Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

CONTROLLED DOCUMENT

DMA Docket No. 2214

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This document has been recorded as

EXPLORATION PROJECT

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

Routing Slip

	Room 4070		
To:	Base Metals Br.	Date	11/15/51
To:	~~F. L. Knouse~~	Date	~~11/19/51~~
To:	~~G. H. Johnson~~	Date	~~11/27/51~~
To:	~~Kocsal~~	Date	~~12/17/51~~
To:	~~Operating Com~~	Date	~~12/18/51~~
To:	~~Krause~~	Date	~~1-9-52~~
To:	Opr. Com.	Date	6-26-52
To:	Mr. Mittendorf	Date	
To:	Mails & Files	Date	
To:	Ellis (Docket)	Date	
To:	(1) Mr. Mittendorf	Date	8-13-52
To	(2) Mails & Files	Date	
To:		Date	
To:		Date	
To:		Date	

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700
FILE COPY
SURNAME:

F. L. Knouse
Ellis

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

August 13, 1952

Memorandum

To: Mails and Files

From: Ernest Wm. Ellis, Chief
Rare and Misc. Metals Division

Subject: Docket No. DMA-2214 (Copper)
Johnson Stephenson, President
Copper Head Mine,
Siskiyou County, California

The above-docketed application, dated November 1, 1951, was transferred to Region III for a Field Team examination on December 26, 1951. The examining geologists submitted their report to the Regional Office on May 14, 1952, the examination having been delayed because of winter conditions. Although the geologists recommended that the requested loan be denied, the Region III Field Team, after discussing the program with the applicant, was of the opinion that denial should be held in abeyance until the applicant had had a chance to do some extra work to expose a possible fault. The Field Team stated they would decide definitely, after the work was done, whether to deny or approve the loan.

By letter from Mr. Stephenson to Mr. Miller, Executive Officer of Region III, dated August 4, and Mr. Miller's memorandum of August 8, we have been advised that the Applicant has made satisfactory arrangements with some mine officials to work the mine, with the inference that he is not interested in a DMEA loan.

We are, accordingly, removing this application from our active file and considering it closed by withdrawal. The docket file is attached.

Ernest Wm. Ellis

Ernest Wm. Ellis

cc to: Adm. Reading File
Docket
Messrs. C.H.Johnson, Rm. 3621
Ned Nelson, Rm. 4216 GSA
Ellis
Knouse
GLAult/gla 8-13-52

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

August 13, 1952

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8/13/52 gfa

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.

August 8, 1952

Memorandum

To: DMEA, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 2214 (Copper), Copper Head Mine, Siskiyou County, California

Reference is made to subject docket and especially to my letter, dated July 7, to Mr. John Stephenson, of which a carbon copy was sent to you.

Attached is a copy of a letter received by me from Mr. Stephenson, dated August 4, in which he informs me that he has made other arrangements and infers that he is no longer interested in a DMEA loan. A copy of my reply to Mr. Stephenson, dated August 8, also is attached.

The docket is being returned herewith.

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

Attachments

Copy to E. H. Bailey, USGS (with copy of Stephenson's letter)

AUG 12 1952

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.

August 8, 1952

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To: DMEA, Interior Building, Washington 25, D. C.

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Executive Officer
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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.

August 8, 1952

Mr. John Stephenson
Sutter Hotel
14th and Jefferson Streets
Oakland, California

Re: Docket DMEA 2214 (Copper)
Copper Head Mine
Siskiyou County, California

Dear Mr. Stephenson:

I was very glad to get your August 4 letter and to learn that you have made satisfactory arrangements with some mine officials to work your Copper Head Mine in Siskiyou County, California. This is good news and I congratulate you on your success.

It was a pleasure to work with you in our attempt to negotiate an exploration loan for your property, and though you were not successful in consummating the loan up to the time other arrangements were made, I do admire your patience and the faith you consistently have in the possibilities of your property.

I trust you will call on me when you return to Oakland, as I am very much interested in what you are doing in Siskiyou County.

Sincerely yours,

H. C. MILLER

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

Copy to DMEA, Interior Building, Washington 25, D. C.
E. H. Bailey, USGS

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

Office of
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DMEA Field Team
Region III

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

August 8, 1952

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

Copy to DMEA, Interior Building, Washington 25, D. C.
E. H. Bailey, USGS

C
O
P
Y

Horse Creek, California

August 4, 1952

Mr. H. C. Miller,
Executive Officer
DMEA Field Team, Region III
San Francisco, California

Dear Mr. Miller:

Your letter of July 7th was not forwarded from the Sutter Hotel, Oakland until a few days ago.

Your letter of June 20 while written in a kindly spirit could hardly be used to induce my partners to spend the money so I did not try.

However, here comes back the Oregon party who examined the mine with the former resident Engineer of the Blue Ledge with a better offer and a stronger organization which included two mine operators after two days examination they made an offer which we accepted and they are now assembling equipment to move in.

I shall remember your kindness, patience and consideration during our long negotiations with the DMEA.

Yours very truly,

/s/ John Stephenson
Pres., Copper Head Mine

C
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P
Y

Horse Creek, California

August 4, 1952

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DMEA Field Team, Region III
San Francisco, California

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

Office of
Executive Officer
DMEA Field Team
Region III

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

July 7, 1952

Mr. John Stephenson
Sutter Hotel
14th and Jefferson Streets
Oakland, California

RE: Docket DMEA-2214 (Copper)
Copper Head Mine
Siskiyou County, California

Dear Mr. Stephenson:

Reference is made to my letter to you, dated June 20, 1952, in which I stated that if you did further exploration of your copper prospect on your own, "we will continue to hold your application open for some future time."

The Washington Office of the Defense Minerals Exploration Administration sanctions my proposition to you, but insists that a time limit to complete the work which you propose to do should be set.

Accordingly, I am setting August 15, 1952 as a completion date which should give you plenty of time to complete the work. Should your work reveal new evidence sooner than that you should report the facts to us as early as possible so that we can decide what action to take.

Very truly yours,

H. C. MILLER

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

Copy to DMEA, Interior Building, Washington 25, D. C.
Mr. E. H. Bailey, USGS

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
JUL 11 1952

SD

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

Office of
Executive Officer
DMEA Field Team
Region III

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

July 7, 1952

Mr. John Stephenson
Sutter Hotel
14th and Jefferson Streets
Oakland, California

RE: Docket DMEA-2214 (Copper)
Copper Head Mine
Siskiyou County, California

Dear Mr. Stephenson:

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

Copy to DMEA, Interior Building, Washington 25, D. C.
Mr. E. H. Bailey, USGS

JUL 11 1952

7/2/52 gla

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

July 1, 1952

Memorandum

To: E. W. Ellis, DMEA

From: C. H. Johnson, Bureau of Mines

Subject: DMEA - 2214 Copper Head, Siskiyou County, California

I have noted the report by Irwin and Robertson on this prospect, and believe it justifies denial. However, since the Field Team chose to postpone recommendation of any action until Applicant does some more work, I think you might do well to ask the Executive Officer to have a little sampling done when and if another examination is made.

C. H. Johnson

C. H. Johnson

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 2 1952

FILE COPY
SURNAME: 100

F L Knouse
Ellis

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

JUN 30 1952

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

Re: Docket No. DMEA-2214 (Copper)
John Stephenson
Copper Head Mine
Siskiyou County, California

Dear Mr. Miller:

Reference is made to your letter dated June 20, 1952, addressed to the captioned applicant.

It is suggested that the applicant be given a time limit to complete the work which he proposes to do; and as you are familiar with his proposal and the period of time required to do this work, you should write the letter and send a copy to this office.

Sincerely yours,

(signed) FRANK E. JOHNSON
(JHB)

Chairman, Operating Committee

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

T. P. Thayer (JHB)
Member, Geological Survey

FLKnouse/jem
6/26/52
cc to: Adm. Reading File
Docket
Messrs. CHJohnson-3621
Ned Nelson-4216-GS
Ellis Knouse
Opr. Committee
Field Team, Region III

6/25/52 gfa

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 23 1952

Office of
Executive Officer
DMEA Field Team
Region III

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

June 20, 1952

Mr. John Stephenson
Sutter Hotel
14th and Jefferson Streets
Oakland, California

RE: Docket DMEA-2214 (Copper)
Copper Head Mine
Siskiyou County, California

Dear Mr. Stephenson:

Your letter of June 5 which outlines your ideas of the geology and ore possibilities of your copper deposit in Siskiyou County, California has been given studied consideration by Messrs. Bailey, Robertson and Irwin, geologists of the Geological Survey. These geologists report that after reading your letter their views as to the possibility of finding enough ore to warrant further exploration of your property remain unchanged.

In view of the difference of opinion between you and the geologists and the suggestion you made to me on your last visit to the office that you would do further exploration on your own, we will continue to hold your application open for some future time.

If, as a result of the new work, you reveal new evidence that might change the geologists' opinions of your property, you should get in touch with me again. At that time we will give studied consideration to the need for making another examination of your property.

Very truly yours,

H. C. MILLER

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

HCMiller:hdj

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

6/4/52 gla

Filed by F. L. Kunkel

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
MAY 26 1952

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

Office of
Executive Officer
DMEA Field Team
Region III

1012 Flood Bldg.
870 Market St.
San Francisco 2, Calif.

May 21, 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-2214 (Copper) - Copper Head Mine, Siskiyou County, California. John Stephenson, Copper Head Mine, Alameda, Calif.

Reference is to your "Review of Application for Exploration Assistance" dated December 26, 1951, requesting an examination of subject property.

Examination of the property was held up by snow until a few weeks ago. Attached are four copies of a report, DMEA-2214, Copper Head Mine, Siskiyou County, California, by W. P. Irwin and J.F.Robertson, Geologists, U. S. Geological Survey, dated May 14, 1952.

You will notice the examining geologists recommend that the requested loan be denied. Region III Field Team, however, after discussing the program with the applicant, is of the opinion that denial should be held in abeyance until the applicant has had a chance to expose what he maintains is a possible fault, now completely covered by overburden. If this fault exists as maintained by the applicant, the property will be reexamined to ascertain if there is any mineralization along the fault. The applicant intends to expose the fault by trenching at an early date and is to let us know when the fault has been exposed. After that we can decide definitely whether to deny or approve the loan.

We are holding the docket in our files until we can report to you the results of our reexamination, if one is made.

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

Attachment

Copy to: E. H. Bailey, USGS

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Bolsa [illegible]
[illegible] 30 1952

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA 2214, Copper Head Mine

Siskiyou County, California

W. P. Irwin, Geologist
J. F. Robertson, Geologist
U. S. Geological Survey

May 14, 1952

Reviewed by
DMEA OPERATING COMMITTEE

6-2-52
(date)

Summary

An application was filed with DMEA on November 1, 1951 by Mr. John Stephenson requesting 50 percent government participation in a $4,125 program to explore the Copper Head Mine in Siskiyou County, California. Mr. Stephenson proposes to drive a tunnel 100 feet long with two cross cuts, each 50 feet long, im search for veins or pockets of copper-bearing ore in schist.

In response to a request by DMEA, the Copper Head Mine was examined on May 1, 1952, by W. P. Irwin and J. F. Robertson of the Geological Survey, accompanied by Mr. Stephenson, to determine the feasibility of the exploration proposal. It is recommended that a DMEA loan be denied, as the probability of finding enough ore to warrant the exploration cost is poor.

Introduction

The Copper Head Mine is approximately 22 miles northwest of Yreka in Siskiyou County, California. It is at an altitude of about 2500 feet in Sec. 36, T. 47 N., R. 11 W., Seiad quadrangle, on the south side of McCoy Creek, a tributary of Horse Creek. The mine is 45 miles by automobile from Yreka. The route follows U. S. Highway 99 north for 9 miles, then 30 miles west on U. S. Highway 96 along the Klamath River to Horse Creek Post Office. The six miles from Horse Creek Post Office to the mine are on a dirt logging road that is maintained in good condition during the summer, but is poor in wet seasons. The closest railroad shipping point is Hornbrook, 42 miles by road from the mine.

The Copper Head claim was purchased by Mr. Stephenson in 1948 for $5000. Work since then consisted mainly of erecting a furnished cabin, cleaning old workings, and digging two prospect pits near the old workings. Mr. Stephenson reports that operators before 1900 mined a pocket of ore for gold. They roasted the slightly enriched and oxidized sulfide ore in pits, then ground it in water-powered arrastras, and amalgamated the gold and silver. It is estimated that not over a couple of tons of hand sorted ore from the mine has been shipped since 1948.

Workings

The prospect consists of an adit and two small cuts in the gully of McCoy Creek. McCoy Creek flows slightly north of west with a steep gradient, and the workings are within 50 feet of the creek on the south side. The adit, tunnel No. 1, trends S. 20°E. for 15 feet, then forks into (1) a drift trending SE 42 feet and (2) a crosscut trending SW 30 feet. The adit requires no timbering.

About 50 feet west of the adit a cut extends 5 feet in a southerly direction, and this is to be the portal of the 100 foot exploratory tunnel proposed by the applicant. Another shallow cut is about 20 feet farther west.

Geology

The country rock is medium to coarse-grained quartzitic sericite-chlorite schist. In the vicinity of the workings it crops out for 75 feet along an easterly trending line, and is exposed over a width of 50 feet. There are no other outcrops nearby. A series of small anticlines and synclines are exposed in the workings and outcrop. They plunge at an average of 40 degrees N.60° W., with a deviation of as much as 15 degrees. Fractures cut the folds parallel to their axial planes, and are nearly vertical. Along some of the fractures the schist has been displaced a fraction of an inch.

One of the anticlines is exposed in the adit for 20 feet near the portal, and in the two open cuts to the west. In the crest of this anticline, chevron folds with an amplitude of six inches are well developed, but these decrease in amplitude toward the flanks. Fractures are particularly well developed parallel to the axial plane. No chevron folds were seen in the other anticlines or synclines.

In the zone of chevron folds the schist consists of quartzitic layers and alternate micaceous layers. This banding is little developed in the less deformed schist nearby, and doubtless the segregation of quartzitic and micaceous material took place where folding was most intense.

In addition to the quartzitic layers that form part of the banding of the folded schist, irregular masses of more coarsely crystalline quartz occur at the crest of the crenulated anticline where it is exposed in the west wall of the adit. These masses range from a fraction of an inch to a foot in width, and from a foot to 5 feet in length. In the two cuts to the west, where the same anticline is exposed, none of the irregular masses of quartz were seen. Only a few small masses of quartz were seen in adjacent folds.

Ore

Ore minerals are concentrated in some of the quartz masses, along their borders, and to a small degree are disseminated throughout some of the highly crenulated schist in the anticlinal fold, but most of the rock is nearly barren. Included are the primary sulfide minerals, pyrite and chalcopyrite and minor secondary sulfides bornite, covellite, and chalcocite. Mr Stephenson reports that pyrargyrite and stephanite

are also present. Malachite and azurite occur as stains and incrustations throughout the ore zone, but are surprisingly sparse considering the near surface occurrence of the ore.

The only significant concentration of metallic minerals observed is at the crest of the anticline exposed in the adit. In the westernmost cut only a few small pyrite crystals were seen, and in the middle cut a few blebs of chalcopyrite, pyrite and covellite are sparsely disseminated. The schist, where gently folded but not fractured and crenulated, is barren. Where fractures and chevron folds were developed the schist was more receptive to ore deposition. The applicant reports high assay values in copper and silver. These high values were obtained from selected specimens, and are not representative of the grade of the zone in the crest of the anticline.

Three faults that cut across the trend of the fold in the adit contain barren gouge seams and do not appear to have controlled ore mineralization, as evidenced by some truncation of mineralized schist. No evidence was found to explain the localization of chevron folds on only one anticlinal fold. Mr. Stepehson believes the crumpling is due to drag next to a fault, and further believes that this fault most likely contains ore-bearing veins. No fault zone that would account for such deformation is exposed.

Exploration Proposal

The applicant believes that a fault parallel to the axial planes of the fold is present about 50 feet south of the crenulated anticline, and that copper-bearing veins may be present in the fault. He proposes to drive a 100-foot adit southerly from the cut 50 feet west of the present adit in an attempt to crosscut the postulated veins. Two 50-foot drifts would be driven from the adit in the event any favorable ore-structures are encountered.

Conclusions

The applicant's exploration proposal is not feasible, and does not warrant Government aid. No evidence was seen to indicate the presence of ore or a fault south of the crenulated anticline. The proposed adit would explore practically the same ground opened by the present adit, and the same objective could be attained by extending the present adit only 60 feet.

The only ore seen at the property consists of several tons of highly sorted material that was mined from a small pocket in the crest of the anticline exposed in the adit near the portal. None of the rock exposed along the crest of this anticline in the adit and two cuts can reasonably be construed to be ore.

COPY

Office of
Executive Officer
DMEA Field Team
Region III

1012 Flood Bldg.
870 Market St.
San Francisco 2, Calif.

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-2214 (Copper) - Copper Head Mine, Siskiyou County, California. John Stephenson, Copper Head Mine, Alameda, Calif.

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

Attachment

Copy to: E. H. Bailey, USGS

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

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

MAY 26 1952

DMEA 2214, Copper Head Mine

Siskiyou County, California

W. P. Irwin, Geologist
J. F. Robertson, Geologist
U. S. Geological Survey

May 14, 1952

Reviewed by
DMEA OPERATING COMMITTEE
6-2-52
(date)

Summary

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In response to a request by DMEA, the Copper Head Mine was examined on May 1, 1952, by W. P. Irwin and J. F. Robertson of the Geological Survey, accompanied by Mr. Stephenson, to determine the feasibility of the exploration proposal. It is recommended that a DMEA loan be denied, as the probability of finding enough ore to warrant the exploration cost is poor.

Introduction

The Copper Head Mine is approximately 22 miles northwest of Yreka in Siskiyou County, California. It is at an altitude of about 2500 feet in Sec. 36, T. 47 N., R. 11 W., Seiad quadrangle, on the south side of McCoy Creek, a tributary of Horse Creek. The mine is 45 miles by automobile from Yreka. The route follows U. S. Highway 99 north for 9 miles, then 30 miles west on U. S. Highway 96 along the Klamath River to Horse Creek Post Office. The six miles from Horse Creek Post Office to the mine are on a dirt logging road that is maintained in good condition during the summer, but is poor in wet seasons. The closest railroad shipping point is Hornbrook, 42 miles by road from the mine.

The Copper Head claim was purchased by Mr. Stephenson in 1948 for $5000. Work since then consisted mainly of erecting a furnished cabin, cleaning old workings, and digging two prospect pits near the old workings. Mr. Stephenson reports that operators before 1900 mined a pocket of ore for gold. They roasted the slightly enriched and oxidized sulfide ore in pits, then ground it in water-powered arrastras, and amalgamated the gold and silver. It is estimated that not over a couple of tons of hand sorted ore from the mine has been shipped since 1948.

Workings

The prospect consists of an adit and two small cuts in the gully of McCoy Creek. McCoy Creek flows slightly north of west with a steep gradient, and the workings are within 50 feet of the creek on the south side. The adit, tunnel No. 1, trends S. 20°E. for 15 feet, then forks into (1) a drift trending SE 42 feet and (2) a crosscut trending SW 30 feet. The adit requires no timbering.

About 50 feet west of the adit a cut extends 5 feet in a southerly direction, and this is to be the portal of the 100 foot exploratory tunnel proposed by the applicant. Another shallow cut is about 20 feet farther west.

Geology

The country rock is medium to coarse-grained quartzitic sericite-chlorite schist. In the vicinity of the workings it crops out for 75 feet along an easterly trending line, and is exposed over a width of 50 feet. There are no other outcrops nearby. A series of small anticlines and synclines are exposed in the workings and outcrop. They plunge at an average of 40 degrees N.60° W., with a deviation of as much as 15 degrees. Fractures cut the folds parallel to their axial planes, and are nearly vertical. Along some of the fractures the schist has been displaced a fraction of an inch.

One of the anticlines is exposed in the adit for 20 feet near the portal, and in the two open cuts to the west. In the crest of this anticline, chevron folds with an amplitude of six inches are well developed, but these decrease in amplitude toward the flanks. Fractures are particularly well developed parallel to the axial plane. No chevron folds were seen in the other anticlines or synclines.

In the zone of chevron folds the schist consists of quartzitic layers and alternate micaceous layers. This banding is little developed in the less deformed schist nearby, and doubtless the segregation of quartzitic and micaceous material took place where folding was most intense.

In addition to the quartzitic layers that form part of the banding of the folded schist, irregular masses of more coarsely crystalline quartz occur at the crest of the crenulated anticline where it is exposed in the west wall of the adit. These masses range from a fraction of an inch to a foot in width, and from a foot to 5 feet in length. In the two cuts to the west, where the same anticline is exposed, none of the irregular masses of quartz were seen. Only a few small masses of quartz were seen in adjacent folds.

Ore

Ore minerals are concentrated in some of the quartz masses, along their borders, and to a small degree are disseminated throughout some of the highly crenulated schist in the anticlinal fold, but most of the rock is nearly barren. Included are the primary sulfide minerals, pyrite and chalcopyrite and minor secondary sulfides bornite, covellite, and chalcocite. Mr Stephenson reports that pyrargyrite and stephanite

are also present. Malachite and azurite occur as stains and incrustations throughout the ore zone, but are surprisingly sparse considering the near surface occurrence of the ore.

The only significant concentration of metallic minerals observed is at the crest of the anticline exposed in the adit. In the westernmost cut only a few small pyrite crystals were seen, and in the middle cut a few blebs of chalcopyrite, pyrite and covellite are sparsely disseminated. The schist, where gently folded but not fractured and crenulated, is barren. Where fractures and chevron folds were developed the schist was more receptive to ore deposition. The applicant reports high assay values in copper and silver. These high values were obtained from selected specimens, and are not representative of the grade of the zone in the crest of the anticline.

Three faults that cut across the trend of the fold in the adit contain barren gouge seams and do not appear to have controlled ore mineralization, as evidenced by some truncation of mineralized schist. No evidence was fondd to explain the localization of chevron folds on only one anticlinal fold. Mr. Stepehson believes the crumpling is due to drag next to a fault, and further believes that this fault most likely contains ore-bearing veins. No fault zone that would account for such deformation is exposed.

Exploration Proposal

The applicant believes that a fault parallel to the axial planes of the fold is present about 50 feet south of the crenulated anticline, and that copper-bearing veins may be present in the fault. He proposes to drive a 100-foot adit southerly from the cut 50 feet west of the present adit in an attempt to crosscut the postulated veins. Two 50-foot drifts would be driven from the adit in the event any favorable ore-structures are encountered.

Conclusions

The applicant's exploration proposal is not feasible, and does not warrant Government aid. No evidence was seen to indicate the presence of ore or a fault south of the crenulated anticline. The proposed addit would explore practically the same ground opened by the present adit, and the same objective could be attained by extending the present adit only 60 feet.

The only ore seen at the property consists of several tons of highly sorted material that was mined from a small pocket in the crest of the anticline exposed in the adit near the portal. None of the rock exposed along the crest of this anticline in the adit and two cuts can reasonably be construed to be ore.

OFFICE OF THE ADMINISTRATOR

gla 1/16/52

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS ADMINISTRATION

WASHINGTON 25, D. C.

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

Office of
Executive Officer
DMEA Field Team
Region III

January 9, 1952

Memorandum

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

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-2214 (Copper) - Copper Head Mine
John Stephenson, President.

Reference is made to subject "Review of Application for Exploration Assistance", signed by Mr. Frank E. Johnson, Chairman, Operating Committee, dated December 26.

Mr. Stephenson has been contacted concerning a field investigation of the Copper Head Mine and he informs me that due to the heavy snowfall in the area of the mine it will not be possible to carry out a field examination for several months. He will keep in touch with conditions at the mine and will let me know when a geologist can reach and geologize the property.

Our consideration of the points raised in the Review will, therefore, be held in abeyance until such time as the property can be visited.

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

Copy to E. H. Bailey, USGS

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 14 1952

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

DEC 2 6 1951

Mr. R. C. Miller, Executive Officer
1012 Flood Building
870 Market Street
San Francisco, California

We attach Notice of Application and Application [illegible]

Applicant John Stephenson, President, Copper Hard Mine

Docket No. [illegible]-2216

Commodity Copper

Amount $ [illegible] - 50% Gov't. Share - $[illegible]2,062.50

Please expedite the processing of this application [illegible] reference to the [illegible] relating the Bureau's Rental

Very truly yours,

SIGNED

[illegible]
[illegible]
Louis U. Johnson, Chairman
Operating Committee

SIGNED

[illegible]
For Geological Survey

Defense Minerals Exploration Administration

Review of Application for Exploration Assistance

Docket No. DMEA-2214

Commodity Copper

Total Amount 00,125

Govt. Participation 50% - 00062.50

1. Name and Address of Applicant John Stephenson, President

Copper Bend Mine

2. Location of Property Siskiyou County, California

3. Mineral or metal Copper Is it listed in Section 9 of MO-5?

If not, application will be rejected.

4. Geologic probability of discovery—based on data in application (question #16, 17, 18, 20 and 22)*

Mines or Survey reports, etc., do you rate chances:

a) Good

b) Poor

c) None

d) Don't know—needs field examination yes

e) Is there an alternative and favorable project? 0
(If so, attach an explanation)

5. Is the applicant's right to the property clearly stated? yes
(question 5, 6, 7)*

6. If applicant is a lessee, is a copy of the lease attached? —

Does the lease have sufficient time to run to cover a future

productive period? —

*question numbers are those of MF-103

7. Are subordination agreements necessary? -

a) MF-201? -

b) MF-202 -

8. From the data presented, does the proposed project appear feasible from the point of view of:

a) Available manpower yes

b) Equipment and supplies should be checked by field teams
(question 14 plus general knowledge of availability)*

c) Accessibility (question 12)* questionable during winter months

d) Water (question 13)* yes

e) Power (question 13)* yes

Is a field check needed on any of these points? yes

9. Does the experience of the applicant appear to be adequate to assure that he can properly conduct the proposed project? (question 4)* yes - as supervisor but field team should check ability to do the engineering.

Is a field check needed on this point?

10. Exhibit A. (questions 21 and 22)*

a) Is the project adequately described? no

If not, are there sufficient data given so that you can describe the project? no If so, attach a draft.

b) Is there an adequate map or sketch of the proposed work? no

c) Is the proposed work "exploration" under the definition of Section 8, MO-5? yes

If not, what part of it is?

Is this part a worth-while exploration project? Requires a Field Team check

d) Are the cost estimates detailed? Not to the degree required.

Can they be summarized, as on page 2 of Procedural Instruction 5-A, from the available data? _____ If so, attach a draft.

e) Are the cost estimates reasonable? They appear low for the amount of proposed work.

f) Should more information be requested from applicant? No.

g) Is a field examination necessary to complete Exhibit A? Yes.

11. Exhibit B (question 23-d)*

a) Is it applicable? No.

b) If so, are sufficient data furnished? _____ If so, attach a draft.

c) Is a field check needed? _____

12. Exhibit C (question 23-e, f and g)*

a) Is it applicable? Yes.

b) Sufficient data? No. If so, attach a draft.

c) Are rents and charges reasonable? It is not clear if the equipment is owned by the applicant or is to be rented. This point should be clarified and the units should be described and if owned, the fair market value should be supplied.

d) Is a field check needed? Yes.

13. Exhibit D (question 23-a, b)*

a) Are there sufficient data? No.

b) Is the schedule adequate for the work proposed? Doubtful

c) Is the schedule excessive for the work proposed? No-cost appeared low. Is a $500./month man required to supervise driving one drift or crosscut.

d) Are the proposed wages and salaries reasonable? _____

e) Is a field check needed? Not necessary

14. Exhibit E (question 23-c)*

a) Is it applicable? Not applicable.

b) Sufficient data?

c) Reasonable?

d) Field check needed?

15. In your judgment, can the proposed work be done in the proposed time? Yes

(All exploration must be completed within two years)

16. If field examination is not needed, attach your recommendation.

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing question? It is possible the region office may have enough information about this property to determine the geological feasibility of this project and will be able to call the applicant into the office and clarify the other points without a visit to the property.

Reviewed by: F Kaveel

C. K. Johnson

N. E. Nelson

MEMO - 11-23-51

Date

[illegible]
Department of the Interior
[illegible]
[illegible]

DEC 2 6 1951

Mr. R. C. Miller, Executive Officer
1012 Flood Building
870 Market Street
San Francisco, California

We attach [illegible] application for [illegible]

[illegible]

Applicant John Stephenson, President, Copper Hood Mine

Lease No. DMA-2216

Commodity Copper

Amount $ 04,125 - 50% Govt. Share - $02,062.50

Please expedite the [illegible] of this application [illegible] tolerance in the [illegible] in the [illegible]

Very truly yours,

SIGNED

[illegible]
[illegible]
Frank H. Johnson, Chairman
Operating Committee

[illegible]
SIGNED
[illegible]

12-26
5.0

Sa.

6/5/51

Defense Minerals Administration

Review of Application for Exploration Assistance

Docket No. [illegible]

Commodity Copper

Total Amount [illegible]

Govt. Participation [illegible]

1. Name and Address of Applicant John Stephenson, President
Copper Bend Mine

2. Location of Property Siskiyou County, California

3. Mineral or metal Copper Is it listed in Section 9 of MO-5?

If not, application will be rejected.

4. Geologic probability of discovery—based on data in application (question #16, 17, 18, 20 and 22)*

Mines or Survey reports, etc., do you rate chances:

a) Good

b) Poor

c) None

d) Don't know—needs field examination yes

e) Is there an alternative and favorable project? no
(If so, attach an explanation)

5. Is the applicant's right to the property clearly stated? yes
(question 5, 6, 7)*

6. If applicant is a lessee, is a copy of the lease attached? —

Does the lease have sufficient time to run to cover a future

productive period? —

*question numbers are those of MF-103

7. Are subordination agreements necessary? _____

a) MF-201? _____

b) MF-202 _____

8. From the data presented, does the proposed project appear feasible from the point of view of:

a) Available manpower _____

b) Equipment and supplies _____
(Question 14 plus general knowledge of availability)*

c) Accessibility (question 12)* _____

d) Water (question 13)* _____

e) Power (question 13)* _____

Is a field check needed on any of these points? _____

9. Does the experience of the applicant appear to be adequate to assure that he can properly conduct the proposed project? (question 4)* _____

_____

Is a field check needed on this point? _____

10. Exhibit A. (questions 21 and 22)*

a) Is the project adequately described? _____

If not, are there sufficient data given so that you can describe the project? _____ If so, attach a draft.

b) Is there an adequate map or sketch of the proposed work? _____

_____

c) Is the proposed work "exploration" under the definition of Section 8, MO-5? _____

If not, what part of it is? _____

_____

_____

_____

Is this part a worthwhile exploration project? Requires a field team check

d) Are the cost estimates detailed? Not to the degree required.

Can they be summarized, as on page 2 of Procedural Instruction 5-A, from the available data? _____ If so, attach a draft.

e) Are the cost estimates reasonable? They appear low for the amount of proposed work.

f) Should more information be requested from applicant? No.

g) Is a field examination necessary to complete Exhibit A? Yes.

11. Exhibit B (question 23-d)*

a) Is it applicable? No.

b) If so, are sufficient data furnished? _____ If so, attach a draft.

c) Is a field check needed? _____

12. Exhibit C (question 23-e, f and g)*

a) Is it applicable? Yes.

b) Sufficient data? No. If so, attach a draft.

c) Are rents and charges reasonable? It is not clear if the equipment is owned by the applicant or is to be rented. This point should be clarified and the units should be described and if owned, the fair market value should be supplied.

d) Is a field check needed? Yes.

13. Exhibit D (question 23-a, b)*

a) Are there sufficient data? No.

b) Is the schedule adequate for the work proposed? Doubtful

c) Is the schedule excessive for the work proposed? No, cost appeared low. Is a $500./month man required to supervise driving one drift or crosscut.

d) Are the proposed wages and salaries reasonable? _____

e) Is a field check needed? Not necessary

14. Exhibit E (question 23-c)*

a) Is it applicable? Not applicable.

b) Sufficient data?

c) Reasonable?

d) Field check needed?

15. In your judgment, can the proposed work be done in the proposed time? Yes

(All exploration must be completed within two years)

16. If field examination is not needed, attach your recommendation.

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing question? It is possible the region office may have enough information about this property to determine the geological feasibility of this project and will be able to call the applicant into the office and clarify the other points without a visit to the property.

Reviewed by: J L Krause

C. H. Johnson

N.E. Nelson - by F.H.K.

SEE. MEMO. 11-23-51

Date 12. 18-51

INT.-DUP. SEC., WASH., D.C. 99009

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

DEC 2 6 1951

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

Dear Sir:

We attach "Review of Application for Exploration Assistance" on:

Applicant John Stephenson, President, Copper Head Mine

Docket No. DMEA-2214

Commodity Copper

Amount $ $4,125 - 50% Govt. Share - $$2,062.50

Please expedite the consideration of this application with particular reference to the points raised in the attached "Review".

Very truly yours,

Frank E. Johnson
~~For Director, DMEA~~
~~Executive Committee~~
Frank E. Johnson, Chairman
Operating Committee

Mr. Stephenson will let us know when geologist can examine the property.

For Bureau of Mines

T. P. Thayer
For Geological Survey

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED

1952 JAN 2 AM 9:15

SAN FRANCISCO, CALIFORNIA

Defense Minerals Exploration Administration

Review of Application for Exploration Assistance

Docket No. DMEA-2214

Commodity Copper

Total Amount $4,125

Govt. Participation 50% - $2062.50

1. Name and Address of Applicant John Stephenson, President

Copper Head Mine

2. Location of Property Siskiyou County, California

3. Mineral or metal Copper Is it listed in Section 9 of MO-5?

If not, application will be rejected.

4. Geologic probability of discovery—based on data in application (question #16, 17, 18, 20 and 22)*

Mines or Survey reports, etc., do you rate chances:

a) Good

b) Poor

c) None

d) Don't know—needs field examination yes

e) Is there an alternative and favorable project? No
(If so, attach an explanation)

5. Is the applicant's right to the property clearly stated? yes
(question 5, 6, 7)*

6. If applicant is a lessee, is a copy of the lease attached? ---

Does the lease have sufficient time to run to cover a future

productive period? ---

*question numbers are those of MF-103

7. Are subordination agreements necessary? -

a) MF-201? -

b) MF-202 -

8. From the data presented, does the proposed project appear feasible from the point of view of:

a) Available manpower **yes**

b) Equipment and supplies **should be checked by field teams**
(question 14 plus general knowledge of availability)*

c) Accessibility (question 12)* **questionable during winter months**

d) Water (question 13)* **yes**

e) Power (question 13)* **yes**

Is a field check needed on any of these points? **yes**

9. Does the experience of the applicant appear to be adequate to assure that he can properly conduct the proposed project? (question 4)* **yes - as supervisor but field team should check ability to do the engineering.**

Is a field check needed on this point?

10. Exhibit A. (questions 21 and 22)*

a) Is the project adequately described? **no**

If not, are there sufficient data given so that you can describe the project? **no** If so, attach a draft.

b) Is there an adequate map or sketch of the proposed work? **no**

c) Is the proposed work "exploration" under the definition of Section 8, MO-5? **yes**

If not, what part of it is?

Is this part a worth-while exploration project? Requires a Field Team check

d) Are the cost estimates detailed? Not to the degree required.

Can they be summarized, as on page 2 of Procedural Instruction 5-A, from the available data? _____ If so, attach a draft.

e) Are the cost estimates reasonable? They appear low for the amount of proposed work.

f) Should more information be requested from applicant? No.

g) Is a field examination necessary to complete Exhibit A? Yes.

11. Exhibit B (question 23-d)*

a) Is it applicable? No.

b) If so, are sufficient data furnished? _____ If so, attach a draft.

c) Is a field check needed? _____

12. Exhibit C (question 23-e, f and g)*

a) Is it applicable? Yes.

b) Sufficient data? No. If so, attach a draft.

c) Are rents and charges reasonable? It is not clear if the equipment is owned by the applicant or is to be rented. This point should be clarified and the units should be described and if owned, the fair market value should be supplied.

d) Is a field check needed? Yes.

no equipment only shared tools

13. Exhibit D (question 23-a, b)*

a) Are there sufficient data? No.

b) Is the schedule adequate for the work proposed? Doubtful

c) Is the schedule excessive for the work proposed? No-cost appeared low. Is a $500./month man required to supervise driving one drift or crosscut.

yes

d) Are the proposed wages and salaries reasonable? _____

e) Is a field check needed? Not necessary

Contractor willing to do it @ 15 foot.

14. Exhibit E (question 23-c)*

a) Is it applicable? **Not applicable.**

b) Sufficient data?

c) Reasonable?

d) Field check needed?

15. In your judgment, can the proposed work be done in the proposed time? **Yes**

(All exploration must be completed within two years)

16. If field examination is not needed, attach your recommendation.

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing question? **It is possible the region office may have enough information about this property to determine the geological feasibility of this project and will be able to call the applicant into the office and clarify the other points without a visit to the property.**

Reviewed by: J L Kunze

C A Johnson

N. E. Nelson by F.H.K.

SEE memo, 11-23-51

Date 12-18-51

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED

1952 JAN 2 AM 9:15

SAN FRANCISCO, CALIFORNIA

December 6-1951

Defense Mineral Administration
Washington, D.C.

Re; Docket No DMA-2214
John Stephenson, President
Copper Head Mine
Exploration Project Application

Gentlemen;

Enclose original Assay Certificates in compliance with your
(I) request in your letter of Nov 30

We decided to drive the exploration tunnel from the No 2 opening because here the alteration zone is plainly exposed and the oxyidized orebody six feet wide shows every evidence of mineralization and continuous extension.

The tunnel would be in the direction of the main fault zone and under the large croppings on the side of the mountain.

The movement along the strike and the side slip indicate a shear zone and as the tunnel will cross cut this zone the ore bodies and localization of ore shoots will be exposed and
(2) cross cuts will determine their size and value. Sampling and assays and close supervision will be re uired.

The estimate of 100' of tunnel and 100' of cross cuts may be considered as an estimate of the amount of work

Mr.C.P.Venstrand E.M. a former engineer at the Blue Ledge Mine just North of the Copper Head on a visit to the mine last Summer considered our plan of exploration as the right method.

As the two mines are similar in geology and formation we consider his opinion of great value.

(3) Item 23-Form MF-103

Our application of Nov I -(DMA 2214) we based our estimate on contracting the work by the foot on an offer by a reliable mining contractor with modern equipment. However we can do the work as follows-

(a) LABOR -

	2 Drill men	$2.00 per hour	
	I mucker	I.50 " "	
	I Trammer	I.50 " "	
3L	I Supervisor	$500 Month	
	Drill Steel, bits, etc		$60.00
	Rental Compressor $140 Mo		280 two months
	Rental Drills $I day Each		100.00
3f	Powder, fuse, Caps		200.00
	Gasoline, Oil compressor		225.00
	Sampling, Assayes 50 samples		150.00

4

One 8 hour shift per day, five day week
Can complete the work in 50 working days 4 to 5 feet per day
Can start work within 30 days after contract is made
if wather permits.

President Copper Head Mine

C
O
P
Y

REPORT OF ASSAY
ABBOT A. HANKS, INC.

Assayers, Chemists, Engineers

624 Sacramento Street

September 17, 1948

Johan Stephanson

Sample of O R E

Liability No.	Mark	GOLD Troy Ounces	GOLD Value	SILVER Troy Ounces	SILVER Value	Percentages	
751	Blue Ore Shoot Gen. sample 6'	.20	7.00	15.60	14.04	Copper	4.12

yd

ABBOT A HANKS, INC.

(s) John L. Martel

C
O
P
Y

Report of Assay

ABBOT A. HANKS, INC.

Assayers, Chemists, Engineers
624 Sacramento Street

July 20, 1948

Ormerad - Stephanson

Sample of O R E

Labty. No.	Mark	GOLD Troy Ounces	GOLD Value	SILVER Troy Ounces	SILVER Value	Percentages
98907	1 Foot W	.015	.52	1.20	1.08	
98908	2 Foot	.04	1.40	1.76	1.58	
98909	3	.19	6.65	13.90	12.51	
98910	4	.22	7.70	11.38	10.24	
98911	5	.23	8.05	15.37	13.83	
98912	6 H.Wall	.03	1.05	1.87	1.68	

yd

ABBOT A. HANKS, INC.

(s) John L Martel

C
O
P
Y

Report of Assay
ABBOT A. HANKS, INC.

Assayers, Chemists, Engineers
624 Sacramento Street

September 14, 1948

Sample of O R E

Labty. No		Mark	GOLD Troy Ounces	GOLD Value	SILVER Troy Ounces	SILVER Value	Percentages
549	#1	Bull Nose Tun	.33	11.55	26.47	23.82	
550	#2	Drag Fold Black Wall	.01	.35	1.20	1.08	
551	#3	Draf Chlorite	.27	9.45	8.88	7.99	

yd

Abbot A. Hanks, Inc.

(s) Jno. L. Martel

C
O
P
Y

Assay Report

PITTSBURGH TESTING LABORATORY

Assayers & Metallurgical Engineers

651 Howard Street

San Francisco 5, California

Gold @ $35.00 per oz.
Silver @ $ per oz.

Sample Ore (2)

Received June 30, 1949

Date July 5, 1949
Lab. No. 22664

Submitted by Mr. John Stephanson
Yreka Inn
Yreka, California

No.	Mark	Per Ton of 2000 LBS. GOLD Ounces	GOLD Value	SILVER Ounces	SILVER Value	Copper Percent	Lead Percent	Zinc Percent
22664	#1 -(small pieces) Mid-section vein	0.17	$5.95	24.63	$22.29	5.63		
	#2 -(large pieces) Inner wall near foot	0.34	11.90	47.14	42.66			

PITTSBURGH TESTING LABORATORY

(s) Parker M. Robinson
District Manager

C
O
P
Y

Assay Report

PITTSBURGH TESTING LABORATORY
Assayers and Metallurgical Engineers

651 Howard Street

San Francisco 5, California

Gold @ $35.00 per oz.

Silver @ $ per oz.

Sample Ore (1)

Received August 11, 1949

Submitted by Copper Head Mine
Horse Creek
California

Date August 18, 1949
Lab. No. 22942

		Per Ton of 2000 Lbs.						
		GOLD		SILVER		Copper	Lead	Zinc
No.	Mark	Ounces	Value	Ounces	Value	Percent	Percent	Percent
22942	No. 6 Inner Wall Schist Chalcopyrite	0.18	$6.30	2.30	$2.08	5.63		

PITTSBURGH TESTING LABORATORY

Parker M. Robinson

C
O
P
Y

Assay Report

PITTSBURGH TESTING LABORATORY
Assayers and Metallurgical Engineers
651 Howard Street
San Francisco 5, California

Gold @ $35.00 per oz.
Silver @ $ per oz.

Sample Ore (1)

Received July 21, 1959

Submitted By Copper Head Mine
Horse Creek
California

Date July 22, 1949

Lab. No. 22797

Order No. SF-4759

		Per Ton of 2000 Lbs.						
		GOLD		SILVER				
No.	Mark	Ounces	Value	Ounces	Value	Percent	Percent	Percent
22797	Daily sample July 18, 1949	0.38	$13.30	12.20	$11.04			

PITTSBURGH TESTING LABORATORY

(s) Parker M. Robinson

1 1951

December 6-1951

Defense Mineral Administration
Washington, D.C.

Re; Docket No DMA-22I4
John Stephenson, President
Copper Head Mine
Exploration Project Application

Gentlemen;

Enclose original Assay Certificates in compliance with your
(I) request in your letter of Nov 30.

We decided to drive the exploration tunnel from the No 2 opening because here the alteration zone is plainly exposed and the oxyidized orebody six feet wide shows every evidence of mineralization and continuous extension.

The tunnel would be in the direction of the main fault zone and under the large croppings on the side of the mountain.

The movement along the strike and the side slip indicate a shear zone and as the tunnel will cross cut this zone the ore bodies and localization of ore shoots will be exposed and
(2) cross cuts will determine their size and value. Sampling and assays and close supervision will be required.

The estimate of IOO' of tunnel and IOO' of cross cuts may be considered as an estimate of the amount of work

Mr.C.P.Venstrand E.M. a former engineer at the Blue Ledge Mine just North of the Copper Head on a visit to the mine last Summer considered our plan of exploration as the right method.

As the two mines are similar in geology and formation we consider his opinion of great value.

(3) Item 23-Form MF-I03

Our application of Nov I -(DMA 22T4) wecbased our estimate on contracting the work by the foot on an offer by a reliable mining contractor with modern equipment. However we can do the work as follows-

(a) LABOR -

	2 Drill men	$2.00 per hour	
	I mucker	I.50 " "	
	I Trammer	I.50 " "	
3L	I Superviser	$500 Month	
	Drill Steel, Bits, etc		$60.00
	Rental Compressor $I40 Mo		280 two months
	Rental Drills $I day Each		IOO.00
3f	Powder, fuse, Caps		200.00
	Gasoline, Oil compressor		225.00
	Sampling, Assayas 50 samples		I50.00

4

One 8 hour shift per day, five day week
Can complete the work in 50 working days 4 to 5 feet per day
Can start work within 30 days after contract is made if wather permits.

President Copper Head Mine

December 6-I95I

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Washington, D.C.

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John Stephenson, President
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(3) Item 23-Form MF-I03

Our application of Nov I -(DMA 22I4) wecbased our estimate on contracting the work by the foot on an offer by a reliable mining contractor with mdern equipment. However we can do the work as follows-

(a) LABOR -

	2 Drill men	$2.00 per hour	
	I mucker	I.50 " "	
	I Trammer	I.50 " "	
3L	I Superviser	$500 Month	
	Drill Steel, Bits, etc		$60.00
	Rental Compressor $I40 Mo		280 two months
	Rental Drills $I day Each		I00.00
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(3) Item 23-Form MF-IO3

Our application of Nov I -(DMA 22I4) wecbased our estimate on contracting the work by the foot on an offer by a reliable mining contractor with mdern equipment. However we can do the work as follows-

(a) LABOR -

	2 Drill men	$2.00 per hour	
	I mucker	I.50 " "	
	I Trammer	I.50 " "	
3L	I Superviser	$500 Month	
	Drill Steel,Bits,etc	$60.00	
	Rental Compressor $I40 Mo	280	two months
	Rental Drills $I day Each	IOO.00	
3f	Powder,fuse,Caps	200.00	
	Gasoline,Oil compressor	225.00	
	Sampling,Assayas 50 samples	I50.00	

4

One 8 hour shift per day,five day week
Can complete the work in 50 working days 4 to 5 feet per day
Can start work within 30 days after contract is made if wather permits.

President Copper Head Mine

FILE COPY
SURNAME:

410

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

F. L. Kerr
Motenbach

NOV 30 1951

Mr. John Stephenson, President
Copper Head Mine
236 D. Singleton Avenue
Alameda, California

Re: Docket No. DMA - 2214
John Stephenson, President
Copper Head Mine
Exploration Project Application

Dear Mr. Stephenson:

We refer to your above-referenced application and wish to inform you that it is now being processed by this office. We will, however, require some additional information so we can continue with the processing. The data required is as follows:

1. The original assay certificates for the samples listed on page 3 of the attachments to your Application for Exploration Aid (Form MF-103).

2. It is not clear in your application where you propose to drive the 100-foot length tunnel and 100-foot length crosscut. Do you propose to follow a fault fissure with the tunnel in which the copper mineral is found? Please describe in more detail the purpose of both the proposed 100-foot length tunnel and crosscut.

3. Item 23 - Form MF-103 - your breakdown for tunneling (drifting?) and crosscutting should detail the costs to do this work as follows:

   a. Labor, by numbers and classes (Miners, Muckers, etc.) with wages of each.

   b. Supervisors, by numbers and position, with salaries of each.

c. Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50.00 or more each.

d. Cost of rental for equipment which the operator proposes to rent to complete the project.

e. Rental value of items of equipment which you, as the operator, now own and which will be devoted to the project (please include the fair market value of each item of equipment as well as a description of the unit).

f. Cost of material and supplies including items of equipment costing less that $50.00 each.

g. Cost of power, water, utilities, and any other items not provided for above.

4. Item 24 - Form MF-103 - furnish a time schedule of the project. Please state if your plans are to operate on a one, two, or three shift basis, when can you begin the work, number of days you propose to work monthly, and the advance per shift you estimate will be made in the tunnel and/or crosscut.

When we have received this information we will be able to proceed with the processing of your application.

Sincerely yours,

C. O. Mittenderf (for) J.H. 11-30

ACTING Administrator
Defense Minerals Exploration
Administration

FLKnouse/meb
11/27/51

cc to: Adm.Reading File
Reports & Records
Mr. Mittendorf
Field Team,Reg.III(2)
Mr. O.M.Johnson
Mr. McKnight
Mr. Knouse
Docket

FILE COPY
SURNAME:

410

F. Knouse
Mittendorf

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

November 27, 1951

BL

Memorandum

To: Mr. C. H. Johnson - USBM
Interior Building - Room 3619

From: Administrator
Defense Minerals Exploration
Administration

Subject: Docket No. DMA - 2214
Copper Head Mine
Siskiyou County, California
Exploration Project Application

Attached hereto is the complete Docket containing Form MF-103 for exploration aid and correspondence covering the case.

Please review the above application and return it together with your findings and recommendations to this office.

C. O. Mittendorf (for)

N.S
R+R

Enclosures

FKnouse/meb
cc to: Adm.Reading File
Reports & Records
Mr. Mittendorf
Mr. Knouse
Docket

IN REPLY REFER TO:

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

November 23, 1951

Re: DMA-2214

Memorandum

To: Mr. C. O. Mittendorf

From: Mr. N. E. Nelson

Subject: Copper Head Mine, Siskiyou County, California

No reference to the Copper Head property (nor the White Cloud, McCoy, or Kuntz) is made in Copper in California, Bulletin 144, 1948. The Barton, which is the same neighborhood as the Copper Head, is mentioned, but no particulars are given. The California Journal Mines and Geology, Vol. 43, No. 4, 1947, Mines and Mineral Resources of Siskiyou County does not mention the prospect as a gold possibility, past or present. Therefore much reliance must be placed in the statements of John Stephenson, President of the Copper Head Mining Company.

The values shown for the twelve samples listed suggest an ore occurrence of above average value, but one may wonder how it happens that five samples show the same values, 4.12% Cu, four run 5.6% Cu and three run 5.63% Cu. These unusual coincidences tend to cast doubt on the correctness of the results given and perhaps on application as a whole. The applicant should submit the original certificates for inspection as mistakes may have been made in the listing.

If, on further investigation, the matter of the samples is satisfactorily explained and general confidence in the engineering data is restored, the prospect should have the attention of a field team.

N. E. Nelson

N. E. Nelson
Geologist

November 20, 1951

Memorandum

To: Mr. E. T. McKnight - USGS
Room 4204 - GSA Building

From: Mr. F. L. Knouse - DMA
Room 4635 -

Subject: Docket No. DMA 2214
Copper Head Mine
Siskiyou County, California
Exploration Project Application

Attached hereto is an application (Form MF-103) for exploration aid for the above-subject mine.

Please review the above application and return it together with your findings and recommendations to this office.

F. L. Knouse

Attachment

cc to: Reports and Records
PED
FLKnouse
Docket

Mr. John Stephenson, President
236 D. Singleton Avenue
Alameda, California

Subject: DMA-2214
Re: Exploration Loan
Copper Head Mine

My dear Mr. Stephenson:

This will acknowledge receipt of your application dated November 1, 1951 for a loan under the Defense Production Act of 1950.

Your application was assigned Docket Number DMA-2214 and referred to the Base Metals Branch.

Kindly refer to DMA-2214 in any future correspondence relating to your application.

Sincerely yours,

Robert E. Adams

Robert E. Adams, Chief
Reports and Records Unit

2463

dmw 2214

Alameda, Cal. Nov I-I95I

Defence Minerals Administration
Department of the Interior
Washington 25 D.C.

Gentlemen;

Your Regional Director, Mr. H.C. Miller instructed us to mail the enclosed application to you direct to save time.

Respectfully uyours

COPPER HEAD MINE Inc.

Pres.

Form MF-103
(April 1951)

U. [redacted]EPARTMENT OF THE INTERI[redacted]

DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

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

DO NOT FILL IN THIS BLOCK

Docket No. dma 2 2 14

Date received 11-5-51

Participation

John Stephenson, Pres.
Copper Head Mine

236 D.Singleton Ave.
ALAMEDA, CAL.

Name and address of applicant

Date

FILL IN THIS BLOCK

Date of application Nov I -1951

Estimated cost $4.125

Mineral or metal Copper

Percentage of Government participation $2.062.50

Location of mine Siskiyou County, Calif.

Date of filing MF-100 Have not filed

DMA Docket Number, if available

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

Minerals Division
RECEIVED
NOV 5 1951

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation?
*2. If a partnership, state names and addresses of partners.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.
9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)?

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.
    (*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

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

*11. State the present and former names of the property, if any.
*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.
*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.
*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.
15. State in detail how the ore could be shipped and how and where milled.
*16. History:
    (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.
    (*b*) State briefly the known history and production of adjoining and neighboring properties.
    (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.
*17. Production:
    (*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)
    (*a*) Describe the ore or mineral deposits briefly.
    (*b*) Submit available maps and assay data.
    (*c*) Give estimated tonnage and grade of each class of ore reserves.
19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?
21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

    NOTE.—The Government will not participate in a project that will require more than 2 years to complete.
22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:
    ✓(*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.
    ✓(*b*) Supervisors, by numbers and positions, with salaries of each.
    ✓(*c*) Cost of necessary repairs to existing facilities, structures, and buildings.
    ✓(*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.
    ✓(*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.
    ✓(*f*) Cost of rental for equipment which the operator proposes to rent.
    ✓(*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.
    (*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.
    (*i*) Cost of power, water, utilities, and any other items not provided for above.
24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

CERTIFICATION

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

COPPER HEAD MINE, Inc.
(Name of company)

By [signature]
(Signature of authorized official)

Nov. 1 -1951
(Date)

President
(Title)

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

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

THE APPLICANT

*1 A Corporation.
*2
*3 John Stephenson, Pres.; Edward Gilroy, Vice Pres.
3617 E. 12th St., Oakland, Cal.
Edward Cross, Secy.Treas., 3615 E. 12th St., Oakland---Directors
The above are the stockholders.
*4 The exploration is under the direct management of John Stephenson, who has had long experience since 1906 as Supt. Manager or operator of Gold, Silver, Quicksilver and Copper Mines.
*5 We are the owner.
*6 There are no debts, claims or encumbrances.
*7
*8 The claim was purchased in 1948 for $5,000., since which time $3005.55 has been expended for roads, bridges, camp buildings, exploration sampling, assays and tests.
The present cash on hand is $2,000. There are no liabilities.
*9 The Applicant is prepared to expend $2000. in immediate exploration, but as this amount may not be sufficient to accomplish the required exploration an additional amount may be sufficient to accomplish the objective, as detailed in question *23.
*10 The claim owned is recorded as follows:
Name of claim: COPPER HEAD; 500 feet Northwest of point of discovery and 1000 feet Southeast. (To End lines)
200 feet Northeast of point of discovery and 400 feet Southwest of point of discovery. (to Side lines)
Joins Deckers placer claim on Northwest end line.
Located on White Cloud Mountain half mile from Horse Creek stream and situated in Siskiyou County Oak Bar Mining District.
It is marked by squared trees on corners and center lines.
The claim apparently covers the apex and main shear zone, but the company will file two additional claims alongside.
Application for patent is under consideration.
*11 Present name COPPER HEAD MINE, former names WHITE CLOUD, McCOY and KUNTZ MINE.
*12 Six miles up the County road along Horse Creek from the store and Post Office on the Klamath River Highway, then 36 miles to R. R. at Yreka or 33 miles to R.R., at Hornbrook. The County road is maintained in good condition by the County and Forest Service. The Mine is within 1/4 mile of the road by private road of easy grade.
*13 McCoy Creek runs through the canyon below the mine with a normal flow of 4 to 10 Miners inches.
Power for exploration will be gasoline compressor. Power line of Cal. Oregon Power Co., three miles from mine.
*14 Present camp quarters sufficient for crew required for exploration.
*15 Ore is of sufficient grade to ship to smelter, so can be trucked to R. R. and shipped to Tacoma Smelter; some sorting will be required, as usual. Loading facilities built by Newmount Mining at Yreka can be used.
*16 As claims were filed in this region in the 1850-60-70s, little is known; however, some later operations can be surmised by the remains of two water power arrastras on the claim.
(a) A Mr. Kunz mined stringers and cross veins for years, roasting the ore in pits and grinding in the arrastra amalgamating the gold and silver. It is related that he returned to Germany with a small fortune.
The copper deposit was uncovered by later miners looking for gold.

*16 (b) Our neighbor mine, about five miles North, is the Blue Ledge Mine, located by prospectors in 1898. The No. 1 tunnel was advanced a short distance by several lessees who sold the claims to Dr. J. F. Reddy of Medford about 1903.
Dr. Reddy sold the mine in 1905 to R. S. Towne, President of the Cia Metalurgica Mexicana, for $200,000.
Mr. Towne, between 1905 and 1909, developed the mine for a distance of 1680 feet along the strike and to a depth of 600 feet.
Patented in 1911, the mine was sold to the Mexican Smelting and Refining Co.
Shipments to Tacoma of high grade sorted ore were made in 1917 18-19-20 and 1930-31.
Value of shipments approximate $644,000. for 11,151 tons.
Ore reserve 250,000 tons.

The Blue Ledge and the Copper Head are in the same belt of ancient schists flanking the Siskiyou range. The geology and the evidence of faulting and shearing very similar, and the oxydized ore identical in color and appearance.

West about twenty miles is the Grey Eagle Mine, developed by Col. Thompson of the Newmount Co.

A copper-iron sulphide mine of rather low grade with only nominal gold and silver values.

Obtained an R.F.C. loan in 1943 and built a concentrating mill, shipped to smelter about four million dollars worth of copper in 1943-4-5.

About thirty miles West is the old Queen of Bronze at Takilma, a high grade copper-silver mine which has produced over $1,500,000 for various operators during the past 75 years. The nearby Cowboy Mine is in operation and shipping to Tacoma.

(c) An engineer in 1950 and one in 1951 examined the Copper Head for prospective purchasers. Their reports must have been favorable, because their clients came back with offers to purchase, but under Lease and Bond conditions and price which we considered as not acceptable.

*18 (a) The ore body encountered is a replacement of brecciated and crushed sericite schist between a footwall of chlorite schist and a strong competent hanging wall of quartz schist. The ore zone, about six feet wide, has some narrow quartz veins.

At present in the oxydized zone about 16' from surface only residual ores are of value when sorted out.
Water channels in the leached and kaolinized sericite gouge and selvage on the walls and the appearance of sooty chalocite are evidence that an enrichment zone will be encountered at lower levels or more cover. This zone can be of great value and establish the mine.

Residual ore which has escaped oxydization are sulphides, chalcopyrite, bornite, chalcosite, with usual carbonates and oxides. Silver is mainly pyrargyrite.
Gold is with the copper and silver.

ASSAY LIST---COPPER HEAD MINE

Number	Au.	Ag.	Cu.	Total	Sample Taken
97997	$14.70	25.18	4.12%	60.02	Face No. 1 Tunnel
98160	3.50	6.49	"	30.13	7 x 12 face No. 1 Tunnel
98909	6.65	12.51	"	39.30	2 x 8' under hanging
98910	7.70	10.24	"	38.18	2 x 8' center
98911	9.05	12.83	"	42.12	2 x 8' along foot
549	11.55	23.82	5.6	62.81	bull nose-quartz center
551	9.00	14.04	"	50.48	drag chlorite #2
751	7.10	14.04	4.12	48.88	gen. sample blue ore
22654	5.95	22.29	"	55.68	sorted about 50% reject
22654	11.90	42.66	5.63	82.10	sorted inner wall schist
22797	13.30	11.04	"	51.78	sorted as mined on dump
22802	5.60	12.90	"	45.94	sorted as mined

Most of the samples were large, up to 200 lbs., quartered down for assay. Original certificates for above assays on file.

Average value in GOLD $9.19

Average value in SILVER 17.34

Average value in COPPER 24.07

AVERAGE TOTAL VALUE $50.60 per ton

SILVER is the antimonial-arsenical sulphides Pyragarite, stephanite etc. black and dark red sulphides.

COPPER is mainly in chalcopyrite and in the oxides present in the oxydized zone, stains of chalcocite indicate this ore may be below.

The above ore was encountered in a replacement near the surface (12-16') and are residual ores in a highly oxydized zone with open channels, indicating extensive leaching of values downward. This evidence indicates that values may double at lower depth or more cover and that the high silver values present may indicate bonanzas of silver below, which can be of great economic value. There are numerous examples of copper, silver, lead mines throughout the world with similar ore conditions.
Only minor amounts of Arsenic, Antimony, Lead, Zinc indicated.

THE EXPLORATION

20 The exploration will be conducted for copper ores in an altered sericite in a sheared and brecciated area near faults.

Gold and silver values indicated may be an important factor.

21 Present plan is to extend the No. 2 short tunnel to the drag area and drift along under the main croppings. The underground conditions will expose the trend and nature of the orebody and indicate the location of cross cuts or raises required. The downward direction and trend of the shear zone will be disclosed, so that the location for a lower cross-cut tunnel from the surface can be determined.

While there are other croppings and surface indications of ore below on the property, we believe it best to concentrate on the ores outlined where ore of good grade has been found.

With the equipment and crew outlined, we can expect an average of five feet per day or eight-hour shift.

22 The copper, silver deposits of the Siskiyou region are all replacement deposits in the schists where faults and shear zones have opened channels for ore deposition.

At the Copper Head the surface evidence of faulting is a small canyon and fault scarp SE of tunnel No. 1 and a large drag fold fifty feet NW on the strike indicates a low angle fault (30 deg.) with a displacement of 25-30 feet. This may be a fault or shear zone.

A large sill of quartz porphyry appears above the mine. This intrusive may have had influence on the ore formation.

The size and nature of the ore body is disclosed in the present oxydized zone.

About twenty tons were mined in Tunnel No. 1 and the residual ore sorted out, which was carefully sampled and assayed. About ten tons of ore assaying $45. to $55. per ton obtained.

The exploration will no doubt encounter similar ore in the oxydized zone, which can be stock piled and later shipped.

REQUIREMENTS AND COST

23
24 Work to consist of 100 feet, 5 x 7 ft. tunnel and 100 ft. of cross cuts.

200 ft. of tunnel and cross cuts at $15 per ft.	$3,000	(contract)
100 ft. rail (2d hand)	50	
Mine car. " "	75	
Supervision two months at $500. per month	1,000	
TOTAL	$4,125.	

The work can be done in two months.

Croppings
Proposed tunnel 100'
Proposed cross-cuts
Camp
600'
Copper Head
Copper Mine
Siskiyou Co, Calif.
John Stephenson Pres.
Oct. 1951

C
O
P
Y

REPORT OF ASSAY
ABBOT A. HANKS, INC.

Assayers, Chemists, Engineers

624 Sacramento Street

September 17, 1948

Johan Stephanson

Sample of O R E

Liability No.	Mark	GOLD Troy Ounces	GOLD Value	SILVER Troy Ounces	SILVER Value	Percentages	
751	Blue Ore Shobt Gen. sample 6'	.20	7.00	15.60	14.04	Copper	4.12

yd

ABBOT A HANKS, INC.

(s) John L. Martel

C
O
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Y

Report of Assay

ABBOT A. HANKS, INC.

Assayers, Chemists, Engineers
624 Sacramento Street

July 20, 1948

Ormerad - Stephanson

Sample of O R E

Labty. No.	Mark	GOLD Troy Ounces	GOLD Value	SILVER Troy Ounces	SILVER Value	Percentages
98907	1 Foot W	.015	.52	1.20	1.08	
98908	2 Foot	.04	1.40	1.76	1.58	
98909	3	.19	6.65	13.90	12.51	
98910	4	.22	7.70	11.38	10.24	
98911	5	.23	8.05	15.37	13.83	
98912	6 H.Wall	.03	1.05	1.87	1.68	

yd

ABBOT A. HANKS, INC.

(s) John L Martel

C
O
P
Y

Report of Assay
ABBOT A. HANKS, INC.

Assayers, Chemists, Engineers
624 Sacramento Street

September 14, 1948

Sample of O R E

Labty. No		Mark	GOLD Troy Ounces	GOLD Value	SILVER Troy Ounces	SILVER Value	Percentages
549	#1	Bull Nose Tun	.33	11.55	26.47	23.82	
550	#2	Drag Fold Black Wall	.01	.35	1.20	1.08	
551	#3	Draf Chlorite	.27	9.45	8.88	7.99	

yd

Abbot A. Hanks, Inc.

(s) Jno. L. Martel

C
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P
Y

Assay Report

PITTSBURGH TESTING LABORATORY

Assayers & Metallurgical Engineers

651 Howard Street

San Francisco 5, California

Gold @ $35.00 per oz.
Silver @ $ per oz.

Sample Ore (2)

Received June 30, 1949

Date July 5, 1949
Lab. No. 22664

Submitted by Mr. John Stephanson
Yreka Inn
Yreka, California

No.	Mark	Per Ton of 2000 LBS. GOLD Ounces	GOLD Value	SILVER Ounces	SILVER Value	Copper Percent	Lead Percent	Zinc Percent
22664	#1 -(small pieces) Mid-section vein	0.17	$5.95	24.63	$22.29	5.63		
	#2 -(large pieces) Inner wall near foot	0.34	11.90	47.14	42.66			

PITTSBURGH TESTING LABORATORY

(s) Parker M. Robinson
District Manager

C
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P
Y

Assay Report

PITTSBURGH TESTING LABORATORY
Assayers and Metallurgical Engineers

651 Howard Street

San Francisco 5, California

Gold @ $35.00 per oz.

Silver @ $ per oz.

Sample Ore (1)

Received August 11, 1949

Submitted by Copper Head Mine
Horse Creek
California

Date August 18, 1949
Lab. No. 22942

		Per Ton of 2000 Lbs.						
		GOLD		SILVER		Copper	Lead	Zinc
No.	Mark	Ounces	Value	Ounces	Value	Percent	Percent	Percent
22942	No. 6 Inner Wall Schist Chalcopyrite	0.18	$6.30	2.30	$2.08	5.63		

PITTSBURGH TESTING LABORATORY

Parker M. Robinson

C
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Assay Report

PITTSBURGH TESTING LABORATORY
Assayers and Metallurgical Engineers
651 Howard Street
San Francisco 5, California

Gold @ $35.00 per oz.
Silver @ $ per oz..

Sample Ore (1)

Received July 21, 1959

Submitted By Copper Head Mine
Horse Creek
California

Date July 22, 1949

Lab. No. 22797

Order No. SF-4759

		Per Ton of 2000 Lbs.						
		GOLD		SILVER				
No.	Mark	Ounces	Value	Ounces	Value	Percent	Percent	Percent
22797	Daily sample July 18, 1949	0.38	$13.30	12.20	$11.04			

PITTSBURGH TESTING LABORATORY

(s) Parker M. Robinson

REPORT OF ASSAY

ABBOT A. HANKS, INC.

ASSAYERS, CHEMISTS, ENGINEERS
624 SACRAMENTO STREET

SAN FRANCISCO. September 17, 1948

SAMPLE OF O R E

DEPOSITED BY Johan Stephanson

Labty. No.	Mark	GOLD, per ton of 2,000 lbs.		SILVER, per ton of 2,000 lbs.		Percentages	
		Troy Ounces	Value @ $35.00 oz.	Troy Ounces	Value @		
			$		$		
751	Blue Ore Shoot Gen. sample 6'	.20	7.00	15.60	14.04	Copper	4.12

yd

ABBOT A. HANKS, INC.

Jno. L. Martell

REPORT OF ASSAY

ABBOT A. HANKS, INC.

ASSAYERS, CHEMISTS, ENGINEERS
624 SACRAMENTO STREET

SAN FRANCISCO. July 20, 1948

SAMPLE OF ORE

DEPOSITED BY Ormerad& Stephanson

Labty. No.	Mark	GOLD, per ton of 2,000 lbs. Troy Ounces	GOLD, per ton of 2,000 lbs. Value @ $35.00 oz.	SILVER, per ton of 2,000 lbs. Troy Ounces	SILVER, per ton of 2,000 lbs. Value @	Percentages
98907	1 Foot W	.015	$ .52	1.20	$ 1.08	
98908	2 Foot	.04	1.40	1.76	1.58	
98909	3 } 6	.19	6.65	13.90	12.51	
98910	4 } 6	.22	7.70	11.38	10.24	
98911	5 } 6	.23	8.05	15.37	13.83	
98912	6 H.Wall	.03	1.05	1.87	1.68	

yd

3 = 24 = 8 — Au Ave 8.19
Au Avg 12.19
Au Cor 18.95
Ag 39.27 — Value

ABBOT A. HANKS, INC.

Original Signed by
JNO. L. MARTEL

REPORT OF ASSAY

ABBOT A. HANKS, INC.

ASSAYERS, CHEMISTS, ENGINEERS
624 SACRAMENTO STREET

SAN FRANCISCO. September 14, 1948

SAMPLE OF O R E

DEPOSITED BY Johan Stephanson

Labty. No.	Mark	GOLD, per ton of 2,000 lbs.		SILVER, per ton of 2,000 lbs.		Percentages
		Troy Ounces	Value @ $35.00 oz.	Troy Ounces	Value @	
			$		$	
549	#1 Bull Nose Tun	.33	11.55	26.47	23.82	
550	#2 Drag Fold Black Wall	.01	.35	1.20	1.08	
551	#3 Drag Chlorite	.27	9.45	8.88	7.99	

yd

ABBOT A. HANKS, INC.
Original Signed by
JNO. L. MARTEL

FORM 8001 SM-5-46

ASSAY REPORT

PITTSBURGH TESTING LABORATORY

ASSAYERS AND METALLURGICAL ENGINEERS

651 HOWARD STREET

SAN FRANCISCO 5, CAL.

Gold, @ $35.00 *per oz.*
Silver, @ $ *per oz.*

Sample Ore (2)

Received June 30, 1949

Submitted by Mr. John Stephanson
Yreka Inn
Yreka, California

Date July 5, 1949
Lab. No. 22664

NUMBER	MARK	PER TON OF 2000 LBS. GOLD OUNCES	GOLD VALUE	SILVER OUNCES	SILVER VALUE	COPPER PER CENT	LEAD PER CENT	ZINC PER CENT	
22664	#1 -(small pieces) Mid-section vein	0.17	$5.95	24.63	$22.29	5.63			
	#2 -(large pieces) Inner wall near foot	0.34	11.90	47.14	42.66				

July 1950
Au 11.90
Ag 42.66
Cu 25.20 (22½)
$79.76

Respectfully submitted,

PITTSBURGH TESTING LABORATORY

Parker M. Robinson

DISTRICT MANAGER

WPS/LK:no
cc: 1

FORM 8001 5M-5-46

ASSAY REPORT

PITTSBURGH TESTING LABORATORY

ASSAYERS AND METALLURGICAL ENGINEERS

651 HOWARD STREET

SAN FRANCISCO 5, CAL.

Gold, @ $35.00 *per oz.*
Silver, @ $ *per oz.*

Sample Ore (1)

Received August 11, 1949

Submitted by Copper Head Mine
Horse Creek
California

Date August 18, 1949
Lab. No. 22942

NUMBER	MARK	PER TON OF 2000 LBS. GOLD OUNCES	GOLD VALUE	SILVER OUNCES	SILVER VALUE	COPPER PER CENT	LEAD PER CENT	ZINC PER CENT	
22942	No. 6 Inner Wall Schist Chalcopyrite	0.18	$6.30	2.30	$2.08	5.63			

Respectfully submitted,

PITTSBURGH TESTING LABORATORY

Parker M. Robinson

DISTRICT MANAGER

JW/WPS:no
cc: 2

FORM 8001 5M-5-46

ASSAY REPORT

PITTSBURGH TESTING LABORATORY

ASSAYERS AND METALLURGICAL ENGINEERS

651 HOWARD STREET

SAN FRANCISCO 5, CAL.

Gold, @ $35.00 *per oz.*
Silver, @ $ *per oz.*

Sample Ore (1)

Received July 21, 1949

Submitted by Copper Head Mine
Horse Creek
California

Date July 22, 1949
Lab. No. 22797
Order No. SF-4759

NUMBER	MARK	PER TON OF 2000 LBS. GOLD OUNCES	GOLD VALUE	SILVER OUNCES	SILVER VALUE	COPPER PER CENT	LEAD PER CENT	ZINC PER CENT	
22797	Daily sample July 18, 1949	0.38	$13.30	12.20	$11.04				

Au 13 30
Ag 11 04
Cu 32 88
$ 57 22

Respectfully submitted,

PITTSBURGH TESTING LABORATORY

Parker M. Robinson

DISTRICT MANAGER

WPS/LK/JW:mo
cc: 2

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

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

DO NOT FILL IN THIS BLOCK

Docket No. dma/212/4

Date received 11-5-51

Participation

John Stephenson, Pres.
Copper Head Mine

236 D.Singleton Ave.
ALAMEDA, CAL.

Name and address of applicant

Date

FILL IN THIS BLOCK

Date of application Nov 1 -1951

Estimated cost $4.125

Mineral or metal Copper

Percentage of Government participation $2.062.50

Location of mine Siskiyou County, Calif.

Date of filing MF-100 Have not filed

DMA Docket Number, if available

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

Defense Minerals Administration
RECEIVED
NOV 5 1951

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation?
*2. If a partnership, state names and addresses of partners.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.
9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)?

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.
    (*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

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

*11. State the present and former names of the property, if any.
*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.
*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.
*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.
15. State in detail how the ore could be shipped and how and where milled.
*16. History:
    (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.
    (*b*) State briefly the known history and production of adjoining and neighboring properties.
    (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.
*17. Production:
    (*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)
    (*a*) Describe the ore or mineral deposits briefly.
    (*b*) Submit available maps and assay data.
    (*c*) Give estimated tonnage and grade of each class of ore reserves.
19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?
21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

    NOTE.—The Government will not participate in a project that will require more than 2 years to complete.
22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:
    (*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.
    (*b*) Supervisors, by numbers and positions, with salaries of each.
    (*c*) Cost of necessary repairs to existing facilities, structures, and buildings.
    (*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.
    (*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.
    (*f*) Cost of rental for equipment which the operator proposes to rent.
    (*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.
    (*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.
    (*i*) Cost of power, water, utilities, and any other items not provided for above.
24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

CERTIFICATION

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

COPPER HEAD MINE, Inc.
(Name of company)

By [signature]
(Signature of authorized official)

Nov. 1, 1951
(Date)

President
(Title)

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

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

THE APPLICANT

*1 A Corporation.
*2
*3 John Stephenson, Pres.; Edward Gilroy, Vice Pres.
3617 E. 12th St., Oakland, Cal.
Edward Cross, Secy.Treas., 3615 E. 12th St., Oakland---Directors
The above are the stockholders.
*4 The exploration is under the direct management of John Stephenson, who has had long experience since 1906 as Supt. Manager or operator of Gold, Silver, Quicksilver and Copper Mines.
*5 We are the owner.
*6 There are no debts, claims or encumbrances.
*7
*8 The claim was purchased in 1948 for $5,000., since which time $3005.55 has been expended for roads, bridges, camp buildings, exploration sampling, assays and tests.
The present cash on hand is $2,000. There are no liabilities.
*9 The Applicant is prepared to expend $2000. in immediate exploration, but as this amount may not be sufficient to accomplish the required exploration an additional amount may be sufficient to accomplish the objective, as detailed in question *23.
*10 The claim owned is recorded as follows:
Name of claim: COPPER HEAD; 500 feet Northwest of point of discovery and 1000 feet Southeast.
200 feet Northeast of point of discovery and 400 feet Southwest of point of discovery.
Joins Beckers placer claim on Northwest end line.
Located on White Cloud Mountain half mile from Horse Creek stream and situated in Siskiyou County Oak Bar Mining District.
It is marked by squared trees on corners and center lines.
The claim apparently covers the apex and main shear zone, but the company will file two additional claims alongside.
Application for patent is under consideration.
*11 Present name COPPER HEAD MINE, former names WHITE CLOUD, McCOY and KUNTZ MINE.
*12 Six miles up the County road along Horse Creek from the store and Post Office on the Klamath River Highway, then 36 miles to R. R. at Yreka or 33 miles to R.R., at Hornbrook. The County road is maintained in good condition by the County and Forest Service. The Mine is within 1/4 mile of the road by private road of easy grade.
*13 Mahey Creek runs through the canyon below the mine with a normal flow of 4 to 10 Miners inches.
Power for exploration will be gasoline compressor. Power line of Cal. Oregon Power Co., three miles from mine.
*14 Present camp quarters sufficient for crew required for exploration.
*15 Ore is of sufficient grade to ship to smelter, so can be trucked to R. R. and shipped to Tacoma Smelter; some sorting will be required, as usual. Loading facilities built by Newmount Mining at Yreka can be used.
*16 As claims were filed in this region in the 1850-60-70s, little is known; however, some later operations can be surmised by the remains of two water power arrastras on the claim.
(a) A Mr. Kunz mined stringers and cross veins for years, pocketing the ore in pits and grinding in the arrastra amalgamating the gold and silver. It is related that he returned to Germany with a small fortune.
The copper deposit was uncovered by later miners looking for gold.

*16 (b) Our neighbor mine, about five miles North, is the Blue Ledge Mine, located by prospectors in 1898. The No. 1 tunnel was advanced a short distance by several lessees who sold the claims to Dr. J. F. Reddy of Medford about 1903.
Dr. Reddy sold the mine in 1905 to R. S. Towne, President of the Cia Metalurgica Mexicana, for $200,000.
Mr. Towne, between 1905 and 1909, developed the mine for a distance of 1650 feet along the strike and to a depth of 600 feet. Patented in 1911, the mine was sold to the Mexican Smelting and Refining Co.
Shipments to Tacoma of high grade sorted ore were made in 1917 18-19-20 and 1930-31.
Value of shipments approximate $644,000. for 11,151 tons.
Ore reserve 150,000 tons.

The Blue Ledge and the Copper Head are in the same belt of ancient schists flanking the Siskiyou range. The geology and the evidence of faulting and shearing very similar, and the oxydized ore identical in color and appearance.

West about twenty miles is the Grey Eagle Mine, developed by Col. Thompson of the Newmont Co.

A copper-iron sulphide mine of rather low grade with only nominal gold and silver values.

Obtained an R.F.C. loan in 1943 and built a concentrating mill, shipped to smelter about four million dollars worth of copper in 1943-4-5.

About thirty miles West is the old Queen of Bronze at Takilma, a high grade copper-silver mine which has produced over $1,500,000 for various operators during the past 75 years. The nearby Cowboy Mine is in operation and shipping to Tacoma.

(c) An engineer in 1950 and one in 1951 examined the Copper Head for prospective purchasers. Their reports must have been favorable, because their clients came back with offers to purchase, but under Lease and Bond conditions and price which we considered as not acceptable.

*18 (a) The ore body encountered is a replacement of brecciated and crushed sericite schist between a footwall of chlorite schist and a strong competent hanging wall of quartz schist. The ore zone, about six feet wide, has some narrow quartz veins.

At present in the oxydized zone about 16' from surface only residual ores are of value when sorted out.
Water channels in the leached and kaolinized sericite gouge and selvage on the walls and the appearance of pasty chalcocite are evidence that an enrichment zone will be encountered at lower levels as more cover. This zone can be of great value and establish the mine.

Residual ore which has escaped oxydization are sulphides, chalcopyrite, bornite, chalcocite, with usual carbonates and oxides. Silver is mainly pyrargyrite.
Gold is with the copper and silver.

ASSAY LIST - COPPER HEAD MINE

Number	Au.	Ag.	Cu.	Total	Sample Taken
27987	$14.70	25.18	4.12%	60.02	Face No. 1 Tunnel
28160	3.30	6.49	"	30.13	7 x 12 face No. 1 Tunnel
28909	6.65	12.51	"	29.30	2 x 8' under hanging
28910	7.70	10.24	"	18.18	2 x 8' center
28911	9.05	12.83	"	42.12	2 x 8' along foot
549	11.55	23.82	5.6	62.81	bull nose quartz center
551	9.00	14.04	"	50.48	drag chlorite #2
751	7.10	14.14	"	48.88	gen. sample blue ore
22654	5.95	22.29	"	55.68	sorted about 90% reject
22654	11.90	42.66	5.63	82.10	sorted inner wall schist
22997	13.30	11.04	"	51.78	sorted as mined on dump
22802	5.60	12.90	"	45.94	sorted as mined

Most of the samples were large, up to 200 lbs., quartered down for assay. Original certificates for above assays on file.

Average value in GOLD $9.19

Average value in SILVER 17.34

Average value in COPPER 24.07

AVERAGE TOTAL VALUE $50.60 per ton

SILVER is the antimonial-arsenical sulphides Pyrargarite, stephanite etc. black and dark red sulphides.

COPPER is mainly in chalcopyrite and in the oxides present in the oxydised zone, stains of chalcocite indicate this ore may be below.

The above ore was encountered in a replacement near the surface (12-16') and are residual ores in a highly oxydised zone with open channels, indicating extensive leaching of values downward. This evidence indicates that values may double at lower depth or more over and that the high silver values present may indicate bonanzas of silver below, which can be of great economic value. There are numerous examples of copper, silver, lead mines throughout the world with similar ore conditions.
Only minor amounts of Arsenic, Antimony, Lead, Zinc indicated.

THE EXPLORATION

20 The exploration will be conducted for copper ores in an altered sericite in a sheared and brecciated area near faults.

Gold and silver values indicated may be an important factor.

21 Present plan is to extend the No. 2 short tunnel to the drag area and drift along under the main croppings. The underground conditions will expose the trend and nature of the ore-body and indicate the location of cross cuts or raises required. The downward direction and trend of the shear zone will be disclosed, so that the location for a lower cross-cut tunnel from the surface can be determined.

While there are other croppings and surface indications of ore below on the property, we believe it best to concentrate on the ores outlined where ore of good grade has been found.

With the equipment and crew outlined, we can expect an average of five feet per day or eight-hour shift.

22 The copper, silver deposits of the Siskiyou region are all replacement deposits in the schists where faults and shear zones have opened channels for ore deposition.

At the Copper Head the surface evidence of faulting is a small canyon and fault scarp SE of tunnel No. 1 and a large drag fold fifty feet NW on the strike indicates a low angle fault (16 deg.) with a displacement of 25-30 feet. This may be a fault or shear zone.

A large sill of quartz porphyry appears above the mine. This intrusive may have had influence on the ore formation.

The size and nature of the ore body is disclosed in the present oxydized zone.

About twenty tons were mined in Tunnel No. 1 and the residual ore sorted out, which was carefully sampled and assayed. About ten tons of ore assaying $45. to $55. per ton obtained.

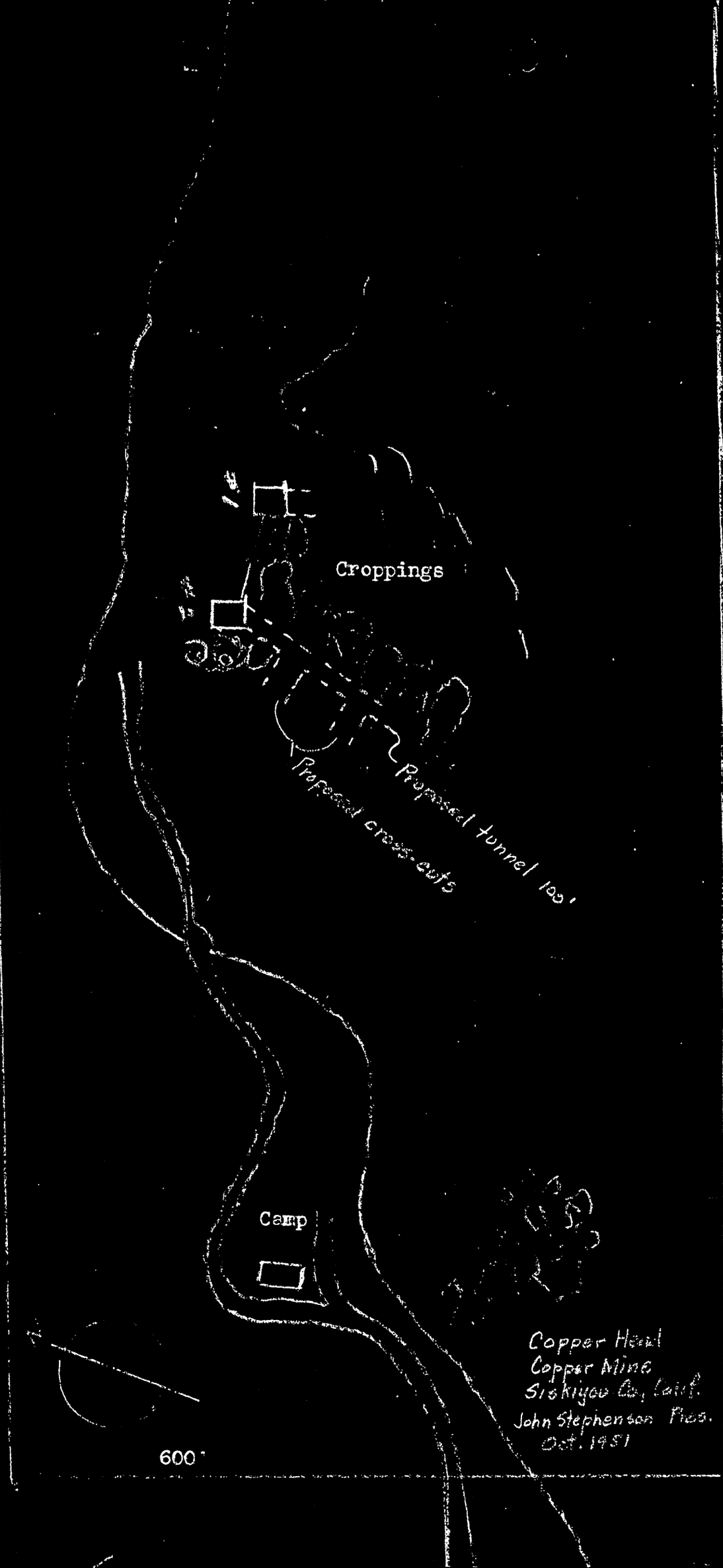
The exploration will no doubt encounter similar ore in the oxydized zone, which can be spook piled and later shipped.

REQUIREMENTS AND COST

23
24 Work to consist of 100 feet, 5 x 7 ft. tunnel and 100 ft. of cross cuts.

200 ft. of tunnel and cross cuts at $15 per ft.	$3,000 (contract)
100 ft. rail (24 hand)	50
Mine car. " "	75
Supervision two months at $500. per month	1,000
TOTAL	$4,125.

The work can be done in two months.


Croppings
Proposed tunnel 100'
Proposed cross-cuts
Camp
600'
Copper Head
Copper Mine
Siskiyou Co, Calif.
John Stephenson Phos.
Oct. 1951

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

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

DO NOT FILL IN THIS BLOCK

Docket No. dma 2214

Date received 11-5-51

Participation

John Stephenson, Pres.
Copper Head Mine

236 D.Singleton Ave.
ALAMEDA, CAL.

Name and address of applicant

Date

FILL IN THIS BLOCK

Date of application Nov 1 -1951

Estimated cost $4.125

Mineral or metal Copper

Percentage of Government participation $2.062.50

Location of mine Siskiyou County, Calif.

Date of filing MF-100 Have not filed

DMA Docket Number, if available

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 5 1951

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation?
*2. If a partnership, state names and addresses of partners.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.
9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)?

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.
    (*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

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

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State amount of power to be used, rate per hour or other cost, and source.
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15. State in detail how the ore could be shipped and how and where milled.
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    (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.
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    (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.
*17. Production:
    (*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: *(If property is or has been operating.)
    (*a*) Describe the ore or mineral deposits briefly.
    (*b*) Submit available maps and assay data.
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    (*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.
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24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

CERTIFICATION

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

COPPER HEAD MINE, Inc.
(Name of company)

By [signature]
(Signature of authorized official)

Nov. 1 -1951
(Date)

President
(Title)

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

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

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*3 John Stephenson, Pres.; Edward Gilroy, Vice Pres.
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Edward Cross, Secy.Treas., 3615 E. 12th St., Oakland---Directors
The above are the stockholders.
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*5 We are the owner.
*6 There are no debts, claims or encumbrances.
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*8 The claim was purchased in 1948 for $5,000., since which time $3095.55 has been expended for roads, bridges, camp buildings, exploration sampling, assays and tests.
The present cash on hand is $2,000. There are no liabilities.
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200 feet Northeast of point of discovery and 400 feet Southwest of point of discovery.
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Located on White Cloud Mountain half mile from Horse Creek stream and situated in Siskiyou County Oak Bar Mining District.
It is marked by squared trees on corners and center lines.
The claim apparently covers the apex and main shear zone, but the company will file two additional claims alongside.
Application for patent is under consideration.
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*12 Six miles up the County road along Horse Creek from the store and Post Office on the Klamath River Highway, then 36 miles to R. R. at Yreka or 33 miles to R.R., at Hornbrook. The County road is maintained in good condition by the County and Forest Service. The Mine is within 1/4 mile of the road by private road of easy grade.
*13 McCoy Creek runs through the canyon below the mine with a normal flow of 4 to 10 Miners inches.
Power for exploration will be gasoline compressor. Power line of Cal. Oregon Power Co., three miles from mine.
*14 Present camp quarters sufficient for crew required for exploration.
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(a) A Mr. Kunz mined stringers and cross veins for years, roasting the ore in pits and grinding in the arrastra amalgamating the gold and silver. It is related that he returned to Germany with a small fortune.
The copper deposit was uncovered by later miners looking for gold.

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Dr. Reddy sold the mine in 1905 to R. S. Towne, President of the Cia Metalurgica Mexicana, for $200,000.
Mr. Towne, between 1905 and 1909, developed the mine for a distance of 1680 feet along the strike and to a depth of 600 feet. Patented in 1911, the mine was sold to the Mexican Smelting and Refining Co.
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Ore reserve 250,000 tons.

The Blue Ledge and the Copper Head are in the same belt of ancient schists flanking the Siskiyou range. The geology and the evidence of faulting and shearing very similar, and the oxydized ore identical in color and appearance.

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A copper-iron sulphide mine of rather low grade with only nominal gold and silver values.

Obtained an R.F.C. loan in 1943 and built a concentrating mill, shipped to smelter about four million dollars worth of copper in 1943-4-5.

About thirty miles West is the old Queen of Bronze at Takilma, a high grade copper-silver mine which has produced over $1,500,000 for various operators during the past 75 years. The nearby Cowboy Mine is in operation and shipping to Tacoma.

(c) An engineer in 1950 and one in 1951 examined the Copper Head for prospective purchasers. Their reports must have been favorable, because their clients came back with offers to purchase, but under Lease and Bond conditions and price which we considered as not acceptable.

*18 (a) The ore body encountered is a replacement of brecciated and crushed sericite schist between a footwall of chlorite schist and a strong competent hanging wall of quartz schist. The ore zone, about six feet wide, has some narrow quartz veins.

At present in the oxydized zone about 16' from surface only residual ores are of value when sorted out.
Water channels in the leached and kaolinized sericite gouge and selvage on the walls and the appearance of sooty chalcocite are evidence that an enrichment zone will be encountered at lower levels or more cover. This zone can be of great value and establish the mine.

Residual ore which has escaped oxydization are sulphides, chalcopyrite, bornite, chalcosite, with usual carbonates and oxides. Silver is mainly pyrargyrite.
Gold is with the copper and silver.

ASSAY LIST---COPPER HEAD MINE

Number	Au.	Ag.	Cu.	Total	Sample Taken
97997	$14.70	25.18	4.12%	60.02	Face No. 1 Tunnel
98160	3.50	6.49	"	30.13	7 x 12 face No. 1 Tunnel
98909	6.65	12.51	"	39.30	2 x 8' under hanging
98910	7.70	10.24	"	38.18	2 x 8' center
98911	9.05	12.83	"	42.12	2 x 8' along foot
549	11.55	23.82	5.6	62.81	bull nose quartz center
551	9.00	14.04	"	50.48	drag chlorite #2
751	7.10	14.14	"	48.88	gen. sample blue ore
22634	5.95	22.29	"	55.68	sorted about 50% reject
22634	11.90	42.66	5.63	82.10	sorted inner wall schist
22997	13.30	11.04	"	51.78	sorted as mined 8n Ramp
22802	5.60	12.90	"	45.94	sorted as mined

Most of the samples were large, up to 200 lbs., quartered down for assay. Original certificates for above assays on file.

Average value in GOLD $9.19

Average value in SILVER 17.34

Average value in COPPER 24.07

AVERAGE TOTAL VALUE $50.60 per ton

SILVER is the antimonial-arsenical sulphides Pyragarite, stephanite etc. black and dark red sulphides.

COPPER is mainly in chalcopyrite and in the oxides present in the oxydized zone, stains of chalcocite indicate this ore may be below.

The above ore was encountered in a replacement near the surface (12-16') and are residual ores in a highly oxydized zone with open channels, indicating extensive leaching of values downward. This evidence indicates that values may double at lower depth or more cover and that the high silver values present may indicate bonanzas of silver below, which can be of great economic value. There are numerous examples of copper, silver, lead mines throughout the world with similar ore conditions.
Only minor amounts of Arsenic, Antimony, Lead, Zinc indicated.

THE EXPLORATION

20 The exploration will be conducted for copper ores in an altered sericite in a sheared and brecciated area near faults.

Gold and silver values indicated may be an important factor.

21 Present plan is to extend the No. 2 short tunnel to the drag area and drift along under the main croppings. The underground conditions will expose the trend and nature of the orebody and indicate the location of cross cuts or raises required. The downward direction and trend of the shear zone will be disclosed, so that the location for a lower cross-cut tunnel from the surface can be determined.

While there are other croppings and surface indications of ore below on the property, we believe it best to concentrate on the ores outlined where ore of good grade has been found.

With the equipment and crew outlined, we can expect an average of five feet per day or eight-hour shift.

22 The copper, silver deposits of the Siskiyou region are all replacement deposits in the schists where faults and shear zones have opened channels for ore deposition.

At the Copper Head the surface evidence of faulting is a small canyon and fault scarp SE of tunnel No. 1 and a large drag fold fifty feet NW on the strike indicates a low angle fault (30 deg.) with a displacement of 25-30 feet. This may be a fault or shear zone.

A large sill of quartz porphyry appears above the mine. This intrusive may have had influence on the ore formation.

The size and nature of the ore body is disclosed in the present oxydized zone.

About twenty tons were mined in Tunnel No. 1 and the residual ore sorted out, which was carefully sampled and assayed. About ten tons of ore assaying $45. to $55. per ton obtained.

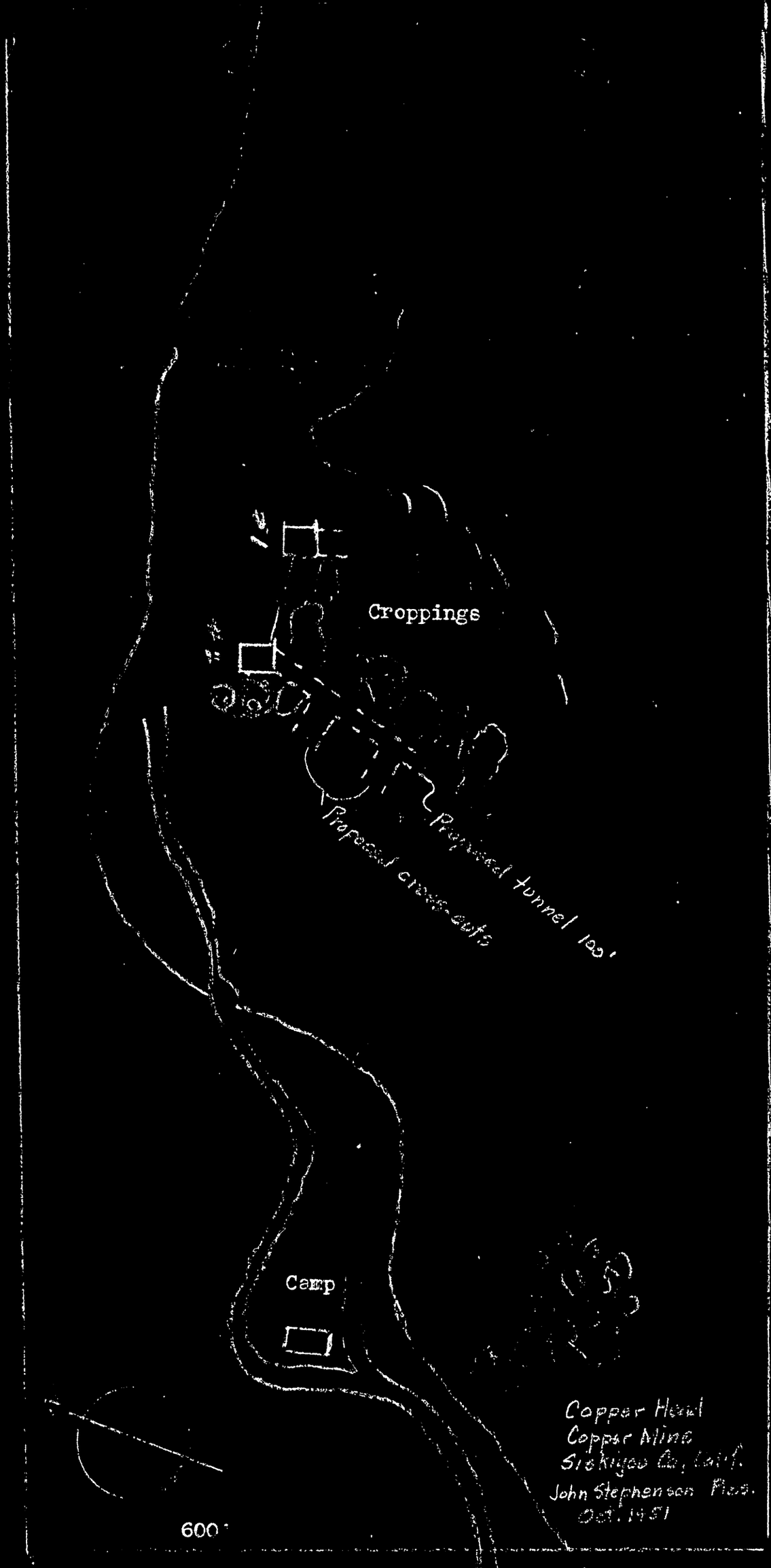
The exploration will no doubt encounter similar ore in the oxydized zone, which can be stock piled and later shipped.

REQUIREMENTS AND COST

23
24 Work to consist of 100 feet, 5 x 7 ft. tunnel and 100 ft. of cross cuts.

200 ft. of tunnel and cross cuts at $15 per ft.	$3,000 (contract)
100 ft. rail (2d hand)	50
Mine car. " "	75
Supervision two months at $500. per month	1,000
TOTAL	$4,125.

The work can be done in two months.


Croppings
Proposed tunnel 100'
Proposed cross-cuts
Camp
600'
Copper Head
Copper Mine
Siskiyou Co, Calif.
John Stephenson Pres.
Oct. 1951

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

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

DO NOT FILL IN THIS BLOCK

Docket No. dma 2214

Date received 11-5-51

Participation

John Stephenson, Pres.
Copper Head Mine

236 D.Singleton Ave.
ALAMEDA, CAL.

Name and address of applicant

Date

FILL IN THIS BLOCK

Date of application Nov 1 -1951

Estimated cost $4.125

Mineral or metal Copper

Percentage of Government participation $2.062.50

Location of mine Siskiyou County, Calif.

Date of filing MF-100 Have not filed

DMA Docket Number, if available

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22802	5.60	12.90	"	45.94	sorted as mined

Most of the samples were large, up to 200 lbs., quartered down for assay. Original certificates for above assays on file.

Average value in GOLD $9.19

Average value in SILVER 17.34

Average value in COPPER 24.07

AVERAGE TOTAL VALUE $50.60 per ton

SILVER is the antimonial-arsenical sulphides Pyrargarite, stephanite etc. black and dark red sulphides.

COPPER is mainly in chalcopyrite and in the oxides present in the oxydized zone, stains of chalcocite indicate this ore may be below.

The above ore was encountered in a replacement near the surface (12-16') and are residual ores in a highly oxydized zone with open channels, indicating extensive leaching of values downward. This evidence indicates that values may double at lower depth or more cover and that the high silver values present may indicate bonanzas of silver below, which can be of great economic value. There are numerous examples of copper, silver, lead mines throughout the world with similar ore conditions.
Only minor amounts of Arsenic, Antimony, Lead, Zinc indicated.

THE EXPLORATION

20 The exploration will be conducted for copper ores in an altered sericite in a sheared and brecciated area near faults.

Gold and silver values indicated may be an important factor.

21 Present plan is to extend the No. 2 short tunnel to the drag area and drift along under the main croppings. The underground conditions will expose the trend and nature of the ore-body and indicate the location of cross cuts or raises required. The downward direction and trend of the shear zone will be disclosed, so that the location for a lower cross-cut tunnel from the surface can be determined.

While there are other croppings and surface indications of ore below on the property, we believe it best to concentrate on the ores outlined where ore of good grade has been found.

With the equipment and crew outlined, we can expect an average of five feet per day or eight-hour shift.

22 The copper, silver deposits of the Siskiyou region are all replacement deposits in the schists where faults and shear zones have opened channels for ore deposition.

At the Copper Head the surface evidence of faulting is a small canyon and fault scarp SE of tunnel No. 1 and a large drag fold fifty feet NW on the strike indicates a low angle fault (30 deg.) with a displacement of 25-30 feet. This may be a fault or shear zone.

A large sill of quartz porphyry appears above the mine. This intrusive may have had influence on the ore formation.

The size and nature of the ore body is disclosed in the present oxydized zone.

About twenty tons were mined in Tunnel No. 1 and the residual ore sorted out, which was carefully sampled and assayed. About ten tons of ore assaying $45. to $55. per ton obtained.

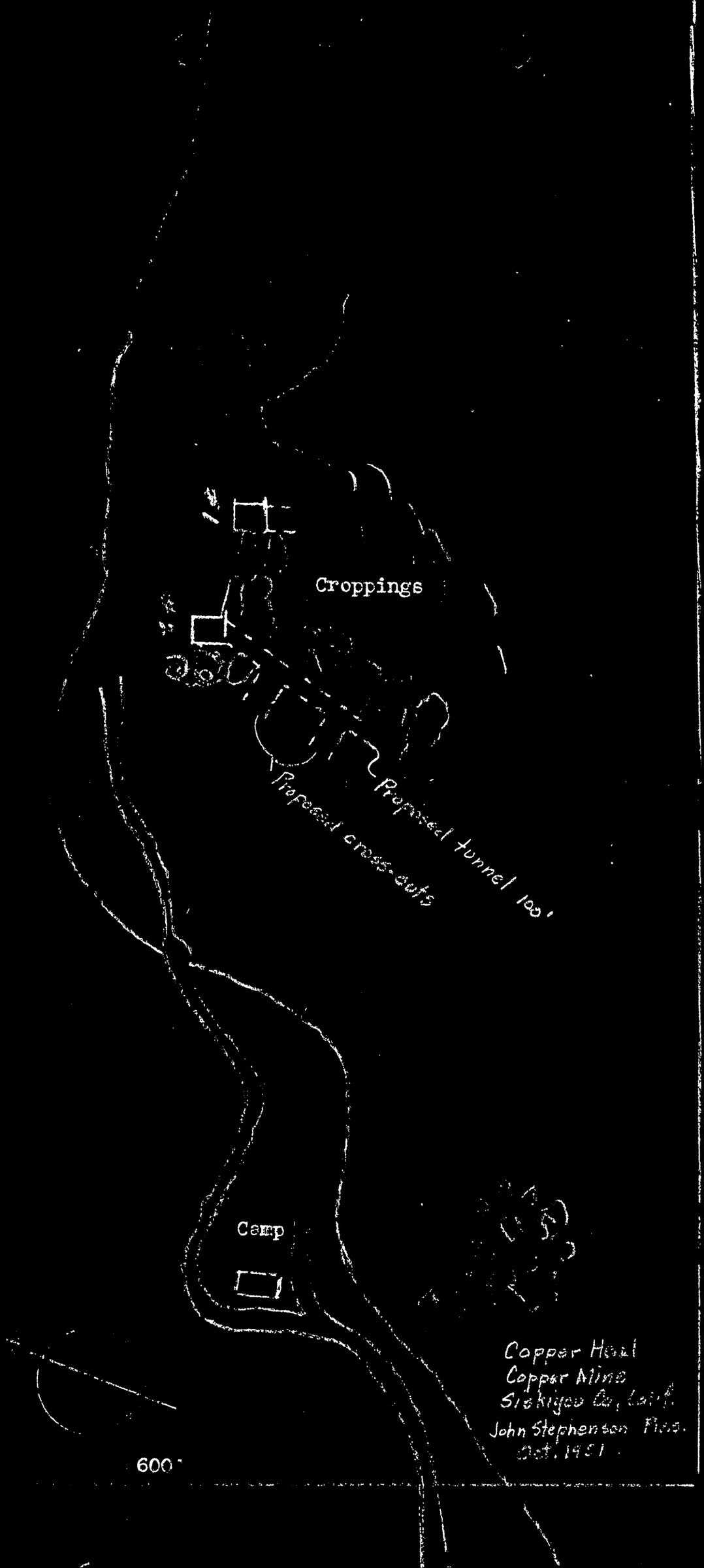
The exploration will no doubt encounter similar ore in the oxydized zone, which can be stock piled and later shipped.

REQUIREMENTS AND COST

23
24 Work to consist of 100 feet, 5 x 7 ft. tunnel and 100 ft. of cross cuts.

200 ft. of tunnel and cross cuts at $15 per ft.	$3,000	(contract)
100 ft. rail (2d hand)	50	
Mine car. " "	75	
Supervision two months at $500. per month	1,000	
TOTAL	$4,125.	

The work can be done in two months.


Croppings
Proposed tunnel 100'
Proposed cross-cuts
Camp
600'
Copper Head
Copper Mine
Siskiyou Co., Calif.
John Stephenson Pres.
Oct. 1951