DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

CONTROLLED DOCUMENT

DMA Docket No. 2916

DO NOT DETACH THIS SLIP

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

This document has been recorded as

EXPLORATION ASSISTANCE

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

One copy to USBM. and to USGS. One copy retained in Region II.

Routing Slip

To:	Code 700, Room 4640	Date	3/5/53
To:	Open Comm	Date	4-24-53
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	

DO NOT DETACH

CONTROLLED DOCUMENT

Not too well documented
but satisfactory for purpose

J.A.K

FILE COPY
SURNAME:

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

Ellis
Kunkel
Hedges
Sotfidge
Hoffman

APR 23 1953

Mr. [illegible] Allen
Chairman and Trustee
Executive [illegible] Limited
[illegible] Wetland Building
[illegible], [illegible]

Re: Project No. [illegible] (Colony)
Strain, Lake Group of Claims,
[illegible] District,
[illegible] County, [illegible]

Dear [illegible]:

D.C. 4/24/53

[illegible] dated January [illegible], [illegible], for aid in the exploration project located on [illegible] patented mineral claims recently reviewed by this [illegible].

Objectives [illegible] by the efforts [illegible] information [illegible] the [illegible], which [illegible] of yield [illegible] uranium-bearing [illegible] and [illegible] that [illegible] possibility [illegible] deposit.

[illegible] all information available from other [illegible], appears that the [illegible] is not believed [illegible] Federal [illegible] Government participation.

[illegible] assistance [illegible] application for exploration aid to the extent [illegible] must be [illegible].

If future [illegible] property reveals evidence [illegible] we will [illegible] a new application.

Very [illegible],

C. O. Mittendorf (for)

[illegible] Administrator

[illegible]lt/[illegible]Ellis/[illegible]la
4-23-53
cc [illegible] Adm. [illegible] File
Operating [illegible] Steel
Docket
Messrs. Abbott [illegible], Rm. 3041
A. [illegible] Kinkel, Rm. [illegible] - DMA
Ellis DMEA Field Team, Region II (2)

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

April 23, 1953

SUMMARY OF PROPOSED PROJECT

Docket No. DMEA-2916
Applicant: Productive Mines Limited
Subject: Denial of application

Commodity: Antimony
Location of property: Birmingham Group, Owyhee County, Idaho — Region II
Amount of application: $50,000.00
Date of application: February 10, 1953

Outline of project: The project consists entirely of underground exploration at six different localities on four claims.

New application (denial recommended before transfer to Field for examination of property):

Field Team's transmittal letter of February 24, 1953, states that Mr. C. C. Popoff, USBM, visited the subject property in 1952. He reports that the property contains very little stibnite and that it looks quite hungry. Evidence on hand indicates the property must be considered largely as a potential silver-gold producer, with minor amounts of stibnite.

Recommendations by the Field Team:

There appears to be little reason why this property should be given a DMEA contract; therefore, a field examination was not considered to be advisable unless requested by the Washington office.

Commodity Members' comments:

Bureau of Mines: Abbott Renick, dated April 20, 1953.

Concurs in denial of the application

Geological Survey: Arthur R. Kinkel, Jr., dated March 17, 1953.

(1) The district is primarily a precious metal district and while antimony occurs in the vein, there is no indication that it is in minable quantities.

Geological Survey comments (continued):

(2) The deposits are small and there probably would be no substantial production of antimony; and

(3) The veins were not promising-looking to the Examiner. Denial recommended.

Rare and Misc. Metals Division Engineer: ErnestWm. Ellis

Comments: Reviewed by Ernest Wm. Ellis. Denial letter written on basis of recommendations.

Ernest Wm.Ellis, Chief
Rare and Misc. Metals Division

4/21/53 gla

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

April 20, 1953

Re DMEA 2916
Productive Mines Ltd.
Prospect
Owyhee County, Idaho
Antimony

Memorandum

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
APR 20 1953

To: E. Wm. Ellis

From: Abbott Renick

Subject: Concurrence in denial recommended by field team

Field team states, "There appears to be little reason why this property should be given a DMEA contract." They, therefore recommend denial of the application, with which I concur.

Abbott Renick

Abbott Renick

Copy to Minerals Division
Base Metals Branch
A.R. Kinkle, Rm. 4234 - G.S.A. Bldg.
A. Renick
F I L E S

3/17/53 gla

IN REPLY REFER TO:

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

March 17, 1953

Re: DMEA-2916
Productive Mines Limited
Birmingham group of claims,
Flint mining district, Owyhee
County, Idaho
Total cost: $50,000

Memorandum

To: Mr. E. Wm. Ellis

From: A. R. Kinkel, Jr.

Subject: Recommendation for ~~field referral~~ denial

The Productive Mines Limited has requested Government assistance to explore a group of claims in the Flint mining district, Owyhee County, Idaho. The project consists entirely of underground exploration at six different localities on four claims. Total cost is said to be $50,000, but the total as given in a more or less itemized statement is $34,900.

So far as is known the most recent report on the area is Bulletin No. 11 of the Idaho Bureau of Mines and Geology by Arthur Piper and Francis Laney published in 1926.

The district was and is primarily a precious metal producer and no record of base metal production was found. However, according to the above report stibnite and jamesonite are locally abundant in the ores of the district and some of the ore from the Rising Star vein consisted almost wholly of stibnite and jamesonite (Piper and Laney, pp. 75 and 80).

The field team, in its letter of transmittal, recommends that the application be denied on the basis that the deposits are potentially silver-gold producers. In addition, the letter states that C. C. Popoff of the U. S. Bureau of Mines visited the property in 1952 and reports that there is very little stibnite present.

This reviewer concurs with the field team's denial for the following reasons, (1) the district is primarily a precious metal district and while antimony occurs in the veins, there is no indication that it is in mineable quantities; (2) the deposits are small and there probably would be no substantial production of antimony; (3) the veins were not promising-looking to the examiner.

A R Kinkel Jr.

Arthur R. Kinkel, Jr.
Geologist

IN REPLY REFER TO:

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

March 17, 1953

Re: DMEA-2916
Productive Mines Limited
Birmingham group of claims,
Flint mining district, Owyhee
County, Idaho
Total cost: $50,000

Memorandum

To: Mr. E. Wm. Ellis

From: A. R. Kinkel, Jr.

Subject: Recommendation for ~~field referral~~ denial

The Productive Mines Limited has requested Government assistance to explore a group of claims in the Flint mining district, Owyhee County, Idaho. The project consists entirely of underground exploration at six different localities on four claims. Total cost is said to be $50,000, but the total as given in a more or less itemized statement is $34,900.

So far as is known the most recent report on the area is Bulletin No. 11 of the Idaho Bureau of Mines and Geology by Arthur Piper and Francis Laney published in 1926.

The district was and is primarily a precious metal producer and no record of base metal production was found. However, according to the above report stibnite and jamesonite are locally abundant in the ores of the district and some of the ore from the Rising Star vein consisted almost wholly of stibnite and jamesonite (Piper and Laney, pp. 75 and 80).

The field team, in its letter of transmittal, recommends that the application be denied on the basis that the deposits are potentially silver-gold producers. In addition, the letter states that C. C. Popoff of the U. S. Bureau of Mines visited the property in 1952 and reports that there is very little stibnite present.

This reviewer concurs with the field team's denial for the following reasons, (1) the district is primarily a precious metal district and while antimony occurs in the veins, there is no indication that it is in mineable quantities; (2) the deposits are small and there probably would be no substantial production of antimony; (3) the veins were not promising-looking to the examiner.

Arthur R. Kinkel, Jr.
Geologist

3/25/53 gla

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

March 16, 1953

DMEA-2916

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
MAR 19 1953

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

Re: Productive Mines Limited
Owyhee County, Idaho

Dear Mr. Selfridge:

Reference is made to a Field Team letter dated February 24, 1953, whereby we transmitted an application submitted by Productive Mines Limited. The enclosed map is to accompany this application.

Sincerely yours,

Eva M. Raymond

Eva M. Raymond
For: A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II

Enclosure

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

March 16, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
MAR 19 1953

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

Re: Productive Mines Limited
Owyhee County, Idaho

Dear Mr. Selfridge:

Reference is made to a Field Team letter dated February 24, 1953, whereby we transmitted an application submitted by Productive Mines Limited. The enclosed map is to accompany this application.

Sincerely yours,

Eva M. Raymond
For: A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II

Enclosure

March 5, 1953

Mr. A. C. Allen, Chairman
Productive Mines Limited
712 Swetland Building
Portland, Oregon

Subject: DMEA-2916
Re: Exploration Assistance
Birmingham Group

My dear Mr. Allen:

The receipt of your application dated February 10, 1953 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-2916 and referred to the Rare and Miscellaneous Metals Division.

Kindly refer to DMEA-2916 in any future correspondence relating to your application.

Sincerely yours,

R. E. ADAMS

Robert E. Adams
Chief, Operations Control
and Statistics Division

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

March 5, 1953

Memorandum

To: Executive Officer, DMEA Field Team, Region II

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number

There is listed below the assigned docket number to an application recently received from Region II.

DMEA-2916 **Productive Mines Limited**

R. E. ADAMS

Robert E. Adams,
Chief, Operation's Control
and Statistics Division

33980

dmea 2-916

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

February 24, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 3 1953

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

Dear Mr. Selfridge:

Enclosed are the original and two copies of an application for a DMEA contract submitted by Productive Mines Limited. Three copies of a letter from Productive Mines Limited, which describes the proposed exploration work and a list of company property, are also enclosed. The application concerns a property in the Flint Mining district, Owyhee County, Idaho. One copy of the application and accompanying letter are being retained at this office.

The Flint Mining district is described in Idaho Bureau of Mines and Geology Bulletin No. 11, Geology and Metalliferous Resources of the Region about Silver City, Idaho, by Arthur M. Piper and Francis B. Laney, 1926. There has been little work done in the district since Piper and Laney made their report.

The Flint district, along with the Silver City district, was formerly of importance as a producer of silver and gold. The mineralized structures are reported to be strong quartz veins in which the more common sulphide minerals are various silver sulpho-antimonides. Other minerals are stibnite, jamesonite, various selenides, and gold. Accessory minerals include galena, chalcopyrite and sphalerite. The veins are typically epithermal and have never been of value as base metal producers.

Mr. C. C. Popoff, U. S. Bureau of Mines, visited the subject property in 1952. He reports that the property contains very little stibnite and that it looks quite hungry. Evidence on hand indicates the property must be considered largely as a potential silver-gold producer, with minor amounts of stibnite. Moreover, recovery of selenium from the various selenide minerals would probably be negligible, if it was recovered at all. There appears to be little reason

why this property should be given a DMEA contract; therefore, a field examination of the property will not be scheduled and no further consideration will be given this application unless requested by the Operating Committee.

By DMEA Field Team, Region II

A. E. Weissenborn

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

M. E. Volin

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

Enclosure

cc: USBM (2)

A. C. ALLEN
C. H. ROBERTS

dmea 2916

711 - 716 SWETLAND BUILDING
CORNER 5TH AND WASHINGTON STS

LAW OFFICES
ALLEN & ROBERTS
PORTLAND 4, OREGON

16 February, 1953.

United States Department of Interior,
DMEA,
1201 North Division Street,
Spokane, Washington.

Attention: Mr. I. E. Howard.

Gentlemen:

Under date of February 10, 1953, in care of William Slotboom, we handed your department an application for an exploration loan. While our original application asked for a loan of $50,000.00, we did not specify the work which it would entail. That expenditure we desire now to supplement to that report and add to the same the following estimates and information, to-wit:

We propose to do the following work on the Treasure Vault Mining claim located in Twilight Gulch, spile and retimber 200 feet of tunnel at an estimated cost of $4,000.00; put in an 80 foot raise at a cost of $15.00 per foot or $1,200.00; continue cross-cut and drift on the vein 250 feet at an estimated cost of $4,000.00; sink a shaft on this vein a distance of 100 feet at a cost of $3,500.00; drift on the vein from the bottom of the shaft, 100 feet at a cost of $2,000.00. This we call our Number One undertaking.

#2 Proposition: On the stibnite quartz claim in Twilight Gulch, we propose to drift on this vein at least 150 feet at a cost of $2,500.00.

#3 Proposition: This proposition is in connection with the development work on the south side of Aster Gulch. On the southern side of the bullion mining claim, an X-cut tunnel has already been driven approximately 500 feet. This cross-cut tunnel, we propose to continue a distance of at least 18 feet in order to intersect the vein here on the Rising Star vein; we propose to drift 150 feet at least on the main vein; we estimate the cost of this work at $2,500.00.

Proposition #4: On the Bullion claim, a cross-cut of approximately 400 feet has been driven in order to cut under an old shaft, which is in ore. We propose to extend this cross-cut in order to complete the tunnel and then drift on the vein. There is some retimbering to be done in order to complete this work; the cost of the drift with the retimbering , we estimate at $2,000.00.

A. C. ALLEN
C. H. ROBERTS

711 - 716 SWETLAND BUILDING
CORNER 5TH AND WASHINGTON STS

LAW OFFICES
ALLEN & ROBERTS
PORTLAND 4, OREGON

Proposition #5: On the Cresent Quartz Mining claim located in Aster Gulch, we propose to drift on two different veins here at least 150 feet; these veins have been cut by a 500 foot cross-cut; the estimated cost of this work will be $2,500.00.

Proposition #6: On what is commonly called the Antimony vein, located in Aster Gulch and on the bullion quartz mining claim, we desire to continue the cross-cut tunnel in order to cut this antimony vein; we propose to extend this cross-cut tunnel at least 100 feet at a cost of $1,500.00.

We further propose to start stopes in the different ore shoots as soon as they are open. The cost of the timber, lumber, planks, lagging, labor, etc. necessary to do this will amount to $7,500.00. We will also have a surveying cost of approximately $200.00 and an expense for repairing the buildings about the mines of approximately $1,000.00, and there will be necessary to spend, $500.00 to condition the roads in and about said property.

For your further consideration, we are enclosing to you the new estimated statement of the equipment owned by the trust with the cost attached.

We are also attaching to this letter, a map outlined in red, showing where we propose to work and develope this property.

Respectfully submitted,

PRODUCTIVE MINES LIMITED.

BY: A. C. Allen
Trustee and Chairman.

ACA:jg
Encl: (2)

P.S.

The silver ore involved contains a large percentage of antimony, plus the actual antimony veins.

RECEIVED
BUREAU OF MINES
FEB 17 1953
SPOKANE, WASH.

PERSONAL PROPERTY LIST

	Appraised Value.
1 - Caterpiller D 13,000 Power Unite complete	$ 9,500.00
1 - 8 Ton Dump Truck with new heavy duty tires	1,800.00
1 - Sullivan Air Hoist	375.00
1 - M 6 R Skookum Block	[illegible]40.00
1 - 7½ H.P. 1150 R.P.M. Volt D.C.Motor	500.00
1 - Revising D. C. Drum Controller	200.00
~~240 R.P.M. on wheel shaft~~	
1 - 3 ton Yale chain block	100.00
7 - Mining cars, four new and three 2nd hand cars	500.00
200 H T ype Bits & Assorted lengths of steel	270.00
1 - Tool Sharpener machine	1,000.00
1 - 50 H.P. Motor	500.00
3000 feet of pipe 3 in, 2 in & 1½ in	1,500.00
1 - Stoper Machine	575.00
2 - Jack Hammers	80.00
300 Timkin Bits	60.00
12 tons of 16# New Rails & flanges	1,800.00
3 - Beds, mattresses, springs & four chairs	50.00
1 - Oil Stove and tank	50.00
1 - Pipe & Dues for cutting threads on pipe	25.00
Lumber, windows, doors for cabins, mess hall & machine sheds & blacksmith shop	1,100.00
Small tools, blacksmith shop outfit	256.00
Miner lights with batteries to work in tunnel	125.00
1 - Air Compressor, portable	2,600.00
1 - 440 Electric Motor for compressor	500.00
100 feet of cable 3/8 inch	75.00
190 feet of 5/16 in. plow steel with clamps & other	125.00
small items that are not itemized, such as shop tools and chains, etc.	150.00
1 - Blower and Pipe Motor	360.00
	$ 23,991.00

This equipment is now at the plant, being installed to make ready for operation. All of this equipment is purchased and paid for by the company.

A. C. ALLEN
C. H. ROBERTS

711 - 716 SWETLAND BUILDING
CORNER 5TH AND WASHINGTON STS

dmea 2916

LAW OFFICES
ALLEN & ROBERTS
PORTLAND 4, OREGON

10 February, 1953.

United States Department of the Interior,
Defense Minerals Exploration,
1201 North Division Street,
Spokane, Washington.

Gentlemen:

The writer is one of the trustees and is chairman of the Board of Trustees of Productives Mines Limited, a common law trust of Idaho.

The trust is hereby making an application to your department for a loan of $50,000., for mineral exploration work, in connection with the property owned by said trust in the Flint Mining District in Idaho.

We understand that originally the trust, through J. G. Vollmer, wrote a letter to your department, requesting a loan, but that the application was never properly completed, although your department, through your Engineer, Mr. Poppof, made an examination of this property, which examination you probably have in your files and which we would prefer to use in connection with this application, without any necessity of further examinations if possible.

The new trustees have attempted to familiarize themselves with the workings of this trust and with the property owned by the trust, including the equipment and machinery. We feel that the property warrants an exploration loan, as we have a considerable amount of Antimony now showing and good evidence of Selenium ore being recovered and also the possibility of Tungsten ore.

In connection with the necessary work to be done, wish to state, that the buildings about the mine, must be repaired on account of the heavy snow which caused some of them to collapse. Furthermore, the mill owned by the company, should be set up at the mine and a mill site prepared. Likewise, some road work will be required in and about the mine, although of course, there are roads up there now.

The new Board of Trustees would therefore appreciate as prompt action as possible in connection with this application and if

further information is required, the same will be secured as promptly as possible.

This application is being personally delivered to your department and presented by Mr. William Slotboom, who is a substantial unit-holder in this trust and who is interested in seeing that several of the members can be helped if possible.

Anticipating the cooperation of your department, we are,

Very respectfully yours,

PRODUCTIVE MINES, LIMITED:

BY: A.C. Allen
Chairman and Trustee

ACA:jg
Encl:

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. dmea 2916
Metal or Mineral
Date Received 3-3-53
Estimated Cost
Participation (Government %)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
MAR 3 1953

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: Productive Mines Limited, a trust, 712 Swetland Building, Portland, Oregon.

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract
See attached map of property.

(*b*) State any mine name by which the property is known. Birmingham Group, Flint Mining District

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise owner.
by purchase from - Birmingham

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property.

(*e*) If you own the land, describe any liens or encumbrances on it Unpatented claims

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. See attached schedule

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes. See statement & Equipment report.

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you. See Engineer's report.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points. County Road from Jordan Valley

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power. Electrical power available when needed or necessary.

5. *The exploration project.*—(*a*) S[redacted] the mineral or minerals for which you wis[redacted] explore Tungston, Antimony and Selenimum

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc. when weather permits

(*c*) The work will start within ..... days and be completed within ½ months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations. Engineer and Manager

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.). Cost of setting mill, ect.

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants. going wage

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs.

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)? yes, by assessment among the unit-holders.

(*b*) How do you propose to furnish your share of the costs?

☒ Money ☐ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated February 10th, 1953

PRODUCTIVE MINES, LIMITED,
(Applicant)

By R. C. Allen
Chairman and Trustee

L. A. Feike
Secretary and Trustee

E. Earl Feike
Trustee

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—66551-1

REPORT OF INVESTIGATION

Production Mines Co. Limited Mint, Custer County, Idaho.

In Twilight Gulch on the Yankeetown vein there has been a cross cut tunnel driven 230 feet long where the vein was cut in an ore shoot. A drift was run on this vein. It was drifted both north and south a total distance of approximately 120 feet in this ore shoot.

This vein was cut off from veins north by a fault. There are five known faults in this District. The faults are not up and down faults, but are a straight slant or slant fault such as cited according to an I'dle Report of Mines report made by a Dr. Piper and Dr. Lang from the Idaho School of Mines, Moscow, Idaho, in 1921.

Dr. Lang (deceased), was at that time, Dean of the School of Mines (Dean of Idaho School of Mines). Their bulletin on the Silver City, Delamar and Flint Mining Districts in Custer County. Copies of the report can not be purchased, as all available copies have been purchased and the edition has been exhausted, but probably there is a copy in the Library in Spokane, Washington, which can be borrowed.

The ore shoots seem to exist or occur up a plant those faults or near them, on one side or the other of the fault and in places on both sides of the fault.

Piper and Lang visited this, Twilight Gulch, Silver Gulch and Carroll Gulch in this Flint District, were faults. This vein faulted off to the south, but did note that this drift was continued on south several hundred feet and that they came into the vein again in an ore shoot.

This tunnel or drift is small just beyond the first one shown at the beginning of the drift. This tunnel should be caught up and re-timbered. As the Pilot District is a hard rock country, when running through the drift, the tunnel is probably up and in good shape, and this tunnel should be extended on through this second one shown. This tunnel shown in the drawing the raise should be directly under the open of the ridge between Bright Hope and Inter Ocean and has an approximate depth of 200 feet. The tunnel then needs to be an one foot, as there is an one foot in the open. Here the raise ceases since the ridge it stands up out of the general or the country rock, which is granitic, a probable one foot in height.

This tunnel should be extended on through and out into the pitch (inter pitch), on the other side of this ridge, as they plan to build the mill in Inter Pitch. The ore could be taken through this tunnel into the mill or to the mill, also additional water if needed for the mill could be piped through this tunnel. We probably would have to raise the water a few feet with a pump, as the grade of the tunnel would be the wrong way. There is a [illegible] miner engineer living in Idaho who has an old map of this tunnel, and a copy of this map might be secured from him. From definite information, the company has this tunnel after being "caught up" and re-timbered back to normal, would only have to be driven about 200 to 250 feet to come out into Inter Pitch.

In this drift as the raise runs above the 2/0 foot cross cut intersects the raise a raise has been started. The point for the drift has been chosen and the model blasted for the raise. This raise should be continued

on up into the sand and level about a distance of from seventy-five to one hundred feet for air ventilation, then a 40 inched block of ore could be taken out. This would result in an ore all of the way up to the sand level, which is not usual and is open out to the surface. Also a 3 foot shaft is put down at least 100 feet deep in this ore shoot and another level established. This shaft would be in ore all of the way down and the ore would get better with depth.

This is only one of the veins on which development work should be done.

In three other places in Aster Gulch where this company did some development work on different veins, the work started there should be completed. In the Rising Star vein, for instance, the early day miners drove a 3 cut approximately 300 feet long, according to a survey made a year or two ago. This tunnel lacks about 20 feet of ever cutting the vein there and to drive out the 3 to continue on into the vein. There is an ore shoot in the surface above this 3 cut. This tunnel was driven sometime around 1900. Part of this tunnel was caved but has been re-timbered and cleaned out and is open now. Part of this tunnel is in hard rock, which required no timber. This tunnel or 3 cut runs in a northwest direction. On the opposite side of this gulch a 3 cut tunnel was driven by this company, a distance of probably 160 feet. It was driven about 80 or 100 feet in a northwest direction, then turned in a southwest direction. A limited vein was located on for about 30 feet in this northwest tunnel and in one place along this vein there was high grade ordinary ore. This vein apparently limited off. This tunnel was started to go in under an old shaft that the early day miners put down in a rich ore shoot, but this company got

last opportunity and ventured around and did not get into this vein. The vein is there beyond the fault and the only way where stopped we got north of this shaft. This shaft is all caved and a man cannot carry of this tunnel must be made below: and be removed there, for the reason is that the carry rock on this vein are very. Any should get the vein within 30 feet. There are 12 different veins on the property. Drucell Veins runing in a north and south direction.

On the center most vein, this company ran a cross-cut tunnel about 350 feet or rather they continued a cross cut that run in about 185 feet. This tunnel was driven to cut a vein at about 250 feet depth, and was driven to cross raise on old shaft. There are two shaft cut of this shaft in the 100 feet or around 100.

The vein on the surface is about six feet in width. The history of this is that the vein jam in the shaft to fifteen or twenty feet wide.

This shaft is caved full up to the collar of the shaft. The shaft was supposed to a twenty-five to eighty feet deep. There is no authentic data on if the shaft and anyone can tell anything about the work done passed may a long time ago. In driving this cross cut tunnel this company cut three or four small veins but they did not drift on any of them.

At about four hundred feet in front the portal of the tunnel and at the distance in there the survey showed that the vein in the shaft should be, a small vein appeared where we are. The question is the character of the vein up at the shaft on the surface. This probably is the vein and a drift should be turned there and run north on this small vein a distance of at least fifty feet. This vein will probably either pinch out near the end of this 2 cut they run into a faulted country and then there is should a faulted vein and turned north as it and drifted about thirty feet. At that point the stratigraphy and faulted organization of the veins come together and there is a good looking vein carrying silver and antimony in the end of drift, apparently they were getting out of the shaft and this drift should be continued on north.

The company had no fan or blower for ventilation and the air was so bad, we couldn't work in there and that the drift across they only another stream was lost of money. The prospects for getting ore here is very good.

There are two straight arsenic veins on this property. These veins veins carry no silver other than arsenic. One of these veins is in Aster gulch and one vein is in Twilight. These veins are separate and entirely different veins. That is the vein in Twilight Gulch is not a continuation of the vein in Aster Gulch. Both veins should be developed. In Aster Gulch there is a 2 cut tunnel that run about zero one. The tunnel was started in near the bottom of the gulch and then about one hundred and fifty feet in a northeast direction. Intently to cut this Arsenic vein at a depth of from

one hundred to one hundred and fifty feet. This tunnel should be driven on into the vein. This tunnel is in hard rock. There are no timbers in the tunnel. This tunnel is up and in good shape.

Recent investigation has disclosed that in addition to the ordinary ore, which has been removed and developed, there is also the possibility of further ore being developed upon this property and certain amounts of minerals are recovered, all of which metals has as to which-ever, are classified as strategic metals or materials.

Respectfully submitted,

PRODUCTIVE MINES LTD.,

BY: _____.
Trustee and Chairman

BY: _____.
Trustee and Secretary

PRELIMINARY REPORT ON THE BIRMINGHAM

CLAIMS

FLINT DISTRICT, OWYHEE CO. IDAHO.

SUMMARY:

The Birmingham property covers a large section of very promising but undeveloped territory adjacent to the Flint mine on the north.

Some eight or ten parallel veins cross and outcrop on a high ridge between Twlight and Aster gulches and can be easily prospected by tunneling on them from either of the gulches. Included are the Peseverence and Rising Star veins, the two largest in the district and from which nearly all the past production has come. Milling ore is to be found on dumps of old-time prospecting work on many of the veins. Ore shoots are partially developed on the Peseverence and "Intermediate" veins on this property.

There is sufficient standing timber on the claims to supply mine timbers for a number of years.

Neither the mining nor the concentration of the ores presents any serious problems. Flotation will give a recovery of 90% to 95% of the values as a very high grade concentrate and the ratio of concentration will be high.

Water for milling is not plentiful and plans should be made to impound the mill tailing and recover as much water as possible for re- use. By so doing it should be possible to operate a mill of 50 tons daily capacity except possibly, during the late summer; this will depend on how much water is developed in mining.

GENERAL GEOLOGY:

In the Flint district, there are three types of country rock. The oldest is granite (or grano-diorite), next in age is rhyolite, and the youngest is basalt.

The veins of the district are all fissure veins in the granite. There is no apparent genetic connection between them and the rhyolite or basalt. These veins are approximately parallel and strike N 20' E and dip to the east at about 80'. Widths are from one foot to as much as ten feet; the larger veins have average widths of six feet or more over considerable distances. These larger veins can be traced by their outcrops for a distance of more than a mile.

The vein filling is a hard, milky-white quartz containing pyrite (iron sulphide), spalerite (zinc sulphide), stibnite (antimony sul-

phide(, together with the silver sulphantimonates pyrergyrite, stephanite and polybesite. Stibnite is not abundant but is a valuable ore of antimony; the pure mineral contains 71.6% antimony. In the Flint district the silver content of stibnite is usually very low. The three silver-bearing minerals, when pure, contain from 60% to 75% silver and from 10% to 20% antimony; it can be readily seen that only a small amount of the silver sulphantimonates is required to make valuable ore. There is very slight surface oxidation and since oxidation makes flotation difficult and sometimes impossible.

There has not been sufficient work done in the district to determine the average length of ore shoots nor the distance between ore shoots. Neither is the depth of mineralization known. The Precious Metals Company mined excellent ore at a depth of about 500 feet in the Flint mine on the Rising Star vein and it is reported that ore was found there at a depth of 650 feet But the extent is unknown; apparently it was not extensive.

There has been some minor faulting since the veins were formed but these faults do not present a diffucult problem. The movement appears to have been for relatively short distances - perhaps 25 to 50 feet.

HISTORY:

Disdoveries were made in the district soon after the beginning of mining around Silver City, 9 miles to the north - that is, in the early '60's'. High grade ore of sufficient value to stand the cost of wagon transportation to Winnemucca, Nevada, and thence by rail and water to Swansea, Wales, for treatment, accounted for the early production. This is generally believed to have totaled several hundred thousand dollars, altho records are quite incomplete. Attempts to concentrate lower grade ores were unsuccessful since the silver-bearing minerals are soft and brittle and slime easily in crushing the ore; also, these minerals have a strong tendency to float by surface tension and these two characteristics combined to cause excessive tailing losses in the gravity concentrating methods used at that time. Cyanidation was tried unsuccessfully. It is now known that the ore can be concentrated by flotation but this method was not used in the United States until about 1915.

BIRMINGHAM PROPERTY:

The claims belonging to Mr. Art Birmingham join the property of the Flint mine on the North and extend from there to the north side of Twilight gulch, covering the high ridge between Aster and Twilight gulches for practically its entire length. Since this high ridge (which, for brevity, might be called the A-T ridge) runs more or less at right angles to the various veins, it affords an excellent opportunity to develop the veins by driving tunnels on them from one or the other gulch. The outcrops of some eight or ten veins are to be found along this ridge - two to the west of the Perseverance vein and several to the east of the Rising Star vein.

The Perseverance and Rising Star veins are two of the largest in the district, averaging six feet or more in width. The past production of the district has come almost entirely from these two veins. Both of them can be

traced thru the Brimingham property and both outcrop prominently on top of A-T ridge. An old prospect hole on the Perseverance vein at the top of the ridge shows the apex of a shoot of good ..... milling ore. The outcrop of the Rising Star vein nearby shows the characteristic basalt dike which is found with this vein in the Flint mine. Between these two veins on the Birmingham property there is a smaller vein which I have called the Intermediate vein in this report. This vein does not appear in the Flint workings. A recently driven tunnel on this vein, running north from Aster gulch, has disclosed an ore shoot of excellent milling ore, the extent of which has not yet been determined. Several tons of this ore are on the dump and the writer took a grab sample of the poorer part which contained considerable talc. All pieces that were noticably high grade wer removed from the sample and the remainder assayed 45 ounces in silver per ton and $4.00 in gold. There is an old tunnel on this vein on the south side of Aster gulch from which some shipping ore was produced. A sample taken by the writer across about 3 feet of the remaining low grade ore assayed 27 ounces silver per ton. Where this vein outcrops on the A-T ridge there is an old prospect hole with some good milling ore on the dump. On to the east and up the ridge several other veins have been prospected and most of the dumps show some milling ore. This is particularly true of the Crescent which is the highest and farthest east. This 4-foot vein was opened in the early days by means of a shaft, probably about 50 feet deep originally but now caved to the top. Apparently some drifting was done, judging by the size of the dump. Piper and Laney sampled this dump and reported something over 20 ounces silver per ton, if I remember correctly.

MINING:

Mining operations on this property should not present any serious problems. While the ore is quite hard and difficult to drill, it shatters well when blasted. The vein material breaks free from the enclosing wall rock so there is but little dilution of the ore with waste. Heavy timbering is not generally necessary and there is sufficient standing timber available on the claims to supply all mining needs for a number of years.

MINE DEVELOPMENT:

As mentioned above, a shoot of good milling ore has been opened on the Intermediate vein by recent work. Since small scale mining equipment is now installed there, the extent of this ore shoot should be determined first. However, I would not recommend exploratory work beyond this ore shoot at the present time for reasons given below.

I would recommend work of the Perseverance vein from the lowest practical point in Aster gulch, drifting north under the A-T ridge. This will give considerably greater depth than the tunnel now started on the Intermediate vein. This greater depth will not only develop a larger tonnage of ore above the tunnel but should also drain more water for use in the mill. The protal of this tunnel will be adjacent to a much better millsite, particularly with reference to impounding mill tailing for the recovery of water.

The Perseverance is a considerably wider vein and will therefore provide a larger tonnage of ore with the same amount of work. Considering the past production from this vein on Flint ground, the ore showing in the pit on A-T ridge, and the showing in the Iva Grace tunnel in Twilight gulch, there is every reason to expect that other good ore shoots will be developed by the tunnel recommended.

If a tunnel is run on one of the veins from Aster gulch and extended until it is under Twilight gulch and a raise is then made to the surface, all of the water in Twilight gulch, as well as that developed along the tunnel, can be brought out to a millsite in Aster gulch. Unless this data is available from previous surveys, a survey should be made covering the Perseverance, Intermediate and Rising Star veins from Aster gulch to Twilight gulch to determine the length of such a tunnel, the depth it would have under A-T ridge, and its depth below the surface at Twilight gulch. This information could be obtained approximately by measuring the to-pographic map of the Flint district and which accompanies the Piper-Laney report. Unfortunately my copy of this report was lost and there is none nearby to which I can refer.

A tunnel on the Perseverance vein would also serve as a permanent working tunnel. Later on, when ore shoots have been developed on the Intermediate and Rising Star veins, cross cutting to those veins will develop them at greater depth as well as provide a way to bring the ore to the head of the mill.

MILLING:

The early day probelem of concentrating the ores of the Flint district has been solved by the development of the flotation process. This was first demonstrated on a commercial scale when the Precious Metals Company operated the Flint mine in 1924. With old equipment not at all suited to the process, and with other homemade equipment, a recovery of 87% was obtained in the form of a concentrate averaging about 1000 ounces of silver per ton. With a properly equipped mill a recovery approaching 95% can be expected with the concentrate assaying 2000 ounces of silver per ton. The concentration ratio would be 50 or 60 tons of ore into one ton of concentrate. The long distance from the property to a smelter makes a high ratio of concentration important——the cost of transporting and smelting the concentrate is thus spread over a larger number of tons of ore with a resulting lower cost per ton for these items.

Water for milling is not plentiful in the Flint district and must be given careful consideration, particularly since a prior water right is held by the Flint mine. Thought must be given not only to a primary source of water; plans must also be made to impound the mill tailing and recover as much water as possible for re-use. Early in the season, usually until in June or early July, there is a small flow of water is Aster gulch which will

be available. There is a much larger flow in Twilight gulch which lasts considerably longer and the possibility of obtaining this water has been suggested under the heading of Mine Development above.

Accompanying this report is a sketch map, now drawn to scale, showing the general relationship of the Perseverance, Intermediate and Rising Star veins and Twilight and Aster gulches. There is also a photograph showing this portion of the district and also the Flint mine.

Respectfully submitted,

Ralph V. Thurston,
Mining Engineer.

Payette, Idaho.
May 22, 1948.

The trust owns the following equipment and personal property which can be used in connection with the operation and development of said mine, to-wit:

1 - Caterpiller D. 13,000 Power Unit Complete,
1 - 8 Ton Dump Truck with Heavy Duty new tires,
1 - Pickup truck with new tire & Spare.
30 - 115 A. H. 6 Volt Truck Batteries,
1 - Slusher Hoist and with Double drive,
1 - Sullivan Air Hoist,
1 - Skochum Block,
1 - 7½ H.P. 1150 R.P.M. Volt B.C. Motor,
1 - Revising D.C. Drum controller,
1 - Set Revisvours V-Belt drive & chain, drive to give 240 R.P.M. on wheel shaft,
1 - 3 Ton yale chain block,
7 - Mining cars,
1,000 H. Type Bits & assorted lengths of steel,
1 - Tool Sharpner machine,
1 - 50 H.P. Motor, new,
40 Batteries for locomotive with drive pulley V belt type,
1800 feet of pipe different sizes,
3,000 feet of pipe, 3 in, 2 in, 1½ in,
1 - Stoper Machine & Liner,
Some extra long steel to cor drill,
500 bits and short steel for starters,
2 - Jack Hammers, New Thor type,
1 - Jack Hammer , Worthing type,
600 Timkin Bits, different length steel,
3 - beds, mattresses, springs, four chairs,
1 - table, hot water tank,
3 - Ranges,
1 - Oil stove and tank,
1 - pipe & dies for cutting threads, lumber, windows, doors, cabin lumber for mess hall, floorings nails, lumber for machine shed roofing material, new fire hose, with two Nozzles, 500 new bits, miners lights, with batteries.
1 - Air Compressor with new hose & some steel & bits.
1 - Portable Compressor with Gardner & Denver Stationery
1 - 440 Electric Motor for large compressor.
100 feet of 3/8 in steel & 190 feet 5/16 in plow steel.
1 - Grease gun, sodering material & torch,
1 - Blower with 100 feet of pipe and motor,
1 - Locomotive, complete to pull nine ore cars, with new motor,
1 - Ball Mill with Classifier & crushers,
12 - tons of 16# New Rails & Flanges.

Starlight Date or group of dates may send to
Publicity Div. Kodak.

	[illegible]	[illegible]
Dragoon	20	107
Cyclone	20	152
North Intermediate, Silver Star	20	130
Cardiff	20	130
Dillon	20	125
N. Intermediate, Paramount	20	140
Hillsboro	20	97
Jumbo	20	124
Crystal	20	127
Grey Eagle	20	120
S.W. Intermediate, Grey Eagle	20	159
Agua	20	125
North Intermediate, Dillon	20	121
Vamo	20	141
Treasure Vault	20	59
Bodie	20	199
Sunshine	20	90 or 95
Atlas	20	135
Ajax	20	158
Goldfield	20	135
North Intermediate, Treasure Vault	20	222
Silver Star	20	140

dmea 2916

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

February 24, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
MAR 3 1953

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

Dear Mr. Selfridge:

Enclosed are the original and two copies of an application for a DMEA contract submitted by Productive Mines Limited. Three copies of a letter from Productive Mines Limited, which describes the proposed exploration work and a list of company property, are also enclosed. The application concerns a property in the Flint Mining district, Owyhee County, Idaho. One copy of the application and accompanying letter are being retained at this office.

The Flint Mining district is described in Idaho Bureau of Mines and Geology Bulletin No. 11, Geology and Metalliferous Resources of the Region about Silver City, Idaho, by Arthur M. Piper and Francis E. Laney, 1926. There has been little work done in the district since Piper and Laney made their report.

The Flint district, along with the Silver City district, was formerly of importance as a producer of silver and gold. The mineralized structures are reported to be strong quartz veins in which the more common sulphide minerals are various silver sulpho-antimonides. Other minerals are stibnite, jamesonite, various selenides, and gold. Accessory minerals include galena, chalcopyrite and sphalerite. The veins are typically epithermal and have never been of value as base metal producers.

Mr. C. C. Popoff, U. S. Bureau of Mines, visited the subject property in 1952. He reports that the property contains very little stibnite and that it looks quite hungry. Evidence on hand indicates the property must be considered largely as a potential silver-gold producer, with minor amounts of stibnite. Moreover, recovery of selenium from the various selenide minerals would probably be negligible, if it was recovered at all. There appears to be little reason

why this property should be given a DMEA contract; therefore, a field examination of the property will not be scheduled and no further consideration will be given this application unless requested by the Operating Committee.

By DMEA Field Team, Region II

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

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

Enclosure

cc: USBM (2)

dmea 2916

16 February, 1953.

United States Department of Interior,
DMEA,
1201 North Division Street,
Spokane, Washington.

Attention: Mr. I. E. Howard.

Gentlemen:

Under date of February 10, 1953, in care of William Slotboom, we handed your department an application for an exploration loan. While our original application asked for a loan of $50,000.00, we did not specify the work which it would entail. That expenditure we desire now to supplement to that report and add to the same the following estimates and information, to-wit:

We propose to do the following work on the Treasure Vault Mining claim located in Twilight Gulch, spile and retimber 200 feet of tunnel at an estimated cost of $4,000.00; put in an 80 foot raise at a cost of $15.00 per foot or $1,200.00; continue cross-cut and drift on the vein 250 feet at an estimated cost of $4,000.00; sink a shaft on this vein a distance of 100 feet at a cost of $3,500.00; drift on the vein from the bottom of the shaft, 100 feet at a cost of $2,000.00. This we call our Number One undertaking.

#2 Proposition: On the stibnite quartz claim in Twilight Gulch, we propose to drift on this vein at least 150 feet at a cost of $2,500.00.

#3 Proposition: This proposition is in connection with the development work on the south side of Aster Gulch. On the southern side of the bullion mining claim, an X-cut tunnel has already been driven approximately 500 feet. This cross-cut tunnel, we propose to continue a distance of at least 18 feet in order to intersect the vein here on the Rising Star vein; we propose to drift 150 feet at least on the main vein; we estimate the cost of this work at $2,500.00.

Proposition #4: On the Bullion claim, a cross-cut of approximately 400 feet has been driven in order to cut under an old shaft, which is in ore. We propose to extend this cross-cut in order to complete the tunnel and then drift on the vein. There is some retimbering to be done in order to complete this work; the cost of the drift with the retimbering , we estimate at $2,000.00.

Proposition #5: On the Cresent Quartz Mining claim located in Aster Gulch, we propose to drift on two different veins here at least 150 feet; these veins have been cut by a 500 foot cross-cut; the estimated cost of this work will be $2,500.00.

Proposition #6: On what is commonly called the Antimony vein, located in Aster Gulch and on the bullion quartz mining claim, we desire to continue the cross-cut tunnel in order to cut this antimony vein; we propose to extend this cross-cut tunnel at least 100 feet at a cost of $1,500.00.

We further propose to start stopes in the different ore shoots as soon as they are open. The cost of the timber, lumber, planks, lagging, labor, etc. necessary to do this will amount to $7,500.00. We will also have a surveying cost of approximately $200.00 and an expense for repairing the buildings about the mines of approximately $1,000.00, and there will be nemessary to spend, $500.00 to condition the roads in and about said property.

For your further consideration, we are enclosing to you the new estimated statement of the equipment owned by the trust with the cost attached.

We are also attaching to this letter, a map outlined in red, showing where we propose to work and develope this property.

Respectfully submitted,

PRODUCTIVE MINES LIMITED.

BY: A. C. Allen
Trustee and Chairman.

ACA:jg
Encl: (2)

P.S.

The silver ore involved contains a large percentage of antimony, plus the actual antimony veins.

PERSONAL PROPERTY LIST

	Appraised Value.
1 - Caterpiller D 13,000 Power Unite complete	$ 9,500.00
1 - 8 Ton Dump Truck with new heavy duty tires	1,800.00
1 - Sullivan Air Hoist	175.00
1 - H 6 R Skockum Block	[illegible],240.00
1 - 7½ H.P. 1150 R.P.M. Volt D.C.Motor	500.00
1 - Revising D. C. Drum Controller	200.00
~~240 R.P.M. on wheel shaft~~	
1 - 3 ton Yale chain block	100.00
7 - Mining cars, four new and three 2nd hand cars	500.00
200 H T ype Bits & Assorted lengths of steel	270.00
1 - Tool Sharpener machine	1,000.00
1 - 50 H.P. Motor	500.00
3000 feet of pipe 3 in, 2 in & 1½ in	1,500.00
1 - Stoper Machine	575.00
2 - Jack Hammers	80.00
300 Timkin Bits	60.00
12 tons of 16# New Rails & flanges	1,800.00
3 - Beds, mattresses, springs & four chairs	50.00
1 - Oil Stove and tank	50.00
1 - Pipe & Dues for cutting threads on pipe	25.00
Lumber, windows, doors for cabins, mess hall & machine sheds & blacksmith shop	1,100.00
Small tools, blacksmith shop outfit	256.00
Miner lights with batteries to work in tunnel	125.00
1 - Air Compressor, portable	2,600.00
1 - 440 Electric Motor for compressor	500.00
100 feet of cable 3/8 inch	75.00
190 feet of 5/16 in. plow steel with clamps & other	125.00
small items that are not itemized, such as shop tools and chains, etc.	150.00
1 - Blower and Pipe Motor	360.00
	$ 23,991.00

This equipment is now at the plant, being installed to make ready for operation. All of this equipment is purchased and paid for by the company.

Dmea 2916

10 February, 1953.

United States Department of the Interior,
Defense Minerals Exploration,
1201 North Division Street,
Spokane, Washington.

Gentlemen:

The writer is one of the trustees and is chairman of the Board of Trustees of Productives Mines Limited, a common law trust of Idaho.

The trust is hereby making an application to your department for a loan of $50,000., for mineral exploration work, in connection with the property owned by said trust in the Flint Mining District in Idaho.

We understand that originally the trust, through J. G. Vollmer, wrote a letter to your department, requesting a loan, but that the application was never properly completed, although your department, through your Engineer, Mr. Poppof, made an examination of this property, which examination you probably have in your files and which we would prefer to use in connection with this application, without any necessity of further examinations if possible.

The new trustees have attempted to familiarize themselves with the workings of this trust and with the property owned by the trust, including the equipment and machinery. We feel that the property warrants an exploration loan, as we have a considerable amount of Antimony now showing and good evidence of Selenium ore being recovered and also the possibility of Tungsten ore.

In connection with the necessary work to be done, wish to state, that the buildings about the mine, must be repaired on account of the heavy snow which caused some of them to collapse. Furthermore, the mill owned by the company, should be set up at the mine and a mill site prepared. Likewise, some road work will be required in and about the mine, although of course, there are roads up there now.

The new Board of Trustees would therefore appreciate as prompt action as possible in connection with this application and if

further information is required, the same will be secured as promptly as possible.

This application is being personally delivered to your department and presented by Mr. William Slotboom, who is a substantial unit-holder in this trust and who is interested in seeing that several of the members can be helped if possible.

Anticipating the cooperation of your department, we are,

Very respectfully yours,

PRODUCTIVE MINES, LIMITED:

BY: A. C. Allen
Chairman and Trustee

ACA:jg
Encl:

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1035.2.

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. DMEA 2-9-1-6
Metal or Mineral
Date Received 3-3-53
Estimated Cost
Participation (Government %)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 3 1953

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: [illegible]

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract See attached map of property.

(*b*) State any mine name by which the property is known. [illegible]

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise [illegible]

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property.

(*e*) If you own the land, describe any liens or encumbrances on it [illegible]

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. See attached schedule

4. *Physical description.*—(*a*) Describe in detail any mining or exploration operations which have been or now are being conducted upon the land, including existing mine workings and production facilities. State your interest, if any, in such operations. Also describe accessibility of mine workings for examination purposes. See attached [illegible] report

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades.

(*c*) Describe the geologic features of the property, including mineralization, type of deposit (vein, bedded, etc.), and your reasons for wishing to explore. Illustrate with maps or sketches. Send with your application (but not necessarily as a part of it) any geologic or engineering report, assay maps, or other technologic information you may have, indicating on each whether you require its return to you. See attached report

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points. [illegible]

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power. [illegible] available when needed or necessary.

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore Lignite,

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc.

(*c*) The work will start within ..... days and be completed within 3 months from the date of an exploration project contract.

(*d*) State the operating experience and background of the applicant with relation to the ability to carry out such exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project:

(*a*) *Independent contracts.*—(Note.—If the applicant does not intend to let any of the work to contractors, write "none" after this item. To the extent that the work is to be contracted, do not repeat the cost of the contract-work in subsequent items.) State the cost of any proposed independent contracts for the performance of all or any part of the work, expressed in terms of units of work (such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved, etc.).

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel.

(*d*) *Operating equipment.*—Furnish an itemized list of any operating equipment to be rented, purchased, or which is owned and will be furnished by the Operator, with the estimated rental, purchase price, or suggested use-allowance based on present value, as the case may be.

(*e*) *Rehabilitation and repairs.*—Furnish a detailed list showing the cost of any necessary initial rehabilitation or repairs of existing buildings, installations, fixtures, and movable operating equipment, now owned by the Operator and which will be devoted to the exploration project.

(*f*) *New buildings, improvements, installations.*—Furnish a detailed list showing the cost of any necessary buildings, fixed improvements, or installations to be purchased, installed or constructed for the benefit of the exploration project.

(*g*) *Miscellaneous.*—Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of the Operator's equipment), analytical work, accounting, workmen's compensation and employers' liability insurance, and payroll taxes.

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

NOTE.—No items of general overhead, corporate management, interest, taxes (other than payroll and sales taxes), or any other indirect costs, or work performed or costs incurred before the date of the contract, should be included in the estimate of costs.

7. (*a*) Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation (Sec. 7, DMEA No. 1)? Yes, by assessment among the unit-holders.

(*b*) How do you propose to furnish your share of the costs?

☒ Money ☐ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated January 10th, 1953

Lignite, Texas,
(Applicant)

By T. C. Allen
President and Director

L. A. Feike
Secretary and Director

E. Earl Feike
Treasurer

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—66551-1

PLAN OF DEVELOPMENT WORK

Production Mines Co. Limited Flint, Owyhee County, Idaho.

In Twilight Gulch on the Perserverence vein there has been a cross cut tunnel driven 250 feet long where the vein was cut in an ore shoot. A drift was run on this vein. They drifted both north and south a total distance of approximately 130 feet in this ore shoot.

This vein was cut off from going south by a fault. There are five known faults in this District. The faults are not up and down faults, but are a straight shore or shear from west to east according to an Idaho Bureau of Mines report made by a Mr. Piper and Mr. Lancy from the Idaho School of Mines, Moscow, Idaho, in 1926.

Mr. Laney (deceased), was at that time, Dean of the School of Mines (State of Idaho School of Mines). Their bulletin on the Silver City, De Lamar and Flint Mining Districts in Owyhee County. Copies of the same can not be purchased, as all available copies have been purchased and the edition has been exhausted, but probably there is a copy in the Library in Spokane, Washington, which can be borrowed.

The ore shoots seem to make or occur up against these faults or near them, on one side or the other of the fault and in places on both sides of the fault.

Piper and Lancy claimed that, Twilight Gulch, Aster Gulch and Corrall Gulch in this Flint District, were faults. This vein faulted off going south, but old maps show that this drift was continued on south several hundred feet and that they came into the vein again in an ore shoot.

This tunnel or drift is caved just beyond the first ore shoot or at the beginning of the fault. This tunnel should be caught up and re-timbered. As the Flint District is a hard rock country, after passing through the fault, the tunnel is probably up and in good shape, and this tunnel should be continued on through this second ore shoot. This tunnel where it is following the vein should be directly under the apex of the ridge between Twilight Gulch and Aster Gulch and has an approximate depth of 300 feet. The tunnel there would be in an ore shoot, as there is an ore shoot in the apex. Where the vein crosses over the ridge it stands up out of the ground or the country rock, which is grandorite, a probable ten feet in height.

This tunnel should be extended on through and out into the gulch (Aster gulch), on the other side of this ridge, as they plan to build the mill in Aster Gulch. The ore could be taken through this tunnel into the mill or to the mill, also additional water if needed for the mill could be piped through this tunnel. We probably would have to raise the water a few feet with a pump, as the grade of the tunnel would be the wrong way. There is a certain mining engineer living in Idaho who has an old map of this tunnel, and a copy of this map might be secured from him. From definite information, the company has this tunnel after being "caught up" and re-timbered where needed, would only have to be driven about 200 to 250 feet to come out into Aster Gulch.

In this drift on the vein near where the 250 feet cross cut intersects the vein a raise has been started. The pocket for the shute has been shot out and one round blasted for the raise. This raise should be continued

on up into the mined out level above a distance of from seventy-five to one hundred feet for air ventilation, then this unmined block of ore could be taken out. This raise would be in ore all of the way up to the next level, which is not caved and is open out to the surface. Also a shaft should be put down at least 100 feet deep in this ore shoot and another level established. This shaft would be in ore all of the way down and the ore would get better with depth.

This is only one of the veins on which development work should be done.

In three other places in Aster Gulch where this company did some development work on different veins, the work started there should be completed. On the Rising Star vein, for instance, the early day miners drove a X cut approximately 500 feet long, according to a survey made a year or two ago. This tunnel lacks about 18 feet of cross cutting the vein there and this cross cut should be continued on into the vein. There is an ore shoot on the surface above this X cut. This tunnel was driven somewhere around 1870. Part of this tunnel was caved but has been re-timbered and cleaned out and is open now. Most of this tunnel is in hard rock, which required no timber. This tunnel or X cut runs in a southeast direction. On the opposite side of this gulch a X cut tunnel was driven by this company, a distance of probably 400 feet. It was driven about 200 or 250 feet in a northeast direction, then turned in a northwest direction. A faulted vein was drifted on for about 30 feet in this northwest tunnel and in one place along this vein there was high grade antimony ore. This vein apparently faulted off. This tunnel was started to go in under an old shaft that the early day miners put down in a rich ore shoot, but this company got

lost apparently and wandered around and did not cut into this vein. The vein is there beyond the fault and the early day miners stoped ore out north of this shaft. This shaft is all caved and a new and correct survey of this tunnel must be made before work is resumed there, for the opinion is that the survey made on this work was wrong. They should get the vein within 30 feet. There are 12 different veins on the property. Prucell Veins running in a north and south direction.

On the easter most vein, this company ran a cross-cut tunnel about 500 feet or rather they continued a cross cut that was in about 125 feet. This tunnel was driven to cut a vein at about 200 feet depth, and was driven to come under an old shaft. There was ore mined out of this shaft in the late 60ths or around 1870.

The vein on the surface is about six feet in width. The history of this is that the vein down in the shaft is fifteen or twenty feet wide.

This shaft is caved full up to the collor of the shaft. The shaft was supposed to be seventy-five to eighty feet deep. There is no authentic data on this shaft and anyone that knew anything about the work there passed away a long time ago. In driving this cross cut tunnel this company cut three or four small veins but they did not drift on any of them.

At about four hundred feet in front the protal of the tunnel and at the distance in where the survey showed that the vein in the shaft should be, a small vein carrying values was cut. The quartz is the character of the vein up at the shaft on the surface. This probably is the vein and a drift should be turned there and run north on this small vein a distance of at least fifty feet. This vein will probably widen going north near the end of this X cut they run into a faulted country and also there we struck a faulted vein and turned north on it and drifted about thirty feet. At that point the stringers and faulted segements of the veins were coming together and there is a good looking vein carrying silver and antimony in the end of drift, apparently they were getting out of the fault and this drift should be continued on north.

The company had no fan or blower for ventilation and the air was so bad, men couldn't work in there and that the chief reason they quit; another reason was lack of money. The prospects for getting ore here is very good.

There are two straight antimony veins on this property. These quartz veins carry no mineral other than antimony. One of these veins is in Aster gulch and one vein is in Twilight. These veins are separate and entirely different veins. That is the veins in Twilight Gulch is not a continuation of the vein in Aster Gulch. Both veins should be developed. In Aster Gulch there is a X cut tunnel that was driven years ago. The tunnel was started in near the bottom of the gulch and driven about one hundred and fifty feet in a northwest direction. Evidently to cut this Antimony vein at a depth of from

one hundred to one hundred and fifty feet. This tunnel should be driven on into the vein. This tunnel is in hard rock. There are no timbers in the tunnel. This tunnel is up and in good shape.

Recent investigation has disclosed that in addition to the antimony ore, which has been uncovered and developed, there is also the possibility of Tungston ore being developed upon this property and certain amounts of selenium ore recovered, all of which metals has as we understand, are classified as stratigic metals or materials.

Respectfully submitted,

PRODUCTIVE MINES, LTD.,

BY: _____.
Trustee and Chairman

BY: _____.
Trustee and Secretary

PRELIMINARY REPORT ON THE BIRMINGHAM

CLAIMS

FLINT DISTRICT, OWYHEE CO. IDAHO.

SUMMARY:

The Birmingham property covers a large section of very promising but undeveloped territory adjacent to the Flint mine on the north.

Some eight or ten parallel veins cross and outcrop on a high ridge between Twlight and Aster gulches and can be easily prospected by tunneling on them from either of the gulches. Included are the Peseverence and Rising Star veins, the two largest in the district and from which nearly all the past production has come. Milling ore is to be found on dumps of old-time prospecting work on many of the veins. Ore shoots are partially developed on the Peseverence and "Intermediate" veins on this property.

There is sufficient standing timber on the claims to supply mine timbers for a number of years.

Neither the mining nor the concentration of the ores presents any serious problems. Flotation will give a recovery of 90% to 95% of the values as a very high grade concentrate and the ratio of concentration will be high.

Water for milling is not plentiful and plans should be made to impound the mill tailing and recover as much water as possible for re- use. By so doing it should be possible to operate a mill of 50 tons daily capacity except possibly, during the late summer; this will depend on how much water is developed in mining.

GENERAL GEOLOGY:

In the Flint district, there are three types of country rock. The oldest is granite (or grano-diorite), next in age is rhyolite, and the youngest is basalt. ?

The veins of the district are all fissure veins in the granite. There is no apparent genetic connection between them and the rhyolite or basalt. These veins are approximately parallel and strike N 20' E and dip to the east at about 80'. Widths are from one foot to as much as ten feet; the larger veins have average widths of six feet or more over considerable distances. These larger veins can be traced by their outcrops for a distance of more than a mile.

The vein filling is a hard, milky-white quartz containing pyrite (iron sulphide), spalerite (zinc sulphide), stibnite (antimony sul-

phide(, together with the silver sulphantimonates pyrergyrite, stephanite and polybesite. Stibnite is not abundant but is a valuable ore of antimony; the pure mineral contains 71.6% antimony. In the Flint district the silver content of stibnite is usually very low. The three silver-bearing minerals, when pure, contain from 60% to 75% silver and from 10% to 20% antimony; it can be readily seen that only a small amount of the silver sulphantimonates is required to make valuable ore. There is very slight surface oxidation and since oxidation makes flotation difficult and sometimes impossible.

There has not been sufficient work done in the district to determine the average length of ore shoots nor the distance between ore shoots. Neither is the depth of mineralization known. The Precious Metals Company mined excellent ore at a depth of about 500 feet in the Flint mine on the Rising Star vein and it is reported that ore was found there at a depth of 650 feet but the extent is unknown; apparently it was not extensive.

There has been some minor faulting since the veins were formed but these faults do not present a diffucult problem. The movement appears to have been for relatively short distances - perhaps 25 to 50 feet.

HISTORY:

Disdoveries were made in the district soon after the beginning of mining around Silver City, 9 miles to the north - that is, in the early '60's'. High grade ore of sufficient value to stand the cost of wagon transportation to Winnemucca, Nevada, and thence by rail and water to Swansea, Wales, for treatment, accounted for the early production. This is generally believed to have totaled several hundred thousand dollars, altho records are quite incomplete. Attempts to concentrate lower grade ores were unsuccessful since the silver-bearing minerals are soft and brittle and slime easily in crushing the ore; also, these minerals have a strong tendency to float by surface tension and these two characteristics combined to cause excessive tailing losses in the gravity concentrating methods used at that time. Cyanidation was tried unsuccessfully. It is now known that the ore can be concentrated by flotation but this method was not used in the United States until about 1915.

BIRMINGHAM PROPERTY:

The claims belonging to Mr. Art Birmingham join the property of the Flint mine on the North and extend from there to the north side of Twilight gulch, covering the high ridge between Aster and Twilight gulches for practically its entire length. Since this high ridge (which, for brevity, might be called the A-T ridge) runs more or less at right angles to the various veins, it affords an excellent opportunity to develop the veins by driving tunnels on them from one or the other gulch. The outcrops of some eight or ten veins are to be found along this ridge - two to the west of the Perseverance vein and several to the east of the Rising Star vein. ?

The Perseverance and Rising Star veins are two of the largest in the district, averaging six feet or more in width. The past production of the district has come almost entirely from these two veins. Both of them can be

traced thru the Brimingham property and both outcrop prominently on top of A-T ridge. An old prospect hole on the Perseverance vein at the top of the ridge shows the apex of a shoot of good ..... milling ore. The outcrop of the Rising Star vein nearby shows the characteristic basalt dike which is found with this vein in the Flint mine. Between these two veins on the Birmingham property there is a smaller vein which I have called the Intermediate vein in this report. This vein does not appear in the Flint workings. A recently driven tunnel on this vein, running north from Aster gulch, has disclosed an ore shoot of excellent milling ore, the extent of which has not yet been determined. Several tons of this ore are on the dump and the writer took a grab sample of the poorer part which contained considerable talc. All pieces that were noticably high grade wer removed from the sample and the remainder assayed 45 ounces in silver per ton and $4.00 in gold. There is an old tunnel on this vein on the south side of Aster gulch from which some shipping ore was produced. A sample taken by the writer across about 3 feet of the remaining low grade ore assayed 27 ounces silver per ton. Where this vein outcrops on the A-T ridge there is an old prospect hole with some good milling ore on the dump. On to the east and up the ridge several other veins have been prospected and most of the dumps show some milling ore. This is particularly true of the Crescent which is the highest and farthest east. This 4-foot vein was opened in the early days by means of a shaft, probably about 50 feet deep originally but now caved to the top. Apparently some drifting was done, judging by the size of the dump. Piper and Laney sampled this dump and reported something over 20 ounces silver per ton, if I remember correctly.

MINING:

Mining operations on this property should not present any serious problems. While the ore is quite hard and difficult to drill, it shatters well when blasted. The vein material breaks free from the enclosing wall rock so there is but little dilution of the ore with waste. Heavy timbering is not generally necessary and there is sufficient standing timber available on the claims to supply all mining needs for a number of years.

MINE DEVELOPMENT:

As mentioned above, a shoot of good milling ore has been opened on the Intermediate vein by recent work. Since small scale mining equipment is now installed there, the extent of this ore shoot should be determined first. However, I would not recommend exploratory work beyond this ore shoot at the present time for reasons given below.

I would recommend work of the Perseverance vein from the lowest practical point in Aster gulch, drifting north under the A-T ridge. This will give considerably greater depth than the tunnel now started on the Intermediate vein. This greater depth will not only develop a larger tonnage of ore above the tunnel but should also drain more water for use in the mill. The protal of this tunnel will be adjacent to a much better millsite, particularly with reference to impounding mill tailing for the recovery of water.

The Perseverance is a considerably wider vein and will therefore provide a larger tonnage of ore with the same amount of work. Considering the past production from this vein on Flint ground, the ore showing in the pit on A-T ridge, and the showing in the Iva Grace tunnel in Twilight gulch, there is every reason to expect that other good ore shoots will be developed by the tunnel recommended.

If a tunnel is run on one of the veins from Aster gulch and extended until it is under Twilight gulch and a raise is then made to the surface, all of the water in Twilight gulch, as well as that developed along the tunnel, can be brought out to a millsite in Aster gulch. Unless this data is available from previous surveys, a survey should be made covering the Perseverance, Intermediate and Rising Star veins from Aster gulch to Twilight gulch to determine the length of such a tunnel, the depth it would have under A-T ridge, and its depth below the surface at Twilight gulch. This information could be obtained approximately by measuring the to-pographic map of the Flint district and which accompanies the Piper-Laney report. Unfortunately my copy of this report was lost and there is none nearby to which I can refer.

A tunnel on the Perseverance vein would also serve as a permanent working tunnel. Later on, when ore shoots have been developed on the Intermediate and Rising Star veins, cross cutting to those veins will develop them at greater depth as well as provide a way to bring the ore to the head of the mill.

MILLING:

The early day probelem of concentrating the ores of the Flint district has been solved by the development of the flotation process. This was first demonstrated on a commercial scale when the Precious Metals Company operated the Flint mine in 1924. With old equipment not at all suited to the process, and with other homemade equipment, a recovery of 87% was obtained in the form of a concentrate averaging about 1000 ounces of silver per ton. With a properly equipped mill a recovery approaching 95% can be expected with the concentrate assaying 2000 ounces of silver per ton. The concentration ratio would be 50 or 60 tons of ore into one ton of concentrate. The long distance from the property to a smelter makes a high ratio of concentration important----the cost of transporting and smelting the concentrate is thus spread over a larger number of tons of ore with a resulting lower cost per ton for these items.

Water for milling is not plentiful in the Flint district and must be given careful consideration, particularly since a prior water right is held by the Flint mine. Thought must be given not only to a primary source of water; plans must also be made to impound the mill tailing and recover as much water as possible for re-use. Early in the season, usually until in June or early July, there is a small flow of water is Aster gulch which will

be available. There is a much larger flow in Twilight gulch which lasts considerably longer and the possibility of obtaining this water has been suggested under the heading of Mine Development above.

Accompanying this report is a sketch map, now drawn to scale, showing the general relationship of the Perseverance, Intermediate and Rising Star veins and Twilight and Aster gulches. There is also a photograph showing this portion of the district and also the Flint mine.

Respectfully submitted,

Ralph V. Thurston,
Mining Engineer.

Payette, Idaho.
May 22, 1948.

The [illegible] owns the following equipment and personal property which can be used in connection with the operation and development of cold mine, [illegible]:

1 - Caterpillar D. 10,000 Pound Pull Capacity,
1 - 8 Ton Drop Hook [illegible] Duty [illegible],
1 - Heavy [illegible] [illegible] 6 Spare,
10 - 225 H. P. 6 Volt Diesel Batteries,
1 - Shaker Motor and with Double drive,
1 - 6 Drum Air Hoist,
1 - Operator Stand,
1 - 75 H.P. 1150 R.P.M. Volt D.C. Motor,
1 - Lorain D.C. Drum controller,
1 - Set Navigation 7-Foot drive 6 chain, Mine to drive 150 H.P.M. on steel shaft,
2 - 2 Ton pulley chain block,
7 - Mining cars,
2,400 ft. Spare Wire 1 material length of steel,
1 - Coal Scraper crusher,
1 - 20 H.P. Motor, [illegible],
10 Batteries for locomotive with drive pulley V belt type,
1800 feet of pipe different sizes,
2,000 feet of pipe, 1 in, 2 in, 2½ in,
2 - Gasoline Welding 6 Torch,
[illegible] cable long cord to our drill,
900 bits and 6 cut steel for starter,
2 - Jack Hammer, Pneumatic type,
1 - Jack Hammer, [illegible] type,
600 Stable size, different length steel,
3 - Jack, automatic, [illegible], [illegible] chain,
1 - Wire, Hot water tank,
3 - Hoses,
1 - Oil stove and tank,
1 - Pipe 6 size for air [illegible], water, steam, [illegible], cable holder for [illegible], [illegible] cable, holder for and for steel rail or material, air line hose, with the [illegible], 500 air lite, [illegible] lite, lite batteries.
1 - Air Compressor with air tank 6 cubic steel 6 lite.
1 - Portable Compressor with [illegible] 6 [illegible] Stationary
1 - Air Receiver tanks for large compressor.
120 feet of 3/8 in steel 6 100 feet 3/8 in pipe etc 1.
1 - Crane gun, [illegible] material 6 tank,
1 - Motor with 100 feet of pipe and [illegible],
1 - Locomotive, [illegible] to pull ore car cord, with [illegible],
1 - Drill Mill with [illegible] 6 [illegible],
12 - Sets of 16' [illegible] 6 Flanges.

Birmingham Claims or group of claims now owned by
Productive Mines Limited.

	BOOK	PAGE
Evergreen	20	129
Spokane	20	122
North Extension, Silver Star	20	132
Garfield	20	138
Bullion	20	126
N. Extension, Perseverence	20	140
Willamette	18	589
January	20	124
Cresent	20	127
Grey Eagle	20	130
S.W. Extension, Grey Eagle	20	133
Apex	20	125
North Extension, Bullion	20	131
Venus	20	141
Treasure Vault	18	89
Hecla	20	139
Sunshine	19	513 or 515
Atlas	20	136
Ajax	20	135
Stibnite	20	134
North Extension, Treasure Vault	20	122
Silver Crown	20	142

ROOM 13, POST OFFICE BLDG.
KNOXVILLE 2, TENN.

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

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE TO AVOID
PAYMENT OF POSTAGE, $300
(PMGC)

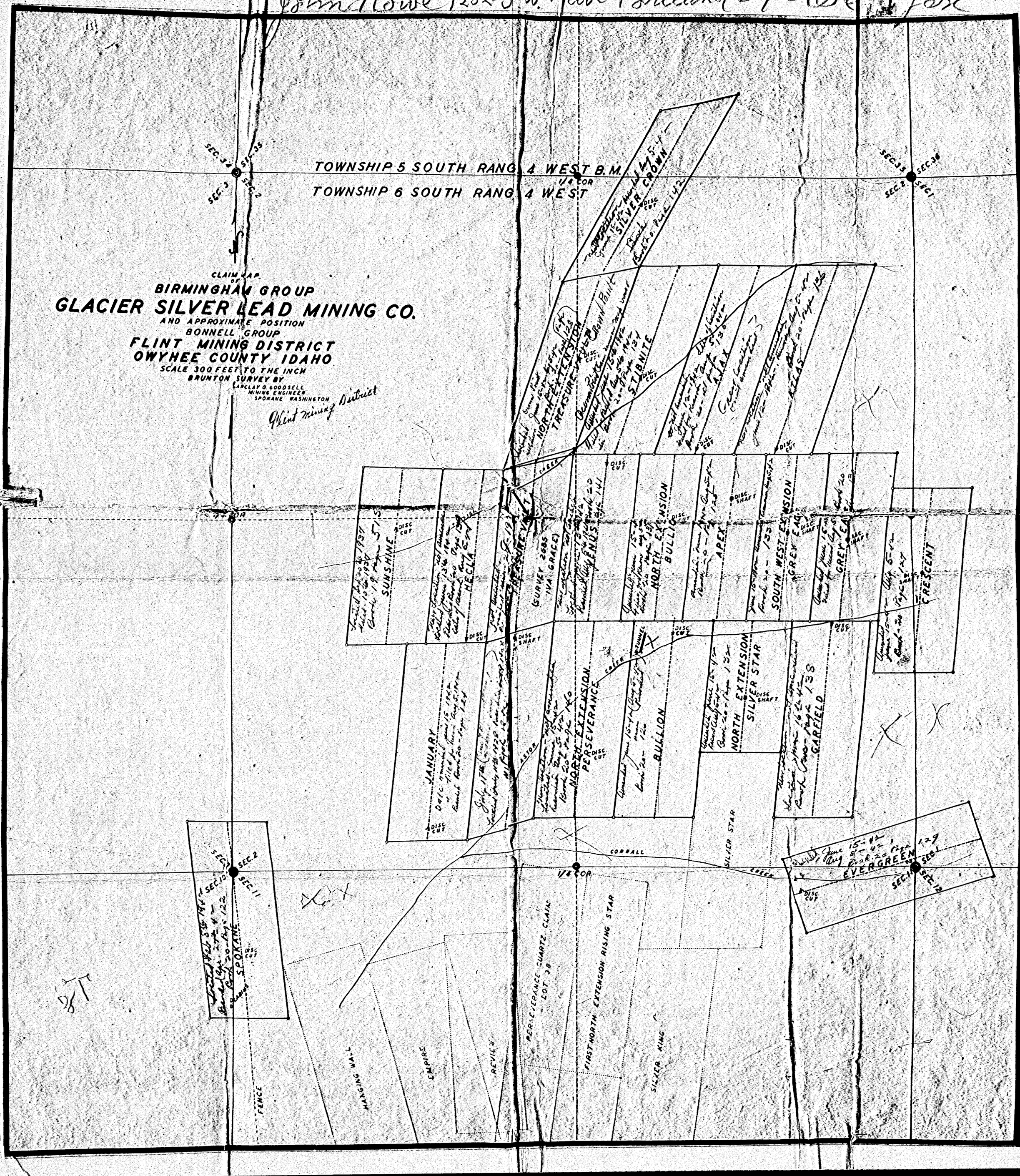
George S. Schlatter, Chairman
Operating Committee, D.M.A.
Dept. of the Interior
Washington 25, D.C.

KNOXVILLE TENN.
FEB 28 1951
PM 3 30
RECEIVED

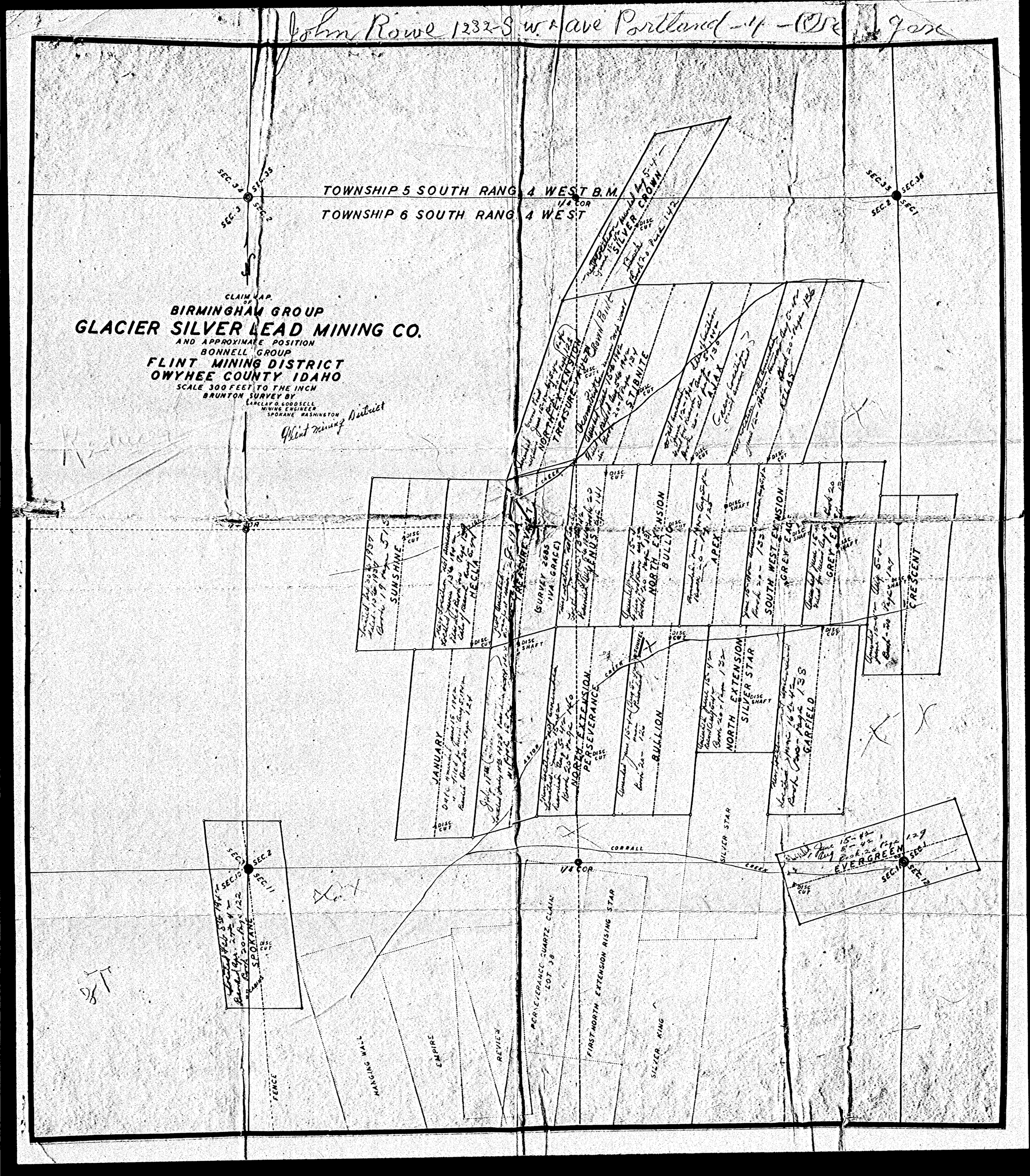
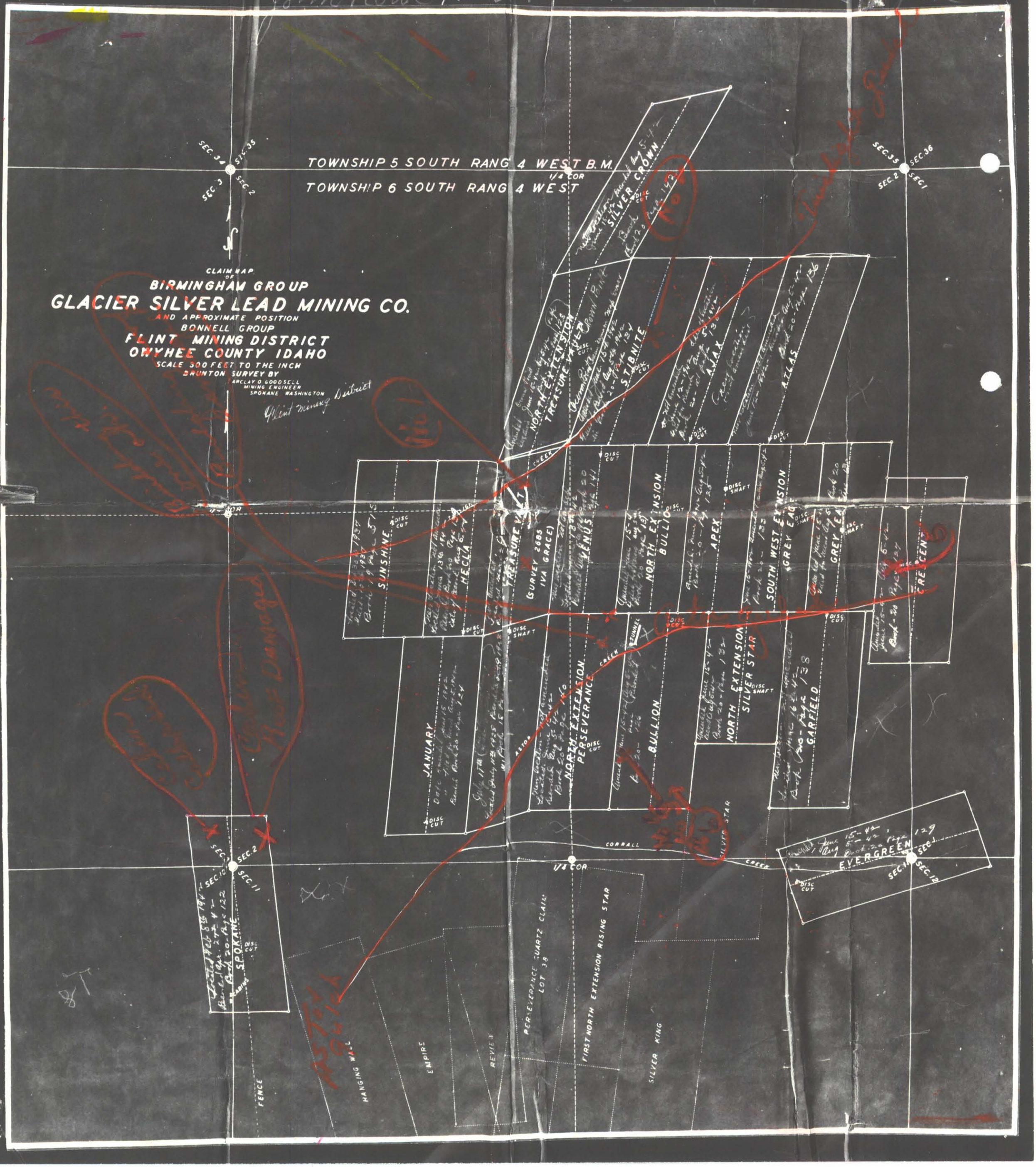
DMCA 2916

DMCA 2916

John Rowe 1232-S.W. Ave Portland - 17 - Ore



John Rowe 1232-S W. Ave Portland - 4 - Ore



John Rowe 1232-S.W. 4 ave Portland-4-Or