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

OCT 16 1951

A.E.C.

Memorandum

To: Reports and Records Unit
Administrative Management Div.

From: Chief, Lead-Zinc Branch

Docket DMA-1341X
Emm Mining and Development Corporation, Tucson, Ariz.
Antelope Claims, Pima County, Arizona
Exploration loan, $17,025
Lead, zinc

Subject: Recommendation for denial of exploration loan.

A field team report on the geology of the Antelope claims of the Emm Mining and Development Corporation has been received by the Lead-Zinc Branch.

The workings consist of a 132 shaft on the vein and a total of 120 ft. of drifting on the 50 and 100 foot levels. The 100 ft. level is not accessible because of water.

The claims are in an area of brecciated andesite which extends northeast from the claims about 4000 ft. The andesite area is from 1000 to 3000 ft. wide in a NW-SE direction. On the west side granite is present and it is ~~present and it is~~ probable that granite underlies the andesite at no great depth.

Mineralization occurs in narrow fissures which trend northerly or northeasterly. The main vein on the Antelope claims strikes N 7° E, and dips steeply to the west. Its average width is from 1 to 2 feet. Where observed, the vein was composed of clayey gouge with very sparse mineralization consisting of sphalerite and galena and a few grains of chalcopyrite. Three samples were taken by the examining geologist. No. 1 taken over a width of 20 inches from the face of a gouged pocket in the shaft 20 ft. below the collar assayed Tr. Au, 0.4 oz. Ag, 0.3% Pb, and 0.3% Zn. No. 2 taken over a width of 17 inches from the vein at the south face of the 50 ft. level assayed 0.02 oz. Au, 8.4 oz. Ag, 0.9% Pb, and 0.4% Zn. No. 3 taken from the vein on the north side of the shaft over a width of 22 inches assayed Tr. Au, 0.4 oz. Ag, 0.2% Pb, and 0.2% Zn. This last sample was considered average vein material.

No recorded production is known from this prospect and there are no measured, indicated, or inferred reserves above the 50 ft. level.

The applicant originally applied for a direct loan, but at the suggestion of the Lead-Zinc Branch in Washington changed it to an exploration loan. The proposed exploration, which it is estimated would cost $17,025, consists of deepening the shaft to the 300 ft. level and drifting north and south from the shaft a distance of 50 ft. in each direction on the 150, 200, 250, and 300 foot level.

Because the present vein showings are very poor and there is no geologic evidence to indicate a better grade of ore at depth, the field team recommends that the application be denied. The Lead-Zinc Branch concurs with this recommendation.

The following material is attached:

3 copies Form NSRB-146
3 copies Form MF-103
3 " " MF-100
1 copy of field team report.

T. P. Billings, Chief
Lead-Zinc Branch

Approved:

Director, Supply Division

not stripped in FOR.

FILE COPY
SURNAME:

350

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

OCT 16 1951

Lyons (E. Tke)
McCaright
Bilbrough
Burkop

Docket DMA-1341X
Emm Mining and Development Corporation, Tucson, Ariz.
Antelope Claims, Pima County, Arizona
Exploration loan, $17,025
Lead, zinc

Memorandum

To: Reports and Records Unit
Administrative Management Div.

From: Chief, Lead-Zinc Branch

Subject: Recommendation for denial of exploration loan.

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No recorded production is known from this prospect and there are no measured, indicated, or inferred reserves above the 50 ft. level.

The applicant originally applied for a direct loan, but at the suggestion of the Lead-Zinc Branch in Washington changed it to an exploration loan. The proposed exploration, which it is estimated would cost $17,025, consists of deepening the shaft to the 300 ft. level and drifting north and south from the shaft a distance of 50 ft. in each direction on the 150, 200, 250, and 300 foot level.

Because the present vein showings are very poor and there is no geologic evidence to indicate a better grade of ore at depth, the field team recommends that the application be denied. The Lead-Zinc Branch concurs with this recommendation.

The following material is attached:

3 copies Form NSRB-146
3 copies Form MF-103
3 " " MF-100
1 copy of field team report.

T. P. Billings, Chief
Lead-Zinc Branch

Approved:

Tom Lyon
Director, Supply Division

EJLyons:emp
G 10-11-51
Copies to: J. H. East, Jr. Region IV (2)
Chief, Lead-Zinc Branch
E. T. McKnight 4204 GSA
O. M. Bishop
Directors r. files 4214 GSA
Br. r. files 4214 GSA
Administrators r. files
DMA docket files

FILE COPY
SURNAME:

350

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

Lyons (EJLL)
Natwright
Bishop
Emp

Re: Docket DMA-1341

OCT 1 6 1951

A.E.C.

Emm Mining and Development Corporation
Ruby Star Rt., Box 9
Tucson, Arizona

Gentlemen:

The Lead-Zinc Branch has received a field team report based upon an examination of your property, the Antelope claims, in Pima County, Arizona.

Review of this report indicates, on the basis of geologic evidence, that there is little possibility of finding a substantial body of commercial ore at depth and that further exploration is not warranted. In view of this, we are not able to justify an expenditure of public funds for the work you propose. I regret, therefore, that your application must be denied.

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

Very truly yours,

Tom Lyon 10/16

Tom Lyon, Director
Supply Division

EJLyons:emp
G 10-12-51
Copies to: J.H. East, Jr. (2)
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
O. M. Bishop
Directors r. files 4214 GSA
Br. r. files 4214 GSA
Administrators r. files

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

224 New Customhouse
Denver 2, Colorado

October 3, 1951

Memorandum

To: Executive Secretary, Defense Minerals Administration

From: DMA Field Team, Region IV

Subject: DMA Docket 1341X, EMM Mining & Development Corporation, Antelope Claims, Pima Mining District, Pima County, Arizona

Enclosed herewith are the original and two copies of the report on the EMM Mining and Development Corporation as listed above.

We concur with the recommendations of the field examiners that the lease be denied.

The brochure is returned herewith.

J. H. East, Jr.

for A. H. Koschmann

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D.C.
OCT 5 8 50 AM '51

Enclosures

JHE:ld

cc: DMA

OCT 8 1951

OCT 9 1951

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.
200 New Customhouse
Denver 2, Colorado

September 28, 1951

Memorandum

To: DMA Field Team, Region IV

From: A. H. Koschmann

Subject: DMA Docket 1341X, EMM Mining and Development Corporation, Antelope Claims, Pima Mining District, Pima County, Arizona

Enclosed are the original and 7 copies of the geologic report by Calvin S. Bromfield of the U. S. Geological Survey covering the above docket. It has been recommended that the loan be denied.

A. H. Koschmann
A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (8)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P.O.Box 4126, University Station
Tucson, Arizona

~~September 7, 1951~~

SEP 25 1951

Memorandum

To: Field Team, Region IV, Denver, Colorado
Through: Mr. A. H. Koschmann

From: Mr. A. F. Shride, Tucson, Arizona

Subject: Report on DMA 134IX, KMM Mining and Development Corporation, Antelope Claims, Pima Mining District, Pima County, Arizona

Enclosed are the original and 7 copies of the above report by C. S. Brumfield of the Geological Survey. This is the complete report; there will be no engineering report to accompany this geologic report.

This report and the recommendation that an exploration loan be denied, because of lack of geologic possibility of discovering a minable orebody, have my approval. The brochure is enclosed.

A. F. Shride
Acting District Supervisor
Arizona-New Mexico

Enclosures 9

# IRON MINING AND DEVELOPMENT CORPORATION
# ANTELOPE CLAIMS, PIMA MINING DISTRICT
# PIMA COUNTY, ARIZONA
# DMA 1141X

## Geology

By Calvin S. Brownfield
Geologist, U. S. Geological Survey

EMM MINING AND DEVELOPMENT CORPORATION
ANTELOPE CLAIMS, PIMA MINING DISTRICT
PIMA COUNTY, ARIZONA
DMA 134IX

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## INTRODUCTION

The KMM Mining and Development Corporation submitted a request for a development loan dated May 24, 1951 under the Defense Production Act of 1950. A subsequent letter from the Lead-Zinc Branch of the DMA suggested that because the applicants had insufficient proven reserves they should enter an application for an exploration loan. This was done under date of June 21, 1951. The applicants, Mr. Frank McCarger, President of the KMM Mining and Development Corp., and Mr. Rex McBurnes, Vice-President, have outlined a project estimated to cost $17,025, of which the Government would participate to the extent of half the cost.

The docket was received in the Tucson office of the Defense Minerals Administration with a request that a geologic appraisal be made as to the feasibility of an exploration project. An engineering report was requested only if the geologic report was favorable.

The property was visited on August 17, 1951 and again on August 24, 1951. Thanks are due to Frank McCarger for courtesies extended to the examining geologist.

## LOCATION

The Antelope 1, 2, and 3 claims of the KMM Mining and Development Corp. are in the Pima Mining District 22 road miles south of Tucson, Arizona. They are located in the west central portion of sec. 15, T. 17 S., R. 12 E. (fig. 1). An excellently maintained highway from Tucson passes within two miles of the claims. A good desert road runs southwest from the highway to the property (fig. 1).

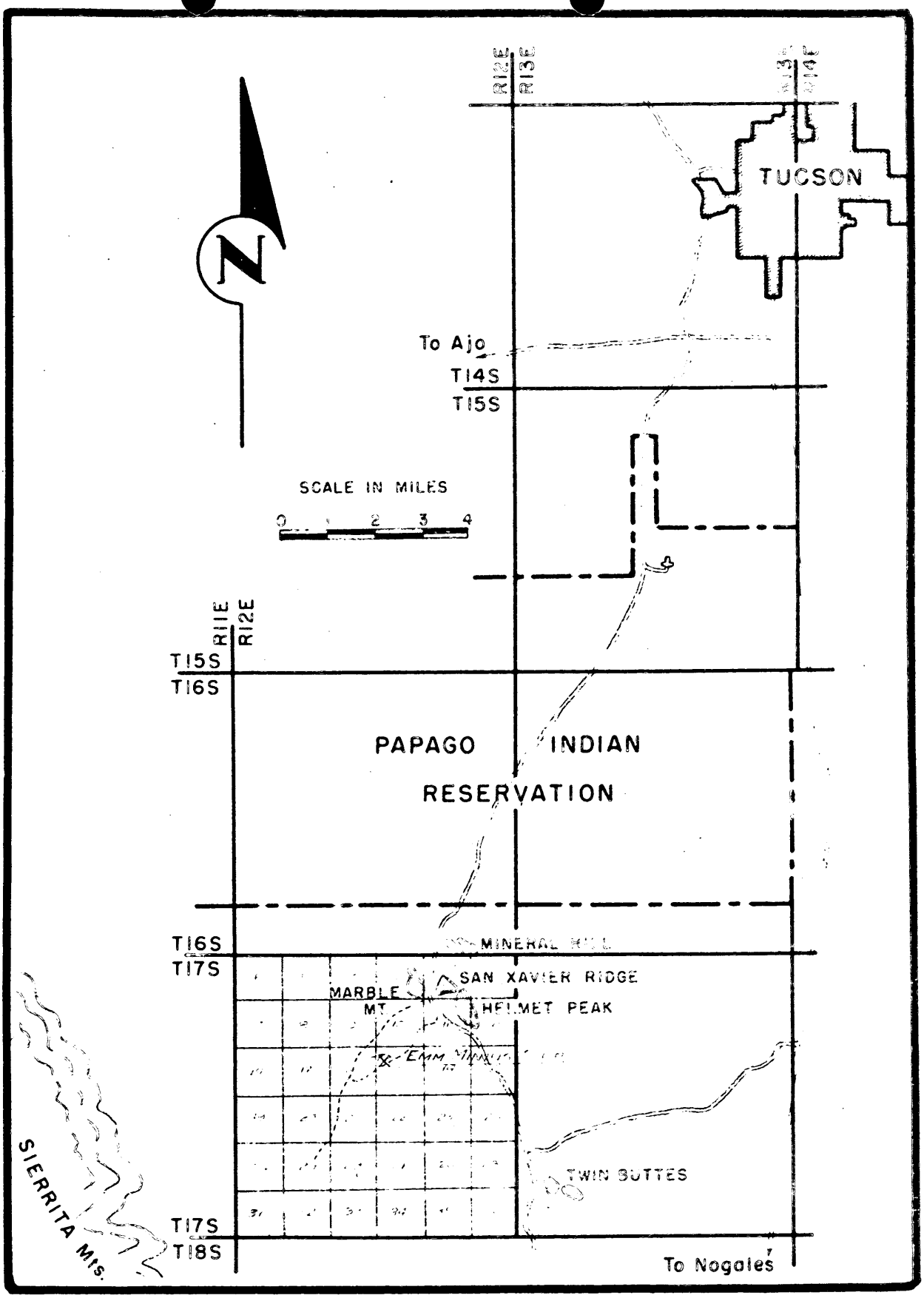



FIG. 1 LOCATION MAP OF EMM MINING CORP.

DMA 1341 X

## OWNERSHIP AND EXTENT

The three contiguous claims known as the Antelope 1, 2, and 3 (formerly known as the Ohio 3, 7, and 6 respectively) are owned by J. W. and Leona Mills and according to the application are under a 10 year lease and option to Frank McCargar, Rex McBarnes, and H. C. Ertel. The writer was informed at the time of his visit to the property that H. C. Ertel's interest in the corporation has been purchased, and he is no longer connected with the enterprise.

## GENERAL GEOLOGICAL SETTING

The Antelope claims lie within an area of brecciated andesite. This area forms an elongated outcrop extending in a northeast direction from the claims for about 4000 feet and there adjoins Cretaceous arkoses and shales, and it extends a similar distance to the southwest where it disappears under alluvium. The andesite outcrop is from 1000 to 3000 feet wide and is bordered on the east and south by alluvium and on the west by granite (fig. 2). The Paymaster Mine 2500 feet to the west of the Antelope claims expose granite in the shaft at a depth of 300 feet. Granite probably underlies the andesite at no great depth.

To the north of the bordering Cretaceous rocks and about two miles northeasterly from the Antelope claims is a complexly faulted area of Paleozoic rock in which contact metamorphic deposits occur in limestone. The San Xavier Mine is located in this area, and it is from here that the important production of base metals in the district has come.

## ORE DEPOSITS

The mineralization in the area occurs in narrow fissure fillings in andesite. The veins trend northerly to northeasterly. On the main

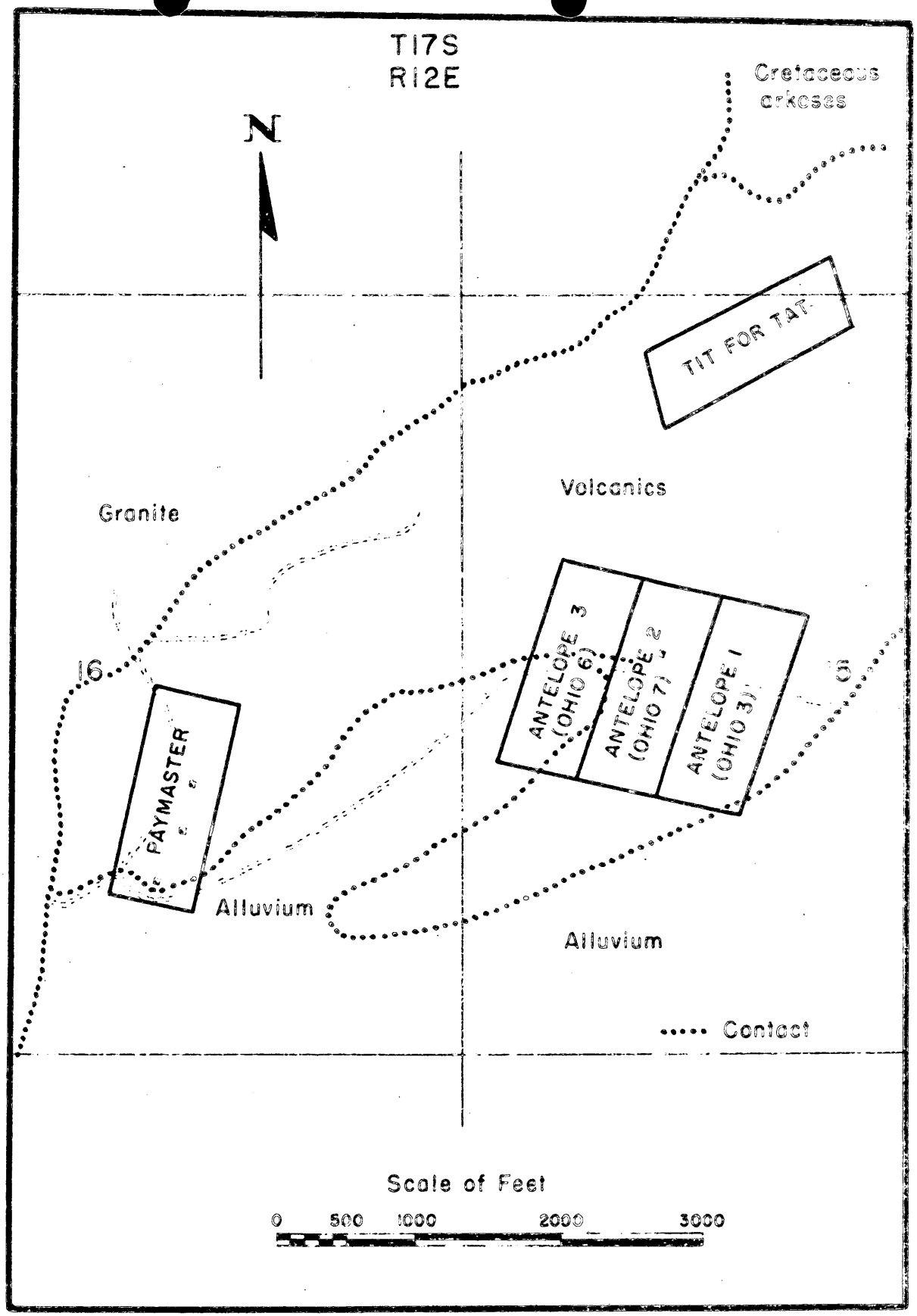



FIG 2 ANTELOPE CLAIMS & VICINITY WITH GEOLOGIC RELATIONS

DMA 1341X

vein of the Antelope claims the vein strikes N. 7° E. and dips steeply to the west. It has been opened by a 132 feet shaft on the vein and by a total of about 120 feet of drifting on the 50 and 100 feet levels. The 100 feet level is not accessible as water is standing in the shaft 60 feet from the collar. These workings are known as the Antelope Mine. The average width of the vein is from 1 to 2 feet. Where the vein was observed on the 50 foot level, it was composed of clayey gouge with sparse mineralization. At the north end the vein is composed of 1-3 inches of gouge; at the south end the vein has a width of 17 inches. A small amount of galena and sphalerite was observed at the south end of the 50 foot level, and a little sphalerite near the north end, otherwise the vein is barren.

Twenty feet down from the collar of the shaft on the south side the vein had a width of 31 inches with some galena in a limonitic gouge matrix. The applicants were working here at the time of the first visit to the property. When the property was revisited a week later, the applicants had shot a round out and the face was barren (see Sample 1, fig. 3, and table below). In the shaft set immediately below this "pocket" the vein was barren. It is characteristic in this area for the mineralization to be in discontinuous pockets.

As far as the writer was able to determine there is no recorded production from this prospect.

Some sphalerite and galena and a few grains of chalcopyrite were observed. Silver in the district when it occurs is largely in argentiferous tetrahedrite. The gangue of the veins is composed of limonitic gouge and a little quartz.

Three channel samples were taken to gain an idea of the tenor of the vein material. They are all of very low grade. Sample 1 represents the best of the vein material in the accessible workings. For sample locations, see figure 3.

TABLE I

| Sample No. | Remarks | Width (inches) | Gold oz/ton | Silver oz/ton | Lead % | Zinc % |
|---|---|---|---|---|---|---|
| 1 | Face of gouged pocket in shaft | 20 | trace | 0.4 | 0.3 | 0.3 |
| 2 | "Best" material seen | 17 | .02 | 0.4 | 0.9 | 0.4 |
| 3 | Average vein material | 22 | trace | 0.4 | 0.2 | 0.2 |

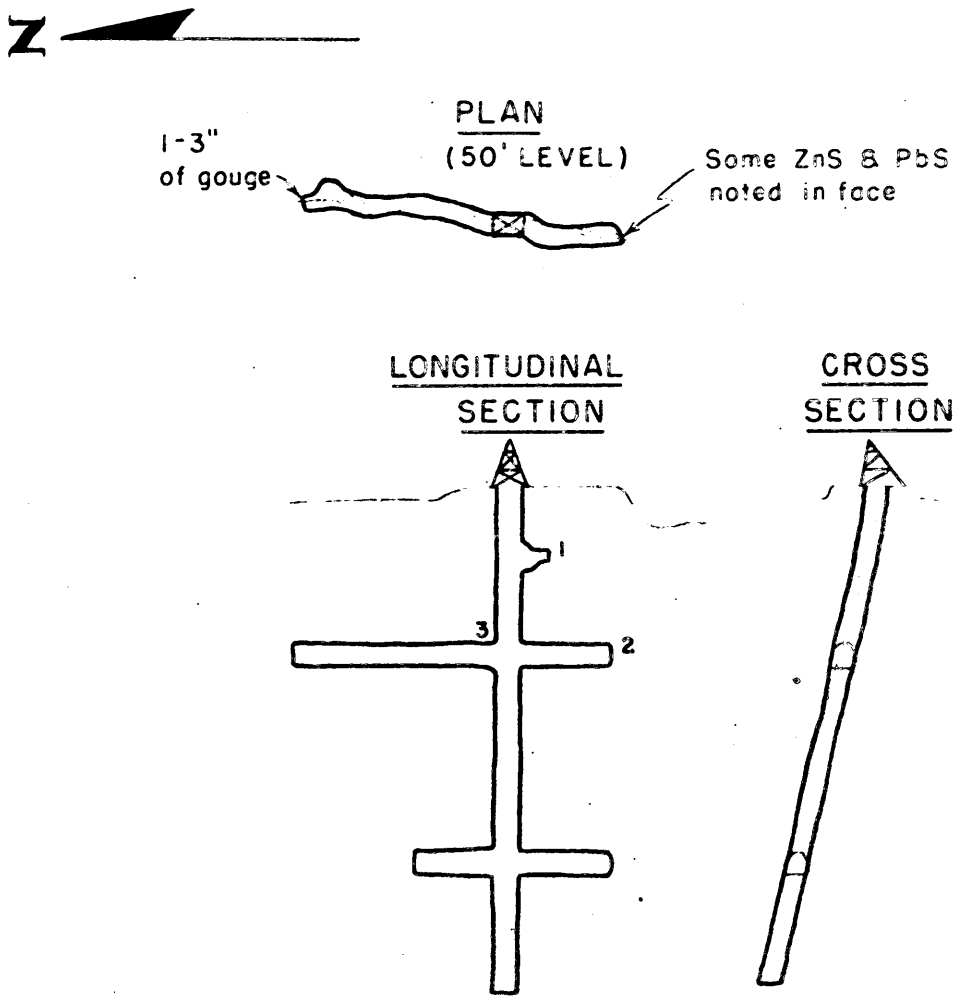
These samples indicate that the vein material cannot even be considered as a low grade mill ore, as contended by the applicants. The applicants have taken no systematic samples of the vein, and were relying largely on hearsay.

ORE RESERVES

There are no measured, indicated, or inferred reserves above the 50 foot level of the Antelope Mine. The 100 foot level is inaccessible and there are no positive data on the vein. It cannot logically be assumed that there will be any appreciable change in vein character. Dump material supposedly representing the lower portions of the mine show that little mineralization is present there.

PROPOSED EXPLORATION

It is proposed by the applicants to extend the shaft from the 132 foot to the 300 foot level and to drift north and south for 50 feet on the 150, 200, 250, and 300 foot levels. This exploration is based on the assumption that ore of higher grade will be encountered at depth.




| SAMPLE | LENGTH | DESCRIPTION | Au | Ag | Pb | Zn |
|---|---|---|---|---|---|---|
| 1 | 20" | FACE OF GOUGED POCKET IN SHAFT | Tr. | 0.4 | 0.3 | 0.3 |
| 2 | 17" | LIMONITIC GOUGE, SOME PbS, ZnS | 0.02 | 8.4 | 0.9 | 0.4 |
| 3 | 22" | AVERAGE VEIN MATERIAL | Tr. | 0.4 | 0.2 | 0.2 |

SCALE 1" = 50'

FIG. 3 PLAN & SECTIONS WITH ASSAYS EMM MINING CO.
DMA 1341X

The applicants rightly have little expectations of finding any ore above the 50 feet level, and are placing their hope on ore which they expect to come in with depth. There is no geologic basis for this hope.

CONCLUSIONS

In the work which has been done on the claims of the EMM Mining and Development Corporation up to the present time no recorded production has been made. In the shaft and on the 50 foot level of the Antelope Mine no encouraging sign has been discovered. The vein as exposed is essentially barren. Any likely discovery is apt to consist of small pockets of a few tons distributed sparingly within the narrow vein. In addition there is no geologic reason to expect the ore to become more abundant or of higher grade with depth. This misconception seems to be the hope of the applicants.

It is concluded that there has been insufficient discovery of minable material in ratio to the amount of work done on the vein to give reasonable expectation of making a significant discovery of lead-zinc ore through further exploration. Therefore, from a geologic viewpoint, the application cannot be recommended.

FILE COPY
SURNAME:

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

Mt Knight
O'Leary
(For Mote)
Billings
Lemmon for Rose.

Docket DMA-1341X
Emm Mining & Development Corp.
Lead, silver, zinc
Exploration loan

Mr. J. H. East, Jr.
Executive Officer, DMA Field Team
Region IV
224 New Customhouse
Denver 2, Colorado

Dear Mr. East:

Subject docket is referred to the field for advice.

The property lies very close to the property on which a development loan and an exploration loan are being requested by the Tucson Mining Company (DMA 1722X), which is also being referred to the field. The Emm Mining Company property should receive a geologic appraisal as an exploration project. If this appraisal shows that it has geologic merit, the engineering phases of the application should then be considered.

Very truly yours,

Tom Lyon

Chairman
Coordinating Committee

OCT 5 8 50 AM '51
DEFENSE MINERALS ADMINISTRATION WASHINGTON, D.C.

Howell B. Mote
For the Bureau of Mines

For the Geological Survey

ETMcKNIGHT:emp
G 7-18-51
Copies to: Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
R. E. Mote
Reports & Records Unit
Directors r. file 4214 GSA
Br. r. file 4214 GSA
Files

FILE COPY
SURNAME:

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

JUL 20 1951

July 18, 1951

McKnight
DMEA
(FORMATE)
Billings
Lemmon
Lemmon

Re: Docket DMA-1341X
Lead, silver, zinc

Emm Mining and Development Corporation
Ruby Star Rt. Box 9
Tucson, Arizona

Gentlemen:

Your application (Docket DMA-1341X) for an exploration loan under the provisions of the Defense Production Act of 1950 has been reviewed by the Lead-Zinc Branch of the Defense Minerals Administration. Before final decision can be taken on your request, it will be necessary to obtain additional information on your property. Your application, therefore, has been referred to Mr. J. H. East, Jr., Executive Officer, DMA Field Team, 224 New Customhouse, Denver 2, Colorado, with the request that the needed information be supplied to us.

Very truly yours,

Tom Lyon

Tom Lyon, Director
Supply Division

ETMcKNIGHT:emp
G 7-18-51

Copies to: J. H. East, Jr. Region IV (2)
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
R. H. Mote
Reports and Records Unit
Directors r. file 4214 GSA
Br. r. file 4214 GSA
Files

FILE COPY
SURNAME:

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

June 22, 1951

Mr. Frank McCargar
President
Emm Mining & Development Corp.
Ruby Star Route
Box 9
Tucson, Arizona

Subject: DMA-1341X
Re: Exploration Loan
Antelope Claims #1, 2, 3

My dear Mr. McCargar:

Receipt is acknowledged of your application and attachments of June 15, 1951 for an exploration loan under the Defense Production Act of 1950.

The application was assigned Docket Number DMA-1341X and was referred to Mr. Otto Herres, Chief, Lead-Zinc Branch on June 21, 1951.

In any future correspondence relating to your application, kindly refer to DMA-1341X.

Sincerely yours,

LANDON F. STROBEL

Landon F. Strobel
Executive Secretary

LFSTROBEL:js
cc: Strobel-2
>Files
Herres
Lyon

DMA 1341

258

FILE COPY
SURNAME:

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

June 14, 1951

Mr. Frank McCargar, President
Ruby Star Route Box 9
Tucson, Arizona

Subject: DMA-1341
Re: Loan
Antelope Claims #1,2,3

My dear Mr. McCargar:

Receipt is acknowledged of your application and attachments of May 12, 1951 for a loan under the Defense Production Act of 1950.

The application was assigned Docket Number DMA-1341 and referred to Mr. Otto Herres, Chief, Lead-Zinc Branch on May 31, 1951.

In any future correspondence relating to your application, kindly refer to DMA-1341.

Sincerely yours,

LANDON F. STROBEL
jc

Landon F. Strobel
Executive Secretary

L. F. Strobel:jc
cc: Strobel
✓ File
Herres
Lyon

FILE COPY
SURNAME:

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

Copies to: J. H. East, Jr. Region II (2)
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
L. B. Moon
R. H. Mote
L. F. Strobel
Tom Lyon

Directors r. file 4214 GSA
Br. reading file 4214 GSA
Files

June 5, 1951

Re: Docket DMA-1341

Mr. Frank McCargar
Ruby Star Rt. Box 9
Tucson, Arizona

Dear Mr. McCargar:

Your application for a Government loan amounting to $20,000 for development of your mine has been reviewed by the Lead-Zinc Branch of the Defense Minerals Administration.

To be eligible for a direct loan in the full amount needed to finance a mining operation it is necessary for an applicant to have sufficient proven reserves of strategic minerals to justify the loan. Your application indicates that your mine is not developed to the stage where you can give any tonnage for proven ore, and part of your application is for sinking your shaft to the 350 foot level with exploration work on 4 of the levels thus tapped, in order to locate ore in depth. Federal aid for this type of work can be given under the exploration program recently approved by the Defense Minerals Administration. This program calls for participation on the part of the applicant to the extent of 50 per cent for lead-zinc exploration. Funds advanced by the Government will be considered a loan to be repaid if the exploration is profitable, but to be cancelled if unsuccessful. Information on the exploration program and the necessary forms for making application are enclosed.

If you should care to apply for exploration aid under this program you should fill out and return the application form (MF-103). The deadline for the applications was May 31, which allows a relatively short time to carry out the negotiations that have to be completed by July 1, on which date the law under which the program is set up expires. However, we anticipate that the Congress may renew this law, hence, if you are interested in making application under the program, you should send in your application promptly. If there is time available, it might be handled before July 1 deadline. It would expedite handling if the application is specific concerning the work that is proposed.

Very truly yours,

Otto Herres

Otto Herres, Chief
Lead-Zinc Branch

Enclosure

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-1341X

Date received 6/21/51

Participation

EMM MINING & DEVELOPMENT CO
RUBY STAR RT. BOX 9
TUCSON, ARIZONA.

Name and address of applicant

Date 6/15/51

FILL IN THIS BLOCK

Date of application 6/15/51

Estimated cost $17,025.00

Mineral or metal LEAD AND ZINC ORE

Percentage of Government participation 50%

Location of mine PIMA MINING DISTRICT, PIMA COUNTY, ARIZONA

Date of filing MF-100 May 15, 1951

DMA Docket Number, if available 1341 X

## 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?
*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.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
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.
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)?

*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.
    (*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

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

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

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

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

## THE EXPLORATION

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

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

## THE REQUIREMENTS AND COSTS

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

## CERTIFICATION

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

E. M. McNamara & Development Co
(Name of company)

By Ralph McNamara
(Signature of authorized official)

6/15/51
(Date)

Sec & Treas
(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

1. E M M Mining & Dev. Co. Ruby Star Rt. Box 9. Tucson, Arizona.

# LEASE and OPTION

This LEASE AND OPTION, made and entered into this 22nd. day of June, 1950, by and between J. U. MILLS and LENORA MILLS, his wife, parties of the First Part, and FRANK McCARGAR, REX McCARGAR AND H. C. ENGEL, parties of the Second Part.

WITNESSETH:

1. OPTION TO PURCHASE:

The parties of the second part, their heirs, successors or assigns, for and in consideration of the covenants and agreements herein set forth are hereby given and granted by the parties of the First Part, the exclusive option to purchase, for the price and upon the terms and conditions hereinafter set forth, those certain three (3) unpatented mining claims in Pima Mining District, Pima County, Arizona, which are described as follows, to-wit:

| Name | Record of location notice Book | Page |
|---|---|---|
| Antelope no. 1 | 72 | 55 |
| Antelope No. 2 | 72 | 56 |
| Antelope No. 3 | 72 | 57 |

2. PURCHASE PRICE:

That purchase price of the above described mining claims, in the event the parties of the second part shall exercise their option to purchase same is the sum of Thirty Thousand Dollars ($30,000.00) lawful money of the United States of America. Said option shall not be considered as exercised until the entire sum of Thirty Thousand Dollars has been paid.

3. ROYALTIES AND PAYMENTS:

The parties of the First part shall be paid a sum equal to ten per cent (10%) of the net smelter or mill returns on all ore, concentrates or bullion shipped from said property, by which is meant ten per cent (10%) of the check received from any smelter, custom mill or mint. All royalties herein provided for shall be credited on the purchase price and any such payments and any other payments made shall be considered as rental for the use and occupancy of the premises and as liquidated damages unless the full sum of Thirty Thousand Dollars is paid as herein provided. All royalties paid by the smelter or purchaser of the ores and concentrates shall be paid to the Southern Arizona Bank and Trust Company of Tucson, Arizona, and said bank shall promptly remit same to the parties of the First Part. The smelter or purchaser of said ores or concentrates shall send to said bank a settlement sheet in duplicate. This lease and option shall expire ten (10) years from the date hereof unless the full purchase price shall have been paid as hereinbefore set forth.

4. POSSESSION AND CONTROL OF PROPERTY:

The parties of the Second Part are hereby granted the exclusive possession of said mining claims, and until default occurs, as hereinafter as provided, they shall be permitted to work, mine and develop the same, which must be, however, strictly in accordance with all mining laws and governmental regulations.

5. MANNER OF OPERATION.

The parties of the Second Part agree to commence actual mining work within ten (10) days from date hereof and shall continuously work said mining claims with at least forty (40) shifts per month during the life of this agreement. A shift shall be defined as the work of one man for a n eight hour day. The parties of the Second Part agree that they will not allow or permit any mechanics or materialmens liens of any kind to b e fixed against the above described mining claims, and that they will promptly pay any and all bills and obligations incurred by them in connection with their mining operations on the above claims.

Lessee or their assigns shall pay promptly when due all labor wages, material and supplies and shall save the lessors harmless for all claims for damages or injuries resulting from the operation of these mining claims.

agree

7- Elm Mining & Dev. Co. Ruby Star Rd. Box 9- Tucson, Ariz.

Said Second Parties agree to post at the entrance of all workings on said claims, and entrances to all boarding houses, notices provided for by the laws of the State of Arizona, generally known as "Notice of Non-liability for Labor or Materials Furnished", on or before the day the said parties of the Second Part begin operations on said mining claims. The Parties of the Second Part also agree to file proper affidavits of assessment work in the office of the County Recorder of Pima County, Arizona, on or before July 1st of each year, and the parties of the Second Part agree in any event to perform the assessment work on said claim s as required by law, or file the affidavit in lieu thereof if permitted by law.

6. WORKMEN'S INSURANCE:

The parties of the Second Part shall carry and pay for workmen's compensation insurance as provided by the laws of the State of Arizona on all their employees.

7. RIGHT TO INSPECT PROPERTY AND BOOKS:

The parties of the First Part or their duly authorized agents or attorneys shall have the right at all reasonable times to go into or upon said mining claims, or any part thereof, for the purpose of inspecting any work or development thereon, and also the right of examining the books and records of the parties of the Second Part, or their sub-lessees or assigns, for the purpose of determining the amount of work done and performed upon said mining claims, and for the purpose of determining the amount and value of ore or products shipped or sold therefrom.

8. TAXES

The parties of the Second Part agree to pay when due and before delinquent, all taxes which may be levied against said mining claims or the products thereof, or upon any property placed thereon.

9. NOTICE OF REMOVAL, SALE OR DISPOSITION OF PRODUCT OF MINE:

No shipments, removal, sales or other disposition of the ores, bullion or concentrates shall be made without giving notice thereof by copy of the bill of lading , or other written notice thereof to the parties of the First Part at such address as shall be fixed by the parties of the First Part.

10. REMOVAL OF EQUIPMENT:

IN THE EVENT OF ABANDONMENT or termination of this lease and option before the option herein granted is exercised, all buildings and machinery placed upon the claims by the parties of the Second Part may be removed by them, provided the removal takes place within sixty (60) days of the termination of this lease and option. However, all rails, pipes, timbers or ladderways placed in the underground workings of said property shall not be removed but shall remain in place and become the property of the parties of the First Part. In the event of removal of any buildings and machinery placed upon the premises, such removal shall be done in such a manner as not to damage the underground workings of said mines or mining claims. Any of said property which is not removed within sixty (60) days shall become the property of the parties of the First Part. During the continuance of this lease and option the parties of the Second Part shall not remove from any shaft or working on said claims any ladderways, pipes, timbers or ladders, regardless of the purpose of such removal without first having secured the written permission of the parties of the First Part.

11. DEED IN ESCROW:

Upon the request of the parties of the Second Part, the parties of the First Part shall execute a good and sufficient deed of conveyance to said mining claims, conveying to the parties of the Second Part their heirs or assigns all of the right, title and interest of said parties of the First Part therein, and shall place same in escrow in the Southern Arizona Bank and Trust Co. in Tucson, Arizona, which said deed shall be delivered to the parties of the second part upon the full payment of the purchase price herein provided for. The cost of said escrow shall be borne equally between the parties of this agreement.

7. E. M. Mummy & Dev. S. Ruby Star Rt. Box 9. Tucson, Arizona.

12. TERMINATION CLAUSE:

In the event the parties of the Second Part shall fail to keep or perform any of the covenants, conditions or agreements in this contract which the said parties of the Second Part are obligated to keep or perform and said default continues for thirty (30) days after written notification mailed to the parties of the Second Part, as herein provided for notifying the parties of the Second Part of the default then existing, then the parties of the First Part, at their election, shall have the right to terminate this contract by giving the parties of the Second Part notice in writing that this agreement has been terminated. After said termination the parties of the Second Part shall have no right, title or interest of any kind whatsoever in and to said mining claims, except the right to remove equipment as provided herein. Any notice herein provided for shall be considered as having been given to the parties of the Second Part when an envelope containing said notice, addressed to the parties of the Second Part at Tucson Arizona, shall have been registered and deposited, postage prepaid, in the United States mail.

13. SURRENDER OF POSSESSION:

Upon the termination of this agreement by lapse of time or otherwise, then in that case it shall be lawful for the said parties of the First Part to eneter upon and take possession of all the claims hereby leased, with or without process of law, and in such case parties of the second part agree o surrender, yield and deliver to the said parties of the First Part quiet and peaceable possession of said property in as good condition as when received, having regard to the operation of said property as herein contemplated.

14. OTHER CONDITIONS:

Time is hereby declared to be of essence of this agreement. This agreement shall extend to and be binding upon and inure to the benefit of the heirs, executors, administrators, successors and assigns of the respective parties hereof.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands the day and year first above written.

J. W. MILLS
LEONA MILLS
Parties of the First Part.
REX McBARNES
FRANK McCARGAR
HORACE C. ERTEL
Parties of the Second Part.

The lease as written is in good standing as of this date.
6/15/51

EMM MINING AND DEVELOPMENT CO.
RUBY STAR RT. BOX 9
TUCSON, ARIZONA.

8. The EMM MINING AND DEVELOPMENT CO. is a new company being in existance less than a year. We have spent the past year exploring, testing and installing machinery on Antelope Claims No's. 1,2 and 3. As yet we have not produced or shipped any ore. Machinery, equipment etc to the value of $8,000.00 is on the location and ready to start operation. This machinery and equipment is all paid for and clear. We have a small cash balance but are both financially able to take care of any expense that we might contract. Starting this coming Monday we expect to operate with what ore we have blocked out.

[redacted] MINING AND DEVELOPMENT CO.
[redacted] SPAR ST. BOX 9
TUCSON, ARIZONA.

9. The [redacted] MINING AND DEVELOPMENT CO. IS PREPARED AND FINANCIALLY ABLE TO PAY ITS SHARE OF THE PROPOSED PROJECT.

[illegible] MINING AND DEVELOPMENT CO.
[illegible] SEAR BLD. SEC 9
TUCSON, ARIZONA.

10. (a)

Antelope Claim #1
Antelope Claim #2
Antelope Claim #3
All of Pima Mining District, Pima County, Arizona.

(b)

Pt $S^{2}_{1}$ $N^{4}_{3}$ 623.34 PP-16-17-12

Both areas are the same.

MIN MINING AND DEVELOPMENT CO.
RUBY GEM MT. BOX 9
TUCSON, ARIZONA.

25.Ore to be shipped by truck to nearest rail head at BENSONIA, Arizona, a distance of 12 1/2 miles over a good hiway. From BENSONIA by rail to smelter at either DOUGLAS, ARIZONA., a distance of 148 miles or to SUPERIOR, ARIZONA a distance of 100 miles.

19. It is our belief that ther is a large body of low grade mill ore between the 30 and 100 ft. levels. We have installed a small mill operation and expect to start( will start Monday) a strip mine operation to recover this ore - this operation will be in addition to and independent of exploration work on lower levels.

[illegible] MINING AND DEVELOPMENT CO.
[illegible] ROAD RT. BOX 9
TUCSON, ARIZONA.

20. We expect to find argentiferous galena with subordinate copper and zinc minerals.

EEB mining and development co.
GREEN STAR RT. BOX 9
TUCSON, ARIZONA.

21. Reconditions of present shaft from 70' level to the 132' level.
Lowering of shaft from 132' level to the 300' level.
North and South drifts at 150', 200', 250' and 300' levels.
Drifts to run about 50', unless they show immediate production possibilities.
Estimated time for above work: ~~9~~ 10 months.

22. Because of faulting, igneous intrusion, and alluvial cover, few if any of the sedimentary rock units are exposed in their original or entire thickness. Over much of the area structural relations are obscure. The structure of the area has been complicated by folds, overthrusts, low-angle faults, and steeply dipping faults.

Our claims are located midway between two well known producing mines, viz, the San Xavier mine operated by the Eagle Pitcher Mining and Smelting Co. is one of the most important producers of lead and zinc in Arizona and for 1940 it's output of these minerals ranked third in the state. The ore deposits in this area include contact, replacement, and vein types. Available evidence suggests that the ore solutions ascended through fissures of northeast and eastward strike and that the principal ore bodies are less than a mile from granite outcrop. Evidence of ore bodies on our claims conform with the above description, also ore in small quantities is present in test holes and present shaft of 132' depth. All evidence points to a heavier vein at greater depth.

[illegible] MINING AND DEVELOPMENT CO.
[illegible] ST. BOX 9
TUCSON, ARIZONA.

[illegible]

| | | |
|---|---|---|
| (a) | Miners (2) Rate $1.75 hr. $140.00 mo. 2 Mths. | 3,100.00 |
| (b) | Part time engineer | 300.00 |
| | Other work and supervision done by owners, no salary. | |
| (c) | New skids, ladders and stations | |
| | Reconditioning of timber in shaft from the 65' to the 138' level | 450.00 |
| (d) | None | |
| (e) | Blower and motor | 150.00 |
| (f) | None | |
| (g) | All equipment necessary for 2 miners on hand including jackhammers, compressors, hoist, headframe, ore bin etc. Estimated rental value $300.00 per month. | 2,700.00 |
| (h) | Lumber for timbering shaft (300' level) including skids, ladders and stations. 250 board feet per ft. of shaft. | 4,410.00 |
| | Hangers, bolts, nails etc | 350.00 |
| | Pipe, fittings, hangers etc | 300.00 |
| | Cable, track, cars etc. | 500.00 |
| (i) | Power (gas and oil for motors for compressors, hoist and blower) | |
| | Gas 19 gal per d.7 | |
| | Oil 10 gallons qt per wk. | 365.00 |
| | Carbide, batteries etc | 50.00 |
| | Powder and fuse | 750.00 |
| | Drill steel | 250.00 |
| | Misc. repairs | 500.00 |
| | Total | $17,025.00 |

HIM MINING AND DEVELOPMENT CO.
RUBY STAR RT. BOX 9
TUCSON, ARIZONA.

24.

| | | |
|---|---|---|
| 1st. No. | Install new skips, ladders and stations. Recondition old 1½' shaft. Install blower | 697.50 |
| 2nd. No. | Lower shaft 40' | 2,467.50 |
| 3rd. No. | Drift 60' at 150' level | 1,207.50 |
| 4th. No. | Lower shaft 40' | 2,467.50 |
| 5th. No | Drift 20' on 150' level | |
| | Drift 60' on 200' level | 1,207.50 |
| 6th No. | Lower shaft 40' | 2,467.50 |
| 7th. No. | Drift 40' on 200' level | |
| | Drift 40' On 250' level | 1,207.50 |
| 8th. No. | Lower shaft 40' | 2,467.50 |
| 9th. No. | Drift 60' on 250 ' level | |
| | Drift 60' On 300' level | 1,207.50 |
| 10th.no. | Lower shaft 8' | |
| | Drift 80' on the 300' level | 1,627.50 |
| | Total | $17,025.00 |

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-1341 X

Date received 6/21/51

Participation

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 21 1951
LANDON F. STROBEL
Executive Secretary

EMM MINING AND DEVELOPMENT CO.
RUBY STAR RT BOX 9
TUCSON, ARIZONA.

Name and address of applicant

Date 6/15/51

FILL IN THIS BLOCK

Date of application 6/15/51

Estimated cost $17,025.00

Mineral or metal LEAD AND ZINC ORE

Percentage of Government participation 50%

Location of mine PIMA MINING DISTRICT, PIMA COUNTY, ARIZONA.

Date of filing MF-100 5/15/51

DMA Docket Number, if available 1341 X

## 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?
*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.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
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.
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)?

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

16—64067-1

JUN 22 1951

## THE PROPERTY

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

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

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

| | *Tons per day* | *Grade or analysis* | *Cost per ton* | *Net value per ton* |
|---|---|---|---|---|
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| (3) Shipped or sold | | | | |

*18. Ore or mineral reserves: (If property is or has been operating.)
    (*a*) Describe the ore or mineral deposits briefly.
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    (*c*) Give estimated tonnage and grade of each class of ore reserves.
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## THE EXPLORATION

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

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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.

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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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    (*f*) Cost of rental for equipment which the operator proposes to rent.
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    (*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.
    (*i*) Cost of power, water, utilities, and any other items not provided for above.
24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

## CERTIFICATION

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

Emma Mining & Development Co. By [illegible]
(Name of company) (Signature of authorized official)

6/15/51 Secy-Treas.
(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

7. Emm Mining & Dev Co. Ruby Star Rt. Box 9. Tucson, Arizona.

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Lesses or theor assigns shall pay promptly when due all labor wages, material and supplies and shall save the lessors harmless for all claims for damages or injuries resulting from the operation of these mining claims.

7. Em M Mining & Dev. Co. Ruby Star Rd. Box 9. Tucson, Arizona

Said Second Parties agree to post at the entrance of all workings on said claims, and entrances to all boarding houses, notices provided for by the laws of the State of Arizona, generally known as "Notice of Non-Liability for Labor or Materials Furnished", on or before the day the said parties of the Second Part begin operations on said mining claims. The Patties of the Second Part also agree to file proper affidavits of assessment work in the office of the County Recorder of Pima County, Arizona, on or before July 1st of each year, and the parties of the Second Part agree in any event to perform the assessment work on said claim s as required by law, or file the affidavit in lieu thereof if permitted by law.

6. INDEMNITY INSURANCE:

The partiesof the Second Part shall carry and pay for workmen's compensation insurance as provided by the laws of the State of Arizona on all their employees.

7. RIGHT TO INSPECT PROPERTY AND BOOKS:

The parties of the First Part or their duly authorized agents or attorneys shall have the right at all reasonable times to go into or upon said mining claims, or any part thereof, for the purpose of inspecting any work or development thereon, and also the right of examining the books and records of the parties of the Second Part, or their sub-lessees or assigns, for the purpose of determining the amount of work done ans performed upon said mining claims, and for the purpose of determining the amount and value of ore or products shipped or sold therefrom.

8. TAXES

The parties of the Second Part agree to pay when due and before delinquent, all taxeswhich may be levied against said mining claims or the products thereof, or upon any property placed thereon.

9. NOTICE OF REMOVAL, SALE OR DISPOSITION OF PRODUCTS OF MINES:

No shipments, removal, sales or other disposition of the ores, bullion or concentrates shall be made without giving notice thereof by copy of the bill of lading , or other writtennotice thereof to the parties of th e First Part at such address as shall be fixed by the parties of the First Part.

10. REMOVAL OF EQUIPMENT:

IN THE EVENT OF ABONDONMENT or termination of this lease and option before the option herein granted is exercised, all buildings and machinery placed upon the claims by the parties of the Second Part may be removed by them, provided the removal takes place within sixty (60) days of the termination of this lease and option. However, all rails, pipes, timbers or ladderways placed in the underground workings of said property shall not be removed but shall remain in place and become the property of the parties of the First Part. In the event of removal of any buildings and machinery plced upon the premises, such removal shall be done in such a manner as nor to damage the underground workings of said mines or mining claims. Any of said property which is not removed within sixty (60) days shall become the property of the parties of the First Part. During the continuance of this lease and option the parties of the Second Part shall not remove from any shaft or working on said claims any ladderways, pipes, timbers or ladders, regardless of the purpose of such removal without first having secured the written permission of the parties of the First Part.

11. DEED IN ESCROW:

Upon the request of the parties of the Second Part, the parties of the First Part shall excute a good and sufficient deed of conveyance to said mining claims, conveying to the parties of the Second Part their heirs o r assigns all of the right, title and interest of said parties of the First Part therein, and shall placesame in escrow in the Southern Arizona Bank and Trust Co. in Tucson, Arizona, which said deed shall be delivered to the parties of the second part upon the full payment of the purchase price herein provided for. The cost of said escrow shall be borne equally between the parties of this agreement.

7. Emm Mining & Dev. Co. Ruby Star Rt. Box 9. Tucson, Arizona.

12. TERMINATION CLAUSE:

In the event the parties of the Second Part shall fail to keep or perform any of the covenants, conditions or agreements in this contract which the said parties of the Second Part are obligated to keep or perform and said default continued for thirty (30) days after written notification mailed to the parties of the Second Part, as herein provided for notifying the parties of the Second Part of the default then existing, then the parties of the First Part, at their election, shall have the right to terminate this contract by giving the parties of the Second Part notice in writing that this agreement has been terminated. After said termination the parties of the Second Part shall have no right, title or interest of any kind whatsoever in and to said mining claims, except the right to remove equipment as provided herein. Any notice herein provided for shall be considered as having been given to the parties of the Second Part when an envelope containing said notice, addressed to the parties of the Second Part at Tucson Arizona, shall have been registered and deposited, postage prepaid, in the United States mail.

13. SURRENDER OF POSSESSION:

Upon the termination of this agreement by lapse of time or otherwise, then in that case it shall be lawful for the said parties of the First Part to eneter upon and take possession of all the claims hereby leased, with or without process of law, and in such case parties of the second part agree to surrender, yield and deliver to the said parties of the First Part quiet and peaceable possession of said property in as good condition as when received, having regard to the operation of said property as herein contemplated.

14. OTHER CONDITIONS:

Time is hereby declared to be of essence of this agreement. This agreement shall extend to and be binding upon and inure to the benefit of the heirs, executors, administrators, successors and assigns of the respective parties hereof.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands the day and year first above written.

J. W. MILLS
LEONA MILLS
Parties of the First Part.
REX McBARNES
FRANK McCARGAR
HORACE C. ERTEL
Parties of the Second Part.

The lease as written is in good standing as of this date.
6/15/51

EMM MINING AND DEVELOPMENT CO.
RUBY STAR RT. BOX 9
TUCSON, ARIZONA.

8. The EMM MINING AND DEVELOPMENT CO. is a new company being in existance less than a year. We have spent the past year exploring, testing and installing machinery on Antelope Claims No's. 1,2 and 3. As yet we have not produced or shipped any ore. Machinery, equipment etc to the value of $8,000.00 is on the location and ready to start operation. This machinery and equipment is all paid for and clear. We have a small cash balance but are both financially able to take care of any expense that we might contract. Starting this commming Monday we expect to operate with what ore we have blocked out.

EMM MINING AND DEVELOPMENT CO.
RUBY STAR RT. BOX 9
TUCSON, ARIZONA.

9. The EMM MINING AND DEVELOPMENT CO. IS PREPARED AND FINANCIALLY ABLE TO PAY ITS SHARE OF THE ROPOSED PROJECT.

EMM MINING AND DEVELOPMENT CO.
RUBY STAR RT. BOX 9
TUCSON, ARIZONA.

10. (a)

Antelope Claim #1
Antelope Claim #2
Antelope Claim #3
All of Pima Mining District, Pima County, Arizona.

(b)

Pt $S^2NE^4$ G28.54 P2-16-17-12

Both areas are the same.

EMM MINING AND DEVELOPMENT CO.
RUBY STAR RT. BOX 9
TUCSON, ARIZONA.

15.Ore to be shipped by truck to nearet rail head at SAHUARITA, Arizona, a distance of 12 1/2 miles over a good hiway. From SAHUARITA by rail to smelter at either DOUGLAS, ARIZONA., a distance of 148 miles or to SUPERIOR, ARIZONA a distance of 100 miles.

EMM MINING AND DEVELOPMENT CO.
RUBY STAR RT. BOX 9
TUCSON, ARIZONA.

19. It is our belief that ther is a large body of low grade mill ore between the 30 and 100 ft. levels. We have installed a small mill operation and expect to start( will start Monday) a strip mine operation to recover this ore - this operation will be in addition to and independent of exploration work on lower levels.

EMM MINING AND DEVELOPMENT CO.
RUBY STAR RT. BOX 9
TUSCON, ARIZONA.

20. We expect to find argentiferous galena with subordinate copper and zinc minerals.

EMM mining and development co.
RUBY STAR RT. BOX 9
TUCSON, ARIZONA.

21. Recondition of present shaft from 70' level to the 132' level.
Lowering of shaft from 132' level to the 300' level.
North and South drifts at 150', 200',250' and 300' levels.
Drifts to run about 50', umless they show immediate production possibilities.
Estimated time for above work 18 months.

EMM MINING AND DEVELOPMENT CO.
RUBY STAR RT. BOX 9.
TUCSON, ARIZONA.

22. Because of faulting, igneous intrusion, and alluvial cover, few if any of the sedimentary rock units are exposed in their original entire thickness. Over much of the area structural relations are obscure. The structure of the area has been complicated by folds, overturns, low-angle faults, and steeply dipping faults.

Our claims are located midway between two well known producing mines. One, the San Xavier mine operated by the Eagle Pitcher Mining and Smelting Co. is one of the most important producers of lead and zinc in Arizona and for 1948 it s output of these minerals ranked third in the state. The ore deposits in this area include contact, replacement, and vein types. Available evidence suggests that the ore solutions ascended through fishers of northeast and eastward strike and that the principal ore bodies are less than a mile from granite outcrop. Evidence of ore bodies on our claims conform with the above description, also ore in minor quantities is present in test holes and present shaft of 132' depth. All evidence points to a heavier vein at greater depth.

EMM MINING AND DEVELOPMENT CO.
RUBY STAR RT. BOX 9
TUCSON, ARIZONA.

25.

| | | |
|---|---|---|
| (a) | Miners (2) Rate $1.75 hr. $140.00 wk. 37wks. | 5,180.00 |
| (b) | Part time engineer | 500.00 |
| | Other work and supervision done by owners. No salary. | |
| (c) | New skids, ladders and stations | |
| | Reconditioning of timber in shaft from the 60' to the 132' level | 450.00 |
| (d) | None | |
| (e) | Blower and motor | 150.00 |
| (f) | None | |
| (g) | All equipment necessary for 2 miners on hand including jackhammers, compressors, hoist, headframe, ore bin etc. Estimated rental value $300.00 per month. | 2,700.00 |
| (h) | Lumber for timbering shaft (300' level) including skids, ladders and stations. 250 board feet per ft. of shaft. | 4,410.00 |
| | Hangers, bolts, nails etc | 550.00 |
| | Pipe, fittings, hangers etc | 500.00 |
| | Cable, track, cars etc. | 500.00 |
| (i) | Power (gas and oil for motors for compressors, hoist and blower) | |
| | Gas 15 gal per day | |
| | Oil 10 qt per wk. | 585.00 |
| | Carbide, batteries etc | 50.00 |
| | Powder and fuse | 750.00 |
| | Drill Steel | 200.00 |
| | Misc. repairs | 500.00 |
| | Total | $17,025.00 |

EMM MINING AND DEVELOPMENT CO.
RUBY STAR RT. BOX 9
TUCSON, ARIZONA.

24.

| | | |
|---|---|---|
| 1st. Mo. | Install new skids, ladders and stations. Recondition old 132' shaft. Install blower | 697.50 |
| 2nd. Mo. | Lower shaft 40' | 2,467.50 |
| 3rd. Mo. | Drift 80' at 150' level | 1,207.50 |
| 4th. Mo. | Lower shaft 40' | 2,467.50 |
| 5th. MO | Drift 20' on 150' level | |
| | Drift 60' on 200' level | 1,207.50 |
| 6th MO. | Lower shaft 40' | 2,467.50 |
| 7th. Mo. | Drift 40' on 200' level | |
| | Drift 40' On 250' level | 1,207.50 |
| 8th. Mo. | Lower shaft 40' | 2,467.50 |
| 9th. Mo. | Drift 60' on 250 ' level | |
| | Drift 20' On 300' level | 1,207.50 |
| 10th.mo. | Lower shaft 8' | |
| | Drift 80' on rhe 300' level | 1,627.50 |
| | Total | $17,025.00 |

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-1341 X

Date received 6/21/51

Participation

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 21 1951
LANDON F. STROBEL
Executive Secretary

EMM MINING AND DEVELOPMENT CO.
RUBY STAR RT. BOX 9
TUCSON, ARIZONA.

Name and address of applicant

Date 6/15/51

FILL IN THIS BLOCK

Date of application 6/15/51

Estimated cost $17,025.00

Mineral or metal LEAD AMD ZINC ORE

Percentage of Government participation 50%

Location of mine PIMA MINING ISTRICT, PIMA COUNTY, ARIZONA.

Date of filing MF-100 5/15/51

DMA Docket Number, if available 1341 X

## 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?
*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.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
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.
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)?

*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.

(*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

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

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled.

*16. History:

(*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.

(*b*) State briefly the known history and production of adjoining and neighboring properties.

(*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:

(*a*) If mine is in production, furnish the following information:

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

*18. Ore or mineral reserves: (If property is or has been operating.)

(*a*) Describe the ore or mineral deposits briefly.

(*b*) Submit available maps and assay data.

(*c*) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

## THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?

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

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

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

## THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:

(*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.

(*b*) Supervisors, by numbers and positions, with salaries of each.

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

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

(*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.

(*f*) Cost of rental for equipment which the operator proposes to rent.

(*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.

(*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.

(*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

## CERTIFICATION

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

E M M Mining & Devel Corp. By Ray P. McJames
(Name of company) (Signature of authorized official)

6/15/51 Vice Pres.
(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

7. E M M Mining + Dev Co. Ruby Star Rt. Box-9. Tucson, Arizona.

**LEASE and OPTION**

This LEASE AND OPTION, made and entered into this 22nd. day of June, 1950, by and between J. W. MILLS and LENORA MILLS, his wife, parties of the First Part, and FRANK McCARGAR, REX McBARNES AND H. C. ERTEL, parties of the Second Part.

WITNESSETH:

1. OPTION TO PURCHASE:

The parties of the second part, their heirs, successors or assigns, for and in consideration of the covenants and agreements herein set forth are hereby given and granted by the parties of the First Part, the exclusive option to purchase, for the price and upon the terms and conditions hereinafter set forth, those certain three (3) unpatented mining claims in Pima Minind District, Pima County, Arizona, which are described as follows, to-wit:

| Name | Record of location notice Book | Page |
|---|---|---|
| Antelope no. 1 | 72 | 55 |
| Antelope No. 2 | 72 | 56 |
| Antelope No. 3 | 72 | 57 |

2. PURCHASE PRICE:

That purchase price of the above described mining claims, in the event the parties of the second part shall exercise their option to purchase same is the sum of Thirty Thousand Dollars ($30,000.00) lawful money of the United States of America. Said option shall not be considered as exercised until the entire sum of Thirty Thousand Dollars has been paid.

3. ROYALTIES AND PATMENTS:

The parties of the first part shall be paid a sum equal to ten per cent (10%0 of the net smelter or mill returns on all ore, concentrates or bullion shipped from said property, by which is meant ten per cent (10%) of the check received from any smelter, custom mill or mint. All royalties herein provided for shall be credited on the purchase price and any such payments and any otherpayments made shall be considered as rental for the use and occupancy of the premises and as liquidated damages unless the full sum of Thirth Thousand Dollars is paid as herein provided. All royalties paid by the smelter or purchaser of the ores and concentrates shall be paid to the Southern Arizona Bank and Trust Company of Tucson, Arizona, and said bank shall promptly remit same to the parties of the First Part. The smelter or purchaser of said ores or concentrates shall send to said bank a settlement sheet in duplicate. This lease and option shall expire ten (10)years from the date hereof unless the full purchase price shall have been paid as hereinbefore set forth.

4. POSSESSION AND CONTROL OF PROPERTY:

The parties of the Second Part are hereby granted the exclusive possession of saidmining claims, and until default occurs, as hereinafter provided, they shall be permitter to work, mine and develop the same, which must be, however, strictly in accordance with all mining laws and governmental regulations.

5. MAnner of OPERATION.

The parties of the Second Part agree to commence actual mining work within ten (10) days from date hereof and shall continuously work said mining claims with at least forty (40) shifts per month during the life of this agreement. A shift shall be defined as the work of one man for a n eight hour day. The parties of the Second Part agree that they will not allow or permit any mechanics or materialmens liens of any kind to b e fixed against the above described mining claims, and that they will promptly pay any and all bills and obligations incurred by them in connection with their mining operations on the above claims.

Lesses or theor assigns shall pay promptly when due all labor wages, material and supplies and shall save the lessors harmless for all claims for damages or injuries resulting from the operation of these mining claims.

9. E M M Mining & Dev. Co - Ruby Star Pt Bx 9 - Tucson, Ariz.

Said Second Parties agree to post at the entrance of all workings on said claims, and entrances to all boarding houses, notices provided for by the laws of the State of Arizona, generally known as "Notice of Non-Liability for Labor or Materials Furnished", on or before the day the said parties of the Second Part begin operations on said mining claims. The Patties of the Second Part also agree to file proper affidavits of assessment work in the office of the County Recorder of Pima County, Arizona, on or before July 1st of each year, and the parties of the Second Part agree in any event to perform the assessment work on said claim s as required by law, or file the affidavit in lieu thereof if permitted by law.

6. INDEMNITY INSURANCE:

The partiesof the Second Part shall carry and pay for workmen's compensation insurance as provided by the laws of the State of Arizona on all their employees.

7. RIGHT TO INSPECT PROPERTY AND BOOKS:

The parties of the First Part or their duly authorized agents or attorneys shall have the right at all reasonable times to go into or upon said mining claims, or any part thereof, for the purpose of inspecting any work or development thereon, and also the right of examining the books and records of the parties of the Second Part, or their sub-lessees or assigns, for the purpose of determining the amount of work done ans performed upon said mining claims, and for the purpose of determining the amount and value of ore or products shipped or sold therefrom.

8. TAXES

The parties of the Second Part agree to pay when due and before delinquent, all taxes which may be levied against said mining claims or the products thereof, or upon any property placed thereon.

9. NOTICE OF REMOVAL, SALE OR DISPOSITION OF PRODUCTS OF MINES:

No shipments, removal, sales or other disposition of the ores, bullion or concentrates shall be made without giving notice thereof by copy of the bill of lading , or other writtennotice thereof to the parties of th e First Part at such address as shall be fixed by the parties of the First Part.

10. REMOVAL OF EQUIPMENT:

IN THE EVENT OF ABONDONMENT or termination of this lease and option before the option herein granted is exercised, all buildings and machinery placed upon the claims by the parties of the Second Part may be removed by them, provided the removal takes place within sixty (60) days of the termination of this lease and option. However, all rails, pipes, timbers or ladderways placed in the underground workings of said property shall not be removed but shall remain in place and become the property of the parties of the First Part. In the event of removal of any buildings and machinery plced upon the premises, such removal shall be done in such a manner as nor to damage the underground workings of said mines or mining claims. Any of said property which is not removed within sixty (60) days shall become the property of the parties of the First Part. During the continuance of this lease and option the parties of the Second Part shall not remove from any shaft or working on sa d claims any ladderways, pipes, timbers or ladders, regardless of the purpose of such removal without first having secured the written permission of the parties of the First Part.

11. DEED IN ESCROW:

Upon the request of the parties of the Second Part, the parties of the First Part shall excute a good and sufficient deed of conveyance to said mining claims, conveying to the parties of the Second Part their heirs o r assigns all of the right, title and interest of said parties of the First Part therein, and shall placesame in escrow in the Southern Arizona Bank and Trust Co. in Tucson, Arizona, which said deed shall be delivered to the parties of the second part upon the full payment of the purchase price herein provided for. The cost of said escrow shall be borne equally betw ween the parties of this agreement.

7 E. M. M. Mining & Dev. Co. Ruby Star Pt. Bx 9 - Tucson, Ariz.

12. TERMINATION CLAUSE:

In the event the parties of the Second Part shall fail to keep or perform any of the covenants, conditions or agreements in this contract which the said parties of the Second Part are obligated to keep or perform and said default continues for thirty (30) days after written notification mailed to the parties of the Second Part, as herein provided for notifying the parties of the Second Part of the default then existing, then the parties of the First Part, at their election, shall have the right to terminate this contract by giving the parties of the Second Part notice in writing that this agreement has been terminated. After said termination the parties of the Second Part shall have no right, title or interest of any kind whatsoever in and to said mining claims, except the right to remove equipment as provided herein. Any notice herein provided for shall be considered as having been given to the parties of the Second Part when an envelope containing said notice, addressed to the parties of the Second Part at Tucson Arizona, shall have been registered and deposited, postage prepaid, in the United States mail.

13. SURRENDER OF POSSESSION:

Upon the termination of this agreement by lapse of time or otherwise, then in that case it shall be lawful for the said parties of the First Part to enter upon and take possession of all the claims hereby leased, with or without process of law, and in such case parties of the second part a ree o surrender, yield and deliver to the said parties of the First Part quiet and peaceable possession of said property in as good condition as when received, having regard to the operation of said pr perty as herein contemplated.

14. OTHER CONDITIONS:

Time is hereby declared to be of essence of this agreement. This agreement shall extend to and be binding upon and inure to the benefit of the heirs, executors, administrators, successors and assi ns of the respective parties hereof.

IN WITNESS WHEREOF the parties hereto have hereunto set their hands the day and year first above written.

J. R. HILLS
LYDIA HILLS
Parties of the First Part.

[illegible]
[illegible]
[illegible]
Parties of the Second Part.

The lease as written is in good standing as of this date.
6/15/51

EMM MINING AND DEVELOPMENT CO.
RUBY STAR RT. BOX 9
TUCSON, ARIZONA.

8. The EMM MINING AND DEVELOPMENT CO. is a new company being in existance less than a year. We have spent the past year exploring, testing and installing machinery on Antelope Claims No's. 1,2 and 3. As yet we have not produced or shipped any ore. Machinery, equipment etc to the value of $8,000.00 is on the location and ready to start operation. This machinery and equipment is all paid for and clear. We have a small cash balance but are both financially able to take care of any expense that we might contract. Starting this commming Monday we expect to operate with what ore we have blocked out.

EMM MINING AND DEVELOPMENT CO.
RUBY STAR RT. BOX 9
TUCSON, ARIZONA.

9. The EMM MINING AND DEVELOPMENT CO. IS PREPARED AND FINANCIALLY ABLE TO PAY ITS SHARE OF THE PROPOSED PROJECT.

EMM MINING AND DEVELOPMENT CO.
RUBY STAR RT. BOX 9
TUCSON, ARIZONA.

10. (a)

Antelope Claim #1
Antelope Claim #2
Antelope Claim #3
All of Pima Mining District, Pima County, Arizona.

(b)

Pt $S^2NE^4$ G28.54 P2-16-17-12

Both areas are the same.

EEM MINING AND DEVELOPMENT CO.
RUBY STAR RT. BOX 9
TUCSON, ARIZONA.

15.Ore to be shipped by truck to nearet rail head at SAHUARITA, Arizona, a distance of 12 1/2 miles over a good hiway. From SAHUARITA by rail to smelter at either DOUGLAS, ARIZONA., a distance of 148 miles or to SUPERIOR, ARIZONA a distance of 100 miles.

EMM MINING AND DEVELOPMENT CO.
RUBY STAR RT. BOX 9
TUCSON, ARIZONA.

19. It is our belief that ther is a large body of low grade mill ore between the 30 and 100 ft. levels. We have installed a small mill operation and expect to start( will start Monday) a strip mine operation to recover this ore - this operation will be in addition to and independent of exploration work on lower levels.

EMN MINING AND DEVELOPMENT CO.
RUBY STAR RT. BOX 9
TUSCON, ARIZONA.

20. We expect to find argentiferous galena with subordinate copper and zinc minerals.

EMM mining and development co.
RUBY STAR RT. BOX 9
TUCSON, ARIZONA.

21. Recondition of present shaft from 70' level to the 132' level.
Lowering of shaft from 132' level to the 300' level.
North and South drifts at 150', 200', 250' and 300' levels.
Drifts to run about 50', unless they show immediate production possibilities.
Estimated time for above work ~~9~~ 10 months.

22. Because of faulting, igneous intrusion, and alluvial cover, few if any of the sedimentary rock units are exposed in their original entire thickness. Over much of the area structural relations are obscure. The structure of the area has been complicated by folds, overturns, low-angle faults, and steeply dipping faults.

Our claims are located midway between two well known producing mines. One, the San Xavier mine operated by the Eagle Pitcher Mining and Smelting Co. is one of the most important producers of lead and zinc in Arizona and for 1948 it s output of these minerals ranked third in the state. The ore deposits in this area include contact, replacement, and vein types. Available evidence suggests that the ore solutions ascended through fishers of northeast and eastward strike and that the principal ore bodies are less than a mile from granite outcrop. Evidence of ore bodies on our claims conform with the above description, also ore in minor quantities is present in test holes and present shaft of 132' depth. All evidence points to a heavier vein at greater depth.

EMM MINING AND DEVELOPMENT CO.
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TUCSON, ARIZONA.

23.

| | | |
|---|---|---|
| (a) | Miners (2) Rate $1.75 hr. $140.00 wk. 37wks. | 5,180.00 |
| (b) | Part time engineer | 500.00 |
| | Other work and supervision done by owners. No salary. | |
| (c) | New skids, ladders and stations | |
| | Reconditioning of timber in shaft from the 60' to the 132' level | 450.00 |
| (d) | None | |
| (e) | Blower and motor | 150.00 |
| (f) | None | |
| (g) | All equipment necessary for 2 miners on hand including jackhammers, compressors, hoist, headframe, ore bin etc. Estimated rental value $300.00 per month. | 2,700.00 |
| (h) | Lumber for timbering shaft (300' level) including skids, ladders and stations. 250 board feet per ft. of shaft. | 4,410.00 |
| | Hangers, bolts, nails etc | 550.00 |
| | Pipe, fittings, hangers etc | 500.00 |
| | Cable, track, cars etc. | 500.00 |
| (i) | Power (gas and oil for motors for compressors, hoist and blower) | |
| | Gas 15 gal per day | |
| | Oil 10 ~~gallons~~ qt per wk. | 585.00 |
| | Carbide, batteries etc | 50.00 |
| | Powder and fuse | 750.00 |
| | Drill Steel | 200.00 |
| | Misc. repairs | 500.00 |
| | Total | $17,025.00 |

EMM MINING AND DEVELOPMENT CO.
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TUCSON, ARIZONA.

24.

| | | |
|---|---|---|
| 1st. Mo. | Install new skids, ladders and stations. Recondition old 132' shaft. Install blower | 697.50 |
| 2nd. Mo. | Lower shaft 40' | 2,467.50 |
| 3rd. Mo. | Drift 80' at 150' level | 1,207.50 |
| 4th. Mo. | Lower shaft 40' | 2,467.50 |
| 5th. MO | Drift 20' on 150' level | |
| | Drift 60' on 200' level | 1,207.50 |
| 6th MO. | Lower shaft 40' | 2,467.50 |
| 7th. Mo. | Drift 40' on 200' level | |
| | Drift 40' On 250' level | 1,207.50 |
| 8th. Mo. | Lower shaft 40' | 2,467.50 |
| 9th. Mo. | Drift 60' on 250 ' level | |
| | Drift 40' On 300' level | 1,207.50 |
| 10th.mo. | Lower shaft 8' | |
| | Drift 80' on rhe 300' level | 1,627.50 |
| | Total | $17,025.00 |

Form MF-100
(March 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

# GENERAL TECHNICAL DATA
# FOR USE UNDER THE
# DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. Lma-1341

Date received 5/29/51

EMM Mining & Developing Corp.
Ruby Star Rt. Box 9
Tucson, Arizona

Name and address of applicant

Date May 12, 1951.

## INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) Necessity Certificate pursuant to the provisions of Sec. 124-A (Amortization Deduction) of Internal Revenue Code, 1950, (5) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (6) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

## GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products?
   (*b*) What are the byproducts, if any?
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☒ Lessee.
   - ☐ Contractor.
5. Number of years in production None

   If not in production or operation, estimated date when production will begin June 15, 1951.
6. Experience of operators:

   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*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.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

| Name and Address (a) | Official Title (If officer is also director indicate by "D") (b) | Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c) | Estimated Net Worth Outside of Interest in Applicant (d) | Number of Shares Held in Applicant Corporation: Common (e) | Number of Shares Held in Applicant Corporation: Preferred (f) | Life Insurance Carried for Benefit of Applicant: Amount (g) | Life Insurance Carried for Benefit of Applicant: Net Cash Surrender Value After Loans (h) |
|---|---|---|---|---|---|---|---|
| Frank McCargar | Pres. (D) | None | | | | None | |
| Rex McBarnes | Sec.&Tres.(D) | None | | | | None | |
| Miss Gertrude Becker | (D) | None | | | | None | |
| Mrs. Rex McBarnes | (D) | None | | | | None | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | Total | | x x x x x | | | x x x x x | x x x x x |

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

**For Corporate Applicants**

| Item | Authorized (a) | Outstanding (b) | Par Value (c) | Number of Shares Outstanding (d) | Dividend Rate Last Paid* (e) |
|---|---|---|---|---|---|
| Common stock | $ | $ | $ | | |
| Preferred stock | $ | $ | $ | | |

*Indicate period covered.

10. Production: Just Starting. Machinery not all in place.

| Item | Kind of Product (a) | 1948 Total (b) | 1949 Total (c) | 1950 Total (d) | Present Average Monthly (e) |
|---|---|---|---|---|---|
| 1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.) | | | | | |
| 2. Quantity of product processed (specify unit of measure and type of process) | | | | | |
| 3. Quantity and grade of product sold or shipped (specify units of measure) | | | | | |

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change.

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves.

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

**TOTAL ORE OR MINERAL RESERVES**

| Ore or Mineral Reserve | Estimated Tons (a) | Metal or Mineral Content Per Ton (Grade) (b) | Gross Value Per Ton (c) | Recoverable Unit Value Per Ton (d) | Estimated Cost of Production Per Ton (e) |
|---|---|---|---|---|---|
| Measured (proved) | | | | | |
| Indicated (probable) | | | | | |

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

**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 M Mining & Development Co
(Name of company)

By Frank McCarg
(Signature of authorized official)

May 25, 1951
(Date)

Pres.
(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.**

U. S. GOVERNMENT PRINTING OFFICE 16—63792-1

EMM MINING & DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # I.

I.

(a) Chief mine products are LEAD Z NC & S LVER ORE.
(b) None.

EMM MINING & DEVELOPMENT CORP.
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TUCSON, ARIZONA.

SHEET # 2.

2. Antelope Mine (Claimes # 1,2 and 3.)

(a) A timbered shaft 132ft. deep and 3 untimbered shafts each 50 ft. deep.
(b) 35 ft. south at 50 ft. level.
51 ft. north at 50 ft. level.
25 ft south at 100 ft. level.
25 ft. north at 100 ft. level.
(c) None.
(d) None.

Ground water level of this area 60 ft.
Water level in shaft 60 ft.
Have installed a 900 gal. an hour centrifical pump. (jet)
Rate of inflow 5 gal. an hour.
Pumping problem solved.

EMM MINING & DEVELOPMENT CORP.
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TUCSON, ARIZONA.

SHEET # 3.

(a) 12½ miles south east.
(b) Pima Mining District.
(c) Township, unknown. Section, pt. $S^2$ $NE^4$ . Range G 28.54.
(d) Pima Co. Arizona.

EMM MINING & DEVELOPMENT CORP.
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TUCSON, ARIZONA.

SHEET # 4.

(a) Almost ready to start production by the EMM MINING & DEVELOPment CORP.
(b) Lessee.

EMM MINING & DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # 6.

(a)

FRANK McCARGAR
20 years farm owner and operator.
18 years hotel owner and operator.

REX McBARNES
10 years general construction and contracting.
20 years general business management including restraurant ownership and management also Post Exchange Management.

(b)

Engineer
30 years as mine owner and mill operator.

EMM MINING & DEVELOPMENT CORP.
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TUCSON, ARIZONA.

SHEET # 7.

(a) Original exploration by Mr. Mills lease owner, in 1938.
132 ft. shaft sunk in 1941 by Mr. Eiselman.
Suspension of operations at start of World Wad II to develop near by copper property.

(b) The PAYMASTER MINE ½miles to the west. Operated 1887 -1908.
260,000 # lead and 200,000 oz. silver.
HELMET PEAK MINE - 3/4 mile east. Considerable oxidized lead and zinc ore reported to have been mined from near the surface.
OLIVETTE MINE - 1½ miles north east. Rich producer of lead zinc and silver up to 1913.
SAN XAVIER MINE - 2 miles north east. 1949 production - lead 9,637,071 #; zinc 17,260,303 #; copper 1,009,398 #; silver 274,516 oz.

(c) Before taking over the mine lease, we had the following report from a private mining engineer.
A study of the shaft wall was made and sampling done. 12 ft. below the ground caping ore was in place. Values lead, zinc and silver. Some few specks of galina in spots of Hi-grade cl. & b were found in state not fully decomposed. The feed of this ore is in a strike in a fisher vain 31 " wide and about 6' in depth coming in from south at 5° slop from south to north going north. Below this layer the value of the vain pinches to about 14" wide and goes down to the 50' level. At this level 12'from the shaft north is a 31" showing of galena and marmatite. Test samples taken from a full run of the drifts on the 50 ' level shows a low grade mill ore.
Since water stood in the shaft at the 60' level no report could be made on the lower workings. Contact with the former opprator and men who worked in the shaft was made and the following was found : The shaft fully timbered goes to a depth of 132'. At the 100' level a drift runs north 25' and south 25'. From these drifts and the 32' of shaft below the 100' level a carload shipment of hi-grade galena was made. In the bottom of the shaft is a vain of galena 8"in width.
Sampling of the dump proved that considerable values were present and that they could be saved by milling.
Since taking over the property we have extended the north drift at the 50' level to 51', uncovering a 3'face of good mill ore.
To the south at the 50' ft. level we have extended the drift to 23' 43', uncovering a 16" face of mill ore.
A 10 ton ball mill, with jig and shaker table have been installed: we intend to use the water in the shaft for milling operations and when dewatered to ~~mix~~ extend the shaft to a depth of 300'
The water level stays at 60' unless pumped and then recovers at the rate of 5 gal. a minute.
Further exploration of property shows - 3 50' shafts in three directions from the main shaft. All shafts show low grade mill ore. Also the area between these shafts have outcropings of breccia andesite carring galana. Several 8' tp 10' deep test shafts show mill ore at that depth.

EMM MINING & DEVELOPMENT CORP.
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TUCSON, ARIZONA.

SHEET # 9

THE EMM MINING & DEVELOPMENT CORP. IS INCORPORATED FOR $300,000.
The shares are of no par value and are divided as follows:

MR. FRANK McCARGAR - 10 shares.
MR. REX McBARNES - 10 shares
MISS GERTRUDE BECKER - 5 shares
MRS. REX McBARNES - 5 shares

EMM MINING & DEVELOPMENT CORP.
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TUCSON, ARIZONA.

SHEET # 11.

Estimated monthly production with present equipment :
Lead and zinc concentrate ----- 1 ton per month.
Galana hi-grade ---------5 tons per month.

Estimated monthly production with proposed equipment :
Lead and zinc concentrate -------- 12 tons per month.
Galana hi-grade ---------- 30 tons per month.

EMM MINING & EVELOPMENT CORP.
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TUCSON, ARIZONA.

SHEET # 12.

(a) The ore consists of argentiferous galena with copper, zinc, lead and silver minerals. It occurs in fissure zones from a few inches to many feet in width. Individual ore bodies are small and not continuous for long dis ances. The area consists of brecciated andesite in which hydro-thermal alteration has formed chlorite, exidote and some serpentine. Granite outcrops 3,000' south west of the location and probably underlies at some unknown depth. The ore bodies occur at irregular replacements within a north eastward trend - brecciation zone being 500' wide and several thousand feet long.

(b)

1- No figures on proved reserve.
2- No figures on probable reserve.

ELM MINING & DEVELOPMENT CORP.
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TUCSON, ARIZONA.

SHEET # 13.

12½ miles to rail center.
22 miles to supply center.
22 miles to residence point.
Road:
2 3/10 miles of graded desert road
Balance - Gravel county road.
Road condition - excellent.

EMM MINING & DEVELOPMENT CORP.
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TUCSON, ARIZONA.

SHEET # 14.

At present time mine shaft as source of water - 70 ft. water in shaft at present time.

Future operation :

Near by abondon shafts have abundent water supply ; some are as deep as 700 ft. with a water level of 60 ft from surface.

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TUCSON, ARIZONA.

SHEET # 15.

50 Horsepower
40 cents per hour
2 stationary motors.

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TUCSON, ARIZONA.

SHEET # 16.

No operation up to the present, but present equipment calls for two or three men tp operate, they being the owners.
Proposed expanded operation, calls for sixextra men on two shifts.

ERN MINING & DEVELOPMENT CORP.
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TUCSON, ARIZONA.

SHEET # 17.

Headframe
Hoist
10 ton rough ore bin
8 ton crushed ore bin
Crusher
Elevators, jack shafts etc.
2 air compressors.
10 ton ball mill
1 - Hertz jig.
1 - Deister table
1 - agitating screen.
2 - air hammers
1 - Ferhuson power tractor shovel.
1 - centrifical jet pump
2 - centrifical pumps.
2 - stationary motors
1 - uncompleted building.
Good condition.

EMM MINING & DEVELOPMENT CO.
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TUCSON, ARIZONA.

SHEET # 18.

It is our belief that we have a very good property and that the proper way to developthis mine will be to operate, both as an open pit and under ground operation. A medium sized mill operation with flotation will take care of all low grade ore, showing a nice tonage. At the present tine, we do not have enough capital to proceed along these lines, but with the loan requested we can very quickly be in operation and produce a fair quantity of much needed vital lead and zinc.

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-1341 X

Date received 6/21/51

Participation

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 21 1951
LANDON F. STROBEL
Executive Secretary

EMM MINING AND DEVELOPMENT CO.
RUBY STAR RT. BOX. 9
TUCSON ARIZONA.

Name and address of applicant

Date 6/15/51

FILL IN THIS BLOCK

Date of application 6/15/51

Estimated cost $17, 025.00

Mineral or metal LEAD AND ZINC ORE.

Percentage of Government participation 50%

Location of mine PIMA MINING DISTRICT, PIMA COUNTY, TUCSON, ARIZONA.

Date of filing MF-100 MAY 15, 1951

DMA Docket Number, if available 1341 X

## 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?
*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.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property. ~~Inapplicable~~
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.
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)?

*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.
    (*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

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

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled.

*16. History:
    (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.
    (*b*) State briefly the known history and production of adjoining and neighboring properties.
    (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

*17. Production:
    (*a*) If mine is in production, furnish the following information:

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

*18. Ore or mineral reserves: (If property is or has been operating.)
    (*a*) Describe the ore or mineral deposits briefly.
    (*b*) Submit available maps and assay data.
    (*c*) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

## THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?

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

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

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

## THE REQUIREMENTS AND COSTS

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

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

## CERTIFICATION

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

Elm Mountain Development Co
(Name of company)

By Ray K McCarness
(Signature of authorized official)

6/15/51
(Date)

Sec & Treas.
(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

7. [illegible] Co. [illegible] Star [illegible] Co. [illegible]

**LEASE and OPTION**

This LEASE AND OPTION, made and entered into this 22nd. day of June, 1950, by and between J. V. MILLS and LENORA MILLS, his wife, parties of the First Part, and FRANK McCARGAR, REX McCARGAR AND H. C. ENTEL, parties of the Second Part.

WITNESSETH:

1. OPTION TO PURCHASE:

The parties of the second part, their heirs, successors or assigns, for and in consideration of the covenants and agreements herein set forth are hereby given and granted by the parties of the First Part, the exclusive option to purchase, for the price and upon the terms and conditions hereinafter set forth, those certain three (3) unpatented mining claims in Pima Minind District, Pima County, Arizona, which are described as follows, to-wit:

| Name | Record of location notice Book | Page |
|---|---|---|
| Antelope no. 1 | 72 | 55 |
| Antelope No. 2 | 72 | 56 |
| Antelope No. 3 | 72 | 57 |

2. PURCHASE PRICE:

That purchase price of the above described mining claims, in the event the parties of the second part shall exercise their option to purchase same is the sum of Thirty Thousand Dollars ($30,000.00) lawful money of the United States of America. Said option shall not be considered as exercised until the entire sum of Thirty Thousand Dollars has been paid.

3. ROYALTIES AND PAYMENTS:

The parties of the first part shall be paid a sum equal to ten per cent (10%) of the net smelter or mill returns on all ore, concentrates or bullion shipped from said property, by which is meant ten per cent (10%) of the check received from any smelter, custom mill or mint. All royalties herein provided for shall be credited on the purchase price and any such payments and any otherpayments made shall be considered as rental for the use and occupancy of the premises and as liquidated damages unless the full sum of Thirth Thousand Dollars is paid as herein provided. All royalties paid by the smelter or purchaser of the ores and concentrates shall be paid to the Southern Arizona Bank and Trust Company of Tucson, Arizona, and said bank shall promptly remit same to the parties of the First Part. The smelter or purchaser of said ores or concentrates shall send to said bank a settlement sheet in duplicate. This lease and option shall expire ten (10)years from the date hereof unless the full purchase price shall have been paid as hereinbefore set forth.

4. POSSESSION AND CONTROL OF PROPERTY:

The parties of the Second Part are hereby granted the exclusive possession of saidmining claims, and until default occurs, as hereinafter as provided, they shall be permitter to work, mine and develop the same, which must be, however, strictly in accordance with all mining laws and governmental regulations.

5. MANNER OF OPERATION.

The parties of the Second Part agree to commence actual mining work within ten (10) days from date hereof and shall continuously work said mining claims with at least forty (40) shifts per month during the life of this agreement. A shift shall be defined as the work of one man for a n eight hour day. The parties of the Second Part agree that they will not allow or permit any mechanics or materialmens liens of any kind to b e fixed against the above described mining claims, and that they will promptly pay any and all bills and obligations incurred by them in connection with their mining operations on the above claims.

Lessee or theor assigns shall pay promptly when due all labor wages, material and supplies and shall save the lessors harmless for all claims for damages or injuries resulting from the operation of these mining claims.

7. Elm-Mt-Mining & Dev. Co. Ruby Star Pt. 1914-9 - Tucson, Ariz.

Said Second Parties agree to post at the entrance of all workings on said claims, and entrances to all boarding houses, notices provided for by the laws of the State of Arizona, generally known as "Notice of Non-Liability for Labor or Materials Furnished", on or before the day the said parties of the Second Part begin operations on said mining claims. The Parties of the Second Part also agree to file proper affidavits of assessment work in the office of the County Recorder of Pima County, Arizona, on or before July 1st of each year, and the parties of the Second Part agree in any event to perform the assessment work on said claims as required by law, or file the affidavit in lieu thereof if permitted by law.

6. INDEMNITY INSURANCE:

The partiesof the Second Part shall carry and pay for workmen's compensation insurance as provided by the laws of the State of Arizona on all their employees.

7. RIGHT TO INSPECT PROPERTY AND BOOKS:

The parties of the First Part or their duly authorized agents or attorneys shall have the right at all reasonable times to go into or upon said mining claims, or any part thereof, for the purpose of inspecting any work or development thereon, and also the right of examining the books and records of the parties of the Second Part, or their sub-lessees or assigns, for the purpose of determining the amount of work done and performed upon said mining claims, and for the purpose of determining the amount and value of ore or products shipped or sold therefrom.

8. TAXES

The parties of the Second Part agree to pay when due and before delinquent, all taxes which may be levied against said mining claims or the products thereof, or upon any property placed thereon.

9. NOTICE OF REMOVAL, SALE OR DISPOSITION OF PRODUCTS OF MINES:

No shipments, removal, sales or other disposition of the ores, bullion or concentrates shall be made without giving notice thereof by copy of the bill of lading , or other writtennotice thereof to the parties of the First Part at such address as shall be fixed by the parties of the First Part.

10. REMOVAL OF EQUIPMENT:

IN THE EVENT OF ABANDONMENT or termination of this lease and option before the option herein granted is exercised, all buildings and machinery placed upon the claims by the parties of the Second Part may be removed by them, provided the removal takes place within sixty (60) days of the termination of this lease and option. However, all rails, pipes, timbers or ladderways placed in the underground workings of said property shall not be removed but shall remain in place and become the property of the parties of the First Part. In the event of removal of any buildings and machinery placed upon the premises, such removal shall be done in such a manner as nor to damage the underground workings of said mines or mining claims. Any of said property which is not removed within sixty (60) days shall become the property of the parties of the First Part During the continuance of this lease and option the parties of the Second Part shall not remove from any shaft or working on said claims any ladderways, pipes, timbers or ladders, regardless of the purpose of such removal without first having secured the written permission of the parties of the First Part.

11. DEED IN ESCROW:

Upon the request of the parties of the Second Part, the parties of the First Part shall execute a good and sufficient deed of conveyance to said mining claims, conveying to the parties of the Second Part their heirs or assigns all of the right, title and interest of said parties of the First Part therein, and shall placesame in escrow in the Southern Arizona Bank and Trust Co. in Tucson, Arizona, which said deed shall be delivered to the parties of the second part upon the full payment of the purchase price herein provided for. The cost of said escrow shall be borne equally between the parties of this agreement.

7 Ehm Mining & Dev. Co. Ruby Star Pt. Proj. Tucson, Ariz.

12. TERMINATION CLAUSE:

In the event the parties of the Second Part shall fail to keep or perform any of the covenants, conditions or agreements in this contract which the said parties of the Second Part are obligated to keep or perform and said default continues for thirty (30) days after written notification mailed to the parties of the Second Part, as herein provided for notifying the parties of the Second Part of the default then existing, then the parties of the First Part, at their election, shall have the right to terminate this contract by giving the parties of the Second Part notice in writing that this agreement has been terminated. After said termination the parties of the Second Part shall have no right, title or interest of any kind whatsoever in and to said mining claims, except the right to remove equipment as provided herein. Any notice herein provided for shall be considered as having been given to the parties of the Second Part when an envelope containing said notice, addressed to the parties of the Second Part at Tucson Arizona, shall have been registered and deposited, postage prepaid, in the United States mail.

13. SURRENDER OF POSSESSION:

Upon the termination of this agreement by lapse of time or otherwise, then in that case it shall be lawful for the said parties of the First Part to enter upon and take possession of all the claims hereby leased, with or without process of law, and in such case parties of the second part agree o surrender, yield and deliver to the said parties of the First Part quiet and peaceable possession of said property in as good condition as when received, having regard to the operation of said pr perty as herein contemplated.

14. OTHER CONDITIONS:

Time is hereby declared to be of essence of this agreement. This agreement shall extend to and be binding upon and inure to the benefit of the heirs, executors, administrators, successors and assi ns of the respective parties hereof.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands the day and year first above written.

J. W. MILLS
LEENA MILLS
Parties of the First Part.
REX McBATHES
FRANK McCARGAR
HORACE G. ERTEL
Parties of the Second Part.

The lease as written is in good standing as of this date.
6/15/51

EEN MINING AND DEVELOPMENT CO.
RUDY STAR RT. BOX 9
TUCSON, ARIZONA.

8. The EEN MINING AND DEVELOPMENT CO. is a new company being in existance less than a year. We have spent the past year exploring, testing and installing machinery on Antelope Claims No's. 1,2 and 3. As yet we have not produced or shipped any ore. Machinery, equipment etc to the value of $8,000.00 is on the location and ready to start operation. This machinery and equipment is all paid for and clear. We have a small cash balance but are both financially able to take care of any expense that we might contract. Starting this comming Monday we expect to operate with what ore we have blocked out.

EEM MINING AND DEVELOPMENT CO.
RUBY STAR RT. BOX 9
TUCSON, ARIZONA.

9. The [redacted] MINING AND DEVELOPMENT CO. IS PREPARED AND FINANCIALLY ABLE TO PAY ITS SHARE OF THE PROPOSED PROJECT.

MEN MINING AND DEVELOPMENT CO.
RUBY STAR RT. BOX 9
TUCSON, ARIZONA.

10. (a)

Antelope Claim #1
Antelope Claim #2
Antelope Claim #3
All of Pima Mining District, Pima County, Arizona.

(b)

Pt $S^2NE^4$ G&S.R. P2-16-17-12

Both areas are the same.

BRI MINING AND DEVELOPMENT CO.
ROOM STAR RT. BOX 9
TUCSON, ARIZONA.

15.Ore to be shipped by truck to nearest rail head at CANANEA, Arizona, a distance of 12 1/2 miles over a good hiway. From CANANEA by rail to smelter at either DOUGLAS, ARIZONA., a distance of 140 miles or to SUPERIOR, ARIZONA a distance of 100 miles.

19. It is our belief that ther is a large body of low grade mill ore between the 30 and 100 ft. levels. We have installed a small mill operation and expect to start( will start Monday) a strip mine operation to recover this ore - this operation will be in addition to and independent of exploration work on lower levels.

EVEN MINING AND DEVELOPMENT CO.
EVEN STAR RT. BOX 9
TUCSON, ARIZONA.

~~24~~
20. We expect to find argentiferous galena with subordinate copper and zinc minerals.

BM mining and development co.
RUBY STAR RT. BOX 9
TUCSON, ARIZONA.

21. Recondition of present shaft from 70' level to the 132' level.
Lowering of shaft from 132' level to the 300' level.
North and South drifts at 150', 200',250' and 300' levels.
Drifts to run about 50', unless they show immediate production possibilities.
Estimated time for above work ~~9~~ 10 months.

22. Because of faulting, igneous intrusion, and alluvial cover, few if any of the sedimentary rock units are exposed in their original or entire thickness. Over much of the area structural relations are obscure. The structure of the area has been complicated by folds, overturns, low-angle faults, and steeply dipping faults.

Our claims are located midway between two well known producing mines. One, the San Xavier mine operated by the Eagle Pitcher Mining and Smelting Co. is one of the most important producers of lead and zinc in Arizona and for 1948 its output of these minerals ranked third in the state. The ore deposits in this area include contact, replacement, and vein types. Available evidence suggests that the ore solutions ascended through fissures of northeast and eastward strike and that the principal ore bodies are less than a mile from granite outcrop. Evidence of ore bodies on our claims conform with the above description, also ore in minor quantities is present in test holes and present shaft of 132' depth. All evidence points to a heavier vein at greater depth.

MEXI MINING AND DEVELOPMENT CO.
HUBY OTAR M. BOX 9
TUCSON, ARIZONA.

24.

| | | |
|---|---|---|
| (a) | Miners (2) Rate $1.75 hr. $140.00 wk. Year. | 5,100.00 |
| (b) | Part time engineer | 500.00 |
| | Other work and supervision done by owners. No salary. | |
| (c) | New skids, ladders and stations | |
| | Reconditioning of timber in shaft from the 60' to the 130' level | 450.00 |
| (d) | None | |
| (e) | Blower and motor | 150.00 |
| (f) | None | |
| (g) | All equipment necessary for 2 miners on hand including jackhammers, compressors, hoist, headframe, ore bin etc. Estimated rental value $500.00 per month. | 8,700.00 |
| (h) | Lumber for timbering shaft (300' level) including skids, ladders and stations. 280 board feet per ft. of shaft. | 4,410.00 |
| | Hangers, bolts, nails etc | 550.00 |
| | Pipe, fittings, hangers etc | 500.00 |
| | Cable, track, cars etc. | 500.00 |
| (i) | Power (gas and oil for motors for compressors, hoist and blower) | |
| | Gas 15 gal per d y | |
| | Oil 10 ~~xxxxxx~~ qt per wk. | 585.00 |
| | Carbide, batteries etc | 50.00 |
| | Powder and fuse | 750.00 |
| | Drill steel | 200.00 |
| | Misc. repairs | 500.00 |
| | Total | $17,025.00 |

EMM MINING AND DEVELOPMENT CO.
RUBY STAR RT. BOX 9
TUCSON, ARIZONA.

24.

| | | |
|---|---|---|
| 1st. Mo. | Install new skids, ladders and stations. | |
| | Recondition old 132' shaft. | |
| | Install blower | 697.50 |
| 2nd. Mo. | Lower shaft 40' | 2,467.50 |
| 3rd. Mo. | Drift 80' at 150' level | 1,207.50 |
| 4th. Mo. | Lower shaft 40' | 2,467.50 |
| 5th. MO | Drift 20' on 150' level | |
| | Drift 60' on 200' level | 1,207.50 |
| 6th MO. | Lower shaft 40' | 2,467.50 |
| 7th. Mo. | Drift 40' on 200' level | |
| | Drift 40' On 250' level | 1,207.50 |
| 8th. Mo. | Lower shaft 40' | 2,467.50 |
| 9th. Mo. | Drift 60' on 250 ' level | |
| | Drift 80' On 300' level | 1,207.50 |
| 10th.mo. | Lower shaft 8' | |
| | Drift 80' on the 300' level | 1,627.50 |
| | Total | $17,025.00 |

Form MF-100
(March 1951)

# U. S. DEPARTMENT OF THE INTERIOR
## DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

# GENERAL TECHNICAL DATA
# FOR USE UNDER THE
# DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. Dma-1341

Date received 5/29/51

EMM Mining & Developing Corp.
Ruby Star Rt. Box 9
Tucson, Arizona

Name and address of applicant

Date May 12, 1951.

## INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) Necessity Certificate pursuant to the provisions of Sec. 124-A (Amortization Deduction) of Internal Revenue Code, 1950, (5) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (6) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

## GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products?
   (*b*) What are the byproducts, if any?
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☒ Lessee.
   - ☐ Contractor.
5. Number of years in production None

   If not in production or operation, estimated date when production will begin June 15, 1951.
6. Experience of operators:

   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*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.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

| Name and Address (a) | Official Title (If officer is also director indicate by "D") (b) | Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c) | Estimated Net Worth Outside of Interest in Applicant (d) | Number of Shares Held in Applicant Corporation: Common (e) | Number of Shares Held in Applicant Corporation: Preferred (f) | Life Insurance Carried for Benefit of Applicant: Amount (g) | Life Insurance Carried for Benefit of Applicant: Net Cash Surrender Value After Loans (h) |
|---|---|---|---|---|---|---|---|
| Frank McCargar | Pres. (D) | None | | | | None | |
| Rex McBarnes | Sec.&Tres.(D) | None | | | | None | |
| Miss Gertrude Becker | (D) | None | | | | None | |
| Mrs. Rex McBarnes | (D) | None | | | | None | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | Total | | x x x x x | | | x x x x x | x x x x x |

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

**For Corporate Applicants**

| Item | Authorized (a) | Outstanding (b) | Par Value (c) | Number of Shares Outstanding (d) | Dividend Rate Last Paid* (e) |
|---|---|---|---|---|---|
| Common stock | $ | $ | $ | | |
| Preferred stock | $ | $ | $ | | |

*Indicate period covered.

10. Production: Just Starting. Machinery not all in place.

| Item | Kind of Product (a) | 1948 Total (b) | 1949 Total (c) | 1950 Total (d) | Present Average Monthly (e) |
|---|---|---|---|---|---|
| 1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.) | | | | | |
| 2. Quantity of product processed (specify unit of measure and type of process) | | | | | |
| 3. Quantity and grade of product sold or shipped (specify units of measure) | | | | | |

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change.

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves.

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

**TOTAL ORE OR MINERAL RESERVES**

| Ore or Mineral Reserve | Estimated Tons (a) | Metal or Mineral Content Per Ton (Grade) (b) | Gross Value Per Ton (c) | Recoverable Unit Value Per Ton (d) | Estimated Cost of Production Per Ton (e) |
|---|---|---|---|---|---|
| Measured (proved) | | | | | |
| Indicated (probable) | | | | | |

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

**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 M McMurray Development Corp
(Name of company)

By Frank H McCaughey
(Signature of authorized official)

May 25 1951
(Date)

Pres.
(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.**

U. S. GOVERNMENT PRINTING OFFICE 16—63792-1

EMM MINING & DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # I.

I.

(a) Chief mine products are LEAD, ZINC & SILVER ORE.
(b) None.

EMM MINING & DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # 2.

2. Antelope Mine (Claimes # 1,2 and 3.)

(a) A timbered shaft 132 ft. deep and 3 ntimbered shafts ~~aa~~ each 50 ft. deep.
(b) 35 ft. south at 50 ft. level.
51 ft. north at 50 ft. level.
25 ft. south at 50 ft. level.
25 ft. north at 50 ft. level.
(c) None.
(d) None.

Ground water level of this area 60 ft.
Water level in shaft 60 ft.
Have installed a 900 gal. an hour centrifical jet pump.
Rate of inflow 5 gal. an hour.
Pumping problem solved.

EIM MINING AND DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # 3.

(a) $12\frac{1}{2}$ miles south east.
(b) Pima Mining District.
(c) Township, unknown. Section, pt. $S^2$ N $E^4$. Range G 28.54.
(d) Pima Co. Arizona.

EMM MINING & DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # 4.

(a) Almost ready to start production by the EMM MINING & DEVELOPMENT CORP.
(b) Lessee.

EMM MINING & DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # 6.

(a)

FRANK McCARGAR.
20 years farm owner and operator.
18 years hotel owner and operator.

REX McBARNES
10 years general construction and contracting.
20 years general business management including restraurant ownership and management also Post Exchange Management.

(b)

Engineer
30 years as mine owner and mill operator.

EMM MINING & DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # 7.

(a) Original exploration by Mr. Mills lease owner, in 1938.
132 ft. shaft sunk in 1941 by M. Eiselman.
Suspension of operations at start of World Wad II to develop near by copper property.

(b) The PAYNA TER MINE miles to the west. Operated 1887 -1903.
260,000 # lead and 200,000 oz. silver.
HOLMAN PEAK MINE - 3/4 mile east. Considerable oxidized lead and zinc ore reported to have been mined from near the surface.
OLIVETTE MINE - 1½ miles north east. Rich producer of lead zinc and silver up to 1913.
SAN XAVIER MINE - 2 miles north east. 1949 production - lead 9,637,071 #; zinc 17,260,303 #; copper 1,009,398 #; silver 274,516 oz.

(c) Before taking over the mine lease, we had the following report from a private mining engineer.
A study of the shaft wall was made and sampling done. 12 ft. below the ground caping ore was in place. Values lead, zinc and silver. Some few specks of galena in spots of hi-grade cl. & b were found in state not fully decomposed. The feed of this ore is in a s r ke in a fisher vein 31 " wide and about 6' in depth coming in from south at 3° slop from south to north going north. Below this layer the value of the vein pinches to about 14" wide and goes down to the 50' level. At this level 12' from the shaft north a 31" showing of galena and marmat to. Test samples taken from a full run of the drifts on the 50 ' level shows a low grade mill ore.
Since water stood in the shaft at the 60' level no report could be made on the lower workings. Contact with the former opprator and men who worked in the shaft was made and the following was found : The shaft fully timbered goes to a depth of 132'. At the 100' level a drift runs north 25' and south 25'. From these drifts and the 32' of shaft below the 100' level a carload shipment of hi-grade galena was made. In the bottom of the shaft is a vein of galena 8"in width.
Sampling of the dump proved that considerable values were present and that they could be saved by milling.
Since taking over the property we have extended the north drift at the 50' level to 51', uncovering a 3'face of good mill ore. To the south at the 50' ft. level we have extended the drift to 43', uncovering a 16" face of mill ore.
A 10 ton ball mill, with jig and shaker table have been installed: we intend to use the water in the shaft for milling operations and when dewatered to ~~mix~~ extend the shaft to a depth of 300'
The water level stays at 60' unless pumped and then recovers at the rate of 5 gal. a minute.
Further exploration of property shows - 3 50' shafts in three directions from the main shaft. All shafts show low grade mill ore. Also the area between these shafts have outcroppings of breccia andesite carring galena. Several 8' to 10' deep test shafts show mill ore at that depth.

EMM MINING & DEVELOPMENT CORP.
RUBY Star rt. - BOX 9
TUCSON, ARIZONA.

SHEET # 9

THE EMM MINING & DEVELOPMENT CORP. IS INCORPORATED FOR $300,000.
The shares are of no par value and are divided as follows:

MR. FRANK McCARTHAR - 10 shares.
MR. REX McCARTHES - 10 shares
MISS GERTRUDE BECKER - 5 shares
MRS. REX McCARTHES - 5 shares

RMI MINING & DEVELOPMENT CORP.
RUBY STAR MT. - BOX 9.
TUCSON, ARIZONA.

SHEET # 11.

Estimated monthly production with present equipment :
Lead and zinc concentrate ----- 1 ton per month.
Galena hi-grade ---------5 tons per month.

Estimated monthly production with proposed equipment :
Lead and zinc concentrate -------- 12 tons per month.
Galena hi-grade ---------- 30 tons per month.

EMI MINING & DEVELOPMENT CORP.
RUBY STAR MT. - BOX 9.
TUCSON, ARIZONA.

ITEM # 12.

(a) The ore consists of argentiferous galena with copper, zinc, lead and silver minerals. It occurs in fissure zones from a few inches to many feet in width. Individual ore bodies are small and not continuous for long dis ances. The area consists of brecciated andesite in which hydro-thermal alteration has formed chlorite, exidote and some serpentine. Granite outcrops 3,000' south west of the location and probably underlies at some unknown depth. The ore bodies occur at irregular replacements within a north eastward trend - brecciation zone being 500' wide and several thousand feet long.

(b)

1- No figures on proved reserve.
2- No figures on probable reserve.

SHEET # 13.

12½ miles to rail center.
22 miles to supply center.
22 miles to residence point.
Road:
2 3/10 miles of graded desert road
Balance - Gravel county road.
Road condition - excellent.

SHEET # 14.

At present time mine shaft as source of water - 70 ft. water in shaft at present time.

Future operation :

Near by abondon shafts have abundant water supply ; some are as deep as 700 ft. with a water level of 60 ft from surface.

FEH MINING & DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # 15.

50 Horsepower
40 cents per hour
2 stationary motors.

SHEET # 16.

No operation up to the present, but present equipment calls for two or three men to operate, they being the owners.
Proposed expanded operation, calls for eleextra men on two shifts.

E M MINING & DEVELOPMENT CORP.
RUBY STAR MT. - BOX 9.
TUCSON, ARIZONA.

SHEET # 17.

Headframe
Hoist
10 ton rough ore bin
8 ton crushed ore bin
Crusher
Elevators, jack shafts etc.
2 air compressors.
10 ton ball mill
1 - Horts jig.
1 - Deistor table
1 - agitating screen.
2 - air hammers
1 - Ferguson power tractor shovel.
1 - centrifical jet pump
2 - centrifical pumps.
2 - stationary motors
1 - uncompleted building.
Good condition.

It is our belief that we have a very good property and that the proper way to developthis mine will be to operate, both as an open pit and under round operation. A medium sized mill operation with flotation will take care of all low grade ore, showing a nice tonage. At the present time, we do not have enough capital to proceed along these lines, but with the loan requested we can very quickly be in operation and produce a fair quantity of much needed vital load and zinc.

Form MF-100
(March 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

# GENERAL TECHNICAL DATA
# FOR USE UNDER THE
# DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. DMA-1341

Date received 7/29/51

EMM Mining & Developing Corp.
Ruby Star Rt Box 9
Tucson, Arizona

Name and address of applicant

Date May 12, 1951.

## INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) Necessity Certificate pursuant to the provisions of Sec. 124-A (Amortization Deduction) of Internal Revenue Code, 1950, (5) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (6) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

## GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products?
   (*b*) What are the byproducts, if any?
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☒ Lessee.
   - ☐ Contractor.
5. Number of years in production None

   If not in production or operation, estimated date when production will begin June 15, 1951.
6. Experience of operators:
   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*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.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

| Name and Address (a) | Official Title (If officer is also director indicate by "D") (b) | Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c) | Estimated Net Worth Outside of Interest in Applicant (d) | Number of Shares Held in Applicant Corporation: Common (e) | Number of Shares Held in Applicant Corporation: Preferred (f) | Life Insurance Carried for Benefit of Applicant: Amount (g) | Life Insurance Carried for Benefit of Applicant: Net Cash Surrender Value After Loans (h) |
|---|---|---|---|---|---|---|---|
| Frank McCargar | Pres. (D) | None | | | | None | |
| Rex McBarnes | Sec.&Tres.(D) | None | | | | None | |
| Miss Gertrude Becker | (D) | None | | | | None | |
| Mrs. Rex McBarnes | (D) | None | | | | None | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | Total | | x x x x x | | | x x x x x | x x x x x |

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

**For Corporate Applicants**

| Item | Authorized (a) | Outstanding (b) | Par Value (c) | Number of Shares Outstanding (d) | Dividend Rate Last Paid* (e) |
|---|---|---|---|---|---|
| Common stock | $ | $ | $ | | |
| Preferred stock | $ | $ | $ | | |

*Indicate period covered.

10. Production: Just Starting. Machinery not all in place.

| Item | Kind of Product (a) | 1948 Total (b) | 1949 Total (c) | 1950 Total (d) | Present Average Monthly (e) |
|---|---|---|---|---|---|
| 1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.) | | | | | |
| 2. Quantity of product processed (specify unit of measure and type of process) | | | | | |
| 3. Quantity and grade of product sold or shipped (specify units of measure) | | | | | |

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change.

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves.

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

**TOTAL ORE OR MINERAL RESERVES**

| Ore or Mineral Reserve | Estimated Tons (a) | Metal or Mineral Content Per Ton (Grade) (b) | Gross Value Per Ton (c) | Recoverable Unit Value Per Ton (d) | Estimated Cost of Production Per Ton (e) |
|---|---|---|---|---|---|
| Measured (proved) | | | | | |
| Indicated (probable) | | | | | |

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

**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 M Murray & Development Corp
(Name of company)

By Frank Lyc Cooper
(Signature of authorized official)

May 25, 1951
(Date)

Pres.
(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.**

U. S. GOVERNMENT PRINTING OFFICE 16—63792-1

EMM MINING & DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # I.

I.

(a) Chief mine products are LEAD ZINC & SILVER ORE.
(b) None.

EMM MINING & DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # 2.

2. Antelope Mine (Claimes # 1,2 and 3.)

(a) A timbered shaft 132ft. deep and 3 untimbered shafts each 50 ft. deep.
(b) 35 ft. south at 50 ft. level.
51 ft. north at 50 ft. level.
25 ft south at 100 ft. level.
25 ft. north at 100 ft. level.
(c) None.
(d) None.

Ground water level of this area 60 ft.
Water level in shaft 60 ft.
Have installed a 900 gal. an hour centrifical pump. (jet)
Rate of inflow 5 gal. an hour.
Pumping problem solved.

EMM MINING & DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # 3.

(a) 12½ miles south east.
(b) Pima Mining District.
(c) Township, unknown. Section, pt. $S^2$ $NE^4$ . Range G 28.54.
(d) Pima Co. Arizona.

EMM MINING & DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # 4.

(a) Almost ready to start production by the EMM MINING & DEVELOPment CORP.
(b) Lessee.

EMM MINING & DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # 6.

(a)

FRANK McCARGAR
20 years farm owner and operator.
18 years hotel owner and operator.

REX McBARNES
10 years general construction and contracting.
20 years general business management including restraurant ownership and management also Post Exchange Management.

(b)

Engineer
30 years as mine owner and mill operator.

EMM MINING & DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # 7.

(a) Original exploration by Mr. Mills lease owner, in 1938.
132 ft. shaft sunk in 1941 by Mr. Eiselman.
Suspension of operations at start of World Wad II to develop near by copper property.

(b) The PAYMASTER MINE ½miles to the west. Operated 1887 -1908.
260,000 # lead and 200,000 oz. silver.
HELMET PEAK MINE - 3/4 mile east. Considerable oxidized lead and zinc ore reported to have been mined from near the surface.
OLIVETTE MINE - 1½ miles north east. Rich producer of lead zinc and silver up to 1913.
SAN XAVIER MINE - 2 miles north east. 1949 production - lead 9,637,071 #; zinc 17,260,303 #; copper 1,009,398 #; silver 274,516 oz.

(c) Before taking over the mine lease, we had the following report from a private mining engineer.
A study of the shaft wall was made and sampling done. 12 ft. below the ground caping ore was in place. Values lead, zinc and silver. Some few specks of galina in spots of Hi-grade cl. & b were found in state not fully decomposed. The feed of this ore is in a strike in a fisher vain 31 " wide and about 6' in depth coming in from south at 5° slop from south to north going north. Below this layer the value of the vain pinches to about 14" wide and goes down to the 50' level. At this level 12'from the shaft north is a 31" showing of galena and marmatite. Test samples taken from a full run of the drifts on the 50 ' level shows a low grade mill ore.
Since water stood in the shaft at the 60' level no report could be made on the lower workings. Contact with the former opprator and men who worked in the shaft was made and the following was found : The shaft fully timbered goes to a depth of 132'. At the 100' level a drift runs north 25' and south 25'. From these drifts and the 32' of shaft below the 100' level a carload shipment of hi-grade galena was made. In the bottom of the shaft is a vain of galena 8"in width.
Sampling of the dump proved that considerable values were present and that they could be saved by milling.
Since taking over the property we have extended the north drift at the 50' level to 51', uncovering a 3'face of good mill ore.
To the south at the 50' ft. level we have extended the drift to 43', uncovering a 16" face of mill ore.
A 10 ton ball mill, with jig and shaker table have been installed: we intend to use the water in the shaft for milling operations and when dewatered to extend the shaft to a depth of 300'
The water level stays at 60' unless pumped and then recovers at the rate of 5 gal. a minute.
Further exploration of property shows - 3 50' shafts in three directions from the main shaft. All shafts show low grade mill ore. Also the area between these shafts have outcropings of breccia andesite carring galana. Several 8' tp 10' deep test shafts show mill ore at that depth.

EMM MINING & DEVELOPMENT CORP.
RUBY STar rt. - BOX 9
TUCSON, ARIZONA.

SHEET # 9

THE EMM MINING & DEVELOPMENT CORP. IS INCORPORATED FOR $300,000.
The shares are of no par value and are divided as follows:

MR. FRANK McCARGAR - 10 shares.
MR. REX McBARNES - 10 shares
MISS GERTRUDE BECKER - 5 shares
MRS. REX McBARNES - 5 shares

EMM MINING & DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # 11.

Estimated monthly production with present equipment :
Lead and zinc concentrate ----- 1 ton per month.
Galana hi-grade --------5 tons per month.

Estimated monthly production with proposed equipment :
Lead and zinc concentrate ------- 12 tons per month.
Galana hi-grade ---------- 30 tons per month.

EMM MINING & DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # 12.

(a) The ore consists of argentiferous galena with copper, zinc, lead and silver minerals. It occurs in fissure zones from a few inches to many feet in width. Individual ore bodies are small and not continuous for long dis ances. The area consists of brecciated andesite in which hydro-thermal alteration has formed chlorite, exidote and some serpentine. Granite outcrops 3,000' south west of the location and probably underlies at some unknown depth. The ore bodies occur at irregular replacements within a north eastward trend - brecciation zone being 500' wide and several thousand feet long.

(b)

1- No figures on proved reserve.
2- No figures on probable reserve.

EMM MINING & DEVELOPMENT CORP.
RUBT STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # 13.

12½ miles to rail center.
22 miles to supply center.
22 miles to residence point.
Road:
2 3/10 miles of graded desert road
Balance - Gravel county road.
Road condition - excellent.

EMM MINING & DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # 14.

At present time mine shaft as source of water - 70 ft. water in shaft at present time.

Future operation :

Near by abondon shafts have abundent water supply ; some are as deep as 700 ft. with a water level of 60 ft from surface.

EMM MINING & DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # 15.

50 Horsepower
40 cents per hour
2 stationary motors.

EMM MINING & DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # 16.

No operation up to the present, but present equipment calls for two or three men tp operate, they being the owners.
Proposed expanded operation, calls for sixextra men on two shifts.

EMM MINING & DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # 17.

Headframe
Hoist
10 ton rough ore bin
8 ton crushed ore bin
Crusher
Elevators, jack shafts etc.
2 air compressors.
10 ton ball mill
1 - Hertz jig.
1 - Deister table
1 - agitating screen.
2 - air hammers
1 - Ferhuson power tractor shovel.
1 - centrifical jet pump
2 - centrifical pumps.
2 - stationary motors
1 - uncompleted building.
Good condition.

EMM MINING & DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # 18.

It is our belief that we have a very good property and that the proper way to developthis mine will be to operate, both as an open pit and underground operation. A medium sized mill operat-- ion with flotation will take care of all low grade ore, showing a nice tonage. At the present tine, we do not have enough capital to proceed along these lines, but with the loan requested we can very quickly be in operation and produce a fair quantity of much needed vital lead and zinc..

Form MF-100
(March 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

# GENERAL TECHNICAL DATA
# FOR USE UNDER THE
# DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. dma-1341

Date received 6/29/51

EMM Mining & Developing Corp.
Ruby Star Rt - Box 9
Tucson, Arizona

Name and address of applicant

Date May 12, 1951

## INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) Necessity Certificate pursuant to the provisions of Sec. 124-A (Amortization Deduction) of Internal Revenue Code, 1950, (5) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (6) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

## GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products?
   (*b*) What are the byproducts, if any?
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry(ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☒ Lessee.
   - ☐ Contractor.
5. Number of years in production None

   If not in production or operation, estimated date when production will begin ~~XMayXXXXXXXXX~~ JUNE 15, 1951
6. Experience of operators:

   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*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.

JUN 1 1951

16—63792-1

S

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

| Name and Address (a) | Official Title (If officer is also director indicate by "D") (b) | Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c) | Estimated Net Worth Outside of Interest in Applicant (d) | Number of Shares Held in Applicant Corporation: Common (e) | Number of Shares Held in Applicant Corporation: Preferred (f) | Life Insurance Carried for Benefit of Applicant: Amount (g) | Life Insurance Carried for Benefit of Applicant: Net Cash Surrender Value After Loans (h) |
|---|---|---|---|---|---|---|---|
| Frank McCargar | Pres. (D) | None | | | | None | |
| Rex McBarnes | Sec.&Tres.(D) | None | | | | None | |
| Miss Gertrude Becker | (D) | None | | | | None | |
| Mrs. Rex McBarnes | (D) | None | | | | None | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | Total | | x x x x x | | | x x x x x | x x x x x |

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

**For Corporate Applicants**

| Item | Authorized (a) | Outstanding (b) | Par Value (c) | Number of Shares Outstanding (d) | Dividend Rate Last Paid* (e) |
|---|---|---|---|---|---|
| Common stock | $ | $ | $ | | |
| Preferred stock | $ | $ | $ | | |

*Indicate period covered.

10. Production: Just Starting. Machinery not all in place.

| Item | Kind of Product (a) | 1948 Total (b) | 1949 Total (c) | 1950 Total (d) | Present Average Monthly (e) |
|---|---|---|---|---|---|
| 1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.) | | | | | |
| 2. Quantity of product processed (specify unit of measure and type of process) | | | | | |
| 3. Quantity and grade of product sold or shipped (specify units of measure) | | | | | |

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change.

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves.

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

**TOTAL ORE OR MINERAL RESERVES**

| Ore or Mineral Reserve | Estimated Tons (a) | Metal or Mineral Content Per Ton (Grade) (b) | Gross Value Per Ton (c) | Recoverable Unit Value Per Ton (d) | Estimated Cost of Production Per Ton (e) |
|---|---|---|---|---|---|
| Measured (proved) | | | | | |
| Indicated (probable) | | | | | |

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

**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 M M Mining & Development Corp.
(Name of company)

By Frank McCarger
(Signature of authorized official)

May 25 1951
(Date)

Pres.
(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.**

U. S. GOVERNMENT PRINTING OFFICE 16—63792-1

EMM MINING & DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # I.

I.

(a) Chief mine products are LEAD, ZINC & SILVER ORE.
(b) None.

EIM MINING & DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # 2.

2. Antelope Mine (Claimes # 1,2 and 3.)

(a) A timbered shaft 132 ft. deep and 3 ntimbered shafts each 50 ft. deep.
(b) 35 ft. south at 50 ft. level.
51 ft. north at 50 ft. level.
25 ft. south at 50 ft. level.
25 ft. north at 50 ft. level.
(c) None.
(d) None.

Ground water level of this area 60 ft.
Water level in shaft 60 ft.
Have installed a 900 gal. an hour centrifical jet pump.
Rate of inflow 5 gal. an hour.
Pumping problem solved.

E M MINING AND DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # 3.

(a) 12½ miles south east.
(b) Pima Mining District.
(c) Township, unknown. Section, pt. $S^2$ N $E^4$. Range G 28.54.
(d) Pima Co. Arizona.

EMM MINING & DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # 4.

(a) Almost ready to start production by the EMM MINING & DEVELOP-MENT CORP.
(b) Lessee.

EMM MINING & DEVELOPMENT CORP.
RUBY STAR RT. - BOX 9.
TUCSON, ARIZONA.

SHEET # 6.

(a)

FRANK McCARGAR.
20 years farm owner and operator.
18 years hotel owner and operator.

REX McBARNES
10 years general construction and contracting.
20 years general business management including restraurant ownership and management also Post Exchange Management.

(b)

Engineer
30 years as mine owner and mill operator.

[illegible] MINING & DEVELOPMENT CORP.
[illegible] CLUB BLDG. - SUITE 9.
TUCSON, ARIZONA.

SHEET # 7.

(a) Original exploration by Mr. Mills lease owner, in 1930.
150 ft. shaft sunk in 1941 by [illegible]. Nicolson.
Suspension of operations at start of World War II to develop silver by copper property.

(b) The PANCH FOR MINE Miles to the west. Operated 1887 -1903.
200,000 # lead and 200,000 oz. silver.
HILL [illegible] MINE - 3/4 mile east. Considerable oxidized lead and zinc ore reported to have been mined from near the surface.
OLIVERT MINE - 1 [illegible] miles north east. [illegible]ish producer of lead zinc and silver up to 1919.
[illegible] MINE - 2 miles north east. 1949 production - lead 9,657,071 #; zinc 17,2[illegible],303 #; copper 1,009,398 #; silver 274,516 oz.

(c) Before taking over the mine lease, we had the following report from a private mining engineer.
A study of the shaft wall was made and sampling done. 18 ft. below the ground caping ore was in place. Values lead, zinc and silver. Here few specks of galena in spots of hi-grade ol. & D were found in state not fully decomposed. No feed of this ore is in a [illegible] ho in a fisher vein 31" wide and about 6' in depth coming in from south at [illegible] dip from south to north going north. Below this layer the value of the vein pinches to about 14" wide and [illegible] down to the 50' level. At this level 12' from the shaft north [illegible] 31" showing of galena and normal to. Most samples taken from a full run of the drifts on the 50' level show a low grade mill ore.
Since water stood in the shaft at the 60' level no report could be made on the lower workings. Contact with the former operator and men who worked in the shaft was made and the following was found : The shaft fully timbered goes to a depth of 130'. At the 100' level a drift runs north 85' and south 85'. From these drifts and the 32' of shaft below the 100' level a carload shipment of hi-grade galena was made. In the bottom of the shaft is a vein of galena 8" in width.
Sampling of the dump proved that considerable values were present and that they could be saved by milling.
Since taking over the property we have extended the north drift at the 50' level to 91', uncovering a 3' face of good mill ore. To the south at the 50' ft. level we have extended the drift to 49', uncovering a 16" face of mill ore.
A 10 ton ball mill, with jig and shaker table have been installed: we intend to use the water in the shaft for milling operations and when dewatered to ~~mix~~ extend the shaft to a depth of 300'
The water level stays at 60' unless pumped and then recovers at the rate of 3 gal. a minute.
Further exploration of property shows - 3 50' shafts in three directions from the main shaft. All shafts show low grade mill ore. Also the area between these shafts have outcroppings of breccia anfonite carring galena. Several 8' to 10' deep test shafts show mill ore at that depth.

MEN MINING & DEVELOPMENT CORP.
RUBY Star Rt. - BOX 9
TUCSON, ARIZONA.

ORDER # 9

THE MEN MINING & DEVELOPMENT CORP. IS INCORPORATED FOR $500,000.
The shares are of no par value and are divided as follows:

MR. FRANK McCARTHY - 10 shares.
MR. BEN McCARTHY - 10 shares
MISS CARRIE DE SCHIRR - 5 shares
MRS. BEN McCARTHY - 5 shares

[illegible] / 11.

Estimated monthly production with present equipment :
Lead and zinc concentrate ----- 1 ton per month.
Galena Hi-grade ---------5 tons per month.

Estimated monthly production with proposed equipment :
Lead and zinc concentrate -------- 18 tons per month.
Galena Hi-grade ---------- 70 tons per month.

[illegible] MINING & EXPLORATION CORP.
GREY [illegible] MT. - [illegible] 9.
TUCSON, ARIZONA.

[illegible] 12.

(a) The ore consists of argentiferous galena with copper, zinc, lead and silver minerals. It occurs in fissure zones from a few inches to many feet in width. Individual ore bodies are small and not continuous for long distances. The area consists of brecciated andesite in which hydro-thermal alteration has formed chlorite, oxidate and some serpentine. Granite outcrops 3,000' south west of the location and probably underlies at some unknown depth. The ore bodies occur at irregular replacements within a north eastward trend - brecciation zone being 900' wide and several thousand feet long.

(b)

1- No figures on proved reserve.
2- No figures on probable reserve.

Claim # 13.

12) miles to rail center.
22 miles to supply center.
22 miles to railhead point.
Road
3 3/10 miles of graded desert road
Balance - Gravel county road.
Road condition - excellent.

SHEET # 24.

At present time mine shaft on source of water - 70 ft. water in shaft at present time.
Future operation :
Near by abandon shafts have abundant water supply ; some are as deep as 700 ft. with a water level of 60 ft from surface.

DEL MONTE & DEVELOPMENT CORP.
DEER CREEK NO. - DDH 9.
SYCAMORE, ARIZONA.

DEPTH # 15.

50 Horsepower
40 cubic per hour
2 stationary screens.

SHEET # 16.

No operation up to the present, but present equipment calls for two or three men to operate, they being the owners.
Proposed opened operation, calls for eleventre men on two shifts.

E M MAPES & DEVELOPMENT CO.
MOUNT GRAM MT. - DEC 9.
TUCSON, ARIZONA.

ITEM # 17.

Headframe
Hoist
10 ton rough ore bin
8 ton crushed ore bin
Crusher
Elevators, jack chaffe etc.
2 air compressors.
10 ton ball mill
1 - Horta jig.
1 - Wilfley table
1 - agitating screen.
3 - air hammers
1 - Ferguson power tractor shovel.
1 - centrifical jet pump
2 - centrifical pumps.
2 - stationary motors
1 - uncompleted building.
Good condition.

SHEET # 20.

It is our belief that we have a very good property and that the proper way to develop this mine will be to operate, both as an open pit and under round operation. A medium sized mill operation with flotation will take care of all low grade ore, showing a nice tonnage. At the present time, we do not have enough capital to proceed along these lines, but with the loan requested we can very quickly be in operation and produce a fair quantity of much needed vital lead and zinc.