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Reconstruction Finance Corporation Arizona Records

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DEPARTMENT OF MINERAL RESOURCES
STATE OF ARIZONA
FIELD ENGINEERS REPORT

Granted

Mine LOMA PRIETA. Cu., MoS_2. Date February 1, 1943

District Copper Basin Engineer Earl F. Hastings

Subject: Reconstruction Finance Corporation
Preliminary Development Loan

H
C

Docket No. C-ND-Phoenix 130
Date application Received January 26, 1943
Date of Report February 1, 1943

1. Name and address of applicant (correspondent):
N. Duyn, Box 1429, Prescott, Arizona.

2. Character of project and estimated cost thereof:
Cu., MoS_2. Unwater 400 foot shaft and 1035 feet of lateral workings to expose and sample copper and molybdenite ores--$5000.00.

3. Location of property:
Copper Basin Mining District, Sec. 20, 21,27,28 and 29, T 13 N, R 3 W, Yavapai County, Arizona.

4. Applicant's interest in or ownership of property:
Applicant has assignment of lease and option from Sophia Smoot, owner, to Fred Gibbs, lessee. The terms of this agreement are not outlined.

5. Loan requested:
$5000.00.

6. Loan recommended:
$5000.00.

7. Comments:
(A) Added to the docket are:
1. Mine Owner's Report Form filed with the Department of Mineral Resources September 18, 1939.
2. Preliminary Report on molybdenite occurrence in the Copper Hill, Commercial and Loma Prieta mines by C. J. Sarle, Consulting Geologist, dated Nov. 14, 1935.
3. Copy of letter to the applicant from the Department of Mineral Resources.

(B) A U. S. G. S. engineer, whose name is not of record, making verbal inquiry as to possible productive molybdenite areas was referred to the Copper Basin District among others. It is believed a cursory survey was made and additional data may therefore possibly be obtained from the U. S. G. S. files.

(C) A very thorough and complete assay map indicates widespread copper mineralization of a low, but probably commercial, grade. Those blocks on which comparision between the Peach and Tovote sampling is possible, and both being given equal credance, indicates an average cu. content of 1.3%.

The ore is not definitely blocked, but there is no objection to the probable tonnage estimate ranging from 500,000 to 750,000 tons as such estimate does not appear fanciful.

The MoS_2 content is not so well proven. Two dump samples of 0.25% and 0.35% respectively appear the sole basis of estimating molybdenite content. The origin of this information is obscure. For the purpose of this review, and in the belief that the applicant can make suitable reply to the inquiry listed in 7 - (A) - 3 above, an average MoS_2 content of 0.3% is being assumed.

On these premises there are 6 pounds of molybdenite and 26 pounds of copper per ton of ore which 4.8 pounds of MoS_2 and 22.1 pounds of copper can reasonably be anticipated as recoverable; or between 1200 and 1800 tons of MoS_2 and from 5525 to 8288 gons of copper recoverable from the probable ore body.

(D) A study of the assay plan reveals that copper values are fairly uniform and tends to eliminate the possibility of a selective mining to reduce the tonnage and improve the grade.

It does not necessarily follow that the molybdenite will be found to be so thoroughly disseminated. In fact, the reverse may well be true, judging from information on the occurrence of it where exposed elsewhere in the district, to the extent that mineable fracture zones within the ore body will yield a much higher MoS_2 head.

(E) The ore is not marketable by direct shipment, but must be milled on, or in the vicinity of, the property. In the absence of tests on the ore, exact estimates cannot be made as to the ultimate net worth of the ore. Allowing an 80% recovery of MoS_2 and 85% recovery of copper, and a net value of $0.40 per pound of MoS_2 and $0.14 (inc. premium) per pound of copper, the ore has a value of $5.01. This is before freight and smelter charges on a concentrate--the ratio of concentration should be relatively high and the charge back to raw ore low in the same ratio.

There are some minor gold and silver values which would slightly increase the dollar value of the ore.

Ore of the average value above estimated would preclude profitable operation on a small scale. Whether or not the need for molybdenite is critical to the extent that a large reduction plant is justifiable in the light of equipment and material shortage is not a matter to be weighed in this review.

(F) This loan is being recommended however, as it is the belief that the combination of the Loma Prieta Mine, the Copper Hill Mine (operating on an R.F.C. "C" loan), and the U. S. Navy Mine (Operating on an R.F.C. "C" loan) and the Commercial Mine (currently in production shipping Cu. ore), all adjoining properties, can support a mill or mills.

The Loma Prieta mine should be reopened and again carefully sampled. Such sampling would: 1. Prove another check on the marginal copper values. 2. Reveal whether or not selective mining is possible in relation to MoS_2 occurrence habits. 3. Be used to determine if a large scale operation is warranted if selective mining is not possible.

ARIZONA DEPARTMENT OF MINERAL RESOURCES

Earl F. Hastings
Projects Engineer

325 Heard Building
Phoenix, Arizona
February 14, 1944

TULLY - Ass't Chief - Mining Section RFC - Washington, 25, D. C.

Re: N. Duyn - Docket No. ND-8082

Enclosed herewith please find my Supervising Engineer's Liquidation Report, in duplicate, on the above captioned project.

WM. B. MAITLAND
Supervising Engineer

WBM:dem
Encs. 2 c Supervising
Engineer's Liquid. Report

RECONSTRUCTION FINANCE CORPORATION
MINING DIVISION
LIQUIDATION REPORT OF SUPERVISING ENGINEER

N. Duyn
Docket No. - ND-8082
February 14, 1944

1. NAME AND ADDRESS OF APPLICANT

N. Duyn
Box 1429
Prescott, Arizona

2. LOCATION OF PROJECT

Sec. 20, 21, 27, 28 and 29 - Township 13 North
Range 3 West, G. & S. R. B. & M.
Loma Prieta Mine, Copper Basin Mining District,
Yavapai County, Arizona

3. AMOUNT OF LOAN & DATE OF AUTHORIZATION

$5,000.00 in March, 1943

4. PURPOSES FOR WHICH LOAN WAS EXPENDED

To unwater, rehabilitate and sample the underground workings of applicant's copper-molybdenum mine.

5. EQUIPMENT

a. Equipment acquired with loan funds (cost price)

1 - Sterling Turbine Pump complete with 300' of 3" column, Peerless Pulley Head and Bowls.....$375.00

1 - 1937 Ford V8 Motor with Pulley..... 98.16

Misc. Small Tools and Supplies..... 300.00

$ 773.16

b. Equipment on Hand

None

c. Equipment Sold and Sales Price and Date

1 - Sterling Turbine Pump complete Aug. 5, 1943....$ 296.79
(applied to operating fund and not deposited in the Federal Reserve Bank)

Misc. Small Tools and Equipment Aug. 12, 1943..... 65.80
(applied to operating fund as above)

1 - Ford V8 Motor complete returned to Arizona Mining Supply Co. to satisfy outstanding bills against operation..... (90.00)

Returned to Operating Fund - Total - .....$ 362.59

d. No remaining equipment.

6. PROPERTY

Applicant stated that he was the assignee of a lease and option dated Jan. 5, 1943, on 16 patented lode claims. Copy of lease was sent to Washington.

In letter to W. B. Gohring from N. Duyn, dated Sept. 8, 1943, applicant stated "further expenditure on this project does not seem to be warranted at the present, I wish to liquidate the R.F.C. loan and abandon the project."

Verbally, the applicant informed me during January, 1944 that he and his associates had purchased the property and were now the fee owners.

7. COMMENTS

Operations ceased on Sept. 8, 1943 and applicant made the following statement:

Total expenditure on project.....	$ 5,671.36	
Bills still to be paid (subsequently paid).....	217.33	$5,888.69
Total refunds from operation.....	- 462.18	
Total Expenditures.....	$ 5,426.51	
Funds Advanced by Applicant.....	$ 426.51	

8. CONCLUSION

The project failed to develop ore of sufficient grade to warrant further expenditures. However, under increased price for copper and molybdenum, the project might have considerable value as it contains a large tonnage of low grade ore. Under present market conditions, the loan should be considered a loss.

9. RECOMMENDATION

It is recommended that this account be considered closed, but I believe that the R.F.C. should take the necessary steps to protect any interest it may have in this project, as it is possible that at some future date the property may become valuable.

WILLIAM B. MAITLAND
Supervising Engineer

M. Dwyer
ND 8082
Feb 14, 1944

1. Name and Address of Applicant

M. Dwyer
Box 1429
Prescott, Arizona

2 Location of Project

Sec 20, 21, 27, 28 + 29, T 18 N, R 3 W, G + S R B + M
~~Lomo~~ Loma Prieta Mine, Copper Basin Mining District
Yavapai Co, Arizona

3. Amount of Loan + Date of Authorization

$5000 on March 1943

4. Purposes for Which Loan Was Expended

To unwater, rehabilitate + sample the underground workings of applicants copper-molybdenum mine.

5. Equipment

a Equipment acquired with Loan Funds (Cost Price)

1 Sterling Turbine ~~complete~~ pump complete with 300' of 3" column, ~~and~~ Peerless pulley head and bowls $375.00
1 1937 Ford V8 Motor with pulley 98.16
Misc small tools and supplies 300.00
$773.16

b Equipment on hand

None

(1)

c. Equipment Sold and Sales Price & Date

1 Sterling Turbine pump complete Aug 5, 1943 $296.79
(applied to operating fund & not deposited in Federal Reserve Bank)

Misc small tools & equip Aug 12, 1943 $65.80
(applied to operating fund as above)

1 Ford V8 Motor complete returned to Arizona Mining Supply Co to satisfy outstanding bills against operation 90.00

Returned to operating fund Total $362.59

d. No remaining equipment

6 Property

Applicant stated that he was the assignee of a lease and option dated Jan 5, 1943 on 16 patented lode claims. Copy of lease was sent to Washington

(1)

In letter to W.B Gohning from N. Dwyer dated Sept 8, 1943, applicant stated "further expenditure on this project does not seem to be warranted at the present, I wish to liquidate the R.F.C. loan and abandon the project.

Verbally the applicant informed me during January 1944 that he & his associates had purchased the property and were now the fee owners.

7. Comments

Operations ceased on Sept 8, 1943 and applicant made the following statement

Total expenditure on project	$5671.36
Bills still to be paid (subsequently paid)	217.33
Total refunds from operation	462.18
Total expenditures	$5426.51
Funds advanced by applicant	$426.51

5888.69
462.18
5426.51

8 Conclusion

The project failed to develop ore of sufficient grade to warrant further expenditures However under increased price for copper and molybdenum the project might have considerable value as it contains a large tonnage of lower grade ore. Under present market conditions the loan should be considered a loss

9 Recommendation

It is recommended that this account be considered closed but I believe that the R.F.C. should take the necessary steps to protect any interest it may have in this project as it is possible that at some future date the ~~project~~ property may become valuable

(2)

[illegible]

325 Heard Building
Phoenix, Arizona
September 9, 1943

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

Re:- N. Duyn, Docket MB-8082.

Enclosed please find my Progress Report on the above captioned docket.

Wm. B. MAITLAND
Supervising Engineer.

Enclosures
2c Progress Report
1c Map

RECONSTRUCTION FINANCE CORPORATION
MINING SECTION
SUPERVISING ENGINEER'S FINAL PROGRESS REPORT

Re: N. Duyn, Docket No. ND-8082
September 10,1943.

In March 1943 this project was granted a $5,000 accessibility loan in order to dewater a 400-foot vertical shaft and four levels therefrom. The mine was dewatered, all of the levels made accessible and in co-operation with the U.S.G.S. the underground workings were thoroughly sampled.

I visited this property on June 12, and on July 7th in order to inspect the progress being made and assist with the sampling. Most of the sampling was done by C.A.Anderson of the U. S. G. S. and his assistants although the location and method of sampling was thoroughly agreed upon with this engineer. Large 10-foot long grooves were cut with a pneumatic chipping hammer along the walls of the drifts, the sample caught on a canvas, then quartered and later assayed by the Union Assay Office of Salt Lake City or Hawley and Hawley of Douglas, Arizona. In my opinion the mine was thoroughly and properly sampled.

The following are the results of this sampling, and a comparison with the results of earlier sampling of the mine:

	U.S.G.S.-R.F.C. Smpls.			Tovote Smpls.			A.B.Peach Smpls.		
Level	No.of Smpls	%Cu	%MOS2	No.of Smpls	%Cu	%MOS2	No.of Smpls	%Cpr.	%MOS2
46'	4	1.20	0.13	2	2.10	2.75	0	...	...
75'	1	0.93	0.08	2	5.25	...	0	...	...
150'	24	0.90	0.15	40	1.17	...	0	...	...
400 Shaft	55	0.84	0.12	147	1.03	...	28	1.29	...
(150' Lvl (to 400' (Lvl.	4	0.69	0.14	0	...	...	47	1.41	...
All Lvls.	88 Smpls.	0.87%	0.13%	191 Smpls.	1.11%	(2.75)	75	1.36%	...

It is estimated as shown by the attached map that the mine contains 1,750,000 tons of probable ore extending to a known depth of 400 feet and averaging 0.87% copper and 0.13% MOS2. The copper is in the form of chalcopyrite and molybdenum occurs as molybdenite. Little if any oxidation was noticed.

After the mine was sampled, it was also inspected by the Bureau of Mines, and then allowed to refill with water.

The applicant does not intend to apply for further funds for this project as he feels that the grade of the ore is too low grade to be profitably operated under the present market prices for the contained metals. I concur with him on this. As a result the applicant has liquidated all the machinery and equipment purchased by loan funds, and paid all debts incurred. Of the $5,000 loan granted, there will be no money returned as the applicant had to use some of his own funds to pay up all the debts.

Further technical information can be obtained from the report of Dr. C. A. Anderson which is on file with the U. S. G. S. in Washington.

WM. B. MAITLAND,
Supervising Engineer.

Supervising Engineer's 1 + 3 copies

Final Progress Report

M. Dwyer
ND 8082
Sept 10, 1943

On March 1943 this project was granted a $5000 accessibility loan order to dewater a 400 foot vertical shaft and form levels therefrom. The mine was dewatered, all of the levels made accessible and in co-operation with the U.S.G.S. the ~~mine~~ underground workings ~~was~~ thoroughly sampled.

I visited this property on June 12 and on July 7 order to inspect the progress being made and assist with the sampling. Most of the sampling was done by C.A. Anderson of the U.S.G.S. and his assistants altho the location and method of sampling was thoroughly agreed upon with this engineer. Large 10 foot long grooves were cut with a pneumatic ~~chipping~~ hammer along the walls of the drifts, the sample ~~cut~~ caught on a canvas, then quartered and later assayed by the Union Assay Office of Salt Lake City ~~or~~ Hawley and Hawley of Douglas, Ariz. In my opinion the mine was thoroughly and properly sampled.

Following are the results of this sampling and a comparison with the

Level	USGS-RFC Samples			Tovote Samples			A.B. Pench Samples		
	No. of samples	% Cu	% MoS_2	No. of Samples	% Cu	% MoS_2	No of Samples	% Copper	% MoS_2
46'	4	1.20	0.13	2	2.10	2.75	0	—	—
75'	1	0.93	0.08	2	5.25	—	0	—	—
150'	24	0.90	0.15	40	1.17	—	0	—	—
400	55	0.84	0.12	147	1.03	—	28	1.29	—
Shaft 150' Level to 400' Level	4	0.69	0.14	0	~~1.11~~	—	47	1.41	—
All levels	88 Samples	0.87%	0.13%	191 Samples	1.11%	(2.75)	75 Samples	1.36%	—

results of earlier sampling of the mine :-

Quote

It is estimated as shown by the attached map that the mine contains 1,250,000 tons of probable ore extending to a known depth of 400 feet and averaging 0.87% copper and 0.13% MoS_2. The copper is in the form of chalcopyrite and the molybdenum occurs as molybdenite. Little if any oxidation was noticed.

After the mine was sampled it was also inspected by the Bureau of Mines and then allowed to refill with water.

The applicant does not intend to apply for further funds for this project as he feels that the grade of the ore is too low grade to be profitably operated under the present market prices for the contained metals. I concur with him on this. As a result the applicant has liquidated all the machinery and equipment purchased by loan funds and paid all debts incurred. Of the $5000 loan granted there will be no money returned as the applicant had to use

some of ~~this~~ own funds to ~~pay~~ clear up all the debts.

Further technical information can be obtained from the report of Dr. C. A. Anderson ~~now~~ which is on file with the USGS in Washington

Wm B Mathews
Sup Eng