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W. G. Gribble

RECONSTRUCTION FINANCE CORPORATION
MINING SECTION
PROGRESS REPORT

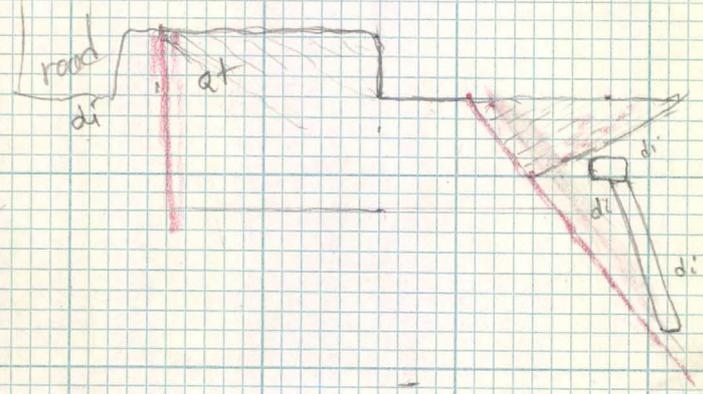
Borrower: Heron and Gribble
Docket No: 6200
Date of Visit: July 8, 1947
Date of Report: July 15, 1947

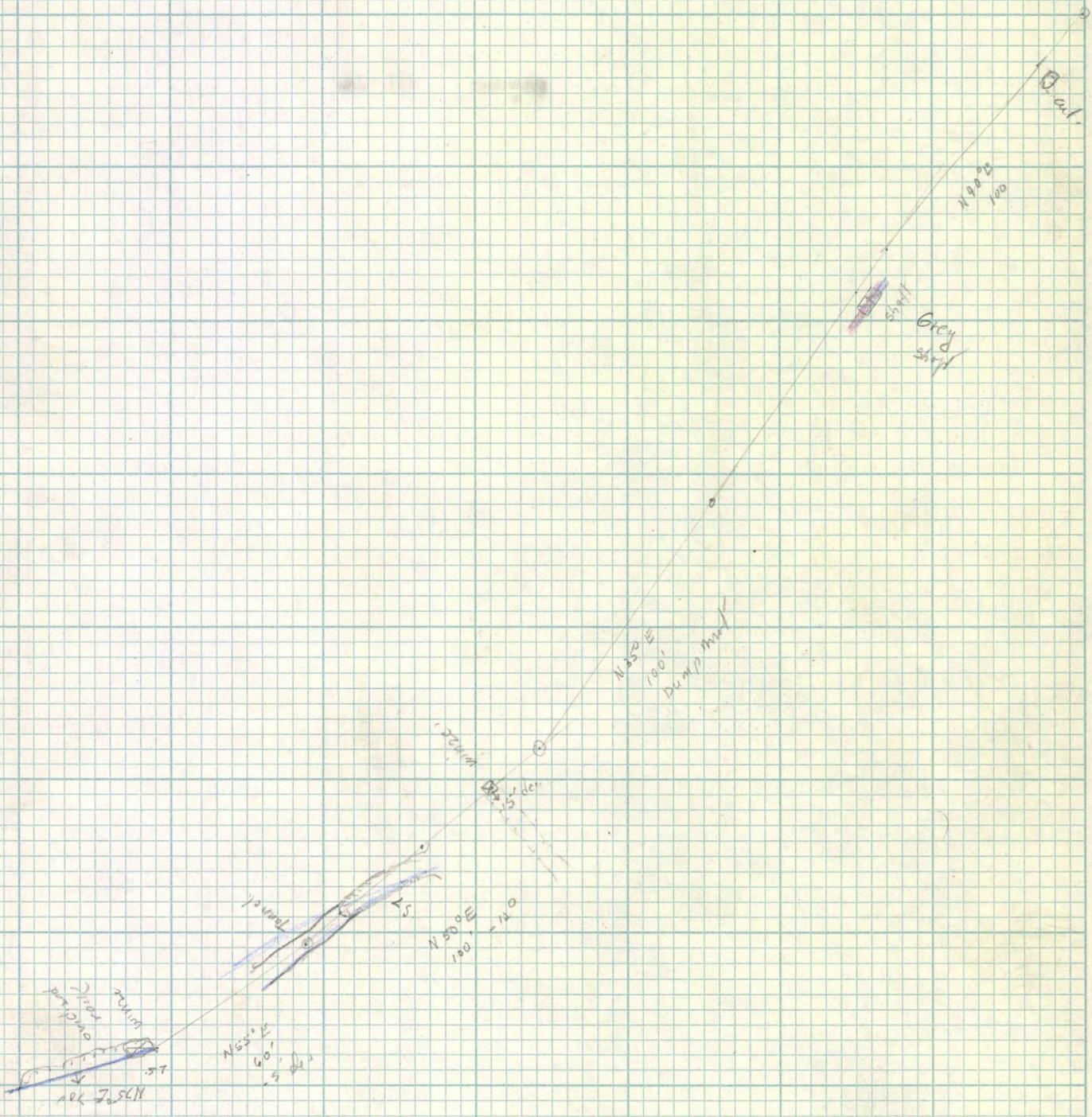
This is the first report on Borrower's progress since the loan was granted. Borrower has placed two buildings on the property, installed a compressor and power unit and has done some underground work. Also, the Borrower has sent two shipments of ore to the smelter. The first shipment of 53 tons assayed 2.98% Copper and the second shipment of 25 tons averaging 5.9% copper.

There are four men employed on the property in addition to Mr. Gribble, one of the partners. The ore which was shipped came out of the open cut. However, any further ore must come from underground operations as the cut is too deep. Borrower has run a forty-foot adit level from bottom of cut. At the end he has sunk a 40 foot inclined winze. At the time of my examination, the Borrower was preparing to cross-cut from bottom of winze to the ore. If the ore is out a sufficient quantity will be mined to repay the loan. There is at the present time \$9155.47 in the account. There has been requisitioned \$1500.00 for July which will be sufficient to cover the cost of labor in running the cross-cut to the ore zone. As nearly as I can ascertain the Borrower is progressing according to schedule.

CHARLES A. RASOR
Supervising Engineer

CAR:gmk







RECONSTRUCTION FINANCE CORPORATION

Orig. & 3 copies

WASHINGTON 25, D.C.

325 Heard Building
Phoenix, Arizona
May 14, 1945

Globe Transit

MEMORANDUM

TO: W. B. Gohring - Supervising Engineer in Charge - Phoenix
FROM: Charles A. Rasor - Supervising Engineer - Phoenix
RE: Gribble and Heron - Docket No. ND-5721

I submit herewith a breakdown and analysis of the operation of Gribble and Heron under a Reconstruction Finance Corporation loan of \$10,000.00.

An original Preliminary Development Loan of \$3,000.00 was approved on April 16, 1943 to rehabilitate the Globe-Transit Mine at Globe, Arizona. On September 15, 1943 a further loan of \$10,000.00 was approved, of which \$3,000.00 repaid the first loan.

Operations started May 10, 1943 and the loan was paid off May 20, 1944. The mine is continuing to produce copper ore successfully.

During this period 3,282.44 wet tons were taken from the mine and old dumps and sent to the smelter. The following table gives an analysis of metal produced and returns.

Table I

Analysis of Metal Production and Returns

3282.44 wet tons		
3057.1525 dry tons		
Total copper - 187068 pounds		
Average Assay - 3.05% cu.		
Gross value at Smelter	\$15001.40	Average value per ton 4.91
Average value per ton 4.91		
Premiums (5 cents + 10 cent special)	27218.40	8.90
Total gross value	\$42219.80	13.81
Average value per ton 13.81		
Less Smelter treatment charges	10700.03	3.50
Amount received from Smelter	\$31519.77	10.31

Total loan funds \$ 10,000.00
Net smaller premium income 2649.422

\$ 36494.22

Total operating costs 18179.37
Profit before return of capital & →
and interest charges 18314.85

Q
Repayment of loan May 20, 1944
with total interest charges 10309.92

Net Profit to Benefactor \$ 8004.93 ~~244~~

Gribble and Heron
Docket No. ND-5721

Production Analysis
May 14, 1945

Amount received from Smelter	\$31519.77	10.31
Less trucking	3035.73	.72
	<u>\$28484.04</u>	9.39
Less freight	718.90	.22
	<u>\$27765.14</u>	9.17
Less Royalty on Smelter Settlement	363.64	
	<u>\$27401.50</u>	.50
Less Royalty on A premiums	907.28	
Net proceeds	<u>\$26494.22</u>	8.67

Operating costs are itemized below:

Table II

Analysis of Operating Costs

<u>Development & Mining</u>	<u>Total Cost</u>	<u>% of Total</u>	<u>Cost Per Ton</u>
Labor & Payroll taxes	\$10126.72	55.7	3.09
Supervision & Genl Exp.	2650.00	14.6	.81
Supplies	1448.93	8.0	.44
Rental on Equipment	1228.80	6.7	.37
Timber	1385.24	7.6	.42
Compensation Insurance	756.44	4.2	.23
Unemployment Tax & OAB	583.24	3.2	.18
Total:	<u>\$18179.37</u>	100.0	<u>\$5.54</u>
→ Net smelter and premium proceeds			\$26494.22
Total operating costs			<u>18179.37</u>
Profit before interest charges			8314.85
Interest charges, Loan			<u>309.92</u>
Net profit to Borrower			<u>\$8004.93</u>

Sub-requisition No. 17 shows \$2,743.29 was returned to Borrower from Trustee Bank; the difference being that the premiums on the last two shipments and the 10% premiums due on other shipments did not go through the account.

The ore occurs as a replacement of limestone in kidney-like masses. It is oxidized and consists of cuprite, chrysocolla and malachite.

Although most of the ore sent to the smelter came from the dumps, most of the operating costs were due to development of a high grade copper ore body underground.

CAR:sbm

Charles A. Rasor
CHARLES A. RASOR
Supervising Engineer

XXXXXXXXXXXXXXXXXXXX

325 Heard Building

Phoenix, Arizona

May 19, 1945

MEMORANDUM

TO: W. B. Gohring - Supervising Engineer in Charge - Phoenix
FROM: Charles A. Rasor - Supervising Engineer - Phoenix
RE: Gribble and Heron - Docket No. ND-5721

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Gribble and Heron
Docket No. ND-5721

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Unemployment Tax & OAB	583.24	3.2	.18
Total:	<u>\$18179.37</u>	<u>100.0</u>	<u>\$5.54</u>

Total loan funds	\$10000.00
Net smelter and premium proceeds	<u>26494.22</u>
	<u>36494.22</u>
Total operating costs	<u>18179.37</u>
Profit before return of capital & interest charges	<u>18314.85</u>
Repayment of loan May 20, 1944, with total interest charges	<u>10309.92</u>
Net Profit to Borrower	<u>\$ 8004.93</u>

Sub-requisition No. 17 shows \$2,743.29 was returned to Borrower from Trustee Bank; the difference being that the premiums on the last two shipments and the 10% premiums due on other shipments did not go through the account.

The ore occurs as a replacement of limestone in kidney-like masses. It is oxidized and consists of cuprite, chrysocolla and malachite.

Although most of the ore sent to the smelter came from the dumps, most of the operating costs were due to development of a high grade copper ore body underground.

CAR:gnk

CAR
CHARLES A. RASOR
Supervising Engineer

325 Heard Building
Phoenix, Arizona
January 25, 1944

TULLY - Ass't. Chief - Mining Section RFC - Washington, D. C.

Re: Gribble and Heron - Docket No. 5721

Enclosed please find my Progress
Report, in duplicate, on the
above captioned project.

TRAVIS P. LANE
Supervising Engineer

TPL:dm
Encs.
2c Progress Report
with supporting data

RECONSTRUCTION FINANCE CORPORATION
MINING DIVISION
PROGRESS REPORT OF SUPERVISING ENGINEER

Docket No. - ND-5721
Heron and Gribble
Date of Examination - Jan. 20, 1944
Date of Report - Jan. 25, 1944

The project was granted a loan in the amount of \$3,000 in July, 1943 and an additional loan of \$7,000 in September, 1943.

The purpose of the additional loan was to provide additional equipment, begin mining ore in the area of an old stope and to drift easterly in the contact ore zone to connect with the Transit shaft workings.

The accompanying sketch indicates the present extent of the workings. Because of delay in obtaining a special premium price for copper, mining operations were not begun, but instead work was concentrated upon advancing the east drift toward the Transit shaft. This drift has been carried in the contact zone between diabase and limestone. The Transit shaft and its tributary workings are inaccessible, but Mr. Gribble was in these workings many years ago and has a positive recollection of the presence of a body of 5% copper ore in quartzite immediately north and west of the shaft in the area which is the objective of the present drifting. The smelter desires a high silica ore and it is expected that it will be accorded a favorable treatment rate.

The last 30 feet of the drift and the face contains a band of good iron-copper ore, with copper content as shown on the sketch which accompanies this report. The operators plan to begin a stope some 20 feet back from the face of the drift and to resume drifting as soon as the stope is well started.

The property was granted a 10% special premium copper price at the end of December. This price makes possible the shipment of considerable dump material lying at various places on the property, particularly at the old gray shaft.

At the time of my visit, eight lots of ore had been shipped consisting principally of dump material with some ore from the recent drift development. Returns from the first 3 lots shipped were as follows:

<u>Dry Tons</u>	<u>% Cu</u>	<u>Smelter Net</u>
49.35	3.93	\$ 73.19
76.24	3.04	- .62
37.22	3.72	41.30

The premium price on these shipments will show a substantial profit for the ore produced to date.

Docket No. - ND-5721
Heron and Gribble

It is difficult to estimate the tonnage of commercial grade material available in the dumps. It is material which was discarded many years ago before a smelter was built at Globe. A little sorting is done and considerable waste material of later date must be stripped off. The chances appear good for shipping a substantial tonnage, probably several thousand tons or more, of ore of the grade of the above-tabulated shipments. The rate of shipment will depend upon the smelter's (International) willingness to accept ore. For the near future the smelter has agreed to accept 3 carloads a week.

The operation is being conducted in an efficient business-like manner.

TRAVIS P. LANE
Supervising Engineer

RECONSTRUCTION FINANCE CORPORATION
MINING DIVISION
REPORT OF SUPERVISING ENGINEER

Docket No. MD-5721
Date of Examination... Aug.17,1943
Date of Report..... Sept.4,1943

Note:

The project has been operating under a Preliminary Development Loan in the amount of \$3,000 granted in July, 1943. The purpose of the loan has been accomplished and the loan funds have been expended. The applicant has requested additional funds with which to prosecute further development and to finance mining of ore. The mine was examined on August 17th, and the results are noted in the following report.

1. NAME AND ADDRESS OF APPLICANT

Name:..... Gribble and Heron
Address:..... P.O.Box No. 127,
Globe, Arizona.

Correspondent:

James R. Heron,
P. O. Box No. 127,
Globe, Arizona.

2. CHARACTER OF PROJECT: Development of copper deposit. ✓

3. LOCATION OF MINE

The mine is located in Township 1-N., Range 15 E., in the Globe - Copper Hill Mining District, Gila County, Arizona. The mine is one mile east by dirt and paved road from Globe. The market for the ore is the International Smelter approximately five miles by paved road from Globe. The mine is accessible at all seasons.

4. APPLICANT

The applicant is a partnership composed of two equal partners, Mr. Sidney Gribble and Mr. James R. Heron, both residents of Globe, Arizona. The partners are each middle-aged men.

Mr. Gribble has spent over thirty years in the Globe District, and has worked at various times in practically every mine of note in the district. During most of this time he has been engaged in leasing operations. His shipments to the smelter at Miami have totaled over 200,000 tons of copper ore principally from the Buffalo Vein, of the Old Dominion Mine. He has also

5 at
has
mine

shipped substantial amounts of lead-silver and lead-zinc ores from the district. He probably has a better practical working knowledge of the mines of the district than any other person in the region and his character, and judgment and ability are highly respected.

Mr. Heron has a good working knowledge of mining. He was born in Globe, and conducts a real estate and insurance business which was founded by his father, now retired, who is one of the oldest residents of the district. He is prominent in civic affairs and his character and business ability are of the highest quality.

The property is operated under lease from the Miami Copper Company. A copy of the lease agreement was submitted with the original application for a Preliminary Development Loan.

5. LOAN REQUESTED

The applicant requests a loan in the sum of \$10,000 which includes repayment of the Preliminary Development Loan of \$3,000.

6. DESCRIPTION OF PROJECT

A. General Features

1. There are no mine workings, mill, etc. which are not confined within the applicant's ownership.
2. The project would comply with state compensation and safety-first regulations.
3. There are no apparent legal discrepancies in the proposed project.
4. There are no impeded right-of-way facilities.
5. There is no likelihood of surface or sub-surface trespass during the project.

B. Existing Development

1. The mine is opened by shaft.
 - a. The sketch accompanying this report is based upon a map submitted with the application.
 - b. Vein samples were cut with pick and maul and gathered on canvas. Muck samples were shoveled onto canvas and reduced by quartering.

c. The portions of the workings in which the present interest is centered were generally accessible and in fair condition.

d. General features of deposit, etc.

The property consists of a small portion of the Old Dominion ground, now owned by the Miami Copper Company. It embraces an area having an approximate length of a claim and a half along the NE-SW strike of the big fault vein, which is the principal ore zone of the district, and a width of approximately 900 feet. The area is specifically designated in the copy of the lease agreement which was submitted in the original application for loan.

The Globe shaft, which is the site of the present operations and of the proposed development, is located about 1/2 mile easterly from the main Old Dominion Shaft. While no important Old Dominion workings carry through to the surface in the immediate vicinity of the Globe shaft, the ground here overlies extensive deeper workings which have made a large production in the past. The rocks within the fault zone in the area under consideration are bedded limestones and shattered quartzites. The ore under development occurs in elongated bunches along a bedding plane in limestone, and in kidney masses replacing limestone, and, in the vicinity of the transit shaft, in shattered quartzite. The ore is oxidized and consists of cuprite, chrysocolla and malachite in a gangue of iron oxide and quartz.

Following is a detailed description of the active workings and the sampling : (see sketch which accompanies this report)

The Globe shaft was sunk many years ago and is said to be 200 feet deep. It is now filled with muck to a point 15 feet below the 98-foot level. No record or map is available regarding the workings below this level. The purpose of the preliminary development loan was to rehabilitate the shaft and station at the 98-foot level and make accessible for sampling and stoping and further development a reported showing of ore in an old stoped area on this level.

The crosscut from the shaft was found to be badly caved at 140 feet from the shaft and a drift and crosscut which was driven easterly around the cave picked up the vein at the stope. This stope is approximately 60 feet long and extends some 30 above the level at its highest point, near its western end. In its eastern portion the stope widens out on a roll in the formation. The drift is caved beyond the stope in an westerly direction.

In an easterly direction it passes through and north of the vein but at about 50 feet beyond the stope the drift turns more easterly and at its end a raise connects with the surface approximately 130 feet above. The raise is inaccessible and the drift is filled with muck at the bottom of the raise. The presence of copper ore in the muck and the fact that the vein or trend of ore opened in the stope projects through this point suggests that the end of the drift has encountered a continuation of the stope ore and that it has probably been stoped somewhere in the raise above. The raise rises rather steeply in a southwesterly direction from the drift and at some point above turns more southerly to open onto the surface.

Sample No. 1, assaying 7.80% Cu. was cut across the top of the stope at its highest point. The sample checks fairly well, with applicant's Sample No. 3 which was taken across a wider width of ore some 6 feet west from this point. The ore appears to pinch out in the East end of the stope somewhat below the point where these samples were taken. Just east of this point the back could not be reached but it could be seen to contain ore which is mixed with more waste than in the above samples. Somewhat further east the stope broadens out into an area about 20' x 22'. Good ore occurs in bunches in the back and east and south walls of this stope. The ore throughout this stope does not occur in regular lenses but rather in bunches and tabular masses and since the ore is considerably harder than the enclosing waste material it is quite readily sorted out. The floor of the east end of the stope was covered with a thick layer of broken material. Some high grade had been sorted out and some waste broken onto the pile but the material still contains a fair amount of good ore. A shovelled sample (No.2) of all the material assayed 2.22% Cu. Because of the erratic in-and-out character of the mineralization here a muck sample seemed more practical than random cuts on the walls or back. Mr. Gribble states that a grade of about 4% Cu. could be sorted from this material and that further mining in the stope will, by selective breaking and sorting, produce a shipping grade which will run between 4 and 5% copper. I believe that this is a reasonable estimate.

Sample No. 3, was cut in the floor of the drift beneath the east end of the stope. The sample contained alternate bunches of waste and ore and, assuming that selective

breaking and sorting will about offset dilution, I believe that the shipping product from here will assay about the same as that shown by the sample i.e. 5.40% Cu. The floor of the drift west of here below the stope had not been trenched and was covered with muck and therefore was not sampled. It would be entirely reasonable however to expect that the ore developed in the stope above will be found to extend into and below the floor of the drift at this place.

Sample No. 5, assaying .90% Cu. was a grab from muck in a raise above the drift some 35 feet beyond the above described stope. This raise rises at an angle of 30 degrees southerly from the drift for a distance of 26 feet and then rises vertically 15 feet. The vertical portion of the raise was inaccessible. The copper mineralization occurs disseminated in highly silicious material in the end of the incline and the vertical section of the raise. Little or no sorting would be practical here.

Sample No. 4, assaying 3.31% Cu, was shovelled from gob material at the foot of the incline raise at the end of the drift. The material appears to have been derived from stoping operations somewhere in the raise above. This sample compares with applicant's sample No. 4, assaying 3.6% Cu. Sample No. 6 assaying 4.55% Cu., represents a pile of several hundred pounds of material sorted from this gob.

Applicant's Sample No. 1 represents gob material at a small ore showing in the drift south of the main stope. The showing did not appear particularly attractive and was not sampled at the time of the present examination. The transit shaft, located some 225 feet northeasterly from the end of the drift in the Globe Shaft, has produced a substantial amount of ore in the past and a large volume of ore has been produced from surface workings adjacent to it. Mr. Gribble shipped about 2,000 tons of 8% copper ore from a glory hole just east of the transit shaft. The ore occurs in shattered quartzite in this area. The transit shaft is presently caved at the surface. Mr. Gribble was in it many years ago, and is well acquainted with the mine. He makes a positive statement regarding the presence of a width of 10 feet of 5% copper ore in quartzite on the 100-foot level of the transit shaft. The applicant proposes drifting from the Globe workings toward the transit shaft. The present drift would reach the shaft at a point approximately 165 feet below the collar of that shaft.

The applicant expects to encounter ore in the drift as it progresses along the trend of the ore now opened in the stope in the Globe shaft workings. The ore produced from the transit shaft was high in silica and was not desirable in the early smelting operations in the district, a situation which is reversed today. This class of ore now commands particularly favorable treatment rates at the regional smelters. The evidence of past production from the area of the transit shaft together with the statement by Mr. Gribble, which in view of his proven reliability seems acceptable as fact, makes the possibilities in the proposed development appear especially attractive.

G. Proposed Development.

The program submitted by the applicant proposes to adequately equip the property, further rehabilitate the workings, begin mining ore in the stopes; and to develop the ore below the stopes, and drift easterly on the level to connect with the transit shaft workings.

D. Equipment

The present hoist is a small make-shift piece of equipment and will have to be replaced by a larger one.

It is proposed to purchase necessary compressor, drills, etc. on a rental-purchase plan.

No construction other than an ore bin is necessary.

E. Cost Estimates

It is not possible to make a close estimate of mining costs in the present state of development of the property. The ground breaks easily by picking and light drilling but is sufficiently firm to stand without timber support except in the larger openings.

The ore is generally much harder than the waste material and can be readily separated by selective breaking and sorting. It is estimated that about 2 tons of material will be broken in the stopes for each ton shipped, the waste being left as fill in the stope. Mining cost is estimated at \$4.00 per ton.

The ore is to be shipped to the International Smelter at Miami. Treatment charge is \$3.50 per ton. Cost for trucking to the smelter is \$1.00 per ton.

Royalty to Miami Copper Company is based on a sliding scale. On ore having a smelter net value up to \$18.00 per ton the royalty is 10%.

F. Ore Reserves

There is no blocked out body of ore in the mine and it is not possible because of the erratic content and shape of the ore bodies to estimate probable amount of ore to be expected from the proposed development. Sampling in the stope and on the floor of the level below it however indicates that a substantial amount of ore will be derived from this working place, and the possibilities for eventually producing a very large amount of ore both here and in the proposed east drift development seems quite good.

Assuming that ore shipped from the stope area will contain 4.5% copper, as seems fairly well indicated by the sampling, the ore would have a net value at the mine about as follows:

(90-10- x .90 @ \$.09275.....	\$ 6.68
Premium 90 x 97 x 5.....	4.36
	<u>11.04</u>
Less Treatment.....	3.50
	<u>7.54</u>
Less Royalty.....	.75
	<u>6.79</u>
Less trucking.....	1.00
Net to mine.....	\$ 5.79

In the above calculations gold values are not included although my samples indicate that somewhat over .03 Oz. Au. would be present in ore containing the above amount of copper. The applicant's samples which were assayed at the International Smelter do not show any significant gold content. The difference is probably due to discrepancies in assaying. In any event since the material would be shipped to the International plant it would not appear wise to count upon any returns for gold.

The above net value to the mine would indicate a profit, after mining cost of around \$1.75 per ton.

The above figures include only an "A" premium payment for copper. It would seem that the project would be properly eligible to receive a "B" premium. In this event ore of the above grade would yield a more generous profit or more importantly, the higher price would permit of mining a larger volume of lower grade material with an ultimately larger production of copper.

7. ESTIMATED COST OF PROJECT

1. Hoist.....	\$500.00
2. Equipment Rental, 3 mos. @ \$200 per mo....	600.00
3. Rehabilitation of workings and preparation for stoping.....	1,000.00
4. Ore Bin.....	300.00
5. Development, Working Capital, Contingencies.....	4,800.00
6. Repayment of Preliminary R.F.C. Loan....	<u>3,000.00</u>
	\$10,000.00

Item No. 5 is not broken down in detail because the direction of work in the mine will be guided by the results obtained once the work is under way.

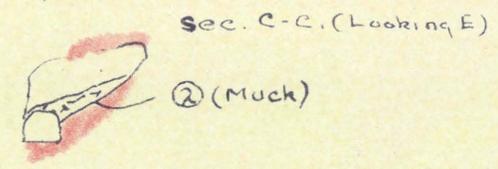
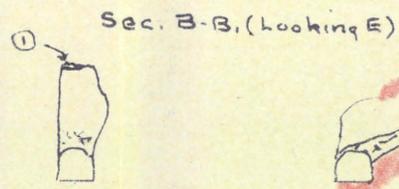
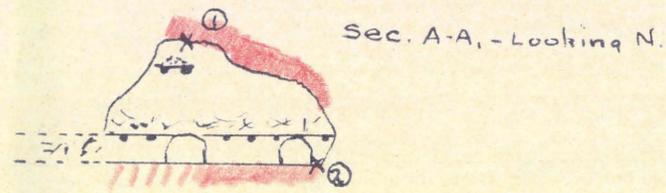
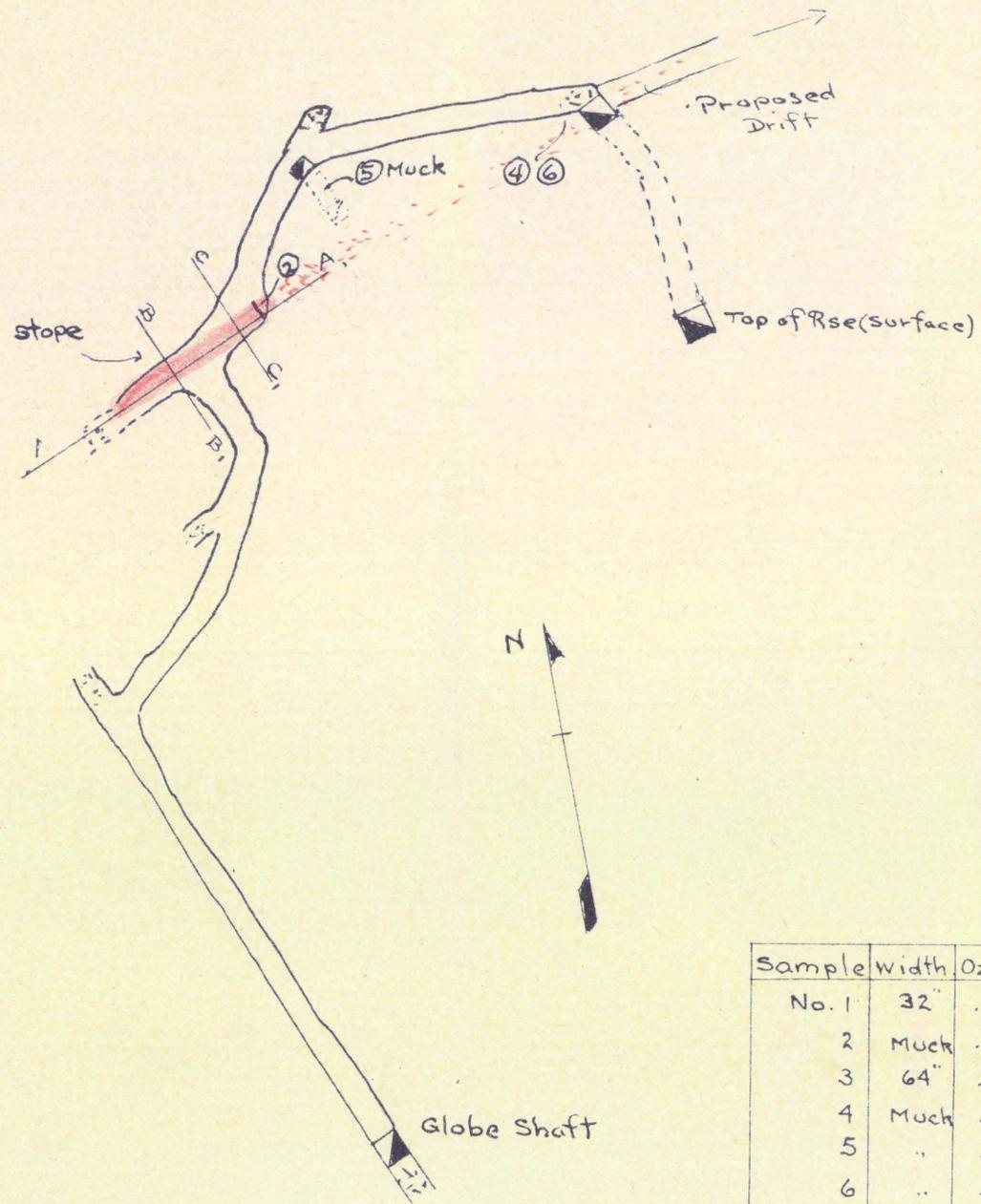
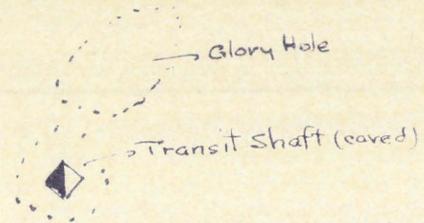
It is expected that the property will be self-sustaining upon completion of the proposed project.

8. COMMENTS OF SUPERVISING ENGINEER

The project is in competent hands, and the work to date has been performed in an efficient business-like manner.

The property is located in the formerly highly productive main ore zone of the Globe district and appears to have large potentialities. A substantial amount of copper ore is indicated by the sampling in the stope area, and the possibilities in the extension of the east drift toward the transit shaft seem particularly attractive. I believe that an additional loan to the project is justified.

T. P. LANE
SUPERVISING ENGINEER.



Sample	width	Oz Au	Oz Ag	%Cu.
No. 1	32"	.04	.2	7.80
2	Muck	.01	.5	2.22
3	64"	.04	.4	5.40
4	Muck	.03	.5	3.31
5	..	.05	.3	.90
6	..	.01	.4	4.55

GLOBE SHAFT & 98 FT. LEVEL
 DOCKET NO. ND-8211
 GRIBBLE & HERON
 Gila Co., Arizona
 Scale: 1" = 50'
 July 17, 1943
 Samples: x - ①
 Ore:

T.P.L

Docket No ND-5721
 Date of Examination Aug 17, 1943
 Date of Report Sept

Note:

The project has been operating under a Preliminary Development loan in the amount of \$3000 ^{granted} in July 1943. The purpose of the loan has been accomplished and the loan funds have been expended. The applicant has requested additional funds with which to prosecute further development and to finance mining of ore. The mine was examined on Aug 17th and the results are noted in the following report:

1 Name and Address of Applicant

Name: Gibble and Heron
 P.O. Box 127
 Globe, Arizona
 Correspondent: James R. Heron
~~James R. Heron~~ P.O. Box 127
 Globe, Arizona

2

Character of Project: Development of Copper deposit.

3 Location of Mine

The mine is located in Township 1 N., Range 15 E., in the Globe-Copper Hill Mining District, Gila County, Arizona. The mine is 1 mile east by dirt and ~~packed~~ road from Globe. The Market for the ore is the International smelter approximately 5 miles by packed road from Globe. The mine is accessible at all seasons.

4 Applicant

The applicant is a partnership composed of two ~~equal~~ partners, Mr Sidney Gibble and Mr. James B. Heron, both residents of Globe, Arizona. The partners are each middle-aged men. Mr Gibble

has spent over 30 years in the globe district and has worked at various times in practically every mine of note in the district. During most of this time he has been engaged in leasing operations. His shipment to the smelter at Miami has totaled over 200,000 tons of ~~ore~~ ^{principally} from the Buffalo vein of the Old Dominion ~~Mine~~. He has also shipped substantial ^{amounts of} lead-silver and lead-zinc ores from the district. He probably has ~~to~~ ^{the best} practical knowledge of the mines of the district than any other person in the region and his character, and judgment, and ability are highly

respected.

Mr. Heron has a good working knowledge of mining. He was born in Globe and ^{conducts} a ~~engaged in~~ the real estate and insurance business which ^{was} ~~the~~ founded by his ~~father~~ ^{now retired, who is} father, one of the oldest residents of the district. He is prominent in civic affairs and his ~~old business~~ ^{at} character and business ability are of the highest quality.

Handwritten mark

The property is operated under lease from the Miami Copper Company. A copy of the lease agreement was submitted with the original application for a preliminary development loan.

5 Loan Requested

The applicant requests a loan in the sum of \$10,000 which includes repayment of the ~~development~~ ^{loan} preliminary development ~~loan~~ ^{in the amount} of \$3000.

6 Description of Project

A. General Features

1. There are no mine workings, mill, etc which are not confined within the applicant's ownership.
2. The project would comply with state compensation and safety-first regulations
3. There are no apparent legal

legal discrepancies in the proposed project.

- ✓ 4. There are no ~~impeded~~ ^{impeded} ~~impeded~~ right-of-way facilities
- 5. There is no likelihood of surface sub-surface trespass during the project.

B Existing development

- 1. The mine is opened by shaft.
 - a. The sketch accompanying this report is based upon a map submitted with the application.
 - b. Vein samples were ^{cut} with pick and maul and gathered on canvas. Much samples were shoveled onto canvas and reduced by quartering.
 - c. The portions of the workings in which the present interest is centered are more generally accessible and in fair condition.
 - d. ^{General} Features of deposit, etc.

✓ The property consists of a ^{small} portion of the Old Dominion ground, now owned by the Miami Copper company. ✓ It ^{embraces} ~~embraces~~ an area having an approximate length of a claim and a half along the NE-SW ^{line} strike of the big fault vein, which is the principal ore zone of the district, and a width of approximately 900 feet. The area is

specifically designated in the copy of the lease agreement which was submitted in the original application for loan.

~~The main Old Dominion shaft is some feet from the site of the present operations.~~

The Globe shaft, which is the site of the present operations and of the proposed development, is located about 1/2 mile easterly from the main Old Dominion shaft.

While no ^{important Old Dominion} ~~very long~~ workings can, though to the surface in the immediate vicinity of the ~~globe shaft~~ ^{the globe shaft} ~~the ground here~~ ^{overlies} ~~very~~ extensive deeper workings which have made a large production in the past.

The rocks within the fault zone in the area under consideration are ^{bedded} limestone and shattered quartzites. The ore ~~occurs~~ under development occurs ⁱⁿ elongated blanches ~~from~~ along ^a bedding planes in the limestone. ~~In places the ore also~~ ^{and} ~~is~~ ^{is} in kidney masses replacing ~~the~~ limestone, ^{in the vicinity of the transit shaft,} and in shattered quartzite.

The ore ^{is} ~~an~~ oxidized and ~~consist of~~ consists of cuprite, chrysocolla and malachite in a ^{gangue} ~~matrix~~ of iron oxide and quartz.

Following is a detailed description of the active workings and the sampling: (see sketch which accompanies this report)

The Globe shaft was sunk many years ago ^{and} is said to be 200 Ft. deep. It is now filled ^{with muck} to a point 15 feet below the 98 Ft. level. No record or maps are available regarding the workings below this level. The purpose of the preliminary development loan was to rehabilitate the shaft and stamens at the 90 Ft. level and make accessible for sampling and stoping and further development a reported ^{ore} showing in an ~~crosscut~~ ^{crosscut} from the old stoped area on this level. The crosscut from the shaft was found to be badly caved at 140 feet from the shaft and a drift ^{and crosscut which} was driven easterly around the core ~~and the~~ to ~~rein~~ picked up the vein at the stope. This stope is approximately 60 feet long and extends some 30 above the level at its highest point, near its western end. In its eastern portion the stope widens out on a roll in the formation. The drift is caved beyond the stope ~~is caved~~ in an westerly direction. ^{easterly} In an ~~westerly~~ direction it passes through and north of the vein but ~~at~~ about 50 feet beyond the stope the drift turns more easterly and at its end a raise connects with the surface approximately 130 feet above. The raise is inaccessible and the drift is filled with muck at the bottom of the raise. The presence of copper ore in the

much and the fact that ~~the projection~~
of the ~~ore vein or trend~~ of ore ~~in the opened~~
in the slope projects through this point
suggests that the end of the drift has
encountered ^{a continuation of the slope} ~~this same~~ ore and that it has
probably ~~might have~~ been stoped somewhere in the
raise above. The raise rises rather steeply
in a ^{south-} westerly direction ^{from the drift} and at some
point above ~~it~~ turns more southerly to
open onto the surface.

Sample No. 1, ^{assaying 7.80% Cu,} was cut across the
top of the slope at its highest point.
The sample checks fairly well with
Applicant's sample No 3 which was
taken across a wider width of ore
some 6 feet west from this point. The
ore appears to pinch out in the west
end of the slope somewhat below
the point where these samples were
taken. ^{Just} west of this point the ~~ground~~

~~the back could not be reached~~ but it could be
seen to contain ore ^{which} is mixed with more
waste than in the above samples. Somewhat
further west the slope broadens out into
an area about 20' x 22'. Good ore occurs
in ^{branches in} the back and west and south
walls of this slope. The ore ~~is~~ throughout
this slope doesn't occur in regular lenses
but rather in bunches and tabular
masses and since the ore is considerably
harder than the enclosing waste

material ~~and~~ it is quite readily sorted out. The floor of the west end of the slope was covered with a thick layer of broken material. Some high grade had been sorted out but the ^{and some waste broken onto the pile} material ^{still} contains a fair amount of good ore. A shovelled sample ^(No. 2) of all the material assayed 2.22% Cu. Because of the erratic ^{and} out character of the mineral here the much sample seemed more practical than random cuts on the mills or back.

WGP

→ Mr. Gribble states that a grade ^{of about} 4% Cu could be sorted from this material and that ~~that much mining material from~~ further ^{in the slope} mining will, by selective breaking and sorting, produce a shipping grade ~~below~~ which will run between 4 and 5% copper. I believe that this is a reasonable estimate.

Sample No. 3, ^{assays 5 to 9 lbs.} was cut in the floor of the drift beneath the west end of the slope. The sample contained alternate benches of waste and ore and, assuming that selective breaking and sorting will about offset dilution, I believe ^{that} the ^{shipping} product from here will assay about the same as ~~at~~ that shown by the sample i.e. 5.40% Cu. The floor of the drift east of here below the slope had not been trenched and was

✓

and therefore was not sampled.

comes into much. It would be entirely reasonable however to expect that the ore developed in the slope above will be found to extend into and below the floor of the drift at this place.

Sample No. 5, assay 90% Cu, was a grab from much in a raise above the drift some 35 feet beyond the above described slope. This

raise rises at an angle of 30° from the drift for a distance of 26 feet and then rises vertically 15 feet. The vertical portion of the raise was inaccessible. The

copper mineralization (disseminated) occurs in a highly silicious material in the end of the incline and the vertical section of the raise. Little or no sorting would be practical here.

Sample No. 4, assay 3.31% Cu, was shovelled from gob material at the foot of the incline raise at the end of the drift. The material appears to have been derived from stoppage operations somewhere in the raise above. Sample

No. 6, assay 4.55% Cu, represents a pile of several hundred pounds of material sorted from this gob.

The transit shaft, located some 225 feet ^{northwesterly} from the end of the drift in the globe shaft, has produced ~~some~~ a substantial amount and a large volume of ore has been produced from it of ore in the past. Mr. Zibbe

shipped about 3000 tons of 8% copper ore from a ^{glory} hole just east of the ^{transit} shaft.

Applicants sample No. 1 represents gob material of a small quantity in the drift south of the main slope. The above did not appear particularly attractive and was not sampled during the present examination. This composite with applicants sample No. 4, assay 3.6% Cu

includes adjacent unit.

The ore occurs in shattered quartzite in this area. The transit shaft is presently covered at the surface. Mr. Gribble has in it many years ago and is well acquainted with the mine. He makes a positive statement regarding the presence of a width of 10 feet of 5% copper ore in quartzite on the 100 FT. level of the transit shaft. The applicant proposes drifting from the globe workings toward the transit shaft. The present drift would reach the shaft at a point approximately 165 feet below the collar of that shaft. The applicant expects to encounter ore in the drift as it progresses along the trend of the ore now opened in the slope in the globe shaft workings. The ~~silica~~ ore produced from the Transit shaft was high in silica, ^{and was} ~~not~~ ^{not} highly desirable in the early ^{smelting} operation in the district, a situation which is reversed today. This class of ore ~~now commands~~ particularly favorable treatment rates at ^{the} regional smelters. The evidence of past production from the area around the transit shaft together with ^{the} statements by Mr. Gribble, which in their ~~of~~ ~~past~~ his proven reliability in the past ~~are~~ ~~actually~~ acceptable, ^{as fact,} ~~makes the proposed development~~ makes the possibilities in the proposed development appear especially attractive.

~~Levels~~

C. Proposed Development

The program submitted by the applicant proposes to ^{adequately} equip ~~the~~ ^{adequately} the property, further rehabilitate the workings, begin mining in the stope; and to develop the ore below the stope, and to ~~drift eastward on the level~~ to connect with the transit shaft workings.

Equipment

The present hoist is a small make-shift piece of equipment and will have to be replaced by ^{a larger one} ~~which would be necessary~~ to ^{efficiently} ~~conduct the~~ ^{proposed} ~~mining and development program.~~

It is proposed to purchase necessary compressor, drills etc. on a rental-purchase plan.

No construction other than an ore bin is necessary.

E. Cost Estimation

It is not possible to ^{make a close} ~~calculate~~ estimate of mining costs in the present state of development of the property. The ground breaks easily by picking and light drilling, but is sufficiently firm to stand without timber support except in the larger openings.

The ore is generally much harder

than the ~~country~~ ~~rock~~ waste vein material and can be readily ~~selected~~ ~~by~~ separated by selective breaking and sorting. It is estimated that about 2 tons of material will be broken in the stops for each ton shipped, the waste ~~will be left in the~~ ~~stop~~ ~~being~~ ~~left~~ ~~in~~ ~~the~~ ~~stop~~, ~~as~~ ~~fill~~ ~~fill~~ ^{as fill} ~~fill~~. Mining cost is estimated at \$4.00 per ton.

D The ore is to be shipped to the International Smelter at Miami. Treatment charge is \$3.50 per ton.

Truck Cost for trucking to the smelter is \$1.00 per ton.

Royalty to Miami Copper Company is based on a sliding scale. An ore ~~pay~~ ~~to~~ ~~the~~ ~~smelter~~ ~~net~~ ~~value~~ ~~of~~ ~~up~~ ~~to~~ \$18 per ton is 10%.

F. Ore Reserves

There is ~~no~~ ~~published~~ ~~body~~ ~~of~~ ~~ore~~ ~~in~~ ~~the~~ ~~mine~~ ~~and~~ ~~it~~ ~~is~~ ~~not~~ ~~possible~~ ~~because~~ ~~of~~ ~~the~~ ~~erratic~~ ~~content~~ ~~and~~ ~~shape~~ ~~of~~ ~~the~~ ~~ore~~ ~~bodies~~ ~~to~~ ~~estimate~~ ~~probable~~ ~~amount~~ ~~of~~ ~~ore~~ ~~to~~ ~~be~~ ~~expected~~ ~~from~~ ~~the~~ ~~proposed~~ ~~development~~. Sampling in the stop and on the floor of the level ~~below~~ ^{it shows} indicates that a substantial amount of ore will be derived from this working place, and the possibilities ~~here~~ ~~and~~ ~~in~~ ~~the~~ ~~proposed~~ ~~case~~.

eventually producing a ^{new} ~~large~~ ^{large} amount of ore both here and in the proposed east drift development seems ^{quite} ~~very~~ good.

Assuming that ^{shipped} ore from the ~~stope~~ ^{stope} area will contain 4.5% copper, as seems fairly well indicated by the sampling, the ore would have a net value at the mine about as follows:

	11775
(90 - 10) x .90 @ \$0.9275 =	6.68
9 Premium 90 x .97 x 5 =	4.36
	11.04
Less Less Treatment	3.50
	7.54
Less Less Royalty	1.75
	6.79
Less Less Trucking %	1.00
	5.79
Net to Mine: \$	\$ 5.79

MoP

From the above ^{calculations} ~~figures~~ gold values are not included ^{although} ~~while~~ my samples indicate that ~~some~~ ^{some} ~~what~~ ^{or} .03% Au would be present ~~contained~~ in ore containing the above amount of copper. The applicant's samples which were assayed ~~at~~ ^{at} the International Smelter do not show ^{any} ~~any~~ ^{app} significant gold content. The difference is probably due to discrepancies in assaying. In any event since the material would be shipped to the International plant it would not appear wise to count upon any returns for gold.

The above net value to the mine would indicate a profit, after mine cost of around \$4⁵⁰ per ton, of around \$1.75 per ton.

The property has not yet been granted a "B" copper premium although it seems probable that it would be eligible.

The above figures include only an "A" premium payment for copper. It would seem that the project would be properly eligible to receive a "B" premium. In this event ~~material~~ ^{grade} one of the above ~~grade~~ would yield a more generous ~~margin~~ of profit or ~~what is~~, more importantly, the higher price would permit of mining a ~~very small~~ large volume of lower grade material with an ultimately ^{production} larger amount of copper.

Estimated Cost of Project

- 1. Hoist 500
 - 2. Equipment Rental, 3 mos. @ \$200 per mo. \$ 600
 - 3. Rehabilitation of workings and preparation for stoping 1000
 - 4. Ore Bin ^{contingencies} 300
 - 5. Development, Working Capital, ^{Contingencies} 4600
 - 6. Repayment of Preliminary R.F.C. loan 3000
-
- 10,000

Item No. 5 is not broken down in detail because ^{the direction of} work in the mine will be guided by the results obtained once the work is under way.

15
It is expected that the ~~project~~ ^{property} will be ~~so~~ self-sustaining ~~is~~ upon completion of the proposed project.

Comments of Sup. Eng.

The project is in competent hands

~~The property is located in the formerly highly productive main ore zone of the Globe district and ^{appears} to be potentially capable of producing a~~

The project is in competent hands and the work to date has been performed in an efficient business-like manner.

The property is located in the formerly highly productive main ore zone of the Globe district ^{and} ~~appears to have large~~ ~~potentialities.~~

~~The sampling ^{in the slope area} indicates ~~a~~ ~~substantial~~ amount of ~~ore~~ ~~from~~ the~~

Sampling in the slope area appears to ~~show~~ a substantial production of

~~A~~ substantial amount of copper ore appears to be ~~assumed~~ by the sampling in the slope area and the possibilities in the

extension of the east drift toward the Transit
workings offers good promise of developing
a substantial amount of ore in the area.
A good quantity of ore in that area, I believe
that an additional loan to the project is
justified.

and the possibility

seem to be particularly good

N5P

A substantial amount of copper ore
is assumed by the sampling in the slope
area, and the possibilities in the extension
of the east drift toward the Transit shaft
seem particularly attractive. I believe that
an additional loan to the project is
justified.

T. P. Lane

In an easterly direction it passes through and north of the vein but at about 50 feet beyond the stope the drift turns more easterly and at its end a raise connects with the surface approximately 130 feet above. The raise is inaccessible and the drift is filled with muck at the bottom of the raise. The presence of copper ore in the muck and the fact that the vein or trend of ore opened in the stope projects through this point suggests that the end of the drift has encountered a continuation of the stope ore and that it has probably been stoped somewhere in the raise above. The raise rises rather steeply in a southwesterly direction from the drift and at some point above turns more southerly to open onto the surface.

Sample No. 1, assaying 7.80% Cu. was cut across the top of the stope at its highest point. The sample checks fairly well, with applicant's sample No. 3 which was taken across a wider width of ore some 6 feet west from this point. The ore appears to pinch out in the west end of the stope somewhat below the point where these samples were taken. Just west of this point the back could not be reached but it could be seen to contain ore which is mixed with more waste than in the above samples. Somewhat further west the stope broadens out into an area about 20' x 22'. Good ore occurs in bunches in the back and west and south walls of this stope. The ore throughout this stope does not occur in regular lenses but rather in bunches and tabular masses and since the ore is considerably harder than the enclosing waste material it is quite readily sorted out. The floor of the west end of the stope was covered with a thick layer of broken material. Some high grade had been sorted out and some waste broken onto the pile but the material still contains a fair amount of good ore. A shovelled sample (No.2) of all the material assayed 2.22% Cu. Because of the erratic in-and-out character of the mineralization here a muck sample seemed more practical than random cuts on the walls or back.

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