



CONTACT INFORMATION  
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Reconstruction Finance Corporation Arizona Records

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325 Heard Bldg.  
Phoenix, Arizona  
March 23, 1944

*Premier Group*

TULLY - Asst. Chief - Mining Section RFC - Washington

Re: Elmer C. Walker - Docket No. B-ND-4300

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

WILLIAM B. MATTLAND  
Supervising Engineer

WBM:MTW  
Encs.

Report in duplicate

RECONSTRUCTION FINANCE CORPORATION  
MINING SECTION  
LIQUIDATION REPORT

Borrower: Elmer C. Walker - B-ND-4300  
Date of Report: March 23, 1944

1. NAME AND ADDRESS OF APPLICANT:

Elmer C. Walker  
P. O. Box 45  
Dragoon, Arizona

2. LOCATION OF PROJECT:

In section 2, 3, 10, and 11, T 16S, R 22E, G & S R B & M, Cochise County, Arizona - 5 miles from Dragoon.

3. AMOUNT OF LOAN AND DATE OF AUTHORIZATION:

\$5,000.00 on October 23, 1942.

4. PURPOSES FOR WHICH LOAN WAS EXPENDED:

To rehabilitate a gravity concentrating mill to treat old tungsten mine dumps.

5. EQUIPMENT:

a. Equipment purchased with loan funds and cost thereof:--

200' of black pipe (size unknown) - - - - -	\$ 25.00
Jig and concentrating table - - - - -	100.00
Head motion for table - - - - -	51.00
	<u>51.00</u>
TOTAL	\$176.00

b. Equipment on hand and estimated resale value:--

Pipe - - - - -	\$ 15.00
Jig & table - - - - -	85.00
Head motion - - - - -	43.00
	<u>43.00</u>
TOTAL	\$143.00

c. This equipment is still in applicants mill and since he requests that the mill be left intact as he intends to operate the project in the future under his own funds, no attempt has been made to liquidate the equipment.

6. PROPERTY:

The property is held by lease dated July 1, 1942, running for 1-1/2 years with right of renewal from year to year. I am not aware whether this lease is still in good standing or is in default due to non performance.

7. COMMENTS:

Last visit to the property was made by the writer on April 14, 1943, and the last withdrawal of loan funds was made on May 26, 1943.

8. CONCLUSION:

The proposed project failed to develop any material quantity of ore, and with the exception of the remaining equipment worth salvaging, the property is believed to be of no value. Consequently, except for the salvage value of equipment, the loan should be considered a loss.

9. RECOMMENDATION:

It is recommended that this account be closed when the remaining equipment acquired, in whole or in part, with loan or operation funds which is considered worth salvaging has been liquidated and proceeds applied on borrower's indebtedness.

WILLIAM B. MATTIAND  
Supervising Engineer

RECONSTRUCTION FINANCE CORPORATION  
MINING DIVISION  
MEMORANDUM OF VISIT OF  
SUPERVISING ENGINEER

Docket No. B- ND- 4300  
Elmer C. Walker  
P. O. Box 45  
Dragoon, Arizona

On April 14, 1943, I visited the above captioned Docket in order to inspect the progress being made.

On October 23, 1942, a \$5,000.00 Loan was granted this project in order to allow the applicant to rehabilitate a small mill and mill a large mine waste dump containing hubnerite, wolframite and minor scheelite. This money has now all been spent and the applicant has accomplished the following:

Built a small mill;  
Cleaned out a shallow well and installed a pump;  
Installed a dragline loader at the mine dump. Has a 5 ton truck to haul the ore 2-3/4 miles from mine, to mill.

The expenditure of the loan funds has been as follows for the period from November 8, 1943, to April 15, 1943:

Payroll . . . . .	\$3,585.20	(includes wages to applicant of \$900.00)
Equipment . . . . .	667.17	
Supplies . . . . .	342.29	
Miscellaneous . . . . .	<u>408.47</u>	
TOTAL EXPENDITURES . . . . .		\$5,003.13

The applicant has also sold a small undetermined amount of tungsten concentrates to a Tucson ore buyer for \$73.20.

Attached to this report is a flow sheet of this applicant's mill. The mill is poorly constructed and inefficiently operated. The applicant apparently knows nothing of the general principles of ore milling and concentrating and does not try to keep any records of his work. Some of the most obvious faults in his work are as follows:

- (1) The applicant has never sampled any of the mill-heads or products.
- (2) The ore from the dump is screened at the dragline loader to minus 1/2" before it is hauled to the mill, but the jaw-crusher is set to about 4 inches.

- (3) The set of rolls is broken down and the applicant feels they are not necessary in the circuit so has by-passed them.
- (4) The jig screen is 12 mesh, the same as the trommel screen.
- (5) The jig hutch product contains no concentrate, but is sent directly to the table.
- (6) The table has too much slant and is greatly over loaded.
- (7) As shown by my assays, there is no sharp separation of the table tails and concentrates, but instead they blend together.
- (8) Since the trommel screen is broken in places, the table feed contains much coarse material.
- (9) One man is employed in picking over the jig discharge for pieces of ore about 1/2" in diameter that contains part tungsten and part quartz.

My sampling consisted of taking grab samples at various points in the mill. The results are as follows:

Mill heads . . . . .	0.09% WO <sub>3</sub>
Jig rejects (oversize and picked) . . .	0.08
Jig tails (hutch product) . . . . .	0.07
Table tails (obviously salted by concentrates) . . . . .	0.34
Table concentrates (not clean) . . . . .	.29.80

The table concentrates are not high enough to be marketable. I did not sample the jig concentrate, but it looked about the same grade as the table concentrate. My sampling is not representative of the actual mill products, as they were merely grab samples, but since the applicant takes no samples, it was the best I could do.

I believe that a good operator with the expenditure of perhaps \$1,000.00 to revamp the mill could make a little above expenses in the milling of these dumps, but I do not believe that the applicant is capable of operating this project and since no more funds are available and the applicant must shortly cease operations, no further loan would appear justifiable to this applicant.

WM. B. MAITLAND  
Supervising Engineer

325 Heard Building  
Phoenix, Arizona  
April 28, 1943

Mr. Elmer C. Walker  
P. O. Box 45  
Dragoon, Arizona

Dear Mr. Walker:

Re: Docket No. B-ND-4300

I thought you might be interested in the results of the assays of the samples I took at the time of my visit to your mill.

The mill heads ran .09 WO<sub>3</sub>; the Jig tails or hutch product .07; the over-size picked rejects from the jig ran .08; The table tails ran .34 and table concentrates ran 29.8. It is obvious from these assays that the table tails were salted by the concentrates which shows that your concentrating table is over-loaded and out of adjustment.

It is my opinion that before you can make a satisfactory extraction on the ore you are now treating, it will be necessary to install a 1/2" screen between the jaw crusher and the ore bin, set the jaw crusher to 1/2" opening, install a 1/8" screen between the jaw crusher and rolls, repair and set the rolls to 3/16" opening. The trommel screen should also be replaced with about a 1/16" screen and the jig screen should be replaced with a 20 mesh screen. You are making no concentration in the hutch of the jig as you are bleeding the hutch product away too fast. Changing and installing these screens would eliminate one man now being used to hand-pick the over-size rejects from the jig. Also, it will be necessary to install another table and re-cover and re-set the slant of your present table in order to make a clean separation between the table tails and the table concentrates.

I believe that these changes are necessary before you can possibly make any profit from your mill operations and of course, if your mill-heads only run .09, as my grab sample for that day indicated, it would be doubtful whether this ore will pay to transport and mill. Perhaps, however, you can mill a richer part of the dump, thereby increasing the value of your heads.

Mr. Elmer C. Walker  
Page No. 2

April 28, 1943

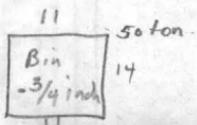
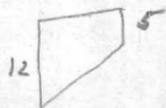
I am sending you this information with the hope that it may be of value to you, although I appreciate the fact that you are now out of loan funds. If I can be of further assistance to you, please call upon me.

Sincerely yours,

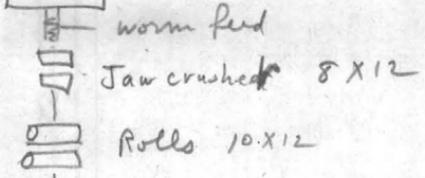
WM. B. MAITLAND  
Supervising Engineer

WEM:MF

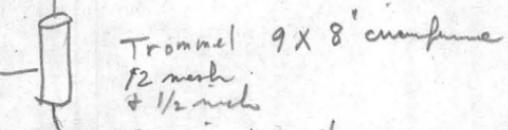




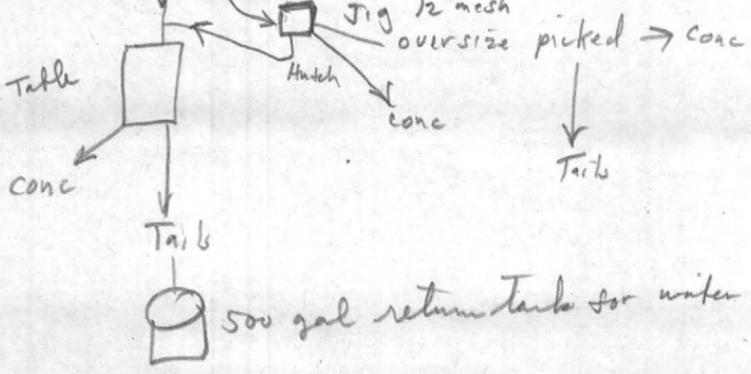
50 ton  
14



worm feed  
Jaw crusher 8 X 12  
Rolls 10 X 12



Trommel 9 X 8' circumference  
12 mesh  
+ 1/2 inch



Jig 12 mesh  
oversize picked -> Conc  
Hutch -> Conc  
Tails

500 gal return tank for water

20 H.P.  
Fairbanks  
more engine  
5000 gal water tank  
gas pump at mill  
6 H.P.

2  $\frac{3}{4}$  miles mine to mill  
drag line

8' = 3.

3.)  $\sqrt{80}$   

$$\begin{array}{r} 2.6 \\ 80 \\ \underline{62} \\ 180 \\ \underline{186} \end{array}$$

$11 \times 14 \times 5 \times 4 \times 3$   

$$\begin{array}{r} 27 \\ 9 \overline{) 245} \\ 18 \\ \underline{65} \\ 63 \\ \underline{5} \end{array}$$

$$\frac{43}{\frac{27}{70}}$$

$$\frac{7}{5 \times 14 \times 11} = 55$$
  
~~189~~

$$\frac{7}{3.5 \times 11 \times 14} = 38$$
  

$$\frac{35}{38.5} = 9$$

Elmer Walker

\$5000 loan 11/8/42 - 4/16/43 5000.00

4/8/43 From Ingotter concated 73.20

5073.20

Supplies	mill Equipment	Payroll	Misc
48.50	125.00	225.00	25.00
19.80	175.27	375.00	1.50
13.42	11.52	498.60	25.00
11.19	50.00	477.50	184.00
22.18	101.42	367.85	32.05
26.30	57.00	343.00	13.50
108.08	26.72	290.95	15.00
10.72	7.90	325.30	29.54
45.25	26.21	301.95	45.00
15.00	92.13	255.25	30.00
20.35		124.80	3.63
1.50			4.25
342.29	667.17	3585.20	408.47
		\$5003.13	

## Memorandum of Visit

Re: Docket No B-ND-4300, Elmer E. Walker,  
P.O. Box 45, Dragoon, Ariz

On April 14, 1943 I visited the above captioned Docket number to inspect the progress being made.

On Oct 23, 1942 a \$5000 loan was granted this project number to allow the applicant to rehabilitate a small mill and mill a large mine waste dump containing kribnite, wolframite, and minor scheelite. This money has now all been spent and the applicant has accomplished the following: -

① Built a small mill

Cleaned out a shallow well & installed a pump.

Installed a dragline loader at the mine dump

to mill. He has a 5 ton truck to haul the ore  $2\frac{3}{4}$  miles from mine

The expenditure of the loan funds has been as follows for the period from Nov 8, 1942 to April 15, 1943:

Payroll	\$3585.20	(Includes wages to applicant of \$900.00)
Equipment	667.17	
Supplies	342.29	
Miscellaneous	408.47	
Total expenditures	\$5003.13	

The applicant has also sold a small undetermined amount of tungsten <sup>concentrates</sup> to a Tucson ore buyer for \$73.20

attached to this report is a flow sheet of the applicants mill. The mill is poorly constructed and inefficiently operated. The applicant apparently knows

nothing of the general principles of ore milling and concentrating and does not try to keep any records of his work. Some of the most obvious faults in his work are as follows: -

1. The applicant has never sampled any of the mill heads or products

2. The ore from the dump is screened at the dragline loader to minus  $\frac{1}{2}$  inch before it is hauled to the mill but the jaw crusher is set to about 4 inches

3. The set of rolls is broken down and applicant feels they are not necessary in the circuit so has by-passed them.

4. The jig screen is 12 mesh the same as the trommel screen.

5. The jig hutch product contains no concentrate but is sent directly to the table.

6. The table has too much slant and is greatly over loaded

7. as shown by my assays there is no sharp separation of the table tails and concentrates but instead they blend together

8. Since the trommel screen is broken in places the table feed contains much coarse material

9. One man is employed in picking over the jig discharge for pieces of ore about  $\frac{1}{2}$ " in diameter that contains part tungsten and part quartz.

10. ~~In other words the mill is improperly constructed and poorly run.~~

My sampling consisted of taking grab samples

at various points in the mill, the results are as follows:

Mill Heads	0.09% $WO_3$
Jig rejects (conge + picked)	0.08
Jig tails (Hutch product)	0.07
Table tails (obviously salted by concentrates)	0.34
Table concentrates (not clean)	29.80

20  
1.80

The table concentrates are not high enough to be marketable. I did not sample the jig concentrate but it looked about the same grade as the table concentrate. My sampling is not representative of the actual mill products as they were merely grab samples but since the applicant takes no samples it was the best I could do.

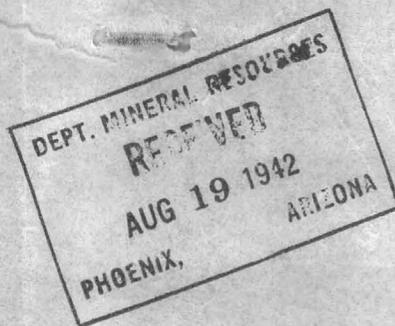
(3) I believe that a good operator with the expenditure of perhaps \$1000 to revamp the mill could make a little above expenses in the milling of these dumps but I do not believe that the applicant is capable of operating this project and since no more funds are available and the applicant must shortly cease operations, no further loan would appear justified to this applicant.

Wm B Marshall  
Simp Eng

( COPY )

*Walker Mine*

Box 2, Sells Star Route,  
Tucson, Ariz.  
Aug. 16th, 1942.



Reconstruction Finance Corporation,  
#325 Heard Building,  
Phoenix, Ariz.

Gentlemen;

Att: Mr. Lane

I refer to our 'phone conversation and my letter of the 6th in the matter of making inspection under the application of Mr. Elmer C. Walker (Docket No. B-ND-4300). I was at the mines all last week up to Sat. morning when ~~xxxx~~ I came to Tucson. We had hoped that you might be able to get a man down last week but had had no word up to the time I left there.

We have done everything in the way of preparation that we can do until we have definite information that the application has been granted, if it should be. You will understand this situation. Mr. Walker is in contact with enough good miners that he knows, to make up three shifts which we hope to put on. We are trying to string them along, but they will be scattered to the four winds unless we can give them something definite soon. There is some road building and other preliminary work that we could hold them with until the machinery could be secured and placed, if it can be done in a reasonable time. Then we were negotiating for a good servicable compressor from a nearby mine, but this has now been leased to another operator. So we are just waiting for the inspection.

Most certainly we do not expect any special favor, but if you can find it possible from the conditions to make a special effort to get your man down there this next week, and as early in the week as possible, it will be very greatly appreciated. The whole set-up tends to make it possible for us to get in early production after the loan is authorized and I believe the WPB as well as ourselves would gain by as early action as possible.

I am sending you this letter Special Delivery in the hope that it may be on your desk tomorrow morning, perhaps, before you have completed your early week assignments, and I sincerely trust that we may be included in them.

Yours very truly,

C. B. COLBORN

P.S.- Please wire me the result after you have made up your assignments. Wire me at my expense care Western Union here. I will stay here until Monday evening awaiting your wire, when I will return to the mine.  
C.B.C.

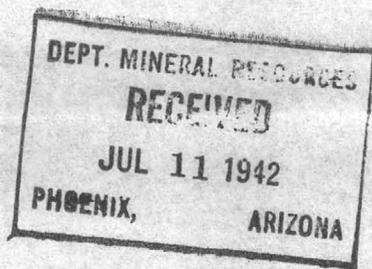
Exhibits attached to Development Loan  
Application of Elmer C. Walker, Dragoon,  
Ariz., July 7th, 1942

- - - - -

1. Enlarged 4/1 scale sketch map of portion of claims on which first development is proposed.
- ✓ 2. Copy of report of Oscar H. Hershey, engineer, dated Feb. 23rd, 1915.
- ✓ 3. Copy of letter of O.T. Smith, mentioned in the Hershey report, and mining sup't on one operation on these claims.
- ✓ 4. Copy of production report of these mines from May 18th, 1915 to date.
5. Photostatic copy of map of claims covered in lease to applicant.
6. 14 sheets of Assay Reports by A.L. Pellegrin & Sons, Tucson, Ariz. in 1940-41-42

NOTE:

Numbers checked in pencil are attached to this copy of application.



TRIPPLICATE

# APPLICATION FOR A DEVELOPMENT LOAN

NOTE.—Read carefully Reconstruction Finance Corporation Circular No. 14 (revised) and this application form before starting to prepare application.

### Application of

(NAME) Elmer C. Walker,  
(ADDRESS) P.O. Box 45, Dragoon, Cochise Co., Ariz.  
(CITY AND STATE) \_\_\_\_\_

For a Development Loan under authority of section 14, Public No. 417, Seventy-third Congress, as amended.

The application should be prepared and executed in duplicate; one counterpart should be accompanied by a complete set of exhibits, including maps, reports, and all other documents called for; the other should be accompanied by a set of exhibits complete except for supporting maps, assay reports, and other documents of which it is difficult to obtain more than one copy; each counterpart with exhibits should be fastened in a separate binder and sent to Reconstruction Finance Corporation, 811 Vermont Avenue NW., Washington, D. C.

Name and address of applicant should be stamped or typed on each sheet of application, and on all accompanying papers, for identification. If any space in any exhibit is not large enough to permit giving full information, such information should be typewritten on attached sheets of paper labeled, lettered, and numbered to correspond with the respective exhibit, section, and subsection.

Date July 7, 1942

Name of correspondent Elmer C. Walker,

Address of correspondent P.O. Box 45, Dragoon, Cochise Co., Ariz.

Location of mine: County Cochise State Ariz. Mineral or metal produced tungsten

Does this application pertain to the production of strategic and critical minerals? yes  
(Yes or no)

Elmer C. Walker (hereinafter called "applicant"),

a 20,000.00 individual, hereby applies to RECONSTRUCTION FINANCE CORPORATION (hereinafter called  
(Corporation, individual, partnership)

"R. F. C."), for a loan of not more than \$20,000.00 to be evidenced by a note or notes satisfactory to R. F. C. and secured as required by R. F. C.

To induce R. F. C. to make such loan, applicant submits as part of this application the attached exhibits, A to D, inclusive, and such other exhibits and papers as are attached hereto, and warrants and represents the statements herein and therein to be true and complete.

Applicant represents that applicant is not, at the time of making this application, indebted to R. F. C. in any amount, and neither the applicant nor any other party on applicant's behalf has heretofore applied to R. F. C. for a loan, except as follows:

NONE

Applicant hereby authorizes all constituted Federal, State, municipal, and other authorities at all times and from time to time to permit representatives of R. F. C. to have full access to and to furnish R. F. C. with any and all information, records, reports, returns, and files pertaining to or filed by or on behalf of applicant.

Dated July 7th, 1942 (Sign below)

WITNESS Phyllis Penrose Walker

WITNESS: C. B. Colborn

Elmer C. Walker





## EXHIBIT B

### *Technical Data*

The data required by Exhibit B should be supplied in detail on separate sheets of paper attached at end of this Exhibit.  
Data should be lettered and numbered to correspond with respective paragraphs below.

- A. **REPORTS:** Furnish any reports available that apply to this application, including results from any metallurgical investigations.
- B. **METAL OR MINERAL:** State metal or mineral to be produced. Applicant must present evidence of definite markets for products other than gold and silver which will be produced during the life of the loan, with location and capacity of each market and sales prices.
- C. **GEOLOGY AND TOPOGRAPHY:** Submit all available information and maps.
- D. **EXISTING DEVELOPMENT:**
1. Furnish all possible information with regard to the ore body or mineral deposit. If maps and sections of the mine or placer are not available, pencil sketches are acceptable. However, such sketches should, if possible, be drawn to scale, or if not, dimensions must be shown. Give the assays of all samples, stating clearly how samples were taken, giving width and location of each sample. Show the location, value, and width of each sample on maps submitted. For placer deposits give the values obtained from each shaft or drill hole and state how the values were determined. If the data is available, show the estimated yardage and value.
  2. Submit certificates, when available, giving analysis of each sample and number each sample to correspond with sample numbers on the maps submitted.
  3. State type of mine, whether tunnel or adit, shaft, open-cut, placer, drift, etc., and show in detail the amount of development work. State distance along vein between levels and to surface. Indicate condition of workings, noting necessary repairs, if any.
  4. List present equipment on property and describe condition.
- E. **PROPOSED DEVELOPMENT:**
1. State clearly and in detail the proposed work. Estimate the cost of producing and marketing the product.
  2. State recent daily, monthly, and annual production (if any) and estimated production if loan is granted.
  3. State whether workings are dry or wet; if latter, amount of water that has to be pumped, gallons per minute, to keep water down.
- F. **MARKETING OF PRODUCT:** Explain fully whether the product produced is milled on the property, shipped to custom mill or smelter, or shipped direct to the mint, or otherwise marketed. In any case, supply all cost data with regard to marketing.
- G. **WATER SUPPLY:** State whether water supply for all proposed operations is sufficient during all seasons of year. State amount in gallons per minute, miners' inches, or second-feet. If available, state the maximum, minimum, and average flow. Describe the source of the water supply, its dependability, water rights, etc.
- H. **POWER:** State kind and source of power proposed to be used in operating the property.
- I. **COST:** State past (if mine has been in operation) and estimated future:
1. Detailed mining cost per ton, or per cubic yard of product and per foot of development work.
  2. Detailed milling cost.

**EXHIBIT C**  
*Current Financial Statement*

As of  
Applicant cannot make a financial statement of interest in the consideration  
of this application.

(It is desired that this should be not more than 30 days prior to date of application)

*Assets*

**CURRENT ASSETS:**

- 1. Cash \_\_\_\_\_ \$ \_\_\_\_\_
- 2. Notes receivable \_\_\_\_\_
- 3. Accounts receivable \_\_\_\_\_
- 4. Inventories, materials on hand, etc. \_\_\_\_\_

TOTAL CURRENT ASSETS \_\_\_\_\_

**FIXED AND OTHER ASSETS:**

- 5. Plant used in business { Lands \_\_\_\_\_
- Buildings \_\_\_\_\_
- Ores \_\_\_\_\_
- 6. Machinery \_\_\_\_\_
- 7. Equipment, furniture, fixtures, etc. \_\_\_\_\_

TOTAL ASSETS \_\_\_\_\_

*Liabilities*

**CURRENT LIABILITIES:**

- 8. Notes payable \_\_\_\_\_
- 9. Accounts payable \_\_\_\_\_
- 10. Other current liabilities \_\_\_\_\_
- 11. Liabilities accrued but not yet payable (interest, rent, taxes, wages, payments due on account of leases, options, or other contracts, etc.) \_\_\_\_\_

TOTAL CURRENT LIABILITIES \_\_\_\_\_

**FIXED AND OTHER LIABILITIES:**

- 12. Mortgage debt, etc. \_\_\_\_\_
- 13. Contracts for lease, royalty, or purchase which constitute charges: \_\_\_\_\_
- 14. Other liabilities (describe) \_\_\_\_\_

TOTAL LIABILITIES \_\_\_\_\_

- 15. Contingent liabilities (describe) \_\_\_\_\_

**INSTRUCTIONS.**—In addition to the foregoing statement, attach a copy of latest balance sheet; also state terms of notes payable, mortgage debts, etc., giving maturity dates, rate of interest, etc.; and describe any other liens.

**EXHIBIT D**

*Fees, Commissions, Etc.*

(No fees or commissions shall be paid by applicant for the purpose of procuring a loan, but reasonable compensation may be paid for proper services actually and necessarily rendered to applicant. If an application is granted it is to be expected that prior to disbursement the Corporation will require that it be furnished with certificates and agreements from applicant and from persons retained to render services to applicant, in form satisfactory to the Corporation, that all compensation shall be subject to the approval of the Corporation.)

All fees, commissions, salaries, charges, compensation, and things of value paid or delivered, or agreed to be paid or delivered, or contemplated to be hereafter paid or delivered by or on behalf of applicant in connection with the application and/or any loan granted are as follows:

Name	Description of services	Amount paid	Amount agreed or contemplated to be paid
		\$ _____	\$ _____
	NONE		

Information requested account of loan application of Elmer C. Walker attached, and as indicated below:

EXHIBIT A

1. Tungsten mine. New workings opened up by cross-cuts.
- 2.-b Applicant has the property under lease and is at present unable to finance the proposed operation.
4. These claims were patented about 1903 and have been operated intermittantly (See exhibit 4) since that time. Same have been leased to applicant to Dec. 31st, 1943, with option of renewal. - Applicant has never had any bankruptcy proceedings filed against him nor has he made any assignment for protection of creditors. He has lived near the claims since 1902 and has worked on them and nearby mining properties most of the time to this date.
5. No claims.
6. Mines are located in Cochise Co., Ariz. in what is known as the Dragoon Mining District, Survey #1789 in Sec. 2, 3, 10 & 11 - T 16 S - R 22 E and Survey #1800 in Sec. 34 & 35 T 15 S - R 22 E and Sec. 2 & 3, T 16 S - R 22 E, G&SRB&M. - Dragoon is the nearest railroad station, approximately 6 miles.
7. a-Claim maps attached. (Exhibit 5)  
b-All patented claims.  
c-See exhibits 2 and 5.  
d-Republic Mines, Johnson City Mines, Keystone Mines.
8. a-Not in production operation except small surface workings. Lessee is exploring property for depth mining.  
b-See Exhibit 4.

EXHIBIT "B"

- A See Exhibits 1, 2, 3, 4 & 6.
- B Tungsten Oxide (WO<sub>3</sub>). To be marketed under specifications and term conditions of Minerals Reserve Company. Application "Form B" being submitted.
- C See Exhibits 2 & 5.
- D-1 Exhibit 2. Other data not at present available  
2 Exhibit 6.  
3 Cross-cutting veins at depth.  
4 No mining machinery of value at present.
- E-1 Proposed to run two cross-cuts at present (See Exhibit 1). Estimated tunnel cost \$12.00 per foot.  
2 No production at present and cannot estimate production of proposed development.  
3 workings are dry.
- F Product will be milled on property.
- G Ample supply of water from well at mill formerly operated on the property. This well supplied water for all Primos Chemical Co.

operations. The well is on patented ground and carries unlimited water rights in accordance with Arizona Law.

H Gasoline driven Compressor.

- I-1 Have no records on past operation. Estimated cost of cross-cuts on proposed development \$12.00 per foot.
- 2 No estimate.

( COPY )

San Francisco, Calif.,  
Feb. 23rd, 1915.Mr. Gideon Boericke,  
Primos, Pa.

Dear Sir;

In accordance with your letter of Jan. 13th I have made a brief examination of your tungsten deposits near Dragoon, Cochise Co., Arizona, occupying 1½ days. I was guided over the property by Mr. O. T. Smith and, as many of the cuts have caved and some underground workings were under water, I was dependent on him for certain information about the thickness of veins, etc. Probably I can best lay the foundation for my conclusions by comments on the claims in the order visited. They are included in a large area of semi-porphyrific granite consisting of free quartz, <sup>with</sup> feldspar and a little brown biotite, with scattered phenocrysts of white feldspar up to 3 inches in length. Some scattered muscovite may be largely secondary. The granite is cut by dykes and small irregular bodies of pale pink aplite. The tungsten-bearing veins occur in three irregular <sup>zones</sup> of sheeting that have a general northeast course and southeast dip. The veins are of quartz, with considerable white mica along the walls, hubnerite, a little scheelite, traces of fluorite and locally iron, copper and lead sulphides. They were produced by emanations from the granite magma after the upper portion had crystallized, the sheeting permitting the egress of the magmatic water.

On the Ada claim, owned by Stein & Boericke, the sheeted zone strikes N. 60 degrees E., and dips S. 30 degrees E. 45 degrees to 60 degrees. This has many small seams of quartz. The first important opening going southwest on the claim is a cut 60 feet long on a quartz vein which strikes N. 80 degrees E. and dips S. 10 degrees E. and hence intersecting the sheeting. Quartz up to several feet thick yielded ore. There was another small lens about 120 feet farther west, production unknown. On top of the ridge, a vein striking N. 80 degrees W. and dipping S. 10 degrees W. 50 degrees, intersected the small veins in the sheeted zone and formed a series of small bunches of ore that were worked in shallow cuts, production unknown. The best showing is on the southwest portion of the claim where there is a cut about 180 ft. long on a vein striking N. 60 degrees E. and dipping S. 30 degrees E. 45 degrees, and thence a series of cuts on the vein, or a set of stringers in a narrow zone, extends 180 feet southwest. This vein is parallel to the sheeting. The cuts are partly caved. Smith says there are two shafts, about 45 and 50 feet deep respectively. In the cuts there was a fine body of ore 75 feet long and 2 feet wide, about 75% hubnerite. This gradually pinched to a depth of 30 feet and then the vein was cut off. Smith says this was the best bunch of ore on the property and that if <sup>similar</sup> ~~several~~ bunches recurred at frequent intervals with depth, the mine would pay well at \$6.00 per unit of tungsten acid. However, from the description, I fear that the vein, though in places 3 to 4 feet thick, may have ended against a cross fracture and not necessarily extend deeper. For this reason I do not recommend further work here.

The Little Jessie claim, owned by Stein & Boericke and the Chrome Steel Co., has a network of small quartz veins with an occasional blade of hubnerite, nowhere forming commercial bunches. The best bunch observed is at a small cut probably near the southwest end of the claim. It is over 2 feet in greatest thickness and has enough hubnerite and scheelite to make something less than 1% ore. Across the Yankee Pride claim (same owners as preceding), there are many small seams of quartz with an occasional blade of hubnerite and at wide intervals a few pounds of fair ore, but no commercial bunches, distributed through a rather definite sheeted zone, several



has a structure and type of mineralization that suggest persistence with depth. It may be followed 300 feet farther to a short distance in the Yellow Jacket claim. It is the longest vein I saw in the district. Probably it will average 8 inches thick for 500 feet.

What is supposed to be the vein at the end of the cross-cut was trenched for about 250 feet. Mr. Smith says from this was mined ore continuous except for one short barren section, 4 inches to 3 feet thick, probably 10 inches that, if mined without sorting, would not exceed 2% ore. Above this there are several cuts on small veins at the top of the ridge, many small quartz stringers of no value. Farther northeast a cut 50 feet long yielded ore from a vein 3 feet thick, but very short. Smith thinks the veins on the Blue Bird claim have yielded more ore than all the other veins in the district together, though the float diggings he thinks have yielded ten times as much as the veins. He is doubtful if these veins could be profitably worked underground at a price of \$6.00 per unit.

The Warrior claim (same owners as preceding) had one vein that was stoped about 75 feet long, to a maximum depth of 30 feet, with 12 to 18 inches of good grade ore, coarse type. Smith thinks the vein at the bottom has 18 inches of fair ore. He thinks this work more than paid for itself. He says this is also a good float claim, but Sebring says not much remains on it. The Red Bird claim has but little float, per Smith. The Trench was a good float claim, but is worked out. The Oregon claim, also owned by Stein & Boericke, is a float claim now being worked by Sebring, his son and Mexicans. Seven men in 26 days secured 3035 lbs. for which Sebring will get 12¢ per lb. One man may work over in 3-foot ground 75 cu. ft. The ground has been pretty well worked out on the Oregon claim down to where the pay stratum becomes buried under 3 to 6 feet of granite debris and the present workers are inclined to quit.

On the Gray, Black Beauty, and Dividend claims, owned by Stein & Boericke and the Chrome Steel Co., this stringer zone is very wide and strong. The best veins seen on the Gray are about a foot thick, not commercial. The foot of the hill on this claim probably would make good float diggings. On the Black Beauty and Dividend claims, when any seam makes a bunch a foot or more thick, it is short, rarely more than 30 to 40 feet long and very low in grade. Smith regards these three claims as among the best in the district and they have undoubtedly given rise to much float ore, but I am certain they cannot be worked profitably under ground.

At the northeast end of the Dividend claim, the stringer system weakens and across the Cracker Jack claim (same owners as last), it is not of much account, though 18 inches of quartz with large hubnerite blades may be seen in a small cut and several hundred pounds of ore may have been removed. There is not much float ore on this claim.

Across the Hidden Treasure and most of the Surprise claim (same owners as preceding) the stringer system is weak, the being widely separated and bunches few and small. However, on the northeast quarter of the Hidden Treasure and southwest quarter of the Surprise, seams are abundant and rich enough to have given rise to an area that may pay to "turn over" for float as is being done beyond the claim lines.

SEAMS  
same

Near the northeast end of the Surprise claim, the vein system becomes stronger and spreads out. Veins 6 inches to a foot thick appear and may be traced for several hundred feet.

On the Last Chance claim, owned by Stein & Boericke, some milling ore has been taken from several cuts near the southwest end. The ground in the head of a draw below this section would probably pay to turn over for float. Shallow cuts that have yielded a little ore are scattered through the claim to the principal workings near the northeast end. Here there is a shallow

cut about 300 feet long on a vein from 5 to 30 inches thick, averaging about 18 inches, Smith says, striking N. 20 degrees W. and dipping ~~N.~~ N. 70 degrees E. 45 degrees. There is a shaft 50 feet deep on the vein and connecting with it Smith says there is a stope 30 ft. long and 25 feet high. He says the vein yielded, by sorting, quite a good many tons of better than 2% milling ore. Mined as a whole it would not average 1%. The ore at depth will have a sprinkling of galena, chalcopyrite and pyrite. On both sides are smaller veins.

Near the northeast corner of the claim there is a nearly continuous cut about 200 feet long on a vein striking N. 30 degrees W. and dipping N. 60 degrees E. 35 degrees to 50 degrees, averaging 8 inches thick 2% ore (Smith). There is an incline down 100 feet and a stope about 30 feet long and to about 20 feet from the surface (Smith).

On the Mayflower claim (same owners as preceding) a vein 12 inches thick, of 2% ore, dipping 35 degrees was mined 50 feet long and 15 feet deep. There are copper carbonates with the hubnerite which, I understand, made the ore <sup>UN-</sup>desirable. Some ore was taken from cuts further north on the claim. There may be here a very persistent vein, but as the ore averaged from 6 to 8, or at most 12 inches thick, I doubt that it could be worked profitably at depth.

On the Wolfram Queen claim (owners same as preceding) a shallow cut exposes for 150 feet a 6 to 10 inch vein striking north and dipping east 65 degrees, of low grade ore, not commercial at depth. Farther north there is another shallow cut. The presence of copper minerals at this end of the belt seems objectionable.

The system of <sup>SMALL</sup> veins extends over onto the King claim, also owned by Stein & Boericke, but there is little ore in it on that claim. Not far beyond the north end of the claim the tungsten belt ends through the granite contacting with the Pinal schist.

I was impressed by the fact that by far the best showings in the district are on those claims that are owned by Stein & Boericke alone. Mr. Smith insisted that this is partly due to the fact that these claims have been extensively dug upon, whereas on most of the claims that Stein & Boericke own in conjunction with the Chrome Steel Co., little more than the location and patent work have been done. Part of the apparent contrast may be due to this, but I remain convinced that the Stein & Boericke claims, as a whole, are far more promising than those owned by the two companies jointly. Hence, if an effort is made to work the latter group, they could not be expected to yield as much ore as did the first group. The one claim owned by the Chrome Steel Co. alone, the Yellow Jacket, has been developed on a scale comparable with the Blue Bird, yet it appears to me very much less promising than the latter.

The recognized float diggings are largely exhausted on the Stein & Boericke claims. On the claims owned by the two companies jointly, the surface float has been picked up, but the ground has not been "turned over." Sebring intimated to me that he very much desired a lease on that group. Not knowing exactly what amount of float ore has been produced by the district, I cannot make an estimate of how much would probably be yielded by these jointly owned claims, but I believe it would be considerably less than the Stein & Boericke claims have produced.

In the basins and broader gulches of the district, there must be considerable float under the coarse granite sand that fills these depressions. This is particularly true of the shallow basin between the Ada-Aetna group and the Blue Bird-Dividend group. In

these basins would lie the largest opportunity in the district if it were a humid country, but there is no water available to hydraulic these deep deposits and I do not recommend you to acquire a property on this basis.

It is safe to say that there are in the Dragoon district, several thousand small veins of tungsten bearing quartz. The total amount of tungsten mineral is large. After going over the field I selected three localities as deserving further consideration. All other portions I was quite certain could not be worked at a profit at depth. The first was the rich bunch on the Ada claim. This I rejected because the ore pockets on that claim show a strong tendency to form at the intersections of veins, and the evidence as well as I could get at it in the caved conditions of the workings, suggests that there is little likelihood that another valuable bunch might be found at depth.

The second vein considered is the principal one on the Last Chance claim as described by Mr. Smith as 18 inches of not to exceed 1% ore. Based on his opinion as to costs in the Dragoon district, I made a little calculation on the basis of developing a vein 300 feet long, 300 feet deep, 1 foot wide and mining from it 2% ore at \$6.00 per unit, 80% saving, and got a profit of \$2.46 per ton. On that basis a vein 18 inches wide of 1% ore would not pay its way. The vein 8 inches thick, supposed to have 2% ore would not pay. Hence, I cannot recommend any work on the Last Chance claim until the price of hubnerite ore is very much higher than \$6.00 a unit.

The third place considered is on the Blue Bird claim. The best vein of the group is described by Mr. Smith as 10 inches of possible 2% ore which, according to my method of figuring above mentioned, would pay a small profit per ton. The ribbon quartz vein is too narrow to be profitable worked at present. Hence, I must discourage further development of the property at this point with the price at \$6.00 per unit, or not much over, for hubnerite concentrate. It must be remembered that I have been figuring rather close and that in actual working at the present time, it is hardly safe to count on mining a less than 3% ore one foot thick at a profit allowing for shaft sinking and other relatively heavy development expense. Besides, the working profit in sight must be great enough to pay for a mill and other equipment. It is unnecessary to go into this matter any deeper at present, but I suggest that if the market price of tungsten ore at any time in the future persistently holds at a figure very much in advance of recent prices, you consider the proposition of driving a tunnel beginning on the Warrior claim and extend it across the vein system in the Blue Bird claim. Without an accurate survey, I estimate that a tunnel 700 or 800 feet long might cut the vein system near the shaft 300 feet deeper than the outcrop. It would cut many seams besides the definite vein system. The cost might be \$7.00 per foot, say \$5,600.00. This is the best place on the property to make a trial of the possibility of making mining pay at depth, but, as stated above, I do not recommend it under present conditions, as the margin of possible success is too narrow for safety.

Respectfully submitted,

(Signed) Oscar H. Hershey

Dragoon, Ariz., July 9th, 1916.

Primos Chemical Co.,  
Primos, Pa.

Dear friends;

I received your favor of the 30th today and note carefully all you say, both regarding the tungsten market and also the probably chance to prove the Blue Bird with a tunnel. This has got to be a great desire of mine especially as our lower work, as I told you before, developed a strong vein about 60 ft. in from the old Blue Bird shaft. We also drifted out back of the old shaft and sunk on a small vein there to the same depth as the one in the cross-cut, and to get air in this working, decided to drift across from one to the other, starting about 100 ft. in the lower workings toward the Yellow Jackey claim. We have cross-cut two veins, one about 20" and the other over two feet. Now, there is no sign whatever of either of the veins on the surface but they are both giving us good ore and we are very proud of the find, as we had worked out about all of the available ore above the first level. You were right about the cross-cut which we expected to run 800 ft. but this will not be in barren ground as we should commence hitting veins in the first 300 ft. and the drifting work would all depend on the veins which should be paying their way. The main thing is the cross-cut and with this 800 ft. I expect to raise out of the north side of the hill on the Warrior and with a small air hoist, hoisting all ore through, saving the expense of hauling from the Juniper side clear around the Yellow Jacket, and all waste to go out on the Juniper side.

I have taken up more carefully the cost of equipment with various parties and as soon as I get their replies, will give you an itemized account of the total cost of the cross-cut.

Of course, if we start this work, as fast as we come to a vein we will go to mining on it and I feel confident that we will strike several that we know nothing about at present. If a party should have told me that we could have mined the amount of ore from the Blue Bird several years ago, I would have been tempted to call him something besides a truthful man, but now I firmly believe that there is more to this camp than any of us ever thought to find. We have also run a long cross-cut in the Dividend on the tunnel level, under some of the veins on the north side of the ridge and have at present a vein 3 ft. thick and not through it yet. While this one does not show ore at present, still it is only a barren spot in it.

Now, with careful observation in our development, I find that there seems to be a regular bunch of veins which occur in the hardest granite we have, that seem to be permanent while, in the broken up formation, such as the one we had in the Blue Bird cross-cut, which we called the Murphy Vein, these do not pay, and the ore is very peckety and widely distributed so that they will not allow work to a profit. These we quit as soon as we are sure of the ground as it would cost more than the ore is worth to timber the ground. So I sincerely hope that ore will stay up until we can prove out this work with a tunnel or cross-cut.

Our Mexican War seems to be over again, so that everything is still quiet in our district. Except that the other day a couple of villistas started to do up our ex-deputy of Johnson. There were five of them that had taken on some boot-leg, and one landed on the deputy

P.C.Co. 2.

with a 5# boulder on his jaw, and he called for help and our old watchman, Bud Snow, hearing the row and having no gun, took a billiard Q and rushed to the fray. He tapped the on on top of the head and had the rock and put him to sleep right now. He landed on the next across the left ~~sax~~ and he also went to sleep and at present has three ears. The other two have their heads done up in towels, so I could not tell what part of their system is missing, but they all took a nap. Also a couple Americans came rushing up to help stop the row, but Bud put them to sleep also and one has his arm in a sling. So, since then we have no revolution, so that Bud has the field.

One man that is running a soft drink joint over there wanted to make the boys feel good so he ordered ten barrels of beer but the citizens, thinking it would not help the quiet of the town in war times, overhauled the wagon just above my house and broke every bottle, one at a time, and it makes me feel bad to go by on a hot day and see that wreck.

With kindest regards to all, I remain,

(signed) O.T.SMITH

PRIMOS CHEMICAL COMPANY.

Primos, Penna.

June 24, 1942

Mr. Elmer C. Walker,  
Dragoon, Ariz.

Dear Elmer;

In reply to your request for information relative to the production of the Dragoon Patented Tungsten Mining Claims back to World War I, I have taken from the records the following production figures;

May 18th to Dec 23rd, 1915 - 146,055# analyzing 60.40% to 72.18% WO3, with the exception of the following lots:

4019#	- - -	57.00%	WO3
2217#	- - -	51.36%	"
14489#	- - -	52.60%	"
5805#	- - -	57.36%	"
4984#	- - -	57.36%	"

Jan. 1 to Mar. 27, 1916 - 49,309# - 20,390# of which analyzed 51.20% to 63.40% WO3 and 28,919# of which analyzed 36.00% to 49.70% WO3.

April 7 to May 9, 1916 - 16,376# - we have not as yet located analyses.

May 17 to June 19, 1916 - 22,223# analyzing 60.28% to 62.36% WO3, excepting one lot of 3130# which analyzed 58.72% WO3.

June 29 to Aug. 5, 1916 - 21,609# - we have not as yet located analyses.

SUMMARY OF ABOVE PRODUCTION

133,634#	-	60.28% to 72.18%	WO3
55,034#	-	51.20% to 63.40%	"
28,919#	-	36.00% to 49.70%	"
37,985#	-	No analyses.	
255,572#	-	Total Production.	

Sept. 28, 1935 to Aug. 20, 1936 - 9,166 $\frac{3}{4}$ # - 60.1% to 67.6% WO3, with the exception of the following lots:

483#	-	55.1%	WO3
531#	-	59.0%	"
726#	-	57.7%	"
1,024#	-	51.5%	"

April 12, 1938 to Dec. 31, 1942 - 82,178 $\frac{1}{2}$ # - 60.05% to 70.7% WO3 with the exception of the following:

630#	-	55.37%	WO3
5,975#	-	Sold without analyses	

Mr. Elmer C. Walker,

#2

June 24, 1942

If you require the missing analyses for World War I production, please let me know and we will make a further search of the records here.

There were two prior periods of active operation of the property, one beginning in the fall of 1898 immediately upon our acquisition of the property, when we had about 15 white men and 60 Mexicans engaged in mining, sorting and shipping the ores which were obtained from shallow workings on the veins and from placer operations, and which operations, as I remember it, resulted in a profit sufficient to pay for the cost of the claims with ore selling at about \$6.00 per unit. When ore prices went down to around \$2.00 to \$3.50 per unit, operations were suspended, but there was another active campaign between 1898 and 1915 when the property was again operated with tungsten prices at \$6.00 per unit or better. These operations were again suspended when the market broke to a lower figure.

Sincerely yours,

GB/RS

(Signed)

GIDEON BOERICKE