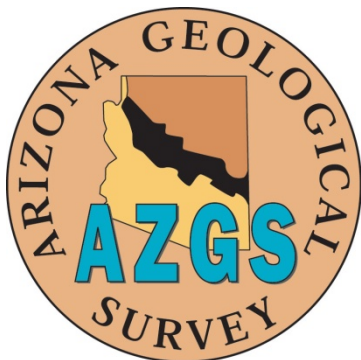




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October 31, 1942

divided in ownership between the Muhelm - Grafen Group and the Lewisohn interests and is a possible future large scale operation if brought under single ownership or operating agreement.

(E) In view of the location in a highly mineralized zone, the applicants operating reputation, favorable marketing conditions, indications of commercial ores by assays (though few in number) submitted, and the applicants precise outlined work program this application is recommended.

DEPARTMENT OF MINERAL RESOURCES

Earl F. Hastings
Assistant Director &
Projects Engineer

MUHEIM - GRAFEN

October 31, 1942

Helvetia

Earl F. Hastings

Reconstruction Finance Corporation
Preliminary Development Loan

Docket No.

C-ND- PHX

Date Application Received

October 28, 1942

Date of Report

October 31, 1942

1. Name and address of applicant (correspondent):
Joe M. Muheim, Jr. ' 824 E. Helen Street, Tucson, Arizona.
2. Character of project and estimated cost thereof:
Rehabilitate 188 foot shaft and lateral working to make accessible copper ore of shipping grade, \$3,500.00.
3. Location of property:
Helvetia Mining District, Pima County, Arizona.
4. Applicant's interest in or ownership of property:
Applicant is partnership having a 3 year lease on the premises. The property is owned by the applicant's father.
5. Loan requested:
\$3,500.00.
6. Loan recommended:
\$3,500.00.
7. Comments:
(A) The applicants are capable miners with local experience. Loan funds would be economically and efficiently expended. The applicants possess considerable mining equipment which will be utilized in the reopening of these workings.

(B) The Saratoga Shaft, on which this work is to be performed is only one of several favorable semi-developed locations. It is anticipated that a shipping grade of ore can be maintained from these workings, the mining of which will serve as development of larger bodies of lower grade ore.

(C) Rail rates from Sonoita to the Shattuck - Denn mill at Bisbee and the Phelps Dodge smelter at Douglas are such that a moderate grade of ore can be profitably marketed, thereby favoring the economies of this general area.

(D) The property is located in a more or less proven mineral belt. The Helvetia (Leader) and King in Exile mines to the north in the same belt are at present in operation. A large low grade area of some 2½ million square feet is exposed on the surface approximately 1500 feet to the north of the Saratoga Shaft; this area is

RECONSTRUCTION FINANCE CORPORATION

MINING DIVISION

REPORT OF SUPERVISING ENGINEER

Docket No. ND-5479 . . . Muheim Brothers
Date of Examination . . . May 3, 1943
Date of Report . . . May 15, 1943

NOTE: The property has been operating under a Preliminary Development Loan in the sum of \$3,500.00, granted in November, 1942. The loan fund has been expended and the present examination and report was made following an application by the Borrower for an additional loan to the project.

1. NAME AND ADDRESS OF APPLICANT

Muheim Brothers
824 East Helen Street
Tucson, Arizona

Correspondent: Joe M. Muheim, Jr.
824 East Helen Street
Tucson, Arizona

2. CHARACTER OF PROJECT:

Development of Copper and Manganese deposits.

3. LOCATION OF MINE:

The mine is located at Rosemont Camp in the Helvetia Mining District in Pima County, Arizona. The mine is 42 miles distant by road from Tucson, the nearest supply center. The first 27 miles of road from Tucson is paved highway and the balance is graded dirt road with no steep grades. The railroad shipping point is at Vail, 17 miles distant by good dirt road from the mine. Sonoita, another rail point, is several miles nearer by good road, but there is no loading ramp there, as at Vail. The roads are passable at all seasons.

4. APPLICANT:

The applicant is a partnership composed of two brothers sharing equally in the venture. They are operating the property under a three (3) year lease from their father who is the owner of the property. The Muheim brothers are each comparatively young men and have been interested in mining operations for many years. Joe Muheim, Jr., the older of the brothers, has held responsible clerical positions with banking and mining firms in Arizona and Mexico. Henry Muheim worked in mines and directed mining operations in Arizona and Mexico all through his adult life. The brothers are reported to be good workers and reliable.

5. LOAN REQUESTED:

\$20,000.00. The application does not provide for repayment of the preliminary development loan.

6. DESCRIPTION OF PROJECT

A. General Features:

- (1) There are no mine workings, mill or other appurtenances which are not confined within the applicant's ownership.
- (2) The project complies with State Compensation and Safety-First Statutes.
- (3) There are no apparent legal discrepancies in the 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) Mine is developed by shaft and tunnels.
 - a. The accompanying sketch of shaft workings is made from compass and tape survey.
 - b. Samples in the shaft were cut with pick and moil and collected on canvas. Dump sample was taken by shovel.
 - c. The shaft workings were accessible and in fair condition. The older stope workings east of the shaft were only partially accessible.
 - d. General features of the deposit:
The topography is one of low hills on the eastern side of the Santa Rita Range.

The predominant rock of the region is a Paleozoic limestone which in places is highly garnetiferous and epidotized. The limestone has been intruded by granular rocks. In the immediate locality of the subject property, masses of Alaskite and a red granitic porphyry, alternating with comparatively thin beds of limestone. The limestone at the contacts is frequently highly silicified and is sometimes mineralized with copper at or near the contacts. In some cases, the mineralization occurs in fractures in the Alaskite at some distance from the contact.

The Helvetia District is credited with a production valued at \$4,000,000 to \$5,000,000, principally in copper. The major portion of this production was made from the area immediately surrounding the settlement of Helvetia and a smelter was at one time operated about a mile north of Helvetia. The Lewissohn interests were quite active in the district many years ago and a great many claims are now owned by that Estate.

The Rosemont Camp, in which the subject property is located, is some four miles southeast of Helvetia. A great deal of prospecting has been done in the district and small lots of high grade ore were shipped from surface workings at many properties. None of these, however, has made a notable production. None has demonstrated a continuity of ore or of ore channel and the greatest productive depth has been about 100' below the surface.

The only active producer in the district at the present time is the "King Lease" operating on a Lewissohn Claim, situated approximately two miles north of the subject property. The Muhlen Brothers formerly were interested in this operation but following disagreements on operating policy, sold to the other parties. This property has recently shipped about 30 carloads of ore reportedly running around 6% copper.

Past production from the subject property has amounted to 11 carloads shipped during the first World War. The ore is reported to have assayed between five and six per cent copper. This ore was derived from a number of fractures in a mass of Alaskite just east from the shaft. The ground was worked through a tunnel in the hillside about 200' east from the shaft and approximately 50' lower than the collar of the shaft. The workings are connected (inaccessible) with the shaft near its collar. The ore was all oxidized and did not extend to a greater depth than 40' below the surface. Judging from the irregularity of the openings and the evidence of close sorting on the dump, the operation could not have returned much profit, if any.

The present interest in the property is centered in a vertical shaft which is sunk in the Alaskite near its contact with a fine-grained red porphyry. The Preliminary Development Loan was granted for the purpose of rehabilitating the 188' shaft and lateral workings to make accessible copper ore of shipping grade. The shaft rehabilitation job proved to be simple

and consisted of replacing a few logging and ladders. The water was found at 185, or 3' above the level. No shipping ore was found, however, and the applicants have started to sink the shaft and have carried it down 5' to a total depth of 198'. Sample No. 1 was cut across one end of the shaft at about a 90° angle with a porphyry hanging wall which shows in the shaft and on the 188' level above at this point. The material sampled was a hard silicified and marblized limestone containing some disseminated chalcopyrite and chalcocite and a little copper carbonate stain. The opening was irregular here and Sample No. 2 was cut across the wall which angled away from the face across which Sample No. 1 was cut. The end of the shaft opposite Sample No. 1 showed practically no mineralization.

The ground in the shaft and on the levels is more or less broken, with many jointing planes of divergent dip and strike cutting the general North - South sheeting of the porphyry. The limestone is irregular and appears to occur in irregular thin beds in the porphyry. At 40' South from the shaft on the 188' level, a small bunch of material was removed at the junction of a joint plane with the sheeting plane upon which the drift is driven. Some mineralized material is remaining in the back at this point, but no ore. There is no ore in the drift which follows this joint plane for 20' in a S 47° W direction, nor in any of the balance of the workings on this level. Five (5) tons of material containing some mixed oxides and sulphides of copper, which was removed from the junction above referred to, have been sorted and piled on the surface near the collar of the shaft. Sample No. 3 was taken from this sorted pile which the applicant's referred to as "shipping ore."

The 100' level has been driven out on a porphyry slip. At 35' from the shaft, a heavy fault cuts across the drift and has been drifted upon for 36' toward the south. The fault zone is about 8' wide and contains crushed porphyry and lime, with considerable gouge material showing many slickensided movement planes. There is no ore exposed in the workings on this level.

At about 300' South from the main shaft, a shallow shaft (20') has been sunk on a thin fissure in a lime porphyry contact. Some copper carbonates are exposed here across a width of 12" to 18". The applicant claims that this fissure can be traced to the main shaft. An occasional piece of copper stained float can be seen on the hillside between this point and the main shaft. The showing was not worth sampling. The manganese showings on the property were inspected. These are

impure beds in porphyry, and manganese stained material can be seen on a large surface area. If the picked sample (32.47% MnO) listed among the applicant's assays is disregarded, the average of the balance would be around 7% MnO and this grade would correspond to the general appearance of the showings which were not worth sampling.

7. PROPOSED DEVELOPMENT

The applicant proposes to sink the shaft to the 300' level and explore by drifts and crosscuts from that level.

8. EQUIPMENT

The applicant lists the equipment now on the property. Practically all of this equipment belongs to the applicants. Beyond miscellaneous tools and supplies, the only equipment purchased with R.F.C. funds was the Meyers Pump Jack with rods and cylinder, purchased for \$250.00.

9. COMMENTS OF SUPERVISING ENGINEER

There is no ore in sight in the mine. The showing in the mine and on the surface of the property, and the performance of nearby prospects does not justify the expectation that the proposed development would ultimately result in the production of substantial amounts of copper.

An additional loan to the project is not recommended.

T. P. LANE
Supervising Engineer



LEN JOHNSON
P.O. Box 2088
Farmington, N. M.
Office, Ph. DA 5-6802
Home, Ph. DA 5-5957

Penny—

Here are copies of
Toralemon's notes on the
Muheim ground—also my
summary of the available
miscellaneous data.

Thanks for the instructive
and interesting visit.

Doog Bell

October 31, 1942

divided in ownership between the Muheim - Grafen Group and the Lewisohn interests and is a possible future large scale operation if brought under single ownership or operating agreement.

(E) In view of the location in a highly mineralized zone, the applicants operating reputation, favorable marketing conditions, indications of commercial ores by assays (though few in number) submitted, and the applicants precise outlined work program this application is recommended.

DEPARTMENT OF MINERAL RESOURCES

Earl F. Hastings
Assistant Director &
Projects Engineer

Granted

MUHEIM - GRAFEN

October 31, 1942

Helvetia

Earl F. Hastings

Reconstruction Finance Corporation
Preliminary Development Loan

Docket No.

C-ND- PHX

Date Application Received

October 28, 1942

Date of Report

October 31, 1942

1. Name and address of applicant (correspondent):
Joe M. Muheim, Jr., 824 E. Helen Street, Tucson, Arizona.
2. Character of project and estimated cost thereof:
Rehabilitate 188 foot shaft and lateral working to make accessible copper ore of shipping grade, \$3,500.00.
3. Location of property:
Helvetia Mining District, Pima County, Arizona.
4. Applicant's interest in or ownership of property:
Applicant is partnership having a 3 year lease on the premises. The property is owned by the applicant's father.
5. Loan requested:
\$3,500.00.
6. Loan recommended:
\$3,500.00.
7. Comments:
 - (A) The applicants are capable miners with local experience. Loan funds would be economically and efficiently expended. The applicants possess considerable mining equipment which will be utilized in the reopening of these workings.
 - (B) The Saratoga Shaft, on which this work is to be performed is only one of several favorable semi-developed locations. It is anticipated that a shipping grade of ore can be maintained from these workings, the mining of which will serve as development of larger bodies of lower grade ore.
 - (C) Rail rates from Sonoita to the Shattuck - Denn mill at Bisbee and the Phelps Dodge smelter at Douglas are such that a moderate grade of ore can be profitably marketed, thereby favoring the economies of this general area.
 - (D) The property is located in a more or less proven mineral belt. The Helvetia (Leader) and King in Exile mines to the north in the same belt are at present in operation. A large low grade area of some 2½ million square feet is exposed on the surface approximately 1500 feet to the north of the Saratoga Shaft; this area is

RECONSTRUCTION FINANCE CORPORATION

MINING DIVISION

REPORT OF SUPERVISING ENGINEER

Docket No. ND-5479 . . . Muheim Brothers
Date of Examination . . . May 3, 1943
Date of Report . . . May 15, 1943

NOTE: The property has been operating under a Preliminary Development Loan in the sum of \$3,500.00, granted in November, 1942. The loan fund has been expended and the present examination and report was made following an application by the Borrower for an additional loan to the project.

1. NAME AND ADDRESS OF APPLICANT

Muheim Brothers
824 East Helen Street
Tucson, Arizona

Correspondent: Joe M. Muheim, Jr.
824 East Helen Street
Tucson, Arizona

2. CHARACTER OF PROJECT:

Development of Copper and Manganese deposits.

3. LOCATION OF MINE:

The mine is located at Rosemont Camp in the Helvetia Mining District in Pima County, Arizona. The mine is 42 miles distant by road from Tucson, the nearest supply center. The first 27 miles of road from Tucson is paved highway and the balance is graded dirt road with no steep grades. The railroad shipping point is at Vail, 17 miles distant by good dirt road from the mine. Sonoita, another rail point, is several miles nearer by good road, but there is no loading ramp there, as at Vail. The roads are passable at all seasons.

4. APPLICANT:

The applicant is a partnership composed of two brothers sharing equally in the venture. They are operating the property under a three (3) year lease from their father who is the owner of the property. The Muheim brothers are each comparatively young men and have been interested in mining operations for many years. Joe Muheim, Jr., the older of the brothers, has held responsible clerical positions with banking and mining firms in Arizona and Mexico. Henry Muheim worked in mines and directed mining operations in Arizona and Mexico all through his adult life. The brothers are reported to be good workers and reliable.

5. LOAN REQUESTED:

\$20,000.00. The application does not provide for repayment of the preliminary development loan.

6. DESCRIPTION OF PROJECT

A. General Features:

- (1) There are no mine workings, mill or other appurtenances which are not confined within the applicant's ownership.
- (2) The project complies with State Compensation and Safety-First Statutes.
- (3) There are no apparent legal discrepancies in the 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) Mine is developed by shaft and tunnels.
 - a. The accompanying sketch of shaft workings is made from compass and tape survey.
 - b. Samples in the shaft were cut with pick and moil and collected on canvas. Dump sample was taken by shovel.
 - c. The shaft workings were accessible and in fair condition. The older stope workings east of the shaft were only partially accessible.
 - d. General features of the deposit:
The topography is one of low hills on the eastern side of the Santa Rita Range.

The predominant rock of the region is a Paleozoic limestone which in places is highly garnetiferous and epidotized. The limestone has been intruded by granular rocks. In the immediate locality of the subject property, masses of Alaskite and a red granitic porphyry, alternating with comparatively thin beds of limestone. The limestone at the contacts is frequently highly silicified and is sometimes mineralized with copper at or near the contacts. In some cases, the mineralization occurs in fractures in the Alaskite at some distance from the contact.

Alaskite

The Helvetia District is credited with a production valued at \$4,000,000 to \$5,000,000, principally in copper. The major portion of this production was made from the area immediately surrounding the settlement of Helvetia and a smelter was at one time operated about a mile north of Helvetia. The Lewissohn interests were quite active in the district many years ago and a great many claims are now owned by that Estate.

The Rosemont Camp, in which the subject property is located, is some four miles southeast of Helvetia. A great deal of prospecting has been done in the district and small lots of high grade ore were shipped from surface workings at many properties. None of these, however, has made a notable production. None has demonstrated a continuity of ore or of ore channel and the greatest productive depth has been about 100' below the surface.

The only active producer in the district at the present time is the "King Lease" operating on a Lewissohn Claim, situated approximately two miles north of the subject property. The Muhlen Brothers formerly were interested in this operation but following disagreements on operating policy, sold to the other parties. This property has recently shipped about 30 carloads of ore reportedly running around 6% copper.

Past production from the subject property has amounted to 11 carloads shipped during the first World War. The ore is reported to have assayed between five and six per cent copper. This ore was derived from a number of fractures in a mass of Alaskite just east from the shaft. The ground was worked through a tunnel in the hillside about 200' east from the shaft and approximately 50' lower than the collar of the shaft. The workings are connected (inaccessible) with the shaft near its collar. The ore was all oxidized and did not extend to a greater depth than 40' below the surface. Judging from the irregularity of the openings and the evidence of close sorting on the dump, the operation could not have returned much profit, if any.

The present interest in the property is centered in a vertical shaft which is sunk in the Alaskite near its contact with a fine-grained red porphyry. The Preliminary Development Loan was granted for the purpose of rehabilitating the 188' shaft and lateral workings to make accessible copper ore of shipping grade. The shaft rehabilitation job proved to be simple

and consisted of replacing a few logging and ladders. The water was found at 185, or 3' above the level. No shipping ore was found, however, and the applicants have started to sink the shaft and have carried it down 5' to a total depth of 198'. Sample No. 1 was cut across one end of the shaft at about a 90° angle with a porphyry hanging wall which shows in the shaft and on the 188' level above at this point. The material sampled was a hard silicified and marblized limestone containing some disseminated chalcopyrite and chalcocite and a little copper carbonate stain. The opening was irregular here and Sample No. 2 was cut across the wall which angled away from the face across which Sample No. 1 was cut. The end of the shaft opposite Sample No. 1 showed practically no mineralization.

The ground in the shaft and on the levels is more or less broken, with many jointing planes of divergent dip and strike cutting the general North - South sheeting of the porphyry. The limestone is irregular and appears to occur in irregular thin beds in the porphyry. At 40' South from the shaft on the 188' level, a small bunch of material was removed at the junction of a joint plane with the sheeting plane upon which the drift is driven. Some mineralized material is remaining in the back at this point, but no ore. There is no ore in the drift which follows this joint plane for 20' in a S 47° W direction, nor in any of the balance of the workings on this level. Five (5) tons of material containing some mixed oxides and sulphides of copper, which was removed from the junction above referred to, have been sorted and piled on the surface near the collar of the shaft. Sample No. 3 was taken from this sorted pile which the applicant's referred to as "shipping ore."

The 100' level has been driven out on a porphyry slip. At 55' from the shaft, a heavy fault cuts across the drift and has been drifted upon for 36' toward the south. The fault zone is about 8' wide and contains crushed porphyry and lime, with considerable gouge material showing many slickensided movement planes. There is no ore exposed in the workings on this level.

At about 500' South from the main shaft, a shallow shaft (20') has been sunk on a thin fissure in a lime porphyry contact. Some copper carbonates are exposed here across a width of 12" to 18". The applicant claims that this fissure can be traced to the main shaft. An occasional piece of copper stained float can be seen on the hillside between this point and the main shaft. The showing was not worth sampling. The manganese showings on the property were inspected. These are

impure beds in porphyry, and manganese stained material can be seen on a large surface area. If the picked sample (32.47% MnO) listed among the applicant's assays is disregarded, the average of the balance would be around 7% MnO and this grade would correspond to the general appearance of the showings which were not worth sampling.

7. PROPOSED DEVELOPMENT

The applicant proposes to sink the shaft to the 300' level and explore by drifts and crosscuts from that level.

8. EQUIPMENT

The applicant lists the equipment now on the property. Practically all of this equipment belongs to the applicants. Beyond miscellaneous tools and supplies, the only equipment purchased with R.F.C. funds was the Meyers Pump Jack with rods and cylinder, purchased for \$250.00. applicant

9. COMMENTS OF SUPERVISING ENGINEER

There is no ore in sight in the mine. The showing in the mine and on the surface of the property, and the performance of nearby prospects does not justify the expectation that the proposed development would ultimately result in the production of substantial amounts of copper.

An additional loan to the project is not recommended.

T. P. LANE
Supervising Engineer

Docket No.:

ND-5479

Date of Examination:

May 3, 1943

Date of Report

Note: The property has been operating under a Preliminary Development loan in the sum of \$3,500 granted in Nov. 1942. The loan fund has been expended and the present examination and report was made following an application by the borrower for an additional loan to the project.

1. Name and Address of Applicant

Name: Muhlein Brothers

Address 824 E Helen St.,
Tucson, Arizona

Correspondent

Joe. M. Muhlein Jr.
824 E Helen St.,
Tucson, Arizona

2. Character of Project

Development of Copper
and Manganese deposits.

3. Location of Mine

The mine is located at Rosemont camp in the Helvetia Mining District in Pima County, Arizona. The mine is 42 miles distant ^{by road} from Tucson the nearest supply center.

The first 27 miles ^{from Tucson} of ~~the road~~ is paved highway and the balance is graded dirt road with no steep grades. The railroad shipping point is at Vail 17 miles ^{distant by good dirt road} from the mine. Sonora, another rail point, is several miles ^{nearer} closer by good road but there is no loading ramp there as at Vail. The roads are passable at all seasons.

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4 Applicant

The Applicant is a partnership composed of two brothers sharing equally in the venture. They are operating the property under a three year lease from their father who is the owner of the property. The Muhlen brothers are each comparatively young men and have been interested in mining operations for many years. Joe Muhlen Jr., the elder of the brothers has ~~followed bookkeeping and clerical holding~~ held responsible ~~positions and bookkeeping~~ and clerical positions with banking and mining firms in ^{2. Mexico} Arizona. Henry Muhlen has worked in mines and ^{in Arizona and Mexico} directed mining operations ^{throughout} all his adult life. The brothers are reported to be ~~reliable~~ and good workers and reliable.

5

Loan Requested

\$20,000

The application does not provide for repayment of the preliminary development loan to the project.

6

Description of Project

A. General Features

1. There are no mine workings, mill or other appurtenances which are not confined within the applicant's ownership.
2. The project complies with State compensation and Safety-First statutes.
3. There are no apparent legal discrepancies in the 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. Mine is developed by shaft and tunnels
- a. ^{The accompanying} sketch of shaft workings is made from compass and tape survey.
- b. Samples in the shaft were cut with pick and noil and collected on canvas. Dump sample was taken

by shovel.

c. The shaft workings were accessible and in fair condition. The older stope workings east of the shaft were only partially accessible.

d. General features of the deposit.

The topography is one of low hills on the eastern side of the Santa Rita range.

The predominant rock of the region is a Paleozoic limestone ^{which} in places highly garnetiferous and epidotized. The limestone has been intruded by granular rocks, and in the immediate locality of the subject property masses of ~~syenite~~, ~~alkali~~ and a red ^{granitic} porphyry ~~alternate with~~ ^{comparatively} thin beds of limestone.

The limestone at the contacts is frequently highly silicified and is sometimes mineralized with copper at or near the ~~contacts~~ ^{occurs} ~~at a place in the line and near the contact~~

No. 17 In some cases the mineralization ^{in the granular} occurs in ~~masses~~ ^{portions} at some distance from the contact.

The Helvetic district is credited with a production valued at \$4 to 5 million dollars principally in copper. The major portion of this production

The Lewisohn interests were quite active in the district many years ago and a great many claims are now owned by their estate.

was made from the area immediately surrounding the settlement of Helvetia and many years ago a smelter was constructed about a mile north of Helvetia.

P

The Rosemont camp in which the subject property is located is some 4 miles southeast of Helvetia. ~~No~~ ~~notable~~ ~~production~~ ~~has been made from~~ ~~this area although much property~~ ~~has been done over a period of many~~ ~~years. On which has been shipped~~ ~~consists of high grade surface material~~ ~~from many of the early days many~~ ~~small lots of high grade ore~~

Mr P

A great deal of prospecting has been done in the district and small lots of high grade ore were shipped from many places. ~~surface workings~~ ~~at many properties.~~ None of these however has made a notable production. None has demonstrated a continuity of ore or of ore channel and the greatest productive depth has been about 100 feet below the surface.

The only ^{active} producer in the district at the present time is the King lease operating on a Lewisohn claim situated approximately 2 miles north of the subject property. The Muehlen brothers formerly were interested in

following disagreement in operating policy this operation but sold to the other parties. This property has ^{recently} shipped about 30 carloads of ore reportedly running around 6% copper.

Past production from the subject property has amounted to 11 carloads shipped during the first world war. The ore is reported to have ^{assayed} ~~run~~ between 5 and 6% copper. This ore was derived from a number of fractures in a Mass of Alaskite just east from the shaft. ~~The workings are connected to the shaft near its collar. The product ore was all oxidized and was all removed from a shallow depth. The ground was marked then a tunnel in the hillside about 200 feet east from the shaft and approximately 50 ft lower than the collar of the shaft. The workings are connected with the shaft near its collar. The ore was all oxidized and did not extend to a greater depth than 20 feet below the surface. Judging from the irregularity of the opening and the evidence of close sorting on the dump the operation could not have returned much profit, if any.~~

The present interest in the property is centered in a ^{vertical} shaft which is sunk in the Alaskite ^{near} ~~where~~ its contacts ^{with} a ~~red~~ fine grained ^{reddish} pale porphyry.

Lewisohn
Lewisohn
Lewisohn
#

WTP

7

The Preliminary Development Loan was granted for the purpose of rehabilitating the 188 ft. shaft and lateral workings to make accessible copper ore of shipping grade. ~~The purpose of the loan has been accomplished in that the shaft workings have been made~~ ~~not accessible but no shipping ore~~ The shaft rehabilitation job ^{proved to be} ~~was~~ simple and consisted of replacing a few ladders and ladders. The water was found at 185 or 3 feet above the level. No shipping ore was found, however, and the applicant has ~~has~~ started ^{to} sink the shaft and had carried it down 5 feet to a total depth of 198 feet. Sample No 1 was cut across one end of the shaft at about a 90° angle into a porphy hanging wall which shows in the shaft and on the 188 ft level above at this point. The material sampled was a hard silicified and marbleized limestone containing some disseminated copper sulphide ~~minerals~~ chalcocite and chalcocite and a little copper carbonate ~~copper~~ stain. ~~At~~ The opening was irregular here and sample No 2 was cut across the wall which angled away from the ^{across} ~~face~~ ^{face} in which sample No 1 was cut. The end of the shaft opposite sample No 1 showed practically no mineralization. ~~The~~ ground in the shaft and on the levels is more or

less broken, with many jointing planes of divergent dip and strike cutting the ^{N-S} general sheeting of the porphyry. The limestone is irregular in ~~width~~ and appears to occur in ~~lenses~~ ~~the porphyry~~ irregular thin beds in the porphyry. ~~There is no ore in the 188 Ft. level. On the 100 Ft. level~~

WTP Oct 40 ft south ^{from} the shaft ^{on the 188 Ft level} a small bunch of material was removed ^{at} the junction of a joint plane with the sheeting plane ~~slip~~ upon which the drift is driven. Some mineralized material ^{is} remaining in the back at this point but ~~no ore~~. There is ~~no ore~~ in the drift ~~which~~ which follows ~~out~~ this joint plane for 20 ft in a $347^{\circ}W$ direction, nor in any of the balance of the workings on this level. 5 tons of ^{material containing some} mixed oxides and sulphides of copper which was removed from the junction above

referred to has been sorted and piled on the surface near the collar of the shaft. Sample no. 3 was taken from this sorted pile which the applicants referred to as "shipping ore".

The 100 Ft. level has been driven out on a ~~lime~~ porphyry slip. At 55 feet from the shaft a heavy fault cuts across the drift and has been been drifted upon for ~~36~~ 36 feet ^{toward the South}. The fault ~~contains~~ some

is about 8 feet ^{wide} and contains crushed porphy and lime with considerable gouge material ~~and showing~~ many slickensided ^{movement} planes. ~~of movement~~, there is no ~~or~~ exposed ~~surface~~ in the workings on this level.

at about 500 ft. ^{south} ~~from~~ from the main shaft a shallow shaft (20') has been sunk on a thin fissure ~~contains~~ in a lime porphy contact. Some copper carbonates are exposed ^{here} ~~for~~ across a width of 12" to 18". ~~The applicant~~ ^{claims} ~~states~~ that this fissure can be traced to the main shaft ~~from this point~~. ~~There is no continuous exposure here.~~ Beyond

MoP ~~the occurrence of~~ An occasional piece of copper stained flint can be seen on the hillside ^{between this point and} ~~from~~ the main shaft. and ~~the applicant claims~~ that ~~the fissure continues to the~~

MoP The showing was not worth sampling.

The manganese ^{on the property} ~~showings~~ were ~~described~~ inspected. There are impure beds in the porphy, and manganese stained material can be seen on a large surface area. If the ~~highest~~ ^(32.47% MnO) picked sample listed among the applicant's assays is disregarded the average of the balance would be around 7% MnO, and this grade would correspond to the general appearance

of the showings which were not until sampling.

Proposed Development.

The Applicant proposes to sink the shaft to the 300 Ft. level and explore by drifts and crosscuts from that level

Equipment.

The applicant lists ~~all~~ the equipment now on the property. Practically all of this equipment belongs to the applicant. Beyond miscellaneous tools and supplies the only equipment purchased with R.F.C. funds was the Meyers Pump jack with rods and cylinder, purchased for \$250.

Comments of Supervising Engineer

There is no ore in sight in the mine. The showings in the mine and on the surface ^{of the property} and with the performance of nearby prospects does not justify the expectation that the proposed ~~development~~ ^{development} would ~~ultimately~~ ^{ultimately} result in the production of substantial ^{amounts} of copper.

An additional ~~development~~ loan to the project is not recommended

Tully

I am enclosing my Supervising
Engineers Report ~~with~~ under the
above captioned project together with
an application for ~~loan~~ with an additional
loan.

Encl.

- 1 Application for loan w/ supporting data
- 1 Sup. Eng. Report
- 1 Sketch
- 1 Assay Cert.