UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.

224 New Customhouse
Denver, Colorado

June 18, 1951

Memorandum

To: Louden Strobel, Executive Secretary, Defense Minerals Administration

From: Executive Officer, DMA Field Team, Region IV

Subject: DMA Docket 21-50 and 494

We are enclosing a memorandum from W. R. Storms, dated June 8, with copies of a confidential letter from M. J. Kissing, consulting mining engineer, Tucson, and L. L. Farnham, Bureau of Mines engineer, regarding the Tennessee-Schuylkill project and Mohave Metal Mining and Reduction Company project, both located in the Wallapai district, Mohave County, Arizona.

These letters should be made a part of the reports previously submitted for your consideration.

J. H. East, Jr.

Attachments
Copy to Otto Herres

Copy to Allman and [illegible]

JHE/cl
cc dma files

DMA 50-856

See file copy on
DMA 50-856

FILE COPY
SURNAME:

McKnight
Lyon
Strobel

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.

June 13, 1951

Re: Dockets DMA-21 and 50

Mr. Ralph R. Langley, President
Tennessee Metals Corporation
8943 Wilshire Boulevard
Beverly Hills, California

Dear Mr. Langley:

The Lead-Zinc Branch of the Defense Minerals Administration has reviewed the report that the field team has prepared on the properties of Tennessee Metals Corporation.

On the basis of this review, we must conclude that the grade of ore available is not rich enough at present metal prices to offset the high costs that would be involved in reopening and operating this property. As the operation cannot be operated at a profit, we are, therefore, not justified in recommending that the Reconstruction Finance Corporation advance public funds to finance the proposed operation.

We believe that the chances of finding higher grade reserves than those available at present or mined in the past are too remote to justify an additional outlay of funds for exploration when the economic situation is such that the existing ore reserves cannot be profitable mined.

I regret the decision that we have had to come to, and I can assure you that it was arrived at only after a thorough study of the many problems involved.

Very truly yours,

Tom Lyon

Tom Lyon, Director
Supply Division

ETMcKNIGHT:emp
G 6/13/51
Copies to: J.H. East, Jr. Region IV (2)
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
R. H. Mote
L. F. Strobel
Directors r. file 4214 GSA
Br. r. file 4214 GSA
Files

Box 1266 Kingman, Arizona

858

FILE COPY
SURNAME:

Herres
Mote
McKnight

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.

June 11, 1951

DMA-50 - 21

Mr. Ralph R. Langley, President
Tennessee Metals Corporation
Box 1266
Kingman, Arizona

Dear Mr. Langley:

I wish to acknowledge receipt of your letter of June 1 requesting that you be kept advised concerning the routing and consideration of your application in Washington.

The report on your property has been received from the field team as you know and is under consideration but many hundred other applications and projects also have come in for consideration in one form or another recently. These all will be handled as promptly as possible. I can understand that you are anxious for some word concerning your project. You will be advised as to the outcome as soon as the field report on your property can be handled.

Very truly yours,

Otto Herres

OTTO HERRES, Chief
Lead-Zinc Branch

OHERRES:ks

cc: Strobel
Mote
McKnight
Herres
Files

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION IV

OFFICE OF
REGIONAL DIRECTOR

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

May 28, 1951

Memorandum

To: Landon Strobel, Executive Secretary, Defense Minerals Administration

From: Executive Officer, Defense Minerals Administration Field Team, Region IV

Subject: DMA 21-50, Tennessee Metals Company, Mohave County, Arizona

We are attaching the original brochure of the above docket. The report was sent to Washington on May 23.

J. H. East, Jr.

J. H. East, Jr.

Attachment

JUN 4 1951

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
DENVER, COLORADO

Region IV

May 28, 1951

Memorandum

To: Landon Strobel, Executive Secretary, Defense Minerals Administration

From: Executive Officer, Defense Minerals Administration Field Team, Region IV

Subject: DMA 21-50, Tennessee Metals Company, Mohave County, Arizona

We are attaching the original brochure of the above docket. The report was sent to Washington on May 23.

J. H. East, Jr.

J. H. East, Jr.

Attachment

HHE/el
cc-dma files

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
DENVER, COLORADO

Region IV

May 28, 1951

Memorandum

To: Landon Strobel, Executive Secretary, Defense Minerals Administration

From: Executive Officer, Defense Minerals Administration Field Team, Region IV

Subject: DMA 21-50, Tennessee Metals Company, Mohave County, Arizona

We are attaching the original brochure of the above docket. The report was sent to Washington on May 23.

J. H. East, Jr.

J. H. East, Jr.

Attachment

JHE/cl
co-dma files

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Arizona-New Mexico Branch
Southwest Experiment Station
Box 4097
University Station

MINING DIVISION
REGION IV

TUCSON, ARIZONA

May 23, 1951

Register - Return Receipt Requested

Memorandum

To : Paul T. Allsman, Denver, Colorado

From : Chief, Arizona-New Mexico Br., Mining Div., Region IV

Subject : Brochure for DMA Docket 21-50, Tennessee Metal Co., Mohave County, Ariz.

Enclosed is brochure for the above docket which we neglected to mail you with the final report.

Mining Division
Mail Room
MAY 23 1951
BUREAU OF MINES
Denver, Colorado

Walter R. Storms
Walter R. Storms

CC P. T. Allsman
DMA 21-50
DF

JUN 4 1951

5

April 2, 1951

Memorandum

To: P. T. Allsman (2)

Charles Anderson (2)

From: Executive Officer, DMA Field Team, Region IV

Subject: DMA 50-21, Tennessee Metals Corporation

The Chief of the Lead-Zinc Branch has forwarded a copy of a letter from J. R. Payne of Kingman, Arizona, denying that he is to be associated with the project. Please attach this to your copy of the brochure.

J. H. East, Jr.

J. H. East, Jr.

Attachment
JHe/el

cc-Kesselmann
DMA files

COPY

Kingman, Arizona
March 14, 1951

Mr. James Boyd
Director Defense Minerals Administration
Washington 25, D. C.

Dear Dr. Boyd:

It has just been brought to my attention by Mr. McCrea of the Treasury Department, Bureau of Internal Revenue, that in an application for a loan by the Tennessee Metals Co., an embryo corporation to reactivate the Tennessee Mine in Mohave County, Arizona, my name has been used indicating that I would be in charge of the mill and all surface operations.

I am writing this letter to disclaim any foreward knowledge of the use of my name and any arrangements or association with the project.

Sincerely yours,

/s/ J. R. Payne

March 26, 1951

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] Mr. [illegible], [illegible] Mr. [illegible], [illegible] Mr. [illegible], all of [illegible], [illegible], and Mr. [illegible] Stuart, Director of Research Services at Phoenix, in connection with a [illegible] of the [illegible] Location of the Bonneville Steels for [illegible], [illegible] [illegible].

[illegible] your [illegible], where contact [illegible] and [illegible] reviews [illegible] results of the [illegible].

J. H. Ewald
J. H. Ewald, Jr.

A. H. Koschmann
A. H. Koschmann

[illegible]/[illegible]
cc- [illegible]
[illegible]

February 6, 1951

Docket [illegible]-50 and [illegible]-21

Memorandum

To: Executive Officer of Field Team, Region IV

From: Lead-Zinc Branch, DMA

Subject: Docket [illegible]-50 and [illegible]-21
Tennessee Metals Corporation
Miami, Arizona

These documents represent the revised application of the Tennessee Schuylkill Company and Arizona Metals Company for Government assistance under the Defense Production Act of 1950, referred to in my memorandum of January 23, 1951. It should be noted that the two companies have merged and formed a new company, Tennessee Metals Corporation.

This application supersedes the original applications [illegible]-50 and [illegible]-21 but a new docket number has not been given this revised version, therefore all correspondence relating to these properties must carry the original docket numbers.

[illegible], Chief
Lead-Zinc Branch, DMA

Approved:
DMA Operating Committee

Chairman

[illegible]

Olaf M. Rove

copy to: Chief, Lead-Zinc Branch
Geological Survey - McKnight
J. H. Hedges
R. H. Mote
2 copies to Executive Officer
Regional Field Team, Region IV
Strobel
Kittendorf
Files

ALBrokaw:jeh
G-2/6/51

Form NSRB-146
(Nov. 1950)

UNITED STATES GOVERNMENT

APPLICATION FOR GOVERNMENT LOAN
UNDER SEC. 302 OF
DEFENSE PRODUCTION ACT OF 1950

FORM APPROVED
BUDGET BUREAU NO. 25-R002

AMOUNT OF LOAN REQUESTED
See Dr. Boyd Letter 1/25/51 Page 7

TERMS OF LOAN REQUESTED
Same as above Page 8

DATE OF APPLICATION
January 25, 1951

NAME AND ADDRESS OF APPLICANT (*Street, City, Zone, State*)

TENNESSEE METALS CORPORATION
Post Office Box Six
Chloride, Arizona

NOTE: This is a consolidation of applications of

Tennessee Schuylkill Corporation, Docket DMA-21, & Arizona Metals Company, Docket DMA-50

TO BE FILLED IN BY DELEGATE AGENCY

(DATE RECEIVED)	COMM.
	AGRIC.
	INT.
	D.T.A.
FILE NO.	

INSTRUCTIONS

Application should be filed with the Department of Commerce, Department of Agriculture, Department of Interior, or the Defense Transport Administration, whichever has the primary interest in the facilities, products, or processes involved. However, for convenience of the applicant, he may file with any government agency with which he has contract or other pertinent relationships and such agency will arrange for the transmittal of the application to the appropriate office.

Submit four (4) signed copies of the application. Name and address of applicant should be stamped or typed for identification of each sheet of the application and all accompanying papers. When a question is inapplicable, this should be so stated on the form. Additional sheets may be attached in answering any questions or in providing other supporting information.

1. PURPOSE OF LOAN

Give a brief general statement of the purpose of the loan requested, including in the table below estimated amounts for such major purposes as land acquisition, building construction, purchase of plant, purchase of equipment, working capital, repayment of debt, etc. Statement should make clear whether funds will be used for expansion of capacity, development of technological processes, or production of essential materials.

General Statement The loan is required for the purpose of reactivating the Wallapai Mining District, by reconditioning mine workings and milling facilities, for acquiring additional mining equipment, for refinancing certain obligations and for working capital so that the supply of critical metals can be greatly increased for use in the National Emergency. This application and discussion supersedes and is intended to consolidate into one operating entity the two applications submitted, by Tennessee Schuylkill Corporation, Docket - DMA-21, dated October 16, 1950, and by Arizona Metals Company, Docket DMA-50, dated November 15 and December 15, 1950, respectively, reference to which is hereby made.

(See letter to Dr. James Boyd dated January 25, 1951 attached)

NATURE OF EXPENDITURE	AMOUNT
(See letter to Dr. James Boyd dated January 25, 1951 (combined applications) Pages 7 & 8.	
Total amount applied for	

2. PROPOSED METHOD FOR REPAYMENT OF LOAN

State sources of funds, and proposed schedule of repayment

It is proposed to repay the loan on the equivalent of a royalty basis, the rate to be agreed upon between the borrower and lender.

3. NATURE OF BUSINESS AND DESCRIPTION OF PROJECT

Describe fully the business activity for which the funds are intended. In so doing, identify the materials and services to be produced, describe the facilities and processes involved, and explain in detail any research activity and the nature of the results expected. Attach blueprints and specifications, if available, and furnish other technical details to the extent that they are not covered elsewhere in the application.

Mining and marketing of strategic base metals - lead, zinc and copper - from Tennessee Mine and Summit Alpha mine in Mohave County, Arizona.

Maps, reports, exhibits and descriptions are attached hereto (see combined application - Letter to Dr. James Boyd dated January 25, 1951) and also to applications formerly filed by Tennessee Schuylkill Corporation, Docker DMA-21 dated October 16, 1950 and Arizona Metals Company, Docker DMA-50 dated November 15 and December 15, 1950.

4. Relationship to National Defense. Explain carefully how the expenditure of the funds will contribute to national defense. As a part of such explanation, the following questions should be answered to the extent possible:

(a) What evidence exists as to current shortages of the materials or services to be produced?

Published statements of the Director of the U. S. Bureau of Mines and the Secretary of the Interior.

(b) What evidence exists as to future shortages of the materials or services to be produced?

Withdrawal of base metals from commercial use and allocation of same to defense production.

(c) Are such shortages, if any, regional or national in scope?

National

(d) In what respects will the use of the funds aid directly in expediting the carrying out of government defense contracts? (A listing of defense contracts, if any, held by applicant is required in item 8 below.)

Production in important volume of metals now in critical short supply and indispensable in defense equipment and facilities.

4. Relationship to National Defense - Continued

(e) In what respects will the use of the funds aid indirectly in expediting the carrying out of government defense contracts or related operations?

Directly and indirectly in increasing the supply of base metals urgently needed for National Defense in substantial volume.

(f) Are there available alternative methods or facilities to accomplish the same purpose as that for which these funds are intended? (For instance, unused capacity, possibility of multiple shift operations, idle facilities, readily convertible equipment, sub-contracting?) If answer is yes, explain why alternatives are not used.

There is no known alternative.

5. Maximum Designed Production

List separately materials or services identified in item 3 (a)	Unit of measure (b)	Maximum designed production with existing facilities (c)	Average percentage of maximum designed production used in quarter preceding filing of application (d)	Maximum designed production including use of funds applied for (e)
Metal	Tons of metal			Tons Metal Monthly
Zinc		None *	None *	780 tons
Lead		None *	None *	480 "
Copper		None *	None *	57 "

* Because of low metal prices, inadequate development and lack of capital, properties have been dormant since World War II.

6. Employment

(a) Number currently employed at location(s) where funds are to be used. (Use pay period ending nearest 15th of month preceding filing of application.)

Caretaker and watchman only

(b) Maximum feasible employment with existing facilities.

(1) Single shift operation.

28 men

(2) Multiple shift operation (specify how many shifts).

2 Shifts - 36 men

(c) Estimated additional employees required by the use of the funds applied for.

40 additional men

7. Timing

(a) On what date(s) are the requested funds needed?

Immediately after being authorized

(b) On what expected date(s) will applicant begin to use such funds and obtain output from the use of such funds? Wherever possible, give planned schedule of output.

Immediately after authorization. Will begin production after 30 days. (See combined application - Letter to Dr. James Boyd dated January 25, 1951)

8. Output from the use of funds applied for will be for the following purposes:
a. For the following principal prime defense contracts (if any) with the United States Government:

Date of contract (a)	Contracting Government Agency (b)	Program symbol (2 digits) or other contract identification (c)	Materials or services (d)	Delivery date(s) (e)	Amount (Dollars) (f)
We are not manufacturing contractors but producers of metals required by Government Defense Contractors. As a result of the financing required by us we can produce metals in amounts and within the time periods indicated in 5 and 7, and in combined application - Letter to Dr. James Boyd dated January 25, 1951 attached.					

b. For the following subcontracts (if any) with U.S. Government prime defense contractors:

Date of contract (a)	Materials or services (b)	Supplied to (Give name and address of firm) (c)	Delivery date(s) (d)	(e) Government agency receiving end product or services (f) Program symbol (2 digits) or other contract identification	Amount (Dollars) (g)
We are suppliers of base metals for use of manufacturing contractors - we are not ourselves manufacturing contractors.				(e)	
				(f)	
				(e)	
				(f)	
				(e)	
				(f)	

c. For the following classes or types of customers not covered by contracts listed above (list materials or services to be provided and, wherever possible, also indicate final product use):

We produce lead, zinc and copper metals, all of which are used in armament, ammunition and armed forces facilities.

9. **Feasibility**

(a) Estimate anticipated requirements for manpower, equipment, raw materials, energy, fuel, transportation facilities, water supply, housing, community facilities, and other factors of production, for (1) preparation of the facilities and (2) actual operation thereof. (The estimates may be limited to those factors of substantial significance to the preparation and operation of the facilities for which the funds are intended.)

During preparatory or development stage will need 24 men, rock drills, general tools and power. During actual operations period will require 100 men. Ample housing facilities are available. (See combined application - Letter to Dr. James Boyd dated January 25, 1951 attached)

(b) Discuss and evaluate the availability of each of the above factors in the area(s) where the funds will be used.

Manpower available progressively as needed. Equipment - of the type and character needed can be assembled and acquired in or near the vicinity of project.

Energy (power), fuel, transportation, water readily available. Limited housing on premises - additional can be readily provided as required.

10. The following applications for necessity certificates for tax amortization (Under Section 124A of the Internal Revenue Code) for facilities at the location(s) covered by this application have been filed since January 1, 1950.

Date of application (a)	Government file number (b)	(Estimated) Total of facilities in dollars on each application (c)	(d) If final action has been taken, give date of	
			Issuance	Denial
Will be filed later.				

11. **Recent Efforts to Obtain Credit**

(a) Banks— List names and addresses of all Banks of Deposit of Applicant within the last 5 years: *(Mark with an asterisk (*) bank or banks in which deposits are now kept)*

Valley National Bank, Kingman, Arizona
Security First National Bank, Carthay Center Branch, Los Angeles, California.
(Accounts in name of Ralph R. Langley)

11. **Recent Efforts to Obtain Credit** - Continued

(b) State efforts to obtain credit, within 60 days preceding date of application, from banks, the Reconstruction Finance Corporation, or other sources, results, and reasons if refused. (NOTE.- Section 302 of the Defense Production Act of 1950 states that a loan may be extended "only to the extent that it is not otherwise available on reasonable terms." Accordingly, Applicant should show that it has applied to each bank named in (a) above, or explain the reason for not doing so. The fact that a loan of the particular maturity and terms applied for is refused by a bank or banks is not sufficient to comply with the statute, if credit on reasonable terms is available. State whether a bank will participate in the loan, and if so, state name of bank and amount of participation. Full particulars must be given.) List the names and addresses of banks and other lending institutions to which applications for credit have been made, and in each case state date of application, amount of credit available, if any, maximum term for which credit is available, what consideration, if any, was given to possible guarantee of loan under Federal Reserve Regulation V, and reason for refusal or reason loan was not obtained. Indicate whether or not application was definitely refused for further credit on any basis.

Upon inquiry we find that banks are unwilling to make mining loans unless secured by readily liquid collateral. We have, however, discussed the matter of mine loans with the Valley National Bank and Security First National Bank and have been advised that no loans or credit will be considered on any basis. This is a fact well known in mining circles. However, if desired, we will make formal written requests of the banks and obtain prompt replies.

12. What other forms of government financial assistance, if any, have been received or requested by the applicant in connection with the purposes of the loan herein applied for? If applicant plans to request such assistance in the future, give details.

NONE

13. HISTORY, MANAGEMENT, LEASED AGREEMENTS, INSURANCE, ETC.

These subjects should be fully covered in statements attached hereto. Outline past management experience or other basis for showing competence of the Applicant to perform in accordance with expressed purpose of the application. If plant was purchased, state price, form and terms of payment, date of purchase, from whom and under what circumstances purchase was made. If it is proposed to construct or acquire new facilities (including equipment), state estimated cost and basis of such estimate, form and terms of payment, and from whom purchases of facilities will be made. State whether Applicant, or the business or plant, has been in receivership, bankruptcy, Chapter X, XI or XII, in hands of creditors, committee, or whether Applicant has effected a compromise with creditors, and if so, discuss fully. Indicate whether business is conducted in leased premises and whether any facilities are leased from others and describe terms of any lease agreements. List type and amount of insurance carried on plant property. Describe briefly any pending or threatened litigation affecting Applicant.

NOTE: Statement on reverse side of this sheet. Also, Combined application attached.

$100,000 insurance will be carried on Tennessee Mill and an appropriate amount on destroyable equipment.

No receivership or other legal or creditor complications.

Copies of leases held are attached as Exhibits T I and S I.

14. NAMES AND ADDRESSES OF OFFICERS, DIRECTORS, OR PARTNERS, AND IN ADDITION THERETO, THE FIVE LARGEST STOCKHOLDERS IF A CORPORATION.

NAME AND ADDRESS (a)	Official title (If officer is also director indicate by "D") (b)	Total of annual salary, commissions, bonuses, etc., received from Applicant and affiliates during last fiscal year (c)	Estimated net worth outside of Applicant (d)	Number of shares held in applicant: Common (e)	Number of shares held in applicant: Preferred (f)	Life insurance carried for benefit of Applicant: Amount (g)	Life insurance carried for benefit of Applicant: Net cash surrender value after loans (h)
Ralph R. Langley	Pres. & Dir.	None	Nominal	400			None
Chloride, Arizona							
R. H. Lesher	Secy,Treas,Dir.	None	Substantial	50			None
Kingman, Arizona							
Charles P. Elmer	Director	None	Substantial	1			None
Kingman, Arizona							
	Total		x x x x x			x x x	x x x

15. CAPITAL STOCK ISSUES

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par value (c)	Number of shares outstanding (d)	Dividend rate last paid (e)
Common stock	$ 5,000 shs.	$ 1,000 shs.	$ No Par	1,000	None
Preferred stock	$ None	$	$		

16. PURCHASE AND SALES RELATIONS WITH OTHERS

Does Applicant buy from, sell to, or use the services of, any concern or partnership in which an officer, director, large stockholder, or partner of the Applicant has a substantial interest? If not, so state. If so, give names of such officers, directors, stockholders, and partners, and names of such concerns or partnerships.

NO

Does any officer, director, large stockholder, or partner of Applicant receive any commission, bonus, or other payment in cash or services from any concern or partnership with which Applicant has business dealings? If not, so state. If so, give names of such officers, directors, stockholders, or partners and amounts of such commissions, bonuses, or payments.

NO

17. COMPENSATION SCHEDULE

INSTRUCTIONS: The schedule shall show the amount of compensation being paid to all employees of Applicant receiving compensation at a rate in excess of $10,000 per annum, including employees paid on a part-time basis where the rate of compensation exceeds $10,000 per annum computed on a full-time basis. If Applicant is a corporation, the schedule should show the compensation, regardless of amount, being paid to all officers, directors, and such stockholders as have an interest in Applicant's business of 10 percent or more. If Applicant is a partnership, the schedule should show the compensation being paid to, or being withdrawn by, all partners for their personal use. If Applicant is an individual, the schedule should show the amount being withdrawn by Applicant for his personal use. In each case the listed person's connection with the business should be indicated (i.e., whether an officer, director, stockholder, partner, owner, etc.). The calendar basis for the compensation should likewise be shown. Attorneys or firms of attorneys on a regular retainer or salary basis should be included. The schedule should include a separate notation indicating the source and amount of any compensation being paid by a company or firm directly or indirectly controlling, affiliated with, or controlled by, Applicant. If the space provided herein is insufficient, the schedule should be continued on the reverse side or appropriate continuation sheets should be attached.

17. **COMPENSATION SCHEDULE** - Continued

The term "compensation", as used herein and such schedule, shall include all salaries, fees, bonuses, commissions, retainers, regular drawing accounts, and other payments, direct or indirect, in money or otherwise, for personal services.

Name (a)	Position (b)	Compensation paid during previous fiscal year (c)	Present compensation (d)
No salaries or other form of compensation are presently being paid or credited to anyone. When operations are resumed Ralph R. Langley, President and Active General Manager will draw salary not exceeding $9,000 per year.			

18. **COLLATERAL**

(a) The applicant offers the following described collateral as security for repayment of the loan applied for.

Description (a)	Date acquired (b)	Cost (c)	Book Value (Net) (d)	Appraised* value (e)
Property now held:				
Applicant has no "collateral" as term is usually used. Security for funds advanced is discussed on Page 8 of combined application - Letter to Dr. James Byd dated January 25, 1951 attached.				
To be acquired:				

* This column need be filled in only if a recent appraisal has been made. If so, identify appraiser below.

Name (a)	Title (b)	Date (c)

(b) Describe existing liens, if any, on property listed above.

Applicant has no debts. Tennessee Schuylkill owes about $150,000 subject to substantial discounts and adjustments. See Page 7 Tennessee Schuylkill application, Docket DMA-21, and combined application Page 8 - Letter to Dr. James Boyd dated January 25, 1951 attached.

EXHIBIT A - CURRENT FINANCIAL STATEMENT

As of _____

(Date not more than 30 days prior to date of application)

ASSETS

CURRENT ASSETS

1. Cash ..... $ _____
2. Notes receivable ..... $ _____
   Less reserve for doubtful notes ..... _____
3. Accounts receivable:
   Current ..... $ _____
   Past due not over 4 months ..... _____
   Past due over 4 months ..... _____ $ _____
   Less reserve for doubtful accounts ..... _____ _____
4. Inventories:
   Raw materials ..... $ _____
   Work in process ..... _____
   Finished goods ..... _____ $ _____
   Less reserve for inventory losses ..... _____ _____
5. Other current assets (describe) _____ _____

TOTAL CURRENT ASSETS ..... $ _____

FIXED AND OTHER ASSETS

6. Plant used in business:
   Land ..... $ _____
   Buildings ..... _____
7. Machinery ..... _____
8. Equipment, furniture, and fixtures ..... _____ $ _____
   Less reserve for depreciation ..... _____ _____
9. Investments—stocks and bonds ..... _____
10. Investments in affiliated companies ..... _____
11. Receivables due from affiliated companies ..... _____
12. Real estate not used in business ..... _____
13. Due from officers, directors, employees, stockholders ..... _____
14. Deferred charges ..... _____
15. Other assets ..... _____

TOTAL ASSETS ..... $ _____

LIABILITIES

CURRENT LIABILITIES

16. Notes payable (see schedule 1, page 10):
    Banks ..... $ _____
    Trade creditors ..... _____
    Officers, stockholders, relatives ..... _____
    Insurance companies ..... _____ $ _____
17. Accounts payable ..... _____
18. Other current liabilities:
    Delinquent taxes { Real estate ..... $ _____
    Delinquent taxes { Federal ..... _____
    Wages and salaries ..... _____
    Due officers ..... _____
    Accrued interest, rent, taxes, wages, etc ..... _____
    _____ _____ _____

TOTAL CURRENT LIABILITIES ..... $ _____

FIXED AND OTHER LIABILITIES

19. Machinery liens ..... _____
20. Mortgage debts (see schedule 2, page 10) ..... _____
21. Bonds or debentures (see schedule 2, page 10) ..... _____
22. Other liabilities ..... _____

NET WORTH

23. Common stock (if Applicant is incorporated) ..... $ _____
24. Preferred stock (if Applicant is incorporated) ..... _____
25. Surplus (if Applicant is incorporated) ..... _____ _____
26. Capital and Surplus Account (if Applicant is partnership or individual) ..... _____

TOTAL LIABILITIES ..... $ _____

27. Contingent liabilities (explain) _____ $

NOTE.— Submit copy of last available audit or of financial statement at close of last fiscal period (if such date differs from date of above statement).

New Corporation. Exhibits A, B & C not applicable.

$4,000 cash paid in thus far for organizational and cost of financing purposes. Corporation holds long range leases on Tennessee Schuylkill Mine and mill and on Old Colony Group (Summit) and Alpha group of mining claims.

Copies of above mentioned leases are attached as Exhibits T I and S I.

SCHEDULE I - Notes Payable (in detail)

Name and address	Maturity	Amount	State amount and character of collateral	Name of guarantor(s) and/or endorser(s)

SCHEDULE 2 - Mortgage Debt (real estate and/or chattels) or Bond Issue

Names and addresses of holders	Date of maturity	Interest rate	Unpaid principal amount	Date to which interest is paid
			$	
TOTAL	X X X X X X	X X X X X	$	X X X X X X X X X X X X X X

If mortgage secures a bond issue, state whether bonds are principally held by management and/or stockholders or by others, and attach copy of mortgage indenture.

EXHIBIT B - CONDENSED COMPARATIVE STATEMENT OF INCOME AND EXPENSES

For years ended _____

(Insert date of end of fiscal year)

(000.00 omitted)

	(Figures for 3 preceding years)			Current year as of date of Exhibit A
	19	19	19	
1. Net sales				
2. Cost of goods sold				
3. Gross profit on sales (line 1 minus line 2)				
4. Other income (itemize)				
5. Total (line 3 plus line 4)				
6. Salaries (officers or partners)*				
7. Selling and all other expenses				
8. Total of lines 6 and 7				
9. Profit or loss before depreciation and Federal taxes (line 5 minus line 8)				
10. Depreciation				
11. Federal Income and Excess Profits Taxes				
12. Net profit or loss (line 9 minus lines 10 and 11)				
ANALYSIS OF SURPLUS				
13. Total surplus at beginning of period				
14. Net profit or loss for period				
15. Line 13 plus line 14 if profit; line 13 minus line 14 if loss				
Add:				
16. Surplus paid in during period				
17. Surplus resulting from revaluation of assets				
18. Other additions to surplus (itemize)				
19. Total of lines 15 to 18, inclusive				
Deduct:				
20. Dividends				
21. Other charges to surplus (itemize)				
22. Total of lines 20 and 21				
23. Surplus at end of period (line 19 less line 22), MUST AGREE WITH SURPLUS AS SHOWN IN BALANCE SHEETS				

* To include all payments of any kind (commissions, bonuses, withdrawals) to officers or partners.

NOTE—If years included in the above tables are not adequately representative of applicant's financial experience, information may be submitted for additional years.

EXHIBIT C - CONDENSED COMPARATIVE STATEMENT OF CONDITION

For years ended _____
(Insert date of end of fiscal year)

(000.00 omitted. Use figures to nearest thousand. For instance, the figure $3,489.36 should be written as 3; the figure $3,689.36 should be written as 4)

ASSETS	(Figures for 3 preceding years) 19	19	19	Current year as of date of Exhibit A
CURRENT ASSETS:				
1. Cash				
2. Receivables (after deducting reserves)				
3. Inventories				
4. Other current assets:				
TOTAL CURRENT ASSETS				
FIXED AND OTHER ASSETS:				
5. Plant accounts (before depreciation):				
Machinery, equipment, etc.				
Delivery equipment				
Real estate and buildings used in business				
6. Other assets (as investments, real estate not used in business, etc.):				
TOTAL ASSETS				
LIABILITIES				
CURRENT LIABILITIES:				
8. Notes payable				
9. Accounts payable				
10. Accrued liabilities				
11. Other current liabilities:				
TOTAL CURRENT LIABILITIES				
FIXED AND OTHER LIABILITIES:				
12. Mortgage debts				
13. Debentures				
14. Other fixed liabilities:				
RESERVES:				
15. Reserve for depreciation				
16. Other reserves:				
NET WORTH:				
17. Common stock (issued) (if Applicant is incorporated)				
18. Preferred stock (issued) (if Applicant is incorporated)				
19. Surplus (if Applicant is incorporated)				
20. Capital and surplus account (if Applicant is partnership or individual)				
TOTAL LIABILITIES				

NOTE— If years included in the above table are not adequately representative of applicant's financial experience, condition statements may be submitted for additional years.

EXHIBIT D

AGREEMENT AS TO COMPENSATION FOR SERVICES RENDERED OR TO BE RENDERED TO APPLICANT IN CONNECTION WITH APPLICATION AND/OR LOAN

To induce the United States Government and its agencies to make a loan under Sec. 302 of the Defense Production Act of 1950 to TENNESSEE METALS CORPORATION (hereinafter called "Applicant") and in consideration of the making of a loan to Applicant, the undersigned, having been retained by Applicant for the purpose of rendering professional or other services in connection with its application for a loan or loans, hereby represents, warrants, and agrees that the undersigned has not been paid, has not made any agreement with the Applicant to be paid, and has not procured any person to pay or agree to pay, and will not, directly or indirectly, charge or receive any bonus, fee, or commission in any form in connection with the said application for, or the obtaining of, the loan applied for by the Applicant, or any compensation in any form for services rendered or to be rendered in connection therewith except for the services and in the amounts stated below:

Name	Description of services	Amount paid	Amount to be paid
	No compensation to anyone.	$	$

To induce the making of the loan and the employment of the undersigned by Applicant, the undersigned hereby further warrants, covenants and agrees, upon the consideration herein specified, and in consideration of the employment of the undersigned by Applicant, as above recited, that if the amount of compensation stated above for any such services shall not be deemed reasonable by any agency of the United States Government, the undersigned will reduce the charge for such services to such amount as shall be deemed reasonable by such agency, and will not, directly or indirectly, charge or collect from the Applicant or any other person, any sum in excess of the amount so deemed reasonable; and that if the undersigned has heretofore collected, from the Applicant or any other person, as compensation for any such services, any amount deemed by such agency to be unreasonable, the undersigned will refund to Applicant or such other person such sums as are in excess of the amount deemed reasonable. The undersigned further warrants, covenants and agrees that if the amount of the compensation for any such services is not determinable at the date of application, or is not stated above, it will not collect or charge any sum as compensation for such services without the prior written approval of the Government agency with which this application is officially filed as to the nature of the services for which such compensation is to be paid and the amount of such compensation.

Witness: D A Decker
Address of witness:

TENNESSEE METALS CORPORATION
By Ralph R Langley President

Dated January 25, 1951

NOTE—Corporations must execute foregoing certificate in corporate name, by duly authorized officer, and seal must be affixed and duly attested; partnerships must execute in firm name, together with signature of a general partner. If no compensation is paid or to be paid for services rendered in connection with application or loan, this should be so stated and the Applicant should sign this Exhibit.

CERTIFICATION

The Applicant hereby certifies that the statements made in the foregoing application, and all exhibits and documents submitted in connection therewith, are true and correct statements to the best of Applicant's information and belief and are submitted as a basis for credit. The Applicant agrees to reimburse any agency of the United States Government upon demand for any expenses incurred in connection with or arising out of this application or any loan made pursuant hereto.

Dated January 25, 1951

Witness: (For individual applicants)

(Signature)

Witness: (For partnership applicants)

(Full name of firm)

By _____, a general partner.
(Signature)

(For corporate applicants)

(CORPORATE SEAL)

TENNESSEE METALS CORPORATION
(Full corporate name of Applicant)

Attest: D A Decker
(Signature)

By Ralph R Langley
(Signature) (Title) President

(Title)

The United States Criminal Code, 18 U.S.C., Sec. 1001, makes it a criminal offense to make a willfully false statement or representation to any Department or Agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE: 1950 O - 916171

TENNESSEE SCHUYLKILL MINE

ORE

PROBABLE AND POSSIBLE

LOCATION:

The Tennessee Schuylkill Mine is located in the Wallapai Mining District, Mohave County, Arizona. It is one mile east of the town of Chloride and a paved highway extends to the borders of the property. It is 24 miles northerly from the town of Kingman, the county seat of Mohave County. Kingman is on the main line of the Atchison, Topeka and Santa Fe Railway.

GEOLOGY:

A short resume of the geology of this mine will be made, so that, a better idea can be obtained as to how the tonnages of probable and possible ore were arrived at.

The Tennessee Schuylkill vein is a shear zone in the granite, gneiss and schist of the pre-Cambrian complex. It extends from north to south through the Elkhart, Tennessee Schuylkill and Johnny Bull and Silver Knight claims. It can be traced on the surface for a distance of 8,000 feet or more. This shear zone is from 20 feet to 30 feet in width. Mineralization is practically continuous throughout the length of the shear zone.

Ore occurs in the shears from a width of a few inches up to 20 feet in width. At times there are hanging wall and foot wall ore shoots. There is quite a variation as to where pay ore will occur. At times it is on the footwall and at other times on the hanging wall and sometimes in the middle. Hence it can be seen that a drift can be driven along the shear zone and miss possible ore shoots. It will be noted that at times long drifts have been driven with little or no crosscutting. As note the drift north on the eight level of the Schuylkill. This drift was extended on into the Elkhart ground with no crosscutting. Still the most northerly stope above and below this level was distinctly cut off by a postmineral fault. While there are numerous cross and longitudinal faults, they are relatively small. The largest displacement being about 20 feet.

With the above facts in mind it can be readily seen that it is probable and possible that ore bodies have been passed by.

In the days when a subsidiary of the United States Smelting and Refining Co. was working the mine, all ore bodies with a low lead content were passed by even if the zinc content was high. As the ores to the south generally show a higher zinc and lower lead content, this was apparently their reason for not mining to the south. All this work was done prior to the high development of the flotation process. All concentration was carried on by jigs and tables with generally speaking, poor results.

Ore occurs in large lenses rather than in shoots. As stated before mineralization is practically continuous. The ore pinches in zones, both longitudinally and vertically. Stopes have been continuous for a thousand feet or more on one level and will be pinched in zones above or below and then will come back in at another

GEOLOGY (Continued):

level. The same holds true for pinches longitudinally. Some of these pinches are due to minor faults and in a number of places the ground has been insufficiently prospected.

As most of the worked places in the mine are inaccessible it is difficult to get a true geological picture of the mine.

ORE. PROBABLE AND POSSIBLE:

There is practically no ore blocked out in the mine. All ore will necessarily be listed under probable and possible.

Seven Level. "A" Ore Body. Probable Ore.

A body of ore is indicated to the north of the Tennessee shaft over a length of 180 feet. This ore body was drifted on and sampled on the seven level by a subsidiary of the U. S. Smelting and Refining Co. A weighted average of their samples, show a width of 3.21 feet, with values as follows:

Gold	0.12	Ounces
Silver	3.80	"
Lead	3.63	Per Cent
Zinc	14.08	"

Dilution in mining will reduce these values from 15 to 20 percent. Likewise the tonnage will be increased.

This area has not been worked from the seventh to the third level, above which there was some stoping. Hence there is a probable ore body 180 feet in length, 400 feet high and 3.85 feet in width. (20% increase in width allowed due to overbreak. This overbreak will probably carry some values.) Allowing 11 cubic feet per ton, this ore body should produce 25,000 tons of ore.

In order to open up this ore body on the seven level it will be necessary to drive a 75 foot crosscut and rehabilitate the old drift. The primary work necessary to start the first stoping will cost as follows:

75 feet crosscutting in wall rock. No timbering. At $17.00 per foot	$ 1,275
Rehabilitating 100 feet old drift. Timbering will be necessary. At $18.00 per foot.	1,800
Total primary cost for stoping.	$3,075

A raise will be put up as the stope is being opened up and all this work will produce ore and is done as regular operation.

Seven Level. (continued) "B" Ore Body. Probable and Possible.

To the south of the Tennessee shaft above the seven level there is a large area which has shown practically no production and has had only a comparatively small amount of development work. One small stope was mined on the fourth level, near

ORE. PROBABLE AND POSSIBLE (Continued):

the south end line. It is probable that this area was not developed and mined due to the low lead and high zinc content that is predominant in this south area. Below this zone on the 9 and 10 levels this area has been mined for a length of 400 feet.

With the continuity in this mine, it is reasonable to suppose that this area will be productive. It can be expected that the ore in this zone will average 2 to 3 per cent lead and 10 to 15 per cent zinc. The ores would show 0.02 to 0.08 ounces in gold and 2 to 4 ounces in silver.

This area has a length of 500 feet, is 500 feet high and should average 5 feet in width and could produce 100,000 or more tons of ore. Of this 25,000 tons can be listed as probable and 75,000 tons as possible. The development of this area would take place after the mine is in regular operation. The stoping of "A" ore body should indicate the better place to start development.

Nine Level. (south) "C" Ore Body. Probable.

The work on this level would start at 15 south crosscut, where the ore has a small offset. The present face shows 3½ feet of ore that will average 1½ per cent lead and 13 per cent zinc, with the usual small gold and silver values. A 200 foot drift in this area would be in virgin territory and would reach the south end line. This drift could be extended into the Johnny Bull and Silver Knight claims if options are obtained on them.

The above drift would open up an area 200 feet high, 200 feet long and 5 feet wide. This area should produce about 12,000 tons of ore.

Cost of primary development on this ore body would be as follows:

200 feet of drift. Timbered. $20.00 per foot. $4,000.00

Eleven Level. "D" Ore Body. Highly probable.

This ore body can be considered as assured, as the ore shows on the 9 level for 400 feet in length, in a winze for a depth of 40 feet with 6 feet of good ore in the bottom and on the eleven level with 80 feet of drifting. On the eleven level the ore shows a high zinc content with low lead. The ore on the eleven level is on the hanging wall of the shear zone, while on the 10 level it is on the footwall.

This ore body would have a heighth of 125 feet, a length of 400 feet and width of 5 feet. This area should produce 25,000 tons of ore.

Two methods are available for working this ore body. It can be worked from the 12 level through 1203 raise which is up to the 11 level. This raise could be continued to connect with the winze from the 9 level. This would be a two compartment timbered raise. All material would be dropped to the 12 level and hoisted from there. After the raise was connected, supplies would be dropped from the 9 level. The cost of this raise would be as follows:

85 feet two compartment timbered raise, at $24.00 per foot. $2,040.00

ORE. PROBABLE AND POSSIBLE (Continued):

The second method would be to cut a station on the 11 level at the shaft and crosscut to the vein. This would make the ore body more accessible and mean from $0.50 to $1.00 per ton cheaper mining. Also there is 200 feet of undeveloped ground to the north and this level would be the logical point to prospect it. The cost of this work would be as follows:

Station on 11 level.			$1,500.00
150 foot crosscut.	No timbering.	$17.00 per foot.	2,250.00
	Total		$3,750.00

The raise would be carried through as part of regular operation, as well as the drifting on vein. Ore would be produced in this work. In the long term the second method is the better.

Twelve Level. "E" Ore Body. Probable.

A zone from the twelve level to the 9 level north of the Tennessee shaft has only been productive from one stope carried up 40 feet above the 12 level and is entirely virgin from here to the 9 level with no prospecting. The logical place to develop this zone is from the 11 level. This would open up an area 225 feet in heighth, 200 feet in length and 5 feet wide. This area should produce 20,000 tons of ore. Ore in this area shows to the south, north and above and below. This ore can be considered highly probable. The cost of prospecting this area would be as follows:

200 feet of drifting.	Timbered.	$18.00 per foot.	$3,600.00

Twelve Level

This level should be rehabilitated to the north. Due to being under water the past 18 months it will be necessary to replace all the pipe and track. Probably 20 per cent of the drift will have to be retimbered. The cost of this work will be about $3,000.00.

Twelve Level. (continued) "F" Ore Body. Probable and Possible

Stoping has been carried on to a heighth of 160 feet above the 12 level on the north end of the property. A zone of 130 feet to the north end line has been insufficiently prospected. Above these stopes, to the 5 level of the Schuylkill shaft the ground is virgin, little prospecting having been done in this area. On the 9 level of the Schuylkill, a drift was driven to the north end line and on into the Elkhart ground and no crosscutting was done. The north stope on the 8 and 9 levels and below was definitely cut off by a post mineral fault. This stope has not been picked up to the north on these levels, though stoping has been carried on below this area with ore in the backs. The point of faulting is marked "Y" on map.

The above zone covers an area, 600 feet high, 400 feet long and 5 feet wide. This area has a potential 100,000 tons. Of this 25,000 tons are probable and 75,000 tons possible.

As well as opening up the 12 level, in order to develop this zone it would be necessary to rehabilitate the 9 level. The cost of this work would be about $5,000. This would not be a primary cost, as it would be carried on during operation.

ORE. PROBABLE AND POSSIBLE (Continued):

Nine Level. "G" Ore Body. Probable.

When the 9 level is opened up, there is an area between 100 north and 100 south which has been non productive and has had little prospecting. A North dipping fault cuts off the orebody at 100 south. On the lower levels this ore body continues through with a displacement of about 20 feet. Hence there is a zone from the 10 level that warrants development. This area is 700 feet high, 200 feet long and 5 feet wide. Due to bad ground around the fault zone it is considered that about one-half this area will be mineable and it should produce about 30,000 tons of ore. Old maps show ore at point marked "X" on map. This work hinges on the opening up of the 9 level after the mine is in operation.

Fourteen Level. "H" Ore Body. Probable and possible.

With the necessity of unwatering the mine, it will be advisable to push the work above the 12 level and leave the work below this level for operational development.

The drift to the north on the 14 level will require rehabilitation. Then the drift should be advanced to connect with the bottom level of the 1250 winze. There is a block of ground for a length of 300 feet that has had no production. This block is 150 feet high, 300 feet long and 5 feet wide. This block should contain 10,000 tons of probable ore and 10,000 tons of possible ore.

Fourteen Level.(continued.) "I" Ore Body. Probable.

Ore was opened up and stoped from the 13 level of the 1250 winze. It is fairly well assured that ore will be opened on the 14 level below these stopes. This area has a heighth of 50 feet, a length of 300 feet and width of 5 feet. This area should produce about 7,000 tons of ore. The cost of developing this zone would be as follows:

Rehabilitation of old drift.	$2,000.00
500 feet of drifting. Timbered. $18.00 per foot.	9,000.00
400 feet of further drifting to north	7,200.00
	$18,200.00

This work would be carried on after mine was in operation.

The 400 feet of additional drifting to the north has a good possibility of developing additional ore. As this area would be 150 feet high, and 300 feet long, it can possibly develop up to 20,000 tons of ore. This is indicated as "J" ore body.

Sixteen Level. "K" Ore Body. Probable.

The winze from the 14 to the 16 level was sunk by the subsidiary of the U. S. Smelting and Refining Co. While there was some good lead ore, as a whole the lead was low and zinc high. In 1939 a small area was mined near the winze, below the 14 level. About 1,500 tons was mined from this stope.

Eleven samples over a length of 240 feet taken by the above Subsidiary shows 0.023 ounces gold, 1.97 ounces silver, 14.0 percent lead and 3.84 percent zinc. The average width was 3.04 feet.

In 1944 the winze was unwatered and 105 feet of old drift was opened up. 226 tons of rock hoisted from this cleanup showed 0.013 ounces gold, 0.53 ounces silver,

ORE. PROBABLE AND POSSIBLE (Continued)

0.63 per cent lead and 5.67 per cent zinc. As the 11 above samples showed the average width to be 3 feet, it is reasonable to assume that two-thirds of the cleanup rock was waste. Using this supposition, it is reasonable to assume that, the ore in place would average 0.039 ounces gold, 1.59 ounces silver, 1.89 per cent lead and 17.01 per cent zinc.

With a combination average of cut samples and car samples the ore is indicated to average 0.031 ounces gold, 1.93 ounces silver, 7.94 per cent lead and 10.42 per cent zinc. In this zone we have a heighth of 200 feet, a length of 240 feet and a width of 3 feet. Allowing for tonnage extracted this would leave us about 12,000 tons in this area.

This level should be unwatered, the drift cleaned up and the ore properly sampled. If the ore body shows as indicated, then it would be advisable to drift 300 feet south and then raise to the Tennessee shaft. This would be an operational development. A large tonnage of ore can probably and possibly be developed on this level.

Total Ore

					Probable tons	Possible tons
"A"	Ore body.	North	Tennessee shaft.	7 Level	25,000	
"B"	"	South	"	7 "	25,000	75,000
"C"	"	"	"	9 "	12,000	
"D"	"	"	"	11 "	25,000	
"E"	"	North	"	12 "	20,000	
"F"	"	"	Schuylkill shaft	12 "	25,000	75,000
"G"	"	"	Tennessee shaft.	9 "	30,000	
"H"	"	"	"	14 "	10,000	10,000
"I"	"	"	"	14 "	7,000	
"J"	"	"	Schuylkill shaft	14 "		20,000
"K"	"	"	Tennessee shaft.	16 "	12,000	
	2,000 feet on			16 "		100,000
					191,000	280,000

Hence the potential ore in the unprospected and partially prospected areas of this mine amount to 471,000 tons. These figures are based on a close knowledge of the continuity of mineralization in this property along the shear zone. A number of times in the life of the mine certain areas have been condemned as worthless. Later it has been found these areas when properly prospected were as productive as other parts of the mine. There was a time when it was necessary to have a high lead content to make the mine pay but this does not hold true at the present time.

The ore can be expected to vary from 6 per cent lead and 7 per cent zinc to 2 per cent lead and 12 per cent zinc. The general average can be expected to be 3 per cent lead and 9 per cent zinc.

Assuming an ore as follows:

Gold	0.03	ounces
Silver	2.5	ounces
Lead	3.0	per cent
Zinc	9.0	per cent

the net values would be as follows:

ORE. PROBABLE AND POSSIBLE (Continued)

Lead Concentrate

Concentration ratio 22 to 1, Saving,
Gold 90 percent, Silver 80 percent, Lead 93 percent.

Gold	0.594	ounces
Silver	44.00	ounces
Lead	61.38	percent
Copper	1.4	percent

Smelter Payments:

Gold.	Pay 0.594 ozs. @ $32.31 per ounce	$ 19.19
Silver.	Pay 95% of 44 ozs. @ 90¢ per ounce	37.62
Lead.	Pay 61.38% less 1.5% X 90% @ 17¢ less 1.96¢	162.11
Copper.	Pay 1.4% less 1% = 8 lbs. at 24.5¢ less 6.46¢	1.44
	Total smelter payments	$220.36

Deductions:

Base charge	$ 9.50	
Credit 29.88% lead @ 10¢	2.99	
Net smelter charge	$ 6.51	
Railway freight $12.00 plus 3% tax	12.36	
Trucking $2.00 plus 3% tax	2.06	
Total deductions		20.93
Net smelter payments per ton of lead concentrates		$199.43

At 22 to 1 concentration ration this would give a value of $9.06 per ton of crude ore.

Zinc Concentrate

Concentration ratio 7 to 1, 85% Saving

Gold	0.03	ounces
Silver	2.50	ounces
Zinc	53.55	percent

Smelter Payments:

Gold.	Pay 80% of 0.03 ozs. @ $32.31 per ounce	$ 0.77
Silver.	Pay 80% of 2½ ozs. @ 90¢ per ounce	1.80
Zinc.	Pay for 85% of 1071 lbs. @ 17.5¢ less .45¢	155.21
	Total smelter payments	$157.78

Deductions:

Base charge	$38.00	
$1.00 for each cent over 6¢ price	11.50	
Labor adjustment	1.85	
Tax on spelter freight	.12	
Total smelter deductions	$51.47	
Railway freight $9.22 plus 3% tax	9.50	
Trucking $2.00 plus 3% tax	2.06	
Total deductions		63.03
Net smelter payments		$ 94.75

ORE. PROBABLE AND POSSIBLE (Continued)

Zinc Concentrate (continued)

At 7 to 1 concentration ratio, this gives a value of $13.54 per ton of crude ore.

Value of gold, silver, lead and copper in crude ore	$ 9.06 per ton
Value of gold, silver and zinc in crude ore	13.54 "
Total value per ton of crude ore	$22.60

MINING COSTS

Costs are based on an average wage of $12.80 per day.

Wages per day	$12.80
Old Age Benefit	.19
Unemployment Insurance	.35
Compensation Insurance	1.16
	$14.50

Mining to start will be rated at 105 tons per day. This is about what the mine can be expected to produce from development on the 7 and 9 levels. Also it is about what the mill will handle in its present condition.

Labor - Mining, underground, 30 men	$435.00
Labor - Surface, Mill, etc. 15 men	217.50
General - Office, etc.	50.00
Mining and milling costs per day	$702.50

Above costs do not include development and rehabilitation.

Labor costs per ton for 105 tons per day (60%)	$ 6.69
Supplies (40%)	4.46
Development	1.50
Rehabilitation	1.00
Total cost per ton of ore mined and milled	$ 13.65

With a net smelter return of $22.60 per ton, this leaves a net profit of $8.95 per ton.

Until such a time as the Tennessee Schuylkill Mine is developed to produce 150 tons per day, it is intended to take outside ore. This will necessitate the installation of a new conveyor belt, primary crusher and sampling unit for handling this ore. In order to bring the mill to 150 tons per day, it will also be necessary to install a new secondary crusher. The cost of the above would be as follows:

1 New secondary short head cone crusher.	$4,500.00
1 New primary 10 X 12 jaw crusher for crushing outside ore.	3,500.00
1 Conveyor belt from upper bin.	2,000.00
Sampling equipment.	1,000.00
Total new mill installations	$11,000.00

MINING COSTS (Continued)

There is a bin at the mill for outside ore. The conveyor belt will be necessary for conveying the ore from above bin to the new primary crusher, which will be set just above the new secondary crusher. A conveyor takes the ore from the regular mine crusher to the secondary crusher.

EQUIPMENT NEEDED

The following new equipment will be needed to put the mine on an economical operating basis.

1	Mucking Machine	$3,500.00
1	Mancha Mule	4,000.00
	Extra battery for above.	1,000.00
10	ton, 12# rail	1,300.00
3	Light drifters	2,400.00
3	Stopers	1,800.00
	Machine parts.	200.00
	Columns, Arms, etc.	500.00
	Steel and Bits	700.00
15	New mine cars	2,625.00
3,000	Feet 3/4" pipe	360.00
3,000	Feet 2" pipe	1,050.00
	Mill repair parts	1,000.00
	General, tools, etc.	1,000.00
	Total	$21,435.00

SUPPLIES

2	Cars timber	$ 6,000.00
5	Tons powder	2,000.00
	Fuse, caps, etc.	200.00
	Mill supplies, balls, re-agents, etc.	2,500.00
	General	1,000.00
	Total	$11,700.00

Total new equipment and supplies $33,135.00

UNWATERING

The pumps were stopped in the mine in April 1949. As the daily pumping amounted to about 18,000 gallons per day, since closing down about 12,000,000 gallons of water has accumulated in the mine. The water has risen about 500 feet, which gives about 24,000 gallons per foot. As there are more openings above the 12 level than below, the ratio will be greater above the 12 level.

The water in the mine is highly acid, hence, all iron is rapidly eaten away. It is necessary to have pumps and water handling equipment made of, or lined with stainless steel.

UNWATERING (Continued)

With no expenditure for equipment, the water can be bailed from the mine with the hoist. About 250 trips can be made by the hoist in 24 hours, hoisting 450 gallons per trip. (The shaft has a single hoisting compartment with counter balance) This would amount to 112,500 gallons. Allowing for 18,000 gallons per day intake, there would be a net gain of 94,500 gallons.

If the hoist were used for bailing, no other work could be carried on in the mine. The 3 men per shift, necessary for this work would all be charged to unwatering.

The more economical method is to pump the water, using a sinker pump to pump to the seven level station pump. The present station pump will handle 120 gallons per minute. This pump is in poor condition and for steady service will have to be replaced.

In 24 hours at 120 gallons per minute, a total of 172,800 gallons would be pumped. Allowing for daily intake of 18,000 gallons and stoppages, there would be a net gain of about 150,000 gallons per day. With 24,000 gallons per foot, the water would be lowered 6.25 feet per day. Due to the larger amount of water between the 12 and 9 levels, (350 feet) the general average probably would not exceed 5 feet per day.

With pumping about 1¼ men would be charged to the unwatering. Work could be carried on in the mine, at, and above the 9 level to start. When the water is lowered to the 11 level, work can be started there.

To start the unwatering the cost would be as follows:

New pump for 7 level. Installed.	$2,000.00
200 ft. 4 inch pipe for repairs	200.00
Sinking pump, with motor.	3,000.00
Wiring, placing pump, etc.	500.00
Power Company deposit.	1,500.00
Compensation Insurance deposit	1,000.00
Miscellaneous	1,000.00
	$9,200.00

Labor employed during the 75 days necessary to pump to the 12 level would be as follows:

These costs include men used in development on the 7 and 9 levels and men on surface for general repair work.

3 Pumpmen for 24 hours per day	$ 43.50
3 Hoistmen	46.50
Master Mechanic	15.50
4 Helpers and roustabouts on surface	54.00
Necessary overtime work for pumping	28.00
6 Men underground	87.00
Supervision	31.00
Superintendant	20.00
Daily payroll	$325.50

UNWATERING (Continued)

Average number of working days, 24 per month.

Payroll per month	$ 7,812.00
Payroll for 3 months	23,436.00

At this time the mine should be ready for production. Funds will be necessary to carry the operation for an extra month. Payroll for the fourth month will be about $15,000.00.

Power bills for the 4 month period will be $4,000.00.

The total funds necessary to put the mine on a 105 tons per day basis, to put the mill in shape for 150 tons per day and handle outside ores and to operate one month would be as follows:

New pumps, installation, etc.	$ 9,200.00
New Mine Equipment	21,435.00
Supplies. Mine and mill	11,700.00
Payrolls	38,436.00
Power	4,000.00
Mill repairs	2,000.00
Mill additions	11,000.00
General overhead	2,000.00
	$99,771.00

From the above figures it will be necessary to have a total of $100,000.00 to place the mine on a 105 tons per day basis, repair the mill and place it in condition to handle 150 tons per day and outside ores.

ADJOINING PROPERTIES

The Tennessee Schuylkill shear zone extends through the Johnny Bull and Silver Knight claims to the south, for over 2,000 feet. A small tonnage of ore has been shipped from these claims from shallow workings. The showings at and near the surface are similar to the showings of the Tennessee and Schuylkill mines. The logical way to develop these claims is through the Tennessee shaft.

The 10 level south drift of the Tennessee has been extended into the Johnny Bull for 40 feet. Six samples taken over a width of six feet showed an average of 0.026 ounces gold, 0.89 ounces silver, 0.45 percent lead and 2.53 percent zinc. The better values came from the last 3 samples toward the face. While the samples were taken over a width of six feet, the main mineralization was in a zone about 2 feet wide.

Considering the continuity of the mineralization in this shear zone, it is reasonable to expect that the Johnny Bull and Silver Knight claims will produce ore in proportion to the 600,000 tons produced by the Tennessee Schuylkill mine.

If possible, this property should be optioned and worked in conjunction with the Tennessee Schuylkill. On the 9 and 10 levels the drifts can be extended into this ground and they offer a very good chance of opening up new ore bodies quickly and in virgin ground.

ADJOINING PROPERTIES (Continued)

The Elkhart Mine adjoins the Schuylkill on the north and the shear zone extends through this property. A good production was made above the fifth level, close to the end lines of the Schuylkill. Some prospecting was done through the eighth level of the Schuylkill into this ground, but the company doing the work, ran out of funds before the ground was thoroughly prospected.

It would be advisable to tie this property up, in conjunction with the operation of the Tennessee Schuylkill mine.

CONCLUSIONS

Under the present conditions and the emergency, it is necessary that such mines as the Tennessee Schuylkill should be placed in operation. This mine and adjoining properties should produce a large tonnage of lead-zinc ores that will be a great help in the National emergency.

These mines at and around the present metal prices, should show a reasonable profit and will quickly return the $100,000.00 necessary to put them in operation.

RECOMMENDATIONS

It is recommended that a minimum of $100,000.00 be raised to unwater, rehabilitate and develop this property, so it can be placed in operation.

S/ Thos. L. Chapman

Thos. L. Chapman, E.M.

January 22, 1951

MAP

BELONGS

HERE

#5

2 maps.

M I N I N G L E A S E

- - - - -

L. L. ROBINSON ESTATE COMPANY

- to -

ARIZONA METALS COMPANY

- - - - -

Dated as of September 1, 1949

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MINING LEASE

THIS LEASE, made and entered into as of the 1st day of September, 1949, by and between L. L. ROBINSON ESTATE COMPANY, a corporation organized and existing under the laws of the State of California, with its principal place of business in Los Angeles, California, duly qualified to transact business in the State of Arizona, party of the first part, hereinafter sometimes referred to as "Lessor," and ARIZONA METALS COMPANY, a corporation organized and existing under the laws of the State of Arizona, with its principal place of business at Kingman, Arizona, party of the second part, hereinafter sometimes referred to as "Lessee."

W I T N E S S E T H :

WHEREAS, said L. L. ROBINSON ESTATE COMPANY heretofore executed and delivered to RALPH R. LANGLEY a certain agreement designated "Mining Lease Agreement," dated the 2nd day of October, 1947, covering those certain patented and unpatented mining claims hereinafter more particularly described under Group "A" of the granting clauses hereof; and

WHEREAS, said Mining Lease Agreement was thereafter supplemented by an instrument designated "Agreement of Amendment to 'Mining Lease Agreement'", dated the 2nd day of January, 1948, covering the unpatented mining claims hereinafter more particularly described under Group "B" of the granting clauses hereof; and

WHEREAS, said Mining Lease Agreement dated the 2nd day of October, 1947, by instrument designated "Agreement of Assignment of Lease" bearing date the 10th day of October A.D., 1947, and recorded on March 9, 1948, in Book 34 of Miscellaneous Records pages 500-501, Records of Mohave County, Arizona, was by said RALPH R. LANGLEY and by SELMA J. LANGLEY, his wife, assigned to said ARIZONA METALS COMPANY; and

WHEREAS, it is the desire of the parties hereto to cancel and terminate as of August 31, 1949, said Mining Lease Agreement dated the 2nd day of October, 1947, and said Agreement of Amendment dated the 2nd day of January, 1948, with the consent and approval of said RALPH R. LANGLEY and SELMA J. LANGLEY, his wife, and mutually to release and exonerate as of the date hereof any and all claims, obligations or liabilities of whatsoever nature which either party may assert or have any right to assert against the other, based upon, arising out of or in connection with said Mining Lease Agreement and said Agreement of Amendment, and for any acts committed or omitted by either party thereunder; and

WHEREAS, the parties hereto further desire to enter into this Mining Lease in lieu of and in substitution for the aforementioned Mining Lease Agreement and Agreement of Amendment thereto.

NOW, THEREFORE, for and in consideration of the sum of Ten ($10.00) Dollars in hand paid to each of the parties hereto by the other, and other valuable considerations moving between the parties, the receipt whereof is hereby acknowledged, it is hereby mutually stipulated, understood and agreed as follows:

ARTICLE I.

CANCELLATION OF PRIOR LEASE AGREEMENTS AND RELEASE FROM LIABILITY THEREUNDER

Section 1. Cancellation of Prior Leases. The parties hereto by the execution of this instrument cancel and terminate as of August 31, 1949, the Mining Lease Agreement dated the 2nd day of October, 1947, and Agreement of Amendment dated the 2nd day of January, 1948, and RALPH R. LANGLEY and SELMA J. LANGLEY, his wife, in approving this Mining Lease by their signatures at the

foot hereof, consent to such cancellation and termination, and ARIZONA METALS COMPANY and said RALPH R. LANGLEY and SELMA J. LANGLEY, his wife, have surrendered, and do hereby ratify and confirm the surrender, as of August 31, 1949, to L. L. ROBINSON ESTATE COMPANY, of possession of each and all of the mining claims covered by said Mining Lease Agreement dated the 2nd day of October, 1947, and Agreement of Amendment dated the 2nd day of January, 1948.

Section 2. Mutual Release of Claims and Liabilities Under Prior Leases. The parties hereto by the execution of this instrument, and RALPH R. LANGLEY and SELMA J. LANGLEY, his wife, in approving the same by their signatures at the foot hereof, mutually release and exonerate any and all claims, obligations or liabilities of whatsoever nature which either party hereto or said RALPH R. LANGLEY and SELMA J. LANGLEY may assert or have any right to assert against the other based upon, arising out of or in connection with the aforementioned Mining Lease Agreement and Agreement of Amendment, and for any acts committed or omitted by either party hereto or by said RALPH R. LANGLEY or SELMA J. LANGLEY in connection therewith.

ARTICLE II.

GRANTING CLAUSES

Section 1. Description of Claims and Grant. For the considerations aforesaid and the payments hereafter to be made by Lessee to Lessor, and the performance of the terms, covenants and

conditions hereof by Lessee, Lessor has granted, demised and leased, and by these presents does grant, demise and lease unto Lessee, the following described mining claims (including water and water rights as may be incident thereto) owned by Lessor, situated in the Wallapai Mining District, County of Mohave, State of Arizona:

Group "A"

Patented Claims	Book	Page	Amended
Summit	19	539 et seq.	
Silver Monster	16	531-534	
Unpatented Claims			
Savannah	D-D	594	YY 431
Tasmania	Y	523	YY 429
Normandy	W-W	271	YY 430
Miners Hope	B	728	YY 428
McCallister	W-W	272	YY 427
Coalinga	3-B	389	
Silver Copper	3-D	653	YY 417
Nora	3-G	135	

Group "B"

Patented Claims		
Eagle	16	527-531
Fountain Head	16	524-527
Unpatented Claims		
Mamie B	3-D	551
Nannie M	3-D	765
Helen	3-G	898
Hillside	3-D	654
Hillside No. 1	3-E	73
Hillside Fraction	3-G	435

(Group "B" Unpatented Claims - continued)

	Book	Page	Amended
Ruby	3-G	434	
Ethel B	3-D	549	
Silver Legion	L	412	
Bryan	H	574	
Iron Copper	3-D	700	YY 418
Bluebell	B	720	
Hilltop	3-D	699	YY 420
Hilltop No. 1	3-E	72	YY 421
Printer Boy	3-G	134	
Safety First	3-G	436	
Old Abe	3-D	653	

GROUP "C"

Unpatented Claims

Goodhope	3-J	421
Goodhope No. 1	3-J	422
Adit	3-G	31
Adit No. 1	3-G	32
Co-op Extension	3-J	364
Arrowhead	3-J	362
Longview	3-J	363
Longview Extension	3-J	365
Valley	3-J	121
Valley No. 1	3-J	122

said mining claims being of record in the Office of the County Recorder of Mohave County, Arizona, in the books and pages set opposite their respective names.

Section 2. Term of Lease. The term of this Lease shall be for a period of ten (10) years from the date hereof, expiring at Noon on the 31st day of August, 1959, unless sooner terminated, in whole or in part, in the manner and under the conditions hereinafter set forth.

ARTICLE III.

COVENANTS CONCERNING ROYALTIES

Section 1. Basis of Computation. Lessee covenants and agrees to pay to Lessor at its office in Los Angeles, California, royalties on all ores extracted and sold or removed from the demised premises, which royalties shall be computed as follows:

(a) On all ores having a market value of $10.00 or less per ton, five percent (5%) of the net amount received by Lessee.

(b) On all ores having a market value in excess of $10.00 but not more than $20.00 per ton, seven and one-half percent (7½%) of the net amount received by Lessee.

(c) On all ores having a market value of $20.00 but not more than $30.00 per ton, ten percent (10%) of the net amount received by Lessee.

(d) On all ores having a market value in excess of $30.00 but not more than $35.00 per ton, twelve and one-half percent (12½%) of the net amount received by Lessee.

(e) On all ores having a market value in excess of $35.00 but not more than $50.00 per ton, fifteen percent (15%) of the net amount received by Lessee.

(f) On all ores having a market value in excess of $50.00 per ton, twenty percent (20%) of the net amount received by Lessee.

Section 2. Definition of "Market Value" and "Net Amount Received by Lessee." The term "market value" as used in subdivisions (a) and (f), inclusive, in the foregoing Section 1, shall be deemed to mean the value of all metals contained in each lot as shown by smelter or custom mill settlement sheets at the time and place when and where ores are milled, treated and settled for; and the term "net amount received by Lessee" shall mean the gross proceeds as shown by smelter and custom mill settlement sheets, less the deductions as specified in the following Section 3.

Section 3. Government Subsidies and Other Deductions.

(a) In computing royalties payable to Lessor under the provisions of the foregoing Section 1 of this Article III., any premiums, subsidies or bonuses which may be allowed and paid by the Federal Government on ores produced from the demised premises shall not be included in the amounts payable to Lessor.

(b) In the computation of royalties payable to Lessor, Lessee shall be entitled to deduct from the gross returns from the sale or other disposition of ores mined from the demised premises, or concentrates produced therefrom, the following:

(1) Actual transportation charges, rail and truck, as the case may be, not to exceed the going rate of charges customarily payable in the district from the mine to the place where marketed or milled by Lessee.

(2) Smelter and custom mill charges and any penalties imposed in the usual and customary practice. In the event ores are milled at a mill owned or operated by Lessee, the mill charges deductible under this subdivision (b) shall not exceed the mill charges customarily paid in the district in which such mill is located.

(3) Severance, sales or similar taxes (Federal and State) imposed upon the mining operations or ores produced and sold therefrom.

Section 4. Royalties Payable on Separate Lots. Lessee covenants and agrees that settlement for all ores shipped in railroad cars shall be made separately on each carlot in accordance with settlement sheets furnished Lessee by the smelter or custom mill. Settlements for all ores transported by truck or by other means than in railroad cars, milled and treated by local custom mills or by a mill owned or operated by Lessee, shall be made in such lots of ore as the concentrates produced therefrom will correspond as near as may be with carlot shipments of ore, each such lot to be identified, assayed and valued in the customary manner for accounting purposes, and the value thus fixed shall be used in computing the royalties to be paid under the foregoing Section 1.

Section 5. Reports to Lessor. Lessee covenants and agrees to furnish Lessor with copies of the smelter or custom mill settlement sheet for each lot mined and shipped, showing the number of tons, the market value as hereinabove defined of the ore in each such lot, and the net amount payable to the Lessee therefor. In the event Lessee crushes and treats ores in a mill owned or operated by it, Lessee shall furnish Lessor certificates executed by an officer of the Lessee showing weights and market values of each separate lot in substantially the same form furnished by smelter or custom mill settlement sheets, as hereinabove provided.

Section 6. Reports and Payments. Lessee covenants and agrees to furnish Lessor smelter and/or mill settlement sheets within ten (10) days after the same are received by Lessee, accompanied by payment of royalties due covering all ores shipped to

independent mills or smelters.

On all ores crushed and treated at a mill owned or operated by it, Lessee covenants and agrees to furnish Lessor certificates executed by one of its officers showing weights and values of each separate lot, as above in Section 4 defined, when the concentrates are produced therefrom, which certificates shall further state the date of shipment and the name of the purchaser of such concentrates; and within ten (10) days after receipt of payment therefor Lessee shall furnish Lessor with customary settlement sheets and remit the royalties payable with respect to each lot so shipped.

ARTICLE IV.

GENERAL COVENANTS OF LESSEE

Section 1. Payment of Taxes. Lessee covenants and agrees that it will, at least five (5) days prior to delinquency, pay all general or special taxes assessed against the properties, and the improvements thereon or therein, described in the granting clauses hereof as "patented claims", as well as all franchise and other governmental taxes or charges necessary to maintain its corporate existence.

Section 2. Licenses. Lessee further covenants and agrees that it will obtain and maintain all Federal and State licenses necessary to conduct its mining operations on the demised premises, and that it will in a timely manner file with the proper bureau or department of the Federal or State government all returns and reports, and will pay any sales or other taxes required under any present or future law respecting its mining operations and the income or products derived therefrom.

Section 3. Work Requirements on Crosscut Tunnel. Lessee further covenants and agrees that it will on or before January 1, 1950, resume the excavation of a crosscut tunnel on that portion of the demised premises included in Group "A" of the granting clauses hereof and generally known as the Summit workings, which excavation was commenced at an elevation of about 450 or 500 feet below the visual outcrops of the so-called Summit vein at the original shaft located on the Summit claim, and which excavation as of the date hereof has proceeded a distance of approximately 400 feet; Lessee agrees diligently to continue the excavation of said tunnel for at least the remaining distance required to intersect the Summit shaft or ore body or vein aforesaid.

Section 4. General Work Requirements. Lessee further covenants and agrees that it will operate the mining claims covered hereby in a safe and minerlike manner; that it will explore all the claims covered hereby and diligently develop and mine such of the claims as appear capable of producing ores in paying quantities, Lessee being hereby granted the option to select the location or claim upon which the operations or development work is to be performed, except as specifically required under the preceding Section 3; provided in any event Lessee shall perform all assessment work on the claims covered hereby necessary to comply with all Federal laws and regulations in order to preserve in good standing all unpatented claims covered by this Lease, and will file the required proof thereof and furnish Lessor with copies of such proof, not less than thirty (30) days before the date upon which such proofs are required to be filed for record.

Notwithstanding the foregoing provisions of this Section 4, Lessee, upon written notice to Lessor given not less than thirty

(30) days prior to July 1st of any year during the term hereof, if ore is not then being produced in paying quantities on the claims embraced within Groups "B" and "C" of the granting clauses hereof, shall have and hereby is given the right to abandon, quitclaim and surrender up to Lessor the claims embraced within said last-mentioned groups, respectively, upon the condition, however, that Lessee shall file with Lessor affidavit or affidavits showing the completion for the current fiscal year of the amount of assessment work required by law and by the rules and regulations of the Bureau of Land Management or other bureau or department of the Federal Government having jurisdiction.

Section 5. Maintenance of Roads. Lessee further covenants and agrees that it will construct and maintain at all times suitable roads providing ingress and egress to the claims being operated under the terms hereof, and that it will at all times permit Lessor, its officers, attorneys or authorized agents, to enter upon and into all parts of the demised premises for the purpose of inspection, with the free use of all passages, ropes, windlasses, ladderways, elevators and all other facilities of ingress and egress for such purpose.

Section 6. Delays Occasioned by Causes Beyond Control of Lessee. Whenever Lessee is prevented by the acts of nature and/or public enemy, strikes, riots, fires, power failure, interference with and prevention of transportation beyond the control of Lessee, or by reason of an order, judgment or decree of any court when not issued or obtained at the instance of Lessee, or for its benefit, or by governmental regulation or by act of any public officer, when not at the instance of Lessee, in the production, milling, treating and/or processing of ore or the shipping of ore from the demised

premises by Lessee, or if market prices of metals over a ninety (90) day period will not permit the mining operations hereunder to yield a reasonable profit and Lessee shall certify in writing to Lessor the existence of the particular circumstance which is precluding Lessee from complying with the covenants of this Lease relating to its mining operations, then and in that event, and for the period during which Lessee, on account of one or more of the events hereinabove specified in this Section 6, is prevented from performing its obligations under the terms hereof, the covenants to perform hereunder shall be suspended for the period, but only for the duration of the period, when Lessee is so prevented, but in no event shall such suspension remain in effect beyond the period specified in such certificate, nor shall such suspension relieve Lessee from its obligations to perform the necessary assessment work to preserve the unpatented mining claims covered by this Lease.

The term "reasonable profit" as used in this Section 6 shall be deemed to mean the net amount received by Lessee as defined in Section 2 of Article III. hereof which would yield to Lessee a fair return on each ton of ore shipped and milled over and above the deductions provided for in Section 3 of Article III.

In the event Lessee shall certify to Lessor that it has suspended mining operations under the foregoing provisions of this Section 6 by reason of the failure of such operations to yield a fair return, Lessee shall furnish Lessor with a detailed statement showing the anticipated net return on each ton of ore to be mined and shipped, based upon the then market value and the deductions as provided in Section 2 of Article III. hereof, and in the event Lessor shall disagree with such showings the parties hereto agree to submit the controversy to a board of three arbitrators, one to be selected by Lessor, one by Lessee, and a third to be chosen by

the two thus selected, and it is agreed and understood that the decision of a majority of such board shall be binding and conclusive on the parties hereto.

Section 7. Mechanics and Materialmen Claims. Lessee further covenants and agrees to pay promptly when due all charges and expenses incurred by or for Lessee in connection with its operations on the demised premises, and to protect said premises and the Lessor and hold the premises and the Lessor harmless from an against any and all claims of miners, mechanics, materialmen, contractors and others in connection with Lessee's operations, and to keep the premises free and clear from all liens and claims of whatsoever nature arising therefrom.

Section 8. Public Liability and Compensation Insurance. Lessee further covenants and agrees that it will protect, save and hold harmless Lessor from and against any and all liability arising out of personal injuries or accidents sustained by employees, licensees, agents, visitors and/or other persons upon the demised premises, and that it will provide at Lessee's own expense workmen's compensation insurance in accordance with the law, and public liability insurance to the extent available, such public liability insurance to be in such form as will protect both Lessor and Lessee. Lessee undertakes and agrees, upon written request of Lessor to furnish Lessor with a certificate executed by one of its officers giving a detailed description of the workmen's compensation and public liability insurance then in force pursuant to the provisions of this Section 8.

Section 9. Maintenance of Books and Records--Right of Inspection. Lessee covenants and agrees to maintain at all times

at its operating headquarters complete records of all ores mined and shipped, including ores broken in or upon the demised premises as of the date hereof, which records shall at all times during business hours be open to the inspection of any officer or authorized attorney or agent of Lessor; and the right is given Lessor to permit its officers, attorneys or authorized agents to make extracts from such books and records. Lessor shall have, and hereby is given, the right and authority to request of and receive from any smelter or custom mill to which ores or concentrates are shipped by Lessee from the demised premises, copies of settlement sheets or other pertinent information in relation thereto.

Section 10. Lessee's Compliance with Law, etc. Lessee agrees to conduct its mining operations on the demised premises in accordance with the prevailing mining laws and regulations of the Federal Government and of the State of Arizona, and in the carrying on of said mining operations Lessee agrees to keep all shafts, tunnels and other workings in safe condition and protected from trespassers by proper doors or other means.

ARTICLE V.

SUBLEASING, EXTENSION OF LEASE AND OPTION TO PURCHASE BY LESSEE

Section 1. Subleasing. Lessee shall have and hereby is given, the right, so long as it is not in default under any of the terms and provisions hereof, to sublease all or any part of the claims described in Groups "B" and "C" of the granting clauses hereof to such persons and upon such terms as may be fixed by Lessee; provided that such sublease shall not relieve Lessee from its obligations under Section 4 of Article IV. hereof with respect

to the performance of the necessary amount of annual assessment work to preserve the claims included in either of said groups.

Section 2. Option to Purchase Group "A" Claims. Lessor grants to Lessee the right and option to purchase all the right, title and interest of Lessor in and to the claims described in Group "A" of the granting clauses hereof for the total sum of Seventy-five Thousand ($75,000) Dollars if exercised on or before January 1, 1955, or as an alternative, for the sum of One Hundred Thousand ($100,000) Dollars if exercised after January 1, 1955, and on or before August 31, 1959, provided in either such case Lessee is not then in default under any of the terms, conditions and provisions hereof. The option prices above in this section provided shall be payable in cash on or before the dates specified in each such option, it being understood and agreed, however, that Lessee shall be given credit on the option price for all royalties paid Lessor under Section 6 of Article III. hereof, between the date hereof and the date of the exercise of the options hereby granted, either for ores mined and shipped from the claims embraced in Group "A" or for ores mined and shipped from any other claims described in the granting clauses hereof.

It is further understood and agreed that the options given with respect to Group "A" claims shall not relieve Lessee from its obligations to perform the covenants and conditions herein contained respecting claims included within Groups "B" and "C".

Section 3. Options to Purchase Group "B" or "C" Claims. Lessor grants to Lessee the right and option to purchase the right, title and interest of Lessor in and to the claims described in Group "B" or "C" of the granting clauses hereof provided the option hereby given is exercised on or before January 1, 1955, and provided

further, that at the time of the exercise of each option the Lessee is not then in default under any of the terms, conditions and provisions hereof, for the sum of Ten Thousand ($10,000) Dollars cash for the claims contained in either of said groups. Upon the exercise of the options given covering Groups "B" or "C" and the payment of the purchase price therefor, Lessor will execute and deliver to Lessee a deed or deeds of all of Lessor's right, title and interest in and to the claims covered by either of said options.

Section 4. Extension of Lease. If on the 31st day of August, 1959, Lessee shall have kept and performed all of the terms, conditions and agreements on the part of Lessee to be kept and performed hereunder, including payment of all royalties, and shall have kept and maintained the mining properties in good and miner-like manner during the term of this Lease to the satisfaction of the Mine Inspector's Office of the State of Arizona, and if, during the original term hereof and prior to the 31st day of August, 1959, Lessor has received royalties from the mining operations on the demised premises of not less than the sum of Fifteen Thousand ($15,000) Dollars in addition to amounts expended by Lessee to cover required assessment work as provided in Section 4 of Article IV. hereof or if, during the period from the date hereof to the 31st day of August, 1959, Lessee has expended a sum of not less than Twenty-five Thousand ($25,000) Dollars in permanent fixed mine improvements, then and in either of those events, Lessor agrees to extend this Lease for a further period of fifteen (15) years commencing on September 1, 1959, upon the same terms and conditions, excluding, however, the right and option to purchase as set forth in the foregoing Sections 2 and 3 of this Article V.

The term "permanent fixed mine improvements" as used in

this Section 4 shall be deemed to include buildings constructed upon and necessary in the operation of the demised premises, timbering, rails, air or water lines in place underground, ore bins, joists and other machinery and equipment used or useful in the operation of the mines.

ARTICLE VI.

DEFAULTS AND REMEDIES

Section 1. Definition of "Defaults". The following events are hereby defined for all purposes hereof as defaults:

(a) Lessee's failure to pay royalties as provided in Section 1 of Article III. hereof.

(b) Lessee's failure to furnish Lessor with reports or copies of smelter or custom mill settlement sheets as provided in Sections 5 and 6 of Article III. hereof.

(c) Lessee's failure to pay taxes or to obtain and maintain licenses as provided in Sections 1 and 2 of Article IV. hereof.

(d) Lessee's failure to perform the development and assessment work as required by Sections 3 and 4 of Article IV. hereof, subject to the provisions of Section 6 of Article IV. hereof.

(e) Lessee's failure to comply with, observe and perform all other of the covenants and agreements herein contained required to be observed and performed by it.

(f) Should Lessee assign or attempt to assign its interest under this Lease, or any part thereof, or of any of Lessee's rights hereunder for the benefit of creditors.

(g) Should Lessee be adjudicated a bankrupt, or should a

petition be filed either by Lessee or by any creditor or creditors of Lessee for reorganization under Chapter X. of the Bankruptcy Act of the United States, or any Amendment thereto.

(h) Should a writ of attachment be levied upon any of the business or assets of Lessee which would interfere with the continued possession and operation of all or any part of the demised premises, or compliance by Lessee of any of the terms, provisions and conditions of this Lease.

(i) Should a writ of execution be levied upon any of the business or assets of Lessee which would interfere with the continued possession and operation of all or any part of the demised premises, or compliance by Lessee of any of the terms, provisions and conditions of this Lease.

Section 2. Remedies in Event of Default. In case a default shall occur as defined in the foregoing Section 1 of this Article VI., Lessor reserves unto itself the right to terminate at its election all of the rights of Lessee under this Lease and all of such rights shall terminate at the expiration of thirty (30) days from the giving of written notice of default, which notice shall specify the nature of the default or defaults which have occurred, and shall be personally served upon an officer of the Lessee or mailed, postage prepaid, to the address of Lessee as provided in Section 6 of Article VII. hereof.

Unless the default or defaults specified in such notice is or are cured to the satisfaction of Lessor within the period of thirty (30) days after written notice as aforesaid, then at the expiration of said thirty (30) day period this Lease and all rights of the Lessee hereunder shall forthwith terminate, and thereupon Lessee shall surrender peaceable possession of the de-

mised premises unto Lessor, and Lessor may reenter and remove all persons therefrom, subject to the rights granted Lessee under the provisions of Section 1 of Article VII. hereof.

Section 3. Additional Remedies. The rights and remedies hereunder given to Lessor are in addition to and not in lieu of or in limitation or derogation of the rights and remedies otherwise granted by law in Lessor; any waiver by Lessor of any breach or default by Lessee, whether such waiver be direct or implied, shall not be considered to be a continuing waiver or a waiver of or consent to any subsequent breach or default on the part of Lessee.

ARTICLE VII.

MISCELLANEOUS

Section 1. Construction of Ditches, etc. and Removal of Facilities by Lessee. Lessee is hereby given the right to construct all necessary ditches, dikes, canals, bridges, tunnels, roads, pipe lines, power lines, wells, tanks and other facilities and buildings necessary or desirable in connection with its operations on the premises. All removable facilities placed by Lessee on the premises shall be and remain the property of Lessee and shall not become a part of the premises, and may be removed by Lessee at any time within ninety (90) days after the expiration of this Lease or its termination under the provisions of Section 2 of Article VI. hereof; provided, however, that none of such removable facilities may be removed at any time unless all sums due from Lessee to Lessor shall have been paid and there exists no lien for mechanics, materialmen or other persons, or any liabilities incurred by the Lessee in connection with its operations which are existing against the premises or for which the Lessor may be or become liable; provided further, that no timbering, rails, air or

water lines in place underground, or power lines aboveground, shall be removed, and any such that shall have been placed therein or thereon by Lessee shall nevertheless become and remain the property of Lessor.

Section 2. Retention of Ores and Tailings by Lessor. Upon the expiration or termination of this Lease, Lessor shall have the right to keep and retain as its own property any and all ore and tailings that remain upon the demised premises.

Section 3. Lessee to Furnish Detail of Workings, etc. Upon the expiration or termination of this Lease according to its terms, Lessee shall furnish Lessor, without cost to Lessor, a map or diagram of the mine workings of the demised premises, together with pertinent assay or other data which Lessee may have with respect to the mined or unmined portions of the demised premises.

Section 4. Assignments. It is understood and agreed that Lessee shall have no right to assign this Lease or any of the Lessee's rights hereunder without the prior written consent of Lessor, and then only on condition that the assignee or assignees of this Lease or of any of Lessee's rights hereunder shall by appropriate instrument agree to observe and perform each and all of the obligations, covenants, terms and conditions hereof.

Section 5. Invalidity of Clauses. Should any court of competent jurisdiction hold any clause or clauses or provisions of this Lease invalid, such holding shall not affect or invalidate the remaining clauses of this Lease, but such remaining clauses shall continue in full force and effect during the term hereof.

Section 6. Notices. Any notice required or permitted to be given by either party hereto to the other shall be deemed

effective for all purposes if deposited in the United States mail, registered, with postage prepaid, in an envelope sealed and addressed to the party or parties to whom it is required or permitted to be given, at the last known address or addresses of such party or parties. Lessor's present address for the purposes hereof is as follows:

L. L. Robinson Estate Company
c/o Clarence C. Hogan
639 South Spring Street
Los Angeles 14, California

Lessee's present address for the purposes hereof is as follows:

Arizona Metals Company
P. O. Box 1266
Kingman, Arizona

Section 7. Successors and Assigns. This Lease shall be binding upon and shall inure to the benefit of the Lessor and the Lessee and their respective successors and assigns.

Section 8. Time is of Essence, etc. Time is of the essence of this Lease and of each of the provisions hereof.

Section 9. Titles not a Part of Lease. The titles of the several articles and sections of this Lease, and the table of contents, shall not be deemed to be a part hereof.

IN WITNESS WHEREOF, Lessor and Lessee have executed this Lease by their respective officers thereunto duly authorized as of the day and year first above written.

(SEAL) L. L. ROBINSON ESTATE COMPANY

S/ M. A. Robinson
President

S/ Clarence C. Hogan
Secretary
LESSOR

(SEAL) ARIZONA METALS COMPANY

S/ Ralph R. Langley
President

S/ Ralph R. Langley, Jr.
Secretary

STATE OF CALIFORNIA)
) ss.:
COUNTY OF LOS ANGELES)

On this 29th day of Nov., 1949, before me, a Notary Public in and for said county and state duly commissioned and sworn, personally appeared M. A. Robinson and Clarence C. Hogan, known to me to be the President and Secretary, respectively, of the L. L. Robinson Estate Company, the corporation that executed the within instrument, known to me to be the persons who executed the within instrument on behalf of said corporation, and acknowledged to me that said corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

S/ Raymond V. Haun
Notary Public in and for said County and State.
My commission expires

STATE OF CALIFORNIA)
) ss.:
COUNTY OF LOS ANGELES)

On this 26th day of November, 1949, personally appeared before me, a Notary Public within and for the County of Los Angeles, State of California, Ralph R. Langley and Ralph R. Langley, Jr., known to me to be the President and Secretary, respectively, of the Arizona Metals Company, the corporation that executed the within instrument, known to me to be the persons who executed the within instrument on behalf of said corporation, and acknowledged to me that said corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year first above written.

S/ Minetta Miller
Notary Public in and for said County and State.
My commission expires April 18, 1953

The undersigned, RALPH R. LANGLEY and SELMA J. LANGLEY, his wife, hereby certify that they have read the foregoing Mining Lease, and hereby approve of all of the terms and provisions thereof.

S/ Ralph R. Langley
Ralph R. Langley

S/ Selma J. Langley
Selma J. Langley

STATE OF CALIFORNIA }
COUNTY OF LOS ANGELES } ss.:

On this 26 day of November, 1949, before me Minetta Miller, a Notary Public in and for said County and State, personally appeared Ralph R. Langley, known to me to be the person whose name is subscribed to the within instrument, and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

S/ Minetta Miller
Notary Public in and for said
County and State
My commission expires April 18, 1953

STATE OF CALIFORNIA }
COUNTY OF LOS ANGELES } ss.:

On this 26 day of November, 1949, before me Minetta Miller, a Notary Public in and for said County and State, personally appeared Selma J. Langley, known to me to be the person whose name is subscribed to the within instrument, and acknowledged to me that she executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

S/ Minetta Miller
Notary Public in and for said
County and State
My commission expires April 18, 1953

MINING LEASE

Date: January 22, 1943.

Lessor: CAROLINE DANIELS MOORE, of Hubbard Woods, State of Illinois, owner as her separate property, hereinafter called "lessor";

to

Lessee: RALPH R. LANGLEY, of 1045 South Bedford Street, Los Angeles, California, hereinafter called "lessee";

Lessor hereby leases to the lessee the mining claims and property hereinafter described, for the term and upon the covenants, conditions and provisions following:

1. PROPERTY: That certain contiguous group of four patented lode mining claims, commonly known as the "ALPHA" Group, situate in the Wallapai Mining District, Mohave County, Arizona, United States patent to which appears of record in the office of the Recorder of said Mohave County in Book 23 of Deeds, on pages 333, et seq., dated January 22, 1914, the names of which mining claims are -

ALPHA,
OMEGA,
MAGNOLIA, and
WALLAPAI QUEEN

together with the hereinafter described equipment and improvements thereon.

2. TERM: Thirty (30) years, commencing on January 22, 1943, and ending thirty years thereafter, unless sooner terminated as hereinafter provided.

3. POSSESSION AND OPERATION: (a) Lessee shall immediately enter upon said leased premises and work the same in a miner like fashion and in a manner necessary to good and economical mining so as to take out the greatest amount of ore possible, with due regard to the development and preservation of same as a workable mining property.

(b) Lessee shall well and sufficiently timber the workings at all points where proper and necessary in accordance with good mining, and in compliance with the mining laws of the State and the rules

and regulations of the office of State Mine Inspector, and shall repair all old timbering where it may become necessary.

(c) Lessee may immediately extract and remove ores from said premises and mill, ship or otherwise treat the same, subject to the royalty hereinafter provided.

(d) From and after April 1, 1943, lessee shall perform, in or upon said premises, not less than thirty (30) miner's shifts of work per month; from and after October 1, 1943, and during the remainder of the life of this lease, the lessee shall perform, in and upon said premises, not less than sixty (60) miner's shifts of work per month, unless the lessee is prevented by strikes, acts of God or Government regulations, or other conditions over which lessee has no control.

4. ROYALTY: (a) All ores shipped, milled or otherwise disposed of shall be subject to the following royalty:

> 10% of net mill or smelter returns, and by "net mill or smelter returns" is meant the proceeds remaining after deducting treatment charges and railroad and trucking charges.

(b) All royalties are due and payable to the lessor within ten days from the date of receipt of mill or smelter returns by lessee, and shall be accompanied by duplicate settlement sheet.

(c) All payments of royalties shall be made to the lessor, or her order, at 1031 Fishers Lane, Hubbard Woods, Illinois, or such other place as may be directed by the lessor in writing.

5. MINIMUM MONTHLY CASH ROYALTY: As a guaranteed monthly royalty for the use and occupation of said premises, the lessee shall pay the lessor a monthly cash royalty of not less than $100.00 during the life of this lease, beginning October 1, 1943: PROVIDED, that the non-payment of monthly cash royalties between the date of this lease and October 1, 1943, shall not in anywise waive the payment of royalties required under the next preceding paragraph 4; PROVIDED FURTHER, that said monthly guaranteed cash royalty of $100.00 is required only when royalty from ores shipped or treated during any month amounts to less than $100.00; PROVIDED FURTHER, that in no event shall ore royalties in excess of $100.00 for any given month be applied on the succeeding month.

6. INSPECTION OF PREMISES: Lessor reserves the right for herself and her agents to enter upon said mining property and the workings therein and thereon at all reasonable times for the purpose of inspection, surveys or taking samples therefrom, and in that behalf the lessee shall extend proper assistance, but the lessee shall be put to no expense by reason thereof.

7. STOPING - STORING OF WASTE: Lessee shall do no underhand stoping, nor shall he stow any waste underground except with the consent and under the direction of the lessor, except in stopes.

8. TAXES: Lessee shall during the life of this lease promptly pay all State, County and Federal taxes levied or assessed against said premises or on any improvements and equipment thereon and for ores mined and treated under this lease, commencing with the second half of the tax year 1942, said second half being due and payable on the first Monday in March, 1943.

9. MACHINERY - REMOVAL: (a) All machinery, equipment and tools placed by lessee upon said premises during the life of this lease shall be subject to removal by him within sixty (60) days after the termination of this lease by default or otherwise: PROVIDED, that all buildings, headframes, underground timbering and rails in the mine shall not be so removable but shall remain on said premises as the property of the lessor: PROVIDED FURTHER, that no such machinery or tools shall be so removed, as aforesaid, while the lessee is in any manner indebted to the lessor under any obligation incurred under this lease.

(b) Lessee is granted the free use of the equipment and buildings hereinafter described now on the premises, conditioned, however, that he will keep and maintain the same in good repair and workable condition at all times at his own cost and expense, and at his own cost and expense supply such working parts and accessories that are now missing, all of which parts and accessories shall become the property of lessor. Lessee is also granted the privilege of purchasing said equipment and property from the lessor for such price and upon such terms as may be agreed upon. Said equipment and improvements consist of the following:

100 H.P. Wolverhampton Gasoline Engine,
1 - Fairbanks-Morse 2-stage Compressor,
1 - 6 X 7 Air Receiver,
All track on and in said mining property, including water and air pipe lines in

the mine and outside of the mine,
1 - Ore Bin,
1 - Ton House.

10. NOTICE OF NON-LIABILITY: Lessee shall at all times during the life of this lease keep said premises free and clear of all liens, claims and debts of every kind and description, and he shall at his own cost and expense immediately record and post and keep posted during the life of this lease, in the name of the lessor, a Notice of Non-Liability in the manner and form by law provided.

11. COMPENSATION INSURANCE: Lessor shall in no event be held liable for any loss, injury or damage to lessee or his employees, or to his equipment and property used by him in connection with his operation under this lease, and lessee shall at all times during the life of this lease comply with the provisions of the Workmen's Compensation Law of the State of Arizona, and, insofar as it may apply, with the Federal Social Security and Non-Employment Insurance Acts of Congress.

12. OWNERSHIP OF PROPERTY: Lessor is the owner of said mining claims as her separate property and not as a part of the community property of the lessor and her husband.

13. REPRESENTATION: Lessee has entered into this lease relying on his own knowledge and judgment of said mining property and not upon any representation made by the lessor or her agents or representatives touching the merits, character or quality thereof.

14. ASSIGNMENT OF LEASE: This lease, or any renewal or reinstatement thereof, shall at the option of the lessor be forfeited and terminated if the term in whole or in part is assigned, transferred or set over by the act of the lessee, or by process or operation of law, or in any other manner whatsoever, or if any part of the said premises are sublet, without the written consent of the lessor.

15. NOTICE: Whenever a notice is required pursuant to or in connection with this lease by lessor to lessee, such notice shall be sufficient if given by registered letter enclosed in a sealed envelope,

postage prepaid thereon, and directed and addressed to the lessee at Kingman, Arizona, and deposited in the United States Postoffice, and the time specified in such notice shall run from the date of posting.

16. TERMINATION OF LEASE BY LESSEE: Lessee may at any time terminate this lease on thirty (30) days' written notice provided the lessee is in good standing and not in anywise indebted to the lessor at the time of such termination.

17. ESSENCE: Time is of the essence hereof, and all the terms and conditions herein contained shall extend to and be binding upon the heirs and assigns of the respective parties.

18. SURRENDER OF POSSESSION: The lessee shall deliver to the lessor quiet and peaceable possession of said premises in good order and condition, with all drifts, tunnels or other passages thoroughly drained and cleared of loose rock and rubbish, without demand or further notice, at noon on the last day of the thirtieth (30th) year from the date of this lease, or in the event of the sooner termination of this lease for any cause whatsoever, upon demand of the lessor, subject in each case to the provisions contained in Clause 9 hereinabove relating to the removal of machinery and tools, etc.

19. DEFAULT: If lessee makes default in the payment of the royalties at the times and in the amounts herein provided, or in any of the terms and conditions herein contained, then this lease shall terminate upon thirty (30) days notice from lessor to lessee of her intention to declare this lease at an end, and if lessee fails within said thirty (30) days to make the payment with respect to which said lessee has defaulted, or correct and make good any other violations of the terms and conditions of this lease on account of which such notice of default has been given, then and thereupon this lease shall become, and thereby be, null and void, and of no further force and effect, and lessee shall thereupon deliver to lessor the peaceable possession of said premises and the equipment described in P9 herein.

EXECUTED in duplicate this 22nd day of January, 1948.

/s/ Caroline Daniels Moore
Lessor

/s/ Ralph R. Langley
Lessee

STATE OF ILLINOIS }
COUNTY OF COOK } ss

The foregoing instrument was acknowledged before me this 5th day of February, 1943, by CAROLINE DANIELS MOORE.

My commission expires August 13, 1943

(SEAL)

/s/ Fee A. Connon
Notary Public in and for the County of Cook, State of Illinois.

STATE OF ARIZONA }
COUNTY OF MOHAVE } ss

The foregoing instrument was acknowledged before me this 22 day of January, 1943, by RALPH R. LAMBLEY.

My commission expires July 19, 1943.

(SEAL)

/s/ Carl G. Krook
Notary Public

January 22, 1951

Memorandum

To: P. T. Allsman, Chief, Mining Division, Bureau of Mines, Region IV.

Charles Anderson, U. S. Geological Survey, Prescott, Arizona.

From: Field Team, DMA, Region IV.

Subject: DMA Dockets 50 and 21, filed by Arizona Metals Co. and the Tennessee Schuylkill Corporation, respectively.

We are in receipt of a letter from the Operating Committee advising that DMA Dockets 50 and 21, filed by Arizona Metals Co. and the Tennessee Schuylkill Corporation, respectively, have been cancelled and that a combined application will be filed in the near future. There is to be no work done on DMA Dockets 50 and 21 until further advice is received.

J. H. East, Jr.

J. H. East, Jr.

A. H. Koschmann

A. H. Koschmann

Copies to: A. H. Koschmann
Charles Anderson (2)
P. T. Allsman
DMA files
J. H. East, Jr.

DMA

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
ROCKY MOUNTAIN REGION
REGION IV

OFFICE OF
REGIONAL DIRECTOR

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

January 11, 1951

WRD 1-15-51

Mr. Ralph E. Langley
1040 South Bedford Street
Los Angeles 35, California

Dear Mr. Langley:

This will acknowledge receipt of your letter dated January 7, requesting that we advise you when the engineers and geologists will visit your property in connection with your application for Government assistance, Docket DMA-50.

When the engineers are ready to visit the property we will contact you, giving you as much advance notice as possible.

It is impossible for us at this time to advise you the names of the persons who will make the field investigation.

Sincerely yours,

J. H. East, Jr.
J. H. East, Jr.
Regional Director

JHE:lm

cc: PT Allsman)
AH Koschmann)
WR Storms)
Chas. Anderson)

Please note that Mr. Langley requests you to contact him before making the field examination. He states: "I must arrange to meet them at the property or arrange with someone to meet them. The portals to the entrances are locked and no stranger could find the claim lines or other important elements without someone to guide them."

J. H. East, Jr.
J. H. East, Jr.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

January 11, 1951

Memorandum

To: W. R. Storms

From: Chief, Mining Division, Region IV

Subject: Docket DMA #50 - Arizona Metals Company, Summit Alpha Mines, Kingman, Arizona.

Herewith are copies of letters from DMA Team, Region IV, Chairman of the Lead-Zinc Committee, and Ralph R. Langley concerning their Arizona Summit Alpha mines, Kingman, Arizona.

Mr. Anderson has been sent copies of this information with a request that he make an examination. I have also been instructed by the Team that you assign an engineer with Mr. Anderson and secure such engineering information as proves advisable.

Paul T. Allsman

Enclosures

Copy to: FieldTeam, Reg. IV

FOR VICTORY
BUY UNITED STATES WAR BONDS AND STAMPS

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

224 New Customhouse
Denver 2, Colorado

January 10, 1951

Memorandum

To: P. T. Allsman

From: Field Team, Region IV

Subject: Docket DMA 50 - Arizona Metals Company, Summit Alpha Mines, Kingman, Arizona

Attached is a copy of our memorandum of today addressed to Mr. Charles Anderson, above subject.

While this is primarily a geological examination, it will be well to have one of Mr. Storms' engineers visit the property at the same time and secure whatever engineering information he can.

J. H. East, Jr.

A. H. Koschmann

Attachment

JHE:lm

FOR VICTORY
BUY UNITED STATES WAR BONDS AND STAMPS

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

224 New Customhouse
Denver 2, Colorado

January 10, 1951

Memorandum

To: Charles Anderson, Geological Survey, Prescott, Ariz.

From: Field Team, Region IV

Subject: Docket DMA 50 - Arizona Metals Company, Summit Alpha Mines, Kingman, Arizona

The Operating Committee has submitted the attached report in reference to the above subject. A copy of the memorandum from the Committee is attached.

You will note that a geological examination is requested to substantiate the reserve estimates made by the applicant. Please process this application as promptly as possible.

A copy of this memorandum is being sent to Mr. Allsman with the request that he have an engineer from the Bureau of Mines accompany you to secure whatever information he can.

J. H. East, Jr.

J. H. East, Jr.

A. H. Koschmann

A. H. Koschmann

Attachment

cc: PF Allsman

J. H. E.

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Administration

C
O
P
Y

December 26, 1950

Memorandum

To: Executive Officer of Field Team, Region IV

From: Lead-Zinc Committee, DMA

Subject: Docket DMA 50 - Arizona Metals Company, Summit Alpha Mines, Kingman, Arizona

The Arizona Metals Company application, as presented by Ralph R. Langley, President, has been reviewed by the Nonferrous Lead-Zinc Commodity Committee.

The application does not indicate that the three properties proposed for development have measured ore reserves. However, it is estimated by the applicant that 1,060,000 tons of Pb-Zn ore averaging 6.0% Pb and 7.0% Zn would be available for production if the proposed development work is completed. This estimate is based on a past production of 25,000 tons ore. The exhibits included with application are not in sufficient detail to support such a liberal estimate of ore reserve.

The committee, therefore, recommends:

(1) That the information submitted by the applicant in requesting a loan be referred to the field committee for investigation and advice.

The committee's review of the papers indicates that the suitability of the project in the development program will depend first of all upon a geological examination to substantiate the reserve estimates made by the applicant.

OTTO HERRES, Chairman
Lead-Zinc Committee, DMA

APPROVED:
DMA Operating Committee

(s) Otto Herres
(acting for S. H. Williston, Chairman

Olaf N. Rove

J. H. Hedges

1045 S. Bedford St.
Los Angeles 35, Calif.

C
O
P
Y

ARIZONA METALS COMPANY
Summit Alpha Mines
Kingman, Ariz.

P. O. Box 1266
Kingman

January 7, 1951

Mr. J. H. East, Jr.
224 New Customhouse
Denver 2, Colorado

Dear Mr. East:

I have a letter from Mr. Charles Merrill, Chief Base Metals Branch, Defense Minerals Administration at Washington, dated December 28th, advising that our application for assistance has been considered by the Operating Committee and sent on to the Field Team for examination and report.

I would like to get in touch with that Field Team for the following reasons:

I must arrange to meet them at the property or arrange with someone to meet them. The portals to the entrances are locked and no stranger could find the claim lines or other important elements without some one to guide them.

Another reason is that we have very recently decided to combine our application with that of the Tennessee Schuylkill Corporation -- and operate the two projects through a new entity. Mr. Winer of the Tennessee Corporation and I have had some correspondence with Mr. S. H. Williston, Chairman, Operating Committee and with Dr. Boyd direct in that respect. They have suggested that we execute a joint application--which we are now preparing.

We do not wish to delay any examination but we do want to know when the Team will be in our district and arrange to meet them there and we also think it best for the Beam to be advised of our filing a joint application so that they can cover our combined situation while on the ground.

Mr. Wimer talked with Messrs. Williston and Herries by telephone today and was advised that the Team works out of your office and that we could get the information indicated from you. Mr. Wimer then called you but found you away until Wednesday.

Will you please advise us who compose the team and arrange to have us advised in advance of their visit to the properties.

Yours very truly,

(s) Ralph R. Langley

COPY

FROM

TENNESSEE SCHUYLKILL CORPORATION

CHLORIDE, ARIZONA

October 4, 1950

Mr. J. H. Eason, Jr., Regional Director
U. S. Bureau of Mines
New Customs House Building
Denver, Colorado

WRS -
One for the growing file of applications
JRC

Dear Mr. Eason:

This company is the owner of the Tennessee Mine located at Chloride, Arizona. The Tennessee Mine is equipped with a mining and milling plant capable of handling 150 tons daily. The last operating campaign at the mine began in 1936 and ended in December 1948. During this period some 375,000 tons of crude ore was mined and milled which produced some Thirty million lbs. of lead and thirty-five million lbs. of zinc with small gold and silver values.

From the beginning of 1945 until the end of 1948 the property was operated by contractors, none of whom were prepared to make any capital investment. The result of this was that underground development work was not kept ahead as it should have been which resulted in the mine being shut down in December, 1948. There are several orebodies known to exist in the mine which could be developed if sufficient operating capital were available. It is estimated that the Tennessee Mine can produce from 300,000 to 400,000 lbs. of lead and from 500,000 to 700,000 lbs. of zinc monthly after certain underground development has been done.

The Defense Production Act of 1950 and Executive Order 10161, implementing said Act, provide for increased production of lead and zinc and for Government loans or guarantees for this purpose. The General Counsel of this corporation, Mr. William V. O'Connor, has just returned from Washington where he held a conference with Mr. Julian Feiss, Administrative Assistant to Dr. James Boyd, Director for the Bureau of Mines. The purpose of this conference was to inquire into the procedure to be followed by a mining company, such as ours, in making application for a Government loan or a Government guarantee of a private loan. We have also carried on some correspondence with U. S. Senator Carl Hayden on this subject.

Both Mr. O'Connor and Senator Hayden advise that the National Security Resources Board is at present developing an outline of the procedures to be followed in making application for a Government loan or a Government guarantee of a private loan. Mr. Julian Feiss told Mr. O'Connor that the Bureau of Mines will certify to the R.F.C. or any private financial institution that a particular mining company is eligible for financial assistance and that such eligibility will be determined by potential ore reserves, past production record, etc. Mr. Feiss also stated that because of the fact that the Tennessee Mine participated in the Premium Price Plan during World War II that the Regional Office of the Bureau of Mines would have considerable information about the property.

U. S. BUREAU OF MINES
OCT 5 1950
TUCSON ARIZ., ARIZONA

Mr. Feiss further suggested to Mr. O'Connor that we contact you immediately so that there will be no delay in making our application for financial assistance when the procedure is determined. Perhaps you have some knowledge at this time of the data that will be required and if so we could probably save valuable time by beginning the work of accumulating it now. At any rate, we shall appreciate an early reply to this letter with any suggestions you may have. Will you also let us know if our application should be made direct to your Denver office or through the office of the Bureau in Tucson.

Very truly yours,

TENNESSEE SCHUYLKILL CORPORATION

By N. A. Wimer

N. A. Wimer - President

NAW:D

c.c. Mr. J. Bruce Clemmer
U. S. Bureau of Mines
School of Mines Building
Tucson, Arizona

AGREEMENT OF LEASE

This Agreement of Lease, made this 25th day of January 1951, by and between TENNESSEE SCHUYLKILL CORPORATION, Chloride, Mohave County, Arizona, Lessor, hereinafter called the first party, and TENNESSEE METALS CORPORATION, Chloride, Mohave County, Arizona, Lessee, hereinafter called the second party:

WITNESSETH:

ARTICLE I

That the first party, being the lawful owner of the described property, for and in consideration of the sum of TEN DOLLARS ($10.00), and other valuable considerations, to it in hand paid by the second party, the receipt whereof is hereby acknowledged, and for and in consideration of the payments to be made by the second party, and of the covenants and agreements hereinafter set forth, does hereby lease, let and demise unto the second party, its heirs and assigns, upon the terms and conditions hereinafter set forth, those certain mining claims situate, lying and being in the Wallapai Mining District, Mohave County, Arizona, the names of which and the books and pages where the location notices or patents thereof appear of record in the office of the Recorder of said Mohave County, being as follows, to wit:

PATENTED CLAIMS

Name of Claim	Survey Number	Book of Mines	Page
Tennessee Lode	MS 1427	14	420
Great Lead Lode	MS 1427	14	420
Tennessee South Lode	MS 1427	14	420
Schuylkill Lode	Lot 38	4	652
Schuylkill Millsite	MS 1221	12	752
Black Rock Spring	MS 3422	20	3
Empire No. 2	MS 910	12	486-489

UNPATENTED CLAIMS

Tennessee West	3S	580
Schuylkill West	3S	529
Tennessee North Fraction	3S	500

Together with all buildings pipelines, tanks and all other fixtures and improvements therein and thereon, including mining, milling and assay equipment and tools and machinery except as stated below.

Reference is hereby made to the above mentioned records for a more full and complete description of said mining claims.

Also, all of Lots 4, 5, 6 and 7 in Block 12 of Chloride townsite in the County of Mohave, State of Arizona, including all buildings and improvements thereon.

The property reserved and excepted for the use of the lessor shall be the building known as the Staff House together with all furnish-

ings and equipment belonging to and in said building, also the three private offices located in the center of the main office building together with the furniture and fixtures in said three office rooms.

ARTICLE II Term of Lease

This lease agreement, unless sooner forfeited, cancelled, terminated or surrendered, as herein provided, shall continue in force and effect for a period of Ninety-nine years from the date hereof.

ARTICLE III Possession and Control of Property

The second party shall have and it is hereby given and granted the right to enter into and take over immediately upon this agreement becoming effective, the sole and exclusive possession and control of said described property and the whole and every part thereof, and during the term of this lease to remain in the sole and exclusive possession and control thereof, and to explore, investigate, measure, sample, examine, test, develop, work, mine, operate, use, manage and control the same, and the water and water rights appurtenant thereto, and to mine, extract and remove from said property the ores and minerals therein and appurtenant and belonging thereto, and to construct mining and treatment plants and treat, mill, ship, sell or otherwise dispose of the products of its operation and retain the full proceeds therefrom less the royalties payable to the first party as stipulated in Article IV hereof. The second party hereby expressly agrees that during the twelve months next succeeding the effective date of this contract it will expend, or cause to be expended, at least Twenty Thousand Dollars ($20,000.00) for exploration and development work upon the leased premises.

All work for the development and operation of the property is to be done in a careful and workmanlike manner and conform in all respects to the mining laws and regulations of the United States and the State of Arizona.

ARTICLE IV Royalties and Rentals

The second party hereby agrees to pay the first party royalties on all ores, minerals, bullion, concentrates and other products mined and removed from said property during the term of this lease as follows:

Ten per cent (10%) of the net returns received from the sale of bullion, ores, concentrates or other products derived from the leased property.

It is further agreed that in case ores from properties other than the properties included in this lease are treated in the mill of first party a payment of 50¢ per ton on all such outside ore will be made by second party to first party, such payment to be made on or before the 10th of the month after the month in which such ores are treated. Second party also agrees to pay first party 25¢ a ton for each ton of ore transported through the underground workings of first party, said charge to apply to all ore coming from properties other than those included in this lease. Such transportation charges shall be paid on or before the 10th of the month following the month in which such charges accrue.

It is, however, expressly stipulated and agreed that should this agreement remain in force for more than a year, the minimum rental or royalty thereafter shall be the sum of One Thousand Dollars ($1,000.00) per month, and the second party will pay to the first party, by the 10th of the next succeeding month, any sum that may be required to cover any deficit that may remain after the regular royalties have been paid.

The lessee shall bear all costs and expenses of maintenance and operation of the domestic water system and shall promptly make any repairs necessary to keep said domestic water system in continuous operation and shall also keep all plumbing fixtures used in connection therewith in good repair at all times.

Lessee further agrees to supply at his expense any electric power that may be used in connection with the ordinary operation of the Staff House or the office space reserved for the use of the lessor and to keep the electric facilities used for these purposes in good repair at all times.

Lessee also agrees to supply oil for heating purposes in said Staff House and said office space at its own expense.

ARTICLE V Protection from Liens and Damages and Payment of Taxes

The second party shall keep the leased property and the whole, and every part thereof, free and clear of liens for labor done or performed upon said property, or materials furnished to it on or for said property, or for the development or operation thereof under this lease and while the same is in force and effect, and will save and keep harmless the first party from all costs, loss or damage which may arise by reason of injury to any persons employed by the second party in or upon

said property or any part thereof, or which may arise by reason of injury to any persons, livestock or other property as the result of any work or operations of the second party or its possession and occupancy of the property.

The second party will keep posted upon said property such notices of non-liability for labor or materials furnished as may be posted thereon by the first party pursuant to laws of the State of Arizona.

The second party shall pay all taxes assessed upon said property and falling due during the term of this lease and while the same is in force and effect, and shall pay all taxes levied or assessed against any and all personal property, machinery and equipment placed upon said property by the second party during the term of this lease. The second party shall also pay all sales taxes and other taxes of every kind, character and description levied or imposed during the term of this lease upon the ores, minerals, concentrates or products of ores, produced, sold or otherwise disposed of by the second party, and all taxes levied against the second party as an employer of labor. All taxes are to be promptly paid when due and before delinquent.

The second party shall also carry at all times during the effective term of this lease Workmen's Compensation, Liability and other insurance required by the laws and mining regulations of the State of Arizona, and shall also insure the buildings, machinery and equipment now on said property against loss by fire in the amount of not less than One Hundred Thousand Dollars ($100,000.00).

During the life of this agreement the second party will perform the assessment work upon the unpatented mining claims hereby leased as may be required by law, or in the event that no such work is required, will do all things necessary to protect the title of first party to said claims.

ARTICLE VI Reports and Maps

The second party shall furnish first party monthly with copies of the logs of all drill holes sunk on the property, and with such sample or assay maps as may be made, showing the position of such drill holes, and of any new workings with assay values of samples taken on said property, also with copies of all settlement sheets or mint returns for all products marketed as these are received from the purchasers of said products.

The duly authorized representative of the first party shall be permitted to enter into and upon said property and the workings of the second party at all reasonable times for the purpose of inspection, and also to examine the books of accounts and records of production and sale of products.

ARTICLE VII Forfeiture Clause

The failure of the second party to keep or perform any agreement on its part to be kept and performed, according to the terms and provisions hereof, and especially the failure of the second party to make the payments of the minimum royalty or rental stipulated in Article IV hereof, shall, at the election of the first party, work a forfeiture hereof. Provided, however, that in the event of a default on the part of the second party and the election of the first party to terminate this lease on account thereof, the first party shall give to the second party a written notice of its intention to declare a forfeiture of this lease and to terminate the same on account thereof, specifying the particular default or defaults relied upon by it, and if such default arises from non-payment of rental or royalty, the second party shall have Thirty (30) days after receipt of said notice in which to make good such default, but in the case of all other types of default, a period of Sixty (60) days shall be granted to remedy said default and reinstate this agreement.

In the event of a valid forfeiture, surrender or other termination of this lease and option, the second party will surrender to first party peaceable possesion of said property and the whole and every part thereof immediately, and all payments theretofore made shall become the property of first party as a rental for the use of the property and as consideration for the privileges hereby granted.

ARTICLE VIII Force Majeure

If the second party shall be delayed at any time in keeping or performing any agreement on its part to be kept or performed according to the terms and provisions hereof, except the payment of minimum royalties and taxes, by strikes, lockouts, fire, unusual delay in transportation, orders or regulations of the Government, or any duly constituted instrumentality thereof, unavoidable casualties, or acts of God, such delay shall not be deemed a breach of this lease or a default on the part of the second party constituting a cause for forfeiture, but the operations contemplated under this agreement shall be promptly resumed as soon as the cause of

prevention no longer exists.

ARTICLE IX Removal of Equipment, Etc. by Second Party

The second party shall have, and it is hereby given and granted thirty (30) days after a valid forfeiture, surrender or other termination of this lease and option in which to remove from said property all warehouse stocks, merchandise, materials, tools, hoists, compressors, engines, motors, pumps, transformers, electrical accessories, metal or wooden tanks, pipes and connections, mine cars and any and all other machinery and equipment erected or placed in or upon said property by second party, together with all ore broken in the stopes or workings, except mine timbers and underground mine tracks and pipe lines in place on the main levels or in the shafts, and permanent improvements attached to the soil.

Provided, but only provided, that the second party is not at that time in default in respect to any payments due to first party or in respect to any of the terms of this agreement, the non-performance of which might involve the first party in any present or future liability. Otherwise in order to collect such payments or protect itself against such liability, the first party shall be entitled to a first and prior lien upon all moveable equipment and other personal property of the second party placed upon the leased property, and if necessary may dispose of same for the satisfaction of such claims.

ARTICLE X

The second party expressly reserves the right to cancel, terminate and surrender this agreement and option and to relinquish all rights, privileges and obligations hereunder at any time during the term hereof after having given to first party thirty (30) days written notice of its intention and fully discharged all obligations previously incurred.

ARTICLE XI Interpretation and Notification

This lease Agreement has been accepted and will be performed by the parties in the State of Arizona, and all questions pertaining to its validity, construction or interpretation shall be determined in accordance with the laws of the State of Arizona.

All notices herein provided for may be given by mail at the following

addresses, until otherwise changed by written request of the parties hereto, To-wit:

To the first party at Chloride, Arizona

To the second party at Chloride, Arizona

ARTICLE XII Inurement Clause

Time is of the essence of this Agreement. The terms, provisions, covenants and agreements herein contained shall extend to, be binding upon and inure to the benefit of the successors and assigns of the parties hereto.

ARTICLE XIII Assignment

The Lessee shall have the right to sell or assign this Lease with all the rights thereunder.

IN WITNESS WHEREOF, the First Party and the second party have caused their names to be hereunto subscribed in duplicate counterparts, as of the day and year first above written.

ATTEST

TENNESSEE SCHUYLKILL CORPORATION

Secretary

President
First Party

(SEAL)

ATTEST

TENNESSEE METALS CORPORATION

Secretary

President
Second Party

(SEAL)

STATE OF CALIFORNIA)
) SS:
COUNTY OF LOS ANGELES)

On this, the day of January, 1951, before me, the undersigned officer, personally appeared N. A. WIMER, known to me to be the person whose name is subscribed to the within and foregoing instrument, and acknowledged to me that he executed the same for the purpose and consideration therein expressed.

WITNESS my hand and official seal.

Notary Public

My commission expires

STATE OF CALIFORNIA)
) SS:
COUNTY OF LOS ANGELES)

On this, the day of January, 1951, before me, the undersigned officer, personally appeared RALPH R. LANGLEY, known to me to be the person whose name is subscribed to the within and foregoing instrument, and acknowledged to me that he executed the same for the purpose and consideration therein expressed.

WITNESS my hand and official seal.

Notary Public

My commission expires

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON

OFFICE OF
FEDERAL COORDINATOR

MINERAL ADMINISTRATION
MINERAL ALLOCATIONS

June 6, 1951

Memorandum

To: Landon Strobel, Executive Secretary, Defense Minerals Administration

From: Executive Officer, DMA Field Team, Region IV

Subject: DMA 21-50, Tennessee Metals Co.

We are enclosing additional information on the brochure for the Tennessee Metals Company, which was just received from the field. The report was mailed to you on May 23.

J. H. East, Jr.

Enclosure

See file copy for DMA 50-456

JUN 14 1951

Herres

Air Mail

TENNESSEE METALS CORPORATION
POST OFFICE BOX SIX
CHLORIDE, ARIZONA

Los Angeles California
June Ist, I95I.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 4 1951
LANDON F. STROBEL
Executive Secretary

Mr. Otto Herres, Chief,
Lead-Zinc Division,
Defense Minerals Administration,
Interior Department,
Washington 5,
D.C.

Docket DMA-50 & 2I.

Dear Mr. Herres;

I will greatly appreciate being kept advised as to the different steps and the route our application and report must pass thru to final consideration.

Also, at what stage are we permitted to read and discuss the report and project generally with final authorities, particularly with you.

Seems to me that after all the months it has taken to bring our matter up to a point wherein it can be intelegently discussed from a practical realistic viewpoint, it is time for such a discussion, I am sure that you personally agree with me in that respect but whether your practical realistic approach to such matters will prevail of course I do not know.

Naturally what we want is action--to read and examine the field teams report and an opportunity to discuss the matter with final authorities at as early a date as possible.

Please write me to Kingman--Arizona, Box I266, where I will be for some time, with copy to my Beverly Hills address.

Sincerely,

Ralph R. Langley

Ralph R. Langley
President

Tennessee Metals Corporation.

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.
    (*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

    NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any.
*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.
*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.
*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.
15. State in detail how the ore could be shipped and how and where milled.
*16. History:
    (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.
    (*b*) State briefly the known history and production of adjoining and neighboring properties.
    (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.
*17. Production:
    (*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)
    (*a*) Describe the ore or mineral deposits briefly.
    (*b*) Submit available maps and assay data.
    (*c*) Give estimated tonnage and grade of each class of ore reserves.
19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?
21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

    NOTE.—The Government will not participate in a project that will require more than 2 years to complete.
22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:
    (*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.
    (*b*) Supervisors, by numbers and positions, with salaries of each.
    (*c*) Cost of necessary repairs to existing facilities, structures, and buildings.
    (*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.
    (*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.
    (*f*) Cost of rental for equipment which the operator proposes to rent.
    (*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.
    (*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.
    (*i*) Cost of power, water, utilities, and any other items not provided for above.
24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

Tennessee Metals Corporation
(Name of company)

By [signature]
(Signature of authorized official)

May 23, 1951
(Date)

President
(Title)

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

COPY

FROM

TENNESSEE METALS CORPORATION

POST OFFICE BOX SIX

CHLORIDE, ARIZONA

May 28, 1951

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

The Applicant:

#1 to #5 inclusive: See MF-100 and Docket DMA 50 & 21

#6: Operator is Lessee.

#7: Copies of leases in Docket DMA 50 & 21 in good standing.

#8: See exhibits Docket DMA 50 & 21.

#9: ($30,000.00). Yes.

The Property:

#10 (a): No real estate. Property consists of mining claims.
(b): See answer to #2 and Exhibits referred to therein.

#11 to #14 inclusive: See Docket DMA 50 & 21.

#15: Can be milled locally.

#16 to #20 inclusive: Covered fully in Docket DMA 50 & 21.

#19: Fully discussed in Docket DMA 50 & 21.

The Explorations:

#20: Primarily lead, zinc and copper.

#21: At section "B" Exhibit "A", which is the claim map of the Lucile Alpha Group, the crosscut is to be driven to intersect the vein, a distance of about 250 feet and after intersecting, drifting; on the fissure is to be done for a distance of 100 feet each way from the intersection.

At Section "C" Exhibit "A", which shows the Alpha claims on the claim map, the crosscut is to be driven to intersect the Silver-Copper vein, a distance of about 100 feet. Also, a crosscut is to be driven from the lower Alpha Tunnel to intersect the Omega vein, a distance of about 100 feet.

On the 750 level of the Tennessee mine as shown on Exhibit "T-2" a crosscut is to be driven a distance of about 70 feet to get under a body of ore indicated as Block "A" on said Exhibit.

On the 11 level of the Tennessee Mine a crosscut is to be driven from the shaft to get into a block of ore indicated on the map, Exhibit T-6, as Block "F", a distance of 250 feet.

All of this work, if started simultaneously when funds are made available, can be completed within six months time.

The Exploration (continued):

#22: The geological basis and other realistic phases strongly indicating the probability of opening extensive ore bodies are stated in the Exhibits included in Docket DMA 50 & 21.

The Requirements and Costs:

#23 (a): 3 Miners @ $15; 3 Helpers @ $14; 8 Trumers @ $14.

(b): 2 Supervisors; 1 at Summit-Alpha and 1 at Tennessee, $500 per month each.

(c): Estimate $2,500.00

(d): Orebins $3,000.00

(e): 1 Compressor $9,500.00

(f): Compressor $1,300.00

(g): $1,000.00

(h): $4,000.00

(i): $4,000.00

#24: Entire work can be done in six months after funds are available.

DMA 50 and 21

1/11/51

Memorandum

~~To: J. H. East, Jr., Executive Officer, Field Team Region IV~~
from: Lead-Zinc Division, DMA
~~Subject: DMA Dockets 50 and 21, filed by Arizona Metals Co. and~~ Schulykill Corp. respectively.

As you may recall, there has been some correspondence recently between Ralph R. Langley and the Bureau of Mines regarding a possible merger of the Arizona Metals Company and the Tennessee Schuylkill Corporation. I received a ~~xxxxxxxxx~~ telephone call late Monday, January 8 from both Langley and N. A. Wimer, who is president of the Tennessee Schuylkill Corporation, which indicated that the two companies have completed their negotiations for consolidating their holdings. It was their wish that no furhter action be taken on Dockets 21 and 50 as they are ~~xxx~~ preparing a new proposal covering both properties. When the new proposal from Langley and Wimer is received, it will be forwarded promptly for field review and recommendation. It will, therefore, be unnecessary to process further the original proposals from these companies which are now in your hands.

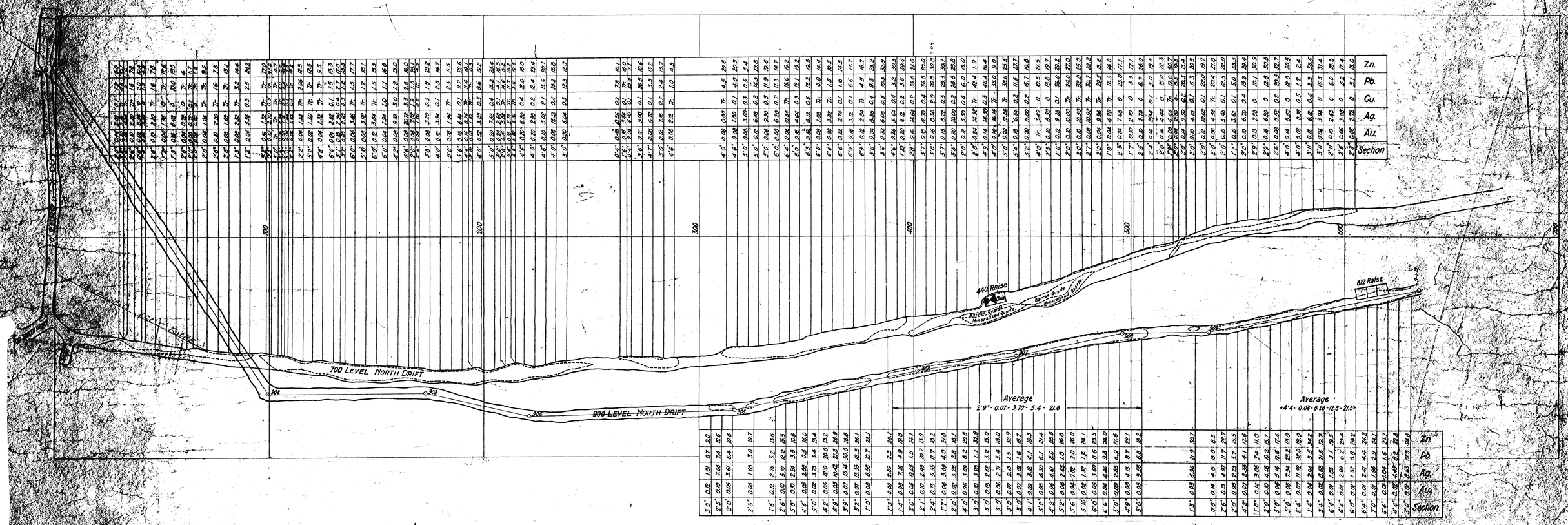
APPROVED OPERATING COMMITTEE

Miss Lanahan:

I had both of these folders - DMA21 and DMA-50. I sent them both to files in the light of this.

Mrs. Cadem.

1/12/51



The Needles Mining & Smelting Co.

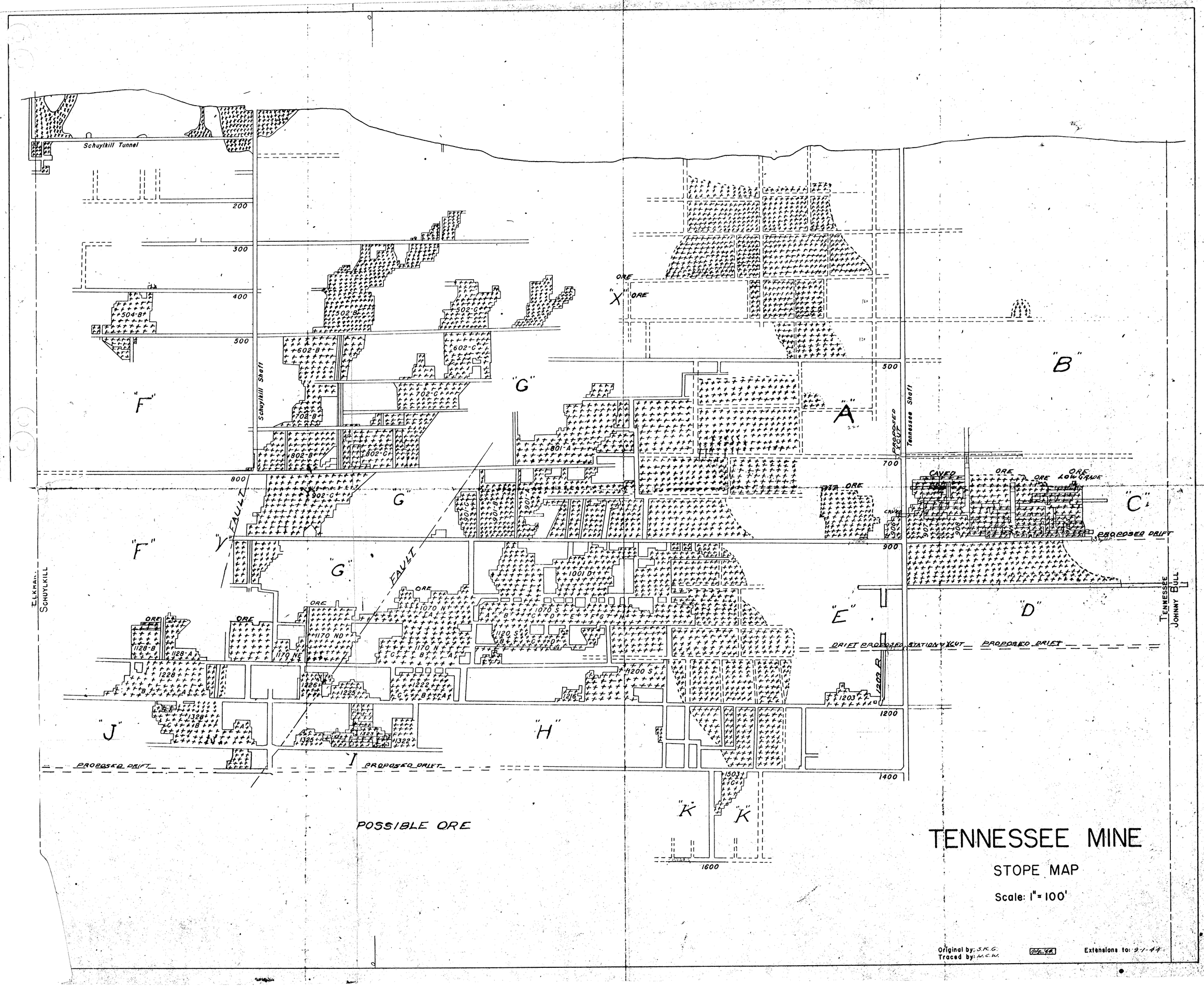
TENNESSEE MINE

Plan and Assay Map of 700 and 900 Drifts

Scale, 1 inch = 20 ft.

Date (700) July 24, 1912

" (900) Dec. 1, 1913



TENNESSEE MINE

STOPE MAP

Scale: 1" = 100'

Original by: J.K.G.
Traced by: M.C.W.

July 44

Extensions to: 9-1-44