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

SEP 14 1951

REGIONAL DIRECTOR'S OFFICE
REGION IV
SEP 20 1951
BUREAU OF MINES
DENVER, COLORADO

Mr. Frank M. Carrow
Western Copper Company
Globe, Arizona

Re: Docket DMA-9

Dear Mr. Carrow:

Your application has been reviewed by the Defense Minerals Administration and we are sorry to inform you that it must be denied.

On the basis of the material submitted with your application and the material available to the Government it is not believed that the project is such as to warrant Government participation at this time.

Very truly yours,

Tom Lyon

Tom Lyon, Director
Supply Division

J.F.S.

RVVaughter
9/12/51
Copy to: Adm. Reading File
Executive Officer, DMA Field Team IV
J.E.Gowen
C.H.Johnson
D. Macleren
Files - Docket DMA

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

SEP 14 1951

REGIONAL DIRECTOR'S OFFICE
REGION IV
SEP 20 1951
BUREAU OF MINES
DENVER, COLORADO

Memorandum:

To: Administrative Management Division

From: Director, Supply Division

Subject: Application for production loan of Western Copper Company, Globe, Arizona (DMA-9); Consolidated-Copper

Denial of this application is recommended by Field Team Region IV for the following reasons:

1. Grade of ore found in a hole drilled in 1939 and in the 160 ft. tunnel is submarginal. There is no reason to expect that additional work will show ore of better grade.

2. There is a serious shortage of water in the district.

3. There are no mineable ore reserves. Inspiration will not treat custom ore and there is no other possibility for treating it at the present time.

4. The ore grade too low to justify the capital cost of a leaching plant.

A letter has been prepared notifying the applicant of this denial.

J.F.D.

Transmitted herewith for your disposal is the entire file consisting of the following:

1 Field Team Report of the Bluebird Group, Western Copper Company.
1 Topographic map of Schulze-Carlotta Copper Deposit
4 Copies of Notes on the Bluebird Group 11-28-50
1 Mimeographed form of 3 pages from Region IV, October 13
2 DMA Referral of Application for Government Aid forms
5 Letters to Regional Director Region IV from
Frank E. Carrow November 30, 1950
J.K. Richardson, January 9, 1951 with letter attached from S. E. Willieton to Mr. Carrow, January 9, 1951
H. F. Petersen February 5, 1951
Paul T. Allsman March 8, 1951
Tom Lyon March 30, 1951 (2 copies)

4 Letters to Mr. F. L. Carrow from
F. T. Allmann October 13, 1950 with letter attached from R. H. Storms to Mr. Carrow October 5, 1950
J. F. East October 24, 1951
J. K. Richardson January 3, 1951 (2 copies)
J. K. Richardson January 11, 1951
1 Letter to Operating Committee from
J. E. East March 9, 1951 (3 copies) with 2 attachments to 2 of the letters - F. T. Allmann March 8, 1951 and R. P. Peterson February 5, 1951 to J. E. East
2 Letters to J. K. Richardson from Frank L. Carrow
January 8, 1951 with report of Lynn Harvey dated November 22, 1949 attached
January 16, 1951
2 Letters to Senator Hayden from Boyd
February 1, 1951 with attached letters of Hayden to Boyd January 25, 1951
April 2, 1951 with attached letter from Hayden to Boyd March 23, 1951
1 Letter from F. L. Carrow to A. H. Allinson January 16, 1951
1 Letter from L. D. Boom to C. E. Merrill November 17, 1951
1 Letter from J. F. East to Mr. Boyd December 4, 1950
1 Letter from J. F. East to Tom Lyon April 3, 1951

Tom Lyon

Tom Lyon, Director
Supply Division

Attachment

RVWashies
9/12/51

Copy to: Adm. Reading File
Executive Officer, Region IV
J.B.Gowen
C.H.Johnson
D.MacLaren
Files - Docket Div.

Mining Division
Date Rec'd.
JUN 21 1951
BUREAU OF MINES
Denver, Colorado

Mining Division
Region IV

June 19, 1951

Mr. Nels P. Peterson
U. S. Geological Survey
Sears Building
Globe, Arizona

Pse

My dear Mr. Peterson:

I am herewith sending you a copy of the assay results of the churn drill hole drilled in August 1950 on the Bluebird Group of the Western Copper Co.

Sincerely yours,

Walter R. Storms, Chief
Arizona-New Mexico Branch

CC P. T. Allsman
DMA 9
DF

MJElsing:frj

Western Copper Co.'s Bluebird Group

Samples were taken at 5-foot intervals in August 1950.

Sample No.	Percent Copper: Arizona Assay Office	Percent Copper: Miami Copper Co.	Difference
1	0.30	0.22	0.08
2	.46	.34	.12
3	.46	.32	.14
4	.41	.30	.11
5	.25	.19	.06
6	.25	.17	.08
7	.14	.12	.02
8	.25	.17	.08
9	.34	.24	.10
10	.46	.40	.06
11	.62	.48	.14
12	.50	.36	.14
13	.35	.35	—
14	.41	.36	.05
15	.46	.42	.04
16	.77	.63	.14
17	.62	.55	.07
18	.55	.47	.08
19	.77	.70	.07
20	.83	.56	.27
21	.55	.53	.02
22	.35	.33	.02
23	.41	.27	.14
24	.62	.46	.16
25	.65	.54	.11
26	.55	.37	.18
27	.41	.36	.05
28	.50	.43	.07
29	.50	.34	.16
30	.41	.39	.02
31	.41	.33	.08
32	.62	.36	.26
33	.83	.57	.26
34	.83	.44	.39
35	.46	.34	.12

Western Upper Jackfish Bloodred Creek

Samples were taken at 3-foot intervals in August 1950.

Sample No.	Arizona Jerry Claim	Percent copper (Cu)	Difference
1	0.30	0.22	0.08
2	.18	.14	.04
3	.45	.32	.13
4	.47	.32	.15
5	.23	.14	.09
6	.18	.17	.01
7	.14		.02
8	.24	.17	.05
9	.14	.12	.02
10	.46	.30	.16
11	.62	.47	.15
12	.30	.36	.06
13	.34	.28	—
14	.43	.36	.07
15	.77	.43	.34
16	.62	.48	.14
17	.52	.35	.17
18	.54	.27	.27
19	.72	.25	.47
20	.83	.36	.47
21	.35	.22	.13
22	.32	.18	.14
23	.41	.21	.20
24	.42	.46	.04
25	.3	.3	.00
26	.38	.27	.11
27	.41	.27	.14
28	.50	.45	.05
29	.50	.30	.20
30	.41	.35	.06
31	.41	.34	.07
32	.42	.32	.10
33	.23	.21	.02
34	.23	.20	.03
35	.40	.27	.13

Western Copper Co.'s Bluebird Group (Cont'd)

Samples were taken at 5-foot intervals in August 1950

Sample No.	Percent Copper: Arizona Assay Office	Percent Copper: Miami Copper Co.	Difference
36	.25	.13	.12
37	.30	.20	.10
38	.30	.19	.11
39	.19	.19	—
40	.41	.33	.08
41	.41	.29	.12
42	.46	.28	.18
43	.50	.29	.21
44	.41	.27	.14
45	.41	.28	.13
46	.41	.27	.14
47	.41	.32	.09
48	.55	.33	.22
49	.46	.32	.14
50	.35	.33	.02
51	.30	.28	.02
52	.46	.21	.25
53	.20	.16	.04
54	.25	.15	.10
55	.25	.14	.11
56	.15	.17	.02
57	.35		
58	.41		
59	.35		
60	.30		
61	.35		
62	.35		
63	.30		
64	.30		
65	.15		
66	.25		
67	.20		
68	.35		
69	.25		
70	.20		
71	.20		

Western Copper Co.'s Bluebird Group (Cont'd)

Samples were taken at 5-foot intervals in August 1950.

Sample No.	Percent Copper: Arizona Assay Office	Percent Copper: Miami Copper Co.	Difference
72	.15		
73	.20		
74	.10		
75	.10		
76	.30		
77	.25		
78	.25		
79	Missing		
80	.30		
81	.20		
82	.10		
83	.20		
84	.15		
85	.15		
86	.20		
87	.10		
88	.10		
89	.05		

Summary

Total depth of hole----------	445 feet	
Miami Copper Co. average for----------	175 ft.	0.38 percent
Arizona Assay Office Average for ½--------	175 ft.	0.49 "
Miami Copper Co. average,----------	175-330 ft.	0.24 "
Ariz. Assay Office average,----------	175-330 ft.	0,35 "

June 6, 1951

Memorandum

To: Tom Lynn, Director, Supply Division, Defense Minerals Administration

From: DMA Field Team, Region IV

Subject: DMA Docket 9, Western Copper Co., Bluebird Group, Gila County, Arizona

We are enclosing the report on the above docket, DMA 9, in accordance with your memorandum of March 30.

The Field Team concurs with the conclusions and recommendations contained in the report.

Paul T. Allsman
F. T. Allsman, Alternate

A. H. Koschmann
A. H. Koschmann

Attachments
One copy by air mail
Two copies by regular mail

Copy to DMA files, Koschmann, Allsman, Storms, Anderson
/el

Mining Division
Region IV

May 3, 1951

Memorandum

To: W. R. Storms

From: Chief, Mining Division

Subject: DMA Docket 9

This is a copy of the letter I called you about.

P. T. Allsman

Attachments

send copy around early as possible P.T.G.

Stamos
DMAG etc.

This is ~~the~~ a copy of the letter I called you about.

P.T.G.

Collaman
Has this been
done?
JFE

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

March 30, 1951

Pending

REGIONAL DIRECTOR'S OFFICE
REGION IV
APR 5 - 1951
BUREAU OF MINES
DENVER, COLORADO

Memorandum

To: Executive Officer, DMA Field Team, Region IV,
224 New Customhouse
Denver 2, Colorado

From: Director, Supply Division

Through: Coordinating Committee

Subject: Loan Application, Western Copper Company (DMA-9)

This acknowledges receipt of the reports of the Geological Survey and the Bureau of Mines on the subject application, transmitted by your memorandum of March 9, 1951 to the Operating Committee.

The recommendation that the loan application be denied for lack of adequate reserves is acceptable, as is also the suggestion that the applicant be encouraged to apply for exploratory assistance. I am disappointed that no contact was made with the applicant and no visit was made to the property, particularly as it was indicated in Williston's letter of January 9, to Mr. Carrow, of which you received a copy, that such contact would be made. It was expected also that the Field Team report would comment on the operation proposed by the applicant, as to its feasibility, cost of production, and what reserves would be needed to undertake it.

I should like very much to have representatives of the Field Team call on Mr. Carrow, as a group if possible, to discuss the project. It could be explained to him that it appears to be an exploratory project, and as such eligible for consideration under the forthcoming exploration program but not for a production loan. The project could be discussed in a general way, as to the chances of developing reserves, the kind and layout of drilling to be done, and the methods of mining and treatment proposed in the event exploration is successful. Then the applicant would feel that his project had been given proper attention, and he would be better prepared to submit a proposal for exploration when and if he chooses to do so.

It would have been better, I think, if your staff had collaborated on this study. Evidently the geologist did not know that the Bureau of Mines had sampled the property, hence there is a discrepancy between his estimate and the Bureau estimate. The Survey geologist's report would seem to be unfavorable to an exploratory project, stating "I strongly doubt that any substantial reserves averaging as much as 1 percent copper could be developed." But perhaps he has set too high an objective. If a very few million tons of somewhat less than 1 percent ore would support a small leaching operation, would that be a reasonable objective?

Will you let me know if a conference with Mr. Carrow can be arranged for a fairly early date? A copy of the report on the Bluebird group by Lynn Hersey is enclosed. This may be returned to Mr. Carrow when it has served your purpose, as we have another copy here.

Tom Lyon

Tom Lyon, Director
Supply Division

Attachment

Approved:

Tom Lyon
Chairman

Powell B. Moon
Member, Bureau of Mines

Olaf Ri Rose
Member, Geological Survey

Copy to: Executive Secretary
Copper Commodity Committee
Files

DMI

Pandemy

~~approved~~

WOM

5/20

April 5, 1951

Memorandum

To: Tom Lyon, Director, Supply Division, DMA

From: Executive Officer, DMA Field Team, Region IV

Subject: Western Copper Company, DMA 9

This will acknowledge your memorandum dated March 30 with reference to the loan application of Western Copper Company, Docket DMA 9.

We will arrange to have representatives of the Field Team call on Mr. Carrow and discuss this matter fully with him.

J. H. East, Jr.

J. H. East, Jr.

JHE/el
cc-Leschmann
DMA files

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

REGIONAL DIRECTOR'S
OFFICE
REGION IV
APR 6 - 1951
BUREAU OF MINES
DENVER, COLORADO

DM H

WOM

April 2, 1951

Hon. Carl Hayden
United States Senate
Washington 25, D. C.

My dear Senator Hayden:

This is in reply to your letter of March 23, 1951 with reference to the application of Mr. Frank E. Carrow of Globe, Arizona, for assistance in the development of his copper property at Miami. You ask if there has been a change in the situation that would make it possible for the government to be of assistance to Mr. Carrow.

We do not feel that the copper situation is such as to justify the initiation of a premium price program or the encouragement of copper production by purchases at prices above the market. We have, however, given considerable thought to Mr. Carrow's proposal with the hope that he might be able to take advantage of the forthcoming exploration program of Defense Minerals Administration. I think you may be aware of the nature of this program which is described in the enclosed press release dated February 20, 1951. It has not as yet received final approval but we have been proceeding to investigate certain exploration projects with it in mind.

If, as seems possible, final analysis indicates that Mr. Carrow's project is very largely exploratory in nature, it would not be eligible for a production loan but might receive favorable consideration as an exploratory project.

The copies of my previous letters to you on this subject, which you enclosed, are returned herewith as requested.

Sincerely yours,

JAMES BOYD

Administrator

Enclosures 3

Copy to J. H. East, 224 New Customhouse, Denver, Colorado, W. C. I.
Executive Secretary
Copper Commodity Committee
F i l e s

UNITED STATES SENATE

March 23, 1951

Dr. James Boyd, Administrator
Defense Minerals Administration
Department of the Interior
Washington 25, D. C.

My dear Dr. Boyd:

Referring to your courteous letters of December 11, 1950 and February 1, 1951, copies of which I enclose for your ready identification, I shall appreciate your advice as to whether there has been any change in the situation which might make it possible for the Government to be of assistance to Mr. Carrow in developing his mining properties.

Yours very sincerely,

U. S. S.

COPY

COPY

March 9, 1951

Memorandum

To: Operating Committee, Defense Minerals Administration

From: DMA Field Team, Region IV

Subject: DMA Docket 9, Western Copper Company (Bluebird Prospect), Gila County, Arizona.

Referring to your letter of instructions, dated January 9, regarding the loan application of the Western Copper Company (Bluebird Prospect), DMA Docket 9, we are attaching a letter report by N. P. Peterson, geologist, U.S. Geological Survey, and a letter from P. T. Allsman, Chief, Mining Division, Region IV, Bureau of Mines. You will note that both reports indicate the tonnage is small and of a low grade. The report of Mr. Peterson disagrees with the appraisal of Mr. Lynn Hersey, which was attached to the application.

We concur with the findings of the field men and recommend denial of the loan application for development. Because of the difference of opinion and the possibility of more extensive ore occurrences, we recommend it be suggested to the applicant that his proposal be considered for an exploration project when authorized. I that case, we would recommend that a few diamond drill holes be drilled at points selected by the DMA Field Tea,

We are returning the brochure of the Western Copper Company.

J. H. East, Jr.

A. H. Koschmann

Copy to Mr. Koschmann
Allsman
Chas Anderson
Storms
N. P. Peterson
DMA files

Mining Division
Region IV

March 8, 1951

Memorandum

To: Field Team, DMA, Region IV

From: P. T. Allsman

Subject: DMA Docket 9, Western Copper Company (Bluebird Prospect), Gila County, Arizona

A Bureau of Mines report on the Blue Bird mine and maps showing sampling on a similar occurrence of copper, the Schultz-Carlota, is attached.

It appears to me that an appraisal of the Bluebird as far as any great tonnage is concerned depends upon possible extension in depth which in turn is a geologic problem. There is a definite difference of opinion between N. P. Peterson and Lynn Hersey on this point. The difference in opinion is on origin. If Peterson is correct, no great extension in depth is likely. If Hersey is correct, extension is possible.

After reviewing Bureau of Mines reports on sampling of the deposit and discussing the situation with engineers in the Tucson office, it appears that the deposit comprises a mantle of reprecipitated copper containing about 1,000,000 tons containing about 0.7 percent copper. Considering the grade, the tonnage is too small to support a profitable operation at this time.

In regard to the difference in opinion between Hersey and Peterson, if there is any reasonable doubt that Peterson's interpretation could be wrong, it is recommended that a few holes be drilled to make certain.

P. T. Allsman

WDM/PTA/cl
cc-Koschmann
DMA files
McMillan

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Arizona-New Mexico Branch
SOUTHWEST EXPERIMENT STATION
Box 4097
UNIVERSITY STATION

MINING DIVISION
REGION IV

TUCSON, ARIZONA

February 20, 1951

Memorandum

To : Paul T. Allsman, Denver, Colorado

From : Chief, Arizona-New Mexico Br., Mining Div., Region IV

Subject : DMA Docket No. 9, Western Copper Co., (Bluebird prospect), Gila County, Ariz.

Mining Division
Dec. Docs.
FEB 26 1951
BUREAU OF MINES
Denver, Colorado

In answer to your memorandum of February 12, asking about the Bureau's report on the Schulze copper property in the Miami area, Larry Marshall sampled the Schulze property for the Bureau in 1944 but made no written report on his findings. I am enclosing a map which shows his samples. The whole thing averaged 0.33 percent copper, as you can see.

On March 3, 1950, I sent you a copy of Tom Chapman's War Minerals Report on the Blue Bird mine. In case you cannot find it, I am enclosing another copy with maps. Tom estimated 1,000,000 tons of copper-bearing material averaging 0.713 percent copper. However, Tom usually was pretty optomistic on his examination work.

Stewart, who might know something about the Schulze property, is on leave this week as his brother-in-law in Phoenix died yesterday. Kumke is at Artillery Peak. When either or both return I will ask them if they know anything about these properties. Kumke spent several years in Globe sometime ago.

Your file also is attached.

Walter R. Storms

Walter R. Storms

CC P. T. Allsman
DMA Docket 9
DF

C
O
P
Y

Box 1211, Globe, Ariz.
February 5, 1951

Memorandum

To: Field Team, Region IV

From: N. P. Peterson, Geological Survey

Subject: Docket DMA-9, Western Copper Company (Bluebird), Miami, Arizona

The Bluebird property of the Western Copper Company lies just outside the southern limits of the area of primary copper mineralization that includes the Miami-Inspiration ore body. It is in the southwestern part of an outcrop of highly fractured Schultze granite porphyry that forms a lobe on the northeastern side of the main Schultze granite mass. The Miami-Inspiration ore body occurs along the north contact of this lobe with the Pinal schist. The major portion of the ore body is in the adjacent schist.

The mineralization on the Bluebird property consists entirely of copper carbonates and silicates deposited as very thin films along the minute fractures in the brecciated rocks and as discontinuous veinlets along some of the larger fractures and minor faults. The mineralized granite porphyry is remarkably fresh and shows no evidence of hydrothermal alteration. There is no indication that copper sulfides were ever present in these rocks. This is probably also true of the small masses of schist that crop out on the property, but the evidence is less conclusive because the effects of weak hydrothermal alteration are difficult to recognize in the schist. The copper minerals in the rocks exposed on the Bluebird property appear to have been deposited by groundwater solutions that contained copper leached from the Miami-Inspiration ore body to the north. Thus no deposits of secondary or primary copper sulfides can be expected to occur at greater depths.

I have no information based on sampling as to the actual copper content of the rocks. However, after completing the areal mapping of this general area in 1944, I estimated that the schist outcrops would probably average less than 0.5 percent and the granite outcrops less than 0.3 percent copper.

A reliable visual estimate is difficult because of the very erratic distribution of the copper minerals. I do not recall being particularly impressed by the area designated by Hersey as "most favorable". I strongly doubt that any substantial reserves averaging as much as 1 percent copper could be developed.

In the summer of 1944, the Bureau of Mines took about 100 samples from the outcrops in an area of similar mineralization on the Schultze property about 4,000 feet southwest of Hersey's most favorable area. I do not have the results of this sampling, but they are undoubtedly available.

Drought conditions have existed in the Globe-Miami district during most of the past 10 years, and the use of water is greatly in excess of recharge. The groundwater reserves of the major mining companies of the district are dwindling but are still sufficient to meet the current requirements. The local municipalities and utility companies are being hard pressed to provide sufficient water supplies for domestic use, and the strain will probably be increased if additional personel is brought into the district during the development of the Copper Cities project.

The leaching operation proposed by Hersey probably would require only about 200,000 gallons per day or a continuous supply of about 140 GPM. This seems a small amount of water; but at present, it appears exceedingly doubtful that even this small additional supply could be developed at a reasonable cost.

Nels P. Peterson

cc: C. A. Anderson
Enclosure: Hersey report

A reliable visual estimate is difficult because of the very erratic distribution of the copper minerals. I do not recall being particularly impressed by the area designated by Hersey as "most favorable". I strongly doubt that any substantial reserves averaging as much as 1 percent copper could be developed.

In the summer of 1944, the Bureau of Mines took about 100 samples from the outcrops in an area of similar mineralization on the Schulize property about 4,000 feet southwest of Hersey's most favorable area. I do not have the results of this sampling, but they are undoubtedly available.

Drought conditions have existed in the Globe-Miami district during most of the past 10 years, and the use of water is greatly in excess of recharge. The groundwater reserves of the major mining companies of the district are dwindling but are still sufficient to meet the current requirements. The local municipalities and utility companies are being hard pressed to provide sufficient water supplies for domestic use, and the strain will probably be increased if additional personnel is brought into the district during the development of the Copper Cities project.

The leaching operation proposed by Hersey probably would require only about 200,000 gallons per day or a continuous supply of about 140 GPM. This seems a small amount of water; but at present, it appears exceedingly doubtful that even this small additional supply could be developed at a reasonable cost.

Nels P. Peterson

cc: C. A. Anderson
Molycorner Hersey report

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

Charlotte

February 27, 1951

Rewritten

Memorandum

To: Field Team, DMA, Region IV

From: R. T. Allsman

Subject: DMA Docket 9, Western Copper Company (Bluebird Prospect). Gila County, Arizona

A Bureau of Mines report on the Blue Bird mine and maps showing sampling on a similar occurrence of copper, the Schultz-Carlota, is attached.

It appears to me that an appraisal of the Bluebird as far as any great tonnage is concerned depends upon possible extension in depth which in turn is a geologic problem. There is a definite difference of opinion between N. P. Peterson and Lynn Hersey on this point. The difference in opinion is on origin. If Peterson is correct, no great extension in depth is likely. If Hersey is correct, extension is possible.

~~Both conclusions are based upon alteration studies of exposed rocks. It may take a few drill holes eventually to determine definitely who is correct.~~

After reviewing Bureau of Mines reports on sampling of the deposit and discussing the situation

R. T. Allsman

P. T. Allsman

by J. O. McMillan

Attachment.

with engineers in the Tucson office, it appears that the deposit comprises a mantle of reprecipitated copper containing about 1,000,000 tons containing about 0.7 percent copper. Considering the grade, the tonnage is too small to support a profitable operation at this time.

(over)

In regard to the difference in gunning between Heavey and Peterson. if there is any reasonable doubt that Peterson's interpretation could be wrong it is recommended that a few holes be drilled to make certain

PTG

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

FEB 13 1951
BUREAU OF MINES
DENVER, COLORADO

February 12, 1951

Memorandum

To: W. R. Storms

From: Chief, Mining Division, Region IV

Subject: Docket DMA-9, Western Copper Company (Bluebird), Miami, Arizona

Herewith is the above docket and letter report by Nels P. Peterson on the Bluebird property. I have been requested by the DMA Team, Region IV, to review the information developed by the Bureau of Mines on the Shultz and any information we may have on this property, but find no information in the files. The geologist appears to disagree materially.

I would like to have your opinion or any one in your organization familiar with the area, and the information sent to me as early as possible.

I recall going over this ground several years ago with Hedges but don't recall much else about it.

Please return the file.

Paul T. Allsman

Enclosures

CC: Field Team, Reg. IV

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON

REGIONAL DIRECTOR'S OFFICE
REGION IV
FEB 12 1951
BUREAU OF MINES
DENVER, COLORADO

Globe, Ariz.
February 6, 1951

Defense Minerals Administration
Field Team, Region IV
224 New Customhouse
Denver, Colo.

The attached is part of the file: Docket DMA-9, Western Copper Company, Miami, Arizona.

Nels P. Peterson

NPE

ONAL DIRECTOR

Region IV

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

October 24, 1950

Mr. Frank B. Garrow, President
Gaston Copper Company, Inc.
Globe, Arizona

Dear Mr. Garrow:

This will acknowledge receipt of your letter dated October 18, 1950 with a report by Lynn Kersey.

We are placing this application in the files pending promulgation of the rules relative to Government loans under the Defense Production Act of 1950, at which time action will be taken on your application.

Sincerely yours,

J. H. Eastt, Jr.
Regional Director

JHE:lla

cc: J. Allman
[illegible] Stokes

WESTERN COPPER COMPANY., INC.

GLOBE, ARIZONA

F. E. CARROW
PRESIDENT

Oct 18, 1950

LOUIS V. STRUKEN
SECRETARY-TREASURER

REGIONAL DIRECTOR'S
OFFICE
REGION IV
OCT 23 1950
BUREAU OF MINES
DENVER, COLORADO

United States
Department of the Interior
Bureau of Mines
Denver 2, Colo.

Gentlemen;

The information you require concerning the Western Copper Company.,Inc is as follows:

(1) Western Copper Company.,Inc Globe, Arizona.

(2) Not Known.

(3) See Report enclosed.

(a) See maps in report.

(b) To be decided upon when Engineer examines Property.

(c) Same as (b).

(d) None waiting for Loan.

(e) Labor Available.(Number of Employee's to be decided upon in accordance with engineer's opinion.

(f) International Smelter Inspiration, Arizona.

(1) Two Miles

(2) Trucks

(g) See report.

(h) " "

(I) Fair condition.

(J) Present Price)

(4) A.B.C. See report

(5) Engineer's report enclosed please return.

(6) Mr. Carrow has had 35 Years pratical Experience in Mining.

(8) No.

Respectfully submitted,

Frank E. Carrow

Frank E. Carrow, president.

REGIONAL DIRECTOR'S OFFICE
REGION IV
FEB 8 - 1951
BUREAU OF MINES
DENVER COLORADO

February 1, 1951

Hon. Carl Hayden

United States Senate

My dear Senator Hayden:

Referring to your letter of January 25, regarding the application for assistance tendered by Frank Carrow.

On January 29 Mr. Carrow wrote to Mr. Williston, Director of our Supply Division, concerning the Blue Bird group of claims at Miami. He was particularly interested in whether a premium price plan, as operated during World War II, was in effect at the present time, and he was advised that there is no such program in effect at present. We pointed out to him, however, that we were diligently working toward the development of an exploration program and hoped that it would be ready within the relatively near future.

The National Minerals Advisory Council, at their meeting with the Secretary of the Interior on January 29, presented some resolutions which we have may be the basis for an exploration program as well as a development program.

With kindest regards and trusting that this gives you the information you desired, I am

Very truly yours,

JAMES BOYD

Administrator

JKRichardson/apd

CC - Senator Hayden
Administrator's Reading File
Executive Secretary
Ex. Off., Field Team, Region IV
Copper Commodity Team
Files

DMA

REGIONAL DIRECTOR'S
OFFICE
REGION IV
FEB 5 - 1951
BUREAU OF MINES
DENVER, COLORADO

January 29, 1951

#9

Mr. Frank E. Carrow
Western Copper Company
Globe, Arizona

Dear Mr. Carrow:

Your letter of January 16 addressed to Mr. Williston, concerning the Blue Bird group of claims at Miami, Arizona, has been referred to me for reply.

There is no premium plan, such as operated during World War II, presently contemplated under the provisions of the Defense Production Act. It is only fair to say to you, however, that a number of the programs which we hope will encourage maximum development of domestic mines have not as yet been fully developed. This delay was due to the fact that the tax provisions were not fully worked out prior to January 1. Programs designed to stimulate production are being worked upon at the present time. However, there is no assurance as to whether such programs will be immediately forthcoming.

I trust that this answers the question posed by your letter to Mr. Williston.

Very truly yours,

J. K. Richardson
Chief, Copper Branch

JKRichardson:apd

CC - L. F. Strobel - 4623
Field Team IV
Files

JE

224 New Customhouse
Denver 2, Colorado

January 15, 1951

Memorandum

To: N. P. Peterson, Geological Survey, Globe, Ariz.

From: Field Team, Region IV

Subject: Docket DMA-9, Western Copper Company (Blubird), Miami, Arizona

We are enclosing a report on the Bluebird Group, Pinal County, Arizona, by Lynn Hersey. Also enclosed is a copy of a memorandum from the Copper Commodity Committee dated January 9, 1951, addressed to the DMA Field Team, Region IV.

You will note in the last paragraph of page 1 in the memorandum that the Committee believes you have rather intimate knowledge of this area, and perhaps of this project. Without doing any field work, will you please look over the report by Mr. Hersey and advise us if, in your opinion, the project has merit.

We do not contemplate making investigation at this time, but we would like to secure your ideas before making any assignments.

J. H. East, Jr.

J. H. East, Jr.

A. H. Koschmann

A. H. Koschmann

cc: JH East, Jr.
AH Koschmann
PT Allsman
WR Storms
Chas. Anderson

Gate copy

Enclosures

JHE:lm

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

REGIONAL DIRECTOR'S OFFICE
REGION IV
JAN 15 1951
BUREAU OF MINES
DENVER, COLORADO

January 9, 1951

Memorandum

To: Executive Officer, DMA Field Team, Region IV
224 New Customhouse
Denver 2, Colorado

From: Copper Commodity Committee, through Operating Committee

Subject: Loan Application Western Copper Co., (Bluebird), Miami, Arizona. Docket No. DMA-9

Transmitted herewith is our file on the above application. It is requested that arrangements be made, at your convenience, for a field study of the project.

We have reviewed the application and have referred also to the War Minerals Report "Blue Bird Mine", by T. L. Chapman, December, 1943. It appears that the project might have considerable merit as an exploration project when and if an exploration-incentive program gets going. If successful, production apparently could be obtained quickly on a worthwhile though moderate scale, and perhaps at market price.

The Operating Committee is informing Mr. Carrow of our desire to have a field study made, as indicated by the enclosed copy of Mr. Williston's letter to him. A report by Lynn Hersey on the "Bluebird Group", dated November 22, 1949, which was submitted by Mr. Carrow in support of his application, is enclosed herewith. This is the report Mr. Carrow asks to have returned to him as soon as possible so that he can have copies made. Attached to the report are the copies of correspondence relating to the application. It is assumed you have either in Denver or Tucson, copies of the Chapman report.

It is suggested that the Field Team consider the project on a broad basis, having in mind the feasibility and cost of subsequent production as well as the proposed exploration. We understand that Mr. N. P. Peterson, of the Geological Survey, has been working in the Globe-Miami district for several years. He should have a well-founded opinion as to the reasonableness of this project. We should also welcome his suggestions for other exploration or production projects in the area.

Report sent to Peterson 1/15/51

We do not regard this investigation as urgent, but rather to be scheduled when convenient.

J. K. Richardson, Chairman
Copper Commodity Committee

Attachments 4

Approved:

S. H. Williston, Chairman
Operating Committee

J. H. Hedges

O. N. Rove

Copy to: Mr. Strobel
Operating Committee
Copper Commodity Committee
J. H. East, (Extra)
Files

1/10/51 - Proceedings of Operating Committee Meeting

DMA-9 Western Copper Company (Bluebird) Miami, Ariz

Complete file referred to Field Team for a field study of the project. Copper commodity committee recommends that the prpposal may have merit as <u>an exploration project</u> when an exploration-incentive program is initiated. Commodity committee suggests that FT consider project on a broad basis, having in mind feasibility and cost of subsequent production, as well as proposed exploration. Commodity committee recommended the FT consult Nels Petersen, who has broad experience in that area.

12/28/50 Operating Committee Meeting Proceedings

DMA-9 Western Copper Co (Bluebird Project)

The Operating Committee considered the recommendation of the Copper Committee and returned the proposal to C. H. Johnson for consideration of Bureau of Mines and Survey reports on the property.

January 9, 1951

Re: Docket No. DMA-9
Western Copper Company
(Bluebird)
Pinal County, Arizona

Mr. Frank K. Carrow,
President, Western Copper
Company, Inc.
Globe, Arizona

Dear Mr. Carrow:

This has further reference to your application for a loan under the Defense Production Act for the Development of the Bluebird group of claims at Miami, Arizona. The material submitted by you, together with other information available to us, has been reviewed with the result that we are asking the field team of Defense Minerals Administration in Region IV to arrange with you to make a careful field study of the feasibility and cost of the proposed drilling. You may expect to hear shortly from Mr. J. H. East, Jr., of the Bureau of Mines, who is Executive Officer of the Field Team.

Very truly yours,

E. W. Williston, Acting Director
Supply Division

CHJohnson:ba

Copy to Operating Committee
L. F. Strobel
Executive Officer, DMA Field Team, J. H. East, Jr., 224
New Customhouse, Denver 2, Colorado
Copper Commodity Committee
F i l e s

January 9, 1951

Memorandum

To: Executive Officer, DMA Field Team, Region IV
224 New Customhouse
Denver 2, Colorado

From: Copper Commodity Committee, through Operating Committee

Subject: Loan Application Western Copper Co., (Bluebird), Miami, Arizona. Docket No. DMA-9

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The Operating Committee is informing Mr. Carrow of our desire to have a field study made, as indicated by the enclosed copy of Mr. Williston's letter to him. A report by Lynn Harvey on the "Bluebird Group", dated November 22, 1949, which was submitted by Mr. Carrow in support of his application, is enclosed herewith. This is the report Mr. Carrow asks to have returned to him as soon as possible so that he can have copies made. Attached to the report are the copies of correspondence relating to the application. It is assumed you have either in Denver or Tucson, copies of the Chapman report.

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We do not regard this investigation as urgent, but rather to be scheduled when convenient.

J. K. Richardson, Chairman
Copper Commodity Committee

Attachments 4

Approved:

S. H. Williston, Chairman
Operating Committee

J. H. Hedges

O. H. Reve

C. Johnson:bm

Copy to: Mr. Strobel
Operating Committee
Copper Commodity Committee
J. H. East, (Extra)

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

DMA

January 3, 1951

Air Mail

Re: Docket No. DMA-9
Western Copper Company
(Bluebird)
Pinal County, Arizona

Mr. Frank E. Carrow
President, Western Copper
Company, Inc.
Globe, Arizona

Dear Mr. Carrow:

This is a belated acknowledgment and reply to your letter of December 4, 1950, to Mr. J. H. East, Jr., requesting return of the report on the Bluebird property. Mr. East meanwhile, has forwarded the entire file to the Defense Minerals Administration, and it has been referred to this Committee for consideration.

Inasmuch as we expect to review the project shortly, and as the one copy will serve our immediate purpose, I trust it will be agreeable to you if we keep it here. It will be marked for return to you as soon as the preliminary review is completed, at which time, if necessary, we may ask you to have a copy made for further reference. The application has been assigned Docket No. DMA-9.

Very truly yours,

J. K. Richardson, Chairman
Copper Commodity Committee, DMA

CHJohnson:ba

Copy to J. K. Richardson
J. H. East, Executive Officer, DMA Field Team, Region IV
224 New Customhouse, Denver 2, Colorado
C. H. Johnson
Operating Committee
F i l e s

December 11, 1950

REGIONAL DIRECTOR'S OFFICE
REGION IV
DEC 15 1950
BUREAU OF MINES
DENVER, COLORADO

Hon. Carl Hayden

United States Senate

My dear Senator Hayden:

In reply to your letter of December 6 to which was attached a letter from Mr. Frank A. Carrow, Globe, Arizona, inquiring concerning mining loans:

We have received considerable information from Mr. Carrow concerning his property and its possibilities for production. The case is now being considered by our copper people and we shall communicate with Mr. Carrow again just as soon as we have some definite answer for him.

The type of assistance that can be given to mining enterprises is described in the enclosed copy of a press release dated December 5.

In regard to Mr. Carrow's question about "premium prices", there is no provision for across-the-board premium prices in the Defense Production Act. We can receive and consider, however, proposals for Government purchase of metals at prices somewhat above market if the individual mine situation warrants it.

Mr. Carrow's letter is returned herewith.

Sincerely yours,

JAMES BOYD

Administrator
Defense Minerals Administration

LBMoon:gr:mme

Enclosures 2

DMA-9

Copy to: J. H. East, Denver, Colo. (2)
Mr. Hedges
Mr. Rove, 4214 GS Bldg.
Mr. Williston
Mr. Boyd
Mr. Moon
Files

REGIONAL DIRECTOR'S OFFICE
REGION IV
DEC 15 1950
BUREAU OF MINES
DENVER, COLORADO

December 11, 1950

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United States Senate

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Sincerely yours,

JAMES BOYD

Administrator
Defense Minerals Administration

LBMoon:gr:mme

Enclosures 2

DMA-9

Copy to: J. H. East, Denver, Colo. (2)
Mr. Hedges
Mr. Rove, 4214 GS Bldg.
Mr. Williston
Mr. Boyd
Mr. Moon
Files

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

REGION IV

OFFICE OF
REGIONAL DIRECTOR

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

December 4, 1950

Mr. Frank E. Carrow, President
Western Copper Company, Inc.
Globe, Arizona

Dear Mr. Carrow:

This will acknowledge receipt of your letter dated November 30, 1950, requesting the return of your copy of the report on the Globe-Miami Mining District, Bluebird Group, Arizona.

The report in question was transmitted to the Defense Minerals Administration, Washington, D. C., on November 6, 1950, and we have written that office today requesting that they forward the report direct to you.

Sincerely yours,

J. H. East, Jr.

J. H. East, Jr. (lm)
Regional Director

/lm

cc: PT Allman

FAE

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

OFFICE OF
REGIONAL DIRECTOR

REGION IV

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

December 4, 1950

Dr. James Boyd, Deputy Administrator
Defense Minerals Administration
Interior Building
Washington 25, D. C.

Dear Dr. Boyd:

Enclosed is a letter from Mr. Frank E. Carrow, President, Western Copper Company, Inc., Globe, Arizona, which is self-explanatory.

The report in question is on the Globe-Miami Mining District, Bluebird Group, Arizona, which was transmitted to your office on November 8, 1950. Will you please return it direct to Mr. Carrow.

Sincerely yours,

J. H. East, Jr.
J. H. East, Jr. (lm)
Regional Director

Enclosure

/lm

cc: F. Allmann

JHE

C
O
P
Y

WESTERN COPPER COMPANY, INC.
Globe, Arizona

November 30, 1950

Mr. J. H. East, Jr.
Regional Director
U. S. Dept. of the Interior
224 New Customhouse
Denver 2, Colorado

Dear Mr. East:

This will acknowledge receipt of your letter dated November 27, 1950, directing me to the Defense Minerals Administration at Washington, D. C., in connection with my application for government assistance.

I am preparing for mailing a packet containing various materials and information on the property and expect to get this out to the Administration within the next few days so that it may receive prompt attention.

Some time ago I submitted a report to you on my property. I now find this copy was my only office copy and I would therefore appreciate it very much if you would return the same so that I can have additional copies made. When this is done, I shall be glad to send a copy for your files.

Very truly yours,

(s) Frank E. Carrow
President

FEC:krb:m

(orig. sent Dr. Boyd 12/4)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
ROCKY MOUNTAIN REGION
REGION IV

OFFICE OF
REGIONAL DIRECTOR

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

November 27, 1950

Mr. Frank M. Carrow, President
Western Copper Company, Inc.
Globe, Arizona

Dear Mr. Carrow:

This will acknowledge receipt of your letter dated November 24, 1950, relative to your mining property near Miami, Arizona.

The applications for Government assistance should be forwarded to the Defense Minerals Administration, Interior Building, Washington, D. C. Full information regarding your property should be furnished.

The formal application forms have not issued from the National Security Relations Board, but we attach a form that we are using in this region.

It is suggested that you forward the information to Washington as soon as convenient so that early action may be obtained.

It is realized that the attached form is not applicable in some instances, particularly for undeveloped properties; however, you should furnish all the information available.

Sincerely yours,

J. H. East, Jr.
Regional Director

Attachment

JHE:lm
cc: JH Hedges
ED Gardner
PT Allsman
WR Storms

Domestic Mining Aid Seen In Defense Production Act

(Republic's Washington Bureau)

WASHINGTON, Aug. 31—Almost an outright statement that the administration intends to make full use of some of the broad powers in the defense production act in order to aid the domestic mining industry has been dropped by a top government official.

It was contained in the recent speech of C. Girard Davidson, assistant interior secretary for mineral resources, before the annual meeting of the American Mining Congress at Salt Lake City.

The statement helped allay some fears expressed recently that the administration would not make use of the new mine-aid provisions, since the law is permissive and not mandatory.

One of these skeptics, Sen. Eugene Milliken, Colorado Republican, said recently he thought the administration might use the new powers to boost foreign purchases only, since it has repeatedly in recent years turned down congressional plans for a new mine-subsidy program.

Davidson declared that the government is "concentrating on all these new methods for expanding minerals porduction" allowed under the defense production act, and proceeded to outline the specific provisions which would help.

He said the act would help the minerals industry "to expand exploration, speed development of new metallurgical processes, and to increase production from both active and inactive deposits."

He continued:

"First, the government can make direct loans to private enterprise, and loan guarantees to private banking institutions, for expansion of existing capacity, for development of new capacity, for exploration and mining, and for development of technological processes and production of materials. x x x.

"Second, the government can make long-term procurement contracts which will guarantee a market to the minerals operator for a reasonable period and at a price adequate to cover the cost of production. x x x.

"Third, the government, through use of its priorities and allocations authority, can channel steel and other materials to the mining industry and the mining machinery industry for essential work, whether it be exploration, expansion of mining operations, or of processing.

Civilian Air Group Urges War Planning

WASHINGTON, Aug. 31 (AP)—A committee of 12 experts proposed Thursday a program for fullest use of the nation's civil aviation facilities in wartime.

The plan was presented to D.

With Arizonans In Armed Services

(The Arizona Republic wants pictures and stories of Arizona's servicemen and women. Send pictures and information about your relatives in service to The Arizona Republic city desk. The picture, if properly identified, will be returned to you.)

Pete W. Tolmachoff, 23, son of Mr. and Mrs. Bill Tolmachoff of

she has been in the corps for two years.

Pfc. Porter Harlan, jr., 19, son of Mr. and Mrs. Porter Harlan of Laveen, is a clerk-typist at Chanute Air Force Base in Illinois. He attended Phoenix Union High School. He is the husband of Gladys Kroenke, daughter of Mr. and Mrs. Fred Kroenke of Phoenix.

Sweden Rejects Soviet Charges

STOCKHOLM, Aug. 31 (AP)—Sweden Thursday rejected as without foundation Soviet charges that Swedish authorities were guilty of "lawless persecution of Soviet citizens."

The foreign office announced rejection of the Soviet note, delivered Wednesday. The Russian note brought up the case of three Latvians who left the Soviet ship Bellostrov during its stay in Stockholm Sept. 16, 1949. Two returned to England and the third went to

WESTERN COPPER COMPANY., INC.

GLOBE, ARIZONA

F. E. CARROW
PRESIDENT

LOUIS V. STRUKEN
SECRETARY-TREASURER

November 24, 1950

REGIONAL DIRECTOR'S OFFICE
REGION IV
NOV 27 1950
BUREAU OF MINES
DENVER, COLORADO

Mr. J. H. East, Jr.
Regional Director
U. S. Department of the Interior
Bureau of Mines
224 New Customhouse
Denver 2, Colorado

My dear Mr. East:

In reply to your letter of October 24th, I am going to send you, under separate cover, a panorama and a little bit of news that I have picked up around the district. I am also enclosing a clipping from the Arizona Republic. This property is on one side of the Inspiration and Miami Copper Company and I am directly on the opposite side in the trend of the ore zone.

I have been informed that the monies we have so long looked for are going to be given to the big operators instead of the small mine operators, and, if that be the case, I don't see any use of your sending your engineers to inspect my property. My property is adjacent to one of the large developing companies ~~in the~~ district, and they maintain that I will get nothing for my ~~property~~. When Senator Carl Hayden of Arizona was last here, I approached him on the subject, and he said there wasn't anything to that at all; the large companies, in any direction, were not dictating to the government what they were going to do with the monies for this class of development. If so, when the time comes, I will be glad to show your engineers around. However, if there is any truth in what the big companies are contending, then you can readily see there is no use wasting your time in any way. I have a remarkable piece of property, and I don't blame the big companies for not buying it. If they do buy it, then they have to drill it, survey it, and, when they do that, it then becomes patented property because they will not do a job of that kind unless it is patented. My property is not patented, but it is beyond any doubt worthy of exploration. In fact, I have ore on the surface on which I can start in working at this time with a bulldozer and a scorifier, plus a few other little tools. With these tools I can start producing copper in less than a week as the ore is right on top of the surface. I am sure your men will agree on this point if and when they come to view the property.

I am not hurrying you about this matter, because I know there is no use trying to hurry the government, but I was merely informing you a head of time that if the big companies in the district could dictate to the government along those lines, then it would be useless for your engineers to come.

The next thing I wanted to ask you about is the premium and how it will read. If it is all right to ask you this at this time, I would be very happy to know because I could go to work immediately with that premium.

I don't only have a little tonnage; I have a vast tonnage. Probably from the report I sent you, it can be seen that it isn't any small body of ore by any means. At this time, the main answer that I wanted to get was about the premium, and I would appreciate very much your letting me know about this.

I am now ill in bed and away from my home. Therefore I do not have Mr. Storm's address with me and am enclosing a copy of this letter for transmittal to him by you.

Thanking you for your reply, I am,

Very truly yours,

Frank E. Carrow

FRANK E. CARROW

FEC:krb

WESTERN COPPER COMPANY., INC.
GLOBE, ARIZONA

F. E. CARROW
PRESIDENT

LOUIS V. STRUKEN
SECRETARY-TREASURER

November 24, 1950

Copy for Storm

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Regional Director
U. S. Department of the Interior
Bureau of Mines
224 New Customhouse
Denver 2, Colorado

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Thanking you for your reply, I am,

Very truly yours,

Frank E. Carrow

FRANK E. CARROW

FEC:krb

REGIONAL DIRECTOR

Region 7V

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

October 24, 1950

Mr. Frank E. Barrow, President
Globe Copper Company, Inc.
Globe, Arizona

Dear Mr. Barrow:

This will acknowledge receipt of your letter dated October 16, 1950 with a report by Lynn Kersey.

We are placing this application in the files pending promulgation of the rules relative to Government loans under the DeFrees Production Act of 1950, at which time action will be taken on your application.

Sincerely yours,

J. H. Eastt, Jr.
Regional Director

JH:ED

cc: [illegible] Allman
[illegible] Storm

Form 6-98

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

U. S. GOVERNMENT PRINTING OFFICE 16—53493-2

LYNN HERSEY
CONSULTING MINING ENGINEER

P. O. BOX 1115
MIAMI, ARIZONA

November 22, 1949

Mr. F. E. Carrow
P. O. Box 1433
Globe, Arizona

Dear Mr. Carrow:

In compliance with your request I have made a surface examination of your Bluebird group of claims near U. S. Highway 70, west of the town of Miami, Arizona, and am submitting a brief report herewith.

Due to the location of this ground adjacent to active mining areas and to the fact that geological conditions are identical with those at the presently operating mines, it is my recommendation that you make an arrangement with a reputable mining concern, preferably with local connections, to do some reconnaissance drilling on the ground.

My studies indicate that 5 drill holes, located approximately at the points shown on the enclosed map, should prove or disprove this property and become a guide to further drilling, if such is indicated.

Yours very truly,

Lynn Hersey
Consulting Engineer

LH:krb

REGISTERED MINING ENGINEER
CERTIFICATE EXPIRES
LYNN HERSEY
DEC. 31, 1951
ARIZONA, U.S.A.

REPORT ON THE
BLUEBIRD GROUP OF CLAIMS
GLOBE-MIAMI MINING DISTRICT-ARIZONA

By

LYNN HERSEY Consulting Engineer

LOCATION AND GENERAL CONDITIONS

This property, belonging to Frank E. Carrow, of Globe, Arizona, consists of sixteen contiguous unpatented mining claims, the Bluebird No's. 1 to 16 inclusive located 1½ miles west of Miami, Arizona, terminus of the Southern Pacific Railway. The south corner of Claim No. 16 is crossed by U. S. Highway 60-70 allowing access to this transcontinental highway. The North corner of Claim No. 12 is adjacent to the property owned by Inspiration Consolidated Copper Company (a subsiduary of Anaconda Copper Mining Company) where two mines, an underground block caving operation and an open pit, are now in production. Two other large mines are in production in the district. These are the Miami Copper Company, adjoining the Inspiration company on the east, and the Castle Dome Copper Company, situated northwest of the Bluebird area. The combined output of the four mines represents approximately one-sixth of total United States primary copper production.

1948
88 - 10½%
834

The mean elevation of the property is about 4,000 feet above sea level. The terrain is rugged with no timber and only the usual semi-arid vegotation of shrubs and grasses.

Lynn Hersey
Mining Engineer

GENERAL GEOLOGY

The oldest formation in the mining area is the Pinal schist, consisting of metamorphosed siliceous sediments probably of Archean age. The Schultz granite and the various granitic and porphyritic intrusives are younger, evidently Mesozoic. The Pinal schist is not uniform in character due to the differences in the original materials from which the schists were formed and in variations in the intensity of the metamorphism. The copper deposits of the Miami area occur in the schist and in the porphyritic rocks in association with the Schultze granite. In some areas the schist and intrusives are overlain by a younger rock, the Gila conglomerate which is post-mineral and contains no appreciable amount of copper.

MINERALOGY

The copper minerals making up most of the present day ores of the district are Chalcocite, Malachite, Chrysocolla, and Azurite.

Chalcocite is the mineral which makes up the bulk of the sulfide ores of the district. It is wholly secondary in character, and is the result of secondary enrichment. It is usually treated by flotation, or can be dissolved in solutions containing ferric sulfate. It is not soluble in dilute solutions of sulfuric acid.

Described in simple terms, secondary enrichment, which process brought about the formation of all the low-grade porphyritic copper deposits of the southwest, consists in the dissolving of primary and/or secondary copper minerals near the

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surface by downward percolating waters and the redeposition of the copper at a greater depth at horizons where a chemically reducing condition exists. In more simple terms; The surface coppers are broken down by weathering and redeposited by coming in contact with pyrite or chalcopyrite below. There is usually a zone directly below the surface where the copper minerals are in the process of decomposition where the minerals are mainly carbonates and silicates. This zone may vary from a few feet to as much as 650 feet in thickness. The amount of copper remaining in this zone is dependent on rapidity of the weathering (which in turn is connected with the amount of rainfall) with the steepness of the topography and with the permeability of the rocks.

Malachite and Azurite are the carbonate ores which, together with Chrysocolla, make up the bulk of the minerals in the oxidized zones. These minerals are soluble in dilute sulfuric acid solutions and are not amenable to treatment by flotation.

In the early days before the advent of leaching methods carbonate minerals were not mined profitably unless the rock in which they occurred could be mined to an average copper content of from 4 to 6 per cent depending on the price of copper. They were then shipped for direct smelter treatment. In cases where there were appreciable quantities of gold or silver in the ores, or where the character of the ore was such that it was particularly desirable for its fluxing qualities at the smelter; lower grade carbonate ores were successfully mined. These special conditions do not exist at the property under discussion.

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At the present time carbonate ores are in many ways more desirable than sulfide. Inspiration Consolidated is treating a large tonnage by tank leaching with solutions containing dilute sulfuric acid and ferric sulphate. Since their ores are mixed carbonate and sulphide it is necessary to use both reagents. There have been a number of instances where oxidized copper cappings have been successfully leached by merely sprinkling the broken rock with water which is later put through launders containing scrap iron or tin cans. At Morenci, Arizona, in 1932 following the shut down of the Phelps Dodge mines, water was sprinkled over the broken areas over the block caved stopes and the copper was precipitated on scrap iron at an extremely low cost per pound. (I prepared the original plans and estimates for this work when employed as Chief Mining Engineer for Phelps Dodge Corporation.) At Bisbee, the stripped capping from the Sacramento open pit was intentionally placed in heap leach piles where it was treated in a similar manner; very profitably. The copper goes into solution as a sulfate and, on contact with the native iron in the launders, the copper is precipitated in metallic form. The sponge copper so produced settles to the bottom of the launders and is removed for shipment to the smelter. This sludge usually averages from 80 to 87 percent copper. The solution can then be recovered, and, after treatment to change the ferrous sulfate to the ferric state, recirculated as the solvent. In cases where there is absolutely no traces of sulfides (Pyrite, chalcopyrite, calcocite) in the ore, the ferric sulphate does not form nor is it needed. In such cases the sulphate radical must be furnished by the

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addition of dilute quantities of commercial sulphuric acid. Detined cans can be purchased for about $20.00 per ton; one cent per pound.

The difficulty at many properties where low grade carbonate ores exist, is the presence of chemical compounds in the ore which would make the acid consumption prohibitive. For example, if a low grade carbonate ore occurs in limestone, manifestly the sulfuric acid would immediately attack the calcium carbonate, of which limestone is mainly composed, in preference to or coincidental with the copper carbonates, with the consequent destruction of the sulfuric acid and the liberation of carbon dioxide. Other minerals also have acid consuming characteristics; consequently before a carbonate orebody can be considered of value its acid consuming qualities must be determined.

I therefore made up a small composite sample of Bluebird rock from widely scattered locations in the mineralized area and submitted it to the Arizona Bureau of Mines at Tucson, Arizona, for testing. Mr. G. H. Roseveare, who is also retained by the United States Bureau of Mines, conducted the tests. His report follows:

? Cooperative ?

> "A composite sample was leached with sulphuric acid by percolation after crushing to one inch from the four small sacks of oxide copper ore from the Globe-Miami district which you delivered to the Arizona Bureau of Mines. The acid added is given in the following table:

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	Tons per 100 tons of heads	Per Cent Sulphuric Acid	Pounds sulphuric acid per ton of heads
Heads	100.0	-	-
Solution No. 1	47.5	1.395	13.25
2	31.1	1.395	8.68
3	37.7	1.395	10.41
4	37.7	1.395	10.41
5	37.7	2.65	19.77
		Total	70.52

The acid added per ton of ore was 70.52 pounds over a period of 12 days.

The acid and copper contents of the solutions taken off the ore are as follows:

	Tons per 100 tons of heads	Per cent Sulphuric Acid	Per Cent copper	Pounds of sulphuric acid removed per ton of ore	Distribution per cent copper
Heads assay	100.0	-	1.55	-	-
Heads Calculated	100.0	-	1.64	-	100.0
Solution No. 1	33.5	0.024	0.53	0.16	10.8
2	31.1	0.065	0.68	0.40	12.9
3	37.0	0.226	0.68	1.67	15.3
4	36.6	0.231	0.68	1.69	15.1
Wash No. 1	37.7	0.114	0.16	0.86	3.7
Solution No. 5	32.6	0.595	0.93	3.88	18.4
Wash No. 2	38.5	0.087	0.18	0.67	4.2
3	34.2	0.045	0.12	0.31	2.5
4	34.2	Nil	0.03	-	0.6
Tailing	96.9	-	0.28		16.5
Composite solutions & washes				9.64	84.5

The total sulphuric acid recovered from solutions and washes amounted to 9.64 pounds per ton of heads. The copper recovered amounted to 84.5 per cent of the total copper. The tailing assayed 0.28 per cent copper. There are pieces of quartz containing green stain in the tailing from which the copper was not dissolved by acid.

Yours very truly,

s/ G. H. Roseveare

Metallurgist"

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It is noted that the acid consumption per ton of ore with a composite head assay of 1.55% Cu. was about normal. The recovery was 84.5% of the total copper, which with ore crushed to one inch size is, in my opinion, exceptionally good. In practice the ore would probably be crushed to about 3/8" size if treated by tank leaching methods.

ORE OCCURRENCE

Although the question of how ore occurs is always an intriguing one, it is in most cases highly theoretical and of practical value only in the consideration of plans to find more ore. In the Miami District, years of mining have shown that the disseminated deposits occur in the Final schist and in the porphyry adjacent to the Schultz granite. No doubt the faulting and fissuring had some influence on ore deposition but I am inclined to the belief that structural conditions were of more importance as aides or deterants to secondary enrichment than to primary mineralization. In any event all of the structural and other geological requirements which in other local mines have been present in the ore horizons are also present on the Bluebird property. The only question is whether this oxidized material is of sufficient thickness and grade to constitute a commercial orebody.

DEVELOPMENT

In about the year 1910 a private party, not connected with any of the local mining firms, put down some ten or twelve churn drill holes in the larger area to the south and west of

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the Live Oak Division ground of Inspiration Consolidated Copper Company. I have been able to find six of these holes on the Bluebird ground not all within the area now considered as having possible ore. It is evident that no sampling or assaying was done of the oxidized material and it could be deducted that the sulfide zone beneath could not have been of the 3% or better grade considered necessary in those days for treatment by gravity methods.

Even as late as 1916 (the date of the preparation of Professional Paper No. 115 by Frederick Leslie Ransome) low grade carbonate ore was not of commercial value. Dr. Ransome in explaining his method of establishing ore boundaries reports as follows: "So far as it has been practicable to secure uniformity, the outline of ore bodies as shown on maps and illustrations accompanying this report are based on tenor, in all material classed as ore, of at least 1.5 per cent of copper in chemical combination with sulfur. Any change in this definition, such as lowering the required minimum tenor or including carbonates and silicates of copper as ore, would naturally modify the outlines as given in the illustrations". At another point he states that: "A study of all the available churn-drill records of this district shows that out of 191 holes which penetrated ore, 154, or about 80 per cent, passed through material containing carbonates and silicates of copper, or mixed carbonates, silicates, and sulphides, before reaching ore." Miami Copper Company in 1915 was milling ore by gravity methods, averaging 2.17 percent copper. The ratio of concentration was from 18 to 21 into 1 and

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the extraction was only about 75 percent. Flotation was only then just past the experimental stage as in 1916 Miami Copper Company built an annex to their mill for the treatment of ore by flotation. (See Trans. A.I.M.E. 1916 Vol. IV pp. 576-645, published in 1917, "History of the Flotation Process at Inspiration".)

It is entirely reasonable to assume that little value was given to carbonate and silicate material at the time the perfunctory drilling was done in and adjacent to the present Bluebird area. In fact, in my opinion, any other assumption would be preposterous. It is doubtful, even if the old records of the few holes in the area could be obtained, if they would be of any value or contain any information pertaining to the now valuable carbonate minerals. They did serve a most useful purpose for the present owner of the property. They served to cast a stigma on the property that has persisted for years.

I have spent considerable time examining and mapping the surface outcrops of the Bluebird property and have delineated a favorable zone averaging about 750 feet in width and measuring about 3,000 feet in length. It runs roughly north and south appearing to start near the SE side line of Bluebird No. 3 and going out of the Bluebird No. 12 at its northern corner where the favorable ground appears to connect with the Inspiration orebody. Twenty six samples taken from surface exposures widely scattered over this area averaged 1.02% in total copper. Since many of these samples were taken from partly

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leached rock on the surface and since those so taken were lowest in grade and brought the average down; an estimate of 1% total copper for the surface area seems fairly conservative. Any appreciable tonnage of 1% carbonate copper rock could be considered as capable of making a commercial orebody.

The 750' x 3000' favorable area above mentioned encompasses a tongue of Pinal schist and goes over into granite porphyry at the south end. The south and central portion appears the most favorable possibly because it is less obscurred by detrital matter and by patches of Gila conglomerate as is the north end.

An engineer of the Department of Mineral Resources made a short examination of the property in 1944 and reported a probable 50,000 tons at 2.5% copper. His estimate was based on the sampling of some shallow shafts and adits, and on assumed downward projection of 50 feet over an area 50 feet in width and 350 feet in length. The purpose of his examination was to obtain a copper premium from the government Quota Committee of the Premium Price Plan. I do not consider such a tonnage, even if existent, of any commercial value.

In my opinion the southern and central part of this favorable zone should be tested by diamond drilling 5 holes along a line in about the center of the zone. As there is practically no overburden, and oxidized material of commercial grade is exposed at the surface in the area, this could be done quite cheaply. The physical characteristics of the rock are similar to those in the Inspiration mine where diamond drilling has been

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successfully done for years. It is recommended that both core and sludge samples be taken and assayed separately; then a weighted assay be calculated. This method was used in drilling the Morenci Low Grade orebody and I understand the present mining is checking estimated grace with a variance of less than one tenth percent total copper.

The cost of testing this possible extension of known orebodies would be small compared with work recently done in the area east of the Miami fault which area has a downward displacement of more than 1,000 feet, making it necessary to drill through thick beds of Gila conglomerate before reaching possible ore horizons.

I do not hesitate in recommending that this drilling be done, and I must confess that I am unable to explain how this area has been overlooked all these years.

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DEVELOPMENT

As stated on page 10 of this report, the recommended method for the preliminary testing of this ground is by diamond drilling. The center hole of the preliminary drilling however should be put down with a churn drill starting with a 12 inch diameter hole. This hole will be spotted in the area most favorable for water, and such a hole can be used both for sampling and as a source of future water supply. The churn drill hole should go to a minimum depth of 1,000 feet and thus sample the primary ground below the zone of secondary enrichment. The contract cost of churn drilling is estimated at $10.00 per foot.

The four remaining holes of preliminary drilling will be done with diamond drills at a cost of approximately $5.00 per foot. They should average about 500 feet in depth.

DEVELOPMENT COSTS

Churn drill hole, 1000 feet @ $10.00	$10,000.00
4 Diamond Drill holes, 2000 feet @ $5.00	10,000.00
Sampling and assaying	2,500.00
Roads to site of holes	5,000.00
Pumps and pipe for water	4,500.00
Engineering & supervision	3,000.00
Total	$35,000.00

The above figures represent a maximum and allow for all contingencies. In all probabilities, under careful planning and supervision, considerable saving can be effected in this work. With haphazard planning and inexperienced supervision, it would cost much more than the above estimates.

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SUBSEQUENT DEVELOPMENT

If this preliminary drilling is favorable and indicates that the ore body has depth comparable with the adjacent deposits of Miami Copper and Inspiration companies, then an additional 20 holes should be put down to delineate the orebody so that the position of a milloite can be determined and so that later waste stripping removed from over the orebody can be dumped at a minimum distance from the mine and still not cover future ore.

These 20 additional holes should cost no more than $60,000 including sampling, assaying, engineering and supervision; since with the drilling experience obtained during the preliminary work, the unit cost will be reduced after the first 5 holes.

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In the following "Summary of Estimated Costs Per Pound Copper" based on a proposed leaching program, costs are figured on a hypothetical output to furnish a base for profit estimation should an orebody of commercial size be developed by the drilling. Without knowing the location of, or size of the treatment plant, an assumed figure is used and the capital expense calculated using an acceptable "per ton of input" cost. Surface sampling has indicated an average grade of about 1.00% copper, or 20 pounds per ton. The assumed production is 1,000,000 pounds of refined copper per month; assumed net extraction 77.5% or 15½ pounds per ton; which, with the mine working 5 days per week will

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requires a daily production of 3,000 tons from open cut or strip mining. A leaching plant to treat 3,000 tons per day plus the necessary mining equipment, shops and access roads are all figured as preliminary capital expense.

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LEACHING OF BLUEBIRD CARBONATE OREBODY

SUMMARY OF ESTIMATED COSTS

PER POUND COPPER

	Cost in Cents Per Pound Copper
Deferred cost of precipitation plant, mining and other equipment, paid in 30 years	~~¢~~ 1.25
General Mining Cost	9.55
Preparation & maintainance leach piles	.18
Operation of leaching plant	4.20
Transportation of precipitates to Smelter	0.03
Smelting and Converting	0.75
General overhead	2.25
Freight, Refining and selling	1.63
Contingencies	1.30
Total Cost Per Pound	¢15.14
Present (6-1-50) selling price copper c.i.f. Connecticut Valley, E & M J, Quotation	20.20
Profit per pound copper before taxes.	~~¢~~ 5.06
Profit from operation after 30 years with capital returned (before taxes)	$16,216,000.00

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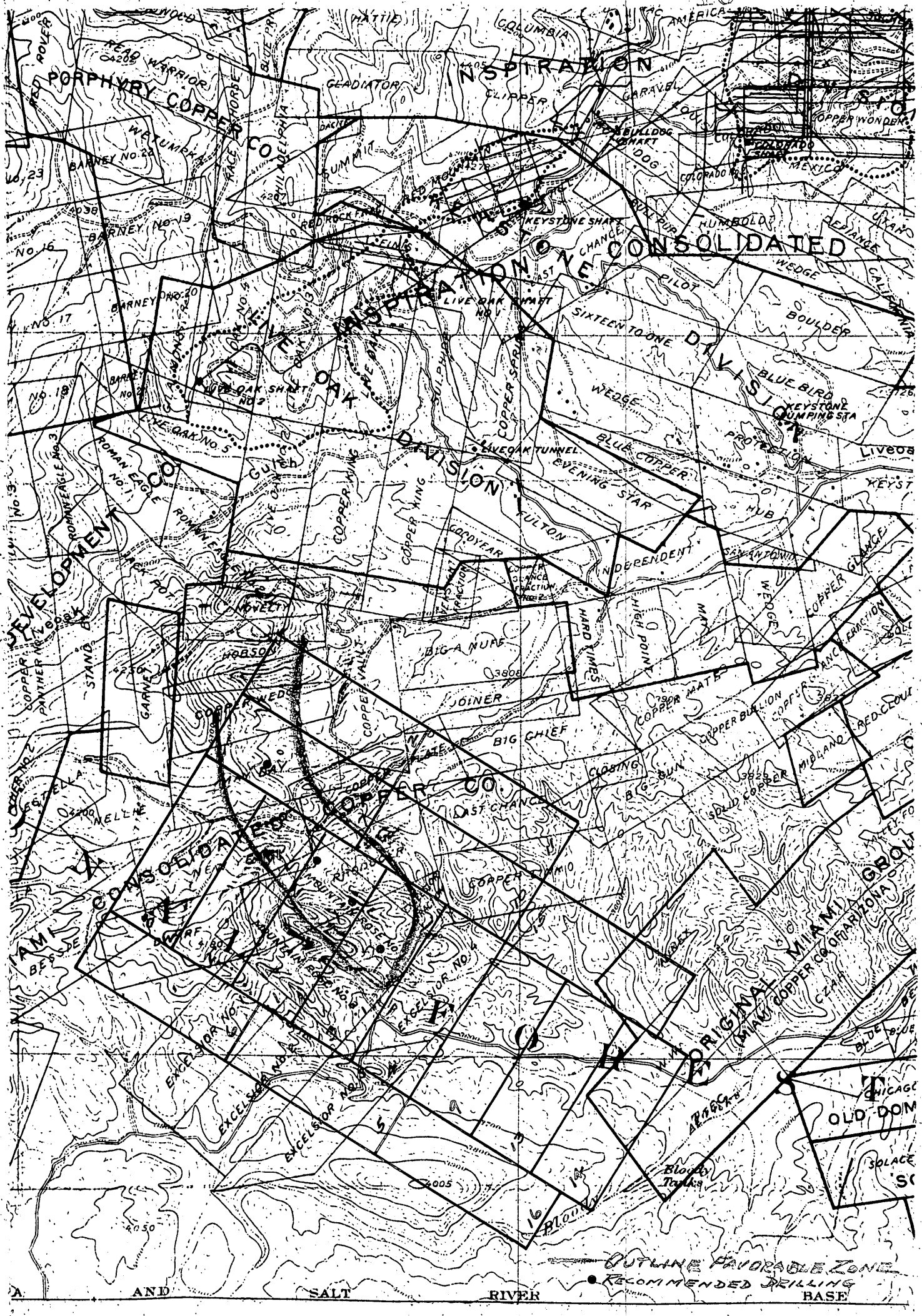
PORPHYRY COPPER CO
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LIVE OAK DEVELOPMENT CO
LIVE OAK DIVISION
INSPIRATION CONSOLIDATED
MIAMI COPPER CO
ORIGINAL MIAMI
MIAMI COPPER CO ARIZONA
OUTLINE FAVORABLE ZONE
RECOMMENDED DRILLING
AND SALT RIVER BASE

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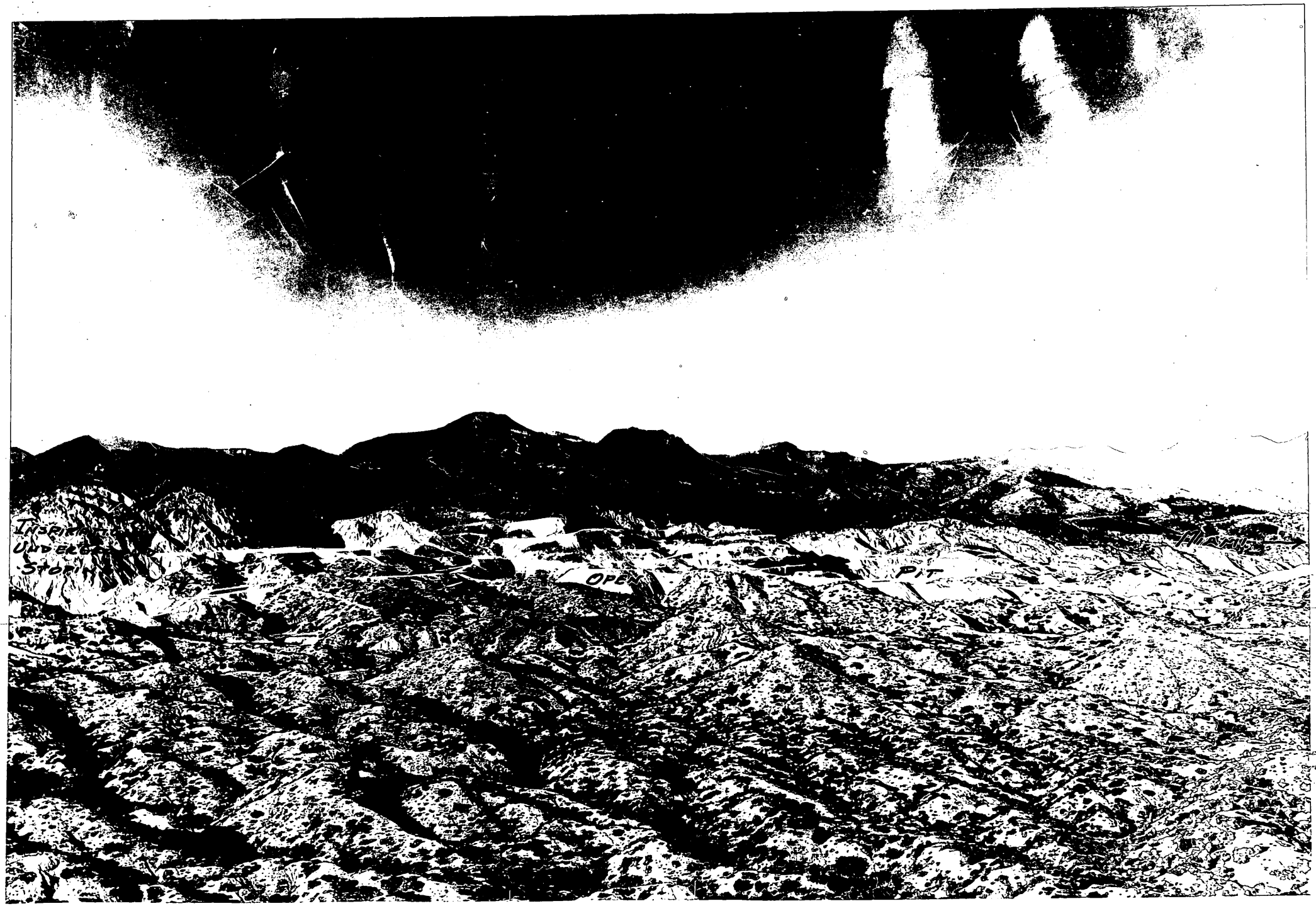
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