DMA Form 1

DEFENSE MINERALS ADMINISTRATION
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DMA Docket No. 3077

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Copies to USGS, USBM. One copy retained in Region

Routing Slip

To:	Code 400, Rm. 3538	Date	6/15/53
To:	Oper Comm.	Date	6-19-53
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400

AUG 1 1 1953

3077

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

Re: Docket No. DMEA 3077 - Tungsten
W. A. Wilmot
Red Ridge claims
Pend Oreille County, Washington

Dear Mr. Weissenborn:

Reference is made to the subject docket and the field examination report by E. A. Magill, Bureau of Mines, and Willard P. Puffett, Geological Survey, on the Red Ridge claims.

This Administration concurred in the recommendations of the field examiners, and of the Field Team, and denied the referenced application for exploration assistance by letter to Mr. Wilmot of July 20, 1953. We call your attention to the following statement made on page 5 of Messrs. Magill and Puffett's report:

> "As the tactite areas are exposed along steep cliff faces, which are nearly normal to the strike of the tactite zone, it is believed a sampling program by the applicant could be outlined in which samples could be cut every five or ten feet along the strike of the zone. If this were done, it would more conclusively prove whether sufficient tungsten is present to constitute ore."

It seems to us that sampling on an interval of five or ten feet can hardly be called prospecting but instead should qualify as part of an exploration program if any such program is warranted.

As in our denial letter, an applicant may be advised that if future prospecting proves the existance of significant mineralization a revised application will be considered.

It is assumed that in this case no such sampling program was recommended to the applicant, but in no case should recommendations outlining a prospecting program, and especially one of such magnitude, be given to any applicant.

Sincerely yours,

SIGNED

Chairman, Operating Committee

APPROVED:

Member, Bureau of Mines

Member, Geological Survey

FARutledge:foc
8-7-53

cc: Docket
Code 400
Adm. Reading File
Operating Comm.
FT. Reg. 2
R. W. Geehan, USBM
D. M. Lemmon, USGS

400

402

JUL 2 0 1953

Denied

Mr. R. C. Wilmot
1615 West 14th Avenue
Spokane, Washington

Re: Docket No. DMA 3377 - Tungsten
R. C. Wilmot
Red Ridge claims
Rand Orcillo County, Washington

Dear Mr. Wilmot:

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 and powellite on the Red Ridge claims, 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 assistance. 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,

FRANK E. JOHNSON
ACTING Administrator

CC: DOCKET
FIELD TEAM, REG. II
ADM. READ. FILE
CODE 400
OPER. COMMITTEE
D. M. LEMON, USGS
R. W. GERMAN, USBM

FARutledge/ls 7/15/53

Memo to Region II on

DMEA 3077

R.C. Wilmot

Red Ridge

Question why field team believes further sampling on 5 to 10 foot intervals by Operator desirable when they only took three samples containing 0.09 - 0.04 - 0.02 % WO_3

Joe Gleason summarized

Ed's memo was written at Gleason's suggestion.

J.G.R.

MEMORANDUM

July 15, 1953

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division

Subject: Denial of exploration project in the amount of $22,826.05
Docket No. DMA 3077 - Tungsten
R. C. Elliot
Red Ridge claims, Pend Oreille County, Washington

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

(1) The applicant proposed to construct a road 3 miles in length from the end of an existing logging road on Sand Creek to the middle and upper of three showings. The remainder of the program was indefinite as it depended upon what was found when the showings were exposed and sampled.

(2) Tungsten occurs at the Red Ridge claims in zones of garnetized rock along the contact between phyllites and granite. The samples taken by the examining field team were very low in tungsten and the scheelite fluoresced "quite yellow," probably being near powellite in composition. Two of the three samples analyzed 0.04 percent WO_3 and the other 0.02 percent WO_3.

(3) Subsequent to the field examination, Mr. Elliot exhibited specimens of scheelite-bearing rock which came from the float in his property area. These specimens contain a very promising amount of fine- to coarse-grained scheelite which fluoresces a much more blue-white color than those samples obtained by the field examiners. Thus there is a good possibility that the immediate area may contain a minable scheelite deposit which as yet has not been discovered.

(4) The examining field team recommends denial of the subject application with further consideration of the area if significant tungsten mineralization is found by additional prospecting.

(5) The Field Team concurs with the recommendations of the examining field team.

(6) The Commodity Divisions of the Geological Survey and the Bureau of Mines concur with the denial of the subject application.

FARutledge/ls
7/15/53

SIGNED

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

cc: Docket
Adm. Reading File
Code 400
Operating Committee

400

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

July 8, 1953

Memorandum

To: DMEA Field Team, Region II

From: Willard P. Puffett, Geologist, U. S. Geological Survey

Subject: Docket No. DMEA-3077 (tungsten), Spectrographic Analysis result of sample taken at Wilmot Red Ridge Claims, Pend Oreille County, Washington

As noted in the field examination report on the subject property, a sample was taken for the purpose of a spectrographic analysis by U. S. Bureau of Mines Laboratory, Albany, Oregon. Results of this analysis arrived subsequent to the transmission of the examination report, and they are now included below to complete the analytical data obtained from samples taken at the Wilmot property.

Aluminum	0.1 to 1.0 percent
Calcium	5.0 to 10.0 percent
Copper	less than 0.001 percent
Magnesium	0.01 to 0.1 percent
Iron	more than 10 percent
Manganese	0.1 to 1.0 percent
Silicon	more than 10 percent
Titanium	0.001 to 0.01 percent

It was originally hoped that in the spectrographic analysis results some indication would be shown as to the molybdenum content of the sample as the fluorescent mineral (scheelite?) fluoresced quite yellow, and it was believed that it was very near the Powellite end of the scheelite-powellite series. Parenthetically, it may be stated that the above results could probably be obtained from a number of types of rocks, but inasmuch as the sample rock was almost entirely garnetized, this analysis may be that of the particular garnet present.

Distribution:
DMEA (Orig. & 3)
USBM (2)
USGS (SRO)
Docket
Puffett

Copy retained 400

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

400

June 30, 1953

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

Re: Docket No. DMEA-3077 (tungsten)
Wilmot Red Ridge Claims
Pend Oreille County, Washington

Dear Mr. Selfridge:

Enclosed please find 4 copies of a field examination report by E. A. Magill, U. S. Bureau of Mines, and Willard P. Puffett, U. S. Geological Survey, on the Wilmot Red Ridge Claims in Pend Oreille County, Washington.

The Wilmot Red Ridge Claims are along a contact between phyllites and granite, in which are found zones of heavily garnetized rock through which scheelite has been disseminated. The field examiners report that samples of this garnetized rock yielded very low tungsten assays, and that the scheelite fluoresced quite yellow, probably being near powellite in composition. The property is now only accessible by hiking, with much rock work being necessary to construct a road to it. Though the property is in a promising geologic environment for the occurrence of scheelite ore, present indications are that it is very low grade, which, coupled with the present inaccessibleness of the tactite zones, are the basis for a recommendation by the field examiners that the application be denied.

Subsequent to the field examination, Mr. Wilmot exhibited specimens of scheelite-bearing rock which came from the float in his property area. These specimens contain a very promising amount of fine- to coarse-grained scheelite which fluoresces a much more blue-white color than those samples obtained by the field examiners. Thus there is a good possibility that the immediate area may contain a minable scheelite deposit which as yet has not been discovered.

The Field Team concurs with the field examiners in that at the present time this application should be denied, but if added promising evidence is submitted by the applicant, the property will merit further consideration for some type of exploration.

Reviewed by
DMEA OPERATING COMMITTEE

7-10-53
(date)

By DMEA Field Team, Region II

A. E. Weissenborn, Executive Officer (USGS)

Thomas E. Howard, Acting Member (USBM)

Enclosure
cc: USBM (2)
Puffett

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration
So. 157 Howard Street
Spokane 4, Washington

June 19, 1953

Memorandum

To: DMEA Field Team, Region II

From: E. A. Magill, Mining Engineer, U. S. Bureau of Mines, and Willard Puffett, Geologist, U. S. Geological Survey

Subject: Docket No. DMEA-3077 (Tungsten), Application for exploration project contract, R. C. Wilmot (Red Ridge claims), Pend Oreille County, Washington

APPLICANT

The applicant is R. C. Wilmot, 1618 West 14th Avenue, Spokane, Washington.

RECOMMENDATIONS

It is recommended that the application of R. C. Wilmot for an exploration loan in the Amount of $22,826.05 be denied. The property is now inaccessible and contains an insufficient percentage of tungsten to be considered at the present time.

EXAMINATION

The examination was made by Willard Puffett, U. S. Geological Survey, and E. A. Magill, U. S. Bureau of Mines on June 17, 1953. Mr. Lyman West, one of the owners, conducted the examining team over the property. Eight hours were spent on the examination, with two hours being actually spent on the exposures, the remaining time being used in hiking to and from the property.

The prospect covered by three lode claims is located in secs. 21 and 22, T. 38 N., R. 43 E., W.M., Pend Oreille County, Washington. The property is about 3 miles airline northeast of Ione.

ACCESSIBILITY

The property is reached from Ione, the nearest town, by 5 miles of road plus about 3 miles of climbing on foot. There is no trail to the property. Due to the underbrush and rugged terrain, it takes about 3 hours of hard climbing to reach the upper outcrop which is 2,000 feet higher in elevation than the road.

Reviewed by
DMEA OPERATING COMMITTEE

7-10-53
(date)

COMPETENCE OF APPLICANT

It is believed that the applicant is competent to carry out an exploration program as he is a mining geologist with experience in the northwestern states.

APPLICANT'S PROPERTY RIGHTS

The property consists of three unpatented lode claims, the Red Ridge, Red Ridge No. 1, and Red Ridge No. 2. The Red Ridge claim is recorded in Book 5, page 82, of the records of the County Auditor at Newport, the county seat. Red Ridge No. 1 and Red Ridge No. 2 had not been recorded at the date of the examination.

The applicant, R. C. Wilmot, hold a 90 percent interest and Lyman and Kermit West hold the remaining 10 percent.

GEOLOGY

The Red Ridge Claims are on the western slope of Snyder Hill, just to the east of Box Canyon, between altitudes of 3,000 and 4,500 feet. As mapped by Park and Cannon 1/, this area is underlain by the

1/ Park, C. F. Jr. and Cannon, R. S., Jr., Geology and Ore Deposits of the Metaline Quadrangle, Washington: U. S. Geological Survey Prof. Paper 202, 1943, Pl. I.

Maitlen Phyllite of Cambrian Age, which has been intruded by granitic rocks of the Kaniksu batholith of Cretaceous (?) age. The main contact between the two types of rocks traverses the northern part of the area in a general east-west direction, whereas the central portion of the area is marked by a narrow angular re-entrant of the metamorphic rocks between two narrow southward extensions of the granitic rocks.

In this area the metamorphic rocks are finely foliated quartzitic schist, light gray to greenish-gray in color. For the most part the schistosity parallels the bedding which strikes slightly west of north and dips steeply to the west. Color bands in the schist, which presumably represent original bedding, range in thickness from one-eighth inch to one inch. The more argillaceous variants of this rock are quite phyllitic, sericite having been developed parallel to the foliation. Locally, the schist has been stained a dark, reddish-brown color, presumably from oxidation of iron minerals.

The granite near the contact is very coarse grained, some grains of feldspars exceeding three-quarters of an inch in cross section. Locally, lenses of the granite are pegmatitic in character. Numerous dikes, aplitic to granitic in character cross the schist. Contacts between these dikes and the enclosing schist are sharp with no apparent baking or other effects of metamorphism being present.

Although Park and Cannon's map shows two narrow extensions of the granite to the south, in more detail there are many more stringers of granite extending into the schist, with dikes of like material connecting between the granite extensions.

A major portion of the loose rock on the hill slope contains brown garnets and epidote, but the applicant had found only three areas in the bedrock in which a zone of garnet-epidote rock could be definitely outlined. The locations of these zones are shown on the accompanying map and are indicated as the lower, middle, and upper showings.

The lower showing, at an altitude of approximately 3410 feet (aneroid) consists of narrow bands of tactite trending normal to both sides of an east-west-trending two-foot thick aplite dike. These bands of tactite, consisting of disseminated garnets and epidote, are in a finely foliated, slightly calcareous schist which strikes nearly N-S, and dips very steeply to the west. From the exposures available for inspection, it is difficult to obtain the exact orientation of the tactite zone but it appears to be striking parallel to the schist and dipping very steeply in the opposite direction. The tactite here is a maximum of three feet wide and may extend for slightly more than 100 feet along strike. No samples of this zone were taken as the applicant stated he was of the opinion that at the present it does not merit consideration on the application.

The middle showing, at an altitude of 4310 feet, is on the steep eastern slope of a relatively shallow and flat-bottomed ravine. Fifty to sixty feet above the bottom of the ravine, the tactite zone is found exposed as sharp bluffs, six to ten feet high. Here the tactite is a massive, nearly completely brown, garnetized rock with only subsidiary epidote and quartz. The zone here parallels the schistosity of the enclosing rock which strikes N. 25° W. and dips 30° S. It is difficult to measure the thickness of this zone, but it is known to be more than 5 feet thick and extends along strike for approximately 200 feet. The applicant is of the opinion that this zone persists down dip to the granite contact, approximately 100 feet to the west. The applicant also states this zone follows a fold that plunges to the south, but this was not verified on the examination.

The upper showing is at an altitude of 4275 feet, and is exposed in a cliff nearly a quarter of a mile to the east of the middle showing. Here a well-garnetized zone up to fifteen feet wide parallels the schistosity of a quartzitic schist. This zone is found in and in back of a nearly vertical cliff face about 150 feet long and a maximum of 40 feet high.

Three chip samples were taken of the upper and middle showings. One sample was taken of the float below the middle showing. When examined with a fluorescent lamp, all samples showed similar amounts of disseminated scheelite or powellite. The fluorescence

was very yellow indicating the mineral was near the powellite end of the series. The chip samples were assayed for WO_3 content and the sample taken of the float is being submitted for spectrographic analysis.

Assay results of the three chip samples were obtained from the Union Assay Office, Inc., Salt Lake City, Utah. Two samples assayed 0.04 percent WO_3, whereas the third sample yielded 0.02 percent WO_3. Because of these low assay results, it is doubtful that any of the exposed tactite could be considered ore.

PAST OPERATION

The tactite exposures were located by the West brothers and Wilmot in 1952. Attention was drawn to the area by the report of finding garnetized rock a number of years ago in this phyllite- granite contact area which has favorable geologic relationships for possible ore deposits.

There are small cuts on the Red Ridge and Red Ridge No. 1 claims exposing the tactite. On the Red Ridge No. 2 claim the tactite is exposed in a cliff; no development work has been done on this claim.

There has been no production from the property.

MANPOWER AND SUPPLIES

Manpower and supplies are available in the area.

Water for diamond drilling would present a problem in the latter part of the summer. It would have to be piped more than a mile to the middle exposure (Red Ridge No. 1), more than one-half mile to the Upper exposure (Red Ridge No. 2) and much more than a mile to the lower exposure (Red Ridge).

APPLICANT'S PROPOSAL

The applicant proposes to construct a road 3 miles in length from the end of an existing logging road on Sand Creek to the middle and upper exposures. The proposed work on the exposures is as follows:

Lower exposure - no work proposed.

Middle exposure - exploration plan indefinite. Cleaning of slide rock from the outcrop and either drift, sink on, or drill the tactite.

Upper exposure - bench on tactite in cliff, followed by 100 feet of sinking or 1500 feet of diamond drilling in three holes to test downward extension.

Total cost of the exploration program to be $22,826.05.

DISCUSSION

The area covered by the applicant's claims contains a geologically interesting tactite zone through which some fine-grained scheelite or powellite is disseminated. It is the applicant's contention that this area merits exploration as he has obtained assay results from sampling which indicate these tactite areas may yield a few hundred tons of ore containing from 0.5 to 1.0 percent WO_3. The applicant believes further that, if he can obtain assistance to build a road to the property, he can mine this rock and ship it to the Emerald Mine mill, in British Columbia, and realize a profit. It is his information that the Emerald Mine mill will not accept ore containing less than 1.0 percent WO_3.

Assay results of three samples, taken by the examining team and believed by them to be representative of the deposit, yielded very low percentages of tungsten. As the tactite areas are exposed along steep cliff faces, which are nearly normal to the strike of the tactite zone, it is believed a sampling program by the applicant could be outlined in which samples could be cut every five or ten feet along the strike of the zone. If this were done, it would more conclusively prove whether sufficient tungsten is present to constitute ore.

Inasmuch as the property is now very inaccessible, much rock work being necessary to construct a road to it, and the indicated percentage of tungsten is very low, it is believed that at the present time the application for exploration assistance should be denied. The area is geologically favorable for the occurrence of tungsten-containing ore and should the applicant submit evidence that he has found better grade than that now indicated, further consideration of his application is recommended.

Attachment

Distribution:
- DMEA (4)
- USBM (2)
- USGS (SRO)
- Docket
- Puffett

14. Exhibit E (question 23-c)*

a) Is it applicable?_____

b) Sufficient data?_____

c) Reasonable?_____

d) Field check needed?_____

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

(All exploration must be completed within two years)

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

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing question?_____

Reviewed by:_____

Date_____

JUN 22 1953

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

Re: Docket No. DMEA 3077 - Tungsten
R. C. Wilmot
Red Ridge Claims
Pend Oreille County, Washington

Dear Mr. Weissenborn:

This will acknowledge receipt of the subject docket and your letter of June 9, 1953, which states that a field examination is being scheduled.

We will, therefore, hold this application in abeyance until the report and recommendations by the Field Team are received.

Under separate cover we are sending you two copies of a memorandum by D. M. Lemmon, Geological Survey, on the Field Team's report on the Little Noisy mine, Docket No. DMEA-2894. This property is in the same general area and may be similar in occurrence to the above referenced property.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

APPROVED:

J. H. Hedges
Member, Bureau of Mines

A. R. Kinkel, Jr.
Member, Geological Survey

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

400

JUN 22 1953

Mr. R. C. Wilmot
1618 West 11th Avenue
Spokane, Washington

Re: Docket No. DMEA 3077 - Tungsten
R. C. Wilmot
Red Ridge Claims
Pend Oreille County, Washington

Dear Mr. Wilmot:

Reference is made to the above docketed application for exploration assistance which has been reviewed by the Iron and Ferro-Alloys Division of the Defense Minerals Exploration Administration, and 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 at an early date 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

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

[redacted]

402

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

June 5, 1953

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

3077

Re: R. C. Wilmot application (Tungsten)
Red Ridge Claims
Pend Oreille County, Washington

Dear Mr. Selfridge:

Enclosed are three copies of an application submitted by R. C. Wilmot, 1618 West 11th Avenue, Spokane, Washington, for government assistance in an exploration project for scheelite-bearing rock in a tactite area along a phyllite-granite contact in Pend Oreille County, Washington.

As the application states, this property is a raw prospect on which a small amount of surface prospecting has been done. This work has succeeded in roughly delineating two showings of tactite containing some scheelite. The meager assay data included in the application indicates the probable WO_3 content of the mineralized zones is less than 1 percent.

Proposed work includes an access road, long-hole drilling, and, if feasible, 150 feet of shaft sinking and 200 feet of drifting at an estimated cost of $22,826.05.

This prospect is 6 miles west of the Little Noisy Mine, Pend Oreille County, Washington (Docket No. DMEA 284), and occurs in the same rock formation. Further exploration for tungsten in this area would be stimulated if promising quantities of scheelite are found at the Red Ridge claims and the proposed exploration at the Little Noisy Mine proves successful.

A field examination of the Red Ridge claims is being scheduled to determine the feasibility of the applicant's proposal.

Sincerely yours,

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

Enclosure
cc: USBM (2)
Puffett

RECEIVED
BUREAU OF MINES
JUN 2 1953
SPOKANE, WASH.

1618 West 11th Avenue
Spokane, Washington

June 2, 1953

U. S. Bureau of Mines
N. 1205 Division
Spokane, Washington

Dear Sirs:

Enclosed is an application for a D.M.E.A. loan on the Red Ridge Mine.

It is a new discovery; one claim has been recorded, one claim has been staked but not recorded and one claim is to be staked this next week.

The minority owners' consent to lien will be filed this next week. Meanwhile it is hoped preliminary consideration can take place.

Yours sincerely,

R C Wilmot

R. C. Wilmot, M.E.

rcw/fw
Encs. (4) - Applications, etc.

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-3077
Metal or Mineral
Date Received 6/15/53
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:

Mr. R. C. Wilmot
1610 West 11th Avenue
Spokane, Washington

(*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

Red Ridge M. C. Book 5 page 82 Newport Pend Oreille Co
Red Ridge No. 1, M. C. located
Red Ridge No. 2, M. C.

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

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

Own 90%. 10% owned by Lyman and Kermit West

(*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 None

(*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 6 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)?

(*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 June 2, 1953

R E Wilmot
(Applicant)

By

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

DMEA APplication

RED RIDGE MINE

4-a This is a raw prospect. Only surface prospecting and location work has been done.

4-b No past production. Ore reserves are indicated by geology not proved.

<u>Lower Claim</u>

3 shoots--total length, 55', estimated depth, 50' width, 3', 50% ore

Total tons--400

Values spotty--estimated 1%

<u>Middle Claim</u>

90' high, 4' wide by an estimated 200 ' long = 7200 tons

Values .5% (average 4 samples; this is not ore)

Speculative 25 to 50' high, 5' thick by an estimated 200' long = 2500 tons. Estimated value 1%

<u>Upper Claim</u>

Benching	30' x 3' x 20'	
	50% Ore	= 90 tons
	30' x 3' x 100'	
	50% Ore	= 450 tons
		540 tons

Value 1% or better

Some additional ore should be found

Total -- Possible Ore

	940 tons at 1%
	7200 tons at .5%
Speculative	2500 tons at 1%

4-c The deposit is in tactite following along certain beds in the Maitlen Phyllite near its contacts with a granitic stock.

The country rock is intensely folded and has probably

been deformed at least twice. The axis of the folds is roughly north south with a south plunge. Crossing the folds is a series of nearly vertical east striking fractures. Granite is intruded as dykes along these fractures as well as in the north south direction.

Tactite forms in the phyllite near the granite contacts especially where there are reentrant angles. Certain green phyllites located under a red shist have been preferrentially altered by garnet, epidote and later quartz.

Sulfide mineralization is light, although marcasite and pyrite are fairly common and stibnite was encountered in one place south of the lower claim. The ore seems to be connected with N55°E fractures that may be filled with quartz seams or aplite dykelets.

These structures tend to result in ore shoots elongated in the vertical direction but rather short horizontally. Both the upper and lower showing conform to this pattern but the middle showing seems to be different. The tactite is thicker and denser than elsewhere. Also, the mineralization is disseminated and although low grade is fairly uniform. It is believed that this shoot gives sufficient promise to warrant expectation of a small mine.

The lower showing has two tactite beds. (They may be the same bed repeated.) Short shoots show along the strike. The values are very spotty--some specimens would go 5-10%. Crystals and streaks 1/2" wide are found. On the other hand, there appears to be less disseminated value and more open spaces with nothing. Neither great depth nor great quantity is to be expected north of the east striking granite dyke. But the showings to the south of the dyke give some promise of ore in depth. This is especially true of the triangular showing next to the aplite dyke. This could be prospected by drill or by adit. An adit site giving about 200' of backs is available.

The upper showing is a bed tactized for about 300'. The bed is from 3 to 4' wide. Near the south end of the tactite it is crossed by a 1" quartz stringer trending

N55°E. In the vicinity of this stringer the tactite is at least 8' wide. Some mineralization closely follows the stringer.

Other mineralization is splotchy, although it is fine grained and disseminated. Some 1% ore can be mined here. Along the strike northward the mineralization weakens and then picks up again for a little way.

The entire zone needs sampling as estimation may be low here as it has been on the middle showing.

This entire exposure is on or near a 20' cliff face and prospecting by benching would be very cheap. There is almost certainly a shoot of ore near the junction of the tactite and the quartz stringer. Perhaps 50% of the mined rock could be sorted and shipped as 1% or better ore.

The benching would show if a fairly constant tonnage per vertical foot could be counted on. Below the bench development should be by a winze stope, although good drill sites are available and so is water.

Because of its importance, the middle showing is described in detail. The bedded tactite follows a S10°E fold that probably plunges south at about 30°. At the top of the fold, forming under a red shist, the tactite is 6' thick. As it extends down the west flank towards the granite contact the tactite widens to 10' at the deepest place it can be seen.

The light shows a rather uniform mineralization in the top half of the tactite but the lower half is blank or very lightly mineralized. Two cut samples were taken--one 3' wide 90' up the hill assayed 0.65% and one 4' wide 70' up the hill assayed 0.3%. Two other samples from last fall were run this spring--one 2' wide assayed 0.4% and one of the better grade float without waste ran 0.7%. The values in this showing were underestimated when it was found last fall.

As the tactite goes down it approaches the granite as

shown in the sketch. The outcrop of the intrusive can be traced to the south for about 200' and may extend much further as there are granite boulders along the gulch for a thousand feet or more.

The geology of the Emerald mine is somewhat similar. There tactite beds assaying .3% to .4% change downward near the granite contact to large orebodies assaying 1% or better. It is a reasonable geological prospect that the same conditions are repeated on the Red Ridge. If so, a body of 1% ore should be found where the tactite intersects the granite.

4-d The mine is about 15 miles from Metaline Falls over the Sullivan Lake road. The lower showing is about six miles from Ione. Both towns are railpoints.

The principal lack of this property is an access road. The only practical grade to the middle and upper showings is to come in over the Forest Service road to the head of Sand Creek, thence south and west around the hill until the showings are located. This will be about three miles long and will require two bridges.

The lower showing can be reached by a road about one mile long from the end of a logging road.

4-e There is sufficient water on the property for any drilling purposes. There is a spring near the upper showing. If this is not sufficient, water can be taken from Exposure Creek. There is also a lake near the middle showing at this time of year. Metaline Falls and to a lesser extent Ione are mining towns. Equipment and manpower can be supplied from them. Spokane is the main supply point.

5-b Plan of Operations:

The first essential is to put the road in. The property is in rough country and the only way for a cat to get in is to build its own road.

The lower showing is too erratic to be considered at this time.

The upper showing warrants benching to determine if the ore goes down. Assuming this is shown, sinking for 100 feet should follow. Alternately drilling 1500 feet of hole in three fans is possible. There are good sites and water is available. But this course is not recommended because the visible tonnage does not warrant the added cost of drilling. At the very least benching should be done.

The middle showing justifies considerable work. Not enough is known to lay down a hard and fast method. The aim should be to cut the tactite near the granite contact and if possible drift on it. The first step is to clear the slide rock from the outcrop on the hillside and if possible from the outcrop in the gulch. If that can be done an adit could be run from the north end of the gulch deep enough to intersect the tactite. If the contact can not be located with certainty it would be better to sink or drill.

A precise method will be submitted when the position of the tactite is determined.

5-d Applicant is a mining geologist with experience in development projects.

6-a Estimate of Costs:

Independent contracts are to be let for the tractor at $100 per day for a D-6 Cat and driver. The rest is covered in the cost estimate.

6-b Supervision is to be furnished by applicant at an estimated half-time cost of $10.00 per day and expenses of $1.00.

6- RED RIDGE ESTIMATED COSTS

Cost for 2 men and compressor for 1 shift

Wages		Machinery Rental	
	$ 14.71	125 cu. ft. Compressor	$140.00/Mo.
	14.71	200' of Hose	24.00/Mo.
Ins. 10%	2.94	Drill	35.00
	$ 32.36	Jack leg	20.00
		Car	15.00
		25 days	234.00
			9.60
		Supplies	
		Set of Steel . . .	48.80
		Estimated life 14 days	3.50/day
		Gas at 12 gals/shift	3.60
		Powder/shift at 18.60/ 100#	14.00
		Rail 8#	1.40
		Pipe 50#	1.50

SUMMARY:

Total wages	$32.36
Equipment	9.60
Supplies	24.00
Incidentals	4.04
Supervision	11.00
	$81.00/shift

Drifting at 3' per shift = $27.00/ft

Sinking at 1-2/5' per shift = $57.85/ft

Prices exclusive of timber

Drift timber equals $13.00 per set or $2.60 per ft. Shaft set includeing the hangers, etc. equals $23.00 per set or $4.60 per ft.

Timber price $70.00 per 1000 bd. ft.

Additional expense for shaft:

Hoist Gasoline 2 drums (rental)	$ 120.00
Bucket (rental)	35.00
25 days	155.00
Total rental	6.20/day
Gas	2.00
Labor	14.71
Timber	4.60
Incidentals	.49
	28.00/shift

or $20.00/ft.

Capital Expenses not Allowed for in Above Estimates:

Extra Pipe at 50¢ ft.	$100.00
Extra Rail at $140 ton	140.00
5/8" wire rope for hoist at 25¢ ft	50.00
Tools, blacksmith, pipecutter, threader, wrenches	600.00
Sorting table	210.00
	$1100.00

Pick-up car (rental) $25.00/wk plus 3¢/mile, plus gas & oil Estimated at 3¢/mile Total $51.60 per week for 23 weeks	1186.80

Road Costs:

3 miles	
D-6 Cat and driver 25 days contract at $100 per day	2500.00
Swamper 25 days at $14.71	367.50
Insurance	36.75
2 bridges, iron pipe at $500/bridge	1000.00
	$3904.25

Cost of Work Proposed:

$81/day for drifting at $29.60/ft or $27.00 without timber
$108.50/day for sinking at $77.85/ft or $78.00

SUMMARY OF COSTS:

Road three miles	$ 3904.25
Benching upper showing 16 days at $80/day	1280.00
Cat work exposure of the middle outcrop 10 days at $117/per day	1170.00
Longhold drilling to locate tactite 5 days at $65/day	325.00
150 feet of timbered drift at $29.60/ft	4440.00
200 feet of drift in hard rock at $27.00/ft	5400.00
	$16529.35
Equipment cash minimum	1100.00
Car Rental	1186.80
Contingencies	4000.00
	$6286.80
TOTAL	$22326.05

FILE COPY
SURNAME:

400

Rutledge
Martin
Gibson
Bellendorf
Matthews

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

AUG 11 1953

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

Re: Docket No. DMEA 3077 - Tungsten
R. C. Wilmot
Red Ridge claims
Pend Oreille County, Washington

Dear Mr. Weissenborn:

Reference is made to the subject docket and the field examination report by E. A. Magill, Bureau of Mines, and Willard P. Puffett, Geological Survey, on the Red Ridge claims.

This Administration concurred in the recommendations of the field examiners, and of the Field Team, and denied the referenced application for exploration assistance by letter to Mr. Wilmot of July 20, 1953. We call your attention to the following statement made on page 5 of Messrs. Magill and Puffett's report:

> "As the tactite areas are exposed along steep cliff faces, which are nearly normal to the strike of the tactite zone, it is believed a sampling program by the applicant could be outlined in which samples could be cut every five or ten feet along the strike of the zone. If this were done, it would more conclusively prove whether sufficient tungsten is present to constitute ore."

It seems to us that sampling on an interval of five or ten feet can hardly be called prospecting but instead should qualify as part of an exploration program if any such program is warranted.

As in our denial letter, an applicant may be advised that if future prospecting proves the existence of significant mineralization a revised application will be considered.

R.C.G.
8-11-53

It is assumed that in this case no such sampling program was recommended to the applicant, but in no case should recommendations outlining a prospecting program, and especially one of such magnitude, be given to any applicant.

Sincerely yours,

SIGNED

Chairman, Operating Committee

APPROVED:

Member, Bureau of Mines

Member, Geological Survey

FARutledge:foc
8-7-53

cc: Docket
Code 400
Adm. Reading File
Operating Comm.
FT. Reg. 2
R. W. Geehan, USBM
D. M. Lemmon, USGS

400

pc

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

MEMORANDUM

July 15, 1953

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division

Subject: Denial of exploration project in the amount of $22,826.05
Docket No. DMEA 3077 - Tungsten
R. C. Wilmot
Red Ridge claims, Pend Oreille County, Washington

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

(1) The applicant proposed to construct a road 3 miles in length from the end of an existing logging road on Sand Creek to the middle and upper of three showings. The remainder of the program was indefinite as it depended upon what was found when the showings were exposed and sampled.

(2) Tungsten occurs at the Red Ridge claims in zones of garnetized rock along the contact between phyllites and granite. The samples taken by the examining field team were very low in tungsten and the scheelite fluoresced "quite yellow," probably being near powellite in composition. Two of the three samples analyzed 0.04 percent WO_3 and the other 0.02 percent WO_3.

(3) Subsequent to the field examination, Mr. Wilmot exhibited specimens of scheelite-bearing rock which came from the float in his property area. These specimens contain a very promising amount of fine- to coarse-grained scheelite which fluoresces a much more blue-white color than those samples obtained by the field examiners. Thus there is a good possibility that the immediate area may contain a minable scheelite deposit which as yet has not been discovered.

(4) The examining field team recommends denial of the subject application with further consideration of the area if significant tungsten mineralization is found by additional prospecting.

(5) The Field Team concurs with the recommendations of the examining field team.

(6) The Commodity Divisions of the Geological Survey and the Bureau of Mines concur with the denial of the subject application.

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

400

FILE COPY
SURNAME:

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

Rutledge
Martin
Geehan
Lemmon
Knebel
Hedges
Lefebvre

Mr. R. C. Wilmot
1618 West 11th Avenue
Spokane, Washington

JUL 20 1953

Re: Docket No. DMEA 3077 - Tungsten
R. C. Wilmot
Red Ridge claims
Pend Oreille County, Washington

Dear Mr. Wilmot:

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 and powellite on the Red Ridge claims, 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 assistance. 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,

FRANK E. JOHNSON (B.D.H.)
ACTING Administrator

MDH
7-20-53

CC: DOCKET
FIELD TEAM, REG. II
ADM. READ. FILE
CODE 400
OPER. COMMITTEE
D. M. LEMMON, USGS
R. W. GEEHAN, USBM

FARutledge/ls 7/15/53

400

FILE COPY
SURNAME:

Rutledge
Martin
Gehow
Lemmon
Jeffrey

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

July 15, 1953

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division

Subject: Denial of exploration project in the amount of $22,826.05
Docket No. DMEA 3077 - Tungsten
R. C. Wilmot
Red Ridge claims, Pend Oreille County, Washington

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

(1) The applicant proposed to construct a road 3 miles in length from the end of an existing logging road on Sand Creek to the middle and upper of three showings. The remainder of the program was indefinite as it depended upon what was found when the showings were exposed and sampled.

(2) Tungsten occurs at the Red Ridge claims in zones of garnetized rock along the contact between phyllites and granite. The samples taken by the examining field team were very low in tungsten and the scheelite fluoresced "quite yellow," probably being near powellite in composition. Two of the three samples analyzed 0.04 percent WO_3 and the other 0.02 percent WO_3.

(3) Subsequent to the field examination, Mr. Wilmot exhibited specimens of scheelite-bearing rock which came from the float in his property area. These specimens contain a very promising amount of fine- to coarse-grained scheelite which fluoresces a much more blue-white color than those samples obtained by the field examiners. Thus there is a good possibility that the immediate area may contain a minable scheelite deposit which as yet has not been discovered.

(4) The examining field team recommends denial of the subject application with further consideration of the area if significant tungsten mineralization is found by additional prospecting.

(5) The Field Team concurs with the recommendations of the examining field team.

(6) The Commodity Divisions of the Geological Survey and the Bureau of Mines concur with the denial of the subject application.

FARutledge/ls
7/15/53

cc: Docket
Adm. Reading File
Code 400
Operating Committee

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

MDL 7-20-53

Docket

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

RECEIVED
JUL 13 1953

DMEA

July 8, 1953

Memorandum

To: DMEA Field Team, Region II

From: Willard P. Puffett, Geologist, U. S. Geological Survey

Subject: Docket No. DMEA-3077 (tungsten), Spectrographic Analysis result of sample taken at Wilmot Red Ridge Claims, Pend Oreille County, Washington

As noted in the field examination report on the subject property, a sample was taken for the purpose of a spectrographic analysis by U. S. Bureau of Mines Laboratory, Albany, Oregon. Results of this analysis arrived subsequent to the transmission of the examination report, and they are now included below to complete the analytical data obtained from samples taken at the Wilmot property.

Aluminum	0.1 to 1.0 percent
Calcium	5.0 to 10.0 percent
Copper	less than 0.001 percent
Magnesium	0.01 to 0.1 percent
Iron	more than 10 percent
Manganese	0.1 to 1.0 percent
Silicon	more than 10 percent
Titanium	0.001 to 0.01 percent

It was originally hoped that in the spectrographic analysis results some indication would be shown as to the molybdenum content of the sample as the fluorescent mineral (scheelite?) fluoresced quite yellow, and it was believed that it was very near the Powellite end of the scheelite-powellite series. Parenthetically, it may be stated that the above results could probably be obtained from a number of types of rocks, but inasmuch as the sample rock was almost entirely garnetized, this analysis may be that of the particular garnet present.

Distribution:
DMEA (Orig. & 3)
USBM (2)
USGS (SRO)
Docket
Puffett

F.T. report was rec'd 7/7

Copy retained 400

Docket

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

June 30, 1953

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

Re: Docket No. DMEA-3077 (tungsten)
Wilmot Red Ridge Claims
Pend Oreille County, Washington

Dear Mr. Selfridge:

Enclosed please find 4 copies of a field examination report by E. A. Magill, U. S. Bureau of Mines, and Willard P. Puffett, U. S. Geological Survey, on the Wilmot Red Ridge Claims in Pend Oreille County, Washington.

The Wilmot Red Ridge Claims are along a contact between phyllites and granite, in which are found zones of heavily garnetized rock through which scheelite has been disseminated. The field examiners report that samples of this garnetized rock yielded very low tungsten assays, and that the scheelite fluoresced quite yellow, probably being near powellite in composition. The property is now only accessible by hiking, with much rock work being necessary to construct a road to it. Though the property is in a promising geologic environment for the occurrence of scheelite ore, present indications are that it is very low grade, which, coupled with the present inaccessibleness of the tactite zones, are the basis for a recommendation by the field examiners that the application be denied.

Subsequent to the field examination, Mr. Wilmot exhibited specimens of scheelite-bearing rock which came from the float in his property area. These specimens contain a very promising amount of fine- to coarse-grained scheelite which fluoresces a much more blue-white color than those samples obtained by the field examiners. Thus there is a good possibility that the immediate area may contain a minable scheelite deposit which as yet has not been discovered.

The Field Team concurs with the field examiners in that at the present time this application should be denied, but if added promising evidence is submitted by the applicant, the property will merit further consideration for some type of exploration.

Cleared OC
7-10-53

By DMEA Field Team, Region II

A. E. Weissenborn

A. E. Weissenborn, Executive Officer (USGS)

Thomas E. Howard

Thomas E. Howard, Acting Member (USBM)

Enclosure
cc: USBM (2)
Puffett

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration
So. 157 Howard Street
Spokane 4, Washington

June 19, 1953

Memorandum

To: DMEA Field Team, Region II

From: E. A. Magill, Mining Engineer, U. S. Bureau of Mines, and Willard Puffett, Geologist, U. S. Geological Survey

Subject: Docket No. DMEA-3077 (Tungsten), Application for exploration project contract, R. C. Wilmot (Red Ridge claims), Pend Oreille County, Washington

APPLICANT

The applicant is R. C. Wilmot, 1618 West 1 th Avenue, Spokane, Washington.

RECOMMENDATIONS

It is recommended that the application of R. C. Wilmot for an exploration loan in the Amount of $22,826.05 be denied. The property is now inaccessible and contains an insufficient percentage of tungsten to be considered at the present time.

EXAMINATION

The examination was made by Willard Puffett, U. S. Geological Survey, and E. A. Magill, U. S. Bureau of Mines on June 17, 1953. Mr. Lyman West, one of the owners, conducted the examining team over the property. Eight hours were spent on the examination, with two hours being actually spent on the exposures, the remaining time being used in hiking to and from the property.

The prospect covered by three lode claims is located in secs. 21 and 22, T. 38 N., R. 43 E., W.M., Pend Oreille County, Washington. The property is about 3 miles airline northeast of Ione.

ACCESSIBILITY

The property is reached from Ione, the nearest town, by 5 miles of road plus about 3 miles of climbing on foot. There is no trail to the property. Due to the underbrush and rugged terrain, it takes about 3 hours of hard climbing to reach the upper outcrop which is 2,000 feet higher in elevation than the road.

COMPETENCE OF APPLICANT

It is believed that the applicant is competent to carry out an exploration program as he is a mining geologist with experience in the northwestern states.

APPLICANT'S PROPERTY RIGHTS

The property consists of three unpatented lode claims, the Red Ridge, Red Ridge No. 1, and Red Ridge No. 2. The Red Ridge claim is recorded in Book 5, page 82, of the records of the County Auditor at Newport, the county seat. Red Ridge No. 1 and Red Ridge No. 2 had not been recorded at the date of the examination.

The applicant, R. C. Wilmot, hold a 90 percent interest and Lyman and Kermit West hold the remaining 10 percent.

GEOLOGY

The Red Ridge Claims are on the western slope of Snyder Hill, just to the east of Box Canyon, between altitudes of 3,000 and 4,500 feet. As mapped by Park and Cannon 1/, this area is underlain by the

1/ Park, C. F. Jr. and Cannon, R. S., Jr., Geology and Ore Deposits of the Metaline Quadrangle, Washington: U. S. Geological Survey Prof. Paper 202, 1943, Pl. I.

Maitlen Phyllite of Cambrian Age, which has been intruded by granitic rocks of the Kaniksu batholith of Cretaceous (?) age. The main contact between the two types of rocks traverses the northern part of the area in a general east-west direction, whereas the central portion of the area is marked by a narrow angular re-entrant of the metamorphic rocks between two narrow southward extensions of the granitic rocks.

In this area the metamorphic rocks are finely foliated quartzitic schist, light gray to greenish-gray in color. For the most part the schistosity parallels the bedding which strikes slightly west of north and dips steeply to the west. Color bands in the schist, which presumably represent original bedding, range in thickness from one-eighth inch to one inch. The more argillaceous variants of this rock are quite phyllitic, sericite having been developed parallel to the foliation. Locally, the schist has been stained a dark, reddish-brown color, presumably from oxidation of iron minerals.

The granite near the contact is very coarse grained, some grains of feldspars exceeding three-quarters of an inch in cross section. Locally, lenses of the granite are pegmatitic in character. Numerous dikes, aplitic to granitic in character cross the schist. Contacts between these dikes and the enclosing schist are sharp with no apparent baking or other effects of metamorphism being present.

Although Park and Cannon's map shows two narrow extensions of the granite to the south, in more detail there are many more stringers of granite extending into the schist, with dikes of like material connecting between the granite extensions.

A major portion of the loose rock on the hill slope contains brown garnets and epidote, but the applicant had found only three areas in the bedrock in which a zone of garnet-epidote rock could be definitely outlined. The locations of these zones are shown on the accompanying map and are indicated as the lower, middle, and upper showings.

The lower showing, at an altitude of approximately 3410 feet (aneroid) consists of narrow bands of tactite trending normal to both sides of an east-west-trending two-foot thick aplite dike. These bands of tactite, consisting of disseminated garnets and epidote, are in a finely foliated, slightly calcareous schist which strikes nearly N-S, and dips very steeply to the west. From the exposures available for inspection, it is difficult to obtain the exact orientation of the tactite zone but it appears to be striking parallel to the schist and dipping very steeply in the opposite direction. The tactite here is a maximum of three feet wide and may extend for slightly more than 100 feet along strike. No samples of this zone were taken as the applicant stated he was of the opinion that at the present it does not merit consideration on the application.

The middle showing, at an altitude of 4310 feet, is on the steep eastern slope of a relatively shallow and flat-bottomed ravine. Fifty to sixty feet above the bottom of the ravine, the tactite zone is found exposed as sharp bluffs, six to ten feet high. Here the tactite is a massive, nearly completely brown, garnetized rock with only subsidiary epidote and quartz. The zone here parallels the schistosity of the enclosing rock which strikes N. 25° W. and dips 30° S. It is difficult to measure the thickness of this zone, but it is known to be more than 5 feet thick and extends along strike for approximately 200 feet. The applicant is of the opinion that this zone persists down dip to the granite contact, approximately 100 feet to the west. The applicant also states this zone follows a fold that plunges to the south, but this was not verified on the examination.

The upper showing is at an altitude of 4275 feet, and is exposed in a cliff nearly a quarter of a mile to the east of the middle showing. Here a well-garnetized zone up to fifteen feet wide parallels the schistosity of a quartzitic schist. This zone is found in and in back of a nearly vertical cliff face about 150 feet long and a maximum of 40 feet high.

Three chip samples were taken of the upper and middle showings. One sample was taken of the float below the middle showing. When examined with a fluorescent lamp, all samples showed similar amounts of disseminated scheelite or powellite. The fluorescence

was very yellow indicating the mineral was near the powellite end of the series. The chip samples were assayed for WO_3 content and the sample taken of the float is being submitted for spectrographic analysis.

Assay results of the three chip samples were obtained from the Union Assay Office, Inc., Salt Lake City, Utah. Two samples assayed 0.04 percent WO_3, whereas the third sample yielded 0.02 percent WO_3. Because of these low assay results, it is doubtful that any of the exposed tactite could be considered ore.

PAST OPERATION

The tactite exposures were located by the West brothers and Wilmot in 1952. Attention was drawn to the area by the report of finding garnetized rock a number of years ago in this phyllite- granite contact area which has favorable geologic relationships for possible ore deposits.

There are small cuts on the Red Ridge and Red Ridge No. 1 claims exposing the tactite. On the Red Ridge No. 2 claim the tactite is exposed in a cliff; no development work has been done on this claim.

There has been no production from the property.

MANPOWER AND SUPPLIES

Manpower and supplies are available in the area.

Water for diamond drilling would present a problem in the latter part of the summer. It would have to be piped more than a mile to the middle exposure (Red Ridge No. 1), more than one-half mile to the Upper exposure (Red Ridge No. 2) and much more than a mile to the lower exposure (Red Ridge).

APPLICANT'S PROPOSAL

The applicant proposes to construct a road 3 miles in length from the end of an existing logging road on Sand Creek to the middle and upper exposures. The proposed work on the exposures is as follows:

Lower exposure - no work proposed.

Middle exposure - exploration plan indefinite. Cleaning of slide rock from the outcrop and either drift, sink on, or drill the tactite.

Upper exposure - bench on tactite in cliff, followed by 100 feet of sinking or 1500 feet of diamond drilling in three holes to test downward extension.

Total cost of the exploration program to be $22,826.05.

DISCUSSION

The area covered by the applicant's claims contains a geologically interesting tactite zone through which some fine-grained scheelite or powellite is disseminated. It is the applicant's contention that this area merits exploration as he has obtained assay results from sampling which indicate these tactite areas may yield a few hundred tons of ore containing from 0.5 to 1.0 percent WO_3. The applicant believes further that, if he can obtain assistance to build a road to the property, he can mine this rock and ship it to the Emerald Mine mill, in British Columbia, and realize a profit. It is his information that the Emerald Mine mill will not accept ore containing less than 1.0 percent WO_3.

Assay results of three samples, taken by the examining team and believed by them to be representative of the deposit, yielded very low percentages of tungsten. As the tactite areas are exposed along steep cliff faces, which are nearly normal to the strike of the tactite zone, it is believed a sampling program by the applicant could be outlined in which samples could be cut every five or ten feet along the strike of the zone. If this were done, it would more conclusively prove whether sufficient tungsten is present to constitute ore. why not FT?

Inasmuch as the property is now very inaccessible, much rock work being necessary to construct a road to it, and the indicated percentage of tungsten is very low, it is believed that at the present time the application for exploration assistance should be denied. The area is geologically favorable for the occurrence of tungsten-containing ore and should the applicant submit evidence that he has found better grade than that now indicated, further consideration of his application is recommended.

Attachment

Distribution:
- DMEA (4)
- USBM (2)
- USGS (SRO)
- Docket
- Puffett

FILE COPY
SURNAME:

400 cc

Rutledge
Hughes
Selfridge
Johnson

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

JUN 22 1953

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

Re: Docket No. DMEA 3077 - Tungsten
R. C. Wilmot
Red Ridge Claims
Pend Oreille County, Washington

Dear Mr. Weissenborn:

This will acknowledge receipt of the subject docket and your letter of June 9, 1953, which states that a field examination is being scheduled.

We will, therefore, hold this application in abeyance until the report and recommendations by the Field Team are received.

Under separate cover we are sending you two copies of a memorandum by D. M. Lemmon, Geological Survey, on the Field Team's report on the Little Noisy mine, Docket No. DMEA-2894. This property is in the same general area and may be similar in occurrence to the above referenced property.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

APPROVED:

J. H. Hedges

Member, Bureau of Mines

R. Kinkel, Jr.

Member, Geological Survey

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

FILE COPY
SURNAME:

400

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

JUN 22 1953

Rutledge
Hartwig
Sellwood
Jeffrey

Mr. R. C. Wilmot
1618 West 11th Avenue
Spokane, Washington

Re: Docket No. DMEA 3077 - Tungsten
R. C. Wilmot
Red Ridge Claims
Pend Oreille County, Washington

Dear Mr. Wilmot:

Reference is made to the above docketed application for exploration assistance which has been reviewed by the Iron and Ferro-Alloys Division of the Defense Minerals Exploration Administration, and 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 at an early date 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 (for)

Administrator

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

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

June 15, 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 -3077, Wilmot, R.C.

ROBERT E. ADAMS

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

38226

June 15, 1953

Mr. R.C. Wilmot
1618 11th Avenue
Spokane, Washington

Subject: DMEA-3077
Re: Exploration Assistance
Red Ridge Mine

My dear Mr. Wilmot:

The receipt of your application dated June 2, 1953, for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-3077 and referred to the Iron and Ferro-Alloys Division.

Kindly refer to DMEA-3077 in any future correspondence relating to your application.

Sincerely yours,

ROBERT E. ADAMS

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

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

June 9, 1953

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

Re: R. C. Wilmot application (Tungsten)
Red Ridge Claims
Pend Oreille County, Washington

Dear Mr. Selfridge:

Enclosed are three copies of an application submitted by R. C. Wilmot, 1618 West 11th Avenue, Spokane, Washington, for government assistance in an exploration project for scheelite-bearing rock in a tactite area along a phyllite-granite contact in Pend Oreille County, Washington.

As the application states, this property is a raw prospect on which a small amount of surface prospecting has been done. This work has succeeded in roughly delineating two showings of tactite containing some scheelite. The meager assay data included in the application indicates the probable WO_3 content of the mineralized zones is less than 1 percent.

Proposed work includes an access road, long-hole drilling, and, if feasible, 150 feet of shaft sinking and 200 feet of drifting at an estimated cost of $22,826.05.

This prospect is 6 miles west of the Little Noisy Mine, Pend Oreille County, Washington (Docket No. DMEA 2894), and occurs in the same rock formation. Further exploration for tungsten in this area would be stimulated if promising quantities of scheelite are found at the Red Ridge claims and the proposed exploration at the Little Noisy Mine proves successful.

A field examination of the Red Ridge claims is being scheduled to determine the feasibility of the applicant's proposal.

Sincerely yours,

A. E. Weissenborn

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

Enclosure
cc: USBM (2)
Puffett

1618 West 11th Avenue
Spokane, Washington

June 2, 1953

RECEIVED
BUREAU OF MINES
JUN 2 1953
SPOKANE, WASH.

U. S. Bureau of Mines
N. 1205 Division
Spokane, Washington

Dear Sirs:

Enclosed is an application for a D.M.E.A. loan on the Red Ridge Mine.)

It is a new discovery; one claim has been recorded, one claim has been staked but not recorded and one claim is to be staked this next week.

The minority owners' consent to lien will be filed this next week. Meanwhile it is hoped preliminary consideration can take place.

Yours sincerely,

R. C. Wilmot

R. C. Wilmot, M.E.

rcw/fw
Encs. (4) - Applications, etc.

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-3077
Metal or Mineral
Date Received 6/15/53
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:

Mr. R. C. Wilmot
1618 West 11th Avenue
Spokane, Washington

(*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

Red Ridge M. C. Book 5 page 82 Newport Pend Oreille Co
Red Ridge No. 1, M. C. located
Red Ridge No. 2, M. C.

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

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

Own 90%. 10% owned by Lyman and Kermit West

(*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 None

(*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*) [redacted]e the mineral or minerals for which you wi[redacted] 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 6 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)?

(*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 June 2, 1953

R C Wilmot
(Applicant)

By

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

DMEA APplication

RED RIDGE MINE

4-a This is a raw prospect. Only surface prospecting and location work has been done.

4-b No past production. Ore reserves are indicated by geology not proved.

Lower Claim

3 shoots--total length, 55', estimated depth, 50' width, 3', 50% ore

Total tons--400

Values spotty--estimated 1%

Middle Claim

90' high, 4' wide by an estimated 200 ' long = 7200 tons

Values .5% (average 4 samples; this is not ore)

Speculative 25 to 50' high, 5' thick by an estimated 200' long = 2500 tons. Estimated value 1%

Upper Claim

Benching	30' x 3' x 20'		
	50% Ore	=	90 tons
	30' x 3' x 100'		
	50% Ore	=	450 tons
			540 tons

Value 1% or better

Some additional ore should be found

Total -- Possible Ore

	940 tons at 1%
	7200 tons at .5%
Speculative	2500 tons at 1%

4-c The deposit is in tactite following along certain beds in the Maitlen Phyllite near its contacts with a granitic stock.

The country rock is intensely folded and has probably

been deformed at least twice. The axis of the folds is roughly north south with a south plunge. Crossing the folds is a series of nearly vertical east striking fractures. Granite is intruded as dykes along these fractures as well as in the north south direction.

Tactite forms in the phyllite near the granite contacts especially where there are reentrant angles. Certain green phyllites located under a red shist have been preferrentially altered by garnet, epidote and later quartz.

Sulfide mineralization is light, although marcasite and pyrite are fairly common and stibnite was encountered in one place south of the lower claim. The ore seems to be connected with N55°E fractures that may be filled with quartz seams or aplite dykelets.

These structures tend to result in ore shoots elongated in the vertical direction but rather short horizontally. Both the upper and lower showing conform to this pattern but the middle showing seems to be different. The tactite is thicker and denser than elsewhere. Also, the mineralization is disseminated and although low grade is fairly uniform. It is believed that this shoot gives sufficient promise to warrant expectation of a small mine.

The lower showing has two tactite beds. (They may be the same bed repeated.) Short shoots show along the strike. The values are very spotty--some specimens would go 5-10%. Crystals and streaks 1/2" wide are found. On the other hand, there appears to be less disseminated value and more open spaces with nothing. Neither great depth nor great quantity is to be expected north of the east striking granite dyke. But the showings to the south of the dyke give some promise of ore in depth. This is especially true of the triangular showing next to the aplite dyke. This could be prospected by drill or by adit. An adit site giving about 200' of backs is available.

The upper showing is a bed tactized for about 300'. The bed is from 3 to 4' wide. Near the south end of the tactite it is crossed by a 1" quartz stringer trending

N55°E. In the vicinity of this stringer the tactite is at least 8' wide. Some mineralization closely follows the stringer.

Other mineralization is splotchy, although it is fine grained and disseminated. Some 1% ore can be mined here. Along the strike northward the mineralization weakens and then picks up again for a little way.

The entire zone needs sampling as estimation may be low here as it has been on the middle showing.

This entire exposure is on or near a 20' cliff face and prospecting by benching would be very cheap. There is almost certainly a shoot of ore near the junction of the tactite and the quartz stringer. Perhaps 50% of the mined rock could be sorted and shipped as 1% or better ore.

The benching would show if a fairly constant tonnage per vertical foot could be counted on. Below the bench development should be by a winze stope, although good drill sites are available and so is water.

Because of its importance, the middle showing is described in detail. The bedded tactite follows a S10°E fold that probably plunges south at about 30°. At the top of the fold, forming under a red shist, the tactite is 6' thick. As it extends down the west flank towards the granite contact the tactite widens to 10' at the deepest place it can be seen.

The light shows a rather uniform mineralization in the top half of the tactite but the lower half is blank or very lightly mineralized. Two cut samples were taken--one 3' wide 90' up the hill assayed 0.65% and one 4' wide 70' up the hill assayed 0.3%. Two other samples from last fall were run this spring--one 2' wide assayed 0.4% and one of the better grade float without waste ran 0.7%. The values in this showing were underestimated when it was found last fall.

As the tactite goes down it approaches the granite as

shown in the sketch. The outcrop of the intrusive can be traced to the south for about 200' and may extend much further as there are granite boulders along the gulch for a thousand feet or more.

The geology of the Emerald mine is somewhat similar. There tactite beds assaying .3% to .4% change downward near the granite contact to large orebodies assaying 1% or better. It is a reasonable geological prospect that the same conditions are repeated on the Red Ridge. If so, a body of 1% ore should be found where the tactite intersects the granite.

4-d The mine is about 15 miles from Metaline Falls over the Sullivan Lake road. The lower showing is about six miles from Ione. Both towns are railpoints.

The principal lack of this property is an access road. The only practical grade to the middle and upper showings is to come in over the Forest Service road to the head of Sand Creek, thence south and west around the hill until the showings are located. This will be about three miles long and will require two bridges.

The lower showing can be reached by a road about one mile long from the end of a logging road.

4-e There is sufficient water on the property for any drilling purposes. There is a spring near the upper showing. If this is not sufficient, water can be taken from Exposure Creek. There is also a lake near the middle showing at this time of year. Metaline Falls and to a lesser extent Ione are mining towns. Equipment and manpower can be supplied from them. Spokane is the main supply point.

5-b Plan of Operations:

The first essential is to put the road in. The property is in rough country and the only way for a cat to get in is to build its own road.

The lower showing is too erratic to be considered at this time.

The upper showing warrants benching to determine if the ore goes down. Assuming this is shown, sinking for 100 feet should follow. Alternately drilling 1500 feet of hole in three fans is possible. There are good sites and water is available. But this course is not recommended because the visible tonnage does not warrant the added cost of drilling. At the very least benching should be done.

The middle showing justifies considerable work. Not enough is known to lay down a hard and fast method. The aim should be to cut the tactite near the granite contact and if possible drift on it. The first step is to clear the slide rock from the outcrop on the hillside and if possible from the outcrop in the gulch. If that can be done an adit could be run from the north end of the gulch deep enough to intersect the tactite. If the contact can not be located with certainty it would be better to sink or drill.

A precise method will be submitted when the position of the tactite is determined.

5-d Applicant is a mining geologist with experience in development projects.

6-a Estimate of Costs:

Independent contracts are to be let for the tractor at $100 per day for a D-6 Cat and driver. The rest is covered in the cost estimate.

6-b Supervision is to be furnished by applicant at an estimated half-time cost of $10.00 per day and expenses of $1.00.

6- RED RIDGE ESTIMATED COSTS

Cost for 2 men and compressor for 1 shift

Wages		Machinery Rental	
	$ 14.71	125 cu. ft. Compressor	$140.00/Mo.
	14.71	200' of Hose	24.00/Mo.
Ins. 10%	2.94	Drill	35.00
	$ 32.36	Jack leg	20.00
		Car	15.00
		25 days	234.00
			9.60
		Supplies	
		Set of Steel . . .	48.80
		Estimated life 14 days	3.50/day
		Gas at 12 gals/shift	3.60
		Powder/shift at 18.60/ 100#	14.00
		Rail 8#	1.40
		Pipe 50¢	1.50

SUMMARY:

Total wages	$32.36
Equipment	9.60
Supplies	24.00
Incidentals	4.04
Supervision	11.00
	$81.00/shift

Drifting at 3' per shift = $27.00/ft

Sinking at 1-2/5' per shift = $57.85/ft

Prices exclusive of timber

Drift timber equals $13.00 per set or $2.60 per ft. Shaft set includeing the hangers, etc. equals $23.00 per set or $4.60 per ft.

Timber price $70.00 per 1000 bd. ft.

Additional expense for shaft:

Hoist Gasoline 2 drums (rental)	$ 120.00
Bucket (rental)	35.00
25 days	155.00
Total rental	6.20/day
Gas	2.00
Labor	14.71
Timber	4.60
Incidentals	.49
	28.00/shift

or $20.00/ft.

Capital Expenses not Allowed for in Above Estimates:

Extra Pipe at 50¢ ft.	$100.00
Extra Rail at $140 ton	140.00
5/8" wire rope for hoist at 25¢ ft	50.00
Tools, blacksmith, pipecutter, threader, wrenches	600.00
Sorting table	210.00
	$1100.00
Pick-up car (rental) $25.00/wk plus 3¢/mile, plus gas & oil Estimated at 3¢/mile Total $51.60 per week for 23 weeks	1186.80

Road Costs:

3 miles	
D-6 Cat and driver 25 days contract at $100 per day	2500.00
Swamper 25 days at $14.71	367.50
Insurance	36.75
2 bridges, iron pipe at $500/bridge	1000.00
	$3904.25

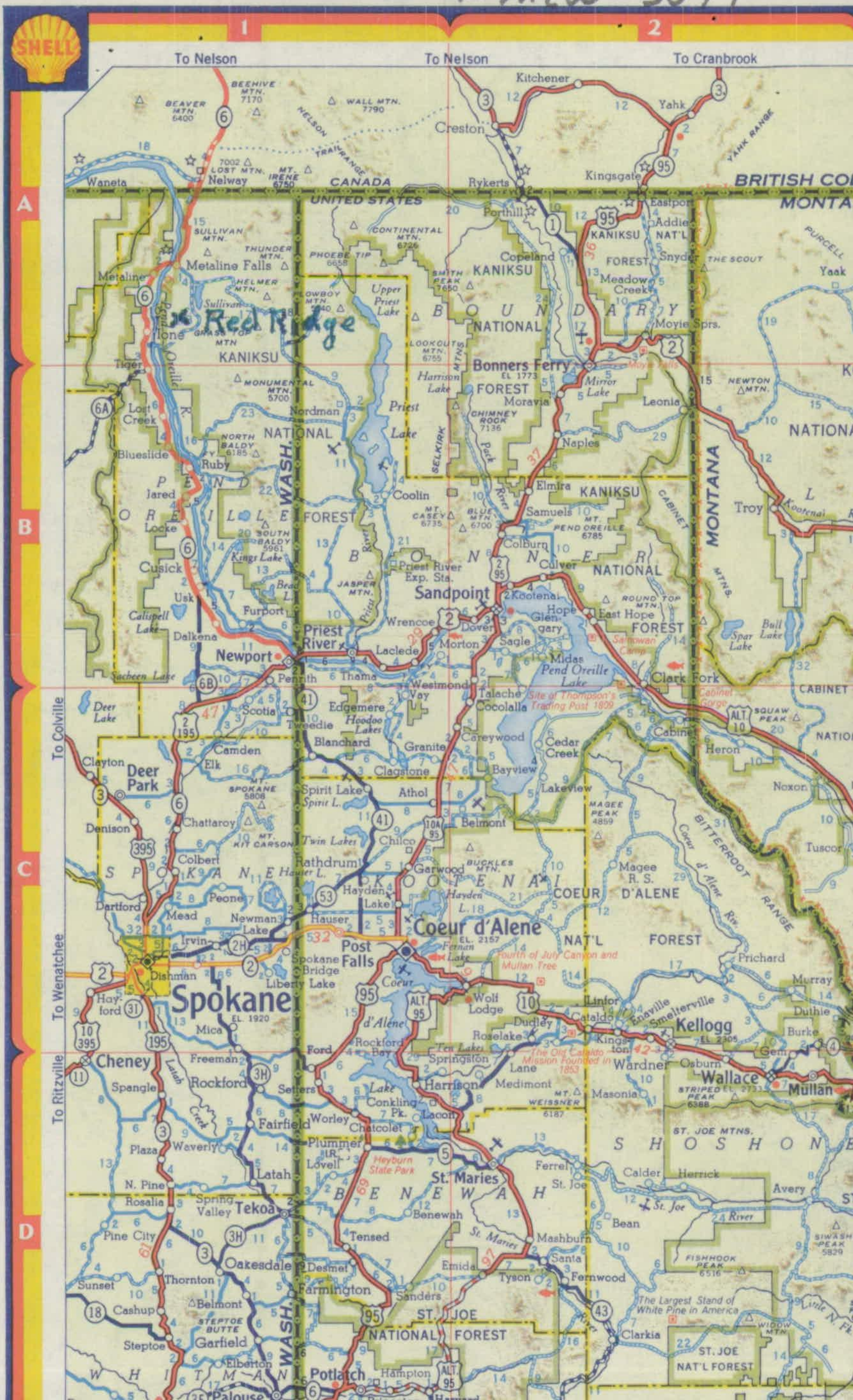
Cost of Work Proposed:

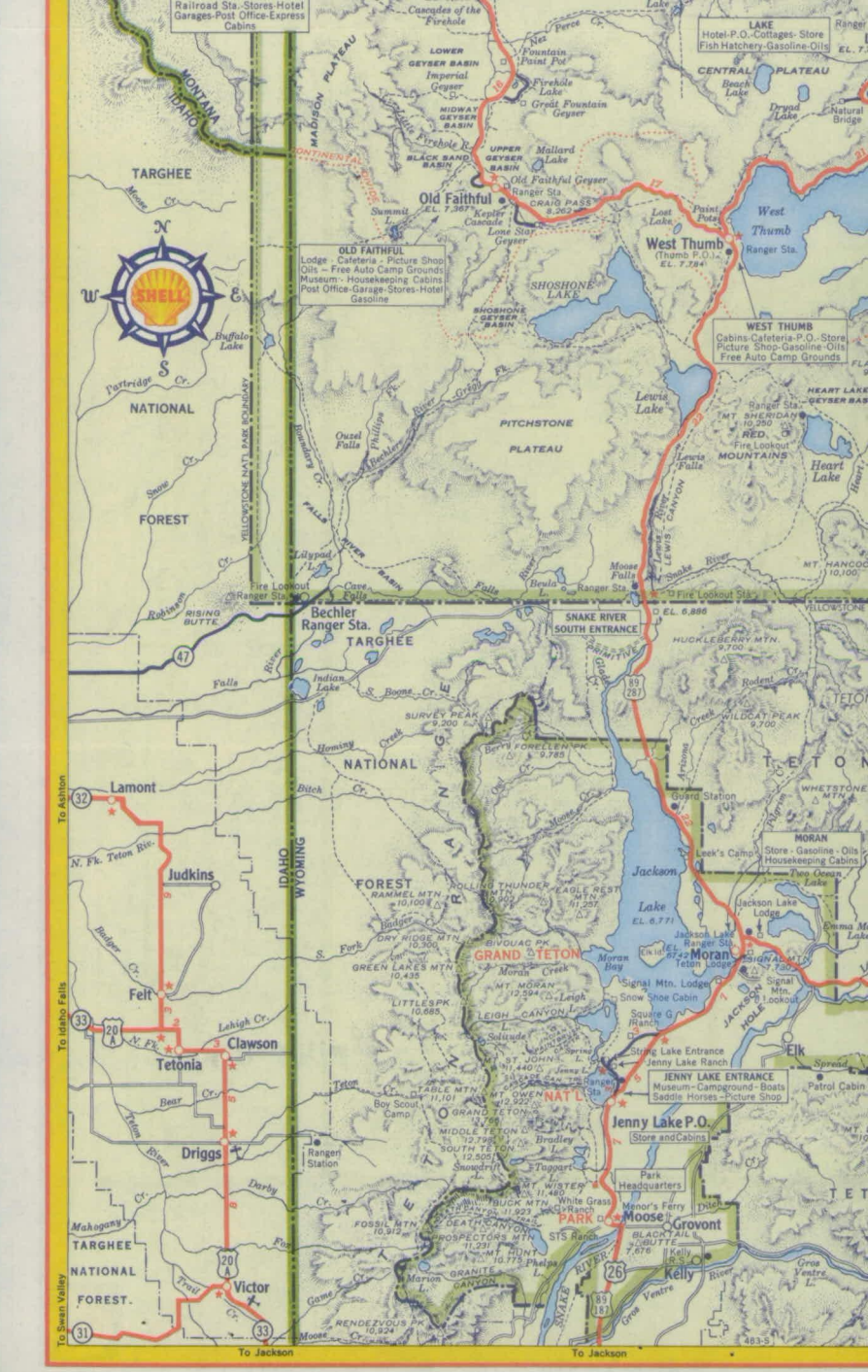
$81/day for drifting at $29.60/ft or $27.00 without timber
$108.50/day for sinking at $77.85/ft or $78.00

SUMMARY OF COSTS:

Road three miles	$ 3904.25
Benching upper showing 16 days at $80/day	1280.00
Cat work exposure of the middle outcrop 10 days at $117/per day	1170.00
Longhold drilling to locate tactite 5 days at $65/day	325.00
150 feet of timbered drift at $29.60/ft	4440.00
200 feet of drift in hard rock at $27.00/ft	5400.00
	$16529.35
Equipment cash minimum	1100.00
Car Rental	1186.80
Contingencies	4000.00
	$6286.80
TOTAL	$22826.05

DMEa - 3077


SHELL
1
2
A
B
C
D
To Nelson
To Nelson
To Cranbrook
To Colville
To Wenatchee
To Ritzville
Red Ridge
CANADA
UNITED STATES
BRITISH COL
MONTANA
WASH.
Beaver Mtn. 6400
Beehive Mtn. 7170
Wall Mtn. 7790
Nelson Trail Range
Yahk Range
Purcell
Kitchener
Creston
Yahk
Kingsgate
Rykerts
Porthill
Eastport
Waneta
Nelway
Lost Mtn.
Mt. Irene 6750
Continental Mtn. 6726
Phoebe Tip 6658
Sullivan Mtn.
Thunder Mtn.
Metaline Falls
Metaline
Helmer Mtn.
Sullivan
Ione
Grass Top Mtn
Cowboy Mtn.
Upper Priest Lake
Smith Peak 7650
Kaniksu
Copeland
Addie
Kaniksu Nat'l Forest
Snyder
The Scout
Yaak
Meadow Creek
Boundary
National
Moyie Sprs.
Lookout Mtn. 6755
Bonners Ferry
EL 1773
Moyie Falls
Tiger
Monumental Mtn. 5700
Harrison Lake
Forest
Moravia
Mirror Lake
Leonia
Newton Mtn.
Lost Creek
Nordman
Priest Lake
Chimney Rock 7136
Selkirk Mtns
Naples
National
North Baldy 6185
Blueslide
Ruby
Pend Oreille
Jared
Coolin
Elmira
Kaniksu
Cabinet Mtns.
Troy
Kootenai
Locke
Forest
Mt. Casey 6735
Blue Mtn. 6700
Samuels
Mt. Pend Oreille 6785
South Baldy 5961
Kings Lake
Colburn
Cusick
Jasper Mtn.
Priest River Exp. Sta.
Culver
National
Sandpoint
Kootenai
Round Top Mtn.
Usk
Bead L.
Furport
Hope
East Hope
Forest
Calispell Lake
Dalkena
Priest River
Wrencoe
Dover
Glengary
Bull Lake
Spar Lake
Samowan Camp
Newport
Laclede
Morton
Sagle
Midas
Pend Oreille Lake
Clark Fork
Sacheen Lake
Penrith
Thama
Westmond
Talache
Cocolalla
Site of Thompson's Trading Post 1809
Cabinet Gorge
Cabinet
Deer Lake
Scotia
Edgemere
Hoodoo Lakes
Tweedie
Careywood
Cabinet
Squaw Peak
Nation
Camden
Elk
Blanchard
Granite
Cedar Creek
Heron
Clayton
Deer Park
Mt. Spokane 5808
Clagstone
Spirit Lake
Spirit L.
Athol
Bayview
Lakeview
Noxon
Denison
Chattaroy
Belmont
Magee Peak 4859
Bitterroot Range
Mt. Kit Carson
Twin Lakes
Chilco
Tuscor
Colbert
Rathdrum
Hauser L.
Garwood
Buckles Mtn.
Magee R.S.
Coeur d'Alene Riv.
Spokane
Kootenai
Coeur d'Alene
Dartford
Peone
Hayden Lake
Hayden L.
Mead
Newman Lake
Hauser
Coeur d'Alene
EL. 2157
Nat'l
Forest
Irvin
Post Falls
Fernan Lake
Fourth of July Canyon and Mullan Tree
Prichard
Dishman
Spokane Bridge
Liberty Lake
Murray
Hayford
Spokane
EL. 1920
Coeur d'Alene
Wolf Lodge
Linfor
Enaville
Smelterville
Duthie
Mica
Dudley
Cataldo
Kellogg
EL 2305
Burke
Rockford Bay
Roselake
Ten Lakes
Kingston
Gem
Cheney
Freeman
Ford
Springston
The Old Cataldo Mission Founded in 1853
Lane
Wardner
Osburn
Wallace
EL. 2733
Mullan
Spangle
Rockford
Latah Creek
Setters
Harrison
Medimont
Mt. Weissner 6187
Masonia
Striped Peak 6388
Lake Conkling Pk.
Lacon
Fairfield
Worley
Chatcolet
St. Joe Mtns.
Shoshone
Plaza
Waverly
Plummer
Heyburn State Park
Lovell
St. Maries
Ferrel
St. Joe
Calder
Herrick
Avery
Latah
N. Pine
Rosalia
Spring Valley
Tekoa
Benewah
St. Joe River
Bean
Siwash Peak 5829
Pine City
Tensed
St. Maries
Mashburn
Fishhook Peak 6516
Oakesdale
Desmet
Emida
Santa
Sunset
Thornton
Farmington
Tyson
Fernwood
Belmont
Sanders
The Largest Stand of White Pine in America
Little N. Fk.
Cashup
Steptoe Butte
St. Joe National Forest
Widow Mtn.
Steptoe
Garfield
Clarkia
St. Joe Nat'l Forest
Elberton
Whitman
Potlatch
Hampton
Palouse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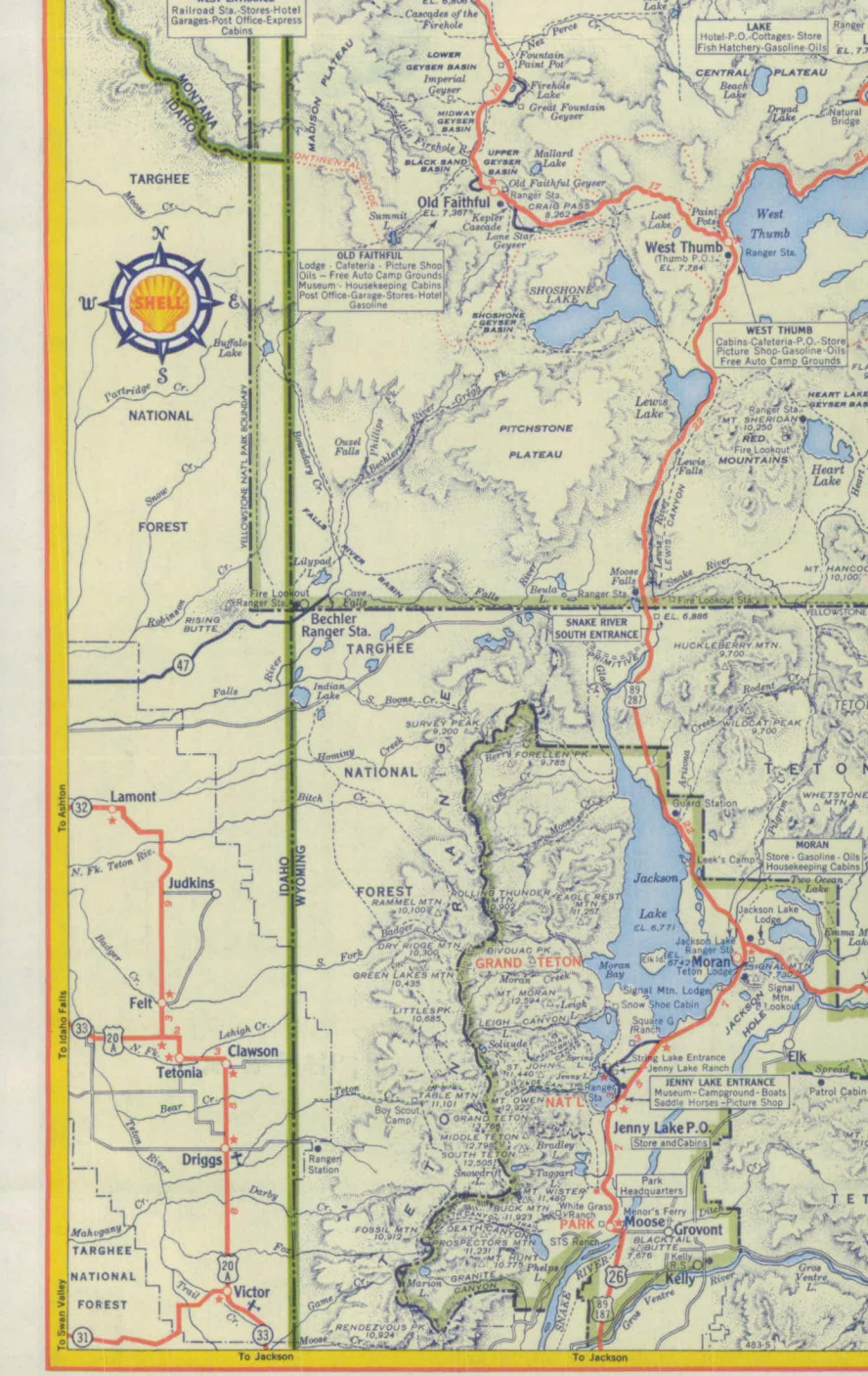
Garages-Post Office-Express
Cabins
MONTANA
IDAHO
MADISON PLATEAU
Cascades of the Firehole
LOWER GEYSER BASIN
Imperial Geyser
Firehole Lake
Great Fountain Geyser
Fountain Paint Pot
Firehole R.
MIDWAY GEYSER BASIN
BLACK SAND BASIN
UPPER GEYSER BASIN
Mallard Lake
Old Faithful Geyser
Ranger Sta.
CRAIG PASS
8,262
Old Faithful
EL. 7,367
Summit L.
Kepler Cascade
Lone Star Geyser
CONTINENTAL DIVIDE
TARGHEE
OLD FAITHFUL
Lodge - Cafeteria - Picture Shop
Oils - Free Auto Camp Grounds
Museum - Housekeeping Cabins
Post Office-Garage-Stores-Hotel
Gasoline
SHOSHONE LAKE
SHOSHONE GEYSER BASIN
Lost Lake
Paint Pots
West Thumb
(Thumb P.O.)
EL. 7,784
West Thumb
Ranger Sta.
WEST THUMB
Cabins-Cafeteria-P.O.-Store
Picture Shop-Gasoline-Oils
Free Auto Camp Grounds
LAKE
Hotel-P.O.-Cottages-Store
Fish Hatchery-Gasoline-Oils
CENTRAL PLATEAU
Beach Lake
Dryad Lake
Natural Bridge
Buffalo Lake
Partridge Cr.
NATIONAL
FOREST
YELLOWSTONE NAT'L PARK BOUNDARY
Bumbaugh Cr.
Ouzel Falls
Phillips River
Gregg Fk.
PITCHSTONE PLATEAU
Lewis Lake
Lewis Falls
LEWIS CANYON
Ranger Sta.
MT. SHERIDAN
10,350
RED MOUNTAINS
Fire Lookout
Heart Lake
HEART LAKE GEYSER BASIN
Snake River
Moose Falls
Beula
Ranger Sta.
Fire Lookout Sta.
Lilypad L.
Cave Falls
Robinson
RISING BUTTE
Fire Lookout
Ranger Sta.
Bechler Ranger Sta.
TARGHEE
Indian Lake
S. Boone Cr.
SNAKE RIVER SOUTH ENTRANCE
EL. 6,886
HUCKLEBERRY MTN.
9,700
Rodent Cr.
WILDCAT PEAK
9,700
SURVEY PEAK
9,200
Hominy Creek
FORELLEN PK.
9,785
NATIONAL
FOREST
RAMMEL MTN.
10,100
ROLLING THUNDER
10,900
EAGLE REST
11,257
DRY RIDGE MTN.
10,365
BIVOUAC PK.
GREEN LAKES MTN.
10,435
GRAND TETON
Moran Creek
MT. MORAN
12,594
Leigh L.
LITTLE PK.
10,685
LEIGH CANYON
Solitude L.
ST. JOHN'S L.
Jenny L.
TABLE MTN.
11,101
MT. OWEN
12,922
GRAND TETON
13,766
MIDDLE TETON
12,805
SOUTH TETON
12,506
Snowdrift L.
Bradley L.
Taggart L.
MT. WISTER
11,460
BUCK MTN.
11,923
DEATH CANYON
PROSPECTORS MTN.
11,231
MT. HUNT
10,775
FOSSIL MTN.
10,934
RENDEZVOUS PK.
10,924
Boy Scout Camp
Ranger Station
Park Headquarters
White Grass Ranch
STS Ranch
Menor's Ferry
PARK
Moose
Grovont
BLACKTAIL BUTTE
7,676
Kelly
Kelly
Gros Ventre L.
Gros Ventre River
Marion
GRANITE CANYON
SNAKE RIVER
Game Cr.
Moose Cr.
Gros Ventre
Jackson
Lake
EL. 6,771
Guard Station
Leek's Camp
MORAN
Store - Gasoline - Oils
Housekeeping Cabins
Two Ocean Lake
Jackson Lake Lodge
Jackson Lake Ranger Sta.
Moran
Teton Lodge
Moran Bay
Elk Id.
Signal Mtn. Lodge
Snow Shoe Cabin
Signal Mtn. Lookout
Square G Ranch
JACKSON HOLE
String Lake Entrance
Jenny Lake Ranch
JENNY LAKE ENTRANCE
Museum-Campground-Boats
Saddle Horses-Picture Shop
Jenny Lake P.O.
Store and Cabins
Elk
Patrol Cabin
Spread
TETON
NATIONAL
PARK
Lamont
N. Fk. Teton Riv.
Judkins
Badger Cr.
Felt
Lehigh Cr.
Clawson
Tetonia
V. Fk.
Bear Cr.
Teton River
Driggs
Darby Cr.
Mahogany
TARGHEE
NATIONAL
FOREST.
Victor
Trail Cr.
IDAHO
WYOMING
To Ashton
To Idaho Falls
To Swan Valley
To Jackson
To Jackson
483-S


Railroad Sta.-Stores-Hotel
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Cabins-Cafeteria-P.O.-Store
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Free Auto Camp Grounds
MONTANA
IDAHO
MADISON PLATEAU
TARGHEE
NATIONAL
FOREST
YELLOWSTONE NAT'L PARK BOUNDARY
Buffalo Lake
Partridge Cr.
Snake Cr.
Robinson
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Ranger Sta.
Bechler
Ranger Sta.
TARGHEE
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Falls River
Boone Cr.
Lilypad L.
Cave Falls
Bechler River
Phillips River
Ouzel Falls
Boundary Cr.
FALLS RIVER BASIN
PITCHSTONE PLATEAU
Lewis Lake
Lewis Falls
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Snake River
Moose Falls
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Rodent Cr.
WILDCAT PEAK
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Hominy Creek
SURVEY PEAK
9,200
Berry FORELLEN PK
9,785
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Moose Cr.
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Emma Matilda Lake
Jackson
Lake
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Jackson Lake Ranger Sta.
Elk Id. EL. 5,742
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SIGNAL MTN.
7,305
Signal Mtn. Lodge
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Elk
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Strong Lake Entrance
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Moose Cr.
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Driggs
Felt
Clawson
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Judkins
Lamont
N. Fk. Teton Riv.
Badger Cr.
Lahigh Cr.
V. Fk.
S. Fork
IDAHO
WYOMING
To Ashton
To Idaho Falls
To Swan Valley
To Jackson
To Jackson
483-5

SHELL
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A
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D
To Nelson
To Nelson
To Cranbrook
To Colville
To Wenatchee
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BRITISH CO
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Sullivan Mtn.
Thunder Mtn.
Metaline Falls
Metaline
Helmer Mtn.
Phoebe Tip 6658
Continental Mtn. 6726
Copeland
Smith Peak 7650
Kaniksu
Lowboy Mtn. 5141
Upper Priest Lake
Sullivan
Grass Top Mtn
Ione
Pend Oreille R.
Boundary National Forest
Lookout Mtn. 6755
Selkirk Mtns.
Bonners Ferry
EL. 1773
Mirror Lake
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Elberton
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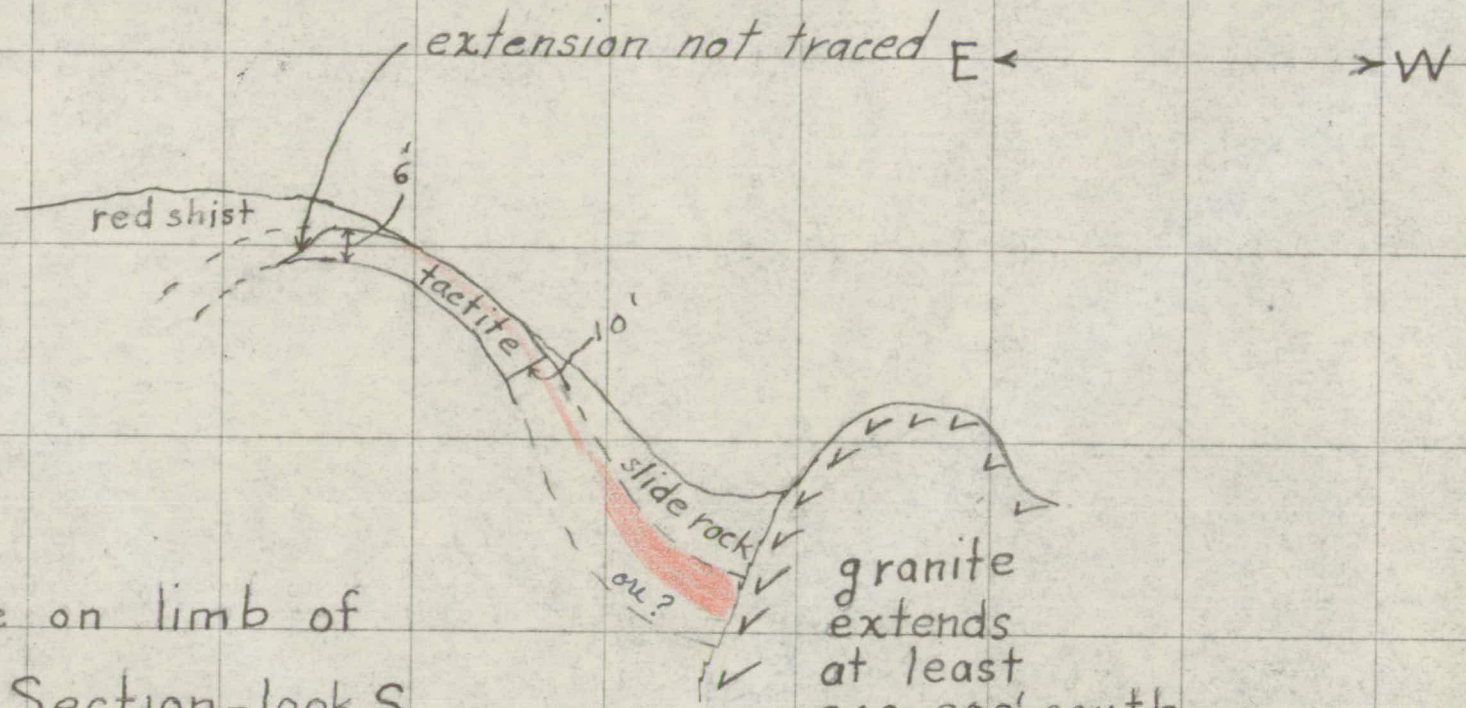
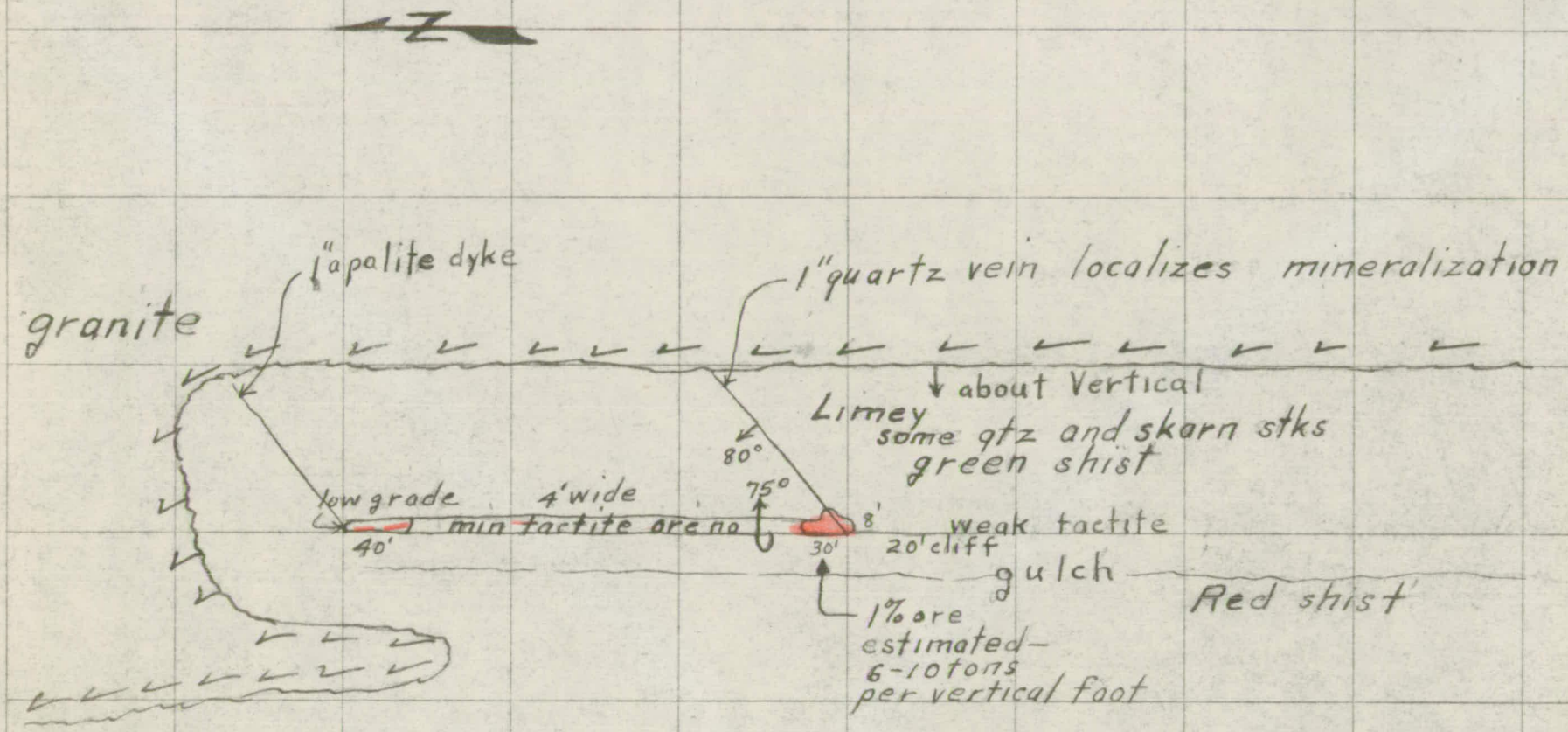
Whitman
Potlatch
Hampton
Palouse
Princeton
Harvard
Diamond



tactite on limb of
fold Section-look S
Plunge 30° South ?
upper 1/2 of tactite
is mineralized Average
values 3-5' of 0.5% WO_3

Diagramatic Section
Red Ridge No 1 M.C.
Middle Showing

DMEA - 3077



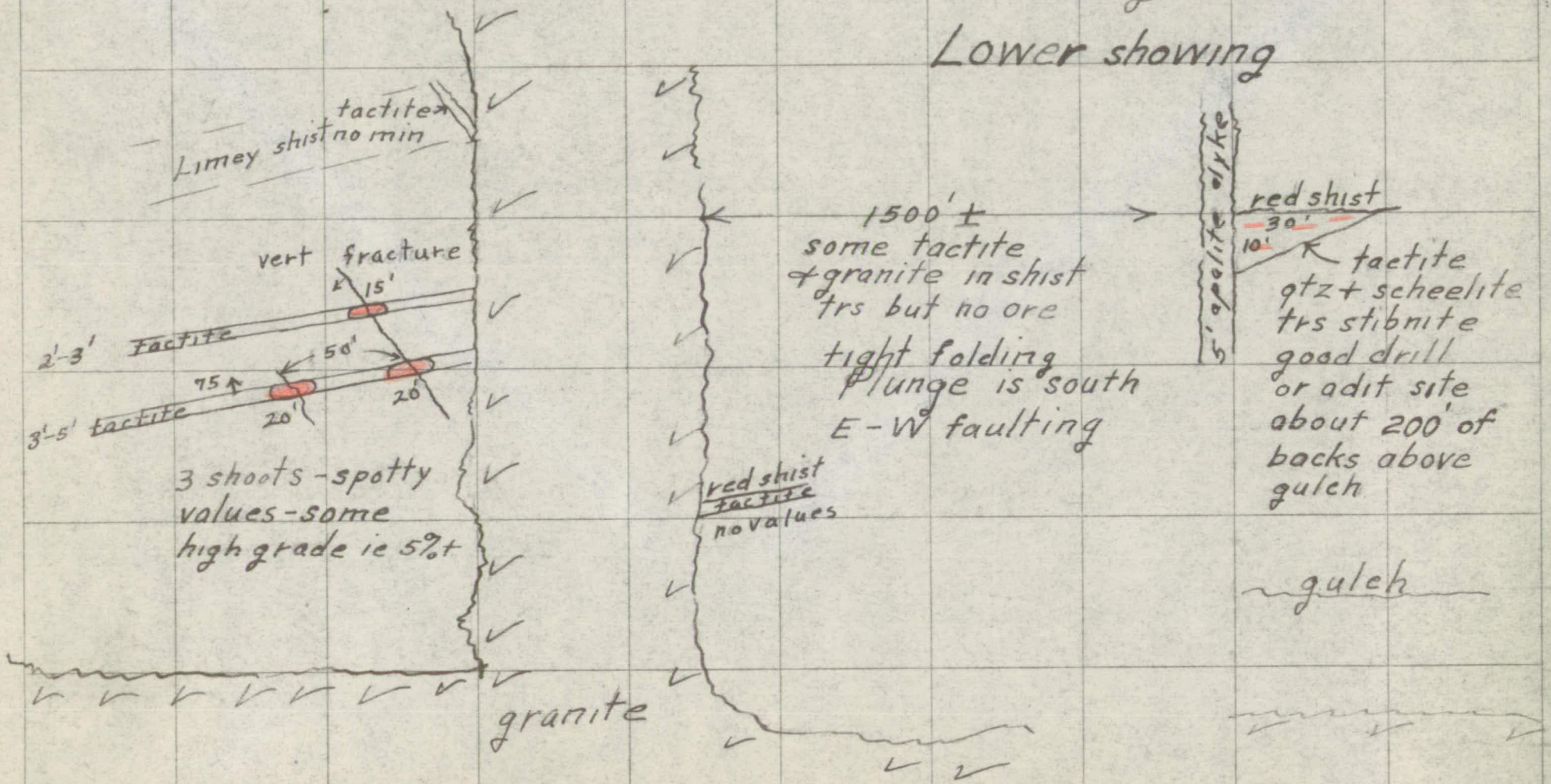
Diagramatic Sketch Red Ridge No 2

Scale approx 1" = 100'

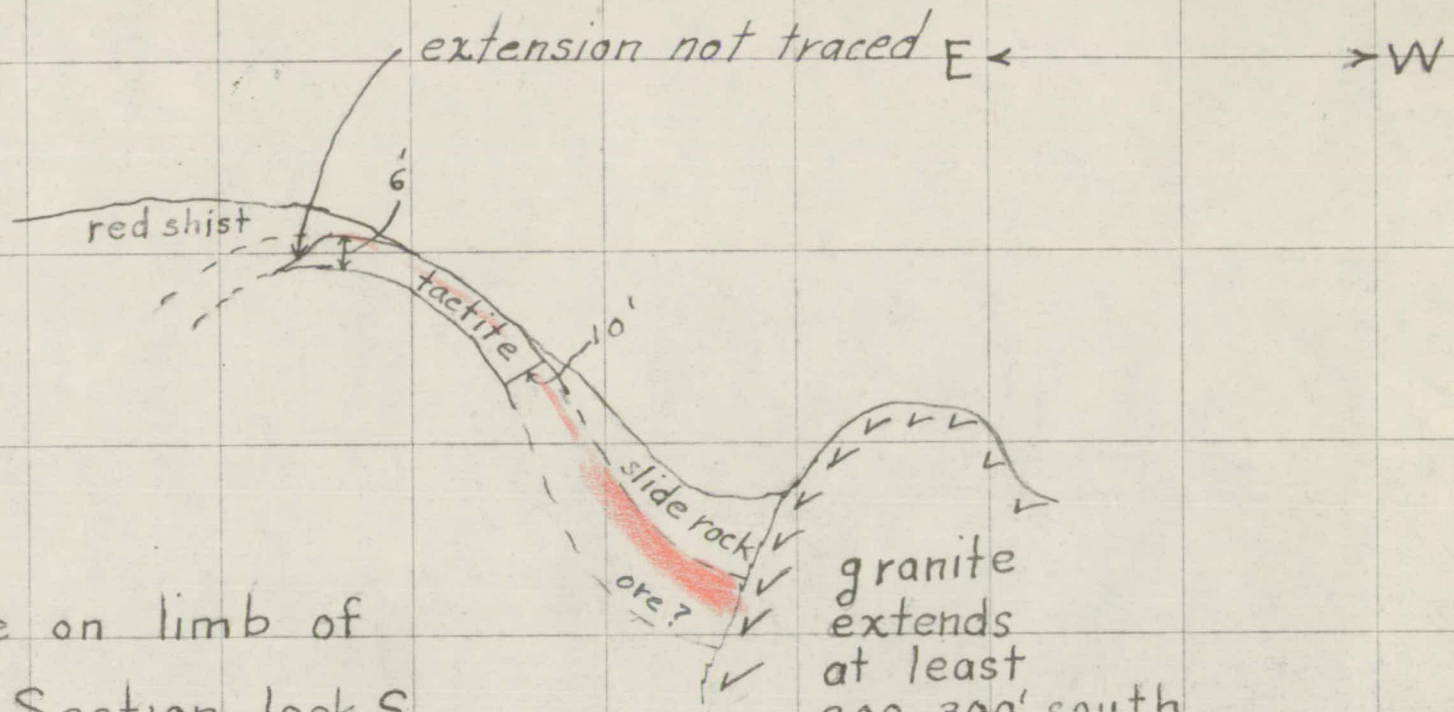
Upper Showing

DMEA-3077

Diagramatic Sketch
Red Ridge M.C.
Lower showing



DMEA - 3077



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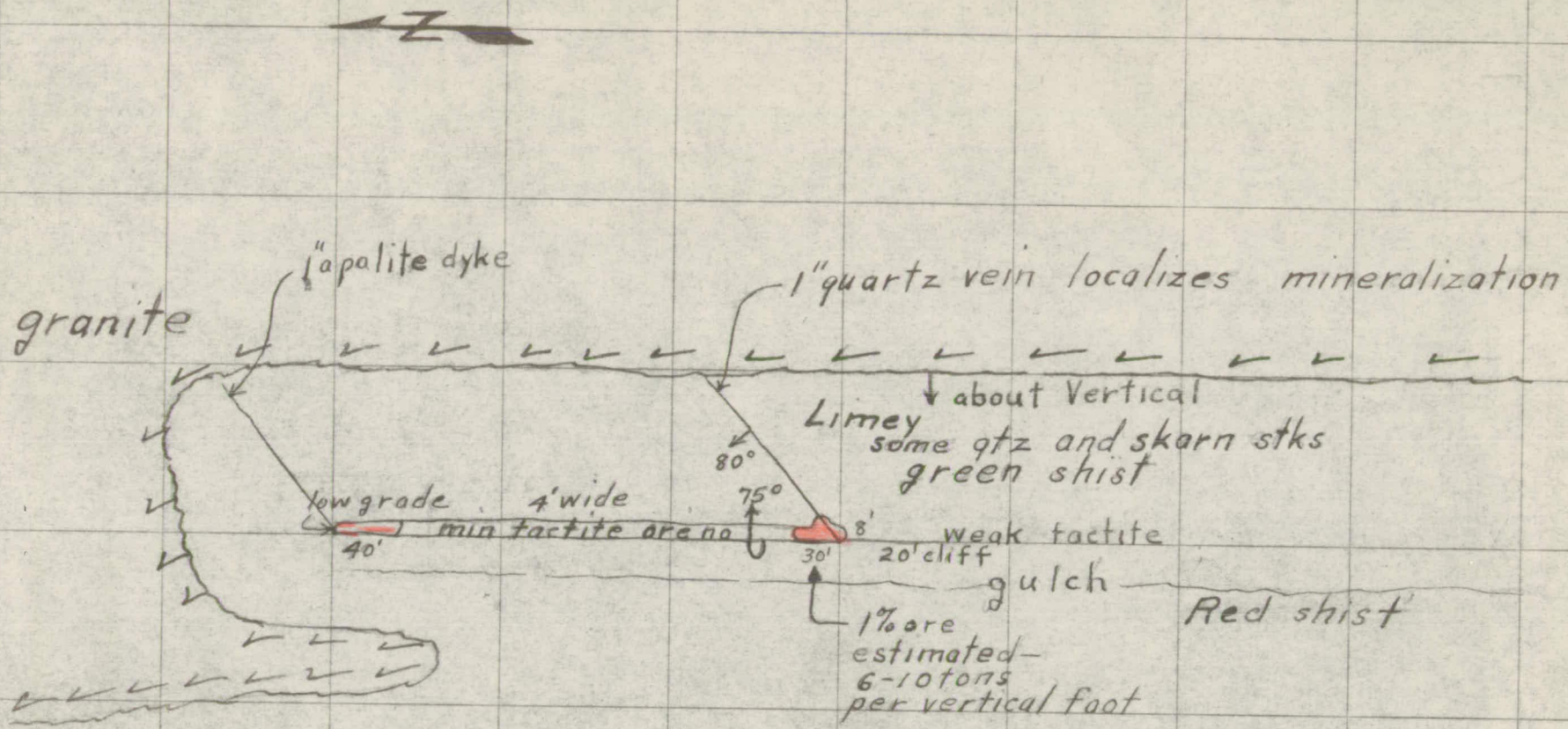
Diagramatic Section
Red Ridge No 1 M.C.
Middle Showing

DMEA-3077



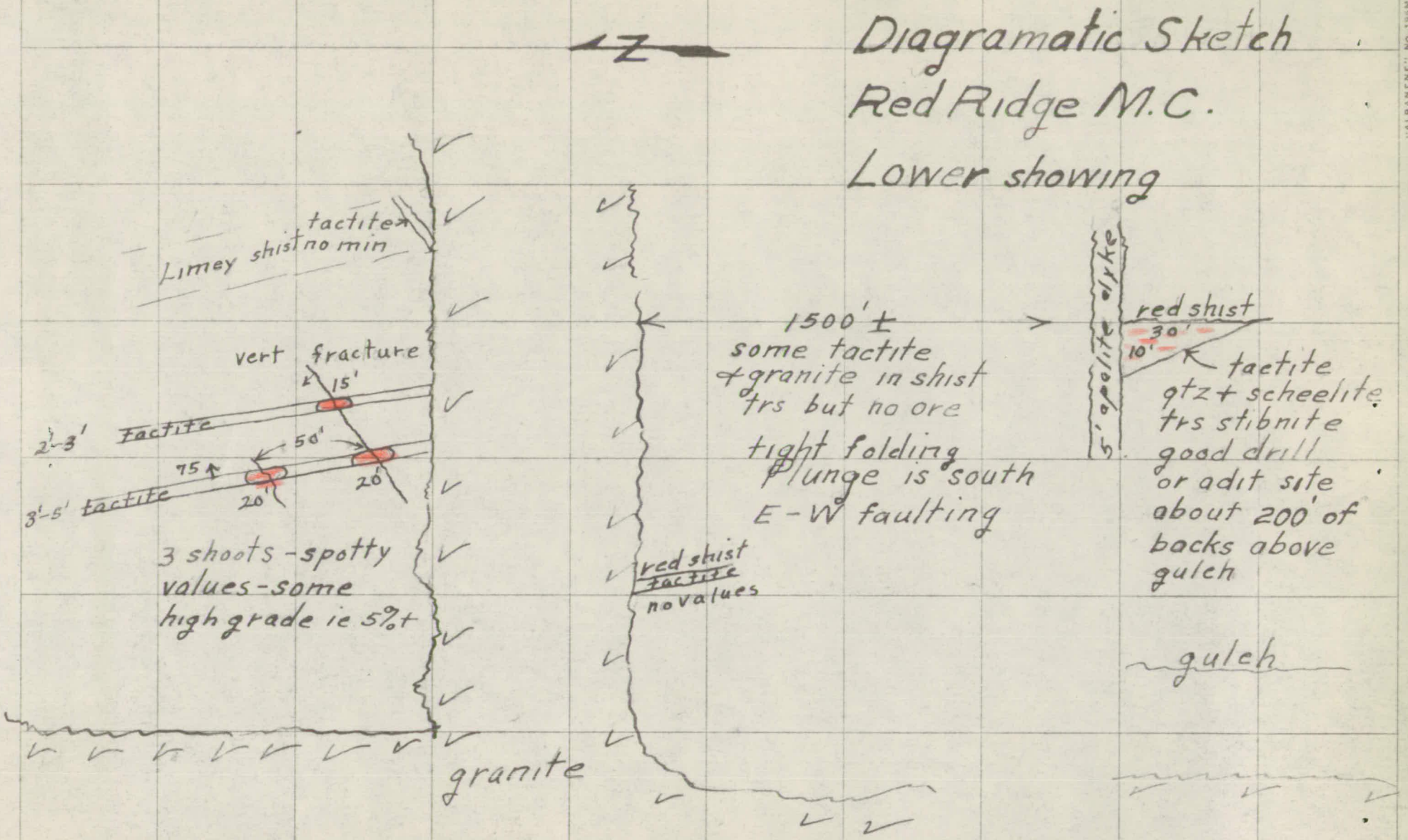
Diagramatic Sketch Red Ridge No 2

Scale approx 1" = 100'

Upper Showing

DMEA-3077

Diagramatic Sketch
Red Ridge M.C.
Lower showing



DMEA-3077

Red Ridge Mine

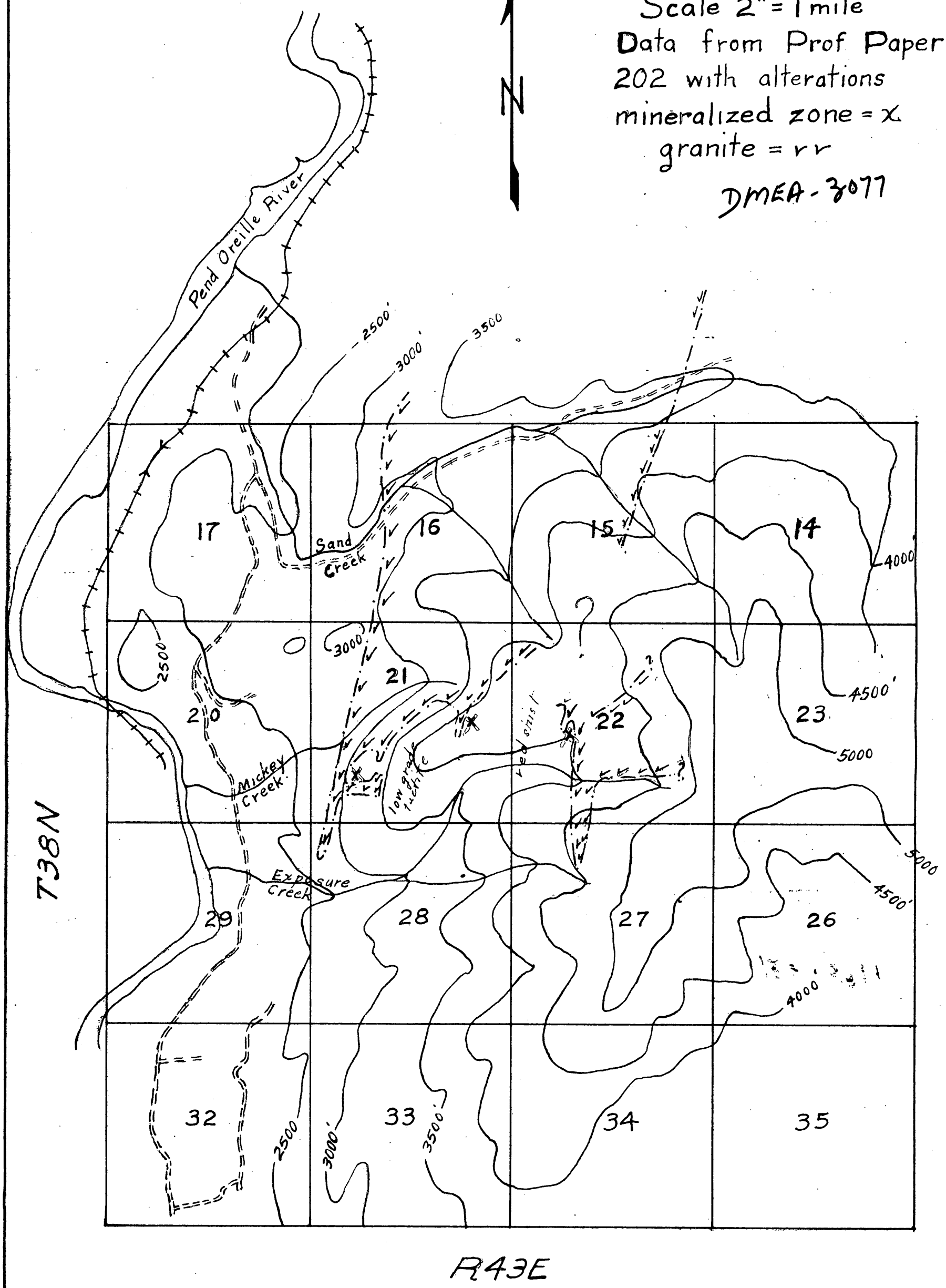
Scale 2" = 1 mile

Data from Prof Paper 202 with alterations

mineralized zone = x

granite = rr

DMEA-3077



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

OFFICIAL BUSINESS

U. S. GEOLOGICAL SURVEY
[illegible]
Spokane 4, Wash.

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

Mr. George C. Selfridge,

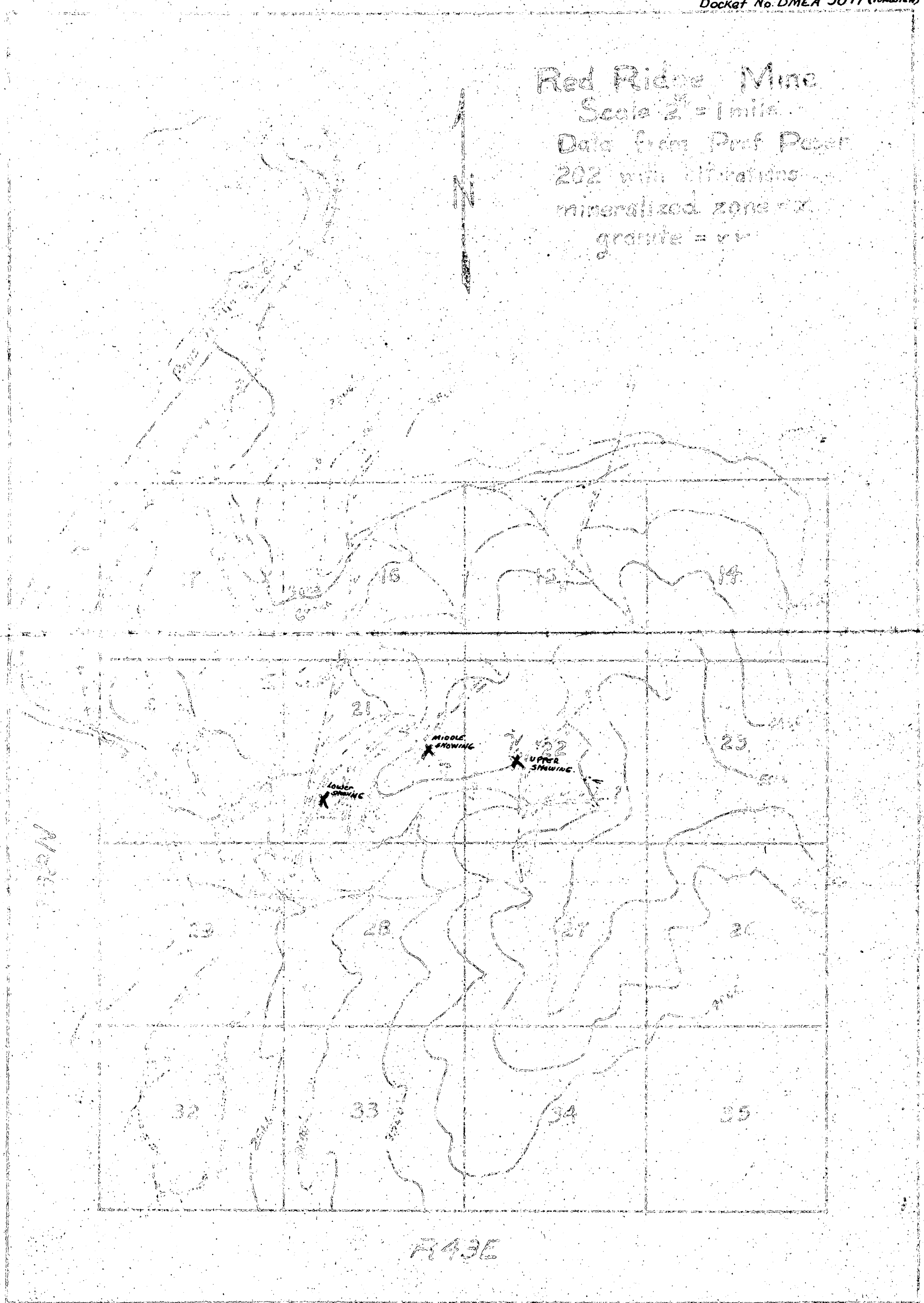
Chairman, Operating Committee

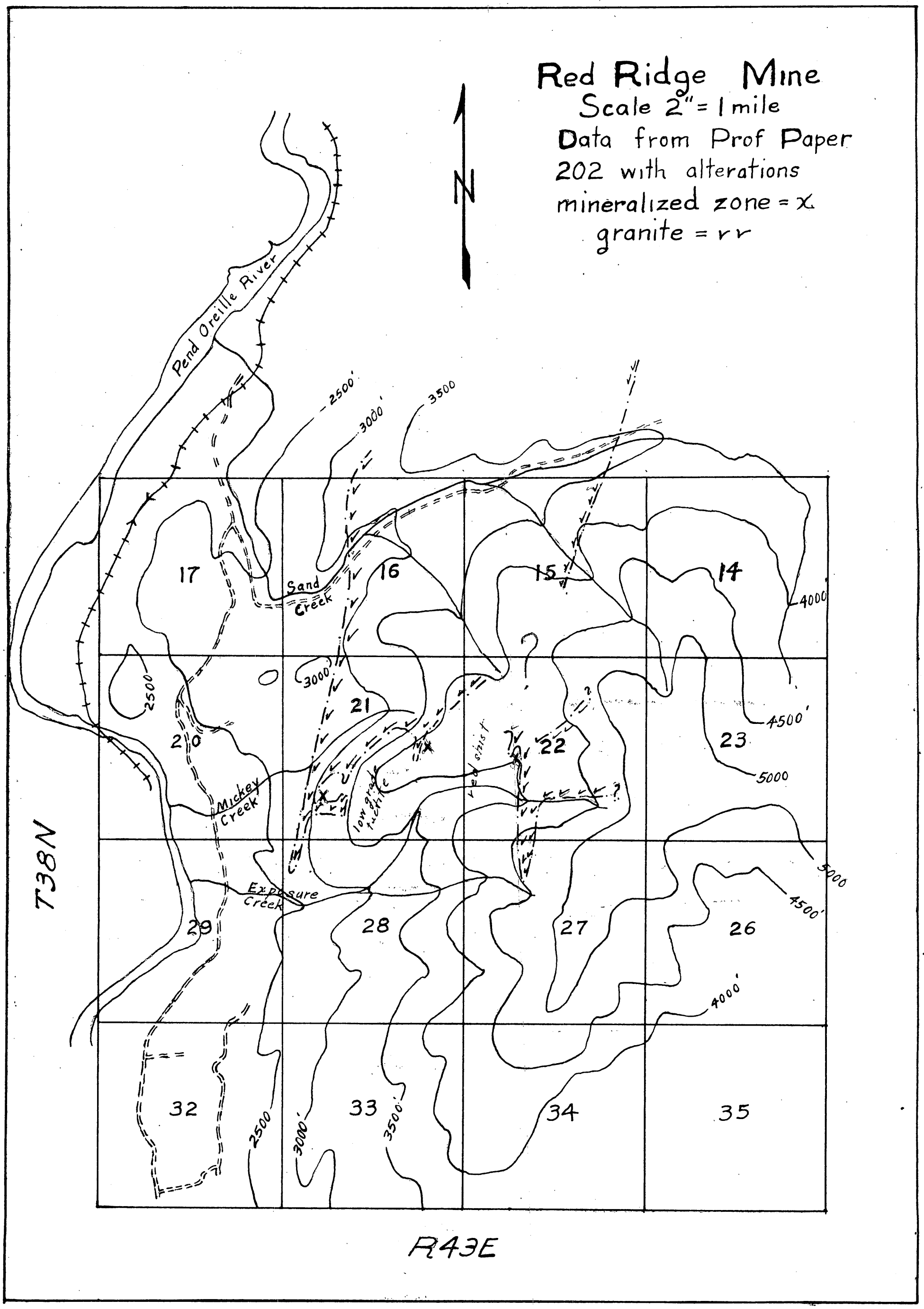
Defense Minerals Exploration Administration

Department of the Interior

Washington 25, D. C.

Docket No. DMEA 3077 (TUNGSTEN)




Red Ridge Mine
Scale 2" = 1 mile
Data from Prof Paper
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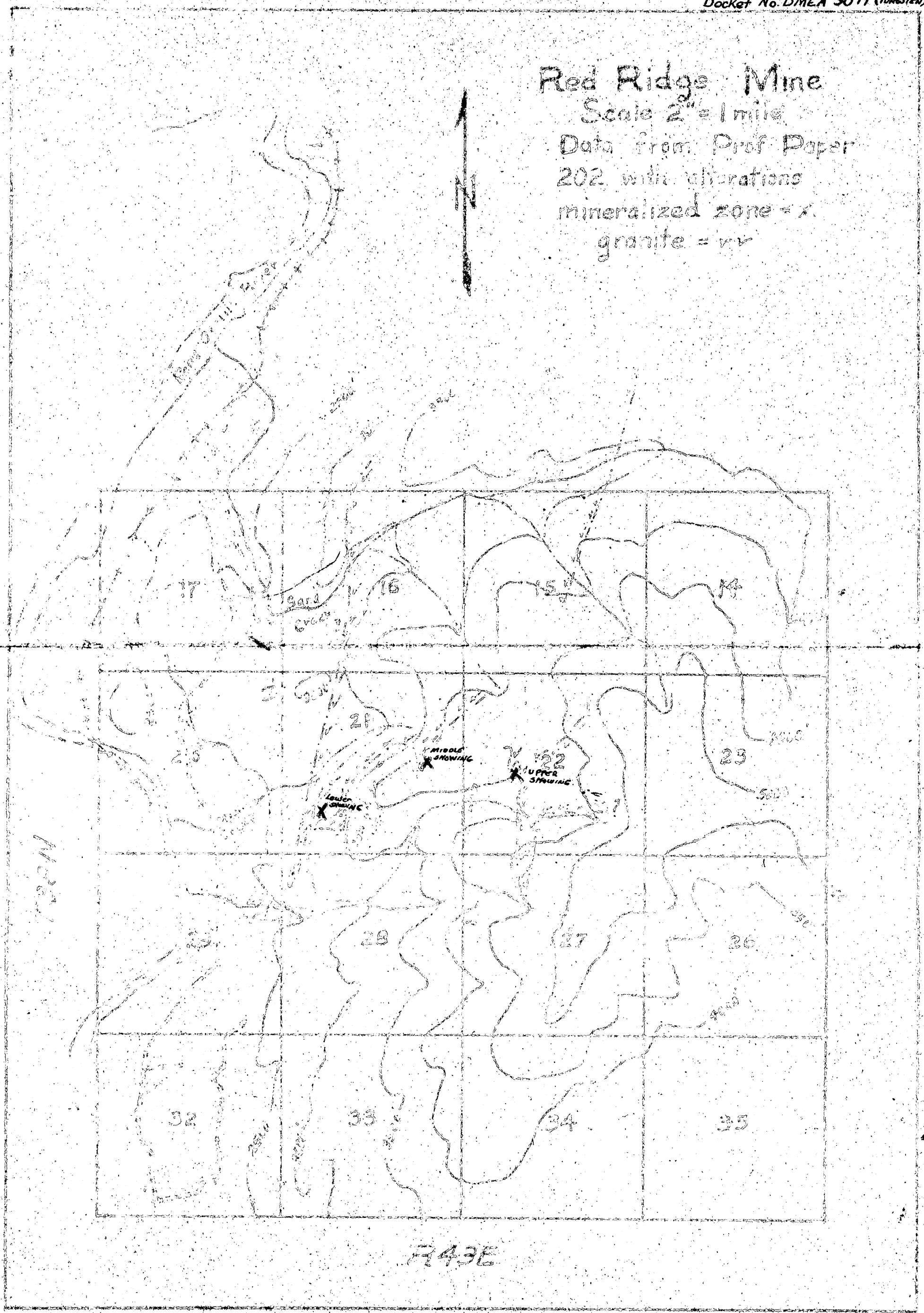
granite = rr
N
Pend Oreille River
Sand Creek
Mickey Creek
Exposure Creek
low grade tuckite
red schist
2500'
3000'
3500
4000'
4500'
5000
17
16
15
14
20
21
22
23
29
28
27
26
32
33
34
35
T38N
R43E

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