3061 was
WITHDRAWN- work under DMEA 3061 was combined in AMENDED CONTRACT

Idm-E-427, DMEA 2635 - Bradley Mining Co.

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rf

July 7, 1955

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Amendment of contract to add additional work and more land
Docket No. DMEA 2635 - Tungsten
Bradley Mining Company
Ima mine
Lemhi County, Idaho
Contract No. Ida-2427

and

Docket No. DMEA 1285 - Tungsten
Bradley Mining Company
Ima Mine
Lemhi County, Idaho
Contract No. Ida-2411

and

Docket No. DMEA 3061 - Tungsten
Bradley Mining Company
Ima mine
Lemhi County, Idaho

The operator's request for additional exploration assistance under Docket No. DMEA 3061 is recommended for approval by this Division. It is suggested that the additional work be added to that already authorized under Contract No. Ida-2427, Docket No. DMEA 2635; Docket No. DMEA 3061 be withdrawn; and the "Agreement Concerning Royalty" covering Contracts Nos. Ida-2411 and Ida-2427 revised. A summary of the data contained in Dockets Nos. DMEA 1285, DMEA 2635, and DMEA 3061 follows:

Docket No. DMEA 1285
Contract No. Ida-2411

The exploration program at the Ima mine under Contract Ida-2411 was divided into two projects. Project No. 1, on the north side of Patterson Canyon, extended the 360-foot level of the Ima mine in a northwesterly direction. The work under this phase of the contract

consisted of 1,620 feet of crosscutting, 682 feet of drifting, and 196 feet of raising on three of the four veins encountered during the drifting and crosscutting. Project No. 2, on the south side of Patterson Canyon, consisted of 1200 feet of diamond drilling from the surface followed by 1,666 feet of crosscutting in a southeasterly direction from the Bureau of Mines tunnel and 412 feet of drifting on the major vein encountered.

The total accepted cost of the exploration program under Contract IDa-241 amounted to $113,691.70, of which the Government's share at 75 percent was $85,268.77.

As a result of the exploration program, the following estimate of ore reserves was prepared by the Field Team.

Measured	19,377.3 tons	
Indicated	17,203.1 tons	
Subtotal		36,580.4 tons
Inferred		30,340 tons
Total		66,920 tons

The same reserves are estimated to contain 0.50 percent recoverable WO_3.

Production through March 1955 from the area containing the above estimate of reserves totaled 24,172 tons, assuming an average of 1900 pounds each for the ores tallied. Total production from all of the area included under both contracts, Contracts Nos. IDa-241 and IDa-247, during the same period was 26,248 tons, including the 24,172 tons reported above.

The results of Bureau of Mines sampling of the DMEA workings, reported in a memorandum dated March 1, 1954, by V. E. Johnson, Bureau of Mines, indicates the vein material averaged 0.75 percent WO_3. Including overbreak, the ore mined should average 0.43 percent WO_3. As the operator reports the mill heads average 0.50 percent WO_3 based on analyses of products and mill tailings, it appears that the ore mined from the DMEA zone was of lower grade than the ore produced from the other portions of the property.

A certification of discovery or development was issued December 11, 1953. Through March 1955, the Bradley Mining Company had repaid $43,278.15 in royalties on the production from the lands subject to the Government's percentage royalty. The net value of this production was $244,563.63 which represented 17.6 percent of $1,392,424.32, the net value of the total production from the Dan mine during this period. Production subject to the Government's percentage royalty has varied from as high as 42.31 percent of the total production during December 1953 to as low as 4.38 percent during October 1954. During the last period reported, April 1955, 5.13 percent of the total production was subject to the Government's percentage royalty. The previous month it was 9.61 percent.

An "Agreement Concerning Royalty" was executed June 7, 1951, between the Bradley Mining Company and the Government under which the property, from which the production was subject to the Government's percentage royalty, was delimited; payment of the Government's royalty was to be made under and applied to each contract successively; and the repay period extended to 15 years from the date of the First Contract (June 29, 1951). By amendment dated April 19, 1955, this repay period was extended to 16 years.

Docket No. DMEA 2635
Contract No. Idm-427

Contract No. Idm-427, executed October 28, 1952, authorized the following work on the main level of the Ima mine:

1. (a) Installation of 3" air line from the portal of the main level to the starting point of work under the exploration project. Length approximately 3,000 feet.

   (b) Construction of surface trestle for waste disposal.

2. (a) Extend the main level of the Ima mine 2,000 feet to the northwest.

   (b) Drill 2,000 feet of diamond drill holes to explore favorable areas within the zone of mineralization.

   (c) Drive 1,000 feet of drifts and crosscuts to explore veins encountered by the diamond drill holes and the work under 2(a) above

Total estimated cost of project	$112,000.00
Government's participation at 75%	$84,000.00

The exploration work was to be completed within 24 months.

Amendment No. 2 increased the total amount of diamond drilling to 7,158 and the total authorized cost of the project to $136,000.00. The Government's share of the increased sum is $102,000.00.

Amendment No. 3 increased the period for completion of the work from 24 to 36 months.

Through February 1955, $75,923.06 of the authorized funds had been expended. A summary of the work completed by this date follows:

1818 feet of drifts and crosscuts
5436 feet of diamond drilling
3000 feet of air line installed

The first 1,200 feet of drifting in the Dan vein zone under Contract IAm-5427 cut numerous veins, two of which appear to be of minable width and grade. Diamond drilling from the crosscut also cut a number of veins, cores from which look favorable, but drifting on these veins is required to evaluate them. Recent diamond drilling on the 150 level under the vein exposed in the stub drift between diamond drill holes T-195 and T-193 cored 11 feet of good ore.

The requested exploration program is designed to explore areas adjacent to the main producing section of the Dan mine for additional tungsten-bearing veins and faulted segments of the veins now being mined. Such a program should have an excellent chance of making a significant discovery.

A summary of the estimated cost of the Government's participation in the exploration programs at the Dan mine follows:

Contract No.	Total	Government's share @ 75%
IAm-711	$113,691.70	$ 85,268.77
IAm-5427 (authorized)	136,000.00	102,000.00
subtotal	$249,691.70	$187,268.77
Proposed increase	88,400.00	66,300.00
	$338,091.70	$253,568.77

W. S. Martin, Chief
Iron and Ferro-Alloys Division

FARutledge:fec
7-8-55
cc to: Docket
Code 400
Adm. Read. File
Operating Comm.

CROSS REFERENCE -- FOR DMEA 3061 file.

March 29, 1955

Field Team writes Operating Committee, replying to request of 3/24/55, for data on latest proposals by Operator for completing exploration under DMEA 2645 (Idm-E427). Since DMEA 3061, if approved, would probably be as an amendment to DMEA 2645 -- the correspondence is filed in DMEA 2645.

COPY

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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON 25, D. C.

February 9, 1955

Memorandum

To: Administrator, DMEA

From: W. McInnis, Bureau of Mines

Subject: Bradley Mining Co., Ima Mine
Lemhi County, Idaho

DMEA 3061, Tungsten

I have reviewed Mr. Peter Joraleman's report on Bradley Mining Company application for additional exploration at the Ima mine. In reviewing the entire docket I note that the Field Team has been consistent in recommending approval of the application because the proposed exploration is geologically well founded. It is therefore recommended that the application be approved.

/s/ Wilmer McInnis

Wilmer McInnis

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IN REPLY REFER TO:

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

February 3, 1955

Copy retained 400

Memorandum

To: Mr. W. S. Martin, Chief, Ferro-alloy Division, Defense Minerals Exploration Administration

From: Thor N. Hillagnard, U. S. Geological Survey

Subject: DMEA Docket 3061, (Tungsten), Bradley Mining Company, Lemhi County, Idaho: Review of applicant's latest proposal for additional exploration at the Ima mine.

I have reviewed Mr. Peter Jeralemen's report on the cited Bradley Mining Company application for additional exploration at the Ima mine. Mr. Jeralemen recommends a project that will explore the same targets recommended by Mr. Roger McConnel in a previous application submitted by the Bradleys in May 1953, but in a slightly different manner.

Mr. Jeralemen's revised program includes 1400 feet of drifting and crosscutting and 7830 feet of diamond drilling in the hanging footwall areas of the Water fault, and 1050 feet of diamond drilling from the Bureau of Mines tunnel on the south side of Patterson canyon.

Of the work in the Water fault area, Mr. Jeralemen proposes to crosscut the "Northeast vein zone" from the face of the crosscut at coordinates 14,785 N., 13,785 E., rather than from the crosscut farther to the east as proposed by McConnel. Both Jeralemen's and McConnel's proposals have the same objectives in that they would explore the "Northeast vein zone" near its intersection with the Water fault; however, McConnel would drift in the zone and drill the walls, whereas Jeralemen would crosscut directly to the zone-fault intersection and confine the drilling to an area closer to the Water fault. Of the two Jeralemen's is perhaps the better, although there is little difference in the two proposals.

Farther to the west, both geologists propose a crosscut to start at coordinates 15,015 N., 11,175 E., to cross the Water fault and to provide stations from which the hanging wall of the Water fault may be drilled. Jeralemen proposes more drilling than does McConnel, and study of the maps indicates this drilling is warranted. One excellent target is the projected No. 4 vein, which was productive in the footwall of the Water fault on the Zero level.

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Still farther to the west, both geologists propose exploration by crosscutting and diamond drilling of a northwest part of the Ima vein system south of the Water fault. Jeralemon proposes crosscutting from two places instead of from one place as proposed by McConnel, and also more diamond drilling. Of the two proposals, Jeralemon's 260-foot crosscut and 4 diamond drill holes seems to be the more feasible as it will give more intersections on any veins to be found. However, I fail to see why the 80-foot crosscut at coordinates 14,870 N., 12,150 E., as proposed by Jeralemon, is needed. Instead, it would seem that the single hole from the face of the existing crosscut, as proposed by McConnel, should adequately test the target area.

On the south side of the canyon, Jeralemon proposed two holes to test at the tunnel level the southern continuation of one vein found in the Bureau of Mines tunnel and two veins found in the DMEA extension of that tunnel. McConnel, on the other hand, in addition to the horizontal drilling, proposes downward drilling from the DMEA part of the tunnel to test downward extension of veins found in that tunnel.

Since McConnel submitted his proposal, the southern drift on the first vein found by DMEA work has been extended about 200 feet exposing a lenticular vein ranging from 4 to 7 feet in thickness. It is not known whether the vein has been stoped. The strength and persistence of the vein indicates that prospecting of parallel veins is warranted and on this basis alone it would seem that Jeralemon's proposal of horizontal drilling is justified. Two downward holes to test the downward continuation of the vein drifted on, as proposed by McConnel, would even appear to be warranted. DMEA drilling on the south side of Patterson Canyon did not adequately test that area. Subsequent DMEA crosscutting from the Bureau of Mines tunnel shows that veins found in that crosscut dip at very acute angles to the inclination of surface DMEA holes.

Study of the geologic map of the 360 level, that was submitted with the Field Team Final Report on the first Ima contract, will show that considerable diamond drilling has already been done from the 360 level. The hanging wall of the northwest part of the Ima vein system (the No. 3 DMEA vein) has been probed by 4 holes north of the Water fault, and the hanging wall of the 7-x vein south of the Water fault probed by a series of holes. With the possible exception of the 350-foot hole drilled from coordinates 15,015 N., 11,988 E., and part of hole T-92, drilled from coordinates 14,870 N., 13,300 E., none of this drilling duplicates drilling proposed by the applicant. It would therefore seem that as the veins are known to be lenticular and broken by faulting, the total amount of drilling proposed by Jeralemon is not unreasonable, as more than one intersection on a given vein would be justified.

Exploration of the Ima vein system in the hanging and footwall of the Water fault is predicated on the influence of that fault on the vein system. As noted by Jerulamen, there is a suggestion that Ima veins are components of a single system which has been offset nearly 1000 feet along the Water fault. This cannot be safely concluded, however, and there is a possibility that the offset may be much less. Regardless of whether the Water fault is pre- or post-mineral and regardless of the offset, there remains the indisputable fact that much of the mines production from the upper levels has come from those portions of the veins near the Water fault, both in the hanging and footwall blocks. This fact is brought out by the composite map attached to Jerulamen's report, and is portrayed in even more detail by geologic maps of the Zero, 150, and 360 levels, all in possession of the Ferro-Alloys Division.

Study of the 360 level map indicates that the downward extensions of Nos. 2, 3, 4, and 5 veins have not been explored on the 360 level. As these veins were productive on the upper levels, it follows that exploration for them near the Water fault, on the 360 level, as proposed by Jerulamen, is not only warranted but highly logical. The possibility of the "Northeast vein zone" widening into commercial ore bodies near the Water fault must remain speculative, although the possibility certainly warrants exploration.

From a geological viewpoint, the targets to be tested by the applicant's proposed program warrant exploration. Jerulamen has presented more evidence substantiating the proposed exploration program than was presented by McConnel, and the detailed geologic maps of the Zero, 150, and 360 levels give a clearer picture of the proposed target areas. There has not, however, been any geological information obtained from the current DMSA work being done on the Zero level which can be brought to bear on the current proposal, nor is there any reason to suspect that continued advancement of the Zero level to the northeast will yield evidence to the contrary. Likewise, it is believed that further drilling from the northwestern part of the Zero level will be equally meaningless insofar as proposed work on the 360 level is concerned.

It is my understanding that processing of the previous applications was withheld pending results of work currently in progress. In view of the fact that further geologic information on the target area will not be forthcoming from exploration now in progress it is believed that a decision on the current application should be rendered without further delay.

On the basis of geologic information in hand, I recommend approval of Mr. Jurolemon's program, excluding the 80-foot crescent commencing at coordinates 14,870 N., 12,180 E. I believe there is sufficient geologic information available in the DGRA office to justify the proposed project and that a field referral for an additional examination is unnecessary.

Thor N. Kiilsgaard

THKiilsgaard:hlm
G-2/3/55

Copy to: Director's reading, 4212
Branch reading, 4212
DGRA (3)
Docket file
R. W. Geehan

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DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 21 1955

xxxxxxxxxxxxxxxxxx
So. 157 Howard Street
Spokane 4, Washington

January 19, 1955

Air Mail

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

Re: Docket No. DMEA-3061 (tungsten)
Bradley Mining Company
Ima Mine
Lemhi County, Idaho

Dear Mr. Selfridge:

Enclosed is a letter from John D. Bradley, dated December 30, 1954, and a report and maps by Peter Joralemon, dated December 29, 1954. This essentially reactivates an application which was turned in May 8, 1953. Joralemon's proposal in general aims at the same targets as did the earlier proposal, which was based on a report by Roger N. McConnel, but I might point out that it follows closely one suggestion made in a memorandum by D. M. Lemmon to W. S. Martin, dated June 16, 1953, that an exploratory crosscut be driven from the face of a crosscut at coordinates 14,725N, 13,725E, rather than from one further southeast.

In reconsidering this application careful consideration should be given to the following letters to the Operating Committee written in connection with the first submittal of the application:

From Killingsord and Volin, dated May 28, 1953
From Killingsord (for Weissenborn), dated August 8, 1953
From Weissenborn, dated August 20, 1953

These letters we believe fully express the opinion of the Field Team that this proposed exploration is geologically well founded. If any further information is required in order for you to arrive at a decision in this matter, we will be glad to furnish it.

Yours sincerely,

John S. Vhay
Acting Executive Officer, DMEA
Field Team, Region I

Enclosures 3 (in trip.)

cc: USGM (2)
Richelson
A. E. Weissenborn
c/o W. H. Bradley, Chief Geologist
U. S. Geological Survey, Wash., D. C.

Copy to Bur Mines
copy to Wm Wright
as

(5)

WORTHEN BRADLEY
PRESIDENT

JOHN D. BRADLEY
EXECUTIVE VICE PRESIDENT

JAMES P. BRADLEY
VICE PRESIDENT

E.A. GRIFFEN
SECRETARY

BRADLEY MINING CO.

1022 CROCKER BUILDING
SAN FRANCISCO 4, CALIFORNIA
TELEPHONE SUTTER 1-0414

ANTIMONY
TUNGSTEN
VIRGIN QUICKSILVER

December 30, 1954

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

Dear Al:

Enclosed please find an original and five copies of Mr. Peter Joralemon's review of Roger McConnel's report regarding what we call Ima DMEA Project No. 4. I believe that Peter has fully justified Roger's position, and although he has changed (as you will note by the map) to a slight degree the nature of the exploration work, the major objective is still the same.

I will not only appreciate having your reactions, but also, assuming that they are favorable, your support of this revised application.

I am not submitting any changes in our detailed calculations because the over-all change in the entire program is so slight. For example, there is an increase of 40 feet in drifting and station cutting, and a decrease of 170 feet in diamond drilling.

With best wishes for the New Year, I am

Sincerely yours,

John D. Bradley
Executive Vice President

RECEIVED
JAN 3 1955
SPOK... OF WASH.

JDB:MV
Encs.

P.S. - We are all extremely anxious to get the final DMEA approval for the underground project at Stibnite.

J.D.B.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 21 1955

December 29, 1954

Mr. John D. Bradley
1022 Crocker Building
San Francisco, California

Dear Mr. Bradley:

The following discussion will give my views regarding the proposed DMEA exploration project at the Ima Mine, Patterson, Idaho.

The Ima vein system is made up of a series of roughly parallel veins occurring in a northwesterly band at least a mile long and 500 feet thick. The attitude of the veins within this band varies widely, but in general is more or less parallel to the band itself.

The most marked characteristic of the individual veins within the band is the strong lenticularity. Past experience has shown repeatedly that, when these veins narrow or become subcommercial, they can be expected to regain their values either farther along the strike or up and down dip. In other words, the Ima veins do not appear to be single ore shoot veins and, for this reason, any veins known or suspected to contain commercial ore should be adequately prospected throughout their extent.

Since commercial metallization is expected to be restricted to this broad vein system or mineralized belt, it is of utmost importance to adequately explore the band, both along its strike to determine its length, and at right angles to the strike to determine the band width. To date the zone of Ima exploration forms a flat cylinder lying along the core of the band. Away from the core, exploration is scanty or non-existent, and the true foot and hanging wall of the ore band have not been determined.

It would be a great mistake to maintain exploration only in a one-dimensional sense. Exploration in a northeast, southwest direction is as important and as logical as is that to the northwest or southeast. No ore body can be satisfactorily developed until its width as well as its length has been determined.

RECEIVED
JAN 3 1955
U. S. G. S.
SPOKANE, WASH.

The exploration plan outlined by McConnel in 1953 is directed toward determination of true width of the vein system. The work

planned is centered near the east-west Water Fault, because of the possibility that this fault may have played an important role in localizing ore deposition. Since the time that the original report was submitted, additional evidence has come to light that strengthens the idea that the Water Fault, as a cross-structure, may be as important in ore localization as are the vein fissures themselves. In particular, there is a strong suggestion of a lineation of ore shoots along different veins more or less parallel to the Water Fault.

If the general Ima vein system proves to be lenticular and wider in the center than near the ends, the wide section should be in the vicinity of the Water Fault. For this reason width exploration most logically should be done near this fault.

In addition to the more general reasons given above for carrying out a width exploration project, there are specific goals to be attained. In particular, these are the exploration at depth of the Nos. 2, 3, and 4 veins explored north of the Water Fault on the Zero level, and of the series of narrow, hubnerite-bearing veins intersected in crosscuts to the south of the Water Fault on the 360 level. These are discussed in more detail below.

The accompanying map illustrates the scope of exploration to date. Perhaps the most striking feature to be seen on the map is the lack of exploration along the northwest projection of the Ima vein system lying south of the Water Fault, and along the southeast projection of the vein system lying north of this fault. Present work suggests that these two vein systems are segments of a single system that has been cut and offset nearly 1000 feet along the Water Fault. This cannot safely be concluded. On the contrary there is considerable evidence suggesting that the total offset along this fault is less than 100 feet. If such is the case, the unexplored areas north and south of the Water Fault should be investigated.

The role the Water Fault has played in Ima ore deposition is not clear. The fault area appears to be a center of mineralization, away from which known veins become weaker. The suggested lineation of ore shoots along the Nos. 3, 5, and 7 veins parallel to the trend of the Water Fault was mentioned above. This parallelism adds to the favorability of further exploration along the fault.

The proposed exploration program shown on the accompanying map will explore the Ima vein system on either side of the Water Fault along a band 3200 feet long and from 500 to 1000 feet wide. The

concentration of this work on the 360 level is for two reasons. First, most exploration to date has been from the Zero level. Work done on the lower level will add a valuable third dimension to the Ima vein geology. Second, work on the 360 level can be done with a minimum of interference to the mining operations which are being carried out largely from upper levels.

The work planned north of the Water Fault and east of the West Vein will explore for the downward extension of the Nos. 2, 3, 4, and 5 veins, and will probe further to the east in search of possible veins hitherto unexplored. This work will explore a wider area than that planned by McConnel. Recent work has indicated that near the Water Fault, veins are commonly badly cut up by branches from the main fault. The northernmost drilling is designed to intersect possible veins beyond this zone of intricate shearing.

The drilling proposed west of the West Vein will determine whether or not additional east-dipping veins may occur in this area to give the vein system a more symmetrical fan-shaped cross section.

South of the fault on the west side, drilling is planned to probe for offset segments of the West, 7, 5, 3, and 2 veins. The drilling and crosscutting to the east will test this area for continuation of veins explored but lost further to the southeast, as well as the narrow, high-grade stringers intersected in the long east crosscut.

The third area of proposed exploration lies south of Patterson Creek. The work planned here is designed to determine possible strengthening of known veins to the southeast, controlled by another ore center such as the Water Fault.

Description of Proposed Work

The proposed exploration consists of 1400 feet of drifting and crosscutting, 160 feet of diamond drill stations, and 8880 feet of diamond drilling. This represents an increase of 40 feet in combined drifting and station cutting over McConnel's program, and a decrease of 170 feet in diamond drilling.

Exploration is proposed to prospect the northeast area with 1060 feet of drifting and crosscutting, and 4650 feet of diamond drilling. This will explore a zone in the hanging wall of the Water Fault 2500 feet long and over 400 feet wide.

One diamond drill hole 500 feet long is proposed to explore the northwest area and will extend the length of explored hanging wall to 3200 feet.

In the footwall of the Water Fault on the west end, the program proposes the driving of 340 feet of crosscuts to the south, with 1380 feet of diamond drilling to explore a band 800 feet long and 250 feet wide.

To the east, 1300 feet of drilling will adequately explore a block 1200 feet long and 700 feet wide.

In the area south of Patterson Canyon, 1050 feet of diamond drilling will test for possible veins over a width of 1050 feet. At this time, no further work in this area is recommended.

The above projects will fill important gaps in the exploration pattern at this important tungsten producer. Each should be considered as a logical phase in the growth of the overall Ima exploration-development program. Each has my strong endorsement.

Sincerely yours,

Peter Jralemon

PJ:B

WS.1

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

REFERENCE SLIP

DATE 11-24-53

REFERRED TO:

1. ~~Administrator~~ ~~4624~~
2. ~~Mail & Files~~ ~~4624~~
3. 400
4.

FOR:

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

REMARKS: Should this go to the Operating Committee?

WSM

[redacted]

Not necessary

Check (X) before the items needing attention.

F. A. Rutledge

Initials of sender.

GPO 16—63815-1

[illegible]tin

I prefer to have Ops Comm pass on this action..
They agreed to send proposed letter to Reg II on Sept 17 – but might not necessarily agree to override F.T. in the face of their dissent.
I want to be sure that Bureau & Survey are familiar with that dissent & remain of the opinion that its conclusions (?) of Sept 17 – still hold.

Note last sentence of 2nd ¶ F.T. letter 10/13

Personally – I have no qualms re: sending letter – but I do want to respect Bur & Survey opinions.

ODM

400

NOV 27 1953

Mr. John D. Bradley
Executive Vice President
Bradley Mining Company
425 Crocker Building
San Francisco, California

Re: Docket No. DMEA 3061 - Tungsten
Bradley Mining Company
Ima mine
Lemhi County, Idaho

Dear Mr. Bradley:

Reference is made to your letter of July 1, 1953, and to subsequent discussions held by you and your consulting geologist, Mr. Roger H. McConnel, with our Field Team regarding the subject project.

We believe that the assays and geological observations obtained through our completed and current projects at the Ima mine, when properly plotted on plans and sections, will add significantly to the information which should be considered in judging the merits of the proposed new exploration program at that mine.

Accordingly, we shall defer our decision regarding the above-docketed application until we have had an opportunity to consider the final reports on exploration under Contract No. Idm-341, and to study the geologic mapping currently being detailed by McConnel. We should be able, however, as you suggest, to proceed without awaiting the final reports on exploration now in progress, provided you can arrange to have the necessary information made available in your interim reports.

Sincerely yours,

C. O. Mitendorf

Administrator

cc: Docket
Code 400
FT, Reg. 2
Oper. Com.
Adm. Read. File
R. W. Geehan, USBM
T. P. Thayer, USGS

FARutledge/WSMartin/ls
11/27/53

400

Had been summoned by:
Rutledge
Martin
Johnson
Larrabee

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

Revised

Mr. John D. Bradley
Executive Vice President
Bradley Mining Company
425 Crocker Building
San Francisco, California

Re: Docket No. DMEA 3061 - Tungsten
Bradley Mining Company
Ima mine
Lemhi County, Idaho

Dear Mr. Bradley:

Reference is made to your letter of July 1, 1953, and to subsequent discussions held by you and your consulting geologist, Mr. Roger H. McConnel, with our Field Team regarding the subject project.

We believe that the assays and geological observations, obtained through our completed and current projects at the Ima mine, when properly plotted on plans and sections will add significantly to the information which should be considered in judging the merits of the proposed new exploration program at that mine.

Accordingly, we shall defer our decision regarding the above-docketed application until we have had ~~the~~ an opportunity to consider the final reports on exploration under Contract No. Idm-E41, ~~to review the final results of~~ exploration now in progress; and to study the ~~completed~~ geologic mapping currently being detailed by McConnel. We should be able, however, as you suggest, to proceed without awaiting the final reports on provided you can arrange to have the necessary information made available in your interim reports.

Sincerely yours,

Administrator

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

So. 157 Howard Street
Spokane 4, Washington

Defense Minerals Administration
RECEIVED
OCT 19 1953

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October 13, 1953

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

Re: Docket No. DMEA-3061 (tungsten)
Bradley Mining Company
Ima Mine
Lemhi County, Idaho

Dear Mr. Selfridge:

Reference is made to your letter requesting our comments on the proposed letter to the Bradley Mining Company from the Administrator stating that decision on the proposed project submitted under Docket No. DMEA-3061 should be deferred until assays and geological observations obtained through the current project at the Ima mine are properly plotted on plans and sections, as this will add significantly to the information which should be considered in judging the merits of the proposed exploration program at that mine.

In previous correspondence, the Field Team has said about all there is to be said concerning the Bradley Mining Company's additional proposal. We regard it as good exploration, but we evidently have failed to convince the Operating Committee. We cannot recommend that the proposed letter be sent because the work that is now going on from the Zero level is continually getting further away from the area in which the proposed Project 4 (for DMEA-3061) will take place and, therefore, as time progresses, the new data is becoming progressively less significant in judging the merits of the proposed new exploration. If the suggested letter is sent, the Bradley Mining Company will very likely point this fact out to you in their reply.

If the project is denied on the basis that the DMEA has done enough for the Ima mine, we would regard this as a policy matter and would have no objections. However, we raised this

issue early in the contract negotiations and were informed that there was no limit to the number of projects a company might have as long as each project could stand on its own merits. We regard the proposed Project 4 as good exploration which is not a sure bet but which has a reasonable chance of finding ore; therefore, we still recommend it in its entirety. In any event we believe that enough information is available to make up our minds and that no useful purpose could be served by deferring the decision--which has been pending since June.

By Field Team, Region II

A. E. Weissenborn, Executive Officer
(U. S. Geological Survey)

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

cc: USBM (2)

SEP 17 1953

Air Mail

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

Re: Docket No. DMEA 3061 - Tungsten
Bradley Mining Company
Ima Mine
Lemhi County, Idaho

Dear Mr. Weissenborn:

Enclosed is a draft of a letter regarding the subject application which we propose to send to Mr. John D. Bradley, Executive Vice President, Bradley Mining Company, 425 Crocker Building, San Francisco, California. Also enclosed for your files is copy of Mr. Bradley's letter to us of July 1, 1953, mentioned therein.

We understood from your recent telephone call to this office that you then were not entirely in agreement with our expressed intention to defer our decision regarding the above application. We believe that the assays and geological observations obtained through our current project at the Ima Mine, when properly plotted on plans and sections, will add significantly to the information which should be considered in judging the merits of the proposed new exploration program. Apparently you had other views on the subject at that time.

Accordingly, we should appreciate being advised whether you now concur with our proposed letter to Mr. Bradley. If you still feel, however, that the application should either be approved in its entirety or denied outright, please send us promptly a written expression of your opinion on the subject.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Enclosures

APPROVED:

J. H. Hedges

Member, Bureau of Mines

A. R. Kinkel, Jr.

Member, Geological Survey

Copy to: Docket
FT, Reg. 2
Adm. Rend. File
Code 400
Op. Comm.
Mary Miller, USGS
R. W. Geehan, USBM

WMartin/ls 9/16/53

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SEP 17 1953

Mr. John D. Bradley
Executive Vice President
Bradley Mining Company
425 Crocker Building
San Francisco, California

Re: Docket No. DMEA 3061 - Tungsten
Bradley Mining Company
Ima Mine
Lemhi County, Idaho

Dear Mr. Bradley:

Reference is made to your letter of July 1, 1953, and to subsequent discussions held by you and your consulting geologist, Mr. Roger H. McConnel, with our Field Team regarding the subject project.

We believe that the assays and geological observations, obtained through our current project at the Ima Mine, when properly plotted on plans and sections will add significantly to the information which should be considered in judging the merits of the proposed new exploration program at that mine.

Accordingly, we shall defer our decision regarding the above application until we have had further opportunity to review, in summary form, the results of the work now in progress.

Sincerely yours,

Administrator

C
O
P
Y

BRADLEY MINING CO.
P. O. Box 638
Bradley Field
Boide, Idaho

July 1, 1953

Mr. C. O. Mittendorf, Administrator
U. S. Department of the Interior
Defense Minerals Exploration Administration
Washington 25, D. C.

Re: Docket No. DMEA 3061 - Tungsten
Bradley Mining Co.
Ima Mine
Lemhi County, Idaho

Dear Mr. Mittendorf:

Thank you for your advice of June 23, that our latest application for exploration assistance at our Ima Mine has been assigned Docket No. DMEA 3061.

I expect to see Al Weissenborn at the Sun Valley mining meeting, and no doubt at that time we can cover some of the features of this proposed project that you have referred to him.

Thank you for your cooperation in expediting this program.

Sincerely yours,

Signed: JOHN D. BRADLEY

John D. Bradley
Executive Vice President

JDB/dc

September 3, 1953

Memorandum

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Docket No. DMEA-3061 - Tungsten
Bradley Mining Company (Ima Mine)
Lemhi County, Idaho

In the subject application for aid for an exploration project at the Ima Mine, the applicant proposes the following work in two different areas on the property:

Area 1. Exploration in an east-west direction along: the Water Fault on the 360 level (the main haulage level) of the Ima Mine; and the North East vein zone.

(a). The Water Fault walls to be explored by short crosscuts from present workings to penetrate foot and hanging walls, followed by 3710 feet of diamond drilling parallel to and in the walls of the fault.

Direct Costs

380 feet of crosscuts @ $33.06/ft.		$12,560.90
3710 "	D.D. holes @ $5.00/ft.	18,550.00

(b). The North-East vein zone to be explored by a drift along one or more of the veins to the Water Fault, followed by diamond drilling into both vein walls at stated intervals.

Direct Costs

870 feet of drifts @ $33.06/ft.		$28,758.40
2850 "	D.D. holes @ $5.00/ft.	14,250.00
Total Area No. I		$74,119.50

Area 2. Exploration by diamond drilling only of the veins discovered in the exploration work under Docket No. DMEA-1285.

Direct Costs

2490 Feet D.D. holes @ $5.00	$12,450.00
270 " Setups @ $33.06	8,924.30
Total Area No. 2	$21,374.30
Total Direct Costs Areas I and II	$95,493.60

Indirect Costs

Rehabilitation and repairs	$ 1,500.00
New Bldg. improving & installing	2,837.05
Total	$ 4,337.05
GRAND TOTAL	$ 99,830.65
Government participation @ 75%	$74,872.98

* *

The work in Area No. 2 under Contract Idm-E41, Docket No. DMEA-1285, consisting of 1200 ft. diamond drilling and 1000 ft. of combined crosscutting and drifting on No. 1 vein in Bureau of Mines tunnel has been completed.

Drifting on the No. 1 vein resulted in the discovery of a marginal ore shoot approximately 147 feet in length and 3½ feet to 6 feet in width. In addition to this vein, two other small stringers containing some mineralisation were cut by the crosscut tunnel.

The applicant, believing that these three veins offer excellent possibilities for exploration by diamond drilling below the tunnel level, has proposed the above exploration program for Area 2.

The merits of this proposal might be rightfully appraised by carefully considering the rather limited success of the work under Contract Idm-E41. The diamond drilling work of this contract consisted of three holes that intersected two vein structures showing strong mineralisation over widths of 8 feet to 11 feet. Subsequent cross-cutting in the Bureau of Mines tunnel to these veins showed them to be mere stringers. In the light of this experience the proposed drilling to intersect and test these structures of a greater depth may not be warranted.

It is believed, however, that the No. 1 vein, although pinching out in the drift about 360 feet east of the crosscut tunnel warrents additional exploratory work. This could probably be accomplished with a winze on the vein in the marginal ore shoot.

With regard to the proposed exploration work in Area I(a).

This program is proposed for the 360 foot level where the work under Contract Idm-E41 recently completed was very successful. It appears to have considerable merit. However, it is our understanding (from a field team letter dated August 8, 1953) that the applicant is presently preparing to map the geology of the mine in considerable detail. It is suggested that the proposed exploration work be held in abeyance until this mapping is completed when a second look at the program may be taken. This suggestion holds also for the proposed work on the North East vein in Area I(b).

With additional detailed geological data, it is believed that the present proposals may be considerably revised with a probable change in location and amounts of all drifting, crosscutting and diamond drilling.

Exploration work on the zero level under Docket No. DMEA-2635, Contract Idm-E427, is presently being carried on. This work involves 3000 feet of drifting and crosscutting, and 2000 feet of diamond drilling. It is very probable that this work when completed will also furnish data that will prove to be very helpful in formulating a program for additional exploration work on the 360 level. Current field reports on this contract tend to confirm this.

We believe, therefore, that this application should be denied without prejudice and the applicant requested to submit a revised proposal at a later date. A new proposal should be in the form of a request for an amendment to Contract No. Idm-E427.

An inspection report dated August 13, 1953, Docket No. 2635, states that diamond drilling from the DMEA drift has indicated a parallel vein containing 6 to 7 feet of hubernite-bearing quartz at 114 feet. As the DMEA drift is being driven along a non-commercial vein, the Operator has suggested abandoning the drift driven to date and to relocate the drift on the new discovery. This suggests more detailed mapping and planning is definitely in order. Detailed mapping of the geology was also recommended by D. M. Lemmon, Geological Survey, in his memorandum of June 16, 1953. Lemmon also stated that if the present Contract Idm-E427, Docket No. DMEA 2635, was completed, the next step might be something quite different from the current new proposal.

JHopkins:foc
cc: Docket
Code 400
Adm. Reading File

Acting Chief, Iron & Ferro-Alloys Division

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

So. 157 Howard Street
Spokane 4, Washington

400

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 25 1953

August 20, 1953

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

Re: Docket No. DMEA-3061 (tungsten)
Bradley Mining Company (Ima Mine)
Lemhi County, Idaho

Dear Mr. Selfridge:

Supplementing my letter to you of August 11, I am enclosing a map submitted by Roger H. McConnel, consulting geologist for the Bradley Mining Company, which gives some additional justification for the proposed exploration north of the Water Fault. McConnel's map is incomplete and is made only to show that there are ore bodies in the hanging wall of the Water Fault and that there is a very large stretch which has not been tested on the 360 level, or on the Zero level either, for that matter, although mineralization is known in the hanging wall of the fault.

Sincerely yours,

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

cc: USBM (2)

Copy retained 400

Box 29
Kellogg, Idaho
August 4, 1953

REFER TO	ACTION	NOTED	DATE
Col Weber			
ANSWERED			

Mr. A. E. Weissenborn, Executive Officer
Field Team, Region II
Defense Minerals Exploration Administration
South 157 Howard Street
Spokane 8, Washington

Dear Al:

Enclosed is a map of part of the Ima Mine at Pittsburg, Idaho. The map illustrates the No. 4 vein on the Zero level and shows a rough projection of the vein to the 300 level.

This will, I think, clarify one of the questions about prospecting in the hangingwall of the Water Fault, and I think illustrates the advisability of the relatively inexpensive prospecting proposed for the walls of the Water Fault.

If there are further questions on which I can be of help, please call on me.

Sincerely yours,

Roger H. McConnel

Roger H. McConnel

RHMcC:el
Enc.

Code 400

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

xxxxxxxxxxxxxxxxxx
So. 157 Howard Street
Spokane 4, Washington

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 13 1953

August 8, 1953

Air Mail

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

Re: Docket No. DMEA-3061 (tungsten)
Bradley Mining Company
Ima Mine
Lemhi County, Idaho

Dear Mr. Selfridge:

This is in reply to the Operating Committee's letter of June 23, 1953, in which you asked for a review of the latest proposal of the Bradley Mining Company for further exploration at the Ima mine. Attached to your letter was a memorandum from Mr. Lemmon giving very pertinent and thoughtful comments on the new proposal. Reply to these questions was deferred until now as I had intended to visit the property and it seemed that it would be logical to discuss these questions with the Bradley people at that time. This visit was made about the middle of July and the whole problem was discussed at some length with J. D. Bradley, vice-president, Charles Hathhorn, superintendent of the Ima Mine and Roger McConnel, chief geologist of the Bunker Hill & Sullivan Mining Company, who is now acting as consultant for the Bradley Mining Company.

Mr. Lemmon, I believe, is probably right, in part at least, in his surmise that the program under discussion was applied for with the thought in mind that the DMEA might soon cease making contracts. He is right, at least I would suspect, to the extent of the timing of the application; in other words, it would probably be coming in now in the normal course of events. The possible ending of the DMEA program resulted in it having been presented in June rather than at a little later date. The Bradley Mining Company regards the proposal as geologically sound and one which would stand on its own feet; in other words, it is something which they would propose to do regardless of the results of the exploration which will be conducted from the Zero level northwest of the present workings. This is not merely a proposal made to get something in ahead of the deadline but is a result of some careful thought and study by Roger McConnel, their present consultant. Reply to the specific questions asked by Mr. Lemmon is made below to the best of our ability.

Copy retained 400

Zero level exploration north of Ima Canyon: (The proposed exploration is to be done from the 360 level not the Zero level; the exploration to the northwest under the existing contract is from the Zero level)

1) Significance of the "Water fault" in relation to the ore deposits. The "Water fault" is now believed to be a flat dipping pre-mineral fault. There may be others somewhat similar to it as suggested by Mr. Lemmon. I am not aware of any major ones of this type within the present mine workings, at least the part that I have been able to observe, although study of the Survey maps made during the war may show that there are others in other parts of the mine which are not now accessible or which I have not had occasion to visit. About the only thing that can be said at present regarding the relation of the "Water fault" to the mineral deposits is that there apparently has been a good deal of fracturing and crumbling of the ground in the vicinity of the fault and that a number of the productive ore bodies of the mine have been found in fairly close proximity to the "Water fault." However, this, of course, has not been the only productive area in the mine. It may be a coincidence but, generally speaking, ore bodies have been larger and richer near the "Water fault." Inspection of the map attached to the application, supplemented by other mine records, clearly shows that a stretch along the "Water fault" from about coordinate East 11,500 to East 13,500 has been rather highly productive from both sides of the fault. All exploration with the exception of a small amount of the 120 level rather far from the fault has been west of coordinate East 12,500 and the stretch from the easternmost part of the Zero level has been untested north of the fault except by one working which explored a very limited area. Part of this area in the vicinity between coordinates East 13,000 and East 13,500 has been productive south of the fault. Prospecting north of the fault to attempt to pick up the extension of known ore trends and prospecting on both sides of the fault for possible new ore trends would appear to be excellent exploration. There is approximately 2,000 feet of potentially favorable ground essentially untested north of the "Water fault."

2) The width of the "Northeast vein zone". The "Northeast vein zone" as labeled on the map is approximately 200 feet wide as pointed out by Mr. Lemmon and therefore it is a very logical question as to why a 600-foot zone should be explored by drill holes. Actually, inspection of the 360 level crosscut on which the "Northeast vein zone" is exposed indicates that this is something of a misnomer. There are exposed in the crosscut numerous tungsten-bearing quartz stringers from the main drift to the end of the crosscut and at least one of these was promising enough to justify some exploration by drifting as may be noted from the map. It would seem logical, therefore, that if any drilling is to be done the entire area should be crosscut. These stringers have been known to widen into highly productive ore bodies, an example of which is to be seen a little east of coordinate North 14,500, East 13,500. This stope was an important producer in former operations.

3) What drilling has been done on the 360 level? The only drilling on the 360 level are some short holes that test the flat vein. Two short holes have been drilled on the No. 1 DMEA vein, a short 250-foot hole has been drilled northeastward from coordinate North 15,000, East 12,000, from the little stub crosscut near coordinate North 15,000, East 12,000, and has cut two small tungsten veins. Some drilling has been done southwest from the No. 3 vein but this is outside of the main area of the proposed exploration and has no particular bearing on the present problem.

4) Possibility of crosscutting from coordinate North 14,725, East 13,725 to the intersection of the "Water fault" and the "NE vein zone." This has been considered and abandoned in favor of the proposal submitted. The reasons are that although this crosscut would indeed test the projected intersection of a favorable zone with the "Water fault," it would test it only at one point. The proposed drift would go along the zone and would permit testing of the full width of the zone by diamond drill holes at several points. Further, the most likely structure would be picked on which to drift with the hope that this might open up into an ore body. Once again it should be pointed out that an ore body need not be very long to be profitable; an example being the ore body already mentioned which is slightly east of coordinates North 14,500, East 13,500. The veins, incidentally, which were found on the 120 level are flat and dip to the southwest. The veins exposed in 360 crosscut are generally steep and they are not exposed on the 120 level. It should further be pointed out that the so-called Blacksmith vein in the old Blacksmith stope near the intersections of coordinate North 13,500, East 14,500 has been rather productive and that the so-called "NE vein zone" is heading in this direction. Therefore, although the intersection of the so-called "NE vein zone" with the "Water fault" is believed to be a particularly favorable area, the possibility that the "NE vein zone" might contain ore shoots away from the fault should not be ignored. The small amount of additional drifting that would be required to do the work by means of the drift proposed by the company versus the crosscut proposed by Mr. Lemmon would appear to be justified in view of the additional information that would be obtained.

Drilling south of Ima Canyon.

1) Has the USBM former drill hole been taken into account in planning the work? Yes, this has been done. Most of the Bureau drilling was further to the southwest. Because this was unknown territory and there was no way of knowing the structure or dip of the veins it turned out that most of the Bureau holes as well as the DMEA holes were drilled essentially parallel to the dip of the veins and thus the area has not been thoroughly prospected by former drilling.

2) Is drilling preferable to further drifting? Drifting on the vein south of Ima Canyon has now reached approximately 400 feet. The ore can hardly be classes as marginal. Although spotty, the average width is about 4 feet and there is in places up to 7 feet of good ore. It would appear that further prospecting for parallel veins is well warranted.

3) Have geologic maps been made of recent workings showing structure of the Belt series? Hulin's mapping did not go into this detail and, as a matter of fact, showed only the major veins. Mapping which is now being done under McConnel's direction is much more detailed and it is his intention to have meticulously recorded all information on the small veins, the so-called early veins and the bedding of the Belt rocks where this is feasible. Up to the moment not too much progress has been made on this as there has been something of a turnover of junior geologists who will do the work under McConnel's direction. It is McConnel's and the companys definite intention, however, to push this phase of the geologic work.

I trust that this will answer the various questions which have been raised and that it will now be possible to work out a satisfactory contract. After a rather careful going over the area I still consider this as quite desirable and well conceived exploration.

Sincerely yours,

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

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COPY

BRADLEY MINING CO.
P. O. BOX 638
BOISE, IDAHO

July 1, 1953

Mr. C. O. Mittendorf, Administrator
U. S. Department of The Interior
Defense Minerals Exploration Administration
Washington 25, D. C.

Re: Docket No. DMEA 3061 - Tungsten
Bradley Mining Co.
Ima Mine
Lemhi County, Idaho

Dear Mr. Mittendorf:

Thank you for your advice of June 23, that our latest application for exploration assistance at our Ima Mine has been assigned Docket No. DMEA 3601.

I expect to see Al Weissenborn at the Sun Valley mining meeting, and no doubt at that time we can cover some of the features of this proposed project that you have referred to him.

Thank you for your cooperation in expediting this program.

Sincerely yours,

Signed: John D. Bradley

John D. Bradley
Executive Vice President

JDB/dc

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JUN 23 1953

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

Re: Docket No. DMEA 3061 - Tungsten
Bradley Mining Co.
Isa Mine
Lemhi County, Idaho

Dear Mr. Weissenborn:

Reference is made to the above-docketed application for exploration assistance. After review by the Washington office and the Commodity Divisions of the Geological Survey and Bureau of Mines, the subject application is being referred to your office for further review and discussion with the applicant.

Contract No. Idm-241 with the Bradley Mining Co. has been conspicuously successful in finding ore; it is not unlikely that the results of the second contract, Idm-2427, will also be successful. We believe, however, that the proposed program of the present application should be revised.

Mr. D. M. Lemmon, Geological Survey, has prepared a memorandum covering the points in question and two copies are enclosed.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

APPROVED:

J. H. Hedges

Member, Bureau of Mines

A. R. Kinkel, Jr.

Member, Geological Survey

FARutledge:foc
6-19-53
cc: Docket
Code 400
Oper. Comm.
Adm. Reading File
FT. Reg. II
R. W. Geehan, USBM
D. M. Lemmon, USGS

JUN 23 1953

Mr. John D. Bradley
Executive Vice President
Bradley Mining Co.
425 Crocker Building
San Francisco 4, California

Re: Docket No. DMEA 3061 - Tungsten
Bradley Mining Co.
Ima Mine
Lemhi County, Idaho

Dear Mr. Bradley:

Reference is made to your application for exploration assistance transmitted to the Defense Minerals Exploration Administration regional office by your letter of May 8, 1953. This application has been assigned Docket No. DMEA 3061 and referred to the Iron and Ferro-Alloys Division, DMEA.

After a review by the Iron and Ferro-Alloys Division, the subject application has been referred to Mr. A. E. Weissenborn, Executive Officer, DMEA Field Team, Region II, South 157 Howard Street, Spokane 4, Washington, for a field review.

Accordingly, the Regional Office will discuss with you several features of this proposed project. Any assistance that you can render the members of the Field Team will be appreciated.

Sincerely yours,

C. O. Mittendorf

Administrator

FARutledge:foc
6-19-53
cc: Docket
Code 400
Adm. Reading File
Oper. Comm.
FT. Reg. 2
R. W. Geehan, USBM
D. M. Lemmon, USGS

400

June 12, 1953

Memorandum

To: W. S. Martin, DMEA

From: Robert W. Geehan

Subject: Ima Mine, Lemhi Co., Idaho, Bradley Mining Co.
DMEA 3061 - Tungsten

Reference is made to the letter of May 28 to Mr. Selfridge from the Field Team of Region II regarding the subject docket.

The Field Team question regarding the extent to which a property can be explored under DMEA contract is particularly pertinent, as there have been two prior contracts at the Ima. However, if the work is exploration, not development, the quantity of exploration justified should be measured against the expected results, not against the number of contracts or the amount of money expended. The question regarding the need for tungsten is not pertinent in my opinion, as this is covered by ODM instruction. (Letters from Arthur S. Flemming, Director, ODM, May 18 and June 1). However, if DMEA considers it important, the fact that the Ima is one of the three significant domestic sources of tungsten concentrates suitable for production of tungsten wire would be a factor.

The Field Team states "The exploration program proposed by the applicant would explore a favorable target area which could add substantial amounts of tungsten to the nation's ore reserves." It is recommended that the application be approved.

Robert W. Geehan

IN REPLY REFER TO:

G-MD-DML

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

June 16, 1953

Memorandum

To: W. S. Martin, DMEA

From: D. M. Lemmon, USGS

Subject: Proposal of May 8th for additional exploration Bradley Mining Company Ima mine Lemhi County, Idaho

DMEA-2635(?) 3061
Tungsten

Work under the first DMEA contract at the Ima mine is nearing completion and work is starting on the second contract, involving extensive exploration northwest from the zero level beneath the General Electric property.

The Bradley Mining Company now proposes a third project to search for other veins on the north side of Ima Canyon east of present known ore bodies and to drill downward from the tunnel on the south side of the canyon. The work involves 1,250 feet of drifting and crosscutting, 270 feet of diamond drill stations, and 9,050 feet of diamond drilling, at a total estimated cost of $99,830.65

The proposed project is somewhat different from previous successful exploration at the mine in that it involves drifting on the 360 level along a zone of mineralized fractures in which ore bodies were not found at the surface or in underground work on the 120 and 360 levels. The drifting will be followed by core drilling horizontal holes 300 feet long, in each direction, at intervals of 200 feet. In addition, 8 horizontal holes 250 to 600 feet long will be drilled along both sides of the"water fault" for a distance of 3,000 feet.

Inasmuch as the proposed program involves a different emphasis from that of past exploration, I suggest that DMEA ask the Field Team to review carefully with the Bradley Mining Company the objectives and methods proposed. It is possible that the Bradley Mining Company is requesting this new program in expectation that DMEA will soon cease making new loans. The most favorable exploration targets in the mine are those lying northwest of the present workings, in ground to be explored on the zero level in accordance with the contract now in force. If this work were completed, the next step proposed might be something quite different from the current new proposal.

The following specific comments outline a few points that might well be discussed with the Bradley Mining Company and the Field Team:

Zero level exploration north of Ima Canyon.

1) How significant is the "Water fault" in relation to the ore deposits? My impression is that similar faults are present in the mine, that others will be found to the northwest, and that blind exploration of both sides of the fault outside the known ore zones is real wild-catting.

2) The map shows the "Northeast vein zone" to be 200 feet wide. Why drill a width of 600 feet?

3) What drilling has been done on the 360 level?

4) Has consideration been given to the possible merit of continuing the second crosscut, from coordinates 14, 725 N, 13,725 E, northeastward to the intersection of the "Water fault" and the "NE vein zone"? About 700 feet of crosscut would test the presumed favorable ground beneath the Water fault and would intersect the NE zone 700 feet north of the present zero level crosscut, and 400 feet north of the drift on the 120 level. Inasmuch as the NE zone is not encouraging in present exposures on the surface, 120 and zero levels, perhaps the best chances for discovery lie farther north, and the intensive drilling to the south might be eliminated.

Drilling below zero level south of Ima Canyon.

1) The map showing proposed drill holes does not include former drill holes by U.S.B.M. and by Bradley Mining Company. Has the former work been taken into account in the present proposal?

2) Work to date south of the Canyon has resulted in opening one vein, probably marginal in grade and size. Is continued crosscut drilling preferable to more extensive drifting southward along this vein in the hope that it will lead into an ore body?

3) Have geologic maps been made of recent workings showing structure of the Belt Series? Or, are they rocks too badly deformed to show bedding?

D. M. Lemmon

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.
xxxxxxxxxxxxxxxxxx
So. 157 Howard Street
Spokane 1, Washington

May 23, 1953

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

Re: Application for Exploration
at Ima Mine
Lemhi Co., Idaho

Dear Mr. Selfridge:

Enclosed are the original and three copies of an application for a DMA contract submitted by the Bradley Mining Company, concerning the Ima mine, Lemhi County, Idaho. Six copies of the application were received at this office, but one copy has been retained for the files of the Executive Officer and one for the files of the Field Team Member.

The Bradley Mining Company has received two DMA contracts on the Ima mine. Contract Idm-641 is almost completed; as of this date, there remains only a short footage of drifting to be done. Project work conducted under this contract has been very successful in exposing a substantial tonnage of tungsten ore (see DMA Annual Report, Region II, for further details). Exploration work on the second contract, Idm-6427, is just getting under way, and it is too early at this date to evaluate the results of work completed.

Exploration work proposed in the subject application is geologically well-founded. The proposed program would explore the northward extension of the Northeast vein zone into previously untested areas. The Northeast vein zone is known to be tungsten-bearing, where intersected by the 360 level, and there is reason to believe the vein zone will become more tungsten-enriched to the north in the area near the water fault. The northern region presents a promising exploration target that can most advantageously be explored by drifting and diamond drilling. The diamond drilling proposed from the Bureau of Mines tunnel on the south side of the canyon would explore the downward and southward extensions of tungsten-bearing structures previously exposed in that tunnel.

The exploration program proposed by the applicant would explore a favorable target area which could add substantial amounts of tungsten to the nation's ore reserves. The Bradley Mining Company has proven to be a good operator in other DMEA projects, and there is every reason to expect them to do the proposed work in an efficient and highly satisfactory manner. For these reasons, the Field Team recommends approval of a DMEA contract. The Field Team does not, however, know the extent to which a property may be explored under DMEA contract and therefore suggests consideration of this matter by DMEA officials in Washington, D. C. If the need for tungsten is acute and is expected to remain that way for an indefinite period of time, the application should be favorably considered as there is every chance for the proposed work to result in a discovery.

There is also an excellent chance for the property to produce enough ore to repay the Government for funds expended not only in this program but the other two programs as well. On the other hand, if there is a limit to which a property should be explored under DMEA contract, this application should receive consideration in line with those policies.

No report or breakdown of cost estimates on the subject application is being prepared at this office as there is believed to be sufficient information in the Washington office files, in the way of previous field reports, interim reports by field examiners and the Operator, and monthly invoice reports, to prepare a contract. If a contract is negotiated, it is recommended that it be on a unit cost basis rather than for costs incurred.

By Field Team, Region II

Thor H. Kiilsgaard
for A. A. Weissenborn, Exec. Officer
U. S. Geological Survey

E. E. Volin, Member
U. S. Bureau of Mines

Enclosures
cc: DMEA (Orig.+2)
DMEA(2)
Nickelson

Kellogg, Idaho
May 15, 1953

Mr. John D. Bradley
Executive Vice President
Bradley Mining Company
425 Crocker Building
San Francisco 4, California

Dear Mr. Bradley:

The following comments are made in connection with a proposal for a fourth DMEA project at the Ima Mine, Patterson, Idaho, and will answer questions 4(c) and 5(6) of the application, DMEA Form MP-103 (revised April, 1952).

Question 4(c) - Geologic Features

On the attached partial composite map is shown the geology of the 360 Level, Ima Mine. The principal veins and the Water Fault, the most prominent fault known in the mine, are illustrated, together with the proposed work.

As will be noted on the map, exploration and mining so far have been directed along a northwesterly-trending zone of veins lying in both the hanging wall and the footwall of the Water Fault.

Three additional areas or zones of tungsten mineralization appear very worthy of exploration, all being not far distant from presently active areas of the mine.

The first of these lies northeast of the presently explored area of the mine in the footwall of the Water Fault.

This zone is indicated by seven steeply dipping hubnerite-bearing veins and one flat hubnerite-bearing vein in two crosscuts driven northeasterly from the vein zone already exploited. (See map) These veins strike northerly toward the Water Fault. None of these veins where presently exposed are large enough to constitute ore, but each is well mineralized with hubnerite.

Because of past experience at the Ima in successfully following such showings along the strike into ore shoots, I am quite convinced that these exposures are well worth considerable further exploration.

The second zone of interest is the inclined block of ground along the Water Fault, in each wall of the fault.

The Water Fault is a major structure in the mine and, though it is not known to be mineralized itself, commercial tungsten mineralization is found in veins branching from its walls. The known veins branch from the fault over a distance of about 1500 feet along the strike of the fault. Should the northeast zone of veins mentioned in preceding paragraphs develop into ore shoots as is expected, the zones of tungsten bearing veins branching into either wall of the Water Fault would extend along the strike of the fault for over 3000 feet. Such a distance is nearly equal to the length of the presently exploited vein zone.

Thus, the vicinity of the Water Fault in each wall appears to offer above average chances for discovery of additional veins, and its prospecting, largely by drilling, is strongly urged.

The third area to be further prospected lies across Patterson Creek from the principal mine workings where exploration has found one vein of moderate grade hubnerite ore and, in addition, three small hubnerite-bearing veins. These veins were encountered during the progress of exploration under RMKA contract Project #2, IDM-Fd1, the project now nearing completion.

The best vein has been explored by drift for about 250 feet under the above mentioned contract, and drifting will continue for about another 200 feet to complete the contract.

The other veins, though mineralized with hubnerite where exposed, are too small to constitute ore, yet they deserve additional exploration. They, as have other small veins in the main mine ore, may well lead to substantial hubnerite ore shoots.

Further exploration on these veins, designed to cover the entire zone in which they lie, can be accomplished by additional drilling, as illustrated on the attached map.

Question 5(b) - Description of the Proposed Work

The exploration proposed consists of some 1250 feet of drifting and crosscutting, 270 feet of diamond drill stations, and 9050 feet of diamond drilling.

It is proposed to prospect the first area, the northeast vein zone described above, by 870 feet of drift along one or more of the veins to the Water Fault, plus 2850 feet of diamond drilling. The work as outlined will thoroughly prospect the zone of veins over a length of about 870 feet and across a width of about 600 feet.

For the second area, namely, the walls of the Water Fault, short crosscuts to penetrate both the foot and hanging walls of the fault in unexplored areas, plus some 3710 feet of diamond drilling, are proposed. This work, plus that already accomplished, will prospect the Water Fault vicinity over a distance of about 3000 feet along its strike.

For the third area southeast of the main workings, drilling only is proposed.

Drilling is designed to test this group of veins both laterally and downward and totals some 2490 feet, as illustrated on the map attached to the application.

This explanation, I trust, sufficiently describes the mine geology, the reasons for the proposed exploration, and the plan of exploration.

Each of the projects outlined has my strong endorsement as an attractive venture for further discovery of tungsten ore in this well-mineralized property.

RECEIVED
MAY 18 1953
U. S. G. S.
SPOKANE, WASH.

Very truly yours,

Roger H. McConnel

Roger H. McConnel

RHMc:cl
Attach.

WORTHEN BRADLEY
PRESIDENT

JOHN D. BRADLEY
EXECUTIVE VICE PRESIDENT

JAMES P. BRADLEY
VICE PRESIDENT

E.A. GRIFFEN
SECRETARY

BRADLEY MINING CO.
425 CROCKER BUILDING
SAN FRANCISCO 4, CALIFORNIA
TELEPHONE SUTTER 1-0414

ANTIMONY
TUNGSTEN
VIRGIN QUICKSILVER

May 8, 1953

Mr. A. E. Weissenborn, Exec. Officer
Field Team, Region II
Defense Minerals Exploration Administration
South 157 Howard Street
Spokane 8, Washington

Re: Application for Exploration at Ima Mine, Patterson, Idaho

Dear Al:

Enclosed herewith are an original and five copies of our application for further exploration at our Ima Mine, Patterson, Idaho.

These applications include the following:

1. Description by Roger H. McConnel of the work to be done and results hoped to be attained.

2. Maps illustrating the area in which the work will be performed.

3. Detailed data concerning the exploration program listed according to your Form MF-103.

Although Mr. McConnel's descriptive report provides all the necessary data for a clear understanding of our objectives I wish to briefly state herewith that our proposal involves two different areas as follows:

Area 1

Exploration in an East-West direction along the Water Fault on the 360 level (the main haulage level) of the Ima Mine.

Area 2

Diamond drilling South of the Ima Canyon from underground headings driven under DMEA contract Project #2 IDM-E41. The objective is to further test the potentialities of veins discovered under this project.

Mr. A. E. Weissenborn May 8, 1953

Trusting that this latest proposal will be processed at an early date and with kindest regards, I am,

Sincerely yours,

John D. Bradley

John D. Bradley
Executive Vice President

JDB:as
Encl.

RECEIVED
MAY 18 1953
U. S. C. S.
SPOKANE, WASH.

Bradley Mining Co.
425 Crocker Building
San Francisco 4, California

1. (a) Bradley Mining Co.
425 Crocker Building
San Francisco 4, California

(b) Not applicable

(c) Officers
Worthen Bradley, President - 425 Crocker Bldg., San Francisco
John D. Bradley, Executive Vice Pres. - 425 Crocker Bldg., San Francisco
James P. Bradley, Vice President - 425 Crocker Bldg., San Francisco
E. A. Griffen, Secretary & Treasurer - 425 Crocker Bldg., San Francisco
G. C. Orton, Assistant Secretary - 425 Crocker Bldg., San Francisco

(d) Not applicable

3. (a) Patented Lode Claims as follows, Located in Sections 14, 23 and 24, Township 14 North Range 23 East, Boise Meridian.
Patterson No. 2, Manda No. 23, Maxda No. 24
Mineral Survey No. 3368
Ima No. 4, Ima No. 5, Ima No. 9, Ima No. 20
Mineral Survey No. 1827
Ima No. 10, Ima No. 15, Ima No. 16, Ima No. 17
Mineral Survey No. 1946
(b) Ima Mine & Miller Mine
(c) Purchaser under contract
(d) Copies of contracts previously submitted in connection with Contract I-DMA-KAl consist of leases with option to purchase.
(e) Subject to royalties with annual minimums. All royalties apply on purchase price.
(f) None involved.

4. (a) Mining and concentrating presently being conducted by the applicant. Concentrator of modern construction has capacity of 130-150 tons per day. Mine workings are accessible for examination.
(b) Mine has been in operation approximately 16 years. Applicant has conducted operations since January 1945.
Production data is as follows:

	1952	1945-1952 (incl.)
Hubnerite and Scheelite S.T.U.	20,356.76	87,930.40

(c) See letter attached from Roger H. McConnel to Mr. John D. Bradley, dated May 8, 1953.
(d) Distance to railhead at Mackay, Idaho is approximately 56 miles in summer and 100 miles in winter. Supply center is Boise and for some items, points in Montana. Project is accessible all year. Adequate residential facilities adjoin property.
(e) Supplies of manpower, supplies and equipment have been adequate to date. Water is plentiful and power is generated by diesels. Public power will be available in a short time.

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425 Crocker Building
San Francisco 4, California

5. (a) Tungsten in the form of huebnerite.
   (b) See answer to 4 (c) above.
   (c) The work will start within 90 days from signing of the contract and will be completed within 24 months.
   (d) Applicant has had many years of experience in operation of this property and others, and retains a staff of competent engineers to supervise the project.

6. Scope of work: 1250 feet of drifting and lateral exploration.
   270 feet of diamond drill stations.
   9050 feet of diamond drilling.

(a) Independent Contracts
Diamond drilling only.
9050 feet of drilling @ $5.00 per foot $45,250.00

(b) Labor, Supervision, Consultants

Number	Class	Straight Time Hourly Rate
4	Miners	1.96
2	Motormen	1.96
1/4	Supervisor	2.29
1/8	Timber Framer	1.96
1/4	Blacksmith	2.04
1/4	Dumpman	1.72

Allowable labor costs are to include the above classifications at the specified straight time rates plus legal overtime. There shall be no restrictions as to the number of employees who may work on the project, nor shall there be any limit to the number of employees working under any particular job classification as listed above.

Labor and supervision are listed as the manpower required per work-day at straight hourly rates. On the basis of an average advance of 8 feet per work-day, 190 work-days will be required. Including legal overtime, the total wages are estimated at $22,258.00. $22,258.00

One Geological consultant @ $50.00 per day plus $15.00 per day for expenses, 15 days = $975.00. 975.00

Total labor, supervision, consultants: $23,233.00

Labor, supervision, consultants per foot of advance: $15.28 per ft.

(c) Operating Materials and Supplies

2500 feet 20# rail and accessories (8.5 tons @ $150.00/ton	$1,275.00
1250 feet 2" pipe @ $0.42	525.00
1250 feet 3/4" pipe @ $0.133	166.00
6700 feet stull timber @ $0.15	1,005.00
28,000 board feet lumber @ $60.00/M	1,680.00
12 tons powder @ $375.00/ton	4,500.00
230 tungsten carbide bits @ $12.00	2,760.00
drill steel	750.00
300 feet 1" air hose @ $0.90	270.00

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San Francisco 4, California

6. (c) Operating Materials and Supplies (Continued)

300 feet 3/4" water hose @ $0.75	$ 225.00	
7600 blasting caps @ $0.02	152.00	
68,400 feet fuse @ $35.00/3000	798.00	
drill repair parts	200.00	
car repair parts	300.00	
1100 feet 16" ventube plus fittings @ $1.08/ft.	1,188.00	
Misc. items (pipe fittings, nails, wire, etc.)	1,000.00	
Power 97,714 K.W.H. @ 3.5¢	3,420.00	
		$20,214.00

Operating materials and supplies per foot of advance: $13.30 per foot

(d) Operating Equipment

Item	Owned by Operator Replacement Value	Depreciation Allowance	Total Depreciation Allowance *
360 cu. ft.			
Compressor	$ 5,400.00	$ 90.00	$1,350.00
Trammer	3,850.00	64.17	962.55
Loader	1,550.00	25.83	387.45
Mine Cars (10)	800.00	13.33	199.95
Stoper Drill	486.50	8.11	121.65
Framing Shed Equipment	700.00	11.67	175.05
Blacksmith Shop Equipment	2,550.00	42.50	637.50
Total	$15,336.50	$255.61	$3,834.15

*15 Months

Total $3,834.15

(e) Rehabilitation and Repairs
Drift repair through caved ground $1,500.00

(f) New Buildings, Improvements, Installations

1440 feet 20# rail and accessories		
5 tons @ $150.00 per ton	$ 750.00	
1440 board ft. lumber (ties) @ $60.00/M	86.40	
470 feet 3" pipe @ $0.87	408.90	
950 feet 2" pipe @ $0.42	399.00	
470 feet 1" pipe @ $0.18	84.60	
350 feet 3/4" pipe @ $0.133	46.55	
520 feet 16" ventube plus fittings @ $1.08	561.60	
Installation of rail, pipe, ventube	500.00	
		$2,837.05

(g) Miscellaneous
Accounting and Engineering
1 hour each day for one accountant and one engineer. The rate for each being $2.29 per hour including compensation insurance and payroll taxes. 190 working days. $870.20

Workmen's Compensation
$22,258.00 @ $6.50/$100.00 $1,446.77

F.I.C.A. and U.I. Taxes
$22,258.00 @ $2.9% $645.48

Total $2,962.45

(h) Contingencies None

Total Cost $99,830.65

7. (a) Yes
(b) Monthly costs will be paid by applicant and proper percentage charged monthly to R.M.E.A.