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

224 New Customhouse
Denver 2, Colorado

June 19, 1952

Memorandum

To: Acting Administrator, Defense Minerals Exploration Administration
Attention: Code 210

From: Field Team, Region IV

Subject: Final Report, DMA Docket 1819X (Zinc) Joe E. Moffett's Mid Day Zinc Deposits, Otero County, New Mexico

Enclosed are four copies of the final report on DMA 1819X.

At the request of the applicant, the application was withdrawn.

W. H. King
W. H. King

A. H. Koschmann
A. H. Koschmann

S.V.

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

421 New Customhouse
Denver 2, Colorado

June 19, 1952

Memorandum

To: Acting Administrator, Defense Minerals Exploration Administration
Attention: Code 210

From: Field Team, Region IV

Subject: Final Report, DMA Docket 1819X (Zinc) Joe E. Moffett's Mid Day Zinc Deposits, Otero County, New Mexico

Enclosed are four copies of the final report on DMA 1819X.

At the request of the applicant, the application was withdrawn.

W. H. King
W. H. King

A. H. Koschmann
A. H. Koschmann

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

October 25, 1951

Memorandum

To: DMA Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Final Report, DMA Docket 1819-X, Joe E. Moffett, applicant, Mid Day Zinc Deposits, Silver Hill (Orogrande) Mining District, Otero County, New Mexico

The application of the subject docket was for an exploration loan of an unspecified amount.

The ore exposed on the claims consists of sphalerite, partially oxidized to smithsonite, as a replacement in highly garnetized and marbelized limestone. The major part of this limestone has been removed by erosion, which has uncovered the monzonite intrusive.

There are not any measureable reserves, and indicated reserves are only 41 tons of 22%. There are little data for estimating inferred reserves, but these may amount to 6,000 tons of 20 percent zinc ore.

The applicant did not submit details as to the proposed project, but the examining engineer suggests two drifts of 30 feet each on the present showing of ore, and recommends approval of a loan of $2,500.

The applicant has sufficient resources to supply his part of the cost of the project.

We concur with the recommendation of the examining engineer, with the provision that one of the miners should be competent to supervise the operation.

An exploration project contract is being processed.

Paul T. Allsman

Paul T. Allsman

Reviewed by
DMEA OPERATING COMMITTEE

6-27-52
(date)

Mining Division
Date Rec'd.
OCT 22 1951
BUREAU OF MINES
Denver, Colorado

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Arizona-New Mexico Branch
[redacted]
Box 4097
UNIVERSITY STATION
TUCSON, ARIZONA

MINING DIVISION
REGION IV

October 18, 1951

Memorandum

To : Paul T. Allsman, Denver, Colorado

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

Subject : Final Report, DMA Docket 1819X, Joe E. Moffett's Mid Day Zinc Deposits, Silver Hill (Orogrande) Mining District, Otero County, N. Mex.

Enclosed are original and 7 copies of the above report by J. H. Soule' of the Bureau of Mines. No separate geological report will be submitted by the Geological Survey.

Although the author of this report states that the possibilities of finding much zinc ore seem remote, he has recommended that a total loan for $2,500 be made.

The report has my approval.

Brochure is enclosed.

Walter R. Storms

Walter R. Storms

CC P. T. Allsman (7)
C. A. Anderson
DMA-1819X
DF

FOR VICTORY
BUY
UNITED STATES SAVINGS BONDS AND STAMPS

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

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMA-1819X, Joe E. Moffett's Mid Day Zinc Deposits

Silver Hill (Orogrande) Mining District

Otero County, N. Mex.

John H. Soule', Mining Engineer

U. S. Bureau of Mines

October 1951

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

By John H. Soule[1]

The Mid Day claim of the patented Alabama group in the Silver Hill (Orogrande) Mining District, Otero County, N. Mex., is owned by Joe E. Moffett of Alamogordo, N. Mex. Moffett applied to the Defense Minerals Administration in June 1951 for an exploration loan on the property. The application, Docket DMA-1819X, was sent to the field for an inspection. This examination was made by the writer on September 12, 1951.

Very little ore has been produced from this group of claims and on only one, the Mid Day, was any appreciable base metal mineralization noted. Appreciable zinc with a small amount of copper and lead were noted in two small exposures near the southeasterly limits of the Mid Day claim.

The zinc minerals occur as replacements in limestones which have been highly garnetized and marbelized. The limestone occurs as remnants after erosion has removed the bulk of this formation and has exposed the monzonite intrusive that lies beneath it.

Although the possibilities of discovering large ore bodies on the Mid Day claim are remote, the presence of zinc minerals in two places seems to indicate that a small amount of exploratory work would be worthwhile. This work should consist of drifting

---

1/ Mining Engineer, Bureau of Mines

on the known ore exposures. From the results of this project additional exploratory work in the area, especially to the southeast in the limestone flanks on the intrusive, might be suggested.

The program was planned by the examining engineer from data contained in the applicant's proposal and from data obtained from an examination of the property. The suggested project will cost about $2,500 and should be completed in one month. The applicant and the Government would share equally the costs of exploration.

It must be considered that while the success of the project is improbable, it may be possible to discover sufficient ore to repay the loan and to result in geological evidence that may indicate better ore deposits in the area. Under these conditions, the project is recommended.

JOE E. MOFFETT'S MID DAY ZINC DEPOSITS
SILVER HILL (ORORANDE) MINING DISTRICT
OTERO COUNTY, NEW MEXICO
DMA-1819X

Engineering Report

By John H. Soule
Mining Engineer
Bureau of Mines

October 1951

JOE E. MOFFETT'S MID DAY ZINC DEPOSITS
SILVER HILL (OROGRANDE) MINING DISTRICT
OTERO COUNTY, NEW MEXICO
DMA-1819X

CONTENTS

	Page
Engineering report	
Introduction	1
Acknowledgments	1
Location, topography and climate	1
History and production	4
Ownership and extent	5
Description of the deposits	5
Ore Reserves	6
Present status	7
Proposed exploration	7
Estimated costs	8
Proposed financing	10
Conclusions	10
Recommendations	10

ILLUSTRATIONS

Figure		Following page
1	Location map	1
2	Claim map	1
3	Topographic sketch	2
4	Sketch of geology and underground workings	6
5	Sketch section A-A	6

INTRODUCTION

In June 1951, Joe E. Moffett of Alamogordo, N. Mex. applied to the Defense Minerals Administration for an exploration loan under the Defense Production Act of 1950. It was intended to explore the Mid Day claim of the Alabama Group which Moffett owns and which is located in the Silver Hill (Orogrande) Mining District, Otero County, N. Mex. The application, Docket DMA-1819X, was sent to the field for an examination of the property to supply some data that was either missing or was not clear.

The district has had an appreciable past production of iron, copper, precious metals and turquoise. Other than turquoise, little production has been made from the Alabama group, although sampling has disclosed the presence of zinc minerals.

ACKNOWLEDGMENTS

Acknowledgment is made of the assistance rendered by Joe E. Moffett, who showed the examining engineer over the property.

LOCATION, TOPOGRAPHY AND CLIMATE

The Mid Day lode claim is one of 5 patented claims in the Alabama Group. This group is located in sec. 10, T. 22 S., R. 8 E., in the Silver Hill (Orogrande) Mining District, Otero County, N. Mex., (see figures 1 and 2).

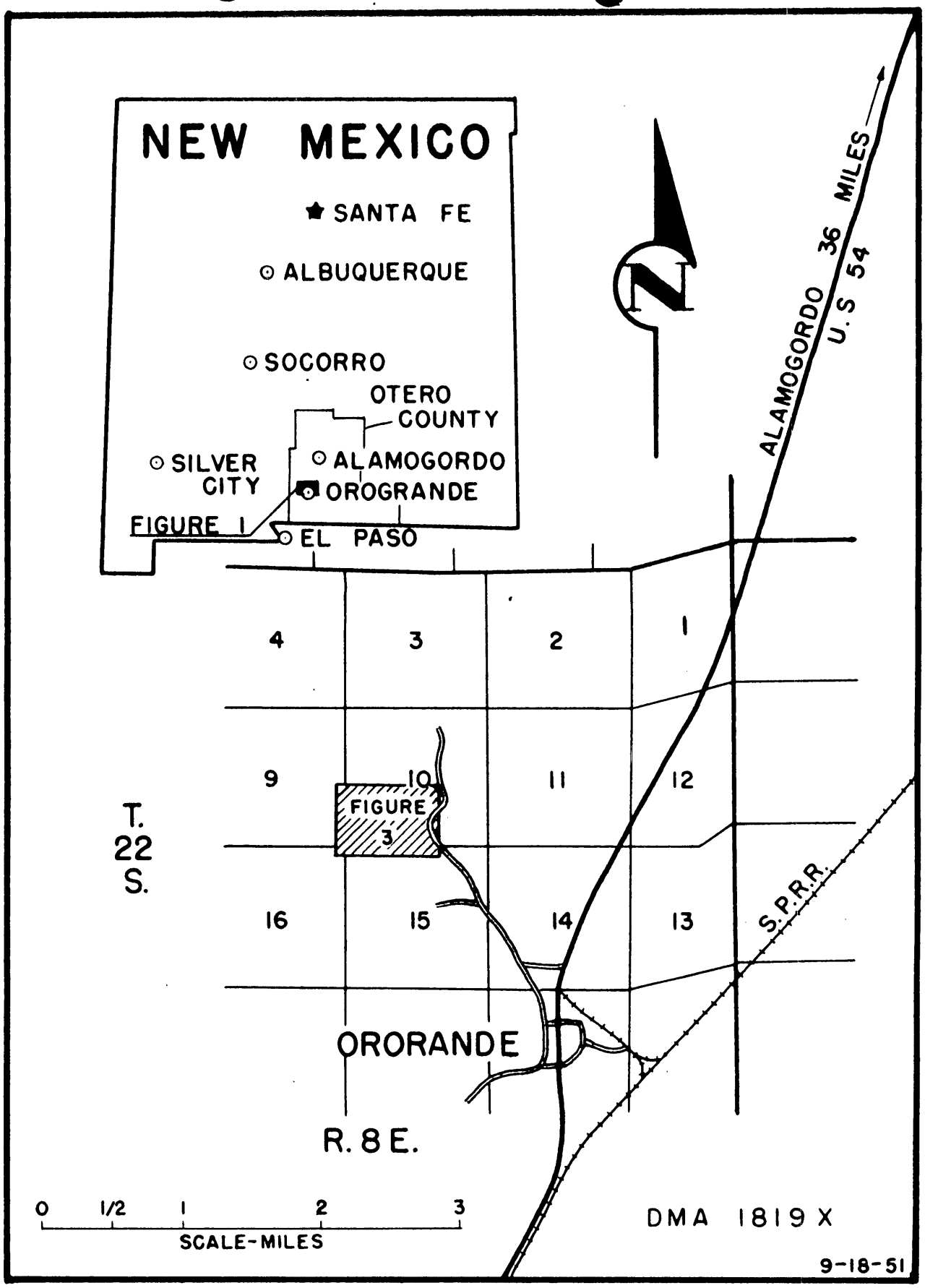

FIGURE 1-LOCATION MAP, ALABAMA GROUP (MID DAY LODE), OTERO COUNTY, N. MEX.

The mine is reached by traveling the well-graveled road northwest from Orogrande past a borrow pit and up the canyon for a distance of 1½ miles. A range fence is encountered across this road at this point. The property lies just north of the fence and west of the main creek (see figures 1 and 3).

The small town of Orogrande is 36 miles south and a little west of Alamogordo, N. Mex., and 50 miles north and a little east of El Paso, Texas. El Paso would be the source of mining supplies and equipment. A railroad loading-ramp is located ½ mile southeast of Orogrande and about 2 miles from the property.

The property is situated in the southeastern part of the Jarilla Hills, a small desert range of mountains about 10 miles long in a north-south direction and nearly 5 miles wide. The hills are completely flanked by alluvium and rise about 700 feet above the valley floor. The mean altitude of the property is about 4,500 feet. The highest point rises to an altitude of 4,851 feet. The slopes are steep in places but the topography is generally not Rugged (see figure 3).

There are no permanent streams in the area, so water must be imported. The Southern Pacific railway has a reservoir near the property, the water being brought from the Sacramento Mountains to the east by pipe line. The pipe line is reported to be 26 miles in length. There are no data on the depth of the water in the area of the claims.

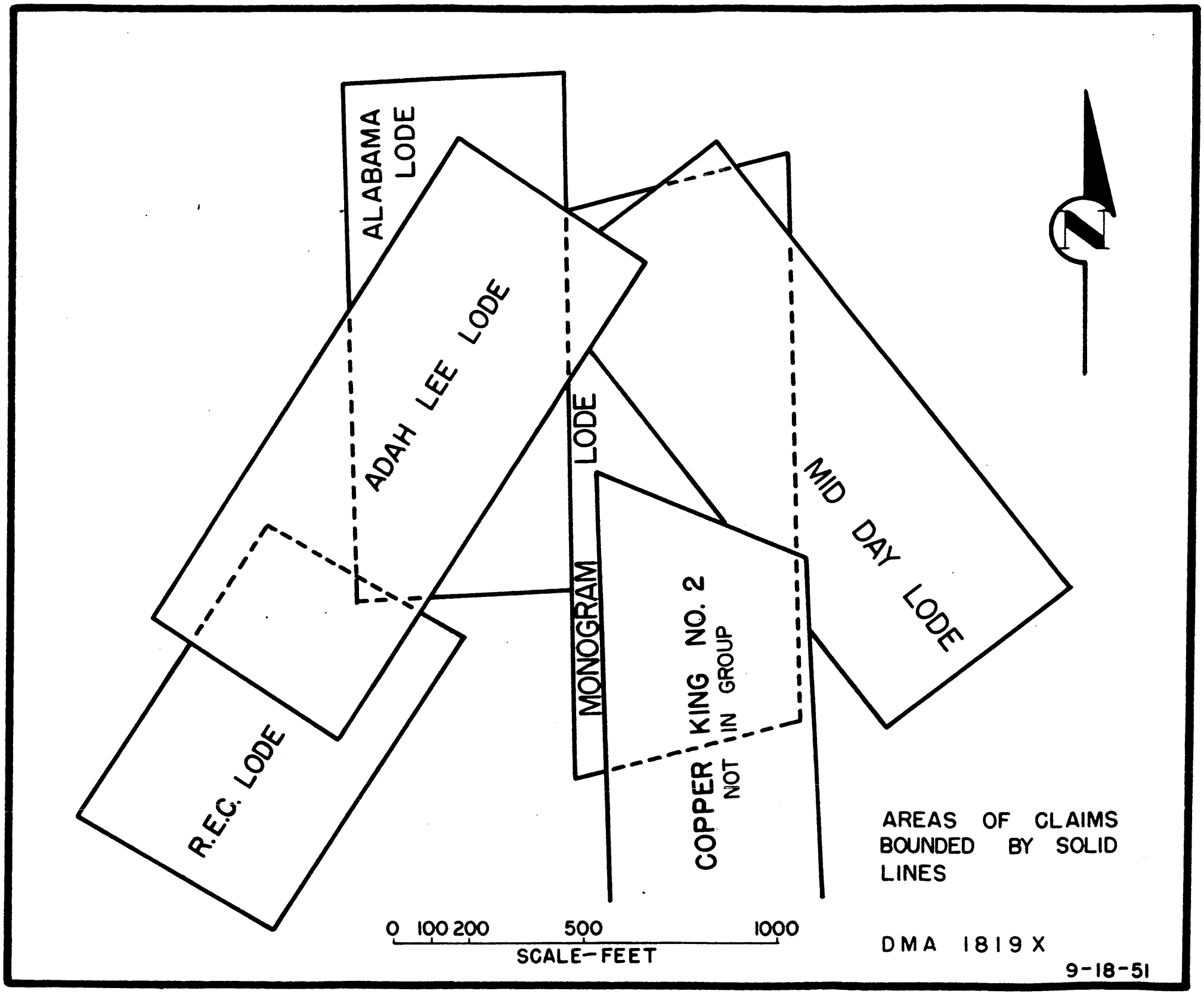

FIGURE 2.-CLAIM MAP, ALABAMA GROUP (MID DAY LODE), SURVEY NO. 1089

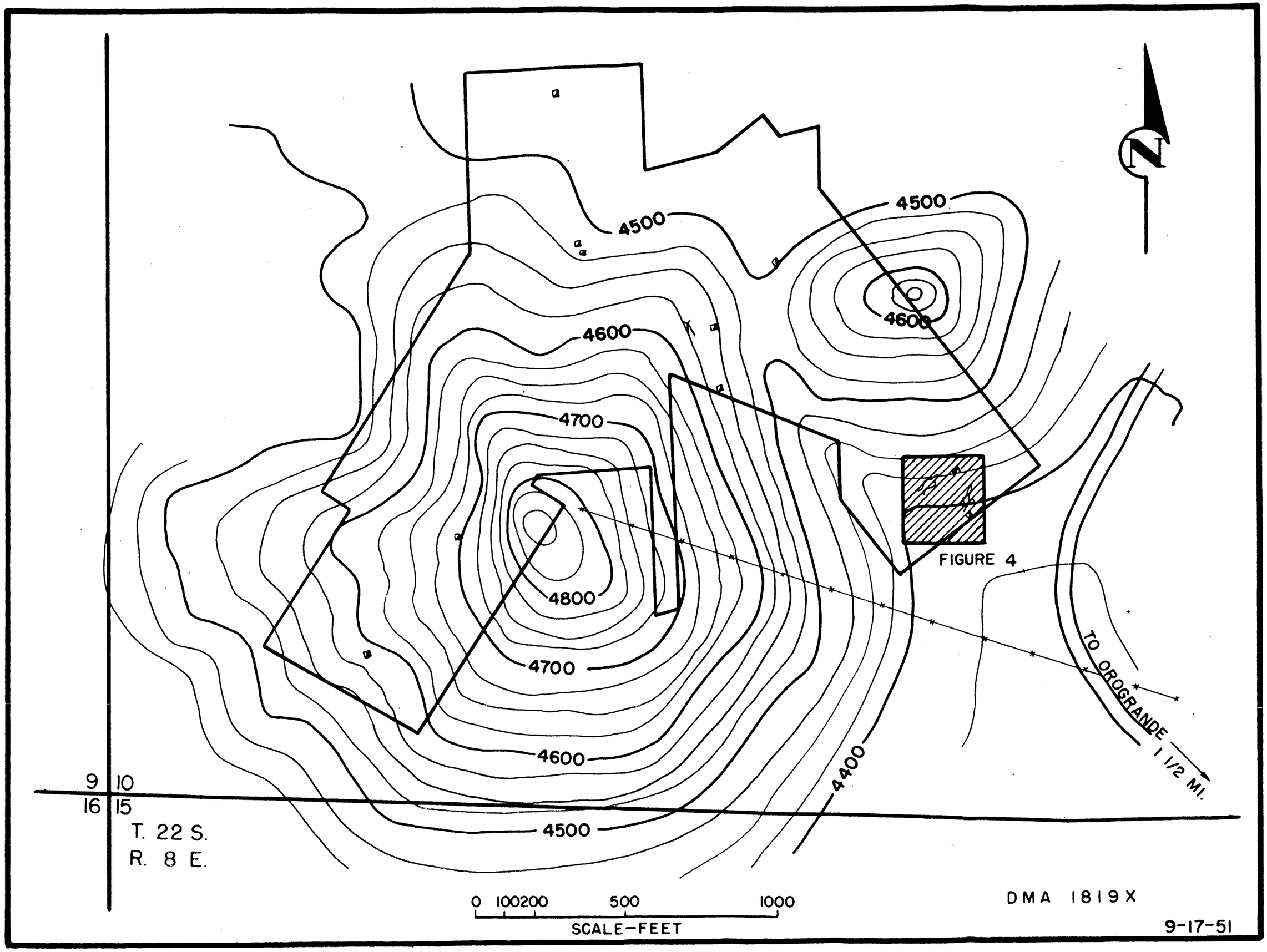

FIGURE 3.-TOPOGRAPHIC SKETCH AND ALABAMA GROUP CLAIM OUTLINE (MID DAY LODE ON EAST)

The average yearly precipitation is estimated to be about 10 inches. Summers are hot. Cold winter weather is neither severe nor prolonged.

Usual desert flora exist. There is no timber suitable for mining purposes.

HISTORY AND PRODUCTION

Although the Orogrande district has been known and prospected since 1879, the first attempts to conduct mining operations occurred about 1900. Precious and base metals were sought, as well as some turquoise. In 1907, a matting furnace was installed which operated intermittently for 2 years and treated copper ores. Base metal production since that time has been sporadic and small. In 1916, there was considerable activity in the iron mines. These were operated until 1921 when the increasing sulfur content and the decreasing iron content of the ores made them undesirable.

The approximate production of metals from the Orogrande area is shown in the following table:

Metal	Amount
Gold	$300,000
Silver	50,000 oz.
Copper	6,500,000 lbs.
Lead	1,400,000 lbs.
Iron	230,000 tons

The total value of these ores was approximately $2,800,000. A little tungsten was reportedly produced from the district, as well as an unknown amount of turquoise.

From the small mine workings on the Alabama group of claims, there has been very little production of base metal or iron ores. Any small production seems to have been derived from the Mid Day claim, the most easterly of the group, as shown in figure 2. A considerable part of the district production of turquoise may have been obtained from this group of claims.

OWNERSHIP AND EXTENT

The Alabama group of claims consists of 5 patented lode claims. This group, Survey 1089, was patented in 1903 and consists of the following claims: Mid Day Lode, Alabama Lode, Adah Lee Lode, R. E. C. Lode, and the Monogram Lode. The claims are shown in figure 2. There is considerable overlap of the various claims so the area of the group is but 58.159 acres.

The claims are owned by Joe E. Moffett of Alamogordo, N. Mex. Moffett has paid the taxes for at least the last 4 years, as noted from the tax receipts.

DESCRIPTION OF THE DEPOSITS

The Alabama group of claims is located in the southeastern part of the Jarilla Hills. These hills once consisted of sedimentary rocks of probable Pennsylvanian age that were domed and intruded by an irregular stock of monzonite and some minor intrusives. Subsequent erosion has removed most of these sedimentary rocks leaving only small patches of limestone within the hills. This formation becomes thick on the flanks where it dips away from the hills and into the valley floor.

Two small remnant patches of limestone are present on the Alabama group, as well as a tongue of the flanks which just enters the southeastern part of the group. This tongue is the limestone shown in figures 4 and 5. The patches are obviously shallow and can contain no sizable ore bodies, so consequently are of little interest. The tongue is more extensive than the patches and may contain ore bodies, especially down dip to the southeast and probably beyond the claim boundary. This is indicated in section in figure 5.

The sedimentary rocks consist principally of limestones with some interbedded shale. Near the contact with the intrusive, alteration is intense with the formation of magnetite, garnet, and other silicate rocks. Some marbelization was noted. Sphalerite was noted in 2 short adits on the Mid Bay claim. The exposures are shown in figure 4 and the assay results are listed as follows:

Assay Results

Sample No.	Length, ft.	Percent Cu	Pb	Total Zn	Oxide Zn
1	3.0	1.00	0.15	14.95	4.40
2	1.7	0.20	0.10	38.50	----

The sphalerite occurs as a replacement of a limestone bed in Sample No. 2 and is wholly unoxidized. In Sample No. 1 the zinc is partially oxidized and occurs near a fracture in the metamorphosied limestones.

ORE RESERVES

There are practically no measured ore reserves on the property. Indicated reserves are small and are tabulated as follows:

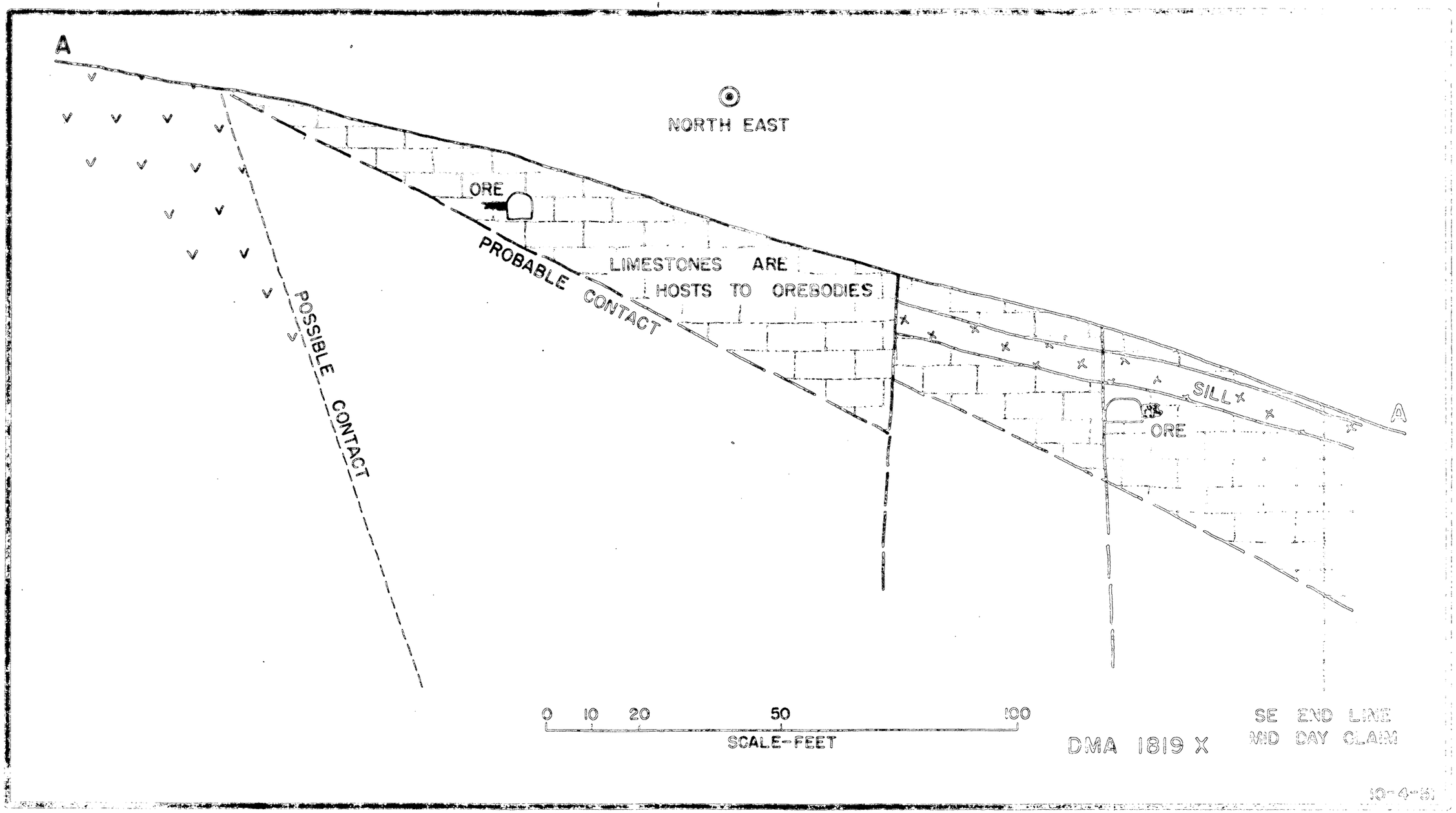

FIGURE 5.—SKETCH SECTION A–A, MID DAY LODE

Sample No.	Tons	Sulfide Zinc Percent
1	24	10.55
2	17	38.50

There are very little data available to compute inferred reserves, but assuming that one limestone bed was replaced over the lateral extent of the sedimentary outcrop, shown in figure 4, and that mineralization is 3 feet thick, an expectable inferred reserve would be on the order of 6,000 tons of zinc ore. As there is a probable maximum of 44,000 tons of altered sedimentary rocks within the claim boundaries and as surface and subsurface indications show a very small percentage of this rock to contain zinc mineralization, the 6,000 tons of inferred ore may be considered the maximum quantity of ore that could exist within these boundaries.

PRESENT STATUS

The property is idle at the present time and has been idle for many years. There are no extensive workings, only shallow adits, shafts, and pits. Two of the most important adits were recently cleaned out for inspection and sampling. These are shown in figure 4.

There is no equipment of any kind on the property.

PROPOSED EXPLORATION

Practically no details of the proposed exploration were given in the application for Government assistance. Conversations with the owner disclosed that he had very little idea of what was to be done.

In view of the fact that zinc mineralization does occur, it may prove advantageous to perform a small amount of exploratory work on the Mid Day claim. While it is known that no extensive zinc ore deposits can occur on this claim, small lenses of fairly high-grade ore may occur. The exploration of these may give valuable clues to the existence of larger ore bodies outside of the claim limits to the southeast.

The following program is suggested as the quickest and cheapest method of exploring the deposits. It is based on the fundamental idea of following the ore. Two short drifts of about 30 feet in length driven from points inside the adits should suffice. One should be driven from the point marked Sample No. 1 on figure 4. This drift should be driven easterly to start and then follow in the direction of mineralization. The second tunnel would start northerly from Sample No. 2 and follow the ore. It would be better, perhaps, to start and concentrate on the Sample No. 2 location as it is here that high grade mineralization occurs.

Including the time necessary to prepare for the tunnel work, this program should be completed in one month. Subsequent work can be planned from the results obtained in this preliminary exploration.

ESTIMATED COSTS

As the project has a short life, all major items of equipment should be obtained on a rental basis with the rental applied to purchase if subsequent events warrant. The major items are listed as follows with 10 percent of the new price estimated as rental:

Compressor, 165 cfm	$390
Tugger hoist, with 200 ft. of cable	75
Rock drill, hoses and pressure tank	75
Mine car	20
	$560

As the original adits shown in figure 4 are in part inclined, the small hoist is necessary to pull the cars out of the underground workings.

Other necessary materials may not be rentable but may be obtained in a used condition. However, the following tabulation is estimated on the basis of new costs:

Drill steel and bits	$75
300 feet of track, 12 lb. rail	200
300 feet of $1\frac{1}{2}$-in. pipe and fittings	80
Small tools, shovels, lamps and extras	200
	$555

The following supplies and services will be necessary:

Explosives	$80
Gasoline and oil	160
Freight on supplies	140
Water and supply haulage	50
Carbide and other small items	50
Tent for laborers	65
Analyses	30
	$575

The application states the need of 3 men (2 miners and a mucker) to be paid $6.00 per day. It is doubtful if qualified miners can be obtained at this rate. Ten dollars per day would be a better rate.

The following wage table is based on this increased wage:

3 men at $10.00 per day for 27 days ---------- $810

The costs are recapitualted as follows:

Equipment rental	$560
Pipe, track and tools	555
Supplies	575
Labor	810
	$2,500

PROPOSED FINANCING

Mr. Moffett, owner of the Alabama group of claims, states that he has sufficient resources to cover his share of a small exploration project. Under the Defense Production Act, the costs of a project as outlined would be equally shared by the applicant and the Government.

CONCLUSIONS

Although the potentialities of finding sizable zinc ore bodies on the Mid Day claim of the Alabama group are very small, some exploratory work seems justified to determine the extent of 2 known unexplored areas where zinc mineralization is known to exist. A small amount of drifting, starting on the known areas of mineralization and following this mineralization, appears to be the simplest way of exploring the possible deposits. This work may give geologic information of value to the district in locating other ore bodies.

RECOMMENDATIONS

It is recommended that a small exploration project, costing $2,500, be approved, with the Government and the applicant sharing the costs on an equal basis. The phases of the recommended project are recapitulated as follows:

1. The work will consist of driving 2 short drifts, each following the mineralized zone. One will start at a point marked Sample No. 1 in figure 4 and the other will start at the point marked Sample No. 2 of the same figure.

2. As the project will last but a short time, no facilities are necessary other than a tent to house the laborers during the period of the project, about one month. A tent would cost about $65.

3. There is no equipment on the property and a complete mine plant must be obtained. All of the major items should be acquired on a rental basis with option to purchase if the results obtained by the preliminary project warrants purchase of the equipment.

4. Only 3 men will be required for this project. The applicant states that these are available. The supervision will be done by the applicant at no cost to the project.

5. Very little rehabilitation will be necessary other than laying track and pipe to the various working places. A small amount of road work is necessary to reach the property. The few hundred feet of road can be made passable in less than 3 man-shifts.

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

224 New Customhouse
Denver 2, Colorado

April 15, 1952

Memorandum

To: C. O. Mittendorf, Acting Administrator, Defense Minerals Exploration Administration

From: Executive Officer, Field Team, Region IV

Subject: DMA Docket 1819X, Mid Day Lead-Zinc Lode, Orogrande District, New Mexico, Joe E. Moffett

Mr. Joe E. Moffett has requested us to cancel his application for an exploration loan on the Mid Day claim. Accordingly, his docket has been placed in our inactive files.

J. H. East, Jr.

J. H. East, Jr.

APR 16 1952

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

224 New Customhouse
Denver 2, Colorado

April 15, 1952

Memorandum

To: C. O. Mittendorf, Acting Administrator, Defense Minerals Exploration Administration

From: Executive Officer, Field Team, Region IV

Subject: DMA Docket 1819X, Mid Day Lead-Zinc Lode, Orogrande District, New Mexico, Joe E. Moffett

Mr. Joe E. Moffett has requested us to cancel his application for an exploration loan on the Mid Day claim. Accordingly, his docket has been placed in our inactive files.

J. H. East, Jr.

J. H. East, Jr.

JHS:ld

cc: Docket, chron.
Koschmann
Storms

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

224 New Customhouse
Denver 2, Colorado

WASHINGTON 25, D.C.
DEPARTMENT OF THE INTERIOR
RECEIVED
NOV 27 1951
Defense Minerals Administration,
Production Expansion Division

October 25, 1951

LEAD-ZINC

Memorandum

To: Executive Secretary, Defense Minerals Administration

From: DMA Field Team, Region IV

Subject: DMA Docket 1819-X, Final Report, Joe E. Moffett, applicant; Mid Day Zinc Deposits, Silver Hill (Orogrande) Mining District, Otero County, New Mexico

The subject report has been approved by us and an exploration loan of $2,500 is being processed.

Your copies of the report and the brochure are being held here until the execution of the exploration project contract.

J. H. East, Jr.

A. H. Koschmann

OFFICAL FILE COPY

To		Date

RECEIVED
NOV 21 1951

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 1 - 1951

FILE COPY
SURNAME:

Gildersleeve (ENE)
McKnight
Olenoy
(For more Ratings)
Tom

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

July 24, 1951

JUL 27 1951

Re: DMA-1819X

Mr. Joe E. Moffett, Manager
Mid Day Lode
1102 Vermont Avenue
Alamogordo, New Mexico

Dear Mr. Moffett:

Your application for an exploration loan (Docket DMA-1819X) 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, Director
Supply Division

BGildersleeve:emp
G 7-24-51
Copies to: J. H. East, Jr. Region IV (2)
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
R. H. Mote
Reports & Records
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.

July 16, 1951

Mr. Joe E. Moffett
1102 Vermont Avenue
Alamogordo, New Mexico

Subject: DMA-1819X
Re: Exploration Loan -
Mid Day Lode

My dear Mr. Moffett:

Receipt is acknowledged of your application and attachments of June 25, 1951 for an exploration loan under the Defense Production Act of 1950.

The application was assigned Docket Number DMA-1819X and referred to Mr. Otto Herres, Chief, Lead-Zinc Branch on July 11, 1951.

In any future correspondence relating to your application, kindly refer to DMA-1819X.

Sincerely yours,

LANDON F. STROBEL

Landon F. Strobel
Executive Secretary

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

Form MF-103
(April 1951)

(4)

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 1819X

Date received 7-9-51

Participation

Joe E.Moffett 1102 Vermont Ave, Alamogordo, New Mexico
Mrs Eva E.R.Shipley 1102 Vermont Ave Alamogordo, New Mexico
Mrs Edwina K.Neve 1108 Vermont Ave Alamogordo, New Mexico
Mrs Mary M.Bell ---------- Weed, New Mexico

Partnership, Joe E.Moffett,Mgr.

Name and address of applicant

Date June 25, 1951

FILL IN THIS BLOCK

Date of application June 25th, 1951 Estimated cost $ 6,500.00

Mineral or metal Zinc, Copper, Lead,Manganese Percentage of Government participation %50.

Location of mine Silver Hill Mining District Orogrande, Otero County, N.Mex.
Patented as Mineral Survey No.1089 on June 15th, 1903.

Date of filing MF-100 DMA Docket Number 1819X

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 9 - 1951
LANDON F. STROBEL
Executive Secretary

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.

---------- (Name of company)

By ---------- (Signature of authorized official)

---------- (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

Form MF-103 Continuation

Item	The applicant
1	Partnership
2	Owners
3	Not applicable
4	Joe E.Moffett, Twenty yeasrs Police Dept,El Paso,Texas and now Chief of Police Alamogordo, N.M. Service with U.S.Engineer's World War 2, Also early association with Father Geo E.Moffett Prior Owner, Geologist and Mining Engineer.
5	Owner
6	None
7	No
8	During present ownership no work has been done on this property During the past thirty years we have grubstaked two miners who are now cleaning out present shafts and tunnels for purpose of inspecting by a mining engineer.
9	Amount necessary to meet 50% of estimate cost of $2,500.00
10	Patented land under Mineral Survey No.1089 Midday Lode consisting of 19.17 acres in Silver Hill Mining District Orogrande, Otero County,New Mexico . (B) Mid Day Lode Mineral Survey No.1089 New Mexico.
11,	Mid day Lode, Mining Survey No. 1089 No change since 1903.
12.	1½ miles north west of PostOffice at Orogrande,New Mexico 3 miles north West of Southern Pacific Railroay Depot at Orogrande,Otero County, New Mexico. Gravel road to R.R.Spur loading Ramp 1½ miles , Down grade haul road of about 1.02 ½ miles of this road will need considerel repairs.
13.	Water would have to be obtained from S.P.R.R.resoirvoy about 1 mile distance. Road in fair condition.
14.	No Power available. B. No equipment of any kind .
15.	By rail or Truck. Nearest Mill at Deming,N.M. Nearest Smelter located at El Paso, Texas.
16.	Attached copy of Bullitin No 7, and recent report by Mr Robert Lemon, R.E.M. of Patagonia, Arizona.
17.	Not in Production.
18.	Not presently in production.
19.	None

20. Lead, Copper, Zinc, and Manganese ores for shipment to mill of or smelter.

21. Deapening of existing shafts and investigating of extensions of ore bodies previously discovered along breaks and contacts in the lime stones.

22. See attacher reports and history.

23. Estimates of expenses:

A.	2 miners and 1 mucker @ $18.00 per day	$ 700.00	
B.	repairs to shafts and drifts.....	$ 200.00	
C.	Tent camp for workers.....	$ 250.00	
D.	Small gasoline hoist	$ 200.00	
E.	2 mine cars used	$ 200.00	
F.	Rock drill and accessories.....	$ 500.00	
G.	250 feet of Track and pipe.....	$ 400.00	
H.	Hand tools all kinds including wheelbarrows..	$ 250.00	*
I.	1 gasoline 105 C.F.M. compressor.....	$ 200.00	rental *
		$2900.00	
	Supervision by partner no direct expense		
1.	Freight on equipment, labor and Misceleanous..	$ 500.00	
2.	Laying of track, pipe, set up hoist ect.....	$ 300.00	
3.	Blasting supplies	$ 150.00	
4.	Rental of road equipment machinery.....	$ 400.00	*
	Overall estimate of 1st month operation	$4,050.00	$4,050.00

Second month

Labor as listed ~~xxxxxx~~.....	$ 700.00
Blasting supplies, oil, gasoline, ect.....	$ 350.00
Rental on equipment.....	$ 200.00
	$1250.00

3rd and succeeding months: as above.

24. Progress expected: 100 linear feet of development work, or 100 tons of ore extracted

* rental monies can be applied to purchase price of equipment.

Certification.

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

Partnership as listed by Joe E Moffett

June 25, 1951 Manager

Date Title.

LENON ENGINEERING OFFICES
Robert Lenon, B.S.E.M.,
Consulting Mining Engineer
Regional Mining & Mineral
Surveyor.

PO Box 525
Patagonia

PO Box 257
Nogales

PO Box 1525
Bisbee

Patagonia, Arizona, March 10th 1951.

The Alabama Group of Patented Claims, Silver Hills District, Otero County, N. Mex.

The Alabama Group is made up of the Alabama, Monogram, Adah Lee, Mid Day and R.E.C. lode claims, patented as mineral survey No.1089, on June 15th., 1903.

A reconnaissance was made of this property on February 26th 1951 to ascertain its possibilities for production of metals and minerals. Reference is made to the patent-plat for features mentioned in this report.

The ground is situated in the Silver Hills District, Otero County, N. Mexico, about one and one half miles west of Orogrande Post Office which is on the El Paso,-Alamogordo highway, and about two miles west of the main line of the Southern Pacific Railroad.

The District is an old one, and little work has been done on the property in question for some time. As a consequence it was not possible to enter some of the more interesting-looking workings for examination.

Workings of particular interest are listed below in approximate order of interest for possible future development:

1. MID DAY lode, shaft-tunnel No.2: This is the most extensive work on the property, and was done on a flat-lying bed in the limestone dipping about 20 northeasterly. Most of this work is accessible and a good ~~quantity~~ quantity of sulphides, showing values in copper and zinc is visible on the dump. It is recommended that the workings be entered and sulphides in place be picked and blasted for a look at the fresh materials for sampling and examination.

2. MID DAY lode, opening No.6: This is a large quarry-like opening from which a considerable amount of turquoise is said to have been extracted. Crumbs of this mineral found on the dumps appear to be of good quality and stones from this deposit are known to have retained their good color permanently.

This opening, which is about 30X40X15 feet in size, shows no veins of turquoise in place on the walls, and the bottom is entirely covered with waste shot down from the sides. In view of the large amount of work done, however, and the superior quality of the stones extracted, it is suggested that the loose rock be cleared away and the bottom of the pit carefully examined for extensions of the deposits previously mined.

3. MID DAY lode, shaft No.4: This is a shaft sunk in a large open-cut for the purpose of mining turquoise. The shaft is vertical and is wholly untimbered;

Alabama Group - continued:

it is open to a depth of about 50 feet. It is recommended that this shaft be entered for the purpose of examining the walls for possible veins of turquoise that may still be visible.

4. [illegible] lode, shaft No.5: This is a vertical shaft open to a depth of over fifty feet and wholly untimbered. The vein on which it was struck strikes northeasterly, and is strong. From the appearance of the siliceous material on the dumps it is probable that this work was done for the precious-metals values that may be therein. It is recommended that these openings be entered and samples taken for gold and silver. No base-metal minerals were noted on the dump.

All of the above-mentioned workings are shown in red on the attached copies of the patent-plat; they being the only openings that appeared attractive during the reconnaissance. Claim-corners seen are also shown in red, while those looked forand not found are shown in blue.

While the veins seen are not continuous nor large, this group contains formations that make it have considerable merit. It is suggested that an effort be made to put the several openings in shape so they can be examined. When this is done it will be possible for interested persons to examine the deposits in detail and they can take samples and determine the merit of each area for themselves.

C O P Y

From Bulletin No.7--"The Metal Resources of New Mexico and their Economic Features"; By, Samuel G. Lasky and Thomas P. Wooten----1932 (out of print) New Mexico Bureau of Mines and Mineral Resources.

C O P Y

Orogrande (Jarilla, Silver Hills, Brice) District.

Orogrande is a station on the Southern Pacific railroad in southwestern Otero County. The Jarilla Hills are a few miles northwest of Orogrande.

Prospecting was first conducted in the Jarilla hills in 1879, but no real mining was done until about 20 years later. A 250 ton matting furnace was operated at Orogrande from 1907 to 1909. Iron ore was shipped to Pueblo, Colorado., intermittently from 1916 to 1921. The iron ore was produced chiefly from the Cinco de Mayo, Iron Duke, Lincoln, Seven-some-Eleven and Three Bears Claims. A jigging plant for treating these ores was operated during 1921. Up to about 1904 the district yielded approximately $100,000 in gold and copper. Of this amount about $8,000 came from dry placer operations. From 1904 to 1929 the district produced gold, silver, copper and lead to the value of $1,446,491, of which over $13,000 represents placer gold. No figures of the iron ore values produced are available. The district has also produced a little tungsten ore.

The Jarilla Hills consist of an irregular mass of fine grained monzonite porphory, which has intruded carboniferous limestone. The limestone is metamorphosed near the contact and contains iron oxides and typical contact silicates. The ores occur as contact-metamorphic deposits in the limestone and following bedding planes and fracture zones across the strata. They contain pyrite, chalcopyrite and associated gold and silver. Some of the deposits in the metamorphic rock are essentially quartz-pyrite veins having indefinite bounderies. The ores are partly oxidized.

Placer deposits, the gold of which was derived from some of the lode deposits, have been worked on the southeastern slope of the hills. The gravels are reported to assay about $1 a cubic yard. Water is very scarce, and most of the gold has been recovered with some form of dry washer. The gold is about 940 fine.

##########

CERTIFICATE OF ASSAY

FOR Mr. R. W. Langford
1102 Vermont
Alamagordo, New Mexico

Miller's Assay Office

HUGO W. MILLER, Owner
Registered Mining Engineer
Established in 1913 — Nogales, Arizona

Laboratory Number	Customer's Marks On Samples As Submitted	GOLD (Oro) Troy Ounces Per Ton (2000 Lbs.)	SILVER (Plata) Troy Ounces Per Ton (2000 Lbs.)	COPPER (Cobre) Percent	LEAD (Plomo) Percent	ZINC		
92193	Sample in flat can			3.4%	1.3%	6.4%		
92194	X Sample from probable Gold bearing dump @ #4	None	0.4					
92195	X "Mid Day Lode" tunnel & shaft #2 present workings				1.3%	1.5%		

Note: Sample Pulps Kept Thirty Days in Case Further Analyses Desired.

1 oz. Troy has 31.1035 grams.
1 Kilo has 32.1507 oz. Troy
1 lb. avoirdupois has 14.583 oz. Troy.

Charges $ 7.75

Date May 8, 1951

Charles O'Keefe
Assayer.