DMA Form 1

DEFENSE MINERALS ADMINISTRATION
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DMEA ~~XXXX~~ Docket No. 2339

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

OFFICIAL BUSINESS

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WASHINGTON, D.C.
FEB 20
10-PM
1953

2616

Mr. H. T. O'Reilly
40 East Lyndale Avenue
Helena, Montana

Returned to Writer

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UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

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DATE 3/2/53

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W. R. Griswold
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GPO 16—63815-1

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

500

FEB 20 1953

Mr. H. T. O'Reilly
40 East Lyndale Avenue
Helena, Montana

Re: Docket No. DMEA-2339 (Lead-Zinc)
Bo (Bull) Gulch Prospect
Jefferson County, Montana

Dear Mr. O'Reilly:

Reference is made to your application, Docket No. DMEA-2339, for Government assistance in the exploration of your property.

A study of the information furnished in your application and other data available to this Administration indicates that the geological probability of discovering significant bodies of ore is not sufficiently good to warrant the expenditure of public funds. We regret to advise you that your application is denied.

Your interest in the program is appreciated, and we wish to thank you for bringing your property to the attention of the Government.

Sincerely yours,

O P Mitchell

Administrator

FILE COPY
SURNAME:

500

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

FEB 2 0 1953

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40 East Lyndale Avenue
Helena, Montana

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Sincerely yours,

C. O. Mittendorf

Administrator

FXCorbett/bjl (written 2/18/53)

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals Division
Mr. Kinkel
Mr. Bishop
Mr. Corbett
Region II (2)
Chron.

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

Memorandum

To: The Administrator

From: Chief, Base Metals Division

Subject: Recommendation for denial of Application Docket No. DMEA-2339, H. T. O'Reilly, Bo (Bull) Gulch Prospect, Jefferson County, Montana.

In compliance with the decision of the field and commodity engineers, this office approves recommendation for denial of this application for exploration funds.

The application was received by this Office January 21, 1952, and a report was submitted by the USBM and USGS on July 11. This report concludes that because of a paucity of ore minerals and the character of the occurrence, the possibilities of this prospect becoming a producer of significant amounts of metals are too poor to justify the expenditure of public funds on the proposed exploration project.

The matter had apparently been held pending by the Field Team to await the results of bulldozing work. We are now advised by the field that no communication has been received from applicant since May, 1952.

W. R. Griswold

500

FILE COPY
SURNAME:

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

Memorandum

To: The Administrator

From: Chief, Base Metals Division

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W. R. Griswold

FXCorbett/W. R. Griswold/hmj
(2-18-53)
CC to: Docket
Admr. R. File
Op. Committee
Base Metals Div.
Mr. Bishop
Mr. Kinkel
Mr. Corbett
Reg. II (2)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

February 12, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
FEB 20 1953

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-2339 (Lead-Zinc)
H. T. O'Reilly
Bo (Bull) Gulch Prospect
Jefferson County, Montana

Dear Mr. Selfridge:

Reference is made to your letter of February 2, 1953. Subject applicant has not contacted the Field Team since the time of the original field examination (May 1952. It is therefore recommended that the application be denied as was indicated in the examination reports dated June 13 and 19, 1952, attached to a Field Team memorandum to the Operating Committee dated July 3, 1952.

Sincerely yours,

A. E. Weissenborn

A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II

CC: USBM(2)
Klepper

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D. C.~~
So. 157 Howard Street
Spokane 4, Washington

February 12, 1953

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-2339 (Lead-Zinc)
H. T. O'Reilly
Bo (Bull) Gulch Prospect
Jefferson County, Montana

Dear Mr. Selfridge:

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Sincerely yours,

A. B. Weissenborn
Executive Officer, DMEA
Field Team, Region II

CC: USBM(2)
Klepper

FILE COPY
SURNAME:

500

Keating

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

Mr. A. E. Weissenborn
Executive Officer
DMEA Field Team, Region II
South 157 Howard Street
Spokane 4, Washington

FEB 2 1953

Re: Docket No. DMEA-2339 (Lead-Zinc)
H. T. O'Reilly
Bo (Bull) Gulch Prospect
Jefferson County, Montana

J.C. 2/2/53

Dear Mr. Weissenborn:

Responding to your letter of July 3, 1952, in regard to the subject application, we advised you in a letter dated August 5, 1952, that a final decision relative to a denial of the subject application, as you requested, would be deferred until a final report and recommendation had been received from your office.

You will recall that you recommended denial with the proviso that if Bulldozing then in progress showed favorable results, the application could be reconsidered.

A review of our files indicates that we have no further word in regard to this matter.

In a letter of October 29, 1952, to Mr. Johnson, Chairman of the Operating Committee, you state that it is to be presumed that the bulldozing has not been done, or that the results were so unfavorable that the Applicant did not think further action was required.

Would you please advise us as to the status of this application so that we may take the proper action to bring our files up to date.

FXCorbett/AGKeating/bjl
(1/30/53)
Copy to: Docket
Admr. R. File
Op. Committee
Base Metals Div.
Mr. Bishop
Mr. Kinkel
Chron.

Sincerely yours,

George C. Selfridge (JHB)
Chairman, Operating Committee

APPROVED:

J. H. Hedges (JHB)
Member, Bureau of Mines

A. R. Kinkel, Jr. (JHB)
Member, Geological Survey

UNITED STATES
DEPARTMENT OF THE INTERIOR

COPY

DEFENSE MINERALS ADMINISTRATION
~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

Docket

October 29, 1952 DMEA-2339

Mr. F. E. Johnson, Chairman
Operating Committee, DMEA
Dept. of the Interior
Washington 25, D. C.

Dear Mr. Johnson:

In a recent phone conversation between Mr. M. E. Volin and Mr. Keller about another matter, Mr. Keller requested information on the status of five dockets which are still pending. Following is the information which Mr. Keller has requested.

Docket No. DMEA-393X. W. A. Moon, Sunrise Mine. An exploration proposal has been worked out with the Operator and a tentative contract was drawn up on a unit cost basis. This was sent to the Operator some time ago to find out whether he would be agreeable to the costs that were stipulated. There was a long delay while Mr. Moon was apparently taking this up with his board of directors. In response to a very recent letter from me, he has stated that the terms of the proposed contract are satisfactory to his company. The report plus the tentative contract has already gone forward to you.

Docket No. DMEA-2109. The Mineral King. The applicant has shown little interest in discussing this proposal with us presumably because he has been dickering with a mining company for the sale of the property. We have noted recently in the papers that the property has been sold to the A. S. and R. Since then we have been trying to contact the Operator to get written confirmation of this so that the application can be withdrawn. We are writing him again to this effect and will state that if we do not hear from him, we will consider the application withdrawn.

Docket No. DMEA-2339. H. T. O'Reilly, Bo Gulch, Powell Co., Montana. This was denied in July with the proviso that if bulldozing then in progress showed up anything, the application could be reconsidered. Mr. M. M. Klepper of this office has been in the general area and has been keeping an eye on the work at Bo Gulch. As I have not heard from Mr. Klepper recently, I presume that either the bulldozing has not been done, or the results were so unfavorable that Mr. Klepper did not think any further action was required.

Unfortunately, Mr. Alepper is on leave at the moment. On his return, I will obtain final word so that the matter can be closed.

Docket No. DMA-2217, Clark Mines Inc. The applicant was to inform us when the shaft has been unwatered. He has never done so. We will contact him again and either insist on unwatering the shaft so that an examination can be made, or will deny the application.

Docket No. DMA-2496, Golden Anchor Mine; Powell County, Montana. The same status as some of the others described above. A proper appraisal of the proposal could not be made until some old workings had been cleaned out. The applicant was to advise us when this was done. One of our men is now in the field checking on this.

In reviewing the situation, it is clear that we have been making an error in our treatment of some of these dockets. Some of them look pretty hopeless, but our field men hesitate to make a negative recommendation because if a shaft were unwatered, an old working cleaned out, or a pit or two dug so that some definite information were available, there is a bare chance that something might be worked out. The applicant usually states he will do this, but quite as commonly fails to fullfill his promise. As a result, the field man usually makes two or three attempts to find out what has happened, and when no progress is reported, he is inclined to drop the whole matter forgetting that the record is on our book as an unfinished examination. This perhaps does no great harm, but it clutters up our records and makes it appear that we are taking too long to examine a property. I think in most cases this can be avoided by the Field Team making a definite negative recommendation on the basis that the information presented is insufficient to properly appraise the applicant's proposal. A statement can be made that if the applicant will do a certain specified amount of work, say, to pump out a shaft or make workings safe for inspection, the case can be reconsidered. In other words, we should strive to make this the applicant's responsibility to present the necessary information, and if he does not do so, then the docket will be considered dead until and unless he does so. I think this would save us quite a lot of trouble and remove a lot of dead wood from our unfinished files. This is not the only reason for the delay in getting in reports to you, of course, but a number of dockets are in this condition.

I would appreciate your opinion on this matter.

Sincerely yours

A. H. Weissenborn
Executive Officer, DMA
Field Team, Region II

cc: DMA(2)
DMA(2)

FILE COPY
SURNAME:

500
Contracts
HFKeller

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

AUG 5 1952

Mr. A. E. Weissenborn
Executive Officer, Region II
DMEA Field Team
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA-2339 (Lead-Zinc)
Be (Bull) Gulch Prospect
Jefferson County, Montana
$13,260.00

Dear Mr. Weissenborn:

We have your letter of July 3, 1952, in which were enclosed memorandums from Montis R. Klepper and E. G. Erickson, recommending the denial of the application.

As you propose to reappraise the application in the light of any significant development that may result from the surface trenching now being done, we shall defer making a final decision on this application until we receive your final report and recommendations.

Sincerely yours,

(signed) FRANK E. JOHNSON
(FJ)

Chairman, Operating Committee

P.N. 8-5-52

APPROVED:

J. H. Hedges (JHB)
Member, Bureau of Mines

O. M. Lemmon (JHB)
Member, Geological Survey

HFKeller/mb
August 1, 1952
cc to: Docket ✓
Adm Reading File
Operating Committee
Mr. Keller (2)
Mr. Bishop
Mr. McKnight
Region II
Chron

IN REPLY REFER TO:

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

July 29, 1952

Memorandum

Re: DMEA-2339
Bo (Bull) Gulch Prospect
Jefferson County, Montana
$13,260

To: Mr. H. F. Keller

From: E. L. Newcomb, USGS
O. M. Bishop, USBM

Subject: Concurrence with field team denial

The applicant requests Government assistance to explore a mineralized shear zone in quartz monzonite. The proposal involves 235 feet of shaft sinking and crosscutting to cut possible lead-zinc mineralization at depth.

The field team recommends that the application be denied. An 80 foot shaft, 2 prospect shafts, and several dozer cuts have already tested the vein structure over a strike length of 600 feet. No surface exposures of lead-zinc mineralization were found along the shear zone and since the shafts are inaccessible the reported mineralization in these workings cannot be checked. It is reported that 6 inches of 20-30% combined lead-zinc ore occurs near the bottom of the 80 foot shaft. However, the dump material contains only negligible amounts of ore of this grade. Past production consisted of only a few tons of shipping ore from the exploration shafts. The dump material indicates that the mineralization is complex and consists of minor amounts of pyrite, galena, sphalerite, arsenopyrite and calcite or rhodochrosite. The evidence from the dumps does not suggest that the shear zone is strongly mineralized. In fact, it can reasonably be assumed that the mineralization in the shafts is in narrow discontinuous bands which are unlikely to develop into minable widths at a greater depth.

We concur with the field team and recommend the application be denied. However, they also suggest that a formal letter of denial might be held in abeyance for a few weeks as the applicant plans to bulldoze several cuts across the vein structure. The field team will check this work to determine whether the results warrant further consideration of the application.

E. L. Newcomb
E. L. Newcomb
Geologist

O. M. Bishop
O. M. Bishop
Mining Engineer

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

July 29, 1952

Memorandum

Re: DMEA-2339
Bo (Bull) Gulch Prospect
Jefferson County, Montana
$13,260

To: Mr. H. F. Keller

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O. M. Bishop, USBM

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E. L. Newcomb
Geologist

O. M. Bishop
Mining Engineer

OFFICE OF THE ADMINISTRATOR

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS ADMINISTRATION

WASHINGTON 25, D. C.

1201 N. Division St.
Spokane 2, Wash.
July 3, 1952

MEMORANDUM

To: Chairman, Operating Committee, DMEA, Washington, D. C.

From: Field Team, Region II

Subject: Denial of application of Bo (Bull) Gulch property, Jefferson County, Mont., Docket No. DMEA 2339X. Commodity: lead-zinc

Enclosed herewith are memoranda from Montis R. Klepper, Geologist, U. S. Geological Survey, and E. G. Erickson, Mining Engineer, U. S. Bureau of Mines, recommending denial of the captioned application.

Surface trenching currently in progress is being watched for significant developments. If this work indicates either a strong vein structure or important base metal mineralization, the initial application will be reappraised and an appropriate recommendation made by the Field Team.

By Field Team, Region II

For: Thor N Stubgaard
A. E. Weissenborn, Exec. Officer
(U. S. Geological Survey)

M E Volin
M. E. Volin, Member
(U. S. Bureau of Mines)

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
9-19-52
(date)

cc: USGS, Spokane

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
So. 157 Howard Street
Spokane 4, Washington

Department of the Interior
Defense Minerals Exploration Administration
JUL 11 1952

June 19, 1952

MEMORANDUM

To: A. E. Weissenborn, Exec. Officer, DMEA Field Team, Region II

From: M. R. Klepper, Geologist, U. S. Geological Survey

Subject: Examination of Bo (Bull) Gulch prospect, Jefferson County, Montana, Docket DMEA 2339X.

Recommendation: This application should be denied unless the dozer trenches that the applicant plans to excavate within the next few weeks disclose a strong vein structure or a significant showing of lead and zinc minerals.

On May 6 Eric G. Erickson and I visited the Bo (Bull) Gulch property in the NW$\frac{1}{4}$ sec. 8, T. 7 N., R. 3 W., Jefferson Co., Montana. The property is on the west side of Bull Gulch about a mile by dirt road north of the Prickly Pear Creek road and a mile air-line east of U. S. Highway 91. Mr. H. T. O'Reilly and Everett Real, lessees, and Mr. Henry Madison, owner of the property accompanied us.

All workings are on the gentle west slope of Bull Gulch, from 50 to 75 vertically above the gulch bottom. Three shafts, respectively about 80,30, and 40 feet deep, and two shallow dozer cuts comprise the workings. The three shafts and one dozer cut are aligned in a N. 65° E. direction over a distance of about 600 feet. The other cut is about 400 feet S. 50° W. of the southwestmost aligned working. The shafts are inaccessible, and there are no exposures along the presumed vein zone, except for some disintegrated and weakly limonite stained quartz monzonite in one of the dozer cuts.

The three shafts are each said to be on a steeply dipping vein that trends about N. 65° E. The wall rock is quartz monzonite, which is locally somewhat bleached and pyritic. The southwestern shaft was sunk a few years ago by Mr. Real to a depth of 40 feet, reportedly in a strongly sheared zone that contains narrow streaks of

Reviewed by
DMEA OPERATING COMMITTEE
7-18-52
(date)

sulfide minerals. The best sulfide streak is said to have been found near the bottom of the shaft; it was about 6 inches thick and consisted of predominant sphalerite with common pyrite, calcite (or rhodochrosite) and quartz, and sparse galena. Only a negligible amount of ore of this type can now be found on the dump. None was shipped. On the dump of the central shaft, 200 feet to the northeast, small pieces of ore can be found that contain pyrite, sphalerite and galena with a little calcite, quartz, and arsenopyrite. None has been shipped. The northeasternmost shaft, near the margin of the valley fill was sunk by Mr. Madison many years ago. He estimates that a few tons of ore containing 10 to 15 percent lead and 10 to 15 percent zinc were shipped. A few small pieces of ore consisting of pyrite, galena and sphalerite, arsenopyrite, and calcite or rhodochrosite can be sorted from the dump.

The distribution of workings suggests that all but one dozer cut may explore a single N. 65° E.-trending fracture zone, but the nature of the dump material does not indicate that this zone is strongly mineralized, although locally it may be considerably sheared and altered. In view of the complexity of the ore and the small quantity found to date and of the probable narrow and discontinuous nature of the sulfide bands, I recommend that this application be denied. A formal letter of denial might be held in abeyance for a few weeks, however, as the applicant plans to bulldoze across the vein at two places between the three shafts and would like to have this decision reconsidered if his work discloses a strong vein or a significant showing of lead-zinc ore.

cc: USBM, Spokane
USBM, Albany
USGS (SRO)

1201 N. Division St.
Spokane 2, Wash.
June 13, 1952

MEMORANDUM

To: M. E. Volin, Member, DMEA Field Team, Region II

From: E. G. Erickson, Mining Engineer, Bureau of Mines

Subject: Docket DMEA 2339X, Bo Gulch claim, Jefferson County, Mont., commodity: lead-zinc

The captioned prospect was examined May 6, 1952, in company with M. R. Klepper, USGS field team representative, the applicants, H. F. O'Reilly and Everett Real, and the owner, Henry Madison.

RECOMMENDATION

Available evidence suggests that the probability of finding minable ore reserves is remote; it is considered advisable that the applicants' request for exploration assistance be denied. If additional trenching done for the applicants' account reveals a significant vein structure, the original proposal should be further reviewed by the Field Team.

LOCATION

The property, on the west slope of Bo Gulch, is in the SW¼ of sec. 8, T. 7 N., R. 3 W., M.P.M., Jefferson County, Montana. Accessible by car, it is one mile east over county and Forest Service roads from the intersection between U. S. Highway No. 91 and the Prickly Pear Creek road one mile south of Jefferson City, Montana.

PROPERTY AND OWNERSHIP

The property, owned by Henry Madison, Jefferson City, Montana, and leased to H. T. O'Reilly, Robert Steinbacher, and Everett Real, Helena, Montana, consists of 160 acres of homestead land held under U. S. Patent No. 399656.

COMPETENCE OF APPLICANT

The applicants and partners appear to be physically competent and financially able to prosecute a limited exploration campaign. Although they cannot qualify as skilled miners, the applicants have had experience in connection with small-scale prospecting ventures.

PAST PRODUCTION

According to Henry Madison, production is estimated at not more than 2 tons of complex sulfide ores containing about 10 percent lead and 10 percent zinc sorted from a prospect shaft dump during the course of a former leasing operation. Smelter returns for the shipment were not available to the examining team.

DESCRIPTION OF DEPOSIT

The deposit is a narrow breccia in locally altered quartz monzonite, apparently striking about N. 65° E. and dipping 70° to 80° NW. An 80-foot shaft, two shallow prospect shafts, and several short bulldozer cuts have probed the structure over a strike length of 600 feet.

The underground workings currently are inaccessible because of caving and flooding.

The vein width appeared to be not more than 6 inches. It is, however, locally accompanied by an alteration halo about 4 feet wide. Ore fragments on the dumps consist chiefly of galena, sphalerite, pyrite, arsenopyrite, and calcite in quartz gangue.

RECOVERABLE ORE RESERVES

A firm statement regarding minable ore reserves cannot be made, as adequate supporting information is not available. If the vein structure is assumed to contain a series of lenticular ore pods 1-1/2 feet wide, distributed at a 1 to 5 frequency, minable reserves can amount to about 22-1/2 tons per foot depth, with a dilution factor of 25 percent. Extraction of any narrow ore shoots found through further exploration probably will be by a high cost resuing method with a corresponding tonnage decrease.

E. G. Erickson

cc: USGS, Spokane
Wash.,D.C. (4)

500

FILE COPY
SURNAME:

Moulds

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

MAR 5 1952

Mr. H. T. O'Reilly
354 N. Davis Street
Helena, Montana

Re: DMEA 2339 Lead-Zinc
Be or Bull Gulch Claim
Jefferson County, Montana

Dear Mr. O'Reilly:

With reference to your letter of February 26, we do not have any record of the letter written to the Base Metals Division concerning your exploration project and presume that your letter was addressed to some other agency which is not concerned with the exploration assistance program.

Your application was forwarded to this office by the Executive Officer of Region II, Spokane, and he informed us at the time that one copy of your application was being retained to facilitate a field examination. The field examination will be made at the earliest practicable date, which, owing to winter conditions, will probably not be until spring. As a field examination is necessary before further consideration can be given to your application, final action will have to be deferred until the examination has been made and a report received from the Regional Office.

Sincerely yours,

D. E. Moulds 3/5/52

D. E. Moulds, Chief
Defense Minerals Exploration
Administration

DEMoulds/hmj
3-5-52
cc to: Adm. R. File
Docket File, Copy
Mr. Moulds
Field Team Region II

Helena, Montana
February 26, 1952

Department of the Interior
Defense Minerals Exploration & Adm.
Washington, D. C.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 3 - 1952

Gentlemen:

Your letter of January 23, 1952 assigned me Docket number DMEA 2339 and referred the application to Base Metals Division. I wrote to the Base Metals Division and they said they hadn't received anything on Docket Number DMEA 2339. That was about a month ago.

I was wondering if something happened to the application? Would it be possible for me to send further information to assist in furthering the consideration of this application?

I am anxious to find out the progress of my application, and any information will be appreciated. Hoping to hear from you, I remain,

Yours sincerely,

H. T. O'Reilly
354 N. Davis, Helena, Mont.

IN REPLY REFER TO:

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

February 7, 1952

Re: DMEA-2339
Bo or Bull Gulch Claim
Jefferson County, Montana
Lead-zinc
$13,260

Memorandum

To: Mr. D. E. Moulds

From: Mr. E. L. Newcomb

Subject: Field examination of property

The Region II field office has retained one copy of Form MF-103, one copy of Form MF-100, and a copy of the lease agreement to facilitate a field examination at the earliest practicable date.

This application will be reviewed after we receive the field examination report.

Returned herewith are:

2 Forms MF-103
2 " MF-100
2 Lease Agreements
2 January 16, 1952, Letter from A. E. Weissenborn

E. L. Newcomb
E. L. Newcomb
Geologist

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

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E. L. Newcomb
Geologist

DMEA-2331

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

[illegible] Street
[illegible], [illegible]

January 16, 1[illegible]2

[illegible]airman, [illegible] Committee
[illegible]ense Minerals Exploration Administration
[illegible]partment of Interior
[illegible]ashington [illegible], D. C.

Dear [illegible]r:

Enclosed are three copies of forms [illegible]-100 and [illegible]-103, submitted by Mr. [illegible] O'Neilly, 103 East Lyndale Avenue, Helena, Montana. The application concerns the [illegible] property located east of Jefferson City in Jefferson County, Montana. Also enclosed are three copies of a lease agreement on the subject property.

One copy of form [illegible]-100, one copy of [illegible]-103, and a copy of the lease agreement are being retained at this office to facilitate a field examination. The field examination will be made at the earliest practicable date which, owing to winter conditions, will probably not be until spring.

Sincerely,

[illegible]er [illegible] Hilla[illegible]rd
[illegible] [illegible] Weissenborn,
[illegible]ecutive Officer, DMEA
[illegible], [illegible]ion 1

Enclosures.

6/5/51

Defense Minerals Administration

Review of Application for Exploration Assistance

Docket No. DMEA - 2339

Commodity Lead - Zinc

Total Amount $13,260

Govt. Participation 50% - $6,630

1. Name and Address of Applicant H.T. O'Reilly, 40 East Lyndale Ave: Helena, Montana.

2. Location of Property Bo or Bull Gulch Claim in NW¼, Sec. 8 T. 7 N: R. 3 W: U.S. Patent #399656 - Containing 160 acres.

3. Mineral or metal Lead - Zinc Is it listed in Section 9 of MO-5?

If not, application will be rejected.

4. Geologic probability of discovery—based on data in application (question #16, 17, 18, 20 and 22)*

Mines or Survey reports, etc., do you rate chances:

a) Good

b) Poor

c) None

d) Don't know—needs field examination X

e) Is there an alternative and favorable project?
(If so, attach an explanation)

5. Is the applicant's right to the property clearly stated? YES
(question 5, 6, 7)*

6. If applicant is a lessee, is a copy of the lease attached? YES - lease made in name of O'Reilly, Robt. Steinbacher and E. Real
Does the lease have sufficient time to run to cover a future productive period? YES

*question numbers are those of MF-103

7. Are subordination agreements necessary? YES

a) MF-201? _____

b) MF-202 YES

8. From the data presented, does the proposed project appear feasible from the point of view of:

a) Available manpower YES

b) Equipment and supplies YES
(Question 14 plus general knowledge of availability)*

c) Accessibility (question 12)* YES

d) Water (question 13)* YES

e) Power (question 13)* YES

Is a field check needed on any of these points? Apparently not.

9. Does the experience of the applicant appear to be adequate to assure that he can properly conduct the proposed project? (question 4)* Don't Know

Is a field check needed on this point? YES

10. Exhibit A. (questions 21 and 22)*

a) Is the project adequately described? No

If not, are there sufficient data given so that you can describe the project? _____ If so, attach a draft.

b) Is there an adequate map or sketch of the proposed work? No

c) Is the proposed work "exploration" under the definition of Section 8, MO-5? YES ?

If not, what part of it is? _____

Is this part a worthwhile exploration project?_____

d) Are the cost estimates detailed? No

Can they be summarized, as on page 2 of Procedural Instruction 5-A, from the available data? No If so, attach a draft.

e) Are the cost estimates reasonable? No

f) Should more information be requested from applicant? No

g) Is a field examination necessary to complete Exhibit A? YES

11. Exhibit B (question 23-d)*

a) Is it applicable? YES

b) If so, are sufficient data furnished? No If so, attach a draft.

c) Is a field check needed? YES

12. Exhibit C (question 23-e, f and g)*

a) Is it applicable? YES

b) Sufficient data? No If so, attach a draft.

c) Are rents and charges reasonable? No

d) Is a field check needed? YES

13. Exhibit D (question 23-a, b)*

a) Are there sufficient data? No

b) Is the schedule adequate for the work proposed? No

c) Is the schedule excessive for the work proposed?_____

d) Are the proposed wages and salaries reasonable? Dont Know

e) Is a field check needed? YES

14. Exhibit E (question 23-c)*

a) Is it applicable? YES

b) Sufficient data? NO

c) Reasonable?

d) Field check needed? YES

15. In your judgment, can the proposed work be done in the proposed time? Dont Know

(All exploration must be completed within two years)

16. If field examination is not needed, attach your recommendation.

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing question? Rather Than Sink a new 200 foot Shaft why not rehabilitate The present 84 foot shaft?

Reviewed by: L. L. Farnham

Date 1/28/57

INT.-DUP. SEC., WASH., D.C. 99009

One settlement sheet has been found of ore shipped from the Bo Gulch or Bull Gulch Claim. This sheet is enclosed. Please return it when possible.

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

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. DMEA-2339
Metal or Mineral
Date Received 1-21-52
Amount $
Participation (Government %)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 21 1952

H. T. O'Reilly
40 E. Lyndale Ave.
Helena, Mont.

Name and address of applicant

Date December 28, 1951

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

DMA Docket Number (if available) _____

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.

(Name of company)	By H. T. O'Reilly (Signature of authorized official)
December 28, 1951 (Date)	Miner (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

INSTRUCTIONS

1. (a) The property is situated between the Greater Helena Mining District and the Boulder Mining District where recent discoveries of uranium ore have been found. On the property itself there are 3 shafts on the same lead, all of which have ore of lead, zinc, manganese, gold and silver.
   (b) Enclosed is a copy of the lease.
   (c) Legal description of the property is NW¼ SEC. 8, T. 7N., R. 3W.

2. (a) I expect to find lead, zinc, manganese, gold and silver ore.
   (b) This property is located in the Boulder Bathylith. The same formation the Butte ore bodies are located in. A big talc lead cuts thru the decomposed granite country rock, from north to south. In this talc lead are 3 known leads of lead, zinc, manganese, gold and silver ore, of various widths ranging from 5" at the surface to 4' at the deepest depth that has been explored. The talc lead is roughly about 25' wide, and the lead and zinc ore is a sulfide.

   A sketch of the property is with question #4.

   An assay of three surface leads in the big talc lead is enclosed.

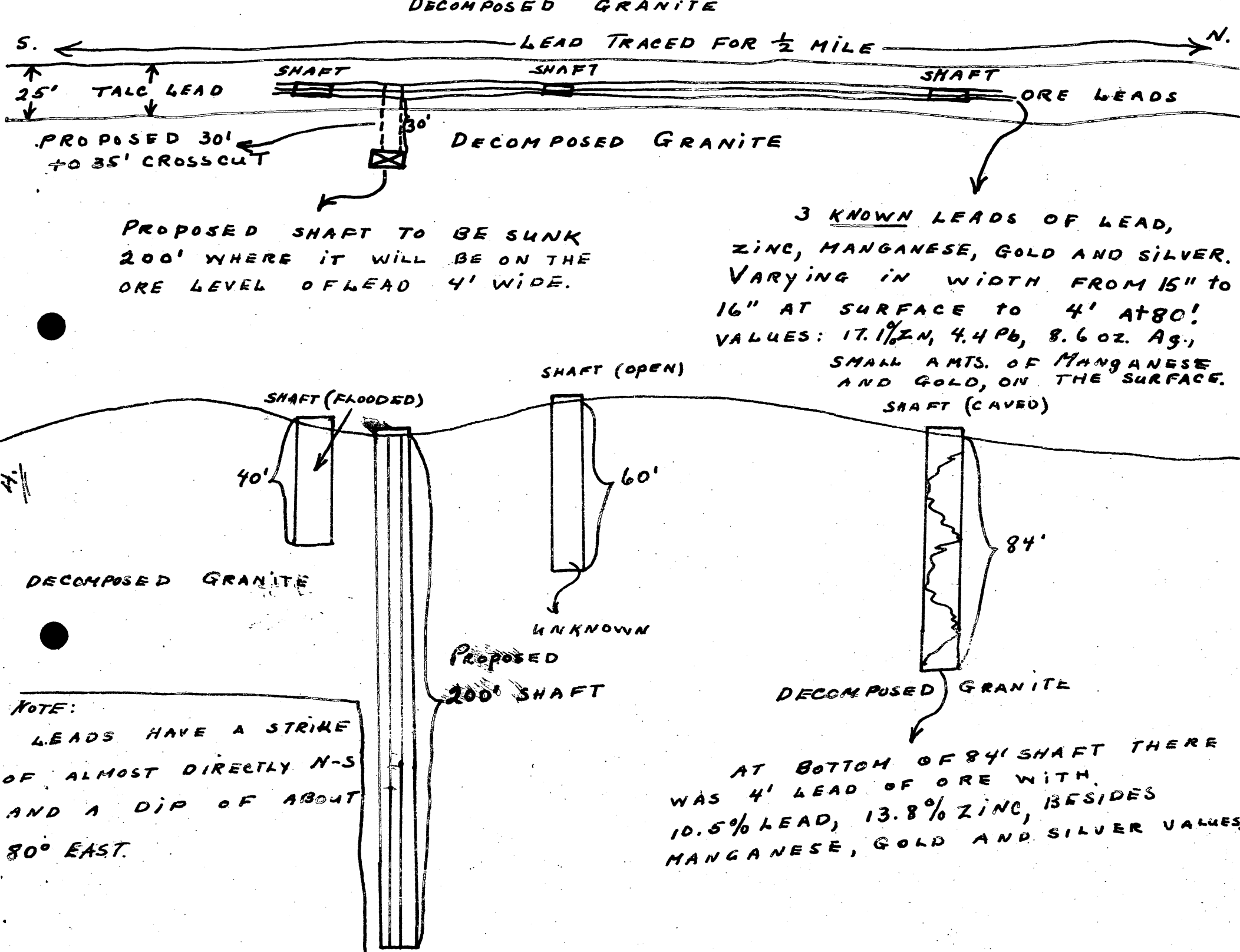
3. The proposed work necessary is as follows;

1. Repair shed to house supplies and tools.
2. Truck in machinery and necessary supplies.
3. Build compressor house for compressor, hoist, pump and accessories.
4. Set up compressor, hoist, pump, and engines.
5. Start shaft and erect gallows frame over shaft.
6. Sink and timber 200' shaft to ore level.
7. Crosscut to 4' ore lead. Crosscut should be from 30' to 35' long.
8. Timber crosscut.
9. Build track.

Estimated cost of this amount of work is as follows;

Repair to existing facilities ----------	$ 275.00
Building additional facilities ----------	1100.00
Labor ---------- ----------	5400.00
Materials, supplies, assaying, accounting, power, etc.	4145.00
Furnished equipment ----------	2340.00
	$13260.00

(b) Work will begin immediately, if loan is granted. The project should be completed in from 4½ to 6 months.


DECOMPOSED GRANITE
S.
LEAD TRACED FOR ½ MILE
N.
25'
TALC LEAD
SHAFT
SHAFT
SHAFT
ORE LEADS
30'
PROPOSED 30' TO 35' CROSSCUT
DECOMPOSED GRANITE
PROPOSED SHAFT TO BE SUNK 200' WHERE IT WILL BE ON THE ORE LEVEL OF LEAD 4' WIDE.
3 KNOWN LEADS OF LEAD, ZINC, MANGANESE, GOLD AND SILVER. VARYING IN WIDTH FROM 15" to 16" AT SURFACE to 4' AT 80'. VALUES: 17.1% ZN, 4.4 Pb, 8.6 oz. Ag., SMALL AMTS. OF MANGANESE AND GOLD, ON THE SURFACE.
SHAFT (OPEN)
SHAFT (FLOODED)
SHAFT (CAVED)
40'
60'
84'
DECOMPOSED GRANITE
UNKNOWN
Proposed 200' SHAFT
DECOMPOSED GRANITE
NOTE: LEADS HAVE A STRIKE OF ALMOST DIRECTLY N-S AND A DIP OF ABOUT 80° EAST.
AT BOTTOM OF 84' SHAFT THERE WAS 4' LEAD OF ORE WITH 10.5% LEAD, 13.8% ZINC, BESIDES MANGANESE, GOLD AND SILVER VALUES.

5. Existing Facilities:

(a) A machine shed must be repaired, A job that will cost about $ 150.

(a) Track must be relaid at a cost of $125.

6. Additional Facilities:

(a) A gallows frame must be erected at a cost of about $425.
(b) A compressor house should be built at a cost of about $475.
(c) A needed short stretch of road and leveling job would cost about $200.

7. Operating Equipment;

(a) Rented ----------$ 200.
(b) Purchased ----------None.
(c) Furnished:

1. Compressor ----------	$85.	a	month.
2. Compressor engine, receiver, gages, etc,	$30.	"	" .
3. Sludge pump ----------	$25.	"	" .
4. Hoist ----------	$30.	"	" .
5. Jackhammer #45 ----------	$30.	"	" .
6. Jackhammer #80 ----------	$25.	"	" .
7. Mine car ----------	$ 5.	"	" .
8. Dump truck ----------	$125.	"	" .
9. Steel, bits, hose, pipe, valves, etc,	$35.	"	" .
Total	$390.	"	" .

8. Labor:

(a) 3 miners to be paid $12. a day each.

9. Materials:

1. Timber	$ 1830.00
2. Powder	780.00
3. Bits sharpened	85.00
4. Nails	15.00
5. Ranger Bolts	285.00

Supplies:

1. Estimated repairs on machinery	250.00
2. Cable	95.00
3. Miscellaneous	60.00

Engineering:

1. No outside expense expected.

Assaying:

1. Estimated cost of assays @	35.00

Accounting:

1. Estimated cost	150.00

Power:

1. Gas and Oil	560.00

Water:

1. None.

Utilities:

1. None.

$4145.00

10. (a) I am prepared to invest 50% of the proposed project.

(b) Yes, this amount is sufficient to pay my part in the project.

11. Conditions or Circumstances:

(a) I don't know of any unusual conditions or circumstances not brought up.

Form MF-100
(May 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

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

NOT TO BE FILLED IN BY APPLICANT

Docket No. DMEA-2339

Date received 1-21-52

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 21 1952

H. T. O'Reilly
40 E. Lyndale Ave.
Helena, Mont.

Name and address of applicant

Date December 28, 1951

INSTRUCTIONS

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

GENERAL TECHNICAL DATA

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

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

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☐ Lessee.
   - ☐ Contractor.
5. Number of years in production _____

   If not in production or operation, estimated date when production will begin _____
6. Experience of operators:
   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

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

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation		Life Insurance Carried for Benefit of Applicant	
				Common (e)	Preferred (f)	Amount (g)	Net Cash Surrender Value After Loans (h)
	Total		x x x x x			x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

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

*Indicate period covered.

10. Production:

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

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

12. Ore or Mineral Reserves:

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

(b) If deposit is other than placer:

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

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

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved) NONE		4.4%-10.5% Pb.			
Indicated (probable)	150,000 T up	13.8%-17.1% Zn.	$83	$83	$21

(c) If placer:

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

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

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

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

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

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

13. Access Roads:

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

14. Water Supply:

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

15. Power:

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

16. Labor:

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

17. Equipment and Facilities:

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

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

CERTIFICATION

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

(Name of company)

By H. T. O'Reilly
(Signature of authorized official)

December 28, 1951
(Date)

Miner
(Title)

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

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

GENERAL TECHNICAL DATA

1. Materials Produced:
   (a) The chief products are zinc and lead.
   (b) The byproducts are manganese, gold, and silver.

2. The mine property consists of 3 shafts. The property is known as the "Bo Gulch Claim." The lead has been traced by surface cuts for about one-half mile.
   (a) There is about 180' of shaft.
   (b) There are no drifts or crosscuts. Several open cuts have been made tracing the lead. There are no tunnels or adits.
   (c) NW^{4} Sec.8, T.7N., R. 3W.
   (d) Jefferson County, Montana.

The intention is to sink a new shaft 200' in the country granite, 50' south of the big talc lead containing the ore leads. Then to crosscut to the ore. If water is encountered then, it can be pumped out. The ore at 84' on this same lead, was 4' wide and was 10.5% lead and 13.8% zinc.

3. (a) This property is 1½ miles east of Jefferson City, Montana.
   (b) Jefferson Mining District.
   (c) NW^{4} Sec. 8, Township 7 N. Range 3 West.
   (d) Jefferson County, Montana.

4. (a) Property is not in production.
   (b) We are operating this property as lessees.

5. Some 15 or 20 years ago the property was in production about 18 months.
   If the loan is granted the property will be in production in from 4 to 6 months.

6. (a) (b) The applicant and manager of the project are the same. I have worked in the mines in Butte for two years. Operated a ranch two years and a tourist court 2½ years. Since the war, have been interested in and operated small mines in the Greater Helena Mining District, and the Winston Mining District.

7. (a) Three shafts have been sunk on the same lead on the "Bo Gulch Claim". Several surface cuts have been made tracing the lead. Some shipments have been made of 10.5% lead and 13.8% zinc, but how many tons I could not say for certain.
   #1 Shaft was abandonded because they started to stope toonear the shaft and the shaft caved in.
   #2 Shaft was abandoned because one partner drowned. (Not on the property).
   #3 Shaft was abandoned in 1945 because the price of zinc was low, and with the end of the war the miners figured it would go lower.
   (b) No known adjoinging or neighboring properties.
   (c) Enclosed is an assay report of 3 leads in same big talc mineralized lead. No other private reports are available.

8. The applicant is not a corporation.
9. No Capital stock issues.
10. No known production.
11. NO known rate of production.
12. The talc lead is approximately 25' wide with several leads in it. The principle one explored is/5" to/6" on the surface (40'), and widens to 4' at about 80' depth. The lead has been traced for ½ mile. No known geology reports.
(b)1. Assay on three leads is enclosed.
2. No measured ore reserves. Probable ore reserves is hard to estimate. The main lead of/5" to/6" at 40' widens to 4' at 80' depth, and the lead is at least ½ mile of known length. Also there are several smaller leads that have not been explored.
Not a placer but a lead.

13. Access Roads:
1¾ miles to shipping point, 3/4 miles of macadam hiway, ½ mile county dirt road, ½ mile private dirt road.

14. Water Supply:
Small creek, sufficient for cooking and drinking purposes. Adequate supply the year around. Creek about 14" wide with an 8% grade in December.

15. Power:
Power is available from a Montana Power Company line, but has'nt been used at the prospect. Gasoline power was used previously.

16. Labor:
No recent payroll period. Exploration has been done by local miners, on a no payroll basis.

17. Equipment and Facilities:
Buildings consist of a machine shed badly in need of repairs.

1. Compressor
2. Compressor engine.
3. Slusher pump.
4. Pump engine.
5. Hoist.
6. Jackhammer #45.
7. Jackhammer #80.
8. Mine car.
9. 2 Hoisting buckets.
10. Cable.
11. Lumber and planks.
12. 200' track.
13. Dump truck.
14. Drills and bits.
15. Tools and other equipment.

18. I am unaware of any particular conditions or circumstances, not mentioned above.

EXPLORATION

Subject: DMEA-2339
Re: Exploration Loan
Bo Gulch Claim
January 23, 1952

Mr. H. T. O'Reilly
40 E Lyndale Avenue
Helena, Montana

My dear Mr. O'Reilly:

This will acknowledge receipt of your application dated December 28, 1952 for a loan under the Defense Production Act of 1950.

Your application was assigned Docket Number DMEA-2339 and referred to the Base Metals Division.

Kindly refer to DMEA-2339 in any future correspondence relating to your application.

Sincerely yours,

ROBERT E. ADAMS

Robert E. Adams
Acting Administrative Officer

7862

DMEA-2239

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

So. 157 Howard Street
Spokane 4, Washington

January 16, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 21 1952

Chairman, Operating Committee
Defense Minerals Exploration Administration
Department of Interior
Washington 25, D. C.

Dear Sir:

Enclosed are three copies of Forms MF-100 and MF-103, submitted by Mr. H. T. O'Reilly, 403 East Lyndale Avenue, Helena, Montana. The application concerns the Bo Gulch property located east of Jefferson City in Jefferson County, Montana. Also enclosed are three copies of a lease agreement on the subject property.

One copy of Form MF-100, one copy of MF-103, and a copy of the lease agreement are being retained at this office to facilitate a field examination. The field examination will be made at the earliest practicable date which, owing to winter conditions, will probably not be until spring.

Sincerely,

Thor H. Kiilsgaard

Thor H. Kiilsgaard
For: A. E. Weissenborn,
Executive Officer, DMEA
Field Team, Region II

Enclosures.

One settlement sheet has been found of ore shipped from the Bo Gulch or Bull Gulch Claim. This sheet is enclosed. Please return it when possible.

AMERICAN SMELTING AND REFINING CO.

EAST HELENA PLANT

East Helena, Mont., June 14, 1937 193

Bought of F. Karnowsky & M. C. Campbell Mine Bull Gulch Our Lot No. 1079

Class Crude Shipping Point Jefferson City, Montana Mine Lot No. 1

Quotations of Weeks Avg. Silver .77 Lead 6.00 Cathode Copper 13.65

ASSAYS	GOLD Oz. per ton	SILVER Oz. per ton	LEAD Per Cent	COPPER Per Cent	INSOL Per Cent	IRON Per Cent	Manganese Per Cent	ZINC Per Cent	SULPHUR Per Cent	ARSENIC Per Cent	Antimony Per Cent	BISMUTH Per Cent	
A. S. & R. Co.	0.045	6.4	13.8	0.01				10.5	8.0	0.12	0.27	0.02	
Umpire													
Settlement	0.045	6.4	13.8	0.01				10.5	8.0	0.12	0.27	0.02	

Car & Number	Weight
Truck	11350

VALUES PER TON			
Gold	91.1371%	@ 35.00-1/4%	1.43
Silver less 1 oz		@ .77	4.16
Lead Less 1.5 90%		@ 6.00-1.50	9.96
Copper, Less		@	
			15.55
Less Total Deductions			6.46

DEDUCTIONS PER TON			
Base for Charge Lead	6.00		
Truck Shipment		.25	
			6.25
Insoluble	%	@	
Zinc	.5 %	@ .30	.15
Sulphur	%	@	
Arsenic	%	@	
Antimony	%	@	
Bismuth	0.124 Lbs.	@ .50	.06
Debit			
Iron	%	@	
Total Deductions			$ 6.46

Weight of Lot

Weight of Sacks

Wet Weight

Less Moisture 7.2 % 817

Dry Weight 10533 Pounds @ 9.09 Per Ton $ 47.87

Freight Per Wet Ton @	$	
Hauling Per Wet Ton @ 2.50 to N. Pumnea, Helena	$ 14.19	
Royalty 10% to Henry Madison, Jefferson, Mont.	$ 2.87	
Advances	$	
Umpire	$	
Sampling When Less Than 10 Tons	$ 5.00	
TOTAL	$ 22.06	$ 22.06
NET PROCEEDS		$ 25.81

Date of B/L

Date of Arrival 6-7-37

Checked

Correct J Mac

Rates except on contracts, subject to change without notice.

A charge of $5.00 made on all lots under 10 dry tons.

25M—1-37.

INDEPENDENT PUBLISHING CO.

AMERICAN SMELTING AND REFINING CO.

EAST HELENA PLANT

East Helena, Mont., June 8, 1927 138

Bought of T. Fitzgerald & Co. General ..... Mine Bull Calf ..... Our Lot No. 1079

Class Crude ..... Shipper Point ..... Mine Lot No. 1

Quotations of Silver .72 ..... Lead 6.00 ..... Cathode Copper 13.65

Assays	Gold Oz. per ton	Silver Oz. per ton	Lead Per Cent	Copper Per Cent	Iron Per Cent	Manganese Per Cent	Zinc Per Cent	Sulphur Per Cent	Arsenic Per Cent	Antimony Per Cent	Bismuth Per Cent
A. A. & Co.	0.040	1.6					10.4	2.0	.12	0.27	0.02
Weights	0.040	1.6	0.01				10.4	2.0	.12	0.27	0.02

Deductions per Ton		Values per Ton		Weight
Base for Charge	Lead 5.00	Gold	1.42	
Truck Allowance	.25	Silver	.16	
		Lead	1.00	
		Copper		
Insoluble	% @			
Zinc	% @ .15			
Sulphur	% @			
Arsenic	% @			Truck 1 1250
Antimony	% @			
Bismuth	0.04 lbs. @ .50			
Debit				
Iron	% @			
Total Deductions	$ 5.40	Less Total Deductions	6.40	

Weight of Lot .....

Weight of Sacks .....

Net Weight .....

Less Moisture 7.5 % 217

Dry Weight 2,683

Freight	@	2.00	Per Ton $ 40.27
Freight Per Wet Ton	@		$
Hauling For Wet Ton	@	2.50	$ 14.12
Sampling			$ 2.42
Advance			$
Umpire			$
Sampling When Less Than 10 Tons			$

Date of Sampling .....

Date of Arrival .....

Checked .....

Correct .....

Rates except on contracts, subject to change without notice.

A charge of $5.00 made on all lots under 10 dry tons.

TOTAL $ 56.81

NET PROCEEDS $ 56.81

2M—1-27.

A. V. TRENT,
Owner-Manager

GOODALL BROTHERS

ASSAYERS AND METALLURGICAL CHEMISTS

46 SO. MAIN ST., HELENA, MONTANA

Pb = .17
Zn = .175

TEL. 628
P. O. BOX 537

Date DEC 17 1951

UMPIRE ASSAY..... CONTROL ASSAY..... HAND SAMPLE.....

ASSAYED FOR: H. J. O'Reilly

MARKS: Ho E. Lyndale

Sample No.	DESCRIPTION	GOLD Ozs. Per Ton	SILVER Ozs. Per Ton	WET LEAD Per Cent	COPPER Per Cent	ZINC Per Cent	IRON Per Cent	INSOL. Per Cent	Mn. Per Cent	Total Value Per Ton	
3-A	Madison - Hard {40'	0.04	8.6	4.4		17.1			1.13	18.01	83.83
3-B	" - Brown {surface	0.06	1.9	1.4		1.0			0.37	3.81	[illegible].89
3-C	" - Talc {surface	0.01	2.4	1.4		3.8				7.51	20.57

Values not figured

gold, silver & lead on #3-A and gold and silver on #3-B & 3-C are the only values figured

Gold not deducted:

Charges $ 15.00 Paid

GOODALL BROS.

By A. V. Trent

NPCo. B-8027—Form 1

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

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. DMEA-2339
Metal or Mineral
Date Received 1-21-52
Amount $
Participation (Government %)

Name and address of applicant: N. T. O'Reilly, 40 E. Lyndale Ave., Helena, Mont.

Date December 28, 1951

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

DMA Docket Number (if available) _____

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. ~~$11,720.00~~ $13,260.00

   (*b*) State the time required to start the project and to complete it. 4 to 6 mo.

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.

(Name of company)	By H. T. O'Reilly (Signature of authorized official)
December 28, 1951 (Date)	Miner (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

INSTRUCTIONS

1. (a) The property is situated between the Greater Helena Mining District and the Boulder Mining District where recent discoveries of uranium ore have been found. On the property itself there are 3 shafts on the same lead, all of which have ore of lead, zinc, manganese, gold and silver.
   (b) Enclosed is a copy of the lease.
   (c) Legal description of the property is NW¼ SEC. 8, T. 7N. Rge. 3W.

2. (a) I expect to find lead, zinc, manganese, gold and silver ore.
   (b) This property is located in the Boulder Bathylith. The same formation the Butte ore bodies are located in. A big talc lead cuts thru the decomposed granite country rock, from north to south. In this talc lead are 3 known leads of lead, zinc, manganese, gold and silver ore, of various widths ranging from 15" at the surface to 4' at the deepest depth that has been explored. The talc lead is roughly about 25' wide, and the lead and zinc ore is a sulfide.

   A sketch of the property is with question #4.

   An assay of three surface leads in the big talc lead is enclosed.

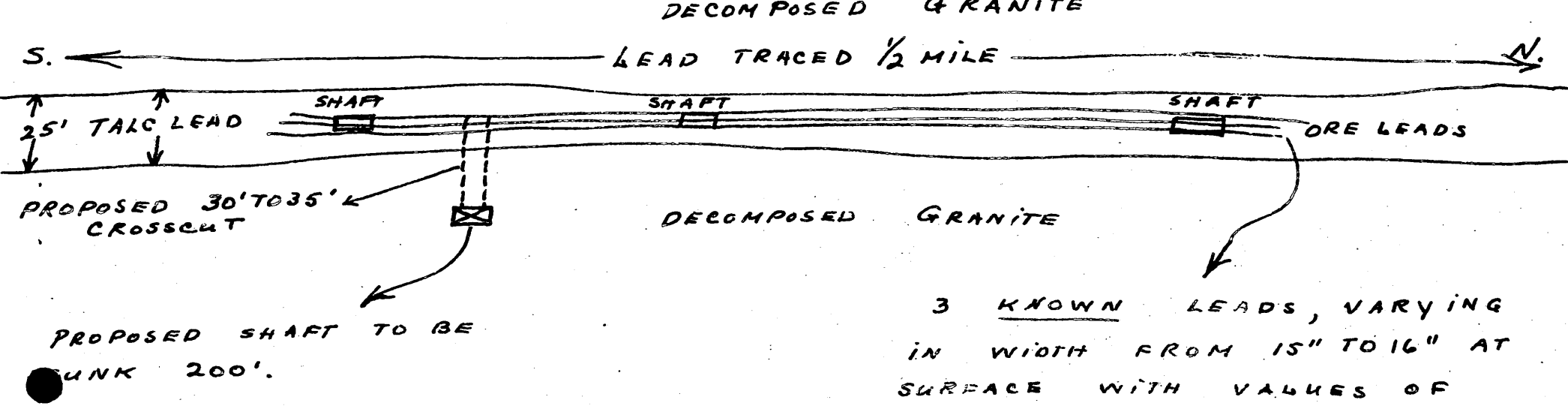
3. The proposed work necessary is as follows:

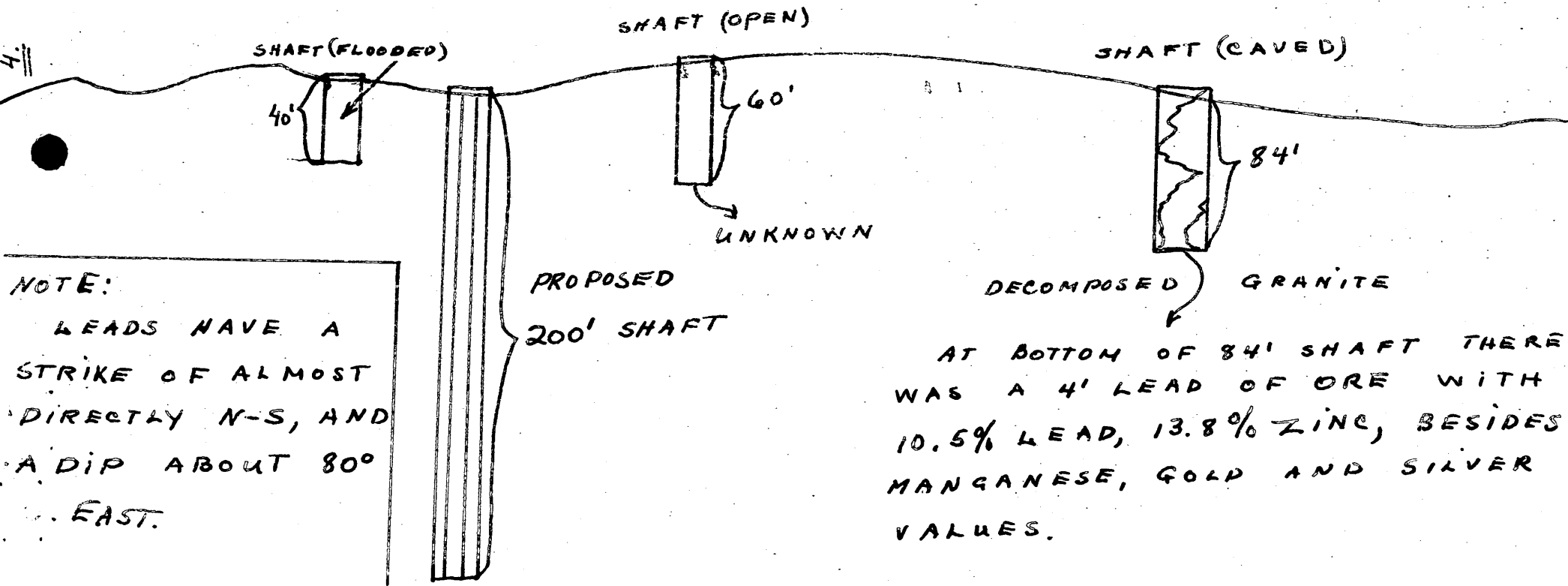
1. Repair shed to house supplies and tools.
2. Truck in machinery and necessary supplies.
3. Build compressor house for compressor, hoist, pump and accessories.
4. Set up compressor, hoist, pump, and engines.
5. Start shaft and erect gallows frame over shaft.
6. Sink and timber 200' shaft to ore level.
7. Crosscut to 4' ore lead. Crosscut should be from 30' to 35' long.
8. Timber crosscut.
9. Build track.

Estimated cost of this amount of work is as follows:

Repair to existing facilities	$ 275.00
Building additional facilities	1100.00
Labor	5400.00
Materials, supplies, assaying, accounting, power, etc.	4145.00
Furnished equipment	2340.00
	$13260.00

(b) Work will begin immediately, if loan is granted. The project should be completed in from 4½ to 6 months.


DECOMPOSED GRANITE
S.
LEAD TRACED ½ MILE
N.
25' TALC LEAD
SHAFT
SHAFT
SHAFT
ORE LEADS
PROPOSED 30' TO 35' CROSSCUT
DECOMPOSED GRANITE
PROPOSED SHAFT TO BE SUNK 200'.
3 KNOWN LEADS, VARYING IN WIDTH FROM 15" TO 16" AT SURFACE WITH VALUES OF 17.1% ZINC, 4.4% LEAD, 8.6 oz Ag., AND SMALL AMOUNTS OF GOLD AND MANGANESE.


4.
SHAFT (FLOODED)
40'
SHAFT (OPEN)
60'
UNKNOWN
SHAFT (CAVED)
84'
PROPOSED
200' SHAFT
DECOMPOSED GRANITE
NOTE:
LEADS HAVE A STRIKE OF ALMOST DIRECTLY N-S, AND A DIP ABOUT 80° EAST.
AT BOTTOM OF 84' SHAFT THERE WAS A 4' LEAD OF ORE WITH 10.5% LEAD, 13.8% ZINC, BESIDES MANGANESE, GOLD AND SILVER VALUES.

5. Existing Facilities:

(a) A machine shed must be repaired, A job that will cost about $ 150.
(a) Track must be relaid at a cost of $125.

6. Additional Facilities:

(a) A gallows frame must be erected at a cost of about $425.
(b) A compressor house should be built at a cost of about $475.
(c) A needed short stretch of road and leveling job would cost about $200.

7. Operating Equipment:

(a) Rented ----------$ 200.
(b) Purchased ***----------None.
(c) Furnished:

1. Compressor	$85.	a	month.
2. Compressor engine, receiver, gages, etc,	$30.	"	" .
3. Sludge pump	$25.	"	" .
4. Hoist	$30.	"	" .
5. Jackhammer #45	$30.	"	" .
6. Jackhammer #80	$25.	"	" .
7. Mine car	$ 5.	"	" .
8. Dump truck	$125.	"	" .
9. Steel, bits, hose, pipe, valves,etc,	$35.	"	" .
Total	$390.	"	" .

8. Labor:

(a) 3 miners to be paid $12. a day each.

9. Materials:

1. Timber	$ 1830.00
2. Powder	780.00
3. Bits sharpened	85.00
4. Nails	15.00
5. Hanger Bolts	285.00

Supplies:

1. Estimated repairs on machinery	250.00
2. Cable	95.00
3. Miscellaneous	60.00

Engineering:

1. No outside expense expected.

Assaying:

1. Estimated cost of assays	35.00

Accounting:

1. Estimated cost	150.00

Power:

1. Gas and Oil	560.00

Water:

1. None.

Utilities:

1. None.

$4145.00

10. (a) I am prepared to invest 50% of the proposed project.

(b) Yes, this amount is sufficient to pay my part in the project.

11. Conditions or Circumstances:

(a) I don't know of any unusual conditions or circumstances not brought up.

Form MF-100
(May 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

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

NOT TO BE FILLED IN BY APPLICANT

Docket No. DMEA-3339

Date received 1-21-52

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 21 1952

Name and address of applicant

Date December 28, 1951

INSTRUCTIONS

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

GENERAL TECHNICAL DATA

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

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

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☐ Lessee.
   - ☐ Contractor.
5. Number of years in production _____

   If not in production or operation, estimated date when production will begin _____
6. Experience of operators:
   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

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

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation		Life Insurance Carried for Benefit of Applicant	
				Common (e)	Preferred (f)	Amount (g)	Net Cash Surrender Value After Loans (h)
	Total		x x x x x			x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

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

*Indicate period covered.

10. Production:

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

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

12. Ore or Mineral Reserves:

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

(b) If deposit is other than placer:

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

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

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved) NONE					
Indicated (probable)	150,000 Tons	4.4%-10.5% Pb. 13.8%-17.1% Zn	$83	$83	$21

(c) If placer:

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

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

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

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

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

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

13. Access Roads:

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

14. Water Supply:

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

15. Power:

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

16. Labor:

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

17. Equipment and Facilities:

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

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

CERTIFICATION

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

(Name of company)

By H. T. O'Reilly
(Signature of authorized official)

December 28, 1951
(Date)

Miner
(Title)

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

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

GENERAL TECHNICAL DATA

1. Materials Produced;
   (a) The chief products are zinc and lead.
   (b) The byproducts are manganese, gold, and silver.

2. The mine property consists of 3 shafts. The property is known as the "Bo Gulch Claim." The lead has been traced by surface cuts for about one-half mile.
   (a) There is about 180' of shaft.
   (b) There are no drifts or crosscuts. Several open cuts have been made tracing the lead. There are no tunnels or adits.
   (c) NW^{4} Sec.8, T.7N., R. 3W.
   (d) Jefferson County, Montana.

The intention is to sink a new shaft 200' in the country granite, 50' south of the big talc lead containing the ore leads. Then to crosscut to the ore. If water is encountered then, it can be pumped out. The ore at 84' on this same lead, was 4' wide and was 10.5% lead and 13.8% zinc.

3. (a) This property is 1½ miles east of Jefferson City, Montana.
   (b) Jefferson Mining District.
   (c) NW^{4} Sec. 8, Township 7 N. Range 3 West.
   (d) Jefferson County, Montana.

4. (a) Property is not in production.
   (b) We are operating this property as lessees.

5. Some 15 or 20 years ago the property was in production about 18 months.
   If the loan is granted the property will be in production in from 4 to 6 months.

6. (a) (b) The applicant and manager of the project are the same. I have worked in the mines in Butte for two years. Operated a ranch two years and a tourist court 2½ years. Since the war, have been interested in and operated small mines in the Greater Helena Mining District, and the Winston Mining District.

7. (a) Three shafts have been sunk on the same lead on the "Bo Gulch Claim". Several surface cuts have been made tracing the lead. Some shipments have been made of 10.5% lead and 13.8% zinc, but how many tons I could not say for certain.
   #1 Shaft was abandonded because they started to stope too near the shaft and the shaft caved in.
   #2 Shaft was abandoned because one partner drowned. (Not on the property).
   #3 Shaft was abandoned in 1945 because the price of zinc was low, and with the end of the war the miners figured it would go lower.
   (b) No known adjoinging or neighboring properties.
   (c) Enclosed is an assay report of 3 leads in same big talc mineralized lead. No other private reports are available.

8. The applicant is not a corporation.
9. No Capital stock issues.
10. No known production.
11. NO known rate of production.
12. The talc lead is approximately 25' wide with several leads in it. The principle one explored is/5" to/6" on the surface (40'), and widens to 4' at about 80' depth. The lead has been traced for ½ mile. No known geology reports.
(a)1. Assay on three leads is enclosed.
2. No measured ore reserves. Probable ore reserves is hard to estimate. The main lead of/5" to/6" at 40' widens to 4' at 80' depth, and the lead is at least ½ mile of known length. Also there are several smaller leads that have not been explored.
Not a placer but a lead.

13. Access Roads:
1½ miles to shipping point, 3/4 miles of macadam hiway, ½ mile county dirt road, ½ mile private dirt road.

14. Water Supply:
Small creek, sufficient for cooking and drinking purposes. Adequate supply the year around. Creek about 14" wide with an 8% grade, in December.

15. Power:
Power is available from a Montana Power Company line, but hasn't been used at the prospect. Gasoline power was used previously.

16. Labor:
No recent payroll period. Exploration has been done by local miners, on a no payroll basis.

17. Equipment and Facilities:
Buildings consist of a machine shed badly in need of repairs

1. Compressor
2. Compressor engine.
3. Slusher pump.
4. Pump engine.
5. Hoist.
6. Jackhammer #45.
7. Jackhammer #80.
8. Mine car.
9. 2 Hoisting buckets.
10. Cable.
11. Lumber and planks.
12. 200' track.
13. Dump truck.
14. Drills and bits.
15. Tools and other equipment.

18. I am unaware of any particular conditions or circumstances, not mentioned above.

THIS AGREEMENT, made this ___ day of January, 1952, by and between HENRY MADISON and DORIS K. MADISON, his wife, of Jefferson City, Montana, first parties, and H. T. O'REILLY, ROBERT STEINBACHER and EVERETT REAL, of Lewis and Clark County, Montana, second parites, WITNESSETH:

That for valuable considerations, the reciept whereof is hereby acknowledged, first parties hereby grant to second parties the exclusive right and option to purchase, and the exclusive right to occupy and mine, under the terms and conditions hereinafter set forth, that certain real estate, situated in Jefferson County, Montana, and described as follows, to-wit:

> The Northwest Quarter (NW¼) of Section Eight (8), Township Seven (7) North, Range Three (3) West, U.S.Patent No. 399656, containing 160 acres of land; reserving, however, the right to pasture said land, without interference with the operations of second parties hereunder.

1. The price to be paid for said land in the event of the exercise of said option is the sum of Forty Five Thousand Dollars ($45,000.00), payble on or before January 1, 1962.

2. From the time of the execution and delivery of this agreement until January 1, 1962, subject to the performance by second parties of all of the terms and conditions hereof on their part, as and when required by the provisions hereof, second parties shall have the exculsive right to occupy said lands and explore the same for metals and other minerals, and develop and extract ore therefrom, and market the same in crude form, or to mill any ore so extracted an/or any ore now or hereafter broken and in the workings or upon the dumps upon said land, and market the concentrates thereof, and retain the proceeds of all ores and concentrates so marketed, subject to the payment of royalties as hereinafter provided; and second parties may install such machinery and other equipment, buildings and other structures,

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and construct such roads and other facilities, as they may deem necessary, or proper, and use the same in their operations hereunder.

3. Second parties shall pay to first parties a royalty of ten per cent (10%) of the net smelter returns from all ores, concentrates, and other products of operations hereunder. Three Dollars ($3.00) per wet ton shall be deducted from such returns in lieu of all transportation costs before computation of royalty. All Royalties paid shall be credited as payments upon the purchase price.

4. No ores, concentrates, or other products shall be shipped outside the State of Montana unless second parties shall first notify first parties in writing, stating the name and address of the smelter or other purchaser to which shipment is contemplated. Any smelter or other purchaser of ore, concentrates, or other products, is hereby directed to deduct from the returns upon each shipment the royalties herein provided for and transmit the same to the First Natinnal Bank and Trust Company at Helena, Montana, for the credit of first parties, together with a copy of the settlement sheet. At the same time such smelter or other purchaser is directed to mail a copy of each such settlement sheet to first parties at Jefferson City, Montana.

5. As a condition to the continuance of this option and lease in force second parties shall, beginning with the calendar month of April, 1952, perform or cause to be performed upon said optioned property during each calendar month of the life of this agreement, except when prevented by weather conditions, strikes, or other causes beyond their control, other than lack of financial means, at least twenty-five (25) man shifts of work at eight (8) hours each, or the equivalent in working hours, or make equivalent expenditure in bull-dozer or other machine work, in development

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and/or mining.

6. All work shall be done in a good, minerlike manner, consistently with good mining practice, and first parties and their agents or attorneys may go upon said property and into the workings thereon at any reasonable time for the purpose of inspection and the taking of samples.

7. The billing for each shipment of ore or concentrates or other products shall show the names of first parties as the owners of said property.

8. Second parties may cut any timber growing upon said lands and use the same for their mining operations, and may make similar use of any down timber.

9. Second parties shall keep a record of all sampling data, which record shall be open at all reasonable times to inspection by first parties, their attorney or agent; and in the event of the forfeiture or other termination of this agreement without the payment of the purchase price, second parties shall deliver such records or copies thereof, and all drilling records and unused drill cores, to first parties.

10. Second parties shall at all times when employing men keep qualified under the Montana Workmens' Compensation Act, so that all accidental injuries to employees shall be compensated under said Act.

11. Second parties shall conduct operations hereunder in such manner as not to subject first parties or any of said optioned property to any liability for debts or other obligations of second parties nor to liability to damages, and shall hold first parties and said property harmless therefrom, and all costs and expenses arising therefrom; it being distinctly understood that second parties are independent contractors and are not partners or employees of first parties. Second parties shall keep posted in at least three conspicuous places upon said property notices to the effect that they are

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operating said property under an option and lease and that they are solely responsible for any debts and other obligations and for any other liability arising from operations hereunder.

12. Second parties shall pay all Gross Metals Mines taxes and all net proceeds taxes upon production hereunder, but shall not be required to pay any taxes assessed against royalties paid to first parties.

13. When at least Five Thousand Dollars ($5,000.00) shall have been paid upon the purchase price, first parties will, upon written request of second parties, deliver to second parties for examination an abstract of title showing a good, merchantable title in first parties to said optioned land, and will at the same time deposit in said First National Bank in escrow a warranty deed conveying said optioned land to second parties, together with an executed copy of this agreement; and when said abstract shall have been examined and approved by the attorneys of second parties, said abstract shall also be deposited in said bank in escrow with said deed; and said bank is instructed to hold said deed and abstract and deliver the same to second parties upon the full payment of said purchase price and upon the performance by second parties of all of the terms and conditions hereof which shall accrue to the time of such payment; but in the event of the forfeiture of this agreement, or the expiration of its term without such payment of the purchase price, said bank is instructed to hold said deed and abstract subject to the order of first parties.

14. Time is of the essence hereof. If second parties shall fail to comply with any of the terms or conditions hereof on their part, this option and lease shall be subject to forfeiture at the election of first parties; but if first parties shall elect to declare a forfeiture becuase of such

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default, they shall give second parties notice in writing of their intention so to do, specifying in such notice the grounds of such forfeiture; and if second parties shall, within sixty (60) days after the service of such notice, cure and correct all defaults of which they may then be guilty, then this agreement shall continue in force as though such default had not occurred and such notice had not been given; but if second parties shall fail to so cure and correct all such defaults within said period, then this agreement shall become null and void at the expiration of said sixty (60) day period, subject to the right of second parties to remove property as hereinafter provided; and all payments made to first parties by second parties of royalties or otherwise, shall be retained by them as liquidated damages and as rental. Failure of first parties to take advantage of any particular default shall not be construed as a waiver of any other default.

15. Notice may be served upon second parties by personal delivery to them, or by registered mail, in an envelope securely sealed, bearing the necessary postage, and addressed to second parties at No. 40 East Lyndale Avenue, Helena, Montana, or to such other address as second parties may designate in writing, and deposited in the U. S. Post Office in Jefferson County, Montana. Service by mail shall be deemed complete upon such deposit in the Post Office.

16. In case of the termination of this agreement in any manner without the purchase of said optioned property by second parties as and when herein provided, second parties shall have sixty (60) days thereafter in which to remove from said optioned property any machinery and other equipment and personal property placed thereon by them, and may likewise remove any buildings or other similar structures, other than mine timbering, provided such removal shall not

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injure the land; provided, however, that if weather and/or road conditions shall render removal of such property within said time impossible or undly expensive, second parties shall have time in addition to said sixty (60) days equal to the time of existence of such preventing conditions; and any property not removed within the time above allowed shall become the property of first parties.

17. In case of the assignment of this agreement by second parties or any of them in whole or in part, an executed copy of such assignment shall be delivered to first parties, with the address to which the assigns shall desire notices to be sent; and thereafter copies of all notices to second parties shall be served upon such assigns in the same manner above provided for service upon second parties.

18. Subject to the foregoing this agreement shall be binding upon and inure to the benefit of the heirs, personal representatives and assigns of the respective parties hereto.

IN WITNESS WHEREOF the parties hereto have executed these presents the day and year hereinabove first written.

_____

_____

First Parties.

_____

_____

_____

Second Parties.

STATE PUBLISHING CO.,
HELENA, MONT.
3

State of Montana)
ss.
County of _____,)

On this _____day of January, 1952, before me,_____ _____, a notary public for the State of Montana, personally appeared Henry Madison and Doris K. Madison, his wife, known to me to be the persons whose names are subscribed to the foregoing instrument, and acknowledged to me that they executed the same.

In Witness Whereof I have hereunto set my hand and affixed my notarial seal the day and year in this certificate first above written.

_____
Notary Public for the State of Montana, residing at _____, Montana. My Commission expires _____.

(Notarial Seal)

STATE PUBLISHING CO.,
HELENA, MONT.
3

Copy

THIS AGREEMENT, made this ___ day of January, 1952, by and between HENRY MADISON and DORIS K. MADISON, his wife, of Jefferson City, Montana, first parties, and H. T. O'REILLY, ROBERT STEINBACHER and EVERETT REAL, of Lewis and Clark County, Montana, second parites, WITNESSETH:

That for valuable considerations, the reciept whereof is hereby acknowledged, first parties hereby grant to second parties the exclusive right and option to purchase, and the exclusive right to occupy and mine, under the terms and conditions hereinafter set forth, that certain real estate, situated in Jefferson County, Montana, and described as follows, to-wit:

> The Northwest Quarter (NW¼) of Section Eight (8), Township Seven (7) North, Range Three (3) West, U.S.Patent No. 399656, containing 160 acres of land; reserving, however, the right to pasture said land, without interference with the operations of second parties hereunder.

1. The price to be paid for said land in the event of the exercise of said option is the sum of Forty Five Thousand Dollars ($45,000.00), payable on or before January 1, 1962.

2. From the time of the execution and delivery of this agreement until January 1, 1962, subject to the performance by second parties of all of the terms and conditions hereof on their part, as and when required by the provisions hereof, second parties shall have the exculsive right to occupy said lands and explore the same for metals and other minerals, and develop and extract ore therefrom, and market the same in crude form, or to mill any ore so extracted an/or any ore now or hereafter broken and in the workings or upon the dumps upon said land, and market the concentrates thereof, and retain the proceeds of all ores and concentrates so marketed, subject to the payment of royalties as hereinafter provided; and second parties may install such machinery and other equipment, buildings and other structures,

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and construct such roads and other facilities, as they may deem necessary, or proper, and use the same in their operations hereunder.

3. Second parties shall pay to first parties a royalty of ten per cent (10%) of the net smelter returns from all ores, concentrates, and other products of operations hereunder. Three Dollars ($3.00) per wet ton shall be deducted from such returns in lieu of all transportation costs before computation of royalty. All Royalties paid shall be credited as payments upon the purchase price.

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5. As a condition to the continuance of this option and lease in force second parties shall, beginning with the calendar month of April, 1952, perform or cause to be performed upon said optioned property during each calendar month of the life of this agreement, except when prevented by weather conditions, strikes, or other causes beyond their control, other than lack of financial means, at least twenty-five (25) man shifts of work at eight (8) hours each, or the equivalent in working hours, or make equivalent expenditure in bull-dozer or other machine work, in development

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and/or mining.

6. All work shall be done in a good, minerlike manner, consistently with good mining practice, and first parties and their agents or attorneys may go upon said property and into the workings thereon at any reasonable time for the purpose of inspection and the taking of samples.

7. The billing for each shipment of ore or concentrates or other products shall show the names of first parties as the owners of said property.

8. Second parties may cut any timber growing upon said lands and use the same for their mining operations, and may make similar use of any down timber.

9. Second parties shall keep a record of all sampling data, which record shall be open at all reasonable times to inspection by first parties, their attorney or agent; and in the event of the forfeiture or other termination of this agreement without the payment of the purchase price, second parties shall deliver such records or copies thereof, and all drilling records and unused drill cores, to first parties.

10. Second parties shall at all times when employing men keep qualified under the Montana Workmens' Compensation Act, so that all accidental injuries to employees shall be compensated under said Act.

11. Second parties shall conduct operations hereunder in such manner as not to subject first parties or any of said optioned property to any liability for debts or other obligations of second parties nor to liability to damages, and shall hold first parties and said property harmless therefrom, and all costs and expenses arising therefrom; it being distinctly understood that second parties are independent contractors and are not partners or employees of first parties. Second parties shall keep posted in at least three conspicuous places upon said property notices to the effect that they are

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operating said property under an option and lease and that they are solely responsible for any debts and other obligations and for any other liability arising from operations hereunder.

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14. Time is of the essence hereof. If second parties shall fail to comply with any of the terms or conditions hereof on their part, this option and lease shall be subject to forfeiture at the election of first parties; but if first parties shall elect to declare a forfeiture becuase of such

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default, they shall give second parties notice in writing of their intention so to do, specifying in such notice the grounds of such forfeiture; and if second parties shall, within sixty (60) days after the service of such notice, cure and correct all defaults of which they may then be guilty, then this agreement shall continue in force as though such default had not occurred and such notice had not been given; but if second parties shall fail to so cure and correct all such defaults within said period, then this agreement shall become null and void at the expiration of said sixty (60) day period, subject to the right of second parties to remove property as hereinafter provided; and all payments made to first parties by second parties of royalties or otherwise, shall be retained by them as liquidated damages and as rental. Failure of first parties to take advantage of any particular default shall not be construed as a waiver of any other default.

15. Notice may be served upon second parties by personal delivery to them, or by registered mail, in an envelope securely sealed, bearing the necessary postage, and addressed to second parties at No. 40 East Lyndale Avenue, Helena, Montana, or to such other address as second parties may designate in writing, and deposited in the U. S. Post Office in Jefferson County, Montana. Service by mail shall be deemed complete upon such deposit in the Post Office.

16. In case of the termination of this agreement in any manner without the purchase of said optioned property by second parties as and when herein provided, second parties shall have sixty (60) days thereafter in which to remove from said optioned property any machinery and other equipment and personal property placed thereon by them, and may likewise remove any buildings or other similar structures, other than mine timbering, provided such removal shall not

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injure the land; provided, however, that if weather and/or road conditions shall render removal of such property within said time impossible or undly expensive, second parties shall have time in addition to said sixty (60) days equal to the time of existence of such preventing conditions; and any property not removed within the time above allowed shall become the property of first parties.

17. In case of the assignment of this agreement by second parties or any of them in whole or in part, an executed copy of such assignment shall be delivered to first parties, with the address to which the assigns shall desire notices to be sent; and thereafter copies of all notices to second parties shall be served upon such assigns in the same manner above provided for service upon second parties.

18. Subject to the foregoing this agreement shall be binding upon and inure to the benefit of the heirs, personal representatives and assigns of the respective parties hereto.

IN WITNESS WHEREOF the parties hereto have executed these presents the day and year hereinabove first written.

_____

_____

First Parties.

_____

_____

_____

Second Parties.

STATE PUBLISHING CO.,
HELENA, MONT.

State of Montana)
ss.
County of _____,)

On this _____day of January, 1952, before me,_____ _____, a notary public for the State of Montana, personally appeared Henry Madison and Doris K. Madison, his wife, known to me to be the persons whose names are subscribed to the foregoing instrument, and acknowledged to me that they executed the same.

In Witness Whereof I have hereunto set my hand and affixed my notarial seal the day and year in this certificate first above written.

_____
Notary Public for the State of Montana, residing at _____, Montana. My Commission expires _____.

(Notarial Seal)

STATE PUBLISHING CO.,
HELENA, MONT.
3

DMEA-2339

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

[illegible]

[illegible] January [illegible], [illegible]

[illegible]
[illegible]
[illegible]
[illegible]

Gentlemen:

[illegible] three copies of [illegible] -1[illegible] and -1[illegible], [illegible] by [illegible] Kelly, [illegible] and [illegible] Avenue, [illegible], [illegible] [illegible] Oregon [illegible], [illegible]. [illegible] enclosed [illegible] two copies of a [illegible] on the subject property.

[illegible] -1[illegible], one copy of -1[illegible], one copy of [illegible] are being routed [illegible] facilities [illegible] The field examination will be made [illegible] earliest [illegible] date which, [illegible] weather conditions, will [illegible] will allow.

Sincerely,

[illegible]
[illegible]
[illegible] Officer,
[illegible]

[illegible]

One settlement sheet has been found of ore shipped from the Bo Gulch or Bull Gulch Claim. This sheet is enclosed. Please return it when possible.

Form MF-103
(Revised June 1952)

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

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. DMEA-2339
Metal or Mineral
Date Received 1-21-52
Amount $
Participation (Government %)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 21 1952

H. T. O'Reilly
40 E. Lyndale Ave.
Helena, Mont.

Name and address of applicant

Date December 28, 1951

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

DMA Docket Number (if available) _____

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.

(Name of company)	By H. T. O'Reilly (Signature of authorized official)
December 28, 1951 (Date)	Miner (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

INSTRUCTIONS

1. (a) The property is situated between the Greater Helena Mining District and the Boulder Mining District where recent discoveries of uranium ore have been found. On the property itself there are 3 shafts on the same lead, all of which have ore of lead, zinc, manganese, gold and silver.
   (b) Enclosed is a copy of the lease.
   (c) Legal description of the property is NW¼ SEC. 8, T. 7 N., R. 3 W.

2. (a) I expect to find lead, zinc, manganese, gold and silver ore.
   (b) This property is located in the Boulder Bathylith. The same formation the Butte ore bodies are located in. A big talc lead cuts thru the decomposed granite country rock, from north to south. In this talc lead are 3 known leads of lead, zinc, manganese, gold and silver ore, of various widths ranging from 5" at the surface to 4' at the deepest depth that has been explored. The talc lead is roughly about 25' wide, and the lead and zinc ore is a sulfide.

   A sketch of the property is with question 14.

   An assay of three surface leads in the big talc lead is enclosed.

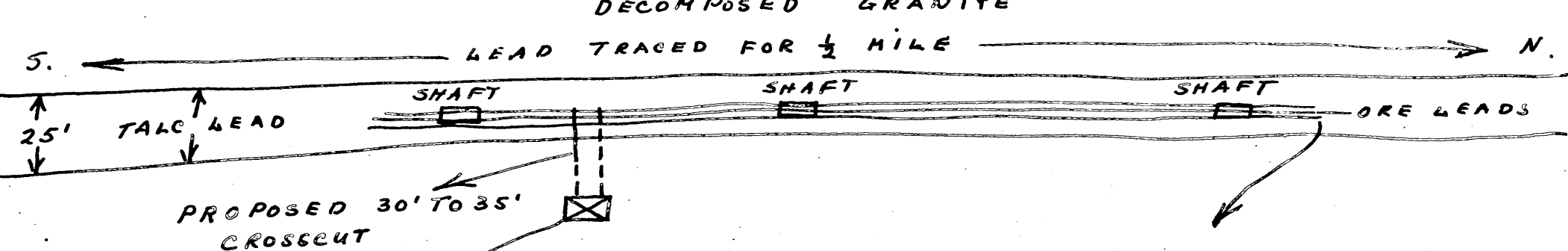
3. The proposed work necessary is as follows:

1. Repair shed to house supplies and tools.
2. Truck in machinery and necessary supplies.
3. Build compressor house for compressor, hoist, pump and accessories.
4. Set up compressor, hoist, pump, and engines.
5. Start shaft and erect gallows frame over shaft.
6. Sink and timber 200' shaft to ore level.
7. Crosscut to 4' ore lead. Crosscut should be from 30' to 35' long.
8. Timber crosscut.
9. Build track.

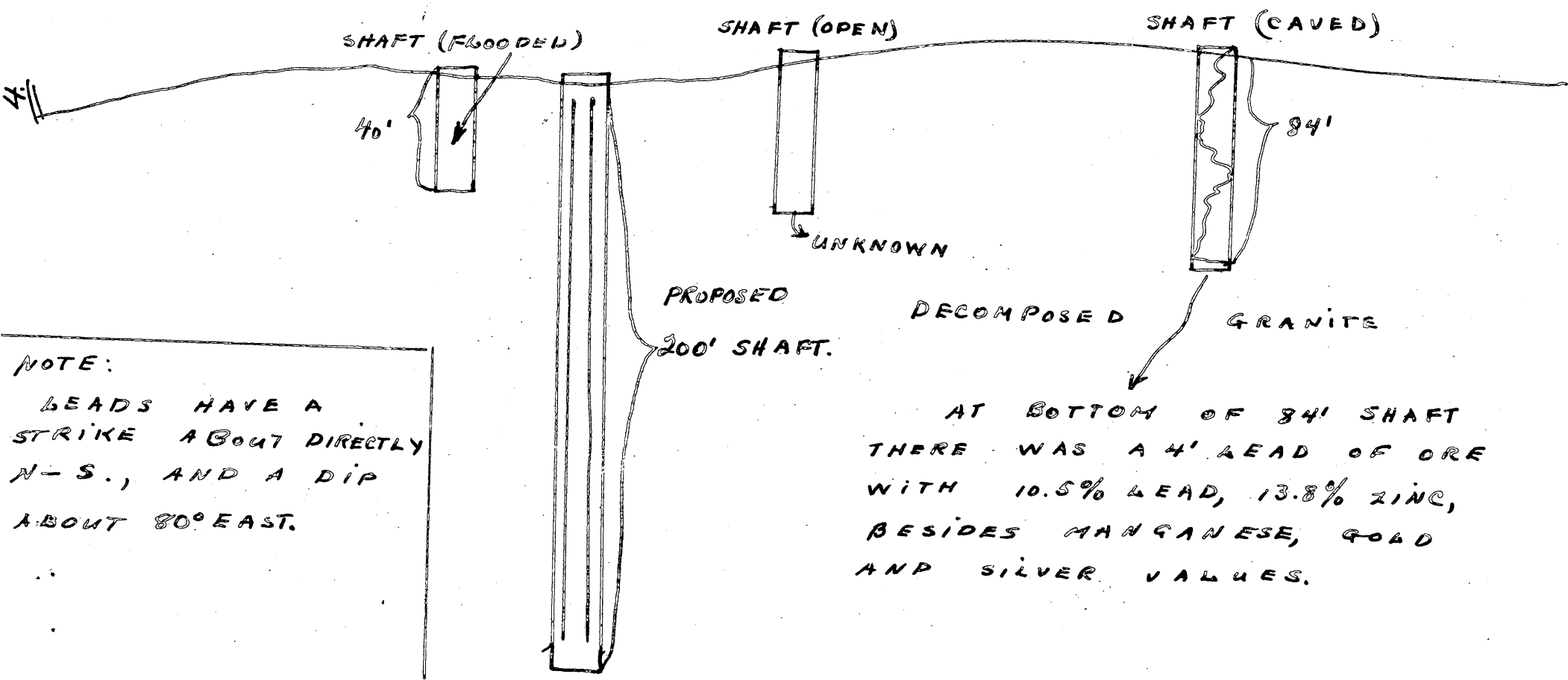
Estimated cost of this amount of work is as follows:

Repair to existing facilities	$ 275.00
Building additional facilities	1100.00
Labor	5400.00
Materials, supplies, assaying, accounting, power, etc.	4145.00
Furnished equipment	2340.00
	$13260.00

(b) Work will begin immediately, if loan is granted. The project should be completed in from 4½ to 6 months.



3 KNOWN LEADS, VARYING IN WIDTH FROM 15" TO 16" AT SURFACE WITH VALUES OF 17.1% ZINC, 4.4% LEAD, 8.6 OZ. SILVER, AND SMALL AMOUNTS OF GOLD AND MANGANESE.



NOTE:
LEADS HAVE A STRIKE ABOUT DIRECTLY N-S., AND A DIP ABOUT 80° EAST.

AT BOTTOM OF 84' SHAFT THERE WAS A 4' LEAD OF ORE WITH 10.5% LEAD, 13.8% ZINC, BESIDES MANGANESE, GOLD AND SILVER VALUES.

5. Existing Facilities:

(a) A machine shed must be repaired, A job that will cost about $ 150.
(a) Track must be relaid at a cost of $125.

6. Additional Facilities:

(a) A gallows frame must be erected at a cost of about $425.
(b) A compressor house should be built at a cost of about $475.
(c) A needed short stretch of road and leveling job would cost about $200.

7. Operating Equipment;

(a) Rented ----------$ 200.
(b) Purchased ***----------None.
(c) Furnished;

1. Compressor ----------	$85.	a	month.
2. Compressor engine, receiver, gages, etc,	$30.	"	" .
3. Sludge pump ----------	$25.	"	" .
4. Hoist ----------	$30.	"	" .
5. Jackhammer #45 ----------	$30.	"	" .
6. Jackhammer #80 ----------	$25.	"	" .
7. Mine car ----------	$ 5.	"	" .
8. Dump truck ----------	$125.	"	" .
9. Steel, bits, hose, pipe, valves,etc,	$35.	"	" .
Total	$390.	"	" .

8. Labor:

(a) 3 miners to be paid $12. a day each.

9. Materials:

1. Timber	$ 1830.00
2. Powder	780.00
3. Bits sharpened	85.00
4. Nails	15.00
5. Hanger Bolts	285.00

Supplies:

1. Estimated repairs on machinery	250.00
2. Cable	95.00
3. Miscellaneous	60.00

Engineering:

1. No outside expense expected.

Assaying:

1. Estimated cost of assays	35.00

Accounting:

1. Estimated cost	150.00

Power:

1. Gas and Oil	560.00

Water:

1. None.

Utilities:

1. None.

$4145.00

10. (a) I am prepared to invest 50% of the proposed project.

(b) Yes, this amount is sufficient to pay my part in the project.

11. Conditions or Circumstances:
    (a) I don't know of any unusual conditions or circumstances not brought up.

Form MF-100
(May 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

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

NOT TO BE FILLED IN BY APPLICANT

Docket No. DMEA-2339

Date received 1-21-52

RECEIVED JAN 21 1952

A. T. O'Reilly
40 E. Lyndale Ave.
Helena, Mont.

Name and address of applicant

Date December 28, 1951

INSTRUCTIONS

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

GENERAL TECHNICAL DATA

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

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

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☑ Lessee.
   - ☐ Contractor.
5. Number of years in production _____

   If not in production or operation, estimated date when production will begin _____
6. Experience of operators:
   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation. Not a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation		Life Insurance Carried for Benefit of Applicant	
				Common (e)	Preferred (f)	Amount (g)	Net Cash Surrender Value After Loans (h)
	Total		x x x x x			x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues: None

For Corporate Applicants

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

*Indicate period covered.

10. Production: None

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

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change. None

12. Ore or Mineral Reserves: None proven

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

(b) If deposit is other than placer:

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

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

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved) None					
Indicated (probable)	150,000 T. up	From 4.4%-10.5% Pb. " 13.8%-17.1% Zn	$83+	$83	$21

(c) If placer:

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

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

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

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

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

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

13. Access Roads:

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

14. Water Supply:

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

15. Power:

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

16. Labor:

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

17. Equipment and Facilities:

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

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

CERTIFICATION

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

(Name of company)

By H. T. O'Reilly
(Signature of authorized official)

December 28, 1951
(Date)

Miner
(Title)

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

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

GENERAL TECHNICAL DATA

1. Materials Produced:
   (a) The chief products are zinc and lead.
   (b) The byproducts are manganese, gold, and silver.

2. The mine property consists of 3 shafts. The property is known as the "Bo Gulch Claim." The lead has been traced by surface cuts for about one-half mile.
   (a) There is about 180' of shaft.
   (b) There are no drifts or crosscuts. Several open cuts have been made tracing the lead. There are no tunnels or adits.
   (c) NW^{4} Sec.8, T.7N., R. 3W.
   (d) Jefferson County, Montana.

The intention is to sink a new shaft 200' in the country granite, 50' south of the big talc lead containing the ore leads. Then to crosscut to the ore. If water is encountered then, it can be pumped out. The ore at 84' on this same lead, was 4' wide and was 10.5% lead and 13.8% zinc.

3. (a) This property is 1¼ miles east of Jefferson City, Montana.
   (b) Jefferson Mining District.
   (c) NW^{4} Sec. 8, Township 7 N. Range 3 West.
   (d) Jefferson County, Montana.

4. (a) Property is not in production.
   (b) We are operating this property as lessees.

5. Some 15 or 20 years ago the property was in production about 18 months.
   If the loan is granted the property will be in production in from 4 to 6 months.

6. (a) (b) The applicant and manager of the project are the same. I have worked in the mines in Butte for two years. Operated a ranch two years and a tourist court 2½ years. Since the war, have been interested in and operated small mines in the Greater Helena Mining District, and the Winston Mining District.

7. (a) Three shafts have been sunk on the same lead on the "Bo Gulch Claim". Several surface cuts have been made tracing the lead. Some shipments have been made of 10.5% lead and 13.8% zinc, but how many tons I could not say for certain.
   #1 Shaft was abandonded because they started to stope too near the shaft and the shaft caved in.
   #2 Shaft was abandoned because one partner drowned. (Not on the property).
   #3 Shaft was abandoned in 1945 because the price of zinc was low, and with the end of the war the miners figured it would go lower.
   (b) No known adjoinging or neighboring properties.
   (c) Enclosed is an assay report of 3 leads in same big talc mineralized lead. No other private reports are available.

8. The applicant is not a corporation.
9. No Capital stock issues.
10. No known production.
11. NO known rate of production.
12. The talc lead is approximately 25' wide with several leads in it. The principle one explored is 15" to 16" on the surface (40'), and widens to 4' at about 80' depth. The lead has been traced for ½ mile. No known geology reports.
    (b) 1. Assay on three leads is enclosed.
    2. No measured ore reserves. Probable ore reserves is hard to estimate. The main lead of 15" to 16" at 40' widens to 4' at 80' depth, and the lead is at least ½ mile of known length. Also there are several smaller leads that have not been explored.
    Not a placer but a lead.

13. Access Roads:
    1½ miles to shipping point, 3/4 miles of macadam hiway, ¼ mile county dirt road, ¼ mile private dirt road.

14. Water Supply:
    Small creek, sufficient for cooking and drinking purposes. Adequate supply the year around. Creek about 14" wide with an 8% grade in December.

15. Power:
    Power is available from a Montana Power Company line, but has'nt been used at the prospect. Gasoline power was used previously.

16. Labor:
    No recent payroll period. Exploration has been done by local miners, on a no payroll basis.

17. Equipment and Facilities:
    Buildings consist of a machine shed badly in need of repairs.
    1. Compressor
    2. Compressor engine.
    3. Slusher pump.
    4. Pump engine.
    5. Hoist.
    6. Jackhammer #45.
    7. Jackhammer #80.
    8. Mine car.
    9. 2 Hoisting buckets.
    10. Cable.
    11. Lumber and planks.
    12. 200' track.
    13. Dump truck.
    14. Drills and bits.
    15. Tools and other equipment.
18. I am unaware of any particular conditions or circumstances, not mentioned above.

THIS AGREEMENT, made this ___ day of January, 1952, by and between HENRY MADISON and DORIS K. MADISON, his wife, of Jefferson City, Montana, first parties, and H. T. O'REILLY, ROBERT STEINBACHER and EVERETT REAL, of Lewis and Clark County, Montana, second parites, WITNESSETH:

That for valuable considerations, the reciept whereof is hereby acknowledged, first parties hereby grant to second parties the exclusive right and option to purchase, and the exclusive right to occupy and mine, under the terms and conditions hereinafter set forth, that certain real estate, situated in Jefferson County, Montana, and described as follows, to-wit:

> The Northwest Quarter (NW¼) of Section Eight (8), Township Seven (7) North, Range Three (3) West, U.S.Patent No. 399656, containing 160 acres of land; reserving, however, the right to pasture said land, without interference with the operations of second parties hereunder.

1. The price to be paid for said land in the event of the exercise of said option is the sum of Forty Five Thousand Dollars ($45,000.00), payble on or before January 1, 1962.

2. From the time of the execution and delivery of this agreement until January 1, 1962, subject to the performance by second parties of all of the terms and conditions hereof on their part, as and when required by the provisions hereof, second parties shall have the exculsive right to occupy said lands and explore the same for metals and other minerals, and develop and extract ore therefrom, and market the same in crude form, or to mill any ore so extracted an/or any ore now or hereafter broken and in the workings or upon the dumps upon said land, and market the concentrates thereof, and retain the proceeds of all ores and concentrates so marketed, subject to the payment of royalties as hereinafter provided; and second parties may install such machinery and other equipment, buildings and other structures,

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and construct such roads and other facilities, as they may deem necessary, or proper, and use the same in their operations hereunder.

3. Second parties shall pay to first parties a royalty of ten per cent (10%) of the net smelter returns from all ores, concentrates, and other products of operations hereunder. Three Dollars ($3.00) per wet ton shall be deducted from such returns in lieu of all transportation costs before computation of royalty. All Royalties paid shall be credited as payments upon the purchase price.

4. No ores, concentrates, or other products shall be shipped outside the State of Montana unless second parties shall first notify first parties in writing, stating the name and address of the smelter or other purchaser to which shipment is contemplated. Any smelter or other purchaser of ore, concentrates, or other products, is hereby directed to deduct from the returns upon each shipment the royalties herein provided for and transmit the same to the First National Bank and Trust Company at Helena, Montana, for the credit of first parties, together with a copy of the settlement sheet. At the same time such smelter or other purchaser is directed to mail a copy of each such settlement sheet to first parties at Jefferson City, Montana.

5. As a condition to the continuance of this option and lease in force second parties shall, beginning with the calendar month of April, 1952, perform or cause to be performed upon said optioned property during each calendar month of the life of this agreement, except when prevented by weather conditions, strikes, or other causes beyond their control, other than lack of financial means, at least twenty-five (25) man shifts of work at eight (8) hours each, or the equivalent in working hours, or make equivalent expenditure in bull-dozer or other machine work, in development

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and/or mining.

6. All work shall be done in a good, minerlike manner, consistently with good mining practice, and first parties and their agents or attorneys may go upon said property and into the workings thereon at any reasonable time for the purpose of inspection and the taking of samples.

7. The billing for each shipment of ore or concentrates or other products shall show the names of first parties as the owners of said property.

8. Second parties may cut any timber growing upon said lands and use the same for their mining operations, and may make similar use of any down timber.

9. Second parties shall keep a record of all sampling data, which record shall be open at all reasonable times to inspection by first parties, their attorney or agent; and in the event of the forfeiture or other termination of this agreement without the payment of the purchase price, second parties shall deliver such records or copies thereof, and all drilling records and unused drill cores, to first parties.

10. Second parties shall at all times when employing men keep qualified under the Montana Workmens' Compensation Act, so that all accidental injuries to employees shall be compensated under said Act.

11. Second parties shall conduct operations hereunder in such manner as not to subject first parties or any of said optioned property to any liability for debts or other obligations of second parties nor to liability to damages, and shall hold first parties and said property harmless therefrom, and all costs and expenses arising therefrom; it being distinctly understood that second parties are independent contractors and are not partners or employees of first parties. Second parties shall keep posted in at least three conspicuous places upon said property notices to the effect that they are

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operating said property under an option and lease and that they are solely responsible for any debts and other obligations and for any other liability arising from operations hereunder.

12. Second parties shall pay all Gross Metals Mines taxes and all net proceeds taxes upon production hereunder, but shall not be required to pay any taxes aesessed against royalties paid to first parties.

13. When at least Five Thousand Dollars ($5,000.00) shall have been paid upon the purchase price, first parties will, upon written request of second parties, deliver to second parties for examination an abstract of title showing a good, merchantable title in first parties to said optioned land, and will at the same time deposit in said First National Bank in escrow a warranty deed conveying said optioned land to second parties, together with an executed copy of this agreement; and when said abstract shall have been examined and approved by the attorneys of second parties, said abstract shall also be deposited in said bank in escrow with said deed; and said bank is instructed to hold said deed and abstract and deliver the same to secnnd parties upon the full payment of said purchase price and upon the performance by second parties of all of the terms and conditions hereof which shall accrue to the time of such payment; but in the event of the forfeiture of this agreement, or the expiration of its term without such payment of the purchase price, said bank is instructed to hold said deed and abstract subject to the order of first parties.

14. Time is of the essence hereof. If second parties shall fail to comply with any of the terms or conditions hereof on their part, this option and lease shall be subject to forfeiture at the election of first parties; but if first parties shall elect to declare a forfeiture becuase of such

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default, they shall give second parties notice in writing of their intention so to do, specifying in such notice the grounds of such forfeiture; and if second parties shall, within sixty (60) days after the service of such notice, cure and correct all defaults of which they may then be guilty, then this agreement shall continue in force as though such default had not occurred and such notice had not been given; but if second parties shall fail to so cure and correct all such defaults within said period, then this agreement shall become null and void at the expiration of said sixty (60) day period, subject to the right of second parties to remove property as hereinafter provided; and all payments made to first parties by second parties of royalties or otherwise, shall be retained by them as liquidated damages and as rental. Failure of first parties to take advantage of any particular default shall not be construed as a waiver of any other default.

15. Notice may be served upon second parties by personal delivery to them, or by registered mail, in an envelope securely sealed, bearing the necessary postage, and addressed to second parties at No. 40 East Lyndale Avenue, Helena, Montana, or to such other address as second parties may designate in writing, and deposited in the U. S. Post Office in Jefferson County, Montana. Service by mail shall be deemed complete upon such deposit in the Post Office.

16. In case of the termination of this agreement in any manner without the purchase of said optioned property by second parties as and when herein provided, second parties shall have sixty (60) days thereafter in which to remove from said optioned property any machinery and other equipment and personal property placed thereon by them, and may likewise remove any buildings or other similar structures, other than mine timbering, provided such removal shall not

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injure the land; provided, however, that if weather and/or road conditions shall render removal of such property within said time impossible or undly expensive, second parties shall have time in addition to said sixty (60) days equal to the time of existence of such preventing conditions; and any property not removed within the time above allowed shall become the property of first parties.

17. In case of the assignment of this agreement by second parties or any of them in whole or in part, an executed copy of such assignment shall be delivered to first parties, with the address to which the assigns shall desire notices to be sent; and thereafter copies of all notices to second parties shall be served upon such assigns in the same manner above provided for service upon second parties.

18. Subject to the foregoing this agreement shall be binding upon and inure to the benefit of the heirs, personal representatives and assigns of the respective parties hereto.

IN WITNESS WHEREOF the parties hereto have executed these presents the day and year hereinabove first written.

_____

_____

First Parties.

_____

_____

_____

Second Parties.

STATE PUBLISHING CO.,
HELENA, MONT.
3

State of Montana)
ss.
County of _____,)

On this _____day of January, 1952, before me,_____ _____, a notary public for the State of Montana, personally appeared Henry Madison and Doris K. Madison, his wife, known to me to be the persons whose names are subscribed to the foregoing instrument, and acknowledged to me that they executed the same.

In Witness Whereof I have hereunto set my hand and affixed my notarial seal the day and year in this certificate first above written.

_____
Notary Public for the State of Montana, residing at _____, Montana. My Commission expires _____.

(Notarial Seal)

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