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

REGIONAL DIRECTOR'S OFFICE
REGION IV
MAY 12 1952
BUREAU OF MINES
DENVER, COLORADO

MAY 8

Mr. P. D. Parker
P. O. Box 1276
Globe, Arizona

Re: Docket No. DMA 2009X (Manganese)
Ramsdell Mine
Gila County, Arizona

Dear Mr. Parker:

Your application for exploration assistance has been carefully reviewed, together with information obtained by a field examination of your property, and other available data.

This information, while noting a relatively small tonnage of ore on your property, indicates that, geologically, there is little probability of finding additional ore in sufficient quantity to be of importance to the National Defense Program. We regret, therefore, to inform you that your application is denied.

We wish to thank you for your interest in the Defense Minerals Program and for bringing the property to our attention.

Sincerely yours,

C. O. Mittendorf

Acting Administrator
Defense Minerals Exploration
Administration

TLChapman/FEJohnson/lm/bih
5/7/52
cc to: Docket
Admr's. Reading File
Operating Committee
Field Team, Region IV
Messrs. D.M. Lemon R-5216 GSA Bldg.,
J.H. Hedges R-4604
G.C. Selfridge
T.L. Chapman
Stanley Walker R-2465
F.E. Johnson

C
O
P
Y

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

January 18, 1952

Memorandum

To: George C. Selfridge

From: Norwood B. Melcher

Subject: DMA-2009, P. D. Parker

The report of the Field Team indicates that only a very small tonnage of manganese could be obtained from this deposit, obviously at a very high price.

It is recommended that the application be denied.

The complete file is attached herewith.

/s/ NBM

Norwood B. Melcher

Attachment

C
O
P
Y

OFFICE MEMORANDUM UNITED STATES GOVERNMENT

To: George C. Selfridge January 9, 1952

From: M. D. Crittenden

Subject: DMA 2009 - P. D. Parker

The Field Team report on this property indicates that the prospects for a significant discovery as a result of this exploration are poor. The breccia zone to be prospected is already exposed and can be mined without further exploration. The amount of ore indicated to date is not sufficient to warrant the expense of the access road. On this basis both forms of assistance should be denied.

/s/ Max D. Crittenden, Jr.

Form 6-95

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

REFERENCE SLIP

DATE 4/14/52

REFERRED TO:

1. King
2.
3.
4.

FOR:

..... Action	..... Recommendation
..... Approval	..... Record of .....
..... Comment	
..... Conference	..... Referring to .....
..... Consideration	
..... Filing	..... Reply for signature of .....
..... Instructions	
..... Investigation	..... Rewriting
..... Initials	..... Signature
..... Mailing	..... Suggestions
..... Previous correspondence	..... Your information

REMARKS: Letter from Frank Johnson re: DMA 2009, P. D. Parker in answer to our letter dated March 26.

Check (X) before the items needing attention.

Initials of sender.

GPO 16—51162-1

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

APR 10 1952

APR 14 1952

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

Re: Docket No. DMA 2009X
(Manganese)
P. D. Parker

Dear Mr. East:

This will acknowledge receipt of your letter of March 26, 1952, concerning the subject application and requesting that a policy determination be made with respect to the action you should take on applications for Government assistance for exploration of submarginal deposits.

Your comments regarding the application of P. D. Parker have been noted. It is also noted in the next to the last paragraph of your letter you state that you have tested a number of shipments of ore to the Deming, New Mexico Purchase Depot, and that these shipments have been stopped because the percentage of lead-zinc in the manganese exceeds the specification limits. However, the Field Team reported that an analysis of a sample of ore from Mr. Parker's Ramsdell mine indicated only minor amounts of copper, lead and zinc, and that this ore does not have any deleterious elements.

We agree with you that the economic aspects of a proposal should be considered in arriving at a decision with respect to an application. However, an application should not be denied primarily because the immediate economic aspects are unfavorable. Your attention is called to the criteria set forth in the Mineral Order for Exploration Projects. Under these criteria seven factors are considered and weighed in passing on applications, the most important of which, in our opinion, is the geologic probability of making a significant discovery.

The purpose of the Exploration Program is to find strategic and critical minerals for use in National Defense. If the possibility exists to discover or develop a large tonnage of submarginal strategic or critical minerals which can be mined at low cost and there is a possibility of working out the metallurgy so that significant production may be made within ten years from the start of the project, such a project certainly falls within the scope of this program, provided other factors are favorable. On the other hand, where the possibility exists of only discovering or developing a small tonnage of submarginal

material, it should not be classed as falling within the category of making a significant discovery, and hence, it would appear to be in order to deny an application on a deposit of this nature.

You state that you are approving applications in the case of uranium where the average grade of ore is as low as .10% U_3O_8, which is considered 25% below profitable operation. If the possibilities are such that only spotted occurrences of such low grade material could be found or developed, we do not believe that the applicant should be encouraged to spend his money where he obviously has no hope of recovering it. However, if the possibility exists of finding higher grade material which would result in profitable operations on a small scale, we feel that it would be a suitable Exploration Project. Furthermore, if the possibility existed of discovering and developing a deposit of substantial tonnage such as 20,000,000 to 30,000,000 tons of material assaying .10% U_3O_8, and the applicant was competent to carry out such an Exploration Project, we feel it would be in line with the Defense Program. The same type of thinking would apply to oxidized lead-zinc ores where there would not be a suitable project on a small scale; but if the possibility existed to find large deposits and the applicant was competent, such a project should be given careful consideration.

It is impossible to lay down definite rules or policies in these cases as it is purely a matter of judgment wherein honest differences of opinions may exist. Each proposal must be considered on its own merits. We feel that any possibility of adding substantial tonnages to the country's reserves of strategic and critical minerals, even though not considered commercial, at the present time or the metallurgy has not been worked out satisfactorily, should be looked upon favorably. This type of exploration is definitely within the realm of DMEA, and we should furnish assistance for projects of this type where applicants are competent to carry them out and other factors are favorable.

Sincerely yours,

Frank E. Johnson
Chairman, Operating Committee
Defense Minerals Exploration
Administration

APPROVED:

J. N. Hedges
Member, ~~Bureau of~~ Mines

T. P. Thayer
Member, Geological Survey

March 26, 1952

Memorandum

To: Frank E. Johnson
Chairman, Operating Committee

From: Regional Director, Region IV

Subject: Docket DMA-2009X - P. D. Parker

Referring to your letter dated January 31, regarding docket DMA-2009X, manganese, P. D. Parker, Ramsdell mine, Gila County, Arizona: We have re-examined the report as submitted by the field examiners, and we are in accord with the examining team in that the application should be denied.

The denial is based on the improbability of securing a significant tonnage of manganese ore. You will note that the report states "that this type of deposit is generally very shallow, extending only from 40 to 60 feet. This depth would not give a significant tonnage in our opinion".

It is noted in the third paragraph of your letter that you state "primary emphasis should not be placed on the economic aspects of the proposal; but rather the unlikelihood of making a discovery or development of ore of significant importance should be stressed".

We have advised our field examiners that an application should not be turned down entirely on the economic aspects of the proposal.

In this connection, we would like to have your policy determination of the action that we should take on applications for Government assistance in opening mineral deposits of obvious submarginal grade, as for example:

W.H.K

(1) In the case of uranium, a cut-off .13 U_3O_8 is considered commercial ore. We are approving applications where the average grade of ore is indicated as low as .10, which is 25 percent below profitable operation.

(2) Another case in point is Potter and Sims, docket DMA-1387, where a large tonnage of tungsten ore is probably present, but the sample submitted to Tucson for testing was too low grade to even test.

(3) A deposit in Utah to explore zinc carbonate was denied because there was no method of treatment of the ore that we knew of other than the direct shipment to a zinc smelter.

It seems to this field team that economics in these cases must come into the judgment of the application.

In the fourth paragraph of your letter regarding the purchase program for domestic manganese ore at Deming, New Mexico, we have tested several shipments of ore from the Globe district and in every instance, shipments have been stopped because of the percentage of lead-zinc in the manganese, which exceeds the specifications and the stockpile would not accept it.

We would like for the Operating Committee to give us the policy determination regarding submarginal deposits, such as we have indicated above.

J. H. East, Jr.

J. H. East, Jr.

JHE:ftm

Copy to: AH Koschmann
WH King

DMA File

Keep this report handy with me JHE

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

REGIONAL DIRECTOR'S OFFICE
REGION IV
JAN 31 1952
FEB 1 1952
BUREAU OF MINES
DENVER, COLORADO

AIR MAIL

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

Re: Docket No. DMA 2009X (Manganese)
P. D. Parker
Ramsdell Mine
Gila County, Arizona

Dear Mr. East:

The field team report, dated November 26, 1951, on the subject property is being reviewed, and we find it necessary to request your further attention in this respect.

The "summary, conclusions, and recommendations", pages 1 and 2, recommend denial on the basis that the mine cannot be operated at a profit, and note that a loan might not be amortized.

We feel that in recommending a denial, primary emphasis should not be placed on the economic aspects of the proposal; but rather the unlikelihood of making a discovery or development of ore of significant importance should be stressed. This procedure is in keeping with the declared purposes and intent of DMEA as expressed in MO-5, MF-100, MF-103, MF-200 and "Questions and Answers on the Mineral Exploration Program" (Departmental Release of May 14, 1951). Your attention is directed to the recurring use of the words "contribution", "aid", "grant" and the fact that the operator is not required to mine, even if profitable ore is found (see MF-200, clause 14, final sentence).

Your attention is further directed to the fact that manganese ores need not contain a minimum of 40 percent manganese to be sold to the Deming, New Mexico, ore-purchasing depot. The criterion in this respect is the efficiency of concentration. It will be noted in the "Manganese Regulation", "Purchase Program for Domestic Manganese Ore at Deming, New Mexico" that, if ore from the Ramsdell mine is amenable to concentration, the mine-run ore containing 25.83 percent manganese will be purchased at $24.70 per long dry ton.

JHE
WLP

A supplementary report clarifying the above noted points is requested. In this connection, please comment on the possibility of discovering or developing a significant quantity of low grade manganese ore that would be sold to the Deming Purchase Depot.

Sincerely yours,

Frank E. Johnson
Chairman, Operating Committee
Defense Minerals Exploration
Administration

APPROVED:

J. H. Hedges
Member, Bureau of Mines

T. P. Thayer
Member, Geological Survey

Show W.K.

W. Fast

JAN 31 1952

AIR MAIL

Mr. J. P. Fast, Jr.,
Executive Officer, Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMA 2009X (Manganese)
P. L. Parker
Ramsdell Mine
Gila County, Arizona

Dear Mr. Fast:

The field team report, dated November 26, 1951, on the subject property is being reviewed, and we find it necessary to request your further attention in this respect.

The "summary, conclusions, and recommendations", pages 1 and 2, recommend denial on the basis that the mine cannot be operated at a profit, and note that a loan might not be amortized.

We feel that in recommending a denial, emphasis should not be placed on the economic aspects of the proposal; but rather the unlikelihood of making a discovery or development of ore of significant importance should be stressed. This procedure is in keeping with the declared purposes and intent of DMEA as expressed in MO-5, MF-100, MF-103, MF-200 and "Questions and Answers on the Mineral Exploration Program" (Departmental Release of May 14, 1951). Your attention is directed to the recurring use of the words "contribution", "aid", "grant" and the fact that the operator is not required to mine, even if profitable ore is found (see MF-200, clause 14, final sentence).

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A supplementary report clarifying the above noted points is requested. In this connection, please comment on the possibility of discovering or developing a significant quantity of low grade manganese ore that could be sold to the Deming Purchase Depot.

Sincerely yours,

(signed) [illegible]

Chairman, Operating Committee
Defense Minerals Exploration
Administration

APPROVED:

[illegible] Hodges, [illegible]
Member, Bureau of Mines

L. P. Thayer
Member, Geological Survey

QLBrewer/FEJohnson/lm/bih
1/29/52
cc to: Admr's Reading File
Docket
N. B. Melcher, USBM
M.D.Crittenden, USGS
G.C.Selfridge
GGGentry
Field Team, Region IV(2)

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

200 New Customhouse
Denver 2, Colorado

November 26, 1951

Memorandum

To: DMA Field Team, Region IV

From: A. H. Koschmann

Subject: DMA Docket 2009 (Access Road and Exploration Loan Applications, P. D. Parker, Applicant), Ramsdell Manganese Mine, McMillan Mining District, Gila County, Arizona

Enclosed are the original and 7 copies of the geologic report by C. S. Bromfield of the U. S. Geological Survey covering the above docket. A separate report by the U. S. Bureau of Mines will not be prepared.

It has been recommended that the loans be denied.

The brochures (2) are enclosed.

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

November 23, 1951

Memorandum

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

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

Subject: Final Report, DMA 2009 (Access Road and Exploration Loan Applications, F. D. Parker, Applicant), Pansdell Manganese Mine, McMillan Mining District, Gila County, Arizona

Enclosed are the original and 7 copies of the above report by C. S. Bromfield of the Geological Survey. A separate report by the Bureau of Mines will not be prepared.

This report and the recommendation that an access road and exploration loan be denied because of adverse economics and geologic probability have my approval.

The brochures are enclosed.

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

Enclosures 10

PAMPERELL MANGANESE MINE
MCMILLAN MINING DISTRICT
GILA COUNTY, ARIZONA
DMA 2009
(ACCESS ROAD AND EXPLORATION LOAN)

Geology

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

RAMSDELL MANGANESE MINE
MCMILLAN MINING DISTRICT
GILA COUNTY, ARIZONA
DNA 2009
(ACCESS ROAD AND EXPLORATION LOAN)

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SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The manganese deposit of the Ramsdell Manganese Mine occurs in relatively narrow steeply dipping breccia veins. The ore is of secondary origin and is of the type which becomes impoverished at depths of 40-60 feet. High grade (40-45 percent Mn) masses and pods occur interspersed within a vein composed largely of low grade (15-25 percent Mn) breccia material. Based on past production the ratio of high grade material to low grade material is approximately 1:8.

There are several factors which mitigate against the successful operation of the Ramsdell manganese prospect. The geological potential of the vein is on the order of 3300 tons, but only some 400 tons of this amount would be of commercial grade (40-45% Mn); the remainder is low grade and probably uneconomic. To recover this 400 tons the entire amount would have to be mined. It is not intended here to go into the details of the economics involved, but this factor condemns the enterprise even if it were thought worthwhile to obtain the limited reserves of manganese available. In this type of small operation, in narrow veins, the estimated production would not be more than one ton per man shift. The cost of mining and sorting the ore would be at least $20 per ton. At a ratio of 8 long tons of low grade material to one long ton of "high" grade ore the cost of producing one tons of ore would be 8 x $20 or $160. This excludes haulage and freight to Deming, New Mexico, on ore which is worth only $76 per long ton at Deming. The economic difficulties are obvious.

It is concluded that the high cost necessary to recover the small reserves of manganese interspersed within the vein would prohibit

the Famadell manganese prospect from operating at a profit; therefore a loan could not be amortized. It is recommended that the exploration and access road be denied.

INTRODUCTION

On August 6, 1951, P. D. Parker of Globe, Arizona made an application for an access road of approximately 5 miles in length to the Ramsdell manganese prospect, Gila County, Arizona. On August 17, 1951, he made application for an exploration project pursuant to Mineral Order #5, under the Defense Production Act of 1950. The estimated cost of the exploration project, exclusive of the access road, was $4,000, of which the Government's share would be 75 percent. The applications were reviewed in Washington, docketed as DMA 2009 and AR 1 , and forwarded to the Field Team, Region IV, Defense Minerals Administration for a field examination.

P. D. Parker was contacted by the writer on October 4, and the property was visited on October 5, 1951.

ACKNOWLEDGMENTS

The examining geologist wishes to thank P. D. Parker, applicant, and F. T. Ramsdell, lessor of subject property, for assistance rendered.

LOCATION

The Ramsdell Manganese Mine is on the south bank of the Salt River above Gleason Flat. On the official Crook National Forest Map the mine would be located in the southwestern part of the unsurveyed portion of T. 5 N., R. 16 E. (fig. 1).

The mine is reached by going 20 miles northeast of Globe on Highway 60 to Seven Mile Wash, thence 15 miles by good dirt road to the John Peer's ranch on the north side of Hayatack Butte. The road ends at Peer's ranch and the property is accessible only by a foot or horseback trail of 4 to 5 miles (see fig. 1).

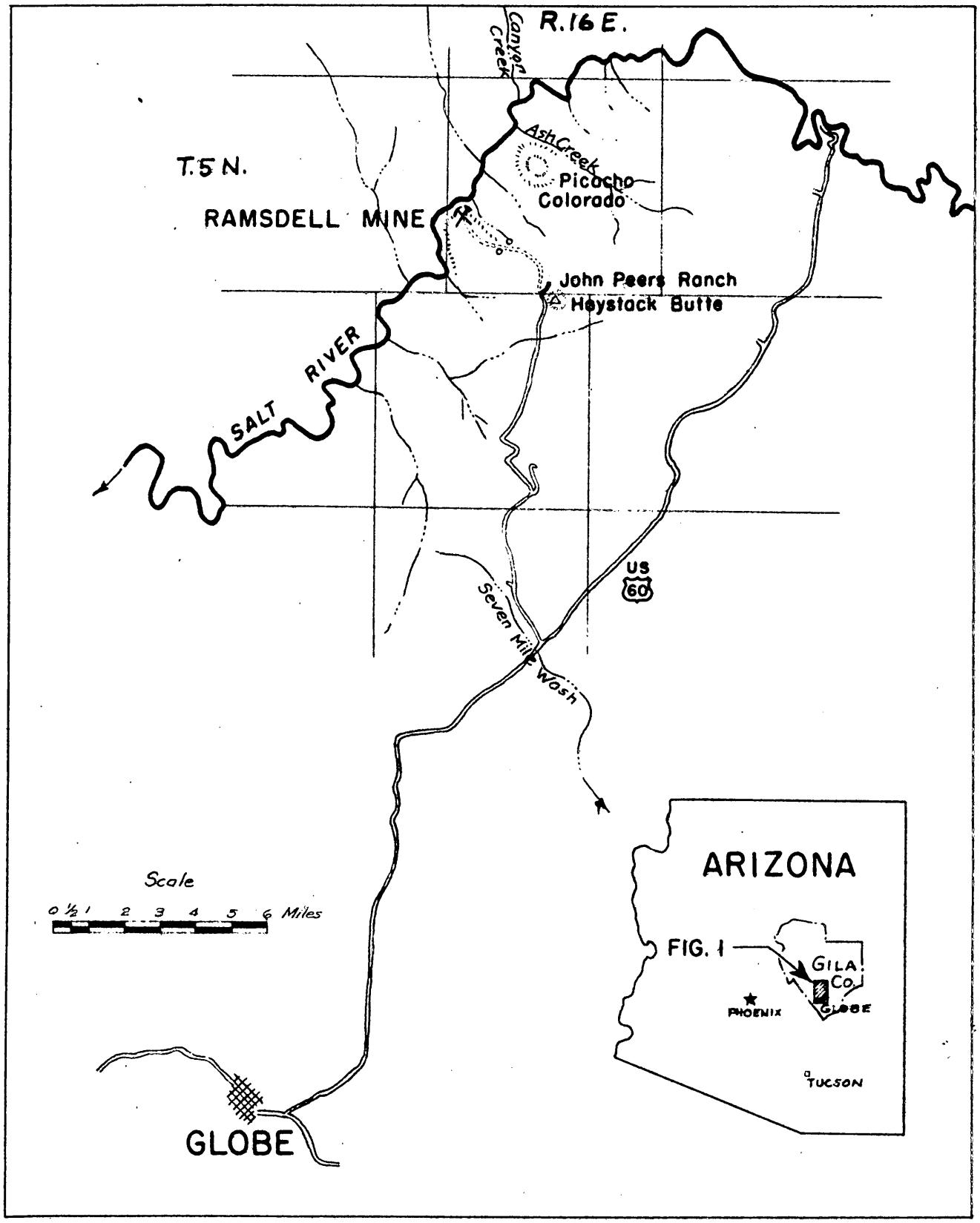

FIG. 1 - LOCATION MAP, RAMSDELL MANGANESE MINE

DMA 2009

The prospect is about a quarter of a mile from the Salt River on a north-trending ridge in an area of moderate topography. The altitude of the mine is approximately 3,100 feet, and that of the river 2,800 feet. In the immediate area there is a maximum relief of about 800 feet. The proposed access road would have an easy grade and could follow the crest of a gentle ridge to the vicinity of the prospect.

HISTORY AND PRODUCTION

The seven claims composing the Ramsdell manganese prospect were located by F. T. Ramsdell during the early years of World War II. Lessees operated the property for a short time during World War II and are reported to have shipped 17 long tons of approximately 49 percent manganese ore. This is the only shipment that has been made from the property. Perhaps ten tons of sorted ore, averaging approximately 40 to 45 percent manganese are in a dump at the property. During the war the lessees drove a 60-foot drift on the vein. The present applicant extended the drift 23 feet along the vein and put a small 15-foot raise up to the surface (see fig. 2). At the present the property is inactive.

OWNERSHIP AND EXTENT

The applicant, P. D. Parker, has a 10 year lease and purchase option on 7 unpatented contiguous claims which are held by F. T. Ramsdell of Globe, Arizona. The royalty is 10 percent of the gross value of the ore and a minimum monthly royalty payment of $100 is applicable on the purchase price of $5,000. The expiration date of this lease and option is July 15, 1961.

GENERAL GEOLOGY

The ore deposit occurs in steeply dipping fissure veins cutting phaneritic igneous rocks of intermediate to basic composition.

The vein strikes N. 10° E. and dips 80° E. and is exposed

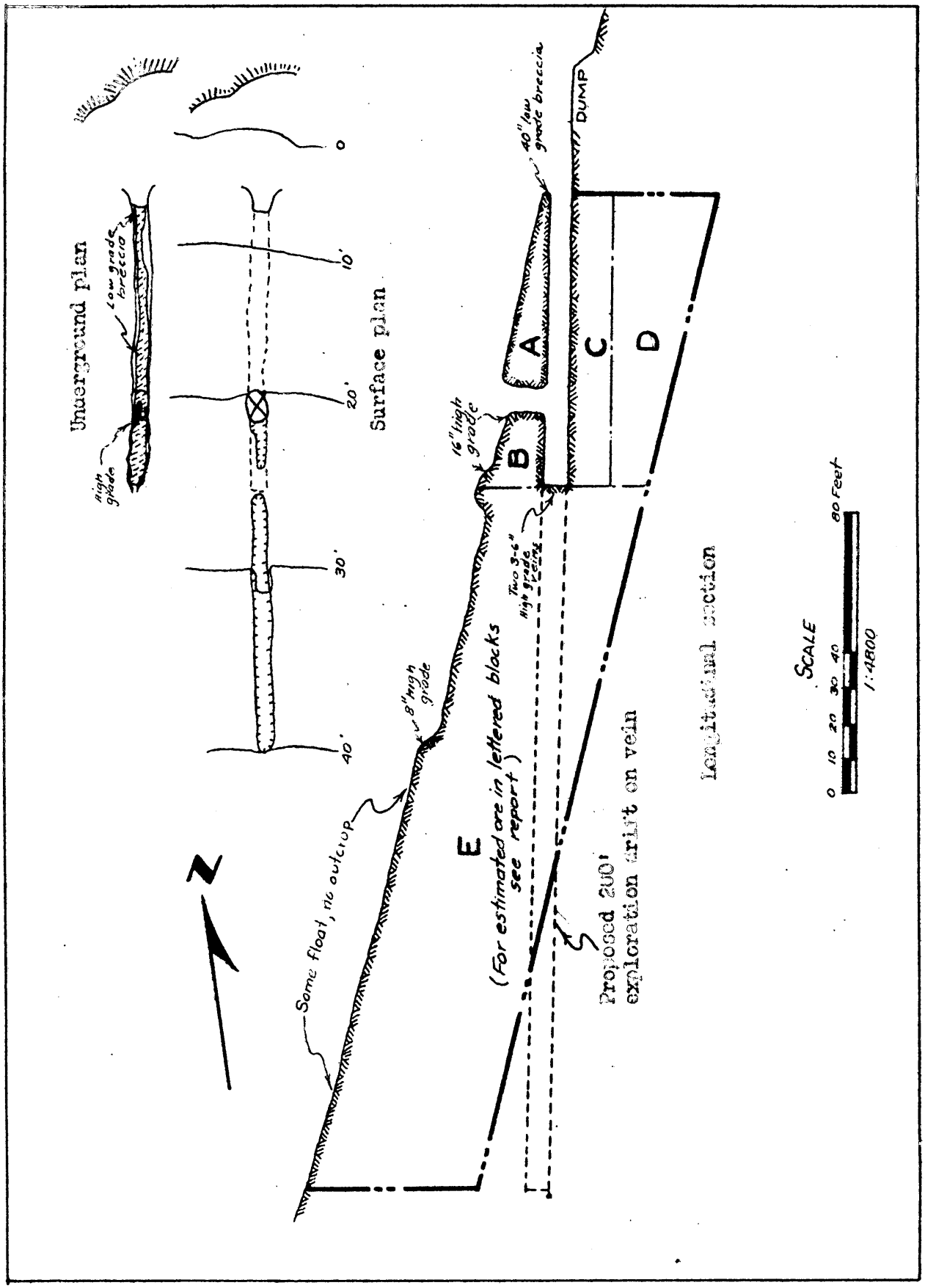

FIG.2-PLAN & SECTION RAMSDELL MANGANESE MINE

DMA 2009

for approximately 150 feet on the surface. The vein is explored by an 85-foot adit and by approximately 90 feet of surface trenching. There is a short 15-foot raise to the surface 60 feet from the mouth of the adit. Only a very small amount of backs is developed (fig. 2).

The vein as exposed in the trenches and adit occurs in a brecciated zone which varies in width from 6 inches up to 40 inches or more and averages perhaps 2 - 2½ feet in width. Manganese minerals of the "psilomelane" type, here termed loosely "wad," occur as reticulating veinlets filling the interstices of the breccia, forming a low-grade material. Within this low-grade material relatively high-grade wad occurs as lenses and pods connected by thin stringers. The individual masses show concentric layered columnar or stalactitic structure with the axes of individual columns being normal to the layers. These masses reach a maximum observable width of 16 inches and the longest mass seen is approximately 10 feet long. This mass occurs in the 85 foot adit (fig. 2) and was the only one which was observed. Two narrow stringers (3 - 6 inches wide) parallel the sides of the drift and extend from this pod to the face of the drift (fig. 2). On the surface a high-grade stringer of 8 - 9 inches width is present at the south end of the cut. At the north end of the surface cut at the raise a 16 inch-wide mass of high-grade wad is exposed. The bottom of the cut is covered with caved material and could not be observed.

The manganese oxides are undoubtedly secondary in origin. Veins of this type commonly become low grade at shallow depth. Other manganese deposits in Gila County[1] become poor in grade at 45 feet. Elsewhere

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1/ Wilson, E. D., Manganese Ore Deposit in Ariz., Univ. of Ariz. Bull. 127, p. 60, 1930.

depths of 40 - 50 feet have been reached and 50 feet is a reasonable figure on which to base estimation of the potential of the deposit.

ORE RESERVES

Mr. Parker supplied several assays from which the grade of the ore can be judged. These are given below:

Sample		Percent Manganese
1	Represents high grade from open cut	50
2	Represents high grade from adit	37.63
3	From ore dump (fines), representing adit	46.8
4	From ore dump (coarse), " "	36.4

The applicant submitted the following analysis of his ore. The analysis is from material mined from the last 23 feet of the drift.

Fe	1.4
SiO_2	2.4
Al_2O_3	.2
Phos.	.033
Mn	49.77
Sul.	Nil
BaO	3.4

The writer took two samples as follows:

Sample		Percent Manganese
1	Represents grab sample of coarse and fines from dump. Dump represents material extracted from adit.	41.4
2	Represents grab sample of average breccia material	25.83

Analysis of sample one, above, for copper, lead, and zinc showed only minor amounts of these metals to be present. The figures were well below stockpile specifications.

Sorted high grade material would meet Government stockpile requirements as to grade and analysis. There are no significant

amounts of deleterious elements and the ore would be penalty free.

The vein on the Ramsdell manganese prospect is developed underground by 85 feet of drifting, and a short raise to the surface. At the surface there is approximately 90 feet of trenching along the vein to an average depth of 3 to 4 feet. The applicant reports that during World War II previous lessors shipped 17 long tons of 40-50 percent manganese ore. In addition there is approximately 10 tons of 40-45 percent of sorted manganese ore in a dump at the property. Thus there can be accredited to the mine from development to date a total production of 27 long tons of 40-45 percent manganese ore. Assuming a vein width of 2.5 feet, which is average for the breccia ore and which would be a minimum practical mining width, this would give an approximate ratio of 1 long ton of 40-45 percent manganese recovered to every 8 long tons of low grade (15-25 percent) manganese breccia material mined.

Assuming the vein persists to a depth of 50 feet and has a width of 2.5 feet, and allowing for what little has been produced, it is estimated that the Ramsdell manganese prospect may have a total of 3,340 tons of indicated and inferred reserves of dominantly low grade material broken down as follows (see fig. 2):

	Reserves* Indicated	Long Tons	Inferred
Area A	100	(20-25 percent Mn)	
Area B	80	(20 long tons 40-45%)	
Area C	210	(perhaps 26 long tons high grade)	
Area D			450
Area E	—		2,500
Total	390		2,950

*Figures include high and low grade together.

Using the ratio of 1 long ton of high grade 40-45 percent manganese ore to 8 long tons of low grade 15-25 percent manganese breccia material it is estimated that there might be about 420 long tons of high grade ore that could be sorted from 3,360 long tons of combined high and low grade material.

The applicant does not plan or have any equipment to treat the low grade material; his present plans call only for sorting and shipping the high grade ore from the lenses or pockets which occur interspersed within the vein.

PROPOSED PROGRAM

The applicant proposes to extend the existing drift an additional 200 feet to explore the extent and grade of the ore (fig. 2). Before commencing the project a preliminary access road approximately 5 miles in length would have to be built. This road would extend largely along ridge lines and would have easy grades. For approximately 4 miles the road would traverse talus covered slopes, and decomposed igneous rocks. The last mile might involve a small amount of blasting in bedrock. The applicant estimates the cost of the proposed drifting at $4,000. No informed estimate of the road cost is available but the author estimates that $4,000 - $5,000 would be a conservative guess. Thus the total cost of the project as proposed would be $8,000 to $9,000 of which the Government's share would be 75 percent.

REGIONAL DIRECTOR

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

Mining Division
Date Rec'd.
MAR 25 1952
BUREAU OF MINES
Denver, Colorado

W.H.K.

March 26, 1952

Memorandum

To: Frank E. Johnson
Chairman, Operating Committee

From: Regional Director, Region IV

Subject: Docket DMA-2009X - P. D. Parker

Referring to your letter dated January 31, regarding docket DMA-2009X, manganese, P. D. Parker, Ramsdell mine, Gila County, Arizona: We have re-examined the report as submitted by the field examiners, and we are in accord with the examining team in that the application should be denied.

The denial is based on the improbability of securing a significant tonnage of manganese ore. You will note that the report states "that this type of deposit is generally very shallow, extending only from 40 to 60 feet. This depth would not give a significant tonnage in our opinion".

It is noted in the third paragraph of your letter that you state "primary emphasis should not be placed on the economic aspects of the proposal; but rather the unlikelihood of making a discovery or development of ore of significant importance should be stressed".

We have advised our field examiners that an application should not be turned down entirely on the economic aspects of the proposal.

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(1) In the case of uranium, a cut-off .13 U_3O_8 is considered commercial ore. We are approving applications where the average grade of ore is indicated as low as .10, which is 25 percent below profitable operation.

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(3) A deposit in Utah to explore zinc carbonate was denied because there was no method of treatment of the ore that we knew of other than the direct shipment to a zinc smelter.

It seems to this field team that economics in these cases must come into the judgment of the application.

In the fourth paragraph of your letter regarding the purchase program for domestic manganese ore at Deming, New Mexico, we have tested several shipments of ore from the Globe district and in every instance, shipments have been stopped because of the percentage of lead-zinc in the manganese, which exceeds the specifications and the stockpile would not accept it.

We would like for the Operating Committee to give us the policy determination regarding submarginal deposits, such as we have indicated above.

J. H. East, Jr.

JHE:ftm

Copy to: AH Koschmann
WH King

DMA File

224 New Customhouse
Denver 2, Colorado

September 28, 1951

Mr. P. D. Parker
P. O. Box 1276
Globe, Arizona

Dear Mr. Parker:

Your letter of September 24, 1951 to Mr. East has come to my attention for reply. The additional information required probably will have to be obtained by an examination of your deposit.

The application will be sent to the DMA Field Team at Tucson for their consideration when it is received from Washington. They will advise you when they are prepared to make the investigation.

Very truly yours,

Paul T. Allsman for
J. H. East, Jr.
Executive Officer
DMA Field Team, Region IV

PTA:oj
cc: DMA Subject and Chron.
AHKoschmann
WRStorms

D. M. A.-2009

Globe Arizona
9/24/51

Mr. J. H. East
Defense Mineral Adm.
224 New Customhouse
Denver 2, Colorado

REGIONAL DIRECTOR'S
OFFICE
REGION IV
SEP 27 1951
BUREAU OF MINES
DENVER, COLORADO

Dear Sir:

Received a letter from D.M.A. Washington D.C. in regard to my application for exploratory loan in which they advised me that it had been referred back to your office and advised me to get in touch with you as you would want further information.

Be advised that I will gladly furnish you any further information that you may want.

Very Truly Yours
P. D. Parker

P. O. Box 1276
Globe, Arizona

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

200 New Customhouse
Denver 2, Colorado

Extra Copies

November 26, 1951

Memorandum

To: DMA Field Team, Region IV

From: A. H. Koschmann

Subject: DMA Docket 2009 (Access Road and Exploration Loan Applications, P. D. Parker, Applicant), Mansdell Manganese Mine, McMillan Mining District, Gila County, Arizona

Enclosed are the original and 7 copies of the geologic report by C. S. Bromfield of the U. S. Geological Survey covering the above docket. A separate report by the U. S. Bureau of Mines will not be prepared.

It has been recommended that the loans be denied.

The brochures (2) are enclosed.

December 7, 1951 -- Original report and 6 copies to Washington

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

November 23, 1951

Memorandum

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

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

Subject: Final Report, DMA 2009 (Access Road and Exploration Loan Applications, F. D. Parker, Applicant), Pandell Manganese Mine, McMillan Mining District, Gila County, Arizona

Enclosed are the original and 7 copies of the above report by C. S. Bromfield of the Geological Survey. A separate report by the Bureau of Mines will not be prepared.

This report and the recommendation that an access road and exploration loan be denied because of adverse economics and geologic probability have my approval.

The brochures are enclosed.

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

Enclosures 10

PANDELL MANGANESE MINE
MCMILLAN MINING DISTRICT
GILA COUNTY, ARIZONA
DNA 2009
(ACCESS ROAD AND EXPLORATION MAP)

Geology

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

FAMSDELL MANGANESE MINE
MCMILLAN MINING DISTRICT
GILA COUNTY, ARIZONA
DMA 2009
(ACCESS ROAD AND EXPLORATION LOAN)

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ILLUSTRATIONS

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SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The manganese deposit of the Ramsdell Manganese Mine occurs in relatively narrow steeply dipping breccia veins. The ore is of secondary origin and is of the type which becomes impoverished at depths of 40-60 feet. High grade (40-45 percent Mn) masses and pods occur interspersed within a vein composed largely of low grade (15-25 percent Mn) breccia material. Based on past production the ratio of high grade material to low grade material is approximately 1:8.

There are several factors which mitigate against the successful operation of the Ramsdell manganese prospect. The geological potential of the vein is on the order of 3300 tons, but only some 400 tons of this amount would be of commercial grade (40-45% Mn); the remainder is low grade and probably uneconomic. To recover this 400 tons the entire amount would have to be mined. It is not intended here to go into the details of the economics involved, but this factor condemns the enterprise even if it were thought worthwhile to obtain the limited reserves of manganese available. In this type of small operation, in narrow veins, the estimated production would not be more than one ton per man shift. The cost of mining and sorting the ore would be at least $20 per ton. At a ratio of 8 long tons of low grade material to one long ton of "high" grade ore the cost of producing one tone of ore would be 8 x $20 or $160. This excludes haulage and freight to Deming, New Mexico, on ore which is worth only $76 per long ton at Deming. The economic difficulties are obvious.

It is concluded that the high cost necessary to recover the small reserves of manganese interspersed within the vein would prohibit

the Ramsdell manganese prospect from operating at a profit; therefore a loss could not be ascertained. It is recommended that the exploration and access road be denied.

INTRODUCTION

On August 6, 1951, P. D. Parker of Globe, Arizona made an application for an access road of approximately 5 miles in length to the Ramsdell manganese prospect, Gila County, Arizona. On August 17, 1951, he made application for an exploration project pursuant to Mineral Order #5, under the Defense Production Act of 1950. The estimated cost of the exploration project, exclusive of the access road, was $4,000, of which the Government's share would be 75 percent. The applications were reviewed in Washington, docketed as DMA 2009 and AR __I__, and forwarded to the Field Team, Region IV, Defense Minerals Administration for a field examination.

P. D. Parker was contacted by the writer on October 4, and the property was visited on October 5, 1951.

ACKNOWLEDGMENTS

The examining geologist wishes to thank P. D. Parker, applicant, and F. T. Ramsdell, lessor of subject property, for assistance rendered.

LOCATION

The Ramsdell Manganese Mine is on the south bank of the Salt River above Gleason Flat. On the official Creek National Forest Map the mine would be located in the southeastern part of the unsurveyed portion of T. 5 N., R. 16 E. (fig. 1).

The mine is reached by going 20 miles northeast of Globe on Highway 60 to Seven Mile Wash, thence 15 miles by good dirt road to the John Peer's ranch on the north side of Haystack Butte. The road ends at Peer's ranch and the property is accessible only by a foot or horseback trail of 4 to 5 miles (see fig. 1).

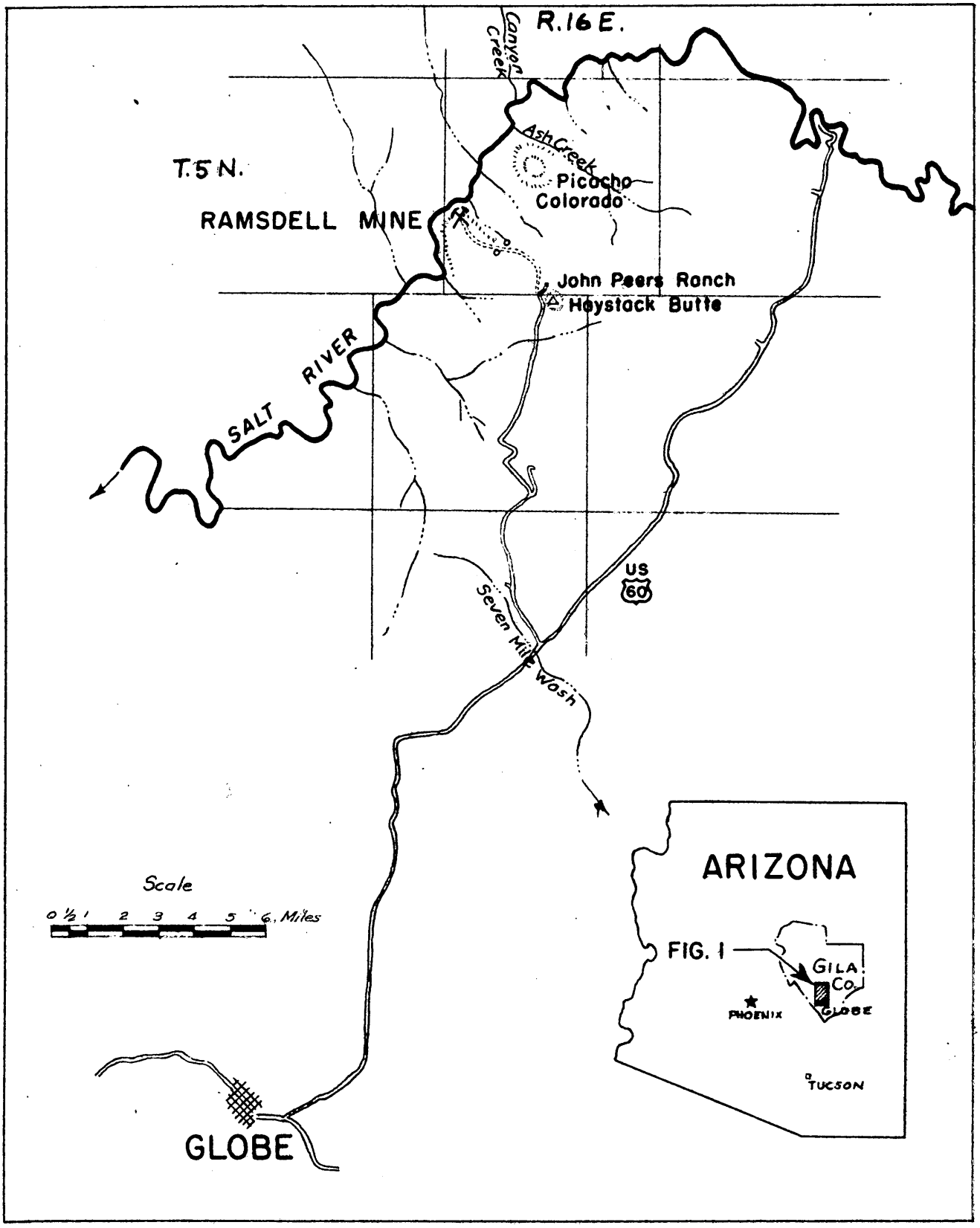

FIG. 1 - LOCATION MAP, RAMSDELL MANGANESE MINE

DMA 2009

The prospect is about a quarter of a mile from the Salt River on a north-trending ridge in an area of moderate topography. The altitude of the mine is approximately 3,100 feet, and that of the river 2,800 feet. In the immediate area there is a maximum relief of about 800 feet. The proposed access road would have an easy grade and could follow the crest of a gentle ridge to the vicinity of the prospect.

HISTORY AND PRODUCTION

The seven claims comprising the Ramsdell manganese prospect were located by F. T. Ramsdell during the early years of World War II. Lessees operated the property for a short time during World War II and are reported to have shipped 17 long tons of approximately 49 percent manganese ore. This is the only shipment that has been made from the property. Perhaps ten tons of sorted ore, averaging approximately 40 to 45 percent manganese are in a dump at the property. During the war the lessees drove a 60-foot drift on the vein. The present applicant extended the drift 23 feet along the vein and put a small 15-foot raise up to the surface (see fig. 2). At the present the property is inactive.

OWNERSHIP AND EXTENT

The applicant, F. D. Parker, has a 10 year lease and purchase option on 7 unpatented contiguous claims which are held by F. T. Ramsdell of Globe, Arizona. The royalty is 10 percent of the gross value of the ore and a minimum monthly royalty payment of $100 is applicable on the purchase price of $5,000. The expiration date of this lease and option is July 15, 1961.

GENERAL GEOLOGY

The ore deposit occurs in steeply dipping fissure veins cutting phaneritic igneous rocks of intermediate to basic composition.

The vein strikes N. 10° E. and dips 80° E. and is exposed

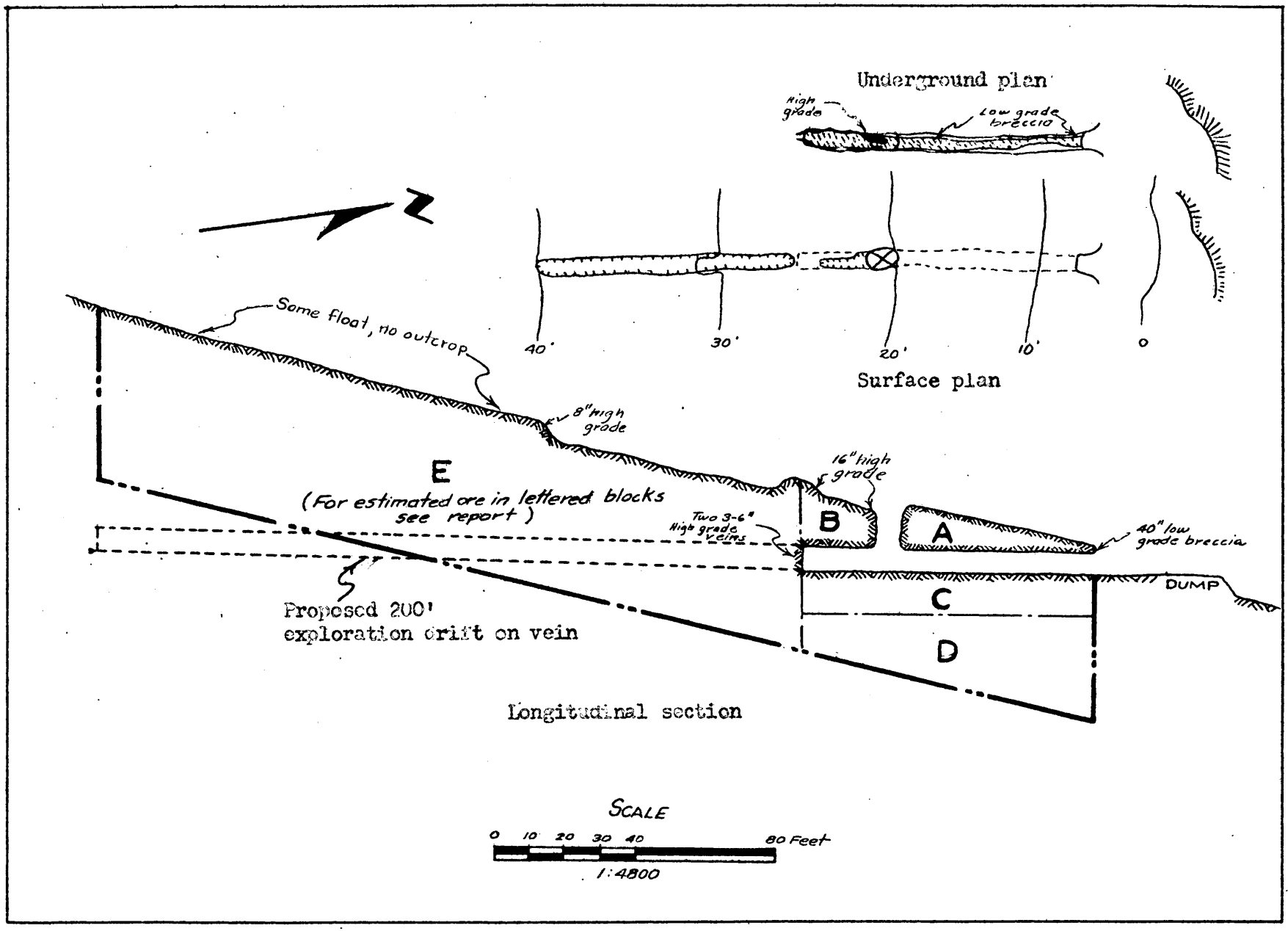

FIG.2-PLAN & SECTION RAMSDELL MANGANESE MINE

DMA 2009

for approximately 150 feet on the surface. The vein is explored by an 85-foot adit and by approximately 90 feet of surface trenching. There is a short 15-foot raise to the surface 60 feet from the mouth of the adit. Only a very small amount of backs is developed (fig. 2).

The vein as exposed in the trenches and adit occurs in a brecciated zone which varies in width from 6 inches up to 48 inches or more and averages perhaps 2 - 2½ feet in width. Manganese minerals of the "psilomelane" type, here termed loosely "wad," occur as reticulating veinlets filling the interstices of the breccia, forming a low-grade material. Within this low-grade material relatively high-grade wad occurs as lenses and pods connected by thin stringers. The individual masses show concentric layered columnar or stalactitic structure with the axes of individual columns being normal to the layers. These masses reach a maximum observable width of 16 inches and the longest mass seen is approximately 10 feet long. This mass occurs in the 85 foot adit (fig. 2) and was the only one which was observed. Two narrow stringers (3 - 6 inches wide) parallel the sides of the drift and extend from this pod to the face of the drift (fig. 2). On the surface a high-grade stringer of 8 - 9 inches width is present at the south end of the cut. At the north end of the surface cut at the raise a 16 inch-wide mass of high-grade wad is exposed. The bottom of the cut is covered with caved material and could not be observed.

The manganese oxides are undoubtedly secondary in origin. Veins of this type commonly become low grade at shallow depth. Other manganese deposits in Gila County[1/] become poor in grade at 45 feet. Elsewhere

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1/ Wilson, E. D., Manganese Ore Deposit in Ariz., Univ. of Ariz. Bull. 127, p. 68, 1930.

depths of 40 - 50 feet have been reached and 50 feet is a reasonable figure on which to base estimation of the potential of the deposit.

ORE RESERVES

Mr. Parker supplied several assays from which the grade of the ore can be judged. These are given below:

Sample		Percent Manganese
1	Represents high grade from open cut	50
2	Represents high grade from adit	37.63
3	From ore dump (fines), representing adit	46.8
4	From ore dump (coarse), " "	36.4

The applicant submitted the following analysis of his ore. The analysis is from material mined from the last 23 feet of the drift.

Fe	1.4
SiO_2	2.4
Al_2O_3	.2
Phos.	.035
Mn	49.77
Sul.	Nil
BaO	3.4

The writer took two samples as follows:

Sample		Percent Manganese
1	Represents grab sample of coarse and fines from dump. Lump represents material extracted from adit.	41.4
2	Represents grab sample of average breccia material	23.83

Analysis of sample one, above, for copper, lead, and zinc showed only minor amounts of these metals to be present. The figures were well below stockpile specifications.

Sorted high grade material would meet Government stockpile requirements as to grade and analysis. There are no significant

amounts of deleterious elements and the ore would be penalty free.

The vein on the Ramsdell manganese prospect is developed underground by 85 feet of drifting, and a short raise to the surface. At the surface there is approximately 90 feet of trenching along the vein to an average depth of 3 to 4 feet. The applicant reports that during World War II previous lessors shipped 17 long tons of 40-50 percent manganese ore. In addition there is approximately 10 tons of 40-45 percent of sorted manganese ore in a dump at the property. Thus there can be accredited to the mine from development to date a total production of 27 long tons of 40-45 percent manganese ore. Assuming a vein width of 2.5 feet, which is average for the breccia ore and which would be a minimum practical mining width, this would give an approximate ratio of 1 long ton of 40-45 percent manganese recovered to every 8 long tons of low grade (15-25 percent) manganese breccia material mined.

Assuming the vein persists to a depth of 50 feet and has a width of 2.5 feet, and allowing for what little has been produced, it is estimated that the Ramsdell manganese prospect may have a total of 3,340 tons of indicated and inferred reserves of dominantly low grade material broken down as follows (see fig. 2):

	Reserves* Indicated	Long Tons	Inferred
Area A	100	(20-25 percent Mn)	
Area B	80	(20 long tons 40-45%)	
Area C	210	(perhaps 26 long tons high grade)	
Area D			450
Area E	—		2,500
Total	390		2,950

*Figures include high and low grade together.

Using the ratio of 1 long ton of high grade 40-45 percent manganese ore to 8 long tons of low grade 15-25 percent manganese breccia material it is estimated that there might be about 420 long tons of high grade ore that could be sorted from 3,340 long tons of combined high and low grade material.

The applicant does not plan or have any equipment to treat the low grade material; his present plans call only for sorting and shipping the high grade ore from the lenses or pockets which occur interspersed within the vein.

PROPOSED PROGRAM

The applicant proposes to extend the existing drift an additional 200 feet to explore the extent and grade of the ore (fig. 2). Before commencing the project a preliminary access road approximately 5 miles in length would have to be built. This road would extend largely along ridge lines and would have easy grades. For approximately 4 miles the road would traverse talus covered slopes, and decomposed igneous rocks. The last mile might involve a small amount of blasting in bedrock. The applicant estimates the cost of the proposed drifting at $4,000. No informed estimate of the road cost is available but the author estimates that $4,000 - $5,000 would be a conservative guess. Thus the total cost of the project as proposed would be $8,000 to $9,000 of which the Government's share would be 75 percent.

224 New Customhouse
Denver 2, Colorado

September 24, 1951

Memorandum

To: W. R. Storms, (with brochure)

(Through Chief, Mining Division, Region IV)

C. A. Anderson

From: DMA Field Team, Region IV

Subject: DMA Docket 2009, P. D. Parker, applicant, Rumsdell Manganese Mine, McMillen Mining District, Gila County, Arizona

Enclosed is one copy of Application for an Exploration Project of the subject docket at an estimated cost of $4,000.00.

The coordinating committee did not review the application due to the lack of information in the Washington office.

The proposed work is not clearly stated, but apparently consists of 200 feet of tunnel.

Unless you have information regarding this mine in the field office, a joint examination should be made by the Bureau of Mines and the Geological Survey.

If the examination shows that the mine has merit, please submit the necessary data for an exploration contract, and return the brochure with your report.

J. H. East, Jr.

A. H. Koschmann

WDM:oj
cc: DMA Subject and Chronoligcal
AHKoschmann

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

200 New Customhouse
Denver 2, Colorado

November 26, 1951

Memorandum

To: DMA Field Team, Region IV

From: A. H. Koschmann

Subject: DMA Docket 2009 (Access Road and Exploration Loan Applications, P. D. Parker, Applicant), Ramsdell Manganese Mine, McMillan Mining District, Gila County, Arizona

Enclosed are the original and 7 copies of the geologic report by C. S. Bromfield of the U. S. Geological Survey covering the above docket. A separate report by the U. S. Bureau of Mines will not be prepared.

It has been recommended that the loans be denied.

The brochures (2) are enclosed.

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

November 23, 1971

Memorandum

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

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

Subject: Final Report, DMA 2009 (Access Road and Exploration Loan Applications, F. D. Parker, Applicant), Parnell Manganese Mine, McMillan Mining District, Gila County, Arizona

Enclosed are the original and 7 copies of the above report by C. S. Brumfield of the Geological Survey. A separate report by the Bureau of Mines will not be prepared.

This report and the recommendation that an access road and exploration loan be denied because of adverse economics and geologic probability have my approval.

The brochures are enclosed.

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

Enclosures 20

RAMSDELL MANGANESE MINE
MCMILLAN MINING DISTRICT
GILA COUNTY, ARIZONA
DMA 2009
(ACCESS ROAD AND EXPLORATION LOAN)

Geology

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

RAMSDELL MANGANESE MINE
MCMILLAN MINING DISTRICT
GILA COUNTY, ARIZONA
DMA 2009
(ACCESS ROAD AND EXPLORATION LOAN)

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ILLUSTRATIONS

Figure		Following Page
1	Location map	3
2	Plan and section of Ramsdell Manganese Mine	4

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

The manganese deposit of the Ramsdell Manganese Mine occurs in relatively narrow steeply dipping breccia veins. The ore is of secondary origin and is of the type which becomes impoverished at depths of 40-60 feet. High grade (40-45 percent Mn) masses and pods occur interspersed within a vein composed largely of low grade (15-25 percent Mn) breccia material. Based on past production the ratio of high grade material to low grade material is approximately 1:8.

There are several factors which mitigate against the successful operation of the Ramsdell manganese prospect. The geological potential of the vein is on the order of 3300 tons, but only some 400 tons of this amount would be of commercial grade (40-45% Mn); the remainder is low grade and probably uneconomic. To recover this 400 tons the entire amount would have to be mined. It is not intended here to go into the details of the economics involved, but this factor condemns the enterprise even if it were thought worthwhile to obtain the limited reserves of manganese available. In this type of small operation, in narrow veins, the estimated production would not be more than one ton per man shift. The cost of mining and sorting the ore would be at least $20 per ton. At a ratio of 8 long tons of low grade material to one long ton of "high" grade ore the cost of producing one tone of ore would be 8 x $20 or $160. This excludes haulage and freight to Deming, New Mexico, on ore which is worth only $76 per long ton at Deming. The economic difficulties are obvious.

It is concluded that the high cost necessary to recover the small reserves of manganese interspersed within the vein would prohibit

the Ramsdell manganese prospect from operating at a profit; therefore a loan could not be amortized. It is recommended that the exploration and access road be denied.

INTRODUCTION

On August 6, 1951, P. D. Parker of Globe, Arizona made an application for an access road of approximately 5 miles in length to the Ramsdell manganese prospect, Gila County, Arizona. On August 17, 1951, he made application for an exploration project pursuant to Mineral Order #5, under the Defense Production Act of 1950. The estimated cost of the exploration project, exclusive of the access road, was $4,000, of which the Government's share would be 75 percent. The applications were reviewed in Washington, docketed as DMA 2009 and AR __?__ , and forwarded to the Field Team, Region IV, Defense Minerals Administration for a field examination.

P. D. Parker was contacted by the writer on October 4, and the property was visited on October 5, 1951.

ACKNOWLEDGMENTS

The examining geologist wishes to thank P. D. Parker, applicant, and F. T. Ramsdell, lessor of subject property, for assistance rendered.

LOCATION

The Ramsdell Manganese Mine is on the south bank of the Salt River above Gleason Flat. On the official Crook National Forest Map the mine would be located in the southwestern part of the unsurveyed portion of T. 5 N., R. 16 E. (fig. 1).

The mine is reached by going 20 miles northeast of Globe on Highway 60 to Seven Mile Wash, thence 15 miles by good dirt road to the John Peer's ranch on the north side of Haystack Butte. The road ends at Peer's ranch and the property is accessible only by a foot or horseback trail of 4 to 5 miles (see fig. 1).

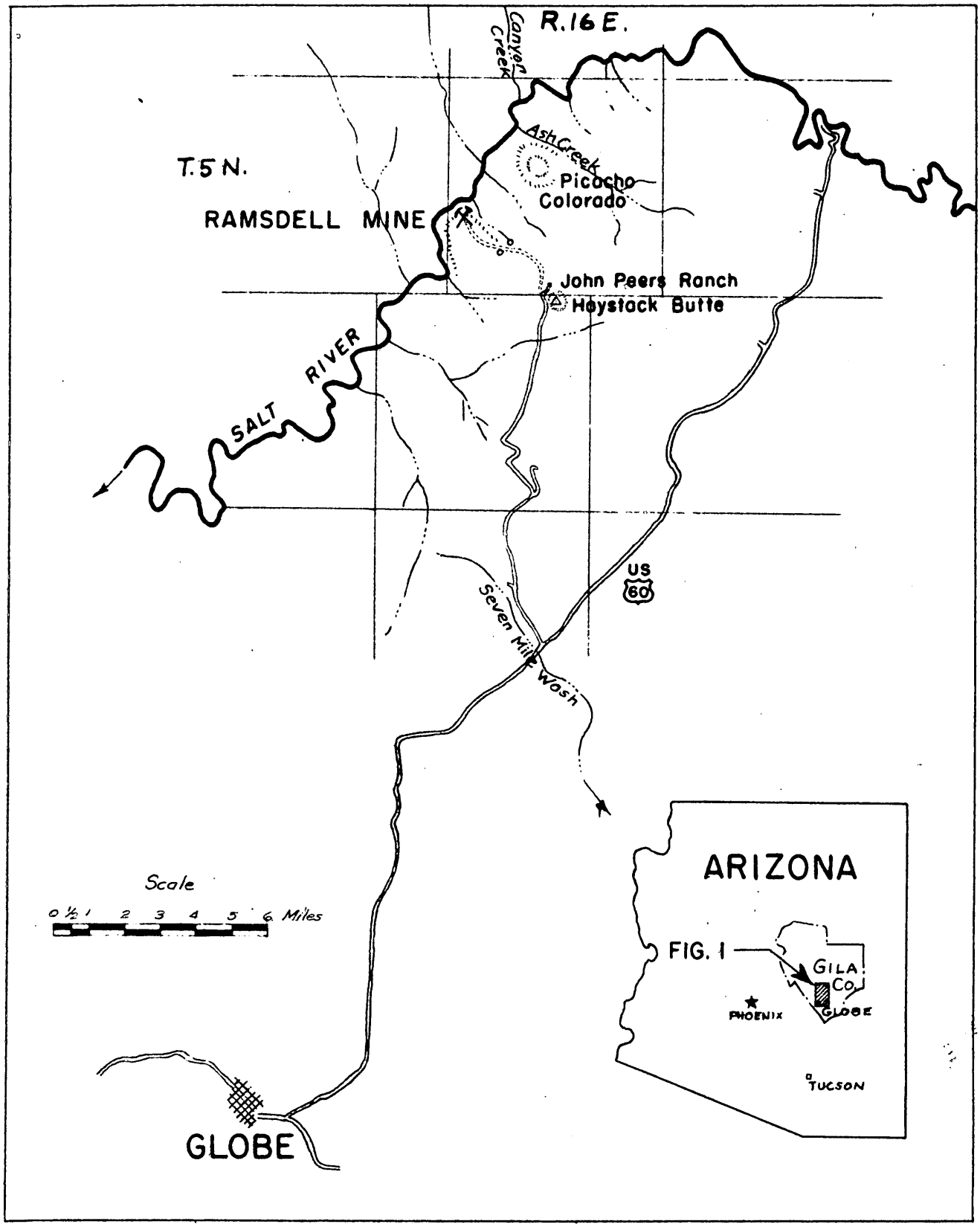

FIG. 1 - LOCATION MAP, RAMSDELL MANGANESE MINE

DMA 2009

The prospect is about a quarter of a mile from the Salt River on a north-trending ridge in an area of moderate topography. The altitude of the mine is approximately 3,100 feet, and that of the river 2,800 feet. In the immediate area there is a maximum relief of about 800 feet. The proposed access road would have an easy grade and could follow the crest of a gentle ridge to the vicinity of the prospect.

HISTORY AND PRODUCTION

The seven claims composing the Ramsdell manganese prospect were located by F. T. Ramsdell during the early years of World War II. Lessees operated the property for a short time during World War II and are reported to have shipped 17 long tons of approximately 49 percent manganese ore. This is the only shipment that has been made from the property. Perhaps ten tons of sorted ore, averaging approximately 40 to 45 percent manganese are in a dump at the property. During the war the lessees drove a 60-foot drift on the vein. The present applicant extended the drift 23 feet along the vein and put a small 15-foot raise up to the surface (see fig. 2). At the present the property is inactive.

OWNERSHIP AND EXTENT

The applicant, F. D. Parker, has a 10 year lease and purchase option on 7 unpatented contiguous claims which are held by F. T. Ramsdell of Globe, Arizona. The royalty is 10 percent of the gross value of the ore and a minimum monthly royalty payment of $100 is applicable on the purchase price of $5,000. The expiration date of this lease and option is July 15, 1961.

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The ore deposit occurs in steeply dipping fissure veins cutting phaneritic igneous rocks of intermediate to basic composition.

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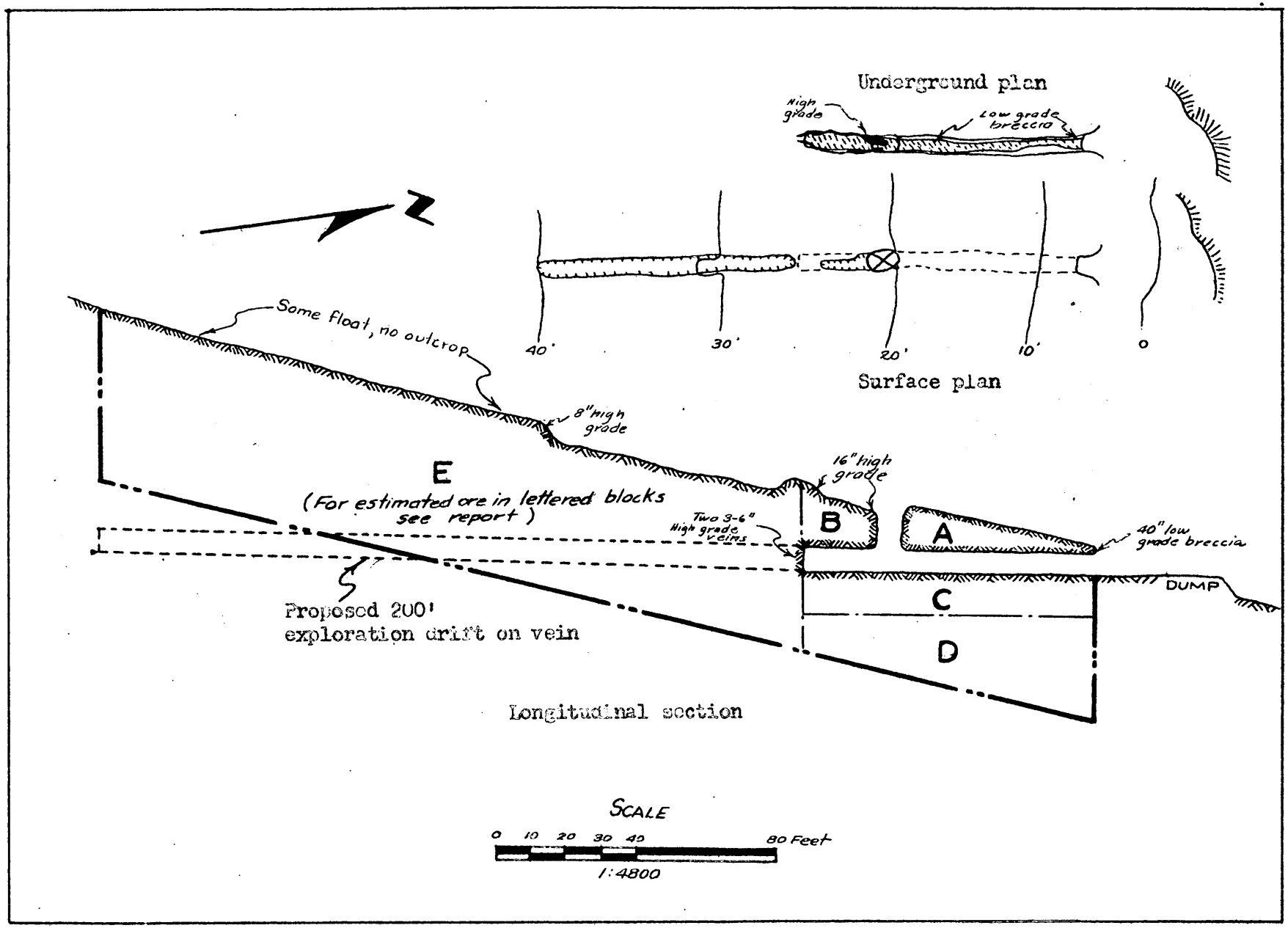

FIG.2-PLAN & SECTION RAMSDELL MANGANESE MINE

DMA 2009

for approximately 150 feet on the surface. The vein is explored by an 85-foot adit and by approximately 90 feet of surface trenching. There is a short 15-foot raise to the surface 60 feet from the mouth of the adit. Only a very small amount of backs is developed (fig. 2).

The vein as exposed in the trenches and adit occurs in a brecciated zone which varies in width from 6 inches up to 40 inches or more and averages perhaps 2 - 2½ feet in width. Manganese minerals of the "psilomelane" type, here termed loosely "wad," occur as reticulating veinlets filling the interstices of the breccia, forming a low-grade material. Within this low-grade material relatively high-grade wad occurs as lenses and pods connected by thin stringers. The individual masses show concentric layered columnar or stalactitic structure with the axes of individual columns being normal to the layers. These masses reach a maximum observable width of 16 inches and the longest mass seen is approximately 10 feet long. This mass occurs in the 85 foot adit (fig. 2) and was the only one which was observed. Two narrow stringers (3 - 6 inches wide) parallel the sides of the drift and extend from this pod to the face of the drift (fig. 2). On the surface a high-grade stringer of 8 - 9 inches width is present at the south end of the cut. At the north end of the surface cut at the raise a 16 inch-wide mass of high-grade wad is exposed. The bottom of the cut is covered with caved material and could not be observed.

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Assuming the vein persists to a depth of 50 feet and has a width of 2.5 feet, and allowing for what little has been produced, it is estimated that the Ramsdell manganese prospect may have a total of 3,340 tons of indicated and inferred reserves of dominantly low grade material broken down as follows (see fig. 2):

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*Figures include high and low grade together.

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The applicant does not plan or have any equipment to treat the low grade material; his present plans call only for sorting and shipping the high grade ore from the lenses or pockets which occur interspersed within the vein.

PROPOSED PROGRAM

The applicant proposes to extend the existing drift an additional 200 feet to explore the extent and grade of the ore (fig. 2). Before commencing the project a preliminary access road approximately 5 miles in length would have to be built. This road would extend largely along ridge lines and would have easy grades. For approximately 4 miles the road would traverse talus covered slopes, and decomposed igneous rocks. The last mile might involve a small amount of blasting in bedrock. The applicant estimates the cost of the proposed drifting at $4,000. No informed estimate of the road cost is available but the author estimates that $4,000 - $5,000 would be a conservative guess. Thus the total cost of the project as proposed would be $8,000 to $9,000 of which the Government's share would be 75 percent.

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

224 New Customhouse
Denver 2, Colorado

December 7, 1951

Memorandum

To: Executive Secretary, Defense Minerals Administration

From: DMA Field Team, Region IV

Subject: DMA Docket 2009 (Access Road and Exploration Loan Applications, F. D. Parker, Applicant), Ramsdell Manganese Mine, McMillan Mining District, Gila County, Arizona

Enclosed herewith is the original of the Geologic Report on the above application for an access road.

We agree with the examining engineer that the above application for an access road be denied.

Paul T. Allsman, Alternate

A. H. Koschmann

Enclosures