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Reconstruction Finance Corporation
Mining Division
Report of Supervising Engineer

(1)

Docket No _____ B-ND-4487
Date authorization for Exam. Rec'd Nov 6, 1942
Date of Examination, inclusive Nov 18, 1942
Date of Report Dec 1, 1942

1. Name and address of Applicant

E. F. Epley
Paradise, Arizona

Silver Hill
Mine

Correspondent: Same.

2. Character of Project

Purchase mining equipment and supplies to develop lead property by crosscutting from end of tunnel and sinking in 80 footwinze.

3. Location of Mine

In T. 17 S. and either R. 30 or 31 E., S.R and B. meridian, California mining district, Cochise County, Arizona. The nearest railroad station station is Rodeo, New Mexico approximately 16 miles over improved dirt road. However, there are no ore loading platforms at either Rodeo, New Mexico or San Simon, Arizona. Therefore any lead ore consigned to El Paso Texas via railroad must be loaded at Steins, New Mexico approximately 35 miles from Paradise, Arizona. The climate is such that mining operations can be conducted throughout the year.

4. Applicant

The applicant probably is competent to handle all the operations. Consideration should be taken into account that he is 68 years

of age and does not expect to hire a foreman.

5. Loan Requested
$15,000.00

6. Description of Project
A. General Features
Applicant is not operating or developing the property at the present time. In the past the applicant has mined a few tons and it is assumed that he complied with all safety-first acts. There are no legal discrepancies, unimpeded right-of-way facilities or likelihood of surface or sub-surface trespass as far as could be ascertained.

B. Existing Development
1. Tunnel Mine
As the applicant did not have a map of the underground workings it was necessary to prepare a tape and compass map. The workings consisted of upper and lower tunnels 30 feet vertical distance apart and numerous shallow pits on the surface. Only the lower tunnel was mapped as it represented the main feature for a development loan. Mr. Copley stated that he had driven this tunnel under a bond and lease from the then owner, Mr. George A. Walker, back in 1926. As represented on the accompanying map the tunnel is nearly straight and extends into the side of a hill for 405 feet. Also an 80 foot winze and three short drifts were driven. In 1942 the applicant sunk a 25 foot winze and mined approximately 9 tons of ore.
All the openings were accessible except the 80 foot winze.

Sampling and assay data are meager as ore exposures are decidedly limited. There were three small ore exposures to sample, one near the portal of the tunnel, another in the bottom of the 80 foot winze and another in the bottom of the 25 foot winze. Near the portal of the tunnel, a narrow fissure crossed and showed a two inch seam of galena where marked in red on the maps. A sample was not taken here as the fissure was exposed on the surface five feet above. However, where a small underhand stope was started on the dip of the vein a sample was taken along the wall across twelve inches of vein material. This sample assayed 6.20 per cent lead. The bottom of the stope could not be sampled because of loose muck.

The 80 foot winze was inaccessible for sampling. However, the applicant showed two samples taken near the bottom which assayed 20 per cent and 9 per cent lead. Furthermore the applicant stated there were no other showing of mineralization except in the bottom and to have made the applicant get a windlass and rope to examine this hole would have been a waste of time for he explains perfectly the condition of this winze and the taking of the samples in his letter of October 22, 1942.

During the first part of 1942, the applicant sank a 25 foot winze at the intersection of three narrow fissures and mined approximately 9 tons of ore which were shipped to Hawley and Hawley, ore buyers in Douglas, Arizona. This ore averaged about 14 ounces of silver and 30 per cent lead. Two samples were taken near the bottom of this winze to check any remaining ore. The bottom of the winze could not be sampled because of loose muck. The two samples

assayed less in lead than the ores shipped and indicated that this small stope may be bottomed like the others seen on the surface.

The rocks of the surrounding area and within the applicant's property consist mostly of massive limestones of Devonian and Mississippian age intruded by narrow dikes of granite porphyry parallel to the general foliation and certain are fissures. Cutting across the dips of the sedimentary rocks, but roughly parallel to the strike are some faults and mineralized fissures which strike approximately N 45° W and dip northeast. From the limited amount of exposures it appears that the mineralization consists of small lenticular masses of galena that pinch out both along the strike and dips and apparently are seldom over two feet thick. Moreover they are narrow, varying between 2 and 12 inches in thickness.

C. Proposed Development

The applicant proposed to drift east from end of tunnel 30 feet to locate the downward extent of an ore chute on the surface 200 feet above end of tunnel and to sink in the 80 foot wedge an undetermined distance and to crosscut from this wedge southwest to intersect ore shown in 25 foot wedge. Although the applicant states that the vein exposed in the surface stope dips 45 degrees northwest and verified by my examination, he fails to see that the vein exposed about 100 feet in from the tunnel portal might not be the downward extension. As there are no other veins exposed in the tunnel, the conclusion must be reached either the vein exposed

on the surface reveal with depth or is represented by the one cut approximately 100 feet in from the tunnel portal.

Comments of Supervising Engineer

The examination of the Silver Hill property disclosed that the applicant had mined during the first half of 1942 a narrow shoot of ore approximately 10 feet long and 25 feet deep formed at the intersection of three narrow fissures.

Previously, probably 1926, a tunnel was driven 900 feet to cut the downward extension of a shallow surface stope. The end of the tunnel by survey is under the stope but 30 feet west. The applicant fails to see that he cut this fissure approximately 100 feet in from the tunnel and that further crosscutting at the end of the tunnel is useless.

Approximately 9 tons of hand sorted ore assaying 30 percent lead has been shipped but this engineer is unable to show where any additional ore can be developed by the use of a development loan.

Charles A. Rosser

Super. Eng.

attachment
1 assay sheet
1 map of tunnel.

325 Heard Bld.
Phoenix, Arizona

Mr. Charles W. Tully, asst chief
Mining Section R.F.C.
811 Vermont ave., N.W.
Washington, D.C. Re: E. F. Epley
Docket no. B-ND-4487

Dear Mr. Tully:

I have enclosed my report on the examination of the above applicant's Silver Hill property in Cochise County, Arizona. I must report that the facts do not suggest a loan on this property.

Also enclosed is my report on the applicant's Harris mine which I was authorized to examine in a letter from Mr. Mink. Although this property presented more evidence of mineralization, and had a small estimated ore reserve, it cannot qualify for a loan. If the applicant owned the necessary machinery, no doubt he could take out the ore, with the help of two men, at a profit. However, there is no evidence to indicate any extensions of ore bodies except by further prospecting.

I have furnished Mr. Epley with forms to be filled out on his Harris mine and told him that I would furnish the maps and samples. However he may

over

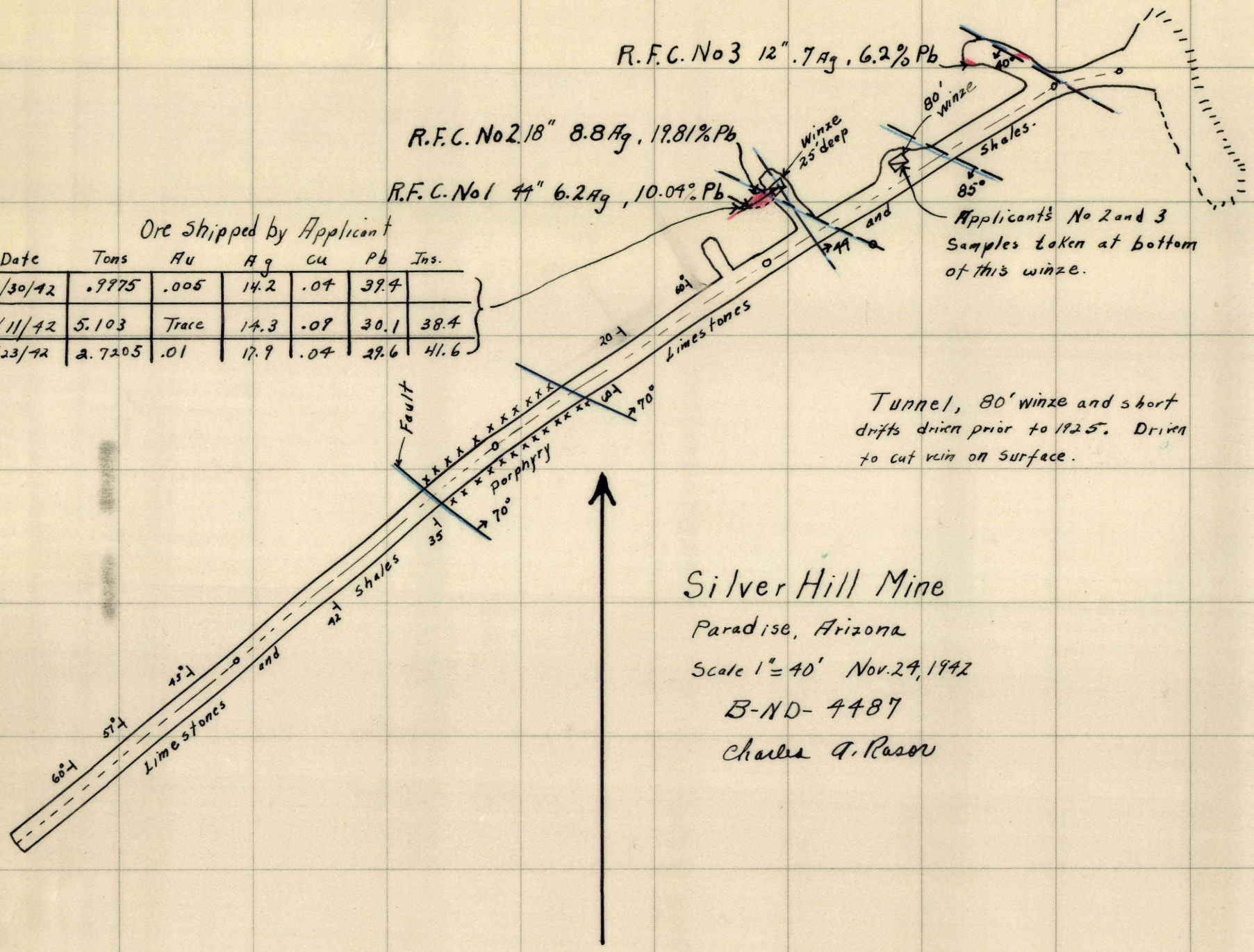
submit ~~the~~ some additional results on some ore which he shipped from the stope exposed in the 492 foot tunnel, for he did not have the results when I examined the property.

When his application has been received would you notify this office of the Docket No. so that we may keep our records in order.

Very truly yours.
Charles A. Rosor

Enclosures.

1. Supervising Engineers report on Salem Hill Mine
2. " " " " Harris "
3. Our Bond application complete with supporting data.



Ore Shipped by Applicant

Date	Tons	Au	Ag	Cu	Pb	Ins.
3/30/42	.9975	.005	14.2	.04	39.4	
5/11/42	5.103	Trace	14.3	.09	30.1	38.4
6/23/42	2.7205	.01	17.9	.04	29.6	41.6

Tunnel, 80' winze and short drifts driven prior to 1925. Driven to cut vein on surface.

Silver Hill Mine

Paradise, Arizona

Scale 1" = 40' Nov. 24, 1942

B-ND-4487

Charles A. Rason

LOCATION
SURVEY
GEOLOGY BY
MINE
SCALE
LEVEL
POSITION
DATE

Reconstruction Finance Corporation
Mining Division
Report of Supervising Engineer

(1)

Docket No. B-ND

Date Authorization for Examination Received Nov 16, 1942

Date of Examination, inclusive Nov 18, 1942

Date of Report Dec. 1942

1. Name and Address of Applicant

E. F. Epley,
Paradise, Arizona
correspondent: same.

2. Character of Project

To develop copper property by drifting on vein exposed in 492 tunnel.

3. Location of Mine

Probably in Section 33, T. 16. S. R. 31 E., California mining district, Cochise County, Arizona. Condition of roads and access to railroad loading stations are the same as described in applicants' Docket no. B-ND 4487.

4. Applicant

competency of applicant same as described in examination of S. Tres Hill mine

5 Loan Requested

$15 000.00

6 Description of Project

A. General Features-

The shaft part of this mine has not been operated since 1921. However, the tunnel part of the mine was operated by the applicant in Feb. 1942, stoping out a small body of lead-zinc ore and shipping to a custom mill in Lordsburg, New Mexico.

B. Existing Development

1. Tunnel and shaft mine

As the applicant did not have any maps of the underground working, except a claim map, a compass and tape survey was made of all accessible underground workings. (See attached maps.). The shaft was accessible for 155 feet, but the last 30 feet was in a dangerous condition. According to the applicant the shaft extended about 80 feet below the 155 foot level. Extending off from the shaft were four levels varying in length from 25 feet to 75 feet. The shaft did not have any equipment and the timbering was in poor condition.

The tunnel part of the mine is accessible by way of Turkey creek. It extends into

the drill about 500 feet and cuts the vein developed by the shaft 400 feet from the portal.

Sampling and assay data

The applicant has stated that three car shipments of copper ore were sent to the El Paso smelter which paid good. There are no other records.

The applicant has no record of the lead-zinc ore shipped to a custom mill in Lordsburg, New Mexico, except a slip of paper stating that he will get paid for 3080 pounds of lead and 2079 pounds of zinc.

Your engineer took four samples from ore exposures in the Harris shaft and they are recorded on both the plan map and section map of the shaft. Samples were not taken in the first stope below the collar of the shaft as loose muck covered the floor completely. Oxide ore was taken from this stope originally. The west face of the stope did not show any mineral and was not sampled. The next level was measured at 75 feet below the surface. As there were no ladders or other equipment to reach the top of the stope a sample was taken in the floor. This assayed twice as much in lead as the copper and zinc combined. Beyond this stope to the face, the fissure did not show any sulfide mineralization. At the 125 foot level a sample was taken in the face of the drift.

37% Cu 6% Pb 33.2 oz.

2% Cu

40 lbs.

60 − 20 = 40 lbs. (11.75 − 6.00) = .575
40
23.00

180 − 30 = 150 lbs
90%
135.00 lbs.
.0494
540
215
540
6.669

6.50
1.56
4.94
6.67
11.61

350 smelter
2.00 hauling
3.00 Freight
9.00

3000
2
10)6000 cu ft
600 Tons

30 feet wide 2' [illegible] 100' long

(4)

This sample more closely represents the type of ore occuring in this part of the property and will be used in calculating any possible ore reserves. Stopes were not started on this level. On the bottom level two samples were taken. Sample No 3. gives a clear idea of the amount of metal present in that portion of the vein not showing distinct mineralization. Sample No 4 was taken across a chalcopyrite boulder in the vein and is not representative of the stope or any part of the vein material. It was taken to indicate the value of the ore after mining and hand sorting. However from all observations there appeared more galena and sphalerite in the ore than chalcopyrite.

Samples were not taken from the stope exposed in the long tunnel. In the first place it appeared that all available ore had been mined and in the second place it was impossible to sample the roof because of inaccessibility and the floor because of abundant muck.

No doubt the applicant will send in to you the returns of the small lot sent to the custom mill in Lordsburg, New Mexico. According to the applicant the ore had to be milled twice to recover the lead and zinc values.

3600
21
850

300

100

300

~~100~~

500

600

5750
2400

8150
1500

9650
1

This deposit lies along the contact between a narrow porphyry dike and limestone of possibly Devonian age. A few cuts expose the vein on the surface but the best exposures are represented in the shaft and tunnel. The shaft through a depth of 155 feet has exposed a short of ore varying in width from 40 feet to 40 feet with an average thickness of about 2 feet. The mineralization consists of chalcopyrite, galena, sphalerite, pyrite quartz and calcite restricted to a lenticular mass in the vein. Only one such lenticular mass has been exposed in the shaft.

Another lenticular mass of ore was exposed in the tunnel level which is between 600 and 700 feet east of the shaft. Here the chief minerals are galena and sphalerite with minor chalcopyrite. Gangue minerals are calcite and quartz. A small shipment of 16 tons sent to mill assayed 16.4% lead and 18.4% zinc.

C. Proposed Development

The applicant has no plan of development on the shaft part of the mine and your engineer has no recommendations to make. To rehabilitate this shaft would be expensive as there is not one piece of equipment on the property.

The tunnel part of this mine would be the only and logical place for exploration. Here the applicant has track to the face of the tunnel and three cars. His only needed equipment would consist of a compressor and drills and air and water lines to the vein. The applicant wants to drift from the tunnel toward the shaft on the vein. However the only evidence of ore was that taken from a small stope 20-25 feet long and 15 feet high. Toward the shaft there was no evidence of ore except on the surface some 300 feet above.

D- Equipment

The applicant does not own any equipment on any of his properties except the tools in the 492 foot tunnel and three cars.

Additional equipment which the applicant would need are summarized as follows.

		$
1.	one 210 cu feet, portable compressor.	3600.00
2.	one rock drill	250.00
3	mounting for drifter, drill steel and bits	300.00
4	air and water hoses.	100.00
5	air pipe, compressor tanks, fittings, valves.	300.00
6	Mine rails and spikes	100.00

7. Lumber for ore bin, compressor, etc. -- 500.00
8 Freight and installation equip -- 600.00
9. Drifting 200 feet at $12.00 per foot -- 2400.00
10 Taxes, insurance and misc 1500.00
$9650.00

E Cost Estimations

1 Vein deposit

a Mining --- 2.00 per ton.
b Drifting --- 12.00 per foot.
h. Haulage
Crude ore. $2.50 - $3.00 per ton.
i Freight to smelter, per ton.
Crude ore. 2.00 per ton.
j. smelter treatment
Crude ore $3.50 for metal payments not exceeding $15.00 per ton
l. Timber per 1000 at mine $65.00.

F. Ore Reserves

Ore reserves in the tunnel are nil. It would take drifting along the vein to uncover any ore reserves and then raising to outline same.

At the shaft it is estimated that there are possibly 600 tons of lead copper ore having a value of approximately $12.00 per ton in place. After mining

hand sorting and all handling, freight and smelter charges there might be a profit of $9.00 per ton. There appears no way of developing any further ore reserves in this part of the Harris mine.

7. Employment.

A. There are no men employed.

B. Not more than three men would be necessary to operate the tunnel portion of the mine.

8. Objections To Project

A. None.

B. Property is a prospect and nothing more. One undesirable feature, should ore be encountered, will be the complex nature of the ore. To get the best results from this ore it would be necessary to send it to a mill for separation into lead and zinc concentrates. Hand sorted ore would result in a high zinc content and penalties.

12 Comments of Supervising Engineer.

The Harris mine of the applicant would certainly be of more deserving of a loan than this Silver Hill property. However, this property is only a prospect and has no great extent of ore reserves. From the few assays taken and the ore shipped by the applicant it would appear that the chief values in this property are lead with minor copper and zinc.

If this property had been inaccessible the applicant certainly would have been entitled to a $5000 preliminary development loan. However, the submitted facts do not support a development loan as there is not sufficient ore in sight to justify a sustained mining operation. Nevertheless 200 feet of drifting on the vein exposed in the tunnel level might expose a short of complex lead-zinc-copper ore.

Charles A. Rason

attachments

1. Ore assay chart
1 Claim map.
1 Plan map and vertical section.
1. Longitudinal section map.

Here

18.4 Tozn

16) 2948
16
134
128
68
64
40

16 x % = 2948

16 x % = 2630

16.4 %

16) 2630
16
103
96
70
64
40

2948

2948

77) 2270
154
730
693
370
308
620
616

2262

16 Tons 28.530 lead 570 9120 lead.

32.530 zinc 550 10400

2630

86) 2262
172
542
516
260
258
20