DMA Form 1.

DEFENSE MINERALS ADMINISTRATION
Control Slip

CONTROLLED DOCUMENT

DMA Docket No. 3488

DO NOT DETACH THIS SLIP

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

This document has been recorded as

Exploration Assistance

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

Cysto USBM & USGS

Routing Slip

To:	400	Date	9/15/54
To:	OperCom	Date	10/1/54
To:	OperCom	Date	1-6-54
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	
To:		Date	

DO NOT DETACH

CONTROLLED DOCUMENT

400

JAN 1 0 1955

Messrs. E. B. Ball and C. W. Reno
P. O. Box 104
Eagle Mountain, California

Re: Docket No. DMEA 488 - Tungsten
Red Ocher claims
Riverside County, California

Gentlemen:

Your application for aid for an exploration project and other data available to us in Washington relating to the above noted property have been carefully 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 of the National Defense Program.

Careful study of all our information, although noting scattered showings of tungsten mineralization on your property, 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, therefore, that your application for exploration assistance is denied.

We wish to thank you for your interest in the Defense Minerals Exploration Administration program and for bringing your property to our attention.

Sincerely yours,

C. O. Mittendorf

Administrator

TLChapman:foc
1-5-55
cc to: Docket
Code 400
Adm. Read. File
Operating Comm.
FT. REG. III
R. W. Geehan, USBM
Thor H. Kiilsgaard, USGS

January 5, 1955

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Denial of application for exploration assistance in the amount of $1,760.00
Docket No. DMEA 3488 - Tungsten
Emmett B. Ball and Charles W. Reno
Red Ocher claims
Riverside County, California

Denial of the subject application is recommended by this Division and is based on the following information:

1. The applicant requested exploration assistance in the amount of $1,760.00 for the purpose of road construction and surface exploration on the Red Ocher claims, located in the Iron Wood Mining District, Riverside County, California.

2. The Red Ocher claims are underlain by igneous and metamorphic rocks. Scheelite occurs in small scattered crystals in tactite near the contact of the two rock types and as large crystals and in thin quartz veinlets in the metamorphic rocks. Powellite also occurs in these mineralized areas.

3. Two samples from better areas showed less than 0.01 percent WO_3 and one picked sample from a veinlet returned 0.77 percent WO_3 and 2.35 percent Mo. There were no concentrations with a minable thickness of this type of ore.

4. Little work has been done on the property, but the general occurrences of scheelite and powellite indicate little possibility of developing any ore bodies of a significant size and grade.

5. The Field Team and the Commodity Divisions of the Geological Survey and the Bureau of Mines recommend that the application be denied.

TLCHAPMAN:foc
1-5-55
cc to: Docket
Code 400
Adm. Read. File
Operating Comm.

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

400

IN REPLY REFER TO:

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

December 30, 1954

Re: DMEA-3488
E. B. Ball & C. W. Reno
(Red Ocher Claims)
Riverside Co., Calif.
$1,760 - Tungsten

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

From: E. L. Newcomb, U. S. Geological Survey

Subject: Concurrence with Field Team recommendation for denial

The Field Team has recommended the applicant's proposed trenching project be denied.

Very limited exposures of tungsten-bearing tactite occur in two small areas on the property. Only sparse amounts of scheelite were found in the outcrop locations which were prospected by the applicant. The scheelite occurs as scattered crystals or small pods in epidote tactite and in quartz veinlets. Results of sampling indicate average grade of mineralization is less than 0.1 percent WO_3. By high-grading the larger scheelite crystals and pods, the Field Team obtained a composite grab sample which assayed 0.77 percent WO_3. However, this is not indicative of anything other than the grade of hand specimen amounts of ore.

Sufficient prospecting has not been done on the property; however, the present mineralized exposures do not indicate that large amounts of tungsten ore are likely to be found by further exploration.

I concur with the Field Team's conclusions, and recommend this application be denied.

E. L. Newcomb

ELNewcomb:edf

Copy to: R. W. Geehan, 3513
DMEA (3)
Director's reading, 4212
Branch, 4211

Copy retained 400

400

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

420 Custom House
555 Battery Street
San Francisco 11, Calif.

December 13, 1954

Memorandum

To: George C. Selfridge, Chairman, Operating Committee, DMEA
Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA-3488 - Tungsten
Emmett B. Ball & Charles W. Reno
Red Ocher Claims
Riverside County, California

Reference is made to your letter dated October 1, 1954, referring the subject application to us for a field examination of the property.

Attached are the original and three copies of a report entitled "DMEA-3488, Red Ocher Tungsten Claims, Riverside County, California," by Harold K. Stager, Geologist, U. S. Geological Survey, and Glenn G. Gentry, Mining Engineer, U. S. Bureau of Mines, dated December 9, 1954.

Mr. Roscoe Smith and I are in agreement with the following abstract from Mr. A. C. Johnson's covering letter of December 9, 1954, and recommend that the application for exploration aid be denied:

> "The examining engineer and geologist are in agreement that the application for exploration assistance be denied. The property is considered to be an entirely undeveloped prospect and the light, scattered and isolated occurrences of the scheelite mineral indicate that additional work on the property is not justified as it appears very unlikely that a significant discovery would be made or that a profitable mining operation could be conducted."

S. RICKER
S. Ricker, Executive Officer
DMEA Field Team, Region III

Attachment

Reviewed by
DMEA OPERATING COMMITTEE
12-27-54
(date)

Copy to: Roscoe Smith, USGS

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA-3488, Red Ocher Tungsten Claims

Riverside County, California

Harold K. Stager, Geologist
U. S. Geological Survey

Glenn G. Gentry, Mining Engineer
U. S. Bureau of Mines

December 9, 1954

Reviewed by
DMEA OPERATING COMMITTEE
12-27-54
(date)

EXAMINATION REPORT

Docket No.: DMEA-3488 (Tungsten)

Name and address of applicant: Emmett B. Ball and Charles W. Reno (Partnership)
P. O. Box 104,
Eagle Mountain, California

Name and location of property: Red Ocher Claims
Riverside County, California

SUMMARY

Under date of August 30, 1954, Mr. Emmett B. Ball and Charles W. Reno, applied to the Defense Minerals Exploration Administration for financial assistance in the amount of $1,760.00 for the purpose of road construction and surface exploration on the Red Ocher mining claims.

Pursuant to receipt of this application, the Red Ocher claims were examined and the route of the proposed road inspected. A conference was also held with Mr. Charles W. Reno, one of the partners and co-owner of the property.

The property is considered to be an entirely undeveloped prospect, and the light, scattered and isolated occurrences of the scheelite mineral indicate that additional work on the property is not justified, as it appears very unlikely that a significant discovery would be made or that a profitable mining operation could be conducted.

Reviewed by
DMEA OPERATING COMMITTEE
12-27-54
(date)

For these reasons the examining engineers recommend that the application be denied.

CONCLUSIONS AND RECOMMENDATIONS

Small exposures of "tactite" having a general northwest-southeast strike were observed in two small areas. Small amounts of scheelite mineralization follow the small seams and narrow quartz filled fissures and in general occur as very thin flakes or faces along fractures in the quartz.

There is very little dissemination of scheelite through the exposures of tactite that could be examined. All available exposures reported to contain scheelite were carefully examined by mineralight, which indicated a general average grade varying from 0.01% WO_3 to perhaps 0.25% WO_3.

For the most part, the steep hill sides are covered with loose slide rock and the operators have made no attempt to prospect any of the areas proposed in the application.

Prior to any exploration or even limited prospecting, it would be necessary to rehabilitate about two miles of old road and construct about 1-1/2 miles of new road. This road, while proposed in the best location in the area, would be subject to washouts after each hard rain storm, and in the large gulches would then require rebuilding. The examining engineers conclude that road construction, suitable for transportation of

machinery, would cost about three times more than the amount estimated by the applicants.

The scheelite exposures are too small to offer a chance for a profitable operation nor are the exposures of tonnages and values sufficient to justify exploration with government funds.

INTRODUCTION

The Red Ocher mining claims and the particular exposures of tactite, claimed by the applicant as the most pronounced, were examined on October 30, 1954. During the morning examination the engineers were accompanied by Mr. Henry Hubbard representing the applicants, and during the afternoon and the night examination by mineralight, Mr. Charles W. Reno, one of the applicants, accompanied the examining team.

NAME AND LOCATION OF PROPERTY

The Red Ocher lode mining claims are situated on the northeast slope of the Little Maria Mountains in the Ironwood Mining District of Riverside County, Calif. The claims are 26.2 miles northwest of Blythe, Calif., and are reached by traveling north from Blythe a distance of 20.5 miles on an all weather road, thence northerly for a distance of 3.4 miles over an unimproved road, thence westerly for a distance of 2.3 miles over a very rough and seldom used desert road. From the end of this last section of the road, it is necessary to walk for approximately 1.5 miles.

ACCESSIBILITY

The 2.3 miles from the unimproved county road is over very rough terrain and is barely passable for modern automobiles. Considerable grading and improvements would be necessary prior to the transportation of machinery to the property.

The 1.5 miles of new road construction will necessarily have to cross two deep gulches and in these particular locations, the road will be subject to "wash outs" after each heavy rain. When this condition occurs, it will be necessary to rebuild that portion of the road before automobile transportation can be resumed.

COMPETENCY OF APPLICANTS

Both of the applicants appear to have had considerable mining experience and are considered to be entirely capable of performing the work they propose.

Mr. Charles W. Reno is a graduate geologist, presently employed as a mill foreman for the Kaiser Steel Co. at the Iron Mines of Eagle Mountain, Calif.

Mr. Emmett B. Ball is reported to be a graduate mining engineer and is employed in the engineering department of the Kaiser Steel Co. at Eagle Mountain, Calif.

The applicants expect to secure necessary mining and road equipment on a rental basis, and to perform the work themselves by working week ends.

APPLICANTS PROPERTY RIGHTS

The mining claims comprise the Red Ocher, Red Ocher No. 2, and Red Ocher No. 3. These claims are held by "right of location" and are unsurveyed. The claims are recorded in the office of the County Recorder, Riverside County, Riverside, California as follows:

Red Ocher, Book 1458, page 81
Red Ocher No. 2, Book 1589, page 280
Red Ocher No. 3, Book 1589, page 282

The applicants report there are no financial obligations against the mining claims.

DESCRIPTION OF PROPERTY

(a) Surface facilities: None

(b) Mine workings: None

(c) Existing development: None

GEOLOGY

The Red Ocher claims are underlain by igneous and metamorphic rocks. Scheelite occurs as small scattered crystals in tactite near the contact of the two rock types and as large crystals in thin quartz veinlets in the metamorphic rocks.

The igneous rock of the claim area is a light gray, medium grained monzonite that is the principal plutonic rock of the Little Maria Mountains. Overlying the monzonite is a light-cream- to-gray, coarsely crystalline limestone that strikes northwest and dips from 20 to 50 de-

grees northeast. Thin pods and zones of epidote tactite have been formed along the contact. Several outcrops of hematite-rich rock ranging in size from small pods to masses over 100 feet in diameter are exposed at the southeast end of the Red Ocher claim and have been prospected by shallow shafts and pits. There are two faults in the claim area with displacements estimated to range from 100 to 300 feet and numerous smaller faults and fractures that generally trend northeast.

ORE DEPOSITS

There are two types of tungsten-bearing deposits on the Red Ocher claims. Scheelite (calcium tungstate) occurs (1) as scattered crystals in epidote tactite, and (2) with powellite (calcium molybdate) as large crystals and masses in quartz veinlets. Scheelite and powellite are the only ore minerals present in the surface exposures although molybdenite (molybdenum sulfide) is probably present at a shallow depth.

In contact with the monzonite at the northwest end of the Red Ocher No. 2 claim is a small epidote tactite body, about 250 feet long and 80 feet wide. Bedding in the tactite strikes N. 25° W. and dips 45° NE. Scattered crystals of fine-grained scheelite, with traces of oxidized copper minerals, occur in the tactite close to the igneous contact. An 18-inch chip sample (No. 1416) across the scheelite-bearing tactite zone in one of the better exposures contained less than 0.01 percent WO_3 and less than 0.01 percent Mo. Examination of the entire outcrop with ultraviolet light failed to dis-

close scheelite crystals in concentrations above an estimated 0.1 percent WO_3, although the applicants claim to have had samples assayed that contained as much as 0.3 percent WO_3.

Crystals and masses of scheelite, as much as 3 inches in diameter, occur with powellite in the short, thin, and discontinuous quartz veinlets in area "B". These veinlets range from a few feet to 60 feet in length and from 2 inches to 2 feet in width. Most of the veinlets strike northwest and are vertical or dip steeply northeast. A 20-inch sample (No. 1417) across one of the scheelite-bearing veinlets contained less than 0.01 percent WO_3 and less than 0.01 percent Mo. A second sample selected from the best part of the same veinlet contained 0.77 percent WO_3 and 2.35 percent Mo. Except for the widely scattered crystals of scheelite an examination of the veinlets by ultraviolet light failed to disclose any material of ore grade and no concentrations in veinlets of minable thickness.

There has been no ore produced from the Red Ocher claims.

ORE RESERVES

There are no measured, indicated, or inferred reserves of ore grade material on the Red Ocher claims. The best exposure of scheelite-bearing tactite that crops out on the property contains less than 0.01 percent WO_3. The only ore grade material exposed on the claims is in thin discontinuous quartz veinlets in the limestone and does not

occur in minable quantities. There is no geologic evidence to indicate the presence of deposits of larger size or of higher grade material elsewhere on the claims.

SAMPLING

Due to the limited size of the tactite exposures and the spotty nature of the scattered scheelite mineralization, it was considered that more information could be obtained from an inspection by use of a mineralight than by channel cut samples. For this reason, only three samples were taken, as follows:

Sample No.	Width	%, MoS	%, WO_3	Description
BM-1416	1.5'	*0.01	*0.01	Surface exposure of tactite on limestone-granite contact. About 300 feet S. 60°E. from northwest center monument of Red Ocher No. 2 claim.
BM-1417	20"	*0.01	*0.01	"B" ore body at top of saddle. This exposure about 1 foot above surface. Quarts stringers show some scheelite as thin faces.
BM-1418		2.35	0.77	Selected sample by use of mineralight. Thin faces of scheelite in fractures of quarts. Same location as BM-1417.

*Less than.

PAST OPERATION

The applicants filed on the Red Ocher mining claim in 1951 and on the Red Ocher No. 2 and No. 3 claims in 1953.

The original development consisted of sinking a shaft on the Red Ocher claim to explore an exposure of iron ore. This venture was not successful and after observing exposures of scheelite crystals in other areas, claims No. 2 and No. 3 were added to the property.

The applicants are employed by the Kaiser Steel Co. at Eagle Mountain, California, which is approximately 60 miles distant from the Red Ocher claims. Therefore, they can only spend week ends at the tungsten property. For this reason and financial reasons, the applicants have been unable to do any development work. The work done, so far, has consisted of some examination by mineralight and a small amount of sampling.

No production of tungsten ore has been made from the property.

MANPOWER, SUPPLIES, ETC.

The general market for manpower, equipment and supplies is usually from Los Angeles, Calif., however, in this instance, the applicants expect to personally conduct the exploration work and to secure any necessary equipment and supplies from the Kaiser Steel Co. at Eagle Mountain, Calif.

There is no water at the mine or in the immediate vicinity. Water for mining and domestic use would have to be hauled from the town of Blythe, Calif.

There is no transmitted electric power in this area and all machinery would have to be operated by Diesel or gasoline engines.

The climate is principally dry and hot in the summer months and moderate during the winter. All year operation could be expected.

APPLICANTS PROPOSAL

1. The applicant proposes to repair 1/4 mile of access road and to construct one mile of new road.

2. 150 feet of trenching approximately 3 feet deep.

   40 feet of trenching across the "A" ore body, and 30 feet of trenching across the "B" ore body.

   Extend an open cut 50 feet in length through part of the "B" ore body.

The examining engineers have concluded:

1. Road repairs and moderate improvements will be necessary from the county road to its present end, a distance of 2.3 miles, and the new road construction will amount to a distance of approximately 1-1/2 miles. The cost of this work has been estimated by the applicant at $336.00. The examining engineers preliminary estimate for the cost of this work is $1,200.00.

2. Trenching would be a practical method of prospecting both the "A" and "B" ore bodies. However, the limited exposures and the amount of loose overburden indicate a very speculative condition, which does not justify the work and expenditure required.

3. An open cut would only be justified for a substantial exposure of scheelite-bearing tactite, and such is not the case here.

The geological target, as presently observed, is almost non-existent and does not justify the expenditure.

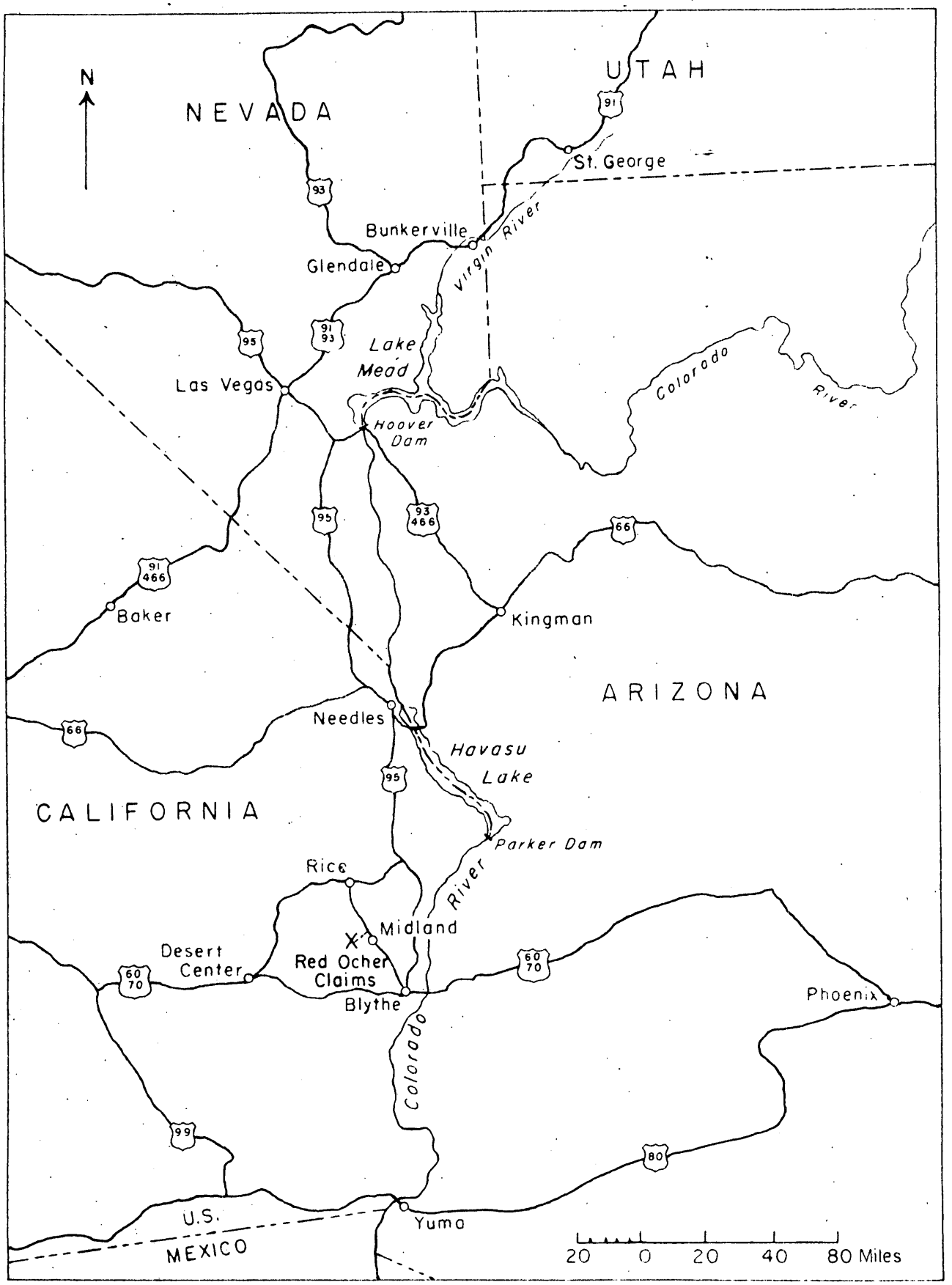


Figure 1. Index map showing location of Red Ocher Claims, Riverside County, California.

OCT 1 1954

Mr. H. C. Miller, Executive Officer
DMEA Field Team, Region III
420 Customhouse Building
San Francisco 11, California

Re: Docket No. DMEA 3488 - Tungsten
Emmett B. Ball & Charles W. Reno
Red Ocher claims
Riverside County, California

Dear Mr. Miller:

The above-docketed application for exploration assistance is being referred to your office for a field examination of the property.

Two copies of a relevant memorandum dated September 23, 1954, by E. L. Newcomb, Geological Survey, are enclosed for your information.

Also enclosed are two copies of the map received with the application.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Enclosures

APPROVED:

J. H. Hedges

Member, Bureau of Mines

Thor H. Kiilsgaard

Member, Geological Survey

cc: DOCKET
CODE 400
ADM. READ. FILE
OPER. COMM.
FT, REG. III
R. W. GEEHAN, USBM
THOR KIILSGAARD, USGS

FARutledge/ls
9-29-54

OCT 1 1954

Messrs. E. B. Ball and C. W. Reno
P. O. Box 104
Eagle Mountain, California

Re: Docket No. DMEA 3488-Tungsten
Red Ochar claims
Riverside County, California

Gentlemen:

The above-docketed application for exploration assistance for tungsten has been reviewed by the Iron and Ferro-Alloys Division of the Defense Minerals Exploration Administration and referred to Mr. H. C. Miller, Executive Officer, DMEA Field Team, Region III, 420 Custom House, 555 Battery Street, San Francisco 11, California, for a field examination of the property.

Any assistance that you can render the members of the Field Team will be appreciated.

Sincerely yours,

Frank E. Johnson

ACTING Administrator

cc: DOCKET
FT, REG. III
CODE 400
ADM. READ. FILE
OPER. COMM.
R. W. GEEHAN, USBM
THOR KIILSGAARD, USGS

FARutledge/ls
9-29-54

407

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

October 1, 1954

Memorandum

To: W. S. Martin, DMEA, Room 3538

From: R. W. Geehan

Subject: DMEA 3488 - Tungsten
Emmett B. Ball and Charles W. Reno
Red Ocher claims

The application should be referred to the Field Team.

Costs calculated by the applicants appear to be too low. The extension of costs for assays contains a mistake and should total $225, not $60.

R. W. Geehan

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 13 1954

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. 3488
Metal or Mineral TUNGSTEN
Date Received
Estimated Cost $1,760
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: Emmett E. Hall and Charles W. Reno Partnership
P. O. Box 10, Eagle Mountain, California

(*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. Three unpatented claims, the Red Ocher Red Ocher # 2 and Red Ocher #3. Legal description on accompanying sheet

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

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

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

(*e*) If you own the land, describe any liens or encumbrances on it None

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. Red Ocher #3, book 1589 Page 282. Red Ocher # 2, book 1589 page 280. Red Ocher, book 1458 page 01.

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 Scheelite

(*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 9 months from the date of an exploration project contract.

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

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

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

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

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

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

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

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

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

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

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

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

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

[X] Money [ ] Use of equipment owned by you [ ] Other

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated August 30, 19[illegible]

Charles W. Reno
Applicant
By Emmett B. Ball Jr

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

Name and address: Emmett D. Ball and
Charles W. Reno
Box 104
Eagle Mountain, Calif.

SEP 13 1954

3 a. The discovery post of the Red Ocher # 3 claim is situated 700 ft. in a southwesterly direction from a shaft 20 ft. deep sunk in iron ore. The southeast end line of the Red Ocher # 3 is also the northwest end line of the Red Ocher claim, and both the afore mentioned claims are contiguous with the Red Ocher # 2 claim. The general location of these claims is 8 miles in northwesterly directly from Midland, California in the Ironwood Mining District.

4 a. No mining has been performed on the claims. Past exploration, in which the present owners had no interest, was confined to several small open cuts and 2 15 ft. shafts sunk in iron ore. There are no production facilities. Recent exploration work done by the owners consists of lamping (ultraviolet lights), outcrops, taking channel and grab samples for WO_3 assays, and surface geological work.

The claims are accessable from Blythe, California by 26 miles of graded road, then 2 miles of unimproved road (passable for passenger cars) and an easy 1½ mile walk.

b. No production. Ore reserve, tonnage and grade, undeterminable at present time.

Name and address: Emmett B. Ball and
Charles W. Reno
Box 104
Eagle Mountain, Calif.

c. The Tungsten deposits on the property are of two general types.

(1) Typical western tactite, rich in epidote with some garnet, formed by contact metamorphism in areas along the contact of the igneous quartz monzonite ? and a massive siliceous limestone. The limestone strikes generally NW and extends several miles to the SE of the property. The width of the limestone on the property varies from approximately 200 ft. to 1000 ft. The limestone dips steeply to the NE and is cut by several large faults showing both horizontal and vertical movements. The tactite, which is quite heavy and dense at the surface, occurs on both hanging and footwall sides of the lime in widely separated areas. Assays of surface outcrops of the tactite run from .01% WO_3 to .3% WO_3. Hematite occurs in large quantities, probably as a replacement in the limestone and often lies near tactite zones. The largest tactite zone appears to be about 240 ft. X 40 ft. and dips almost vertically.

(2) Quartz veins, carrying relatively high grade massive Scheelite. These veins vary in width from stringers of 2 inches to 2 ft. In general, the veins are vertical and cut at right angles across the limestone,

Name and address: Emmett B. Ball and
Charles W. Reno
Box 104
Eagle Mountain, Calif.

quartz monzonite contacts, extending as much as 60 ft. into the quartz monzonite but only a few feet into the massive limestone. The assays on these veins (samples taken on 6 veins from 6 inches to 2 ft. in width) runs from .2% WO_3 to 1.0% WO_3. The Scheelite occuring sometimes in lumps the size of a baseball would be quite amenable to hand sorting for higher concentrates.

We wish to explore the property to determine:

(1) If the tactite bearing Scheelite will be higher grade at depth and to determine the extent of the larger bodies. The extremely dense tactite which forms most surface outcrop occurs between large areas of apparently softer material which has eroded away and been covered by talus. It is this softer material which we feel may contain a higher percent of WO_3 because of indications ~~which~~ in pieces of float that show higher assays in softer, more porous tactite.

(2) To determine the vertical and horizontal extent and grade (near the surface) of the best looking Scheelite bearing quartz vein. This work is necessary to determine if the property may be profitably mined for Scheelite.

Name and address: Emmett B. Ball and
Charles W. Reno
Box 104
Eagle Mountain, Calif.

d. The property lies about 29 miles north of Blythe, California, the nearest sizable community from which equipment, supplies and labor can be obtained. A graded road from Blythe runs to within 4 miles of the property. From there, an unimproved but passable road runs to within 1 mile of the property. The first step in exploration of this deposit would be to construct and improve the last 1½ miles. A railroad siding (Styx siding) lies 7 miles to the east of the property, accessable by a graded road. See accompanying quandrangle map.

e. Manpower, materials, supplies, equipment, and water are all available at Blythe, California. Power would have to be furnished by portable engines if needed.

5 a. Proposed work to include:

1. Repairing ¼ mile of access road by bulldozing and constructing (with bulldozer) approximately 1 mile of new road to reach property.

2. 150 ft. of trenching approximately 3 ft. deep. Three 40 ft. trenches are to traverse tactite body "A". Thirty ft. of trenching is to be done on tactite body "B".

3. An open cut 50 ft. long to be driven through part of tactite body "B" and intersect Scheelite bearing quartz vein at a maximum depth of about 15 ft. The open cut will strike to the north and be about 5 ft. wide for its entire 50 ft. length.

4. General exploration including further study of the exposed contacts, faults, etc., and night larping with ultra-

Name and address: Emmett B. Ball and
Charles W. Reno
Box 104
Eagle Mountain, Calif.

violet lights. Sampling to be done on any promising outcrops as well as subsurface as the trenching and open cut progresses.

5 b. Both members of the partnership have good mining backgrounds. Mr. Ball is a graduate mining engineer who has worked as a miner in a large underground mine as well as holding several supervisory positions in a large open pit mining operation, including pit shift foreman, and varied engineering and geological work.

Mr. Reno is a graduate mining geologist with some operating experience in small quarries and varied engineering and geological work in a large open pit operation.

These two men will supervise all operations in the proposed exploration work.

Name and address: Emmett B. Ball and
Charles W. Reno
Box 104
Eagle Mountain, Calif.

	Items	Total
6 a. Independent Contracts		
1. For repairing and constructing access road-bulldozer rental including transportation, fuel, and operator @ $12 per hr. for 28 hrs.	$336.00	$336.00
b. Labor, supervision, consultants		
1. Engineering for laying out road trenches & open cut @ $3 per hr. for 20 man hrs.	60.00	
2. Geological work, including sampling, determining contacts, faults, and lamping outcrops @ $3 per hr. for 20 man hrs.	60.00	
3. General supervision @ $3 per hr. for 25 man hrs.	75.00	
4. Drilling labor @ $2 per hr. for 50 man hrs.	100.00	
5. Trenching & mucking labor @ $1.80 per hr. for 130 man hrs.	234.00	529.00
c. Operating Materials & Supplies		
1. Powder, 6 boxes @ $10 per box	60.00	
2. Fuse & Caps	5.00	
3. Drill steel (used) & bits	40.00	
4. Picks, bars, & shovels (used)	15.00	
5. Wheelbarrow (used)	10.00	
6. Ultraviolet lamp batteries	5.00	
7. Fuel-gasoline @ $1.30 per gal. for 100 gals.	30.00	
8. Oil @ $.50 a qt. for 20 qts.	10.00	175.00

Name and address: Emmett B. Ball and
Charles W. Reno
Box 104
Eagle Mountain, Calif.

		Items	Total
d/	Operating Equipment		
	1. Air compressor and jack-hammer rental @ $4 per hr. for 50 hrs.	$200.00	
	2. Pick-up Truck (purchase used)	250.00	$450.00
e.	None		
f.	None		
g.	Miscellaneous		
	1. Repairs and maintenence on pick-up truck	30.00	
	2. Assays @ $15 per sample for 15 assays	60.00	
	3. Accounting	20.00	110.00
h.	Contingincy estimated at 10% of total, equalling	160.00	160.00
			$1760.00

15
15
75
125

IN REPLY REFER TO:

400

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

September 23, 1954

Re: DMEA-3488
E. B. Ball & C. W. Reno
(Red Ocher Claims)
Riverside Co., Calif.
$1,760 - Tungsten

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

From: E. L. Newcomb, U. S. Geological Survey

Subject: Review of application

The applicant proposes to build an access road and to trench a total of 200 feet at several places along a monzonite-limestone contact.

Tungsten mineralization is stated to occur in two types of deposits, (1) tactite developed along monzonite-limestone contacts and (2) quartz veins extending from the contact zone into monzonite and limestone. Samples from tactite assayed .01 to 0.3 percent WO_3 and assays of samples from the quartz veins contained 0.2 to 1.0 percent WO_3.

There is no record of past production from the Red Ocher claims. Previous exploration was limited to several small open cuts, and two (15 feet) prospect shafts developed in iron ore.

We have no available information on the Red Ocher property. The map of Tungsten occurrences in California, published in 1942 by the State Bureau of Mines, does not show any tungsten prospects in the neighborhood of the applicant's property. The operators' assays were undoubtedly taken from the best pods of ore and cannot be assumed to be representative of the grade of these deposits. Although the amount of proposed work is small, it is quite possible that sufficient exploration has already been done on this property.

I recommend the application be referred to the Field Team for an examination. A firm recommendation on the applicant's proposal cannot be made without further geological information.

ELNewcomb:hlm
G-9/23/54

E. L. Newcomb

CC: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
R. W. Geehan, 3513

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

400

Defense Minerals Administration
RECEIVED
SEP 13 1954

420 Custom House
555 Battery Street
San Francisco 11, California

September 8, 1954

dmea 3488

Memorandum

To: Defense Minerals Exploration Administration, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Application for DMEA loan -- Scheelite
Emmett B. Ball and Charles W. Reno (Partners)
Red Ocher Claims
Riverside County, California

Attached are three of the four copies of an exploration loan application received in this office September 7, 1954. Also enclosed is a tracing map of the property. This is the only copy of this map we received with the application.

S. RICKER

S. Ricker for
H. C. Miller
Executive Officer
DMEA Field Team, Region III

Attachments

Copy to: R. M. Smith-USGS (no attchmts.)

DOCKET
SURNAME

400 Chapman
Martin
Geehan
Kiilsgaard
Hedges
Selfridge
FEJ

JAN 10 1955

Messrs. E. B. Ball and C. W. Reno
P. O. Box 164
Eagle Mountain, California

Re: Docket No. DMEA 3436 - Tungsten
Red Ocher claims
Riverside County, California

Gentlemen:

Your application for aid for an exploration project and other data available to us in Washington relating to the above noted property have been carefully 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 of the National Defense Program.

Careful study of all our information, although noting scattered showings of tungsten mineralization on your property, 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, therefore, that your application for exploration assistance is denied.

We wish to thank you for your interest in the Defense Minerals Exploration Administration program and for bringing your property to our attention.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

TLChapman:foc
1-5-55
cc to: Docket
Code 400
Adm. Read. File
Operating Comm.
FT. REG. III
R. W. Geehan, USBM
Thor H. Kiilsgaard, USGS

RCH.

400

DOCKET
SURNAME
Chapman
Martin
Lehon
Selfridge

January 5, 1955

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Denial of application for exploration assistance in the amount of $1,760.00
Docket No. DMEA 3488 - Tungsten
Emmett B. Ball and Charles W. Reno
Red Ocher claims
Riverside County, California

Denial of the subject application is recommended by this Division and is based on the following information:

1. The applicant requested exploration assistance in the amount of $1,760.00 for the purpose of road construction and surface exploration on the Red Ocher claims, located in the Iron Wood Mining District, Riverside County, California.

2. The Red Ocher claims are underlain by igneous and metamorphic rocks. Scheelite occurs in small scattered crystals in tactite near the contact of the two rock types and as large crystals and in thin quartz veinlets in the metamorphic rocks. Powellite also occurs in these mineralized areas.

3. Two samples from better areas showed less than 0.01 percent WO_3 and one picked sample from a veinlet returned 0.77 percent WO_3 and 2.35 percent Mo. There were no concentrations with a minable thickness of this type of ore.

4. Little work has been done on the property, but the general occurrences of scheelite and powellite indicate little possibility of developing any ore bodies of a significant size and grade.

5. The Field Team and the Commodity Divisions of the Geological Survey and the Bureau of Mines recommend that the application be denied.

TLCHAPMAN:foc
1-5-55
cc to: Docket
Code 400
Adm. Read. File
Operating Comm.

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

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

400

January 5, 1955

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Denial of application for exploration assistance in the amount of $1,760.00
Docket No. DMEA 3488 - Tungsten
Emmett B. Ball and Charles W. Reno
Red Ocher claims
Riverside County, California

Denial of the subject application is recommended by this Division and is based on the following information:

1. The applicant requested exploration assistance in the amount of $1,760.00 for the purpose of road construction and surface exploration on the Red Ocher claims, located in the Iron Wood Mining District, Riverside County, California.

2. The Red Ocher claims are underlain by igneous and metamorphic rocks. Scheelite occurs in small scattered crystals in tactite near the contact of the two rock types and as large crystals and in thin quartz veinlets in the metamorphic rocks. Powellite also occurs in these mineralized areas.

3. Two samples from better areas showed less than 0.01 percent WO_3 and one picked sample from a veinlet returned 0.77 percent WO_3 and 2.35 percent Mo. There were no concentrations with a minable thickness of this type of ore.

4. Little work has been done on the property, but the general occurrences of scheelite and powellite indicate little possibility of developing any ore bodies of a significant size and grade.

5. The Field Team and the Commodity Divisions of the Geological Survey and the Bureau of Mines recommend that the application be denied.

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

Docket

IN REPLY REFER TO:

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

December 30, 1954

Re: DMEA-3488
E. B. Ball & C. W. Reno
(Red Ocher Claims)
Riverside Co., Calif.
$1,760 - Tungsten

WSM

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

From: E. L. Newcomb, U. S. Geological Survey

Subject: Concurrence with Field Team recommendation for denial

The Field Team has recommended the applicant's proposed trenching project be denied.

Very limited exposures of tungsten-bearing tactite occur in two small areas on the property. Only sparse amounts of scheelite were found in the outcrop locations which were prospected by the applicant. The scheelite occurs as scattered crystals or small pods in epidote tactite and in quartz veinlets. Results of sampling indicate average grade of mineralization is less than 0.1 percent WO_3. By high-grading the larger scheelite crystals and pods, the Field Team obtained a composite grab sample which assayed 0.77 percent WO_3. However, this is not indicative of anything other than the grade of hand specimen amounts of ore.

Sufficient prospecting has not been done on the property; however, the present mineralized exposures do not indicate that large amounts of tungsten ore are likely to be found by further exploration.

I concur with the Field Team's conclusions, and recommend this application be denied.

E. L. Newcomb

E. L. Newcomb

Copy retained 100

IN REPLY REFER TO:

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

December 30, 1954

Re: DMEA-3488
E. B. Ball & C. W. Reno
(Red Ocher Claims)
Riverside Co., Calif.
$1,760 - Tungsten

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

From: E. L. Newcomb, U. S. Geological Survey

Subject: Concurrence with Field Team recommendation for denial

The Field Team has recommended the applicant's proposed trenching project be denied.

Very limited exposures of tungsten-bearing tactite occur in two small areas on the property. Only sparse amounts of scheelite were found in the outcrop locations which were prospected by the applicant. The scheelite occurs as scattered crystals or small pods in epidote tactite and in quartz veinlets. Results of sampling indicate average grade of mineralization is less than 0.1 percent WO_3. By high-grading the larger scheelite crystals and pods, the Field Team obtained a composite grab sample which assayed 0.77 percent WO_3. However, this is not indicative of anything other than the grade of hand specimen amounts of ore.

Sufficient prospecting has not been done on the property; however, the present mineralized exposures do not indicate that large amounts of tungsten ore are likely to be found by further exploration.

I concur with the Field Team's conclusions, and recommend this application be denied.

E. L. Newcomb

ELNewcomb:edf

Copy to: R. W. Geehan, 3513
DMEA (3)
Director's reading, 4212
Branch, 4211

IN REPLY REFER TO:

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

December 30, 1954

Re: DMEA-3488
E. B. Ball & C. W. Bere
(Red Ocher Claims)
Riverside Co., Calif.
$1,760 - Tungsten

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

From: E. L. Newcomb, U. S. Geological Survey

Subject: Concurrence with Field Team recommendation for denial

The Field Team has recommended the applicant's proposed trenching project be denied.

Very limited exposures of tungsten-bearing tactite occur in two small areas on the property. Only sparse amounts of scheelite were found in the outcrop locations which were prospected by the applicant. The scheelite occurs as scattered crystals or small pods in epidote tactite and in quartz veinlets. Results of sampling indicate average grade of mineralization is less than 0.1 percent WO_3. By high-grading the larger scheelite crystals and pods, the Field Team obtained a composite grab sample which assayed 0.77 percent WO_3. However, this is not indicative of anything other than the grade of hand specimen amounts of ore.

Sufficient prospecting has not been done on the property; however, the present mineralized exposures do not indicate that large amounts of tungsten ore are likely to be found by further exploration.

I concur with the Field Team's conclusions, and recommend this application be denied.

E. L. Newcomb

ELNewcomb:edf

Copy to: R. W. Geehan, 3513
DMEA (3)
Director's reading, 4212
Branch, 4211

Docket

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

420 Custom House
555 Battery Street
San Francisco 11, Calif.

December 13, 1954

Memorandum

WSM

To: George C. Selfridge, Chairman, Operating Committee, DMEA
Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA-3488 - Tungsten
Emmett B. Ball & Charles W. Reno
Red Ocher Claims
Riverside County, California

Reference is made to your letter dated October 1, 1954, referring the subject application to us for a field examination of the property.

Attached are the original and three copies of a report entitled "DMEA-3488, Red Ocher Tungsten Claims, Riverside County, California," by Harold K. Stager, Geologist, U. S. Geological Survey, and Glenn G. Gentry, Mining Engineer, U. S. Bureau of Mines, dated December 9, 1954.

Mr. Roscoe Smith and I are in agreement with the following abstract from Mr. A. C. Johnson's covering letter of December 9, 1954, and recommend that the application for exploration aid be denied:

> "The examining engineer and geologist are in agreement that the application for exploration assistance be denied. The property is considered to be an entirely undeveloped prospect and the light, scattered and isolated occurrences of the scheelite mineral indicate that additional work on the property is not justified as it appears very unlikely that a significant discovery would be made or that a profitable mining operation could be conducted."

S. Ricker, Executive Officer
DMEA Field Team, Region III

Attachment

Reviewed by
DMEA OPERATING COMMITTEE
12-27-54
(date)

Copy to: Roscoe Smith, USGS

DEC 26 1954

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA-3488, Red Ocher Tungsten Claims

Riverside County, California

Harold K. Stager, Geologist
U. S. Geological Survey

Glenn G. Gentry, Mining Engineer
U. S. Bureau of Mines

December 9, 1954

Reviewed by
DMEA OPERATING COMMITTEE
12-27-54
(date)

EXAMINATION REPORT

Docket No.: DMEA-3488 (Tungsten)

Name and address of applicant: Emmett B. Ball and Charles W. Reno (Partnership)
P. O. Box 104,
Eagle Mountain, California

Name and location of property: Red Ocher Claims
Riverside County, California

SUMMARY

Under date of August 30, 1954, Mr. Emmett B. Ball and Charles W. Reno, applied to the Defense Minerals Exploration Administration for financial assistance in the amount of $1,760.00 for the purpose of road construction and surface exploration on the Red Ocher mining claims.

Pursuant to receipt of this application, the Red Ocher claims were examined and the route of the proposed road inspected. A conference was also held with Mr. Charles W. Reno, one of the partners and co-owner of the property.

The property is considered to be an entirely undeveloped prospect, and the light, scattered and isolated occurrences of the scheelite mineral indicate that additional work on the property is not justified, as it appears very unlikely that a significant discovery would be made or that a profitable mining operation could be conducted.

For these reasons the examining engineers recommend that the application be denied.

CONCLUSIONS AND RECOMMENDATIONS

Small exposures of "tactite" having a general northwest-southeast strike were observed in two small areas. Small amounts of scheelite mineralization follow the small seams and narrow quartz filled fissures and in general occur as very thin flakes or faces along fractures in the quartz.

There is very little dissemination of scheelite through the exposures of tactite that could be examined. All available exposures reported to contain scheelite were carefully examined by mineralight, which indicated a general average grade varying from 0.01% WO_3 to perhaps 0.25% WO_3.

For the most part, the steep hill sides are covered with loose slide rock and the operators have made no attempt to prospect any of the areas proposed in the application.

Prior to any exploration or even limited prospecting, it would be necessary to rehabilitate about two miles of old road and construct about 1-1/2 miles of new road. This road, while proposed in the best location in the area, would be subject to washouts after each hard rain storm, and in the large gulches would then require rebuilding. The examining engineers conclude that road construction, suitable for transportation of

machinery, would cost about three times more than the amount estimated by the applicants.

The scheelite exposures are too small to offer a chance for a profitable operation nor are the exposures of tonnages and values sufficient to justify exploration with government funds.

INTRODUCTION

The Red Ocher mining claims and the particular exposures of tactite, claimed by the applicant as the most pronounced, were examined on October 30, 1954. During the morning examination the engineers were accompanied by Mr. Henry Hubbard representing the applicants, and during the afternoon and the night examination by mineralight, Mr. Charles W. Reno, one of the applicants, accompanied the examining team.

NAME AND LOCATION OF PROPERTY

The Red Ocher lode mining claims are situated on the northeast slope of the Little Maria Mountains in the Ironwood Mining District of Riverside County, Calif. The claims are 26.2 miles northwest of Blythe, Calif., and are reached by traveling north from Blythe a distance of 20.5 miles on an all weather road, thence northerly for a distance of 3.4 miles over an unimproved road, thence westerly for a distance of 2.3 miles over a very rough and seldom used desert road. From the end of this last section of the road, it is necessary to walk for approximately 1.5 miles.

ACCESSIBILITY

The 2.3 miles from the unimproved county road is over very rough terrain and is barely passable for modern automobiles. Considerable grading and improvements would be necessary prior to the transportation of machinery to the property.

The 1.5 miles of new road construction will necessarily have to cross two deep gulches and in these particular locations, the road will be subject to "wash outs" after each heavy rain. When this condition occurs, it will be necessary to rebuild that portion of the road before automobile transportation can be resumed.

COMPETENCY OF APPLICANTS

Both of the applicants appear to have had considerable mining experience and are considered to be entirely capable of performing the work they propose.

Mr. Charles W. Reno is a graduate geologist, presently employed as a mill foreman for the Kaiser Steel Co. at the Iron Mines of Eagle Mountain, Calif.

Mr. Emmett B. Ball is reported to be a graduate mining engineer and is employed in the engineering department of the Kaiser Steel Co. at Eagle Mountain, Calif.

The applicants expect to secure necessary mining and road equipment on a rental basis, and to perform the work themselves by working week ends.

APPLICANTS PROPERTY RIGHTS

The mining claims comprise the Red Ocher, Red Ocher No. 2, and Red Ocher No. 3. These claims are held by "right of location" and are unsurveyed. The claims are recorded in the office of the County Recorder, Riverside County, Riverside, California as follows:

Red Ocher, Book 1458, page 81
Red Ocher No. 2, Book 1589, page 280
Red Ocher No. 3, Book 1589, page 282

The applicants report there are no financial obligations against the mining claims.

DESCRIPTION OF PROPERTY

(a) Surface facilities: None

(b) Mine workings: None

(c) Existing development: None

GEOLOGY

The Red Ocher claims are underlain by igneous and metamorphic rocks. Scheelite occurs as small scattered crystals in tactite near the contact of the two rock types and as large crystals in thin quartz veinlets in the metamorphic rocks.

The igneous rock of the claim area is a light gray, medium grained monzonite that is the principal plutonic rock of the Little Maria Mountains. Overlying the monzonite is a light-cream- to-gray, coarsely crystalline limestone that strikes northwest and dips from 20 to 50 de-

grees northeast. Thin pods and zones of epidote tactite have been formed along the contact. Several outcrops of hematite-rich rock ranging in size from small pods to masses over 100 feet in diameter are exposed at the southeast end of the Red Ocher claim and have been prospected by shallow shafts and pits. There are two faults in the claim area with displacements estimated to range from 100 to 300 feet and numerous smaller faults and fractures that generally trend northeast.

ORE DEPOSITS

There are two types of tungsten-bearing deposits on the Red Ocher claims. Scheelite (calcium tungstate) occurs (1) as scattered crystals in epidote tactite, and (2) with powellite (calcium molybdate) as large crystals and masses in quartz veinlets. Scheelite and powellite are the only ore minerals present in the surface exposures although molybdenite (molybdenum sulfide) is probably present at a shallow depth.

In contact with the monzonite at the northwest end of the Red Ocher No. 2 claim is a small epidote tactite body, about 250 feet long and 80 feet wide. Bedding in the tactite strikes N. 25° W. and dips 45° NE. Scattered crystals of fine-grained scheelite, with traces of oxidized copper minerals, occur in the tactite close to the igneous contact. An 18-inch chip sample (No. 1416) across the scheelite-bearing tactite zone in one of the better exposures contained less than 0.01 percent WO_3 and less than 0.01 percent Mo. Examination of the entire outcrop with ultraviolet light failed to dis-

close scheelite crystals in concentrations above an estimated 0.1 percent WO_3, although the applicants claim to have had samples assayed that contained as much as 0.3 percent WO_3.

Crystals and masses of scheelite, as much as 3 inches in diameter, occur with powellite in the short, thin, and discontinuous quartz veinlets in area "B". These veinlets range from a few feet to 60 feet in length and from 2 inches to 2 feet in width. Most of the veinlets strike northwest and are vertical or dip steeply northeast. A 20-inch sample (No. 1417) across one of the scheelite-bearing veinlets contained less than 0.01 percent WO_3 and less than 0.01 percent Mo. A second sample selected from the best part of the same veinlet contained 0.77 percent WO_3 and 2.35 percent Mo. Except for the widely scattered crystals of scheelite an examination of the veinlets by ultraviolet light failed to disclose any material of ore grade and no concentrations in veinlets of minable thickness.

There has been no ore produced from the Red Ocher claims.

ORE RESERVES

There are no measured, indicated, or inferred reserves of ore grade material on the Red Ocher claims. The best exposure of scheelite-bearing tactite that crops out on the property contains less than 0.01 percent WO_3. The only ore grade material exposed on the claims is in thin discontinuous quartz veinlets in the limestone and does not

occur in minable quantities. There is no geologic evidence to indicate the presence of deposits of larger size or of higher grade material elsewhere on the claims.

SAMPLING

Due to the limited size of the tactite exposures and the spotty nature of the scattered scheelite mineralization, it was considered that more information could be obtained from an inspection by use of a mineralight than by channel cut samples. For this reason, only three samples were taken, as follows:

Sample No.	Width	%, MoS	%, WO_3	Description
BM-1416	1.5'	*0.01	*0.01	Surface exposure of tactite on limestone-granite contact. About 300 feet S. 60°E. from northwest center monument of Red Ocher No. 2 claim.
BM-1417	20"	*0.01	*0.01	"B" ore body at top of saddle. This exposure about 1 foot above surface. Quartz stringers show some scheelite as thin faces.
BM-1418		2.35	0.77	Selected sample by use of mineralight. Thin faces of scheelite in fractures of quartz. Same location as BM-1417.

*Less than.

PAST OPERATION

The applicants filed on the Red Ocher mining claim in 1951 and on the Red Ocher No. 2 and No. 3 claims in 1953.

The original development consisted of sinking a shaft on the Red Ocher claim to explore an exposure of iron ore. This venture was not successful and after observing exposures of scheelite crystals in other areas, claims No. 2 and No. 3 were added to the property.

The applicants are employed by the Kaiser Steel Co. at Eagle Mountain, California, which is approximately 60 miles distant from the Red Ocher claims. Therefore, they can only spend week ends at the tungsten property. For this reason and financial reasons, the applicants have been unable to do any development work. The work done, so far, has consisted of some examination by mineralight and a small amount of sampling.

No production of tungsten ore has been made from the property.

MANPOWER, SUPPLIES, ETC.

The general market for manpower, equipment and supplies is usually from Los Angeles, Calif., however, in this instance, the applicants expect to personally conduct the exploration work and to secure any necessary equipment and supplies from the Kaiser Steel Co. at Eagle Mountain, Calif.

There is no water at the mine or in the immediate vicinity. Water for mining and domestic use would have to be hauled from the town of Blythe, Calif.

There is no transmitted electric power in this area and all machinery would have to be operated by Diesel or gasoline engines.

The climate is principally dry and hot in the summer months and moderate during the winter. All year operation could be expected.

APPLICANTS PROPOSAL

1. The applicant proposes to repair 1/4 mile of access road and to construct one mile of new road.

2. 150 feet of trenching approximately 3 feet deep.

   40 feet of trenching across the "A" ore body, and 30 feet of trenching across the "B" ore body.

   Extend an open cut 50 feet in length through part of the "B" ore body.

The examining engineers have concluded:

1. Road repairs and moderate improvements will be necessary from the county road to its present end, a distance of 2.3 miles, and the new road construction will amount to a distance of approximately 1-1/2 miles. The cost of this work has been estimated by the applicant at $336.00. The examining engineers preliminary estimate for the cost of this work is $1,200.00.

2. Trenching would be a practical method of prospecting both the "A" and "B" ore bodies. However, the limited exposures and the amount of loose overburden indicate a very speculative condition, which does not justify the work and expenditure required.

3. An open cut would only be justified for a substantial exposure of scheelite-bearing tactite, and such is not the case here.

The geological target, as presently observed, is almost non-existent and does not justify the expenditure.

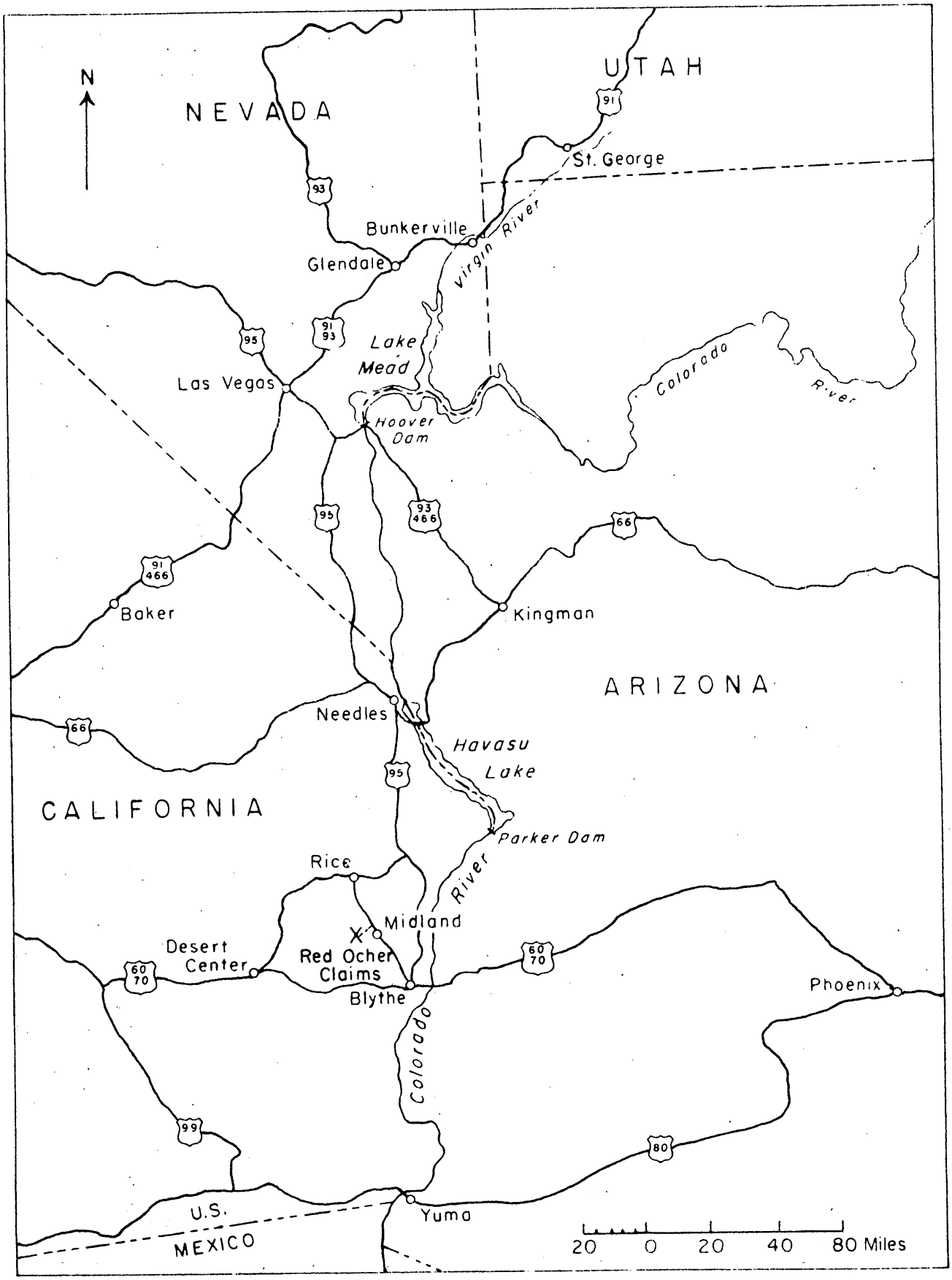


Figure 1. Index map showing location of Red Ocher Claims, Riverside County, California.

Docket

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

October 1, 1954

Memorandum

To: W. S. Martin, DMEA, Room 3538

WSM

From: R. W. Geehan

Subject: DMEA 3488 - Tungsten
Emmett B. Ball and Charles W. Reno
Red Ocher claims

The application should be referred to the Field Team.

Costs calculated by the applicants appear to be too low. The extension of costs for assays contains a mistake and should total $225, not $60.

but we think the price should be changed and that the total is OK

R. W. Geehan
R. W. Geehan

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

October 1, 1954

Memorandum

To: W. S. Martin, DMEA, Room 3538

From: R. W. Geehan

Subject: DMEA 3488 - Tungsten
Emmett B. Ball and Charles W. Reno
Red Ocher claims

The application should be referred to the Field Team.

Costs calculated by the applicants appear to be too low. The extension of costs for assays contains a mistake and should total $225, not $60.

R. W. Geehan

DOCKET
Surname:
Rutledge
Geehan
Martin
Kiilsgaard
Hedges
Selfridge

400

OCT 1 1954

Messrs. E. B. Ball and C. W. Reno
P. O. Box 104
Eagle Mountain, California

Re: Docket No. DMEA 3488-Tungsten
Red Ocher claims
Riverside County, California

Gentlemen:

The above-docketed application for exploration assistance for tungsten has been reviewed by the Iron and Ferro-Alloys Division of the Defense Minerals Exploration Administration and referred to Mr. H. C. Miller, Executive Officer, DMEA Field Team, Region III, 420 Custom House, 555 Battery Street, San Francisco 11, California, for a field examination of the property.

Any assistance that you can render the members of the Field Team will be appreciated.

Sincerely yours,

Frank E. Johnson

ACTING Administrator

cc: DOCKET
FT, REG. III
CODE 400
ADM. READ. FILE
OPER. COMM.
R. W. GEEHAN, USBM
THOR KIILSGAARD USGS

FARutledge/ls
9-29-54

R.C.S.

40

DOCKET
Surname:
Rutledge
Martin
Geehan
Selfridge
Jefferson

OCT 1 1954

Mr. H. C. Miller, Executive Officer
DMEA Field Team, Region III
420 Customhouse Building
San Francisco 11, California

Re: Docket No. DMEA 3488 - Tungsten
Emmett B. Ball & Charles W. Reno
Red Ocher claims
Riverside County, California

Dear Mr. Miller:

The above-docketed application for exploration assistance is being referred to your office for a field examination of the property.

Two copies of a relevant memorandum dated September 23, 1954, by E. L. Newcomb, Geological Survey, are enclosed for your information.

Also enclosed are two copies of the map received with the application.

Sincerely yours,

George C. Selfridge (By ESJ)

Chairman, Operating Committee

Enclosures

APPROVED:

J. H. Hedges

Member, Bureau of Mines

Member, Geological Survey

cc: DOCKET
CODE 400
ADM. READ. FILE
OPER. COMM.
FT, REG. III
R. W. GEEHAN, USBM
THOR KIILSGAARD, USGS

FARutledge/ls
9-29-54

R.C.L.

Docket

IN REPLY REFER TO:

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

September 23, 1954

Re: DMEA-3488
E. B. Ball & C. W. Reno
(Red Ocher Claims)
Riverside Co., Calif.
$1,760 - Tungsten

WSM

Memorandum

To: W. S. Martin, Defense Minerals Exploration Administration

From: E. L. Newcomb, U. S. Geological Survey

Subject: Review of application

The applicant proposes to build an access road and to trench a total of 200 feet at several places along a monzonite-limestone contact.

Tungsten mineralization is stated to occur in two types of deposits, (1) tactite developed along monzonite-limestone contacts and (2) quartz veins extending from the contact zone into monzonite and limestone. Samples from tactite assayed .01 to 0.3 percent WO_3 and assays of samples from the quartz veins contained 0.2 to 1.0 percent WO_3.

There is no record of past production from the Red Ocher claims. Previous exploration was limited to several small open cuts, and two (15 foot) prospect shafts developed in iron ore.

We have no available information on the Red Ocher property. The map of Tungsten occurrences in California, published in 1942 by the State Bureau of Mines, does not show any tungsten prospects in the neighborhood of the applicant's property. The operators' assays were undoubtedly taken from the best pods of ore and cannot be assumed to be representative of the grade of these deposits. Although the amount of proposed work is small, it is quite possible that sufficient exploration has already been done on this property.

I recommend the application be referred to the Field Team for an examination. A firm recommendation on the applicant's proposal cannot be made without further geological information.

E. L. Newcomb

E. L. Newcomb

Copy retained 23

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

September 15, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region III

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 III.

DMEA - 3488 Emmett B. Ball & Charles W. Reno

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

September 15, 1954
Subject: DMEA-3488
Re: Exploration Assistance
Red Ocher Claims

Messers. Emmett B. Ball &
Charles W. Reno
P. O. Box 104
Eagle Mountain, California

Gentlemen:

The receipt of your application dated August 30, 1954 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-3488 and referred to the Iron and Ferro Alloys Division.

Kindly refer to in any future correspondence relating to your application.

Sincerely yours,

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 13 1954

420 Custom House
555 Battery Street
San Francisco 11, California

September 8, 1954

Dmea 3488

Memorandum

To: Defense Minerals Exploration Administration, Interior Building, Washington 25, D. C.

From: Executive Officer, DMEA Field Team, Region III

Subject: Application for DMEA loan -- Scheelite
Emmett B. Ball and Charles W. Reno (Partners)
Red Ocher Claims
Riverside County, California

Attached are three of the four copies of an exploration loan application received in this office September 7, 1954. Also enclosed is a tracing map of the property. This is the only copy of this map we received with the application.

S. Ricker for
H. C. Miller
Executive Officer
DMEA Field Team, Region III

Attachments

Copy to: R. M. Smith-USGS (no attchmts.)

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

Department of the Interior
Defense Minerals Administration
RECEIVED
SEP 13 1954

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. 3488
Metal or Mineral Tungsten
Date Received
Estimated Cost $1,760
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: Emmett B. Ball and Charles W. Reno Partnership
P. O. Box 104 Eagle Mountain, California

(*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 Three unpatented claims, the Red Ocher Red Ocher # 2 and Red Ocher #3. Legal description on accompanying sheet

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

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

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

(*e*) If you own the land, describe any liens or encumbrances on it None

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. Red Ocher # 3, book 1589 Page 282. Red Ocher # 2, book 1589 page 280. Red Ocher, book 1458 page 81.

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 Scheelite

(*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 9 months from the date of an exploration project contract.

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

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

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

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

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

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

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

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

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

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

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

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

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

[X] Money [ ] Use of equipment owned by you [ ] Other

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated August 30, 1954

Charles W. Reno
(Applicant)
By Emmett B. Ball Jr.

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

Name and address: Emmett B. Ball and
Charles W. Reno
Box 1104
Eagle Mountain, Calif.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 13 1954

3 a. The discovery post of the Red Ocher # 3 claim is situated 700 ft. in a southwesterly direction from a shaft 20 ft. deep sunk in iron ore. The southeast end line of the Red Ocher # 3 is also the northwest end line of the Red Ocher claim, and both the afore mentioned claims are contiguous with the Red Ocher # 2 claim. The general location of these claims is 8 miles in northwesterly directly from Midland, California in the Ironwood Mining District.

4 a. No mining has been performed on the claims. Past exploration, in which the present owners had no interest, was confined to several small open cuts and 2 15 ft. shafts sunk in iron ore. There are no production facilities. Recent exploration work done by the owners consists of lamping (ultraviolet lights), outcrops, taking channel and grab samples for WO_3 assays, and surface geological work.

The claims are accessable from Blythe, California by 26 miles of graded road, then 2 miles of unimproved road (passable for passenger cars) and an easy 1½ mile walk.

b. No production. Ore reserve, tonnage and grade, undeterminable at present time.

Name and address: Emmett B. Ball and
Charles W. Reno
Box 104
Eagle Mountain, Calif.

c. The Tungsten deposits on the property are of two general types.

(1) Typical western tactite, rich in epidote with some garnet, formed by contact metamorphism in areas along the contact of the igneous quartz monzonite ? and a massive siliceous limestone. The limestone strikes generally NW and extends several miles to the SE of the property. The width of the limestone on the property varies from approximately 200 ft. to 1000 ft. The limestone dips steeply to the NE and is cut by several large faults showing both horizontal and vertical movements. The tactite, which is quite heavy and dense at the surface, occurs on both hanging and footwall sides of the lime in widely separated areas. Assays of surface outcrops of the tactite run from .01% WO_3 to .3% WO_3. Hematite occurs in large quantities, probably as a replacement in the limestone and often lies near tactite zones. The largest tactite zone appears to be about 240 ft. X 40 ft. and dips almost vertically.

(2) Quartz veins, carrying relatively high grade massive Scheelite. These veins vary in width from stringers of 2 inches to 2 ft. In general, the veins are vertical and cut at right angles across the limestone,

Name and address: Emmett B. Ball and
Charles W. Reno
Box 104
Eagle Mountain, Calif.

quartz monzonite contacts, extending as much as 60 ft. into the quartz monzonite but only a few feet into the massive limestone. The assays on these veins (samples taken on 6 veins from 6 inches to 2 ft. in width) runs from .2% WO_3 to 1.0% WO_3. The Scheelite occuring sometimes in lumps the size of a baseball would be quite amenable to hand sorting for higher concentrates.

We wish to explore the property to determine:

(1) If the tactite bearing Scheelite will be higher grade at depth and to determine the extent of the larger bodies. The extremely dense tactite which forms most surface outcrop occurs between large areas of apparently softer material which has eroded away and been covered by talus. It is this softer material which we feel may contain a higher percent of WO_3 because of indications ~~which~~ in pieces of float that show higher assays in softer, more porous tactite.

(2) To determine the vertical and horizontal extent and grade (near the surface) of the best looking Scheelite bearing quartz vein. This work is necessary to determine if the property may be profitably mined for Scheelite.

Name and address: Emmett B. Ball and
Charles W. Reno
Box 104
Eagle Mountain, Calif.

d. The property lies about 29 miles north of Blythe, California, the nearest sizable community from which equipment, supplies and labor can be obtained. A graded road from Blythe runs to within 4 miles of the property. From there, an unimproved but passable road runs to within 1 mile of the property. The first step in exploration of this deposit would be to construct and improve the last 1½ miles. A railroad siding (Styx siding) lies 7 miles to the east of the property, accessable by a graded road. See accompanying quandrangle map.

e. Manpower, materials, supplies, equipment, and water are all available at Blythe, California. Power would have to be furnished by portable engines if needed.

5 a. Proposed work to include:

1. Repairing ¼ mile of access road by bulldozing and constructing (with bulldozer) approximately 1 mile of new road to reach property.
2. 150 ft. of trenching approximately 3 ft. deep. Three 40 ft. trenches are to traverse tactite body "A". Thirty ft. of trenching is to be done on tactite body "B".
3. An open cut 50 ft. long to be driven through part of tactite body "B" and intersect Scheelite bearing quartz vein at a maximum depth of about 15 ft. The open cut will strike to the north and be about 5 ft. wide for its entire 50 ft. length.
4. General exploration including further study of the exposed contacts, faults, etc., and night lamping with ultra-

Name and address: Emmett B. Ball and
Charles W. Reno
Box 104
Eagle Mountain, Calif.

violet lights. Sampling to be done on any promising outcrops as well as subsurface as the trenching and open cut progresses.

5 b. Both members of the partnership have good mining backgrounds. Mr. Ball is a graduate mining engineer who has worked as a miner in a large underground mine as well as holding several supervisory positions in a large open pit mining operation, including pit shift foreman, and varied engineering and geological work.

Jr. Eng., Kaiser Steel Co.

Mr. Reno is a graduate mining geologist with some operating experience in small quarries and varied engineering and geological work in a large open pit operation.

Jr. Eng., Kaiser Steel Co.

These two men will supervise all operations in the proposed exploration work.

Name and address: Emmett B. Ball and
Charles W. Reno
Box 104
Eagle Mountain, Calif.

	Items	Total
6 a. Independent Contracts		
1. For repairing and constructing access road-bulldozer rental including transportation, fuel, and operator @ $12 per hr. for 28 hrs.	$336.00	$336.00
b. Labor, supervision, consultants		
1. Engineering for laying out road trenches & open cut @ $3 per hr. for 20 man hrs.	60.00	
2. Geological work, including sampling, determining contacts, faults, and lamping outcrops @ $3 per hr. for 20 man hrs.	60.00	
3. General supervision @ $3 per hr. for 25 man hrs.	75.00	
4. Drilling labor @ $2 per hr. for 50 man hrs.	100.00	
5. Trenching & mucking labor @ $1.80 per hr. for 130 man hrs.	234.00	529.00
c. Operating Materials & Supplies		
1. Powder, 6 boxes @ $10 per box	60.00	
2. Fuse & Caps	5.00	
3. Drill steel (used) & bits	40.00	
4. Picks, bars, & shovels (used)	15.00	
5. Wheelbarrow (used)	10.00	
6. Ultraviolet lamp batteries	5.00	
7. Fuel-gasoline @ $1.30 per gal. for 100 gals.	30.00	
8. Oil @ $.50 a qt. for 20 qts.	10.00	175.00

Name and address: Emmett B. Ball and
Charles W. Reno
Box 104
Eagle Mountain, Calif.

		Items	Total
d/	Operating Equipment		
	1. Air compressor and jack-hammer rental @ $4 per hr. for 50 hrs.	$200.00	
	2. Pick-up Truck (purchase used)	250.00	$450.00
e.	None		
f.	None		
g.	Miscellaneous		
	1. Repairs and maintenence on pick-up truck	30.00	
	2. Assays @ $15 probably $4.00 per sample for 15 assays	60.00	
	3. Accounting	20.00	110.00
h.	Contingincy estimated at 10% of total, equalling	160.00	160.00
			$1760.00

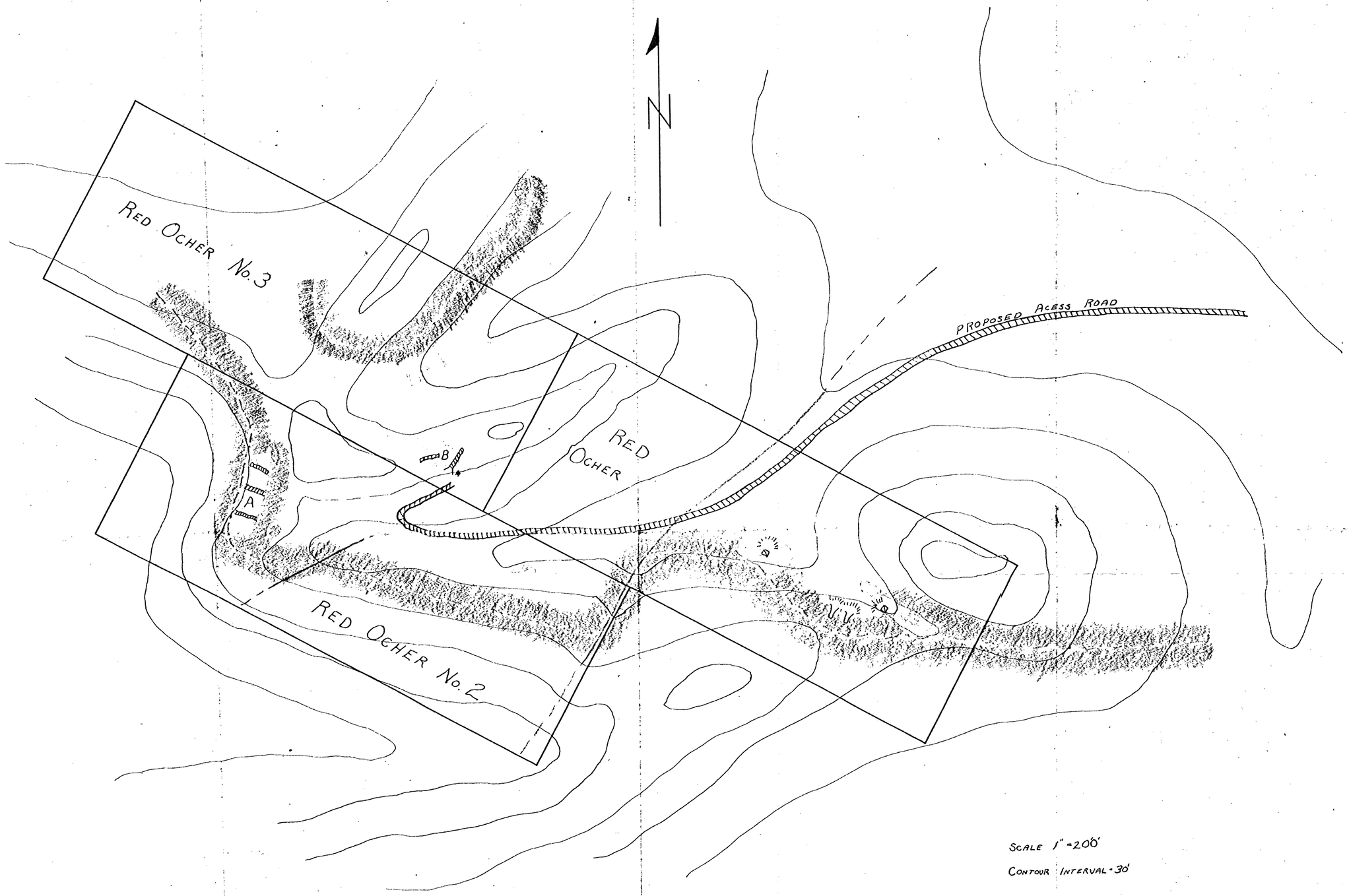
SPOKANE 2, WASHINGTON

OFFICIAL BUSINESS

SE 8 1954

SE 8 1954

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



SCALE 1" = 200'

CONTOUR INTERVAL = 30'

PROPOSED WORK

LIMESTONE - MONZONITE CONTACT

IRON OUTCROPS

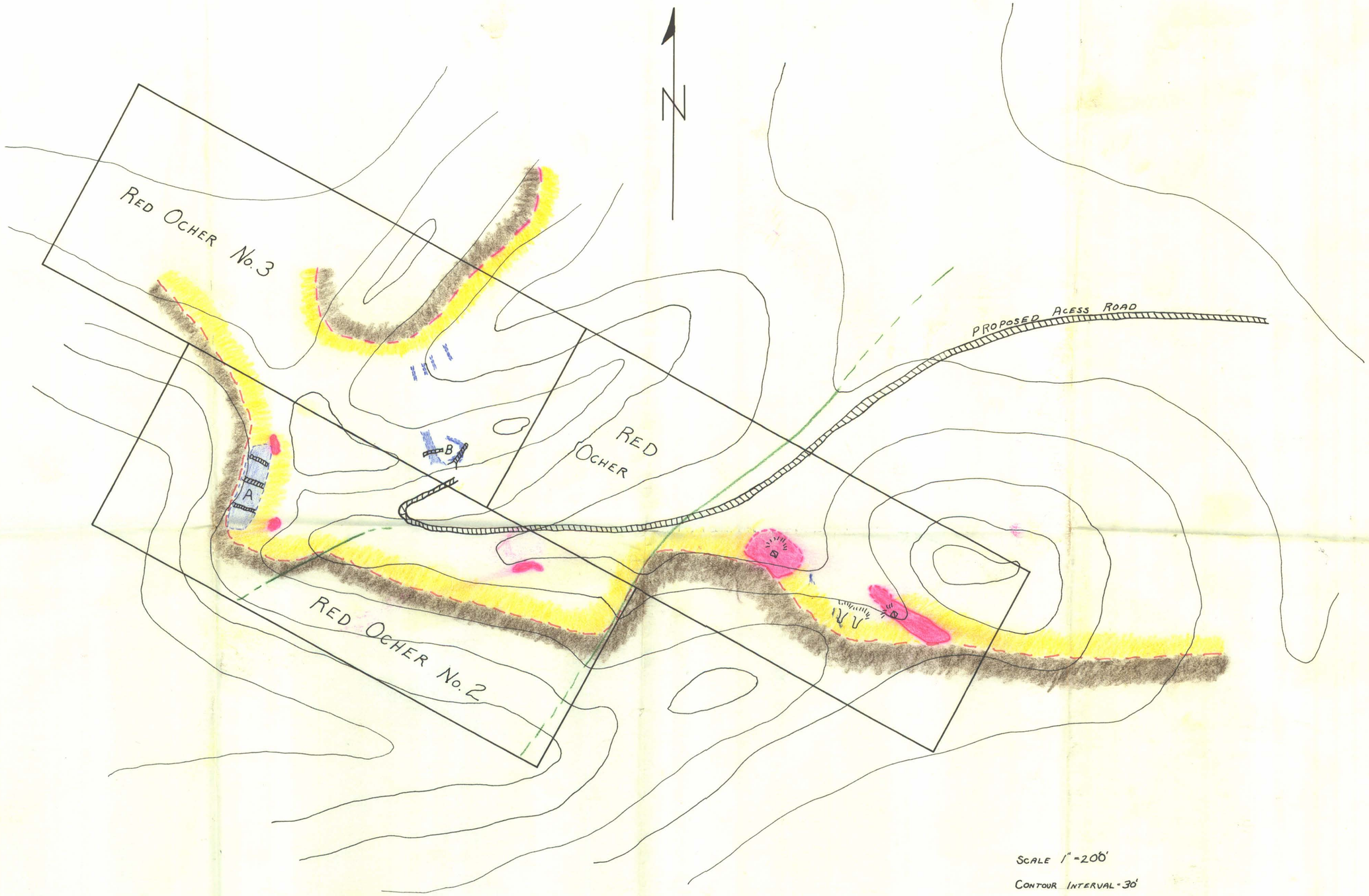
FAULT

MONZONITE

LIMESTONE.

TACTITE & QUARTZ BEARING SCHEELITE

(Reduced) copy of Belyea Dur Life & Johnson
Surveyors Certificate Plan No. 4
P. O. Box 1011, Sale Lake City



SCALE 1" = 200'

CONTOUR INTERVAL = 30'

PROPOSED WORK

LIMESTONE - MONZONITE CONTACT

IRON OUTCROPS

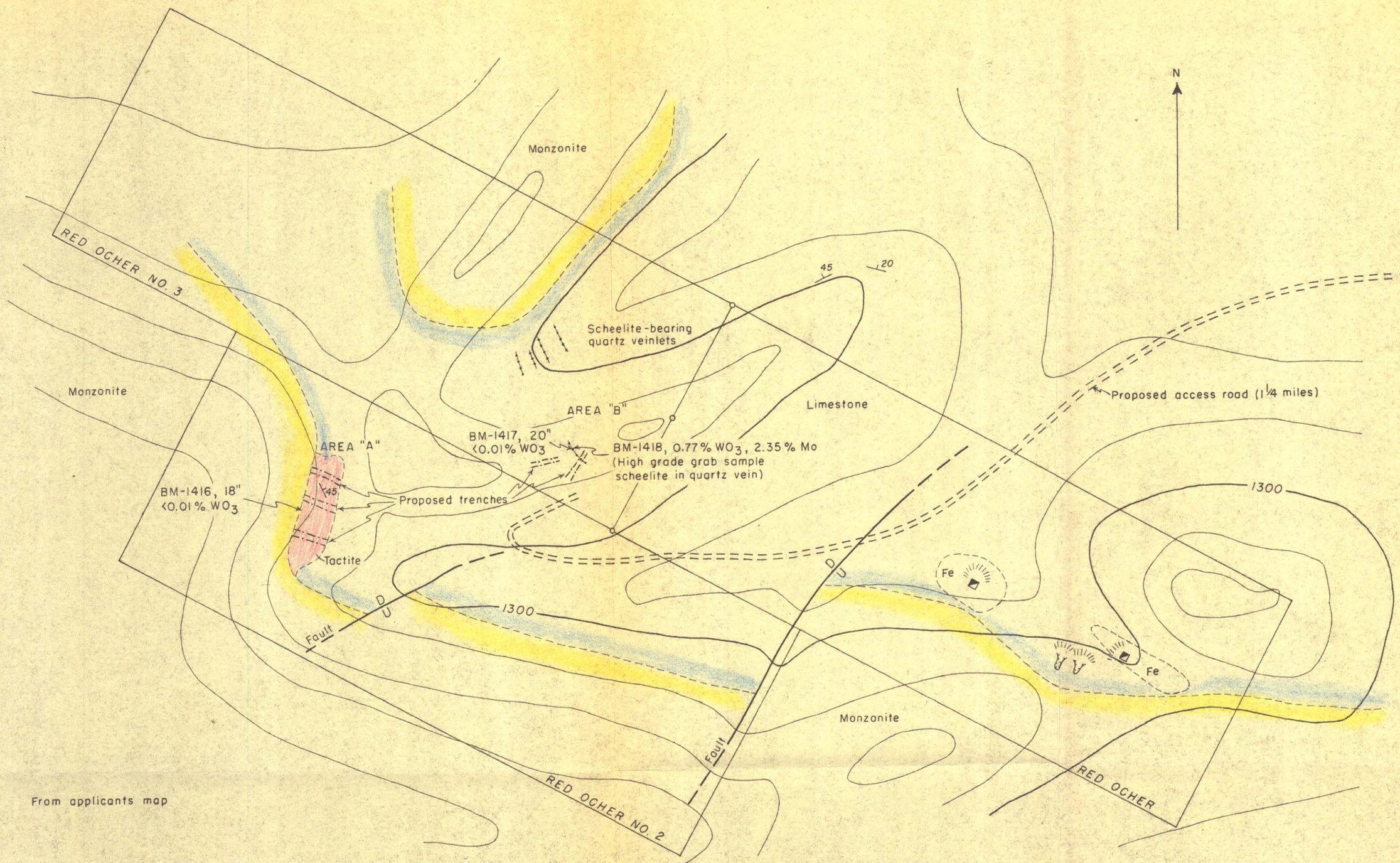
FAULT

MONZONITE

LIMESTONE

TACTITE & QUARTZ BEARING SCHEELITE

(Retained) Owen W. Reynolds Due Lead & Jumbo
P. O. Box 101, Eagle Mountain Sign, Lot 0.9
Santillo, Clearwater



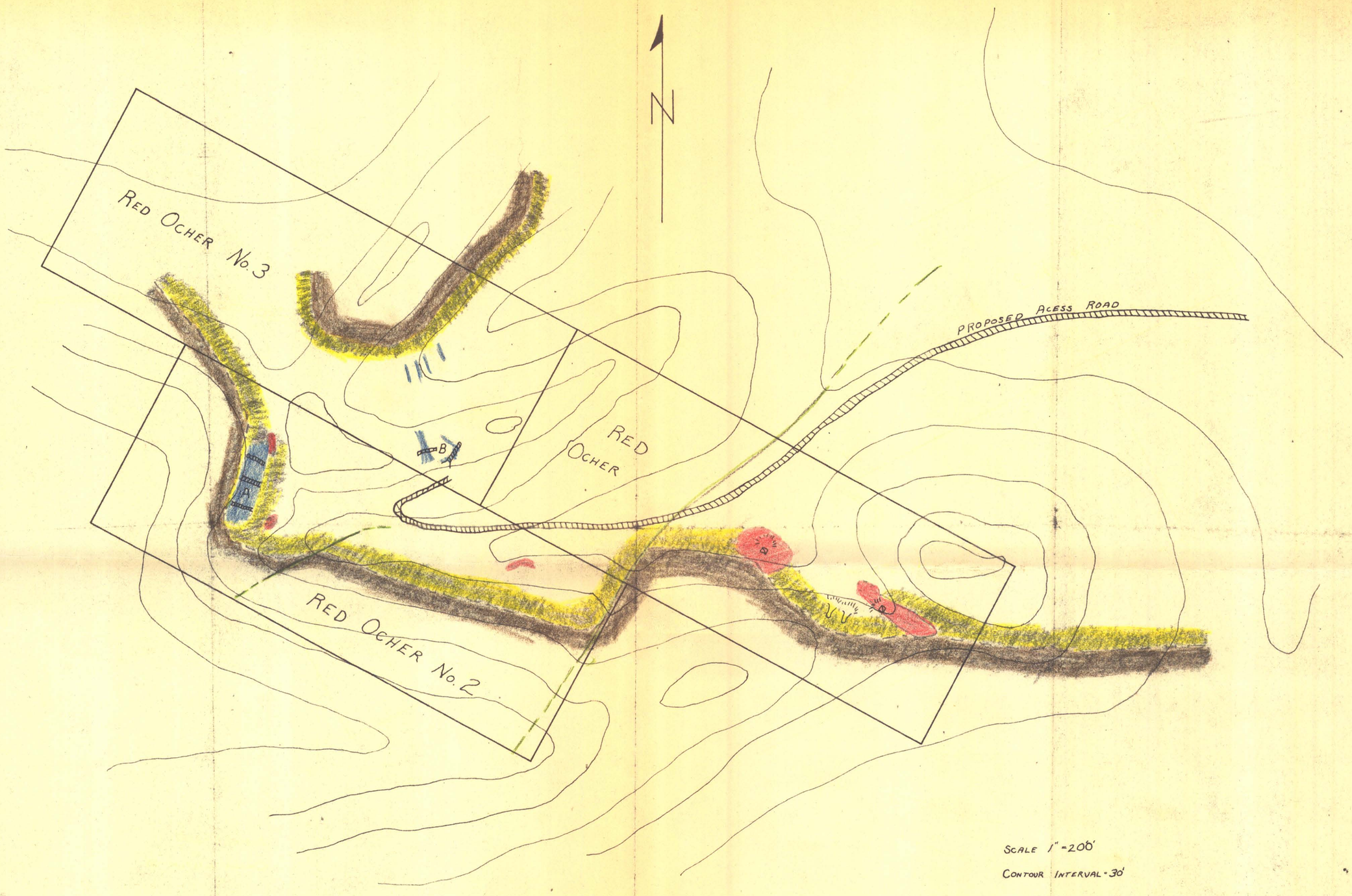
From applicants map

GEOLOGIC SKETCH MAP OF THE RED OCHER CLAIMS, RIVERSIDE COUNTY, CALIFORNIA

200 0 200 400 600 Feet

Contour interval 30 feet
Datum approximate

FIGURE 2



SCALE 1" = 200'

CONTOUR INTERVAL - 30'

PROPOSED WORK

LIMESTONE - MONZONITE CONTACT

IRON OUTCROPS

FAULT

MONZONITE

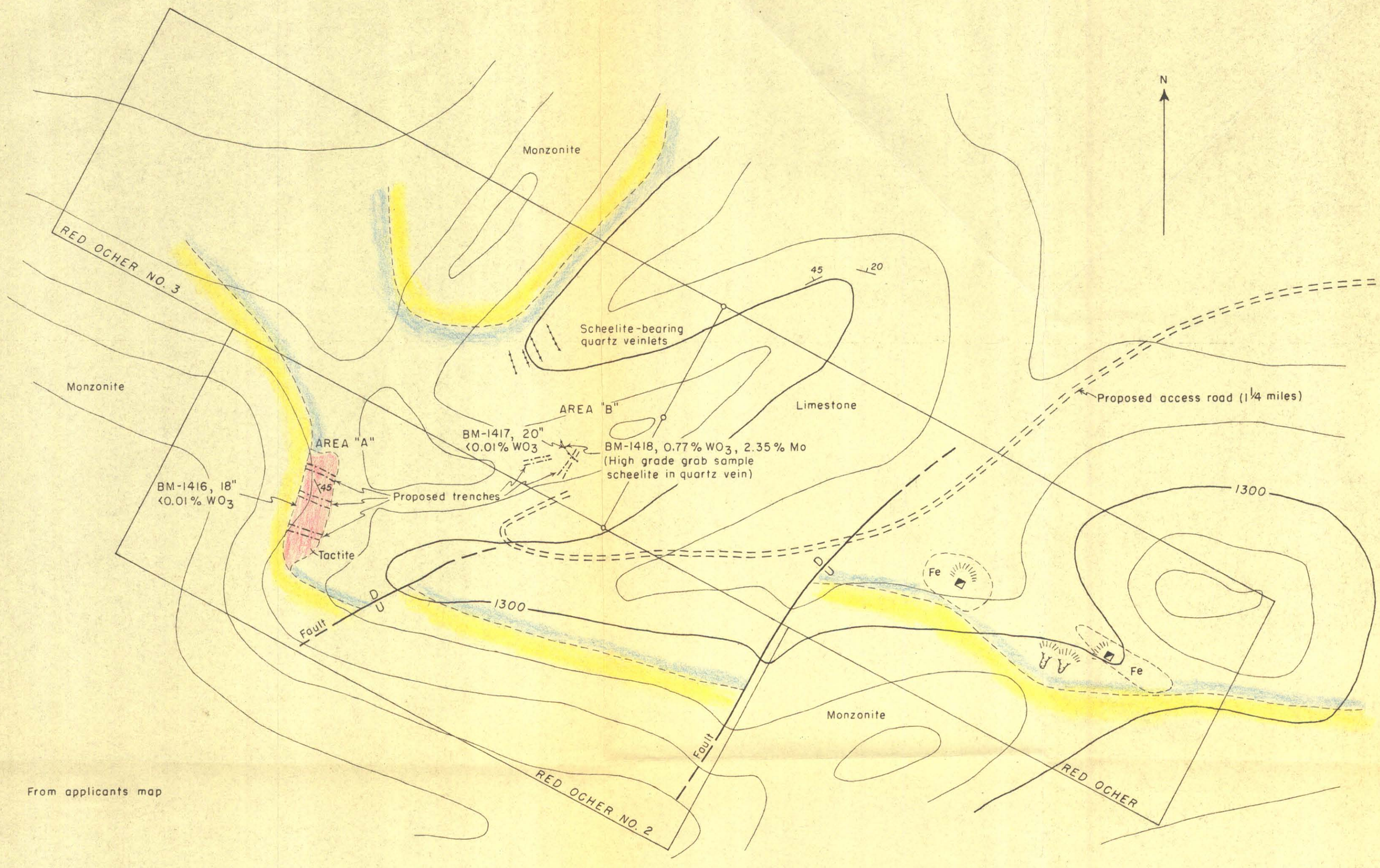
LIMESTONE

TACTITE & QUARTZ BEARING SCHEELITE

(Arranged) Chas. W. Herrick Bur. Eng. H. Jenny
Supplied Plaintiff Engs. Box 10, P. O.

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA 3488
(TUNGSTEN)



From applicants map

GEOLOGIC SKETCH MAP OF THE RED OCHER CLAIMS, RIVERSIDE COUNTY, CALIFORNIA

200 0 200 400 600 Feet

Contour interval 30 feet
Datum approximate

FIGURE 2