DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

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DMEA ~~DMA~~ Docket No. 2666

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EXPLORATION PROJECT

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Routing Slip

Copies to USBM, USGS, and Region III.

To:	Code 700, Rm. 4640	Date	8-22-52
To:	Opr. Com.	Date	10 9-8-52
To:	Mittendorf	Date	
To:	Mailer + Filer	Date	
To:	Ellis (Docket)	Date	
To:	Op Com	Date	10-15-52
To:	Open Com	Date	1-9-53
To:		Date	
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FILE COPY
700 SURNAME:

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

F.L. Knouse
Ellis

BW

Hon. William F. Knowland
Senate Office Building
Washington 25, D. C.

JAN 9 1953

Re: Docket No. DMEA-2666 (Copper)
Calyer Copper Mine
Trinity County, California

My dear Senator Knowland:

In accordance with the telephone conversation of Mr. Frederick L. Knouse with Miss Shaw of your office on January 9, I am enclosing a copy of the denial letter sent to Mr. Russell A. Gieseler of Cal-Cop, Inc., regarding the above-docketed application.

J.C. 1/13/53

Sincerely yours,

C. O. Mittendorf (fw)

Administrator

Enclosure

FLKnouse/gla/jem
1/9/53
cc to: Adm. Reading File
Docket
Ellis
Knouse

FILE COPY
SURNAME:
700

F.L. Knowse
Ellis
Kinkel
~~Hedges~~
F.L. Johnson

BW

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

Mr. Russell A. Gieseler
Cal-Cop, Inc.
221 Palmer Street
Jamestown, New York

Re: Docket No. [illegible]-2666 (Copper,
Salyer Copper Mine
Trinity County, California

Dear Mr. Gieseler:

This is with reference to your application for Government aid, on the captioned project in the amount of $11,231.00.

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

A careful study of your application and data available to this Agency, and an examination of the property concerned reveal that the probability of disclosing minable reserves by your proposed exploration program is not considered sufficiently promising to justify Government participation. Under these circumstances, we regret to advise that your application for exploration aid is denied.

If additional work on your property reveals information which makes the project feasible, an application may be submitted for consideration.

Sincerely yours,

C. O. Mittendorf (KW)

Administrator

FLKnouse/jem
1/8/53
cc to: Adm. Reading File
Docket
Messrs. CHJohnson-Rm.3621
ARKinkel-Rm.4234 GSA
Ellis Knouse
Opr. Committee
Field Team, Region III (2)

J.C. 1/9/53

1/7/53 gla

IN REPLY REFER TO:

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

January 7, 1953

Re: DMEA-2666
Cal-cop, Inc.
Salyer Copper Mine
Trinity County, Calif.

(This replaces a memo of Dec. 15 which was lost)

Memorandum

To: Mr. E. Wm. Ellis

From: Arthur R. Kinkel, Jr.

Subject: Recommendation for denial of application

I concur with the field team in denying this application. The assay values are very low and the inaccessibility of the property and the lack of continuity to the vein system makes it improbable that any amount of ore would be found by exploration.

A R Kinkel Jr.

Arthur R. Kinkel, Jr.

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

January 7, 1953

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Cal-cop, Inc.
Salyer Copper Mine
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Arthur R. Kinkel, Jr.

1/6/53 gla

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 5 1953

January 2, 1953

Memorandum

To: E. W. Ellis, DMEA

From: C. H. Johnson, Bureau of Mines

Subject: DMEA-2666, (Copper), Cal-Cop, Incorporated, Salyer prospect Trinity County, California

I have reviewed the Field Team report by Bodenlos and Pampeyan dated December 1, 1952, and transmitted by H. C. Miller December 5, 1952. The sampling data now presented show only a few feet of material even as rich as 3 percent copper. Considering this and the other circumstances, particularly the location of the prospect, I agree with the examining geologists that the chances are too poor to warrant Government participation in exploration under the DMEA program.

C. H. Johnson

C. H. Johnson

Copy to - Mr. A. R. Kinkel, Jr., Room 4234 GSA
Minerals Division
Base Metals Branch
Mr. Johnson
Files

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 5 1953

January 2, 1953

Memorandum

To: E. W. Ellis, DMTA

From: C. H. Johnson, Bureau of Mines

Subject: DMTA-2666, (Copper), Cal-Cop, Incorporated, Salyer prospect Trinity County, California

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C. H. Johnson

C. H. Johnson

CHJohnson:ks
Copy to - Mr. A. F. Kinkel, Jr., Room 1234 GSA
Minerals Division
Base Metals Branch
Mr. Johnson
Files

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 5 1953

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

January 2, 1953

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From: C. H. Johnson, Bureau of Mines

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C. H. Johnson

CHJohnson:ks
Copy to - Mr. A. R. Kinkel, Jr., Room 4234 GSA
Minerals Division
Base Metals Branch
Mr. Johnson
Files

2666

COPY

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 5 1953

Office of
Executive Officer
DMEA Field Team
Region III

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

December 5, 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-2666 (Copper), Cal-Cop, Inc., Salyer Copper Mine, Trinity County, California

Reference is made to your subject letter, dated October 16, requesting a field examination of the Salyer Copper Mine, Trinity County, California.

Geologists A. J. Bodenlos and Earl Pampeyan of the Geological Survey examined the property on October 29, 1952, at which time channel samples were collected from four outcrops containing copper sulfide minerals. Four copies of a report, entitled DMEA-2666, Salyer Copper Deposit, Trinity County, California by A. J. Bodenlos, Geologist, U. S. Geological Survey, dated December 1, 1952, are attached.

The examination of the property and the channel samples cut indicate that the ore zones contain far less copper than was estimated by the applicant and the deposit contains low-grade ore only in small isolated lenses or pickets. Initial investments for an access road and beneficiation plant would be high, and coupled with the low grade of ore, it makes it advisable to deny the applicant's request for a loan.

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

Attachment
Copy to: E. H. Bailey, USGS
A. C. Johnson, Reno, Nevada (with copy of report)

Reviewed by
DMEA OPERATING COMMITTEE

12-15-52
(Date)

DMEA REPORTS

Date 12-15-52

Mr. C. H. Johnson

Chief, Minerals Division

Calvin Pierson

Mt. Weather

Calvin Pierson
Adm. Asst.
Min. Div.

For your information and review

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
[illegible]
OCT 0 1952

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

INSPECTION OF EXPLORATION PROJECTS
REPORT III

DMEA 2[illegible], Salyer Copper Deposit

Trinity County, California

A. J. [illegible], Geologist
U. S. Geological Survey

December 1, 1952

Reviewed by
DMEA OPERATING COMMITTEE
12-15-52
(date)

Summary

The Salyer copper deposit, Docket DMA 2666, does not warrant an exploration loan. Channel samples cut during field examination indicate the ore zones contain far less copper than was estimated by the applicant, and the deposit contains low-grade ore only in small isolated lenses or pockets. Initial investments for an access road and beneficiation plant would be high; this, coupled with the low grade of ore, requires that I recommend the applicants request for a Government loan be denied.

Introduction

The Salyer copper deposit, under lease to Cal-Cop, Inc., Jamestown, New York (applicant, DMA 2666), is in Section 5, T. 36 N., R. 12 W., MDM, Trinity County, California, and is on the East Fork of the New River. The terrain in the area is mountainous and characterized by steep slopes. The region is heavily wooded, has moderate to heavy overburden, and contains numerous perennial streams. The East Fork of the new River flows between the mineralized outcrops at the deposit.

The principal artery of the region is Highway U. S. 299, extending between Eureka on the west and Redding on the east. A graveled spur road at Hawkins Bar extends northeast several miles beyond the settlement of Denny. The deposit is 8 miles by trail beyond the roadhead. To Hawkins Bar the distance is 41 miles from Eureka, 95 miles from Redding; the spur road is 22.8 miles to the roadhead at Devils Canyon on the New River. Total distance from the deposit is 92 miles to Eureka, 126 miles to Redding.

An examining team, consisting of A. J. Rodenlos and Karl Pampeyan, of the Geological Survey, visited the deposit on October 29, 1952, at which time channel samples were collected from four outcrops containing copper sulfide minerals. A tape and compass survey also was made to check the accuracy of the applicant's maps. Also available to the examining team was a report on the deposit by W. T. Benson, U. S. Bureau of Mines, who had collected and assayed channel samples of two mineralized outcrops.

The geology of the deposit was studied for the applicant by Allen W. Pinger, whose report is included in Docket 2666. The Pinger report presents a good geologic study of the area but his estimates of grade of ore are high. His maps show a good degree of accuracy.

Geology

The geology of the region, although as yet unmapped except for a small area, is adequately described in the applicant's report. Rocks of the area principally are slightly metamorphosed volcanics and sediments; in addition some granodioritic intrusives are present and a belt of serpentine

lies about a mile to the west of the deposit. Greenstones, thought to be metamorphosed andesites, predominate at the deposit. The structure of the area is obscure owing to considerable faulting and the ring of comparatively massive-bedded outcrops.

Two outcrops of copper-bearing sulfides occur north of the stream and two south of the stream; beyond these the area is covered by alluvium in the valley floor and by talus and scree in the adjacent slopes. The principal copper mineral is chalcopyrite, and some bornite also is present. Pyrite and reportedly minor pyrrhotite provide the bulk of sulfides. These occur as lenses and pockets in faulted and sheared greenstone that has been silicified and veined by quartz.

The largest outcrop of sulfide-bearing rock is at the northwest corner of the prospected area, extending from just above the trail to the edge of the stream. At the trail level the sulfide-bearing rock occurs in a zone over 20 feet wide. Shears and faults are oriented between northwest and west and dip northeast to north at moderate to low angles.

A cut about 250 feet to the southeast, on the south bank of the stream, is along the second major exposure of sulfide-bearing rock. The zone most heavily mineralized is 14 feet wide. Here faults and shears strike from a few degrees west of north to northeast and dip eastward. A small prospect pit fifteen feet east of the east end of the cut is in rock that is only slightly mineralized. The mouth of the trench on the north side of the stream is fifty feet northeast of the east pit. The trench is 27 feet long, beyond which is a prospect pit. The trench and pit expose sulfide bearing rock along a northwest-striking shear plane which dips northeast at moderate angles.

At both the northwest outcrop and the main outcrop south of the stream, adits were driven from which several tons of hand-sorted ore were recovered and shipped. Both workings have caved.

Nature of the mineralized zone

The sulfides seem to have been deposited largely as replacement of greenstone along faults and shear planes. Lenses and pockets containing higher than average quantities of chalcopyrite are comparatively small, generally no more than one or two feet in width and several feet in length. In the northwest outcrop the sulfide-bearing rock lenses out upward, in part bounded by an irregular shear plane dipping at low angles.

Owing to the limited number of outcrops of mineralized rock in the area, the orientation and amount of mineralization of the ore zone is largely conjectural. The consulting geologist of the applicant judged the zone to extend between the northwest outcrop and the main south outcrop.

Our mapping indicates a greater likelihood that the zone extends from the northwest outcrop to the east outcrop north of the stream. The attitude of the strongest faults and shears in the main south outcrop indicates a general northerly trend, so it is inferred that this south outcrop is a branch of the main shear zone or an independent structure.

In view of the obvious lenticular nature of mineralized rock in exposures, it is highly probable that the copper content would vary considerably in that part of the zone now covered by overburden. The fact that the mineralization seems to be lensing out upwards at the northwest exposure might be construed as evidence that part of the covered zone may be barren.

Grade of Ore

It is important to note that no samples were taken by the consulting geologist of the applicant and that all cited grades of ore are estimates only. Although assays are given in the applicant's report, their location and nature of sample were unknown to the consulting geologist. Channel samples collected by the examining team for DMEA, and by the U. S. Bureau of Mines in 1943, indicate that the estimates of ore grade made by the applicant are high.

The northwest outcrop, the largest and considered by the applicant as the chief basis for estimating possible large tonnages of good grade, was stated as being 21.5 feet wide and containing from 4.0 to 5.0 percent copper. Channel samples cut by the examining team for DMEA across the same zone, from west to east, assayed as follows:

Sample	Length of Channel in feet	Copper, percent
N-2	6.5	0.45
N-3	5.0	0.80
N-4	5.0	0.50
N-5	5.0	3.15
N-6	5.0	0.38
N-7	3.0	0.12

It is possible that the exposure studied by the geologist of the applicant was not on the same level as that sampled by the examining team, but even if this were the case, it would still indicate that the ore is spotty and does not consistently contain from 4.0 to 5.0 percent copper.

The geologist of the applicant estimated that a 14-foot zone at the main outcrop south of the stream carried 7 percent copper. Samples collected in our examination, from west to east, assayed as follows:

Sample	Length of Channel in feet	Copper, percent
S-2	1.5	0.10
S-3	9.0	2.22
S-5	7.0	1.58

In confirmation of the lower tenor, herewith are assays of the channel samples cut by the U. S. Bureau of Mines in 1943:

Sample	Length of channel in feet	Copper, percent
934	5.0	3.93
935	5.0	2.12
936	5.0	2.18

The discrepancy is attributed to the lenticular nature of the ore and the probability that the two channels were not cut along the same line.

The small pit 15 feet east of the south outcrop assayed 0.10 percent copper over a width of 1.5 feet (DMA sample 5-1).

The east trench north of the stream assayed 0.15 percent copper over a 3-foot width along the shear plane. U. S. Bureau of Mines samples indicate that a wider zone carries 0.40 percent copper in the 6-foot width on the east side of the trench and 3.07 percent copper in the 6-foot width on the west side of the trench.

It is clear therefore that the best grades that can be expected are 3 percent copper over from five to six foot widths. It is also clear that the estimated grades of ore by the applicant are high, and that no significant widths of 5 percent copper ore are present. The assay results used in the applicants report probably are of high-grade grab samples.

Economic appraisal

The Salyer copper deposit is 8 miles from the road head, but it is planned to build another two miles road up New River during the course of lumbering operations which will begin in 1953. This will still leave 6 miles of road which would have to be built to provide access to the deposit. In addition a beneficiation plant would be needed to concentrate ore. These initial investments led the consulting geologist of the applicant to the conclusion that at least 500,000 tons of 5 percent ore would be required for profitable operation. His basis for estimating a tenuous 500,000 tons reserve was a 500-foot horizontal and vertical extent and a 20-foot width for the ore zone. Inasmuch as assays for both DMA and the U. S. Bureau of Mines indicate a maximum grade of 3 percent copper over a 5-foot width in the outcrops north of the stream, and 2.8 percent copper by the Bureau and 1.3 percent copper by DMA in the outcrop south of the stream, the necessary reserve to capitalize large investments apparently is not available. It is my opinion that a drilling program at this time would not prove an ore zone with sufficient reserve to permit a commercially profitable operation.

12/10/52 gla

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

Office of
Executive Officer
DMEA Field Team
Region III

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 9 1952

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

December 5, 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-2666 (Copper), Cal-Cop, Inc., Salyer Copper Mine, Trinity County, California

Reference is made to your subject letter, dated October 16, requesting a field examination of the Salyer Copper Mine, Trinity County, California.

Geologists A. J. Bodenlos and Earl Pampeyan of the Geological Survey examined the property on October 29, 1952, at which time channel samples were collected from four outcrops containing copper sulfide minerals. Four copies of a report, entitled DMEA-2666, Salyer Copper Deposit, Trinity County, California by A. J. Bodenlos, Geologist, U. S. Geological Survey, dated December 1, 1952, are attached.

The examination of the property and the channel samples cut indicate that the ore zones contain far less copper than was estimated by the applicant and the deposit contains low-grade ore only in small isolated lenses or pockets. Initial investments for an access road and beneficiation plant would be high, and coupled with the low grade of ore, it makes it advisable to deny the applicants request for a loan.

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

Attachment
Copy to: E. H. Bailey, USGS
A. C. Johnson, Reno, Nevada (with copy of report)

Reviewed by
DMEA OPERATING COMMITTEE
12-15-52
(date)

10/2/52

Note by Mr. Knouse:

Phone Miss Shaw, Senator Knowland's office, Code 190, Ext. 183, when action on case is taken.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 3 1952

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA 2666, Salyer Copper Deposit

Trinity County, California

A. J. Bodenlos, Geologist
U. S. Geological Survey

December 1, 1952

Reviewed by
DMEA OPERATING COMMITTEE

12-15-52
(date)

Summary

The Salyer copper deposit, Docket DMEA 2666, does not warrant an exploration loan. Channel samples cut during field examination indicate the ore zones contain far less copper than was estimated by the applicant, and the deposit contains low-grade ore only in small isolated lenses or pockets. Initial investments for an access road and benefication plant would be high; this, coupled with the low grade of ore, requires that I recommend the applicants request for a Government loan be denied.

Introduction

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The principal artery of the region is Highway U. S. 299, extending between Eureka on the west and Redding on the east. A graveled spur road at Hawkins Bar extends northeast several miles beyond the settlement of Denny. The deposit is 8 miles by trail beyond the roadhead. To Hawkins Bar the distance is 61 miles from Eureka, 95 miles from Redding; the spur road is 22.8 miles to the roadhead at Devils Canyon on the New River. Total distance from the deposit is 92 miles to Eureka, 126 miles to Redding.

An examining team, consisting of A. J. Bodenlos and Earl Pampeyan, of the Geological Survey, visited the deposit on October 29, 1952, at which time channel samples were collected from four outcrops containing copper sulfide minerals. A tape and compass survey also was made to check the accuracy of the applicant's maps. Also available to the examining team was a report on the deposit by W. T. Benson, U. S. Bureau of Mines, who had collected and assayed channel samples of two mineralized outcrops.

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lies about a mile to the west of the deposit. Greenstones, thought to be metamorphosed andesites, predominate at the deposit. The structure of the area is obscure owing to considerable faulting and shearing of comparatively massive-bedded outcrops.

Two outcrops of copper-bearing sulfides occur north of the stream and two south of the stream; beyond these the area is covered by alluvium in the valley floor and by talus and scree in the adjacent slopes. The principal copper mineral is chalcopyrite, and some bornite also is present. Pyrite and reportedly minor pyrrhotite provide the bulk of sulfides. These occur as lenses and pockets in faulted and sheared greenstone that has been silicified and veined by quartz.

The largest outcrop of sulfide-bearing rock is at the northwest corner of the prospected area, extending from just above the trail to the edge of the stream. At the trail level the sulfide-bearing rock occurs in a zone over 20 feet wide. Shears and faults are oriented between northwest and west and dip northeast to north at moderate to low angles.

A cut about 250 feet to the southeast, on the south bank of the stream, is along the second major exposure of sulfide-bearing rock. The zone most heavily mineralized is 16 feet wide. Here faults and shears strike from a few degrees west of north to northeast and dip eastward. A small prospect pit fifteen feet east of the east end of the cut is in rock that is only slightly mineralized. The mouth of the trench on the north side of the stream is fifty feet northeast of the east pit. The trench is 27 feet long, beyond which is a prospect pit. The trench and pit expose sulfide bearing rock along a northwest-striking shear plane which dips northeast at moderate angles.

At both the northwest outcrop and the main outcrop south of the stream, adits were driven from which several tons of hand-sorted ore were recovered and shipped. Both workings have caved.

Nature of the mineralized zone

The sulfides seem to have been deposited largely as replacement of greenstone along faults and shear planes. Lenses and pockets containing higher than average quantities of chalcopyrite are comparatively small, generally no more than one or two feet in width and several feet in length. In the northwest outcrop the sulfide-bearing rock lenses out upwards, in part bounded by an irregular shear plane dipping at low angles.

Owing to the limited number of outcrops of mineralized rock in the area, the orientation and amount of mineralization of the ore zone is largely conjectural. The consulting geologist of the applicant judged the zone to extend between the northwest outcrop and the main south outcrop.

Our mapping indicates a greater likelihood that the zone extends from the northwest outcrop to the east outcrop north of the stream. The attitude of the strongest faults and shears in the main south outcrop indicates a general northerly trend, so it is inferred that this south outcrop is a branch of the main shear zone or an independent structure.

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S-3	9.0	2.22
S-5	7.0	1.58

In confirmation of the lower tenor, herewith are assays of the channel samples cut by the U. S. Bureau of Mines in 1943:

Sample	Length of channel in feet	Copper, percent
934	5.0	3.93
935	5.0	2.42
936	5.0	2.18

The discrepancy is attributed to the lenticular nature of the ore and the probability that the two channels were not cut along the same line.

The small pit 15 feet east of the south outcrop assayed 0.10 percent copper over a width of 1.5 feet (DMEA sample S-1).

The east trench north of the stream assayed 0.15 percent copper over a 3-foot width along the shear plane. U. S. Bureau of Mines samples indicate that a wider zone carries 0.40 percent copper in the 6-foot width on the east side of the trench and 3.07 percent copper in the 6-foot width on the west side of the trench.

It is clear therefore that the best grades that can be expected are 3 percent copper over from five to six foot widths. It is also clear that the estimated grades of ore by the applicant are high, and that no significant widths of 5 percent copper ore are present. The assay results used in the applicants report probably are of high-grade grab samples.

Economic appraisal

The Salyer copper deposit is 8 miles from the road head, but it is planned to build another two miles road up New River during the course of lumbering operations which will begin in 1953. This will still leave 6 miles of road which would have to be built to provide access to the deposit. In addition a benefication plant would be needed to concentrate ore. These initial investments led the consulting geologist of the applicant to the conclusion that at least 500,000 tons of 5 percent ore would be required for profitable operation. His basis for estimating a tenuous 500,000 tons reserve was a 500-foot horizontal and vertical extent and a 20-foot width for the ore zone. Inasmuch as assays for both DMEA and the U. S. Bureau of Mines indicate a maximum grade of 3 percent copper over a 5-foot width in the outcrops north of the stream, and 2.8 percent copper by the Bureau and 1.3 percent copper by DMEA in the outcrop south of the stream, the necessary reserve to capitalize large investments apparently is not available. It is my opinion that a drilling program at this time would not prove an ore zone with sufficient reserves to permit a commercially profitable operation.

12/16/52 gla

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

Office of
Executive Officer
DMEA Field Team
Region III

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 8 1952

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

December 5, 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-2666 (Copper), Cal-Cop, Inc., Salyer Copper Mine, Trinity County, California

Reference is made to your subject letter, dated October 16, requesting a field examination of the Salyer Copper Mine, Trinity County, California.

Geologists A. J. Bodenlos and Earl Pampeyan of the Geological Survey examined the property on October 29, 1952, at which time channel samples were collected from four outcrops containing copper sulfide minerals. Four copies of a report, entitled DMEA-2666, Salyer Copper Deposit, Trinity County, California by A. J. Bodenlos, Geologist, U. S. Geological Survey, dated December 1, 1952, are attached.

The examination of the property and the channel samples cut indicate that the ore zones contain far less copper than was estimated by the applicant and the deposit contains low-grade ore only in small isolated lenses or pockets. Initial investments for an access road and beneficiation plant would be high, and coupled with the low grade of ore, it makes it advisable to deny the applicants request for a loan.

Reviewed by
DMEA OPERATING COMMITTEE

12-15-52
(date)

H. C. MILLER

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

Attachment
Copy to: E. H. Bailey, USGS
A. C. Johnson, Reno, Nevada (with copy of report)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
[illegible]
DEC 3 1952

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXPLORATION BY FIELD TEAM
REGION III

DMEA 2666, Salyer Copper Deposit

Trinity County, California

A. J. Sodaro, Geologist
U. S. Geological Survey

December 1, 1952

Reviewed by
DMEA OPERATING COMMITTEE

12-15-52
(date)

Summary

The Salyer copper deposit, Docket DMEA 2666, does not warrant an exploration loan. Channel samples cut during field examination indicate the ore zones contain far less copper than was estimated by the applicant, and the deposit contains low-grade ore only in small isolated lenses or pockets. Initial investments for an access road and beneficiation plant would be high; this, coupled with the low grade of ore, requires that I recommend the applicants request for a Government loan be denied.

Introduction

The Salyer copper deposit, under lease to Cal-Cop, Inc., Jamestown, New York (applicant, DMEA 2666), is in Section 5, T. 36 N., R. 12 W., MDM, Trinity County, California, and is on the East Fork of the New River. The terrain in the area is mountainous and characterized by steep slopes. The region is heavily wooded, has moderate to heavy overburden, and contains numerous perennial streams. The East Fork of the new River flows between the mineralized outcrops at the deposit.

The principal artery of the region is Highway U. S. 299, extending between Eureka on the west and Redding on the east. A graveled spur road at Hawkins Bar extends northeast several miles beyond the settlement of Denny. The deposit is 8 miles by trail beyond the roadhead. To Hawkins Bar the distance is 61 miles from Eureka, 95 miles from Redding; the spur road is 22.8 miles to the roadhead at Devils Canyon on the New River. Total distance from the deposit is 92 miles to Eureka, 126 miles to Redding.

An examining team, consisting of A. J. Modenlos and Earl Pampeyan, of the Geological Survey, visited the deposit on October 29, 1952, at which time channel samples were collected from four outcrops containing copper sulfide minerals. A tape and compass survey also was made to check the accuracy of the applicant's maps. Also available to the examining team was a report on the deposit by W. T. Benson, U. S. Bureau of Mines, who had collected and assayed channel samples of two mineralized outcrops.

The geology of the deposit was studied for the applicant by Allen W. Pinger, whose report is included in Docket 2666. The Pinger report presents a good geologic study of the area but his estimates of grade of ore are high. His maps show a good degree of accuracy.

Geology

The geology of the region, although as yet unmapped except for a small area, is adequately described in the applicant's report. Rocks of the area principally are slightly metamorphosed volcanics and sediments; in addition some granodioritic intrusives are present and a belt of serpentine

lies about a mile to the west of the deposit. Greenstones, thought to be metamorphosed andesites, predominate at the deposit. The structure of the area is obscure owing to considerable faulting and shearing of comparatively massive-bedded outcrops.

Two outcrops of copper-bearing sulfides occur north of the stream and two south of the stream; beyond these the area is covered by alluvium in the valley floor and by talus and scree in the adjacent slopes. The principal copper mineral is chalcopyrite, and some bornite also is present. Pyrite and reportedly minor pyrrhotite provide the bulk of sulfides. These occur as lenses and pockets in faulted and sheared greenstone that has been silicified and veined by quartz.

The largest outcrop of sulfide-bearing rock is at the northwest corner of the prospected area, extending from just above the trail to the edge of the stream. At the trail level the sulfide-bearing rock occurs in a zone over 20 feet wide. Shears and faults are oriented between northwest and west and dip northeast to north at moderate to low angles.

A cut about 250 feet to the southeast, on the south bank of the stream, is along the second major exposure of sulfide-bearing rock. The zone most heavily mineralized is 15 feet wide. Here faults and shears strike from a few degrees west of north to northeast and dip eastward. A small prospect pit fifteen feet east of the east end of the cut is in rock that is only slightly mineralized. The mouth of the trench on the north side of the stream is fifty feet northeast of the east pit. The trench is 27 feet long, beyond which is a prospect pit. The trench and pit expose sulfide bearing rock along a northwest-striking shear plane which dips northeast at moderate angles.

At both the northwest outcrop and the main outcrop south of the stream, adits were driven from which several tons of hand-sorted ore were recovered and shipped. Both workings have caved.

Nature of the mineralized zone

The sulfides seem to have been deposited largely as replacement of greenstone along faults and shear planes. Lenses and pockets containing higher than average quantities of chalcopyrite are comparatively small, generally no more than one or two feet in width and several feet in length. In the northwest outcrop the sulfide-bearing rock lenses out upwards, in part bounded by an irregular shear plane dipping at low angles.

Owing to the limited number of outcrops of mineralized rock in the area, the orientation and amount of mineralization of the ore zone is largely conjectural. The consulting geologist of the applicant judged the zone to extend between the northwest outcrop and the main south outcrop.

Our mapping indicates a greater likelihood that the zone extends from the northwest outcrop to the east outcrop north of the stream. The attitude of the strongest faults and shears in the main south outcrop indicates a general northerly trend, so it is inferred that this south outcrop is a branch of the main shear zone or an independent structure.

In view of the obvious lenticular nature of mineralized rock in exposures, it is highly probable that the copper content would vary considerably in that part of the zone now covered by overburden. The fact that the mineralization seems to be lensing out upwards at the northwest exposure might be construed as evidence that part of the covered zone may be barren.

Grade of Ore

It is important to note that no samples were taken by the consulting geologist of the applicant and that all cited grades of ore are estimates only. Although assays are given in the applicant's report, their location and nature of sample were unknown to the consulting geologist. Channel samples collected by the examining team for DMEA, and by the U. S. Bureau of Mines in 1943, indicate that the estimates of ore grade made by the applicant are high.

The northwest outcrop, the largest and considered by the applicant as the chief basis for estimating possible large tonnages of good grade, was stated as being 21.5 feet wide and containing from 4.0 to 5.0 percent copper. Channel samples cut by the examining team for DMEA across the same zone, from west to east, assayed as follows:

Sample	Length of Channel in feet	Copper, percent
N-2	6.5	0.45
N-3	5.0	0.80
N-4	5.0	0.50
N-5	5.0	3.15
N-6	5.0	0.38
N-7	3.0	0.12

It is possible that the exposure studied by the geologist of the applicant was not on the same level as that sampled by the examining team, but even if this were the case, it would still indicate that the ore is spotty and does not consistently contain from 4.0 to 5.0 percent copper.

The geologist of the applicant estimated that a 14-foot zone at the main outcrop south of the stream carried 7 percent copper. Samples collected in our examination, from west to east, assayed as follows:

Sample	Length of Channel in feet	Copper, percent
S-2	1.5	0.10
S-3	9.0	2.22
S-5	7.0	1.58

In confirmation of the lower tenor, herewith are assays of the channel samples cut by the U. S. Bureau of Mines in 1943:

Sample	Length of channel in feet	Copper, percent
934	5.0	3.93
935	5.0	2.42
936	5.0	2.18

The discrepancy is attributed to the lenticular nature of the ore and the probability that the two channels were not cut along the same line.

The small pit 15 feet east of the south outcrop assayed 0.10 percent copper over a width of 1.5 feet (DMEA sample S-1).

The east trench north of the stream assayed 0.15 percent copper over a 3-foot width along the shear plane. U. S. Bureau of Mines samples indicate that a wider zone carries 0.40 percent copper in the 6-foot width on the east side of the trench and 3.07 percent copper in the 6-foot width on the west side of the trench.

It is clear therefore that the best grades that can be expected are 3 percent copper over from five to six foot widths. It is also clear that the estimated grades of ore by the applicant are high, and that no significant widths of 5 percent copper ore are present. The assay results used in the applicants report probably are of high-grade grab samples.

Economic appraisal

The Salyer copper deposit is 8 miles from the road head, but it is planned to build another two miles road up New River during the course of lumbering operations which will begin in 1953. This will still leave 6 miles of road which would have to be built to provide access to the deposit. In addition a beneficiation plant would be needed to concentrate ore. These initial investments led the consulting geologist of the applicant to the conclusion that at least 500,000 tons of 5 percent ore would be required for profitable operation. His basis for estimating a tenuous 500,000 tons reserve was a 500-foot horizontal and vertical extent and a 20-foot width for the ore zone. Inasmuch as assays for both DMEA and the U. S. Bureau of Mines indicate a maximum grade of 3 percent copper over a 5-foot width in the outcrops north of the stream, and 2.8 percent copper by the Bureau and 1.3 percent copper by DMEA in the outcrop south of the stream, the necessary reserve to capitalize large investments apparently is not available. It is my opinion that a drilling program at this time would not prove an ore zone with sufficient reserves to permit a commercially profitable operation.

FILE COPY
SURNAME:
700

FLKnouse

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

OCT 1 6 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. [illegible]-2636 (Copper)
Cal-Ton, Inc.
Weiyer Copper Mine
Trinity County, California

Dear Mr. Miller:

Reference is made to your memorandum dated October 6, 1952, transmitting the Field Team report on the captioned project.

Because of the reported copper mineral values in this property and other extenuating circumstances it is believed a field examination is justified. Therefore kindly have the Field Team make an examination of this property.

The docket enclosed with your memorandum of October 6 is returned herewith.

Sincerely yours,

(signed) FRANK E. JOHNSON
(24B)
Chairman, Operating Committee

Enclosures

FLKnouse/jem
10/15/52
cc to: Adm. Reading File
Docket
Messrs. CHJohnson-3621
Ned Nelson-4216 GSA
Ellis Knouse
Opr. Committee
Field Team, Region III

APPROVED:
J. H. Hedges (24B)
Member, Bureau of Mines

G. R. Fritzel, Jr. (24B)
Member, Geological Survey

B.H. 10-16-52

FILE COPY
700
SURNAME:

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

OCT 1 6 1952

Hon. Clair Engle
House of Representatives
1033 House Office Building
Washington 25, D. C.

Re: Docket No. DMEA-2666 (Copper)
Cal-Cop, Inc.
Belyer Copper Mine
Trinity County, California

My dear Mr. Engle:

Reference is made to your letter, dated September 26, and reply by Mr. H. C. Miller, Executive Officer, DMEA Field Team, Region III, 1012 Flood Building, 870 Market Street, San Francisco 2, California, with reference to a report made by that office in connection with the above-docketed application.

We have today advised Mr. Burnell L. Giesler, President of the company, that additional information has been requested from our San Francisco Office. A copy of our letter to Mr. Giesler is enclosed for your information.

Sincerely yours,

C. O. Mittendorf (for) J.H. 10-16-52
Administrator

Enclosure

GLAult/FLKnouse/gla
10/15/52
cc to: Adm. Reading File
Docket
Mr. Ellis
Mr. Knouse
DMEA Field Team, Region III (2)

700 FILE COPY
SURNAME:

FLKnouse
Ellis
Hedges
HEJohnson

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

OCT 1 6 1952

Mr. Russell [illegible] Ciesoler, President
Cal-Cop, Inc.
221 Palmer Street
Jamestown, New York

Re: Docket No. [illegible]-1666 (Copper)
[illegible] Copper Mine
Trinity County, California

Dear Mr. Ciesoler:

This is to advise you that we have found it necessary to request additional information from our San Francisco Regional Office in connection with your application dated August 20, 1952, which was assigned the above docket number.

If the Field Team finds it necessary to obtain additional information from you for the purpose of conducting an examination of the property, they will contact you.

Sincerely yours,

Signed

[illegible] H. Ellis, Chief
[illegible] Division

10-16-52

GLAult/FLKnouse/gla
10/15/52
cc to: Adm. Reading File
Docket
Mr. Ellis
Mr. Knouse
DMEA Field Team, Region III (2)
Hon. Clair Engle, 1033 HOB, Washington, D. C.

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

Office of
Executive Officer
DMEA Field Team
Region III

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 13 1952

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

October 8, 1952

Hon. Clair Engle
House of Representatives
1033 House Office Building
Washington, D. C.

Re: Docket DMEA-2666 (Copper)
Cal-Cop, Inc.
Salyer Copper Mine
Trinity County, California

My dear Mr. Engle:

Reference is made to your letter, dated September 26, concerning the above-captioned application for a Defense Minerals Exploration Administration loan.

Our report on the subject property was sent to the Washington Office of the Defense Minerals Exploration Administration yesterday, and the applicant should hear shortly from that Administration as to the outcome of his application.

We sincerely appreciate your interest in this and other DMEA applications.

Sincerely yours,

H. C. MILLER

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

Copy to: Adm. Reading File, Washington
DMEA, Interior Bldg., Washington 25, D. C. (with copy of Clair Engle's letter)
E. H. Bailey, USGS

C
O
P
Y

Clair Engle
2d District, California

Home Address:
Red Bluff, California

Office Address:
1033 House Office Building

CONGRESS OF THE UNITED STATES
HOUSE OF REPRESENTATIVES
WASHINGTON, D. C.

Chairman
Subcommittee:
Irrigation-Reclamation

Committees:
Interior and Insular Affairs
Public Lands
Mines and Mining

September 26, 1952

Mr. H. C. Miller
Executive Officer
Defense Minerals Exploration Administration
1012 Flood Building
870 Market Street
San Francisco, California

Dear Mr. Miller:

I am interested in an exploration application, your file No. DMEA 2666, filed by the Cal-Cop, Inc., Jamestown, New York, whose President is Mr. Russell W. Gieseler. I understand the application was transmitted to your office sometime ago for processing. Anything that can be done to expedite it will be appreciated and I would like to be advised as to the action taken.

Sincerely yours,

Clair Engle (Signed)

Clair Engle, M. C.

ce:b

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

Office of
Executive Officer
DMEA Field Team
Region III

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 13 1952

October 8, 1952

Hon. Clair Engle
House of Representatives
1033 House Office Building
Washington, D. C.

Re: Docket DMEA-2666 (Copper)
Cal-Cop, Inc.
Salyer Copper Mine
Trinity County, California

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H. C. MILLER

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

Copy to: Adm. Reading File, Washington
DMEA, Interior Bldg., Washington 25, D. C. (with copy of Clair Engle's letter)
E. H. Bailey, USGS

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Clair Engle
2d District, California

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Office Address:
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HOUSE OF REPRESENTATIVES
WASHINGTON, D. C.

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Committees:
Interior and Insular Affairs
Public Lands
Mines and Mining

September 26, 1952

Mr. H. C. Miller
Executive Officer
Defense Minerals Exploration Administration
1012 Flood Building
870 Market Street
San Francisco, California

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Clair Engle (Signed)

Clair Engle, M. C.

ce:b

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

Office of
Executive Officer
DMEA Field Team
Region III

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

October 8, 1952

Hon. Clair Engle
House of Representatives
1033 House Office Building
Washington, D. C.

Re: Docket DMEA-2666 (Copper)
Cal-Cop, Inc.
Salyer Copper Mine
Trinity County, California

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Sincerely yours,

H. C. MILLER

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

Copy to: Adm. Reading File, Washington (with copy of Clair Engle's letter)
DMEA, Interior Bldg., Washington 25, D. C.
E. H. Bailey, USGS

C
O
P
Y

Clair Engle
2d District, California

Home Address:
Red Bluff, California

Office Address:
1033 House Office Building

CONGRESS OF THE UNITED STATES
HOUSE OF REPRESENTATIVES
WASHINGTON, D. C.

Chairman
Subcommittee:
Irrigation-Reclamation

Committees:
Interior and Insular
Affairs
Public Lands
Mines and Mining

September 26, 1952

Mr. H. C. Miller
Executive Officer
Defense Minerals Exploration Administration
1012 Flood Building
870 Market Street
San Francisco, California

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Sincerely yours,

Clair Engle (Signed)

Clair Engle, M. C.

ce:b

10/10/52 glc

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

OCT 10 1952

Office of
Executive Officer
DMEA Field Team
Region III

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

October 6, 1952

Memorandum

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

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 2666 (Copper), Cal-Cop, Inc., Salyer Copper Mine, Trinity County, California

Reference is made to your subject letter, dated September 10, referring the subject application to us for either a field examination, or a recommendation, based on information available to this office.

Attached are the original and three copies of a memorandum from Mr. Edgar H. Bailey of the Geological Survey to me, dated September 30 - subject: Cal-Cop copper deposit, Trinity County, California, DMEA 2666.

Mr. Bailey recommends that the application be denied and his reasons for this recommendation seem logical. Because Mr. Bailey has recommended denial of the application, we have made no attempt to check the operator's proposed program or costs.

If the Washington Office feels that another attempt should be made to reach the property, we shall, upon request, send engineers and geologists back into the area. We believe, however, that the information on hand is sufficient to warrant denial of the applicant's request.

The docket is being returned herewith.

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

Attachments

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

September 30, 1952

Memorandum

To: H. C. Miller

From: E. H. Bailey

Subject: Cal-Cop copper deposit, Trinity County, California
DMEA 2666

On September 25, 1952 a field party consisting of Frank Wiebelt of the Bureau of Mines and A. J. Bodenlos and Earl Pampeyan of the Geological Survey attempted to reach the Cal-Cop property without success. Owing to injury to one of the members of the party, they were unable to make a more vigorous attempt on the following day. It is believed that the data presented below is sufficient to recommend denial of the application without further field examination. The appraisal is based on first hand knowledge of the terrain, the report by Pinger included with the application, and a report of a preliminary examination by the Bureau of Mines made in 1948 by W. T. Benson.

The exploration of the Cal-Cop deposit by diamond drilling to depths of 100 feet is not recommended because:

(1) The grade of the exposed ore according to the applicants' and Bureau of Mines samples is too low to be mined unless the property is accessible by road.

(2) The Forest Service has built a road 3.7 miles toward the property from Denny but at this point must construct a bridge across the river. The bridge is scheduled for completion in April 1953. Following the construction of the bridge the road will be extended 3 or 4 miles, and by 1954 the deposit may be within 5 miles of a road head. The terrain is such that road construction is slow and costly and it would not be possible to bulldoze a temporary road to the mine at a low cost.

(3) The ore zone was considered by the Bureau engineer in 1948 as made up of discontinuous lenses, but Pinger thought there might be a chance that the zone was continuous at depth. To determine this would require drilling between outcrops on the two sides of the river, in other words drilling under the river. The application requests funds for this exploration, but it seems likely that any ore developed at shallow depths beneath the river could be mined only with great difficulty owing to the inflow of the water from the permanent river.

(4) Bureau of Mines assays from samples collected by Benson indicate that the northeast trench contains 3 percent copper over a 6-foot width. In the south cuts, the 15-feet at the west end of the zone assay between 2.18 and 3.93 percent copper, averaging 2.84 percent; the eastern 30 feet assay at 1 percent or less copper. Pinger, in his examination for Cal-Cop, did not collect any samples. He estimates 7 percent copper in the 14 feet at the west side of the zone south of the creek, or about two and one half times the Bureau assay. In view of this, it is hard to accept Pinger's statement that the northwest pits average 5 percent (a weighted average of his estimates for given widths indicate that the percentage would only be 4.5). In summary, then, the deposit has a 21-foot zone with an estimated 4.5 percent in the northwest cut, a 15-foot zone with an assayed 2.84 percent in the south cut, and a 6-foot zone with an assayed 3.07 percent in the northeast cut.

(5) Pinger's estimate of a possible 500,000 tons to 500 feet is admitted to be a maximum figure. The two main exposures are 300 feet apart and drilling to a depth of 100 feet as proposed would, under optimum conditions, partly block out only 60,000 tons of ore estimated to contain 3 percent copper.

(6) The cost of packing the ore out by mule back will be about $24.00 a ton at a minimum, which is equivalent to the value of copper in five percent ore with copper at 24 cents per pound. This grade of ore is not likely to occur in the deposit in appreciable quantity.

In view of the long haul to the smelter, the lack of precious metal in the ore, the uncertainty of the continuity of the ore, and the difficulty of mining ore from beneath the river if found by drilling, it is recommended that the application be denied.

Edgar H. Bailey

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

Office of
Executive Officer
DMEA Field Team
Region III

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

October 6, 1952

Memorandum

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

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 2666 (Copper), Cal-Cop, Inc., Salyer Copper Mine, Trinity County, California

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If the Washington Office feels that another attempt should be made to reach the property, we shall, upon request, send engineers and geologists back into the area. We believe, however, that the information on hand is sufficient to warrant denial of the applicant's request.

The docket is being returned herewith.

H. C. MILLER

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

Attachments

Reviewed by
DMEA OPERATING COMMITTEE
10-15-52
(date)

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

September 30, 1952

Memorandum

To: H. C. Millar

From: E. H. Bailey

Subject: Cal-Cop copper deposit, Trinity County, California
DMRA 2666

On September 25, 1952 a field party consisting of Frank Wiebelt of the Bureau of Mines and A. J. Bodenlos and Earl Pampeyan of the Geological Survey attempted to reach the Cal-Cop property without success. Owing to injury to one of the members of the party, they were unable to make a more vigorous attempt on the following day. It is believed that the data presented below is sufficient to recommend denial of the application without further field examination. The appraisal is based on first hand knowledge of the terrain, the report by Pinger included with the application, and a report of a preliminary examination by the Bureau of Mines made in 1948 by W. T. Benson.

The exploration of the Cal-Cop deposit by diamond drilling to depths of 100 feet is not recommended because:

(1) The grade of the exposed ore according to the applicants and Bureau of Mines samples is too low to be mined unless the property is accessible by road.

(2) The Forest Service has built a road 3.7 miles toward the property from Denny but at this point must construct a bridge across the river. The bridge is scheduled for completion in April 1953. Following the construction of the bridge the road will be extended 3 or 4 miles, and by 1954 the deposit may be within 5 miles of a road head. The terrain is such that road construction is slow and costly and it would not be possible to bulldoze a temporary road to the mine at a low cost.

(3) The ore zone was considered by the Bureau engineer in 1948 as made up of discontinuous lenses, but Pinger thought there might be a chance that the zone was continuous at depth. To determine this would require drilling between outcrops on the two sides of the river, in other words drilling under the river. The application requests funds for this exploration, but it seems likely that any ore developed at shallow depths beneath the river could be mined only with great difficulty owing to the inflow of the water from the permanent river.

(4) Bureau of Mines assays from samples collected by Benson indicate that the northeast trench contains 3 percent copper over a 6-foot width. In the south cuts, the 15 feet at the west end of the zone assay between 2.18 and 3.93 percent copper, averaging 2.84 percent; the eastern 30 feet assay at 1 percent or less copper. Pinger, in his examination for Cal-Cop, did not collect any samples. He estimates 7 percent copper in the 1½ feet at the west side of the zone south of the creek, or about two and one half times the Bureau assay. In view of this, it is hard to accept Pinger's statement that the northwest pits average 5 percent (a weighted average of his estimates for given widths indicate that the percentage would only be 4.5). In summary, then, the deposit has a 21-foot zone with an estimated 4.5 percent in the northwest cut, a 15-foot zone with an assayed 2.84 percent in the south cut, and a 6-foot zone with an assayed 3.07 percent in the northeast cut.

(5) Pinger's estimate of a possible 500,000 tons to 500 feet is admitted to be a maximum figure. The two main exposures are 300 feet apart and drilling to a depth of 100 feet as proposed would, under optimum conditions, partly block out only 60,000 tons of ore estimated to contain 3 percent copper.

(6) The cost of packing the ore out by mule back will be about $24.00 a ton at a minimum, which is equivalent to the value of copper in five percent ore with copper at 24 cents per pound. This grade of ore is not likely to occur in the deposit in appreciable quantity.

In view of the long haul to the smelter, the lack of precious metal in the ore, the uncertainty of the continuity of the ore, and the difficulty of mining ore from beneath the river if found by drilling, it is recommended that the application be denied.

Edgar H. Bailey

Hon. Herbert H. Lehman
Senate Office Building
Washington 25, D. C.

Re: Docket No. DMA-2666 (Copper)
Cal-Cop, Inc.
Salyer Copper Mine
Trinity County, California

My Dear Senator Lehman:

This will acknowledge your inquiry of September 16, 1952, requesting a report on the subject application referred to in the letter of Mr. Russell A. Gieseler, President, Cal-Cop, Inc., 221 Palmer Street, Jamestown, New York, which is returned herewith.

This application was reviewed by the Rare and Miscellaneous Metals Division of this Agency. It was determined that further information should be obtained from our San Francisco Regional Office, possibly necessitating a Field Team examination of the property, before a final decision could be made. Mr. Gieseler was advised by letter on September 10, 1952, of the referral of his application to the Executive Officer, Region III, DMA Field Team, 1012 Flood Building, 870 Market Street, San Francisco 2, California.

I trust this information will be helpful to you.

Sincerely yours,

C. O. Mittendorf

Administrator

Enclosure

GLAult/RWEllis/gla
9-18-52
cc to: Adm. Reading File
Docket
Mr. Ellis
DMA Field Team, Region III (2)

SEP 10 1952

Mr. Russell A. Giesler
Cal-Cop, Inc.
221 Palmer Street
Jamestown, New York

Re: Docket No. [illegible]-2066 (Copper)
Colyer Copper Mine
Trinity County, California

Dear Mr. Giesler:

The application for assistance in exploring your property in Trinity County, California, under the above captioned docket number, has been reviewed by the Rare and Miscellaneous Metals Division of the Defense Minerals Exploration Administration. Your application has been referred to the Executive Officer of Region III, at the following address, for additional information:

Mr. R. C. Miller
Executive Officer, Region III
DMEA Field Team
1017 Flood Building
870 Market Street
San Francisco 2, California

The Regional Office will contact you, if necessary.

Sincerely yours,

C. O. Mittendorf

Administrator

FHVnouse/jem
9/8/52
cc to: Adm. Reading File
Docket
Messrs. Ellis
Vnouse
Field Team, Region III (2)

SEP 8 1952

Mr. Russell . Heagler, President
Al-Col, Inc.
221 Palmer Street
Jeffersonville, New York

Re: Docket No. [illegible]A-2666 (Hearing)
Salyer Copper Mine
Trinity County, California

Dear Mr. Heagler:

Reference is made to your letter of August [illegible], 1952, and the [illegible]-1 "Application for Mill in a Mineral Project" submitted therewith in connection with the captioned project.

The review of your application is being completed by this Division and at that time you will be contacted by either this office or our Regional Office in San Francisco, California, if we require you to submit Forms MT-205 "Owner's Consent to Lien".

In accordance with your request, we are enclosing a copy of [illegible] Order 1. In the meantime, if we can be of further assistance to you, please do not hesitate to call upon us.

Sincerely yours,

Signed

[illegible] Ellis, Chief
[illegible] Metals Division

Enclosure

FLKnouse/gla 9-8-52
cc to: Adm. Reading File
Docket
Messrs. Red Nelson, Rm. 4216 GSA
S. M. Johnson, Rm. 3261
Ellis
Knouse
DMEA Field Team, Region III (2)

10/2/52 jem.

Charge to the account of COLLE

CLASS OF SERVICE DESIRED			
DOMESTIC		CABLE	
TELEGRAM		ORDINARY	
DAY LETTER		URGENT RATE	
SERIAL		DEFERRED	
OVERNIGHT TELEGRAM		NIGHT LETTER	
SPECIAL SERVICE		SHIP RADIOGRAM	

Patrons should check class of service desired; otherwise the message will be transmitted as a telegram or ordinary cablegram.

WESTERN UNION

1206-B

$

CHECK

ACCOUNTING INFORMATION

TIME FILED

A. N. WILLIAMS, PRESIDENT
NEWCOMB CARLTON, CHAIRMAN OF THE BOARD
J. C. WILLEVER, FIRST VICE-PRESIDENT

Send the following telegram, subject to the terms on back hereof, which are hereby agreed to

WANT A REPLY?
"Answer by WESTERN UNION" or similar phrases may be included without charge.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 30 1952

1012 Flood Bldg.
San Francisco, Calif.
Sept. 26, 1952

Mr. Russell W. Gieseler, President
Cal-Cop, Inc.
221 Palmer Street
Jamestown, New York

Your message Sept 25 re DMEA Docket 2666 Field report being prepared and will be transmitted to Washington Office shortly. That office will handle authorization.

H. C. Miller
Executive Officer, DMEA Field Team

Copy to: DMEA, Washington, D.C.
E.H.Bailey, USGS

ALL MESSAGES TAKEN BY THIS COMPANY ARE SUBJECT TO THE FOLLOWING TERMS:

To guard against mistakes or delays, the sender of a message should order it repeated, that is, telegraphed back to the originating office for comparison. For this, one-half the unrepeated message rate is charged in addition. Unless otherwise indicated on its face, this is an unrepeated message and paid for as such, in consideration whereof it is agreed between the sender of the message and this Company as follows:

1. The Company shall not be liable for mistakes or delays in the transmission or delivery, or for non-delivery, of any message received for transmission at the unrepeated-message rate beyond the sum of five hundred dollars; nor for mistakes or delays in the transmission or delivery, or for non-delivery, of any message received for transmission at the repeated-message rate beyond the sum of five thousand dollars, unless specially valued; nor in any case for delays arising from unavoidable interruption in the working of its lines;

2. In any event the Company shall not be liable for damages for mistakes or delays in the transmission or delivery, or for the non-delivery, of any message, whether caused by the negligence of its servants or otherwise, beyond the actual loss, not exceeding in any event the sum of five thousand dollars, at which amount the sender of each message represents that the message is valued, unless a greater value is stated in writing by the sender thereof at the time the message is tendered for transmission, and unless the repeated-message rate is paid or agreed to be paid, and an additional charge equal to one-tenth of one per cent of the amount by which such valuation shall exceed five thousand dollars.

3. The Company is hereby made the agent of the sender, without liability, to forward this message over the lines of any other company when necessary to reach its destination.

4. Except as otherwise indicated in connection with the listing of individual places in the filed tariffs of the Company, the amount paid for the transmission of a domestic telegram or an incoming cable or radio message covers its delivery within the following limits: In cities or towns of 5,000 or more inhabitants where the Company has an office which, as shown by the filed tariffs of the Company, is not operated through the agency of a railroad company, within two miles of any open main or branch office of the Company; in cities or towns of 5,000 or more inhabitants where, as shown by the filed tariffs of the Company, the telegraph service is performed through the agency of a railroad company, within one mile of the telegraph office; in cities or towns of less than 5,000 inhabitants in which an office of the Company is located, within one-half mile of the telegraph office. Beyond the limits above specified the Company does not undertake to make delivery, but will endeavor to arrange for delivery as the agent of the sender, with the understanding that the sender authorizes the collection of any additional charge from the addressee and agrees to pay such additional charge if it is not collected from the addressee. There will be no additional charge for deliveries made by telephone within the corporate limits of any city or town in which an office of the Company is located.

5. No responsibility attaches to this Company concerning messages until the same are accepted at one of its transmitting offices; and if a message is sent to such office by one of the Company's messengers, he acts for that purpose as the agent of the sender.

6. The Company will not be liable for damages or statutory penalties in any case where the claim is not presented in writing to the Company within sixty days after the message is filed with the Company for transmission; provided, however, that this condition shall not apply to claims for damages or overcharges within the purview of Section 415 of the Communications Act of 1934.

7. It is agreed that in any action by the Company to recover the tolls for any message or messages the prompt and correct transmission and delivery thereof shall be presumed, subject to rebuttal by competent evidence.

8. Special terms governing the transmission of messages according to their classes, as enumerated below, shall apply to messages in each of such respective classes in addition to all the foregoing terms.

9. No employee of the Company is authorized to vary the foregoing.

12-40

CLASSES OF SERVICE

DOMESTIC SERVICES

TELEGRAMS
A full-rate expedited service.

DAY LETTERS
A deferred service at lower than the standard telegram rates.

SERIALS
Messages sent in sections during the same day.

OVERNIGHT TELEGRAMS
Accepted up to 2 A.M. for delivery not earlier than the following morning at rates substantially lower than the standard telegram or day letter rates.

SHIP RADIOGRAMS
A service to ships at sea, in all parts of the world. Plain language or code language may be used.

CABLE SERVICES

ORDINARIES
The standard service, at full rates. Code messages, consisting of 5-letter groups only, at a lower rate.

DEFERREDS
Plain-language messages, subject to being deferred in favor of full-rate messages.

NIGHT LETTERS
Overnight plain-language messages.

URGENTS
Messages taking precedence over all other messages except government messages.

THERE IS A SPECIAL LOW-RATE WESTERN UNION SERVICE FOR EVERY SOCIAL NEED

Telegrams of the categories listed at the right, to any Western Union destination in the United States

TELEGRAMS OF PRESCRIBED FIXED TEXT—	25¢
TELEGRAMS OF SENDER'S OWN COMPOSITION. First 15 words	35¢
LOCAL CITY TELEGRAMS	20¢
TOURATE TELEGRAMS, for TRAVELERS. First 15 words (Additional Words, 2½¢ each)	35¢

GREETINGS AT
Christmas, New Year, Easter, Valentine's Day, Mother's Day, Father's Day, Jewish New Year, Thanksgiving

CONGRATULATIONS ON
Anniversaries, Weddings, Birthdays, Commencement, Birth of a Child

MISCELLANEOUS
Bon Voyage telegrams, "Pep" telegrams, Kiddiegrams (No 35¢ rate)

ASK AT ANY WESTERN UNION OFFICE OR AGENCY FOR FULL INFORMATION

Charge to the account of COLL $

CLASS OF SERVICE DESIRED			
DOMESTIC		CABLE	
TELEGRAM		ORDINARY	
DAY LETTER		URGENT RATE	
SERIAL		DEFERRED	
OVERNIGHT TELEGRAM		NIGHT LETTER	
SPECIAL SERVICE		SHIP RADIOGRAM	

Patrons should check class of service desired; otherwise the message will be transmitted as a telegram or ordinary cablegram.

WESTERN UNION

1206-B

CHECK
ACCOUNTING INFORMATION
TIME FILED

A. N. WILLIAMS, PRESIDENT
NEWCOMB CARLTON, CHAIRMAN OF THE BOARD
J. C. WILLEVER, FIRST VICE-PRESIDENT

Send the following telegram, subject to the terms on back hereof, which are agreed to

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 30 1952

WANT A REPLY?
"Answer by WESTERN UNION" or similar phrases may be included without charge.

1012 Flood Bldg.
San Francisco, Calif.
Sept. 26, 1952

Mr. Russell W. Giessler, President
Cal-Cop, Inc.
221 Palmer Street
Jamestown, New York

Your message Sept 25 re DMEA Docket 2666 Field report being prepared and will be transmitted to Washington Office shortly. That office will handle authorization.

H. C. Miller
Executive Officer, DMEA Field Team

Copy to: DMEA, Washington, D.C.
E.H.Bailey, USGS

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TOURATE TELEGRAMS, for TRAVELERS. First 15 words — — (Additional Words, 2½¢ each)	35¢

GREETINGS AT

Christmas, New Year, Easter, Valentine's Day, Mother's Day, Father's Day, Jewish New Year, Thanksgiving

CONGRATULATIONS ON

Anniversaries, Weddings, Birthdays, Commencement, Birth of a Child

MISCELLANEOUS

Bon Voyage telegrams, "Pep" telegrams, Kiddiegrams (No 35¢ rate)

ASK AT ANY WESTERN UNION OFFICE OR AGENCY FOR FULL INFORMATION

706 FILE COPY
SURNAME:

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

Hon. Herbert H. Lehman
Senate Office Building
Washington 25, D. C.

Re: Docket No. DMEA-2666 (Copper)
Cal-Cop, Inc.
Salyer Copper Mine
Trinity County, California

My dear Senator Lehman:

This will acknowledge your inquiry of September 16, 1952, requesting a report on the subject application referred to in the letter of Mr. Russell W. Gieseler, President, Cal-Cop, Inc., 221 Palmer Street, Jamestown, New York, which is returned herewith.

This application was reviewed by the Rare and Miscellaneous Metals Division of this Agency. It was determined that further information should be obtained from our San Francisco Regional Office, possibly necessitating a Field Team examination of the property, before a final decision could be made. Mr. Gieseler was advised by letter on September 10, 1952, of the referral of his application to the Executive Officer, Region III, DMEA Field Team, 1012 Flood Building, 870 Market Street, San Francisco 2, California.

I trust this information will be helpful to you.

Sincerely yours,

C. O. Mittendorf

Administrator

Enclosure

GLAult/EWEllis/gla
9-18-52
cc to: Adm. Reading File
✓Docket
Mr. Ellis
DMEA Field Team, Region III (2)

United States Senate

September 16, 1952

Respectfully referred to

Mr. C. O. Mettendorf, Administrator
Defense Minerals Exploration Administration
Department of the Interior

with thanks for such favorable consideration as the communication herewith submitted warrants, and for a report thereon, in duplicate to accompany return of inclosure.

By direction of

Herbert H. Lehman
U. S. S.

C
O
P
Y

CAL-COP, INC.
221 Palmer Street
Jamestown, New York

August 30th, 1952

Honorable Herbert H. Lehman
Senate Office Building
Washington, D. C.

Dear Senator:

This corporation recently applied for a loan, approximating $5,600 under the Defense Production Act of 1950, as matching funds to complete the exploration of a copper property in Northern California, thru the Defense Minerals Exploration Administration of the Department of the Interior.

Our application has been assigned Docket Number DMEA-2666, and has been referred, according to a letter received from Wingfield Chamberlain, Acting Chief, Operations and Statistics Division to "Rare and Miscellaneous Metals Division."

Because weather conditions are such that the drilling recommended by one of the nation's leading Mining Geologists should be completed by November 15th, and MUST be completed by December 1st at the latest, we need expedited consideration for our application.

Your cooperation in assisting us in securing reasonably prompt consideration will be greatly appreciated.

Very truly yours,

CAL-COP, INC.

/s/Russell W. Gieseler
Russell W. Gieseler
President

RWG:hh

FOLD ON THIS LINE

SDPA 19
11-26-51
ROUTER

CONTROL NUMBER

DUE DATE

TO THE FOLLOWING, IN ORDER INDICATED			INITIALS	DATE
NAME OR TITLE	ORGANIZATION	ROOM NO.		
1 Mr. Ernest W. Ellis,	DofI	Rm4640		
2.				
3.				
4.				
5.				

PURPOSE OF ROUTING

	PREPARE REPLY FOR SIGNATURE OF		SUPPLY INFORMATION ON WHICH TO BASE REPLY
	NECESSARY ACTION		COMMENT
	INITIAL FOR CLEARANCE	X	INFORMATION ~~AND FILE~~
	SIGNATURE		SEE ME

REMARKS OR ADDITIONAL ROUTING

Re:

Our telephone conversation this date, Sept. 15th 1952.

Harry M. Harper, Chief
Financial Services Division
Office of Loans
SDPA

FROM (Name or Organization)	ROOM NO.	DATE
Small Defense Plants Adm.	415	9/15/52
	PHONE NO. 3470	

GPO 83-21914

Honorable Herbert H. Lehman
United States Senate
Washington, D.C.

Re: Cal-Cop, Inc.
Jamestown, New York
Docket No. DMEA 2666

Dear Senator Lehman:

This will acknowledge receipt of your note in which you enclosed correspondence from Mr. Russell W. Gieseler, dated August 30th, regarding subject company.

We are returning the letter to you with the suggestion that you refer it to Mr. C.O. Hettendorf, Administrator, Defense Minerals Exploration Administration, Department of Interior. The docket number DMEA 2666, as listed in the applicant's letter indicates that this was where the application was filed. We further verified this by telephone conversation with Mr. Ellis of the Department of Interior.

Sincerely yours,

Harvey M. Harper, Chief
Financial Services Division
Office of Loans

Enclosure - 1.
Letter from Mr. Russell W. Gieseler
dated August 30th, 1952

cc: Mr. Ellis
Dept. of Interior

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 16 1952

FILE COPY
SURNAME:
700

FL Knouse
Ellis
Hedges
Mottright for Thayer
F. Johnson

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

SEP 10 1952

Mr. Russell W. Giesler
Cal-Cop, Inc.
221 Palmer Street
Jamestown, New York

Re: Docket No. [illegible]-2666 (Copper)
Salyer Copper Mine
Trinity County, California

Dear Mr. Giesler:

The application for assistance in exploring your property in Trinity County, California, under the above captioned docket number, has been reviewed by the Rare and Miscellaneous Metals Division of the Defense Minerals Exploration Administration. Your application has been referred to the Executive Officer of Region III, at the following address, for additional information:

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

The Regional Office will contact you, if necessary.

9-10-52

Sincerely yours,

C. O. Mittendorf (for)

Administrator

FLKnouse/jem
9/8/52
cc to: Adm. Reading File
Docket
Messrs. Ellis
Knouse
Field Team, Region III (2)

FILE COPY
SURNAME:
700

F.L. Knouse
Ellis
Smith

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

SEP 1 0 1952

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

Re: Docket No. DMA-2666 (Copper)
Gold-Cop Inc.
Silver Copper Mine
Trinity County, California

Dear Mr. Miller:

The captioned application is being referred to you for either a field examination or a recommendation based on information available to your office. An attached copy of a memorandum from Mr. C. H. Johnson dated September 3, 1952, draws attention to various questions to be considered when making your recommendations.

If your office recommends either the program submitted by the applicant or an alternate program approved by the applicant, maps or sketches showing the proposed work in relation to the claim lines with detailed costs of the recommended work as is outlined in Form DM-103, should accompany the report. These costs should be your recommendation based on prevailing rates for the area. The sketches should include any known geology and available sample data as justification for the project.

The description and cost of equipment required to do the work (classified as units to be purchased or rented, and also the fair market value of units to be furnished by the operator should accompany the report. If the work recommended is to be done on a unit cost basis by either the operator or a contractor it should be so indicated and a breakdown of the unit cost supplied. We will also require from the operator the original and five copies of Form DM-203 "Owners Consent to Lien" signed by the lessors.

Under date of August 6, 1952, a copy of Form DM-103 was transmitted to your office, and we are enclosing a copy of Mr. Russell A. Meckler's letter dated August 26, 1952.

Sincerely yours,

Signed

D.H.
9-10-52

Chairman, Operating Committee
FLknouse/jem 9/8/52
cc to: Adm. Reading File Docket
Messrs. CHJohnson-3621 Ned Nelson-4216 C
Ellis Knouse Opr. Committee
Field Team, Region III

Enclosure:
Memo dt J. H. Hedges

Member, Bureau of Mines

G. T. McKnight
Member, Geological Survey

700

FILE COPY
SURNAME:

F L Knouse
Ellis
Mitt

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

SEP 8 1952

Mr. Russell W. Giesseler, President
al-Cop, Inc.
221 Palmer Street
Jamestown, New York

Re: Docket No. DMEA-2666 (Copper)
Salyer Copper Mine
Trinity County, California

Dear Mr. Giesseler:

Reference is made to your letter of August 20, 1952, and the MF-103 "Application for Aid in an Exploration Project" submitted therewith in connection with the captioned project.

The review of your application is being completed by this Division and at that time you will be contacted by either this office or our Regional Office in San Francisco, California, if we require you to submit Forms MF-203 "Owner's Consent to Lien".

In accordance with your request, we are enclosing a copy of DMEA Order 1. In the meantime, if we can be of further assistance to you, please do not hesitate to call upon us.

Sincerely yours,

Signed E.H. 9-8-52

Ernest Wm. Ellis, Chief
Rare and Rec. Metals Division

Enclosure

FLKnouse/gla 9-8-52
cc to: Adm. Reading File
✓Docket
Messrs. Ned Nelson, Rm. 4216 GSA
C. H. Johnson, Rm. 3261
Ellis
Knouse
DMEA Field Team, Region III (2)

3D

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

September 3, 1952

Memorandum

To: E. W. Ellis, DMEA

From: C. H. Johnson, Bureau of Mines

Subject: DMEA-2666 (Copper) Cal-Cop, Inc., Salyer Copper mine, Trinity County, California

I have reviewed the subject application and recommend referral to the Field Team for comment. Actual examination may not be necessary, as the report by Pinger perhaps can be accepted as authoritative.

Pinger gives the prospect a reasonable possibility of having 500,000 tons of 5 percent copper ore. Although he regards this as commercially marginal in the circumstances, and although he does not recommend further expenditure by his client, I feel that it would be in the general interest if private capital could be obtained to finance half of the required cost of a small exploration project.

The field staff, if favorably impressed by the prospect, doubtless will have some constructive criticisms of the proposal.

The Application is returned herewith.

C. H. Johnson
C. H. Johnson

Attachment

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

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. DMEA-2666
Metal or Mineral
Date Received 8-22-52
Estimated Cost
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: CAL-COP, INC., incorporated under the laws of the State of New York
221 Palmer Street
Jamestown, New York

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers. See APPENDIX A.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract 4 Lode Mining Claims, located in Section 5, T 36N, R 12 E, Mt. Diablo Base Line & Meridian, on the East Fork of New River, in the County of Trinity, in the State of California, and a Placer Mining Claim superimposed thereon, held by lease from the principal stockholders of this company.

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

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

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property. Exhibit A, herewith, a copy by photograph of lease

(*e*) If you own the land, describe any liens or encumbrances on it No encumbrances.
new claims now being recorded.

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. Mill Site Placer Mining Claim, Book 50, Page 211; Teresa Lode Claim, Book 50, Page 164; High Grade Lode Claim, Book 50, Page 166, Mining Records, County of Trinity. Two/

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

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

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

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points. See Exhibit B, amended by road described being completed and to be continued 2 miles and completion of trail repairs for pack access.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.
Ample manpower available for further exploration and repairs, pack animals available for supplies, equipment, etc. transport. Water and power not important at this stage of investigation. About 2000 H.P. water power available at site and public power lines about 20 miles distant.

5. *The exploration project.*—(*a*) S[illegible] the mineral or minerals for which you wish [illegible] explore Copper

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc. Exhibit B gives full details, Pages 7 and 8, Maps III & IV

(*c*) The work will start within 30 days and be completed within six months from the date of an exploration project contract.

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

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

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

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

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

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

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

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project. None

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

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

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

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

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

[X] Money [ ] Use of equipment owned by you [ ] Other

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated Aug 20 1952, 195--

CAL-COP, INC. (Applicant)

By [signature]
President

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

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

CAL-C[illegible] INC., 221 Palmer Street, Jame[illegible]wn, New York

APPENDIX A

Item 1 (c)

President - Russell W. Giesler, 114 Ellis Ave., Jamestown, N. Y.
Vice-President- Albert H. Harrison, 209 West 8th St., Jamestown, N. Y.
Secretary- A. H. Giesler, 221 Palmer Street, Jamestown, N. Y.
Treasurer- Earl G. Griffith, 51 Charles Street, Jamestown, N. Y.

CAL-COP, INC. 221 Palmer Street, Jamestown, N. Y.

EXHIBIT C

Item 5 (d) Experience and Background:

Management- President of Corporation: President of Swanson Mining Corporation, since 1941, placer mine located in Trinity County, California, also President of manufacturing enterprises, etc.

Supervision- Mining Geologist, Allen W. Pinger, Consulting Mining Geologist for New Jersey Zinc Company, opinions acceptable to American Smelting & Refining Company, and other companies of like stature.

Exploration-on-the-job-Supervision- Don E. Lee, graduate student, Leland Stanford University, (recommended by Prof. Charles F. Park, Jr., head of School of Mines at Leland Stanford).

Exploration Supervision- President or Vice President of Cal-Cop, Inc.

* *

EXHIBIT D

Item 6 (a) Independent Contracts.

The drilling recommended by Dr. Pinger will be by competant, experienced drilling contractors, acceptable to him, either on a per foot contract basis, or on a shift contract basis, as outlined in Exhibit B.

Drilling cost estimates: $4.00 per foot, 500 to 750 feet.

Transportation of Drill Rig from Spokane or Salt Lake City- $2,000.

Drilling on per foot basis- approximately $5,000.

OR, Actual cost of transportation to drilling site, plus $65. per shift for one drill rig and crew while setting up and tearing down, and $110 per shift for actual drilling time, with no minimum guarrantee.

Item 6 (b) Labor, supervision, consultants:

Camp cook and extra laborer @ $12.00 per day x 30 days-	$360.
Supervision- Mining Geologist	500.
Junior Mining Engineer	300.
President or Vice President- @ $25.00 per day x 20 days	500.
Travel Expense- Supervisory Personnel	1200.
	$2860

Item 6 (c) Operating Equipment and Supplies:

Cook Stove	$35.00	Food Supplies @ $2.00 per man per day, or 30 x 8 x $2.00-	$480.00
Cots 6 @ $6.95	41.70	Transportation by Pack Train Equipment and Supplies-	150.00
Sleeping Bags 3 @ $20	60.00		$630.00
Pots & Pans, etc.	15.00		
Gasoline Lantern	12.00		
Minor Items	10.00		
	$173.70		

Item 6 (d) Operating Equipment, see above.

Item 6 (e) Repair and Rehabilitation: Shelter for personnel can best be provided by the repair of a cabin on the property, the walls of which are logs and intact, but which is otherwise in poor repair. Requires complete reroofing including part of roof supports, new windows, new floor, and the erection of a privy for the personell. Estimates by local contractor- $398.70 plus pack train transportation of materials not available on propoerty, adding possibly $50 to total cost.

Item 6 (f) None buildings required.

Item 6 (g) Miscellaneous:

Trail improvement to provide for drill rig transportation	$250.00
Core boxes and transportation in and out	250.00
Assays and Analysis	200.00
Workman's Compensation	100.00
Payroll Taxes	20.00
Accounting $75 per week x 4 weeks	300.00
	$1,120.00

Item 6 (h) Contingencies-

Possibility for need for temporary bridges over East Fork of Trinity River for drill rig transportation, etc. $1.000.00

Recapitulation:

Item 6 (a)		$5,000.00
" 6 (b)		2,860.00
" 6 (c)	Equipment	173.70
	Supplies	630.00
" 6 (d)		
" 6 (e)		448.70
" 6 (f)		
" 6 (g)		1,120.00
" 6 (h)		1,000.00
	Total-	$11,231.40

8/26/52 gla

IN REPLY REFER TO:

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

August 25, 1952

Memorandum

To: Mr. E. Wm. Ellis

From: N. E. Nelson

Subject: DMEA-2666 (Copper) Cal-Cop, Inc. Salyer Copper Mine, Trinity County, California

The report of Allen W. Pinger points up the shortcomings of this prospect, but the widths and estimated grades of the two showings of chalcopyrite cause him to give the property a conditional approval.

Such being the case a field team report is certainly warranted.

N. E. Nelson

Ned E. Nelson
Geologist

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

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MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. DMEA-2666
Metal or Mineral
Date Received 8-22-52
Estimated Cost
Participation (Government %)

INSTRUCTIONS

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221 Palmer Street
Jamestown, New York

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers. See APPENDIX A.

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2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

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

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

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

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

[X] Money [ ] Use of equipment owned by you [ ] Other

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated Aug 20, 1952, 195

CAL-C P, INC. (Applicant)

By [signature]
President

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

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

CAL-C[illegible] INC., 221 Palmer Street, Jame[illegible]n, New York

APPENDIX A

Item 1 (c)

President - Russell G. Giessler, 114 Ellis Ave., Jamestown, N. Y.
Vice-President- Albert H. Harrison, 209 East 8th St., Jamestown, N. Y.
Secretary- A. H. Giessler, 221 Palmer Street, Jamestown, N. Y.
Treasurer- Earl G. Griffith, 51 Charles Street, Jamestown, N. Y.

CAL-COP, INC. 221 Palmer Street, Jamestown, N. Y.

EXHIBIT C

Item 5 (d) Experience and Background

Management- President of Corporation: President of Cumson Mining Corporation, since 1941, placer mine located in Trinity County, California, also President of manufacturing enterprises, etc.

Supervision- Mining Geologist, Allen D. Pinger, Consulting Mining Geologist for New Jersey Zinc Company, opinions acceptable to American Smelting & Refining Company, and other companies of like stature.

Exploration-on-the-job-Supervision- Don E. Lee, graduate student, Leland Stanford University, (recommended by Prof. Charles F. Park, Jr., head of School of Mines at Leland Stanford).

Exploration Supervision- President or Vice President of Cal-Cop, Inc.

* *

EXHIBIT D

Item 6 (a) Independent Contracts.

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CAL-COP, INC., 221 Palmer Street, Jamestown, N. Y.

EXHIBIT D Continued Page 2

Item 6 (g) Miscellaneous

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Worman's Compensation	100.00
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Recapitulation

Item 6 (a)		$5,000.00
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(c)	Equipment	173.70
	Supplies	630.00
(d)		
(e)		448.70
(f)		
(g)		1,120.00
(h)		1,000.00
		$ 11,231.40

Mr. Russell W. Gieseler
Cal-Cop, Inc.
221 Palmer Street
Jamestown, New York

Subject: Exploration Assistance
Re: DMEA-2666
Salyer Copper Mine
August 22, 1952

My dear Mr. Gieseler:

The receipt of your application dated August 22, 1952, for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-2666 and referred to the Rare and Miscellaneous Metals Division.

Kindly refer to DMEA-2666 in any future correspondence relating to your application.

Sincerely yours,

SIGNED

Wingfield Chamberlain
Acting Chief, Operation's
Control and Statistics Division

8-22-52

Note:

There is also a pending DMPA case for a production loan by this same company

SD

25451

CAL-COP, INC.

COPPER EXPLORATION

221 PALMER STREET JAMESTOWN, NEW YORK

TEL: JAMESTOWN 87-985

August 20th, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 22 1952

Director
Defense Minerals Exploration Administration
Washington 25, D. C.

Dear Sir:

Enclosed find "Application for Aid in an Exploration Project, et al", in quadruplicate on form MF-103.

Your cooperation in expediting consideration of this application is requested, to permit our making the arrangements necessary to get this work done while weather conditions are favorable.

If the results of this initial drilling are favorable, one of the larger producing companies has indicated that they wish to extend the drilling beyond our planning with the idea of proving sufficient ore to merit actual mining beginning early in 1953. This added drilling will require several months and the dead line for removal of equipment is about December 1st at the very latest.

Will you kindly send us as many copies as is necessary for us to have executed on form MEA-203 (Owner's consent to Lien), considering that one group of claims have one ownership, and the other two have a different ownership.

We are also at loss to know exactly what we are consenting to abide by in Item 7 (a) in (Sec. 7 DMEA No.1) inasmuch as we were not sent DMEA Order 1, but only the Question and Answer booklet. We rather hope that we were able to comply with it, even in absentia, and that no serious delays will occur. Will you forward a copy?

Very truly yours,

Cal-Cop, Inc.

Russell W. Gieseler
President

RWG:hh

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. DMEA-2666
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Estimated Cost
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(*c*) If a corporation, add to above statement, titles, names and addresses of officers. See APPENDIX A.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract 4 Lode Mining Claims, located in Section 5, T 36N, R 12 W, Mt. Diablo Base Line & Meridian, on the East Fork of New River, in the County of Trinity, in the State of California, and a Placer Mining Claim superimposed thereon, held by lease from the principal stockholders of this company.

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

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

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property. Exhibit A, herewith, a copy by photograph of lease

(*e*) If you own the land, describe any liens or encumbrances on it No encumbrances.
new claims now being recorded.

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. Mill Site Placer Mining Claim, Book 50, Page 211; Teressa Lode Claim, Book 50, Page 164; High Grade Lode Claim, Book 50, Page 166, Mining Records, County of Trinity. Two/

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

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

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

(*d*) State the facts with respect to the accessibility of the project; Access roads, distances to shipping, supply and residence points. See Exhibit B, amended by road described being completed and to be continued 2 miles and completion of trail repairs for pack access.

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.
Ample manpower available for further exploration and repairs, pack animals available for supplies, equipment, etc. transport. Water and power not important at this stage of investigation. About 2000 H.P. water power available at site and public power lines about 20 miles distant.

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

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc. **Exhibit B gives full details, Pages 7 and 8, Maps III & IV**

(*c*) The work will start within **30** days and be completed within **six** months from the date of an exploration project contract.

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

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

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

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

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

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

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

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project. **None**

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

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

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

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

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

[X] Money [ ] Use of equipment owned by you [ ] Other

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated Aug 20, 1952, 195

CAL-COP, INC.
(Applicant)

By Russell W. French
President

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

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

CAL-CO[illegible] INC., 221 Palmer Street, James[illegible]n, New York

APPENDIX A

Item 1 (c)

President - Russell W. Gieseler, 114 Ellis Ave., Jamestown, N. Y.
Vice-President- Albert H. Harrison, 209 West 8th St., Jamestown, N. Y.
Secretary- A. M. Gieseler, 221 Palmer Street, Jamestown, N. Y.
Treasurer- Earl G. Griffith, 51 Charles Street, Jamestown, N. Y.

CAL-COP, INC. 221 Palmer Street, Jamestown, N.Y.

EXHIBIT C

Item 5 (d) Experiance and Background:

Management- President of Corporation: President of Swanson Mining Corporation, since 1941, placer mine located in Trinity County, California, also President of manufacturing enterprises, etc.

Supervision- Mining Geologist, Allen W. Pinger, Consulting Mining Geologist for New Jersey Zinc Company, opinions acceptable to American Smelting & Refining Company, and other companies of like stature.

Exploration-on-the-job-Supervision- Don E. Lee, graduate student, Leland Stanford University, (recommended by Prof. Charles F. Park, Jr., head of School of Mines at Leland Stanford).

Exploration Supervision- President or Vice President of Cal-Cop, Inc.

* *

EXHIBIT D

Page 1.

Item 6 (a) Independant Contracts.

The drilling recommended by Dr. Pinger will be by competant, experienced drilling contractors, acceptable to him, either on a per foot contract basis, or on a shift contract basis, as outlined in Exhibit B.

Drilling cost estimates: $4.00 per foot, 500 to 750 feet.

Transportation of Drill Rig from Spokane or Salt Lake City- $2,000.

Drilling on per foot basis- approximately $5,000.

OR, Actual cost of transportation to drilling site, plus $65. per shift for one drill rig and crew while setting up and teaming down, and $110 per shift for actual drilling time, with no minimum guarrantee.

Item 6 (b) Labor, supervision, consultants:

Camp cook and extra laborer @ $12.00 per day x 30 days-	$360.
Supervision- Mining Geologist	500.
Junior Mining Engineer	300.
President or Vice President- @ $25.00 per day x 20 days	500.
Travel Expense- Supervisory Personnel	1200.
	$2860

Item 6 (c) Operating Equipment and Supplies:

Cook Stove	$35.00
Cots 6 @ $6.95	41.70
Sleeping Bags 3 @ $20	60.00
Pots & Pans, etc.	15.00
Gasoline Lantern	12.00
Minor Items	10.00
	$173.70

Food Supplies @ $2.00 per man per day, or 30 x 8 x $2.00-	$480.00
Transportation by Pack Train Equipment and Supplies-	150.00
	$630.00

Item 6 (d) Operating Equipment, see above.

Item 6 (e) Repair and Rehabilitation: Shelter for pe sonnel can best be provided by the repair of a cabin on the property, the walls of which are logs and intact, but which is otherwise in poor repair. Requires complete reroofing including part of roof supports, new windows, new floor, and the erection of a privy for the personell. Estimates by local contractor- $398.70 plus pack train transportation of materials not available on propoerty, adding possibly $50 to total cost.

Item 6 (f) No new buildings required.

Item 6 (g) Miscellaneous:

Trail improvement to provide for drill rig transportation	$250.00
Core boxes and transportation in and out	250.00
Assays and Analysis	200.00
Workman's Compensation	100.00
Payroll Taxes	20.00
Accounting $75 per week x 4 weeks	300.00
	$1,120.00

Item 6 (h) Contingiencies-

Possibility for need for temporary bridges over East Fork of Trinity River for drill rig transportation, etc.	$1.000.00

Recapitulation:

Item 6 (a)		$5,000.00
" 6 (b)		2,860.00
" 6 (c)	Equipment	173.70
	Supplies	630.00
" 6 (d)		
" 6 (e)		448.70
" 6 (f)		
" 6 (g)		1,120.00
" 6 (h)		1,000.00
	Total-	$11,231.40

CAL-COP, INC., 221 Palmer Street, Jamestown, N. Y.

EXHIBIT A
5 pages

THIS INDENTURE, made as of this 8 day of March, 1962, by and between C. MARSHALL SALYER and TERESSA M. SALYER, both of Salyer, Trinity County, State of California, hereinafter referred to as the LESSORS, and CAL-COP, INC., a corporation duly created, organized and existing under and by virtue of the laws of the State of New York, and having its principal offices at 221 Palmer Street, in the City of Jamestown, Chautauqua County, New York, hereinafter referred to as the LESSEE, witnesseth:

THAT, the LESSORS, in consideration of the sum of $100.00 (One hundred Dollars) lawful money of the United States paid herewith, and of other valuable considerations as provided in certain ARTICLES OF AGREEMENT of even date hereof, and in further consideration of rents hereinafter provided, hereby leases to the LESSEE, all of the following property and rights, with warranty of title with and in respect thereof free and clear of all liens, encumbrances, to wit:

the following group of mining claims, Viz.,

"TERESSA MINE LODE CLAIM","HIGH GRADE LODE CLAIM" and "MILL-SITE PLACER CLAIM",

which are located on the East Fork of the New River in the New River Mining District of Trinity County and State of California, as recorded in the Mining Records of the said County and State aforesaid (Section 5, Township 36N, Range 12W, Mount Diablo Meridian), together with all other adjacent adjoining or contiguous claims owned by the LESSORS or claimed subsequent to the execution of this instrument, and all others rights of every description and kind pertaining thereto whatsoever, and all buildings, structures and improvements thereon or thereof, and of all machinery, engines, pumps, compressors, tracks, drills, equipment, tools, implements, etc., of every kind used in connection therewith.

TO HAVE AND TO HOLD the same, and to enter into and take possession of all and singular said premises and property, and to commence work and to make improvements thereon and to operate, mine and extract the

minerals from the said property and premises, for the term of ninety-nine (99) years from the date hereof, which term will expire on the 8th day of March, 2951 A.D., unless sooner terminated or forfeited by the operations of any of the termination clauses of this INDENTURE or of the ARTICLES OF AGREEMENT entered into by the parties hereto of even date.

THAT, in consideration of said leasing, the LESSEE covenants and agrees with LESSORS, as follows:

1. In addition to the payments above noted and the other valuable considerations provided in the ARTICLES OF AGREEMENT of even date, the LESSEE shall pay the sum of One Hundred Dollars ($100.00) lawful money of the United States each month on or before the 10th day thereof, beginning with April, 1952, to the LESSORS as long as either of the parties named as LESSORS shall live, or until the termination hereof as provided in the terms of the ARTICLES OF AGREEMENT of even date.

2. The LESSEE further covenants and agrees to carry out the further provisions of the ARTICLES OF AGREEMENT of even date, with respect to the geological survey, the negotiation of contracts and to mine as early as is prudent and practical.

3. The LESSEE agrees to pay all taxes accruing from the date hereof, and to pay taxes advanced by the LESSORS between the 5th day of October, 1950 and the date hereof, and will do and file proof of annual assessment work as legally required, which proof of labor shall be filed with the Recorder of Trinity County not later than June 1st of each year. The LESSEE further agrees to furnish proof of both the proper filing of Assessment work Proofs, and of the payment of taxes and assessments, upon request by the LESSOR.

4. As provided in the ARTICLES OF AGREEMENT, in the event of a termination of this INDENTURE and/ or of the ARTICLES OF AGREEMENT, the LESSEE shall restore to the LESSORS an equal title to that possessed by them as of the date of the execution of these instruments.

THAT, the LESSEE shall have the right to remove, within 90 days of

the termination hereof, all machinery, equipment and other property as is usual under accepted mining practices in the State of California.

~~THAT, the LESSORS agree to transfer to the LESSEE all of their rights and title in the realty and claims at their death, and hereby direct their executors and administrators to deliver a Quit Claim deed to all of the claims and properties which are the subject of this INDENTURE to the LESSEE upon the payment of the sum of $500.00 (Five Hundred Dollars) lawful money of the United States to the said Executor or Administrator of the survivor's estate.~~

THAT, the provisions of this INDENTURE shall be binding upon and inure to the benefit of the heirs, executors, administrators, successors or assigns of the parties hereto.

IN WITNESS WHEREOF, the LESSORS have hereunto set their hands and seals, and the LESSEE has caused its corporate seal to be hereunto affixed, and these presents to be signed by its duly authorized officer, the day and year above first written.

IN THE PRESENCE OF:

_____ (L.S.)
Lessor

_____ (L.S.)
Lessor

CAL-COP, INC., Lessee

By_____
President

State of California)
)
County of) ss.
)
City of)

On this ____ day of March, 1951, before me, the subscriber, personally came before me C. MARSHALL SLYKE and TERESA M. SALTER, to me known, and known to the same persons described herein, and they severally and duly acknowledged to me that they executed the same.

_____
Notary Public

State of New York)
)
Chautauqua County) ss.
)
City of Jamestown)

On this _____ day of March, 1952, before me personally, came RUSSELL J. GISSELL, to me known personally, who being, by me, duly sworn, did depose and say that he resides in the City of Jamestown, Chautauqua County, New York; that he is President of CAL-COP, INC., a corporation described in and which executed the within instrument: that he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed to said instrument by order of the Board of Directors of said corporation: and that he signed his name hereto by like order.

_____
Notary Public

ASSIGNMENT OF MINING CLAIMS

County of Chautauqua)
State of New York) ss

Russell W. Gieseler, being the owner of an undivided half interest in the Bet-Su and Agnes-Tereesa Lode Mining Claims located in Section 5, Township 36 North, Range 12 West, Mt. Diabolo Meridian, in Trinity County, in the State of California, does hereby assign and transfer to Cal-Cop, Inc., a corporation incorporated under the laws of the State of New York, all right, title and interest in the said claims, in consideration of the payment of the sum of $1.00 lawful currency of the United States, receipt of which is hereby acknowledged, this 19th day of August, 1952.

_____ (L.S.)

County of Chautauqua)
State of New York)ss

Subscribed to and sworn to before me this ___ day of August, 1952,

_____
Notary Public

ALLEN W. PINGER
MINING GEOLOGIST
1419 CIRCLE WAY
SALT LAKE CITY

CAL-COP, INC.
JAMESTOWN, NEW YORK
EXHIBIT B
11 sheets, 4 maps

REPORT

ON THE EXAMINATION OF

CAL-COP CLAIMS

TRINITY COUNTY, CALIFORNIA

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MAPS		Scale:
I	Northern California-Index	1 in = 40 mi
II	Sketch of Part of Property, Cal-Cop, Inc	1 in = 100 ft
	(Inset: Part of Trinity County)	1 in = 4 mi
III	Geological Sketch- Workings	1 in = 30 ft
IV	Geological Sections	1 in = 30 ft

ALLEN W. PINGER
MINING GEOLOGIST
1419 CIRCLE WAY
SALT LAKE CITY

May 23, 1952

Mr. Russell W. Gieseler, President,
Cal-Cop, Inc.,
221 Palmer Street,
Jamestown, New York.

EXAMINATION OF CAL-COP CLAIMS (SALYER COPPER)
TRINITY COUNTY, CALIFORNIA

Dear Mr. Gieseler:

This report is based on observations made during a visit to the property with you from May 13 to May 17, 1952.

CONCLUSIONS- Difficulty of access and lack of transportation are the most serious obstacles to overcome in considering any plan to prospect and develop the property.

The two main showings, about 300 feet apart in the bottom of the canyon, expose copper sulphide ore of interesting width and quality. Unfortunately, there has been inadequate work done to afford any quantitative estimate of reserves or possibilities. There is nothing to indicate continuity or extension either between the showings or to depth.

The two showings appear to be in the same northwesterly trending fault or shear zone, which follows the bed of the creek between the two. The presence of strong cross fracturing at each showing makes me hesitate to assume continuous ore between the two showings; they may possibly be small pipe-like shoots in the fault zone, instead of a single strong continuous ore body.

The habit of ore occurrence in the metamorphosed rocks of the Shasta-Trinity Counties region, with a few notable exceptions, is to be small and spotty. If this prospect proves to be one of the exceptions, it is difficult to see it in the present exposures: if the zone does represent a stong continuous ore body (which remains to be proved) a length of 500 feet, an average width of 20 feet, and an assumed depth of 500 feet, would yield 500,000 tons of ore. The best estimate of grade that I can make from present exposures and analyses, is that the ore may run about 5.% Cu, 0.01 to 0.02 ozs Au, and 0.5 ozs Ag.

It is doubtful if 500,000 tons of this grade would stand the cost of equipment, road construction, etc., necessary for operation. If larger reserves can be developed, the property would be of marginal interest; promise of reserves of several million tons would make it of real interest.

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In a location with more favorable access, a limited amount of work to determine continuity, extent, and possibilities would be justified. In the present situation, where all supplies have to be packed in, even the minimum development is faced with high cost.

The steep canyon walls with heavy slide rock and talus, plus the probability of deeper weathering of the ore, make trenching of the ore zone to north and south appear impractical.

A more desirable method of development than trenching would be to clean out the adits at each showing, and drive on the ore zone as far as sulphide ore can be followed. The objection to this is the difficulty and cost of transporting even the least equipment necessary to do efficient work.

The quickest and least expensive means of testing the possibilities of the property would be by diamond drilling five or six 100' holes to establish grade and continuity of ore below and between the two main showings. The actual cost of drilling would be between $4.00 and $5.00 per foot; The cost of taking the equipment in, setting up, dismantling, and moving out, will cost as much as the drilling. The entire job, including supervision, would cost about $6,000.

PROPERTY- The property, four lode and one placer claims, is held by location, the claims being situated in Section 5, T36N, R12W, Mt. Diablo Base Line and Meridian, on the East Fork of New River, in the northwestern part of Trinity County. See maps I and II. The area is extremely rugged, elevations varying from about 2600 feet at the prospect, to 6800 feet at the top of Cabin Peak only three miles to the east. The canyons are narrow, steep walled, and densely wooded. Annual rainfall is heavy, and streams provide an ample supply of water. Water power could be developed. Preliminary prospecting and development could probably only be done during the dry season.

Access is difficult. The property is nearly 90 miles by road and trail east of Eureka, the nearest shipping point for rail or water transportation. Tacoma, the nearest smelter, is 850 miles by water from Eureka.

U.S. Highway No. 299 from Eureka is hard surfaced, but narrow and winding, and crosses two steep summits in the distance of 63 miles to Sawyer's Bar, where a graded gravel surfaced road turns off to Denny, a distance of 16 miles of narrow winding road over another summit. From Denny, the U. S. Forest Service is now building a road several miles farther up New River to make access for logging off a burned area. When this road is finished it will leave about eight miles of trail to reach the property. To convert this eight miles of trail to road would be difficult and costly.

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At the present time the trail up the East Fork is blocked by landslides, but the Forest Service should have the trail opened by mid-summer.

HISTORY- The area of the East Fork of New River was first worked for placer gold in terrace gravels above the present creek bottom. The first published mention of the copper prospect is under the name of the Nonpareil Mine in the 13th Report of the State Mineralogist, in 1896. The claims were presumably located in the early '90's. A small amount of hand-sorted ore is said to have been packed out in 1917; this is the only reported production. After a long period of abandonment, the claims were re-located by C. Marshall Salyer.

GEOLOGICAL OCCURRENCE- The New River area of Trinity County has not been mapped geologically. The rocks comprise a thick series of metamorphic greenstones, originally volcanics; sediments: shales and limestones; schists; serpentine; and intrusive granite and grano-diorite. In the immediate area of the property all rock exposures observed were dense finely grained massive greenstones, which are probably metamorphosed volcanics. Relict structures seen suggest andesitic flows and agglomerates. On the trip out of camp, about one mile west of the cabin, outcrops of black shale or slate was seen; and the ridge west of Pony Creek is a large mass of serpentine.

The structure in the massive greenstone is obscure, but appears to trend northwest-southeast, with a dip to the northeast. The ore exposed at the property appears to be locallized along a fault or sheared zone parallel to the NW-SE trend of the country rock. The stronger faults in the showings strike from N30°W to North, and dip at angles of from 25° to 50° to the NE and East.

There are two main showings: one on the north side of the creek, which extends from creek level to about 25 feet above, and the other on the south side of the creek, about 300 feet southeast of the first. Good ore is exposed at each locality, and consists of chalcopyrite ($CuFeS_2$) with only very sparse pyrite (FeS_2) occurring in irregular massive bunches in highly sheared and altered greenstone. Short adits have been driven into the hill along the ore zone at each locality. These are inaccessible at present, but the old dumps indicate that good sulphide ore was obtained.

The irregular lense-like masses of sulphides vary from a few inches to about one foot in thickness, and are from one to three or four feet long. The country rock between sulphide lenses is often barren, and occasionally has disseminated chalcopyrite in it. The masses of sulphides appear to be locallized

ALLEN W. PINGER
MINING GEOLOGIST
1419 CIRCLE WAY
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along faults and at the intersections of the main northwesterly trending faults with cross faults or fractures usually running northerly to northeasterly. Exposures are lacking, but there is some suggestion that the main northwesterly fault zone is displaced by some of these cross faults; and the further suggestion that possibly the ore is locallized at intersections of the two fault systems. Map III shows the relative locations of the main showings and other smaller showings.

The mineralization appears relatively strong where exposed. The fault zone is highly fractured and broken, and possibly followed an agglomerate bed between two thick massive andesitic flows, a few fragments of highly altered chloritic slate were observed in the unreplaced matrix of the ore zone. The rock appears to be a reasonably favorable host for sulphides; the stronger structures should persist, and I see no obvious geological reason why the ore should not continue with them.

The following tabulation shows the results of analyses of samples taken on the property:

Date	Sample No.	%Cu %	Zn %	Au Ozs/Ton	Ag Ozs/Ton	Remarks
2-28-45	1	5.96	Tr	0.01	0.79	C. M. Salyer
2-28-45	2	8.01	0.10	0.02	1.18	C.M.S.
8-14-45	A3	10.07	n.d.	n.d.	n.d.	C.M.S.
8-14-45	A4	11.23	n.d.	n.d.	n.d.	C.M.S.
8-14-45	A5	9.72	n.d.	n.d.	n.d.	C.M.S.
8-14-45	A6	14.21	n.d.	n.d.	n.d.	C.M.S.
8-14-45	A7	8.92				C.M.S.
9- 8-45	A7		n.d.	0.01	1.79	C.M.S.
9- 8-45	A8	13.23	n.d.	0.03	1.77	C.M.S.
9- 8-45	A9	13.72	n.d.	0.01	2.20	C.M.S.
9- 8-45	B1	n.d.	n.d.	Tr	0.20	C.M.S. (From badly leached
9- 8-45	C1	2.81	n.d.	0.02	0.59	C.M.S. (East outcrop
2-26-47	1-B	n.d.	n.d.	0.01	Tr	C.M.S. 1/2 mile up South Fork of East Fork.
7-12-48	X-1	0.17	n.d.	0.01	Tr	C.M.S. ditto
8-25-48	Crop	Tr	n.d.	0.01	Tr	C:M:S. 1 mile up ditto
9-10-48	43	3.93	n.d.	0.015	0.08	H. N. Witt
9-10-48	44	3.59	n.d.	0.02	0.38	H.N.W.
9-10-48	45	4.71	n.d.	0.015	nil	H.N.W.
9-10-48	46	5.26	n.d.	0.005	0.50	H.N.W.
9-10-48	47	0.15	n.d.	0.005	nil	H.N.W.
9-10-48	48	7.52	n.d.	0.01	0.70	H.N.W.

n.d.= not determined; nil= not present; Tr= trace
Analyses by Abbott A. Hanks, Inc., San Francisco

ALLEN W. PINGER
MINING GEOLOGIST
1419 CIRCLE WAY
SALT LAKE CITY

Because of Mr. Salyer's illness, I was unable to find out exactly where the samples were taken; from my one inspection of the showings with him, I understand that the samples were taken of the different sulphide exposures, and that there is some duplication of samples.

The last group of six samples, taken by Mr. H. N. Witt, appear to have been taken across the showings as the ore would be mined. His samples, Nos. 43-46, were probably taken from the showing on the north side of the creek; No. 47, in the East showing in the trench near my station 4-B on Map III, and No. 48 at the showing on the south side of the creek. It is of interedt to note that these samples show approximately the same copper content as my estimate of grade based on a careful estimate of percentage of chalcopyrite present in the exposures.

My estimate of grade is as follows:

Showing on North side of creek: measurements are taken from station 0, toward station 1, from west to east.

From	To	Feet	Description	Chalcopyrite %	Cu %
0.0	6.5	6.5	Dense chloritic greenstone	None	None
6.5	10.5	4.0	Sheared do do	± 3.	± 1.
10.5	15.0	4.5	do do do	15-20	± 6.
15.0	21.0	6.0	do do do	± 10	± 3.
21.0	22.5	1.5	do Fault Gouge, no sul.	None	None
22.5	28.0	5.5	Sheard chloritic greenstone	10-15	± 4.
28.0	32.0	4.0	do do do	± 20	± 7.
10.5	32.0	21.5	AVERAGE	12-15	4. to 5.

Showing on South side of creek: From west wall to east across ore exposure:

0.0	14.0	14.0	Sheared chloritic greenstone	± 20	± 7.
14.0	44.0	30.0	Dense do do	2-3	± 1.

ORE RESERVES AND POSSIBILITIES- From the small amount of work done it is impossible to estimate any developed reserves; but the width and grade of ore exposed warrant some speculation as to the geological possibilities of the occurrence.

The two showings are about 300 feet apart, and appear to be in the same fault zone. If the ore is continuous between the two, and assuming an extent of 100 feet to northwest and to southeast beyond the showings, there is a possibility of a length of 500 feet with an average width of 20 feet; these dimensions give a horizontal section of 10,000 square feet. Using a factor of 10 cubic feet of ore per ton, an ore body of this size would

ALLEN W. PINGER
MINING GEOLOGIST
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SALT LAKE CITY

contain 100,000. tons for each 100 feet of vertical depth.

If the ore is not continuous between exposures, but is localized in pipe-like shoots in the fault zone, the tonnage possibilities would be probably only of the order of 25,000 to 30,000 tons for each 100 feet of depth.

In the first instance, greater tonnage could be obtained if greater length or greater width were proved in prospecting. In the second instance, pipe-like shoots, the only speculative possibility would be find more massive sulphides and perhaps improved grade.

The most interesting potentiality for large tonnage is the possibility of extent along the trend or strike of the fault zone beyond present showings. If this possibility should materialize, the steep canyon walls would afford adequate backs to permit large reserves above adit levels driven from just above the creek. Unfortunately, the slopes are covered with a heavy overburden of detrital material which prevents adequate inspection to determine gossan croppings or other evidence to indicate persistence of mineralization along strike.

From present showings I believe it is reasonable to expect an average grade as mined of about 5% Cu. Because of the irregular habit of occurrence of the sulphides, I should certainly hesitate to forecast a higher average content. A 5% Cu ore, with the copper occurring as the mineral chalcopyrite ($CuFeS_2$), and with very sparse pyrite (FeS_2) present, as indicated by the exposures, should yield a concentrate running about 30% Cu, with a ratio of concentration of about 6 tons of crude ore milled to produce one ton of concentrates. The ore would appear to be readily milled by gravity methods--jigs and tables; although this question must obviously await further information as to the reality of the grade and reserves. From the analyses made, I would expect a 30% Cu concentrate to run 0.05 to 0.06 oz Au and 2.0 to 3.0 oz Ag per ton. Unfortunately, the precious metal values are not as favorable as would be desirable in a prospect as inaccessible as this one is.

MINING CONDITIONS- The character of the ground exposed in the showings is such that conditions should be favorable for low cost open stope methods of mining. The rock is hard and tight, and I do not anticipate trouble from bad ground that would require timbering, nor trouble from excessive water. These questions, however, cannot be finally answered until further development work is done.

PROSPECTING- In a more favorable location with respect to access and transportation, the prospect would warrant some additional work to determine the possibilities for tonnage and grade. In the existing situation, the difficult access, lack of tranportation to the property, and the long haul over steep winding roads

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MINING GEOLOGIST
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to rail or water transportation results in a discouraging outlook as to costs of prospecting, development, and operation. The lack of precious metal values is a further handicap. Taking all these factors into consideration, the gamble is a long one.

Under the discussion of Ore Reserve Possibilities (page 5) I have suggested the possibility of 100,000 tons of 5% Cu ore per 100 feet of depth. The real facts, when known, may be a fraction of this figure, or they may be several times greater. This may only be determined by prospecting and development.

There are three general approaches to the solution of the problem: 1. Trenching along the strike or trend of the ore zone to the northwest and southeast. The hill slopes are steep and heavily covered with detrital material. Trenching would be difficult because of the uncertain depth to ledge; and results would be uncertain because of the probability that sulphides at higher elevations would be weathered, leached, and oxidized. Samples would be unreliable in terms of sulphide ore below. Timbering of the trenches would probably be necessary to prevent caving of overburden. The cost of such work would be out of proportion to the information obtained, and is not to be recommended.

2. At each showing there is an old adit. These adits could be cleaned out and driven along the course of the ore zone to the northwest and southeast. This work could probably be done with a minimum of timbering, as the ground should stand well except for an occasional weathered fault near the surface. As depth under the hill is gained, the rock should be tight and strong. Systematic cross-cutting of the ore zone would permit adequate sampling. The cost of such work--drifting and cross-cutting at tunnel level, would normally be from $10.00 to $15.00 per foot of advance. Under existing conditions, where all equipment and supplies have to be packed in by trail, the cost would be at least double, even with every precaution being taken to haul in only essential equipment to permit efficient work. Again, the cost of such work would be out of proportion to the risk involved.

3. Prospecting by drilling. Probably the most information per dollar of cost could be obtained by drilling a few holes to determine continuity and grade of ore between and below the surface exposures. The topography is such that shallow holes could be drilled to intersect the ore zone 75 to 100 feet below the showings, and an intermediate hole drilled to test continuity between showings. These holes would give valuable information as to grade, width, and nature of ore occurrence. If these holes proved ore of interesting grade and width, a program of further drilling could be planned to learn more of the extent of the deposit along the trend to northwest and southeast, and to greater depth.

For an initial testing of the showings I would suggest two shallow holes to be drilled from near station 2 (on map III)

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One of these would be drilled to the west at an angle of -60° with the horizontal to determine grade and width under the showing on the north side of the creek. If ore is encountered, a second hole would be drilled vertically from the same location to test at slightly greater depth, and somewhat southeast of the showing. The second drill location would be in the bottom of the trench between stations 4-A and 4-B, with one hole drilled at -60° southwesterly toward the main showing on the south side of the creek, at station 5. If ore is encountered, a second hole from this location would be drilled vertically.

If these four holes encounter ore, a fifth hole would be drilled vertically from a location in the vicinity of station 3; if only the inclined holes at the other locations encounter ore, the hole at station 3 would also be inclined at -60° to the S.W.

The five holes suggested would aggregate between 500 and 750 feet of drilling. The actual drilling cost would be about $4.00 per foot, or between $2,000.00 and $3,000. for the job. It would cost about $2,000.00 to bring the equipment in to the prospect from either Salt Lake or Spokane. Allowing for drilling, transportation, supervision, sampling and assaying, and preservation of the core, it would cost about $6,000 to do this job. I have talked with Messrs Goldsworthy and Baker of Boyles Bros. Drilling Co., here in Salt Lake, giving them the distance from Salt Lake, the distance to be packed in, and the character of the ground to be drilled; and it is from their figures that I have prepared the above estimate of costs. They propose that the Mining Company pay the cost of transportation to the drilling site, and $65.00 per shift for one drill rig and crew while setting up, moving, and tearing down; and $110.00 per shift for drilling time. The proposal has the advantage of no minimum footage guarantee, and works out satisfactorily.

Core recovery and rate of drilling should be good, judging from the rock and ore that can be seen in the showings.

VALUE OF ORE- Information on grade and tonnage is insufficient to do more than speculate as to the value of the ore. From the limited showings, from the few analyses available, and from my estimate of the grade of ore as mined, I judge that the crude ore would run 5.% Cu, 0.01 oz Au, and 0.5 oz Ag. About six tons of run of mine ore would produce one ton of concentrate running perhaps 30.% Cu, 0.05 oz Au, and 2.5 oz Ag.

With copper at 15¢ per lb. this concentrate, less treatment charges, would net between $90.00 and $100.00 per ton at the smelter.

With copper at 24¢ per lb. this concentrate, less treatment charges, would net between $135.00 and $150.00 per ton at the smelter.

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Freight charges and handling: 90 miles truck haul from mine to Eureka, and 850 miles water transport from Eureka to Tacoma, Washington, would total between $20.00 and $25.00 per ton.

Subtracting freight charges on the concentrate, and calculating the value back to the crude ore, we find that on 15¢ copper, the value is about $15.00 per ton at the mine, and on 24¢ copper, the value is about $20.00 per ton at the mine.

Costs, per ton of crude ore, would be:

Mining and development,	about	$5.00	per ton
Milling	about	2.00	
Overhead, depletion, and amortization	about	2.00	
Total costs		$9.00	per ton crude ore

The wholly intangible item would be the cost of building 8 miles of access road to the property. On a small tonnage of concentrates, the cost of the road would be prohibitive. On a large ore reserve, with a large tonnage of concentrates to be shipped, it might be feasible.

It is hazardous to attempt a valuation on the meagre data available; the above rough figures are significant only in so far as they indicate rather clearly, I believe, that on a 15¢ market for copper, even a moderately large tonnage of ore is close to being marginal. On 24¢ copper, a small mine is still marginal, but a large tonnage of reserves might well be valuable and be worthy of serious consideration.

To go a step farther, I would hazard the opinion that the promise of reserves of less than 500,000 tons of 5% Cu would be of very doubtful or no economic value; reserves of between 500,000 and 1,000,000 tons would be of marginal value, and might be worth while on present markets. Possibilities of several million tons would be of definite interest.

The prospect needs additional work to give some indication of its potentialities. In a more favorable situation the geological conditions are sufficiently favorable to warrant the preliminary drilling I have suggested. Under the adverse conditions that exist, the risk is great, and the cost of even the modest program suggested is high.

Respectfully submitted,

ALLEN W. PINGER
MINING GEOLOGIST
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BIBLIOGRAPHY AND ABSTRACTS

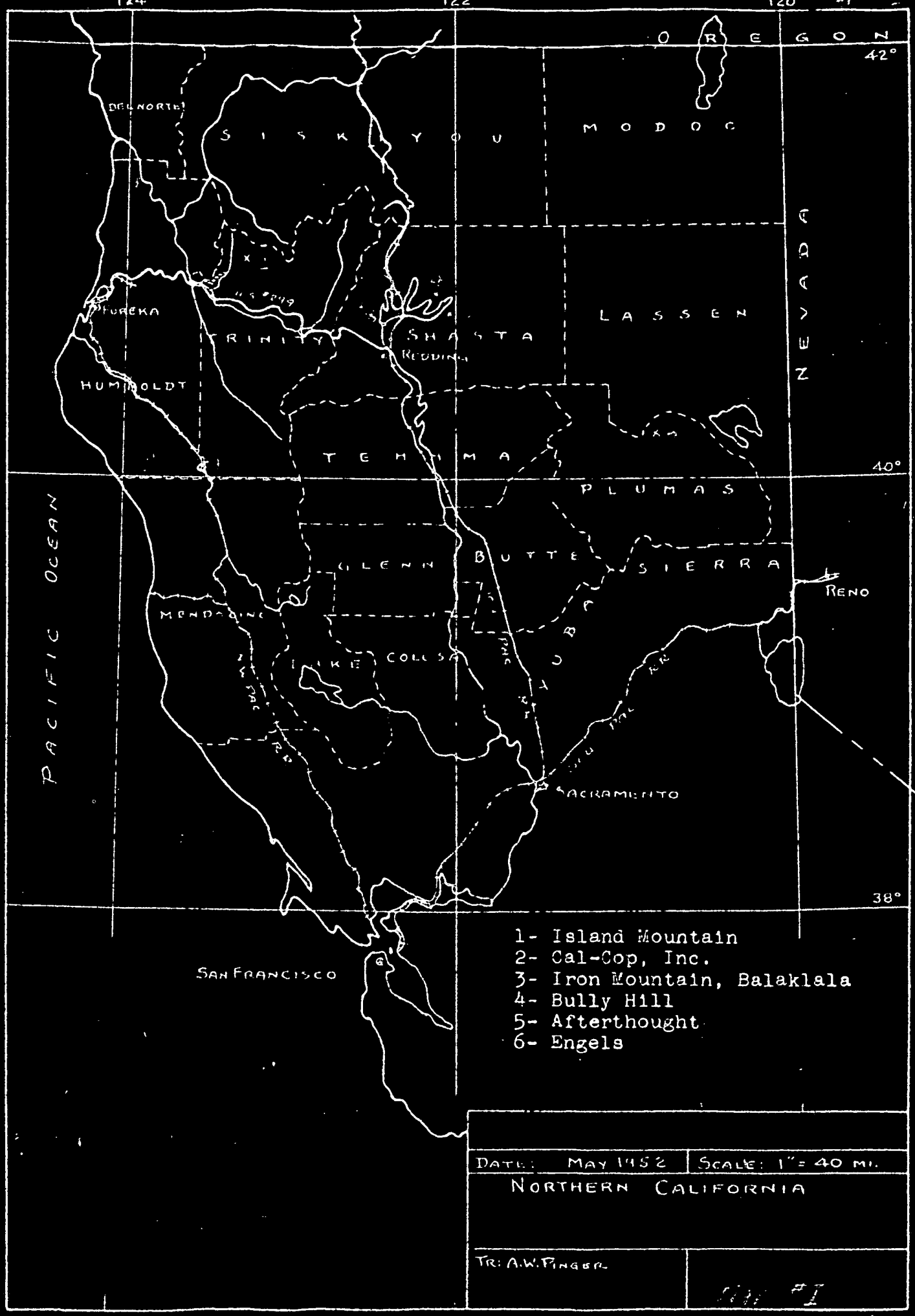
1896- Crawford, J. J., 13th Report of State Mineralogist, Sept '96
Nonpareil Mine- Located on the East Fork of New River, 8 miles east of Francis, Elevation 2400.
Adit, 35 feet, several open cuts; Vein 4' wide, dip 26° east. Slate footwall, Porphyry hangingwall.
Ore: chalcopyrite, sparse gangue.
Idle: C. S. McAtes, Francis, owner.

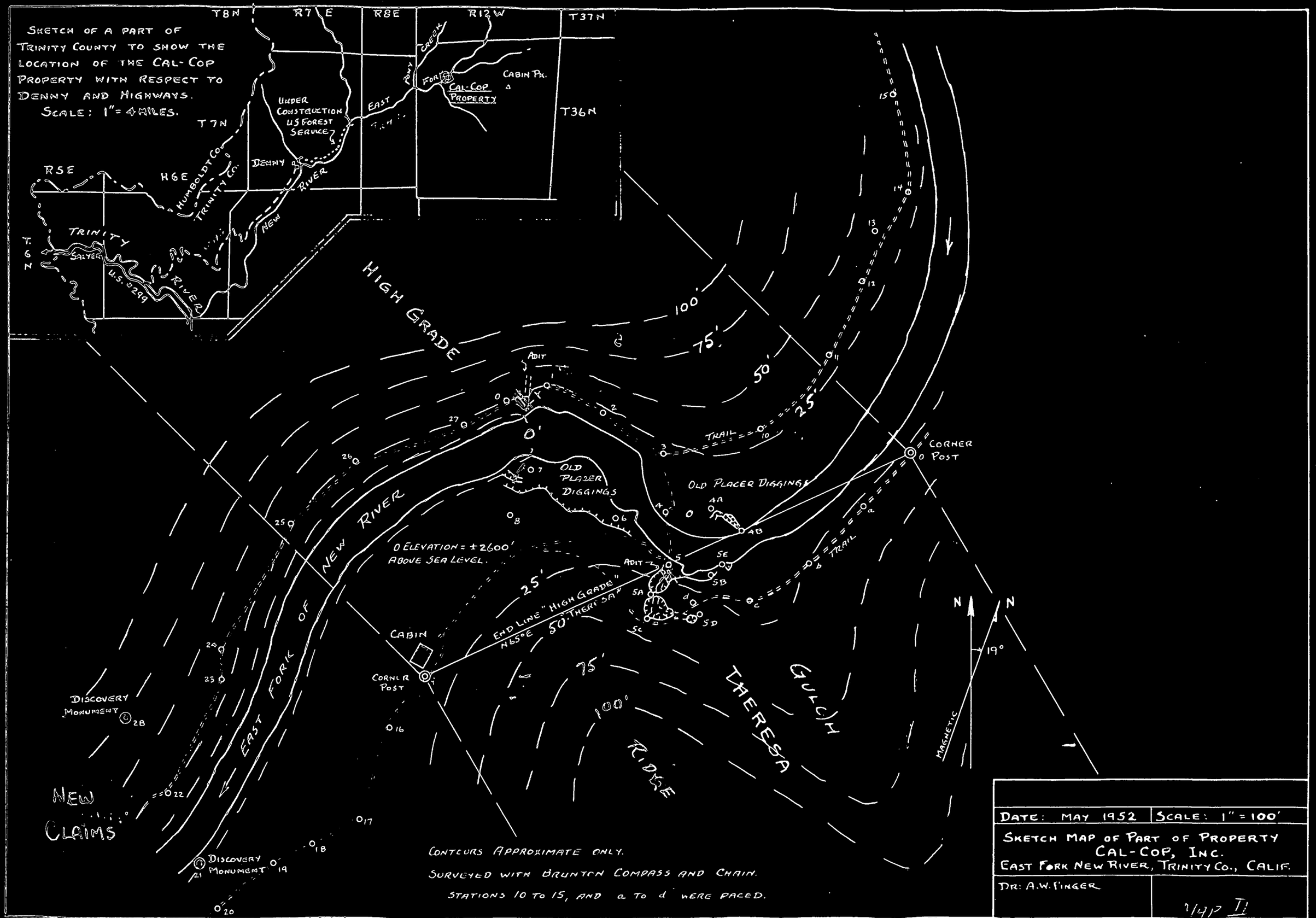
1905- Aubury, L. E., The Copper Resources of Calif., Bull. 23
Nonpareil Group- 4 claims, East Fork of New River
Lode 1' -14' wide; adit 25 feet. 8%Cu.
Gossan outcrops reported over length of one mile.
C. S. McAtes, Redding, Owner

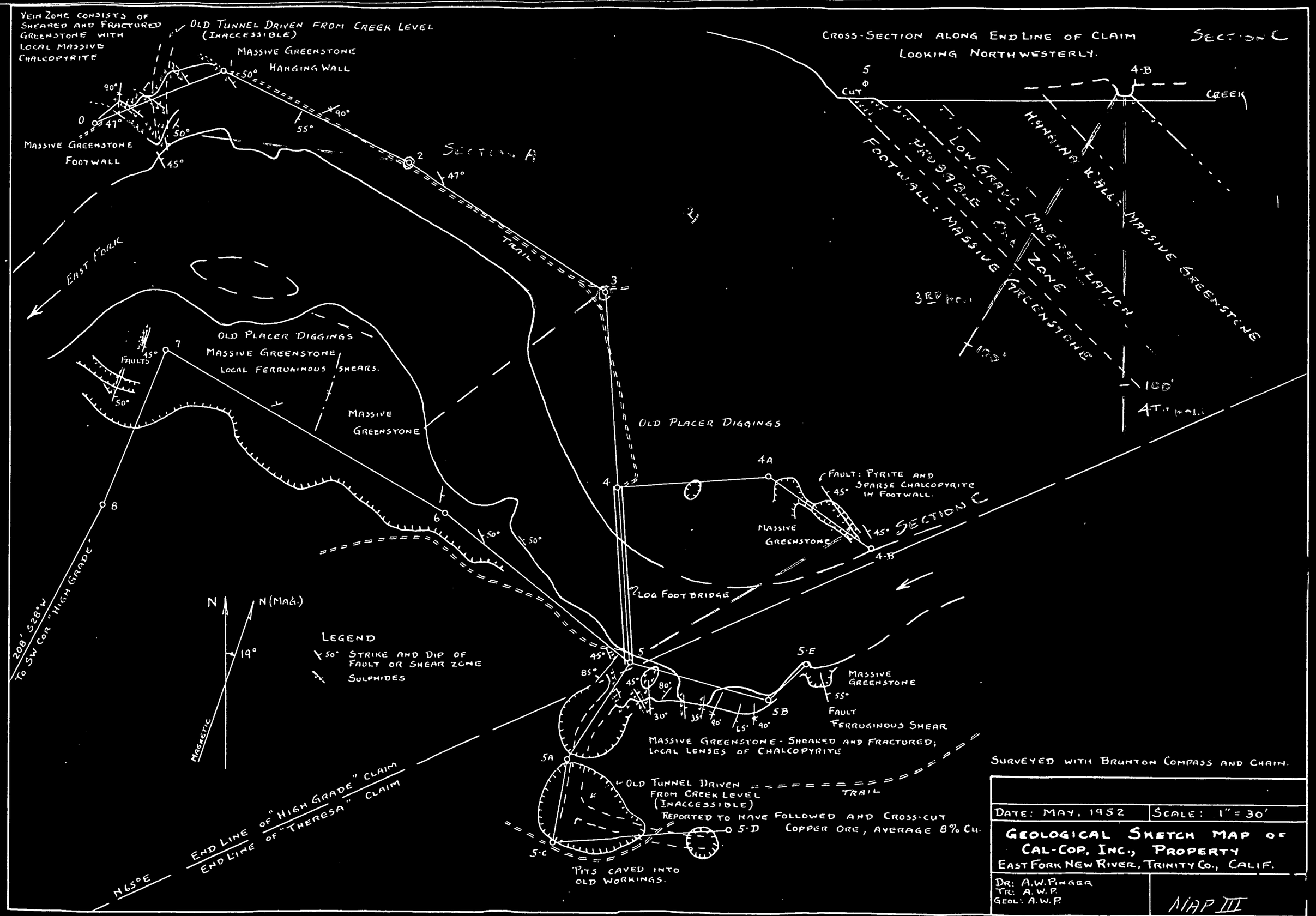
1908- Aubury, L. E., The Copper Resources of Calif., Bull 50
Nonpareil Group- Same description as above.

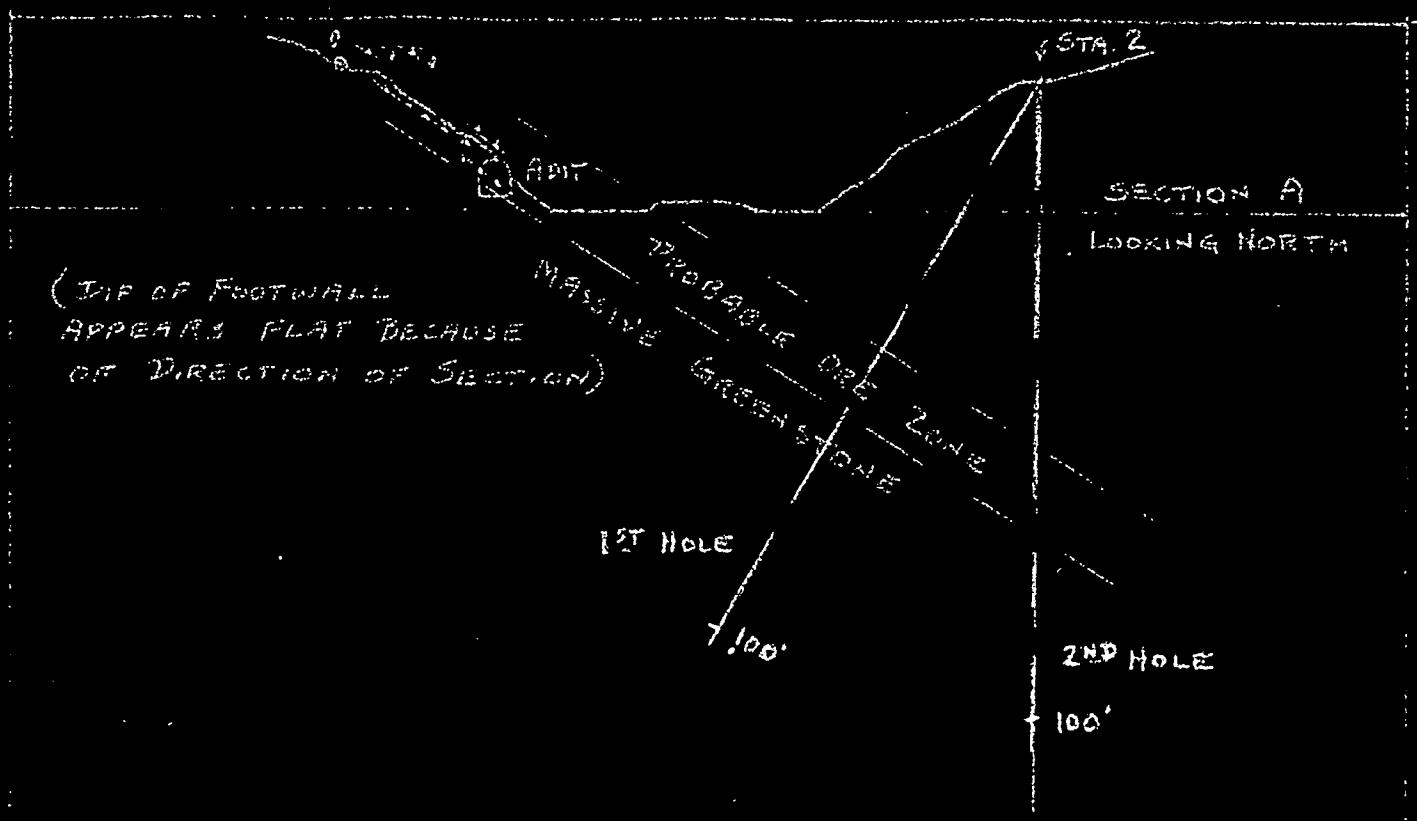
1916- Brown, G. C., Calif. Mng. Bur., Report 14, p. 881
Nonpareil Mine- Sec 5, T36N, R12W, M.D. B&L
Short adit, lode 1 - 14 feet wide, average 8% Cu
Gossan reported for nearly one mile on strike
Idle. C. S. McAtes, Redding, Owner.

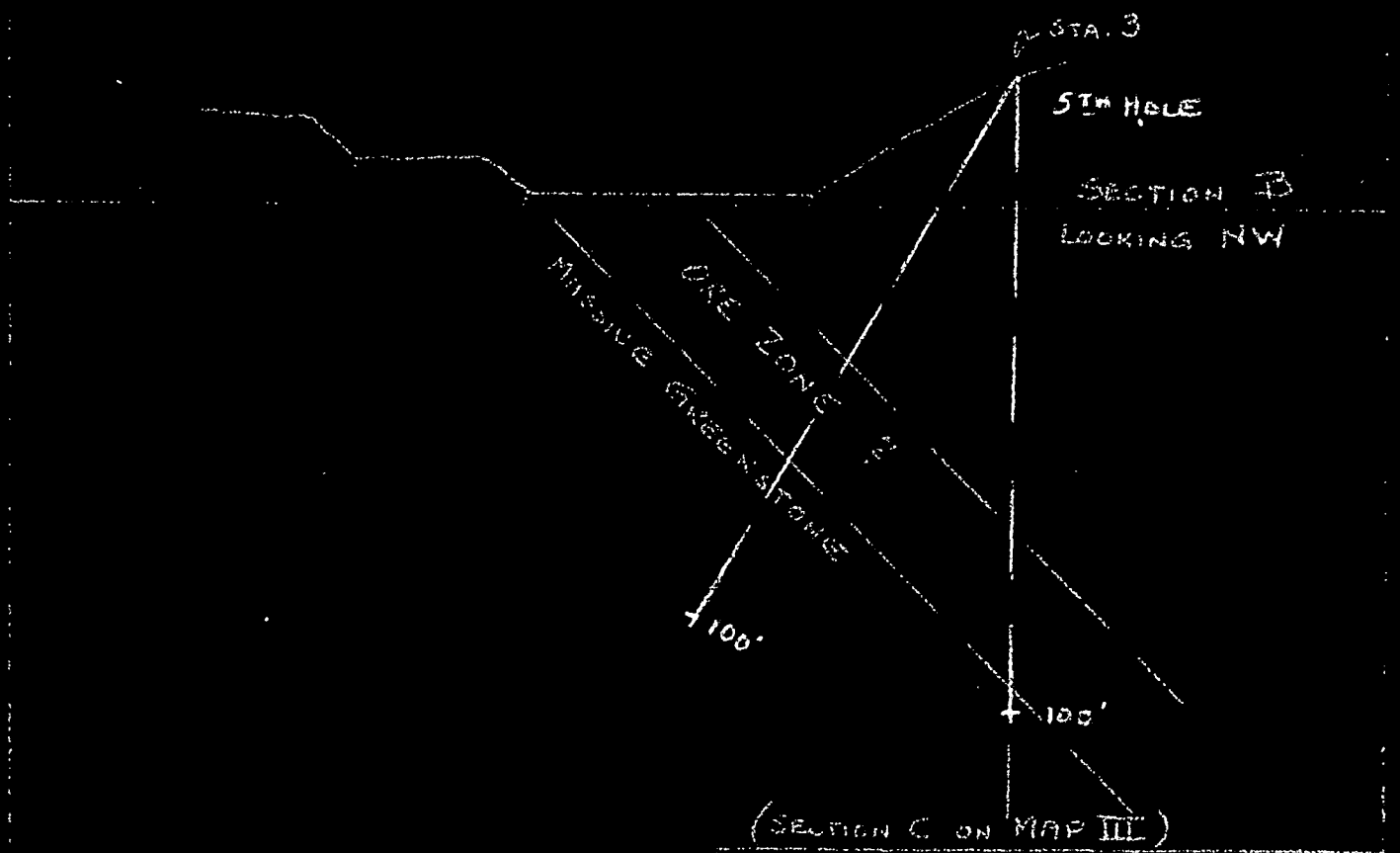
1948- Jenkins, O. P., et als., Copper in Calif., Bull. 144, p 351
Nonpareil Mine- Sec 5, T36N, R12W, M.D. B+L
Gossan; adit 35 feet, Cuts; Vein 1 - 14 feet wide on Slate-Diorite contact.


124°
122°
120°
42°
40°
38°
OREGON
NEVADA
DEL NORTE
SISKIYOU
MODOC
EUREKA
TRINITY
SHASTA
REDDING
LASSEN
HUMBOLDT
TEHAMA
PLUMAS
GLENN
BUTTE
SIERRA
RENO
MENDOCINO
LAKE
COLUSA
SACRAMENTO
PACIFIC OCEAN
SAN FRANCISCO
1- Island Mountain
2- Cal-Cop, Inc.
3- Iron Mountain, Balaklala
4- Bully Hill
5- Afterthought
6- Engels
DATE: MAY 1952
SCALE: 1" = 40 MI.
NORTHERN CALIFORNIA
TR: A.W. PINGER


SKETCH OF A PART OF TRINITY COUNTY TO SHOW THE LOCATION OF THE CAL-COP PROPERTY WITH RESPECT TO DENNY AND HIGHWAYS.
SCALE: 1" = 4 MILES.
T8N
R7E
R8E
R12W
T37N
T36N
T7N
R5E
R6E
T6N
UNDER CONSTRUCTION US FOREST SERVICE
EAST FORK
FOR. CAL-COP PROPERTY
CABIN PK.
DENNY
HUMBOLDT CO.
TRINITY CO.
NEW RIVER
TRINITY
SALYER
U.S. 299
HIGH GRADE
ADIT
OLD PLACER DIGGINGS
TRAIL
CORNER POST
0 ELEVATION = ±2600' ABOVE SEA LEVEL.
END LINE "HIGH GRADE" N65°E 50' THERE 5A
CABIN
CORNER POST
EAST FORK OF NEW RIVER
DISCOVERY MONUMENT
NEW CLAIMS
THERESA GULCH
RIDGE
MAGNETIC
N
19°
CONTOURS APPROXIMATE ONLY.
SURVEYED WITH BRUNTON COMPASS AND CHAIN.
STATIONS 10 TO 15, AND a TO d WERE PACED.
DATE: MAY 1952
SCALE: 1" = 100'
SKETCH MAP OF PART OF PROPERTY
CAL-COP, INC.
EAST FORK NEW RIVER, TRINITY CO., CALIF.
DR: A.W. FINGER
7/4/7 I


Vein Zone consists of Sheared and Fractured Greenstone with Local Massive Chalcopyrite
Old Tunnel Driven from Creek Level (Inaccessible)
Massive Greenstone Hanging Wall
Massive Greenstone Footwall
Section A
East Fork
Trail
Old Placer Diggings
Massive Greenstone
Local Ferruginous Shears.
Faults
Massive Greenstone
Old Placer Diggings
Log Foot Bridge
208' S28°W To SW Cor "High Grade"
N
N (Mag.)
19°
Magnetic
Legend
50° Strike and Dip of Fault or Shear Zone
Sulphides
End Line of "High Grade" Claim
End Line of "Theresa" Claim
N65°E
Cross-Section along End Line of Claim Looking Northwesterly.
Section C
Cut
Creek
Low Grade Mineralization Zone
Footwall: Massive Greenstone
Hanging Wall: Massive Greenstone
3rd Level
100'
At 1st Level
Fault: Pyrite and Sparse Chalcopyrite in Footwall.
Massive Greenstone
Section C
Massive Greenstone
Fault
Ferruginous Shear
Massive Greenstone - Sheared and Fractured; Local Lenses of Chalcopyrite
Old Tunnel Driven From Creek Level (Inaccessible)
Trail
Reported to have Followed and Cross-cut Copper Ore, Average 8% Cu.
Pits caved into Old Workings.
Surveyed with Brunton Compass and Chain.
Date: May, 1952
Scale: 1" = 30'
Geological Sketch Map of Cal-Cop, Inc., Property
East Fork New River, Trinity Co., Calif.
Dr: A.W.Pinger
Tr: A.W.P.
Geol: A.W.P.
Map III





(SECTION C ON MAP III)

DATE: MAY 1952	SCALE: 1" = 30'

GEOLOGICAL SECTIONS
CAL-COP, INC., PROPERTY
EAST FORK NEW RIVER, TRINITY CO., CALIF

DR. AWPINAGEL

MAP IV

RECEIVED
JUL 25 2 15 PM '52
DEFENSE MATERIALS
PROCUREMENT AGENCY

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For CAL-COP, INC.
JAMESTOWN, NEW YORK
EXHIBIT B
11 sheets, 4 maps

REPORT

ON THE EXAMINATION OF

CAL-COP CLAIMS

TRINITY COUNTY, CALIFORNIA

Table of Contents

	Page
Summary and Conclusions	1
Property: Location and Access	2
History	3
Geological Occurrence	3
Grade- anlyses	4
Ore Reserves and Possibilities	5
Mining conditions	6
Prospecting	6
Value of Ore	8
Bibliography and Abstracts	10

MAPS	Scale:
I Northern California-Index	1 in = 40 mi
II Sketch of Part of Property, Cal-Cop, Inc	1 in = 100 ft
(Inset: Part of Trinity County)	1 in = 4 mi
III Geological Sketch- Workings	1 in = 30 ft
IV Geological Sections	1 in = 30 ft

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MINING GEOLOGIST
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May 23, 1952

Mr. Russell W. Gieseler, President,
Cal-Cop, Inc.,
221 Palmer Street,
Jamestown, New York.

EXAMINATION OF CAL-COP CLAIMS (SALYER COPPER)
TRINITY COUNTY, CALIFORNIA

Dear Mr. Gieseler:

This report is based on observations made during a visit to the property with you from May 13 to May 17, 1952.

CONCLUSIONS- Difficulty of access and lack of transportation are the most serious obstacles to overcome in considering any plan to prospect and develop the property.

The two main showings, about 300 feet apart in the bottom of the canyon, expose copper sulphide ore of interesting width and quality. Unfortunately, there has been inadequate work done to afford any quantitative estimate of reserves or possibilities. There is nothing to indicate continuity or extension either between the showings or to depth.

The two showings appear to be in the same northwesterly trending fault or shear zone, which follows the bed of the creek between the two. The presence of strong cross fracturing at each showing makes me hesitate to assume continuous ore between the two showings; they may possibly be small pipe-like shoots in the fault zone, instead of a single strong continuous ore body.

The habit of ore occurrence in the metamorphosed rocks of the Shasta-Trinity Counties region, with a few notable exceptions, is to be small and spotty. If this prospect proves to be one of the exceptions, it is difficult to see it in the present exposures: if the zone does represent a stong continuous ore body (which remains to be proved) a length of 500 feet, an average width of 20 feet, and an assumed depth of 500 feet, would yield 500,000 tons of ore. The best estimate of grade that I can make from present exposures and analyses, is that the ore may run about 5.% Cu, 0.01 to 0.02 ozs Au, and 0.5 ozs Ag.

It is doubtful if 500,000 tons of this grade would stand the cost of equipment, road construction, etc., necessary for operation. If larger reserves can be developed, the property would be of marginal interest; promise of reserves of several million tons would make it of real interest.

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In a location with more favorable access, a limited amount of work to determine continuity, extent, and possibilities would be justified. In the present situation, where all supplies have to be packed in, even the minimum development is faced with high cost.

The steep canyon walls with heavy slide rock and talus, plus the probability of deeper weathering of the ore, make trenching of the ore zone to north and south appear impractical.

A more desirable method of development than trenching would be to clean out the adits at each showing, and drive on the ore zone as far as sulphide ore can be followed. The objection to this is the difficulty and cost of transporting even the least equipment necessary to do efficient work.

The quickest and least expensive means of testing the possibilities of the property would be by diamond drilling five or six 100' holes to establish grade and continuity of ore below and between the two main showings. The actual cost of drilling would be between $4.00 and $5.00 per foot; The cost of taking the equipment in, setting up, dismantling, and moving out, will cost as much as the drilling. The entire job, including supervision, would cost about $6,000.

PROPERTY- The property, four lode and one placer claims, is held by location, the claims being situated in Section 5, T36N, R12W, Mt. Diablo Base Line and Meridian, on the East Fork of New River, in the northwestern part of Trinity County. See maps I and II. The area is extremely rugged, elevations varying from about 2600 feet at the prospect, to 6800 feet at the top of Cabin Peak only three miles to the east. The canyons are narrow, steep walled, and densely wooded. Annual rainfall is heavy, and streams provide an ample supply of water. Water power could be developed. Preliminary prospecting and development could probably only be done during the dry season.

Access is difficult. The property is nearly 90 miles by road and trail east of Eureka, the nearest shipping point for rail or water transportation. Tacoma, the nearest smelter, is 850 miles by water from Eureka.

U.S. Highway No. 299 from Eureka is hard surfaced, but narrow and winding, and crosses two steep summits in the distance of 63 miles to Sawyer's Bar, where a graded gravel surfaced road turns off to Denny, a distance of 16 miles of narrow winding road over another summit. From Denny, the U. S. Forest Service is now building a road several miles farther up New River to make access for logging off a burned area. When this road is finished it will leave about eight miles of trail to reach the property. To convert this eight miles of trail to road would be difficult and costly.

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At the present time the trail up the East Fork is blocked by landslides, but the Forest Service should have the trail opened by mid-summer.

HISTORY- The area of the East Fork of New River was first worked for placer gold in terrace gravels above the present creek bottom. The first published mention of the copper prospect is under the name of the Nonpareil Mine in the 13th Report of the State Mineralogist, in 1896. The claims were presumably located in the early '90's. A small amount of hand-sorted ore is said to have been packed out in 1917; this is the only reported production. After a long period of abandonment, the claims were re-located by C. Marshall Salyer.

GEOLOGICAL OCCURRENCE- The New River area of Trinity County has not been mapped geologically. The rocks comprise a thick series of metamorphic greenstones, originally volcanics; sediments: shales and limestones; schists; serpentine; and intrusive granite and grano-diorite. In the immediate area of the property all rock exposures observed were dense finely grained massive greenstones, which are probably metamorphosed volcanics. Relict structures seen suggest andesitic flows and agglomerates. On the trip out of camp, about one mile west of the cabin, outcrops of black shale or slate was seen; and the ridge west of Pony Creek is a large mass of serpentine.

The structure in the massive greenstone is obscure, but appears to trend northwest-southeast, with a dip to the northeast. The ore exposed at the property appears to be locallized along a fault or sheared zone parallel to the NW-SE trend of the country rock. The stronger faults in the showings strike from N30°W to North, and dip at angles of from 25° to 50° to the NE and East.

There are two main showings: one on the north side of the creek, which extends from creek level to about 25 feet above, and the other on the south side of the creek, about 300 feet southeast of the first. Good ore is exposed at each locality, and consists of chalcopyrite ($CuFeS_2$) with only very sparse pyrite (FeS_2) occurring in irregular massive bunches in highly sheared and altered greenstone. Short adits have been driven into the hill along the ore zone at each locality. These are inaccessible at present, but the old dumps indicate that good sulphide ore was obtained.

The irregular lense-like masses of sulphides vary from a few inches to about one foot in thickness, and are from one to three or four feet long. The country rock between sulphide lenses is often barren, and occasionally has disseminated chalcopyrite in it. The masses of sulphides appear to be locallized

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along faults and at the intersections of the main northwesterly trending faults with cross faults or fractures usually running northerly to northeasterly. Exposures are lacking, but there is some suggestion that the main northwesterly fault zone is displaced by some of these cross faults; and the further suggestion that possibly the ore is locallized at intersections of the two fault systems. Map III shows the relative locations of the main showings and other smaller showings.

The mineralization appears relatively strong where exposed. The fault zone is highly fractured and broken, and possibly followed an agglomerate bed between two thick massive andesitic flows, a few fragments of highly altered chloritic slate were observed in the unreplaced matrix of the ore zone. The rock appears to be a reasonably favorable host for sulphides; the stronger structures should persist, and I see no obvious geological reason why the ore should not continue with them.

The following tabulation shows the results of analyses of samples taken on the property:

Date	Sample No.	%Cu %	Zn %	Au Ozs/Ton	Ag Ozs/Ton	Remarks
2-28-45	1	5.96	Tr	0.01	0.79	C. M. Salyer
2-28-45	2	8.01	0.10	0.02	1.18	C.M.S.
8-14-45	A3	10.07	n.d.	n.d.	n.d.	C.M.S.
8-14-45	A4	11.23	n.d.	n.d.	n.d.	C.M.S.
8-14-45	A5	9.72	n.d.	n.d.	n.d.	C.M.S.
8-14-45	A6	14.21	n.d.	n.d.	n.d.	C.M.S.
8-14-45	A7	8.92				C.M.S.
9- 8-45	A7		n.d.	0.01	1.79	C.M.S.
9- 8-45	A8	13.23	n.d.	0.03	1.77	C.M.S.
9- 8-45	A9	13.72	n.d.	0.01	2.20	C.M.S.
9- 8-45	B1	n.d.	n.d.	Tr	0.20	C.M.S. (From badly leached
9- 8-45	C1	2.81	n.d.	0.02	0.59	C.M.S. (East outcrop
2-26-47	1-B	n.d.	n.d.	0.01	Tr	C.M.S. 1/2 mile up South Fork of East Fork.
7-12-48	X-1	0.17	n.d.	0.01	Tr	C.M.S. ditto
8-25-48	Crop	Tr	n.d.	0.01	Tr	C:M:S. 1 mile up ditto
9-10-48	43	3.93	n.d.	0.015	0.08	H. N. Witt
9-10-48	44	3.59	n.d.	0.02	0.38	H.N.W.
9-10-48	45	4.71	n.d.	0.015	nil	H.N.W.
9-10-48	46	5.26	n.d.	0.005	0.50	H.N.W.
9-10-48	47	0.15	n.d.	0.005	nil	H.N.W.
9-10-48	48	7.52	n.d.	0.01	0.70	H.N.W.

n.d.= not determined; nil= not present; Tr= trace
Analyses by Abbott A. Hanks, Inc., San Francisco

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Because of Mr. Salyer's illness, I was unable to find out exactly where the samples were taken; from my one inspection of the showings with him, I understand that the samples were taken of the different sulphide exposures, and that there is some duplication of samples.

The last group of six samples, taken by Mr. H. N. Witt, appear to have been taken across the showings as the ore would be mined. His samples, Nos. 43-46, were probably taken from the showing on the north side of the creek; No. 47, in the East showing in the trench near my station 4-B on Map III, and No. 48 at the showing on the south side of the creek. It is of interest to note that these samples show approximately the same copper content as my estimate of grade based on a careful estimate of percentage of chalcopyrite present in the exposures.

My estimate of grade is as follows:

Showing on North side of creek: measurements are taken from station 0, toward station 1, from west to east.

From	To	Feet	Description	Chalcopyrite %	Cu %
0.0	6.5	6.5	Dense chloritic greenstone	None	None
6.5	10.5	4.0	Sheared do do	± 3.	± 1.
10.5	15.0	4.5	do do do	15-20	± 6.
15.0	21.0	6.0	do do do	± 10	± 3.
21.0	22.5	1.5	do Fault Gouge, no sul.	None	None
22.5	28.0	5.5	Sheard chloritic greenstone	10-15	± 4.
28.0	32.0	4.0	do do do	± 20	± 7.
10.5	32.0	21.5	AVERAGE	12-15	4. to 5.

Showing on South side of creek: From west wall to east across ore exposure:

0.0	14.0	14.0	Sheared chloritic greenstone	± 20	± 7.
14.0	44.0	30.0	Dense do do	2-3	± 1.

ORE RESERVES AND POSSIBILITIES- From the small amount of work done it is impossible to estimate any developed reserves; but the width and grade of ore exposed warrant some speculation as to the geological possibilities of the occurrence.

The two showings are about 300 feet apart, and appear to be in the same fault zone. If the ore is continuous between the two, and assuming an extent of 100 feet to northwest and to southeast beyond the showings, there is a possibility of a length of 500 feet with an average width of 20 feet; these dimensions give a horizontal section of 10,000 square feet. Using a factor of 10 cubic feet of ore per ton, an ore body of this size would

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contain 100,000. tons for each 100 feet of vertical depth.

If the ore is not continuous between exposures, but is localized in pipe-like shoots in the fault zone, the tonnage possibilities would be probably only of the order of 25,000 to 30,000 tons for each 100 feet of depth.

In the first instance, greater tonnage could be obtained if greater length or greater width were proved in prospecting. In the second instance, pipe-like shoots, the only speculative possibility would be find more massive sulphides and perhaps improved grade.

The most interesting potentiality for large tonnage is the possibility of extent along the trend or strike of the fault zone beyond present showings. If this possibility should materialize, the steep canyon walls would afford adequate backs to permit large reserves above adit levels driven from just above the creek. Unfortunately, the slopes are covered with a heavy overburden of detrital material which prevents adequate inspection to determine gossan croppings or other evidence to indicate persistence of mineralization along strike.

From present showings I believe it is reasonable to expect an average grade as mined of about 5% Cu. Because of the irregular habit of occurrence of the sulphides, I should certainly hesitate to forecast a higher average content. A 5% Cu ore, with the copper occurring as the mineral chalcopyrite ($CuFeS_2$), and with very sparse pyrite (FeS_2) present, as indicated by the exposures, should yield a concentrate running about 30% Cu, with a ratio of concentration of about 6 tons of crude ore milled to produce one ton of concentrates. The ore would appear to be readily milled by gravity methods--jigs and tables; although this question must obviously await further information as to the reality of the grade and reserves. From the analyses made, I would expect a 30% Cu concentrate to run 0.05 to 0.06 oz Au and 2.0 to 3.0 oz Ag per ton. Unfortunately, the precious metal values are not as favorable as would be desirable in a prospect as inaccessible as this one is.

MINING CONDITIONS- The character of the ground exposed in the showings is such that conditions should be favorable for low cost open stope methods of mining. The rock is hard and tight, and I do not anticipate trouble from bad ground that would require timbering, nor trouble from excessive water. These questions, however, cannot be finally answered until further development work is done.

PROSPECTING- In a more favorable location with respect to access and transportation, the prospect would warrant some additional work to determine the possibilities for tonnage and grade. In the existing situation, the difficult access, lack of tranportation to the property, and the long haul over steep winding roads

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to rail or water transportation results in a discouraging outlook as to costs of prospecting, development, and operation. The lack of precious metal values is a further handicap. Taking all these factors into consideration, the gamble is a long one.

Under the discussion of Ore Reserve Possibilities (page 5) I have suggested the possibility of 100,000 tons of 5% Cu ore per 100 feet of depth. The real facts, when known, may be a fraction of this figure, or they may be several times greater. This may only be determined by prospecting and development.

There are three general approaches to the solution of the problem: 1. Trenching along the strike or trend of the ore zone to the northwest and southeast. The hill slopes are steep and heavily covered with detrital material. Trenching would be difficult because of the uncertain depth to ledge; and results would be uncertain because of the probability that sulphides at higher elevations would be weathered, leached, and oxidized. Samples would be unreliable in terms of sulphide ore below. Timbering of the trenches would probably be necessary to prevent caving of overburden. The cost of such work would be out of proportion to the information obtained, and is not to be recommended.

2. At each showing there is an old adit. These adits could be cleaned out and driven along the course of the ore zone to the northwest and southeast. This work could probably be done with a minimum of timbering, as the ground should stand well except for an occasional weathered fault near the surface. As depth under the hill is gained, the rock should be tight and strong. Systematic cross-cutting of the ore zone would permit adequate sampling. The cost of such work--drifting and cross-cotting at tunnel level, would normally be from $10.00 to $15.00 per foot of advance. Under existing conditions, where all equipment and supplies have to be packed in by trail, the cost would be at least double, even with every precaution being taken to haul in only essential equipment to permit efficient work. Again, the cost of such work would be out of proportion to the risk involved.

3. Prospecting by drilling. Probably the most information per dollar of cost could be obtained by drlling a few holes to determine continuity and grade of ore between and below the surface exposures. The topography is such that shallow holes could be drilled to intersect the ore zone 75 to 100 feet below the showings, and an intermediate hole drilled to test continuity between showings. These holes would give valuable information as to grade, width, and nature of ore occurrence. If these holes proved ore of interesting grade and width, a program of further drilling could be planned to learn more of the extent of the deposit along the trend to northwest and southeast, and to greater depth.

For an initial testing of the showings I would suggest two shallow holes to be drilled from near station 2 (on Map III)

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One of these would be drilled to the west at an angle of -60° with the horizontal to determine grade and width under the showing on the north side of the creek. If ore is encountered, a second hole would be drilled vertically from the same location to test at slightly greater depth, and somewhat southeast of the showing. The second drill location would be in the bottom of the trench between stations 4-A and 4-B, with one hole drilled at -60° southwesterly toward the main showing on the south side of the creek, at station 5. If ore is encountered, a second hole from this location would be drilled vertically.

If these four holes encounter ore, a fifth hole would be drilled vertically from a location in the vicinity of station 3; if only the inclined holes at the other locations encounter ore, the hole at station 3 would also be inclined at -60° to the S.S.W.

The five holes suggested would aggregate between 500 and 750 feet of drilling. The actual drilling cost would be about $4.00 per foot, or between $2,000.00 and $3,000. for the job. It would cost about $2,000.00 to bring the equipment in to the prospect from either Salt Lake or Spokane. Allowing for drilling, transportation, supervision, sampling and assaying, and preservation of the core, it would cost about $6,000 to do this job. I have talked with Messrs Goldsworthy and Baker of Boyles Bros. Drilling Co., here in Salt Lake, giving them the distance from Salt Lake, the distance to be packed in, and the character of the ground to be drilled; and it is from their figures that I have prepared the above estimate of costs. They propose that the Mining Company pay the cost of transportation to the drilling site, and $65.00 per shift for one drill rig and crew while setting up, moving, and tearing down; and $110.00 per shift for drilling time. The proposal has the advantage of no minimum footage guarantee, and works out satisfactorily.

Core recovery and rate of drilling should be good, judging from the rock and ore that can be seen in the showings.

VALUE OF ORE- Information on grade and tonnage is insufficient to do more than speculate as to the value of the ore. From the limited showings, from the few analyses available, and from my estimate of the grade of ore as mined, I judge that the crude ore would run 5.% Cu, 0.01 oz Au, and 0.5 oz Ag. About six tons of run of mine ore would produce one ton of concentrate running perhaps 30.% Cu, 0.05 oz Au, and 2.5 oz Ag.

With copper at 15¢ per lb. this concentrate, less treatment charges, would net between $90.00 and $100.00 per ton at the smelter.

With copper at 24¢ per lb. this concentrate, less treatment charges, would net between $135.00 and $150.00 per ton at the smelter.

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Freight charges and handling: 90 miles truck haul from mine to Eureka, and 850 miles water transport from Eureka to Tacoma, Washington, would total between $20.00 and $25.00 per ton.

Subtracting freight charges on the concentrate, and calculating the value back to the crude ore, we find that on 15¢ copper, the value is about $15.00 per ton at the mine, and on 24¢ copper, the value is about $20.00 per ton at the mine.

Costs, per ton of crude ore, would be:

Mining and development,	about	$5.00	per ton
Milling	about	2.00	
Overhead, depletion, and amortization	about	2.00	
Total costs		$9.00	per ton crude ore

The wholly intangible item would be the cost of building 8 miles of access road to the property. On a small tonnage of concentrates, the cost of the road would be prohibitive. On a large ore reserve, with a large tonnage of concentrates to be shipped, it might be feasible.

It is hazardous to attempt a valuation on the meagre data available; the above rough figures are significant only in so far as they indicate rather clearly, I believe, that on a 15¢ market for copper, even a moderately large tonnage of ore is close to being marginal. On 24¢ copper, a small mine is still marginal, but a large tonnage of reserves might well be valuable and be worthy of serious consideration.

To go a step farther, I would hazard the opinion that the promise of reserves of less than 500,000 tons of 5% Cu would be of very doubtful or no economic value; reserves of between 500,000 and 1,000,000 tons would be of marginal value, and might be worth while on present markets. Possibilities of several million tons would be of definite interest.

The prospect needs additional work to give some indication of its potentialities. In a more favorable situation the geological conditions are sufficiently favorable to warrant the preliminary drilling I have suggested. Under the adverse conditions that exist, the risk is great, and the cost of even the modest program suggested is high.

Respectfully submitted,

ALLEN W. PINGER
MINING GEOLOGIST
1419 CIRCLE WAY
SALT LAKE CITY

BIBLIOGRAPHY AND ABSTRACTS

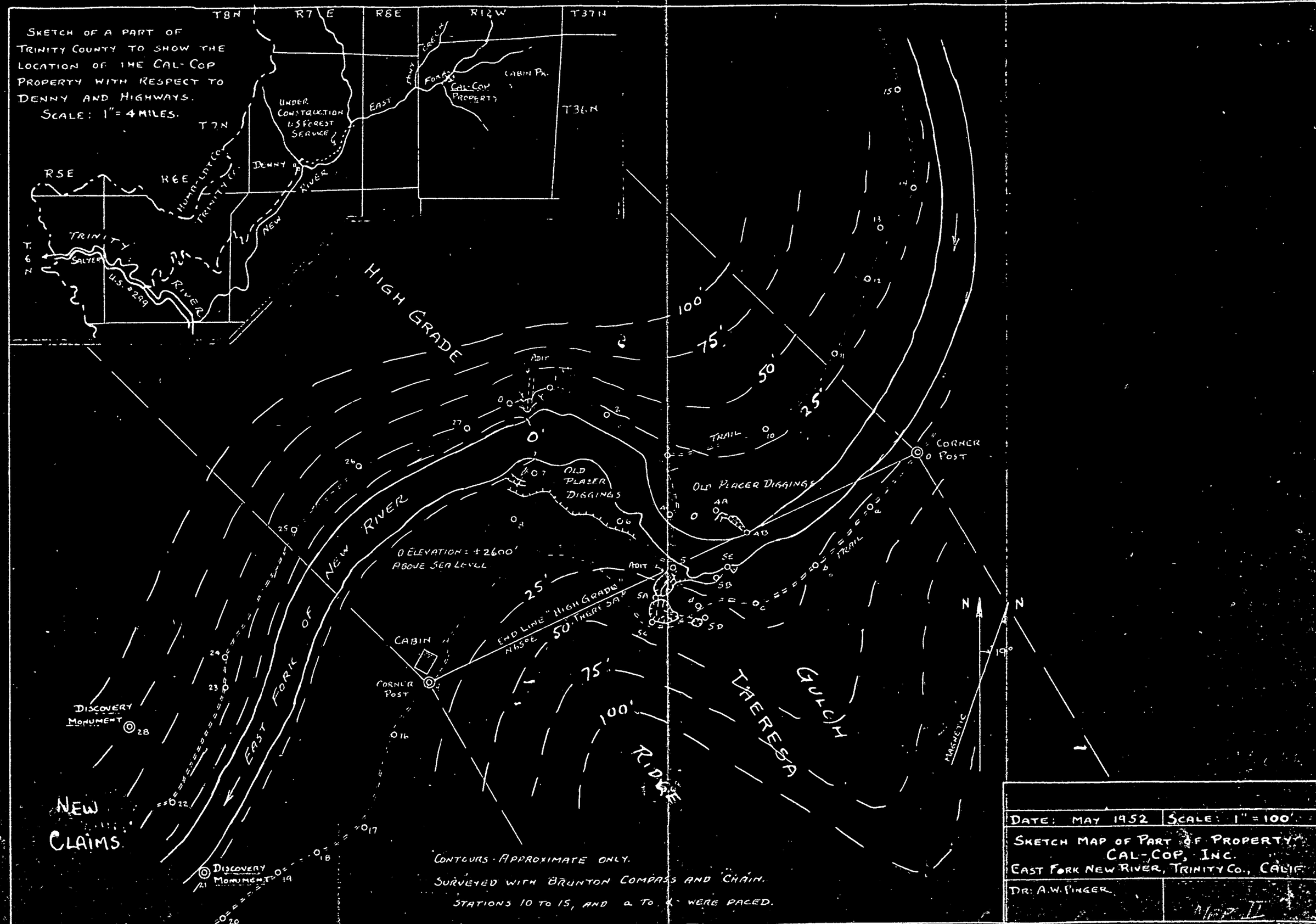
1896- Crawford, J. J., 13th Report of State Mineralogist, Sept '96
Nonpareil Mine- Located on the East Fork of New River, 8 miles east of Francis, Elevation 2400.
Adit, 35 feet, several open cuts; Vein 4' wide, dip 26° east. Slate footwall, Porphyry hangingwall.
Ore: chalcopyrite, sparse gangue.
Idle: C. S. McAtes, Francis, owner.

1905- Aubury, L. E., The Copper Resources of Calif., Bull. 23
Nonpareil Group- 4 claims, East Fork of New River
Lode 1' -14' wide; adit 25 feet. 8%Cu.
Gossan outcrops reported over length of one mile.
C. S. McAtes, Redding, Owner

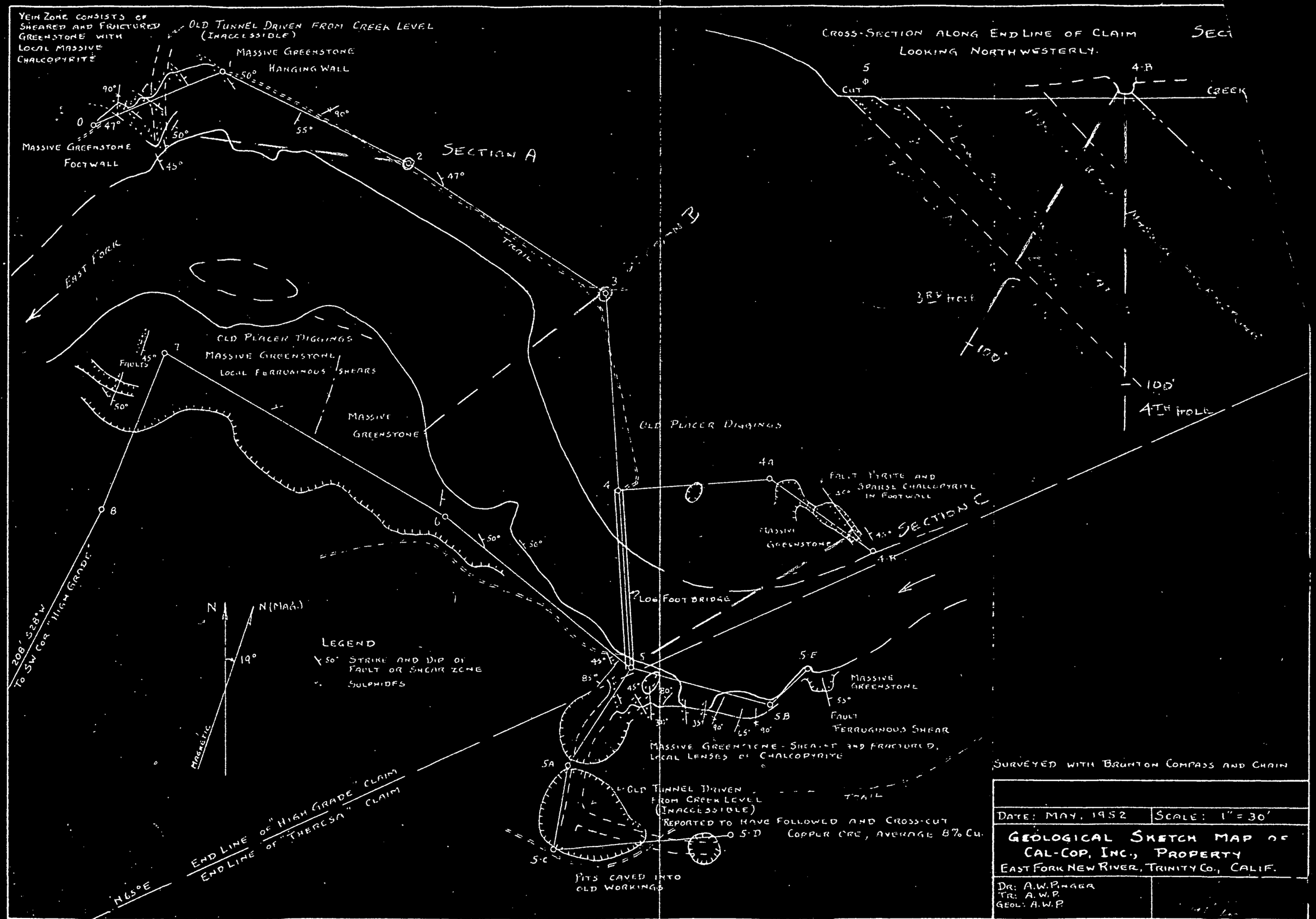
1908- Aubury, L. E., The Copper Resources of Calif., Bull 50
Nonpareil Group- Same description as above.

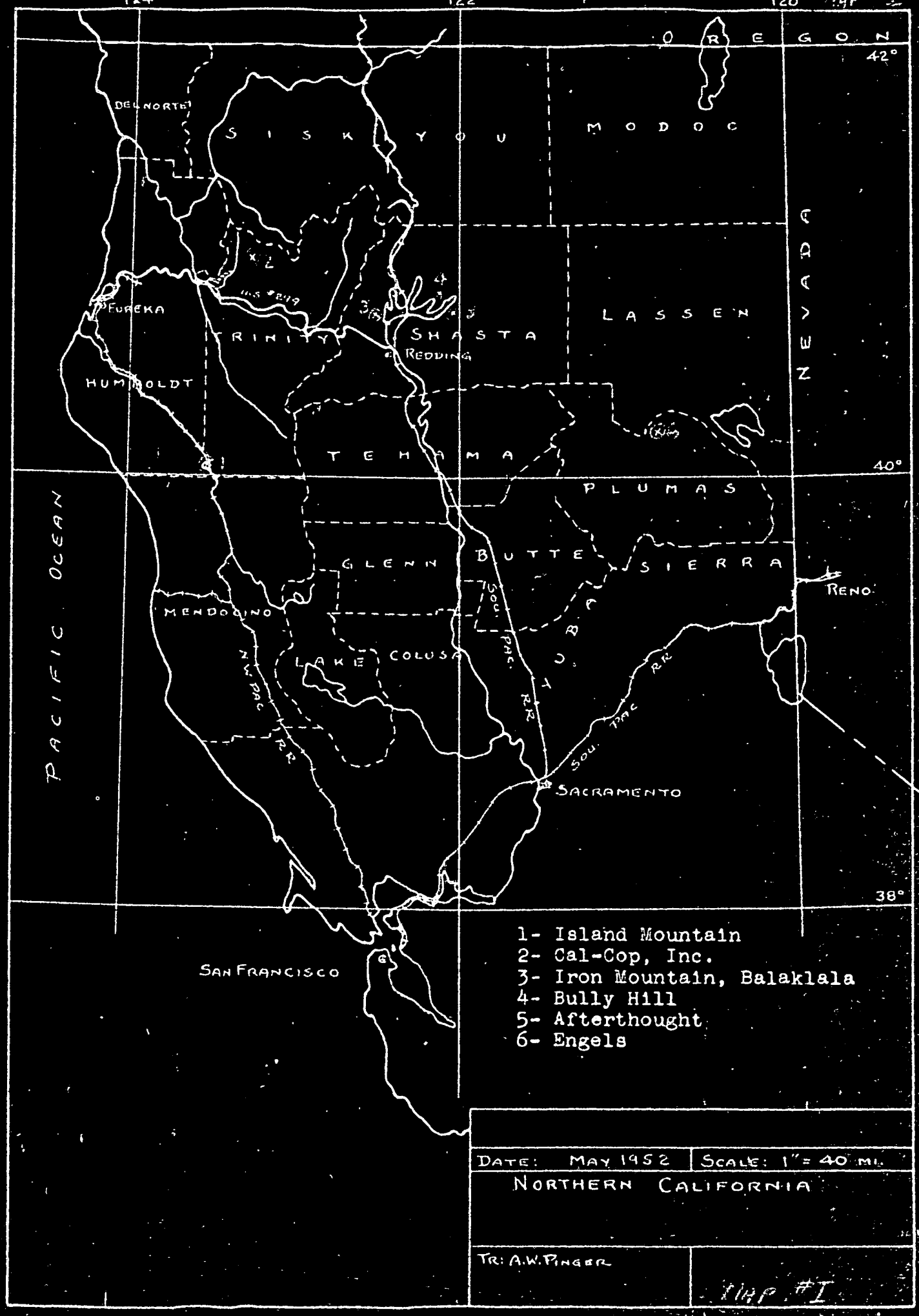
1916- Brown, G. C., Calif. Mng. Bur., Report 14, p. 881
Nonpareil Mine- Sec 5, T36N, R12W, M.D. B&L
Short adit, lode 1 - 14 feet wide, average 8% Cu
Gossan reported for nearly one mile on strike
Idle. C. S. McAtes, Redding, Owner.

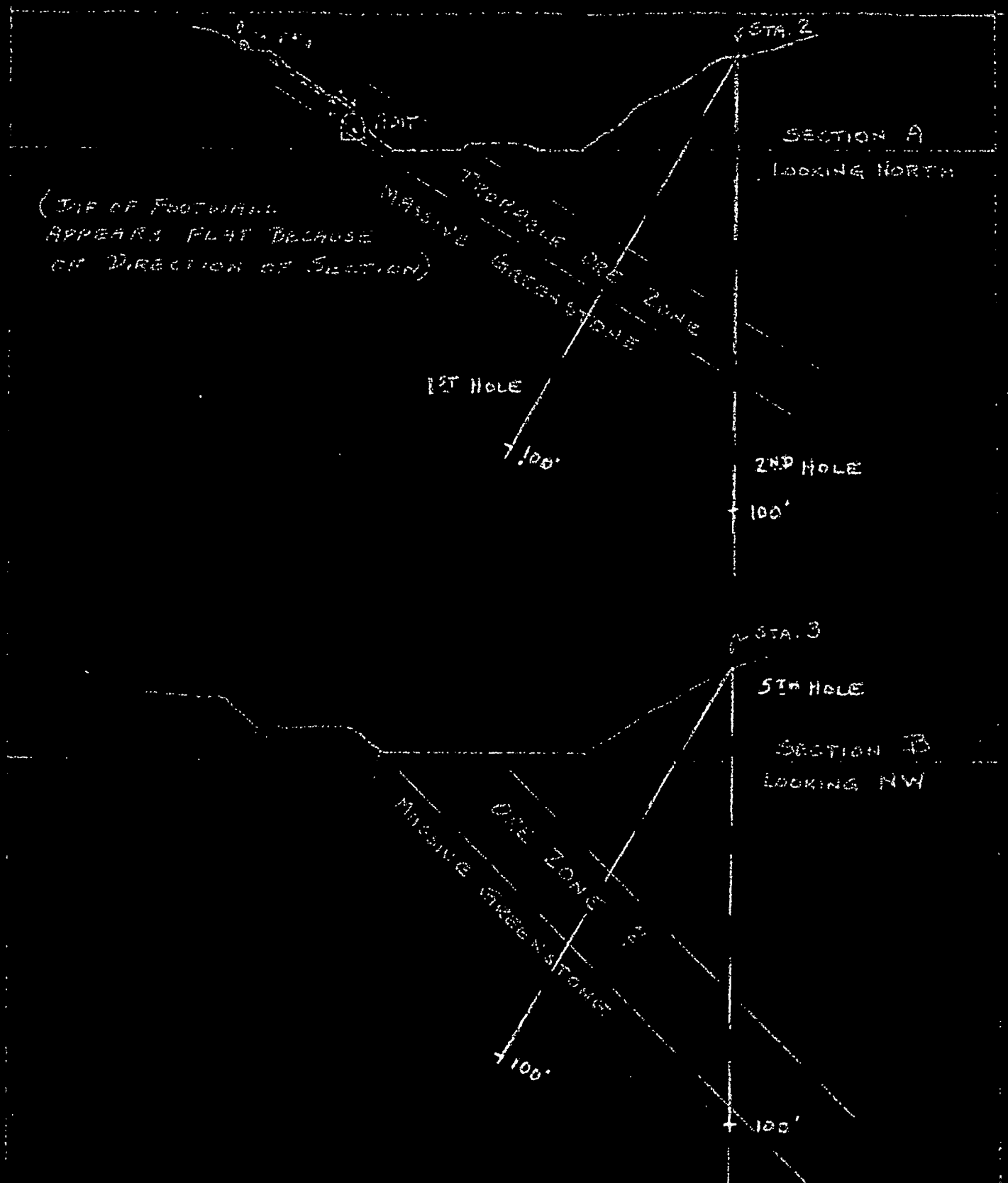
1948- Jenkins, O. P., et als., Copper in Calif., Bull. 144, p 351
Nonpareil Mine- Sec 5, T36N, R12W, M.D. B+L
Gossan; adit 35 feet, Cuts; Vein 1 - 14 feet wide on Slate-Diorite contact.


SKETCH OF A PART OF TRINITY COUNTY TO SHOW THE LOCATION OF THE CAL-COP PROPERTY WITH RESPECT TO DENNY AND HIGHWAYS.
SCALE: 1" = 4 MILES.
T8N
R7E
R8E
R12W
T37N
T36N
T7N
R5E
R6E
UNDER CONSTRUCTION U.S. FOREST SERVICE
EAST FORK
CREEK
CABIN PL.
CAL-COP PROPERTY
DENNY
HUMBOLDT CO.
TRINITY CO.
NEW RIVER
TRINITY
SALYER
U.S. #299
RIVER
T. 6 N.
HIGH GRADE
ADIT
OLD PLACER DIGGINGS
TRAIL
CORNER POST
0 ELEVATION = +2600' ABOVE SEA LEVEL
END LINE "HIGH GRADE" N45°E THERE 50'
CABIN
CORNER POST
EAST FORK OF NEW RIVER
DISCOVERY MONUMENT
NEW CLAIMS
THERESA GULCH
RIDGE
MAGNETIC
N
CONTOURS - APPROXIMATE ONLY.
SURVEYED WITH BRUNTON COMPASS AND CHAIN.
STATIONS 10 TO 15, AND a TO k WERE PACED.
DATE: MAY 1952
SCALE: 1" = 100'
SKETCH MAP OF PART OF PROPERTY
CAL-COP, INC.
EAST FORK NEW RIVER, TRINITY CO., CALIF.
DR: A.W. PINGER
Map II

II 9AM


Vein Zone consists of sheared and fractured greenstone with local massive chalcopyrite
Old Tunnel Driven from Creek Level (Inaccessible)
Massive Greenstone Hanging Wall
Massive Greenstone Footwall
Section A
East Fork
Trail
Old Placer Diggings
Massive Greenstone
Local Ferruginous Shears
Faults
Old Placer Diggings
Log Foot Bridge
Fault Pyrite and Sparse Chalcopyrite in Footwall
Massive Greenstone
Section C
208' S28°W To SW Cor "High Grade"
N
N (Mag.)
19°
Magnetic
Legend
50° Strike and Dip of Fault or Shear Zone
Sulphides
End Line of "High Grade" Claim
End Line of "Theresa" Claim
N65°E
Massive Greenstone
Fault
Ferruginous Shear
Massive Greenstone - Sheared and Fractured, Local Lenses of Chalcopyrite
Old Tunnel Driven from Creek Level (Inaccessible)
Reported to have followed and cross-cut copper ore, average 8% Cu.
Pits caved into old workings
Trail
Cross-Section along End Line of Claim
Looking Northwesterly.
Cut
Creek
3rd Hole
4th Hole
100'
Surveyed with Brunton Compass and Chain
Date: May, 1952
Scale: 1" = 30'
Geological Sketch Map of Cal-Cop, Inc., Property
East Fork New River, Trinity Co., Calif.
Dr: A.W.Pinger
Tr: A.W.P.
Geol: A.W.P.


MAP I
124°
122°
120°
42°
40°
38°
OREGON
DEL NORTE
SISKIYOU
MODOC
EUREKA
TRINITY
SHASTA
REDDING
LASSEN
HUMBOLDT
TEHAMA
PLUMAS
CASCADE
PACIFIC OCEAN
GLENN
BUTTE
SIERRA
RENO
MENDOCINO
LAKE
COLUSA
YUBA
SOU. PAC. RR
N.W. PAC. RR
SACRAMENTO
SAN FRANCISCO
1- Island Mountain
2- Cal-Cop, Inc.
3- Iron Mountain, Balaklala
4- Bully Hill
5- Afterthought
6- Engels
DATE: MAY 1952
SCALE: 1" = 40 MI.
NORTHERN CALIFORNIA
TR: A.W. PINGER
MAP #I



DATE: MAY 1952 | SCALE: 1" = 30'

GEOLOGICAL SECTIONS
CAL-COP, INC., PROPERTY
EAST FORK NEW RIVER, TRINITY CO., CALIF

DR: AWPINAGEL

MAP IV

RECEIVED
JUL 25 2 18 PM '52
DEFENSE MATERIALS
PROCUREMENT AGENCY

CAL-COP, INC., 221 Palme Street, Jamestown, N. Y.

EXHIBIT A
5 pages

THIS INDENTURE, made as of this 8th day of March, 1952, by and between C. MARSHALL SALYER and TERESSA M. SALYER, both of Salyer, Trinity County, State of California, hereinafter referred to as the LESSORS, and CAL-COP, INC., a corporation duly created, organized and existing under and by virtue of the laws of the State of New York, and having its principal offices at 221 Palmer Street, in the City of Jamestown, Chautauqua County, New York, hereinafter referred to as the LESSEE, witnesseth:

THAT, the LESSORS, in consideration of the sum of $100.00 (One hundred Dollars) lawful money of the United States paid herewith, and of other valuable considerations as provided in certain ARTICLES OF AGREEMENT of even date hereof, and in further consideration of rents hereinafter provided, hereby leases to the LESSEE, all of the following property and rights, with warranty of title with and in respect thereof free and clear of all liens, encumbrances, to wit:

the following group of mining claims, Viz.,

"TERESSA MINE LODE CLAIM","HIGH GRADE LODE CLAIM" and "MILL-SITE PLACER CLAIM",

which are located on the East Fork of the New River in the New River Mining District of Trinity County and State of California, as recorded in the Mining Records of the said County and State aforesaid (Section 5, Township 36N, Range 12W, Mount Diabalo Meridian), together with all other adjacent, adjoining or contiguous claims owned by the LESSORS or claimed subsequent to the execution of this instrument, and all other rights of every description and kind pertaining thereto whatsoever, and all buildings, structures and improvements thereon or thereof, and of all machinery, engines, pumps, compressors, tracks, drills, equipment, tools, implements, etc., of every kind used in connection therewith.

TO HAVE AND TO HOLD the same, and to enter into and take possession of all and singular said premises and property, and to commence work and to make improvements thereon and to operate, mine and extract the

minerals from the said property and premises, for the term of ninety-nine (99) years from the date hereof, which term will expire on the 8th day of March, 2051 A.D., unless sooner terminated or forfeited by the operations of any of the termination clauses of this INDENTURE or of the ARTICLES OF AGREEMENT entered into by the parties hereto of even date.

THAT, in consideration of said leasing, the LESSEE covenants and agrees with LESSORS, as follows:

1. In addition to the payments above noted and the other valuable considerations provided in the ARTICLES OF AGREEMENT of even date, the LESSEE shall pay the sum of One Hundred Dollars ($100.00) lawful money of the United States each month on or before the 10th day tereof, beginning with April, 1952, to the LESSORS as long as either of the parties named as LESSORS shall live, or until the termination hereof as provided in the terms of the ARTICLES OF AGREEMENT of even date.

2. The LESSEE further covenants and agrees to carry out the further provisions of the ARTICLES OF AGREEMENT of even date, with respect to the geological survey, the negotiation of contracts and to mine as early as is prudent and practical.

3. The LESSEE agrees to pay all taxes accruing from the date hereof, and to pay taxes advanced by the LESSORS between the 5th day of October, 1950 and the date hereof, and will do and file proof of annual assessment work as legally required, which proof of labor shall be filed with the Recorder of Trinity County not later than June 1st of each year. The LESSEE further agrees to furnish proof of both the proper filing of Assessment work Proofs, and of the payment of taxes and assessments, upon request by the LESSOR.

4. As provided in the ARTICLES OF AGREEMENT, in the event of a termination of this INDENTURE and/ or of the ARTICLES OF AGREEMENT, the LESSEE shall restore to the LESSORS an equal title to that possessed by them as of the date of the execution of these instruments.

THAT, the LESSEE shall have the right to remove, within 90 days of

the termination hereof, all machinery, equipment and other property as is usual under accepted mining practices in the State of California.

~~THAT, the LESSORS agree to transfer to the LESSEE all of their rights and title in the realty and claims at their death, and hereby direct their executors and administrators to deliver a Quit Claim deed to all of the claims and properties which are the subject of this INDENTURE to the LESSEE upon the payment of the sum of $500.00 (Five Hundred Dollars) lawful money of the United States to the said Executor or Administrator of the survivor's estate.~~

THAT, the provisions of this INDENTURE shall be binding upon and inure to the benefit of the heirs, executors, administrators, successors or assigns of the parties hereto.

IN WITNESS WHEREOF, the LESSORS have hereunto set their hands and seals, and the LESSEE has caused its corporate seal to be hereunto affixed, and these presents to be signed by its duly authorized officer, the day and year above first written.

IN THE PRESENCE OF:

_____ (L.S.)
Lessor

_____ (L.S.)
Lessor

CAL-COP, INC., Lessee

By_____
President

State of California)
)
County of) ss.
)
City of)

On this _____ day of March, 1961, before me, the subscriber, personally came before me C. MARSHALL SALTER and TERESA M. SALTER, to me known, and known to the same persons described herein, and they severally and duly acknowledged to me that they executed the same.

_____
Notary Public

State of New York)
)
Chautauqua County) ss.
)
City of Jamestown)

On this _____ day of March, 1952, before me personally, came RUSSELL W. GISSELLA, to me known personally, who being, by me, duly sworn, did depose and say that he resides in the City of Jamestown, Chautauqua County, New York; that he is President of CAL-COP, INC., a corporation described in and which executed the within instrument: that he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed to said instrument by order of the Board of Directors of said corporation: and that he signed his name hereto by like order.

_____
Notary Public

ASSIGNMENT OF MINING CLAIMS

County of Chautauqua)
State of New York) ss

Russell W. Gieseler, being the owner of an undivided half interest in the Bet-Su and Agnes-Teressa Lode Mining Claims located in Section 5, Township 36 North, Range 12 West, Mt. Diabolo Meridian, in Trinity County, in the State of California, does hereby assign and transfer to Cal-Cop, Inc., a corporation incorporated under the laws of the State of New York, all right, title and interest in the said claims, in consideration of the payment of the sum of $1.00 lawful currency of the United States, receipt of which is hereby acknowledged, this 19th day of August, 1952.

_____ (L.S.)

County of Chautauqua)
State of New York)ss

Subscribed to and sworn to before me this 19 day of August, 1952,

_____
Notary Public

CAL-COP, INC., 221 Palmer Street, Jamestown, N. Y.

EXHIBIT A
5 pages

THIS INDENTURE, made as of this 8th day of March, 1962, by and between C. MARSHALL SALYER and TERRESSA M. SALYER, both of Salyer, Trinity County, State of California, hereinafter referred to as the LESSORS, and CAL-COP, INC., a corporation duly created, organized and existing under and by virtue of the laws of the State of New York, and having its principal offices at 221 Palmer Street, in the City of Jamestown, Chautauqua County, New York, hereinafter referred to as the LESSEE, witnesseth:

THAT, the LESSORS, in consideration of the sum of $100.00 (One hundred Dollars) lawful money of the United States paid herewith, and of other valuable considerations as provided in certain ARTICLES OF AGREEMENT of even date hereof, and in further consideration of rents hereinafter provided, hereby leases to the LESSEE, all of the following property and rights, with warranty of title with respect thereof free and clear of all liens, encumbrances, to wit:

the following group of mining claims, Viz.,

"TERRESSA MINE LODE CLAIM","HIGH GRADE LODE CLAIM" and "MILL-SITE PLACER CLAIM",

which are located on the East Fork of the New River in the New River Mining District of Trinity County and State of California, as recorded in the Mining Records of the said County and State aforesaid (Section 5, Township 36N, Range 12W, Mount Diablo Meridian), together with all other adjacent, adjoining or contiguous claims owned by the LESSORS or claimed subsequent to the execution of this instrument, and all others rights of every description and kind pertaining thereto whatsoever, and all buildings, structures and improvements thereon or thereof, and of all machinery, engines, pumps, compressors, tracks, drills, equipment, tools, implements, etc., of every kind used in connection therewith.

TO HAVE AND TO HOLD the same, and to enter into and take possession of all and singular said premises and property, and to commence work and to make improvements thereon and to operate, mine and extract the

minerals from the said property and premises, for the term of ninety-nine (99) years from the date hereof, which term will expire on the 8th day of March, 2051 A.D., unless sooner terminated or forfeited by the operations of any of the termination clauses of this INDENTURE or of the ARTICLES OF AGREEMENT entered into by the parties hereto of even date.

THAT, in consideration of said leasing, the LESSEE covenants and agrees with LESSORS, as follows:

1. In addition to the payments above noted and the other valuable considerations provided in the ARTICLES OF AGREEMENT of even date, the LESSEE shall pay the sum of One Hundred Dollars ($100.00) lawful money of the United States each month on or before the 10th day thereof, beginning with April, 1952, to the LESSORS as long as either of the parties named as LESSORS shall live, or until the termination hereof as provided in the terms of the ARTICLES OF AGREEMENT of even date.

2. The LESSEE further covenants and agrees to carry out the further provisions of the ARTICLES OF AGREEMENT of even date, with respect to the geological survey, the negotiation of contracts and to mine as early as is prudent and practical.

3. The LESSEE agrees to pay all taxes accruing from the date hereof, and to pay taxes advanced by the LESSORS between the 5th day of October, 1950 and the date hereof, and will do and file proof of annual assessment work as legally required, which proof of labor shall be filed with the Recorder of Trinity County not later than June 1st of each year. The LESSEE further agrees to furnish proof of both the proper filing of Assessment work Proofs, and of the payment of taxes and assessments, upon request by the LESSOR.

4. As provided in the ARTICLES OF AGREEMENT, in the event of a termination of this INDENTURE and/ or of the ARTICLE OF AGREEMENT, the LESSEE shall restore to the LESSORS an equal title to that possessed by them as of the date of the execution of these instruments.

THAT, the LESSEE shall have the right to remove, within 90 days of

the termination hereof, all machinery, equipment and other property as is usual under accepted mining practices in the State of California.

~~THAT, the LESSORS agree to transfer to the LESSEE all of their rights and title in the realty and claims at their death, and hereby direct their executors and administrators to deliver a Quit Claim deed to all of the claims and properties which are the subject of this INDENTURE to the LESSEE upon the payment of the sum of $500.00 (Five Hundred Dollars) lawful money of the United States to the said Executor or Administrator of the survivor's estate.~~

THAT, the provisions of this INDENTURE shall be binding upon and inure to the benefit of the heirs, executors, administrators, successors or assigns of the parties hereto.

IN WITNESS WHEREOF, the LESSORS have hereunto set their hands and seals, and the LESSEE has caused its corporate seal to be hereunto affixed, and these presents to be signed by its duly authorized officer, the day and year above first written.

IN THE PRESENCE OF: _____ (L.S)
Lessor

_____ (L.S)
Lessor

CAL-COP, INC., Lessee

By _____
President

State of California)
)
County of) ss.
)
City of)

On this ____ day of March, 1952, before me, the subscriber, personally came before me C. MARSHALL SAWYER and TERESSA M. SAWYER, to me known, and known to the same persons described herein, and they severally and duly acknowledged to me that they executed the same.

_____
Notary Public

State of New York)
)
Chautauqua County) ss.
)
City of Jamestown)

On this _____ day of March, 1952, before me personally, came RUSSELL J. GIESELL, to me known personally, who being, by me, duly sworn, did depose and say that he resides in the City of Jamestown, Chautauqua County, New York; that he is President of CAL-COP, INC., a corporation described in and which executed the within instrument: that he knows the seal of said corporation; that the seal affixed to said instrument is such corporate seal; that it was so affixed to said instrument by order of the Board of Directors of said corporation: and that he signed his name hereto by like order.

_____
Notary Public

ASSIGNMENT OF MINING CLAIMS

County of Chautauqua)
State of New York) ss

Russell W. Gieseler, being the owner of an undivided half interest in the Bet-Su and Agnes-Teresa Lode Mining Claims located in Section 5, Township 36 North, Range 12 West, Mt. Diabolo Meridian, in Trinity County, in the State of California, does hereby assign and transfer to Cal-Cop, Inc., a corporation incorporated under the laws of the State of New York, all right, title and interest in the said claims, in consideration of the payment of the sum of $1.00 lawful currency of the United States, receipt of which is hereby acknowledged, this 19th day of August, 1952.

_____ (L.S.)

County of Chautauqua)
State of New York)ss

Subscribed to and sworn to before me this 19 day of August, 1952,

_____
Notary Public

ALLEN W. PINGER
MINING GEOLOGIST
1419 CIRCLE WAY
SALT LAKE CITY

CAL-COP, INC.
JAMESTOWN, NEW YORK
EXHIBIT B
11 sheets, 4 maps

REPORT

ON THE EXAMINATION OF

CAL-COP CLAIMS

TRINITY COUNTY, CALIFORNIA

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MAPS		Scale:
I	Northern California-Index	1 in = 40 mi
II	Sketch of Part of Property, Cal-Cop, Inc	1 in = 100 ft
	(Inset: Part of Trinity County)	1 in = 4 mi
III	Geological Sketch- Workings	1 in = 30 ft
IV	Geological Sections	1 in = 30 ft

ALLEN W. PINGER
MINING GEOLOGIST
1419 CIRCLE WAY
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May 23, 1952

Mr. Russell W. Gieseler, President,
Cal-Cop, Inc.,
221 Palmer Street,
Jamestown, New York.

EXAMINATION OF CAL-COP CLAIMS (SALYER COPPER)
TRINITY COUNTY, CALIFORNIA

Dear Mr. Gieseler:

This report is based on observations made during a visit to the property with you from May 13 to May 17, 1952.

CONCLUSIONS- Difficulty of access and lack of transportation are the most serious obstacles to overcome in considering any plan to prospect and develop the property.

The two main showings, about 300 feet apart in the bottom of the canyon, expose copper sulphide ore of interesting width and quality. Unfortunately, there has been inadequate work done to afford any quantitative estimate of reserves or possibilities. There is nothing to indicate continuity or extension either between the showings or to depth.

The two showings appear to be in the same northwesterly trending fault or shear zone, which follows the bed of the creek between the two. The presence of strong cross fracturing at each showing makes me hesitate to assume continuous ore between the two showings; they may possibly be small pipe-like shoots in the fault zone, instead of a single strong continuous ore body.

The habit of ore occurrence in the metamorphosed rocks of the Shasta-Trinity Counties region, with a few notable exceptions, is to be small and spotty. If this prospect proves to be one of the exceptions, it is difficult to see it in the present exposures: if the zone does represent a stong continuous ore body (which remains to be proved) a length of 500 feet, an average width of 20 feet, and an assumed depth of 500 feet, would yield 500,000 tons of ore. The best estimate of grade that I can make from present exposures and analyses, is that the ore may run about 5.% Cu, 0.01 to 0.02 ozs Au, and 0.5 ozs Ag.

It is doubtful if 500,000 tons of this grade would stand the cost of equipment, road construction, etc., necessary for operation. If larger reserves can be developed, the property would be of marginal interest; promise of reserves of several million tons would make it of real interest.

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MINING GEOLOGIST
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In a location with more favorable access, a limited amount of work to determine continuity, extent, and possibilities would be justified. In the present situation, where all supplies have to be packed in, even the minimum development is faced with high cost.

The steep canyon walls with heavy slide rock and talus, plus the probability of deeper weathering of the ore, make trenching of the ore zone to north and south appear impractical.

A more desirable method of development than trenching would be to clean out the adits at each showing, and drive on the ore zone as far as sulphide ore can be followed. The objection to this is the difficulty and cost of transporting even the least equipment necessary to do efficient work.

The quickest and least expensive means of testing the possibilities of the property would be by diamond drilling five or six 100' holes to establish grade and continuity of ore below and between the two main showings. The actual cost of drilling would be between $4.00 and $5.00 per foot; The cost of taking the equipment in, setting up, dismantling, and moving out, will cost as much as the drilling. The entire job, including supervision, would cost about $6,000.

PROPERTY- The property, four lode and one placer claims, is held by location, the claims being situated in Section 5, T36N, R12W, Mt. Diablo Base Line and Meridian, on the East Fork of New River, in the northwestern part of Trinity County. See maps I and II. The area is extremely rugged, elevations varying from about 2600 feet at the prospect, to 6800 feet at the top of Cabin Peak only three miles to the east. The canyons are narrow, steep walled, and densely wooded. Annual rainfall is heavy, and streams provide an ample supply of water. Water power could be developed. Preliminary prospecting and development could probably only be done during the dry season.

Access is difficult. The property is nearly 90 miles by road and trail east of Eureka, the nearest shipping point for rail or water transportation. Tacoma, the nearest smelter, is 850 miles by water from Eureka.

U.S. Highway No. 299 from Eureka is hard surfaced, but narrow and winding, and crosses two steep summits in the distance of 63 miles to Sawyer's Bar, where a graded gravel surfaced road turns off to Denny, a distance of 16 miles of narrow winding road over another summit. From Denny, the U. S. Forest Service is now building a road several miles farther up New River to make access for logging off a burned area. When this road is finished it will leave about eight miles of trail to reach the property. To convert this eight miles of trail to road would be difficult and costly.

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At the present time the trail up the East Fork is blocked by landslides, but the Forest Service should have the trail opened by mid-summer.

HISTORY- The area of the East Fork of New River was first worked for placer gold in terrace gravels above the present creek bottom. The first published mention of the copper prospect is under the name of the Nonpareil Mine in the 13th Report of the State Mineralogist, in 1896. The claims were presumably located in the early '90's. A small amount of hand-sorted ore is said to have been packed out in 1917; this is the only reported production. After a long period of abandonment, the claims were re-located by C. Marshall Salyer.

GEOLOGICAL OCCURRENCE- The New River area of Trinity County has not been mapped geologically. The rocks comprise a thick series of metamorphic greenstones, originally volcanics; sediments: shales and limestones; schists; serpentine; and intrusive granite and grano-diorite. In the immediate area of the property all rock exposures observed were dense finely grained massive greenstones, which are probably metamorphosed volcanics. Relict structures seen suggest andesitic flows and agglomerates. On the trip out of camp, about one mile west of the cabin, outcrops of black shale or slate was seen; and the ridge west of Pony Creek is a large mass of serpentine.

The structure in the massive greenstone is obscure, but appears to trend northwest-southeast, with a dip to the northeast. The ore exposed at the property appears to be locallized along a fault or sheared zone parallel to the NW-SE trend of the country rock. The stronger faults in the showings strike from N30°W to North, and dip at angles of from 25° to 50° to the NE and East.

There are two main showings: one on the north side of the creek, which extends from creek level to about 25 feet above, and the other on the south side of the creek, about 300 feet southeast of the first. Good ore is exposed at each locality, and consists of chalcopyrite ($CuFeS_2$) with only very sparse pyrite (FeS_2) occurring in irregular massive bunches in highly sheared and altered greenstone. Short adits have been driven into the hill along the ore zone at each locality. These are inaccessible at present, but the old dumps indicate that good sulphide ore was obtained.

The irregular lense-like masses of sulphides vary from a few inches to about one foot in thickness, and are from one to three or four feet long. The country rock between sulphide lenses is often barren, and occasionally has disseminated chalcopyrite in it. The masses of sulphides appear to be locallized

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MINING GEOLOGIST
1410 CIRCLE WAY
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along faults and at the intersections of the main northwesterly trending faults with cross faults or fractures usually running northerly to northeasterly. Exposures are lacking, but there is some suggestion that the main northwesterly fault zone is displaced by some of these cross faults; and the further suggestion that possibly the ore is locallized at intersections of the two fault systems. Map III shows the relative locations of the main showings and other smaller showings.

The mineralization appears relatively strong where exposed. The fault zone is highly fractured and broken, and possibly followed an agglomerate bed between two thick massive andesitic flows, a few fragments of highly altered chloritic slate were observed in the unreplaced matrix of the ore zone. The rock appears to be a reasonably favorable host for sulphides; the stronger structures should persist, and I see no obvious geological reason why the ore should not continue with them.

The following tabulation shows the results of analyses of samples taken on the property:

Date	Sample No.	%Cu %	Zn %	Au Ozs/Ton	Ag Ozs/Ton	Remarks
2-28-45	1	5.96	Tr	0.01	0.79	C. M. Salyer
2-28-45	2	8.01	0.10	0.02	1.18	C.M.S.
8-14-45	A3	10.07	n.d.	n.d.	n.d.	C.M.S.
8-14-45	A4	11.23	n.d.	n.d.	n.d.	C.M.S.
8-14-45	A5	9.72	n.d.	n.d.	n.d.	C.M.S.
8-14-45	A6	14.21	n.d.	n.d.	n.d.	C.M.S.
8-14-45	A7	8.92				C.M.S.
9- 8-45	A7		n.d.	0.01	1.79	C.M.S.
9- 8-45	A8	13.23	n.d.	0.03	1.77	C.M.S.
9- 8-45	A9	13.72	n.d.	0.01	2.20	C.M.S.
9- 8-45	B1	n.d.	n.d.	Tr	0.20	C.M.S. (From badly leached
9- 8-45	C1	2.81	n.d.	0.02	0.60	C.M.S. (East outcrop
2-26-47	1-B	n.d.	n.d.	0.01	Tr	C.M.S. 1/2 mile up South Fork of East Fork.
7-12-48	X-1	0.17	n.d.	0.01	Tr	C.M.S. ditto
8-25-48	Crop	Tr	n.d.	0.01	Tr	C.M.S. 1 mile up ditto
9-10-48	43	3.93	n.d.	0.015	0.08	H. N. Witt
9-10-48	44	3.59	n.d.	0.02	0.38	H.N.W.
9-10-48	45	4.71	n.d.	0.015	nil	H.N.W.
9-10-48	46	5.26	n.d.	0.005	0.50	H.N.W.
9-10-48	47	0.15	n.d.	0.005	nil	H.N.W.
9-10-48	48	7.52	n.d.	0.01	0.70	H.N.W.

n.d.= not determined; nil= not present; Tr= trace
Analyses by Abbott A. Hanks, Inc., San Francisco

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Because of Mr. Salyer's illness, I was unable to find out exactly where the samples were taken; from my one inspection of the showings with him, I understand that the samples were taken of the different sulphide exposures, and that there is some duplication of samples.

The last group of six samples, taken by Mr. H. N. Witt, appear to have been taken across the showings as the ore would be mined. His samples, Nos. 43-46, were probably taken from the showing on the north side of the creek; No. 47, in the East showing in the trench near my station 4-B on Map III, and No. 48 at the showing on the south side of the creek. It is of interest to note that these samples show approximately the same copper content as my estimate of grade based on a careful estimate of percentage of chalcopyrite present in the exposures.

My estimate of grade is as follows:

Showing on North side of creek: measurements are taken from station 0, toward station 1, from west to east.

From	To	Feet	Description	Chalcopyrite %	Cu %
0.0	6.5	6.5	Dense chloritic greenstone	None	None
6.5	10.5	4.0	Sheared do do	± 3.	± 1.
10.5	15.0	4.5	do do do	15-20	± 6.
15.0	21.0	6.0	do do do	± 10	± 3.
21.0	22.5	1.5	do Fault Gouge, no sul.	None	None
22.5	28.0	5.5	Sheared chloritic greenstone	10-15	± 4.
28.0	32.0	4.0	do do do	± 20	± 7.
10.5	32.0	21.5	AVERAGE	12-15	4. to 5.

Showing on South side of creek: From west wall to east across ore exposure:

0.0	14.0	14.0	Sheared chloritic greenstone	± 20	± 7.
14.0	44.0	30.0	Dense do do	2-3	± 1.

ORE RESERVES AND POSSIBILITIES- From the small amount of work done it is impossible to estimate any developed reserves; but the width and grade of ore exposed warrant some speculation as to the geological possibilities of the occurrence.

The two showings are about 300 feet apart, and appear to be in the same fault zone. If the ore is continuous between the two, and assuming an extent of 100 feet to northwest and to southeast beyond the showings, there is a possibility of a length of 500 feet with an average width of 20 feet; these dimensions give a horizontal section of 10,000 square feet. Using a factor of 10 cubic feet of ore per ton, an ore body of this size would

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contain 100,000. tons for each 100 feet of vertical depth.

If the ore is not continuous between exposures, but is localized in pipe-like shoots in the fault zone, the tonnage possibilities would be probably only of the order of 25,000 to 30,000 tons for each 100 feet of depth.

In the first instance, greater tonnage could be obtained if greater length or greater width were proved in prospecting. In the second instance, pipe-like shoots, the only speculative possibility would be find more massive sulphides and perhaps improved grade.

The most interesting potentiality for large tonnage is the possibility of extent along the trend or strike of the fault zone beyond present showings. If this possibility should materialize, the steep canyon walls would afford adequate banks to permit large reserves above adit levels driven from just above the creek. Unfortunately, the slopes are covered with a heavy overburden of detrital material which prevents adequate inspection to determine gossan croppings or other evidence to indicate persistence of mineralization along strike.

From present showings I believe it is reasonable to expect an average grade as mined of about 5% Cu. Because of the irregular habit of occurrence of the sulphides, I should certainly hesitate to forecast a higher average content. A 5% Cu ore, with the copper occurring as the mineral chalcopyrite ($CuFeS_2$), and with very sparse pyrite (FeS_2) present, as indicated by the exposures, should yield a concentrate running about 30% Cu, with a ratio of concentration of about 6 tons of crude ore milled to produce one ton of concentrates. The ore would appear to be readily milled by gravity methods--jigs and tables; although this question must obviously await further information as to the reality of the grade and reserves. From the analyses made, I would expect a 30% Cu concentrate to run 0.05 to 0.06 oz Au and 2.0 to 3.0 oz Ag per ton. Unfortunately, the precious metal values are not as favorable as would be desirable in a prospect as inaccessible as this one is.

MINING CONDITIONS- The character of the ground exposed in the showings is such that conditions should be favorable for low cost open stope methods of mining. The rock is hard and tight, and I do not anticipate trouble from bad ground that would require timbering, nor trouble from excessive water. These questions, however, cannot be finally answered until further development work is done.

PROSPECTING- In a more favorable location with respect to access and transportation, the prospect would warrant some additional work to determine the possibilities for tonnage and grade. In the existing situation, the difficult access, lack of tranportation to the property, and the long haul over steep winding roads

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to rail or water transportation results in a discouraging outlook as to costs of prospecting, development, and operation. The lack of precious metal values is a further handicap. Taking all these factors into consideration, the gamble is a long one.

Under the discussion of Ore Reserve Possibilities (page 5) I have suggested the possibility of 100,000 tons of 5% Cu ore per 100 feet of depth. The real facts, when known, may be a fraction of this figure, or they may be several times greater. This may only be determined by prospecting and development.

There are three general approaches to the solution of the problem: 1. Trenching along the strike or trend of the ore zone to the northwest and southeast. The hill slopes are steep and heavily covered with detrital material. Trenching would be difficult because of the uncertain depth to ledge; and results would be uncertain because of the probability that sulphides at higher elevations would be weathered, leached, and oxidized. Samples would be unreliable in terms of sulphide ore below. Timbering of the trenches would probably be necessary to prevent caving of overburden. The cost of such work would be out of proportion to the information obtained, and is not to be recommended.

2. At each showing there is an old adit. These adits could be cleaned out and driven along the course of the ore zone to the northwest and southeast. This work could probably be done with a minimum of timbering, as the ground should stand well except for an occasional weathered fault near the surface. As depth under the hill is gained, the rock should be tight and strong. Systematic cross-cutting of the ore zone would permit adequate sampling. The cost of such work--drifting and cross-cutting at tunnel level, would normally be from $10.00 to $15.00 per foot of advance. Under existing conditions, where all equipment and supplies have to be packed in by trail, the cost would be at least double, even with every precaution being taken to haul in only essential equipment to permit efficient work. Again, the cost of such work would be out of proportion to the risk involved.

3. Prospecting by drilling. Probably the most information per dollar of cost could be obtained by drilling a few holes to determine continuity and grade of ore between and below the surface exposures. The topography is such that shallow holes could be drilled to intersect the ore zone 75 to 100 feet below the showings, and an intermediate hole drilled to test continuity between showings. These holes would give valuable information as to grade, width, and nature of ore occurrence. If these holes proved ore of interesting grade and width, a program of further drilling could be planned to learn more of the extent of the deposit along the trend to northwest and southeast, and to greater depth.

For an initial testing of the showings I would suggest two shallow holes to be drilled from near station 2 (on map III)

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One of these would be drilled to the west at an angle of -60° with the horizontal to determine grade and width under the showing on the north side of the creek. If ore is encountered, a second hole would be drilled vertically from the same location to test at slightly greater depth, and somewhat southeast of the showing. The second drill location would be in the bottom of the trench between stations 4-A and 4-B, with one hole drilled at -60° southwesterly toward the main showing on the south side of the creek, at station 5. If ore is encountered, a second hole from this location would be drilled vertically.

If these four holes encounter ore, a fifth hole would be drilled vertically from a location in the vicinity of station 3; if only the inclined holes at the other locations encounter ore, the hole at station 3 would also be inclined at -60° to the S.S.W.

The five holes suggested would aggregate between 500 and 750 feet of drilling. The actual drilling cost would be about $4.00 per foot, or between $2,000.00 and $3,000. for the job. It would cost about $2,000.00 to bring the equipment in to the prospect from either Salt Lake or Spokane. Allowing for drilling, transportation, supervision, sampling and assaying, and preservation of the core, it would cost about $6,000 to do this job. I have talked with Messrs Goldsworthy and Baker of Boyles Bros. Drilling Co., here in Salt Lake, giving them the distance from Salt Lake, the distance to be packed in, and the character of the ground to be drilled; and it is from their figures that I have prepared the above estimate of costs. They propose that the mining company pay the cost of transportation to the drilling site, and $65.00 per shift for one drill rig and crew while setting up, moving, and tearing down; and $110.00 per shift for drilling time. The proposal has the advantage of no minimum footage guarantee, and works out satisfactorily.

Core recovery and rate of drilling should be good, judging from the rock and ore that can be seen in the showings.

VALUE OF ORE- Information on grade and tonnage is insufficient to do more than speculate as to the value of the ore. From the limited showings, from the few analyses available, and from my estimate of the grade of ore as mined, I judge that the crude ore would run 5.% Cu, 0.01 oz Au, and 0.5 oz Ag. About six tons of run of mine ore would produce one ton of concentrate running perhaps 30.% Cu, 0.05 oz Au, and 2.5 oz Ag.

With copper at 15¢ per lb. this concentrate, less treatment charges, would net between $90.00 and $100.00 per ton at the smelter.

With copper at 24¢ per lb. this concentrate, less treatment charges, would net between $135.00 and $150.00 per ton at the smelter.

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Freight charges and handling: 90 miles truck haul from mine to Eureka, and 850 miles water transport from Eureka to Tacoma, Washington, would total between $20.00 and $25.00 per ton.

Subtracting freight charges on the concentrate, and calculating the value back to the crude ore, we find that on 15¢ copper, the value is about $15.00 per ton at the mine, and on 24¢ copper, the value is about $20.00 per ton at the mine.

Costs, per ton of crude ore, would be:

Mining and development,	about	$5.00	per ton
Milling	about	2.00	
Overhead, depletion, and amortization	about	2.00	
Total costs		$9.00	per ton crude ore

The wholly intangible item would be the cost of building 8 miles of access road to the property. On a small tonnage of concentrates, the cost of the road would be prohibitive. On a large ore reserve, with a large tonnage of concentrates to be shipped, it might be feasible.

It is hazardous to attempt a valuation on the meagre data available; the above rough figures are significant only in so far as they indicate rather clearly, I believe, that on a 15¢ market for copper, even a moderately large tonnage of ore is close to being marginal. On 24¢ copper, a small mine is still marginal, but a large tonnage of reserves might well be valuable and be worthy of serious consideration.

To go a step farther, I would hazard the opinion that the promise of reserves of less than 500,000 tons of 5% Cu would be of very doubtful or no economic value; reserves of between 500,000 and 1,000,000 tons would be of marginal value, and might be worth while on present markets. Possibilities of several million tons would be of definite interest.

The prospect needs additional work to give some indication of its potentialities. In a more favorable situation the geological conditions are sufficiently favorable to warrant the preliminary drilling I have suggested. Under the adverse conditions that exist, the risk is great, and the cost of even the modest program suggested is high.

Respectfully submitted,

ALLEN W. PINGER
MINING GEOLOGIST
1419 CIRCLE WAY
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BIBLIOGRAPHY AND ABSTRACTS

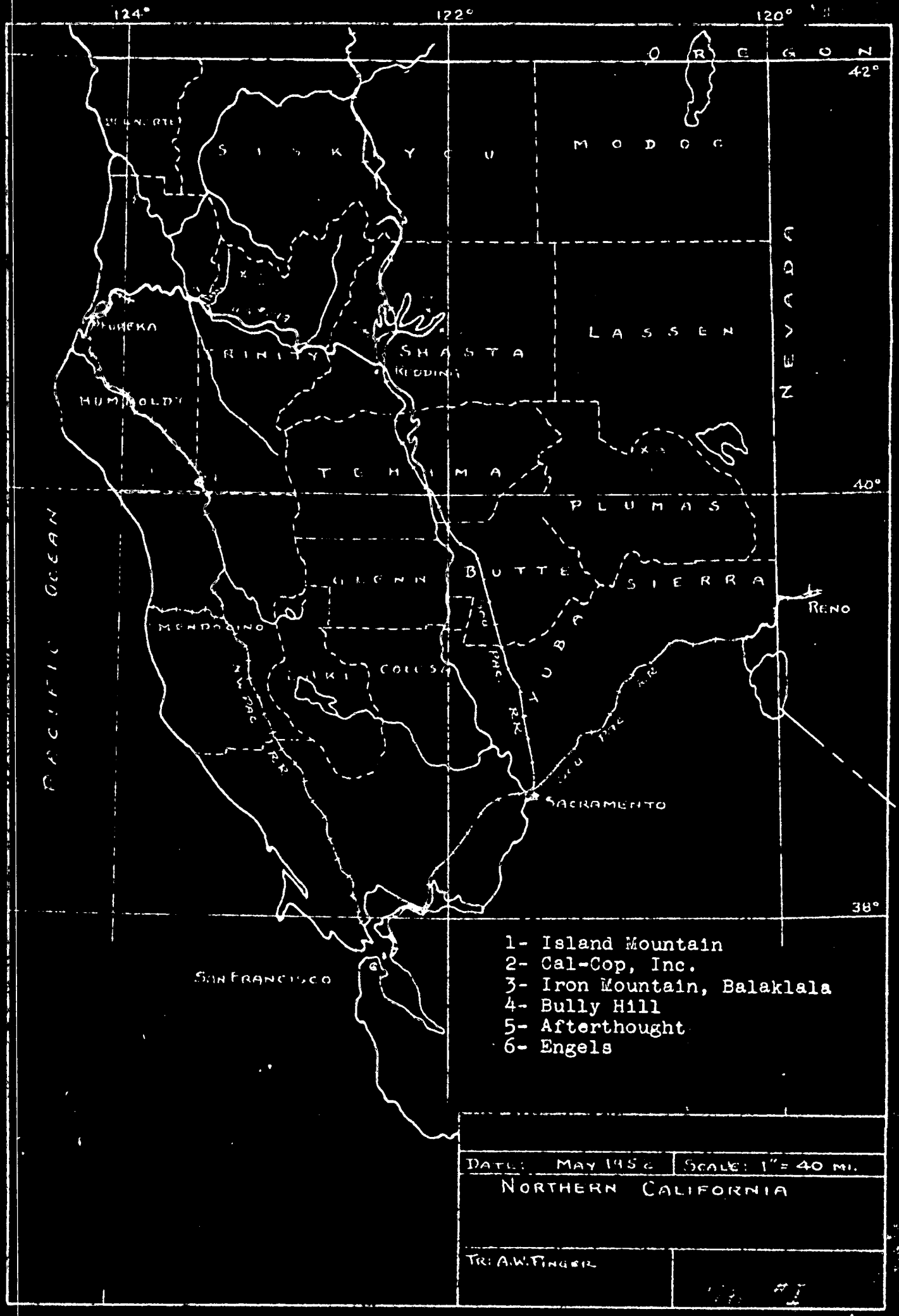
1895- Crawford, J. J., 13th Report of State Mineralogist, Sept '96
Nonpareil Mine- Located on the East Fork of New River, 6 miles east of Francis, elevation 2400.
Adit, 35 feet, several open cuts; Vein 4' wide, dip 25° east. Slate footwall, Porphyry hangingwall.
Ore: chalcopyrite, sparse gangue.
Idle: C. S. McAtes, Francis, owner.

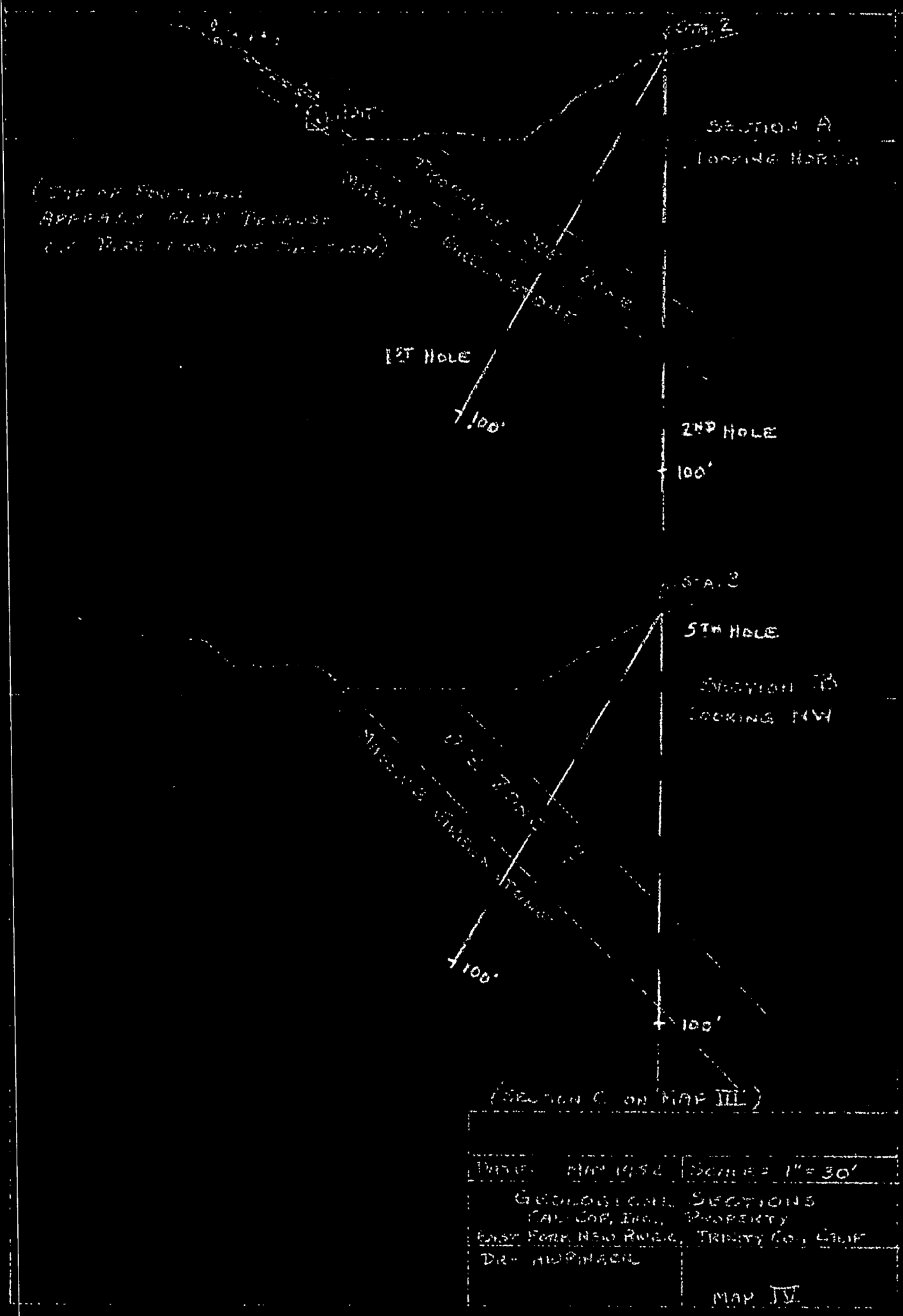
1905- Aubury, L. E., The Copper Resources of Calif., Bull. 23
Nonpareil Group- 4 claims, East Fork of New River
Lode 1' -14' wide; adit 25 feet. 8%Cu.
Gossan outcrops reported over length of one mile.
C. S. McAtes, Redding, Owner

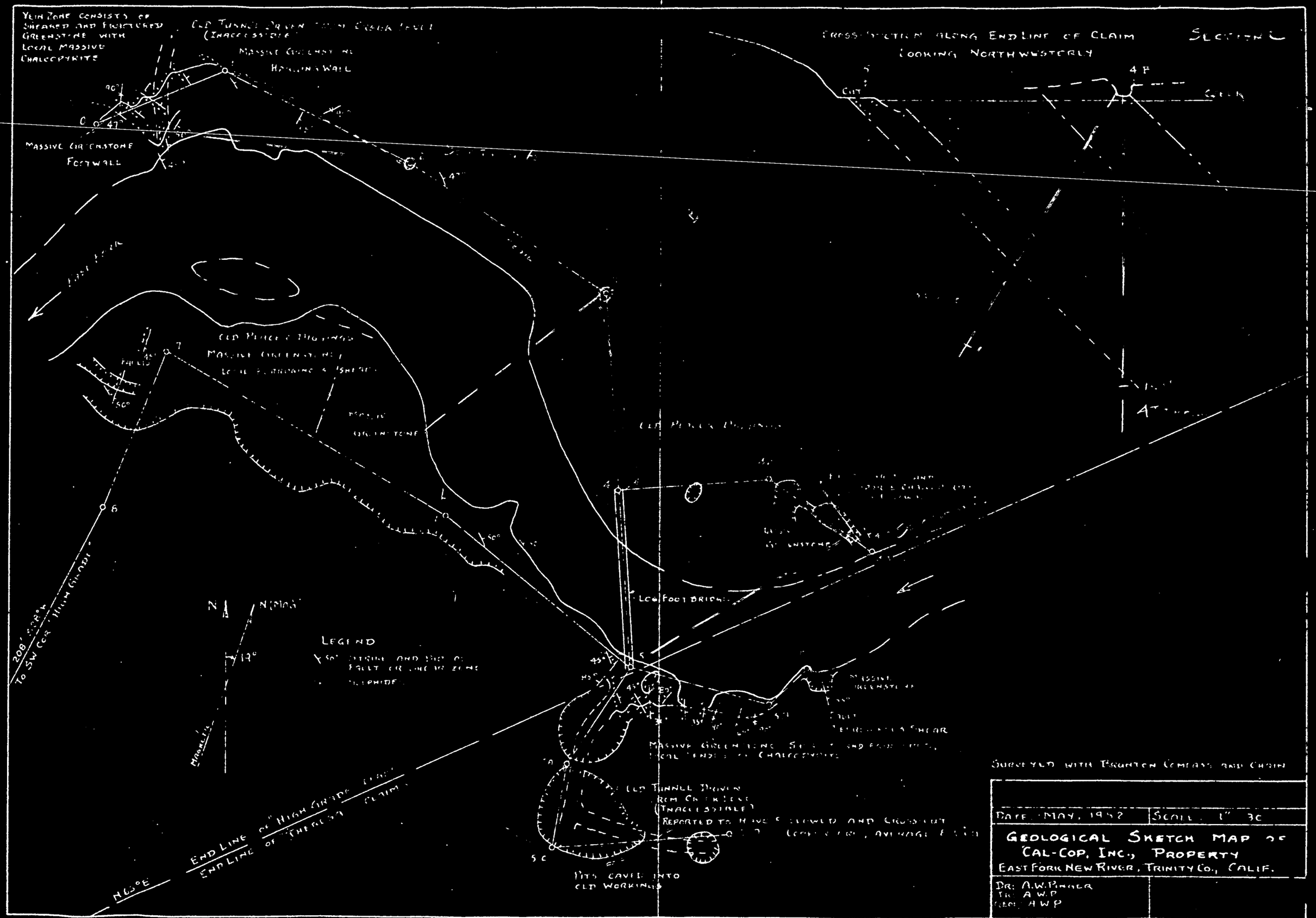
1908- Aubury, L. E., The Copper Resources of Calif., Bull 50
Nonpareil Group- Same description as above.

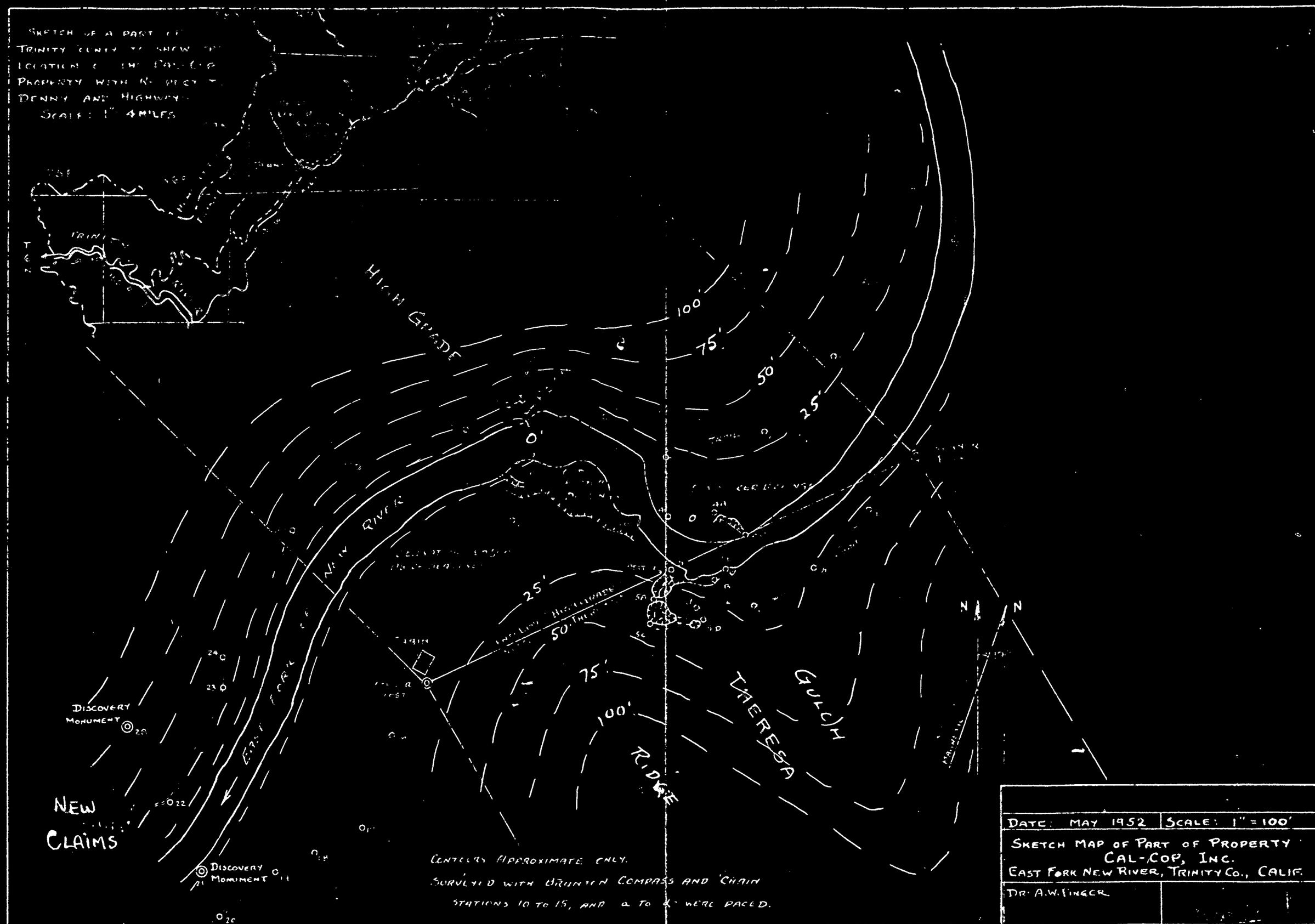
1916- Brown, G. C., Calif. Eng. Bur., Report 14, p. 881
Nonpareil Mine- Sec 5, T36N, R12W, M.D. B&L
Short adit, lode 1 - 14 feet wide, average 8% Cu
Gossan reported for nearly one mile on strike
Idle. C. S. McAtes, Redding, Owner.

1948- Jenkins, O. P., et als., Copper in Calif., Bull. 144, p. 351
Nonpareil Mine- Sec 5, T36N, R12W, M.D. B+L
Gossan; adit 35 feet, Cuts; vein 1 - 14 feet wide on Slate-Diorite contact.


124°
122°
120°
42°
40°
38°
OREGON
NEVADA
PACIFIC OCEAN
SISKIYOU
MODOC
LASSEN
TRINITY
SHASTA
REDDING
EUREKA
HUMBOLDT
TEHAMA
PLUMAS
GLENN
BUTTE
SIERRA
MENDOCINO
COLUSA
YUBA
RENO
SACRAMENTO
SAN FRANCISCO
1- Island Mountain
2- Cal-Cop, Inc.
3- Iron Mountain, Balaklala
4- Bully Hill
5- Afterthought
6- Engels
DATE: MAY 1956
SCALE: 1" = 40 MI.
NORTHERN CALIFORNIA
TR: A.W. FINGER


STA. 2
SECTION A
LOOKING NORTH
1ST HOLE
100'
2ND HOLE
100'
STA. 3
5TH HOLE
SECTION B
LOOKING NW
100'
100'
(SECTION C ON MAP III)
DATE: MAY 1952
SCALE: 1" = 30'
GEOLOGICAL SECTIONS
CAL-COR, INC., PROPERTY
EAST FORK NEW RIVER, TRINITY CO., CALIF.
DR. HOPKINS
MAP IV


Vein zone consists of sheared and fractured greenstone with local massive chalcopyrite
Old tunnel driven from creek level (inaccessible)
Massive greenstone
Hanging wall
Massive greenstone
Footwall
Cross-section along end line of claim
Looking northwesterly
Section
Cut
Creek
Old pits & workings
Massive greenstone
Local stringers & lenses
Fault
Greenstone
Low foot bridge
Massive greenstone
Fault
Reported to have shoved and cross-cut
Pits caved into old workings
208' S 88° W to SW cor. High Grade
N
N (Mag.)
12°
Magnetic
Legend
End line of High Grade claim
End line of Theresa claim
N 65° E
Surveyed with Brunton compass and chain
Date: May, 1952
Scale: 1" = 30'
Geological Sketch Map of Cal-Cop, Inc., Property
East Fork New River, Trinity Co., Calif.
Dr: A.W.Pinder
Tr: A.W.P.
Geol: A.W.P.


Sketch of a part of Trinity County to show the location of the Cal-Cop Property with respect to Denny and Highway
Scale: 1" 4 miles
High Grade
New River
East Fork
Cabin
Highway
Theresa
Gulch
Ridge
Discovery Monument
New Claims
Discovery Monument
100'
75'
50'
25'
0'
N
Contours approximate only.
Surveyed with Brunton Compass and Chain
Stations 10 to 15, and a to e were paced.
Date: May 1952
Scale: 1" = 100'
Sketch Map of Part of Property
Cal-Cop, Inc.
East Fork New River, Trinity Co., Calif.
Dr. A.W. Finger

Mr. E. A. Ellis

Room 4640 - DMEA