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

224 New Customhouse
Denver, Colorado

Air Mail

September 7, 1951

Memorandum

To: Executive Secretary, Defense Minerals Administration

From: DMA Field Team, Region IV

Subject: Final Report, Docket DMA-1019, Jas. R. Mattingley, Applicant, Tiptop and Copper Duke Copper Mines, Pima County, Arizona

Enclosed herewith is original and two copies of the report as indicated above.

We concur with the conclusions and recommendations of the examining team.

J. H. East, Jr.

J. H. East, Jr.

A. H. Koschmann

A. H. Koschmann

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

September 6, 1951

Memorandum

To: DMA Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Final Report, Docket DMA-1019, Jas. R. Mattingley, Applicant, Tiptop and Copper Duke Copper Mines, Pima County, Arizona

The application of the subject docket was for a production loan of $22,870 for the purposes of equipping the Copper Duke mine for production at an estimated cost of $12,870, and for the exploration by diamond core drilling of the two deposits at an estimated cost of $10,000.

The mineralization consists of lenses of copper ore in limestone and quartzite near the contact with underlying granite, with some ore in the granite. The Tiptop mine has no measured nor indicated reserves. At the Copper Duke mine, past operations have removed all the ore associated with limestone above the mine workings. The measured and indicated reserves of the surface deposit at the Copper Duke mine consist of a few hundred tons of 3.0 to 3.8 percent copper.

Due to the small tonnage of low grade reserves and the geologic improbability of developing additional reserves, the examining engineer recommends denial of both the development and exploration loans, with which we concur.

Paul T. Allsman

Paul T. Allsman

Arizona-New Mexico Branch
[redacted]
Box 4097
UNIVERSITY STATION

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
MINING DIVISION
REGION IV

Mining Division
Date Rec'd.
SEP 4 1951
TUCSON, ARIZONA
BUREAU OF MINES
Denver, Colorado

August 29, 1951

Memorandum

To : Paul T. Allsman, Denver, Colorado

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

Subject : Final Report, Docket DMA-1019, Jas. R. Mattingley's Tiptop Group of Copper Mines, Pima County, Ariz.

Enclosed are original and 7 copies of the above report by T. M. Romslo of the Bureau of Mines. No separate geological report will be submitted by the Geological Survey.

This report has my approval.

Brochure is enclosed.

Walter R. Storms

Walter R. Storms

CC P. T. Allsman (7)
C. A. Anderson
DMA 1019
DF

FOR VICTORY
BUY
UNITED STATES SAVINGS BONDS AND STAMPS

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

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMA-1019. - Jas. R. Mattingly's Tiptop Group of Copper Mines

Pima County, Ariz.

T. M. Romslo, Mining Engineer
U. S. Bureau of Mines

August 1951

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By T. M. Remale[1]

The Tiptop group of copper mines, consisting of the Tiptop and Copper Duke mines, was examined in connection with an application to the Defense Minerals Administration for a Governmental loan of $22,870 by James R. Mattingly, 139 Custer, Evanston, Ill. The applicant proposed to equip the Copper Duke mine for production at an estimated cost of $12,870, and to explore this mine and the adjacent Tiptop mine by diamond drilling at an estimated cost of $10,000.

The Tiptop and Copper Duke mines were discovered in 1898. Production has been confined to the period, 1904 to 1906, when approximately 17,300 tons of 6.5 percent copper ore was mined from the Tiptop and 400 tons of 35 percent copper ore was produced from the Copper Duke mine. Since 1906, activity at the mines has been confined to assessment work, the uncovering of a mineralized zone at the Copper Duke in 1947 by the applicant, and the production of 105 tons of 2.8 percent copper ore by the mine owner in 1951.

On the property, pre-Cambrian granite is overlain successively by Cambrian (?) quartzite and Paleozic limestones. The sedimentary rocks occur as small pendants which are in normal and also in fault contact with the underlying widely exposed granite.

1/ Mining Engineer, Arizona-New Mexico Br., Mining Div., Region IV Bureau of Mines.

At the Tiptop mine the sedimentary rocks dip steeply. They are in contact with the granite at a shallow depth below the surface. The ore, both as oxides and sulfides of copper, occurs in altered and fractured limestone, as pockets and bunches. It is confined to a narrow zone along the limestone-quartzite contact.

At the Copper Duke mine the ore in the underground workings is associated with a thin bed of limestone. On the surface it occurs in granite and rhyolite. The underground deposits occur as small lenses at the fault contact with overlying granite and rhyolite. The ore minerals are azurite, malachite and a little chrysocolla. At the surface the same minerals are deposited in the fractured igneous rocks as blebs and discontinuous veinlets.

The applicant proposed to explore the deposits by diamond drilling 3 holes at the Copper Duke mine and 7 at the Tiptop mine at an estimated cost of $10,000. He also proposed to equip the Copper Duke mine for open-pit mining at an estimated cost of $12,870. He proposed to repay the loans from profits derived from the mining operations.

The Tiptop mine contains no measured nor indicated ore reserves. Furthermore, the following findings indicated that the possibilities of finding substantial ore reserves are unfavorable:

1. The ore, both oxides and sulfides of copper, occurred as pockets and bunches in limestone that were confined to a narrow zone near its contact with quartzite;
2. The ore occurred mainly above the lower adit and all of it is believed to have been removed by past mining operations;

3. Little or no ore was found by the lower workings that have rather thoroughly explored the favorable zone;

4. Field evidence indicates the zone favorable to ore deposition is not extensive and that all but a small portion of the zone has been explored by mine workings.

The copper deposits associated with limestone at the Copper Duke mine contain no measured nor indicated ore reserves. These deposits, as lenses of oxide ore, yielded a total of 400 tons from the zone above the adit level. It is possible that other deposits may occur at lower horizons of the limestone bed but there are no criteria for determining their probable locations. Furthermore, there is no reason to believe that such deposits would be of sufficient extent to be minable under present conditions.

The measured and indicated reserves of the surface-exposed deposit at the Copper Duke mine amount to a few hundred tons of 3.0 to 3.8 percent copper ore. The deposit is cutoff at a depth of a few feet but may extend several tens of feet into the hillside. However, field evidence indicates the inferred reserves, which may be several times the measured and indicated reserves, consist of lower grade material.

It also is concluded that ore of the grade exposed at the surface cannot be mined at a profit. Open-pit mining of the deposits might yield ore containing as high as 3 percent copper, as estimated by the applicant. Ore of this grade would have a smelter value of of $10.75 a ton. Estimated costs a ton would be: $2.00 for mining,

$2.00 for trucking, $2.31 for freight, and $4.50 smelting charges, or a total of $10.81. This indicates a loss of $0.06 a ton before royalty and taxes.

It is recommended that the applicant's request for an exploratory loan be denied because the chances of developing any ore at either the Tiptop or Copper Duke mine is unfavorable.

It also is recommended that the request for an exploitation loan be denied because the proposed operation cannot be conducted at a profit.

JAS. R. MATTINGLY'S
TIPTOP GROUP OF COPPER MINES
PIMA COUNTY, ARIZ.
DMA DOCKET - 1019

Engineering Report

By T. M. Remslo
Mining Engineer
U. S. Bureau of Mines

August 1951

JAS. R. MATTINGLEY'S
TIPTOP GROUP OF COPPER MINES
PIMA COUNTY, ARIZ.
BMA-1019

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INTRODUCTION

This report contains information obtained during the course of an examination of the Tiptop group of copper mines, Helvetia mining district, Pima County, Ariz. It also presents an evaluation of the property as it pertains to the Defense Minerals Administration.

The examination was made in connection with an application for a Governmental loan of $22,870 by James R. Mattingly, 139 Custer, Evanston, Ill. The applicant proposed to equip the Copper Duke mine for production at an estimated cost of $12,870, and to explore this mine and the nearby Tiptop mine by diamond drilling at an estimated cost of $10,000.

The examination was made August 6 and 7, 1951 by T. M. Romslo, Bureau of Mines. It is docketed as DMA-1019.

LOCATION, TOPOGRAPHY AND CLIMATE

The Tiptop group of mines is about 28 air-miles southeast of Tucson, Ariz. (fig. 1). The property is accessible from Tucson by traveling south on U. S. highway 89 for 28 miles to the village of Sahuarita, and thence 13.4 miles southeasterly on the graded, dirt road that leads to the Helvetia mining camp. From the point that is signed, "Tip-top mine", the property is about 2.5 miles over a winding, unimproved road.

Sahuarita, on the Nogales branch of the Southern Pacific Railroad, is the nearest railroad shipping point.

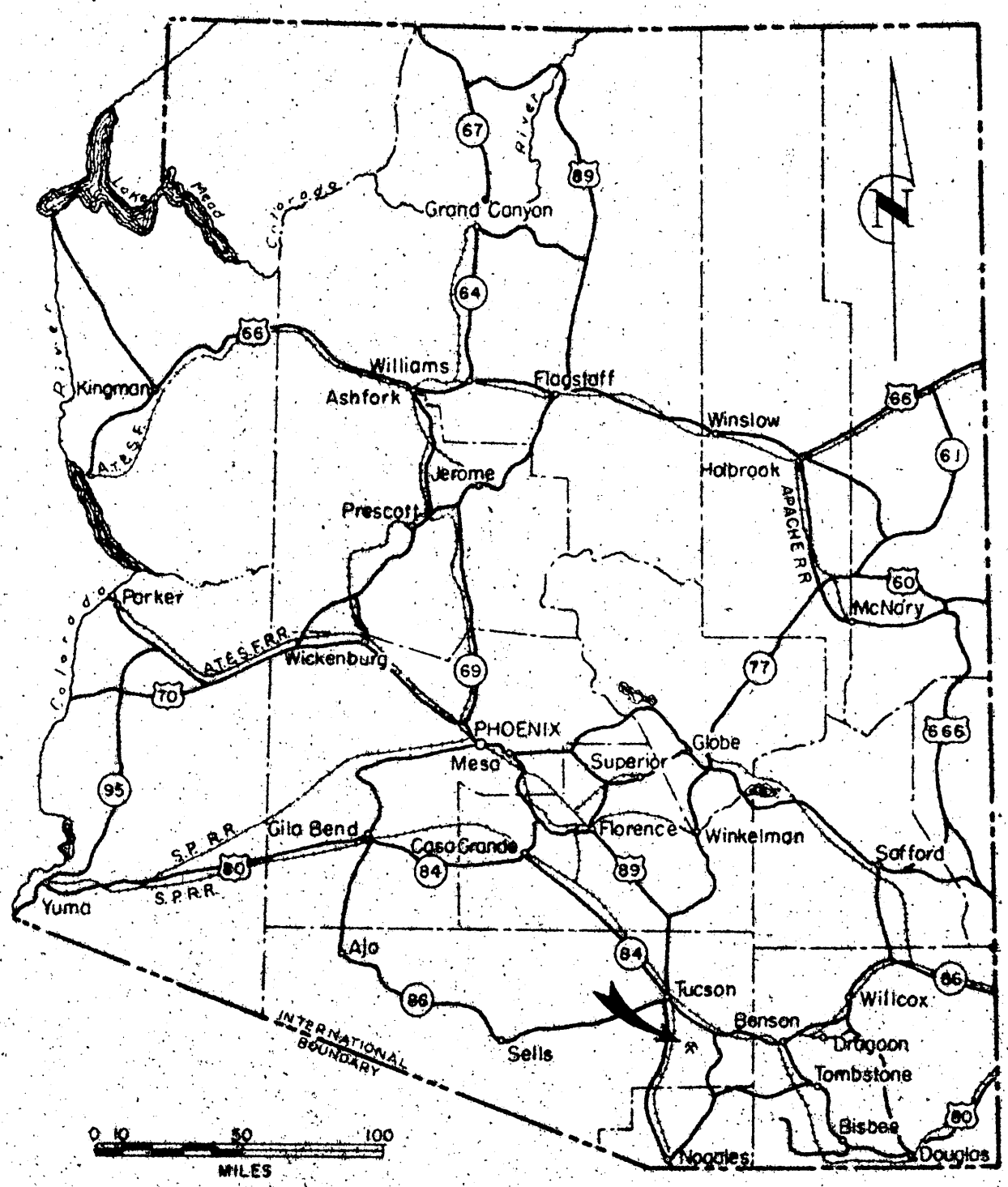


FIG. I - LOCATION MAP OF
TIPTOP GROUP OF COPPER MINES
PIMA COUNTY, ARIZONA

DMA 1019 AUG. 1951

The property is on the western slope and near the northern extremity of the Santa Rita Mountains. It is at an altitude of about 4,300 feet, on the northwest slope of Tiptop Mountain. The mountain is connected to the mountain range by a cross ridge. The area of the property is moderately rugged and has a range in relief of about 200 feet. About 2 miles east of the property the mountains have a crest-line altitude of about 6,000 feet.

The climate is arid, with hot summers and mild winters.

There are no permanent streams in the district.

Vegetation is confined to native grasses, scattered bushes and cacti, mainly ocotilla. Pinon, juniper, and other conifers appear at higher altitudes.

HISTORY AND PRODUCTION

The Tiptop and Copper Duke mines were discovered and located in 1898. Little work was done at the mines until 1903 when they were acquired by the Tiptop Copper Co. The company developed both of the mines and shipped 1,000 tons of ore monthly from the Tiptop during the periods from March 1904 to June 1905, and from September 1906 to December 1906. The ore is said to have averaged about 6.5 percent copper and 0.5 ounce of silver a ton. During 1904 the company shipped about 400 tons of 35 percent copper ore from the Copper Duke mine. In December 1906, the Tiptop mine was bonded to the American Smelting & Refining Co. for $75,000. This company mined and shipped about 300 tons of ore before relinquishing the property in November 1907 to the Tiptop Copper Co.[1/]

1/ Schrader, Frank C., Mineral Deposits of the Santa Rita and Patagonia Mountains, Arizona. U.S. Geol. Surv. Bull. 582, pp. 120 to 124.

The property, which also contained the patented claims of the Bulldozer mine, was held by the Tiptop Copper Co. until 1917 when M. J. Schamorad gained possession. Shortly after Schamorad's death in 1929, the unpatented claims were relocated by Mr. and Mrs. Albert Forbes, Tucson, Ariz. In 1947, James R. Mattingly obtained control of the property under a lease and option agreement. He applied to the Reconstruction Finance Corporation in June 1947 for a mining loan. He reported that the application was withdrawn after the Corporation had examined the property because funds were not available. Shortly after the death of Albert Forbes in 1949 the property was deeded by Mrs. Forbes to her son, Denver S. Forbes.

There was no production from 1907 until 1951 when the present owner shipped 105 tons of ore containing about 3.0 percent copper and 1.5 ounce silver a ton.

PROPERTY AND OWNERSHIP

The property consists of a group of 14 unpatented mining claims in secs. 14 and 15, T. 18 S. R. 15 E., Helvetia Mining District, Pima County, Ariz. It is owned by Denver S. Forbes, 417 N. Main St., Tucson, Ariz.

The applicant holds the property on a lease and option agreement for a period of 10 years from 1947. The agreement calls for the payment of 10 percent royalty on net smelter returns on ores produced from the property.

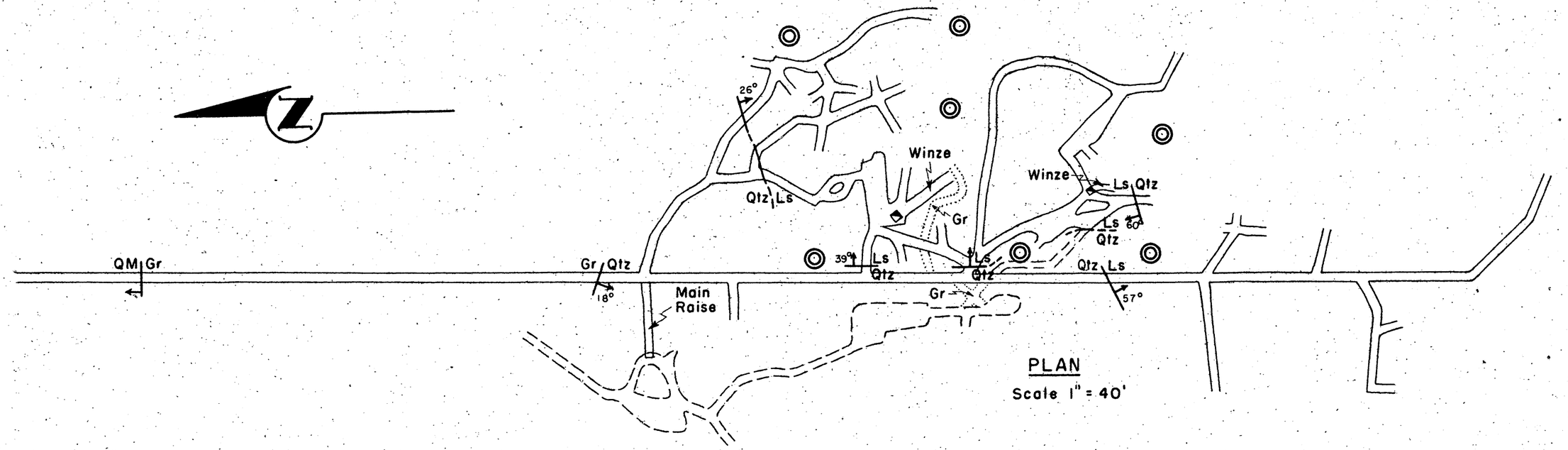
GENERAL GEOLOGY

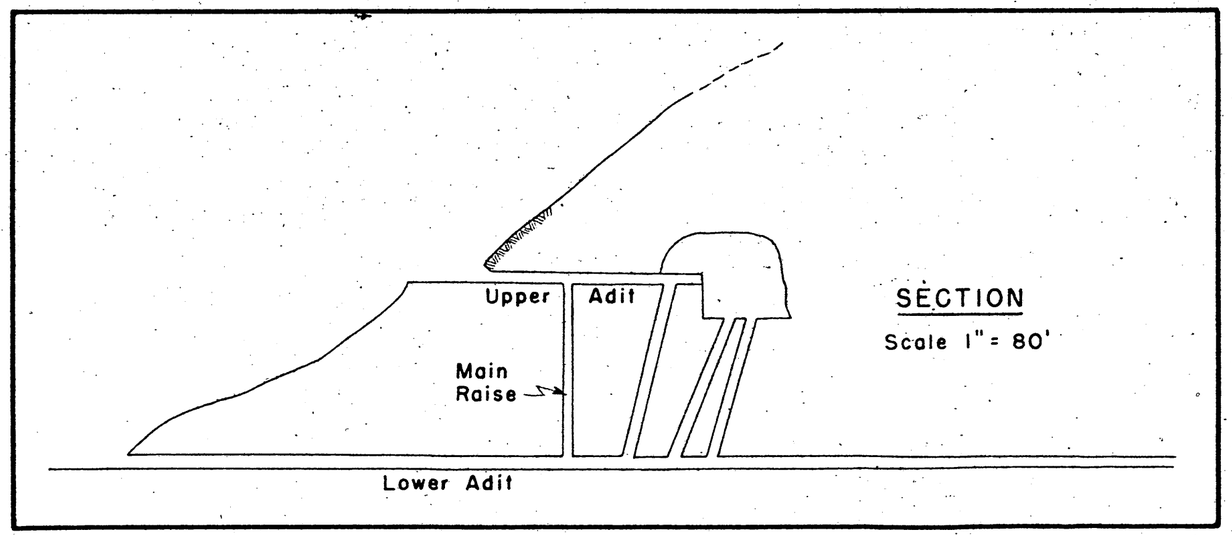
A coarse granite, probably of pre-Cambrian age, is the basement rock of the district. It is overlain by Cambrian (?) quartzite and Paleozoic limestones. Both the granite and the sedimentary rocks have been intruded by a stock of alaskite granite porphyry and by dikes, principally of the alaskite-aplite types. The granite occurs in both normal and fault contact with the overlying rocks.

In the vicinity of the Tiptop property most of the sedimentary rocks have been removed and the pre-Cambrian granite is exposed over much of the area.

At the Tiptop mine, the limestone and quartzite dip steeply to the east and are in contact with granite at a shallow depth below the principal workings (fig. 2). A dark gray rock, tentatively identified as rhyolite, outcrops at the north end of the mine and at the Copper Duke mine where it also is exposed in the underground workings.

At the Copper Duke mine, the granite has been intruded by rhyolite (fig. 3). In the eastern portion of the mine a nearly horizontal fault cuts the granite and also forms a contact between the granite and the overlying rhyolite. The fault zone contains a thin section of limestone.





LEGEND

Ls	Limestone
Qtz	Quartzite
Gr	Granite
QM	Quartz Monzonite
	Upper Adit Workings
	Lower Adit Workings
	Workings From Winze
◎	Proposed Diamond Drill Holes

Traced from map furnished by applicant
Modifications by T.M. Romslo

FIG. 2
TIPTOP MINE

TIPTOP GROUP
OF MINES
PIMA COUNTY, ARIZ.
DMA 1019

ORE DEPOSITS

Tipton Mine

The ore occurs in limestone near its contact with quartzite. It is associated with fractures and faults, and characteristically occurs as irregular pockets and bunches. Probably all but a few hundred tons of the ore produced from the mine has come from workings above the lower adit. In general, the upper portion of this zone contained carbonate ores and the lower portion yielded sulfide ore. In this zone the ores have been deposited on quartzite and on a floor of crushed limestone cut by a net-work of quartz stringers. The main ore bodies averaged about 6 percent copper. A few stringers of 10 to 25 percent copper ore, that go into the hanging wall, also were mined.

The lateral workings from the lower adit have been driven along quartz stringers, and along the stronger fractures in shattered and altered limestone. Ore mineralization is confined to veinlets of copper sulfides, ranging from a knife blade to an inch in thickness, that are present at widely scattered places. A little pyrite was noted in the limestone walls of the workings in widely scattered zones.

The examination indicates that the zone favorable to ore mineralization does not extend much beyond the present workings. At the north end of the mine and at a vertical depth of about 50 feet below the adit level the zone encountered barren granite. Conditions also are unfavorable for ore mineralization at the south end of the mine where the degree of alteration and fracturing of the limestone

is less extensive than in the productive zone of the mine.

Copper Duke Mine

The ore at the Copper Duke mine occurs in limestone, and also occurs in granite and rhyolite. All of the ore produced from the mine has come from the underground limestone deposits where it occurred as small lenses with a maximum thickness of probably not over 3 feet (fig. 3). The ore, as azurite, malachite, and a little chrysocalla, contained about 35 percent copper and a little silver. The ore zone dips gently to the west and passes below the workings at the first crosscut from the portal of the adit.

On the surface, the applicant has exposed a mineralized zone that he proposes to mine by open pit methods. There the ore occurs in a fractured zone of granite and rhyolite as blebs and discontinuous veinlets composed of azurite, malachite and a little chrysocalla. The zone has been exposed by a hillside cut and has been sampled by both the applicant and the Reconstruction Finance Corporation. Five samples taken by the applicant averaged 3.7 percent copper. Thirteen samples taken by the Corporation averaged 3.8 percent copper. The mineralized zone has a length of about 80 feet and an average height of about 4 feet.

The examination shows that mineralization in the sampled deposit is spotty and is confined to the most intensly fractured zones. Much of the intervening ground of the samples is essential barren of mineralization and a visual estimate indicates that the

average grade of the zone is less than 3 percent. That the deposit is not extensive is shown by an inspection of the underground workings. Mineralization in the crosscut that explores the deposits at a vertical depth of less than 10 feet is confined to small zones at widely scattered places. It also occurs similarily in the second set of crosscuts and at the granite-quartzite contact. The richer of the mineralized zones may contain as much as 3 percent copper.

ORE RESERVES

Tiptop Mine

The Tiptop mine contains no measured nor indicated ore reserves. It is possible that some ore may remain in the inaccessible portions of the upper workings but there are no data to indicate its presence. It also is possible that other pockets and bunches of ore may be found by following quartz stringers and fractures near the quartzite. However, there is little chance that any substantial tonnage of ore remains in the deposit because of the mode of occurrence, and because only a small part of the favorable zone remains to be explored.

Copper Duke Mine

Past operations have removed all the ore associated with limestone in the zone above the mine workings. It is possible that similar deposits may occur at lower horizons but such deposits would not constitute ore due to the mode of occurrence and their probable limited extent.

The measured and indicated reserves of the surface deposit consist of a few hundred tons of 3.0 to 3.8 percent copper ore. Inferred ore of similar grade may amount to several times the measured and indicated reserves.

PRESENT STATUS

General

The property is inactive. The owner stays on the property, except week-ends, in a 2-room shack that is the only structure.

Exploration

Tiptop Mine

The Tiptop mine is opened by 2 adits and is developed by more than 4,000 feet of underground workings (fig. 2). The workings are distributed principally on 2 levels, about 100 feet apart, vertically. A winze from the lower level is reported to have an inclined length of about 75 feet. A few hundred feet of workings were driven from the bottom of the winze. At present, water stands at the collar of this winze.

Probably all but a few hundred tons of the ore produced from the mine came from stopes above the lower adit level.

Copper Duke Mine

The underground workings of the Copper Duke mine consist of an adit, crosscuts, 2 short raises and 2 stopes (fig. 3). All of the workings except a large part of the stopes are accessible. The stopes from which 400 tons of ore have been produced probably have a maximum height (vein thickness) of about 4 feet.

The surface workings consist of a hillside cut that was sampled by the Reconstruction Finance Corporation in 1947.

Equipment

Mining equipment on the property is confined to an old hoist and skip at the winze of the Tiptop mine.

PROPOSED EXPLORATION AND EXPLOITATION PROGRAM

Exploration

The applicant proposes to drill 10 diamond drill holes on the property at an estimated cost of $10,000. Three of the holes would be drilled at the Copper Duke mine and the remainder would be drilled at the Tiptop mine. The locations from which the applicant proposed to drill the holes are shown on figures 2 and 3. He did not indicate to what depths the holes might be drilled.

Exploitation

The funds requested for this phase of the program would be utilized to purchase equipment and to provide working capital for the purpose of open-pit mining ore at the Copper Duke mine. A loan of $12,870 was requested for this project.

PROPOSED FINANCING

The applicant proposed to repay the loan out of profits from the sale of copper ore that would be produced from the Copper Duke mine. He submitted data showing that 3 percent copper ore would yield an estimated profit of $3.04 a ton. The profit is based on the following data, submitted by the applicant.

Grade of ore - 3 percent, value		$14.70
	Cost a ton*	
Mine and load on trucks	$ 1.00	
Trucking to railroad	2.00	
Freight to smelter	1.56	
Smelting cost	6.50	
Royalty	0.60	
Total cost	11.66	11.66
Net profit per ton before taxes		$ 3.04

* Based on production of 60 tons daily.

CONCLUSIONS

The Tiptop mine contains no measured nor indicated ore reserves. Furthermore, the following findings indicated that the possibilities of finding substantial ore reserves are unfavorable:

1. The ore, both oxides and sulfides of copper, occurred as pockets and bunches in limestone that were confined to a narrow zone near its contact with quartzite;
2. The ore occurred mainly above the lower adit and all of it is believed to have been removed by past mining operations;
3. Little or no ore was found by the lower workings that have rather thoroughly explored the favorable zone;
4. Field evidence indicates the zone favorable to ore deposition is not extensive and that all but a small portion of the zone has been explored by mine workings.

The copper deposits associated with limestone at the Copper Duke mine contain no measured nor indicated ore reserves. These deposits, as lenses of oxide ore, yielded a total of 400 tons from the zone above the adit level. It is possible that other deposits may occur

at lower horizons of the limestone bed but there are no criteria for determining their probable locations. Furthermore, there is no reason to believe that such deposits would be of sufficient extent to be minable under present conditions.

The measured and indicated reserves of the surface-exposed deposit at the Copper Duke mine amount to a few hundred tons of 3.0 to 3.8 percent copper ore. The deposit is cutoff at a depth of a few feet but may extend several tens of feet into the hillside. However, field evidence indicates that the inferred reserves, which may be several times the measured and indicated reserves, consist of lower grade material.

It also is concluded that ore of the grade exposed at the surface cannot be mined at a profit. Open-pit mining of the deposit might yield ore containing as high as 3 percent copper, as estimated by the applicant. Ore of this grade would have a smelter value of $10.75 a ton. Estimated costs a ton would be: $2.00 for mining, $2.00 for trucking, $2.31 for freight, and $4.50 smelting charges, or a total of $10.81. This indicates a loss of $0.06 a ton before royalty and taxes.

RECOMMENDATIONS

It is recommended that the applicant's request for an exploratory loan be denied because the chances of developing any ore at either the Tiptop or Copper Duke mine are unfavorable.

It also is recommended that the request for an exploitation loan be denied because the proposed operation cannot be conducted at a profit.

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

NOV 13 1951

OFFICE
REGION IV
1951

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

Re: Docket DMA-1019

My dear Senator Hayden:

This is to acknowledge your letter of November 2, 1951 regarding production loan application, DMA-1019, filed by Mr. J. R. Mattingly.

A field examination was made on Mr. Mattingly's property by Defense Minerals Administration, Field Team Region IV, in August 1951. This examination was in the nature of an inspection to determine whether any changes had taken place which would make previous Government data obsolete or necessitate their revision. Since no work was done on the property subsequent to the examination by a competent Reconstruction Finance Corporation field staff in 1947, there was no apparent reason for not accepting their findings for the purposes of this examination. It is felt that the combined investigation of both Government agencies were comprehensive and therefore no further examination of the property is warranted at this time.

The figures of 2700 tons of copper ore is "an analysis of available geological data" as stated in my letter of October 23, 1951. Using the applicant's dimension of his exposed ore body of 125' in length, recalculating his width to 78' instead of 60' and accepting the field team's depth of 4' rather than the applicant's 12', the total volume of ore is 35,000 cubic ft. With 13 tons per cubic foot, the tonnage of copper ore comes to 2,692 tons or rounded off, 2,700 tons. Figuring a 3% mining grade and 90% recovery, 145,800 (146,000 rounded off) pounds of copper can be obtained from this project.

I am enclosing my letter of October 23, 1951 and Mr. Forbes' letter of October 29, 1951 as you requested.

Sincerely yours,

(signed) FRANK E. JOHNSON

Acting Administrator

With FEJ

Enclosures

RVWaugh:rw
11-8-51

Copy to: Adm. Reading File
Deputy Adm. Reading File
Executive Officer, DMA Field Team IV

Mr. Lyon Copper Branch

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

OCT 23 1951

OCT 2 1951

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

Re: Docket No. DMA-1019

My dear Senator Hayden:

This is in acknowledgment and reply to your letter of October 12, 1951 requesting that you be brought up to date on the production loan application of Mr. J. E. Mattingly, DMA-1019.

Since Dr. Boyd's letter of July 30, 1951, Mr. Mattingly's application has been returned from the Defense Minerals Administration Field Team, Region IV and on the basis of their findings Mr. Mattingly was informed with regret that his application was denied.

The denial of this application was based on the findings that 1) the Tip Top mine contains no measured or indicated ore reserves and that geologically it is improbable that additional reserves will be developed and, 2) the surface deposit at the Copper Duke contains only a few hundred tons of ore which is too low in grade to be mined at a profit, and there is no reason to believe that there exist additional deposits of sufficient extent to be minable under present conditions.

In June 1947 Mr. Mattingly applied to the Reconstruction Finance Corporation for a loan of $13,520 to equip the property and provide working capital for surface and underground mining. This application was withdrawn at the suggestion of the Reconstruction Finance Corporation for the reason that without a premium price for copper the operation could not be profitable.

J.F.S.

An analysis of available geological data indicates for an open pit operation a possible potential reserve of approximately 2700 tons of copper ore containing an estimated 3% copper which at present prices would have a smelter value of about $10.75 per ton. Mining, trucking, freight and treatment charges are estimated at $10.81 which indicates a loss of six cents per ton before royalty, taxes, or any capital costs. The total recoverable copper would be only about 73 tons or 146,000 pounds.

A loan of $22,870 would represent a capital expenditure of more than 15 cents per pound of copper and the production cost would be 35 cents per pound before royalty, taxes or any profit to the applicant.

JME
WOM

Mr. Clark

In view of the above analysis, the Defense Minerals Administration believe that the required capital, facilities, manpower and equipment could be better utilized for the Defense Program. The application was therefore denied with regret.

I am returning to you the copy of Dr. Boyd's letter of July 30, 1951 as you requested.

Sincerely yours,

(signed) FRANK E. JOHNSON

ACTING Administrator

Enclosure

JBGowen:ez
10/19/51

Copy to: Administrator's Reading File
Deputy Administrator's Reading File
Executive Officer, RegionIV
Mr. Lyon
Copper Branch
Files - Docket DMA

July 30, 1951

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

Re: Docket No. DMA-1019

My dear Senator Hayden:

This is to acknowledge your letter of July 25, 1951 concerning the status of Mr. James R. Mattingly's application for a $22,870 production loan on Docket No. DMA-1019.

The application in question has been sent by the Copper Branch, Defense Minerals Administration to the DMA Field Team, Region IV, for further investigation.

Sincerely yours,

Administrator

JAS-

WOM

COPY

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

REGIONAL DIRECTOR'S OFFICE
REGION IV
SEP 27 1951
BUREAU OF MINES
DENVER, COLORADO

DMA

SEP 24 1951

Mr. James H. Mattingly
139 Center
Evanston, Illinois

Re: Docket No. DMA-1019

Dear Mr. Mattingly:

Your application for a Government loan 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 felt that the geological possibilities are not such as to justify Government participation in a development project at this time.

Very truly yours,

Tom Lyon

Tom Lyon, Director
Supply Division

J.A.

RVaughton
9/20/51
Copy to: Administrator's Reading File
Executive Officer, Region IV
J.R.Gowen
O.H.Johnson
D.McLaren
Files - DMA Docket

File
WCM

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

NATIONAL DIRECTOR'S OFFICE
REGION IV
SEP 27 1951
BUREAU OF MINES
DENVER, COLORADO

SEP 24 1951

Memorandum:

To: Administrative Management Division

From: Director, Supply Division

Subject: Application for Government loan of Mr. James H. Mattingly, 139 Custer, Evanston, Illinois, DPA-1019, Commodity-Copper

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

1. The ore both oxides and sulfides of copper, occurred as pockets and bunches in limestone that were confined to a narrow zone near its contact with quartzite.

2. The ore occurred mainly above the lower adit and all of it is believed to have been removed by past mining operations.

3. Little or no ore was found by the lower workings that have rather thoroughly explored the favorable zone.

4. Field evidence indicates the zone favorable to ore deposition is not extensive and that all but a small portion of the zone has been explored by mine workings.

5. The ore of the grade explored at the surface cannot be mined at a profit.

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

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

1 DSR-146
1 Field Team Report on the Tip Top Copper Duke Mines with cover letter attached dated Sept. 7, 1951
1 Tip Top Report
1 Report of shipment of ores dated August 6, 1906
4 Assay sheets with cover sheet listing material submitted with application
1 Large smelter sheet Exhibit A # 8
1 Map showing mine workings
1 Claim Map

1 Map showing outcrop and Sample location
2 Carbon letter to Mr. James R. Mattingly from
L. F. Strobel April 19, 1951
Tom Lyon, June 25, 1951 (2 copies)
1 Original letter to Dr. James Boyd from J. N. East,
April 10, 1951 (2 copies)
1 Carbon letter to Hon. E. V. McFarland from James Boyd
June 27, 1951 with letter attached from
McFarland to Gowen, June 14, 1951
1 Carbon letter to Hon. Carl Hayden from James Boyd
June 30, 1951 with attached letter of Hayden
to Boyd, July 25, 1951.

Tom Lyon

Tom Lyon, Director
Supply Division

Attachments

RVWaughier
9/20/51
Copy to: Adm. Reading File
Executive Officer, Region IV
J.B.Gowen
C.H.Johnson
D.MacLaren
Files - DMA Docket

Mining Division
Region IV

September 6, 1978

Memorandum

To: DMA Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Final Report, Docket DMA-1820, Jos. L. Mattingly, Applicant, Tiptop and Copper Duke Copper Mines, Pima County, Arizona

The application of the subject docket was for a production loan of $22,670 for the purpose of equipping the Copper Duke mine for production at an estimated cost of $12,670, and for the exploration by diamond core drilling of the two deposits at an estimated cost of $10,000.

The mineralization consists of lenses of copper ore in limestone and quartzite near the contact with underlying granite, with some ore in the granite. The Tiptop mine has no measured nor indicated reserves. At the Copper Duke mine, past operations have removed all the ore associated with limestone above the mine workings. The measured and indicated reserves of the surface deposits at the Copper Duke mine consist of a few hundred tons of 3.0 to 3.5 percent copper.

Due to the small tonnage of low grade reserves and the geologic improbability of developing additional reserves, the consulting engineer recommends denial of both the development and exploration loans, which which we concur.

Paul T. Allmann

WDM:oj
cc: DMA Subject and Chronological

[illegible] Bar Buchanan
Denver, Colorado

[illegible]

September 7, [illegible]

Memorandum

To: Executive Secretary, Defense Minerals Administration

From: DMA Field Team, Region IV

Subject: Final Report, Project DMA-[illegible], Jas. R. Hollingley, Applicant, Tiptop and Copper Butte Copper Mines, Pima County, Arizona

Enclosed herewith is original and two copies of the report as indicated above.

We concur with the conclusions and recommendations of the combining team.

J. E. [illegible], Jr.

A. H. Koschmann
A. H. Koschmann

Enclosures
oj

cc: DMA Subject and Chron.

July 28, 1952

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

Re: Docket No. DMA-1019

My dear Senator Hayden:

This is to acknowledge your letter of July 23, 1952 concerning the status of Mr. James A. Rabbingly's application for a $22,570 production loan on Docket No. DMA-1019.

The application in question has been sent by the Copper Branch, Defense Minerals Administration to the DMA Field Team, Region IV, for further investigation.

Sincerely yours,

JAMES BOYD

Administrator

Copy to: Reports and Records Branch, w.c.i.
Administrator's Reading File, w.c.i.
Deputy Administrator's Reading File, w.c.i.
Executive Officer, Region IV, w.c.i.
Copper Branch, w.c.i.
Files

KVBaugh:rw

RE

UNITED STATES SENATE

Committee on Appropriations

July 25, 1951

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

My dear Mr. Boyd:

I have been recently advised that Mr. James R. Mattingly has applied for a production loan of $22,870, Docket No. DMA-1019, through the Defense Minerals Administration. I shall greatly appreciate your advising me of the status of the loan application.

Yours very sincerely,

s/ Carl Hayden
U. S. S.

Copy

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

July 17, 1951

1951

Hon. Harold A. Patton, M. C.
House of Representatives
Washington, D. C.

My dear Mr. Patton:

This is to acknowledge your letter of July 13, 1951 concerning the status of Loan application docket No. DMA-1019 and enclosing a letter from Mr. D. F. Forbes dated July 7, 1951.

I wish to inform you that the application in question has been referred by the Copper Branch, to the Defense Minerals Administration Field Team, Region IV, Denver, Colorado for further investigation.

I am returning Mr. Forbes' letter as requested.

Sincerely yours,

SIGNED
Acting
Administrator

Enclosure

RVWaugh:ez

Copy to: Executive Officer, Region IV, w.c.i.
Reports and Records Branch, w.c.i.
Administrator's Reading File, w.c.i.
Deputy Administrator's Reading File, w.c.i.
Copper Branch, w.c.i.
Files

J.7.S.

WPM

Received

July 13, 1951

Dr. James Boyd, Director
Bureau of Mines
Department of Interior
Washington, D. C.

Dear Dr. Boyd:

The enclosure from Denver F. Forbes, 417 N. Main, Tucson, Arizona, is self-explanatory.

In view of my constituent's interest in this matter, may I have a report on the status of Loan application docket No. DMA-1019.

Please return the enclosure to me with your reply.

Thanking you, I remain.

Sincerely yours,

/s/ Harold A. Patten, M. C.

HAP/F

COPY

711

417 North Main
Tucson, Arizona

July 7, 1951

Hon. Representative Harodl Patten
U. S. House of Representatives
Washington, D. C.

Dear Representative:

I have a copper property in the Heboetia Mining District of Roma County, Arizona which is now under lease to a James R. Mattingly of Evanston, Ill. This forty has applied for a production loan of $22,870. from the Defense Minerals Administration for getting this mine in production again. This property has a production record of former years and can produce again with some government help. I am fully convinced that with this help that the property can produce and also pay off the loan. If there is anything you can do in helping to get this loan I certainly will appreciate it. Loan Application Docket No. DMA-1019.

Best regards.

Very truly yours,

/s/ Denver F. Forbes

COPY

9/21

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

OFFICE OF
REGIONAL DIRECTOR

REGION IV

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

July 13, 1951

Hon. Ernest W. McFarland
United States Senate
Washington, D. C.

My dear Senator McFarland:

This will acknowledge receipt of your letter dated July 9, 1951, in reference to Mr. James R. Mattingly's application, Docket DMA-1019.

The application was sent to the field on June 28, and the property will be examined as soon as we have engineers available. We are unable to tell you exactly when the property will be examined, since we have a large number of applications to process and only a limited number of engineers. We will give this as early attention as possible.

Sincerely yours,

J. H. East, Jr.
J. H. East, Jr.
Regional Director

Copy to: Director's Reading File
P. T. Allsman
W. R. Storms

DMA

July 13, 1951

Hon. Ernest W. McFarland
United States Senate
Washington, D. C.

My dear Senator McFarland:

This will acknowledge receipt of your letter dated July 9, 1951, in reference to Mr. James R. Mattingly's application, Docket DMA-2019.

The application was sent to the field on June 28, and the property will be examined as soon as we have engineers available. We are unable to tell you exactly when the property will be examined, since we have a large number of applications to process and only a limited number of engineers. We will give this as early attention as possible.

Sincerely yours,

J. H. Ecker

J. H. Ecker, Jr.
Regional Director

Copy to: Director's Reading File
P. T. Allsman
W. R. Storms

DMA

JHE:ftm

ERNEST W. McFARLAND
ARIZONA

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

United States Senate
Office of the Majority Leader
Washington, D. C.

July 9, 1951

Mr. J. H. East, Jr.
Executive Officer
D. M. A. Field Team
Region 4
224 New Custom House
Denver, Colorado

Dear Mr. East:

This is in reference to the application of Mr. James R. Mattingly for a mining loan. Mr. James Boyd, Administrator of the Defense Minerals Administration, informs me that Mr. Mattingly's application, Docket No. DMA 1019 has been referred to your office for investigation.

I would appreciate an estimate as to when a field report can be expected on this application.

With kindest personal regards, I remain

Sincerely yours,

Ernest W. McFarland

Ernest W. McFarland

JHE

Mining Division
Date Rec'd
JUL 13 1951
BUREAU OF MINES
Denver, Colorado

MINING DIVISION
REGION IV

July 11, 1951

Re: DMA Docket 1019
Tip Top Group
Pima County, Ariz.

Air Mail

Mr. James R. Mattingly
139 Custer
Evanston, Illinois

My dear Mr. Mattingly:

Your application to the Defense Minerals Administration for a loan to explore and develop your Tip Top group of claims has been referred to this office for a field examination of your property.

Will you please let us know if we can contact some one in this locality who knows your property and can guide our examining team to it?

Sincerely yours,

Walter R. Storms, Chief
Arizona-New Mexico Branch

CC P. T. Allsman
C. A. Anderson
DMA 1019
DF

WRStorms:frj

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

WOUU

1951

June 27, 1951

Hon. Ernest W. McFarland
United States Senate
Washington 25, D. C.

Re: Docket No. [illegible]-1019

My Dear Senator McFarland:

This is in acknowledgement and reply to your letter dated June 14, 1951 and addressed to Mr. J. B. Cowen, Chief, Copper Branch, Defense Minerals Administration, concerning the application filed by Mr. James R. Mattingly for a mining loan.

Mr. Mattingly's application has been referred by the Copper Branch, to the DMA Field Team, Region IV for further investigation.

Sincerely yours,

JAMES BOYD
Administrator

Copy to: Mr. J. H. East, Jr.
224 New Customhouse, Denver 2, Colorado
Executive Secretary, w.c.i.
Copper Branch, w.c.i.
Administrator's Reading File, w.c.i.
Deputy Administrator's Reading File, w.c.i.
Files

JBGowen:jp

UNITED STATES SENATE
OFFICE OF THE MAJORITY LEADER
Washington, D. C.

June 14, 1951

Mr. J. B. Gowen
Chief, Copper Branch
Defense Minerals Administration
Department of the Interior
Washington 25, D. C.

RE: DMA 1019

Dear Mr. Gowen:

Reference is made to the mining loan application of Mr. James R. Mattingly, as identified above.

It will be appreciated if you will inform me what action has been taken on this loan and when a final decision may be expected.

Very sincerely,

Ernest W. McFarland

COPY

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

1951

June 27, 1951

Hon. Ernest W. McFarland
United States Senate
Washington 25, D. C.

Re: Docket No. 8[illegible]-1019

My Dear Senator McFarland:

This is in acknowledgement and reply to your letter dated June 14, 1951 and addressed to Mr. J. B. Gowen, Chief, Copper Branch, Defense Minerals Administration, concerning the application filed by Mr. James R. Mattingly for a mining loan.

Mr. Mattingly's application has been referred by the Copper Branch, to the DMA Field Team, Region IV for further investigation.

Sincerely yours,

JAMES BOYD
Administrator

Copy to: Mr. J. H. East, Jr.
224 New Customhouse, Denver 2, Colorado
Executive Secretary, w.c.i.
Copper Branch, w.c.i.
Administrator's Reading File, w.c.i.
Deputy Administrator's Reading File, w.c.i.
Files

JBGowen:jp

UNITED STATES SENATE
OFFICE OF THE MAJORITY LEADER
Washington, D. C.

June 14, 1951

Mr. J. B. Gowen
Chief, Copper Branch
Defense Minerals Administration
Department of the Interior
Washington 25, D. C.

RE: DMA 1019

Dear Mr. Gowen:

Reference is made to the mining loan application of Mr. James R. Mattingly, as identified above.

It will be appreciated if you will inform me what action has been taken on this loan and when a final decision may be expected.

Very sincerely,

Ernest W. McFarland

COPY

224 New Customhouse
Denver, Colorado

June 28, 1951

Memorandum

To: W. R. Storms (with brochure) (Through Chief, Mining Division)

Charles Anderson

From: DMA Field Team, Region IV

Subject: DMA Docket 1019, James R. Mattingly, Tip Top Group of Mines, Pima County, Arizona

The brochure on the above property has been submitted on RSRB 146 forms and appears to be a request for a direct loan. However, the attached letter from the Commodity Committee indicates that much of the funds requested are for exploration and you should therefore contact the applicant and determine whether or not he is willing and financially able to perform any of the work in a matching fund basis, providing your examination indicates that any exploration is warranted.

P. T. Allsman, Alternate

A. H. Koschmann

Attachments

FTA/el
~~cc-dma~~ files, koschmann

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

Re: Docket No. DMA-1017

Mr. James R. Mattingly
139 Custer
Evanston, Illinois

Dear Mr. Mattingly:

The Copper Branch of the Defense Minerals Administration have carefully studied your application for a production loan of $22,870 for the Tip Top Group of Mines, Pima County, Arizona and have concluded that your property warrants a study by the Defense Minerals Administration Field Team. You should hear shortly from Mr. J. H. East, Executive Officer, Field Team, Region IV, 224 New Customhouse, Denver 2, Colorado.

Very truly yours,

Tom Lyon, Director
Supply Division

Jwaer:jp

Copy to: Executive Officer, DMA Field Team Region IV (2)
Executive Secretary
Administrator's Reading File
Copper Branch
Mr. Lyon
Mr. Mac Laren
Mr. C. H. Johnson
Files

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

JUN 2 1951

Docket: DMA-1019
James R. Mattingly
Tip Top Group of Mines
Copper
Production Loan

Mr. J. H. East, Jr.
Executive Officer, DMA Field Team
Region IV
224 New Customhouse
Denver 2, Colorado

Dear Mr. East:

Enclosed is the application of Mr. James R. Mattingly, 139 Custer, Evanston, Illinois for a production loan of $22,870 for the Tip Top Group of Mines, Pima County, Arizona.

Please arrange to have a field team examine this property for the following purposes

To determine the feasibility of the project.
To determine whether the measured and indicated ore reserves are sufficient to justify the loans.
To check costs of production, transportation and smelting.
To check the correctness of the applicant's ~~nature of~~ expenditures.

If the applicant's mineable ore tonnage does not warrant a loan of $22,870 but should warrant a loan of $12,870 which is the total for expenditures not including the estimated cost of $10,000 for ten diamond drill holes, it could be suggested to the applicant that he arrange to apply for an exploration project for his diamond drilling program. In such a case it would be necessary for the applicant to re-submit his original application reducing the amount of the production loan to $12,870. This proposal, naturally would depend on the findings of the field team.

In the event that your field team should recommend the above stated proposal will you please supply Mr. Mattingly with the necessary forms for filing the applications and all information pertaining to aid for an exploration project.

We would appreciate any further information which your field team may deem necessary or which may assist us in expediting the processing of these applications.

For your convenience we are enclosing the entire file of the application. Please return this application, reports and maps with your report.

Very truly yours,

Tom Lyon

Tom Lyon, Chairman
Coordinating Committee

Enclosures

Approved:

Lowell B. Moon

for the Bureau of Mines

Edwin T. McKnight

for the Geological Survey

April 10, 1951

Mr. James R. Mattingly
139 Custer
Evanston, Illinois

Dear Mr. Mattingly:

This will acknowledge receipt of three copies of your application for a mining loan.

Your application is being forwarded to the Defense Minerals Administration in Washington for consideration.

Sincerely yours,

J. H. East, Jr.
Regional Director

/el

cc-DMA Files

January 25, 1951

Mr. James R. Mattingly
139 Custer
Evanston, Illinois

Dear Mr. Mattingly:

This will acknowledge your letter of January 22 with further reference to a government mining loan.

We are enclosing five copies of Form MSAD 146, Application For Government Loan under Sec. 302 of the Defense Production Act of 1950, and a copy of a press release, dated December 5, describing the type of assistance that can be given to mining enterprises. The last paragraph of the release also outlines the type of information we need.

You should forward four copies of the application to this office or to Dr. James Boyd, Administrator, Defense Minerals Administration, Interior Building, Washington 25, D. C.

Sincerely yours,

J. H. EAST, JR.

J. H. East, Jr.
Regional Director

Enclosures
/cl
cc - PT Allsman
DMA files
Chron

139 Custer
Evanston, Ill.
January 22, 1951

REGIONAL DIRECTOR'S
OFFICE
REGION IV
JAN 24 1951
BUREAU OF MINES
DENVER, COLORADO

Mr. J. H. East, Jr.
Regional Director.
Bureau of Mines, Region IV.
224 New Customhouse.
Denver 2, Colorado.

Dear Sir;

I am in receipt of your letter of December 28, 1950, togather with an outline of probable information to be submitted in applying for a mining loan.

It was stated in a recent issue of the Denver Mining Record, that the forms for applying for a loan were now being sent out, and if this is correct, would you kindly forward same to me, or should I assemble the information according to your letter and submit it to you without a form.

Thanking you for your attention to the above, I am

Very Truly Yours

Jas. R. Mattingly

Jas. R. Mattingly
139 Custer, Evanston, Ill.

December 28, 1950

Mr. James R. Mattingly
139 Custer
Evanston, Illinois

Dear Mr. Mattingly:

This will acknowledge receipt of your letter dated December 26, 1950 in reference to your copper claims in the Helvetia mining district, Arizona.

We are attaching an outline which indicates the type of information you should assemble when applying for a Government loan under the Defense Production Act of 1950.

The application may be sent to this office, or it may be forwarded direct to the Defense Minerals Administration, Interior Building, Washington 25, D. C.

Sincerely yours,

J. H. East, Jr.

J. H. East, Jr.
Regional Director

JHE:lm

Attachment

cc: PT Allsman
WR Storms

DMD

LOAN AGENCY
OF THE
RECONSTRUCTION FINANCE CORPORATION
417 SOUTH HILL STREET
LOS ANGELES 13, CALIFORNIA

December 15, 1950

Mr. James R. Mattingly
139 Custer
Evanston, Illinois

Dear Sir:

This is in reply to your letter of December 12 regarding the possibility of Government aid in financing your copper mining property.

The RFC has no mining loans as such. However, loans under the Defense Production Act of 1950 may be made provided they fulfill the necessary requirements. All mining loan applications are to be processed by the United States Bureau of Mines and we would suggest that you contact that Bureau for application forms and instructions.

Very truly yours,

C. A. Rockwood
Mining Engineer

Special

File

December 12, 1950
139 Custer
Evanston, Ill.

Reconstruction Finance Corporation
325 Heard Bldg.
Phoenix, Arizona.
Mr. W. B. Gohring
Supervising Engineer.

Re; James R. Mattingly
Docket No. 6228

Dear Mr. Gohring;

With reference to the above docket number; Under date of October 14, 1947, I withdrew my request for a mining loan because of the discontinuance of the premium price for copper.

It is my understanding that there is now a new arrangement, whereby, the Government will finance small mines.

Will you kindly advise me in this matter.

Thanking you for an early reply, I am

Very Truly Yours

139 Custer, Evanston, Ill.

December 26, 1950
139 Custer
Evanston, Ill.

Mr. J. H. East, jr.
Regional Director.
U. S. Bureau Of Mines.
224 Custom House Bldg.
Denver, Colo.

Dear Sir;

Enclosed, find recent correspondence with the Reconstruction Finance Corporation, in which they advised me to contact your office with reference to information regarding mining loans.

I have fourteen copper claims in the Helvetia mining district, 32 miles South of Tucson, Arizona, Which were examined by a mining engineer from Mr. Gohring's office in 1947. The loan application was approved by Mr. Gohring and sent to Washington, but, was withdrawn because of the discontinuance of the premiun price for copper.

Kindly send me information regarding what forms of loans are available.

Thanking you for your attention to the above matter, I am

Very Truly Yours
Jas. R. Matthews
139 Custer, Evanston, Ill.

April 10, 1951

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

Dear Doctor Boyd:

We are enclosing two copies of form MMMB 146 and additional material as listed received from James R. Mattingly, 199 Custer, Evanston, Illinois.

This is the twenty-second package of reports forwarded to Washington from Region IV.

Sincerely yours,

J. H. East, Jr.
Regional Director

Enclosures

vel
cc-DMA files

4/10

Form NSRB-146
(Nov. 1950)

UNITED STATES GOVERNMENT

APPLICATION FOR GOVERNMENT LOAN
UNDER SEC. 302 OF
DEFENSE PRODUCTION ACT OF 1950

FORM APPROVED
BUDGET BUREAU NO. 25-R002

AMOUNT OF LOAN REQUESTED

TERMS OF LOAN REQUESTED

DATE OF APPLICATION

NAME AND ADDRESS OF APPLICANT (*Street, City, Zone, State*)

JAMES R. MATTINGLY
139 Custer
Evanston, Illinois

TO BE FILLED IN BY DELEGATE AGENCY

(DATE RECEIVED)

COMM.

AGRIC.

INT.

D.T.A.

FILE NO.

INSTRUCTIONS

Application should be filed with the Department of Commerce, Department of Agriculture, Department of Interior, or the Defense Transport Administration, whichever has the primary interest in the facilities, products, or processes involved. However, for convenience of the applicant, he may file with any government agency with which he has contract or other pertinent relationships and such agency will arrange for the transmittal of the application to the appropriate office.

Submit four (4) signed copies of the application. Name and address of applicant should be stamped or typed for identification of each sheet of the application and all accompanying papers. When a question is inapplicable, this should be so stated on the form. Additional sheets may be attached in answering any questions or in providing other supporting information.

1. PURPOSE OF LOAN

Give a brief general statement of the purpose of the loan requested, including in the table below estimated amounts for such major purposes as land acquisition, building construction, purchase of plant, purchase of equipment, working capital, repayment of debt, etc. Statement should make clear whether funds will be used for expansion of capacity, development of technological processes, or production of essential materials.

General Statement Part of funds, namely $12,870.00 will be used to purchase and install equipment and provide operating capital to start operations on open pit section of Tip Top Copper Mine located 32 miles south of Tucson, Arizona. Accompanying maps, assay certificates, reports, etc. describes the history and development of the property. The property is held by location in the name of Albert Forbes of Tucson, Arizona and under lease to me for a 10-year period. Royalty of 10% of net smelter returns to be paid to Forbes with option to purchase when royalty payments equal $75,000.00. There are fourteen (14) claims in the group. June 18, 1947 application was made to R.F.C. for a mining loan, which was withdrawn when they informed me that no more funds were available for this purpose. The balance of funds requested, namely $10,000.00 would be used (continued on reverse side)

NATURE OF EXPENDITURE	AMOUNT
Construction & Eqpt. cost est. ore bin complete (60-ton capacity).	$ 1,500.00
Portable air compressor	1,600.00
Jack hammers	900.00
Water tank & gas driven pump	350.00
Machine steel, powder, caps & fuses	500.00
Air hose, pipe, values and fittings	500.00
Tugger, cable and sheaves	500.00
Miscellaneous supplies	200.00
(continued on reverse side)	
Total amount applied for	

GENERAL STATEMENT (Continued)

to contract for 10 diamond drill holes to be sunk on several of the claims as indicated on mine map accompanying this application, for the purpose of proving up additional ore and the value of same.

NATURE OF EXPENDITURE (Continued)

	Amount
Construction labor	$ 500.00
Pick up truck (1/2 ton)	2,000.00
Total	$8,550.00
Estimated operating capital	4,320.00
Total	12,870.00
Contract for ten diamond drill holes to be sunk on several of the claims. Approx. amount	10,000.00
GRAND TOTAL	$22,870.00

Estimated Cost of Production Based on 60 Tons per Day.

GRADE OF ORE 3% COPPER - VALUE		$	14.70 per ton
Mine and load on trucks	$ 1.00 per ton		
Trucking to R. R.	2.00 " "		
Freight to smelter	1.56 " "		
Smelting cost	6.50 " "		
Royalty	.60		
Total Cost	$11.66		11.66
Net profit per ton before taxes		$	3.04

Estimated earnings per month based on 26 day Month.

1560 tons per month @ $3.00 per ton profit $4,680.00.
Copper production per month, 81,120 lbs.

2. PROPOSED METHOD FOR REPAYMENT OF LOAN

State sources of funds, and proposed schedule of repayment

Loan repayment to be made out of profits from operation at a rate agreeable to the lending Agency.

3. NATURE OF BUSINESS AND DESCRIPTION OF PROJECT

Describe fully the business activity for which the funds are intended. In so doing, identify the materials and services to be produced, describe the facilities and processes involved, and explain in detail any research activity and the nature of the results expected. Attach blueprints and specifications, if available, and furnish other technical details to the extent that they are not covered elsewhere in the application.

It is planned to quarry copper ore from an open pit, which was uncovered by myself in 1947 and was examined by Walter F. Brown of R.F.C. Phoenix, Arizona office in July, 1947. His map and assays are attached hereto.

Production will be on a basis of 1 car of ore per day to be shipped to the smelter at Hayden, Arizona for treatment. The railroad siding is located 17 miles from the mine. The ore will be trucked by contractors from the mine over a good road to the siding at Sahaurita, Arizona.

4. **Relationship to National Defense.** Explain carefully how the expenditure of the funds will contribute to national defense. As a part of such explanation, the following questions should be answered to the extent possible:

(a) What evidence exists as to current shortages of the materials or services to be produced?

Restriction of civilian use of copper.

(b) What evidence exists as to future shortages of the materials or services to be produced?

Defense needs will probably extend the shortage for some time to come

(c) Are such shortages, if any, regional or national in scope?

It is my opinion a world shortage of copper exists.

(d) In what respects will the use of the funds aid directly in expediting the carrying out of government defense contracts? (A listing of defense contracts, if any, held by applicant is required in item 8 below.)

Use of funds will provide more copper, available for defense needs. I have no defense contracts.

4. Relationship to National Defense - Continued

(e) In what respects will the use of the funds aid indirectly in expediting the carrying out of government defense contracts or related operations?

In making more copper available.

(f) Are there available alternative methods or facilities to accomplish the same purpose as that for which these funds are intended? (For instance, unused capacity, possibility of multiple shift operations, idle facilities, readily convertible equipment, sub-contracting?) If answer is yes, explain why alternatives are not used.

Expansion of capacity by multiple shift operation is possible when funds are available.

5. Maximum Designed Production

List separately materials or services identified in item 3 (a)	Unit of measure (b)	Maximum designed production with existing facilities (c)	Average percentage of maximum designed production used in quarter preceding filing of application (d)	Maximum designed production including use of funds applied for (e)
Mining Copper Ore	60 tons per day	None	None	60 tons per day

6. Employment

(a) Number currently employed at location(s) where funds are to be used. (Use pay period ending nearest 15th of month preceding filing of application.)

None

(b) Maximum feasible employment with existing facilities.

(1) Single shift operation.

None

(2) Multiple shift operation (specify how many shifts).

Two shifts feasible when funds are available.

(c) Estimated additional employees required by the use of the funds applied for.

3 men will be employed plus trucking contractor

7. Timing

(a) On what date(s) are the requested funds needed?

As soon as possible.

(b) On what expected date(s) will applicant begin to use such funds and obtain output from the use of such funds? Wherever possible, give planned schedule of output.

Funds will be used as soon as received and production will start in 30 days on a basis of 60 tons per day.

8. Output from the use of funds applied for will be for the following purposes:

a. For the following principal prime defense contracts (if any) with the United States Government:

Date of contract (a)	Contracting Government Agency (b)	Program symbol (2 digits) or other contract identification (c)	Materials or services (d)	Delivery date(s) (e)	Amount *(Dollars)* (f)
	Have no defense contracts				

b. For the following subcontracts (if any) with U.S. Government prime defense contractors:

Date of contract (a)	Materials or services (b)	Supplied to *(Give name and address of firm)* (c)	Delivery date(s) (d)	(e) Government agency receiving end product or services / (f) Program symbol (2 digits) or other contract identification	Amount *(Dollars)* (g)
				(e) / (f)	
	Have no	subcontracts		(e) / (f)	
				(e) / (f)	

c. For the following classes or types of customers not covered by contracts listed above (list materials or services to be provided and, wherever possible, also indicate final product use):

Ore to be shipped to American Smelting & Refining Co. at Hayden, Arizona.

9. **Feasibility**

(a) Estimate anticipated requirements for manpower, equipment, raw materials, energy, fuel, transportation facilities, water supply, housing, community facilities, and other factors of production, for (1) preparation of the facilities and (2) actual operation thereof. (The estimates may be limited to those factors of substantial significance to the preparation and operation of the facilities for which the funds are intended.)

Men required to be drawn from Helvetia and Sahaurita, Arizona, 2 1/2 and 17 miles respectively from the property. equipment, supplies, etc. as listed on Page 1 - Article 1 from Tucson, Arizona. Fuel (gasoline) obtainable at Sahaurita, Arizona, 17 miles from mine. Pick up truck as listed to be used for general transportation. ore to be trucked on contract. Water supply from shaft on property. Two buildings for housing now on the property, also a blacksmith shop.

(b) Discuss and evaluate the availability of each of the above factors in the area(s) where the funds will be used.

All necessary items available within a distance of 32 miles from the mine. Pick up truck would be purchased in Chicago and driven to Helvetia by myself.

10. The following applications for necessity certificates for tax amortization (Under Section 124A of the Internal Revenue Code) for facilities at the location(s) covered by this application have been filed since January 1, 1950.

Date of application (a)	Government file number (b)	(Estimated) Total of facilities in dollars on each application (c)	(d) If final action has been taken, give date of	
			Issuance	Denial
	No application has been filed			

11. **Recent Efforts to Obtain Credit**

(a) Banks— List names and addresses of all Banks of Deposit of Applicant within the last 5 years: *(Mark with an asterisk (*) bank or banks in which deposits are now kept)*

North Shore National Bank
1737 Howard Street, Chicago, Illinois
Personal checking account

11. **Recent Efforts to Obtain Credit** - Continued

(b) State efforts to obtain credit, within 60 days preceding date of application, from banks, the Reconstruction Finance Corporation, or other sources, results, and reasons if refused. (NOTE.- Section 302 of the Defense Production Act of 1950 states that a loan may be extended "only to the extent that it is not otherwise available on reasonable terms." Accordingly, Applicant should show that it has applied to each bank named in (a) above, or explain the reason for not doing so. The fact that a loan of the particular maturity and terms applied for is refused by a bank or banks is not sufficient to comply with the statute, if credit on reasonable terms is available. State whether a bank will participate in the loan, and if so, state name of bank and amount of participation. Full particulars must be given.) List the names and addresses of banks and other lending institutions to which applications for credit have been made, and in each case state date of application, amount of credit available, if any, maximum term for which credit is available, what consideration, if any, was given to possible guarantee of loan under Federal Reserve Regulation V, and reason for refusal or reason loan was not obtained. Indicate whether or not application was definitely refused for further credit on any basis.

Not eligible for this type of loan from commercial banks. Loan application made to R.F.C. in 1947 as stated on Page 1, Article 1 of this application.

12. What other forms of government financial assistance, if any, have been received or requested by the applicant in connection with the purposes of the loan herein applied for? If applicant plans to request such assistance in the future, give details.

None.

13. **HISTORY, MANAGEMENT, LEASED AGREEMENTS, INSURANCE, ETC.**

These subjects should be fully covered in statements attached hereto. Outline past management experience or other basis for showing competence of the Applicant to perform in accordance with expressed purpose of the application. If plant was purchased, state price, form and terms of payment, date of purchase, from whom and under what circumstances purchase was made. If it is proposed to construct or acquire new facilities (including equipment), state estimated cost and basis of such estimate, form and terms of payment, and from whom purchases of facilities will be made. State whether Applicant, or the business or plant, has been in receivership, bankruptcy, Chapter X, XI or XII, in hands of creditors, committee, or whether Applicant has effected a compromise with creditors, and if so, discuss fully. Indicate whether business is conducted in leased premises and whether any facilities are leased from others and describe terms of any lease agreements. List type and amount of insurance carried on plant property. Describe briefly any pending or threatened litigation affecting Applicant.

13. Applicant is an individual, age 54, single and residing temporarily at 139 Custer, Evanston, Illinois.

Business experience of Applicant:

From 1914 to 1932 - Building construction and maintenance, Chicago, Illinois.

From 1933 to 1950 - Gold placer mining, Bridger, Montana. Gold placer mining, Auburn, California. Copper mining, Golden, New Mexico. Gold silver mining and milling, Pearce, Arizona. Gold mining Arivaca, Arizona. Copper mining Helvetia, Arizona.

Equipment as listed on Page 1, Article 1 will be purchased for cash from Bob Barrett, a mining machinery dealer in Tucson, Arizona. Pick up truck to be purchased from some dealer in Chicago, Illinois. Diamond drilling contract will be let on a basis of open bids of contractors in this area.

Applicant has not been in bankruptcy or receivership. No pending or threatened litigation affecting applicant. The property is under lease to applicant from Albert Forbes of Tucson, Arizona for 10 years, royalty rate 10% of net smelter returns to be applied on option to purchase when payments equal $75,000.00. No insurance carried at present, but will be placed when equipment is purchased.

14. NAMES AND ADDRESSES OF OFFICERS, DIRECTORS, OR PARTNERS, AND IN ADDITION THERETO, THE FIVE LARGEST STOCKHOLDERS IF A CORPORATION.

NAME AND ADDRESS (a)	Official title (If officer is also director indicate by "D") (b)	Total of annual salary, commissions, bonuses, etc., received from Applicant and affiliates during last fiscal year (c)	Estimated net worth outside of Applicant (d)	Number of shares held in applicant		Life insurance carried for benefit of Applicant	
				Common (e)	Preferred (f)	Amount (g)	Net cash surrender value after loans (h)
	N O N E						
	Total		x x x x x			x x x	x x x

15. CAPITAL STOCK ISSUES

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par value (c)	Number of shares outstanding (d)	Dividend rate last paid (e)
Common stock	$	$	$		
Preferred stock	$ N	O N E $	$		

16. PURCHASE AND SALES RELATIONS WITH OTHERS

Does Applicant buy from, sell to, or use the services of, any concern or partnership in which an officer, director, large stockholder, or partner of the Applicant has a substantial interest? If not, so state. If so, give names of such officers, directors, stockholders, and partners, and names of such concerns or partnerships.

N O N E

Does any officer, director, large stockholder, or partner of Applicant receive any commission, bonus, or other payment in cash or services from any concern or partnership with which Applicant has business dealings? If not, so state. If so, give names of such officers, directors, stockholders, or partners and amounts of such commissions, bonuses, or payments.

N O N E

17. COMPENSATION SCHEDULE

INSTRUCTIONS: The schedule shall show the amount of compensation being paid to all employees of Applicant receiving compensation at a rate in excess of $10,000 per annum, including employees paid on a part-time basis where the rate of compensation exceeds $10,000 per annum computed on a full-time basis. If Applicant is a corporation, the schedule should show the compensation, regardless of amount, being paid to all officers, directors, and such stockholders as have an interest in Applicant's business of 10 percent or more. If Applicant is a partnership, the schedule should show the compensation being paid to, or being withdrawn by, all partners for their personal use. If Applicant is an individual, the schedule should show the amount being withdrawn by Applicant for his personal use. In each case the listed person's connection with the business should be indicated (i.e., whether an officer, director, stockholder, partner, owner, etc.). The calendar basis for the compensation should likewise be shown. Attorneys or firms of attorneys on a regular retainer or salary basis should be included. The schedule should include a separate notation indicating the source and amount of any compensation being paid by a company or firm directly or indirectly controlling, affiliated with, or controlled by, Applicant. If the space provided herein is insufficient, the schedule should be continued on the reverse side or appropriate continuation sheets should be attached.

Applicant to manage operation and draw $15.00 per day expenses until smelter returns are received.

17. **COMPENSATION SCHEDULE** - Continued

The term "compensation", as used herein and such schedule, shall include all salaries, fees, bonuses, commissions, retainers, regular drawing accounts, and other payments, direct or indirect, in money or otherwise, for personal services.

Name (a)	Position (b)	Compensation paid during previous fiscal year (c)	Present compensation (d)
JAMES R. MATTINGLY	Owner	None	None

18. **COLLATERAL**

(a) The applicant offers the following described collateral as security for repayment of the loan applied for.

Description (a)	Date acquired (b)	Cost (c)	Book Value (Net) (d)	Appraised* value (e)
Property now held:				
Could give order on smelter for payment from smelter returns.				
None				
To be acquired:				
None				

* This column need be filled in only if a recent appraisal has been made. If so, identify appraiser below.

Name (a)	Title (b)	Date (c)

(b) Describe existing liens, if any, on property listed above.

None.

EXHIBIT A - CURRENT FINANCIAL STATEMENT

As of _____
(Date not more than 30 days prior to date of application)

ASSETS

CURRENT ASSETS

1. Cash ..... $ _____
2. Notes receivable ..... $ _____
   Less reserve for doubtful notes ..... _____
3. Accounts receivable:
   Current ..... $ _____
   Past due not over 4 months ..... _____
   Past due over 4 months ..... _____ $ _____
   Less reserve for doubtful accounts ..... _____
4. Inventories:
   Raw materials ..... $ _____
   Work in process ..... _____
   Finished goods ..... _____ $ _____
   Less reserve for inventory losses ..... _____
5. Other current assets (describe) _____

TOTAL CURRENT ASSETS ..... $ _____

FIXED AND OTHER ASSETS

6. Plant used in business:
   Land ..... $ _____
   Buildings ..... _____
7. Machinery ..... _____
8. Equipment, furniture, and fixtures ..... _____ $ _____
   Less reserve for depreciation ..... _____
9. Investments—stocks and bonds .....
10. Investments in affiliated companies .....
11. Receivables due from affiliated companies .....
12. Real estate not used in business .....
13. Due from officers, directors, employees, stockholders .....
14. Deferred charges .....
15. Other assets .....

TOTAL ASSETS ..... $ _____

LIABILITIES

CURRENT LIABILITIES

16. Notes payable (see schedule 1, page 10):
    Banks ..... $ _____
    Trade creditors ..... _____
    Officers, stockholders, relatives ..... _____
    Insurance companies ..... _____ $ _____
17. Accounts payable .....
18. Other current liabilities:
    Delinquent taxes { Real estate ..... $ _____
    Delinquent taxes { Federal ..... _____
    Wages and salaries ..... _____
    Due officers ..... _____
    Accrued interest, rent, taxes, wages, etc ..... _____
    _____ _____

TOTAL CURRENT LIABILITIES ..... $ _____

FIXED AND OTHER LIABILITIES

19. Machinery liens .....
20. Mortgage debts (see schedule 2, page 10) .....
21. Bonds or debentures (see schedule 2, page 10) .....
22. Other liabilities .....

NET WORTH

23. Common stock (if Applicant is incorporated) ..... $ _____
24. Preferred stock (if Applicant is incorporated) ..... _____
25. Surplus (if Applicant is incorporated) ..... _____
26. Capital and Surplus Account (if Applicant is partnership or individual) .....

TOTAL LIABILITIES ..... $ _____

27. Contingent liabilities (explain) _____ $

NOTE.— Submit copy of last available audit or of financial statement at close of last fiscal period (if such date differs from date of above statement).

SCHEDULE I - Notes Payable (in detail)

Name and address	Maturity	Amount	State amount and character of collateral	Name of guarantor(s) and/or endorser(s)

SCHEDULE 2 - Mortgage Debt (real estate and/or chattels) or Bond Issue

Names and addresses of holders	Date of maturity	Interest rate	Unpaid principal amount	Date to which interest is paid
			$	
TOTAL	X X X X X X X	X X X X X X	$	X X X X X X X X X X X X X X X X

If mortgage secures a bond issue, state whether bonds are principally held by management and/or stockholders or by others, and attach copy of mortgage indenture.

EXHIBIT B - CONDENSED COMPARATIVE STATEMENT OF INCOME AND EXPENSES

For years ended _____
(Insert date of end of fiscal year)

(000.00 omitted)

	(Figures for 3 preceding years) 19	19	19	Current year as of date of Exhibit A
1. Net sales				
2. Cost of goods sold				
3. Gross profit on sales (line 1 minus line 2)				
4. Other income (itemize)				
5. Total (line 3 plus line 4)				
6. Salaries (officers or partners)*				
7. Selling and all other expenses				
8. Total of lines 6 and 7				
9. Profit or loss before depreciation and Federal taxes (line 5 minus line 8)				
10. Depreciation				
11. Federal Income and Excess Profits Taxes				
12. Net profit or loss (line 9 minus lines 10 and 11)				
ANALYSIS OF SURPLUS				
13. Total surplus at beginning of period				
14. Net profit or loss for period				
15. Line 13 plus line 14 if profit; line 13 minus line 14 if loss				
Add:				
16. Surplus paid in during period				
17. Surplus resulting from revaluation of assets				
18. Other additions to surplus (itemize)				
19. Total of lines 15 to 18, inclusive				
Deduct:				
20. Dividends				
21. Other charges to surplus (itemize)				
22. Total of lines 20 and 21				
23. Surplus at end of period (line 19 less line 22), MUST AGREE WITH SURPLUS AS SHOWN IN BALANCE SHEETS				

* To include all payments of any kind (commissions, bonuses, withdrawals) to officers or partners.

NOTE—If years included in the above tables are not adequately representative of applicant's financial experience, information may be submitted for additional years.

EXHIBIT C - CONDENSED COMPARATIVE STATEMENT OF CONDITION

For years ended _____
(Insert date of end of fiscal year)

(000.00 omitted. Use figures to nearest thousand. For instance, the figure $3,489.36 should be written as 3; the figure $3,689.36 should be written as 4)

ASSETS	(Figures for 3 preceding years) 19	19	19	Current year as of date of Exhibit A
CURRENT ASSETS:				
1. Cash				
2. Receivables (after deducting reserves)				
3. Inventories				
4. Other current assets:				
TOTAL CURRENT ASSETS				
FIXED AND OTHER ASSETS:				
5. Plant accounts (before depreciation):				
Machinery, equipment, etc.				
Delivery equipment				
Real estate and buildings used in business				
6. Other assets (as investments, real estate not used in business, etc.):				
TOTAL ASSETS				
LIABILITIES				
CURRENT LIABILITIES:				
8. Notes payable				
9. Accounts payable				
10. Accrued liabilities				
11. Other current liabilities:				
TOTAL CURRENT LIABILITIES				
FIXED AND OTHER LIABILITIES:				
12. Mortgage debts				
13. Debentures				
14. Other fixed liabilities:				
RESERVES:				
15. Reserve for depreciation				
16. Other reserves:				
NET WORTH:				
17. Common stock (issued) (if Applicant is incorporated)				
18. Preferred stock (issued) (if Applicant is incorporated)				
19. Surplus (if Applicant is incorporated)				
20. Capital and surplus account (if Applicant is partnership or individual)				
TOTAL LIABILITIES				

NOTE— If years included in the above table are not adequately representative of applicant's financial experience, condition statements may be submitted for additional years.

EXHIBIT D

AGREEMENT AS TO COMPENSATION FOR SERVICES RENDERED OR TO BE RENDERED TO APPLICANT IN CONNECTION WITH APPLICATION AND/OR LOAN

To induce the United States Government and its agencies to make a loan under Sec. 302 of the Defense Production Act of 1950 to JAMES R. MATTINGLY (hereinafter called "Applicant") and in consideration of the making of a loan to Applicant, the undersigned, having been retained by Applicant for the purpose of rendering professional or other services in connection with its application for a loan or loans, hereby represents, warrants, and agrees that the undersigned has not been paid, has not made any agreement with the Applicant to be paid, and has not procured any person to pay or agree to pay, and will not, directly or indirectly, charge or receive any bonus, fee, or commission in any form in connection with the said application for, or the obtaining of, the loan applied for by the Applicant, or any compensation in any form for services rendered or to be rendered in connection therewith except for the services and in the amounts stated below:

Name	Description of services	Amount paid	Amount to be paid
	NONE	$	$

To induce the making of the loan and the employment of the undersigned by Applicant, the undersigned hereby further warrants, covenants and agrees, upon the consideration herein specified, and in consideration of the employment of the undersigned by Applicant, as above recited, that if the amount of compensation stated above for any such services shall not be deemed reasonable by any agency of the United States Government, the undersigned will reduce the charge for such services to such amount as shall be deemed reasonable by such agency, and will not, directly or indirectly, charge or collect from the Applicant or any other person, any sum in excess of the amount so deemed reasonable; and that if the undersigned has heretofore collected, from the Applicant or any other person, as compensation for any such services, any amount deemed by such agency to be unreasonable, the undersigned will refund to Applicant or such other person such sums as are in excess of the amount deemed reasonable. The undersigned further warrants, covenants and agrees that if the amount of the compensation for any such services is not determinable at the date of application, or is not stated above, it will not collect or charge any sum as compensation for such services without the prior written approval of the Government agency with which this application is officially filed as to the nature of the services for which such compensation is to be paid and the amount of such compensation.

Jas. R. Mattingly

Witness: Mary R. Clemente

Address of witness: 1944 West Ohio Street Chicago, Ill.

Dated April 6, 1951

NOTE—Corporations must execute foregoing certificate in corporate name, by duly authorized officer, and seal must be affixed and duly attested; partnerships must execute in firm name, together with signature of a general partner. If no compensation is paid or to be paid for services rendered in connection with application or loan, this should be so stated and the Applicant should sign this Exhibit.

CERTIFICATION

The Applicant hereby certifies that the statements made in the foregoing application, and all exhibits and documents submitted in connection therewith, are true and correct statements to the best of Applicant's information and belief and are submitted as a basis for credit. The Applicant agrees to reimburse any agency of the United States Government upon demand for any expenses incurred in connection with or arising out of this application or any loan made pursuant hereto.

Dated April 6, 1951

Witness: Mary R. Clemente

(For individual applicants)

Jas. R. Mattingly

(Signature)

Witness:

(For partnership applicants)

(Full name of firm)

By _____, a general partner.

(Signature)

(For corporate applicants)

(CORPORATE SEAL)

(Full corporate name of Applicant)

Attest: By _____

(Signature) (Title)

(Signature) (Title)

The United States Criminal Code, 18 U.S.C., Sec. 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: 1950 O - 916171

JAMES R. MATTINGLY
139 Custer
Evanston, Illinois

REGIONAL DIRECTOR'S
OFFICE
REGION IV
APR 9 - 1951
BUREAU OF MINES
DENVER, COLORADO

LIST OF MATERIAL SUBMITTED WITH THIS APPLICATION:

1. Map of the Group of Forbes mining claims near Helvetia, Pima County, Arizona.

2. Map of the proposed open pit operation of the Copper Duke Claim, made by Walter F. Brown, Supervising Engineer of R.F.C. in July, 1947.

3. Plot plan of Copper Duke mine, showing outcrops and samples of proposed open pit operation also plot plan of Tip Top mine with locations of proposed diamond drill holes.

4. Exhibit A - #8 Smelter returns of ore shipped to El Paso Smelting Works from the Tip Top Mine - from 1904 to 1906.

5. American Smelting & Refining Company assay certificate dated May 4, 1947.

6. Jacobs Assay Office assay certificate No. 45804 dated June 13, 1947.

7. Jacobs Assay Office assay Certificate No. 45514 dated April 23, 1947.

8. Arizona Testing Laboratories assay Certificate dated July, 1947.

9. Tip Top Report signed by Clarence L. Aman.

10. Letter to H. R. Simpson from Douglas Gray - dated August 6, 1906.

U.S. MATTINGLY
139 CUSTER
EVANSTON, ILL.

No 9

COPY

TIP TOP REPORT.

GROUP OF CLAIMS.

LOCATION:

The Tip Top Groupof Claims is located in the foothills of the Santa Rita Mountains, Helvetia Mining District, Pima County, Arizona. It is connected by good wagon roads with Tucson and Vail, on the Southern Pacific RR, being 28 miles S.E. of Tucson, and 15 miles S.W. from Vail. The Tip Top group is joined on the south by the Helvetia group of claims and in the S.W. by the Rosemont group. On the east it adjoins a homestead owned by the Tip Top interests.

AREA AND SURFACE IMPROVEMENTS:

This group comprises one full sizes patented claim, 21 full sized unpatented claims and 7 fractions. The claims cover an area of over 500 acres largely mountainous. Included in this property is a homestead containing 148 acres. One the homestead are seven buildings with four to siz rooms which have been used as dwellings, office, store and assay laboratory. There are also corrals, barns, and valuable water rights on the homestead.

GEOLOGY:

The oldest formation exposed on these claims is a coarsely crystalline granite with very prominent feldspar crystals. Carboniferous limestone forms the only sedimentary upon the granite in this locality. Between the granite and the limestone there is a flat irregular mass of fine-grained quartz porphyry which is found underlying the limestone in the Tip Top hill. In the Copper Duke hill the limestone has been entirely eroded away exposing a large area of this quartz porphyry which has a maximum thickness of two hundred ft. This porphyry is mineralized to some extent with native copper. It assays about 1.5% Cu. with small amounts of silver and gold. Besides this intrusion there have been later intrusions of aplite, mica diotite and quartz monzonite, the latter showing small values in copper. The quartz porphyry was responsible for a large amount of fissuring and faulting and also for ascending mineral solutions. The orebodies in the limestone have formed in the fissures along the contacts of the limestone and porphyry, and the limestone and granite. In the Tip Top claim the main ore chute is a fissure vein, almost vertical, which has been displaced horizontally from 2 to 15 ft. by faulting later than the ore formation. On top of the porphyry this orebody spreads out some distance along the contact. The northern part of this orebody has been faulted to the east and forms what is called the northeast orebody. The footwall of this orebody at the eastern end is the granite, as the quartz porphyry plays out to the east. In the Copper Duke working an orebody was found in a fissure in the porphyry which dipped below the tunnel level at a small angle. On the Mormon Queen and Queen of Sheba fissure veins were found in the porphyry with almost a vertical dip. In the Bull

dozer claim the ore occurs in the limestone near the contact with the granite. The workings on the Noon Day cut a large fault dipping almost vertically and showed quantities of sulphides in the crushed area adjacent to the fault. The dip of the contact of limestone and granite on the Bulldozer claim is at a slight angle to the southwest.

DEVELOPMENT WORK:

The Tip Top claim is the most thoroughly developed claim in the group. It is developed by three levels called the upper main and qinze levels. In the upper level the Big Stone orebody was first discovered and was developed by a drift on the orebody. This orebody has a dip of about 70 degrees to the east. The outcrop of this orebody extended for over 300 ft. but on the upper level was only partially stoped out. The main tunnel on the main level was run south for about 950 ft. and raises were put up about 40 ft. to strike the orebody. The inclined distance between these levels is about 110 ft. and the ore was stoped out to the upper level for about 150 ft. at its northern end. About 6000 tons of ore were shipped to the American S. & R. Co. at El Paso during the years 1904 to 1907. The average of this total shipment was about 6.6% cu., 9 oz. Ag., 27.0% Fe., 25% S., and 35% SiO. This ore being so high in sulphides was smelted for a dollar a ton. The southern part of the orebody has not been mined and is about 350 ft. below the surface at the southern extremity. The northeast orebody has been fully developed on the main level and was about sixty feet long and twenty to forty feet wide.

CLARENCE L. AMEN, E.M.

A raise was put up about 20 ft. in the orebody and showed higher values. On the main level this orebody was greatly broken up but in the raise the ore is more solid and uniform. On the main level the orebody averages about 5.0% cu. and 5 oz. Ag., being similar otherwise to the ore in the Big Stope. In the raise however the ore assayed a little over 6% Cu. and a little higher in silver. To the south of this orebody there is a very large area of limestone mineralized with sulphides, partially developed which assays a little better than 3% cu. Forty below the main level the winze level has partially developed this low grade area showing a little higher values in copper and about $2.00 in gold and silver. In the upper workings there is over 500 ft. of development work, in the main level over 3000 ft. and in the winze level about 350 ft. Between levels there are about 700 ft. of raises, winzes and sub-drifts. In the Copper Duke Claim there has been about 700 ft. of work done. This showed up a vein of malachite varying from one to four feet in width and assaying 15% cu. or better. The vein dipped under the level at a slight degree and into the hill. The ore above the level has been stoped out. On the southeast end of the Copper Duke claim there are two promising outcrops of iron gossan heavily stained with copper which have not been prospected and there are similar ones on the Arctic and Four Aces which have not been developed. A drift was driven on the Mormon Queen on a fissure vein in the porphyry which assayed 7.2% cu. and 0.36 oz. Ag. It is about two feet wide and

seems to be widening out and looking richer. On the Queen of Sheba and Copper Belt there are large areas of copper stained porphyry which indicate other fissure veins in the porphyry. A crosscut is being run to strike this veins about 150 ft. below the surface but at present the crosscut has not been advanced far enough to do this. On the Bulldozer claim the contact of the limestone and granite outcrops and the limestone near the contact has been partly replaced by silica and copper carbonates. Quite a large quantity of this ore has been quarried and still remains on the dumps. To the southeast of the Bulldozer hill, shafts have been put down on this claim and on the America which have cut from 5 to 15 ft. of this oxide ore. An assay of the ore on the Bulldozer dumps assayed 8.8% ct. and 2.96 oz. Ag. Most of the work on this claim was done 15 or 20 years ago and as a result very little is known about was was encountered. It is reported that sulphide ore encountered in the lower workings caused their abandonment, due to the difficulty of smelting sulphide ore at that time. The strike of the limestone and granite is covered by wash to the northwest, so the probable extent of this ore on the Bulldozer is not known. The total amount of development work on the entire group is about 7000 ft.

FUTURE DEVELOPMENT WORK:

The Big Stope orebody to the South narrows to about a foot in width but as that has been the character of the orebody to narrow and then widen out, a drift should be driven South and then raises put up on the vein at about fifty foot intervals. From the length of outcrop to this orebody on the surface, the orebody should continue for from 1 to 100 ft. further South. This Southern extremity would be about 350 ft. below the surface. The northeast orebody on the main level is 200 ft. below the surface and ought to be further developed by raises. The low grade orebody to the south should also be further prospected by raising. An incline shaft would be the most advisable way of further developing the vein of malachite on the Copper Duke claim. The showing on the Bulldozer and America is really the largest on the group and the old shafts ought to be retimbered or new ones sunk to determine the extent of this orebody and the character of the ore in depth. In all the old shafts the ore was cut in considerable quantities as evidenced by the amount on the dumps.

CONCLUSIONS:

The previous method of shipping ore to El Paso cost $5.00 a ton for hauling and freighting; so in order to reduce this cost, some method of reduction or concentration should be adopted. With very little development work, enough additional ore could be blocked out to warrant the erection of a fifty ton smelter. This would be the ideal way of reduction as the character of the different ores is such that an ideal mixture could be gotten. The disadvantage to this method is the distance which the coke and smelter supplies would have to be hauled. In the lower workings of the Tip Top and in the shafts on the Juniper and Bulldozer sufficient water could be gotten for smalter and boiler purposes. A more economical method of treating the sulphide ore would be perhaps to use concentrating tables, roasters

and magnetic separators. This sulphide ore is coarsely crystalline and ought to lend itself very well to this treatment.

The principal disadvantages to this method is the inability to treat the oxide ores in this manner. However this large amount of low grade sulphide ore could hardly be treated economically in the smelter. On the Tip Top dump, there are about two hundred tons of 5.5% sulphide ore and about two thousand tons of sulphide ore better than 3%.

There is a small amount of oxide and sulphide ore on the Noon Day dumps, the oxide assaying about 4% and the sulphide about 3.3% Cu. Taken altogether the ore on the different dumps and that partially developed, there is enough known ore to warrant the furthering of plans for a reduction works.

By the use of a traction engine the hauling charges for coke and mat or concentrates could be greatly reduced.

By either means of reduction a very large per cent of the total costs of handling the ore will be cut out and will admit of a very substantial profit on the ore.

Finally with a small expenditure for reduction works, I am firmly convinced that, even at this present low price of copper the conditions at the property are such that very satisfactory profits may be expected from any money expended in its further progress.

(signed) CLARENCE L. AMAN E.M.

SYNOPSIS OF GEOLOGY OF TIP TOP WORKINGS.
(See Blue Print)

MAIN TUNNEL:

935 ft. long, comprised of 80 ft. of quartz monzonite - 285 ft. or granite, slightly copper stained - 330 ft. of quartzite and 240 ft. of limestone with small stringers of pyrite and chalcopyrite.

1 x: - 285 ft. long, 125 ft. being much shattered quartzite and 160 ft. altered limestone with bunches and stringers of pyrite and chalcopyrite. About 60 ft. of this altered limestone will assay from 2 to 4% copper, at the end of this crosscut there is a small open stope which indicated that further development might be advisable here in the form of an incline raise.

2 x: - 28 ft. long. This crosscut went through quartzite from its entire length.

3 x: - 80 ft. long. This cut 5 ft. of quartzite and 75 ft. of mineralized limestone. At the top of the winze there are bunches of sulphide ore averaging 3 to 8% Cu. This crosscut includes the engine room which is 40 ft. x 15 ft.

4 x: - 135 ft. long. 5 ft. of quartzite, 60 ft. of mineralized limestone averaging about 3.5% Cu. and 70 ft. of altered limestone with stringers of pyrite and chalcopyrite were cut.

5 x: - 75 ft. total length. This crosscut went through altered limestone.

6 x:- 45 ft. long. This cut slightly altered limestone throughout its length.

7 x: - 30 ft. long. Altered limestone with small stringers of pyrite was cut through.

8 X: - 75 ft. long. The material cut was altered limestone, 40 ft. of it being slightly mineralized with chalcopyrite and pyrite.

9 x: - 80 ft. long. Altered limestone with occasional pyrite stringers was crosscut.

10 x: -108 ft. long. This drift penetrated 40 ft. of quartzite, 68 ft. of mineralized limestone averaging 4 to 6% Cu.

11 x: -115 ft. long. This cut through 15 ft. of quartzite, 30 ft. of mineralized limestone, 40 ft. of sulphide ore averaging 4.5% Cu., and 30 ft. of mineralized limestone.

12 x: -65 ft. total length. This advanced through 50 ft. of mineralized limestone and 15 ft. of sulphide ore averaging 5 to 8% Cu.

13 x: - 125 ft. total length. This material cut was 115 ft. of mineralized limestone averaging 3.5% Cu. and 10 ft. of badly broken quartzite.

14 x: - 30 ft. in length. This cut 30 ft. of mineralized limestone assaying 3.5% Cu.

15 x: - 105 ft. long. The total advance shows 55 ft. of mineralized limestone going 3.5% Cu., and 50 ft. of altered limestone.

16 x: - 80 ft. long. For its total length it contained altered limestone slightly mineralized.

17 x: - 15 ft. total advance. 10 ft. was mineralized limestone and 5 ft. of much altered granite.

18 x: - 15 ft. long. This cut 10 ft. of mineralized limestone and 5 ft. of sulphide ore averaging 4% Cu.

19 x: - 60 ft. long. This cut sulphide ore averaging 5.5% Cu. through its entire length.

20 x: - 14 ft. long, 12 ft. of sulphide ore going 5% Cu. was shown and 3 ft. of mineralized limestone.

21 x: - 12 ft. in length. This cut sulphide ore carrying 5% Cu. throughout its length.

22 x: - 15 ft. long. This cut mineralized limestone.

23 x: - 25 ft. long. This cut mineralized limestone.

24 x: - 15 ft. long. The advance shows 15 ft. of mineralized limestone.

25 x: - 15 ft. in length. Mineralized limestone showing 3% Cu. was cut.

26 x: - 20 ft. long. The material passed through was altered limestone, showing stringers of pyrite.

27 x: - 15 ft. long. This showed limestone throughout.

28 x: - 15 ft. advance. This was driven in altered limestone slightly mineralized.

29 x: - 15 ft. long. This showed mineralized limestone averaging 3.5% Cu.

30 x: - 35 ft. long. This exposed bunches of sulphide ore averaging 3% to 8% Cu. in an altered limestone.

Note pertaining to sulphide ore in 19x, 20x, 21x and 11x. The ore is bunchy and if a little care be taken in sorting the ore assays as high as 8% and 9% will be gotten.

#1 Winze: - 40 ft. vertically, 65 ft. on incline: - this shows 15 ft. of bunchy sulphide ore averaging 6 to 8% Cu., 10 ft. of very much altered limestone or quartzite and 15 ft. of granite.

#2 Winze: - 40 ft. vertically. This shows mineralized limestone going 3 to 3½% Cu. for 20 ft. and altered limestone and quartzite, the other 20 ft.

Winze x cut --- 125 ft. long. This cut granite in its entire length. #1

Winze x cut --- 180 ft. long. This crosscut 20 ft. of granite 140 ft. of badly broken quartzite and 20 ft. of altered limestone with small bunches and stringers of pyrite and chalcopyrite.

(Signed) CLARENCE L. AMAN, E.M.

C O P Y

Tucson, A. T. August 6th, 1906

Mr. H. R. Simpson,

Asst. Gen'l Manager

A. S. & R. Co.

U. E. MATTINGLY
139 CUSTER
EVANSTON, ILL.

No. 10

Dear Sir:

I beg to submit herewith condensed report, showing measurements of ore bodies, map, shipments of ore and values of same on the Tip Top Mines, located in Helvetia Mining Camp, Pima County, Arizona, sixteen miles Southwest by wagon road from Vails Station on the S. R. R. R.

1. Property consists of 31 mining claims, dimensions 1500' x 600'.
2. One patented claim and 30 held by right of possession: all work holding same regularly complied with in accordance with the mining laws of the District and the United States.
3. DEVELOPMENT WORK consists of some 7,000 feet of levels, drifts, raises and winzes. Trend of vein and ore bodies Northwest and Southeast.
4. DIP OF VEIN and ore bodies South of West, standing nearly vertical.
5. HANGING WALL side of vein, Country rock, quartzite.
6. FOOT WALL side of vein, Country rock, Granite.
7. VEIN OR DYKE appears to be an altered porphyry with lime and shale disturbances, bounded on the Northeast by the granite and Southwest by quartzite.

8. CHARACTER OF SURFACE ORES in shallow workings, silicious carbonates, malachites and azurites.

9. CHARACTER OF SMELTING ORES sulphides, yellow copper, chalcopyrite and bornite.

10. CHARACTER OF CONCENTRATING ORES, silicious sulphides.

11. AVAILABLE SMELTING ORES in Tip Top Claim estimated at 25,000 tons: Assays _____oz., au., _____oz.ag. _____ 6.5% cu.

12. AVAILABLE CONCENTRATING ORES in Tip Top Mine - estimated dimensions 400' x 100' - allowing 15 cu. Ft. to the ton - would yield 373,000 tons: average assay _____oz. au. _____ _____oz. ag. 2.1% cu. wet.

13. COST OF MINING SMELTING ORES, $1.50 per ton.

14. COST OF WAGON HAUL SMELTING ORES, mine to Vail, $2.50 per ton.

15. COST OF MINING CONCENTRATING ORES, $1.00 per ton.

16. COST OF MILLING AND concentrating ores locally (approximately) $.60 per ton.

17. TOTAL SHIPMENTS to Smelter, El Paso, 310 Cars.

18. TOTAL SULPHIDE SMELTING ORE SHIPMENTS, 9,300 tons.

19. TOTAL NET SMELTER RETURNS on sulphide shipments, $93,000.00.

20. TOTAL NET MINE RETURN on sulphide smelting ores, $55,000.00.

21. NET AVAILABLE SULPHIDE smelting ores in mine, value $150,000.00.

22. NET AVAILABLE CONCENTRATING ORES in mine, value $373,000.00.

23. NET VALUE PER TON at mines, smelting ores, as per past shipments, $6.00 per ton.

24. NET VALUE PER TON estimated on raw concentrating ore, 2.5 cu., $1.00 per ton in mine.

E X H I B I T "A"

VERIFICATION OF ORE TONNAGE AND COMPUTED VALUES

BY - Tip Top Mine car samples, Month of May, 1906

" - El Paso Smelting Wks. Shipments, Month of May, 1906

" - Grey check hand sampling (in Aug.) " " " "

- -

MINE CAR SAMPLES RECORD

DATE 1906	No of MINE CARS	ASSAY CU. %
1.	20	3.5
2.	24	6.2
3.	28	7.0
4.	21	6.3
5.	24	6.8
6.	26	6.5
7.	23	6.7
8.	30	6.6
9.	28	5.0
10.	20	6.0
11.	25	6.1
12.	34	6.5
13.	19	6.8
14.	26	7.0
15.	30	6.5
16.	38	6.7
17.	30	6.5
18.	8	7.3
19.	10	8.5
20.	14	7.1
21.	20	7.7
22.	18	8.0
23.	36	7.3
24.	46.	7.0
25.	21	6.1
26.	30	7.1
27.	28	6.5
28.	37	6.00
29.	34	6.1
30.	29	6.2
31.	26	6.0

allowing 1200 lbs. to car - 478.8 tons average assay ---- 6.2 cu.

Grey's check samples, shown on map, No.s 1,2,6, composite assay 8.2% cu. ------oz. Ag. --

El Paso Smelter 17 cars, 510 tons wet. average assay 6.3% cu. ----------oz. ag.

E X H I B I T " B "

VERIFICATION OF ORE TONNAGE AND COMPUTED VALUES.

BY - Tip Top Mine Car samples --- Month of June, 1906

" - El Paso Smelting Wks. Shipments " " " "

" - Gray check hand sampling (in Aug.) " " "

MINE CAR SAMPLES RECORD

DATE JUNE 1906	NO. OF MINE CARS	ASSAY CU. %
1.	18	6.1
2.	17	6.7
3.	16	7.0
4.	28	6.6
5.	14	6.6
6.	12	6.5
7.	16	6.6
8.	13	6.3
9.	14	6.7
10.	10	6.5
11.	19	6.8
12.	21	6.5
13.	8	6.2
14.	13	6.3
15.	14	6.1
16.	18	6.4
17.	11	6.8
18.	19	7.0
19.	18	6.9
20.	20	6.8
21.	16	6.3
22.	11	6.7
23.	21	7.0
24.	13	7.1
25.	11	7.0
26.	9	6.8
27.	8	6.7
28.	11	6.7
29.	13	6.8
30.	14	6.7

allowing 1200 lbs. to car - 267.6 tons average assay 6.6% cu.

Gray's check samples, shown on map, Nos. 1, 2, 3, 4, & 5, composite assay 6.8% cu. --------oz. ag.

El Paso Smelter, 5 cars, 150 tons wet, average assay 6.9% cu. ------ oz. ag.

E X H I B I T "C"

VERIFICATION OF ORE TONNAGE AND COMPUTED VALUES.

By - Tip Top Mine Car samples ----Month of July, 1906

" - El Paso Smelting Wks. Shipments " " " "

" - Gray check hand sampling (in Aug.) " " "

-c- -

MINE CAR SAMPLES RECORD

DATE JULY 1906	NO. OF MINE CARS	ASSAY CU.%
1.	18	6.3
2.	20	6.5
3.	14	6.7
4.	16	7.0
5.	14	6.7
6.	25	6.9
7.	16	7.0
8.	14	6.5
9.	20	6.7
10.	13	7.0
11.	16	6.7
12.	17	6.5
13.	11	6.3
14.	20	6.2
15.	14	6.0
16.	30	6.1
17.	35	6.5
18.	23	6.7
19.	24	7.0
20.	31	6.7
21.	18	6.7
22.	45	7.0
23.	38	6.3
24.	36	6.3
25.	40	6.0
26.	27	7.0
27.	26	6.5
28.	31	6.4
29.	36	6.5
30.	23	6.0
31.	24	6.2

allowing 1200 lbs. to car - 440.4 tons average assay 6.5% cu.

Gray's check samples, shown on map, Nos. 6,7,8 & 9, composite assay 8.2% cu. ----------oz. ag.

El Paso Smelter, 8 cars, 270 tons wet, average assay 6.9% cu. ----------oz.ag.

TIP TOP MINE, AVAILABLE SMELTING ORES, 25,000 TONS.

MINE HAND SAMPLES BY GREY
MINE CAR SAMPLES BY FORMAN
SMELTER CAR RETURNS.

(Position of samples marked on map Plan A, in red ink)

SAMPLES	ag. oz.	au. oz.	cu. %	insol. %	SiO2 %	fe %	Mn. %	caO %	ZN %	S %	As. Sb.
MINE 1.			11.7								
2.			8.7								
3.			3.4								
4.			5.3								
5.			3.0								
AVERAGE											
Composite sample #1, 2, 3, 4 & 5			6.5								
			6.6								
MINE 6.			9.6								
7.			10.6								
8.			6.3								
9.			18.2								
10.			6.6								
11.			11.3								
12			23.8								
xx.			4.8								
xxx.			11.8								
Composite sample #1 to 9, inc.			8.2								
MINE CAR SAMPLES May			6.2								
June			6.6								
July			6.5								
SMELTER CAR RETURNS											
May			6.3								
June			6.9								
July			6.9								

TIP TOP MINE AVAILABLE CONCENTRATING ORE, 373,000 TONS

MINE HAND SAMPLES BY GRAY.

(Position of samples marked on map Plan A, in red ink)

SAMPLES	ag. oz.	au. oz.	cu. %	insol. %	SiO2 %	fe. %	mn. %	caO %	Zn %	S. %	as. sb.
MINE A.			3.4								
B.			2.7								
C.			1.8								
D.			2.5								
E.			2.7								
F.			2.2								
G.			0.9								
H.			0.6								
AVERAGE			2.1								
Composite Samples			1.9								
A. to H. Inc.			2.1								

CONCENTRATION TEST COMPOSITE SAMPLES A TO H INCLUSIVE.

RAW ORE ASSAY

Percentage 6.13 tons into one.
concentrates assay
talings "

LOW GRADE DUMPS.

SAMPLE "I"
6,000 tons

SAMPLE "J"
4,000 tons

R E M A R K S

Mine has been self supporting under frightful disadvantages.

I can see no reason, from all the facts presented, why the Tip Top Mine cannot be made one of the very good copper producing properties of Arizona. It certainly has the good features and ear marks of a good pay copper sulphide zone.

I unhesitatingly recommend it to our company.

Yours truly,

Douglas Gray
Ore Purchasing Agent.

KEY TO MAP

and

DESCRIPTION OF SAMPLES

KEY TO MAP AND DESCRIPTION OF SAMPLES

All numbers in red ink shown on Map of plan "A".

* * * * * *

Sample #1 - Big stope above tunnel level from which May and June shipments were made.

#2 - Big stope extension, South ore chute, shipments made to smelter from this point in May and June.

#3 - North drift under North stope winze (30 mine cars taken from this point). Shipments made to Smelter from this point in May, June and July.

#4 - Southeast Slip, shipping ore, 25 mine cars taken out of this winze and raise.

#5 - West Drift, 25 mine cars taken from this place, 900 ft. from mouth of tunnel, 300 ft. deep, and put in smelter shipments.

#6 - Big Stope, July shipments.

#7 - Upper workings and stope in the main raise. This sample represents grade and character of the good ore mined above, and went in recent smelter shipments.

#8 - From No. 6 Raise, ore shipped to smelter from this point in July.

#9 - From winze, shipment from this point put in July smelter shipments.

#10- Silver streak, 400 ft. from mouth of tunnel - a very promising point for a productive ore chute. No ore from this point ever shipped and is in an undeveloped part of mine.

#11 - Special sample winze, below tunnel 20'.

#12 - Special sample out of raise above tunnel level, and in strong and good smelting ore.

#xx - Represents native copper in the quartz and shale. Tonnage not estimated or considered.

#xxx- Represents a series of samples taken, selected sulphide ores along the course of tunnel, 700 ft. from mouth. Nos. A, B, C, D, E, F, G and H. Low grade concentrating ore on tunnel level, single block.

"I" - Represents 6,000 tons dump ore, low grade concentrating sulphides.

"J" - Represents 4,000 tons low grade sulphides on waste dumps - Could be concentrated.

* * * * * *

FOR REFERENCE.

0. - Granite foot wall.
00. - Quartzite Hanging Wall.
000. - Shales or vein matter.
0000. - Black lime with manganese, occurs as a disturbing element in vein as horse at times.
00000. - Lime vein capping on mountainside.

DOUGLAS GRAY

CLAUDE E. McLEAN
P. O. BOX 1888

ARIZONA TESTING LABORATORIES

ANALYTICAL AND CONSULTING CHEMISTS
ASSAYERS, MINING ENGINEERS
823 EAST VAN BUREN STREET

TELEPHONE 3-6272

ASSAY CERTIFICATE

PHOENIX, ARIZONA, July 2 1947

Mr. W. F. Brown, Supervising Engineer, RFC
325 Heard Building
Phoenix, Arizona

WE HAVE ASSAYED THE SAMPLES RECEIVED FROM YOU AND FIND THE RESULTS AS FOLLOWS:

GOLD FIGURED AT $_____ PER OUNCE.
SILVER FIGURED AT $_____ PER OUNCE.

LAB. FORM 2.

LAB. NO.	SAMPLE	GOLD		SILVER		PERCENTAGES			
		OZ. PER TON	VALUE	OZ. PER TON	VALUE	COPPER	LEAD		
65212	# 1 Width -	7'				2.25%			
13	# 2	7'				2.10%			
14	# 3	6'				2.90%			
15	# 4	5'				3.60%			
16	# 5	5'				4.95%			
17	# 6	8'				6.60%			
18	# 7 7' Jas R. Mattingly Property					1.70%			
19	# 8	12'				4.10%			
20	# 9	9'				3.00%			
21	# 10	10'				5.30%			
22	# 11	15'				3.40%			
23	# 12	12'				6.30%			
24	# 13	9'				1.40%			

47 RESPECTFULLY SUBMITTED,
ARIZONA TESTING LABORATORIES
BY Claude E. McLean ASSAYER

CHARGES $ 13.00

No. 8

J. MATTINGLY
139 CUSTER
EVANSTON, ILL

E. A. JACOBS, SR.
Phone 130-R
30 So. Main

JACOBS ASSAY OFFICE

REGISTERED ASSAYERS

BEN P. JACOBS
Phone 1064-W
P. O. Box 1889

Duplicate Certificate No. 45514

Tucson, Arizona, April 23rd, 1947

Sample Submitted by Mr. J. R. Mattingly

SERIAL	SAMPLE MARKED	GOLD Ozs. per ton ore	GOLD Value per ton ore *	SILVER Ozs. per ton ore	COPPER Per cent Wet Assay	LEAD Per cent Wet Assay	Per cent Wet Assay
113213	#1. Lime		$		2. 95/100		
14	2- Granite				5. 36/100		

Open Pit Operation

RECEIVED JUL 15 1947 MINING SECTION

* Gold Figured $ — per oz. Troy

Charges $ 2.00

Very respectfully,

Ben P. Jacobs

N07

U.E.MATTINGLY
139 CUSTER
EVANSTON, ILL

E. A. JACOBS, SR.
Phone 130-R
30 So. Main

JACOBS ASSAY OFFICE

REGISTERED ASSAYERS

BEN P. JACOBS
Phone 1064-W
P. O. Box 1889

Duplicate Certificate No. 45804 Tucson, Arizona, June 13th, 1947

Sample Submitted by Mr. J R Mattingly Top Top Mine

SERIAL	SAMPLE MARKED	GOLD Ozs. per ton ore	GOLD Value per ton ore *	SILVER Ozs. per ton ore	COPPER Per cent Wet Assay	LEAD Per cent Wet Assay	Per cent Wet Assay
113747	#4 Surface	—	$	—	2.80		
49	5 (x) Surface	—		—	3.45		
50	6 - Surface	—		—	2.63		
51	7 Surface	—		—	2.95		
52	8 Composite Surface		—		4.33		

Open Cut operation

RECEIVED JUL 15 1947 MINING SECTION

* Gold Figured $ — per oz. Troy

Charges $ —

Very respectfully,

Ben P. Jacobs

J. MATTINGLY
139 CUSTER
EVANSTON, ILL

No. 6

FORM 505 20M 9-43 R & G

AMERICAN SMELTING AND REFINING COMPANY

HAYDEN PLANT

ASSAY CERTIFICATE

Handsample #1355 c/o General Delivery Hassayampa Arizona

DATE ASSAYED 5-4 1947

MARKED James R. Mattingly Outcrop - American Claim

Lot No.	GOLD Ounces Per Ton	SILVER Ounces Per Ton	LEAD Fire %	LEAD Wet %	Cu %	Ins. %	S_1O_2 %	Fe %	Mn %	CaO Total %	N_1 %	Zn %	SUL. %	AL_2O_3 %	Sb_1 B_1
Tip-Top Mae	—	—			5.1		62.6			0.2					

RECEIVED MAY 6 1947 BRENT N. RICKARD

RECEIVED JUL 15 1947 MINING SECTION

AMERICAN SMELTING AND REFINING COMPANY

Open pit operation sample # 3

By Carson Assayer

Chemist

No. 5

J. MATTINGLY
139 CUSTER
EVANSTON, ILL.

February 19, 1951

Mr. James Maurice
Box 938
Prescott, Arizona

Dear Mr. Maurice:

This will acknowledge your letter with reference to government mining loan applications.

We are enclosing a copy of a press release, dated December 5, describing the type of assistance that can be given, and an outline indicating the type of information you should furnish with your application.

We do not have copies of MMRB 146 available at this time, but will forward five copies to you as soon as a supply is received. You should forward four copies of the application form to this office or to Dr. James Boyd, Administrator, Defense Minerals Administration, Interior Building, Washington 25, D. C.

Sincerely yours,

J. H. East, Jr.
Regional Director

Enclosure

/al
cc-DMA files

Mining Division
Date Rec'd.

FEB 19 1951

BUREAU OF MINES
Denver, Colorado

Prescott, Arizona
February 16, 1951

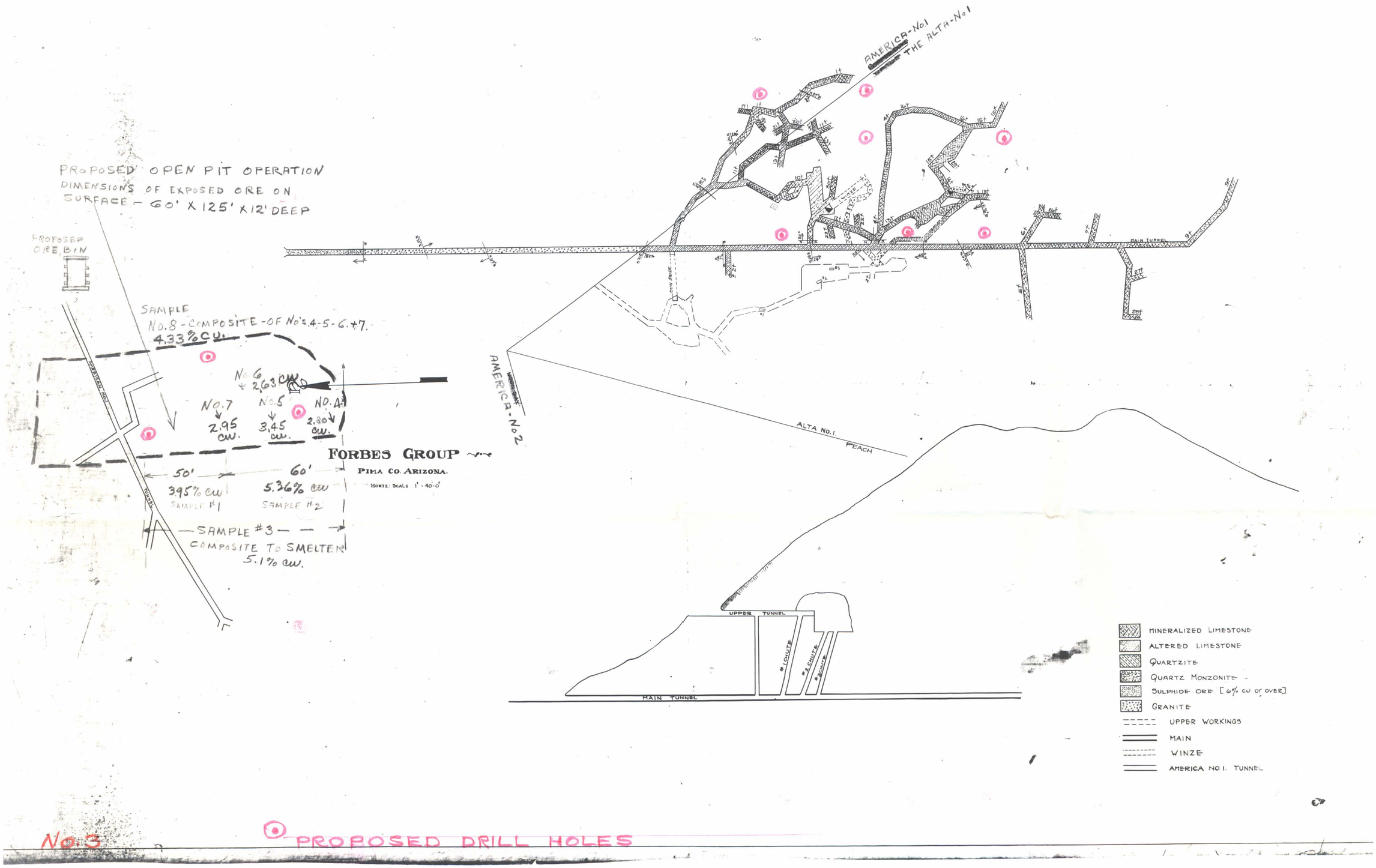
Mr. Paul J. Albrow
Chief Mining Engineer
Region IV U.S. Bureau of Mines
224 New Custom House
Denver 2, Colorado

Dear Sir:
Will you please send a copy of the Mine Loan Application form to the following address:

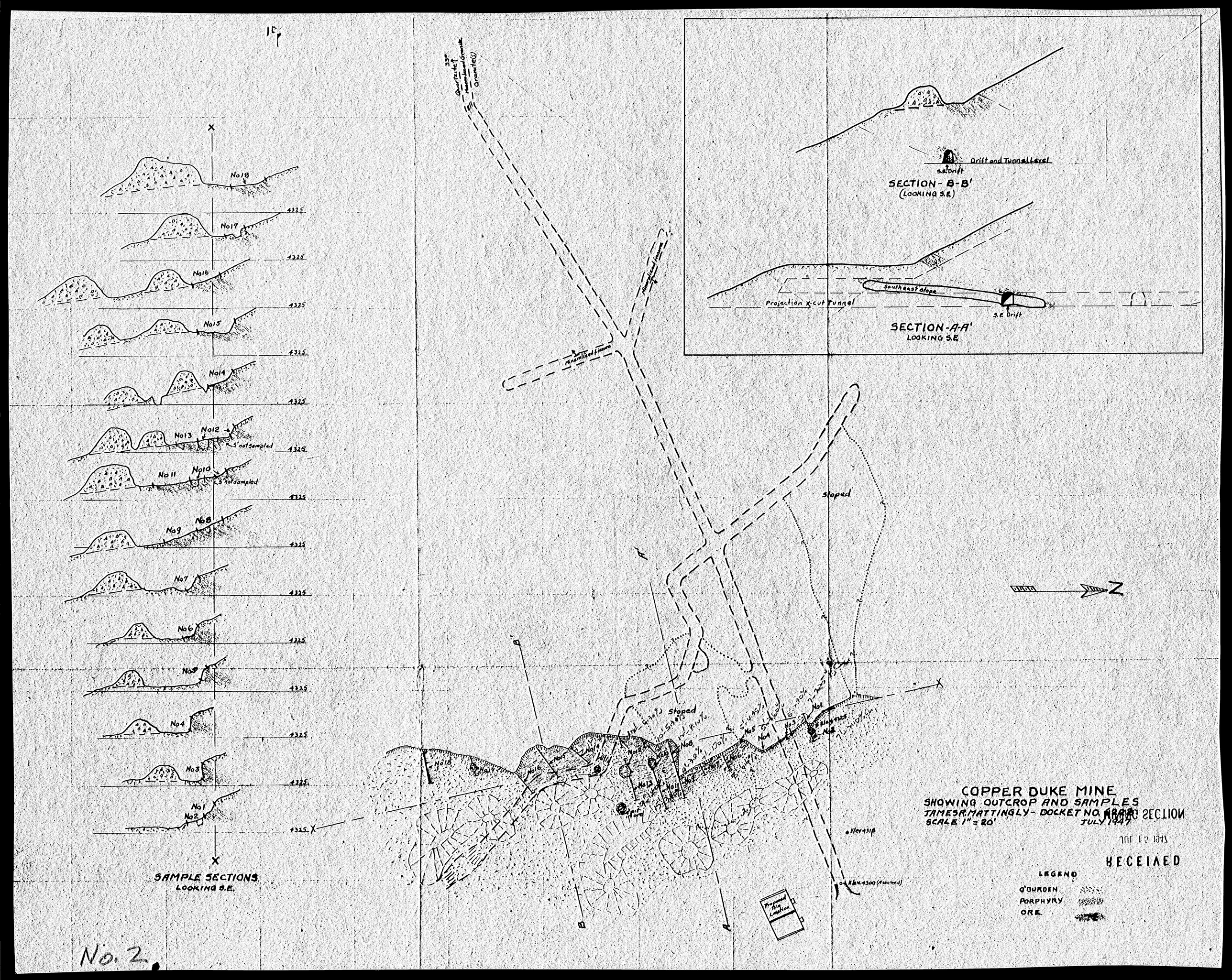
Mr. James Mannix
Box 938
Prescott, Arizona

Yours Sincerely,

James Mannix


PROPOSED OPEN PIT OPERATION
DIMENSIONS OF EXPOSED ORE ON SURFACE - 60' X 125' X 12' DEEP
PROPOSED ORE BIN
SAMPLE
No. 8 - COMPOSITE - OF No's. 4-5-6.+7.
4.33% CU.
No. 6
2.63 CU.
No. 7
2.95 CU.
No. 5
3.45 CU.
No. 4
2.80 CU.
50'
60'
3.95% CU
SAMPLE #1
5.36% CU
SAMPLE #2
SAMPLE #3
COMPOSITE TO SMELTER
5.1% CU.
FORBES GROUP
PIMA CO. ARIZONA.
HORIZ: SCALE 1" = 40'-0"
AMERICA-No.1
THE ALTA-No.1
AMERICA-No.2
ALTA No.1
PEACH
MAIN TUNNEL
UPPER TUNNEL
#1 CHUTE
#2 CHUTE
#3 CHUTE
MAIN TUNNEL
MINERALIZED LIMESTONE
ALTERED LIMESTONE
QUARTZITE
QUARTZ MONZONITE
SULPHIDE ORE [6% CU OR OVER]
GRANITE
UPPER WORKINGS
MAIN
WINZE
AMERICA NO. 1. TUNNEL
PROPOSED DRILL HOLES

No. 3


SAMPLE SECTIONS
LOOKING S.E.
No18
No17
No16
No15
No14
No13
No12
No11
No10
No9
No8
No7
No6
No5
No4
No3
No1
No2
5' not sampled
4325
SECTION - B-B'
(LOOKING S.E.)
Drift and Tunnel Level
S.E. Drift
SECTION - A-A'
LOOKING S.E.
Southeast slope
Projection X-cut Tunnel
S.E. drift
Mineralized fissure
Stoped
Proposed Mill Location
Elev. 4318
Elev. 4300 (Assumed)
Z
COPPER DUKE MINE
SHOWING OUTCROP AND SAMPLES
JAMES R. MATTINGLY - DOCKET NO. 4888
SCALE 1" = 20'
JULY 1947
LEGEND
O'BURDEN
PORPHYRY
ORE

No. 2.

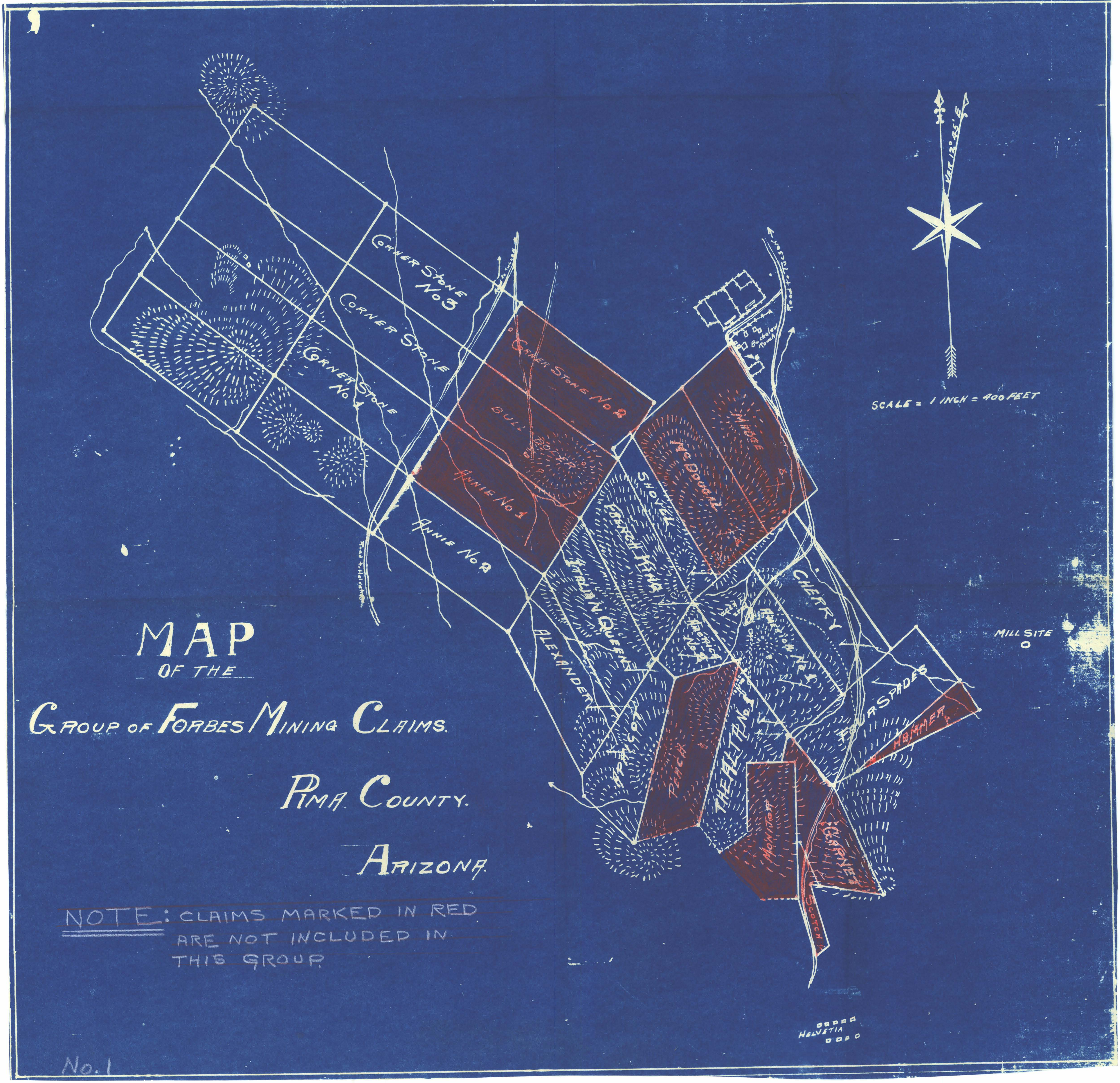

MAP
OF THE
GROUP OF FORBES MINING CLAIMS.
PIMA COUNTY.
ARIZONA.
NOTE: CLAIMS MARKED IN RED
ARE NOT INCLUDED IN
THIS GROUP.
No. 1
CORNER STONE No 3
CORNER STONE
CORNER STONE No 1
CORNER STONE No 2
BULL DOZER
ANNIE No 1
ANNIE No 2
SHOVEL
McDOUGAL
MIDGE
ITALIAN QUEEN
ALEXANDER
CHERRY
FOUR SPADES
HAMMER
PEACH
THE ALTA No 1
MONITOR
GARNET
SCOTCH
Buchelew Ranch
Road to Tucson
Road to Helvetia
VAR 12° 45' E
SCALE = 1 INCH = 400 FEET
MILL SITE
HELVETIA

EXHIBIT-A #8

TO EL PASO SMELTING WORKS.

Date.	Car No.	Weight Dry.	Gold	Silver ozs.	Per cent. Copper	Price.	Per Ton	Iron.	Price.	Total Per Ton.	Treatment.	Insoluble.	Proceeds Less Treatment & Silica.
1904.													
7/5	3	56,842			6.34	9-5/16	$10.62	28.8	$1.44	$12.07	$1.00	26 2.68	$233.45
6/16	4	67,172	.05	.95	7.08	9-2/16	12.11	27.3	1.36	14.42	1.00	26 2.60	360.69
7/5	5	63,720			6.70	9-1/16	10.93	22.5	1.12	12.05	1.00	34.7 3.47	241.50
6/30	6	65,136			6.40	9-1/16	11.30	24.0	1.20	12.50	1.00	32.8 3.28	267.79
7/8	7	68,592		1 .55	6.60	9	10.53	22.2	1.11	12.10	1.00	33.0 3.30	253.45
7/16	8	67,548			6.50	9	10.52	[illegible]	1.11	11.64	1.00	37 3.70	231.35
7/16	9	44,766			6.80	9	11.02			11.02	1.00	41 4.12	154.67
7/27	10	47,094			7.7	9-3/16	12.73	18.0	.90	13.63	2.00	42 4.21	174.72
7/27	11	66,192			9.3	9-3/16	15.50	25.1	1.25	16.35	2.50	32 3.20	358.43
8/15	12 - 13	108,020			6.20	9-1/8	10.55	26.0	1.30	11.46	1.00	31 3.13	367.36
8/17	14 - 15												
	17	211,368			5.4	9-1/16	8.81	23.0	1.15	9.96	1.00	40 4.09	515.90
8/25	16	48,402											
	18												
	19	103,939											
	20	67,231			4.70	9-1/16	7.67	21.1	1.05	8.72	1.00	45.0 4.50	353.51
8/27	21	59,993											
	22	44,331											
	23	65,075											
	24	46,973			4.7	9-1/8	7.72	20.88	1.04	8.76	1.00	47 [illegible]	332.98
9/16	25	47,737											
	26	43,032											
	26	81,507											
	25	20,960			4.8	9-1/8	7.66	20.5	1.02	8.90	1.00	44 4.44	334.50
9/17	31	67,070			5.3	9-1/8	8.54	21.6	1.09	9.61	1.00	42 4.23	145.20
9/27	27 - 29	69,831											
		70,610											
		12,131			5.2	9-1/8	8.54	22.0	1.11	9.65	1.00	40.5 4.05	327.91
9/27	30	54,526			5.4	9-1/3	8.87	21.6	1.08	9.95	1.00	43.1 4.31	123.50
9/20	32	54,602			5.8	9-1/3	9.53	20.6	1.03	10.56	1.00	43.5 4.35	142.24
9/20	33	62,410			6.0	9-1/8	9.85	18.5	.92	10.77	1.00	47.1 4.71	157.90
10/6	34	64,002			5.67	9-1/4	9.4[illegible]	21.6	1.08	10.07	1.00	41.5 4.15	170.88
9/20	35	68,928			5.6	9-1/8	9.20	22.2	1.11	10.31	1.00	39.7 3.97	184.04
9/24	36	93,480			6.6	8-1/4	10.99	21.8	1.09	12.08	1.00	38.6 3.86	537.46
9/24	37	60,800			6.6	9-1/4	10.99	22.1	1.10	12.09	1.00	38.7 3.87	219.49
9/24	38	55,348			6.8	9-1/4	11.32	18.5	.92	12.24	1.00	44.4 4.44	133.15
9/24	39	59,044			7.0	9-1/4	11.65	22.0	1.10	12.75	1.00	39.0 3.90	231.75
9/30	40	50,018			5.99	9-1/4	9.97	21.9	1.09	11.06	1.00	40.8 4.08	149.55
9/27	41	47,986			7.2	9-1/4	11.99	22.4	1.12	13.11	1.00	39.3 3.93	196.26
9/27	42	64,248			6.8	9-5/16	11.40	23.0	1.15	12.55	1.00	36.2 3.62	254.74
9/28	43	70,082			7.7	9-5/16	12.91	22.0	1.10	14.01	2.00	35.6 3.56	296.10
10/1	44	62,158			6.3	9-5/16	10.56	23.0	1.15	11.71	1.00	35.1 3.51	225.77
10/3	45	52,418			5.8	9-5/16	9.72	23.8	1.19	10.91	1.00	[illegible] 3.49	138.36
9/30	46	56,762			7.5	9-5/16	12.63	45.1	2.25	14.88	2.00	70.7 7.07	223.55
10/3	47	57,216			7.1	7-5/16	11.90	25.0	1.25	13.15	1.00	32. 3.20	256.04
10/3	48	60,404			7.5	9-5/16	12.57	25.9	1.29	13.86	2.00	30.1 3.01	267.29
10/5	49	53,904			6.9	9-5/16	11.57	24.2	1.21	12.78	1.00	32.2 3.22	230.71
10/5	50	47,656			6.5	9-5/16	10.89	25.6	1.28	12.17	1.00	30.7 3.07	193.01
10/24	51 - 56	43,776											
		38,696			7.13	9-5/16	11.95	24.0	1.20	13.15	1.00	32.5 3.25	367.00
10/8	52 - 54	87,304			7.3	9-5/16	12.24	23.7	1.18	13.42	2.00	32.3 3.25	355.33
10/14	53 - 55	30,402			7.4	9-5/16	12.4[illegible]	[illegible]	1.21	13.61	2.00	[illegible]	371.23
		38,304											
10/25	57	41,494			7.2	9-5/16	12.07	25.7	1.22	13.35	2.00	[illegible] 3.14	168.26
10/8	58	32,036			7.3	9-5/16	12.24	24.8	1.24	13.48	2.00	31.4 3.24	155.59
10/24	59-63-5-												
	7-8-9	294,580			6.7	9-5/16	11.46	25.84	1.29	12.75	1.00	30.9 3.09	1,275.53
10/14	60 - 64	48,221											
		63,985			6.7	9-5/10	11.46	24.8	1.25	12.70	1.00	31.4 3.14	480.24
10/26	61	47,088			6.4	9-5/10	10.94	25.6	1.28	12.22	1.00	30.0 3.00	133.23
10/17	62	53,500			6.9	9-5/	11.50	24.0	1.20	13.00	1.00	31.1 3.11	257.81

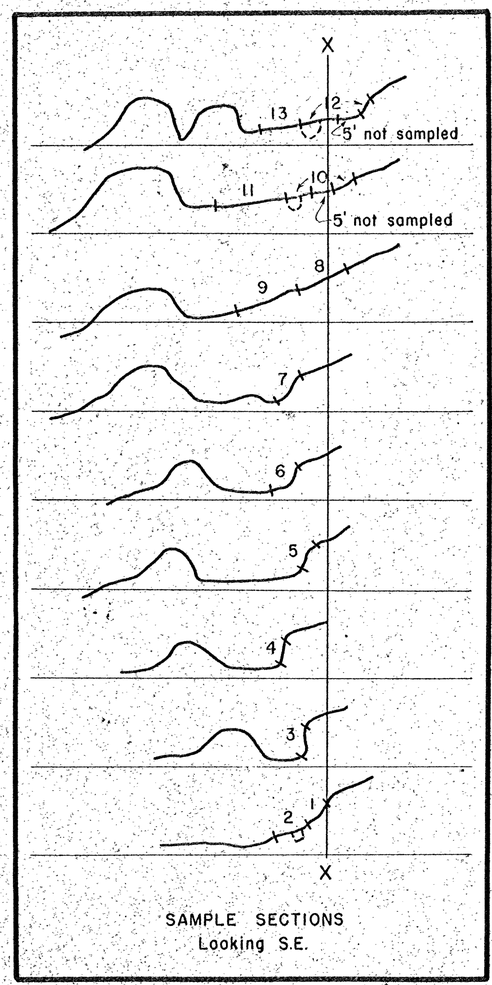
E. 2. Shipments Tip Top Copper Co. to El Paso Smelting Works.

10/20	66 - 70	32,059										
		51,241		6.4	9-5/	10.9[illegible]	25.9	1.29	12.23	1.00	30.5 3.05	340.70
11/2	71 - 83	57,948										
		42,486		5.4	9-13/16	9.5[illegible]	25.4	1.27	10.81	1.00	32.4 3.24	329.92
11/1	72-3-7	50,149										
		42,346										
		68,305		5.3	9-13/16	9.3[illegible]	26.6	1.33	10.69	1.00	31.3 3.13	529.06
10/26	74-5-8-											
	9-80-	38,938										
	1-2	41,622										
		46,205										
		92,416										
		42,135										
		33,792		6.1	9-13/16	10.7[illegible]	29.5	1.47	12.24	1.00	33.3 3.33	1,167.31
11/2	76	30,316		5.1	9-15/16	9.1[illegible]	22.0	1.10	10.22	1.00	37.6 1.	82.76
11/5	84-5-6-7	55,337										
		33,792										
		50,901		5.4	9-13/16	9.6[illegible]	25.9	1.29	10.95	1.00	34. 3.40	655.10
11/10	88	38,016		6.	10-7/16	11.2[illegible]	24.	1.20	12.47	1.00	36. 3.60	101.49
11/10	89	51,774		6.1	10-7/16	11.4[illegible]	25.5	1.27	12.73	1.00	31.7 3.17	221.69
11/17	90 - 91	36,284										
		39,454		7.1	10-9/16	13.5[illegible]	24.9	1.24	14.74	2.00	32.6 3.26	369.00
11/17	92	39,75[illegible]		8.8	10-7/16	16.5[illegible]	23.	1.15	17.68	2.50	[illegible] 3.[illegible]0	234.17
11/1[illegible]	93	42,064		7.2	10-9/16	[illegible]	23.	1.15	15.65	2.00	37.4 3.74	146.39
11/1[illegible]	94	51,168		7.	10-9/16	13.[illegible]	22.2	1.11	14.42	2.00	37.8 3.78	221.04
12/3	95	74,432		6.7	11-1/8	13.4[illegible]	23.4	1.17	14.59	2.00	34.8 3.48	339.04
12/9	96	37,520	1.4 .79	6.9	11-9/16	14.5[illegible]	21.3	1.06	16.21	2.50	37.4 3.74	187.04
12/28	98	42,682		5.3	11-3/8	10.8[illegible]	26.	1.30	12.15	1.00	31.4 3.14	170.94
12/28	99	44,838		5.5	11-3/8	11.2[illegible]	24.3	1.21	12.47	1.00	33.8 3.38	181.57
1/3/05	97	45,608		5.8	11-3/8	11.8[illegible]	23.9	1.19	13.06	1.00	34.8 3.48	196.52
1/30/05	100	48,102		5.1	11-13/16	10.84	25.8	1.29	12.13	1.00	31.6 3.16	191.69
2/16	101	55,958		5.3	11-3/4	11.2[illegible]	24.8	1.24	12.48	1.00	33.6 3.36	145.45
2/16	102	65,692	1.6 .93	7.1	11-3/4	15.02	25.7	1.28	17.23	2.50	28.6 2.86	369.88
3/3	103	45,896	1.1 .63	5.6	11-3/4	11.[illegible]	25.8	1.29	13.76	2.00	30.5 3.05	199.88
2/28	104	36846	1.1 .64	5.3	11-3/4	11.[illegible]	25.5	1.27	13.12	1.00	32.5 3.25	163.41
3/10	105	43,350		5.2	11-3/4	11.	25.8	1.29	12.29	1.00	31.4 3.14	176.65
3/11	106	47,244		5.1	11-3/4	10.79	25.3	1.26	12.05	1.00	32.7 4.27	183.78
3/27	107	41,162		5.2	11-13/16	11.05	25.8	1.29	12.35	1.00	32. 3.20	167.73
4/4	108	62,040		5.5	11-15/16	11.8[illegible]	25.2	1.26	13.08	1.00	33.5 3.35	270.80
4/4	109	41,284		5.8	11-15/16	12.46	26.5	1.32	13.78	2.00	31.6 3.16	177.93
3/28	110	44,096		5.2	11-15/16	11.17	26.5	1.32	12.49	1.00	32.4 3.24	181.90
4/3	111	50,322		6.2	11-15/16	13.32	26.7	1.33	14.65	2.00	30. 3.	243.80
4/5	112	30,176		5.5	11-15/16	11.82	25.8	1.29	13.11	1.00	31.9 3.19	134.58
4/24	113	54,786		6.	11-3/4	12.69	25.7	1.28	13.97	2.00	3.24	239.14
4/15	114	48,334		6.2	11-3/4	13.11	25.6	1.28	14.39	2.00	3.20	222.19
4/24	115	56,690		6.6	11-3/4	13.9[illegible]	24.7	1.23	15.19	2.00	3.20	280.33
4/24	116	58,078	1.1 .59	6.3	11-3/4	13.3[illegible]	24.8	1.24	15.15	2.00	33.2 3.32	235.46
5/2	117	50,530		6.2	11-11/16	13.0[illegible]	25.6	1.28	14.32	2.00	31.2 3.12	232.44
5/3	118	33,992		5.8	11-9/16	12.07	26.8	1.34	13.41	2.00	30.4 3.04	142.26
5/6	119	25,720		6.	11-9/16	12.40	27.2	1.36	13.85	2.00	30.8 3.08	200.48
6/6	120	43,804		6.2	11-5/16	12.62	25.1	1.25	13.87	2.00	30.8 3.08	192.52
6/6	121	59,014		7.	11-5/16	14.25	27.	1.35	15.60	2.00	28.6 2.86	316.91
6/14	122	49,856		5.9	11-5/16	12.0[illegible]	26.2	1.31	13.32	2.00	30.5 3.05	206.15
11/7	123	41,434	1.0 .59	8.0	13-1/8	[illegible]	28.2	1.41	20.90	2.50	27.6 2.76	324.48
1/3/06	124	37,652	1.0 .62	6.65	13-1/2	[illegible]	28.3	1.42	21.10	2.60	[illegible] 2.61	[illegible]
1/6	125	29,736	1.0 .62	7.2	15-1/2	20.[illegible]	28.2	1.41	22.12	3.00	27. 2.70	244.13
1/19	126	46,906	1. .61	7.2	15-9/16	20.17	27.6	1.38	22.16	3.00	27.8 2.78	384.16
1/2[illegible]	127	48,386	1. .62	6.9	15-1/2	[illegible]	27.8	1.39	21.26	2.50	28. 2.80	336.12
2/8	128	26,000	1.1 .69	6.9	15-1/4	[illegible]	27.4	1.37	21.	2.50	27.5 2.75	362.25
2/15	129	45,956		6.63	15-1/4	18.[illegible]	28.0	1.40	19.60	2.50	28.6 2.86	327.21
2/13	130	56,006		6.4	14-7/8	17.1[illegible]	29.0	1.45	18.59	2.50	28.6 2.86	370.48
2/24	131	60,794		6.3	14-7/8	16.[illegible]7	26.6	1.33	18.20	2.50	29.5 2.95	387.56
2/19	132	66,386		6.2	14-5/8	16.[illegible]	24.3	1.22	17.54	2.50	31.6 3.16	394.33
2/28	133	47,942		6.1	14-5/8	16.03	25.1	1.26	17.32	2.50	31.2 3.12	280.46

P. 3. Shipments Tip Top Copper Co. El Paso Smelting Works.

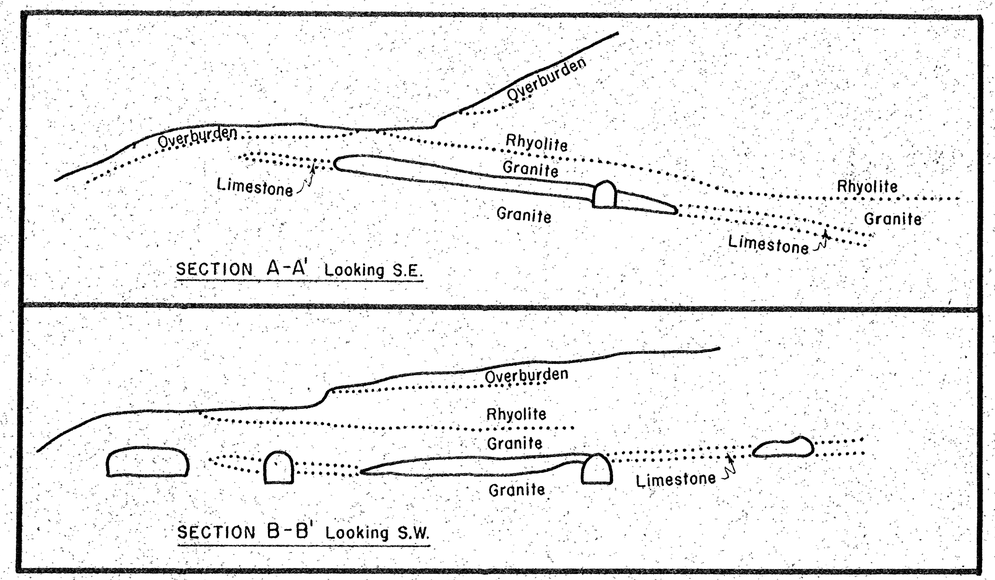
3/6	134	33,826	1.0 .63	5.4	14-3/4	14.34	[illegible]	1.25	16.22	2.00	31. 3.10	186.96
3/6	135	53,150		5.8	14-3/4	15.40	24.7	1.24	16.64	2.50	29.8 2.98	296.58
3/15	136	45,366	.6	5.5	15-1/8	14.97	25.1	1.26	16.23	2.00	29.4 2.94	256.09
3/19	137	49,336	.6	5.9	15-1/4	16.20	27.	1.35	17.55	2.50	28.8 2.88	300.57
3/19	138	46,368	.6	6.	15-1/4	16.47	26.1	1.31	17.78	2.50	29.9 2.99	284.93
3/19	139	41,740	.6	5.8	15-1/4	15.92	26.3	1.32	17.24	2.50	28.8 2.88	247.52
3/19	140	45,072	.6	5.6	15-1/4	15.37	25.7	1.29	16.66	2.50	29.7 2.97	252.18
3/21	141	42,436	.6	5.3	15-1/4	14.55	26.1	1.31	15.86	2.00	29.6 2.96	231.29
3/27	142	41,372	.4	5.	15-1/4	13.73	24.4	1.22	14.95	2.00	30.3 3.03	205.21
4/14	143	37,790	.4	5.2	15-1/4	14.27	24.4	1.22	15.49	2.00	31.9 3.19	194.62
4/24	144	53,010	.4	5.2	15-1/4	14.27	23.6	1.18	15.45	2.00	31.6 3.16	272.74
5/2	145	75,630	.7	6.1	15-1/4	16.74	25.2	1.26	18.00	2.50	31.6 3.16	416.64
5/2	146	59,024	.7	6.1	15-1/4	16.74	25.3	1.27	18.01	2.50	30.9 3.09	366.54
5/11	147	59,752	1. .63	6.4	15-1/4	17.59	26.6	1.33	19.53	2.50	29.4 2.94	420.96
5/17	148	43,488	.7	6.	15-1/4	16.47	25.2	1.26	17.73	2.50	32.2 3.32	261.15
5/11	149	57,472	.8	5.9	15-1/4	16.20	25.0	1.25	17.45	2.50	33.8 3.38	332.40
5/25	150	47,108	.9	6.9	15-1/4	18.94	25.5	1.28	20.22	2.50	32.2 3.22	341.53
5/26	151	57,036	1.0 .64	6.5	15-1/4	17.34	26.	1.30	19.78	2.50	31.6 3.16	402.67
5/24	152	58,260	.8	6.3	15-1/4	17.29	26.5	1.33	18.62	2.50	31. 3.10	379.27
5/26	153	61,502	1. .64	6.2	15-1/4	17.02	25.	1.25	18.91	2.50	34.7 3.47	397.92
5/26	154	47,740	.8	6.	15-13/32	16.64	25.5	1.28	17.92	2.50	33.2 3.32	283.83
5/26	155	62,[illegible]	1. .65	6.4	15-13/32	17.75	25.	1.25	19.65	2.50	[illegible] 3.32	436.16
5/30	[illegible]	[illegible],578	.3	7.3	15-13/32	20.[illegible]	[illegible]	1.28	21.80	3.00	[illegible] 3.26	360.21
5/26	157	53,156	1. .68	7.3	15-13/32	20.2[illegible]	26.4	1.32	22.21	3.00	29.7 2.97	431.63
6/1	158	47,794	1. .64	8.	15-3/8	22.14	26.	1.30	24.08	3.00	30.6 3.06	430.62
6/1	159	52,368	.9	7.2	15-3/8	19.83	26.	1.30	21.23	2.50	31.6 3.16	409.16
6/1	160	50,132	1.1 .71	7.3	15-3/8	21.59	26.7	1.34	23.64	3.00	30.8 3.08	440.16
6/2	161	49,200	.8	5.7	15-3/8	15.77	24.7	1.24	17.01	2.50	36. 3.60	268.39
6/9	162	55,872	.8	6.8	15-3/8	18.82	26.	1.30	20.12	2.50	33.3 3.33	399.21
6/9	163	63,346	.7	7.	15-3/8	19.37	26.	1.30	20.67	2.50	33. 3.33	474.70
6/15	164	42,576	.8	5.7	15-3/8	15.77	24.2	1.21	16.98	2.00	36.8 3.68	229.91
6/15	165	42,632	.7	5.9	15-3/8	16.33	25.	1.25	17.58	2.50	34.6 3.46	247.69
6/15	166	52,448	.7	6.3	15-3/8	17.44	23.4	1.17	18.61	2.50	35. 3.50	330.63
6/20	167	57,466	.64	6.	15-3/8	16.61	25.1	1.26	17.87	2.50	33.2 3.32	346.17
6/22	168	52,138	.4	6.3	15-3/8	17.44	25.	1.13	18.59	2.50	40.4 4.04	314.13
6/29	169	73,276	.8	7.	15-3/8	19.37	25.5	1.23	20.65	2.50	31.5 3.16	549.57
6/30	170	87,906	.8	7.9	15-5/16	21.77	25.4	1.27	23.04	3.00	31.2 3.12	743.60
7/9	171	68,962	1. .61	7.8	15-1/4	21.41	27.	1.35	23.37	3.00	31.3 3.13	594.48
7/13	171x	103,594	1.2 .74	8.6	15-1/8	23.41	27.2	1.36	25.61	3.00	29.8 2.98	1,011.60
7/24	173	53,450	.7	5.7	15	15.39	27.3	1.37	16.78	2.50	28.4 2.84	305.20
7/31	174	53,446	.8	6.5	15	17.55	24.4	1.22	18.77	2.50	33.6 3.36	344.99
8/2	175	72,362	.7	5.9	15-1/16	16.00	24.5	1.23	17.23	2.50	33.8 3.38	410.68
8/2	176	77,854	.8	6.	15-1/16	16.27	24.4	1.22	17.49	2.50	34.8 3.48	443.00
		9,150,266										$42,638.74

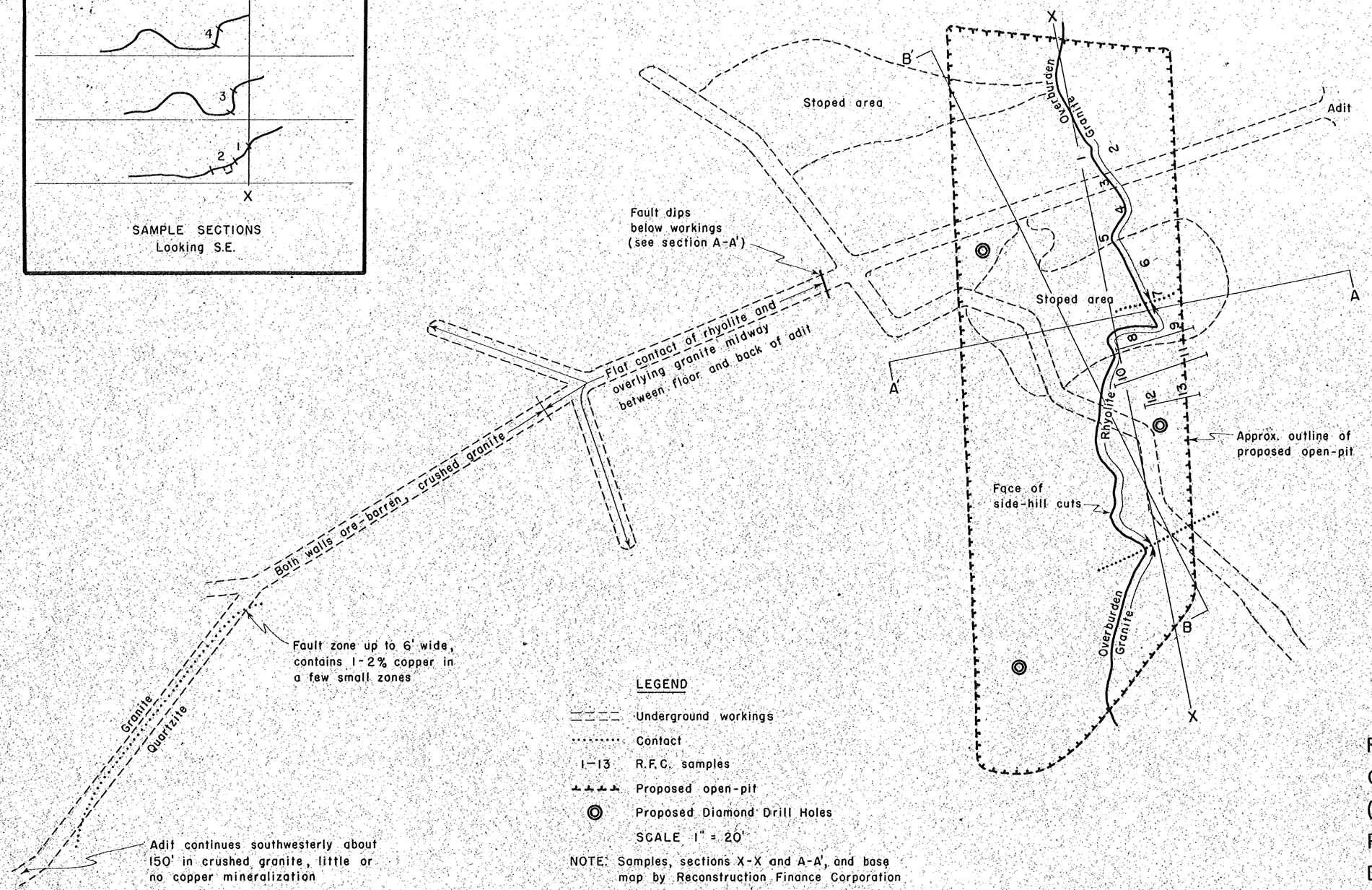
4575.133 tons



SAMPLE SECTIONS
Looking S.E.

SAMPLE NUMBER	INTERVAL FEET	PERCENT COPPER
1	7	2.25
2	7	2.10
3	6	2.90
4	5	3.60
5	5	4.95
6	8	6.60
7	7	1.70
8	12	4.10
9	9	3.00
10	10	5.30
11	15	3.40
12	12	6.30
13	9	1.40





LEGEND

- Underground workings
- Contact
- 1–13 R.F.C. samples
- Proposed open-pit
- Proposed Diamond Drill Holes
- SCALE 1" = 20'

NOTE: Samples, sections X-X and A-A', and base map by Reconstruction Finance Corporation

FIG. 3
COPPER DUKE MINE
(Tiptop Group of Mines)
Pima County, Arizona
DMA 1019