DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

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DMA Docket No. 1316X

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Exploration LOAN

Any action taken to change the type of request for assistance must be promptly reported to the Reports and Records Branch. Use DMA Form 2 for submitting these reports.

Routing Slip

To: SUPPLY DIVISION Date 9-7-51 SEP 10 1951

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INT.-DUP. SEC., WASH., D.C. 98868

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

a. E. C.

SEP 11 1951

Re: DMA-1316X
J. E. Miller and Lula M. Miller
Pikes Peak Area, Dubuque County, Iowa
Exploration loan, $21,840
Lead, zinc

Memorandum

To: Reports and Records Unit
Administrative Management Div.

From: Chief, Lead-Zinc Branch

Subject: Recommendation for denial of application submitted by J. E. Miller and Lula M. Miller of Oak Park, Illinois for loan to explore in the Pikes Peak Area, Dubuque County, Iowa.

The subject application has been reviewed by the Lead-Zinc Branch.

The applicant proposes to explore his property by 10,000 ft. of churn drilling. The drilling will be done under contract at a cost of $1.75 per foot, making a total of $17,500. To this will be added $3,000 for engineering and supervision and $1,040 for travel expenses, both over a six months period. The total estimated cost of the project is $21,840.

The ore deposits of this area occur in narrow, vertical crevices in the form of pod-like bodies. The crevices known, as "ranges", may have considerable longitudinal extent and often occur in closely spaced parallel groups. Fourteen such "ranges" having an approximately east-west strike are known in the area to be explored. There has been some production from the area, largely before 1900.

Exploration by churn drilling for the above type of ore bodies has never been too successful. The reason is that the pod-like bodies have a more or less irregular distribution along the crevices both horizontally and vertically and finding one by churn drilling would be more or less a matter of luck. Furthermore, a drill hole could penetrate the rock within a few feet of such a body and there would be no evidence of its existence upon which to base further drilling.

From June 20 to July 29, 1944, the Bureau of Mines conducted a drilling program in the same area which the applicant wishes to explore. Seven diamond drill holes were put down, five vertical and two inclined. Total footage was 2,221.5 ft. These holes are located 200 to 700 ft. west of the holes the applicant is planning to drill.

The holes drilled by the Bureau of Mines were put down through the Decorah formation from which the main production of the district is derived. The only ore found was in the first hole drilled in which there were 14 ft. of ore averaging 2.13% Zn and 1.65% Pb. This ore occurred above the main producing horizon.

In areas where the Decorah formation is mineralized the oil rock, a member of that formation, has a thickness much less than normal due to action of the mineral-bearing solutions. In all of the holes drilled by the Bureau of Mines the normal thickness of the oil rock was present indicating lack of mineralization in the producing horizon.

Because the results obtained by the Bureau of Mines in this area were discouraging both in that only one hole contained moderate lead and zinc mineralization and that none of the holes v gave evidence of mineralization in the main producing horizon, it is recommended that the application be denied and the attached letter sent to the applicant.

The attached docket contains the following:

2 copies of Form MF-103 with 2 attached maps.

T. P. Billings

T. P. Billings, Chief
Lead-Zinc Branch

Approved:

Tom Lyon

Director, Supply Division

FILE COPY
SURNAME: 350

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

Lynn (Eric)
McKnight
Bullinger
Brahoff

SEP 11 1951

Re: DMA-1316X
J. E. Miller and Lula M. Miller
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To: Reports and Records Unit
Administrative Management Div.

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2 copies of Form MF-103 with 2 attached maps.

B 3
9/11

T. P. Billings, Chief
Lead-Zinc Branch

Approved:

Tom Lyon
Director, Supply Division

EJLyons:emp
G 9-6-51
Copies to: A. B. Needham Region V (2)
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
R. H. Mote
Directors r. file s 4214 GSA
Bra. r. files 4214 GSA
Administrators r. file
DMA docket file

FILE COPY
SURNAME: 350

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

Lyons (E.T.)
McKnight
Billingsley
Brahoff

Re: DMA-1316X

SEP 11 1951

Q.E.C

Mr. J. E. Miller
305 S. Oak Park Avenue
Oak Park, Illinois

Dear Mr. Miller:

The Defense Minerals Administration has reviewed your application for a loan to explore your property in the Pikes Peak area, Dubuque County, Iowa.

As you probably are aware, the Bureau of Mines in 1944 conducted a drilling program in the general area you wish to explore. The results of this program were discouraging in that there was moderate zinc and lead mineralization in the Galena formation in only one hole, and the information obtained from all of the holes indicated a lack of mineralization in the Decorah formation, the main producing horizon of the district. Furthermore, prospecting by churn drilling for crevice deposits of lead is not likely to be too successful because a hole may be only a very short distance from a lead-bearing crevice and not indicate ore.

In view of the above, I regret that we are unable to approve an expenditure of public funds for the project you propose.

We wish to thank you for bringing this property to our attention.

Very truly yours,

BJ 9/11

Tom Lyon
Tom Lyon, Director
Supply Division

EJLyons:emp
G 9-6-51
Copies to: A. B. Needham Region V (2)
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
R. H. Mote
Directors r. files 4214 GSA
Br. r. files 4214 GSA
Administrators r. file
DMA docket file

AUG 28 1951

Re: Docket DMR 1315X
DSA 1316X

Hon. Guy M. Gillette
United States Senate
Washington 25, D. C.

My dear Senator Gillette:

In reply to your letter of August 17 inquiring as to the status of the application for an exploration loan submitted by Mr. J. E. Miller of Oak Park, Illinois:

The application was reviewed by the Defense Minerals Administration and it was found necessary to request further information from the field team. As soon as this information has been received further action will be taken on the application.

Sincerely yours,

Acting Administrator

:Jl.yons:emp
S 8-23-51
Copies to: Administrator
Deputy Administrator
A. E. Needham Region V (2)
Chief, Lead-Zinc Br.
E. T. McKnight 4204, GSA
R. H. Mate
Reports & Records
Directors r. file 4214, GSA
Br. r. file 4214, GSA
File

United States Senate

[illegible]

Mr. [illegible]
[illegible]
[illegible]
Department of the Interior
Washington [illegible]

[illegible] Secretary:

On or about May 24, 1951, Mr. J. E. Miller of Oak Park, Illinois, filed his application with the Department of Interior for exploration loans under the Defense Production Act of 1950.

On May 31, 1951, your department advised Mr. Miller by letter that his applications were assigned Docket Numbers 1315X and 1316X (DMA) and were referred to Mr. Otto Herres, Chief, Lead-Zinc Branch on May 29, 1951. Since then, he has heard nothing whatever with reference to the matter.

Will you please advise me at your earliest convenience as to the status of these applications.

Sincerely,

Guy M. Gillette

GMG:dd

Guy M. Gillette

Billing 8/01. ahe.

A.E.C.

J. Ed Lula M. Miller

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM

REGION V -

DMA-1315 X - North of Asbury
Dubuque County, Iowa.
and

DMA-1316 X - Pikes Peak Area
Dubuque County, Iowa

Harold J. Schrader, Mining Engineer
U.S. Bureau of Mines

Geology by W. A. Broughton, Geologist
U.S. Geological Survey

June 20, 1951.

General:

Following are the results of a field investigation of the application of J. E. and Julia M. Miller for an exploration loan. Both the Pikes Peak area and the Merritt-Ellis area have similiar features, so this report will pertain to the two properties so as to eliminate duplication. Only those deficiencies of information as noted in the letter requesting this examination will be discussed in this report.

Location of Property:

The specific location of the land owned and under lease has been shown by outlining this area in red on the maps submitted with the application. Physical features such as fences, roads and railroads are in evidence in the field so that the boundaries can be easily determined during exploration.

Drilling Plan and Methods:

Past mining has been on gash-vein lead-zinc deposit with workings rarely carried on below the water level. The drilling plan in general will be to place holes on known existing crevices or their extensions and explore for new mineralized openings below the old mining levels.

However, some of the holes will be drilled down through the oil shale in an attempt to find a pitch and flat type zinc deposit as exists on the Wisconsin-Illinois side of the river. There is no ore structure of this nature in the immediate area, but not many deep drill holes exist to either prove or disprove the existance of mineralization at that horizon. Even if no ore is found this information will be of value to determine area structure.

Initial locations of the drill holes are shown as red circles on the included maps. In the case of the Pilot Rock area they are spotted along what appears to be a N-S fracture as evidenced by some 'sucker holes' along this trend. Intersections of this line with the E-W ranges are considered the most favorable place to drill. Additional holes would be drilled along the E-W crevices from any of the early holes that were promising. It should be mentioned that locations shown are more indicative than actual as each hole spotted will require considerable field work and judgement from an accessability standpoint as well as other considerations.

All exploration is planned as churn drilling. Use of one rig has already been obtained and another one is being sought. Mr. Robert Miller stated they had to commence drilling on the Merritt property by July 1st. to validate that lease and that they would do so.

Geological Basis

See next page for attached report by W.B.A.S.

Conclusions; considering all factors the field team believes the project is worthy because:

1. The proposed drilling is in an area that was extensively mined for lead in the early days of this district.
2. Mining rarely went below water level so extensions of mineralization at depth on the lead crevices appear to be feasible.
3. Finding a zinc deposit of the pitch-flat type near the base of the formation is not certain, but the structure and location are very favorable for its occurrence.
4. Supervision of the project in an efficient and workmanlike manner appears likely.

Geologic report on the Pikes Peak and Merritt areas near Dubuque, Iowa

by

W. A. Broughton

Location of properties

The Pikes Peak and the Merritt areas are respectively about 4 miles southwest and about 4 miles northwest of Dubuque, Iowa (fig. 1). Those parts of the two areas covered by this report are shown on plates 1 and 2.

Occurrence of the ore

Ore-bearing beds

The stratigraphic sequence of rock units in the Pikes Peak and Merritt areas is virtually the same as in the Wisconsin-Illinois zinc-lead district east of the Mississippi River. The potential ore-bearing beds (fig. 2) occur in the Galena, Decorah, and Platteville formations, all of Ordovician age. The past production from these two areas has been from the Galena formation. Inasmuch as the depth of former mining was limited by the water table, there has been very little exploration of ore possibilities in the lower part of the Galena formation and in the underlying Decorah and Platteville formations. It is believed that mineralization in the Pikes Peak and Merritt areas is similar to that of the Wisconsin-Illinois area where the middle and upper Galena beds are mainly lead producers and the lower Galena, Decorah, and upper Platteville beds are mainly zinc producers. Miners' terms, subdividing the formations into members, are used in this report.

The youngest member of the Galena formation is the "yellow sandy"--a yellowish-buff thin- to medium-bedded dolomite about 113 feet thick. Underlying the "yellow sandy" is the "drab", a grayish-buff medium- to thick-bedded vuggy and cherty dolomite about 105 feet thick.

The Decorah formation is divided, from top to bottom, into the "gray", "blue", "oil rock", and "clay bed". The "gray" is a shaly thin-bedded grayish limestone about 12 feet thick. The "blue" is a thin-bedded shaly bluish limestone about 8 feet thick. The "oil rock", about 15 feet thick, is a brown fine-grained dense thin-bedded limestone with shale partings. The "clay bed", about 8 feet thick, is a greenish calcareous shale containing thin limestone lenses.

"Glass rock", the upper member of the Platteville formation, is a dense fine-grained shaly limestone with a maximum thickness of about one foot in this area. The "Trenton" is the lower member of the Platteville formation. The upper 30 feet of this member is a grayish shaly limestone and the lower 25 feet is a brown dolomite.

Geologic structure

All Ordovician rock units of the area have been gently folded into open anticlines and synclines whose axes trend generally east-west, north-south, northwest, and northeast.

Past mining was confined to nearly vertical veins occupying fractures ("crevices") in the "yellow sandy" and the upper part of the "drab". The major production came from nearly east-west crevices, but

north-south, northwest, and northeast mineralized fractures are indicated by alinement of old shallow lead pits. It is believed that these crevices will, in many cases, extend downward to the base of the "drab" as they do east of the Mississippi River, but owing to the elevation of the water table they have not been explored to any great extent below the upper part of the "drab".

A few of the east-west crevices that have been mined were steeply inclined either to the north or the south. In a few cases vertical crevices split into two fractures, one steeply inclined to the north and one steeply inclined to the south, in the upper part of the "drab". These inclined fractures suggest the beginning of "pitch" structures that controlled the location of major zinc ore bodies east of the Mississippi River.

Ore shoots, locally called "openings", occur at several stratigraphic horizons along the crevices. Openings may be as much as several hundred feet long and 15 feet high and broad.

Character of the ore

Major production from the Pikes Peak and Merritt areas has been in the form of galena that occurred as fine to coarse crystals. Above the water table the galena is commonly embedded in "ocher" (ferruginous clay and dolomitic sand) and may be accompanied by smithsonite. Below the

water table in the unoxidized portions of the crevices the galena is accompanied by pyrite, marcasite, calcite, and sphalerite. Normally the sphalerite begins in the lower part of the "yellow sandy" (fig. 2) and increases with depth whereas the amount of galena decreases with depth.

Exploration

Exploration for ore in this district is customarily by churn drilling. Prospecting for lead deposits by this method is, however, likely to be unsuccessful because the vertical drill hole may be parallel to and a few inches from a vertical lead crevice and yet not indicate ore. A prospector who can discover and follow a lead crevice by this method must be considered lucky. Churn drilling for pitch and flat zinc-ore bodies in the lower "drab", Decorah, and upper Platteville beds has greater possibilities because of the greater horizontal extent of the inclined pitches and accompanying flats.

The loan applicants plan to drill six initial holes in the Merritt area on the supposed extension of known lead crevices (pl. 1). They propose to drill eight holes in the Pikes Peak area (pl. 2) on possible intersections between known east-west lead crevices and north-south lead crevices (suggested by alinement of old shallow lead diggings). The applicants propose to drill every other hole to the "glass rock" unit in hopes of locating lower zinc ore.

This proposed initial drilling program appears satisfactory. All holes are favorably located for lead-ore exploration and have zinc-ore possibilities. All holes should extend to the base of the "drab", and holes that explore for the lower zinc ore should penetrate the upper few feet of the "Trenton". In the Merritt area at least holes 2, 3, and 4 (pl. 1) should be drilled for zinc ore as well as lead ore inasmuch as they appear to be located on a favorable zinc-bearing structure, namely, steep synclinal limbs. All holes should be competently logged as drilling progresses, and the program should be flexible enough to allow for changes in hole sites as pertinent information is obtained.

L. F. Grobel

Bm 465 6

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JUN 7 1951

Docket: DM-1315
DM-1316

J. S. and Lulu Z. Miller
Lead-zinc
exploration loan

Mr. J. B. Keedham
Executive Officer, DMA Field Team
Region V
5208 Colfax Avenue, South
Minneapolis 8, Minnesota

Dear Mr. Keedham:

The Lead-Zinc Branch has reviewed these two related applications submitted by J. S. and Lulu Z. Miller for loans to explore for lead and zinc in areas near Dubuque, Iowa, namely (DM-1315), the South Merritt property and the Merritt-Kallin area, north of Asbury, Dubuque County Iowa, and also (DM-1316), the Pikes Peak area, Dubuque County, Iowa.

Several area maps are submitted with both of these dockets excluding some geology and the location of several of the lead-zinc bearing fractures. However, none of the maps submitted show the boundaries of the specified properties, and the legal descriptions include certain mineral lots which cannot be located by the property descriptions given.

The applicants propose some drilling in these areas to determine, if possible, the location of ore bodies.

The estimated cost of the entire three year program is $[illegible] and of the area north of Asbury, is $[illegible]. For each area the time needed to complete the project is estimated to be 6 months.

The Lead-Zinc Branch recommends that an investigation be made to determine if these properties are desirable as exploration programs on the basis of the following. Information is needed for both properties as to the location of the boundaries of the areas they propose to explore. Also more specific information is needed as to what type of deposits they plan to prospect for in these areas, is it the joint controlled, fault-vein lead-zinc deposits in the Galena formation, or the pitch and flat type of zinc deposits that are the major producers in Wisconsin and Illinois, but are not yet known to exist in Iowa.

It is suggested that more specific information is needed from the applicants as to where, in these areas, they plan to drill and on what depth feel veins. Also an investigation of the proposed methods should be made, as far as possible, to determine if they plan to prospect by shaft or diamond drills.

It is suggested that a meeting of the applicant and the field team is desirable, preferably on the proposed properties to obtain more specific information as to the plans of the proposed program, the location of the initial drill holes, at least, in each area, and the justification for those holes. If on the basis of these investigations the field team believes that the Government should participate in the project, as many of the negotiations as possible should be entered into that are necessary to complete the contracts.

Very truly yours,

Tom Lyon
Chairman
Coordinating Committee

Lowell B. Moon
For the Bureau of Mines

Olaf N. Rove
For the Geological Survey

AVHoyl:emp
6/6/51

Copies to: Chief, Lead-Zinc Br.
L. A. McKnight
L. B. Moon
R. H. Sete
L. F. Strobel
Tom Lyon
Directors r. file
Adm. file
Br. r. file
Files

JUN 7 1951

Re: Docket: [illegible]-1315
and [illegible]-1316

Mr. and Mrs. J. H. Miller
[illegible] North [illegible] Park Avenue
[illegible] Park, Illinois

Dear Mr. and Mrs. Miller:

The Atomic Energy Commission of the Defense Materials Administration has reviewed your applications ([illegible]-1315 and [illegible]-1316) for leases to explore the Pikes Peak [illegible] and the Grand North of Asbury, Dubuque County, Iowa. The applications have been sent to Mr. A. H. Needham, Area Mine Officer of the Field Area, [illegible] Ifax Avenue, South, [illegible], Minnesota, for further consideration and advice.

Very truly yours,

[illegible], Director
Supply Division

Attachment
[illegible]
Copies to: A. H. Needham, Region V (2)
Chief, Lead-Zinc Br.
L. T. Kenright [illegible]
L. J. Moon
[illegible]
L. F. Strauss
Tom Lyon
Directors r. file [illegible]
Dr. file [illegible]
Adm. file
files

FILE COPY
SURNAME:

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

May 31, 1951

Mr. J. E. Miller
305 South Oak Park Avenue
Oak Park, Illinois

Subject: DMA-1316X DMA-1315X
Re: Exploration Loans
Merritt, Wallis, Riniker

My dear Mr. Miller:

Receipt is acknowledged of your applications and attachments of May 23, 1951 for exploration loans under the Defense Production Act of 1950.

The applications were assigned Docket Numbers DMA-1315X and DMA-1316X and were referred to Mr. Otto Herres, Chief, Lead-Zinc Branch on May 29, 1951.

In any future correspondence relating to your applications, kindly refer to DMA-1315X and DMA-1316X.

Sincerely yours,

LANDON F. STROBEL
jhs

Landon F. Strobel
Executive Secretary

LFSTROBEL:jhs
cc: Strobel-2
✓Files
Herres
Lyon

Form MF-103
(April 1951)

S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

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

DO NOT FILL IN THIS BLOCK

Docket No. DMA 1316X

Date received 5-28-51

Participation

J. E. and Lula M. Miller
305 So. Oak Park Ave.
Oak Park, Illinois

Name and address of applicant

Date May 23, 1941

FILL IN THIS BLOCK

Date of application May 23, 1951

Estimated cost $21,840.00

Mineral ~~or metal~~ Lead and Zinc

Percentage of Government participation 50%

Location ~~of mine~~ Pikes Peak area, Dubuque County, Iowa

Date of filing MF-100 Not filed

DMA Docket Number, if available None

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation? Individuals, husband and wife

*2. If a partnership, state names and addresses of partners. --

*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders. --

*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project. See attached sheet Page 1.

*5. Are you the owner or the lessee of the property? Owners

6. If owner, state what claims, liens, or encumbrances, if any, are against the property. See attached Page 1.

7. If lessee, attach a copy of the lease and state if it is in good standing. ---

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement See attached page 2.

9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)? $10,920.00. Yes

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

MAY 31 1951

5

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. See attached sheet, Page 1.

(*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. Pikes Peak

*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. See attached sheet, Page 1.

*13. State source and quantity of water available for operations and its sufficiency at all seasons. Ample water on property 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. None needed

15. State in detail how the ore could be shipped and how and where milled. Mill would be constructed on property

*16. History: See attached sheet, Page 1.

(*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: -- Not applicable

(*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. Not applicable

(*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.
-- Not applicable

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted? See attached Sheet, Pge. 3

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it. See page 3.

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. See attached sheet, Page 3.

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. See attached sheet, page 3.

(*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. See attached sheet, page 3

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.

E. Miller & Lula M Miller
(Name of company)

By
(Signature of authorized official)

May 23, 1951
(Date)

(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

J. E. and Lula M. Miller
305 So. Oak Park Ave.
Oak Park, Illinois

4. (a) U.S. Army of Engineers, 1917-1918
Michigan College of Mines, B.S.E.M. 1910
Mining lead on Pikes Peak area, 1909-1910
Mining engineering and assaying in New Year gold mine, Fergus County, Montana 1911.
County engineer, Fergus County, Montana, 1912-1917
Owner and operator of Lewistown Pipe Co., manufacturer of large concrete storm sewer pipe from 1918 to present.

(b) Robert E. Miller
Montana School of Mines, 1940-1941.
Foreman On U. S. Government Range development programs constructing earth fill dams in Montana 1936-1940
Building contractor, Billings, Mont. 1948-1951.

6. No claims, liens, or encumbrances of any nature.

10. (a) Lot one W½NE¼, Section 4, Twp. 88N., Rge. 2 E., 5th P.M.
Mineral Lots 272 and 273; Lot one of Mineral Lot 271;
Lot one of Mineral Lot 274; Lot one of Mineral Lot 276;
Dubuque Township, Dubuque County, Iowa.
(b) Same area as described above.

12. Three miles west of Dubuque, Iowa. Two and three tenths miles west of Illinois CentralmRailway on good gravelled county highway running along side of property.

16. (a) Total production of lead ore mined from ranges in this area was 11,850,000 pounds. Some of these crevices are known to extend under the land to the east and west, and others are as yet unproven under the adjacent territory. All of these crevices were extensively worked for lead ore, and in many of them good ore was left in the bottom when the work was abandoned because of the water. In others black jack is known to be present in quantity. In 1899 a partnership under the name of the Pike's Peak Mining company, undertook to unwater some of these mines for the zinc ore. A pump was installed on the Krugh and Amsden range, and later an old shaft on the Dando or Jew was opened up. The pump had a rated capacity of 300 gallons per minute and after a few weeks took the water level down sixtyfeet. This uncovered some galena and a considerable amount of black jack. The latter occurs in solution cavities in the blue Galena limestone, mixed with pyrite and the galena, mixed with some blende is below. Similar ore is found on the Jew crevice. Several hundred tons of the ore have been raised, and considerable bodies have been proven. The ore must be concentrated before it can be used, and the large amount of pyrite present makes it difficult to make a clean concentrate. Many of the other ranges are known to be valuable and will be opened up. 1/

(b) On the Locky land, north of Pike's Peak region proper, are the Old Rock Lead, the Locky and other crevices, including one worked by Messrs. Hird. These crevices have all yielded dry bone and show more or less jack. An effort is now being made to unwater the Locky for the sake of the blende. A lift pump driven by horse power has been installed, and a good body of jack and bone has been uncovered. 2/

(c) Since 1900 there has been some mining done in the Pikes Peak area and some lead and zinc was taken, however, there are no records available as to the amount of production during this time. For a geological report reference to U.S.Bureau of Mines bulletin R.I. 4212, March, 1948, Report of Investigations Dubuque Lead-Zinc District, Iowa, is made.

8.

Financial Statement
J.E. and Lula M. Miller
305 So. Oak Park Avenue
Oak Park, Illinois

May 1, 1951

Assets:		Liabilities
Cash in banks	$ 19,771.78	N
U . S. Gov't. Bonds	25,000.00	O
Lincoln Nat'l. Bank Stock	8,000.00	N
206 acre farm, Dubuque county, Iowa	30,000.00	E
3/4 interest in Lewistown Pipe Co. (not incorporated)	120,000.00	
Notes Lewistown Pipe Co.	92,968.57	
	$295,740.35	Net worth $295,740.35

Life insurance on J. E. Miller to Lula M. Miller, beneficiary
$37,000.00

J. E. and Lula M. Miller
305 So. Oak Park Ave.
Oak Park, Illinois

20. Exploration will be conducted for lead and zinc.

21. Test drilling in the area to determine ore bodies. Estimated time required 6 months after approval of project.

22. The basis of geology of the area is that solution caverns have been formed from crevices in limestone. These caverns have had crystalline lead and zinc deposited in them by ascending solutions.

23.

10,000 feet of contract drilling @ $1.75 per foot	$17,500.00	
Supervision and engineering	3,000.00	*
100 feet casing	300.00	*
Travel expenses	1,040.00	*
Total	$21,840.00	

Footnote 1/ Plate X and Page 562; Iowa Geological Survey, Vol. X; Annual Report 1899. Calvin, Samuel and Bain, H.F.

Footnote 2/ Page 562; Iowa Geological Survey, Vo. X; Annual Report 1899. Calvin, Samuel and Bain, H. F.

* These items are duplicated on the Merritt-Wallis application of the same applicants. In the event both applications are approved, a cost would amount to very little more than for one only.

24. Operations will commence immediately on approval of application and it is estimated that six months will be required for completion.

J. E. and Lula M. Miller
305 So. Oak Park Ave.
Oak Park, Illinois

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

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

DO NOT FILL IN THIS BLOCK

Docket No. dma 1316 X

Date received 5/28/51

Participation

J. E. and Lula M. Miller
305 So. Oak Park Ave.
Oak Park, Illinois

Name and address of applicant

Date May 23, 1941

FILL IN THIS BLOCK

Date of application May 23, 1951

Estimated cost $21,840.00

Mineral or metal Lead and Zinc

Percentage of Government participation 50%

Location of mine Pikes Peak area, Dubuque County, Iowa

Date of filing MF-100 Not filed

DMA Docket Number, if available None

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation? Individuals, husband and wife

*2. If a partnership, state names and addresses of partners. --

*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders. --

*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project. See attached sheet Page 1.

*5. Are you the owner or the lessee of the property? Owners

6. If owner, state what claims, liens, or encumbrances, if any, are against the property. See attached Page 1.

7. If lessee, attach a copy of the lease and state if it is in good standing. ---

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statemen See attached page 2.

9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)? $10,920.00. Yes

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

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. See attached sheet, Page 1.

(*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. Pikes Peak

*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. See attached sheet, Page 1.

*13. State source and quantity of water available for operations and its sufficiency at all seasons. Ample water on property 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. None needed

15. State in detail how the ore could be shipped and how and where milled. Mill would be constructed on property

*16. History: See attached sheet, Page 1.

(*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: -- Not applicable

(*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.) -- Not applicable

(*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.

-- Not applicable

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted? See attached Sheet, Pge. 3

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it. See page 3.

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. See attached sheet, Page 3.

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. See attached sheet, page 3.

(*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. See attached sheet, page 3

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.

J.E. Miller & Lula M. Miller
(Name of company)

By _____
(Signature of authorized official)

May 23, 1951
(Date)

_____
(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

J. E. and Lula M. Miller
305 So. Oak Park Ave.
Oak Park, Illinois

4. (a) U.S. Army of Engineers, 1917-1918
Michigan College of Mines, B.S.E.M. 1910
Mining lead on Pikes Peak area, 1909-1910
Mining engineering and assaying in New Year gold mine, Fergus County, Montana 1911.
County engineer, Fergus County, Montana, 1912-1917
Owner and operator of Lewistown Pipe Co., manufacturer of large concrete storm sewer pipe from 1918 to present.

(b) Robert E. Miller
Montana School of Mines, 1940-1941.
Foreman On U. S. Government Range development programs constructing earth fill dams in Montana 1936-1940
Building contractor, Billings, Mont. 1948-1951.

6. No claims, liens, or encumbrances of any nature.

10. (a) Lot one W½NE¼, Section 4, Twp. 88N., Rge. 2 E., 5th P.M.
Mineral Lots 272 and 273; Lot one of Mineral Lot 271;
Lot one of Mineral Lot 274; Lot one of Mineral Lot 276;
Dubuque Township, Dubuque County, Iowa.
(b) Same area as described above.

12. Three miles west of Dubuque, Iowa. Two and three tenths miles west of Illinois Central Railway on good gravelled county highway running along side of property.

16. (a) Total production of lead ore mined from ranges in this area was 11,850,000 pounds. Some of these crevices are known to extend under the land to the east and west, and others are as yet unproven under the adjacent territory. All of these crevices were extensively worked for lead ore, and in many of them good ore was left in the bottom when the work was abandoned because of the water. In others black jack is known to be present in quantity. In 1899 a partnership under the name of the Pike's Peak Mining company, undertook to unwater some of these mines for the zinc ore. A pump was installed on the Brugh and Amsden range, and later an old shaft on the Dando or Jew was opened up. The pump had a rated capacity of 300 gallons per minute and after a few weeks took the water level down sixtyfeet. This uncovered some galena and a considerable amount of black jack. The latter occurs in solution cavities in the blue Galena limestone, mixed with pyrite and the galena, mixed with some blende is below. Similar ore is found on the Jew crevice. Several hundred tons of the ore have been raised, and considerable bodies have been proven. The ore must be concentrated before it can be used, and the large amount of pyrite present makes it difficult to make a clean concentrate. Many of the other ranges are known to be valuable and will be opened up. 1 /

(b) On the Locky land, north of Pike's Peak region proper, are the Old Rock Lead, the Locky and other crevices, including one worked by Messrs. Hird. These crevices have all yielded dry bone and show more or less jack. An effort is now being made to unwater the Locky for the sake of the blende. A lift pump driven by horse power has been installed, and a good body of jack and bone has been uncovered. 2 /

(c) Since 1900 there has been some mining done in the Pikes Peak area and some lead and zinc was taken, however, there are no records available as to the amount of production during this time. For a geological report reference to U.S.Bureau of Mines bulletin R.I. 4212, March, 1948, Report of Investigations Dubuque Lead-Zinc District, Iowa, is made.

8.

Financial Statement
J.E. and Lula M. Miller
305 So. Oak Park Avenue
Oak Park, Illinois

May 1, 1951

Assets:		Liabilities
Cash in banks	$ 19,771.78	N
U . S. Gov't. Bonds	25,000.00	O
Lincoln Nat'l. Bank Stock	8,000.00	N
206 acre farm, Dubuque county, Iowa	30,000.00	E
3/4 interest in Lewistown Pipe Co. (not incorporated)	120,000.00	
Notes Lewistown Pipe Co.	92,968.57	
	$295,740.35	Net worth $295,740.35

Life insurance on J. E. Miller to Lula M. Miller, beneficiary
$37,000.00

J. E. and Lula M. Miller
305 So. Oak Park Ave.
Oak Park, Illinois

20. Exploration will be conducted for lead and zinc.

21. Test drilling in the area to determine ore bodies. Estimated time required 6 months after approval of project.

22. The basis of geology of the area is that solution caverns have been formed from crevices in limestone. These caverns have had crystalline lead and zinc deposited in them by ascending solutions.

23.

10,000 feet of contract drilling @ $1.75 per foot	$17,500.00	
Supervision and engineering	3,000.00	*
100 feet casing	300.00	*
Travel expenses	1,040.00	*
Total	$21,840.00	

Footnote 1/ Plate X and Page 562; Iowa Geological Survey, Vol. X; Annual Report 1899. Calvin, Samuel and Bain, H.F.

Footnote 2/ Page 562; Iowa Geological Survey, Vo. X; Annual Report 1899. Calvin, Samuel and Bain, H. F.

* These items are duplicated on the Merritt-Wallis application of the same applicants. In the event both applications are approved, a cost would amount to very little more than for one only.

24. Operations will commence immediately on approval of application and it is estimated that six months will be required for completion.

J. E. and Lula M. Miller
305 So. Oak Park Ave.
Oak Park, Illinois

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

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

DO NOT FILL IN THIS BLOCK

Docket No. dma 1316 X

Date received 5/28/51

Participation

J. E. and Lula M. Miller
305 So. Oak Park Ave.
Oak Park, Illinois

Name and address of applicant

Date May 23, 1951

FILL IN THIS BLOCK

Date of application May 23, 1951

Estimated cost $21,840.00

Mineral or metal Lead and Zinc

Percentage of Government participation 50%

Location of mine Pikes Peak area, Dubuque County, Iowa

Date of filing MF-100 Not filed

DMA Docket Number, if available None

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation? Individuals, husband and wife

*2. If a partnership, state names and addresses of partners. ---

*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders. ---

*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project. See attached sheet, Page 1.

*5. Are you the owner or the lessee of the property? Owners

6. If owner, state what claims, liens, or encumbrances, if any, are against the property. See attached Page 1.

7. If lessee, attach a copy of the lease and state if it is in good standing. ---

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement. See attached page 2

9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)? $10,920.00. Yes

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

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. See attached sheet, Page 1.

(*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. Pikes Peak

*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. See attached sheet, Page 1.

*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. Ample water on property all seasons

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work. None needed

15. State in detail how the ore could be shipped and how and where milled. Mill would be constructed on property.

*16. History: See attached sheet, Page 1.

(*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: -- Not applicable

(*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. Not applicable

(*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.

-- Not applicable

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted? See attached sheet Page 3.

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it. See Page 3/

NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

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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:

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(*c*) Cost of necessary repairs to existing facilities, structures, and buildings.

(*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.

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(*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. See attached sheet, page 3

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.

J. E. Miller & Lula M. Miller
(Name of company)

By _____
(Signature of authorized official)

May 23, 1951
(Date)

_____
(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

J. E. and Lula M. Miller
305 So. Oak Park Ave.
Oak Park, Illinois

U.S. Army of Engineers, 1917-1918

4. (a) Michigan College of Mines, B.S.E.M. 1910
Mining lead on Pikes Peak area, 1909-1910
Mining engineering and assaying in New Year gold mine, Fergus County, Montana 1911.
County engineer, Fergus County, Montana, 1912-1917
Owner and operator of Lewistown Pipe Co., manufacturer of large concrete storm sewer pipe from 1918 to present.

(b) Robert E. Miller
Montana School of Mines, 1940-1941.
Foreman on U.S. Government Range development program constructing earth fill dams in Montana 1933-1940
Building contractor, Billings, Mont. 1943-1951.

6. No claims, liens, or encumbrances of any nature.

10. (a) Lot one W½NE¼, Section 4, Twp. 88N., Rge. 2 E., 5th P.M.
Mineral Lots 272 and 273; Lot one of Mineral Lot 271;
Lot one of Mineral Lot 274; Lot one of Mineral Lot 273;
Dubuque Township, Dubuque County, Iowa.
(b) Same area as described above.

12. Three miles west of Dubuque, Iowa. Two and three tenths miles west of Illinois Central Railway on good gravelled county highway running along side of property.

13. (a) Total production of lead ore mined from ranges in this area was 11,000,000 pounds. Some of these crevices are known to extend under the land to the east and west, and others are as yet unproven under the adjacent territory. All of these crevices were extensively worked for lead ore, and in many of them good ore was left in the bottom when the work was abandoned because of the water. In others black jack is known to be present in quantity. In 1899 a partnership under the name of the Pike's Peak Mining company, undertook to unwater some of these mines for the zinc ore. A pump was installed on the Brugh and Ansden range, and later an old shaft on the Dando or Jew was opened up. The pump had a rated capacity of 300 gallons per minute and after a few weeks took the water level down sixty feet. This uncovered some galena and a considerable amount of black jack. The latter occurs in solution cavities in the blue Galena limestone, mixed with pyrite and the galena, mixed with some blende, is below. Similar ore is found on the Jew crevice. Several hundred tons of the ore have been raised, and considerable bodies have been proven. The ore must be concentrated before it can be used, and the large amount of pyrite present makes it difficult to make a clean concentrate. Many of the other ranges are known to be valuable and will be opened up. 1/

(b) On the Locky land, north of Pike's Peak region proper, are the Old Rock Lead, the Locky and other crevices, including one worked by Messrs. Hird. These crevices have all yielded dry bone and show more or less jack. An effort is now being made to unwater the Locky for the sake of the blende. A lift pump driven by horse power has been installed, and a good body of jack and bone has been uncovered. 2/

(c) Since 1900 there has been some mining done in the Pikes Peak area and some lead and zinc was taken, however, there are no records available as to the amount of production during this time. For a geological report reference to U.S. Bureau of Mines bulletin R.I. 4212, March, 1948, Report of Investigations Dubuque Lead-Zinc District, Iowa, is made.

8.

Financial Statement
J. E. and Lula M. Miller
305 So. Oak Park Avenue
Oak Park, Illinois

May 1, 1951

Assets:		Liabilities
Cash in banks	$ 19,771.78	
U . S. Gov't. Bonds	25,000.00	N
Lincoln Nat'l. Bank Stock	8,000.00	O
206 acre farm, Dubuque county, Iowa	30,000.00	N
3/4 interest in Lewistown Pipe Co.(not incorporated)	120,000.00	E
Notes Lewistown Pipe Co.	92,968.57	
	$295,740.35	Net worth $295,740.35

Life insurance on J. E. Miller to Lula M. Miller, beneficiary
$37,000.00

J. E. and Lula M. Miller
305 So. Oak Park Ave.
Oak Park, Illinois

20. Exploration will be conducted for lead and zinc.

21. Test drilling in the area to determine ore bodies. Estimated time required 6 months after approval of project.

22. The basis of geology of the area is that solution caverns have been formed from crevices in limestone. These caverns have had crystalline lead and zinc deposited in them by ascending solutions.

23.

10,000 feet of contract drilling @ $1.75 per foot	$17,500.00
Supervision and engineering	3,000.00 *
100 feet casing	300.00 *
Travel expenses	1,040.00 *
Total	$21,840.00

Footnote 1/ Plate X and Page 562; Iowa Geological Survey, Vol. X; Annual Report 1899. Calvin, Samuel and Bain, H.F.

Footnote 2/ Page 562; Iowa Geological Survey, Vo. X; Annual Report 1899. Calvin, Samuel and Bain, H. F.

* These items are duplicated on the Merritt-Wallis application of the same applicants. In the event both applications are approved, a cost would amount to very little more than for one only.

24. Operations will commence immediately on approval of application and it is estimated that six months will be required for completion.

J. E. and Lula M. Miller
305 So. Oak Park Ave.
Oak Park, Illinois

MINING LEASE

THIS INDENTURE Made and entered into this 12th day of May, 1951 by and between J.Allen Wallis and Irma W.Wallis, husband and wife, and Martin Riniker and Maylo Riniker, husband and wife - - - - - - - - - - - - - - - - - - of Dubuque County, Iowa, hereinafter referred to as Lessors, and J. E. Miller of Cook County, Illinois, hereinafter referred to as Lessee: WITNESSETH:

1. That, in consideration of the covenants and agreements hereinafter set out, to be kept and performed by Lessee, Lessors do hereby lease unto Lessee for prospecting and mining for lead, zinc and other valuable metals, for ten (10) years from the date hereof, the following described premises situated in Dubuque County, Iowa, to-wit:

Lot 1 of Lot 1 of the North fractional 1/2 of the Northwest fractional 1/4, Lot 1 of the South 1/2 of the Northwest 1/4, Northwest 1/4 of the Southwest 1/4, Lot 3 of the Northeast 1/4, West 1/2 of the Southeast 1/4, and the East 1/2 of the Southwest 1/4, all in Section 5; Lot 4 of the North 1/2 of the Northwest 1/4, and Lot 2 of the Southwest 1/4 of the Northwest 1/4 of Section 4; all in Township 89, North, Range 2, East of the 5th P.M., and Lot 2 of the Southeast 1/4 of the Southwest 1/4 and Lot 4 of the South 1/2 of the Southeast 1/4 of Section 32, in Township 90, North, Range 2, East of the 5th P.M., according to the Government survey and the recorded plats of said respective subdivisions, including the right of ingress and egress over private right-of-way as described in the deeds recorded in Book 1, on pages 344 and 346, and in Book 30, page 335 of the deed records of said County.

2. Lessors hereby give and grant unto Lessee, for said term the exclusive right and license to prospect and mine land for lead, zinc, and other ores, together with the right and license to prepare for market on said premises and remove and sell all lead, zinc and other concentrates produced from said ores, with the right to construct buildings or other structures and to make excavations, openings, stockpiles, dumps, ditches and other improvements upon said premises, including the use of water in said operations, and to place such machinery thereon as Lessee may deem necessary for efficiently prospecting and mining said land and treating the ores mined therefrom with the right in lessee to remove all property so placed thereon at any time during the term thereof or within six (6) months after the termination of this lease.

3. The lessee agrees to pay the lessors as rent and tributes for the uses, rights and privileges hereby given as follows:

a. In the event the mine rock or wet mill concentrates are shipped the royalty F.O.B. mine shall be

Seven per cent (7%) of the sale value of the zinc,
Seven per cent (7%) of the sale value of the lead,
Seven per cent (7%) of the sale value of the iron.

No royalty shall be required to be paid on the premiums or bonuses received from the Metals Reserve Company or other governmental agency by lessee.

M I N I N G   L E A S E

This INDENTURE Made and entered into this 12th day of May, 1951 by and between J. Allen Wallis and Irma W. Wallis, husband and wife, and Martin Stalker and Mayle Stalker, husband and wife - - - - - - - - - - - - - - - - of Dubuque County, Iowa, hereinafter referred to as Lessors, and J. R. Miller of Cook County, Illinois, hereinafter referred to as Lessee: WITNESSETH:

1. That, in consideration of the covenants and agreements hereinafter set out, to be kept and performed by Lessee, Lessors do hereby lease unto Lessee for prospecting and mining for lead, zinc and other valuable metals, for ten (10) years from the date hereof, the following described premises situated in Dubuque County, Iowa, to-wit:

Lot 1 of Lot 1 of the North fractional 1/2 of the Northwest fractional 1/4, Lot 1 of the South 1/2 of the Northwest 1/4, Northwest 1/4 of the Southwest 1/4, Lot 3 of the Northeast 1/4, West 1/2 of the Southeast 1/4, and the East 1/2 of the Southwest 1/4, all in Section 5; Lot 4 of the North 1/2 of the Northwest 1/4, and Lot 2 of the Southwest 1/4 of the Northwest 1/4 of Section 4; all in Township 89, North, Range 2, East of the 5th P.M., and Lot 2 of the Southeast 1/4 of the Southwest 1/4 and Lot 4 of the South 1/2 of the Southeast 1/4 of Section 32, in Township 90, North, Range 2, East of the 5th P.M., according to the Government survey and the recorded plats of said respective subdivisions, including the right of ingress and egress over private right-of-way as described in the deeds recorded in Book 1, on pages 344 and 346, and in Book 30, page 335 of the deed records of said County.

2. Lessors hereby give and grant unto Lessee, for said term the exclusive right and license to prospect and mine land for lead, zinc, and other ores, together with the right and license to prepare for market on said premises and remove and sell all lead, zinc and other concentrates produced from said ores, with the right to construct buildings or other structures and to make excavations, openings, stockpiles, dumps, ditches and other improvements upon said premises, including the use of water in said operations, and to place such machinery thereon as Lessee may deem necessary for efficiently prospecting and mining said land and treating the ores mined therefrom with the right in Lessee to remove all property so placed thereon at any time during the term thereof or within six (6) months after the termination of this Lease.

3. The Lessee agrees to pay the Lessors as rent and tributes for the uses, rights and privileges hereby given as follows:

a. In the event the mine rock or wet mill concentrates are shipped the royalty F.O.B. mine shall be

Seven per cent (7%) of the sale value of the zinc,
Seven per cent (7%) of the sale value of the lead,
Seven per cent (7%) of the sale value of the iron.

No royalty shall be required to be paid on the premiums or bonuses received from the Metals Reserve Company or other governmental agency by Lessee.

b. In the event no governmental premium or bonus plan on ore products is in effect, the royalty F.O.B. mine shall be

Seven per cent (7%) of the sale value of the zinc,
Seven per cent (7%) of the sale value of the lead,
Seven per cent (7%) of the sale value of the iron.

c. It is agreed that all ore values are those of unroasted and unfloated mine ores, without regard to any added value due to roasting, magnetic separation, production of acid, flotation, production of any other by-products or other treatment. It is further agreed and understood that in the event the ore is not shipped, but is processed in a mill or plant owned by the lessee, the royalty shall be based on the market value of the raw ore at the time the same is mined.

d. The lessee agrees to pay the royalty on or before the 30th day of each month for all ores sold or delivered to any mill or plant owned by the lessee during the preceding month.

4. Lessee will keep accurate books showing quantities and kinds of ores produced and sold from said lands, when and to whom sold and the money received from sales, and such books of account shall be open to the inspection of the lessors at all reasonable times and hours.

5. All mining operations shall be carried on in a minerlike and workmanlike manner as the same are usually conducted in said locality.

6. It is agreed that ores mined from the lands covered hereby shall be cleaned and prepared for market in the usual and customary manner and if mill or flotation plant shall be located on these lands, lessee shall have the right to treat ores from other lands therein. Said ores may be milled in a plant in which other ores are being treated.

7. Lessee shall have the right to remove ores and minerals mined on the lands covered hereby through a shaft or shafts located on adjoining lands, and to hoist ores and minerals mined on adjoining lands through a shaft or shafts on this land. In case lessee shall avail itself of any of the privileges granted under this paragraph and under paragraph 6 hereof, it shall exercise special care to see that all ores are properly credited to the lands from which they may be mined or produced.

8. The lessors shall at all reasonable times and hours have access to any mines on said land for the purpose of inspection and ascertaining the progress of the work being done, but shall not interfere with the prospecting and mining of lessee.

9. Lessee agrees to commence mining operations on said land within thirty (30) days after the first day of July, 1951, and to continue such mining operations with not less than four (4) men for ten (10) months in each year during the continuance of this lease, unless prevented by fire, strikes, delays of carriers, unavoidable accidents, inclement weather, or other causes beyond the control of lessee; provided, however, that prospecting by drilling on said premises shall be construed as mining operations hereunder and in connection therewith the requirement of having four men engaged shall not apply.

b. In the event no governmental premium or bonus plan on ore products is in effect, the royalty F.O.B. mine shall be

Seven per cent (7%) of the sale value of the zinc,
Seven per cent (7%) of the sale value of the lead,
Seven per cent (7%) of the sale value of the iron.

c. It is agreed that all ore values are those of unprocessed and unflotated mine ores, without regard to any added value due to roasting, magnetic separation, production of acid, flotation, production of any other by-products or other treatment. It is further agreed and understood that in the event the ore is not shipped, but is processed in a mill or plant owned by the lessee, the royalty shall be based on the market value of the raw ore at the time the same is mined.

d. The lessee agrees to pay the royalty on or before the 30th day of each month for all ores sold or delivered to any mill or plant owned by the lessee during the preceding month.

4. Lessee will keep accurate books showing quantities and kinds of ores produced and sold from said lands, when and to whom sold and the money received from sales, and such books of account shall be open to the inspection of the lessors at all reasonable times and hours.

5. All mining operations shall be carried on in a miner-like and workmanlike manner as the same are usually conducted in said locality.

6. It is agreed that ores mined from the lands covered hereby shall be cleaned and prepared for market in the usual and customary manner and if mill or flotation plant shall be located on these lands, lessee shall have the right to treat ores from other lands therein. Said ores may be milled in a plant in which other ores are being treated.

7. Lessee shall have the right to remove ores and minerals mined on the lands covered hereby through a shaft or shafts located on adjoining lands, and to hoist ores and minerals mined on adjoining lands through a shaft or shafts on this land. In case lessee shall avail itself of any of the privileges granted under this paragraph and under paragraph 6 hereof, it shall exercise special care to see that all ores are properly credited to the lands from which they may be mined or produced.

8. The lessors shall at all reasonable times and hours have access to any mines on said land for the purpose of inspection and ascertaining the progress of the work being done, but shall not interfere with the prospecting and mining of lessee.

9. Lessee agrees to commence mining operations on said land within thirty (30) days after the first day of July, 1951, and to continue such mining operations with not less than four (4) men for ten (10) months in each year during the continuance of this lease, unless prevented by fire, strikes, delays of carriers, unavoidable accidents, inclement weather, or other causes beyond the control of lessee; provided, however, that prospecting by drilling on said premises shall be construed as mining operations hereunder and in connection therewith the requirement of having four men engaged shall not apply.

In the event a body of ore is discovered on the leased premises the lessee may conduct drilling operations on adjoining premises for the purpose of determining the extent of such ore body and drilling operations so conducted shall be considered and construed as mining operations under the terms of this lease.

10. In the event that mining operations shall not be conducted on said land as hereinbefore provided, lessee shall pay to lessors the sums of Twenty-five Dollars ($25) and such payment shall operate as rental for one (1) month and shall cover the right and privilege in lessee to suspend mining operations for and during said one (1) month period. In like manner and upon like payments, mining operations may be further deferred or suspended for like periods successively during the term of this lease. All such payments shall be considered as advance royalty and shall be deducted from royalties subsequently accruing hereunder to said landowners.

11. It is further agreed in the event the East St. Louis smelter market for lead or zinc shall at any time during the life of this lease drop below fourteen cents (14¢) per pound the lessee shall have the privilege of discontinuing work under this lease until the said market price equals or exceeds fourteen cents (14¢) per pound; said cessation from work in no event to exceed a period of two (2) years at any one time.

12. Lessee shall furnish lessors a true copy of the log of each drill hole put down on said land by lessee, showing any assays made of cuttings therefrom..

13. Lessee shall have the rightto erect dwelling houses or other habitations on said land without the consent of the lessors. In case of sale of buildings placed on said premises by lessee, the owners of said lands shall have first privilege of buying same. Lessee also agrees to properly protect and timber all shafts sunk by it on said premises in order to protect horses, cattle and other domestic animals belonging to the owner or tenant of said premises from falling therein. Lessee shall do no unnecessary damage to growing crops on said land, and in case any such damage is done to said crops, it shall pay the reasonable amount of such damage.

14. The lessee agrees to fill up all prospect holes as soon as same are abandoned and also where there are open holes or shafts on which it is not working to protect and enclose same to prevent stock from falling therein.

15. No shaft shall be sunk within four hundred (400) feet of the dwelling house or other buildings of the lessors and should the well be drained by pumping water at the mines lessee agrees to drill well deeper so as to furnish water for the owners of said land.

16. In the event ores and minerals mined from other lands are milled on lands covered hereby, lessee shall pay to the owners of said lands for such privilege the sum of Fifty Dollars ($50) per month during the time such milling shall be carried on, provided no such payment shall be required when ores mined on these lands are also being milled.

17. After the expiration of the term hereinbefore fixed, this lease shall continue in force and effect so long thereafter as ores shall be produced from said lands by the lessee, or it shall continue prospecting or mining operations on said land or any part thereof in good faith, or so long as rental is paid as agreed.

In the event a body of ore is discovered on the leased premises the lessee may conduct drilling operations on adjoining premises for the purpose of determining the extent of such ore body and drilling operations so commenced shall be considered and construed as mining operations under the terms of this lease.

10. In the event that mining operations shall not be conducted on said land as hereinbefore provided, lessee shall pay to lessors the sum of Twenty-five Dollars ($25) and such payment shall operate as rental for one (1) month and shall cover the right and privilege in lessee to suspend mining operations for one further said one (1) month period. In like manner and upon like payments, mining operations may be further deferred or suspended for like periods successively during the term of this lease. All such payments shall be considered as advance royalty and shall be deducted from royalties subsequently accruing hereunder to said landowners.

11. It is further agreed in the event the last St. Louis smelter market for lead or zinc shall at any time during the life of this lease drop below fourteen cents (14¢) per pound the lessee shall have the privilege of discontinuing work under this lease until the said market price equals or exceeds fourteen cents (14¢) per pound; said cessation from work in no event to exceed a period of two (2) years in any one time.

12. Lessee shall furnish lessors a true copy of the log of each drill hole put down on said land by lessee, showing any assays made of cuttings therefrom.

13. Lessee shall have the rights over dwelling houses or other buildings on said land without the consent of the lessors. In case of sale of buildings placed on said premises by lessee, the owners of said lands shall have first privilege of buying same. Lessee also agrees to prosecute work and timber all shafts sunk by it on said premises in order to protect horses, cattle and other domestic animals belonging to the owner or tenant of said premises from falling therein. Lessee shall do no unnecessary damage to growing crops on said land, and in case any such damage is done to said crops, it shall pay the reasonable amount of such damage.

14. The lessee agrees to fill up all prospect holes as soon as same are abandoned and also where there are open holes or shafts on which it is not working to protect and enclose same to prevent accidents from falling therein.

15. No shaft shall be sunk within four hundred (400) feet of the dwelling house or other buildings of the lessors and should the well to be drained by pumping water at the mines lessee agrees so drill well deeper so as to furnish water for the owners of said land.

16. In the event oil and minerals mined from other lands are milled on lands covered hereby, lessee shall pay to the owners of said lands for such privilege the sum of Fifty Dollars ($50) per month during the time such milling shall be carried on, provided no such payment shall be required when ores mined on these lands are also being milled.

17. After the expiration of the term hereinbefore fixed, this lease shall continue in force and effect so long thereafter as oil or gas shall be produced from said lands by the lessee, or it shall continue prospecting or mining operations on said land or any part thereof in good faith, or so long as rental is paid as herein.

18. Lessee shall at all times have the right to surrender and release this lease unto lessors, first giving unto lessors fifteen (15) days written notice of intention to do so, and upon such surrender and release being made, lessee shall thereupon be released and discharged from all further obligations hereunder. Such notice and release may be given or delivered to lessors personally or by registered mail, postage prepaid, addressed to lessors at their last known address, or to such other address as they may from time to time in writing designate.

19. The lessors shall have the right to terminate this lease when and if the lessee shall fail to operate or pay rental agreed upon according to the terms of said lease for any continuous period of three (3) months, by mailing to said lessee at its last known address, by registered mail, a notice in writing, setting forth the conditions of the lease which have been violated or unperformed by the said lessee. Said notice shall be termed and conditioned so that the said lessee may, within fifteen (15) days after date of mailing, continue operating under the terms of the lease. However, if at the end of said fifteen (15) days the lessee shall have failed to so operate or pay rent, the filing of the notice, a copy of which has been sent to the lessee, together with an affidavit of proof of mailing, in the office of the County Recorder of Dubuque County, Iowa, shall cause this lease to cease and become null and void.

20. The terms and conditions of this lease shall be binding upon and inure to the benefit of the heirs, successors, legal representatives and assigns of the parties hereto.

21. It is understood and agreed between the parties hereto that J. Allen Wallis and Irma W. Wallis have sold the above described premises to Martin Riniker and Maylo Riniker, under a written contract dated March 1st, 1951, and that the purchase price of said real estate under said contract is payable in deferred payments as therein provided and in consideration thereof it is agreed that during the term of said contract, and until said purchase price is fully paid, the royalties and rentals provided for under this lease shall be paid to the said Lessors as follows:

> Fifty per cent (50%) of said royalties and rentals shall be paid to J. Allen Wallis, his heirs, devisees, legatees, successors and assigns, and
>
> The remaining Fifth per cent (50%) of said royalties and rentals shall be paid to Martin Riniker and Maylo Riniker.

It is further agreed that in the event Martin Riniker and Maylo Riniker default in the performance of said real estate contract and forfeit their interest in said contract and said real estate that then and in that event all of the rights of the said Martin Riniker and Maylo Riniker to royalties and rentals provided for hereunder shall thereupon cease and terminate and all royalties and rentals shall thereafter be payable to J.Allen Wallis, his heirs, devisees, legatees, successors and assigns and this lease shall, except as thus qualified, remain in full force and effect.

Royalties and rentals received by J.Allen Wallis hereunder shall not be treated as payments on the purchase price of said real estate under said contract, but shall be in addition to said purchase price.

18. Lessee shall at all times have the right to surrender and release this lease unto lessors, first giving unto lessors fifteen (15) days written notice of intention to do so, and upon such surrender and release being made, lessee shall thereupon be released and discharged from all further obligations hereunder. Such notice and release may be given or delivered to lessors personally or by registered mail, postage prepaid, addressed to lessors at their last known address, or to such other address as they may from time to time in writing designate.

19. The lessors shall have the right to terminate this lease when and if the lessee shall fail to operate or pay rental agreed upon according to the terms of said lease for any continuous period of three (3) months, by mailing to said lessee at its last known address, by registered mail, a notice in writing, setting forth the conditions of the lease which have been violated or unperformed by the said lessee. Said notice shall be termed and conditioned so that said lessee may, within fifteen (15) days after date of mailing, continue operating under the terms of the lease. However, if at the end of said fifteen (15) days the lessee shall have failed to so operate or pay rent, the filing of the notice, a copy of which has been sent to the lessee, together with an affidavit of proof of mailing, in the office of the County Recorder of Shelby County, Iowa, shall cause this lease to cease and become null and void.

20. The terms and conditions of this lease shall be binding upon and inure to the benefit of the heirs, successors, legal representatives and assigns of the parties hereto.

21. It is understood and agreed between the parties hereto that J. Allen Wallis and Iva W. Wallis have sold the above described premises to Martin Hinker and Mayle Hinker, under a written contract dated March 1st, 1951, and that the purchase price of said real estate under said contract is payable in deferred payments as therein provided and in consideration thereof it is agreed that during the term of said contract, and until said purchase price is fully paid, the royalties and rentals provided for under this lease shall be paid to the said lessors as follows:

> Fifty per cent (50%) of said royalties and rentals shall be paid to J. Allen Wallis, his heirs, devisees, legatees, successors and assigns, and
>
> The remaining fifty per cent (50%) of said royalties and rentals shall be paid to Martin Hinker and Mayle Hinker.

It is further agreed that in the event Martin Hinker and Mayle Hinker default in the performance of said real estate contract and forfeit their interest in said contract and said real estate that then and in that event all of the rights of the said Martin Hinker and Mayle Hinker to royalties and rentals provided for hereunder shall thereupon cease and terminate and all royalties and rentals shall thereafter be payable to J. Allen Wallis, his heirs, devisees, legatees, successors and assigns and this lease shall, except as thus modified, remain in full force and effect.

Royalties and rentals received by J. Allen Wallis hereunder shall not be credited as payments on the purchase price of said real estate under said contract, but shall be in addition to said purchase price.

It is further understood and agreed that when the purchase price of said real estate is fully paid, according to the terms of said contract, the rights and liabilities of J. Allen Wallis and Irma W. Wallis, under the terms of this lease shall cease and terminate and all royalties and rentals provided for hereunder and thereafter accruing shall be the sole property of and payable to Martin Riniker and Maylo Riniker and this lease, except as thus qualified, shall remain in full force and effect.

IN WITNESS WHEREOF the parties hereto have duly executed this indenture on the day and year first above written.

J. ALLEN WALLIS /s/
IRMA W. WALLIS /s/
MARTIN RINIKER /s/
MAYLO RINIKER /s/
Lessors

J. E. MILLER /s/
Lessee

STATE OF IOWA)
) SS:
DUBIQUE COUNTY)

On this 12th day of May, A. D. 1951, before me, a Notary Public of Iowa in and for said County, personally appeared J. Allen Wallis and Irma W. Wallis, husband and wife, and Martin Riniker and Maylo Riniker, husband and wife, to me known to be the persons named in and who executed the foregoing instrument and acknowledged that they executed the same as their voluntary act and deed.

J. ALLEN WALLIS, JR. /s/ (SEAL)
Notary Public, Dubuque County, Iowa

STATE OF IOWA)
) SS:
COUNTY OF DUBUQUE

On this 12th day of May, A. D. 1951, before me, a Notary Public of Iowa in and for said County, personally appeared J. E. Miller, to me known to be the person named in and who executed the foregoing instrument and acknowledged that he executed the same as his voluntary act and deed.

FRANK D. GILLOON /s/
Notary Public in and for said
County and State

(SEAL)

It is further understood and agreed that when the purchase price of said real estate is fully paid, according to the terms of said contract, the rights and liabilities of J. Allen Wallis and Irma W. Wallis, under the terms of this lease shall cease and terminate and all royalties and rentals provided for hereunder and thereafter accruing shall be the sole property of and payable to Martin Rinker and Mayo Rinker and this lease, except as thus qualified, shall remain in full force and effect.

IN WITNESS WHEREOF the parties hereto have duly executed this indenture on the day and year first above written.

J. Allen Wallis /s/
Irma W. Wallis /s/
Martin Rinker /s/
Mayo Rinker /s/
lessors

J. E. Miller /s/
lessee

STATE OF IOWA }
DUBUQUE COUNTY } ss:

On this 12th day of May, A. D. 1951, before me, a Notary Public of Iowa in and for said County, personally appeared J. Allen Wallis and Irma W. Wallis, husband and wife, and Martin Rinker and Mayo Rinker, husband and wife, to me known to be the persons named in and who executed the foregoing instrument and acknowledged that they executed the same as their voluntary act and deed.

J. Allen Wallis, Jr. /s/ (SEAL)
Notary Public, Dubuque County, Iowa

STATE OF IOWA }
COUNTY OF DUBUQUE } ss:

On this 12th day of May, A. D. 1951, before me, a Notary Public of Iowa in and for said County, personally appeared J. E. Miller, to me known to be the person named in and who executed the foregoing instrument and acknowledged that he executed the same as his voluntary act and deed.

Frank D. Gibbons /s/
Notary Public in and for said
County and State.

(SEAL)

MINING LEASE

THIS INDENTURE Made and entered into this 12th day of May, 1951 by and between J.Allen Wallis and Irma W.Wallis, husband and wife, and Martin Riniker and Maylo Riniker, husband and wife - - - - - - - - - - - - - - - - - - of Dubuque County, Iowa, hereinafter referred to as Lessors, and J. E. Miller of Cook County, Illinois, hereinafter referred to as Lessee: WITNESSETH:

1. That, in consideration of the covenants and agreements hereinafter set out, to be kept and performed by Lessee, Lessors do hereby lease unto Lessee for prospecting and mining for lead, zinc and other valuable metals, for ten (10) years from the date hereof, the following described premises situated in Dubuque County, Iowa, to-wit:

Lot 1 of Lot 1 of the North fractional 1/2 of the Northwest fractional 1/4, Lot 1 of the South 1/2 of the Northwest 1/4, Northwest 1/4 of the Southwest 1/4, Lot 3 of the Northeast 1/4, West 1/2 of the Southeast 1/4, and the East 1/2 of the Southwest 1/4, all in Section 5; Lot 4 of the North 1/2 of the Northwest 1/4, and Lot 2 of the Southwest 1/4 of the Northwest 1/4 of Section 4; all in Township 89, North, Range 2, East of the 5th P.M., and Lot 2 of the Southeast 1/4 of the Southwest 1/4 and Lot 4 of the South 1/2 of the Southeast 1/4 of Section 32, in Township 90, North, Range 2, East of the 5th P.M., according to the Government survey and the recorded plats of said respective subdivisions, including the right of ingress and egress over private right-of-way as described in the deeds recorded in Book 1, on pages 344 and 346, and in Book 30, page 335 of the deed records of said County.

2. Lessors hereby give and grant unto Lessee, for said term the exclusive right and license to prospect and mine land for lead, zinc, and other ores, together with the right and license to prepare for market on said premises and remove and sell all lead, zinc and other concentrates produced from said ores, with the right to construct buildings or other structures and to make excavations, openings, stockpiles, dumps, ditches and other improvements upon said premises, including the use of water in said operations, and to place such machinery thereon as Lessee may deem necessary for efficiently prospecting and mining said land and treating the ores mined therefrom with the right in lessee to remove all property so placed thereon at any time during the term thereof or within six (6) months after the termination of this lease.

3. The lessee agrees to pay the lessors as rent and tributes for the uses, rights and privileges hereby given as follows:

a. In the event the mine rock or wet mill concentrates are shipped the royalty F.O.B. mine shall be

Seven per cent (7%) of the sale value of the zinc,
Seven per cent (7%) of the sale value of the lead,
Seven per cent (7%) of the sale value of the iron.

No royalty shall be required to be paid on the premiums or bonuses received from the Metals Reserve Company or other governmental agency by lessee.

b. In the event no governmental premium or bonus plan on ore products is in effect, the royalty F.O.B. mine shall be

Seven per cent (7%) of the sale value of the zinc,
Seven per cent (7%) of the sale value of the lead,
Seven per cent (7%) of the sale value of the iron.

c. It is agreed that all ore values are those of unroasted and unfloated mine ores, without regard to any added value due to roasting, magnetic separation, production of acid, flotation, production of any other by-products or other treatment. It is further agreed and understood that in the event the ore is not shipped, but is processed in a mill or plant owned by the lessee, the royalty shall be based on the market value of the raw ore at the time the same is mined.

d. The lessee agrees to pay the royalty on or before the 30th day of each month for all ores sold or delivered to any mill or plant owned by the lessee during the preceding month.

4. Lessee will keep accurate books showing quantities and kinds of ores produced and sold from said lands, when and to whom sold and the money received from sales, and such books of account shall be open to the inspection of the lessors at all reasonable times and hours.

5. All mining operations shall be carried on in a minerlike and workmanlike manner as the same are usually conducted in said locality.

6. It is agreed that ores mined from the lands covered hereby shall be cleaned and prepared for market in the usual and customary manner and if mill or flotation plant shall be located on these lands, lessee shall have the right to treat ores from other lands therein. Said ores may be milled in a plant in which other ores are being treated.

7. Lessee shall have the right to remove ores and minerals mined on the lands covered hereby through a shaft or shafts located on adjoining lands, and to hoist ores and minerals mined on adjoining lands through a shaft or shafts on this land. In case lessee shall avail itself of any of the privileges granted under this paragraph and under paragraph 6 hereof, it shall exercise special care to see that all ores are properly credited to the lands from which they may be mined or produced.

8. The lessors shall at all reasonable times and hours have access to any mines on said land for the purpose of inspection and ascertaining the progress of the work being done, but shall not interfere with the prospecting and mining of lessee.

9. Lessee agrees to commence mining operations on said land within thirty (30) days after the first day of July, 1951, and to continue such mining operations with not less than four (4) men for ten (10) months in each year during the continuance of this lease, unless prevented by fire, strikes, delays of carriers, unavoidable accidents, inclement weather, or other causes beyond the control of lessee; provided, however, that prospecting by drilling on said premises shall be construed as mining operations hereunder and in connection therewith the requirement of having four men engaged shall not apply.

In the event a body of ore is discovered on the leased premises the lessee may conduct drilling operations on adjoining premises for the purpose of determining the extent of such ore body and drilling operations so conducted shall be considered and construed as mining operations under the terms of this lease.

10. In the event that mining operations shall not be conducted on said land as hereinbefore provided, lessee shall pay to lessors the sums of Twenty-five Dollars ($25) and such payment shall operate as rental for one (1) month and shall cover the right and privilege in lessee to suspend mining operations for and during said one (1) month period. In like manner and upon like payments, mining operations may be further deferred or suspended for like periods successively during the term of this lease. All such payments shall be considered as advance royalty and shall be deducted from royalties subsequently accruing hereunder to said landowners.

11. It is further agreed in the event the East St. Louis smelter market for lead or zinc shall at any time during the life of this lease drop below fourteen cents (14¢) per pound the lessee shall have the privilege of discontinuing work under this lease until the said market price equals or exceeds fourteen cents (14¢) per pound; said cessation from work in no event to exceed a period of two (2) years at any one time.

12. Lessee shall furnish lessors a true copy of the log of each drill hole put down on said land by lessee, showing any assays made of cuttings therefrom..

13. Lessee shall have the rightto erect dwelling houses or other habitations on said land without the consent of the lessors. In case of sale of buildings placed on said premises by lessee, the owners of said lands shall have first privilege of buying same. Lessee also agrees to properly protect and timber all shafts sunk by it on said premises in order to protect horses, cattle and other domestic animals belonging to the owner or tenant of said premises from falling therein. Lessee shall do no unnecessary damage to growing crops on said land, and in case any such damage is done to said crops, it shall pay the reasonable amount of such damage.

14. The lessee agrees to fill up all prospect holes as soon as same are abandoned and also where there are open holes or shafts on which it is not working to protect and enclose same to prevent stock from falling therein.

15. No shaft shall be sunk within four hundred (400) feet of the dwelling house or other buildings of the lessors and should the well be drained by pumping water at the mines lessee agrees to drill well deeper so as to furnish water for the owners of said land.

16. In the event ores and minerals mined from other lands are milled on lands covered hereby, lessee shall pay to the owners of said lands for such privilege the sum of Fifty Dollars ($50) per month during the time such milling shall be carried on, provided no such payment shall be required when ores mined on these lands are also being milled.

17. After the expiration of the term hereinbefore fixed, this lease shall continue in force and effect so long thereafter as ores shall be produced from said lands by the lessee, or it shall continue prospecting or mining operations on said land or any part thereof in good faith, or so long as rental is paid as agreed.

18. Lessee shall at all times have the right to surrender and release this lease unto lessors, first giving unto lessors fifteen (15) days written notice of intention to do so, and upon such surrender and release being made, lessee shall thereupon be released and discharged from all further obligations hereunder. Such notice and release may be given or delivered to lessors personally or by registered mail, postage prepaid, addressed to lessors at their last known address, or to such other address as they may from time to time in writing designate.

19. The lessors shall have the right to terminate this lease when and if the lessee shall fail to operate or pay rental agreed upon according to the terms of said lease for any continuous period of three (3) months, by mailing to said lessee at its last known address, by registered mail, a notice in writing, setting forth the conditions of the lease which have been violated or unperformed by the said lessee. Said notice shall be termed and conditioned so that the said lessee may, within fifteen (15) days after date of mailing, continue operating under the terms of the lease. However, if at the end of said fifteen (15) days the lessee shall have failed to so operate or pay rent, the filing of the notice, a copy of which has been sent to the lessee, together with an affidavit of proof of mailing, in the office of the County Recorder of Dubuque County, Iowa, shall cause this lease to cease and become null and void.

20. The terms and conditions of this lease shall be binding upon and inure to the benefit of the heirs, successors, legal representatives and assigns of the parties hereto.

21. It is understood and agreed between the parties hereto that J. Allen Wallis and Irma W. Wallis have sold the above described premises to Martin Riniker and Maylo Riniker, under a written contract dated March 1st, 1951, and that the purchase price of said real estate under said contract is payable in deferred payments as therein provided and in consideration thereof it is agreed that during the term of said contract, and until said purchase price is fully paid, the royalties and rentals provided for under this lease shall be paid to the said Lessors as follows:

Fifty per cent (50%) of said royalties and rentals shall be paid to J. Allen Wallis, his heirs, devisees, legatees, successors and assigns, and

The remaining Fifth per cent (50%) of said royalties and rentals shall be paid to Martin Riniker and Maylo Riniker.

It is further agreed that in the event Martin Riniker and Maylo Riniker default in the performance of said real estate contract and forfeit their interest in said contract and said real estate that then and in that event all of the rights of the said Martin Riniker and Maylo Riniker to royalties and rentals provided for hereunder shall thereupon cease and terminate and all royalties and rentals shall thereafter be payable to J.Allen Wallis, his heirs, devisees, legatees, successors and assigns and this lease shall, except as thus qualified, remain in full force and effect.

Royalties and rentals received by J.Allen Wallis hereunder shall not be treated as payments on the purchase price of said real estate under said contract, but shall be in addition to said purchase price.

It is further understood and agreed that when the purchase price of said real estate is fully paid, according to the terms of said contract, the rights and liabilities of J. Allen Wallis and Irma W. Wallis, under the terms of this lease shall cease and terminate and all royalties and rentals provided for hereunder and thereafter accruing shall be the sole property of and payable to Martin Riniker and Maylo Riniker and this lease, except as thus qualified, shall remain in full force and effect.

IN WITNESS WHEREOF the parties hereto have duly executed this indenture on the day and year first above written.

J. ALLEN WALLIS /s/
IRMA W. WALLIS /s/
MARTIN RINIKER /s/
MAYLO RINIKER /s/
Lessors

J. E. MILLER /s/
Lessee

STATE OF IOWA)
) SS:
DUBUQUE COUNTY)

On this 12th day of May, A. D. 1951, before me, a Notary Public of Iowa in and for said County, personally appeared J. Allen Wallis and Irma W. Wallis, husband and wife, and Martin Riniker and Maylo Riniker, husband and wife, to me known to be the persons named in and who executed the foregoing instrument and acknowledged that they executed the same as their voluntary act and deed.

J. ALLEN WALLIS, JR. /s/ (SEAL)
Notary Public, Dubuque County, Iowa

STATE OF IOWA)
) SS:
COUNTY OF DUBUQUE

On this 12th day of May, A. D. 1951, before me, a Notary Public of Iowa in and for said County, personally appeared J. E. Miller, to me known to be the person named in and who executed the foregoing instrument and acknowledged that he executed the same as his voluntary act and deed.

FRANK D. GILLOON /s/
Notary Public in and for said
County and State

(SEAL)

MINING LEASE

THIS INDENTURE Made and entered into this 12th day of May, 1951 by and between J.Allen Wallis and Irma W.Wallis, husband and wife, and Martin Riniker and Maylo Riniker, husband and wife - - - - - - - - - - - - - - - - - - - of Dubuque County, Iowa, hereinafter referred to as Lessors, and J. E. Miller of Cook County, Illinois, hereinafter referred to as Lessee: WITNESSETH:

1. That, in consideration of the covenants and agreements hereinafter set out, to be kept and performed by Lessee, Lessors do hereby lease unto Lessee for prospecting and mining for lead, zinc and other valuable metals, for ten (10) years from the date hereof, the following described premises situated in Dubuque County, Iowa, to-wit:

Lot 1 of Lot 1 of the North fractional 1/2 of the Northwest fractional 1/4, Lot 1 of the South 1/2 of the Northwest 1/4, Northwest 1/4 of the Southwest 1/4, Lot 3 of the Northeast 1/4, West 1/2 of the Southeast 1/4, and the East 1/2 of the Southwest 1/4, all in Section 5; Lot 4 of the North 1/2 of the Northwest 1/4, and Lot 2 of the Southwest 1/4 of the Northwest 1/4 of Section 4; all in Township 89, North, Range 2, East of the 5th P.M., and Lot 2 of the Southeast 1/4 of the Southwest 1/4 and Lot 4 of the South 1/2 of the Southeast 1/4 of Section 32, in Township 90, North, Range 2, East of the 5th P.M., according to the Government survey and the recorded plats of said respective subdivisions, including the right of ingress and egress over private right-of-way as described in the deeds recorded in Book 1, on pages 344 and 346, and in Book 30, page 335 of the deed records of said County.

2. Lessors hereby give and grant unto Lessee, for said term the exclusive right and license to prospect and mine land for lead, zinc, and other ores, together with the right and license to prepare for market on said premises and remove and sell all lead, zinc and other concentrates produced from said ores, with the right to construct buildings or other structures and to make excavations, openings, stockpiles, dumps, ditches and other improvements upon said premises, including the use of water in said operations, and to place such machinery thereon as Lessee may deem necessary for efficiently prospecting and mining said land and treating the ores mined therefrom with the right in lessee to remove all property so placed thereon at any time during the term thereof or within six (6) months after the termination of this lease.

3. The lessee agrees to pay the lessors as rent and tributes for the uses, rights and privileges hereby given as follows:

a. In the event the mine rock or wet mill concentrates are shipped the royalty F.O.B. mine shall be

Seven per cent (7%) of the sale value of the zinc,
Seven per cent (7%) of the sale value of the lead,
Seven per cent (7%) of the sale value of the iron.

No royalty shall be required to be paid on the premiums or bonuses received from the Metals Reserve Company or other governmental agency by lessee.

b. In the event no governmental premium or bonus plan on ore products is in effect, the royalty F.O.B. mine shall be

Seven per cent (7%) of the sale value of the zinc,
Seven per cent (7%) of the sale value of the lead,
Seven per cent (7%) of the sale value of the iron.

c. It is agreed that all ore values are those of unroasted and unfloated mine ores, without regard to any added value due to roasting, magnetic separation, production of acid, flotation, production of any other by-products or other treatment. It is further agreed and understood that in the event the ore is not shipped, but is processed in a mill or plant owned by the lessee, the royalty shall be based on the market value of the raw ore at the time the same is mined.

d. The lessee agrees to pay the royalty on or before the 30th day of each month for all ores sold or delivered to any mill or plant owned by the lessee during the preceding month.

4. Lessee will keep accurate books showing quantities and kinds of ores produced and sold from said lands, when and to whom sold and the money received from sales, and such books of account shall be open to the inspection of the lessors at all reasonable times and hours.

5. All mining operations shall be carried on in a minerlike and workmanlike manner as the same are usually conducted in said locality.

6. It is agreed that ores mined from the lands covered hereby shall be cleaned and prepared for market in the usual and customary manner and if mill or flotation plant shall be located on these lands, lessee shall have the right to treat ores from other lands therein. Said ores may be milled in a plant in which other ores are being treated.

7. Lessee shall have the right to remove ores and minerals mined on the lands covered hereby through a shaft or shafts located on adjoining lands, and to hoist ores and minerals mined on adjoining lands through a shaft or shafts on this land. In case lessee shall avail itself of any of the privileges granted under this paragraph and under paragraph 6 hereof, it shall exercise special care to see that all ores are properly credited to the lands from which they may be mined or produced.

8. The lessors shall at all reasonable times and hours have access to any mines on said land for the purpose of inspection and ascertaining the progress of the work being done, but shall not interfere with the prospecting and mining of lessee.

9. Lessee agrees to commence mining operations on said land within thirty (30) days after the first day of July, 1951, and to continue such mining operations with not less than four (4) men for ten (10) months in each year during the continuance of this lease, unless prevented by fire, strikes, delays of carriers, unavoidable accidents, inclement weather, or other causes beyond the control of lessee; provided, however, that prospecting by drilling on said premises shall be construed as mining operations hereunder and in connection therewith the requirement of having four men engaged shall not apply.

In the event a body of ore is discovered on the leased premises the lessee may conduct drilling operations on adjoining premises for the purpose of determining the extent of such ore body and drilling operations so conducted shall be considered and construed as mining operations under the terms of this lease.

10. In the event that mining operations shall not be conducted on said land as hereinbefore provided, lessee shall pay to lessors the sums of Twenty-five Dollars ($25) and such payment shall operate as rental for one (1) month and shall cover the right and privilege in lessee to suspend mining operations for and during said one (1) month period. In like manner and upon like payments, mining operations may be further deferred or suspended for like periods successively during the term of this lease. All such payments shall be considered as advance royalty and shall be deducted from royalties subsequently accruing hereunder to said landowners.

11. It is further agreed in the event the East St. Louis smelter market for lead or zinc shall at any time during the life of this lease drop below fourteen cents (14¢) per pound the lessee shall have the privilege of discontinuing work under this lease until the said market price equals or exceeds fourteen cents (14¢) per pound; said cessation from work in no event to exceed a period of two (2) years at any one time.

12. Lessee shall furnish lessors a true copy of the log of each drill hole put down on said land by lessee, showing any assays made of cuttings therefrom..

13. Lessee shall have the rightto erect dwelling houses or other habitations on said land without the consent of the lessors. In case of sale of buildings placed on said premises by lessee, the owners of said lands shall have first privilege of buying same. Lessee also agrees to properly protect and timber all shafts sunk by it on said premises in order to protect horses, cattle and other domestic animals belonging to the owner or tenant of said premises from falling therein. Lessee shall do no unnecessary damage to growing crops on said land, and in case any such damage is done to said crops, it shall pay the reasonable amount of such damage.

14. The lessee agrees to fill up all prospect holes as soon as same are abandoned and also where there are open holes or shafts on which it is not working to protect and enclose same to prevent stock from falling therein.

15. No shaft shall be sunk within four hundred (400) feet of the dwelling house or other buildings of the lessors and should the well be drained by pumping water at the mines lessee agrees to drill well deeper so as to furnish water for the owners of said land.

16. In the event ores and minerals mined from other lands are milled on lands covered hereby, lessee shall pay to the owners of said lands for such privilege the sum of Fifty Dollars ($50) per month during the time such milling shall be carried on, provided no such payment shall be required when ores mined on these lands are also being milled.

17. After the expiration of the term hereinbefore fixed, this lease shall continue in force and effect so long thereafter as ores shall be produced from said lands by the lessee, or it shall continue prospecting or mining operations on said land or any part thereof in good faith, or so long as rental is paid as agreed.

18. Lessee shall at all times have the right to surrender and release this lease unto lessors, first giving unto lessors fifteen (15) days written notice of intention to do so, and upon such surrender and release being made, lessee shall thereupon be released and discharged from all further obligations hereunder. Such notice and release may be given or delivered to lessors personally or by registered mail, postage prepaid, addressed to lessors at their last known address, or to such other address as they may from time to time in writing designate.

19. The lessors shall have the right to terminate this lease when and if the lessee shall fail to operate or pay rental agreed upon according to the terms of said lease for any continuous period of three (3) months, by mailing to said lessee at its last known address, by registered mail, a notice in writing, setting forth the conditions of the lease which have been violated or unperformed by the said lessee. Said notice shall be termed and conditioned so that the said lessee may, within fifteen (15) days after date of mailing, continue operating under the terms of the lease. However, if at the end of said fifteen (15) days the lessee shall have failed to so operate or pay rent, the filing of the notice, a copy of which has been sent to the lessee, together with an affidavit of proof of mailing, in the office of the County Recorder of Dubuque County, Iowa, shall cause this lease to cease and become null and void.

20. The terms and conditions of this lease shall be binding upon and inure to the benefit of the heirs, successors, legal representatives and assigns of the parties hereto.

21. It is understood and agreed between the parties hereto that J. Allen Wallis and Irma W. Wallis have sold the above described premises to Martin Riniker and Maylo Riniker, under a written contract dated March 1st, 1951, and that the purchase price of said real estate under said contract is payable in deferred payments as therein provided and in consideration thereof it is agreed that during the term of said contract, and until said purchase price is fully paid, the royalties and rentals provided for under this lease shall be paid to the said Lessors as follows:

Fifty per cent (50%) of said royalties and rentals shall be paid to J. Allen Wallis, his heirs, devisees, legatees, successors and assigns, and

The remaining Fifth per cent (50%) of said royalties and rentals shall be paid to Martin Riniker and Maylo Riniker.

It is further agreed that in the event Martin Riniker and Maylo Riniker default in the performance of said real estate contract and forfeit their interest in said contract and said real estate that then and in that event all of the rights of the said Martin Riniker and Maylo Riniker to royalties and rentals provided for hereunder shall thereupon cease and terminate and all royalties and rentals shall thereafter be payable to J.Allen Wallis, his heirs, devisees, legatees, successors and assigns and this lease shall, except as thus qualified, remain in full force and effect.

Royalties and rentals received by J.Allen Wallis hereunder shall not be treated as payments on the purchase price of said real estate under said contract, but shall be in addition to said purchase price.

It is further understood and agreed that when the purchase price of said real estate is fully paid, according to the terms of said contract, the rights and liabilities of J. Allen Wallis and Irma W. Wallis, under the terms of this lease shall cease and terminate and all royalties and rentals provided for hereunder and thereafter accruing shall be the sole property of and payable to Martin Riniker and Maylo Riniker and this lease, except as thus qualified, shall remain in full force and effect.

IN WITNESS WHEREOF the parties hereto have duly executed this indenture on the day and year first above written.

J. ALLEN WALLIS /s/
IRMA W. WALLIS /s/
MARTIN RINIKER /s/
MAYLO RINIKER /s/
Lessors

J. E. MILLER /s/
Lessee

STATE OF IOWA)
) SS:
DUBUQUE COUNTY)

On this 12th day of May, A. D. 1951, before me, a Notary Public of Iowa in and for said County, personally appeared J. Allen Wallis and Irma W. Wallis, husband and wife, and Martin Riniker and Maylo Riniker, husband and wife, to me known to be the persons named in and who executed the foregoing instrument and acknowledged that they executed the same as their voluntary act and deed.

J. ALLEN WALLIS, JR. /s/ (SEAL)
Notary Public, Dubuque County, Iowa

STATE OF IOWA)
) SS:
COUNTY OF DUBUQUE

On this 12th day of May, A. D. 1951, before me, a Notary Public of Iowa in and for Said County, personally appeared J. E. Miller, to me known to be the person named in and who executed the foregoing instrument and acknowledged that he executed the same as his voluntary act and deed.

FRANK D. GILLOON /s/
Notary Public in and for said
County and State

(SEAL)

MINING LEASE

THIS INDENTURE Made and entered into this 12th day of May, 1951 by and between J.Allen Wallis and Irma W.Wallis, husband and wife, and Martin Riniker and Maylo Riniker, husband and wife - of Dubuque County, Iowa, hereinafter referred to as Lessors, and J. E. Miller of Cook County, Illinois, hereinafter referred to as Lessee: WITNESSETH:

1. That, in consideration of the covenants and agreements hereinafter set out, to be kept and performed by Lessee, Lessors do hereby lease unto Lessee for prospecting and mining for lead, zinc and other valuable metals, for ten (10) years from the date hereof, the following described premisms situated in Dubuque County, Iowa, to-wit:

Lot 1 of Lot 1 of the North fractional 1/2 of the Northwest fractional 1/4, Lot 1 of the South 1/2 of the Northwest 1/4, Northwest 1/4 of the Southwest 1/4, Lot 3 of the Northeast 1/4, West 1/2 of the Southeast 1/4, and the East 1/2 of the Southwest 1/4, all in Section 5; Lot 4 of the North 1/2 of the Northwest 1/4, and Lot 2 of the Southwest 1/4 of the Northwest 1/4 of Section 4; all in Township 89, North, Range 2, East of the 5th P.M., and Lot 2 of the Southeast 1/4 of the Southwest 1/4 and Lot 4 of the South 1/2 of the Southeast 1/4 of Section 32, in Township 90, North, Range 2, East of the 5th P.M., according to the Government survey and the recorded plats of said respective subdivisions, including the right of ingress and egress over private right-of-way as described in the deeds recorded in Book 1, on pages 344 and 346, and in Book 30, page 335 of the deed records of said County.

2. Lessors hereby give and grant unto Lessee, for said term the exclusive right and license to prospect and mine land for lead, zinc, and other ores, together with the right and license to prepare for market on said premises and remove and sell all lead, zinc and other concentrates produced from said ores, with the right to construct buildings or other structures and to make excavations, openings, stockpiles, dumps, ditches and other improvements upon said premises, including the use of water in said operations, and to place such machinery thereon as Lessee may deem necessary for efficiently prospecting and mining said land and treating the ores mined therefrom with the right in lessee to remove all property so placed thereon at any time during the term thereof or within six (6) months after the termination of this lease.

3. The lessee agrees to pay the lessors as rent and tributes for the uses, rights and privileges hereby given as follows:

a. In the event the mine rock or wet mill concentrates are shipped the royalty F.O.B. mine shall be

Seven per cent (7%) of the sale value of the zinc,
Seven per cent (7%) of the sale value of the lead,
Seven per cent (7%) of the sale value of the iron.

No royalty shall be required to be paid on the premiums or bonuses received from the Metals Reserve Company or other governmental agency by lessee.

b. In the event no governmental premium or bonus plan on ore products is in effect, the royalty F.O.B. mine shall be

Seven per cent (7%) of the sale value of the zinc,
Seven per cent (7%) of the sale value of the lead,
Seven per cent (7%) of the sale value of the iron.

c. It is agreed that all ore values are those of unroasted and unfloated mine ores, without regard to any added value due to roasting, magnetic separation, production of acid, flotation, production of any other by-products or other treatment. It is further agreed and understood that in the event the ore is not shipped, but is processed in a mill or plant owned by the lessee, the royalty shall be based on the market value of the raw ore at the time the same is mined.

d. The lessee agrees to pay the royalty on or before the 30th day of each month for all ores sold or delivered to any mill or plant owned by the lessee during the preceding month.

4. Lessee will keep accurate books showing quantities and kinds of ores produced and sold from said lands, when and to whom sold and the money received from sales, and such books of account shall be open to the inspection of the lessors at all reasonable times and hours.

5. All mining operations shall be carried on in a minerlike and workmanlike manner as the same are usually conducted in said locality.

6. It is agreed that ores mined from the lands covered hereby shall be cleaned and prepared for market in the usual and customary manner and if mill or flotation plant shall be located on these lands, lessee shall have the right to treat ores from other lands therein. Said ores may be milled in a plant in which other ores are being treated.

7. Lessee shall have the right to remove ores and minerals mined on the lands covered hereby through a shaft or shafts located on adjoining lands, and to hoist ores and minerals mined on adjoining lands through a shaft or shafts on this land. In case lessee shall avail itself of any of the privileges granted under this paragraph and under paragraph 6 hereof, it shall exercise special care to see that all ores are properly credited to the lands from which they may be mined or produced.

8. The lessors shall at all reasonable times and hours have access to any mines on said land for the purpose of inspection and ascertaining the progress of the work being done, but shall not interfere with the prospecting and mining of lessee.

9. Lessee agrees to commence mining operations on said land within thirty (30) days after the first day of July, 1951, and to continue such mining operations with not less than four (4) men for ten (10) months in each year during the continuance of this lease, unless prevented by fire, strikes, delays of carriers, unavoidable accidents, inclement weather, or other causes beyond the control of lessee; provided, however, that prospecting by drilling on said premises shall be construed as mining operations hereunder and in connection therewith the requirement of having four men engaged shall not apply.

In the event a body of ore is discovered on the leased premises the lessee may conduct drilling operations on adjoining premises for the purpose of determining the extent of such ore body and drilling operations so conducted shall be considered and construed as mining operations under the terms of this lease.

10. In the event that mining operations shall not be conducted on said land as hereinbefore provided, lessee shall pay to lessors the sums of Twenty-five Dollars ($25) and such payment shall operate as rental for one (1) month and shall cover the right and privilege in lessee to suspend mining operations for and during said one (1) month period. In like manner and upon like payments, mining operations may be further deferred or suspended for like periods successively during the term of this lease. All such payments shall be considered as advance royalty and shall be deducted from royalties subsequently accruing hereunder to said landowners.

11. It is further agreed in the event the East St. Louis smelter market for lead or zinc shall at any time during the life of this lease drop below fourteen cents (14¢) per pound the lessee shall have the privilege of discontinuing work under this lease until the said market price equals or exceeds fourteen cents (14¢) per pound; said cessation from work in no event to exceed a period of two (2) years at any one time.

12. Lessee shall furnish lessors a true copy of the log of each drill hole put down on said land by lessee, showing any assays made of cuttings therefrom..

13. Lessee shall have the rightto erect dwelling houses or other habitations on said land without the consent of the lessors. In case of sale of buildings placed on said premises by lessee, the owners of said lands shall have first privilege of buying same. Lessee also agrees to properly protect and timber all shafts sunk by it on said premises in order to protect horses, cattle and other domestic animals belonging to the owner or tenant of said premises from falling therein. Lessee shall do no unnecessary damage to growing crops on said land, and in case any such damage is done to said crops, it shall pay the reasonable amount of such damage.

14. The lessee agrees to fill up all prospect holes as soon as same are abandoned and also where there are open holes or shafts on which it is not working to protect and enclose same to prevent stock from falling therein.

15. No shaft shall be sunk within four hundred (400) feet of the dwelling house or other buildings of the lessors and should the well be drained by pumping water at the mines lessee agrees to drill well deeper so as to furnish water for the owners of said land.

16. In the event ores and minerals mined from other lands are milled on lands covered hereby, lessee shall pay to the owners of said lands for such privilege the sum of Fifty Dollars ($50) per month during the time such milling shall be carried on, provided no such payment shall be required when ores mined on these lands are also being milled.

17. After the expiration of the term hereinbefore fixed, this lease shall continue in force and effect so long thereafter as ores shall be produced from said lands by the lessee, or it shall continue prospecting or mining operations on said land or any part thereof in good faith, or so long as rental is paid as agreed.

18. Lessee shall at all times have the right to surrender and release this lease unto lessors, first giving unto lessors fifteen (15) days written notice of intention to do so, and upon such surrender and release being made, lessee shall thereupon be released and discharged from all further obligations hereunder. Such notice and release may be given or delivered to lessors personally or by registered mail, postage prepaid, addressed to lessors at their last known address, or to such other address as they may from time to time in writing designate.

19. The lessors shall have the right to terminate this lease when and if the lessee shall fail to operate or pay rental agreed upon according to the terms of said lease for any continuous period of three (3) months, by mailing to said lessee at its last known address, by registered mail, a notice in writing, setting forth the conditions of the lease which have been violated or unperformed by the said lessee. Said notice shall be termed and conditioned so that the said lessee may, within fifteen (15) days after date of mailing, continue operating under the terms of the lease. However, if at the end of said fifteen (15) days the lessee shall have failed to so operate or pay rent, the filing of the notice, a copy of which has been sent to the lessee, together with an affidavit of proof of mailing, in the office of the County Recorder of Dubuque County, Iowa, shall cause this lease to cease and become null and void.

20. The terms and conditions of this lease shall be binding upon and inure to the benefit of the heirs, successors, legal representatives and assigns of the parties hereto.

21. It is understood and agreed between the parties hereto that J. Allen Wallis and Irma W. Wallis have sold the above described premises to Martin Riniker and Maylo Riniker, under a written contract dated March 1st, 1951, and that the purchase price of said real estate under said contract is payable in deferred payments as therein provided and in consideration thereof it is agreed that during the term of said contract, and until said purchase price is fully paid, the royalties and rentals provided for under this lease shall be paid to the said Lessors as follows:

Fifty per cent (50%) of said royalties and rentals shall be paid to J. Allen Wallis, his heirs, devisees, legatees, successors and assigns, and

The remaining Fifth per cent (50%) of said royalties and rentals shall be paid to Martin Riniker and Maylo Riniker.

It is further agreed that in the event Martin Riniker and Maylo Riniker default in the performance of said real estate contract and forfeit their interest in said contract and said real estate that then and in that event all of the rights of the said Martin Riniker and Maylo Riniker to royalties and rentals provided for hereunder shall thereupon cease and terminate and all royalties and rentals shall thereafter be payable to J.Allen Wallis, his heirs, devisees, legatees, successors and assigns and this lease shall, except as thus qualified, remain in full force and effect.

Royalties and rentals received by J.Allen Wallis hereunder shall not be treated as payments on the purchase price of said real estate under said contract, but shall be in addition to said purchase price.

It is further understood and agreed that when the purchase price of said real estate is fully paid, according to the terms of said contract, the rights and liabilities of J. Allen Wallis and Irma W. Wallis, under the terms of this lease shall cease and terminate and all royalties and rentals provided for hereunder and thereafter accruing shall be the sole property of and payable to Martin Riniker and Maylo Riniker and this lease, except as thus qualified, shall remain in full force and effect.

IN WITNESS WHEREOF the parties hereto have duly executed this indenture on the day and year first above written.

J. ALLEN WALLIS /s/
IRMA W. WALLIS /s/
MARTIN RINIKER /s/
MAYLO RINIKER /s/
Lessors

J. E. MILLER /s/
Lessee

STATE OF IOWA)
) SS:
DUBUQUE COUNTY)

On this 12th day of May, A. D. 1951, before me, a Notary Public of Iowa in and for said County, personally appeared J. Allen Wallis and Irma W. Wallis, husband and wife, and Martin Riniker and Maylo Riniker, husband and wife, to me known to be the persons named in and who executed the foregoing instrument and acknowledged that they executed the same as their voluntary act and deed.

J. ALLEN WALLIS, JR. /s/ (SEAL)
Notary Public, Dubuque County, Iowa

STATE OF IOWA)
) SS:
COUNTY OF DUBUQUE

On this 12th day of May, A. D. 1951, before me, a Notary Public of Iowa in and for said County, personally appeared J. E. Miller, to me known to be the person named in and who executed the foregoing instrument and acknowledged that he executed the same as his voluntary act and deed.

FRANK D. GILLOON /s/
Notary Public in and for said
County and State

(SEAL)