DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

CONTROLLED DOCUMENT

DMA Docket No. 542

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Action on this document is recorded and controlled in Reports and Records Branch. Any movement of this document between divisions or offices of DMA or movement outside DMA must be reported to the Reports and Records Branch. Actions taken that affect status of the case must also be reported.

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Loan

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

Routing Slip

To:	Supply Division	Date	9-10-51
To:	Reports and Records	Date	SEP 11 1951
To:	Code 500, Room 4543 Base Metals Div.	Date	12/12/51
To:		Date	
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FILE COPY
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SURNAME:

Keating

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

DEC 23 1952

Hon. Edwin C. Johnson
United States Senate
Washington, D. C.

Re: Docket No. DMA-542
Paragon Mines
San Bernardo Mines
Colorado

My dear Senator Johnson:

Answering your recent inquiry relative to the above-cited project, we find that the initial application for exploration project assistance in the amount of $50,000.00 for driving new drifts and rehabilitating old drifts in the San Bernardo mine, was denied on September 12, 1951. The basis of this denial was that the proposed work would not open sufficient additional ore to warrant the required expenditure of Government funds.

On November 3, 1951, the Applicant requested reconsideration of the application on a modified basis which would require funds amounting to $15,000.00. This request was denied on February 14, 1952, by a letter to the Applicant in which it was explained that the proposed work was essentially preparatory to extraction of blocked-out ore already existing in the mine and that Mineral Order 5 would not permit work prosecuted primarily for mining or preparation for mining.

On February 18, 1952, this office wrote to you and Senator Eugene D. Millikin in answer to your inquiry regarding the status of this project, and in general stated the situation as we have outlined to you above.

Since our letter of nial to Mr. Otto Beselack, Manager of Paragon Mines, there has been no further word regarding the project and we have considered the matter closed.

Sincerely yours,

C. O. Mittendorf (fw) F.H. 12-23-52

Administrator

AGKeating/bjl/hmj
12-22-52
CC to: Adm. Reading File
Operating Committee
Mr. Keating(2)
Docket
Mr. Kinkle
Mr. Bishop

FILE COPY
SURNAME:

Moulds

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

Hon. Ed C. Johnson, . . .
Hon. Eugene D. Millikin, . . .
United States Senate
Washington 25, D. C.

FEB 18 1952

Re: Docket No. DMA 542
Paragon Mines

My dear Senators Johnson and Millikin:

Reply to your letter of December 21, 1951, concerning the application of the Paragon Mines, Inc. for exploration assistance has been delayed pending review and decision relative to the applicant's request for reconsideration on a modified project.

The initial application for exploration project assistance in the amount of $50,000 for driving new drifts and rehabilitating old drifts in the San Bernardo Mine was denied on September 12, 1951, The reason for denial being that the proposed development work would open up 60,000 - 65,000 tons of ore which could not be profitably mined and milled.

On November 3, 1951 the applicant requested reconsideration on a modified project amounting to $15,000 and stated: "This amount should get us into the ore and to the point of production and prove that we have pay ore".

The work proposed for this project consists of driving a drift parallel to and approximately 10 feet distant from the caved #5 level adit until the adit is found, by crosscutting, to be sufficiently open to rehabilitate. The available information at hand indicates that the proposed work consists entirely of rehabilitation of an existing haulage drift either by cleaning up the old drift or driving around caved areas with the objective of drawing previously broken ore in stopes and stoping blocks of unmined ore. This ore has been sampled and blocked out as indicated on a stope map and the proposed work of drifting and rehabilitation does not appear to investigate either new ground or new ore possibilities in the mine.

The modified application of the Paragon Mining Company does not change the objective of original proposal. The work is indicated to be entirely preparation for mining of ore reserves and as such does

not qualify under Section 7 (a) Mineral Order 5. The modified application is therefore necessarily denied under the working regulations governing the exploration program.

A copy of the letter informing Mr. Otto Beselack of this action is enclosed for your information.

Sincerely yours,

C. O. Mittendorf (fw)

Acting Administrator
Defense Minerals Exploration
Administration

Enclosure

DEMoulds/hmj
2-14-52
cc to: Adm. R. File
Docket File Copy
Mr. Bishop
Mr. McKnight
Mr. Moulds
Region IV

3423

WALTER F. GEORGE, GA., CHAIRMAN
NNALLY, TEX. — EUGENE D. MILLIKIN, C
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ELIZABETH B. SPRINGER, CHIEF CLERK

United States Senate

COMMITTEE ON FINANCE

DEPARTMENT OF THE INTERIOR
RECEIVED
DEC 17 1951
Defense Minerals Administration,
Production Expansion Division,

December 21, 1951

Mr. C. O. Mittendorf
Acting Administrator
Defense Minerals Exploration Administration
Room 4640, Department of the Interior Bldg.
Washington, D. C.

Dear Mr. Mittendorf:

Dr. R. V. Adler of the Paragon Mines, Inc. has written in regard to Application Number DMA 542.

We will appreciate your kind consideration of this application and of being advised of your decision in the matter.

Very truly yours,

Ed C. Johnson, U.S.S.

Eugene D. Millikin, U.S.S.

DEPARTMENT OF
Defense Minerals
RECEI
DEC 26 1951

FILE COPY
SURNAME:

100

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

DMA-542 | DMA-1909; DMA-2287

Memorandum February 18, 1952

To: Mr. Howard Young
Deputy Administrator
Defense Materials Procurement Agency

From: C. O. Mittendorf
Acting Administrator
Defense Minerals Exploration Administration

During the past few days we have found it necessary to deny three applications for exploration assistance. In each case the decision was based on the opinion that the work proposed was essentially for preparation to mine known ore reserves. Copies of our letters to the applicants are attached hereto for your information.

You will note that in only one of the three cases did we suggest that the applicant contact your agency. In that case we felt that the project had merit and that you might be willing to consider it should the applicant make an application for a production loan or a procurement contract.

In the other two cases the work proposed was not only preparation for mining reported orebodies, but the properties themselves were essentially gold and silver mines with very minor amounts of base metals. I did not consider that any useful purpose would be served by suggesting that the applicants contact your agency.

It will be my purpose to keep you fully informed of our denials in this manner.

cc 2/19

C. O. Mittendorf

Attachments

COMittendorf/fw
cc: Operating Committee
Mr. Hedges
Mr. Thayer
Mr. F.E.Johnson
Admr. Reading File
Docket file

BE

FILE COPY
SURNAME:
100

Mittendorf

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

Memorandum

February 14, 1952

To: Operating Committee

From: C. O. Mittendorf
Acting Administrator

Subject: St. Regis Mining Co. - DMA-1909
Galtie Boy Mines, Inc. - DMEA-2287
Paragon Mines, Inc. - DMA-542

In accordance with previous arrangements, I discussed these three cases with Assistant Secretary Rose on Tuesday afternoon. Mr. Rose concurred in the recommendations of the Committee.

It had been my impression, as well as that of Mr. Rose, that these three cases were denied by DMPA and formally transmitted to DMEA for consideration as an exploration project. Our assumptions were erroneous, for the dockets contained no evidence that the cases were formally transmitted to us by Larson, but, on the contrary, were ordinary requests for reconsideration of previous denials. In the circumstances, Mr. Rose felt it would be unnecessary to discuss the cases in the presence of Howard Young. It was his opinion that we should not transmit the dockets to DMPA and inform the applicant accordingly, but that we should mention to the applicant that his case might be a suitable subject for a production loan and that, if he so desired, he could make application to DMPA. It was agreed that copies of our letters of denial in these cases should be furnished to DMPA.

Since your previous minutes state that these cases are being held in abeyance pending the outcome of the stated meeting, and that therefore the final action is suspended, it would probably be in order to make some notation in the next minutes to the effect that formal denials have been made.

C. O. Mittendorf

COMittendorf/fw
cc: Mr. Hedges
Mr. Thayer
Admr. Reading File
Mr. F. E. Johnson
Docket file
Mr. Howard Young, DMPA

C O P Y

February 14, 1952

Mr. Otto Beselack, Manager
Paragon Mines, Inc.
Ophir, Colorado

Re: Docket No. DMA-542
San Bernardo Mine

Dear Mr. Beselack:

We have carefully considered your modified application for exploration assistance in driving a drift around the caved section of the #5 level tunnel and rehabilitating additional sections of the tunnel.

In our opinion the proposed work is essentially preparatory to extraction of the blocked out and partially broken ore existing in stopes above this level and that data derived from the proposed work will not materially add to the information presently available.

Mineral Order-5 states that the Government shall not participate in work prosecuted primarily for mining or preparation for mining and shall not go beyond discovery and reasonable delineation. Under these regulations, therefore, we are unable to approve your application for exploration project assistance.

Sincerely yours,

/s/

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

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

February 4, 1952

Memorandum

To: Acting Administrator
Defense Minerals Exploration
Administration

From: Base Metals Division

Subject: Denial of revised application for exploration project assistance
Paragon Mining Company, Ophir, Colorado, Docket DMA-542X

The initial application for exploration project assistance in the amount of $50,000 for driving new drifts and rehabilitating old drifts in the San Bernardo Mine was denied on September 12, 1951. The reason for denial being that the proposed development work would open up 60,000 - 65,000 tons of ore which could not be profitably mined and milled.

On November 3, 1951 the applicant requested reconsideration on a modified amount of $15,000 and stated: "This amount should get us into the ore and to the point of production and prove that we have pay ore".

The work proposed for this project consists of driving a drift parallel to and 10 feet distant from the caved #5 level adit until the adit is found, by crosscutting, to be sufficiently open to rehabilitate. The purpose of this work appears to be entirely for drawing of broken ore and stoping of ore blocks above the #5 level.

In reviewing the field team report and previous reviews of the project, it appears that major consideration has been given to the commercial aspects of the project. This approach to the problem is correct and necessary in order to determine whether the preparatory expense is warranted, and especially in consideration of a direct loan. The evaluation of the project, however, as exploration under MO-5 has not been given a great deal of attention and does not appear to have entered into the basis for denial.

The available information at hand indicates that the proposed work consists entirely of rehabilitation of an existing haulage drift either by cleaning up the old drift or driving around caved areas with the objective of drawing previously broken ore in stopes and stoping blocks of unmined ore. This ore has been sampled and blocked out as indicated on a stope map and the proposed work of drifting and rehabilitation does not appear to investigate either new ground or new ore possibilities in the mine. There are exploration possibilities in depth below the #5 level and perhaps ahead of the presently developed area. The applicant, however, is interested in continuing the rehabilitation work now in progress and initiate production as soon as possible.

The project does, however, present a possible means of development and production of a worthwhile tonnage of lead and copper in the near future with mining and concentrating facilities available. The commercial aspects appear questionable but efficient production and the present price schedule could revise this marginal ore to commercial ore. Before consideration can be given to participation by the Government in projects prosecuted primarily as preparation for mining, such as the project appears to be, it is believed definite criteria must be established.

The modified application of the Paragon Mining Company does not change the objective of original proposal. The work is indicated to be entirely preparation for mining of ore reserves and as such does not qualify under Section 7(a) Mineral Order-5. The modified application is therefore recommended for denial.

D. E. Moulds

D. E. Moulds

500
FILE COPY
SURNAME:

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

February 4, 1952

Memorandum

To: Acting Administrator
Defense Minerals Exploration
Administration

From: Base Metals Division

Subject: Denial of revised application for exploration project assistance
Paragon Mining Company, Ophir, Colorado, Docket DMA-542X

The initial application for exploration project assistance in the amount of $50,000 for driving new drifts and rehabilitating old drifts in the San Bernardo Mine was denied on September 12, 1951. The reason for denial being that the proposed development work would open up 60,000 - 65,000 tons of ore which could not be profitably mined and milled.

On November 3, 1951 the applicant requested reconsideration on a modified amount of $15,000 and stated: "This amount should get us into the ore and to the point of production and prove that we have pay ore".

The work proposed for this project consists of driving a drift parallel to and 10 feet distant from the caved #5 level adit until the adit is found, by crosscutting, to be sufficiently open to rehabilitate. The purpose of this work appears to be entirely for drawing of broken ore and stoping of ore blocks above the #5 level.

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The modified application of the Paragon Mining Company does not change the objective of original proposal. The work is indicated to be entirely preparation for mining of ore reserves and as such does not qualify under Section 7(a) Mineral Order-5. The modified application is therefore recommended for denial.

D. E. Moulds meh

D. E. Moulds

DEMoulds/meh/hmj
cc to: Adm. R. File
Docket File Copy
Mr. Moulds
Mr. Alt

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

January 28, 1952

Memorandum

Re: DMA-542
San Bernardo Mine
San Miguel County, Colorado
Loan, $15,000
Lead, zinc

To: Mr. D. E. Moulds

From: Mr. E. L. Newcomb

Subject: Geological Recommendation

The applicant originally requested a $50,000 exploration loan for the purpose of re-opening old workings and proving an estimated 100,000 tons of lead-zinc-copper ore previously indicated above and below No. 5 level. In order to obtain this objective 200-875 feet of drifting may be needed parallel to the old, inaccessible drift starting at a point 2200 feet from No. 5 level portal. At 100 foot intervals, 10 foot crosscuts are to be driven to the caved drift to determine whether a part of the drift is open. There is a good chance the drift may be open between 2700 feet from the portal and the end of the drift at about 3100 feet.

A field examination of the property has been made. The field team reported that with costs and metal prices as of last August, ore of the average grade of past production could be produced only at a loss. The field team, therefore, recommended that the application be denied and the applicant was so notified. He has requested, however, that his application be reconsidered for a loan of $15,000 in view of his claim that the ore near and at the back end of the No. 5 level can be profitably mined at present prices.

As the workings in ore are inaccessible, no samples were taken by the field team. Their estimates of ore reserves and grade were calculated from data provided by the operator and the Bureau of Mines. The examining engineer estimates the indicated ore reserves are 59,000 tons with a recoverable grade of 0.017 oz. gold, 6.83 oz. silver, 0.137 per cent copper and 1.59 per cent lead. The grade of these reserves is based on average of ore produced between 1902-1942. On Fig. 2, engineer's report, the reserves are represented as Blocks 1, 2, and 3, all of the above quoted grade. Block 1 is broken ore in stope above No. 5 level, Block 2 is ore above and at end of No. 5 level, and Block 3 is ore below No. 5 level from 1300 feet from portal to 100 feet beyond end of No. 5 level.

The geologist's report classes the reserves somewhat differently, allowing only 29,100 tons of indicated ore, but with an estimate for inferred ore which brings the total to 65,000 tons. For

consideration of an exploration program, the distinction between indicated and inferred ore is immaterial.

Results of sampling as given by the mine manager for these reserves average 0.03 oz. gold, 20.19 oz. silver, 0.55 per cent copper, and 2.49 per cent lead per ton. The average recoverable grade of the mine production since 1902 as calculated from Bureau of Mines' records is as quoted in a preceding paragraph. This grade, however, is a composite figure, based upon averaging 87,820 tons of milled ore (from which the recovery was .016 oz. gold, 6.34 oz. silver, 0.13 per cent copper, and 1.30 per cent lead per ton) with 961 tons of high grade direct shipping ore which undoubtedly was a highly handsorted product. Recoverable zinc is estimated at 1.0 per cent, which is a pure guess as zinc was not assayed in earlier operations.

The proposed work will make only Blocks 1 (broken ore in stope), and 2 available for mining. Further development will be required before ore below the No. 5 level can be mined. As the material in the stope is unknown, both in quantity and grade, Block 2 is the important factor in reconsidering the proposed work. This block has been calculated by me to contain 5,800 tons with 0.02 oz. gold, 12.7 oz. silver, 0.52 per cent copper, and 5.7 per cent lead per ton. The average width of the ore is 1.64 feet. If a mining width of double the average ore width is used the average grade per ton is halved and the total tons doubled. A calculation, using mill concentration ratios, metal prices, costs supplied by the field, and allowing for the recent increase in the price of lead indicates that ore of this grade will yield a net loss (see Appendix 1). This calculation on Block 2 is comparable to the result obtained by the field team for all reserves in Blocks 1, 2 and 3. Even if the net value of the zinc were as much as $2.25 per ton, there still would be a net loss in the operation. Also, in order to recover any zinc, a new unit in the mill would have to be installed.

The modified application is essentially for rehabilitation of the No. 5 level to get the ore above and below this level. Earlier decisions of the Production Expansion Division of DMA were to the effect that straight rehabilitation was not eligible for exploration assistance. If this policy still prevails, reconsideration of this application will be automatically denied. However, since calculations based upon field team data show that none of the reserves can be mined at a profit there is no reason why this application should be further reconsidered and the applicant should be so notified.

E. L. Newcomb

E. L. Newcomb
Geologist

APPENDIX I

Rough Calculation of Ore Value

versus

Production costs for Block 2

(See Field Team Report, pp. 16 and 17. Grade used is that figured by Newcomb for Block 2, over a mining width.)

11 tons ore → 1 ton concentrates

.01 oz. au/ton	= .01 x 90%[1] x $31.82 =	$0.29
6.4 oz. Ag/ton	= 6.4 x 90%[1] x 95% x $0.90 =	4.92
2.9% Pb/ton	= $\frac{[(58 \times 11 \times 90\%^{1/}) - 30] \times 90\% \times \$.17^{2/}}{11}$ =	7.57
0.26% Cu/ton	= $\frac{[(5.2 \times 11 \times 90\%^{1/}) - 20]}{11} \times \$.19$ =	0.54

3/ Value per ton, without deducting transportation and smelting charges..... $13.32

Estimated cost to mine, mill, transport and smelt 1 ton ore..... 17.35

1/ This is mill recovery. Previous recovery given as 80%, but as some ore is shipped direct, this higher figure is used.

2/ Figure supplied by field team, when selling price of lead was 2¢ lower, was .15; hence, .17 is a maximum figure.

3/ Above value based upon the lead smelter settlement. Field team has not given the settlement schedule for the zinc smelter, hence, details at the new price for zinc cannot be calculated from information at hand. At the previous price of 17½¢ for zinc, the zinc value per ton was calculated by field team at $2.90, but the smelting charges at a zinc smelter are very high which would reduce the net return very materially below this. Even if the net return at present realized by Tri-State operators, 11 1/4 cents per lb. for contained zinc, is allowed for this operation, the net value of the zinc (1% recoverable) at present price would be only $2.25.

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

January 14, 1952

Memorandum

To: D. E. Moulds

From: Jacob W. Alt

Subject: Request for aid for exploration project. Paragon Mines, Inc., Ophir, Colorado.

On September 12, 1951, the Supply Division of the Defense Minerals Administration denied the application of the Paragon Mines, Inc., DMA-542 for exploration aid of $50,000.00, Government participation $25,000.00, for driving new drifts and rehabilitating old drifts in the San Bernardo Mine, San Miguel County, Colorado.

The reason for this denial was: "A report of an examination of the mine by the Field Team, Region IV, recommends that the loan be denied. Although the proposed development work would open up from 60,000 to 65,000 tons of indicated ore, a cost analysis by the Field Team revealed that a loss of $2.85 per ton would result from the mining and milling of this ore. The grade of the indicated ore was based entirely on past production records of the Bureau of Mines, and statements and records by the applicant, for the mine workings were not accessible for sampling. The average recovered grade of the mine production since 1902, as calculated from the Bureau of Mines' records, is 0.017 oz. gold, and 6.83 oz. silver per ton, 0.13 % copper and 1.59% lead. Recoverable zinc is estimated at 1.0.%"

On November 3, 1951, Mr. Otto Beselack, Manager, wrote to Mr. Tom Lyon, Director Supply Division, requesting that their application DMA 542 be reconsidered and that it be cut down to $15,000.00 and states: "This amount should get us into the ore and to the point of production and prove that we have pay ore"

The Lead-Zinc Branch has reviewed the original application and the Field Team Report. We have concluded from the Field Team Report that the application should have been for a total cost of not to exceed $25,000.00. On page 13 of the report it is stated:

"The overall cost for drifting is established at $35.00 a foot.

The cost of the project is estimated in two proposals as follows:

1.	Drifting, *2200 to 2500 feet with three 10-foot crosscuts (330 feet at $35.00)	$11,550.00
	Rehabilitation of 575 feet of drift (2500 to 3075 feet)	3,450.00
	Total	$15,000.00
2.	Drifting *2200 to 2800 feet with six 10-foot crosscuts (660 feet at $35.00)	$23,100.00
	Rehabilitation of 275 feet of drift (2800 to 3075 feet)	1,900.00
		$25,000.00

* Distance from portal to face of parallel drift.

The engineer's proposal of the Field Team report: "Specifically, the program involves drifting parallel to the old drift from 2200 feet to 2500 feet from the portal of the fifth level with 5 to 10 foot crosscuts to determine if the main drift is open. If the main drift proved to be open within 300 feet of drifting, a shrinkage stope, located between 2400 and 2700 feet from the portal and reportedly filled with broken ore, could be drawn and milled. This assumes that the filled stope would offer protection to the drift timbers and prevent the main level from caving. In this event, the main drift would probably be found open to the end at 3075 feet and with the exception of clean-up work, would be ready for use in mining virgin ore, reportedly existing from 2845 feet to the end of the main level drift and beyond. If the main level drift is found to be caved at 2500 feet, drifting would continue in the shale to a point where it is found open, or to a point beyond the end of the level. It is assumed that the main level drift will be open beyond the end of the stoped area near 2800 feet from the portal, and there is a possibility that it may be open from 2400 feet.

The Field Team report states: "According to Otto Beselack, the mine manager, $60,000.00 has been spent repairing and retimbering the drift to 1900 feet where a turn-off was made and a new drift started in shale parallel to the old caved drift. The new drift has been driven from 1900 to 2200 feet with three 10-foot crosscuts to the main drift at 100-foot intervals. The main drift may be found open at any distance ahead, or it may be blocked for the remaining 875 feet."

In reviewing this application the Base Metals Division have concluded that this is not an exploration project because it does not comply with Section 7 of Mineral Order-5. The indicated purpose of this project is to make this property ready for mining of broken ore in a stope and to mine ore that is in place and should be considered as a development project.

The USGS and the USBM have reviewed this application, their memorandums are contained within this docket.

Jacob W. Alt

Jacob W. Alt

FILE COPY
SURNAME:

J.W.A.

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

January 14, 1952

Memorandum

To: D. E. Moulds

From: Jacob W. Alt

Subject: Request for aid for exploration project. Paragon Mines, Inc., Ophir, Colorado.

8 On September 12, 1951, the Supply Division of the Defense Minerals Administration denied the application of the Paragon Mines Inc., DMA-542 for exploration aid of $50,000.00, Government participation $25,000.00, for driving new drifts and rehabilitating old drifts in the San Bernardo Mine, San Miguel County, Colorado.

The reason for this denial was: "A report of an examination of the mine by the Field Team, Region IV, recommends that the loan be denied. Although the proposed development work would open up from 60,000 to 65000 tons of indicated ore, a cost analysis by the Field Team revealed that a loss of $2.85 per ton would result from the mining and milling of this ore. The grade of the indicated ore was based entirely on past production records of the Bureau of Mines, and statements and records by the applicant, for the mine workings were not accessible for sampling. The average recovered grade of the mine production since 1902, as calculated from the Bureau of Mines' records, is 0.017 oz gold, and 6.83 oz. silver per ton, 0.13 % copper and 1.59% lead. Recoverable zinc is estimated at 1.0."

On November 3, 1951, Mr. Otto Beselack, Manager, wrote to Mr. Tom Lyon, Director Supply Division, requesting that their application DMA-542 be reconsidered and that it be cut down to $15,000.00 and states: "This amount should get us into the ore and to the point of production and prove that we have pay ore."

The Lead-Zinc Branch has reviewed the original application and the Field Team Report. We have concluded from the Field Team Report that the application should have been for a total cost of not to exceed $25,000.00. On page 13 of the report it is stated:

"The overall cost for drifting is established at $35.00 a foot.

FILE COPY
SUPPLIES

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

January 24, 1952

Memorandum

To: E. H. Heslop

From: Jacob V. Alt

Subject: Request for aid for exploration project. Ferguson Mines, Inc., Ophir, Colorado.

On September 12, 1951, the Supply Division of the Defense Minerals Administration denied the application of the Ferguson Mines Inc., DMA-342 for exploration aid of $50,000.00, Government participation $25,000.00, for driving new drifts and rehabilitating old drifts in the San Juan Mine, San Miguel County, Colorado.

The reason for this denial was: "A report of an examination of the mine by the Field Team, Region IV, recommends that the loan be denied. Although the proposed development work would open up from 30,000 to 35000 tons of indicated ore, a cost analysis by the Field Team revealed that a loss of 2.85 per ton would result from the mining and milling of this ore. The grade of the indicated ore was based entirely on past production records of the Bureau of Mines, and extensions and reserves by the applicant for the mine workings were not accessible for sampling. The average recovered grade of the mine production since 1902 is calculated from the Bureau of Mines' records, to 0.01% or gold, and 2.83 oz. silver per ton, 0.13% copper and 1.59% lead. Recoverable zinc is estimated at 1.0."

On November 3, 1951, Mr. Otto Goelzer, Manager, wrote to Mr. Tom Lyon, Director Supply Division, requesting that their application DMA-342 be reconsidered and that it be cut down to $21,000.00 and stated: "This account should work into the ore and to the point of production and prove that we have pay ore."

The Lead-Zinc Branch has reviewed the original application and the Field Team Report. We have concluded from the Field Team report that the application should have been for a total cost of not to exceed $25,000.00. On page 13 of the report it is stated:

"The overall cost for drifting is established as $35.00 a foot.

The cost of the project is estimated in two proposals as follows:

1.	Drifting, *2200 to 2500 feet with three 10-foot crosscuts (330 feet at $35.00)	$11,550.00
	Rehabilitation of 575 feet of drift (2500 to 3075 feet)	3,450.00
	Total	$15,000.00
2.	Drifting *2200 to 2800 feet with six 10-foot crosscuts (660 feet at $35.00)	$23,100.00
	Rehabilitation of 275 feet of drift (2800 to 3075 feet)	1,900.00
		$25,000.00

* Distance from portal to face of parallel drift.

The engineer's proposal of the Field Team report: "Specifically, the program involves drifting parallel to the old drift from 2200 feet to 2500 feet from the portal of the fifth level with 5 to 10 foot crosscuts to determine if the main drift is open. If the main drift proved to be open within 300 feet of drifting, a shrinkage stope, located between 2400 and 2700 feet from the portal and reportedly filled with broken ore, could be drawn and milled. This assumes that the filled stope would offer protection to the drift timbers and prevent the main level from caving. In this event, the main drift would probably be found open to the end at 3075 feet and with the exception of clean-up work, would be ready for use in mining virgin ore, reportedly existing from 2845 feet to the end of the main level drift and beyond. If the main level drift is found to be caved at 2500 feet, drifting would continue in the shale to a point where it is found open, or to a point beyond the end of the level. It is assumed that the main level drift will be open beyond the end of the stoped area near 2800 feet from the portal, and there is a possibility that it may be open from 2400 feet.

The Field Team report states: "According to Otto Beselack, the mine manager, $60,000.00 has been spent repairing and retimbering the drift to 1900 feet where a turn-off was made and a new drift started in shale parallel to the old caved drift. The new drift has been driven from 1900 to 2200 feet with three 10-foot crosscuts to the main drift at 100-foot intervals. The main drift may be found open at any distance ahead, or it may be blocked for the remaining 875 feet."

In reviewing this application the Base Metals Division have concluded that this is not an exploration project because it does not comply with Section 7 of Mineral Order-5. The indicated purpose of this project is to make this property ready for mining of broken ore in a stope and to mine ore that is in place and should be considered as a development project.

The USGS and the USBM have reviewed this application, their memorandums are contained within this docket.

JWAlt/hmj cc to: Adm. Reading File
1-14-52 Docket
Mr. Alt Mr. Moulds

Jacob W. Alt

January 11, 1952

Memorandum

To: Base Metals, DMEA

From: O. M. Bishop, Lead-Zinc Section, USBM

Subject: Paragon Mines, Inc., Docket DMA No. 542

Applicant first asked $50,000 exploration loan for driving new and rehabilitating old drifts in San Benardo Mine. This was denied on basis of field team observations that although 60,000 tons of ore would probably be made available, such ore would likely analyze too little to pay mining, milling freight and smelting. When told of denial applicant expressed disappointment and asked reconsideration to the extent of $15,000 (50 percent Government participation) with which to extend the parallel section of level 5 from 2,200 to 2,500 ft. in with three 10-foot crosscuts (330 feet @ $35.00= $11,550) plus $3,450 for rehabilitating 575 feet of drift on the same level from 2,500 to 3,075 feet in from the portal.

In analyzing field team report, I am struck by the fact that the section map shows about 235,000 square feet of vein to have been mined, and that about 10,600 feet of drifting plus several thousand feet of raises and intermediate drifts have been run. It seems difficult to believe that all this work, the tramway and the mill were based on persistent losses.

Sampling data presented by the applicant is said to average .03 oz. Au., 20.19 oz. Ag., 0.55 percent Cu., and 2.49 percent Pb. The field team on basis of some 88,000 tons milled or shipped calculates recovered values to have been .017 oz. Au., 6.83 oz. Ag., 0.13 percent Cu., and 1.59 percent Pb per ton. The field team calculates present gross value of a ton of this grade at $11.62. To it they add $2.90 for a potential Zn. credit for a total gross value of $14.50. Costs were estimated to total $17.35 per ton (mining $10.50; milling $4.50; smelting $1.25; and miscellaneous $1.10) thus estimated costs exceeded estimated values by $2.85.

In considering this information, it is difficult to evalue the costs. It is, however, apparent that the vein matter is of higher grade than the material shipped.

The mineralized portion of the vein is said to be 1 to 3 feet in width, however, if 88,780 tons of ore were produced from 235,000 square feet of vein the average thickness extracted must have been 4.5 feet and it was the 4.5 feet that yielded the recoveries reported by the field team. Apparently wall rock dilution either through sloughing in drawing shrinkage stopes, or through breaking it all as ore brought the grade down.

Conclusions:

(1) Applicant has all necessary mining and milling equipment, the mill being on the railroad.
(2) Work proposed at cost of $15,000 is expected to make 5,800 tons of broken ore in stopes on 5th level available for milling.
(3) The work will make it possible to check-sample ore-backs and the face of tunnel where better grade ore is indicated by applicant's samples.
(4) Samples, ore-widths, tonnage mined and values recovered show past mining practice has resulted in much dilution which has added to milling costs, and additional tramming. Cut and fill stoping might well reduce both mining and milling costs per unit of metal recovered. It would eliminate waste by utilizing it as fill, would reduce dilution and hence milling costs and would also reduce the lag between breaking and milling the ore that goes with shrinkage stopes.
(5) Ore is apparently marginal or near marginal. However, it may be that the indications of better ore near the face of the fifth level are true, that better mining costs can be achieved, and that the operation will make accessible reserves of commercial ore.

O W Bishop

DEFENSE MINERALS
ADMINISTRATION
WASHINGTON, D. C.

Nov 8 8 54 AM '51

OFFICIAL FILE COPY

To	Initials	Date

PARAGON MINES, INC.
OPHIR, COLORADO

3rd November, 1951

Mr. Tom Lyon, Director,
Supply Division, Defense Minerals Administration,
Department of the Interior,
Washington D. C.

Re. - ~~DMA 542~~

Dear Mr, Lyon:-

Your letter dated September 12th 1951 received, and to say the least, it was a great disappointment to us.

We do not quite understand how your examining engineers could come to the conclusion that our ore is not high enough and cannot be mined profitably. The engineers could not see the ore in place in the tunnel because of the cave. We spiled through several hundred feet of this cave but are now drifting around the balance of it. However, they did see some of the ore which came out of the caved stopes and which we have piled up at the portal of the tunnel, and it does not take an E. M. to tell that is high grade ore.

I showed the engineers the report on the last 72 narrow guage R. R. cars of concentrates shipped from our mill which averaged 20,6 tons per car and they averaged, gold .63 oz., Silver 228.04 oz., lead 38.076%. Copper 4.91% per tom of concentrates. Zinc, at that time, was not considered nor saved The extraction in milling operations was about 80% of the metal content of the ore. With improvements in metallurgy this should now be 90% at least.

The ore in the breast of the tunnel is 38 inches in width and assays Gold .03 oz., Silver 55.6 ozs., Lead 10.7%. Copper 2.52%. This sampling was made by Mr. Charles N. Bell, E. M. who for years was one of the foremost engineers in the San Juan district of Colorado. the property has produced in past operations, several millions of dollars worthof ore and is now approximately 80% still virgin ground.

You will find enclosed photostatic copy of a letter from Mr. Lewis A. Levensaler, who examined the ore in the stopes where the men were working, to determine the possible tonnage of ore the A. S. & R. Smelter could expect the following year. This was just two months before this property was shut down in 1929, owing to the falling prices for metals and they are still filled with broken ore about 80 feet high. Besides there are 14,000 tons of ore blocked out above these stopes, sampled by Mr. Fred G. Farish, E. M. At present prices this ore will run $35.00 per ton.

We have just purchased new, a Tramaire so as to get away from tramming with a horse and paid $1,775.00 for it, also a used mucking machine for $1, 252,00, These two items are additional mine equipment purchased since your engineers were here.

RECEIVED
NOV 2 0 1951

PARAGON MINES, INC.
OPHIR, COLORADO

No. 2. Re. -DMA ~~343~~

We now respectfully request that you reconsider our DMA 542 application and cut it down to $15,000.00. This amount should get us into the ore and to the point of production, and prove that we have pay ore.

Trusting that you will give this request favorable consideration and that we will hear from you shortly granting our request, we X remain

Sincerely yours,

PARAGON MINES, INC.

Otto Beselack
Manager

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D.C.
NOV 23 11 03 AM '51

THE PARAGON MINES, INC.
Ophir, Colorado

DEFENSE MINERALS
ADMINISTRATION
WASHINGTON, D.C.

NOV 8 8 54 AM '51

3rd November, 1951

Mr. Tom Lyon, Director,
Supply Division, Defense Minerals Administration,
Department of the Interior,
Washington D. C.

Re. - DMA 542

Dear Mr, Lyon:-

Your letter dated September 18th 1951 received, and to say the least, it was a great disappointment to us.

We do not quite understand how your examining engineers could come to the conclusion that our ore is not high enough and cannot be mined profitably. The engineers could not see the ore in place in the tunnel because of the cave. We spiled through several hundred feet of this cave but are now drifting around the balance of it. However, they did see some of the ore which came out of the caved stopes and which we have piled up at the portal of the tunnel, and it does not take an E. M. to tell that is high grade ore.

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COPY

PARAGON MINES, INC.

Ophir, Colorado

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Sincerely yours,

PARAGON MINES, INC.

Otto Resslach

Manager

COPY

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

350

SEP 12 1951

Re: DMA-542
San Bernardo Mine
San Miguel County, Colorado
Exploration loan, $50,000
Lead, zinc

Memorandum

To: Reports and Records Unit
Administrative Management Div.

From: Chief, Lead-Zinc Branch

Subject: Denial of exploration loan

The applicant has requested an exploration loan of $50,000 (Government participation, $25,000), for driving new drifts and rehabilitating old drifts in the San Bernardo Mine, San Miguel County, Colorado.

A report of an examination of the mine by the Field Team, Region IV, recommends that the loan be denied. Although the proposed development work would open up from 60,000 to 65,000 tons of indicated ore, a cost analysis by the field team revealed that a loss of $2.85 per ton would result from the mining and milling of this ore. The grade of the indicated ore was based entirely on past production records of the Bureau of Mines and statements and records by the applicant, for the mine workings were not accessible for sampling. The average recovered grade of the mine production since 1902, as calculated from Bureau of Mines' records, is 0.017 oz. gold, and 6.83 oz. silver per ton, 0.13% copper and 1.59% lead. Recoverable zinc is estimated at 1.0%.

The Lead-Zinc Branch concurs with the field team's recommendation that the loan be denied.

Returned herewith are:

1 Copy loan application
1 Copy field team report
7 correspondence to and from applicant.

T. P. Billings, Chief
Lead-Zinc Branch

Approved:
Tom Lyon
Director, Supply Division

FILE COPY
SURNAME:

350
Campbell (ETM)
McKnight
Bradford
Billings

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

SEP 12 1951

Re: DMA-542
San Bernardo Mine
San Miguel County, Colorado
Exploration loan, $50,000
Lead, zinc

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1 Copy field team report
~~1~~ correspondence to and from applicant.

B 9/12

T. P. Billings, Chief
Lead-Zinc Branch
ABCampbell:emp G 9-7-51

Approved:

Director, Supply Division

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

OFFICE OF
REGIONAL DIRECTOR

REGION IV

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

August 9, 1951

Memorandum

To: Landon Strobel, Executive Secretary
Defense Minerals Administration

From: DMA Field Team, Region IV

Subject: DMA Docket 542, Paragon Mines, San Bernardo Mine, San Miguel, County, Colorado

Enclosed herewith is original and two copies of the report as indicated above.

We concur with the conclusions and recommendations of the examining team.

Paul T Allsman
P. T. Allsman, Alternate

A. H. Koschmann
A. H. Koschmann

Enclosures
One copy by Air Mail
Two copies by Regular Mail

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Defense Minerals Administration
200 New Customhouse
Denver 2, Colorado

August 9, 1951

Memorandum

To: DMA Field Team, Region IV

From: A. H. Koschmann

Subject: DMA Docket 542, Paragon Mines Lead Project, San Miguel County, Colorado

Attached are the original and 7 copies of the geological report by Ward B. Meek covering the San Bernardo mine, San Miguel County, Colorado, DMA docket 542. Most of the mine is inaccessible and no sampling or observations could be made on reported ore shoots. Ore reserves are based chiefly on statements by Otto Beselack, applicant, and grade of ore is based on past production of the mine. The figures indicate that the ore is submarginal, and Mr. Meek points out that there is no evidence to indicate that ore of higher grade would be found in depth or any other part of the mine. Mr. Meek recommends that the application be denied. However, if Paragon Mines, Inc., will open, especially, No. 5 level for further study and sampling, this property might be reconsidered for a loan.

I concur with this recommendation.

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

Enclosures (8)

234 New Customhouse
Denver 2, Colorado

July 23, 1951

Memorandum

To: DMA Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: DMA Docket 5[illegible], Final Report, Paragon Mines, Inc., San Bernardo Mine, San Miguel County, Colorado.

The applicant requested a $50,000 exploration loan for the purpose of opening old workings in the San Bernardo Mine, with the objective of proving 100,000 tons of zinc-lead ore. The workings are inaccessible and no sampling was done, but the examining team estimates the indicated ore above the level at 37,500 tons, with an average mill content of 0.[illegible] ounces gold, 6.34 ounces silver, 1.[illegible] percent lead and 0.137 percent copper, based on returns of past production.

The examining engineer estimates that the proposed work could be done at a cost not exceeding $25,000. Due to the low estimated grade of the ore, operations would be submarginal, and they recommend denial of the application.

We concur with this recommendation, although this is one of those marginal projects which might produce appreciable lead and zinc.

Paul T. Allgeier

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 13 1951

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

Region IV

Building 2-A
Denver Federal Center
Denver 14, Colorado

July 19, 1951

Memorandum

To: Chief, Mining Division, Region IV

From: W. M. Traver, Jr.

Subject: DMA Docket 542, Report on the Paragon Mines, Inc. (San Bernardo Mine)

Please find enclosed the original and seven copies of the "Summary, Conclusions, and Recommendations", by W. B. Meek and Floyd D. Everett, and the same number of copies of Everett's engineering report on the subject docket.

In view of the fact that the indicated value of the ore to be mined is less by about $2.85 a ton than the cost of production, the examining team recommends that the requested exploration loan be denied. I concur with this recommendation.

The original brochure as received from your office is also enclosed.

W. M. Traver, Jr.

W. M. Traver, Jr.

enclosures

Return to DMEA, Rm. 4539

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

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMA-542, Paragon Mines, Inc., San Bernardo Mine

San Miguel County, Colo.

F. D. Everett, Mining Engineer
Bureau of Mines

W. B. Meek, Geologist
U. S. Geological Survey

July 18, 1951

PARAGON MINES, INC.
SAN BERNARDO MINE
SAN MIGUEL COUNTY, COLO.

Summary, Conclusions, and Recommendations

By F. D. Everett
Mining Engineer
Bureau of Mines

and

W. B. Meek
Geologist
U. S. Geological Survey

PARAGON MINES, INC.
SAN BERNARDO MINE
SAN MIGUEL COUNTY, COLO.

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

By F. D. Everett and W. B. Meek

The Paragon Mines, Inc., has applied for a $50,000.00 exploration loan to reopen the San Bernardo mine. The project would consist of driving 330 or 660 feet of new drift around an unknown length of caved drift and of rehabilitating from 575 to 275 feet of the old drift. The costs of the two proposals are estimated at $15,000.00 and $25,000.00, respectively.

The ore deposits lie in the San Bernardo vein which strikes N. 80° W. and dips 65° to 70° SW. Most of the vein is enclosed by Mancos shale which dips about 3° northwesterly; however, in two places in the mine the wall rock is diorite-monzonite. Mineralization has entered along a narrow fault zone of small displacement and filled the fissures which are separated by leaves of rock; no appreciable metallization of country rock occurred although pyritization, sericitization, and silicification are common.

The chief ore minerals are galena, freibergite, gold, and pyrargyrite; the gangue is chiefly quartz, siderite, and calcite.

The ore zone was completely inaccessible, no samples could be taken, and all information was obtained from the mine manager or from company records.

Indicated ore reserves are estimated at 65,000 tons. Barren areas and sorting could reduce this to 59,000 tons. Results of samples

as given by the mine manager average 0.03 ounce gold and 20.19 ounces silver a ton, 0.55 percent copper, and 2.49 percent lead. The average recovered grade of the mine production since 1902 as calculated from Bureau of Mines records is 0.017 ounce gold and 6.83 ounces silver a ton, 0.13 percent copper, and 1.59 percent lead. Recoverable zinc is estimated at 1.0 percent.

The following conclusions and recommendations are offered:

1. The San Bernardo vein is in a strongly mineralized belt, and has a trend parallel to that of other producing veins in the area.

2. Although the main production has come from veins in the volcanic rocks, veins in the Mancos shale are strong and persistent.

3. About 59,000 tons of indicated minable ore of a grade comparable to that previously mined is estimated for the mine.

4. A project of 330 feet of drifting and 575 feet of drift rehabilitating is estimated to require six months and to cost $15,000.00; a project of 660 feet of drifting and 275 feet of drift rehabilitating is estimated to require one year and to cost $25,000.00.

5. A profit is not indicated at the present metal prices for mining ore similar to that previously produced at the San Bernardo mine.

6. The exploration loan should not be granted.

Geology

PARAGON MINES LEAD PROJECT

SAN MIGUEL COUNTY, COLORADO

DMA DOCKET 542

Geology

By Ward B. Meek, Geologist
U. S. Geological Survey

PARAGON MINES LEAD PROJECT
SAN MIGUEL COUNTY, COLORADO

Paragon Mines, Inc., controls the San Bernardo Mine situated southwest of Ophir, Colorado, in San Miguel County. The rocks exposed in the general region include a small amount of Algonkian quartzite and rhyolite, sediments of Jurantriassic, Cretaceous, and Eocene? ages, and igneous rocks of Eocene and Neocene age. In the San Bernardo Mine, only two formations are exposed--the Mancos shale (Cretaceous) and a diorite-monzonite (Eocene or Neocene) intrusive mass.

The Mancos formation is reportedly some 2000 feet thick in this region. It consists of dark gray to black rocks, mostly true shales, but it includes many sandy to calcareous claystones. Some of the wall-rock resembles limestone, but tests for carbonate were negative except for traces. Near the San Bernardo vein, the Mancos shale has been altered, chiefly by silicification; locally fine granular pyrite is disseminated through it. Alteration is nowhere so intense that the sedimentary character of the Mancos is obscured or its dip of about 3° north-northwest concealed.

The diorite-monzonite occurs in two places in the mine. It is exposed on the No. 5 level for about 925 feet inward from the portal, and presumably also below an exposure of some 300 feet on the No. 4 level, now inaccessible due to caving (See Figure 2). It is sericitized and chloritized. Impregnation with finely granular pyrite was observed locally. Some secondary calcite is present.

The structural relation between the Mancos shale and the diorite-monzonite is uncertain. Distribution of the diorite-monzonite suggests that the exposures in the mine are tongues reaching upward from a sill or irregular intrusive mass that splits the Mancos in its lower third. About 1200 feet of Mancos lie above level 5 and below the overlying San Miguel formation (Not shown in Figure 2). If the Mancos is 2000 feet thick some 800 feet of it lie directly below No. 5 level or have been cut out by the intrusion. This raises the question whether the San Bernardo vein at lower levels lies chiefly in the Mancos or in the diorite-monzonite, or in both about equally. This is of some significance because veins in the sediments of this region are more continuous than those in the diorites.

There are no maps or other data showing the geology of the mine, and caving and timbering have made all ore-zones inaccessible. Evidence for geologic interpretation is all but unavailable.

The San Bernardo vein occupies a fault fissure, chiefly in the gently dipping Mancos shale. Displacement appears slight, and only strike-slip evidence was observed. The vein strikes about N. 80° W. and dips 60°-70° southwesterly. Width varies from less than a foot up to seven feet. Several vein-splits were seen in the mine, but none have been followed by mining. It is possible that one of these may be the Garibaldi vein which has been prospected at lower levels a short distance southward.

Due to inaccessibility the vein was not observed at any point where it is ore. Where observed it consists of narrow mineralized zones

separated by leaves of altered country rock. The wall-rock is scantily mineralized with finely granular disseminated pyrite.

Ore was examined only outside the mine where several tons are piled beside the compressor house. Galena, coarsely to finely crystalline, is the chief ore mineral. Finely granular freibergite is locally abundant, and honey yellow sphalerite was observed as a minor constituent. Pyrite is common, occurring mainly in pyritohedrons up to one-fourth inch in diameter. Otto Beselack displayed several large samples, extremely rich in pyrargyrite, which reportedly came from the mine.

Quartz is the dominant gangue mineral although siderite and calcite are common.

ORE RESERVES

Since the reportedly ore-bearing stretches of the vein are inaccessible, no direct observations or sampling could be accomplished. Hence, any conception of the amount and value of the ore must be obtained from the past production record, from statements of Otto Beselack, and from the only available assays, all of which are plotted on the stope map (Figure 2). The assays were all taken on the No. 5 level, and, therefore, they present only a two-dimensional picture. It is also highly probable that they do not represent accurately the percentage of metals which would be recovered in milling and smelting the ore. The reserves of ore that may lie immediately below No. 5 level, and above the heading end of No. 5 level, have been calculated. It has been assumed, where assays are not given for the No. 5 level, that all material stoped was ore, and that the material close

below it is also ore. On this basis blocks of indicated and inferred ore were laid out on the stope map, Figure 2. An arbitrary figure of 11 cubic feet per ton was used. Details of calculations are given in Table 1. The ore reserves thus calculated are summarized below:

Indicated ore (Blocks W, X, Y, and Z) ---------	29,139 tons
Inferred ore (Blocks J, K, L, M, N, O, P) -----	36,504 tons
Total ---------	65,643 tons

This entire structure of calculations is uncertain and may be quite inadequate.

The only block of ore mineable from any present level is block W^1 containing some 7697 tons of ore. The mining of any other block is dependant on the development of a lower level.

There is considerable doubt about the existence of, amount of, and grade of the ore supposedly broken and left in stopes. Caving of the main drift prohibits reaching it until a counter-drift is completed around the caved area. Recovering and marketing this doubtful ore is the core of the Paragon Mining Company's proposal.

According to records the San Bernardo mine from 1902 to the present (See Engineering Report, p. 5) produced 88,781 tons with a present day value of $11.70 per ton. There is no evidence to indicate that ore of higher grade would be found in depth or in any other part of the mine. The Bureau of Mines estimates that present day mining and milling costs on ore produced in the past would be about $17.25 per ton, and it, therefore, seems unlikely that ore can be extracted from the San Bernardo mine at a profit.

The average lead content based on the assays is fair (3.05%, or 61 lbs. per ton), but based on past production the lead content is only 1.594%, or 31.88 lbs. lead per ton. Copper and zinc are so low that they have not been reported (except copper in block W at 0.55% or 11 lbs. per ton).

CONCLUSION AND RECOMMENDATION

In view of the foregoing, the grade and amount of ore on this property is doubtful. It is also doubted that the present mine management is technically able to properly direct the enterprise. Recoveries from past production indicate that an actual loss of $5.55 per ton of ore would result if the ore already produced were being mined and milled today. It is, therefore, recommended that this project be rejected. If Paragon Mines opens No. 5 level so that the reported ore can be reached for examination and sampling, this property might be considered for further study.

PARAGON MINES, INC.
SAN BERNARDO MINE
SAN MIGUEL COUNTY, COLO.

Engineering Report

By F. D. Everett
Mining Engineer
Bureau of Mines

Engineering

PARAGON MINES, INC.
SAN BERNARDO MINE
SAN MIGUEL COUNTY, COLO.

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PARAGON MINES, INC.
SAN BERNARDO MINE
SAN MIGUEL COUNTY, COLO.

ENGINEERING REPORT

By

F. D. Everett

INTRODUCTION

The application of the Paragon Mines, Inc., DMA Docket 542, was for a $50,000.00 exploration loan to open the San Bernardo mine in a program to prove up 100,000 tons of lead-zinc-copper ore. In a field examination of the property by engineers of the Bureau of Mines and geologists of the U. S. Geological Survey, it was revealed that the applicant desired funds for driving from about 200 to over 875 feet of drift in an effort to gain access to the last 875 feet of the fifth level of the San Bernardo mine. The fifth level is 3075 feet long of which the last half is inaccessible due to caving. According to Otto Beselack, the mine manager, $60,000.00 has been spent repairing and retimbering the drift to 1900 feet where a turn-off was made and a new drift started in shale parallel to the old caved drift. The new drift has been driven from 1900 to 2200 feet with three 10-foot crosscuts to the main drift at 100-foot intervals. The main drift may be found open at any distance ahead, or it may be blocked for the remaining 875 feet.

Otto Beselack reports that a shrinkage stope filled with about 5833 tons of broken ore is known to exist between 2400 and 2700 feet from the portal. This broken ore is the first objective of the exploration program. The second objective is to advance to and beyond

the present face of the fifth level where reportedly a 230-foot zone, particularly the last 40 feet, is in good ore.

ACKNOWLEDGMENTS

Acknowledgment is made to Otto Beselack who was courteous and cooperative in showing the mine and mill property to the Defense Minerals Administration examining team.

R. C. Derzay, mining engineer, Bureau of Mines, and Owen Evans, geologist, U. S. Geological Survey, assisted in the examination.

LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES

The San Bernardo mine is in sec. 5, T. 41 N., R. 9 W., San Miguel County, Colo. The mine is near the Matterhorn Station on the Rio Grande Southern narrow-gage railroad, 14 miles south of Telluride and 2 miles southwest of Ophir, Colo. State Highway 145 passes over the property. (Fig. 1).

The railroad operates irregularly between Durango and Ridgway, Colo.; narrow-gage railroad connections are made at Ridgway to Montrose where ore can be transferred to standard-gage cars.

The property is in the San Juan Mountains at an altitude of 9,800 feet. The topography is extremely rugged; the mine is on a north-facing, steep mountain slope about 315 feet vertically above the mill, which is near the center of the valley and 1850 feet northerly by aerial tramway.

The Lake Fork of the San Miguel River flows near the mill in the narrow valley. Water for domestic and milling purposes is piped from a small tributary of this stream. Water is collected in the workings for use in mining.

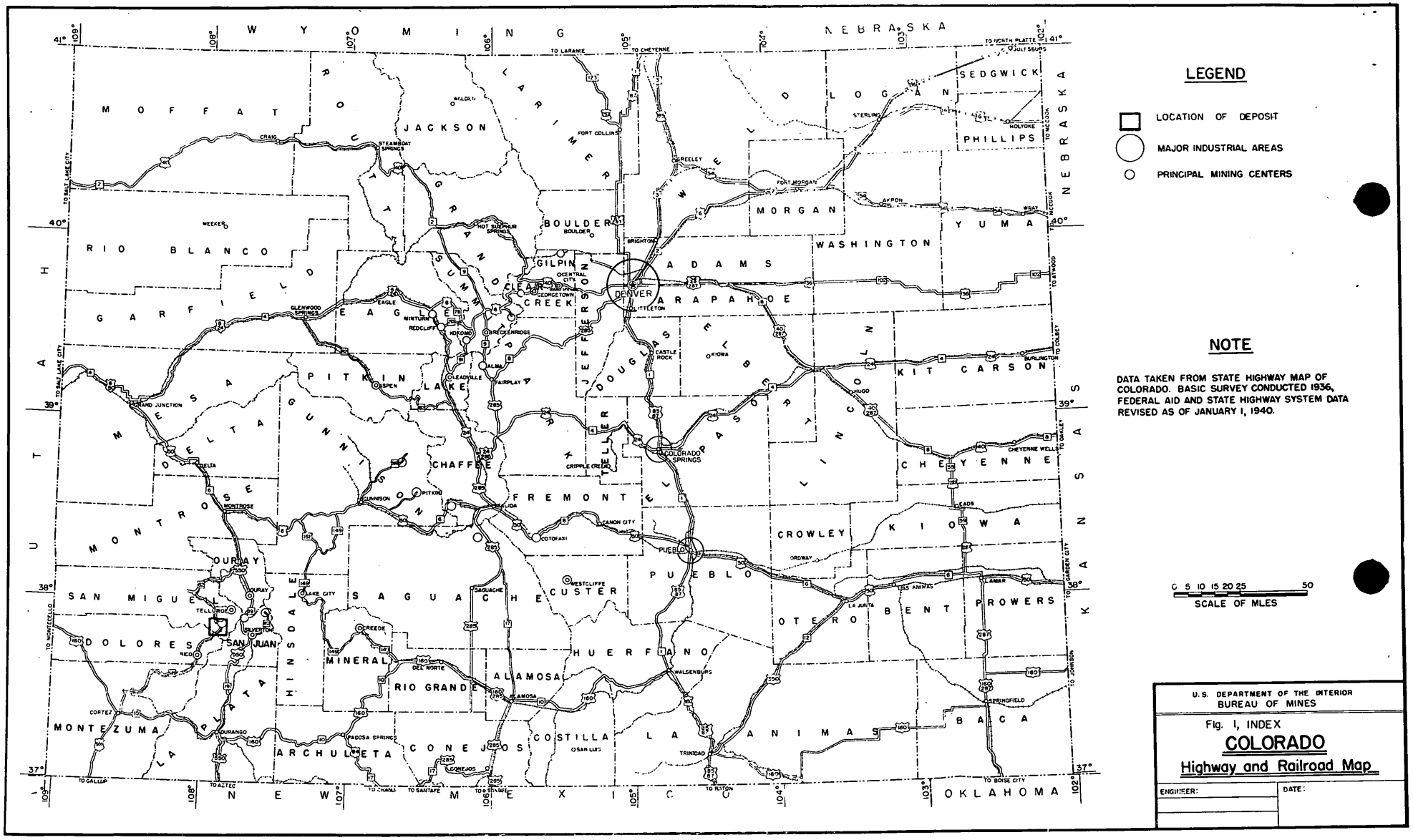

Fig. 1 Location Map Paragon Mines, Inc. San Miguel Co., Colo. DMA 542

Winters are severe and snowfall is heavy. Roads are open throughout the year except for brief periods in winter. In general, year around operations are possible.

HISTORY AND PRODUCTION

The San Bernardo claims were located prior to 1885. Intermittent operations were conducted up to 1919 when the property was acquired by the Otto Mining Company. This company operated between 1920 and 1928 when the property was attached by creditors. The mining and milling equipment was installed during this period. Silver-lead-copper concentrates were produced between 1925 and 1928 and operations were terminated the latter year. Otto Beselack was manager during this period for the company.

Beselack secured a lease and option on the property in 1941 and conducted very limited operations in 1941 and 1942.

The Paragon Mines, Inc., was organized about 1946 and attempts have been made to gain complete access to the fifth or main haulage level in the years since.

Otto Beselack, general manager, of the Paragon Mines, Inc., was unable to produce satisfactory production records. The Economics and Statistics Division of the Bureau of Mines furnished statistics of tons mined and metal produced since 1902. These statistics and the calculated recovered grade of ore are tabulated in table 1.

TABLE 1. - Production from the San Bernardo mine, 1902 to 1942.

Year	Tons ore	Tons conc.	Conc. ratio conc./ore	Ounces Au.	Ounces Ag.	Pounds Cu. Ore	Pounds Cu. Conc.	Pounds Pb. Ore	Pounds Pb. Conc.	Calculated analyses Ounces / ton Au.	Ounces / ton Ag.	Percent Cu.	Percent Pb.
1902	300			30	12,000			300,000		0.30	40.0		50.[illegible]
1903	137			-	10,669			14,900			77.8		5.[illegible]
1910	7			-	471	254		1,202			67.3	1.8	8.5
1911	84			7	3,425	1,544		58,432		.083	40.77	.9	34.07
1912	47			1	1,700	689		21,098		.021	36.1	.73	22.4
1913	287	41	1:7	3	992		482		16,744	.014	3.46	.08	2.9
	41			1	1,948	1,138		17,944		.024	47.5	1.38	21.9
1916	47			9	2,819	1,047		13,898		.192	59.9	1.11	14.7
1917	74			19	3,671	914		11,965		.257	49.7	.6	8.08
1918	55			6	2,790	1,466		7,517		.109	50.7	1.3	6.8
1919	18			1	1,040	445		5,989		.055	57.8	1.23	16.6
1920	2,180	218	1:10	15	3,938		3,098		14,844	.007	1.8	.07	.34
1921	11,200	2,240	1:5	185	91,819		32,822		413,597	.016	8.2	.14	1.85
1922	11,770	1,217	1:9.7	74	36,247		14,874		279,513	.006	3.08	.06	1.18
1923	28			1	2,287	951		23,275		.03	81.7	1.7	41.55
1924	16			1	438	286		3,495		.06	27.4	.89	10.9
1925	21,140	1,793	1:11.7	211	87,853		35,600		464,000	.01	4.17	.084	1.[illegible]
	67			3	3,670	1,000		49,000		.04	54.7	.74	36.[illegible]
1926	12,252	1,021	1:12	404	202,076		93,995		704,688	.033	16.5	.038	2.87
1927	27,691	conc.		526	129,391		49,751		376,443	.019	4.67	.089	.67
	8	crude		2	712	378		5,726		.25	89.0	2.3	35.6
1928	1,300	conc.		10.3	4,288		2,087		19,707	.008	3.29	.08	.75
	4	crude		5	1,117	471		587		.125	279.0	58.8	73.5
1941	13	crude		2.5	855	584		2,831		.193	65.7	2.25	10.87
1942	15	crude		2.1	594	221		3,073		.14	39.5	7.03	10.2
	88,781			1,518.9	606,810	11,388	232,709	540,932	2,289,536				
						244,097		2,830,468					

These records have been calculated to a per-ton basis and are summarized in table 2.

TABLE 2. - Summary, production statistics and calculated grade.

	Tons	Ounces		Pounds	
		Au.	Ag.	Cu.	Pb.
Total tons mined	88,781	1,518.9	606,810	244,097	2,830,468
Average per ton		0.0171	6.83	0.137%	1.594%
Tons shipped crude	961	90.6	50,206	11,388	540,932
Average per ton		0.094	52.24	0.6%	28.14%
Tons concentrated	87,820	1,428.3	556,604	232,709	2,289,536
Average per ton		0.0162	6.34	0.132%	1.30%

The grade of the ore in place would be higher because mill recovery was only about 80 percent of the metals.

OWNERSHIP AND EXTENT

The property consists of 17 patented and 15 unpatented lode claims, a placer claim, and 3 mill sites. The Paragon Mines, Inc., is purchasing these claims, owing $6,500.00 on the property. Operations have been confined to the Honduras, San Bernardo, and Mosquito claims.

R. V. Adler, Montrose, Colo., is president of the company; J. B. Parks, Montrose, is vice president; Mrs. Otto Beselack is secretary and assistant treasurer; and LeRoy C. Sweet is treasurer. Otto Beselack is manager.

The corporation is capitalized for 300,000 shares of stock at one dollar a share of which the company retains 25,000 shares.

Beselack stated that since the corporation was organized $60,000.00, raised by assessment of the stockholders, has been spent in an effort to reopen the fifth level of the San Bernardo mine.

DESCRIPTION OF THE DEPOSITS

The fifth adit level was driven on an east-west fissure vein through nearly horizontal beds of shale, limestone, and quartzite; diorite-monzonite was encountered in the first part of the fifth level and is indicated on the company map (fig. 2) as being encountered near the end of the fourth level. This intrusive is probably a sill penetrating the Cretaceous sedimentary beds.

The mineralized portion of the vein varies from 1 to 3 feet in width and dips 65 degrees to the south.

According to an early report,[1] the principal ore minerals are galena, sphalerite, pyrargyrite, and chalcopyrite in a gangue of quartz, rhodochrosite, and siderite. Freibergite and pyrite are present as accessory minerals.

The shale walls near the vein probably have a tendency to slough and dilute the ore. In the drift, timbers 20 inches in diameter have been used as stull-type drift caps. The ground did not appear to swell or be particularly heavy.

The drift, recently driven in shale and parallel to the old caved drift, requires no timbering; the old drift, in areas where there is no stoping immediately above it and where the vein is not too wide, appears to stand without any appreciable caving.

The rock is not too hard and can be drilled and broken easily.

ORE RESERVES

There are several blocks of ore left in the mine above the fourth adit level, as indicated on the company map (fig. 2). As these areas were outlined in 1912, they are not considered as available ore reserves.

1/ U. S. Geol. Survey, 18th Annual Report, Part IIIf, 1897.

The principal ore reserves, according to data furnished by Beselack, are from 2400 to 2700 feet from the portal above the fifth level and from 2735 feet from the portal to beyond the face of the drift which is at 3075 feet.

Because of inaccessibility, no samples were taken. Beselack furnished a record of samples taken at random intervals along the fifth level. These samples are of no importance because they represent ore that has been mined above the greater part of the areas involved. However, one 230-foot interval at the end of the level is credited with an 18-inch average width assaying 0.02 ounce gold and 11.35 ounces of silver a ton, 5.35 percent lead, and 0.42 percent copper. Zinc has never been considered. The samples from this interval are not too consistent in that wide widths are averaged with narrow widths and good assays are reported adjacent to much poorer ones.

The indicated ore reserves for the property, calculated according to data furnished by Beselack, are as follows (fig. 2):

Block 1. Broken ore in the stope between 2400 and 2700 feet from the portal above the fifth level, a length of 300 feet with a width of 5 feet:

$$\frac{\text{300 feet by 70 feet by 5 feet}}{\text{broken rock factor 18 cu.ft./ton}} \qquad \text{5,833 tons}$$

Block 2. Ore in place between 2835 and 3175 feet from the portal above the fifth level, a length of 340 feet with a vein width of 1-1/2 feet:

$$\frac{\text{340 feet by 100 feet by 1-1/2 feet}}{\text{factor for ore in place 11 cu.ft./ton}} \qquad \text{4,636 tons}$$

One-third of the block will probably be barren; as the mineralized zone is only 1-1/2 feet wide, there will

be at least 100 percent dilution of which 25 percent can be removed by sorting, leaving 4,636 tons.

Block 3. Ore in place, 100 feet below the fifth level between 1300 and 3175 feet from the portal, a length of 1875 feet with an average width of 3.35 feet:

$$\frac{\text{1875 feet by 100 feet by 3.35 feet}}{11} \qquad \text{57,102 tons}$$

This block will probably be at least one-third barren and, as mined, will have at least 50 percent dilution of which 15 percent can be removed by sorting, leaving 48,537 tons. Considerable development work must be done before block 3 will be available for mining.

The ore blocks above the fifth level will be mined before any ore below the level is considered.

Indicated Ore

Block 1	5,833 tons
Block 2	4,636
Block 3	48,537
Total	59,006 tons

Total indicated ore in blocks 1, 2, and 3 is considered as 59,000 tons.

The average grade of the 87,820 tons of ore previously milled plus 961 tons of direct shipping ore, probably highly sorted, recovered an average of 0.016 ounce of gold and 6.34 ounces of silver a ton, 0.137 percent copper, and 1.59 percent lead (see "History and Production"). This grade should be representative of the recoverable metal content of the ore reserves.

Increased ore reserves may be expected along the continuation of the vein, but, as this area was apparently unproductive in the upper levels of the old workings, no ore can be credited to this area beyond 100 feet of the face of the fifth level. Improved metallurgical processes developed since 1928 may result in better mill recovery.

The shrinkage method of mining was utilized between the fourth and fifth levels and probably resulted in 100 percent dilution. A cut-and-fill method of mining where ore and waste are mined separately in narrow mineralized widths might result in higher-grade mill heads, but the mining cost would be proportionately increased.

Most of the 59,000 tons of indicated ore reserves are below the fifth level which would require considerable development before mining. The ore reserves above the fifth level having a good chance of being available are those near the end of the fifth level and the reported stope of broken ore between 2400 and 2700 feet from the portal. The broken ore in this stope is likely to be too highly diluted from the incompetent shale walls near the vein to be considered, and, if found available, its recovery will be costly.

PRESENT STATUS

Development

The San Bernardo mine is developed from five adit levels (fig. 2). The fifth level is the lowest from which ore has been extracted and is the only level that can be safely entered. A lower tunnel, the Garibaldi, which is not part of the property of the Paragon Mines, Inc., has a crosscut to the San Bernardo vein and a raise to the fifth level. These workings are inaccessible.

The fifth level of the San Bernardo mine is open for 1900 feet and a new drift in shale parallels the old caved main level drift to 2200 feet from the portal. No crosscuts or drifts have been presently driven from the parallel drift back to the main level.

The small seepage of water in the drift ultimately flows down the raise connecting the Garibaldi level. There is adequate water for mining.

Mining Equipment, Tramway, and Buildings

The equipment at the mine consists of an old Ingersol Rand, Imperial No. 10, compressor installed about 1920. This piece of equipment, although antiquated, appears to be in surprisingly good condition, being well-oiled and free of rust and corrosion. The rated capacity is slightly over 500 c.f.m., and, at its present efficiency, it could probably deliver 400 c.f.m. at 85 pounds pressure. The compressor is driven by an electric 75-horsepower motor. The company owns three drifting machines, two of which are old but usable (IR 30), complete with columns and clamps. Track is laid in the fifth level of the mine for 2200 feet. If the old drift is not caved for its entire length, there is additional trackage available there, as it is reported to not have been removed. A 3-inch air line extends for 1900 feet and 2-inch for the remaining 300 feet. There are 7 mine cars and a few small tools. A horse pulls the cars in and out of the mine.

An 1850-foot tramway with two riding cables 1-1/4 inches in diameter and a 9/16-inch diameter power cable is used to transport the ore from the mine to the mill. Two 1000-pound buckets are used

with the tramway, each having a capacity of about 2000 pounds. The average load is about 1600 pounds per bucket and the tramway can transfer 20 tons an hour. The cables are rusted but otherwise appear in good condition. A 5-horsepower electric braking motor controls the tramway. A service tramway about 800 feet long is used to transport supplies from the valley floor to the mine. It has two ride cables and one pull cable. A 15-horsepower electric motor powers this system.

A compressor building, sheet aluminum snowshed, 3-horse barn, 300-ton ore bin, and supply tram building constitute the mine buildings. Three houses, equipped for hot and cold running water, are near the state highway. Beselack lives in one of these houses. Two very old buildings, in dire need of repairs, have served as a bunkhouse and boardinghouse; no need is anticipated for these buildings. Other structures in various states of repair constitute what was once the community of Matterhorn.

Mill Equipment and Facilities

An old, but usable, mill is in the valley, just off the highway. The mill was formerly on a spur of the railroad, but the rails have been removed. It would require little work to replace them and make connections with the main line of the railroad. The inside of the mill appeared to be in good condition, provides ample space, is well planned, and adequately equipped. Machinery is well oiled and shows no signs of deterioration. Provisions could easily be made for zinc flotation. A jig has been added since the mill last operated.

Mineral separation type flotation cells are old and obsolete and probably should be replaced. Heating facilities are provided. A flow sheet of the mill is shown on figure 3.

Ore and concentrates were formerly shipped to the American Smelting and Refining Company smelter at Durango, Colo., but this smelter has been dismantled and lead concentrates will probably be shipped to the American Smelting and Refining Company smelter at Leadville, Colo. Zinc concentrates will go to smelters either at Amarillo, Texas, or Tooele, Utah.

Electric power is furnished by the Western Colorado Power Company. A line carrying 11,000 volts is transformed to 440 volts at the property. The transformers belong to the mining company.

PROJECT PROPOSALS, WITH COSTS

Exploration and Development

Company Proposal

The loan application was for $50,000.00 to open the workings at the San Bernardo mine, which would yield 100,000 tons of ore valued at $25.00 a ton, or better. The first objective was to develop an ore body of about 20,000 tons whose existence is stated as being positive. The second objective was to prove 40,000 tons of ore by continuation of the fifth level and to open stopes above the level.

Operating costs are stated to be $3,000 a month and 50 percent, or the applicant's share of matching funds, would be provided by renting company equipment to the project for $1,000.00 a month and by providing $500.00 cash a month.

300-ton ore bin (Mine)

2-bucket tramway

grizzly 2-1/2" x 30"

gyratory crusher
to minus 3/4"

250-ton ore bin (Mill)

18" conveyor bin

feeder

ball mill (100 ton)
(5" balls)

jig

conc.

2-rake Dorr classifier

plus 60-mesh

ball mill
50-ton

minus 60-mesh

3 Wilfley tables
(not in use)

CaO

conditioning tank

12 Mineral Separation
flotation cells

American leaf
filter

settling pond

10-ton ore bin

crane and bucket

railroad car

Mill capacity 175 tons per day

Capacity can be increased to 500 tons

Mill heated by circulating steam

Fig. 3--Flowsheet of San Bernardo Mill, Paragon Mines, Inc., DMA Docket 542

Engineer's Proposal

Specifically, the program involves drifting parallel to the old drift from 2200 feet to 2500 feet from the portal of the fifth level with 5- to 10-foot crosscuts to determine if the main drift is open. If the main drift proved to be open within 300 feet of drifting, a shrinkage stope, located between 2400 and 2700 feet from the portal and reportedly filled with broken ore, could be drawn and milled. This assumes that the filled stope would offer protection to the drift timbers and prevent the main level from caving. In this event, the main drift would probably be found open to the end at 3075 feet and, with the exception of clean-up work, would be ready for use in mining virgin ore reportedly existing from 2845 feet to the end of the main level drift and beyond. If the main level drift is found to be caved at 2500 feet, drifting would continue in shale to a point where it is found open, or to and beyond the end of the level. It is assumed that the main level drift will be open beyond the end of the stoped area, near 2800 feet from the portal, and there is a possibility that it may be open from 2400 feet.

The overall cost for drifting is estimated at $35.00 a foot. The cost of the project is estimated in two proposals as follows:

1.	Drifting, 2200 to 2500 feet with three 10-foot crosscuts (330 feet at $35.00)	$11,550.00
	Rehabilitation of 575 feet of drift (2500 to 3075 feet)	3,450.00
	Total	$15,000.00
2.	Drifting 2200 to 2800 feet with six 10-foot crosscuts (660 feet at $35.00)	$23,100.00
	Rehabilitation of 275 feet of drift (2800 to 3075 feet)	1,900.00
	Total	$25,000.00

New Equipment and Facilities

No new equipment would be required. All facilities are intact. Roads are adequate. Power facilities are available and power costs are estimated at $40.00 a month for drifting and $1,500.00 a month for mining and milling. There is ample water for mining, domestic use, and milling. Tramway facilities are available for delivery of equipment and supplies to the mine and for ore to the mill. The ore bin at the mine is in need of repair but that is of no concern to the exploration project.

Manpower

Beselack states that labor drifting contracts can be made for $15.00 a foot in shale. Miners' wages are $1.50 an hour and muckers' wages are $1.35 an hour. Labor supply is limited but can probably be obtained at either Ophir or Telluride. Otto Beselack will supervise the work at no charge to the project.

PRODUCTION PLAN

Time Schedule for Project Completion

An estimated six months will be required to complete part 1 of the project proposed by the examining engineer and one year for part 2.

Rate of Production

The rate of production after completion of the project would be dependent upon the number of men hired to mine ore. The mine has produced as high as 125 tons a day for an extended period. About 40 tons a day is the maximum rate of production considered possible with the mine in its present state of development.

A ton of ore having the average recoverable value of 0.0171 ounce gold and 6.83 ounces of silver a ton, 0.137 percent copper, and 1.594 percent lead would yield 2.74 pounds of copper and 31.88 pounds of lead. The value of the recovered metal at $31.00 an ounce for gold, 85 cents an ounce for silver, 19 cents a pound for copper, and 15 cents a pound for lead would be about $11.62. The amount of zinc is not known but would probably average 1.0 percent. If a separate zinc concentrate were made with a recovery of 1.0 percent, or 20 pounds of zinc, the net value of the ore before mining and milling would be about $14.50.

Mining Methods and Costs

The shrinkage stope mining method is assumed to be applicable. As the mineralized portion of the vein averages only about 18 inches, and because of incompetent stope walls, the mining width will be at least 36 inches. About 25 percent of the barren waste can probably be sorted from the material mined.

Mining costs are estimated as follows:

Mining	$ 6.00
Sorting	1.50
Tramming	1.00
Development	2.00
Total	$10.50

Milling Methods and Costs

The mill has not been operated since 1928. Provision must be made for making a zinc concentrate. A competent metallurgist must be obtained, at least to work out an efficient process and to train personnel. As the equipment is old, high repair costs can be expected. Concentrates must be shipped to Leadville which is 211 miles by road.

Milling costs are estimated as follows:

Milling	$3.50
Transportation of concentrates to Leadville, Colo., including transfer from narrow-gage to standard-gage cars, per ton crude ore	1.00
Total	$4.50

Smelting Methods and Costs

The ore would be shipped to the American Smelting and Refining Company smelter at Leadville and classified under a lead concentrate schedule. All gold would be paid at $31.82, 95 percent of the silver at 90 cents, deduct 1 unit of copper and pay the remainder at 19 cents a pound, and deduct 1-1/2 units of lead and pay for 90 percent of the remainder at 15 cents. A base charge of $9.00 is made for treatment.

As the concentration ratio is between 10 and 12 to 1, a convenient charge of $1.25 is made for additional deductions and treatment charges per ton of crude ore.

Miscellaneous Costs

Taxes and insurance charges will be about 10 cents a ton. There is no direct royalty charge, but $6,500.00 is owed on the property and $4,000.00 is outstanding in small obligations. Repayment of these sums would represent a minimum charge of about $1.00 a ton.

Total miscellaneous charges are estimated at $1.10 a ton.

SUMMARY: COST OF PROJECT

The capital requirements are summarized for the two proposals as follows:

1.	Drifting, 330 feet at $35.00	$11,550.00
	Rehabilitation of 575 feet of drift	3,450.00
	Total	$15,000.00
2.	Drifting, 660 feet at $35.00	$23,100.00
	Rehabilitation of 275 feet of drift	1,900.00
	Total	$25,000.00

The operating costs per ton are summarized as follows:

Mining, sorting, tramming, and development	$10.50
Milling and shipping concentrates	4.50
Smelting	1.25
Miscellaneous, taxes, payment of property and debts	1.10
Total	$17.35

The value of the ore is estimated at $11.60 with no consideration for zinc, or $14.50 if there is 1.0 percent zinc which can be recovered in a separate concentrate.

A loss of $2.85 a ton is indicated.

PROPOSED FINANCING

The company proposes to rent equipment to the project for part of the matching funds. The remaining portion of funds will be supplied by cash.

The monthly rental value of the equipment to apply toward the cost of the project as appraised by the examining engineer is itemized as follows:

	Per month
Compressor, about 30 years old, I. R. Imperial No. 10, approximately 550 c.f.m. as rated, delivering about 400 c.f.m.	$400.00
Two DA 30 I. R. drifters (only one needed)	30.00
Service tramway ($350.00 value)	30.00
Seven mine cars ($700.00)	56.00
Air receiver ($400.00)	30.00
Horse ($60.00)	10.00
Power transformers, 3 30-k.v.a. single phase 12,000 - 440 volt ($2,000.00)	160.00
Total	$716.00

The project costs are estimated at $2,500.00 a month. Beselack indicated the company could supply about $500.00 a month.

As a profit is not indicated, no provisions are made for repayment other than the provisions in the Defense Minerals Administration contract.

CONCLUSIONS

The evaluation of the San Bernardo mine is based entirely on past production records of the Bureau of Mines and statements and records by Otto Beselack. The only available map is an old longitudinal section and the data presented thereon cannot be verified.

A few sample records were supplied of the caved portion of the drift, many of which show a higher value than is represented by the average grade of the known production; the samples cannot be checked or substantiated other than by statements contained in old reports.

The possibility exists that, with care in mining, sorting, and improved milling practices, the recovered metal content of the ore could be increased.

The following conclusions are offered:

1. There is a possibility that the fifth level will be found open within 300 feet and almost certainly within 600 feet.

2. Three blocks of ore are indicated, totaling 59,000 tons with an average recoverable grade of 0.017 ounce gold and 6.83 ounces of silver per ton, 0.137 percent copper, and 1.59 percent lead. Recoverable zinc is estimated at 1.0 percent.

3. The mining and milling equipment owned by the company is adequate and in good condition.

4. The time necessary to complete a project for (1) drifting 330 feet and rehabilitating 575 feet of drift is six months and for (2) drifting 660 feet and rehabilitating 275 feet of drift is one year.

5. The cost of proposal (1) is $15,000.00 and (2) is $25,000.00.

6. Otto Beselack has managed operations since 1920 but if the mine is reopened there is a definite need for technical assistance both in the mine and mill.

RECOMMENDATIONS

In view of the low copper-lead-zinc content of the reserves, a profitable operation is not indicated. Therefore, the request for a Defense Minerals Administration exploration loan should be denied.

WAR PRODUCTION BOARD

WASHINGTON, D. C.

IN REPLY REFER TO:

F-A LAL 1540-R

September 28, 1942

Mr. Otto Beselack
Ophir
Colorado

Dear Mr. Beselack:

I wrote you a few days ago regarding the molybdenite property.

With reference to the San Bernardo Mine, I am quite certain that you can qualify first for a $5,000 loan to reopen the tunnels and replace the timbers. In making your application you will have to state how much money you will use in actually reopening the property. I would suggest that any balance you submit, you state you will use that amount of money in sampling the property. If you do not have sufficient money to do enough sampling so that a satisfactory or rather correct estimation can be made of the developed ore, I am quite confident that the Bureau of Mines will finish the job and if the amount of ore that you state is now developed, you should then be able to qualify for a General Mining Loan which would provide all the necessary money to put the property into production with a proper mill.

I brought this to the attention of the Lead Branch and when you submit your application to R.F.C. write to Mr. C. A. Wright, Chief of the Mining and Production Section, Tin and Lead Branch, Materials Division, War Production Board, Temporary Building "R", Washington, D. C.

With kindest regards,

Sincerely yours,

Lewis A. Levensaler
Technical Consultant
Ferro-Alloys Branch

FOR VICTORY
BUY
UNITED STATES
WAR
BONDS
AND
STAMPS

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

May 22, 1951

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 13 1951

Memorandum

To: A. H. Koschmann
P. T. Allsman

From: Field Team, Region IV

Subject: DMA-542 - Paragon Mines, Inc., Ophir, Colorado

The brochure on the above docket and accompanying correspondence from the Coordinating Committee, DMA, has been reviewed by Allsman and is being submitted to Mr. Koschmann, who will assign a geologist to go with an engineer, to be assigned by Mr. Traver, to make a geologic appraisal and conduct the suggested negotiations with the operator.

Paul T. Allsman
Paul T. Allsman, Alternate

A. H. Koschmann
A. H. Koschmann

CC: W. M. Traver, Jr.

FILE COPY
SURNAME:

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

Herros
Lyon
McKnight
Mote
Moon
Thayer

May 3, 1951

Mr. Otto Reselack, Manager
Paragon Mines, Incorporated
Ophir, Colorado

Dear Mr. Reselack:

Your letter of April 26 indicating your willingness to participate in the exploration program has been received.

Your application (DMA-542) has been sent to Mr. John H. East, Jr., Executive Officer of the Field Team, 224 New Customhouse, Denver 2, Colorado, for further information and advice.

Very truly yours,

Tom Lyon B.P.
Tom Lyon, Director
Supply Division

EJLyons:emp
G 5/3/51
Copies to: J. H. East, Jr. Region IV (2)
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
L. B. Moon
R. H. Mote
L. F. Strobel
T. Lyon
Files

~~LANDON F. STROBEL~~
Herres

PARAGON MINES, INC.
OPHIR, COLORADO

28th April, 1951

In re. DMA-542

Mr. Otto Herres, Chief
Lead-Zinc Branch
Defense Minerals Administration,
Washington, D. C.

Dear Mr. Herres:-

After receiving your letter of April 12th, I visited the local DMA office at Denver and they advised that new forms for application were in effect but that applications made prior to their issuance would hold provided that the information was included in said application.

I have checked my DMA - 542 application and find that the information required was included but that the continuity was slightly off and one or two items may be inadequate. I, therefore, am including as amendment the attached exhibits. One is our assets and liabilities, 4 copies which elaborate on these items.

Also I am including this statement of our program of exploration and development which I have arranged in a manner that we can handle and hope it will be acceptable to your agency.

1st. Our exploration and development costs amount to between $2,500.00 and $3,000.00 per month. We hope to delineate a large ore body by a continuation of this program and could afford an expenditure of $1,000.00 or thereabouts per month on this project. Our present task is to develope an ore body of about 20,000 tons whose existence is positive. The next step will be to prove about 40,000 tons of indicated ore by a continuation of our adit and stopes. Then by dropping down to our lower level we hope to develop in a few months an added 50,000 tons of very high grade ore whose presence has been proved by this level but which has not been measured. In other words we want to initiate a $50,000.00 program of exploration and development which should give us nearly 100,000 tons of $25.00 or better ore.

In meeting our share of $1,500.00 per month to match the Government's equal amount, we would like to apply the use of our equipment at $1,000.00 and cash of $500.00. I understand that equipment can be applied in lieu of cash.

We have already spent approximately $60,000.00 in an effort to get to the ore and bring the property to a production basis, which can be accomplished by mid summer, if we receive help immediately.

We will be happy to explain our program to your engineers immediately.

Very truly yours,

Otto Beselack

Otto Beselack, Manager

MAY 1 1951

I enclose 3 additional exhibits.

BUREAU OF MINES
WASHINGTON, D. C.

APR 31 12 03 AM '51

In re. DMA 542.

ASSETS:

Mine:	20,000 tons of $30.00 positive ~~ore~~ ore	600,000.00
Mill;	175 ton mill at $1,000.00 per ton	175,000.00
Tram		10,000.00
Mine Equipment:	Compressor, Drills, Cars, Misc.	15,000.00
Air Line, 2000 ft - 3 inch		2,500.00
Track , 5,000 ft.		1,500.00
Transformers and power line		5,000.00
Compressor house		500.00
Motors, etc. 5 - 5 - 15 and 75 HP		1,000.00
Tram House and ore bin		1,500.00
3 residences		12, 500.00
1 Bunk House		3,000.00
1 Boarding House		1,500.00
1 Horse		60.00
2 Water Rights, 4,000 feet of 5" and 8" water line		10,000.00
1 R. R. Spur		2,400.00
Mill transformers		5,000.00
Motors:	100 - 50 - 30 - 20 - 20 - 10 - 10 15 - 5 - 5 Horse power	5,000.00

Liabilities:	Debt on property	6,500.00
	Miscellaneous current bills	4,000.00
		10,000.00

Profit and Loss Statement;

No production at this time, development only. Have spent approximately $60,000.00 on development.

Department of the Interior
Defense Minerals Administration
RECEIVED
APR 3 0 1951
LANDON F. STROBEL
Executive Secretary

In re. DMA 542.

ASSETS:

Mine:	20,000 tons of $30.00 positive ore	600,000.00
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Track , 5,000 ft.		1,500.00
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Compressor house		500.00
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		10,000.00

Profit and Loss Statement;

No production at this time, development only. Have spent approximately $60,000.00 on development.

FORM C-247—12-25—65M-8200. H. B. S. Co.

AMERICA SMELTING AND REFINING CO.

DURANGO PLANT

DURANGO, COLO., Feb. 10, 1927

BOUGHT OF The Otto Mining Co.

LOT NO. SMELTER 153 / MINE ~~126~~ 127

ADDRESS

CLASS ¢

SHIPPING POINT Ophir

QUOTATIONS OF 2/9 SILVER 57 3/4 LEAD 7.10 COPPER 12.748

ASSAYS	GOLD OZ. PER TON	SILVER OZ. PER TON	LEAD PER CENT	COPPER PER CENT	INSOL. PER CENT	IRON PER CENT	MANGANESE PER CENT	LIME PER CENT	ZINC PER CENT		SULPHUR PER CENT
A. S. & R. CO.							Sb	As		Bi	
UMPIRE	0.59	267.4	42.0	6.3	4.0	10.6	3.6	1.0	6.0	0.16	26.9
SETTLEMENT ASSAY											

CAR INITIAL	NUMBER	WEIGHT	FROZEN WGT.
	3626	51,760	

WEIGHT OF LOT 51,760

WEIGHT OF SACKS

WET WEIGHT

LESS MOISTURE 7.5 % 3,382

DRY WEIGHT 47,878

PAYMENTS PER TON		
GOLD 0.59 @ 19.		11.21
SILVER 95% 254.03 @ .5775		146.70
LEAD ~~Xs~~ 810 @ .059 PER UNIT		47.79
COPPER ~~Xs~~ 106 @ .06248 PER UNIT		6.62
GROSS VALUE OF METALS		212.32
GROSS VALUE		
LESS TOTAL DEDUCTIONS		16.76
	@	$195.56

DEDUCTIONS PER TON	
BASE CHARGE	4.00
INSOLUBLE Nil	
~~ZINC~~ As Sb Bi 4.76 - .5 @ $1	4.26
SULPHUR Max	2.50
10% Exs 15 to 75	6.00
EXCESS VALUE	16.76
TOTAL DEDUCTIONS	
PER TON	4,681.51
FREIGHT ADVANCED @ 9.59	248.19
MOISTURE	
SAMPLING	
FROZEN ORE	
UMPIRE 10%	443.33 691.52
% ROYALTY	
NET PROCEEDS $	3,989.99

CORRECT

CHECKED

RATES, EXCEPT ON CONTRACTS, SUBJECT TO CHANGE WITHOUT NOTICE

FORM A.V. 604 — 7-26—3200-H. B. Co.

AMERICAN SMELTING AND REFINING CO.

ARKANSAS VALLEY PLANT — LEADVILLE, COLO., Aug. 22, 1927

BOUGHT OF: Otto Mining Co. (San Bernardo) — LOT NO. SMELTER 9[illegible]3 / MINE [illegible]

ADDRESS: — CLASS: C — SHIPPING POINT: Ophir /35-C

QUOTATIONS OF: 8/17 — SILVER: 54 5/8 — LEAD: .75 — COPPER: 12.846

ASSAYS	GOLD OZ. PER TON	SILVER OZ. PER TON	WET LEAD PER CENT	WET COPPER PER CENT	INSOL. PER CENT	IRON PER CENT	MANGANESE PER CENT	LIME PER CENT	ZINC PER CENT		SULPHUR PER CENT
A. S. & R. CO.							As	Sb		Bi	
UMPIRE											
SETTLEMENT ASSAY	2.[illegible]	411.1	40.[illegible]	4.95	4.[illegible]	1[illegible]	.71	3.7	8.4	.2	

CAR INITIAL	NUMBER	WEIGHT	FROZEN WGT.
	67112	40,7[illegible]0	

WEIGHT OF LOT: 40,7[illegible]0

WEIGHT OF ____ SACKS

WET WEIGHT

LESS MOISTURE [illegible] % [illegible]

DRY WEIGHT: 37,0[illegible]

VALUES PER TON		
GOLD 2.[illegible] @ 1[illegible]		4[illegible]
SILVER 390.565 @ .54625		213.[illegible]4
LEAD, ~~LESS~~ 774 @ .0522 PER UNIT		40.[illegible]
COPPER, ~~LESS~~ 79 @ .06346 PER UNIT		5.01
GROSS VALUE OF METALS		30[illegible].16
LIME CREDIT		306.96
GROSS VALUE		
LESS TREATMENT		16.81

TREATMENT	
BASE	[illegible]
INSOLUBLE nil	
ZINC 8.4 - 8.[illegible]50	.20
SULPHUR Max	2.50
AsSbBi 4.61 - .5[illegible]	4.11
EXCESS VALUE 10% 15 to 75	8.00
LEAD DEBIT	
COPPER DEBIT	
TOTAL DEBIT	16.81
IRON CREDIT	
NET TREATMENT	

@ $ 20[illegible].5 PER TON 5,3[illegible]7.75

FREIGHT ADVANCED @ 11.50 25[illegible].37

ADVANCES

MOISTURE

SAMPLING

FROZEN ORE

UMPIRE

INTEREST 511.53 745.70

CORRECT

CHECKED

% ROYALTY

RATES, EXCEPT ON CONTRACTS, SUBJECT TO CHANGE WITHOUT NOTICE

NET PROCEEDS $ 4,30[illegible].03

THE METALS EXPLORATION COMPANY
120 BROADWAY, NEW YORK CITY
201 FOURTEENTH STREET, DENVER, COLORADO
HOBART BUILDING, SAN FRANCISCO, CALIFORNIA

H. P. WHITNEY, PRESIDENT
BULKELEY WELLS, VICE PRESIDENT AND MANAGING DIRECTOR
FREDERICK N. WATRISS, VICE PRESIDENT AND GENERAL COUNSEL
THOMAS J. REGAN, SECRETARY-TREASURER
FRED G. FARISH, GENERAL MANAGER
ROY H. ELLIOTT, ASSISTANT MANAGER
A. D. SNODGRASS, COMPTROLLER
RUFUS THAYER, COUNSEL

ENGINEERS
WILBUR H. GRANT, GEOLOGIST
THOS. D. HARRIS, EDWIN HIGGINS, GERALD H. HUTTON
S. J. BURRIS, JR., FRED H. DAKIN, CHARLES N. BELL
WALTER L. REID, ROBERT McF. DOBLE

Denver, Colo. September 15th,1922

Mr. Otto Beselack,
333 North Pine Ave,
Chicago, Ill.

Dear Mr. Beselack,---

I am in receipt of a letter from Mr. Fred G. Farish instructing me to send you a blue-print showing the assays and blocks of developed ore in the San Bernardo Mine, San Miguel County, Colo.

As the blue-print does not show the assays, I have taken the liberty of going through Mr. Farish's files to obtain the data on the value of the ores indicated by the blocks shown on the blue-print. I do not find any mention made of blocks F and G.

Very truly yours,

Charles N. Bell

CNB-K

Encs.

PHOTO-COPY
BY PICK
FOR EXTRA COPIES, CALL KE. 2876
MAY 13 1943
PICK PHOTOGRAPH & BLUEPRINT CO.
1015-17th ST. DENVER, COLO.
CERTIFIED ON REQUEST

VALUE OF THE ORES

In the calculation of ore values, the following prices of metals,(slightly below present market quotations), are used.

Gold----------$20.00 per ounce

Silver-------- .50 per ounce

Lead---------- .04 per pound

No attention was given to the zinc content in the ores.

The map, attached to this report, shows the location and size of the blocks considered.

	Tons	Gold	Silver	Lead	Total per ton	Gross Total
Block A	1050	$1.00	$6.25	$8.16	$15.41	$16.180.50
Block B	800	.80	2.30	9.16	12.16	9,808.00
Block C	3000	1.50	5.78	7.52	14.80	44,400.00
Block D	2250	1.60	7.41	16.51	25.52	57,421.00
Block E	6600	2.00	5.81	3.94	11.75	77,550.00
	1000 on dump & in stopes (estimated)				12.00	12,000.00
	14,600			Total		$ 217,359.50

PHOTO-COPY
BY PICK
FOR EXTRA COPIES, CALL KE. 2876
MAY 13 1943
PICK PHOTOGRAPH & BLUEPRINT CO.
1015 - 17th ST. DENVER, COLO.
CERTIFIED ON REQUEST

FILE COPY
SURNAME:

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

APR 12 1951

In reply please refer to DMA-542

ABGriggs
Pat. Eyeno
McKnight
Herrick
Mote

Mr. Otto Reselack, Manager
Paragon Mines, Inc.
Ophir, Colorado

Dear Mr. Reselack:

One of the purposes of the Defense Production Act of 1950 is the encouragement of exploration, development and mining of strategic minerals and metals. Where an applicant has proven reserves of strategic materials, Federal aid in mining can be given through procurement contracts for such materials as are in short supply. On the strength of these contracts, the applicant can obtain private financing in most instances.

The program recently approved for encouragement of exploration of strategic materials calls for participation on the part of the applicant. For zinc, lead and copper deposits it will be necessary to match Government funds on an equal basis. Funds advanced by the Government will be considered a loan, to be repaid if the exploration is profitable, but to be canceled if unsuccessful. The details of the plan, explaining the projects that will be eligible for assistance, the terms and schedules of financing, repayment, and other pertinent information, are enclosed.

A review of your application (DMA-542) for financial aid in bringing your San Bernardo mine in San Miguel County, Colorado to a production basis indicates that your proposal may be considered under this exploration program. Details concerning expenditures that will be considered chargeable to exploration aid will be subject to a final determination by negotiation, but as a preliminary appraisal we believe that the program will apply to the $50,000, the total amount of your application, which you propose to use to open up the mine.

Before we can proceed further with consideration of your application, which may or may not require a field examination, please indicate your willingness to provide your share of the funds needed to carry out the proposed exploration. Any modification of your original proposal that you may wish to make will be considered, but you should be specific concerning the work you wish to undertake.

ABGriggs:emp G 3/21/51
Copies to: 2 copiesto
J. H. East, Executive Officer, Region IV
Chief, Lead-Zinc Br.
McKnight - 4204 GSA
Enclosures

Very truly yours,

OTTO HARRES, Chief
Lead-Zinc Branch

L. B. Moon
R. H. Mote
L. F. Strobel
C. O. Mitten dorf
Files

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

MF-103 Should Be Filed With General Technical Data Form MF-100

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D.C.
NOV 8 8 54 AM '51

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

Not To Be Filled in by Applicant

Docket No. .....
Metal or Mineral .....
Date Received 11-8-51
Amount $.....
Participation (Government %) .....

PARAGON MINES, INC.

Ophir, Colorado

Name and address of applicant

Date November 3rd, 1951

If you have already filed MF-100, give date filed ....., type of assistance requested .....,

DMA Docket Number (if available) DMA 542

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four copies each, of the signed application form, General Technical Data Form MF-100, and answers to questions as specified, to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive office thereof, with your name and address on each sheet of the application and all accompanying papers. If you have previously filed MF-100, it is not necessary to file it again. However, you should indicate in space provided above the type of assistance previously applied for (loans, procurement contracts, etc.) and DMA Docket Number, if available. *When a question is inapplicable it should be so stated in the form.* Additional sheets should be attached in answering any questions or in supplying additional information. IF YOU CANNOT ANSWER A QUESTION, SO STATE.

1. (*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*) If you are not the owner of the property, submit a copy of the lease, purchase option, or other agreements under which you are authorized to operate the property with each copy of your application.

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

   NOTE: (1) 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 (*c*) 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.

   (2) If applicant is not the owner of the property or if there are any liens or encumbrances against the property, copy of agreements of claimants, lienors, encumbrances, and lessors subordinating their interests in the property to the interest of the Government under the Exploration Project Contract will be required for attachment to the Contract.

2. (*a*) What metals or minerals do you expect to find?

   (*b*) Furnish statement of the geologic features of your property, giving type of ore deposit and reasons for expecting to find commercial ore bodies. Illustrate with maps or sketches. If you have a geologic or engineering report, or assay maps showing width and grade, please send them with application, stating whether or not you wish to have them returned.

The information requested in questions 3, 4, 5, 6, 7, 8, and 9 below should be answered specifically and in detail, as this information will be attached to and incorporated as part of the Exploration Project Contract, if such contract is entered into with you by the Government.

ANSWER EACH QUESTION ON SEPARATE SHEETS OF PAPER AND SUBMIT A COPY OF EACH ANSWER FOR EACH COPY OF YOUR APPLICATION.

3. (*a*) Describe fully the proposed work and give the total cost of the project.

   (*b*) State the time required to start the project and to complete it.

4. Submit a map or sketch of the property involved showing a plan (and cross section, if needed) of the present mine workings and the *location of the proposed exploration work* as related to geologic features, such as contacts, veins, ore-bearing beds, etc.

5. Furnish an itemized list of existing facilities, buildings, installations, and fixtures with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition.

6. Furnish a detailed list of additional facilities, buildings, and fixtures to be purchased, installed, or erected by you, with the estimated cost of each item.

7. Furnish a detailed list of operating equipment, separated into items to be—

   (*a*) Rented

   (*b*) Purchased

   (*c*) Furnished by you

   with the rental, purchase price, or depreciation of each item, as the case may be, to be charged as a cost of the project.

8. Furnish an itemized schedule of labor, by numbers and classes (miners, muckers, etc.) and of supervisors by numbers and positions, with the maximum wages or salaries to be paid to each.

9. Furnish a detailed list with estimated cost of each item for materials, supplies, engineering, assaying, accounting, power, water, utilities, and any other items not provided for above.

10. (*a*) How much are you prepared to invest in the proposed project?

    (*b*) Is this amount sufficient to pay your part of the cost of the project, in accordance with the regulations on Government participation (Sec. 9 of MO–5)?

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

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.

Paragon Mines, Inc.
(Name of company)

By Otto Beselack
(Signature of authorized official)

November 3rd, 1951
(Date)

Manager
(Title)

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

U. S. GOVERNMENT PRINTING OFFICE 16—64067-2

LDMA.
Docket #542

Question No. 1 (a) Already covered by application, Docket No 542. LDMA.

(b) Already covered by application, Docket No. 542 LDMA

(c) Already covered by application, Docket No. 542. LDMA

COPY

L.M.A. Docket #542

Question Nos 2, (a) Already covered by application, Docket No. 542. LMA

(b) Already covered by application Docket No. 542. L.M.A.

Gold .05 oz., Silver 10 to 15 oz., Lead better than 5%, Copper .75 to 1.5 %, Zinc 2%, Iron? Average width of vein 3 feet.

COPY

dl-M.a-docket #542

Question No. 5 (a) Already covered by application, Docket No. 542. dl-M-a

However, $15,000.00 now will get us to the point of production.

(b) We are working on it and in 3 months can be in the ore and to the point of production.

COPY

LMA Docket #542

Question No. 4. Already covered by LMA Application, Docket No. 542 LMA

Tog have stope map showing the workings.

COPY

DMA Docket #542

Question No. 5. Already covered by DMA Application, Docket No. 542 DMA

COPY

DMA Docket #542

Question No. 5. None until after we get into production.

COPY

Dm A. Docket #542

Question No. 4.7. (a) None, except rental allowance to our company for our equipment.

(b) None.

(c) All furnished by our company

COPY

L.O.M. a Docket #542

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DMA Docket #542

Question No. 9. Powder, fuse and caps approximately $468.00 per month, mine track and ties approximately $130.00 per month drill steel and bitts approximately $250.00 per month, Electric power approximately $90.00 per month, total $938.00 per month.

COPY

D.C.M.A. Docket #542

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COPY

dl M a Docket #542

Question No. 11. None that we know of.

COPY

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D. C.

MF-103 Should Be Filed With General Technical Data Form MF-100

NOV 8 8 54 AM '51

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

Not To Be Filled in by Applicant

Docket No. _____
Metal or Mineral _____
Date Received 11-8-51
Amount $ _____
Participation (Government %) _____

PARAGON MINES, INC.
Ophir, Colorado

Name and address of applicant

Date November 3rd, 1951

If you have already filed MF-100, give date filed _____, type of assistance requested _____,

DMA Docket Number (if available) DMA [redacted]

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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.

Paragon Mines, Inc.
(Name of company)

By Otto Beselach
(Signature of authorized official)

November 3rd, 1951
(Date)

Manager
(Title)

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

U. S. GOVERNMENT PRINTING OFFICE 16—64067-2

O.M.A. ~~542~~

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(b) already covered by application, Docket No. 542

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COPY

D.M.a. 542

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COPY

LDM.Q. 542

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COPY

20-M.Q.542

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COPY

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COPY

THE PARAGON MINES, INC.
Ophir, Colorado

DEFENSE MINERALS
ADMINISTRATION
WASHINGTON, D. C.

NOV 8 8 54 AM '51

3rd November, 1951

Mr. Tom Lyon, Director,
Supply Division, Defense Minerals Administration,
Department of the Interior,
Washington D. C.

Dear Mr, Lyon:-

Re. - DMA 542

Your letter dated September 12th 1951 received, and to say the least, it was a great disappointment to us.

We do not quite understand how your examining engineers could come to the conclusion that our ore is not high enough and cannot be mined profitably. The engineers could not see the ore in place in the tunnel because of the cave. We spiled through several hundred feet of this cave but are now drifting around the balance of it. However, they did see some of the ore which came out of the caved stopes and which we have piled up at the portal of the tunnel, and it does not take an E. M. to tell that is high grade ore.

I showed the engineers the report on the last 72 narrow guage R. R. cars of concentrates shipped from our mill which averaged 20,6 tons per car and they averaged, gold .63 oz?, Silver 223.04 oz., lead 38.076%. Copper 4.91% per tom of concentrates. Zinc, at that time, was not considered nor saved The extraction in milling operations was about 80% of the metal content of the ore. With improvements in metallurgy this should now be 90% at least.

The ore in the breast of the tunnel is 38 inches in width and assays Gold .03 oz., Silver 55.6 ozs., Lead 10.7%. Copper 2.52%. This sampling was made by Mr. Charles N. Bell, E. M. who for yorrs was one of the foremost engineers in the San Juan district of Colorado. the property has produced in past operations, several millions of dollars worthof ore and is now approximately 80% still virgin ground.

You will find enclosed photostatic copy of a letter from Mr. Lewis A. Lavensaler, who examined the ore in the stopes where the men were working, to determine the possible tonnage of ore the A. S. & R. Smelter could expect the following year. This was just two months before this property was shut down in 1929, owing to the falling prices for metals and they are still filled with broken ore about 80 feet high. Besides there are 14,000 tons of ore blocked out above these stopes, sampled by Mr. Fred G. Farish, E. M. At present prices this ore will run $35.00 per ton.

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Ophir, Colorado

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Trusting that you will give this request favorable consideration and that we will hear from you shortly granting our request, we I remain

Sincerely yours,

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Otto Bisslack

Manager

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Budget Bureau No. 42-R1035.1.

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U. S. GOVERNMENT PRINTING OFFICE 16—64067-2

DMA Docket #542

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COPY

DMA Docket #542

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(b) Yes, it should be.

COPY

DMA Docket #542.

Question No. 11. None that we know of.

COPY

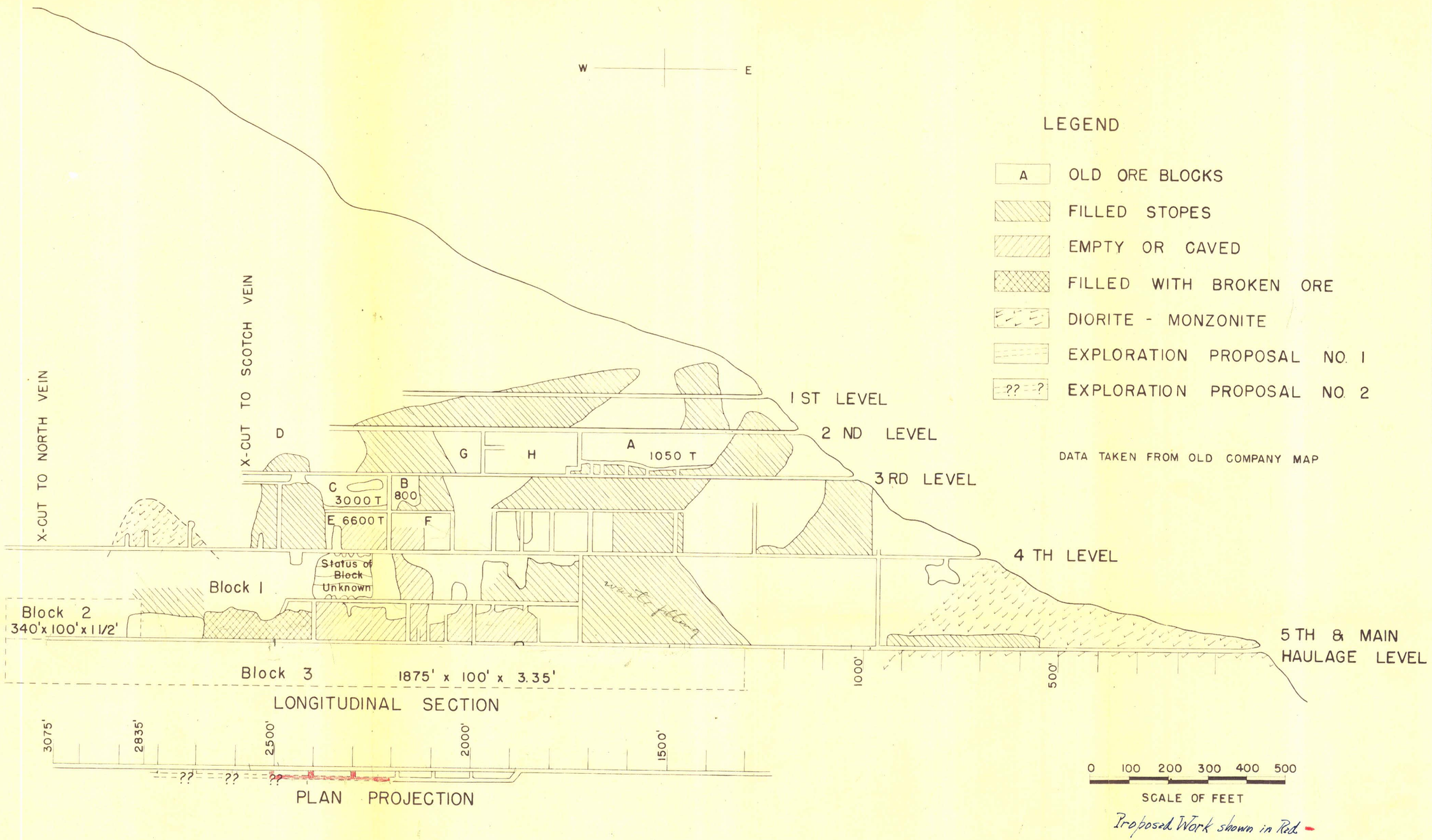
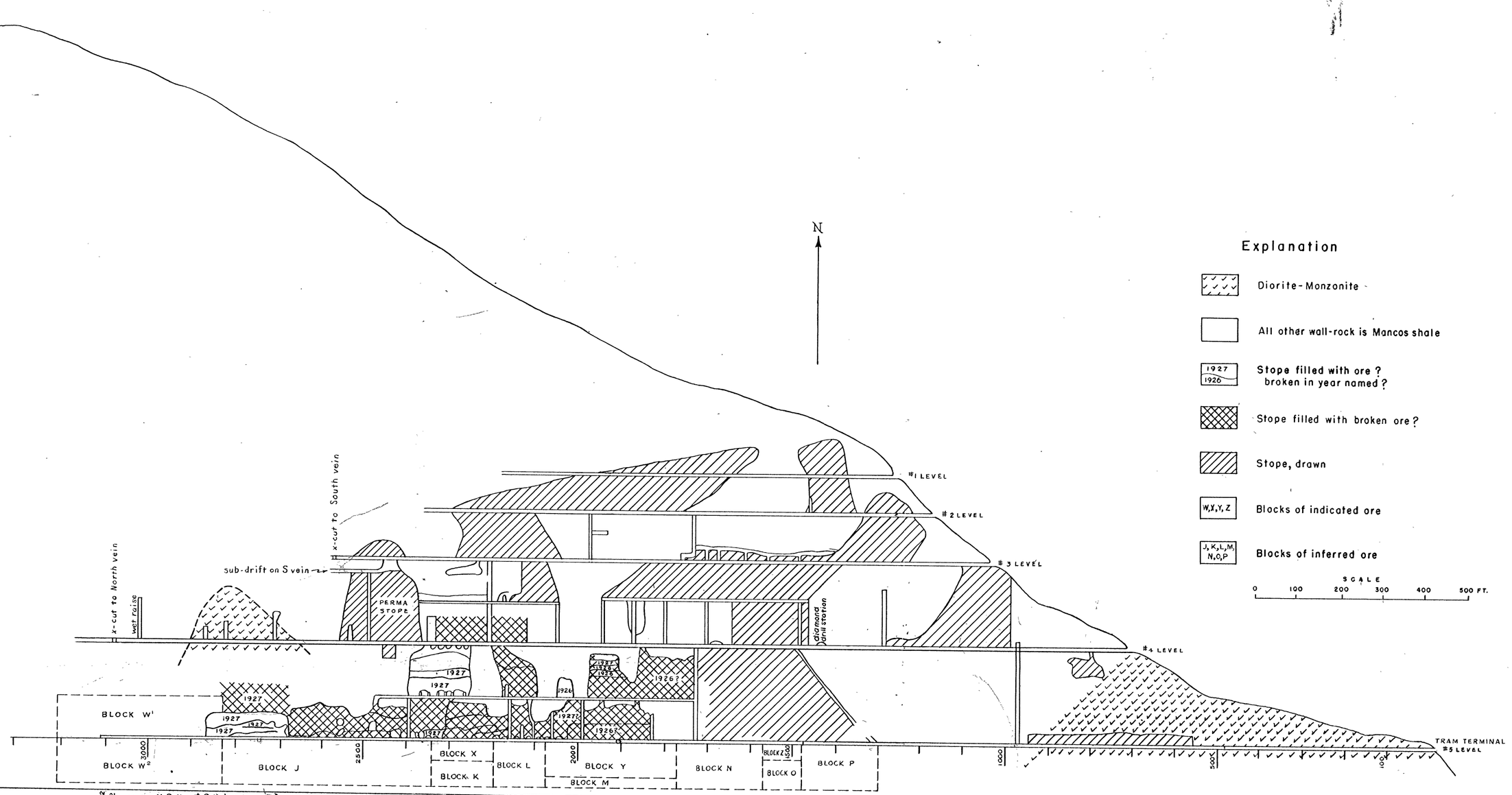


FIG. 2 PROPOSED EXPLORATION FOR PARAGON MINES, INC., SAN BERNARDO MINE DMA - 542



SAMPLES FROM #5 LEVEL

Width in inches	Au in oz.	Ag in oz.	Pb in %	Cu in %
38	.03	55.6	10.7	2.52
34	.03	5.3	8.7	.12
36	.03	4.6	3.7	.1
13	.03	183.3	20.6	.6
19	.02	3.8	2.6	.2
6	.02	6.3	15.8	.2
16	.01	1.4	.9	TR
12	.00	0.5	.2	.00
42	.00	1.1	.7	.12
18	.02	6.6	4.7	.2
8	.10	15.1	10.5	.46
18	.00	0.7	0.6	.00
11	.03	43.	5.5	1.62
17	.00	0.9	.2	.04
21	.02	3.5	3.5	.18
12	.02	6.0	3.6	.24
15	TR	0.4	0.1	TR
20	.04	50.	8.8	1.8
16	.02	7.6	10.2	.3
9	.02	2.8	2.4	.2
6	.02	3.5	2.6	.26
10	.02	14.2	5.8	.26
18	.03	12.4	2.2	.56
20	.30	174.3	2.8	
15	.11	34.6	3.1	
8	.04	17.6	2.0	
24	.41	146.6	2.9	
21	.12	100.5	3.9	
23	.05	32.0	2.8	
24	.04	54.6	0.8	
36	.05	54.0	1.6	
72	.01	0.69	1.60	
84	.01	23.05	6.75	
96	.03	48.61	1.0	
96	.05	75.93	2.25	
72	.01	6.17	8.5	
72	.01	7.67	2.0	
84	.01	1.21	0.15	
72	.01	2.95	.2	
14	.01	2.79	0.75	
85	.01	.36	.05	
108	.02	9.16	.05	
72	.02	3.92	.10	
84	.01	.29	.05	
72	.01	5.33	3.6	
84	.14	3.74	3.5	
60	.01	0.91	2.5	
45	.04	6.0		
45	.07	202.8		
16	.02	9.28	1.0	
9	.02	46.3	1.3	
20	.11	55.3	0.8	
26	.13			
43				
48	0.00	0.42	0.25	
72	.01	3.55	1.25	
84	.01	31.55	2.35	
72	.05	103.15	2.75	
0.57	.06	29.38	25.1	
72	.01	2.73	4.55	
65	.04	52.4	3.45	
15	.02	9.02	.1	
4	.09	254.9		
2	.04	18.0		

Copper content not reported

Copper content not reported

by C.N. Bell ?

from Mine Records

by C.A.Chase

Department of Interior
U.S. GEOLOGICAL SURVEY

PARAGON MINES, INC.

Stope map of SAN BERNARDO MINE
Ophir, San Miguel County, Colorado

Assays and ore blocks plotted on an adaptation of an Otto Mining Company map. This map was difficult to interpret, and the stope legend cannot be considered dependable. All available assays are shown below the points on the #5 Level where they were taken by the agent named below them.

Geologist - W. B. Meek June 1951

DMA Docket 542

Figure 2