DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

CONTROLLED DOCUMENT

DMA Docket No. 3017

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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.

Copies to USBM; USGS and retained in Reg. II.

Routing Slip

To:	Code 400, Rm. 3538	Date	5/5/53
To:	Oper Comm	Date	5-8-53
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CONTROLLED DOCUMENT

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON, D.C.~~
1205 N. Division St.
Spokane 2, Washington
September 20, 1954

B-45

Mr. Lester E. Thornton
P. O. Box 203
Baker, Oregon

Dear Mr. Thornton:

This will acknowledge receipt of your letter of September 2, 1954, with reference to an examination of your property in connection with an application for a DMEA loan.

We have arranged for Mr. Webster S. Anderson of the Bureau of Mines and Mr. Willard P. Puffett of the Geological Survey to examine your property on Wednesday, September 29. If you are unable to accompany them on that date, please advise us.

Sincerely yours,

Thomas E. Howard
For: Wing G. Agnew, Member
DMEA Field Team, Region II

cc: DMEA, Wash. (2)
USGS (2)

(This is in further reference to our letter of August 30, 1954 to Mr. Thornton, who previously had submitted an application under Docket No. DMEA 3017 - tungsten).

COPY

SEP 24 1954

P. O. Box 203
Baker, Oregon
September 2, 1954

Mr. Wing R. Agnew, Member
DMEA Field Team, Region II
1201 N. Division Street
Spokane 2, Washington

Dear Mr. Agnew:

Thank you very much for your letter of August 30, 1954 and for the forms MF-103. I wish I could complete the forms now but I am at a loss as to what I will need and I am going to need assistance from your office.

The geologist for the State of Oregon, Mr. W. S. Wagner, office in Baker, was to have written your office the geology of my claims and would have assisted me with the application, but due to the death of his father back east he will be gone an indefinite time. I am a better prospector than a geologist but I will try and describe the property.

First, this is not the same property examined by Mr. Zoldok but is located about two airline miles to the southwest. Thanks to Mr. Zoldok tho thru his advice I was able after digging enough holes to reach China I did find this lode. I traced it to where I am now digging to what Mr. Wagner calls a hot spot. I went in about fifteen feet and uncovered the scheelite in sheets from 1/2 inch to 2 inches in depth and about 20 inches square. I then dropped down the hill about thirty feet and started drifting in again and I am in fifty-five feet now with scheelite showing in veins of limestone and sandstone all the way in. I still lack about ten feet of hitting the lode I found above. Mr. Wagner and myself have traced the scheelite eight hundred feet wide and one thousand feet up, also for a distance of 2000 feet in a little creek that comes down thru the property. We dug holes about 2 feet deep and found considerable scheelite the entire distance. I would estimate bedrock in the creek at thirty feet. The geology is an altered formation with limestone, sandstone and granite, with granite one side and limestone on the other.

I have not completed all my location work on the claims but expect to be done in about 2 weeks.

I have hopes you could send Mr. Zoldok or someone to help me now. The roads are good and one can drive right to the property. Will need their sleeping bags is all. I will enclose a map how to get to the property, also to my cabin.

I will certainly appreciate help from your office at this time if possible.

Th anking you again, I am,

Sincerely yours,

Lester E. Thornton

I will pick up mail Sept. 11
& 18th in Baker, Oreg.

3

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

1201 N. Division St.
Spokane 2, Washington
July 15, 1953

3017

Tung

3017

WSM

MEMORANDUM

To: DMEA Field Team, Region II

From: Stephen W. Zoldok, Mining Engineer, Bureau of Mines

Subject: Assay results of sample taken at Morton Mine, Grant County, Oregon, Docket No. DMEA 3017 (tungsten)
Ref: Memorandum report dated June 18, 1953

A spectrographic analysis of sample SZ-30 taken on the subject property showed the following elements:

Al, Ca, Fe and Si	Over 10%
Copper	0.1 to 1.0%
Mg, Co, Mn, Ni, Ti	0.01 to 0.1%
Vanadium	0.001 to 0.01%
Tungsten	Not detected

Orig. & 3 cys - Wash.
USGS (2)
DMEA
R/D
SWZ/he

S. W. Zoldok

denied 7-9-53.

JUL 13 1953

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Denial of exploration project in the amount of $42,500.00
Docket No. DMEA 3017 - Tungsten
Lester E. Thornton
Thornton mine
Grant County, Oregon

The denial of the subject application by this Division is based on the following information:

1. The applicant proposed to drift along a "vein structure" for 400 feet to where the "vein" was cut off by a limestone "dike". In addition, 700 feet of crosscutting at unspecified points was included making a total of 1,100 feet of drift and crosscut.

2. The tungsten was said to occur in a pyroxenite vein that also contains chalcopyrite and pyrrhotite. Examination by the DMEA Field Team indicated the tungsten occurs as a few specks of scheelite in tactite. The short adit was driven along a narrow band of tactite in a sheared and pyrrhotite-bearing hornfels. The shear zone, striking N. 60° W., is 3 feet wide and has a vertical dip.

3. The examining field team, Bureau of Mines engineer, recommends denial of the application with the reservation that a re-examination of the area might be desirable should Mr. Thornton prove the existence of a tactite zone showing tungsten mineralization. This was qualified in the letter of denial to the applicant to "significant tungsten mineralization."

4. The Field Team recommends denial of the subject application.

5. The Commodity Divisions of the Geological Survey and the Bureau of Mines concur with the denial.

FARutledge:foc
7-9-53
cc: Docket
Code 400
Adm. Read.
File

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

JUL 13 1953

Mr. Lester E. Thornton
Box 203
Baker, Oregon

Re: Docket No. DMEA 3017- Tungsten
Lester E. Thornton
Thornton mine
Grant County, Oregon

Dear Mr. Thornton:

Your application for aid for an exploration project and other data available to us in Washington concerning the above referenced property have been reviewed.

Projects approved by the Defense Minerals Exploration Administration must, in its judgment, show definite promise of yielding materials of acceptable grade in quantities that will significantly improve the mineral supply position for the National Defense Program.

Careful study of all our information, although noting the occurrence of a small amount of scheelite at the Thornton mine, indicates to us that the probability of disclosing minable ore reserves by your proposed program is not sufficiently promising to justify Government participation. We regret to advise you, under these circumstances, that your application is denied.

This denial is made without prejudice to the property. If at some future date additional prospecting proves the existence of significant tungsten mineralization, we will be glad to consider a revised application for exploration. The revised application should refer to the present docket.

We wish to thank you for your interest in the Defense Minerals Program and for bringing your property to our attention. Please be assured that a revised application containing the necessary information will be given prompt consideration.

Sincerely yours,

C. O. Mittendorf

Administrator

FARutledge:foc
7-9-53
cc: Docket
Code 400
FT. Reg.II
Operating Comm.
Admr. Reading File
Mr. R. W. Geehan, USBM
Mr. D. M. Lemmon, USGS

400

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

1201 N. Division St.
Spokane 2, Washington
June 22, 1953

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

Subject: Docket No. DMEA 3017 (tungsten)
Lester E. Thornton
Grant County, Oregon

Dear Mr. Selfridge:

Enclosed are the original and three copies of a memorandum report by S. W. Zoldok, Mining Engineer, U. S. Bureau of Mines, describing the results of an examination made in connection with the subject application.

Though snow prevented a thorough examination of the property, the nature of the rocks exposed along the creek and in the road-cuts together with the weakness of the structure indicate that the applicant's proposal has little merit.

The Field Team concurs with the examining engineer and recommends that the application be denied.

By Field Team, Region II

A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Thomas E. Howard, Acting Member
U. S. Bureau of Mines

Enclosure

Thru O C,
7-1-53

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

1201 N. Division St.
Spokane 2, Washington
June 18, 1953

MEMORANDUM

To: DMEA Field Team, Region II

From: Stephen W. Zoldok, Mining Engineer, Bureau of Mines

Subject: Preliminary field examination, Thornton Mine, Grant County, Oregon, Docket No. DMEA 3017 (tungsten)

INTRODUCTION

This report describes a preliminary field examination of the Thornton mine, Grant County, Oregon. The inspection was made by S. W. Zoldok, Mining Engineer, Bureau of Mines, on June 4, 1953. The examining engineer was accompanied by Lester E. Thornton, Box 203, Baker, Oregon, applicant and owner of the property. Seven hours were spent in going to and returning from the property and two hours were spent on the property.

RECOMMENDATIONS

It is recommended that Mr. Thornton's application for aid in a tungsten exploration project on the Thornton and Bob claims in Grant County, Oregon, be denied.

PROPERTY AND LOCATION

The property consists of the Thornton and Bob lode mining claims located in sec. 11, T. 10 S., R. 34 E., W.M., Greenhorn Mining District, Grant County, Oregon.

The property is 17 miles northwest of Bates, Oregon. From Bates it is 9 miles down the Middle Fork of the John Day River, then 8 miles north up Granite Boulder Creek. Bates, Oregon, is 2 miles north of U. S. Highway 28.

The property is in a region of medium relief and is heavily forested. Altitudes at the deposit range from 7200 feet upward. Snowfall in the region is very heavy.

HISTORY AND PAST PRODUCTION

The claims were staked during the summer of 1952. The property has had no past production. There are several gold prospects in the area, none of which has had a production. Considerable gold dredging has been done in the stream valleys around Bates, Oregon.

GEOLOGIC SETTING

At the time of examination, the area was covered with a 5-6-foot mantle of snow and the only exposure of bedrock observed at the deposit was in a very short adit and this consisted of a weakly sheared and mineralized (with pyrrhotite)hornfel containing a narrow band of tactite. A few specks of scheelite were observed, and one sample was taken for spectrographic analysis (Sample No. SZ-30). The short adit was driven on a 3-foot shear striking N. 60° W. with a vertical dip.

Observation of bedrock in roadcuts along Granite Boulder Creek indicates the bedrock series in the area consists of granite and metamorphic shales and quartzites.

PROPOSAL

The applicant proposes to drift along the vein to the limestone dike which cuts across the vein, approximately 400 feet, and then to do approximately 700 feet of crosscutting at various points in order to determine width of the structure.

The vein on which the applicant proposes to drift is the same one sampled by the examining engineer. The limestone "dike", shown on a sketch map accompanying the application, was not seen although it could have been covered by snow.

COMPETENCE OF APPLICANT

Mr. Thornton is a typical prospector and would not be competent to manage an exploration project if his loan application was acted on favorably.

CONCLUSIONS

The occurrence of granite and contact metamorphic silicates is of large areal extent in eastern Grant County, Oregon. Although it is recommended that Mr. Thornton's present application for a tungsten exploration loan be denied, a re-examination of the area might be desirable should Mr. Thornton prove the existence of a tactite zone showing tungsten mineralization.

Orig. & 3 cys - Wash.
USGS (2)
DMEA
M/D

S. W. Zoldok

400

MAY 28 1953

Mr. Lester E. Thornton
Box 203
Baker, Oregon

Re: Docket No. DMEA 3017 - Tungsten
Lester E. Thornton
Thornton mine
Grant County, Oregon

Dear Mr. Thornton:

This will acknowledge receipt of your application for assistance in exploring for tungsten at the Thornton mine. After a review by the Iron and Ferro-Alloys Division of the Defense Minerals Exploration Administration, the subject application has been referred to Mr. A. E. Weissenborn, Executive Officer, DMEA Field Team, Region II, South 157 Howard Street, Spokane 4, Washington, for a field examination.

The Regional Office will contact you with regard to an examination of your property. Any assistance that you can render the members of the Field Team during the examination will be appreciated.

Sincerely yours,

C. O. Mittendorf

Administrator

Copy to: Docket
Field Team, Region 2
Code 400
Adm. Read. File
D. M. Lemmon, USGS
R. W. Geehan, USBM

FARutledge/ls 5/27/53

400

MAY 11 1953

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

Re: Docket No. DMEA 3017 - Tungsten
Lester E. Thornton
Thornton mine
Grant County, Oregon

Dear Mr. Weissenborn:

This will acknowledge receipt of the subject docket and your letter of May 1, 1953, in which you state that an early field examination will be scheduled. We will, therefore, hold this application in abeyance until the report and recommendations by the Field Team are received.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

APPROVED:

J. H. Hodgson

Member, Bureau of Mines

A. R. Kinkel, Jr.

Member, Geological Survey

FARutledge/ls
5/7/53

cc: Docket
FT, Reg. 2
Adm. Read. File
Oper. Committee
Code 400
D. M. Lemmon, USGS
R. W. Geehan, USBM

IN REPLY REFER TO:

G-MD-DML

402

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

May 6, 1953

Memorandum

To: W. S. Martin, DMEA

From: D. M. Lemmon, USGS

Subject: Exploration application $42,500 — DMRA-3017
Lester E. Thornton — Tungsten
Thornton and Bob claims
Sec. 11, T. 10 S., R. 34 E.
Grant County, Oregon

The applicant states that "tungsten " (mineral not specified) is present in a pyroxenite vein with chalcopyrite and pyrrhotite. It is stated that a sample contained 0.16 percent "tungsten"; the assayer is not given. No geologic or sample maps are attached to the application.

The Geological Survey has no information about tungsten at this locality.

A covering letter from the Field Team states that a field examination will be made in May. Therefore, I am returning the application to you without recommendation pending receipt of a field report.

D. M. Lemmon

400

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

May 1, 1953

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

Re: DMEA application
Thornton Mine (Tungsten)
Lester E. Thornton
Box 203
Baker, Oregon

Dear Mr. Selfridge:

Attached is the original and 2 copies of an application for exploration assistance at the Thornton mine, Grant County, Oregon. We have retained one copy for our files.

The proposed program appears to be a rather ambitious one in view of the small amount of work done on the deposit and the low content of tungsten (0.16 percent WO_3) noted in the one sample reported by the applicant. If an alternate program of exploration is suggested by the examining team, however, the applicant would consider revising his program.

A field examination will be scheduled about the middle of May.

By Field Team, Region II

M. E. Volin, Acting Exec. Officer
(Bureau of Mines)

Harold Kirkemo, Acting Member
(Geological Survey)

cc: USBM (2)
Fuller

Copy retained

MF-103
(Revised April 1952)

RECEIVED
APR 15 1953

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

MAY 4 1953

U. S. G. S.
SPOKANE, WASH.

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-3017
Metal or Mineral
Date Received 5/4/53
Estimated Cost
Participation (Government %)

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: LESTER E. THORNTON
Box 203
Baker, 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 The Thornton #1 and Bob unpatented mining claims located in Greenhorn Mining District, Sec. 11, T. 10 S., R. 34 E.W.M., Grant County, State of Oregon, and recorded in Book 27, (Thornton) page 148, and (Bob) page 152.

(*b*) State any mine name by which the property is known. Thornton Mine.

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

(*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 There are no liens or encumbrances.

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

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.

(*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.

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

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

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

(*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 30 days and be completed within 23 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.

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

[X] 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 April 15, 1953

LESTER E. THORNTON
(Applicant)

By Lester E. Thornton

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

Lester E. Thornton
Box 203
Baker, Oregon

No. 4
Physical Description

4.(a) The mine has been opened by the owner by an open cut 14 ft. long and a short adit 4 ft. long on the northeast corner. In addition, five open cuts have been made on the vein structure by bulldozer and powder. The mine will be accessible for examination by May 15th, or sooner, if weather permits.

(b) There is no past or current production, nor any established ore reserves.

(c) The vein is pyroxenite composed predominately of augite with minor amount of feldspar. Sulphide minerals that coat the surface are chalcopyrite and pyrrhotite. It is 25 ft. wide and has been exposed for 175 ft. in length. Sample from the deposit showed tungsten at .16 %. Engineers who have visited the property have recommended applicant explore the property for commercial quantities of tungsten ore.

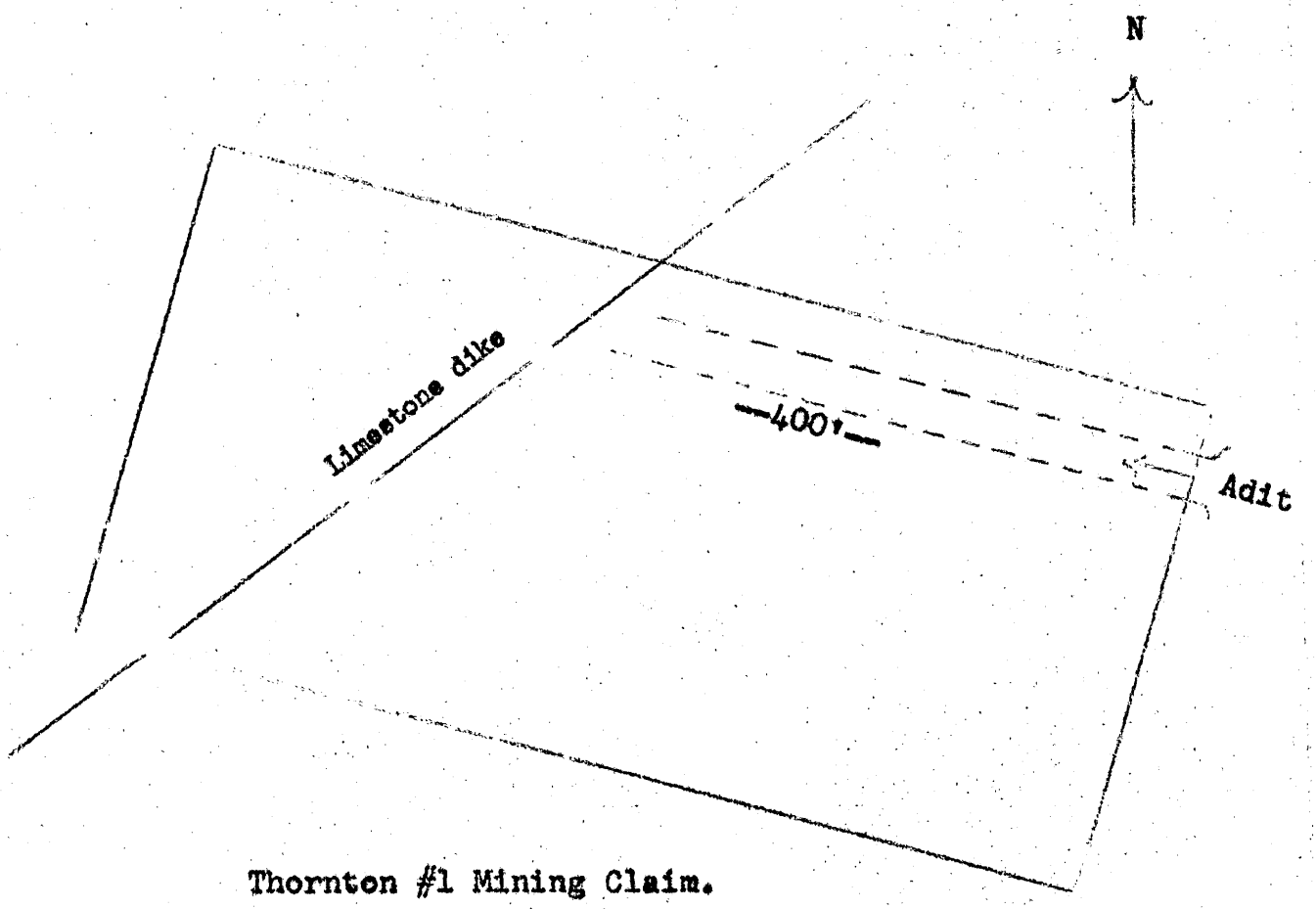
(d) The mine is located 17 miles from Bates, Oregon, which is located 1 1/2 miles north of Highway 28, near Austin. 9 miles from Bates, down the Middle Fork of the John Day River on a gravelled highway, a mountain road turns north, and the mine is located on Granite Boulder Creek 7 1/2 miles from the turn. The property lies approximately 200 ft. southwest of the road.

(e) Applicant states manpower, materials, supplies, equipment, water, and power would be readily available.

Lester E. Thornton
Box 203
Baker, Oregon

No. 5(b).

Sketch



Thornton #1 Mining Claim.

Applicant proposes to drift
Along the vein to the limestone dike which cuts across the vein, approximately 400 ft., and then to do approximately 700 ft. of cross cutting at various points in order to determine width of the structure.

DMEA-3017

Lester E. Thornton
Box 203
Baker, Oregon

5(d). Applicant has been actively engaged in mining since 1920, during which time he operated placer ground in Stices Gulch, near Baker, Oregon, and acquired and has been operating the Tempest Mine successfully the past few years. Applicant will be able to carry out his end of the exploration contract with proceeds acquired from the Tempest Mines, and from other sources. He intends to supervise operations under the direction and guidance of competent engineers.

Lester E. Thornton
Box 203
Baker, Oregon

Estimate of Costs.

6(a). Independent contracts. If possible applicant will endeavor to contract the drifting and cross cutting at $30.00 per foot.

1,100 ft. at $30.00 per ft.	$33,000.00
(b) Engineering and geological fees, including assays	500.00
(c) Operating materials and supplies. Contractor to furnish.	—
(d) Operating equipment. To be purchased.	
Air compressor	6,500.00
Drifter together with accessories	600.00

Applicant will furnish ore car and rail.

(e) Not applicable.

(f) Applicant will furnish, at his own expense, bunkhouse for men, and cook tent.

Compressor shed to be built	900.00
Miscellaneous expenses, contingencies	1,000.00
Total cost of	$42,500.00

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

XXXXXXXXXXXXXXXXXXC.

1205 N. Division St.
Spokane 2, Washington
September 20, 1954

Docket ✓
Defense Minerals ...
SEP 24 1954

DMEA 3017 WSAG

Mr. Lester E. Thornton
P. O. Box 203
Baker, Oregon

Dear Mr. Thornton:

This will acknowledge receipt of your letter of September 2, 1954, with reference to an examination of your property in connection with an application for a DMEA loan.

We have arranged for Mr. Webster S. Anderson of the Bureau of Mines and Mr. Millard P. Puffett of the Geological Survey to examine your property on Wednesday, September 29. If you are unable to accompany them on that date, please advise us.

Sincerely yours,

Thomas E. Howard
For: Wing G. Agnew, Member
DMEA Field Team, Region II

cc: DMEA, Wash. (2)
USGS (2)

— not rec'd by DMEA

(This is in further reference to our letter of August 30, 1954 to Mr. Thornton, who previously had submitted an application under Docket No. DMEA 3017 - tungsten).

Denied 7-9-53

COPY

SEP 2 4 1954

P. O. Box 203
Baker, Oregon
September 2, 1954

Mr. Wing R. Agnew, Member
DMEA Field Team, Region II
1201 N. Division Street
Spokane 2, Washington

Dear Mr. Agnew:

Thank you very much for your letter of August 30, 1954 and for the forms MF-103. I wish I could complete the forms now but I am at a loss as to what I will need and I am going to need assistance from your office.

The geologist for the State of Oregon, Mr. W. S. Wagner, office in Baker, was to have written your office the geology of my claims and would have assisted me with the application, but due to the death of his father back east he will be gone an indefinite time. I am a better prospector than a geologist but I will try and describe the property.

First, this is not the same property examined by Mr. Zoldok but is located about two airline miles to the southwest. Thanks to Mr. Zoldok tho thru his advice I was able after digging enough holes to reach China I did find this lode. I traced it to where I am now digging to what Mr. Wagner calls a hot spot. I went in about fifteen feet and uncovered the scheelite in sheets from 1/2 inch to 2 inches in depth and about 20 inches square. I then dropped down the hill about thirty feet and started drifting in again and I am in fifty-five feet now with scheelite showing in veins of limestone and sandstone all the way in. I still lack about ten feet of hitting the lode I found above. Mr. Wagner and myself have traced the scheelite eight hundred feet wide and one thousand feet up, also for a distance of 2000 feet in a little creek that comes down thru the property. We dug holes about 2 feet deep and found considerable scheelite the entire distance. I would estimate bedrock in the creek at thirty feet. The geology is an altered formation with limestone, sandstone and granite, with granite one side and limestone on the other.

I have not completed all my location work on the claims but expect to be done in about 2 weeks.

I have hopes you could send Mr. Zoldok or someone to help me now. The roads are good and one can drive right to the property. Will need their sleeping bags is all. I will enclose a map how to get to the property, also to my cabin.

I will certainly appreciate help from your office at this time if possible.

Th anking you again, I am,

Sincerely yours,

Lester E. Thornton

I will pick up mail Sept. 11
& 18th in Baker, Oreg.

18

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

1201 N. Division St.
Spokane 2, Washington
July 15, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration

MEMORANDUM

To: DMEA Field Team, Region II

From: Stephen W. Zoldok, Mining Engineer, Bureau of Mines

Subject: Assay results of sample taken at Thornton Mine, Grant County, Oregon, Docket No. DMEA 3017 (tungsten)
Ref: Memorandum report dated June 18, 1953

A spectrographic analysis of sample SZ-30 taken on the subject property showed the following elements:

Al, Ca, Fe and Si	Over 10%
Copper	0.1 to 1.0%
Mg, Co, Mm, Ni, Ti	0.01 to 0.1%
Vanadium	0.001 to 0.01%
Tungsten	Not detected

S. W. Zoldok

Orig. & 3 cys - Wash.
USGS (2)
DMEA
M/D
SWZ/he

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

1201 N. Division St.
Spokane 2, Washington
July 15, 1953

MEMORANDUM

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S. W. Zoldok

Orig. & 3 cys - Wash.
USGS (2)
DMEA
M/D
SWZ/he

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

WASHINGTON 25, D. C.
1201 N. Division St.
Spokane 2, Washington
July 15, 1953

MEMORANDUM

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S. W. Zoldok

Orig. & 3 cys - Wash.
USGS (2)
DMEA
M/D
SWZ/he

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

MEMORANDUM

JUL 13 1953

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Denial of exploration project in the amount of $42,500.00
Docket No. DMEA 3017 - Tungsten
Lester E. Thornton
Thornton mine
Grant County, Oregon

The denial of the subject application by this Division is based on the following information:

1. The applicant proposed to drift along a "vein structure" for 400 feet to where the "vein" was cut off by a limestone "dike". In addition, 700 feet of crosscutting at unspecified points was included making a total of 1,100 feet of drift and crosscut.

2. The tungsten was said to occur in a pyroxenite vein that also contains chalcopyrite and pyrrhotite. Examination by the DMEA Field Team indicated the tungsten occurs as a few specks of scheelite in tactite. The short adit was driven along a narrow band of tactite in a sheared and pyrrhotite-bearing hornfels. The shear zone, striking N. 60° W., is 3 feet wide and has a vertical dip.

3. The examining field team, Bureau of Mines engineer, recommends denial of the application with the reservation that a re-examination of the area might be desirable should Mr. Thornton prove the existence of a tactite zone showing tungsten mineralization. This was qualified in the letter of denial to the applicant to "significant tungsten mineralization."

4. The Field Team recommends denial of the subject application.

5. The Commodity Divisions of the Geological Survey and the Bureau of Mines concur with the denial.

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

FILE COPY
Surname:

Martin
Emmons
Hughes
Rutledge

400

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SECRETARY
WASHINGTON 25, D. C.

JUL 13 1953

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Denial of exploration project in the amount of $42,500.00
Docket No. DMEA 3017 - Tungsten
Lamber E. Thornton
Thornton mine
Grant County, Oregon

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1. The applicant proposed to drift along a "vein structure" for 400 feet to where the "vein" was cut off by a limestone "dike". In addition, 700 feet of crosscutting at unspecified points was included making a total of 1,100 feet of drift and crosscut.

2. The tungsten was said to occur in a pyrrhotite vein that also contains chalcopyrite and pyrrhotite. Examination by the DMEA Field Team indicated the tungsten occurs as a few specks of scheelite in tactite. The short adit was driven along a narrow band of tactite in a sheared and pyrrhotite-bearing hornfels. The shear zone, striking N. 60° W., is 3 feet wide and has a vertical dip.

3. The examining field team, Bureau of Mines engineer, recommends denial of the application with the reservation that a re-examination of the area might be desirable should Mr. Thornton prove the existence of a tactite zone showing tungsten mineralization. This was qualified in the letter of denial to the applicant to "significant tungsten mineralization."

4. The Field Team recommends denial of the subject application.

5. The Commodity Divisions of the Geological Survey and the Bureau of Mines concur with the denial.

FARutledge:foc
7-9-53
cc: Docket
Code 400
Adm. Read.
File

R.C.G.
7-13-53

H. S. Martin, Acting Chief
Iron and Ferro-Alloys Division

FILE COPY
Surname:

400

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SECRETARY
WASHINGTON 25, D. C.

JUL 13 1953

Martin
Lemmon
Geehan
Rutledge
Kyhl
Hydro
Selfridge
Mittendorf

Mr. Lester E. Thornton
Box 203
Baker, Oregon

Re: Docket No. DMEA 3017-Tungsten
Lester E. Thornton
Thornton mine
Grant County, Oregon

Dear Mr. Thornton:

Your application for aid for an exploration project and other data available to us in Washington concerning the above referenced property have been reviewed.

Projects approved by the Defense Minerals Exploration Administration must, in its judgment, show definite promise of yielding materials of acceptable grade in quantities that will significantly improve the mineral supply position for the National Defense Program.

Careful study of all our information, although noting the occurrence of a small amount of scheelite at the Thornton mine, indicates to us that the probability of disclosing minable ore reserves by your proposed program is not sufficiently promising to justify Government participation. We regret to advise you, under these circumstances, that your application is denied.

This denial is made without prejudice to the property. If at some future date additional prospecting proves the existence of significant tungsten mineralization, we will be glad to consider a revised application for exploration. The revised application should refer to the present docket.

We wish to thank you for your interest in the Defense Minerals Program and for bringing your property to our attention. Please be assured that a revised application containing the necessary information will be given prompt consideration.

Sincerely yours,

C. O. Mittendorf

Administrator

FARutledge:foc
7-9-53
cc: Docket
Code 400
FT. Reg.II
Operating Comm.
Admr. Reading File
Mr. R. W. Geehan, USBM
Mr. D. M. Lemmon, USGS

R.L.G.
7-13

Docket

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

1201 N. Division St.
Spokane 2, Washington
June 22, 1953

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

WSM

Subject: Docket No. DMEA 3017 (tungsten)
Lester E. Thornton
Grant County, Oregon

Dear Mr. Selfridge:

Enclosed are the original and three copies of a memorandum report by S. W. Zoldok, Mining Engineer, U. S. Bureau of Mines, describing the results of an examination made in connection with the subject application.

Though snow prevented a thorough examination of the property, the nature of the rocks exposed along the creek and in the road-cuts together with the weakness of the structure indicate that the applicant's proposal has little merit.

The Field Team concurs with the examining engineer and recommends that the application be denied.

By Field Team, Region II

A. E. Weissenborn

A. E. Weissenborn, Exec. Officer
U. S. Geological Survey

Thomas E. Howard

Thomas E. Howard, Acting Member
U. S. Bureau of Mines

Enclosure

Reviewed by
DMEA OPERATING COMMITTEE

7-1-53
(date)

OK, so we deny

with a
"this denial is made
without prejudice
and if new evi

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

1201 N. Division St.
Spokane 2, Washington
June 18, 1953

gcl
7/13/53

MEMORANDUM

To: DMEA Field Team, Region II

From: Stephen W. Zoldok, Mining Engineer, Bureau of Mines

Subject: Preliminary field examination, Thornton Mine, Grant County, Oregon, Docket No. DMEA 3017 (tungsten)

INTRODUCTION

This report describes a preliminary field examination of the Thornton mine, Grant County, Oregon. The inspection was made by S. W. Zoldok, Mining Engineer, Bureau of Mines, on June 4, 1953. The examining engineer was accompanied by Lester E. Thornton, Box 203, Baker, Oregon, applicant and owner of the property. Seven hours were spent in going to and returning from the property and two hours were spent on the property.

RECOMMENDATIONS

It is recommended that Mr. Thornton's application for aid in a tungsten exploration project on the Thornton and Bob claims in Grant County, Oregon, be denied.

PROPERTY AND LOCATION

The property consists of the Thornton and Bob lode mining claims located in sec. 11, T. 10 S., R. 34 E., W.M., Greenhorn Mining District, Grant County, Oregon.

The property is 17 miles northwest of Bates, Oregon. From Bates it is 9 miles down the Middle Fork of the John Day River, then 8 miles north up Granite Boulder Creek. Bates, Oregon, is 2 miles north of U. S. Highway 28.

The property is in a region of medium relief and is heavily forested. Altitudes at the deposit range from 7200 feet upward. Snowfall in the region is very heavy.

Reviewed by
DMEA OPERATING COMMITTEE
7-1-53
(date)

HISTORY AND PAST PRODUCTION

The claims were staked during the summer of 1952. The property has had no past production. There are several gold prospects in the area, none of which has had a production. Considerable gold dredging has been done in the stream valleys around Bates, Oregon.

GEOLOGIC SETTING

At the time of examination, the area was covered with a 5-6-foot mantle of snow and the only exposure of bedrock observed at the deposit was in a very short adit and this consisted of a weakly sheared and mineralized (with pyrrhotite)hornfel containing a narrow band of tactite. A few specks of scheelite were observed, and one sample was taken for spectrographic analysis (Sample No. SZ-30). The short adit was driven on a 3-foot shear striking N. 60° W. with a vertical dip.

Observation of bedrock in roadcuts along Granite Boulder Creek indicates the bedrock series in the area consists of granite and metamorphic shales and quartzites.

PROPOSAL

The applicant proposes to drift along the vein to the limestone dike which cuts across the vein, approximately 400 feet, and then to do approximately 700 feet of crosscutting at various points in order to determine width of the structure.

The vein on which the applicant proposes to drift is the same one sampled by the examining engineer. The limestone dike, shown on a sketch map accompanying the application, was not seen although it could have been covered by snow.

COMPETENCE OF APPLICANT

Mr. Thornton is a typical prospector and would not be competent to manage an exploration project if his loan application was acted on favorably.

CONCLUSIONS

The occurrence of granite and contact metamorphic silicates is of large areal extent in eastern Grant County, Oregon. Although it is recommended that Mr. Thornton's present application for a tungsten exploration loan be denied, a re-examination of the area might be desirable should Mr. Thornton prove the existence of a tactite zone showing tungsten mineralization.

Orig. & 3 cys - Wash.
USGS (2)
DMEA
M/D

S. W. Zoldok

FILE COPY
SURNAME:

Rutledge
Martin

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

MAY 28 1953

BL 5/28

Mr. Lester E. Thornton
Box 203
Baker, Oregon

Re: Docket No. DMEA 3017 - Tungsten
Lester E. Thornton
Thornton mine
Grant County, Oregon

Dear Mr. Thornton:

This will acknowledge receipt of your application for assistance in exploring for tungsten at the Thornton mine. After a review by the Iron and Ferro-Alloys Division of the Defense Minerals Exploration Administration, the subject application has been referred to Mr. A. M. Weissenborn, Executive Officer, DMEA Field Team, Region II, South 157 Howard Street, Spokane 4, Washington, for a field examination.

The Regional Office will contact you with regard to an examination of your property. Any assistance that you can render the members of the Field Team during the examination will be appreciated.

Sincerely yours,

C. O. Mittendorf (fw)

Administrator

Copy to: Docket
Field Team, Region 2
Code 400
Adm. Read. File
D. M. Lemmon, USGS
R. W. Geehan, USBM

FARutledge/ls 5/27/53

FILE COPY
SURNAME:

Rutledge
Martin
Selfridge
Johnson
Thatcher

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

MAY 11 1953

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

Re: Docket No. DMEA 3017 - Tungsten
Lester E. Thornton
Thornton mine
Grant County, Oregon

Dear Mr. Weissenborn:

This will acknowledge receipt of the subject docket and your letter of May 1, 1953, in which you state that an early field examination will be scheduled. We will, therefore, hold this application in abeyance until the report and recommendations by the Field Team are received.

Sincerely yours,

A.H.
5-11-53

George C. Selfridge

Chairman, Operating Committee (GCS)

APPROVED:

J. H. Hedges

Member, Bureau of Mines (JHH)

A. R. Kinkel, Jr

Member, Geological Survey (ARK)

FARutledge/ls
5/7/53

cc: Docket
FT, Reg. 2
Adm. Read. File
Oper. Committee
Code 400
D. M. Lemmon, USGS
R. W. Geehan, USBM

Docket

IN REPLY REFER TO:

G-MD-DML

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

May 6, 1953

WSM

Memorandum

To: W. S. Martin, DMEA

From: D. M. Lemmon, USGS

Subject: Exploration application $42,500 DMEA-3017
Lester E. Thornton Tungsten
Thornton and Bob claims
Sec. 11, T. 10 S., R. 34 E.
Grant County, Oregon

The applicant states that "tungsten " (mineral not specified) is present in a pyroxenite vein with chalcopyrite and pyrrhotite. It is stated that a sample contained 0.16 percent "tungsten"; the assayer is not given. No geologic or sample maps are attached to the application.

The Geological Survey has no information about tungsten at this locality.

A covering letter from the Field Team states that a field examination will be made in May. Therefore, I am returning the application to you without recommendation pending receipt of a field report.

DM Lemmon

D. M. Lemmon

Copy retained 400

IN REPLY REFER TO:

G-MD-DML

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

May 6, 1953

Memorandum

To: W. S. Martin, DMEA

From: D. M. Lemmon, USGS

Subject: Exploration application $42,500 — DMEA-3017
Lester E. Thornton — Tungsten
Thornton and Bob claims
Sec. 11, T. 10 S., R. 34 E.
Grant County, Oregon

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The Geological Survey has no information about tungsten at this locality.

A covering letter from the Field Team states that a field examination will be made in May. Therefore, I am returning the application to you without recommendation pending receipt of a field report.

D. M. Lemmon

May 5, 1953

Mr. Lester E. Thornton
Box 203
Baker, Oregon

Subject: DMEA-3017
Re: Exploration Assistance
Thornton Mine

My dear Mr. Thornton:

The receipt of your application dated April 15, 1953 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-3017 and referred to the Iron and Ferro-Alloy Division.

Kindly refer to DMEA-3017 in any future correspondence relating to your application.

Sincerely yours,

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

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

May 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 - 3017 - Thornton, Lester E.

ROBERT E. ADAMS

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

38226

MF-103
(Revised April 1952)

RECEIVED
APR 15 1953

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

MAY 4 1953

U. S. G. S.

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-3017
Metal or Mineral
Date Received 5/4/53
Estimated Cost
Participation (Government %)

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: LESTER E. THORNTON
Box 203
Baker, 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 The Thornton #1 and Bob unpatented mining claims located in Greenhorn Mining District, Sec. 11, T. 10 S., R. 34 E.W.M., Grant County, State of Oregon, and recorded in Book 27, (Thornton) page 148, and (Bob) page 152.

(*b*) State any mine name by which the property is known. Thornton Mine.

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

(*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 There are no liens or encumbrances.

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

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.

(*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.

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

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power.

5. *The exploration project.*—(*a*) [illegible]te the mineral or minerals for which you wi[illegible]o explore Tungsten.

(*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 30 days and be completed within 23 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.

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

[X] 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 April 15, 1953

LESTER E. THORNTON
(Applicant)

By Lester E. Thornton

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

Lester E. Thornton
Box 203
Baker, Oregon

4.(a) The mine has been opened by the owner by an open cut 14 ft. long and a short adit 4 ft. long on the northeast corner. In addition, five open cuts have been made on the vein structure by bulldozer and powder. The mine will be accessible for examination by May 15th, or sooner, if weather permits.

(b) There is no past or current production, nor any established ore reserves.

(c) The vein is pyroxenite composed predominately of augite with minor amount of feldspar. Sulphide minerals that coat the surface are chalcopyrite and pyrrhotite. It is 25 ft. wide and has been exposed for 175 ft. in length. Sample from the deposit showed tungsten at .16 %. Engineers who have visited the property have recommended applicant explore the property for commercial quantities of tungsten ore.

(d) The mine is located 17 miles from Bates, Oregon, which is located 1 1/2 miles north of Highway 28, near Austin. 9 miles from Bates, down the Middle Fork of the John Day River on a gravelled highway, a mountain road turns north, and the mine is located on Granite Boulder Creek 7 1/2 miles from the turn. The property lies approximately 200 ft. southwest of the road.

(e) Applicant states manpower, materials, supplies, equipment, water, and power would be readily available.

Lester E. Thornton
Box 203
Baker, Oregon

Operating Experience

5(d). Applicant has been actively engaged in mining since 1920, during which time he operated placer ground in Stices Gulch, near Baker, Oregon, and acquired and has been operating the Tempest Mine successfully the past few years. Applicant will be able to carry out his end of the exploration contract with proceeds acquired from the Tempest Mines, and from other sources. He intends to supervise operations under the direction and guidance of competent engineers.

Lester E. Thornton
Box 203
Baker, Oregon

Estimate of Costs.

6(a). Independent contracts. If possible applicant will endeavor to contract the drifting and cross cutting at $30.00 per foot.

1,100 ft. at $30.00 per ft.	$33,000.00
(b) Engineering and geological fees, including assays	500.00
(c) Operating materials and supplies. Contractor to furnish.	--
(d) Operating equipment. To be purchased.	
Air compressor	6,500.00
Drifter together with accessories	600.00

Applicant will furnish ore car and rail.

(e) Not applicable.

(f) Applicant will furnish, at his own expense, bunkhouse for men, and cook tent.

Compressor shed to be built	900.00
Miscellaneous expenses, contingencies	1,000.00
Total cost of	$42,500.00

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

May 1, 1953

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

Re: DMEA application
Thornton Mine (Tungsten)
Lester E. Thornton
Box 203
Baker, Oregon

Dear Mr. Selfridge:

Attached is the original and 2 copies of an application for exploration assistance at the Thornton mine, Grant County, Oregon. We have retained one copy for our files.

The proposed program appears to be a rather ambitious one in view of the small amount of work done on the deposit and the low content of tungsten (0.16 percent WO_3) noted in the one sample reported by the applicant. If an alternate program of exploration is suggested by the examining team, however, the applicant would consider revising his program.

A field examination will be scheduled about the middle of May.

By Field Team, Region II

M. E. Volin, Acting Exec. Officer
(Bureau of Mines)

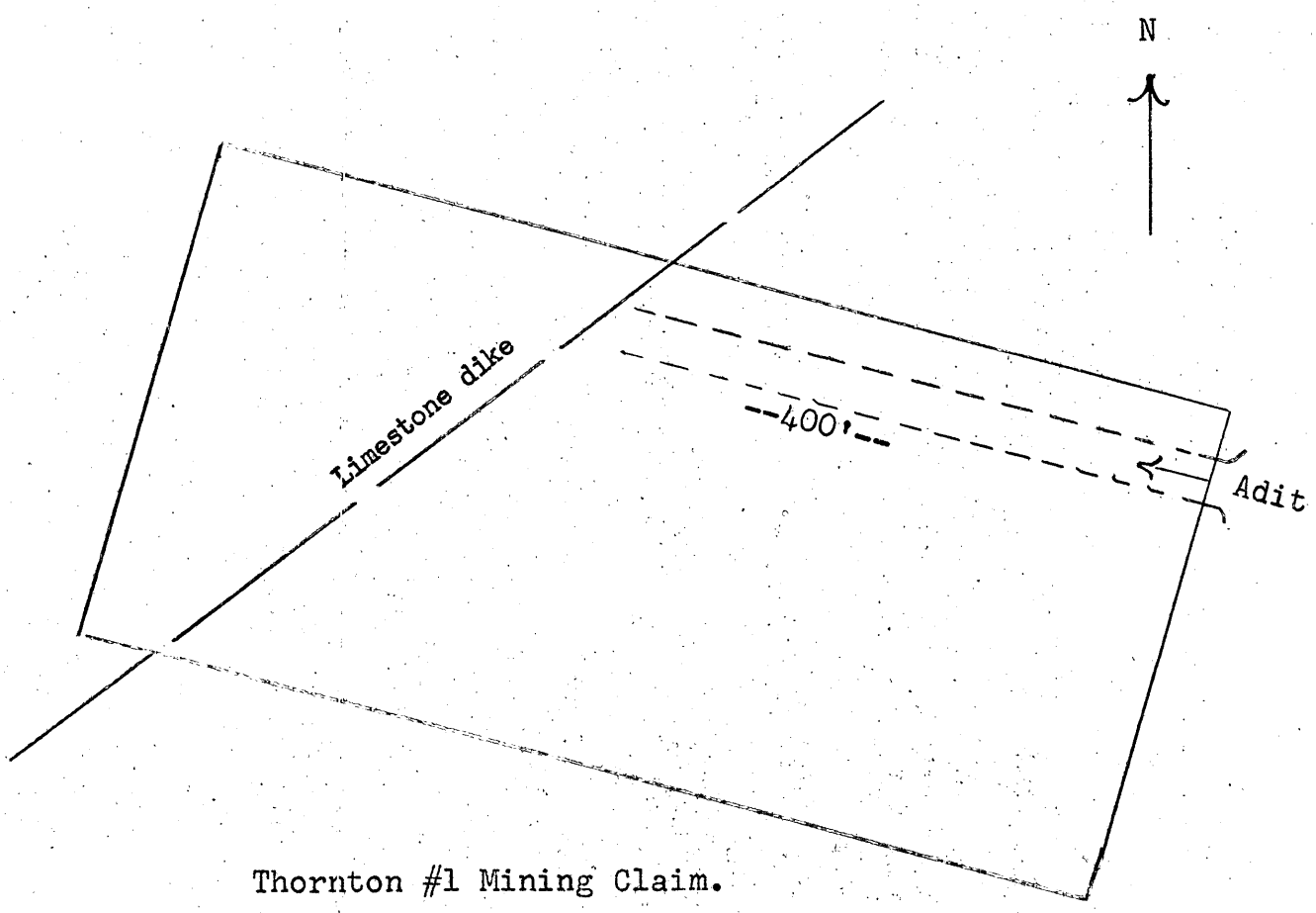
Harold Kirkemo, Acting Member
(Geological Survey)

cc: USBM (2)
Fuller

Lester E. Thornton
Box 203
Baker, Oregon

No. 5(b).

Sketch



Thornton #1 Mining Claim.

Applicant proposes to drift
Along the vein to the limestone dike which cuts across the vein, approximately 400 ft., and then to do approximately 700 ft. of cross cutting at various points in order to determine width of the structure.

DMEA-3017

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1201 North Division Street,
Spokane 2, Washington

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE TO AVOID
PAYMENT OF POSTAGE, $300
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1953

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