DMEA Form 7
(12-56)

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"	[illegible]	110
"	[illegible]	100
2/14	[illegible]	225

FEB 14 1957

Mr. Ben J. Dieringer
Big Rock Candy Mountain
Marysvale, Utah

Re: Docket No. DMEA-4219 (Copper)
Ben J. Dieringer, et al.
Higher Up Claims
Yuma County, Arizona

Dear Mr. Dieringer:

In reply to your letter, dated February 5, 1957, wherein you requested the return of all assay reports for the cited denied application, we are enclosing the following reports:

Custom Assay Office - dated February 27, 1956
ARC Laboratories - dated February 16, 1956
ARC Laboratories - dated February 23, 1956
Arizona Testing Laboratories - dated February 25, 1956
Valley Assay Office - dated July 19, 1955
Custom Assay Office - dated April 14, 1956
Arizona Testing Laboratories - February 25, 1956

The above are the total number of reports submitted by you to this office.

Sincerely yours,

S. O. Mittendorf

Administrator

Enclosures (7)
JWAlt/er 2/13/57
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Pennington, USBM
Mr. Kiilsgaard, USGS
Region III (2)
Chron.

8623

Big Rock Candy Mountain Inc.

Cabins — Cafe
Lemonade Springs
Service Station

BIG ROCK CANDY MOUNTAIN
SCENIC WORLD WONDER
Six Miles North of Marysvale
On U.S. Highway 89
Phone EAst 6-4263 and EAst 6-9990
MARYSVALE, UTAH

Rock Souvenirs
Indian Trading
Post

Feb. 5th, 1957

U. S. Dept. Interior
Defense Minerals Exploration Adm.
Washington 25 D. C.

Re: Docket No. DMEA- 4219(Copper)
Ben J. Dieringer, et al.
Higher Up Claims
Yuma County, Arizona

Att. C. O. Mittendorf, Adm

Dear Mr. Mittendorf:

Reference your letter of June 13th, 1956 advising denial of Loan Application.

Will you kindly return all the Assay Reports I submitted as I do not have copies of most of them. Thank You.

Very truly yours,

Ben J. Dieringer

Ben J. Dieringer

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D M E A
RECEIVED FEB 8 1957

DATE	INITIALS	CODE
2-8	C	220
2-8	JWA	500
		225

File Copy
Surname

J. Alt.
Swisher
Gehon
Kiilsgaard
Martin
Johnson

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

Cw

JUN 13 1956

Mr. Ben J. Dieringer
Big Rock Candy Mountain
Marysvale, Utah

Re: Docket No. DMEA-4219 (Copper)
Ben J. Dieringer, et al.
Higher Up Claims
Yuma County, Arizona

Dear Mr. Dieringer:

Your application for aid for an exploration project and other reports available to us in Washington concerning your application have been reviewed.

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

Careful study of all our information, although noting a small amount of copper mineralization on your property, indicates to us that the probability of disclosing significant ore reserves is not sufficiently promising to justify Government participation. We regret to advise you, under these circumstances, that your application for exploration assistance is denied.

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

Sincerely yours,

G. O. Mittendorf

Administrator

JWAlt/er 6/11/56
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Pennington, USBM
Mr. Kiilsgaard, USGS
Region III (2)
Chron.

R.G.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION 500
WASHINGTON 25, D. C.

June 11, 1956

Memorandum

To: The Administrator

From: Chief, Base Metals Division

Subject: Denial of Application, Docket No. DMEA-4219, Ben J. Dieringer, et al, Higher Up Claims, Yuma County, Arizona, Copper.

The cited application, dated March 15, 1956, was received by this office on March 19.

The exploration proposed by the Applicant consists of 300 feet of drifting along the fault starting at one of the trenches, stripping and trenching. Road building is also included. The Applicant estimates that the total cost of this work would be $20,000.00.

The property was examined by the Field Team on May 4, 1956, and we received their report on June 4.

A 13-foot shaft and five trenches have been dug on the fault. There has been no known production from the claim area.

By far the most extensive copper mineralization occurs in the shaft. Some copper mineralization occurs in the two trenches adjacent to the shaft; 30 and 50 feet from the shaft along the strike of the fault. The rest of the fault, where it has been exposed at the surface, is essentially barren. Other workings in the claim area appear to be on similar small, superficial showings. Inferred reserves are estimated at 100 tons of 3 per cent copper. Exploration might discover several times this amount. The small extent of the fault and the sporadic occurrence of copper along it limit the potentialities of this deposit to a few hundred tons at most.

The Field Team states: "This deposit is along a fault that crosses the top of a ridge and dies out in underlying, as well as overlying rocks. The limitations of the deposit are revealed in its natural setting, and these limitations indicate that not more than a few hundred tons of 2 to 4 per cent copper-bearing rock could be discovered by exploring the fault."

The Field Team recommends that this application be denied.

We concur with the recommendation of the Field Team and the commodity members of the USGS and the USBM that this application be denied.

W. R. Griswold

W. R. Griswold

File Copy
Surname
J-all

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION 500
WASHINGTON 25, D. C.

June 11, 1956

Memorandum

To: The Administrator

From: Chief, Base Metals Division

Subject: Denial of Application, Docket No. DMEA-4219, Ben J. Dieringer, et al, Higher Up Claims, Yuma County, Arizona, Copper.

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We concur with the recommendation of the Field Team and the commodity members of the USGS and the USBM that this application be denied.

JWAlt/er
Copy to: Docket
Base Metals
Chron.

W. R. Griswold

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

June 7, 1956

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: Commodity Industry Analyst, Branch of Base Metals

Subject: Review of Field Team Examination Report, Docket No. DMEA 4219 (copper), Ben J. Dieringer, Higher Up Claims, Yuma County, Arizona - $20,000

The applicant proposed to explore the property by stripping, trenching, and about 300 feet of drifting along the mineralized zone at an estimated cost of $20,000.

According to the examination report by Leonid Bryner, Geological Survey, the inferred reserves are estimated at 100 tons of 3 percent copper. Although several times this amount may result from the proposed exploration, the small extent of the fault and the sporadic occurrence of copper along the fault, limit the potentialities of the deposit to a few hundred tons.

For these reasons it is recommended that the application for assistance to explore the property be denied.

I concur with this recommendation.

J. W. Pennington

J. W. Pennington

Copy to: Division of Minerals
Branch of Base Metals (2)
Thor Kiilsgaard, U.S.G.S.
R. W. Geehan
F i l e s

RECEIVED
JUN 7 1956

June 7, 1956

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: Commodity Industry Analyst, Branch of Base Metals

Subject: Review of Field Team Examination Report, Docket No. DMEA 4219 (copper), Ben J. Dieringer, Higher Up Claims, Yuma County, Arizona - $20,000

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I concur with this recommendation.

J. W. Pennington

J. W. Pennington

Copy to: Division of Minerals
Branch of Base Metals (2)
Thor Kullagard, W.S.E.E.
R. W. Gaston
Files

RECEIVED

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D.C. June ~~July~~ 6, 1956

RECEIVED JUN 7 1956

Re: DMEA 4219
Ben J. Dieringer
Higher Up Claims
Yuma Co., Ariz.
$20,000 - Copper

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of Field Team report

The applicant requested assistance in exploring a copper-bearing fault zone by stripping, drifting and crosscutting at an estimated cost of $20,000.00.

The examiner found the copper minerals (oxide and sulfide) to be confined to a short lens exposed in a 13-foot shaft and a trench. The total length might be 80 feet and the width, as sampled by the applicant and associates, about 3½ feet. The average grade (cut) as indicated by 7 samples is 3.3% Cu.

In view of the small reserve indicated by the sampling and the fact that the mineralization of the fault is intermittent in nature, the examiner and the Field Team recommend denial of the application.

I concur with that recommendation.

N. E. Nelson

N. E. Nelson

IN REPLY REFER TO:

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

July 6, 1956

Re: DMEA 4219
Ben J. Dieringer
Higher Up Claims
Yuma Co., Ariz.
$20,000 - Copper

Memorandum

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Subject: Review of Field Team report

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In view of the small reserve indicated by the sampling and the fact that the mineralization of the fault is intermittent in nature, the examiner and the Field Team recommend denial of the application.

I concur with that recommendation.

N. E. Nelson

N. E. Nelson

NENelson:btr
G 6/6/56

cc: J. W. Pennington, Rm. 3623
Director's reading file (4212)
Branch reading file
DMEA (3)
Chron. File
Docket file

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

RECEIVED
MAY 28 1956

May 24, 1956

224 New Customhouse
Denver 2, Colorado

alt

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Report of Examination, DMEA Docket 4219 (Copper) Ben J. Dieringer (Higher Up Claims) Yuma County, Arizona

Enclosed are the original and three copies of a geologic report of examination on the subject property. The Bureau of Mines did not participate in the examination.

The examiner does not believe that a significant amount of copper would result from the exploration of this property, and he recommends that this application be denied. We concur in this recommendation.

DMEA Field Team, Region III

By J. W. Townsend
Acting Executive Officer

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
6-4-56
(date)

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MINERAL DEPOSITS
DMEA
RECEIVED
MAY 23 1956
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

Box 4126 University Station
Tucson, Arizona

May 21, 1956

MEMORANDUM

TRANSMITTED
MAY 24 1956

To: Executive Officer, DMEA Field Team Region III

From: J. N. Faick Through: E. N. Harshman *ENH for ENH*

Subject: DMEA-4219 Ben J. Dieringer Higher Up Claims (Copper)
Yuma County, Arizona

Enclosed are the original and 8 copies of an examination report by Leonid Bryner on the above subject property. This report, which recommends denial of Government assistance in exploration, has my approval.

The U. S. Bureau of Mines did not participate in this examination and we do not believe the deposit has sufficient merit to require Bureau participation.

J. N. Faick
John N. Faick

JNF:ms

cc: Harshman (8)
Storms
Faick

Reviewed by
DMEA OPERATING COMMITTEE
6-4-56
(date)

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MAY 28 1956

MINERAL DEPOSITS
DMEA
RECEIVED
MAY 23 1956
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

UNITED STATES
DEPARTMENT OF THE INTERIOR

DMEA
Date Rec'd
MAY 23 1956
BUREAU OF MINES
Denver, Colorado

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

TRANSMITTED
MAY 24 1956

DMEA-4219, Ben J. Dieringer

Higher Up Claims (Copper)

Yuma County, Arizona

Leonid Bryner, Geologist
U. S. Geological Survey

May 21, 1956

Reviewed by
DMEA OPERATING COMMITTEE
6-4-56
(date)

RECEIVED
MAY 28 1956
MAY 24 1956
TRANSMITTED

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By Leonid Bryner[1]

In an application dated March 15, 1956, and docketed as DMEA-4219, Ben J. Dieringer applied for aid in a $20,000 program to explore for copper on the Higher Up claims, Yuma County, Arizona. The claims are in an area of layered gneisses and schists. The main deposit, the one which the applicant proposes to explore, occurs in a normal fault that cuts the gneisses and schists. The fault is traceable along the surface for about 200 feet. A 13-foot shaft and five trenches in the fault expose sporadic copper mineralization, mostly in the form of oxides. By far the most extensive copper mineralization occurs in the shaft. Some copper mineralization occurs in the two trenches adjacent to the shaft; 30 and 50 feet from the shaft along the strike of the fault. But the rest of the fault, where it has been exposed at the surface, is essentially barren. Other workings in the claim area appear to be on similar small, superficial showings.

The proposed exploration would consist mainly of stripping, trenching, and about 300 feet of drifting along the fault. Inferred reserves are estimated at 100 tons of 3 percent copper. Exploration might discover several times this amount. But the small extent of the fault and the sporadic occurrence of copper along it limit the potentialities of this deposit to a few hundred tons at most. For this reason it is recommended that the DMEA loan be denied.

---

[1] Geologist, U. S. Geological Survey, Tucson, Arizona.

DMEA-4219, BEN J. DIERINGER
HIGHER UP CLAIMS (Copper)
YUMA COUNTY, ARIZONA

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2	Workings on Higher Up No. 17 claim	7

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MAY 28 1956

INTRODUCTION

On March 15, 1956 B. J. Dieringer applied for DMEA aid in a $20,000 program to explore for copper on the Higher Up Claims. The property is on State-owned land and consists of 20 claims named Higher Up Nos. 1 through 20 (fig. 1). The land is leased from the State of Arizona by Ben J. Dieringer.

The northeast corner of the No. 2 claim and northwest corner of the No. 3 claim is at a brass plaque that marks the quarter corner common to sections 25 and 36 (Fig. 1). The claims are all in section 36, T. 9 N., R. 11 W., Yuma County, Arizona.

The deposit is reached from Congress Junction and U. S. Highway 89, by the following route:

> Via State Highway 71 drive southeast 2 miles to the Kingman road (State Highway 91), follow Kingman road 9 miles to the Alamo turnoff, take the Alamo road (left turn from 91) and follow it 16.8 miles to Bob Orr ranch turnoff on left. Take Bob Orr ranch road and ignore turnoffs until reaching a fork 4.1 miles from the Alamo road. Take right-hand branch of fork and follow for about 2.4 miles. These last 2.4 miles are rough but can be negotiated in a passenger car. About half a mile more may be gained by jeep travel. Beyond the end of the passenger car road the main deposit (the No. 17 claim) is about a 2-mile walk, south, up the north flank of the Harcuvar Mountains. The mineralized area may be seen from where the car is parked. It is near the crest of a northerly-trending spur where this spur merges with the north flank of the range to the right (west) and slightly below a prominent cliff. This cliff may be identified from a distance by the fact that the gently-dipping formation in which the cliff is carved crops out again as a cliff in the next arroyo to the right (west) and again as a cliff in the next arroyo to the left (east).

The country is typical of the Arizona Sonoran Desert Province at elevations in the neighborhood of 2500 to 3500 feet. The nearest water was in a well about 50 feet deep and situated in an arroyo at the end of the jeep road. At present the well is dry.

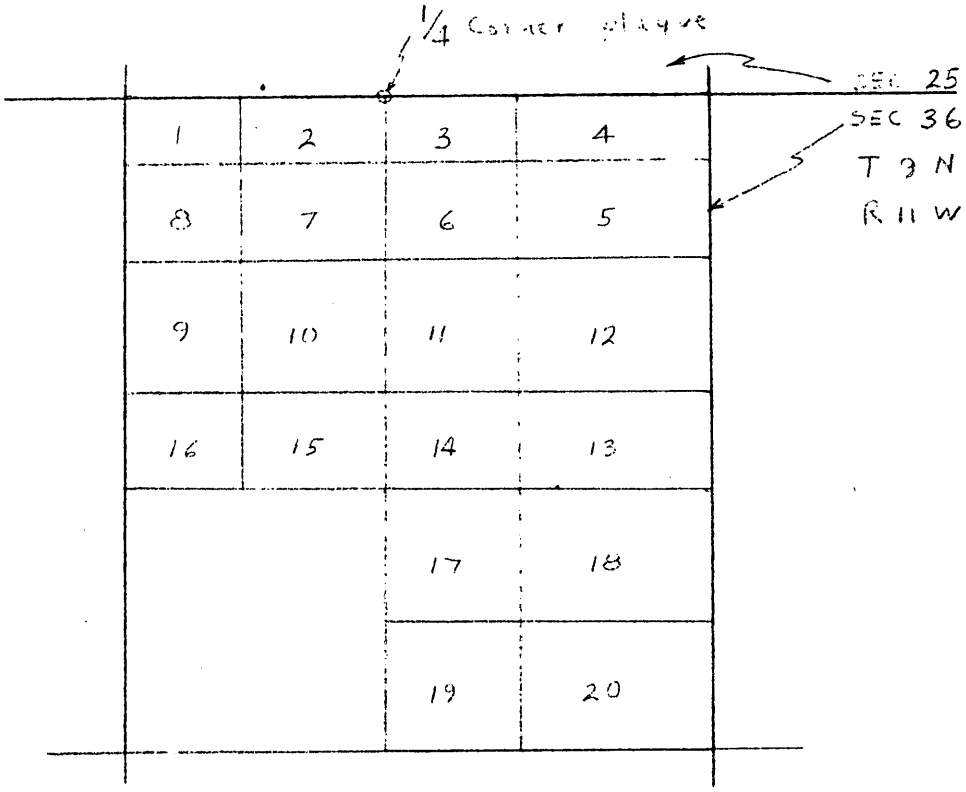


FIG. 1 - CLAIM MAP, HIGHER UP NOS. 1 TO 20,

YUMA COUNTY, ARIZONA

DMEA 4219

I examined the property on May 4, 1956 and was accompanied by Dieringer and by Robert L. Wells, Dieringer's consulting geologist. The examination was confined mostly to showings on the No. 17 claim, where Dieringer proposes to explore.

The deposit is not described in any report that I know of, but the area is covered by Howland Bancroft in "Reconnaissance of the Ore Deposits in Northern Yuma County, Arizona", U.S.G.S. Bulletin 451, 1911.

GEOLOGY

The claims are in an area of schists and gneisses that appear to be metamorphosed sediments with a gentle northwesterly regional dip. The rocks are crystalline and predominantly granitic in composition. Some of the schists, however, are composed mainly of ferro-magnesian minerals. The bedding effect is due to layers of rock of different hardness, and to the fact that the foliation of these rocks is more or less parallel to the layering. In general the harder layers are gneissic and the softer ones schistose.

The main mineralized area is shown in figure 2. Mineralization is localized along a fault that trends N 55° E, dips about 80 degrees to the northwest, and is traceable at the surface for about 200 feet. The deformation of gneissic layers in the walls of this fault indicate that the latest movement was normal. In an uphill direction, that is, toward the southwest, the fault dies out in overlying rocks that are slightly folded but not ruptured. Further examination toward the southwest to the top of the ridge, and down the other side to an elevation

below that of the fault outcrop, revealed several feet of displacement by folding of the gneissic layers along the fault extension but no actual fault. So in a southwesterly direction it appears that the fault dies out both updip and along the strike.

The fault also was traced to the northeast, that is, downhill and toward an arroyo. In this direction the fault apparently dies out close to Trench C (fig. 2), and does not appear again downhill from here though slight folding of the gneissic layers was detected below the trench. So in a northeasterly direction the fault appears to die out also.

A 13-foot shaft and five trenches (A, B, C, D, and E) have been dug on the fault (fig. 2). The best copper showings are in the shaft. Here the copper occurs as veinlets and disseminations of copper oxides and chalcopyrite. Assays indicate that small amounts of gold and silver are present also. Iron occurs with the ore minerals as limonite staining and as massive hematite in which chalcopyrite and pyrite are imbedded. Quartz and barite also are prominent gangue minerals.

In the shaft the copper mineralization is confined mostly to a 2-foot-thick zone of silicified gneiss. The footwall of this siliceous body is adjacent to a 1/2- to 1 1/2-foot zone of chloritized gneiss and fault gouge. The hanging wall is adjacent to highly fractured gneiss, with little or no gouge or chlorite. Copper mineralization extends along fractures 1/2 to 1 foot into both walls. Beyond the gouge zone the wall rocks show little or no hydrothermal alteration. Examination of the fault exposed in the trenches indicates that away from the

shaft, copper mineralization is either absent or comparatively sparse (fig. 2). At Trench A there is some copper in the fault zone but copper is found either in trace amounts or not at all in the other trenches. Also the silicified gneiss exposed in the shaft apparently pinches out and is not present in the trenches, though similar lenses probably occur at other places along the fault and perhaps one such lens accounts for the applicant's assay width of 3 feet at Trench A.

In the walk from the car to the mineralized area three or four small diggings were pointed out to me on the surrounding slopes. These all apparently are on small showings of copper mineralization and are mentioned here as evidence of the widely scattered character and small size of copper deposits in this area. Also of possible significance is the difference in competency between the more gneissic and the more schistose rocks and the distribution of such rocks in layers. Possibly this accounts for the discontinuous character of faulting, with the occurrence of open as well as tight fissures. Fissure fillings and mineralization in such rock would most likely be lenticular rather than continuous.

GRADE

There has been no known production from the claim area. Grade information is based mainly on samples taken by Dieringer and Wells. These samples were almost all taken in the shaft where the copper mineralization appears to be far more extensive than elsewhere. Sample

results from the No. 17 Claim are tabulated below. Some samples that are unusually high-grade and probably represent hand specimens, as well as a sample of a 3" vein are omitted.

TABLE I - RESULTS OF SAMPLING ON NO. 17 CLAIM

Identification	Description	Copper %	Gold oz.	Silver oz.
No. 3; taken by Dieringer; assayed by J. W. Sharpe, Wickenburg	Across 5½' of fault zone, 4½' from bottom of shaft	2.5	0.22	2.58
No. 2; taken by Dieringer; assayed by Sharpe	Across 3½' of fault zone, 2' from bottom of shaft	3.7	0.21	2.77
No. 1666; taken by Wells; assayed by ARC Labs., Phoenix	Across 3½' of fault zone 2'-3' from bottom of shaft	2.30	--	--
USBM No. 13461; taken by Bryner; assayed by U.S.Bur. of Mines	Across 2½' of the most highly mineralized part of the fault zone; 2' from bottom of shaft	2.57 (2.24% acid soluble copper)	0.06	0.50
No. 1646, taken by L. Cornett; assayed by ARC	Across 3' of fault zone, 1½' from bottom of shaft	4.34	--	--
No. 4; taken by Dieringer; assayed by Sharpe	Across 3½' of fault zone at bottom of shaft	4.9	0.19	2.99
No. 125392; taken by Dieringer; assayed by Arizona Testing Laboratories, Phoenix	Across 3' of fault zone, in Trench A	8.10	--	--

This sampling indicates that 2 to 4 percent rock across a width of about 3 feet is present in the shaft. The lack of samples from other parts of the fault is simply a reflection of the lack of any showing that appears promising enough to sample. The 8.10% Copper assay was obtained from near the northeast end of Trench A. The southwest end of this trench, that is, the present face, shows only a 2- or 3-inch width of copper mineralization.

RESERVES

Using a strike length of 20 feet in either direction from the shaft, a vertical extent of 20 feet and a width of 2 feet, gives about 100 tons of inferred reserve of rock that averages about 3 percent copper.

Three or four times this amount might be shown by exploration and development along the fault. The small extent of the fault, and the incompetent rocks along it, limit the potentialities of this deposit to not more than a few hundred tons of ore.

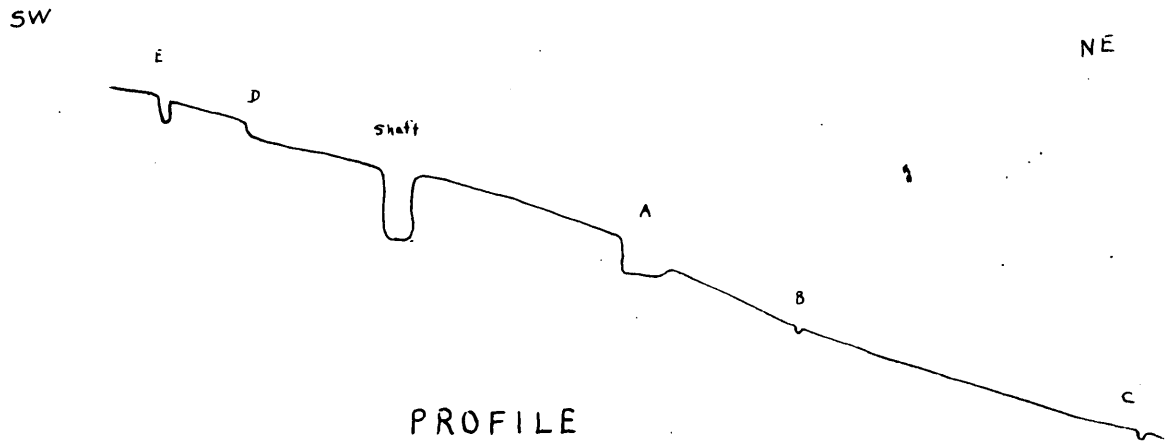
EXPLORATION

The extent of past exploration is indicated by the shallow workings shown in figure 2.

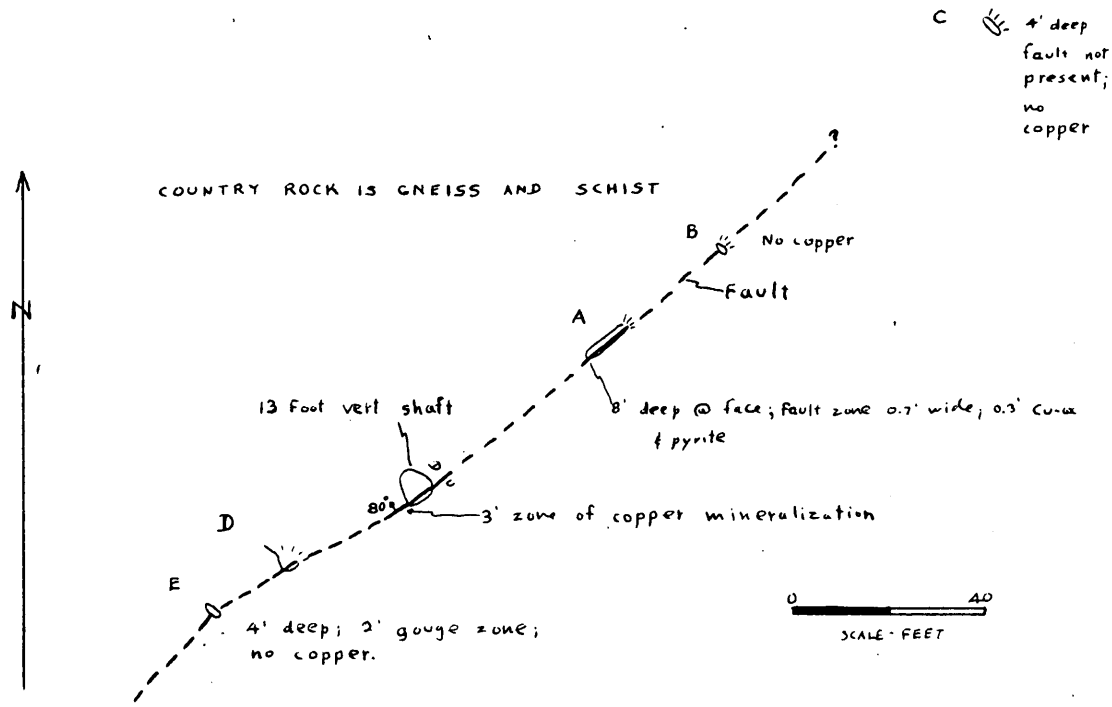
The exploration proposed by the applicant consists essentially of about 300 feet of drifting along the fault starting at about Trench C, and further stripping and trenching. The proposal also includes road building, supervision, and contingencies. Total cost is estimated by the applicant at $20,000.

CONCLUSIONS AND RECOMMENDATIONS

This deposit is along a fault that crosses the top of a ridge, and dies out in underlying as well as in overlying rocks. The limitations of the deposit are revealed in its natural setting, and these limitations indicate that not more than a few hundred tons of 2 to 4 percent copper-bearing rock could be discovered by exploring the fault. My recommendation therefore is that the DMEA loan be denied.



PROFILE



PLAN

FIG. 2 - WORKINGS ON HIGHER UP NO. 17 CLAIM, YUMA CO., ARIZONA

Brunton-tape survey, 5/4/56

DMEA 4219

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

All Bellog

May 24, 1956

224 New Customhouse
Denver 2, Colorado

RECEIVED
MAY 28 1956

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Report of Examination, DMEA Docket 4219 (Copper) Ben J. Mieringer (Higher Up Claims) Yuma County, Arizona

Enclosed are the original and three copies of a geologic report of examination on the subject property. The Bureau of Mines did not participate in the examination.

The examiner does not believe that a significant amount of copper would result from the exploration of this property, and he recommends that this application be denied. We concur in this recommendation.

DMEA Field Team, Region III

By J. W. Townsend
Acting Executive Officer

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
6/4/56
(date)

RECEIVED
MAY 28 1956

MINERAL DEPOSITS
DMEA
RECEIVED
MAY 23 1956
U.S.
GEOLOGICAL SURVEY
DENVER, COLORADO

Box 4126 University Station
Tucson, Arizona

TRANSMITTED
MAY 24 1956

May 21, 1956

MEMORANDUM

To: Executive Officer, DMEA Field Team Region III

From: J. N. Faick Through: E. N. Harshman *CRM for ENH*

Subject: DMEA-4219 Ben J. Dieringer Higher Up Claims (Copper)
Yuma County, Arizona

Enclosed are the original and 8 copies of an examination report by Leonid Bryner on the above subject property. This report, which recommends denial of Government assistance in exploration, has my approval.

The U. S. Bureau of Mines did not participate in this examination and we do not believe the deposit has sufficient merit to require Bureau participation.

J. N. Faick
John N. Faick

JNF:ma

cc: Harshman (8)
Storms
Faick

Reviewed by
DMEA OPERATING COMMITTEE

(date)

MINERAL DEPOSITS
DATA
RECEIVED
MAY 23 1956
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

RECEIVED
MAY 28 1956

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA
Date Rec'd.
MAY 23 1956
BUREAU OF MINES
Denver, Colorado

MAY 24 1956
TRANSMITTED

DMEA-4219, Ben J. Dieringer

Higher Up Claims (Copper)

Yuma County, Arizona

Leonid Brynar, Geologist
U. S. Geological Survey

May 21, 1956

Reviewed by
DMEA OPERATING COMMITTEE

(date)

RECEIVED
MAY 28 1956
TRANSMITTED
MAY 24 1956

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By Leonid Bryner[1]

In an application dated March 15, 1956, and docketed as DMEA-4219, Ben J. Dieringer applied for aid in a $20,000 program to explore for copper on the Higher Up claims, Yuma County, Arizona. The claims are in an area of layered gneisses and schists. The main deposit, the one which the applicant proposes to explore, occurs in a normal fault that cuts the gneisses and schists. The fault is traceable along the surface for about 200 feet. A 13-foot shaft and five trenches in the fault expose sporadic copper mineralization, mostly in the form of oxides. By far the most extensive copper mineralization occurs in the shaft. Some copper mineralization occurs in the two trenches adjacent to the shaft; 30 and 50 feet from the shaft along the strike of the fault. But the rest of the fault, where it has been exposed at the surface, is essentially barren. Other workings in the claim area appear to be on similar small, superficial showings.

The proposed exploration would consist mainly of stripping, trenching, and about 300 feet of drifting along the fault. Inferred reserves are estimated at 100 tons of 3 percent copper. Exploration might discover several times this amount. But the small extent of the fault and the sporadic occurrence of copper along it limit the potentialities of this deposit to a few hundred tons at most. For this reason it is recommended that the DMEA loan be denied.

---

[1] Geologist, U. S. Geological Survey, Tucson, Arizona.

RECEIVED
MAY 28 1953

DMEA-4219, BEN J. DIERINGER
HIGHER UP CLAIMS (Copper)
YUMA COUNTY, ARIZONA

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RECEIVED
MAY 28 1968

INTRODUCTION

On March 15, 1956 B. J. Dieringer applied for DMEA aid in a $20,000 program to explore for copper on the Higher Up Claims. The property is on State-owned land and consists of 20 claims named Higher Up Nos. 1 through 20 (fig. 1). The land is leased from the State of Arizona by Ben J. Dieringer.

The northeast corner of the No. 2 claim and northeast corner of the No. 3 claim is at a brass plaque that marks the quarter corner common to sections 25 and 36 (Fig. 1). The claims are all in section 36, T. 9 N., R. 11 W., Yuma County, Arizona.

The deposit is reached from Congress Junction and U. S. Highway 89, by the following route:

> Via State Highway 71 drive southeast 2 miles to the Kingman road (State Highway 91), follow Kingman road 9 miles to the Alamo turnoff, take the Alamo road (left turn from 91) and follow it 16.8 miles to Bob Orr ranch turnoff on left. Take Bob Orr ranch road and ignore turnoffs until reaching a fork 4.1 miles from the Alamo road. Take right-hand branch of fork and follow for about 2.4 miles. These last 2.4 miles are rough but can be negotiated in a passenger car. About half a mile more may be gained by jeep travel. Beyond the end of the passenger car road the main deposit (the No. 17 claim) is about a 2-mile walk, south, up the north flank of the Harcuvar Mountains. The mineralized area may be seen from where the car is parked. It is near the crest of a northerly-trending spur where this spur merges with the north flank of the range to the right (west) and slightly below a prominent cliff. This cliff may be identified from a distance by the fact that the gently-dipping formation in which the cliff is carved crops out again as a cliff in the next arroyo to the right (west) and again as a cliff in the next arroyo to the left (east).

The country is typical of the Arizona Sonoran Desert Province at elevations in the neighborhood of 2500 to 3900 feet. The nearest water was in a well about 50 feet deep and situated in an arroyo at the end of the jeep road. At present the well is dry.

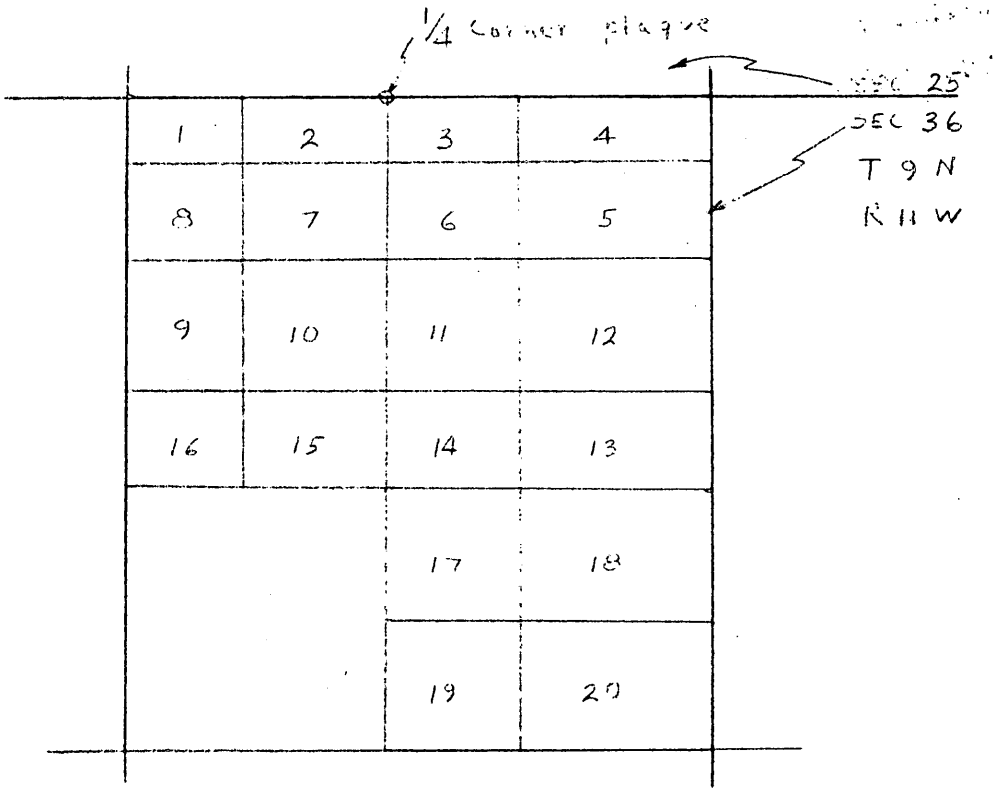

FIG. 1 - CLAIM MAP, HIGHER UP NOS 1 to 20.

YUMA COUNTY, ARIZONA

DMEA 42.9

I examined the property on May 4, 1956 and was accompanied by Dieringer and by Robert L. Walls, Dieringer's consulting geologist. The examination was confined mostly to showings on the No. 17 claim, where Dieringer proposes to explore.

The deposit is not described in any report that I know of, but the area is covered by Rowland Bancroft in "Reconnaissance of the Ore Deposits in Northern Yuma County, Arizona", U.S.G.S. Bulletin 431, 1911.

GEOLOGY

The claims are in an area of schists and gneisses that appear to be metamorphosed sediments with a gentle northwesterly regional dip. The rocks are crystalline and predominantly granitic in composition. Some of the schists, however, are composed mainly of ferro-magnesian minerals. The bedding effect is due to layers of rock of different hardness, and to the fact that the foliation of these rocks is more or less parallel to the layering. In general the harder layers are gneissic and the softer ones schistose.

The main mineralized area is shown in figure 2. Mineralization is localized along a fault that trends N 55° E, dips about 60 degrees to the northwest, and is traceable at the surface for about 200 feet. The deformation of gneissic layers in the walls of this fault indicate that the latest movement was normal. In an uphill direction, that is, toward the southwest, the fault dies out in overlying rocks that are slightly folded but not ruptured. Further examination toward the southwest to the top of the ridge, and down the other side to an elevation

below that of the fault outcrop, revealed several feet
by folding of the gneissic layers along the fault extensi
tual fault. So in a southwesterly direction it appears th
dies out both updip and along the strike.

The fault also was traced to the northeast, that is, d
and toward an arroyo. In this direction the fault apparently dies out close to Trench C (fig. 2), and does not appear again downhill from here though slight folding of the gneissic layers was detected below the trench. So in a northeasterly direction the fault appears to die out also.

A 13-foot shaft and five trenches (A, B, C, D, and E) have been dug on the fault (fig. 2). The best copper showings are in the shaft. Here the copper occurs as veinlets and disseminations of copper oxides and chalcopyrite. Assays indicate that small amounts of gold and silver are present also. Iron occurs with the ore minerals as limonite staining and as massive hematite in which chalcopyrite and pyrite are imbedded. Quartz and barite also are prominent gangue minerals.

In the shaft the copper mineralization is confined mostly to a 2-foot-thick zone of silicified gneiss. The footwall of this siliceous body is adjacent to a 1/2- to 1 1/2-foot zone of chloritized gneiss and fault gouge. The hanging wall is adjacent to highly fractured gneiss, with little or no gouge or chlorite. Copper mineralization extends along fractures 1/2 to 1 foot into both walls. Beyond the gouge zone the wall rocks show little or no hydrothermal alteration. Examination of the fault exposed in the trenches indicates that away from the

shaft, copper mineralization is either absent or comparatively sparse (fig. 2). At Trench A there is some copper in the fault zone but copper is found either in trace amounts or not at all in the other trenches. Also the silicified gneiss exposed in the shaft apparently pinches out and is not present in the trenches, though similar lenses probably occur at other places along the fault and perhaps one such lens accounts for the applicant's assay width of 3 feet at Trench A.

In the walk from the car to the mineralized area three or four small diggings were pointed out to me on the surrounding slopes. These all apparently are on small showings of copper mineralization and are mentioned here as evidence of the widely scattered character and small size of copper deposits in this area. Also of possible significance is the difference in competency between the more gneissic and the more schistose rocks and the distribution of such rocks in layers. Possibly this accounts for the discontinuous character of faulting, with the occurrence of open as well as tight fissures. Fissure fillings and mineralization in such rock would most likely be lenticular rather than continuous.

GRADE

There has been no known production from the claim area. Grade information is based mainly on samples taken by Dieringer and Wells. These samples were almost all taken in the shaft where the copper mineralization appears to be far more extensive than elsewhere. Sample

This sampling indicates that 2 to 4 percent rock across a width of about 3 feet is present in the shaft. The lack of samples from other parts of the fault is simply a reflection of the lack of any showing that appears promising enough to sample. The 8.10% Copper assay was obtained from near the northeast end of Trench A. The southwest end of this trench, that is, the present face, shows only a 2- or 3-inch width of copper mineralization.

RESERVES

Using a strike length of 20 feet in either direction from the shaft, a vertical extent of 20 feet and a width of 2 feet, gives about 100 tons of inferred reserve of rock that averages about 3 percent copper.

Three or four times this amount might be shown by exploration and development along the fault. The small extent of the fault, and the incompetent rocks along it, limit the potentialities of this deposit to not more than a few hundred tons of ore.

EXPLORATION

The extent of past exploration is indicated by the shallow workings shown in figure 2.

The exploration proposed by the applicant consists essentially of about 300 feet of drifting along the fault starting at about Trench C, and further stripping and trenching. The proposal also includes road building, supervision, and contingencies. Total cost is estimated by the applicant at $20,000.

results from the No. 17 Claim are tabulated below. Some samples that are unusually high-grade and probably represent hand specimens, as well as a sample of a 3" vein are omitted.

TABLE I - RESULTS OF SAMPLING ON NO. 17 CLAIM

Identification	Description	Copper %	Gold oz.	Silver oz.
No. 3; taken by Dieringer; assayed by J. W. Sharpe, Wickenburg	Across 5½' of fault zone, 4½' from bottom of shaft	2.5	0.22	2.58
No. 2; taken by Dieringer; assayed by Sharpe	Across 3½' of fault zone, 2' from bottom of shaft	3.7	0.21	2.77
No. 1666; taken by Wells; assayed by ABC Labs., Phoenix	Across 3½' of fault zone 2'-3' from bottom of shaft	2.30	--	--
USBM No. 13461; taken by Bryner; assayed by U.S.Bur. of Mines	Across 2½' of the most highly mineralized part of the fault zone; 2' from bottom of shaft	2.57 (2.24% acid soluble copper)	0.06	0.50
No. 1646, taken by L. Cornett; assayed by ABC	Across 3' of fault zone, 1½' from bottom of shaft	4.34	--	--
No. 4; taken by Dieringer; assayed by Sharpe	Across 3½' of fault zone at bottom of shaft	4.9	0.19	2.99
No. 125392; taken by Dieringer; assayed by Arizona Testing Laboratories, Phoenix	Across 3' of fault zone, in Trench A	8.10	--	--

CONCLUSIONS AND RECOMMENDATIONS

This deposit is along a fault that crosses the top of a ridge, and dies out in underlying as well as in overlying rocks. The limitations of the deposit are revealed in its natural setting, and these limitations indicate that not more than a few hundred tons of 2 to 4 percent copper-bearing rock could be discovered by exploring the fault. My recommendation therefore is that the DMEA loan be denied.

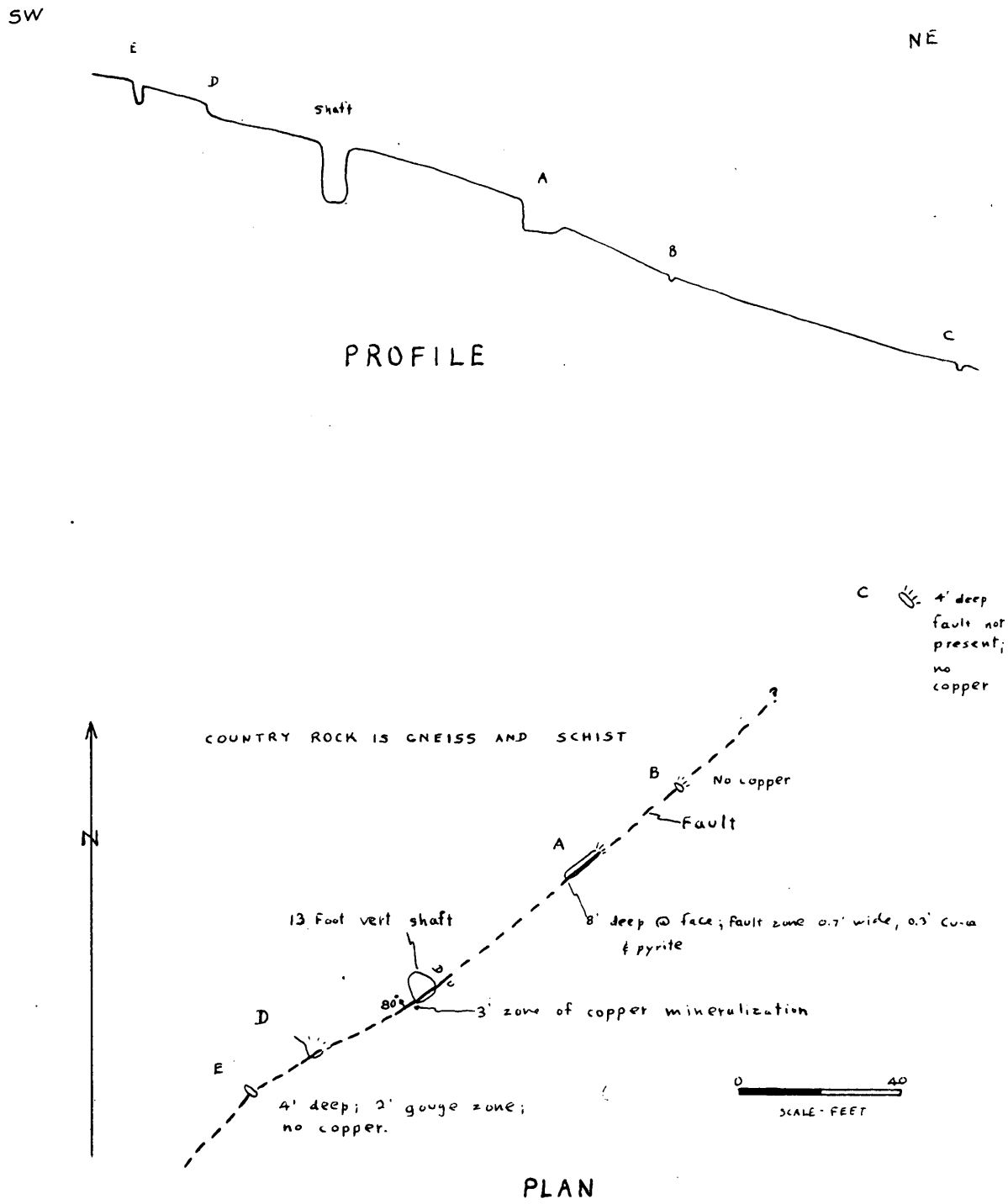

FIG. 2 - WORKINGS ON HIGHER UP NO. 17 CLAIM, YUMA CO., ARIZONA

Brunton-tape survey, 5/4/56

DMEA 4219

RECEIVED
MAY 2 - 1956

April 27, 1956

Memorandum

To: W. R. Storms

From: Superintendent, Denver Experiment Station, Reg. III

Subject: Docket DMEA 4219 (Copper) Ben J. Dieringer, et al., (Higher Up Claims), Yuma County, Arizona

Enclosed please find the subject application in the amount of $20,000.00.

A field examination and suitable report are required. The completed report should be forwarded directly to the Executive Officer, with a copy of the memorandum of transmittal to this office.

JOHN F. SHAW

John F. Shaw

Enclosure

cc: W. M. Traver (3)
E. N. Harshman
J. N. Faick
Sec. Op. Com. (2)

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

~~Betty~~
Betty

April 26, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

Docket

To: J. F. Shaw (2) (With brochure)
J. N. Faick

From: Field Team, Region III

Subject: Docket DMEA 4219 (Copper) Ben J. Dieringer, et al., (Higher Up Claims), Yuma County, Arizona

Enclosed is a copy of the subject application in the amount of $20,000.00. A field examination and suitable report are requested.

The additional data mentioned in the letter from the Chairman, Operating Committee dated April 23, 1956, copy of which is attached, is included with the brochure. Also attached for your information are copies of memoranda of review of the subject application by the Commodity Group.

DMEA Field Team, Region III

W. M. TRAVER,

By W. M. Traver
Executive Officer

Enclosures

DMC:ab

cc: Docket 4219
Chair. Op. Comm. (2)
Harshman
Chron.

RECEIVED
APR 30 1956

File Copy
Surname

J. ALD.
Fizwald
Selfridge
Pfleuron

500

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

APR 23 1956

Mr. W. M. Traver
Executive Officer
DMEA Field Team, Region III
224 New Customhouse Bldg.
Denver 2, Colorado

Re: Docket No. DMEA-4219 (Copper)
Ben J. Bieringer, et al
Higher Up Claims
Yuma County, Arizona

Dear Mr. Traver:

The cited application for exploration assistance is being referred to your office for consideration, a field examination of the property if warranted, and recommendation.

For your information we are enclosing a letter from the Applicant, dated April 14, 1956, containing additional data, together with two maps and copies of assay certificates.

Copies of memoranda by J. W. Pennington, Bureau of Mines, dated March 21 and April 18, and by N. E. Nelson, Geological Survey, dated March 22 and April 19, 1956, relating to the project, are enclosed for your information.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (JWA)

Enclosures

JWAlt/er 4/23/56
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Pennington, USBM
Mr. Kiilsgaard, USGS
Chron.

APPROVED:

/s/ Robert W. Geehan (JWA)
Member, Bureau of Mines

N. E. Nelson (JWA)
Member, Geological Survey

A.C.G.

File Copy
Surname
J. ALT.
Linwood
Geehan
Nelson
Selfridge
Fitzsimons

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

APR 23 1956

Mr. Ben J. Dieringer
Big Rock Candy Mountain
Marysvale, Utah

Re: Docket No. DMEA-4219 (Copper)
Ben J. Dieringer, et al
Higher Up Claims
Yuma County, Arizona

Dear Mr. Dieringer:

Your application for Government assistance to explore the cited property has been reviewed by the Base Metals Division of the Defense Minerals Exploration Administration and has been referred to:

Mr. W. M. Traver, Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

If the Field Team requires additional information concerning your application, they will contact you at an early date.

Sincerely yours,

C. C. Mittendorf

Administrator

JWAlt/eer 3/28/56
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Pennington, USBM
Mr. Kiilsgaard, USGS
Region III (2)
Chron

P.C.L.

IN REPLY REFER TO:

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

April 19, 1956

Re: DMEA 4219
Ben J. Dieringer
Higher Up Claims
Yuma Co., Ariz.
$20,000.00 - Copper

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of information supplementing that of the application.

In response to a request of the Base Metals Division, the applicant has submitted additional information consisting of a longitudinal section of the inferred vein with a profile of the hillside, and copies of assay certificates showing the results of assaying 11 samples. Consistently good copper contents are shown and the gold and silver values are substantial.

Referral to the Field Team for action is again recommended.

N. E. Nelson

N. E. Nelson

RECEIVED
APR 20 1956

IN REPLY REFER TO:

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

April 19, 1956

Re: DMEA 4219
Ben J. Dieringer
Higher Up Claims
Yuma Co., Ariz.
$20,000.00 - Copper

Memorandum

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From: N. E. Nelson, U. S. Geological Survey

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Referral to the Field Team for action is again recommended.

NENelson:btr
G 4/19/56

N. E. Nelson

N. E. Nelson

cc: Director's reading file
(4212) GSA
Branch Reading File (4212) GSA
DMEA (3)
Chron. File
Docket File
H. M. Meyer, Rm. 3623 Interior

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

RECEIVED
APR 13 1956

April 18, 1956

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: Commodity Industry Analyst, Branch of Base Metals

Subject: Review of supplemental data to application, Docket No. DMEA 4219 (copper), Ben J. Dieringer, et al, Higher Up Claims, Yuma County, Arizona, $20,000.00

The additional data to this application contained in the letter of April 14 from Ben J. Dieringer have been reviewed.

Although the estimated costs for geologic, engineering and general engineering have been reduced from the original figures, they still appear high. In addition, Dieringer has increased the proposed drifting from 300 to 350 feet and included assaying costs. As a result, the revised costs are the same as the original ones.

Referral of the application and supplemental data to the Field Team for examination and evaluation is recommended.

J. W. Pennington

Copy to: Division of Minerals
Branch of Base Metals (2)
R. W. Geehan
Thor Kiilsgaard, U.S.G.S.
F i l e s

RECEIVED
APR 1 1956

April 18, 1956

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: Commodity Industry Analyst, Branch of Base Metals

Subject: Review of supplemental data to application, Docket No. DMEA 4219 (copper), Ben J. Dieringer, et al, Higher Up Claims, Yuma County, Arizona, $20,000.00

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Referral of the application and supplemental data to the Field Team for examination and evaluation is recommended.

J. W. Pennington

J. W. Pennington

Copy to: Division of Minerals
Branch of Base Metals (2)
R. W. Geehan
Thor Kiilsgaard, U.S.G.S.
F i l e s

Big Rock Candy Mountain Inc.

Cabins — Cafe
Lemonade Springs
Service Station

BIG ROCK CANDY MOUNTAIN
SCENIC WORLD WONDER
Six Miles North of Marysvale
On U.S. Highway 89
Phone EAST 6-4263
MARYSVALE, UTAH

Rock Souvenirs
Indian Trading
Post

RECEIVED
APR 17 1956

April 14th, 1956

W. R. Griswold, Chief
Base Metals Division
Defense Min. Exploration
U. S. Dept. of the Interior,
Washington, D. C.

Re: Docket No. DMEA-4219 (Copper)
Ben J. Dieringer, et al
Higher Up Claims
Yuma County, Arizona

Dear Mr. Griswold:

In conformity with your letter of April 2nd, for additional information there are attached the following:

1. Sketch Map showing present and proposed workings on Higher Up Claim No. 17 in quadruplicate.

2. Sketch Map showing longitudinal section of vein on Higher Up Claim No. 17 in quadruplicate.

3. Paragraph 5 sub par (d) reduce the $2400.00 to $1500.00; sub par (e) reduce the $2400.00 to $1200.00; sub par (c) increase 300 feet to 350 feet and increase amount from $10,500.00 to $12,250.00 and add sub par (g) showing Assay's $350.00.

4. Cost estimates for road bldg., drifting, crosscutting, trenching etc arrived at through personal discussion with Ike Kusisto, Mines Contracting Co. Wickenburg, Arizona and with several owners of Cat's and other mining and road building equipment.

5. There is no additional geological data available at this time other than that furnished by Robert L. Wells which was quoted in attachment to my original appliaation. As the property comes under State Lease and is legally described I hope this will be ample for map purposes.

6. Copies of Assays, with requested information shown thereon are enclosed from: Custom Assay Office, Wickenburg, Ariz., 2/27/56; ARC Laboratories, Phoenix, Ariz., 2/23/56; Arizona Testing Laboratories, Phoenix, Ariz., 2/25/56 to undersigned and ARC Laboratories 2/16/56; Valley Assay Office Tempe, Ariz., to Floyd O. Bleak and L. E. Bleak-the latter 7/19/56 made on ores from property also attached.

Trusting this information will permit the processing of our application at your earliest convenience, I remain

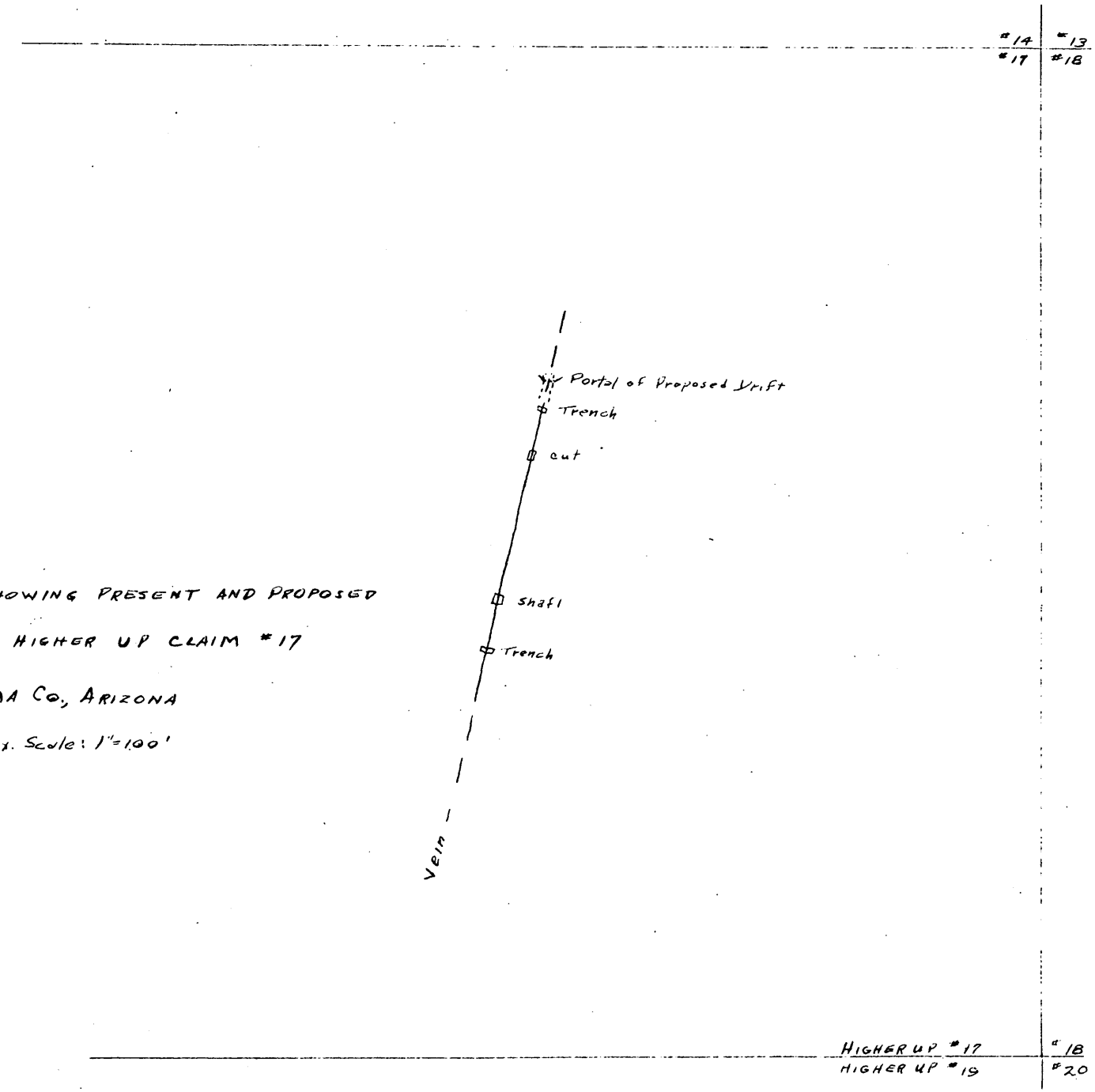
Very truly yours,
Ben J. Dieringer
Ben J. Dieringer

SKETCH MAP SHOWING PRESENT AND PROPOSED

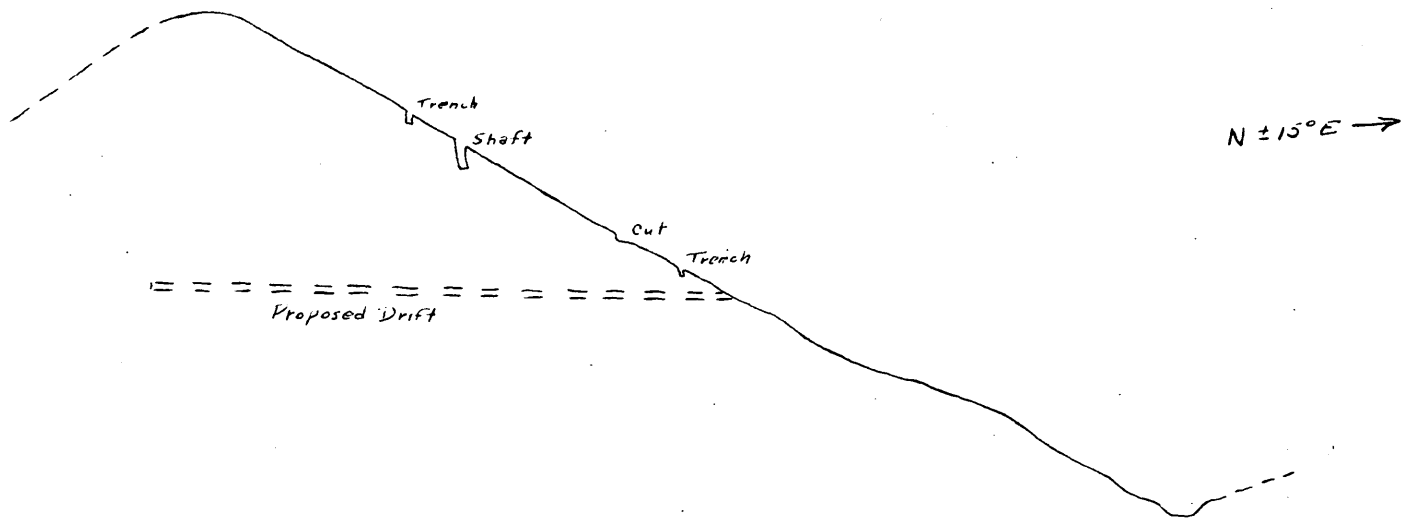
WORKINGS ON HIGHER UP CLAIM #17

YUMA CO., ARIZONA

Approx. Scale: 1"=100'



9-56 - RLW.



SKETCH SHOWING LONG. SECTION OF
VEIN ON HIGHER UP CLAIM #17
YUMA CO., ARIZONA
Approx. Scale: 1" = 100'

4-56 - RLW.

File Copy
Surname
J. Coo.

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

APR 2 1956

Mr. Ben J. Bieringer
Big Rock Candy Mountain Resort
Marysvale, Utah

Re: Docket No. DMEA-4219 (Copper)
Ben J. Bieringer, et al
Higher Up Claims
Yuma County, Arizona

Dear Mr. Bieringer:

Your application dated, March 15, 1956, for Government exploration assistance for the cited property has been received and reviewed by the Base Metals Division of the Defense Minerals Exploration Administration.

In order to expedite the processing of your application, we would appreciate receiving the following information:

A large claim map, showing the location of any work that has been done on these claims and where you propose to do the exploration work as stated in your application.

A longitudinal section showing where this work is to be done and showing the slope of the hill above where this work is to be conducted.

Assays of samples taken on the property, showing where they were taken and the width of the sample. To evaluate your property, copies of assay reports are essential.

R.C.L.

For a project of this size your supervision, engineering and geological costs are high. These are listed in item 5 (d) and (e) of your application.

You state the total cost for repairing road, stripping and trenching, and drifting and crosscutting, but you do not give any details as to how you arrived at these costs.

Any geological information with maps showing the geology of your property would be appreciated.

Please submit all information in quadruplicate at your earliest convenience.

Sincerely yours,

W. R. Griswold

W. R. Griswold, Chief
Base Metals Division

WRG/eb
Copy to: Docket
Admr R File
Op. Committee
Base Metals
Mr. Pennington (USBM [illegible])
Mr. Kiilsgaard, USGS
Region III (2)
Chron.

IN REPLY REFER TO:

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

RECEIVED
MAR 26 1956

March 22, 1956

Re: DMEA 4219
Benj. J. Dieringer
Higher Up Claims
Yuma County, Arizona
$20,000 - Copper

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of application.

The applicant requests assistance in exploring a 3-foot vein traceable for 200 feet. "The copper mineralization is generally concentrated in a 1-foot zone near the center of the vein. In places the copper ore forms pods nearly two feet across." - Application. Work already done consists of a 20-ft. shaft, a small cut and a spot from which the dirt has been removed. Assays are said to run from 2.30 to 11.8% copper, but no widths or locations are given.

The proposed work consists of:

Drifting and crosscutting 300 ft.	$10,500
Stripping and trenching	1,000
Road work	2,800
Geologic and engineering supervision	2,400
General supervision	2,400
Contingencies	900
	$20,000

The drift is to be started at the base of the hill, but the slope is not indicated. Assuming a 45° slope, a 300-foot adit on a 3-ft. vein would partially develop, plus or minus 12,000 tons of material 1/3 of which, or 4,000 tons, might be ore of a grade that cannot be guessed, since no assays related to sample widths are given.

A staged work program, stripping and drifting, may be warranted.

Referral to the Field Team for appropriate action is recommended.

N. E. Nelson

N. E. Nelson

IN REPLY REFER TO:

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

RECEIVED
MAR 23 1956

March 22, 1956

Re: DMEA 4212
Benj. J. Bieringer
Higher Up Claims
Yuma County, Arizona
$20,000 - Copper

Memorandum

To: W. R. Grimwald, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of application.

The applicant requests assistance in exploring a 3-foot vein traceable for 200 feet. "The copper mineralization is generally concentrated in a 1-foot zone near the center of the vein. In places the copper ore forms pods nearly two feet across." - Application. Work already done consists of a 20-ft. shaft, a small cut and a spot from which the dirt has been removed. Assays are said to run from 2.30 to 11.8% copper, but no widths or locations are given.

The proposed work consists of:

Drifting and crosscutting 300 ft.	$10,500
Stripping and trenching	1,000
Road work	2,800
Geologic and engineering supervision	2,400
General supervision	2,400
Contingencies	900
	$20,000

The drift is to be started at the base of the hill, but the slope is not indicated. Assuming a 45° slope, a 300-foot adit on a 3-ft. vein would partially develop, plus or minus 12,000 tons of material 1/3 of which, or 4,000 tons, might be ore of a grade that cannot be guessed, since no assays related to sample widths are given.

A staged work program, stripping and drifting, may be warranted.

Referral to the Field Team for appropriate action is recommended.

N. E. Nelson

NENelson:jah
3/22/56
cc: Director's reading 4212
Branch reading 4212
DMEA (3) ✓ R.H.Meyer 3623
Docket file

all [illegible]

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

RECEIVED
MAR 22 1956

March 21, 1956

Memorandum

To: W. R. Griswold, Defense Minerals Exploration Administration

From: J. W. Pennington, Branch of Base Metals

Subject: Review of application, Docket No. DMEA 4219 (copper), Ben J. Dieringer, Kenneth Morrison, Wilkie Collins, Jr., Higher Up Claims, Yuma County, Arizona, $20,000.00

It is proposed to explore a copper occurrence by trenching and 300 feet of drifting and crosscutting at an estimated cost of $20,000.00.

Insufficient information is furnished with the application. For example, assays of samples are given but locations of samples are omitted. Sketch of claims is inadequate and does not show proposed work, geology, and other pertinent data.

It is not possible to evaluate costs as no information is given on the work involved in building roads, stripping and trenching. Also lacking is estimated assay costs.

Referral of the application to the Field Team is recommended.

J. W. Pennington

Copy to: Division of Minerals
Branch of Base Metals (2)
Thor Kiilsgaard, U.S.G.S.
R. W. Geehan
F i l e s

RECEIVED
MAR 22 1956

March 21, 1956

Memorandum

To: W. E. Griswold, Defense Minerals Exploration Administration

From: J. W. Pennington, Branch of Base Metals

Subject: Review of application, Docket No. DMEA 4219 (copper), Ben J. Bieringer, Kenneth Harrison, Wilkie Collins, Jr., Higher Up Claims, Yuma County, Arizona, $20,000.00

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Referral of the application to the Field Team is recommended.

J. W. Pennington

J. W. Pennington

Copy to: Division of Minerals
Branch of Base Metals (2)
Thor Kiliegaard, U.S.G.S.
E. W. Graham
F i l e s

Subject: DMEA-4219
Re: Higher Up Claims

Ben J. Dieringer, et al
Big Rock Candy Mountain
Marysvale, Utah

March, 20, 1956

Gentlemen:

The receipt of your application dated March 15, 1956 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-4219 and referred to the Base Metals Division.

Kindly identify all future correspondence relating to your application by this docket number.

Sincerely yours,

Robert E. Adams, Chief
Operations Control and
Statistics Division

BIG ROCK CANDY MOUNTAIN
MARYSVALE, UTAH

Tel No. Marysvale East 6-4263
or East 6-9990

March 15, 1956

RECEIVED
MAR 19 1956

Mr. C. O. Mittendorf
Administrator
Defense Minerals Exploration Administration
Washington, 25, D. C.

Dear Mr. Mittendorf:

Attached are the original and three copies of Form MF-103-Application for aid in the exploration of mining claims upon which copper bearing ore veins have been discovered.

A government loan for $10,000 is being hereby requested, to match $10,000 which it is proposed to expend.

The information presented on the forms and the attachments I trust will be sufficient for favorable action by your office. It is my understanding that communications in respect to this action will be handled with your office at University Station, Tucson, Arizona.

This is being sent to you from Phoenix, Arizona, where I have been temporarily residing at the Adams Hotel. I am returning to my place of business, the Big Rock Candy Mountain Resort, Marysvale, Utah, tomorrow and any future communications may be directed to me at my business place there.

Very truly yours,

Ben J. Dieringer

Ben J. Dieringer

Enclosures

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

RECEIVED
MAR 19 1956

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

Not to be filled in by applicant

Docket No. 4219
Metal or Mineral Copper
Date Received 3-19-56
Estimated Cost 20,000
Participation (Government %) 50

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: BEN J. DIERINGER, BIG ROCK CANDY COUNTAIN, Marysvale, Utah; KeNNETH MORRISON, CLARK HOTEL, HASTINGS, NEBRASKA WILKIE COLLINS JR, OTAY RANCH, BOX 835, CHULA VISTA, CALIFORNIA

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

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

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

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

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract Twenty mining claims on Arizona State owned land in Sec. 36, Township 9 North, Range 11 West, in Yuma County, Arizona

(*b*) State any mine name by which the property is known. HIGHER UP CLAIMS

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise All claims staked in name of Ben Dieringer, owner

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

(*e*) If you own the land, describe any liens or encumbrances on it None

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice.

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

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades. No past production

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

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points. Road to within 2½ miles of property; shipping approx. 170 miles at Wickenburg

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power. 48 miles; water to be hauled 6 mi. gasoline for power.

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore Copper

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within 30 days and be completed within 24 months from the date of an exploration project contract.

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

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

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

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

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

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

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

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

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

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

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

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

(*b*) How do you propose to furnish your share of the costs? in Utah, experienced in. inspection and examination. Some experience in actual mining work.

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

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated March 15, 1956

Ben J. Dieringer
(Applicant)

By Ben J. Dieringer

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

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

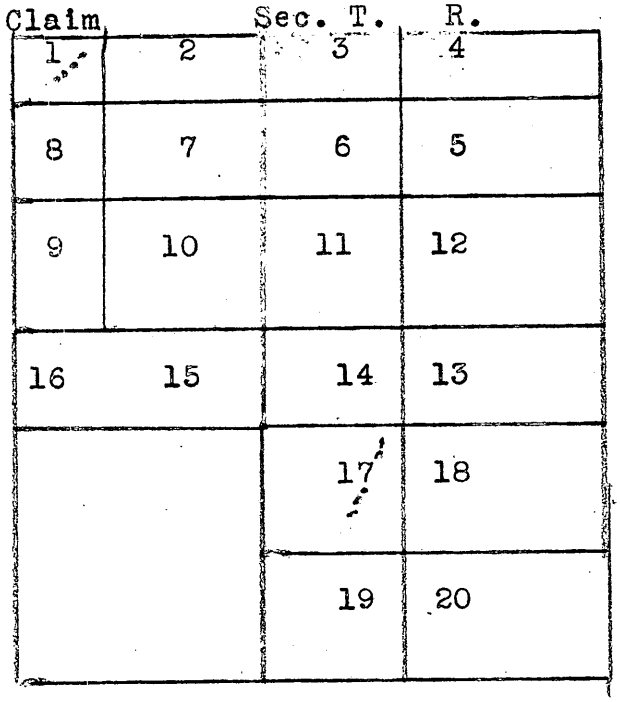
BEN J. DIERINGER Big Rock Candy Mountain, Marysvale, Utah

March 15,1956 ATTACHMENTS TO FORM MF-103 U.S.D.I. -- DMEA

4(c) Ore occurs along fissure vein in an intrusive igneous rock as copper carbonate with some sulphide. Desire to explore vein at depth.

SKETCH

36 Sec. 9N T. 11W R.



HIGHER UP CLAIMS. Dots show vein on No. 17 and No. 1

ASSAYS= run from 2.30 to 11.8% copper

NOTE: Extract from letter from Robert L. Wells consulting geologist, 4541 N. 39th St. Phoenix, Arizona, dared March 1, 1956, said letter including comments on other properties not related to the claims in this application, said letter being addressed to B. J. Dieringer, Big Rock Candy Mountain, Marysvale, Utah.

"Access to the claims is via the Alamo Road from State Highway 71 east of Congress Junction for 31 miles. Thence the left fork from a turn-off to a ranch is taken for 2.3 miles. The left fork is taken near a corral for 4.2 miles to the end of the road accessible to passenger vehicles; a jeep trail continues for approximately one mile to a windmill, from which a foot trail leads to the claims.

RECEIVED
MAR 29 1983

" The property is underlain by gneissic and low order schistose rocks of pre-Cambrian (?) age. The claims were located to cover a copper bearing vein that is traceable on the surface for at least 200 feet. A shaft was excavated on the vein in the early 1900's and has recently been cleaned our. The vein at the surface, as well as at the bottom of the shaft, approximately 20 feet below the surface is, at least 3 feet in width. The copper mineralization is generally concentrated in a 1 foot zone near the center of the vein. In places the copper ore forms pods nearly two feet across.

"A small cut has been made a proximately 100 feet down the slope of the hill from the shaft. The vein in this cut shows the same thickness and/or characteristics as that portion of the vein exposed in the shaft. Enough of the dirt has been removed from a spot approximately 50 feet up the slope from the shaft to expose a similar width to the vein and the copper mineralization.

"As a result of the vertical and horizontal continuity of the vein and the same apparent mineraloogical composition it is suggested that work be continued on this property. It is recommended that the vein be exposed as near the base of the hill as possible and that a drift be started at this point. This type of operation will explore the vein while contributing to the development work that would be necessary for a mining operation. It is probable that ore can be produced during the exploration work and that a profitable operation can be conducted on this vein. It is suggested that other veins on the property be explored and developed simultaneously for an increased daily tonnage.

"If I may be of any further assistance in planning, exploration and development of this property please dont hesitate to call upon me."

5 (continued)

It is planned to have the work performed on a contract basis.

(a)	Estimated costs of repairing part of present road and building new road about six miles	2,800.00
(b)	Estimated cost of further stripping and trenching	$1,000.00
(c)	Estimated cost of drifting and cross-cutting 300 feet at $35 per foot	10,500.00
(d)	Engineering and geological supervision	2,400.00
(e)	General supervision, inspection, examination and record maintenance by owners	2,400.00
(f)	Contingencies	900.00
		$ 20,000.00

RECEIVED
MAR 19 1956

MACKENZIE, TOGNONI & GOODING
ATTORNEYS AT LAW
721 FIRST NATIONAL BANK BUILDING
411 NORTH CENTRAL AVENUE
PHOENIX, ARIZONA
ALPINE 4-2147

ALBERT H. MACKENZIE
HALE C. TOGNONI
WILLIAM H. GOODING

HALE C. TOGNONI
GEOLOGIST AND MINING ENGINEER

March 15, 1956

Mr. Ben Dieringer
Adams Hotel
Phoenix, Arizona

Dear Mr. Dieringer:

At your request I am writing this letter as a title opinion on the 20 State Mining Claims known as "Higher-Up" No's 1 through 20. These claims are legal subdivision type State lode mining claims. They are 1320 feet by 660 feet and they are located in Section 36, T9N, R11W. They occupy all of the north half of Section 36 and the north half of the SE quarter of Section 36. The records show these claims were located on the 21st day of February, 1956, by Ben Dieringer who had purchased by Option Agreement, all the right, title and interest of Imogene Bleak and Floyd Bleak in these claims. The Bleaks abandoned the claims February 20, 1956, and signified this abandonment in a letter to the State Land Commissioner on that date.

Mr. Dieringer is now following the proper procedure on these claims to become the State Mineral Lessee and has done the following:

1. On February 28, 1956, he recorded the 20 Location Notices in the County Recorder's office of Yuma County in Book 158 at pages 436 through 455.

2. These Location Notices were then filed in the State Land Office on March 12, 1956.

3. In a letter of February 22, 1956, acting as Mr. Dieringer's attorney, I sent a map to the State Land Department and signified that Mr. Dieringer intends to proceed to lease on these claims.

4. On February 27, 1956, Mr. Dieringer sent a letter to the Surface Leaseholder, Robert A. Orr, signifying that he was locating mining claims on this land and wished to confer with the Surface Leaseholder in order to arbitrate any conflict that existed between the leaseholder and the miner.

On examining the records of these mining claims, it is my opinion that to date Mr. Dieringer has done all the necessary acts for him to be able to obtain a State Mineral Lease. He has prior right to the State Mineral Lease and that Lease should be granted under Arizona law if he completes the additional necessary acts within the 90-day period.

Sincerely,

Hale C. Tognoni

Hale C. Tognoni

HCT:nf

PRODUCT DEVELOPMENT APPLIED RESEARCH

ARC LABORATORIES

Division of Arizona Research Consultants Inc.
917 W HATCHER ROAD PHOENIX, ARIZONA WINDSOR 3-3573

FOR:

Mr. Moringer
Adams Hotel
Phoenix, Arizona

DATE February 21, 1954

LAB No. 2608

RESULTS

Copper Ore Black Property

2.80 % Cu

[illegible]

Respectfully submitted,

ARC Laboratories

George G. Olsen

As a mutual protection to clients, the public and this corporation, this report is submitted and accepted for the exclusive use of the client to whom it is addressed and for the condition that it is not to be used, in whole or in part, in any advertising or publicity matter without prior written authorization from this corporation.

Phantom Assay Office

ASSAY CERTIFICATE

J. W. (Jack) Sharpe, E. M.
Assayer

Certificate No. .....

Wickenburg, Arizona ... 2/27/56 ..... 19....

.....Ben J. Dieranzer.....

.....

SAMPLE NO.	OWNER'S MARK ON SAMPLE	GOLD OZ. TON	GOLD VAL. TON	SILVER OZ. TON	SILVER VAL. TON	PER CENT OF	Cu		TOTAL VALUE PER TON
1	FROM 3rd vein HEADER UP #1	0.26	9.10	3.18	2.86		7.9		
2	HIGHER UP #17 Picked 3rd vein 2' FROM BOTTOM OF SHAFT 1' ACROSS 5 1/2' VEIN	0.21	7.35	2.79	2.49		3.7		
3	4 1/2' FROM BOTTOM OF SHAFT #17 - ACROSS 3 1/3'	0.22	7.70	2.58	2.33		8.5		
4	VEIN LOWEST POINT BOTTOM 12' SHAFT	0.19	6.65	2.99	2.69		4.9		
	No 3, 3 & 4 FROM SAME SHAFT Samples cut across width Shown								

Gold at $ ..... per oz. Charges $ 10.00 Pd

..... Assayer

ARIZONA TESTING LABORATORIES

A DIVISION OF CLAUDE E. McLEAN & SON LABORATORIES, INC.
PHONE AL 3-6272 817 WEST MADISON ST. P. O. BOX 1858 PHOENIX

[illegible] J. Dieringer
[illegible] Metal
[illegible], Arizona

Date February 2[illegible], [illegible]

Sample of [illegible]

Received [illegible]

Submitted by: Same

ASSAY CERTIFICATE

Gold figured at $ 35.0 per ounce. Silver figured at $ [illegible] per ounce

Lab No.	Identification	Gold		Silver		Percentage	
		Oz. per Ton	Value	Oz. per Ton	Value	Copper (Cu)	
25390	#1 approx 2' cut 20' up hill FROM 6' cut on Lado No 2					3.10	
25391	#2 SAMPLE FROM 6' cut No 1 above					5.90	
25392	#3 Higher up # 17 FROM CUT SO DOWN HILL - FROM 12' SHAFT ACROSS 3' wide VEIN					8.20	
25393	#4 ~ SAMPLE FROM DUMP THROWN OUT SHAFT 12' DEEP ON CLAIM # 17					11.20	

#1 to 2 from LaRue Claims
[illegible] 3/4 MILE FROM Higher up # 17
[illegible] claims
[illegible] by above [illegible]

Respectfully submitted,
ARIZONA TESTING LABORATORIES

Charges: $ 6.00 Paid

Claude E. McLean

ARC LABORATORIES

Division of Arizona Research Laboratories Inc.

[illegible] HATCHER ROAD PHOENIX ARIZONA [illegible]

TO [illegible]

DATE [illegible]

LAB No. [illegible]

RESULTS

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] protection to clients, the public and this corporation this report is submitted for the exclusive use of the client to whom it is addressed [illegible] that it is not to be used, in whole or in part, in any advertising or [illegible] without prior written authorization from this corporation.

VALLEY ASSAY OFFICE

AND ORE TESTING LABORATORY

MEMORANDUM OF ASSAY

Tempe, Arizona

PORTION OF 1000 POUNDS AT CIRDUPOIS COPPER OR LEAD

GOLD SILVER

AT	PER OUNCE	AT	PER OUNCE	AT	PER LB	AT
OZS.	DWS. $ CTS	OZS.	DWS. $ CTS	$	CTS	$

Bulk sample from vein
at Thousand feet of 12'
[illegible] drift

By

Registered Assayer

Ben Jo Dieringer
Rock Candy Mtn.
Kanab, Utah

COPIES OF ASSAYS HIGHER UP CLAIMS
YUMA COUNTY, ARIZONA

April Mtg, 1956

CUSTOM ASSAY OFFICE

ASSAY CERTIFICATE
Jo W. (Jack) Sharpe, B. M.
Assayer

Wickenburg, Arizona 2/27/56

Sample Nos	Owners Mark on Sample	Gold oz	Gold Val Ton	Silver oz	Silver Val. Ton	Per Cent CU
1	From 3" vein on Higher Up #1	0.26	$9.10	3.18	2.86	7.9
2	Higher Up #17 across 3½' vein 2' from bottom 12 ft. shaft	0.21	7.35	2.77	2.49	3.7
3	#17 across 3½' vein 1½' from bottom 12' shaft	0.22	7.70	2.58	2.33	2.5
4	#17 across 3½' vein lowest point bottom 12' shaft	0.19	6.65	2.99	2.69	4.9

Nos 2, 3 & 4 from same shaft samples
across width shown

Charges $10.00 Pd.

(Signed)
Jo W. Sharpe----Assayer

A R C LABORATORIES
Division of Arizona Research Consultants Inc.
917 W. Hatcher Road Phoenix, Arizona Windsor 3-3573

DATE February 23, 1956
LAB NO. 1666

For:
Mr. Dieronger (Dieringer)
Adams Hotel
Phoenix, Arizona

RESULTS
Copper Ore Bleak Property
2.30 % Cu

R. L. Wells, Geologist took sample on #17 Higher Up across 3½ ft. about 2-3 ft. from bottom of 12' shaft--Same shaft as others

Respectfully submitted,
ARC Laboratories
(signed) George G. Olson

[redacted]

A [illegible] of [illegible]
Phone [illegible]
Chemists [illegible] Engineers

[illegible] Stenger
[illegible]
[illegible], Arizona

[illegible]
[illegible] by: Same

Date February [illegible] 1950

ASSAY CERTIFICATE

[illegible] figured at $35.00 per ounce — Silver figured at $[illegible] per [illegible]

Lab. No.	Identification	GOLD Ozs. per ton value	SILVER Ozs. per ton value	[illegible]
[illegible]	# 1 across 2' cut 20' up hill from 0' cut on Lance No. [illegible]			[illegible]
[illegible]	# [illegible] Sample from 0' cut No. 1 above			[illegible]
[illegible]	# [illegible] higher up #[illegible] from cut 50' down hill from 12' shaft across 3' wide vein			[illegible]
[illegible]	# [illegible] Sample from dump thrown out shaft 12' deep Claim #1			[illegible]

[illegible] Claim
[illegible] mile from Sugar Ip #17
[illegible] by some [illegible] person
Charges: $6.00 pd.

Respectfully submitted,
ARIZONA [illegible]
(signed) Clarence E. McLean

A & C LABORATORIES
Division of Arizona Research Consultants Inc.
[illegible] Hatcher road — Phoenix, Arizona — Windsor [illegible]
[illegible] E. Bleak
[illegible] Richland
[illegible], Arizona

Date February 16, 1950
Lab. No. 1[illegible]

RESULTS

Copper ore ---------- 4.34% copper

[illegible]tfully submitted,
[illegible]oratories
[illegible] John T. Ong, Jr.

Mining operator, L. Cordell [illegible] by F. O. Bleak cut sample across [illegible] about 1½' from bottom 12 ft. shaft Claim #17

VALLEY ASSAY OFFICE
and Ore Testing Laboratory
[illegible] L. E. Bleak — Memorandum of assay — Tempe, Arizona July 19, 1955

Sample No.	Gold oz	Silver oz.	Copper %
1	0.06	0.90	11.8

[illegible] Bleam took sample from vein material [illegible] of 12' shaft on dump.

(signed) L. Lu Royer
Registered Assayer

Charge $3.00 pd.