



CONTACT INFORMATION

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PRINTED: 10-31-2005

ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: COPPER HOUSE

ALTERNATE NAMES:

MOHAVE COUNTY MILS NUMBER: 232A

LOCATION: TOWNSHIP 32 N RANGE 11 W SECTION 2 QUARTER SE
LATITUDE: N 36DEG 11MIN 56SEC LONGITUDE: W 113DEG 25MIN 53SEC
TOPO MAP NAME: YELLOW JOHN MOUNTAIN - 7.5 MIN

CURRENT STATUS: RAW PROSPECT

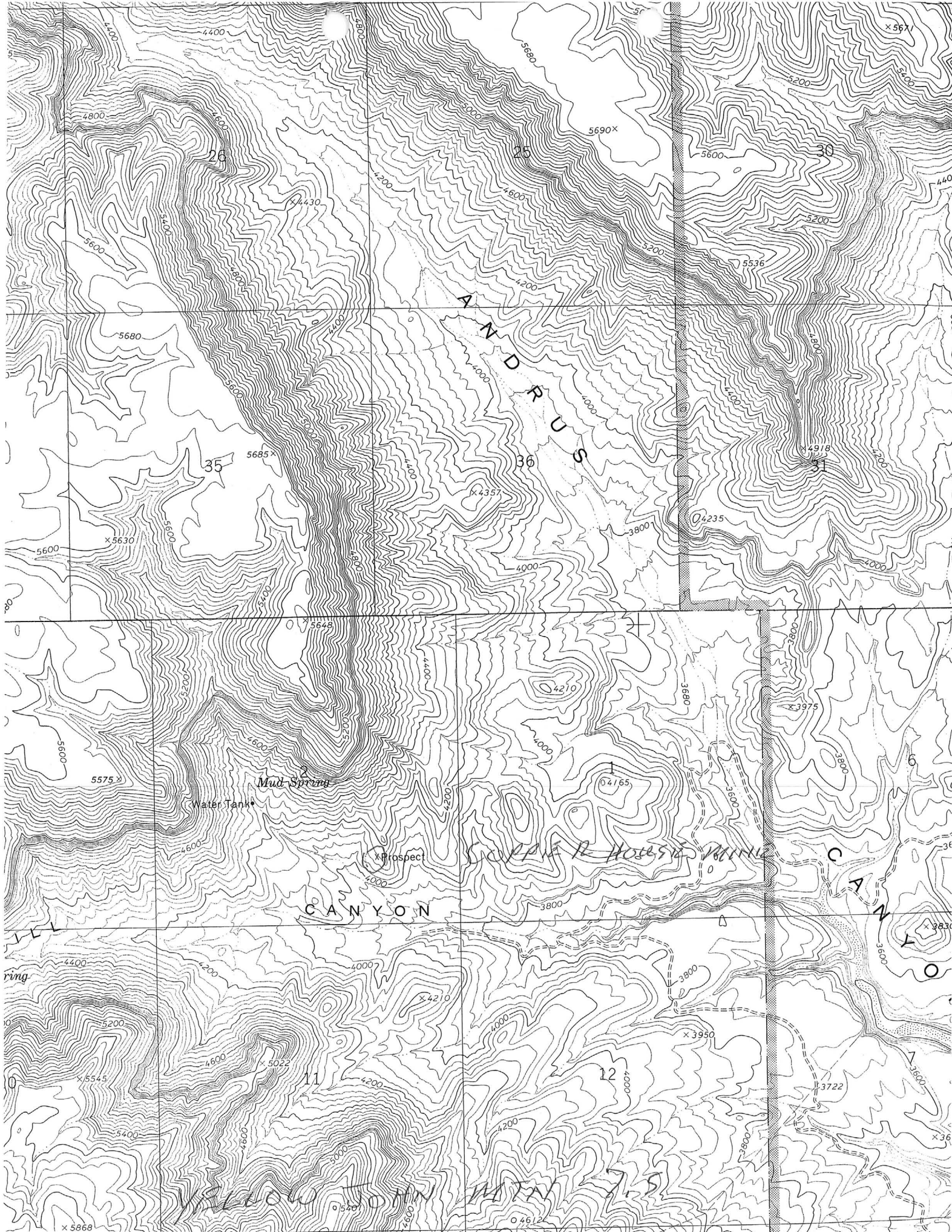
COMMODITY:

COPPER
IRON FERROUS OXID
MANGANESE OXIDE

BIBLIOGRAPHY:

"MINERAL & WTR. RES. OF AZ" AZBM BULL 180, P
288, 1969
AEC PRELIM. RPT. ON URANIUM-BEARING DEPOSIT
IN MOHAVE CTY., JUNE 1953, P. 568
ECONOMIC GEOLOGY, VOL. 80, 1985, PP 1722-1735
ADMMR COPPER HOUSE FILE

A-1



232-A

A-2

COUNTY Mohave STATE Arizona Present file No. AR-126
New file No. 21.206

P 32 N RANGE 11 W SECS. 2 Main Commodity Copper
Others Gold - Silver

PROPERTY NAME COPPER HOUSE MINING CO.

OWNER NAMES -

OWNER Harold A. Anderson, et al (partnership) ADDRESS 321 W. 2nd Street, St. George, Utah

LESSEE - ADDRESS -

LOCATION in an "Un-Named" District east of the Bentley mining district, Reached by traveling 85 miles over dirt road southerly from St. George, to Snyders Ranch, then by a 6 mile pack trip into Dansil Canyon, about 3 miles west of Andrus Canyon.

ACCESS -

TYPE OF DEPOSIT:

Disseminated - Bedded - Contact - Placer -
Vein - Lenses or pods X Residual - Other -

WORKINGS:

Underground X ACCESSIBLE: Yes X No - Unknown -

Drift, X-cut X Shaft -

Total Length: Less than 200' - 200' to 1,000' - More than 1,000' -

Surface X

Open pit - Small - Large - Trenches - Test pits X

Drill holes -

Undeveloped X

PLUS 500 TON PRODUCTION: Yes - No - Unknown X

DATE OF INFORMATION June 1952

TYPE OF REPORT:

Standard Examination - DMEA or OME - WMR X Correspondence -
Summary Report - Access Road X MRB - Other -
Map - Non Bureau -

FURTHER WORK RECOMMENDED - NOT RECOMMENDED X



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

224 New Customhouse
Denver 2, Colorado

December 6, 1951

Memorandum

To: ✓ W. R. Storms (with application)

(Through Chief, Mining Division, Region IV)

C. A. Anderson

From: DMA Field Team, Region IV

Subject: Access Road Application, Copper House Mining Company, Mohave
County, Arizona

Enclosed is a copy of Form MF-104, application for access
road for Copper House Mining Company, Mohave County, Arizona.

A field examination is required.



P. T. Allsman, Alternate



A. H. Koschmann

Enclosure

WRS
12-9-51

AR Copper House

A-4

DEPARTMENT OF MINES
Box 4037, University Station
Tucson, Arizona

MINING DIVISION
REGION IV

January 7, 1952

Re: Access Road

Mr. Harold A. Anderson
Copper House Mining Co.
321 West 2nd North
St. George, Utah

My dear Mr. Anderson:

Your application to the Defense Minerals Administration for an access road to your Copper House mine in northern Mohave County, Arizona, has been referred to this office for an examination.

Will you please let me know the exact location of your mine and if it can be reached at the present time? I suspect that the snow is deep in that section of the state at this time.

Are you producing ore from your mine at the present time, or is the property merely in the development stage? As you may know, if you actually are producing ore and the property seems promising when examined by our engineers, they will recommend that a road be built at Government expense. However, if your property merely is in the development or exploration stage, you will be required to pay for one-half the cost of the road.

Is there any place in the vicinity of your mine where our engineers can stay when examining the possibilities of this access road?

Sincerely yours,

Walter R. Storms, Chief
Arizona-New Mexico Branch
Mining Division, Region IV

CC P. T. Allsman
C. A. Anderson
AR-Copper House
DF

WRStorms:als

C O P Y

A-5

MINING DIVISION
REGION IV

March 3, 1952

Re: Access Road

Mr. Harold A. Anderson
Copper House Mining Co.
321 West 2nd North
St. George, Utah.

My dear Mr. Anderson:

On January 7, I wrote you regarding your application for an access road to your Copper House mine north of the Colorado River in Mohave County, Arizona. As I have heard nothing from you, I am wondering if you received my letter. In case you did not, I am attaching a copy.

If you no longer are interested in an access road, will you please let me know so this application may be taken off our list?

Sincerely yours,

Walter R. Storms, Chief
Arizona-New Mexico Branch

CC W. H. King
AR-?
MMXX DF

WRStorms:frj

A-6

St. George Utah
March 17 1952

Bureau of Mines
Box 4097, University Station
Tucson, Arizona

WTH

Dear Mr. Storms

I misplaced your letter of Jan 7.
So am answering the two letters now

The mine is seven miles west
of the Copper Mountain mine. A mile
or so down the draw from a
seepage known as Mud Spring.

We are at present in the develop-
ment stage. We have shafts are
piled out. We are putting down
a few holes to determine the place
it come up from and the value and a
given distance of the ore showing.
We would be shipping ore now
if the ~~road~~ road was in. It
goes down the Andrew Canyon. At
present there is only a few feet or
yard left in the canyon.

It is about eighty (80) miles
and to the property from St. George.

There has been a lot of snow
on Gaulty Mountain. Other stretches
of road are so soft to travel now.
I intend to fly out and look the
road over and then go out in about
two weeks. I believe that we
can drive a car to within
3 or 6 miles of the property and
then walk to the property. This
however can't be done, as far as I know
now before the 10th of April. Not
then if the roads aren't dry enough.
I will write and let you know
a more definite date for the
engineers to come to see the
property if they can, and will
come to look at it.

I am very much interested in a
road being built down the canyon
and other parts of the road improved.

U. S. BUREAU OF MINES
MINING DIVISION
MAR 1 9 1952
TUCSON, ARIZONA

Sincerely yours
Harold G. Anderson
Copper Hammer Mining Co.

St. George, Utah
April 6, 1895

Walter B. Starnes
United States
Department of the Interior
Bureau of Mines

Dear Sir:

I wrote you some time ago about the mine engineers coming to look at the property on or about the tenth (10) of this month. I have just returned from the property. There is no way except to carry food and bedding for several miles on your back. I therefore don't recommend your coming to see the property for some time yet.

There is a trail to be used by pack horse. However at present there are no horses on top to be used. We are going out again the last of June. By then there will be a road to reach in 2 1/2 miles of the property if the Copper Mountain mine is open by then. If not we intend to go down by pack horse. I am interested in having you engineers look at the property. Perhaps we can work out a

(2)

minute schedule in the mean time.
Our work up to now has been
strip the veins leading to what
we assume, and from all appearances
in the place it is dipping down.
It is dipping to the east. We have our
on the dumps ready to ship when we
can get a road. We are making a cut
out way through the hill at present.

I have some ore samples I brought
back with me the last time. If your
men are here in town any time, I would
like to show them the samples and
answer what questions I can.

Sincerely Yours

Harold C. Anderson
Copper House Mining Co.

U. S. BUREAU OF MINES
MINING DIVISION
APR 9 1952
TUCSON, ARIZONA

B-2

MINING DIVISION
REGION IV

April 9, 1952

Re: Access Road
Application,
Copper House Mine,
Mohave County, Ariz.

Mr. Harold A. Anderson
Copper House Mining Co.
321 West 2nd North
St. George, Utah.

Dear Mr. Anderson:

In answer to your letter of April 6, please let me know when our engineer can get to your property on the north rim of the Colorado River, so we can try to make arrangements to examine your copper mine for an access road. In your letter you say that it probably will be near the end of June.

As our engineer probably will want to take a number of samples on your property, it would be much appreciated if he could obtain a saddle horse for the trip from the end of the road to the mine.

Sincerely yours,

Walter R. Storms, Chief
Arizona-New Mexico Branch

CCCC W. H. King
AR-Copper House ✓
DF

WRStorms:frj

STANDARD FORM No. 14
APPROVED BY THE PRESIDENT
MARCH 10, 1926

TELEGRAM

OFFICIAL BUSINESS—GOVERNMENT RATES

FROM Walter R. Storms
BUREAU of Mines
CHG. APPROPRIATION Day letter DMA
Tucson, Arizona, June 5, 1952

U. S. GOVERNMENT PRINTING OFFICE

16-1723

Phoned 12.45 p.m. frj

Mr. Harold A. Anderson
Copper House Mining Co.
321 West Second North
St. George, Utah

Examining team will visit northern Arizona next week and will contact you in St. George about examining your access road application if you can get ~~xxxxx~~ to mine. Reply collect before Monday if possible.

Walter R. Storms

CC Confirmation
W. H. King
DMA-AR-Copper House
TG(2)
DF

WRStorms:frj

B-4

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable symbol above or preceding the address.

WESTERN UNION

W. P. MARSHALL, PRESIDENT

SYMBOLS

DL=Day Letter
NL=Night Letter
LT=Int'l Letter Telegram
VLT=Int'l Victory Letter

1952 JUN 7

AM 10 27

The filing time shown in the date line on telegrams and day letters is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination

.LA179

L.SLA140 22 COLLECT=WUX ST GEORGE UTAH 7 1004A=

WALTER R STORMS= 1.22

BOX 4097 UNIVERSITY STATION TUCSON ARIZ=

WILL BE ABLE TO LEAVE FOR MINE FRIDAY MORNING JUNE 13 HAVE
SADDLE HORSE AND PACK HORSE ARRANGED FOR NEAR PROPERTY=

HAROLD A ANDERSON=

Chg W Bureau
7/7 min

54 000 hrs.

Access Road -
Copper Horse Min. Co.

10 10 a mail.

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

B-5

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Tucson Division Metallurgical Division

SAMPLE REPORT

Date June 17, 1952

To: Carl Rampacek From: Walter R. Storms
Metallurgical Div Mining Div
Tucson, Ariz Tucson, Ariz.

Name and Location of Property or Project:

Copper House Access Road

Number of Samples in shipment: 3 in 3 bags. Total Weight Shipped: ; GBL No. Carrier Nature of Ore and general comments:Azurite and malachite disseminated in sandstoneIdentification of Samples with tests or analyses desired:

No. 12708)
12709) Cu, Ag, Au
12710)

Mr. Rampacek (2)
Copper House
DF

HAX

RWAgoton:frj

Carl Rampacek
Carl Rampacek

Copper House access Road

WPA

Copper House Mining Co.
% Mr. Harold A. Anderson
321 West 2nd North
St. George, Utah

Walter R. Storms, Chief
Mining Division, Region IV
Arizona-New Mexico Branch
Box 4097, University Station
Tucson, Arizona

St. George, Utah
July 14, 1952

Dear Mr. Storms,

We have waited very anxiously for some report from the men (an engineer and a geologist) you sent to look over our property. Could you tell us about how soon we will receive the survey report? We are also expecting along with that the return of our map which the engineer used and promised to mark the exact location of our mine.

A cooperative road is being put into that region starting July 20th, to which we can connect. But from hear-say, probably will only be permanent until the first good flood comes along. Will check into rumor more fully and let you know what I find.

How soon may we expect our exploration loan? We hope to receive it very soon.

U. S. BUREAU OF MINES
MINING DIVISION
JUL 17 1952
TUCSON, ARIZONA

Sincerely,

Harold A. Anderson

3-8



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

P.O. Box 4126, University Station
Tucson, Arizona

July 16, 1952

WTS

Memorandum

To: A. H. Koschmann, Denver, Colorado
From: A. F. Shride, Tucson, Arizona
Subject: Geologic Report, Access Road Application (DMPA), Copper
House Mining Company (Copper), Mohave County, Arizona

Enclosed are the original and 10 copies of the above report
by C. S. Bronfield of the Geological Survey. The extra copies are
included in case reports on such occurrences should be transmitted
to the Atomic Energy Commission and L. R. Page. The subject of this
examination is a suspected copper deposit, which may include
negligible amounts of radioactive material.

This report and the recommendation that the application
be denied for lack of minable copper ore have my approval.

A. F. Shride
Acting District Supervisor
Arizona-New Mexico

Enclosures 11

AFShride:fsg

Copies to: Mr. Shride
Mr. Storms

B-9

MINING DIVISION
REGION IV

July 17, 1932

Re: Access Road
Mohave County, Ariz.

Mr. Harold A. Anderson
Copper House Mining Co.
321 West 2nd North
St. George, Utah.

My dear Mr. Anderson:

In answer to your letter of July 14, asking about a report on your Copper House property in Mohave County, Arizona, our report has been mailed to our office in Denver, Colorado so you should hear from it within a short time. We cannot release reports to loan applicants. Notice of recommendations on our examinations are either sent out from Denver or Washington, D. C.

In the last paragraph of your letter you say: "How soon may we expect our exploration loan? We hope to receive it very soon". So far as we know, you have never applied for an exploration loan. The only application that we ever received was for an access road to your Copper House property. This is the reason Mr. Robert W. Ageton of the Bureau of Mines and Mr. C. S. Bromfield of the Geological Survey visited your property recently.

I believe Mr. Bromfield has returned your map. Thank you very much for its use.

Sincerely yours,

Walter R. Storms, Chief
Arizona-New Mexico Branch
Mining Div., Region IV

CC W. H. King
A. F. Shride
Copper House AR
DF

WRStorms:frj

B-10



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

200 New Customhouse
Denver 2, Colorado

July 10, 1952

Memorandum

To: DMEA Field Team, Region IV
From: A. H. Koschmann
Subject: DMPA Docket AR-124, Access Road Application, Copper House
Mining Company (Copper), Mohave County, Arizona

Enclosed are the original and 10 copies of the geologic report
by C. S. Bromfield of the U. S. Geological Survey covering the above docket.
It has been recommended that the loan be denied.

Donald H. Macharen
for
A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (11)

B-11

Mining Division
Region IV

July 22, 1952

Memorandum

To: Field Team, Region IV

From: Acting Chief, Mining Division, Region IV

Subject: Final Report, AR Docket 126, (Copper) Copper House Mining
Co's. Sandstone Copper Deposit, Mohave County, Arizona

Enclosed are nine copies of final report on AR-126 by
Robert W. Agston of the U. S. Bureau of Mines.

He concludes that only a small amount of copper ore occurs
in the undeveloped sandstone and an access road is not warranted.

We concur in the recommendation that the application be
denied.

W. L. King
W. L. King



UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS ADMINISTRATION

WASHINGTON 25, D. C.

1224 New Customhouse
Denver 2, Colorado

July 22, 1952

WRS
7-28-52

Memorandum

To: Secretary to the Operating Committee, Defense Minerals
Exploration Administration

From: Field Team, Region IV

Subject: Final Report, DMA Bucket AM-126 (Copper) Copper House
Mining Co's. Sandstone Copper Deposit, Mohave County, Arizona

Enclosed are the original and three copies of the report
pertaining to the above application.

The field examiners believe that there is little probability
of making a significant discovery of copper ore on this property and
they recommend that the application be denied.

We concur in this recommendation.

W. H. King
W. H. King

A. H. Koschmann
A. H. Koschmann

Enc.

cc: WRStorms w/copy of final report
CAAnderson w/copy of final report
Mining Div. w/copy of final report
AHKoschmann w/copy of final report
DMA Final Report

B-13

ACCESS ROAD, COPPER HOUSE MINING COMPANY (COPPER)
MOHAVE COUNTY, ARIZONA

This report contains the results of a reconnaissance made in 1934

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Engineering Report

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ILLUSTRATIONS

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1 Location map, Copper House Mining Co., Mohave County, Ariz.	1
--	---

2 Geological Sketch Map - (See Geology Report)	
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INTRODUCTION

This report describes the results of an examination made in connection with the application for an Access Road by Harold A. Anderson, 321 W. 2nd North, St., George, Utah, for the Copper House Mining Co. The application was made to the Defense Materials Procurement Agency under the Defense Production Act of 1950, as amended. The applicant requested a road about 8 miles long to be built from the head of Andrus Canyon to the mine.

The property was visited by the DMPA examiners on June 13-15, 1952.

ACKNOWLEDGMENTS

The writer wishes to thank Messrs. Harold A. Anderson, Dick Bundy, and William J. Jones for their help during the examination of the property.

LOCATION AND PHYSICAL FEATURES

The mine is situated in Mohave County, Ariz. in Sec. 2, T. 32 N., R. 11 W., in an "Un-named" district east of the Bently mining district of the strip section of northern Arizona, (figure 1). The mine was reached by traveling 85 miles over a dirt road southerly from St. George, Utah, to Snyder's Ranch, then by a 6-mile pack trip into Dansil Canyon, about 3 miles west of Andrus Canyon. Both are tributary to the Grand Canyon of the Colorado River.

The topography is very rugged, the walls of the canyons having sheer drops of a hundred feet in many sections. The climate is typical of the arid areas of the southwest. Vegetation is sparse, but cattle are wintered in the valley floors near the location of the mine.

1/ As far as the writer knows.

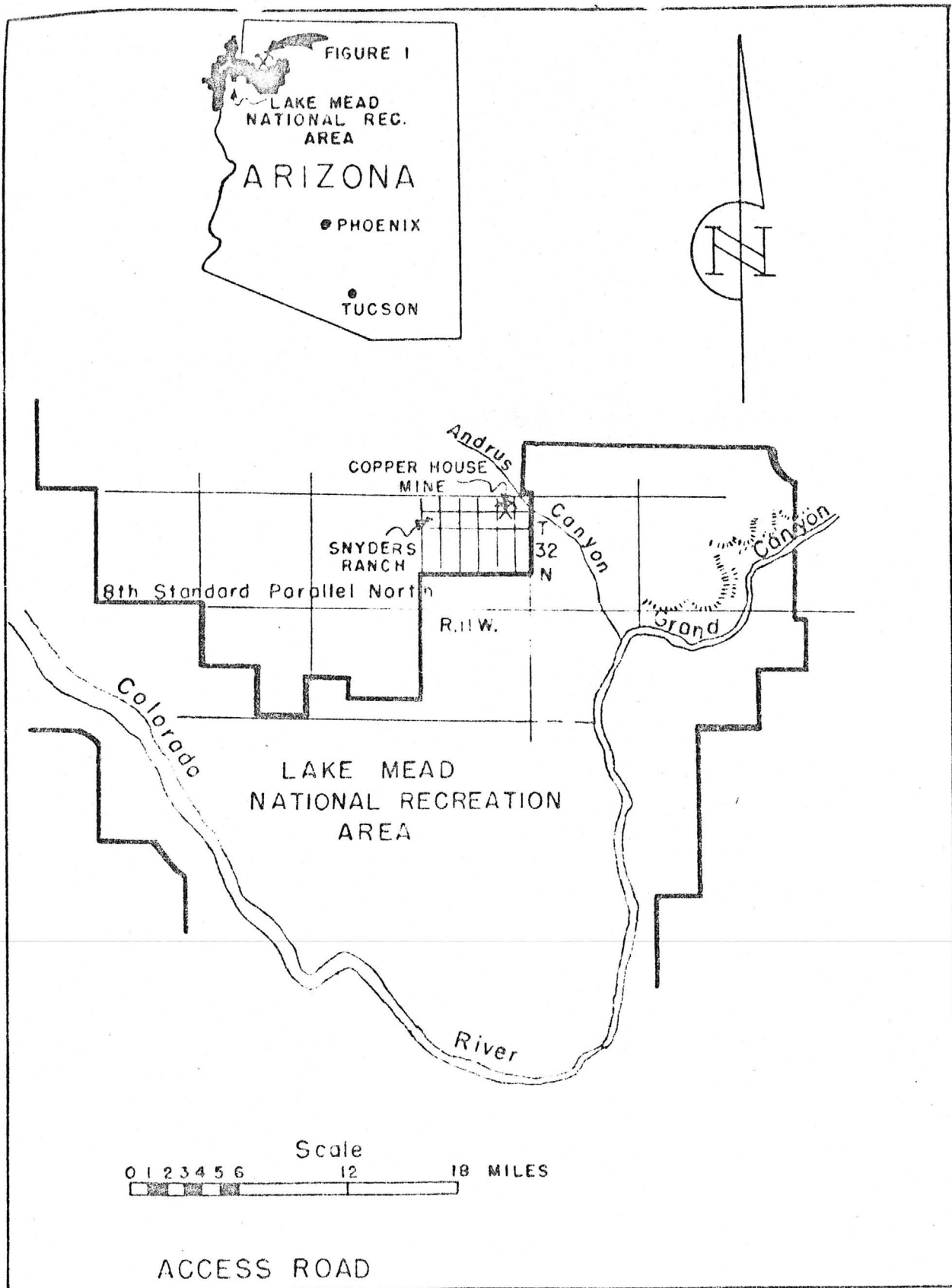


FIG. 1 — LOCATION MAP, COPPER HOUSE MINING CO.
MOHAVE COUNTY, ARIZONA

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HISTORY AND PRODUCTION

So far as is known there has been no production from the property.

There were two short adits (see figure 2 in geological report) driven into the bleached zone prior to the time the applicant and his partners located their claims, but nothing is known about the parties responsible for that work.

OWNERSHIP AND EXTENT

The property consists of two contiguous unpatented claims owned by the partnership of Harold A. Anderson, Dick Bundy, and William J. Jones.

This partnership is known as the Copper House Mining Co.

DESCRIPTION OF DEPOSIT

The deposit appears to be confined to a "bleached" area in the characteristically red Supai (?) formation, and particularly along a line of weak fracturing which strikes N. 30° to 35° W. and dips nearly vertically. Malachite and azurite were the only minerals noted. Azurite appeared as crusts on fractured surfaces and as numerous small nodules ranging in diameter from 1 millimeter to 5 millimeters in diameter.

Malachite was present on fracture surfaces as crusts and as cement between grains, but it was not observed in nodule form. No sulfides were observed.

The examiners took two samples from the best mineralized exposures in the open cut and one sample from the hand sorted ore (figure 2). The assays were as follows:

	Gold, ounces	Silver ounces	Percent	
			Copper	U ₃ O ₈
Pit sample no. 1	Tr.	0.45	4.40	*Nil
Pit sample no. 2	Tr.	0.65	4.83	Nil
Sorted ore sample	Tr.	0.40	5.49	Nil

* Radiometric tests for uranium on the assay pulp from the three samples taken were nil.

There was no mineralization in the two adits that were driven into barren "bleached" sandstone, therefore no samples were taken in them.

ORE RESERVES

There are approximately 2 to 5 tons of hand-sorted ore in stockpiles averaging less than 7 percent copper. There are no measured ore reserves. The indicated ore reserves are estimated to be a few tens of tons averaging less than 5 percent copper. The inferred ore reserves are estimated to be only a few hundred tons of less than 5 percent copper. It is not possible to predict the extension at depth of the bleached area because it may be a lens and limited to relatively shallow depth. If it is a pipelike deposit, then the zone might persist with depth. However, the examiners believe that from the surface exposures, the deposit probably contains only a few hundred tons of inferred ore of approximately 5 percent copper.

PRESENT STATUS

The deposit has been explored for approximately 40 feet along the southeasterly strike to a depth of 5 feet by an open cut about 6 feet wide. There is no mining equipment on the property and no other facilities, such as buildings.

PROPOSED ACCESS ROAD

The applicants proposed, through the Defense Materials Procurement Agency, to have the Government build an access ore haulage road from the head of Andrus Canyon (figure 1) to their property, a distance of approximately 8 miles. This road would traverse very rugged territory and would involve considerable maintenance of sections that of necessity would cross small arroyos that are more or less perpendicular to the main course

of the canyon. In addition, the biggest original cost would be the sections of switchbacks from the rim at the head of Andrus Canyon, down into the bottom of the canyon proper. Further investigation would be required to estimate the cost of construction of a road suitable for haulage with 5-ton to 20-ton trucks as the applicants requested.

CONCLUSIONS AND RECOMMENDATIONS

The fact that the property is only in the exploration stage necessarily excludes from consideration this application for an ore haulage road. Furthermore, the lack of the probability of encountering more than a few hundred tons of less than 5 percent ore at depth would preclude consideration of participation by the Government in the construction of an exploration access road.

Exploration Report
By Harry E. Foster
Geological Engineer
U. S. Bureau of Mines

ACCESS ROAD, COPPER HOUSE MINING COMPANY (COPPER)
MOHAVE COUNTY, ARIZONA

(A) 10/10/52

Engineering Report

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Map showing	7
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Summary and recommendations	9

Engineering Report

By Robert W. Ageton
Mining Engineer
U. S. Bureau of Mines

10/10/52

10/10/52

1. Introduction, general notes

2. Geological Notes, general notes

3. Location and general features

4. History and description

July 1952

B-20

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

DEFENSE MATERIALS PROCUREMENT AGENCY

REPORT OF EXAMINATION BY FIELD TEAM
SECTION IV

Access Road, Copper House Mining Company (Copper)
Mohave County, Arizona
The property was examined on June 19th, 1952.
The mineral is in the form of a massive and is composed of a
"siliceous" mass of quartz, and is distributed in
the channel bed in a continuous line of small fragments, which
differ in size from 1/8" to 1/2". The fragments are mostly rounded, and are
in places as large as 1/2". Robert W. Ageton, Mining Engineer
U. S. Bureau of Mines
Calvin S. Bromfield, Geologist
U. S. Geological Survey

July 1952

B-21

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By Robert W. Ageton ^{1/} and Calvin S. Bromfield ^{2/}

An application for an access haulage road to the Copper House copper claims was made by Harold A. Anderson for the partnership of Harold A. Anderson, Dick Bundy, and William J. Jones, known as the Copper House Mining Co., mailing address 321 W. 2nd North, St. George, Utah, to the Defense Materials Procurement Agency under the Defense Production Act of 1950, as amended. The property is on the north side of the Grand Canyon in Sec. 2, T. 32 N., R. 11 W., Mohave County, Ariz. The applicant requested that a haulage road about 8 miles long be built from the head of Andrus Canyon, a tributary of the Colorado River, to their property. This road was to serve as a haulage road for trucks of 5- to 20-ton capacity. The property was examined on June 13-15, 1952.

✓ The deposit is in the Supai (?) formation and is confined to a "bleached" zone approximately 200 feet in diameter. Mineralization in the bleached zone is concentrated along a line of weak fracturing, which strikes N. 30° to 35° W., and appears to dip nearly vertically. Azurite is present as nodules in the bleached sandstone adjacent to the fractures while malachite appears on fracture surfaces as crusts and as cement between grains. Samples taken in the best mineralized exposures in the open cut averaged 4.91 percent copper, 0.50 ounces per ton silver, and a trace of gold. Radiometric tests for uranium on the assay pulp from the samples were nil.

1/ Mining Engineer, Bureau of Mines
2/ Geologist, Geological Survey

Walter R. Storms.
Robert W. Ageton

B. 22

The applicants have explored approximately 40 feet along the strike to a depth of 5 feet by an open cut about 6 feet wide. There is no mining equipment on the property or other facilities, such as buildings. There are a few tons of less than 7 percent copper ore in stockpiles. There are no measured reserves. The indicated ore reserves are estimated to be a few tens of tons of material averaging less than 5 percent copper. The inferred reserves are estimated to be a few hundred tons of material averaging less than 5 percent copper.

The fact that the property is only in the exploration stage necessarily excludes from consideration this application for an ore haulage road. Therefore, it is recommended that this application be denied. Furthermore, the lack of the probability of encountering more than a few hundred tons of less than 5 percent copper ore at depth would preclude consideration of participation by the Government in the construction of an exploration access road.

Walter R. Storms.

Joan St. Agaton
Calvin J. Brownfield
A. F. Shide

COPPER HOUSE MINING COMPANY
MCRAVE COUNTY, ARIZONA

ACCESS ROAD - COPPER

Geology

By
Calvin S. Bromfield
Geologist, U. S. Geological Survey

100-100000

The Copper House Mine is located in northern
COPPER HOUSE MINING COMPANY
 Mohave County, Arizona
 ACCESS ROAD - COPPER

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General Geologic Setting	1
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ILLUSTRATIONS

Figure 1: Location Map - See Engineering Report

Figure 2: Geologic Sketch Map, Copper House Mine - Following Page 2

The only indication of a mine existing in the area is a
 vertical shaft-like mine which runs the length of the mine, situated several
 feet distant from the copper deposit. The surface of the shaft is covered
 by a layer of soil and is not visible from the road.

INTRODUCTION

The Copper House prospect is in a remote region in northwest Arizona. The property is reached from St. George, Utah by 86 miles of poor dirt road to the north rim of the Grand Canyon, and thence by 6 miles of horse trail down over the rim into the canyon. The deposit lies near the confluence of Andrus and Kanab Canyons which are both tributary to the Grand Canyon of the Colorado. The applicant has applied for an access road from the head of Andrus Canyon to the mine, a distance of 8 miles.

GENERAL GEOLOGIC SETTING

In the Copper House area the topography is typical of the Grand Canyon region, exhibiting vertical cliffs, slopes, and terraces cut in the flatlying Paleozoic section. The rim of the canyon, as everywhere in the region, is formed from Kaibab limestone and is underlain by the cliff-forming Coconino sandstone, which in turn is underlain by slope-forming "red beds" of Permian age. It is in these "red beds" that the copper deposit occurs. Whether these red sandstones and mudstones belong to the Hermit shale or the Supai formation was not definitely determined during the short course of the examination.

The only indication of igneous activity in the area is a vertical basaltic dike which cuts the Supai (?) formation several hundred feet distant from the copper deposit. The surface of the Shivits Plateau on top of the rim is in large part covered by Quaternary (?) basalt flows.

COPPER DEPOSIT

The copper deposit is in the Supai (?) formation. Though this formation is characteristically red, a small volume of sandstone where copper carbonates are localized is bleached to light shades of yellow-brown to nearly white. The outcrop of bleached material is irregular in shape and is approximately 200 feet in greatest diameter (Fig. 2). Too little work has been done to give any indication of the three dimensional shape of the bleached rock. The bleached rock contrasts sharply with the typical red color of the Supai formation which encloses the area. Where exposed in several places the contact between the bleached and unbleached material is quite sharp, changing in the space of a few inches to a few feet from red to light yellow-brown or nearly white. In places along the contact a half a foot or two in width includes light spots or speckles a millimeter or more in diameter. One such spot was about a foot in diameter. There is no apparent structural change at the contact, bedding planes pass unchanged across the color contact.

Although within the bleached area the sandstone is quite uniformly light yellow brown to white in color there are some splotted areas of relict red coloration. Effects resembling Liesegang rings were noted.

The copper deposit appears to be confined to this "bleached" area, and in particular to a line of weak fracturing which strikes N. 30°- 35° W. and dips nearly vertically. This concentration of copper is near the northeast corner of the bleached area (Fig. 2). The southeast end of this weak fracture zone is explored by a shallow pit and a shallow trench which has exposed copper carbonates along a strike length of

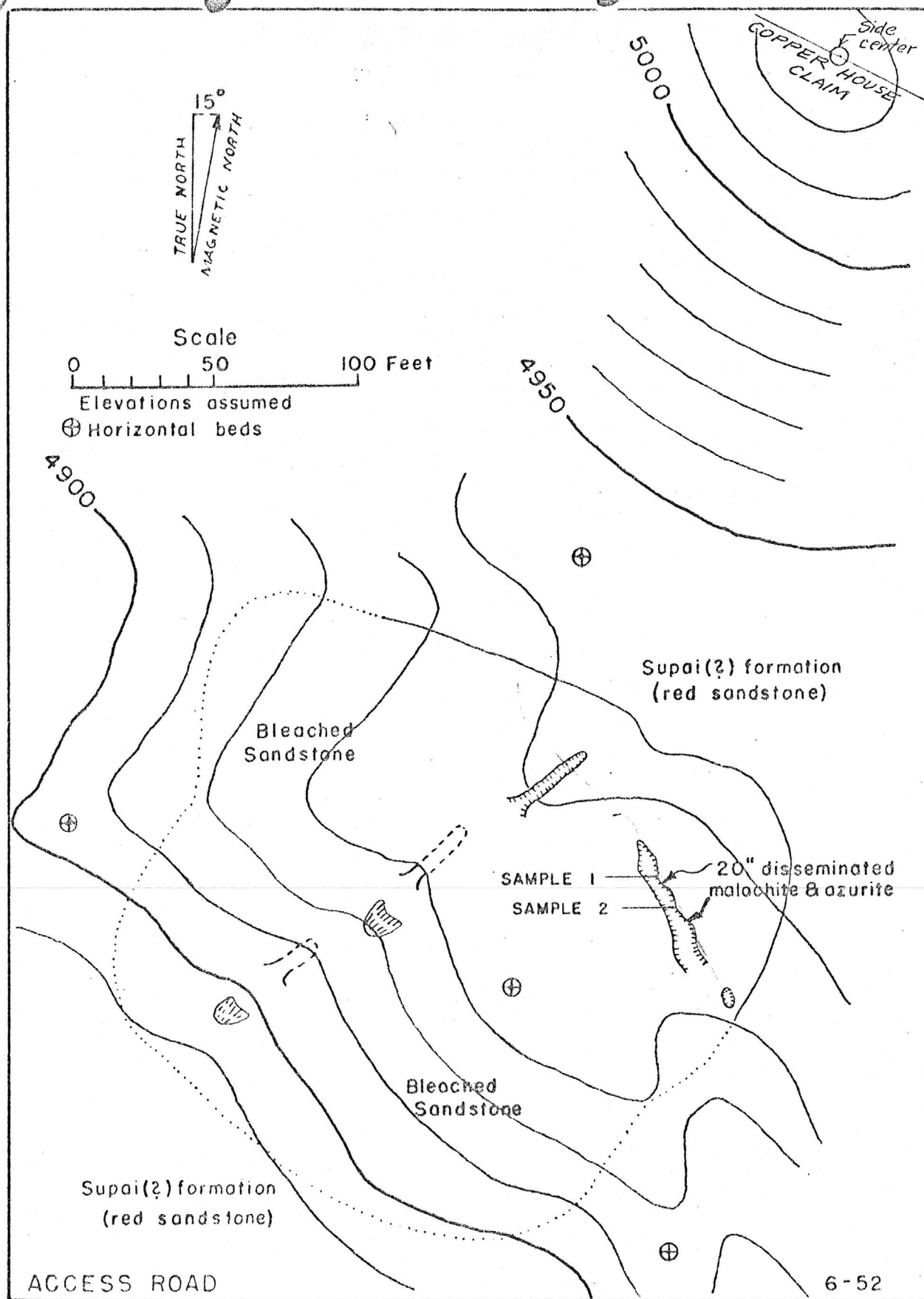


FIG 2— GEOLOGIC SKETCH MAP, COPPER HOUSE MINE
MOHAVE COUNTY, ARIZONA

B-28

50 feet. Another trench 30 feet northwest and at right angles to the strike exposes copper-bearing sandstone through a width of about a foot. Float shows the continuation of a narrow weakly mineralized zone for 30 to 40 feet northwest of this trench. The copper deposit terminates at either end of the fracture zone at the limits of the "bleached" area (Fig. 2).

Two small adits have been driven in the hillside (Fig. 2). Both were started on outcrops of "limonite" stained, bleached rock. These outcrops of limonitic material are apparently superficial and the rock within the adits, is unmineralized bleached rock. The writer believes they are the superficial effects of vadose water action along the small gully in which the two adits are situated.

The mineralogy of the occurrence is simple as exposed in the trenches. ~~Malachite and azurite were the only copper minerals noted.~~ Azurite is present as crusts on fracture surfaces and as numerous small nodules ranging from 1 millimeter to 5 millimeters in diameter and distributed through the light colored sandstone matrix adjacent to the weak fractures. Malachite is also present on fracture surfaces as crusts, and diffused through the sandstone as cement between the grains. Malachite was not observed in nodule form. ~~No sulfides were observed in the cores of the azurite nodules or elsewhere in the deposit.~~

The applicant has had only a few assays made, and these were of hand samples of small size which were not too bulky to carry out to the plateau above. These reputedly ran 7 percent copper. The examining engineers took two samples where the mineralization was best developed as well as a grab sample from a small dump of the best hand sorted ore. These assayed as follows (Fig. 2):

Sample	Width	Au	Ag	Cu	U ₃ O ₈
1	20 inches	Tr.	.45	4.40	Nil*
2	20 inches	Tr.	.65	4.83	Nil
3	Grab sample from ore pile	Tr.	.40	5.49	Nil

* Radiometric check on the assay pulps.

Radioactivity along the mineralized zone was minor in amount.

Readings on a Nuclear Instrument Company, Model 2610 Geiger counter averaged between 3 and 8 divisions on the 0.2 scale (background count 2-2.5). No uranium minerals were recognized, and the samples above are probably typical.

ORE RESERVES

Not enough development work has been done on the Copper House claims on which to base any very satisfactory ore estimation. The depth to which the deposit might persist is an unknown factor dependent in large part upon the shape of the bleached zone with depth. If the bleached zone is lens like, the deposit may be sharply limited at a relatively shallow depth. However, if the bleached zone is pipelike in shape the deposit might persist to deeper levels. Regardless, however, of this factor, only a few hundred tons of approximately 5 percent copper ore can reasonably be inferred.

CONCLUSIONS

On the Copper House prospect the lateral extent of copper mineralization is limited by the extent of the "bleached" area in the Supai formation. This area is about 200 feet in maximum diameter. Azurite and malachite are concentrated along a weak indefinite line of fracturing near the northeast side of the bleached area. This concentration has a length of 130 to 140 feet as traced on the surface

and ranges from a few inches to a maximum of 20 inches in width. The depth to which copper may persist is not known; but copper minerals probably do not persist below the limit of bleached sandstones. Hand sorted material from this deposit averages 5 or 6 percent copper. The potential tonnage available of this grade rock probably does not exceed a few hundred tons.

Therefore, in view of the small area of bleached rock, the narrow zone of copper mineralization, the grade of the material, and its low potential, it is recommended that the application for access road be denied.

MINING DIVISION
REGION IV

July 14, 1938

Memorandum

To : W. H. King, Denver, Colorado
From : Chief, Arizona-New Mexico Branch
Subject : Final Report, DMFA Access Road, Copper House Mining
Co's. Sandstone Copper Deposit, Mohave County, Ariz.

Enclosed are original and 8 copies of the section on Summary, Conclusions, and Recommendations by R. W. Ageton of the Bureau of Mines and C. S. Bromfield of the Geological Survey, and the section on Engineering by Ageton for the above report. A separate report on Geology will be submitted by the Geological Survey.

As only a small amount of copper-bearing material occurs in undeveloped sandstone deposits in extremely rugged country immediately north of the Colorado River, the examiners recommend that an access road for ore haulage be denied. I concur with their recommendations.

Brochure is attached.

Walter R. Storms

Walter R. Storms

CC: W. H. King (3)
A. F. Shride
Access Road
DF

WRStorms:als

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K-126

St George
July 28, 1952

Mr. Walter R. Storms, Chief
Arizona-New Mexico Branch
Mining Div: Region IV

WRS

Dear Sir:

I received your letter of July 17 some days ago. I am working in Las Vegas, Nevada at present so am a little slow in writing to you.

When the mining engineer was here, he asked me how much I thought it would take. I told him \$35,000 for the road & it won't take that much for the road, I don't think. I had the idea, that the loan was for the road and mine to. I no doubt got the wrong idea from what you say in the letter. It must be for the road alone. Since there is a difference I would like to know what steps to take to get a exploration loan & if there are papers to file or what

other means or steps to take - I would
appreciate a early, conciliant answer
or ~~some~~ ^{some} ~~arrangement~~ ^{arrangement} with some
people on a lease arrangement.

We just received a bottle of
concentrated copper ore from a man in
Ogden, Utah. By a leaching acid process he
was able to recover 28.503 grams of 70%
copper from 1/2 lb ore.

Incase you have a N.P.A. - L.M. 7000
map of John J. Blacks. you will note
me as in Township 32ⁿ. Range 11 west. The
proposed Bridge Canyon Dam site is in
Township 28ⁿ Range 12 W. A distance of
about ~~4~~ 4 1/2 townships South of me. The
road ~~we~~ ^{we} have been using is a
year around road site. We go down
the canyon now, which causes no
loss of a section of the road in
high water season. A properly
engineered road and a practical road
could be built from the dam
to connect with St. George. Highway
91 as you know goes through St. George.
● A good road would make mining
practical for others who have

3
Property out in that country
There is also a matter of a
better highway to help the
live stock industry out there
on the strip.

Trusting this letter will be of
some help in explaining our needs
in developing mining and the
country in general; and thanking
you for your great consideration.

Sincerely // ours
Harold A. Anderson
Copper House Mining Co.

321 W. 2nd North
St. George, Utah

U. S. BUREAU OF MINES
MINING DIVISION
JUL 30 1952
TUCSON, ARIZONA

MINING DIVISION
REGION IV

August 1, 1952

Mr. Harold A. Anderson
Copper House Mining Co.
321 West 2nd North
St. George, Utah.

Re: Copper House Mine
Mohave County, Ariz.
(AR-126)

My dear Mr. Anderson:

As requested in your letter of July 28, we are enclosing five copies of Form MF-103 - "Application for Aid in an Exploration project, Pursuant to DMEA Order 1, under the Defense Production Act of 1950, as Amended", one copy of DMEA Order 1, and a copy of "Questions and Answers on the Mineral Exploration Program (January 1952).

If you wish to apply for Government assistance in exploring your Copper House mining property in northern Mohave County, Arizona, please fill out as completely as possible four copies of Form MF-103, then mail them to Mr. W. H. King, Executive Officer, Field Team, Region IV, Defense Minerals Explorations Administration, 224 New Customhouse, Denver 2, Colorado. Answer all questions as fully as possible. Give your proposed exploration work in detail, especially the kind of work that you want to do, the amount of shaft sinking, etc., and the detailed costs of same. One copy of Form MF-103 is for your file.

As explained in DMEA Order 1 if your application is approved by the Defense Minerals Exploration Administration, you will be required to furnish 50 percent of the total requested loan. That is, if you want to do \$20,000 of work on your property, you will have to furnish \$10,000. You also should understand that the Government will not give you its share of the loan at the start of the project, but will reimburse you for 50 percent of the money you have spent after the first full calendar month of operation. This means that you must have enough money on hand to run for 6 weeks or 2 months because it usually takes that length of time before the Government reimburses you after the start of the project.

If I can answer any other questions, do not hesitate to write me again.

Sincerely yours,

CC W. H. King
AR-126
DF

Walter R. Storms, Chief
Arizona-New Mexico Branch
Mining Division, Region IV

WASstorms:frj

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126

MINING DIVISION
REGION IV

December 4, 1953

Mr. Harold A. Anderson
18 D Lincoln
Carver Park
Henderson, Nevada.

Re: Copper House Mining Co.,
Mohave County, Ariz.
AR-126

My dear Mr. Anderson:

As requested in your undated letter which we received yesterday, we are enclosing one copy of the map which accompanied the Bureau of Mines report on your access road application (AR-126) to your Copper House copper property north of the Colorado River in north-eastern Mohave County, Arizona. I cannot remember ever giving you such a map so suspect that the map you mention was obtained from the U. S. Geological Survey as the Survey's geologist made a small map of your property showing mine workings, etc.

If it was the geologist's map that you formerly had, I would suggest that you write for another one to Mr. Andrew F. Shride, U. S. Geological Survey, P. O. Box 4126, University Station, Tucson 5, Arizona.

Sincerely yours,

Walter R. Storms, Chief
Mining Methods Branch
Mining Division, Region IV

CC W. H. King
A. F. Shride
AR-126 ✓
DF

WRStorms:frj

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18 D Lincoln

Carver Park

Henderson, Nevada

Walter R. Storms, Chief
Arizona-New Mexico Branch

Dear Mr Storms:

I has bee some time since we have had any contact with each other. We have done a considerable work on the Copper House property since the boys came out and looked at it. Since that time I have moved to Nevada to live for a while. The other day I was goeing through some of my papers and could not find the map you people made of the property. Could you send me another one? The last time I saw it was at the lawers office. He was draweing up a lease for the property. One of us have misplaced it. We have other property. I want to place it in its proper place in relation to the original Copper House property. In case you dont have one, please write and tell me where I can get another one.

Sincerley Yours

Harold A. Anderson

U. S. BUREAU OF
MINING DEPT. OF
DEC 3 1953
TUCSON, ARIZONA

B-38

November 15, 1955

Mr. Fred Gruberth
Superior Oil Co.
P. O. Box 1872
Grand Junction, Colo.

My dear Mr. Gruberth:

In answer to your letter of November 10, asking if a copy of our report on the Copper Mountain sandstone prospect (sometimes called the Copper House mine) in northern Mohave County, Arizona were available, I am very sorry but we examined this property for another Government agency in 1952 so the report is confidential.

A few samples taken at the deposit averaged about five percent copper, but the uranium content was nil. The property at the time of our examination in June 1952 was owned by the Copper House Mining Company, 321 West Second North, St. George, Utah.

Sincerely yours,

Walter R. Storms
Superintendent
Southwest Experiment Station

CC J. B. Glenmer
J. Shaw
AR-126, Copper House
DF

WRStorms:frj

B. 39

126 Copper House

THE SUPERIOR OIL COMPANY

URANIUM DIVISION
P. O. BOX 1872
GRAND JUNCTION, COLORADO

November 10, 1955

Walter R. Storms, Superintendent
Southwest Experiment Station
Bureau of Mines, Box 4097
Tucson 5, Arizona

Dear Mr. Storms:

In your letter of September 6, 1955, to Mr. William L. de Carbonel, you stated that your office had examined a sandstone copper deposit called Copper Mountain in the eastern part of T. 32 N., R. 10 W.

We would like to know if there is an open file report or a summary report on the Copper Mountain deposit that could be made available to us.

If copies are available or can be made, at our expense, please send them to us.

We would also like to know if the mineral meta-zeunerite was found at the Copper Mountain deposit.

Any cooperation you can give us will be greatly appreciated.

Yours very truly,

THE SUPERIOR OIL COMPANY

Fred Gruberth

Fred Gruberth

FG:vf

U. S. BUREAU OF MINES
SOUTHWEST EXPERIMENT STATION

NOV 14 1955
TUCSON, ARIZONA

See 1235 #4
Wm. L. de Carbonel

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