Send as soon as possible (today)

Letter to Mr. Burfening

Enclose copy of letter of denial

Say we cannot release report
itself as this was for
confidential use of BNA admin etc

If it will help we could supply
copy of application.

We send this quickly because of
Mr B's apparent rush etc etc

Return orig corresp
I have made copies for you

JUN-2 1955

Mr. Ray Ryan
218 Court Building
Evansville, Indiana

Re: Docket No. DMEA 3676 - Tungsten
Lobin Property
Lander County, Nevada

Dear Mr. Ryan:

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 for 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

JUN - 2 1955

Mr. Ray Ryan
218 Court Building
Evansville, Indiana

Re: Docket No. DMEA 3676 - Tungsten
Lakin Property
Lander County, Nevada

Dear Mr. Ryan:

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.

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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. Mittenderf

Administrator

TLChapman:foc 5/27/55
cc to: Docket
Code 400
Adm. Reading File
Operating Comm.
FT. REG. II
Messrs: Holliday, USBM
Kiilsgaard, USGS

May 27, 1955

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Denial of application for exploration assistance to the amount of $41,850.00
Docket No. DMEA 3676 - Tungsten
Ray Ryan
Lakin Property
Lander County, Nevada

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

1. The applicant, Ray Ryan, 218 Court Building, Evansville, Indiana, requested exploration assistance to the amount of $41,850.00 for 3,500 feet of diamond drilling, bulldozer trenching and a magnetometer survey.

2. The property consists of three unpatented lode mining claims as follows:

	Book No.	Page No.
Big Chief	12	137
Betty Louise	12	182
Betty Louise No. 1	12	182

Located in section 36, T. 28 N., R. 46 E., Lander County, Nevada

3. A lease and option, dated March 10, 1954, was issued by the owner, Lee Lakin, Battle Mtn., Nevada, to Harvey W. Smith, lessee, who assigned this lease and option to Ray Ryan, on November 19, 1954.

4. The predominant rocks of the area are limestone, quartzite and shales which have been intruded by grano-diorite and grano-diorite porphyry. Rhyolite and andesite are extrusive within the area. Tactite bands have been formed in the limestones at and near the contact zones. Scheelite and powellite (?) are scattered through the tactite zones.

5. These claims were located as gold prospects and a few pits, with one shallow shaft with some drifting, were put down by the locator. No minable ore was found. Later the presence of scheelite was noted and some bulldozer trenches were opened up on the pr property.

Two small shipments of tungsten ore were made to the Getchell mill; the first 11.316 tons assayed 0.54 percent WO_3 and the second 9.2455 tons assayed 0.35 percent WO_3. It is reported that the mill had difficulties in treating the rock to produce a satisfactory concentrate.

Eight samples taken by the Field Team indicated that the ore was low grade and that there was little probability of opening up any significant bodies of minable ore.

The Field Team recommends denial of the application and the Commodity Divisions of the Geological Survey and the Bureau of Mines concur in the recommendation.

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

TLChapman:fec
5-27-55
cc to: Docket
Code 400
Adm. Read. File
Operating Comm.

IN REPLY REFER TO:

400

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

Defense Minerals Administration
RECEIVED
MAY 23 1955

May 25, 1955

Re: DMEA-3676
Ray Ryan
Lakin Property
Lander Co., Nev.
Tungsten

Memorandum

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

From: R. D. Trace, U. S. Geological Survey

Subject: Review of Field Team report

The operator proposes a 3-stage program of exploration: (1) diamond drill 1,510 feet and magnetometer survey of area, (2) bulldozing and trenching, and geologic mapping and sampling, and (3) 2,000 feet of diamond drilling.

The ore deposits consist of Powellite(?) and scheelite locally disseminated in layers through tactite. About 20 tons of ore has been produced that averaged 0.45 percent WO_3. The Field Team reports this part of the ore was unsalable because of the high Powellite content.

The known deposits appear to be either too low in grade or too small and spotty to warrant exploration.

I concur with the Field Team and recommend that the application be denied.

R. D. Trace

RDTrace:hlm
G-5/25/55

Copy to: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
R. W. Holliday, 3513 Interior

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

40

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 12 1955

1605 Evans Avenue
Reno, Nevada

May 10, 1955

Memorandum

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-3676 (Tungsten)
Ray Ryan
Lakin Property
Lander County, Nevada

Deny without prejudice, and say that we will reappraise if the company feels after further magnetometer survey at its own expense that further work is warranted.
WSM
5/13/55

In accordance to your letter of February 25, 1955 referring to this office the above docketed application for exploration assistance, we are attaching four copies of report on subject property by Earl H. Pampeyan, geologist, U. S. Geological Survey and H. W. Jones, mining engineer, U. S. Bureau of Mines, dated May 6, 1955.

The report recommends that the application be denied due to lack of evidence that an economic body of tungsten ore can be developed. Roscoe Smith and I concur in the recommendation.

S. Ricker

Attach.

SRicker:gh
cc: R. M. Smith, USGS
File

Ryan Lod a Uranium project DMEA 3367

RECEIVED
MAY 12 1955

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION II

APPLICATION REPORT

DMEA-3676 (Tungsten)
Ray Ryan
Lakin Property, Lander County, Nevada

by

Henry W. Jones
Mining Engineer
U. S. Bureau of Mines

Earl H. Pampeyan
Geologist
U. S. Geological Survey

May 6, 1955

INTRODUCTION

Mr. Ray Ryan, 218 Court Building, Evansville, Indiana, applied for an exploration loan under the Defense Minerals Exploration Administration, docket 3676, to explore for tungsten at the Lakin property, Lander County, Nevada.

A field examination was made March 23, 1955 by H. W. Jones, U. S. Bureau of Mines and E. H. Pampeyan, U. S. Geological Survey accompanied by the applicant's representative, Mr. Harvey Smith.

The applicant's proposal requests Government aid in a three-stage exploration program which consists of the following: Stage I, 1,510 feet of diamond drilling to test present exposures of tungsten-bearing tactite, a detailed magnetometer survey over a 1,500 by 2,400-foot area, and a reconnaissance magnetic survey on the surrounding area; Stage II, bulldozing and trenching of magnetic anomalies and geological mapping and sampling; Stage III, 2,000 feet of diamond drilling.

CONCLUSIONS AND RECOMMENDATIONS

Tactite on the Lakin property contains a notable amount of powellite and scheelite but it is not of sufficient grade to support a mining operation. The few spotty high-grade tactite layers exposed are not extensive enough to contain an economic amount of ore. There is an excessive amount of powellite intermingled with the scheelite that is not amenable to concentration in local mills; the nearest mill capable of handling this type ore is at Pine Creek near Bishop, California, a truck haul of over 300 miles.

The mineralized zones on the Lakin property are not adequately exposed to determine structural or lithologic controls, a large expectant tonnage of low grade reserves is not evident, and high grade reserves are spotty and confined to narrow layers which can be traced for only a few tens of feet. If the applicant could demonstrate that other tactite zones containing larger or higher grade ore bodies do exist on the property perhaps a very small exploration program at the applicant's expense would be in order. On the strength of available exposures, it is recommended that the request for a DMEA loan on the Lakin property be denied.

LOCATION, ACCESSIBILITY, LOCAL RESOURCES

The Lakin property is in sec. 36, T. 28 N., R. 46 E., directly south of and adjacent to the Bullion mining district near Tonopah, Nevada. It is reached from Beatty (fig. 1) on a well maintained gravelled road southwesterly 22.6 miles to Tonopah. Continue on the county road an additional 3.7 miles, take the left fork over the Gold Acres mill tailings 1.7 miles. Turn left on the first road past the tailings, then right to the surface trenches of the mine. Total distance from Beatty is 28 miles.

The claims are located on the southeastern foothills of the Shoshone Range at an approximate elevation of 5,400 feet. The Big Chief claim, on which most of the work has been done, is situated on a small rounded knoll. The two adjoining claims to the north and east are on shallow alluvium.

The climate of the area is arid. The mine area is accessible the year around. Domestic and mine water could probably be temporarily obtained from the Gold Acres well in Crescent Valley, about 4 miles below the claims.

HISTORY AND PRODUCTION

A sketchy history of the mine area was supplied by the applicant's representative. The property was located as a gold prospect in 1932 by Lee Lakin of Bozeman, who dug several small prospect pits and a 27-foot vertical shaft with short drifts extending from the bottom. No shipments of ore were made prior to the time the applicant leased the property on March 10, 1954. After that date the applicant contracted a bulldozer to strip the surface overburden from the tactite and surrounding area. About 18 days of bulldozing and several short shallow trenches were completed (see map).

Two truckload shipments of scheelite ore were made to the Getchell mill at Redhouse, Nevada, about 100 miles distant. The first truckload (April 1954) contained 9.25 tons of ore that averaged 0.35 percent WO_3. The second 11.32-ton truckload shipped in May 1954 averaged 0.54 percent WO_3. Due to the high powellite content, it was reported, the shippers were requested not to furnish any more of this type ore.

PROPERTY AND OWNERSHIP

The Lakin property consists of three unpatented lode claims: the Big Chief, Betty Louise, and the Betty Louise #1. They are

recorded in the Lander County Courthouse at Austin, Nevada, and listed in Book 12, pages 157 and 182 respectively, under the name of Lee Lakin. An agreement of lease and option was drawn up between the applicant and Mr. Lakin dated March 10, 1954, a copy of which accompanies the application form. Mr. Lee Lakin died on March 16, 1955 so accordingly all future dealings and payments will be through an administrator.

The applicant, Mr. Ray Ryan, states that he owns the Ryan Oil Company of Indiana; therefore he is probably well qualified financially. The mining engineer, Harvey W. Smith, representing Mr. Ryan in the mining ventures is a graduate of the Colorado School of Mines. He stated that he has had considerable mining and administrative work and therefore well qualified to supervise any mining activity.

GEOLOGY

The Lakin property lies on the east slope of the Shoshone Range. Gentle slopes are covered with one to three feet of soil and rock exposures are few and poor. The area is underlain by Lower (?) Paleozoic limestone locally altered to tactite. Nearby in this same district quartzite and shale crop out and also granodiorite and granodiorite porphyry intrusives as well as rhyolite and andesite extrusives.

The limestone is commonly dark gray, and cut by numerous thin calcite stringers. It strikes north and dips steeply east where best exposed. Near the tactite zone the limestone is broken up and strikes and dips vary greatly.

The tactite evidently formed along a favorable horizon in the limestone, and is predominately a very fine-grained epidote-quartz-garnet rock with small amounts of magnetite, powellite (?) and scheelite included.

Within 10 feet of the tactite the limestone has been bleached and has a fine-grained "sugary" texture. Locally the limestone has been strongly altered to clay minerals which are stained by iron oxides.

No intrusive rock was seen in tactite area, but the Roberts Mountain thrust fault, a large regional structural feature, has localized intrusions of granitic rocks into limestone nearby suggesting that granodiorite may underlie the limestone at shallow depth and may be the source of the mineralizing solutions.

ORE DEPOSITS

Powellite ( ) and scheelite, the ore minerals, are locally disseminated in layers through tactite. The mineralized layers have random orientation and structural control could not be determined from the available exposures. Three zones of tactite surrounded by limestone have been uncovered by bulldozer trenching (fig. 3).

The main tactite zone (fig. 2, 3) is exposed in an area measuring about 200 by 370 feet. It is cut by several quartz veinlets ranging up to 8 inches in thickness and containing copper, iron, tungsten and lead minerals. Powellite or molybdenum-bearing scheelite and scheelite are disseminated through much of the tactite but seem to be most common within 15 feet of the limestone contact. Two persistent layers of tactite containing powellite (?) and

scheelite were lamped and sampled in the No. 1 trench. These appeared to be the best showings of tungsten on the property but were both very spotty and less than two feet thick. A third layer six inches thick was sampled in No. 5 trench. This layer lamped high-grade but was very spotty and could not be projected more than a few feet beyond its exposed length. Tactite containing traces of scheelite is reported on the east edge of the main tactite area in a vertical shaft 27 feet deep.

Tactite zone No. 2, approximately 80 feet in diameter, contains very little, if any, tungsten-bearing rock. Some scheelite was lamped here in float which probably originated up slope in the main tactite zone. Much of the rock exposed in this area has been highly altered and more closely resembles iron stained clay than tactite.

The third tactite zone, which may be a continuation of the one just described (see fig. 3), contains two bands of tactite separated by a 60-foot band of highly altered limestone. The tactite bands are both approximately 20 feet wide and strike N. 30° W. towards No. 2 tactite zone. This zone did contain traces of scheelite but in quantities too small to warrant sampling.

A zone six feet wide of limonitic gossan striking N. 5° E. and dipping 70° W. is explored by a 15-foot prospect shaft 150 feet north of tactite zone No. 3. No tungsten minerals were seen on the dump or in the hole.

Total production from the Lakin property is 20.57 tons of ore averaging about 0.45 percent WO_3. The first shipment of 9.25 tons

assaying 0.35 percent WO_3 was from the north edge of trench No. 1 along the east high-grade streak. A second shipment of 11.32 tons assaying 0.54 percent WO_3 came from the No. 1 trench.

SAMPLING

Eight representative samples were taken at the property at locations shown on the accompanying map, fig. 2, and described as follows:

Sample No.	Width Ft.	% WO_3	% Mo	Description and sample location
175	1.3	0.06	0.02	Lower part trench #1, considerable powellite, opallite, intermingled with scheelite in a highly-brecciated tactite.
176	2.5	0.09	0.09	Head trench #1, scheelite and powellite in brecciated tactite zone about 12 ft. below limestone-tactite contact.
177	2.6	4.00	0.30	Contact of zone sampled by #176. Hard siliceous tactite, considerable scheelite between softer hematitic gouge zones.
178	3.0	<0.01	0.09	Small trench north of #175, considerable powellite, some scheelite.
179	1.0	0.90	0.50	#2 trench, band of scheelite and powellite in tactite.
180	Grab sample	1.05	0.45	South of shaft, some WO_3 and powellite in a soft, altered semi-clay, highly colored area.
181	2.0	0.35	0.01	Siliceous material exposed in bank of cut, between soft altered walls. Some WO_3.
182	0.5	0.37	<0.01	High grade seam of scheelite (quartzitic) cutting soft altered tactite structure.

ORE RESERVES

There are no measured reserves. Indicated reserves of about 250 tons of tactite ranging in grade from less than 0.01 to 4.0 percent WO_3 and averaging less than 0.3 percent WO_3 are in trenches No. 1, 2 and 5. At the west end of trench No. 1 a mineralized layer 50 feet long, about two feet wide and about 10 feet along the dip ranges from 0.09 to 4.0 percent WO_3. A second layer at the east end of this trench is 50 feet long, about two feet wide and 10 feet along the dip and ranges in grade from less than 0.01 to 0.06 percent WO_3. In trench No. 2 one sample cut from a mineralized zone 30 feet long, one foot wide and possibly 10 feet deep assayed 0.9 percent WO_3. A fourth mineralized zone in trench No. 5, almost 30 feet long, a half to two feet wide and less than 10 feet deep, averaged less than 0.4 percent WO_3. Inferred reserves of several hundred tons of tactite averaging less than 0.2 percent WO_3 are in the remainder of the main tactite zone.

PROPOSED EXPLORATION

In the original application submitted by the Ryan Oil Co. a three-stage exploration program was proposed as follows:

Stage I

A. Diamond drill 1,510 feet of hole to test at depth the mineralized zones now exposed: Proposed drill hole data:

No.	Bearing	Dip	Depth
1	N 47 E	-45°	325'
2	"	-60°	245'
3	"	-45°	200'
4	"	-45°	200'
5	Vertical		540'

Holes would be located as shown on fig. 2. Holes 1 through 4 would cut the projected mineralized zones at depths of about 100 feet below the surface. Hole 5 would be drilled to determine the depth to intrusive rock which presumably lies beneath this area.

B. Detailed magnetometer survey of an area measuring 1,500 by 2,400 feet (fig. 3), with readings taken on 50- by 100-foot centers, to determine the size and shape of additional tactite zones.

C. Reconnaissance magnetometer survey on the surrounding area to extend anomalies.

Stage II

A. Bulldozing and trenching of magnetic anomalies determined by Stage I work.

B. Geologic mapping and sampling of newly exposed areas.

Stage III

An additional 2,000 feet of diamond drilling to explore at depth any mineralized zones discovered by diamond drilling, the magnetic survey and trenching in Stage I and II.

The diamond drilling proposed in this program would offer the least expensive method of obtaining widespaced subsurface information in the mineralized area. Total footage requested in Stage I, however, is excessive for testing the tactite and mineralized zones now exposed, and hole L would have a better angle of intersection if it is collared 60 feet east of the proposed location and bears N. 27° W. According to the applicant's claim map (fig. 3) some of the magnetometer work and possibly some of the trenching and drilling would be done outside the boundaries of the three claims held by the Ryan Oil Co. When questioned, the applicant reported that he could probably lease all the ground that would benefit from exploratory work done in the proposed program. The magnetometer survey would be useful if the tactite is magnetic enough to be detected.

The mineralized tactite now exposed is not high enough in grade or large enough to justify the proposed exploration program. It was suggested to the applicant that the magnetometer survey be done at company expense before any other exploratory work began, and that the remainder of the program be dependent upon the results of this work. The applicant does not wish to alter his proposed program but stated that if DMEA approves the application his company would finance the magnetometer survey.

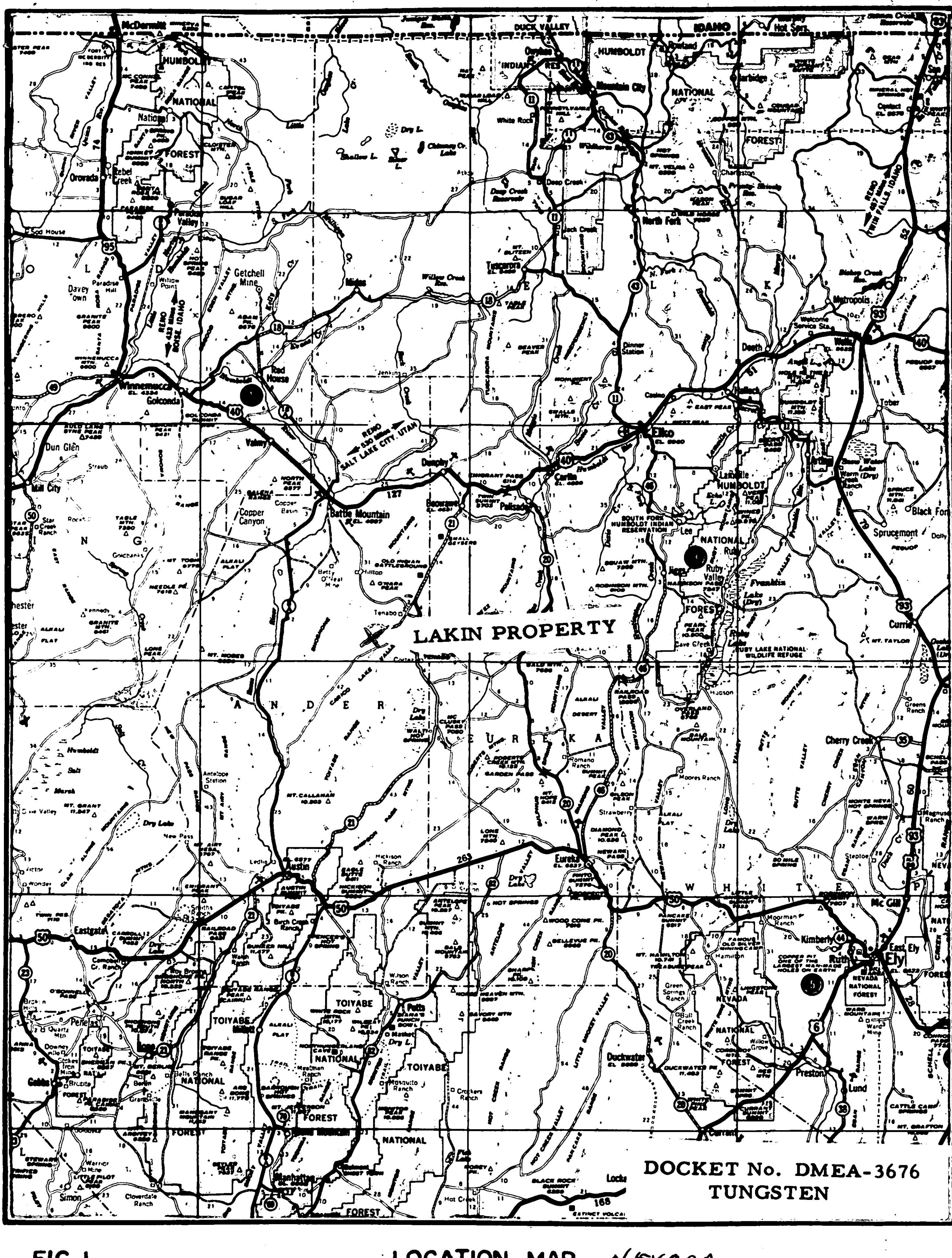


FIG. I LOCATION MAP *NEVADA*

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
MAY 12 1955

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

400

May 18, 1955

Memorandum

To: W. S. Martin, Room 3538

From: R. W. Holliday

Subject: Docket No. DMEA - 3676 (Tungsten)
Ray Ryan
Lakin Property
Lander County, Nevada

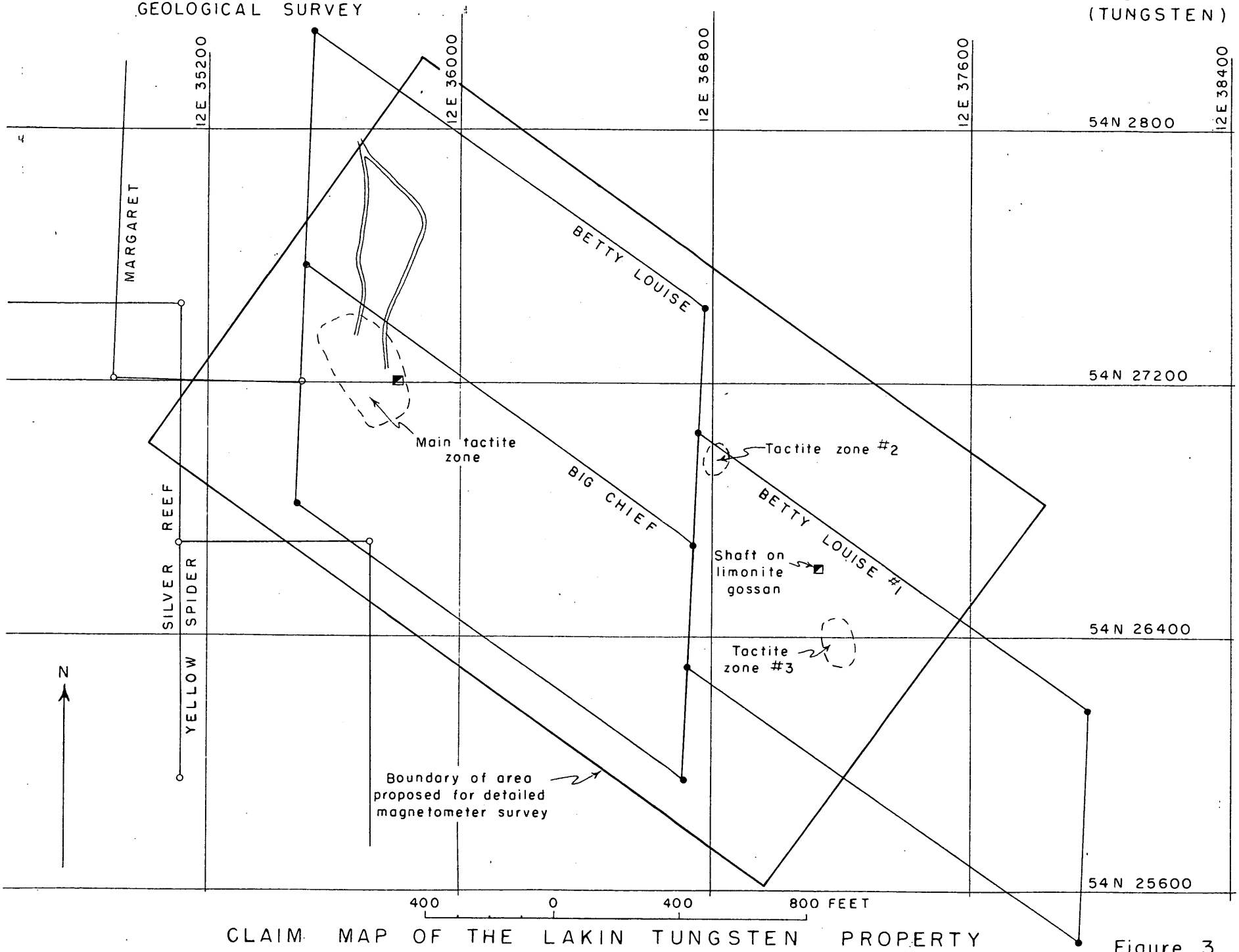
Because of the difficulty in treatment, the spotty occurrence and questionable grade of the ore, it seems likely that this property will be marginal at best.

It is recommended that this application be denied.

R. W. Holliday

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA 3676
(TUNGSTEN)



CLAIM MAP OF THE LAKIN TUNGSTEN PROPERTY

Figure 3

400

FEB 25 1955

Mr. Ray Ryan
218 Court Building
Evansville, Indiana

Re: Docket No. DMEA 3676 - Tungsten
Lakin property
Lander County, Nevada

Dear Mr. Ryan:

The above-docketed application for exploration assistance has been reviewed by the Iron and Ferro-Alloys Division of the Defense Minerals Exploration Administration and referred to Mr. Spangler Ricker, Executive Officer, DMEA Field Team, Region II, 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,

C. O. Mittendorf

Administrator

cc: FT, Reg. 2 - San Francisco
Docket
Code 400
Oper. Comm.
Adm. Read. File
W. McInnis, USBM
T. Kiilsgaard, USGS

FARutledge/ls
2/21/55

400

FEB 25 1955

Mr. Spangler Ricker, Executive Officer
DMEA Field Team, Region II
420 Custom House, 555 Battery Street
San Francisco 11, California

Re: Docket No. DMEA 3676-Tungsten
Ray Ryan
Lakin property
Lander County, Nevada

Dear Mr. Ricker:

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

In reviewing the subject application it was noted that adjoining claims may be benefitted by the proposed exploration. If an exploration project is warranted and the adjoining claims are controlled by the applicant, these claims should be included in the property which is the subject of the requested exploration contract. In any case if an exploration project is recommended by the Field Team, an Owner's Consent to Lien should be obtained.

Two copies of a relevant memorandum dated February 17, 1955, by E. L. Newcomb, Geological Survey, are enclosed for your information.

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
Adm. Read. File
Oper. Comm.
Code 400
FT, Reg. II
T. Kiilsgaard, USGS
W. McInnis, USBM

FARutledge/ls
2-21-55

407

IN REPLY REFER TO:

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

RECEIVED

February 17, 1955

Re: DMEA-3676
Ray Ryan
(Lakin Property)
Bullion District
Lander Co., Nevada
$41,850 - Tungsten

Memorandum

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

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

Subject: Review of application

The operator has proposed a three stage exploration project to develop possible tungsten ore bodies in tactite zones formed by contact metamorphism.

Further exploration appears to be warranted, but the stages of work should be modified. Rather than diamond drilling in Stage I, additional trenching is needed to define the trend of the tactite zones and the continuity of mineralization. If the trenching results are favorable, then diamond drilling might be considered for a second stage. I do not believe the Government should participate in a magnetometer survey. This work may be informative, but to be most useful it should be carried out by the operator before trenching and drilling are done.

The operator's samples contain significant amounts of WO_3, but many of them are below ore grade. However, the operator has produced 20 tons of ore containing about 0.43 percent WO_3 from high grade parts of the ore zones.

This application should be referred to the Field Team for an examination and a report with their recommendations.

E. L. Newcomb

Copy to: DMEA (3)

DMEA - 3676

345 Middlefield Road
Menlo Park, California 94025

April 18, 1966

Mr. Peter J. Burfening
150 North Center Street
P.O. Box 815
Reno, Nevada 89501

74 110

220

Dear Mr. Burfening:

Enclosed are Plates I and II of the report by Minerals Exploration Research Corporation of the Lakin Tungsten Property in Lander County, Nevada. These were extra copies that were submitted by Mr. Ryan with the DMEA application in 1955. I am sorry these plates were not included in the copy of the report when it was returned to you.

Sincerely yours,

H. K. Stager
Field Officer
OME, Region II

Enclosures

cc: Chief, OME, WDC
D RF
MP RF
ACG RF
Misc. Corres.
HKStager:mlb

PETER J. BURFENING
SUITE 206 - 150 NORTH CENTER STREET
P.O. BOX 818 - PHONE FA 9-7811
RENO, NEVADA

April 14, 1966

Mr. H. K. Stager
Field Officer, OME
U. S. Geological Survey
345 Middlefield Road
Menlo Park, Calif. 94025

Dear Mr. Stager:

On February 2 last you sent my attorney, Ralph M. Tucker, same address as mine, a photstadt copy of the geological report prepared by the Minerals Exploration Reasarch Corporation of the Lakin Tungsten property in Lander County, Nevada.

Missing from the report was the Plate II mentioned on page 3 of the report. Mr. Tucker says that it is most important that we have this map.

We would appreciate a copy.

Thanking you, I am,

Very truly yours,

Peter J. Burfening

P. S. I assume that Atty. Tucker advised that this was required by me as Special Administrator of the Lee Lakin Estate.

P. J. B.

RECEIVED
APR 15 1966
OFFICE OF MINERALS EXPLORATION
U.S. GEOLOGICAL SURVEY
MENLO PARK, CALIF.

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
	Long	
	Wright	

APR 1 5 1966

Mr. Peter J. Burfening
Suite 206 - 150 N. Carter Street
P. O. Box 815
Reno, Nevada

Re: DMEA-3676 (Tungsten)
Ray Ryan
Lakin Property
Lander County, Nevada

Dear Mr. Burfening:

In a letter dated April 8, 1966, we advised Congressman Walter S. Baring that from a policy standpoint we had no objection to Mr. Henry Jones testifying as to facts regarding the geology, ore deposits, etc. as he reported them in his report on the Lakin tungsten property. Also, we advised Mr. Baring that from a policy standpoint we had no objection to furnishing Mr. Jones with a copy of his report in order that he might refresh his memory for this purpose. However, we indicated that in the opinion of our attorneys, there is a legal question involving disclosure of information as set forth in the Act of June 25, 1948 (62 Stat. 791, 18 U.S.C. 1905).

We propose to request a formal opinion from the Department of Justice on the applicability of this statute in the circumstances presented by your request, and in order that we may present all of the facts to the Department of Justice, in this connection, we would appreciate your advising us as to: (1) whether the claims in question have been relocated and if so by whom and (2) the court in which the Lakin heirs have instituted legal action against you.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of Minerals Exploration

RWLong/jfg:4/14/66

CC: OME file
Field Office - Region 2
Director's Reading file
Division Copy
Economic geology
OME Reading File

Mr. Robert W. Long - SOL, rm. 6554

23263

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
	Pong	
	White	
	Asst. Sol. Int.	
4/6	Johnson	
4/8	Kildsgaard	
4/8	Twelz	
4/7	Meyer	

APR 8 1966

Hon. Walter S. Baring
U. S. House of Representatives
Washington, D. C. 20515

Dear Mr. Baring:

We have your letter of March 30, 1966, and enclosed copy of a letter to you dated March 23, 1966, from Mr. Peter J. Burfening, requesting consent from the Geological Survey for Henry W. Jones, E.M. to give testimony by Deposition as to his best recollection of the results and findings of an examination of the Lakin property relating to an application filed with the former Defense Minerals Exploration Administration.

At the time Mr. Jones made the examination he was an employee of the U. S. Bureau of Mines. We understand that he is now an employee of the U. S. Forest Service.

From a policy standpoint we have no objection to Mr. Jones testifying as to facts regarding the geology, ore deposits, etc. as he reported them in his report on the Lakin tungsten property. Again from a policy standpoint, we would have no objection to furnishing Mr. Jones with a copy of his report in order that he might refresh his memory for this purpose. However, we are faced with a serious legal question. The Act of June 25, 1948 (62 Stat. 791, 18 U.S.C. 1905) provides:

> "Whoever, being an officer or employee of the United States or of any department or agency thereof, publishes, divulges, discloses, or makes known in any manner or to any extent not authorized by law any information coming to him in the course of his employment or official duties or by reason of any examination or investigation made by, or return, report or record made to or filed with, such department or agency or officer or employee thereof, which information concerns or relates to the trade secrets, processes, operations, style of work, or apparatus, or to the identity, confidential statistical data, amount or source of any income, profits, losses or

171497

23263

expenditures of any person, firm, partnership, corporation, or association; or permits any income return or copy thereof or any book containing any abstract or particulars thereof to be seen or examined by any person except as provided by law; shall be fined not more than $1,000, or imprisoned not more than one year, or both; and shall be removed from office or employment."

It is the opinion of our attorneys that this statute is applicable and covers the type of information desired by Mr. Burfening. Our attorneys have had a discussion with representatives of the Criminal Division, Department of Justice, and they propose to refer the entire matter to the Justice Department for a formal opinion.

We realize that this may take some time, but in the circumstances we feel it is necessary.

Sincerely yours,

Arthur A. Baker

Acting Director

RWLong/jfg:hm:4/6/66

CC: General files
Division file
Director's chron file
Economic Geology file
OME file
OME reading file
Solicitor

WALTER S. BARING
At Large, Nevada

Rayburn House Office Building
Suite 2454

GEORGE H. (TIM) SEWARD
Administrative Assistant

CHARLES R. BELL
Territory Assistant

Congress of the United States
House of Representatives
Washington, D.C. 20515

COMMITTEES:
INTERIOR AND INSULAR AFFAIRS
SUBCOMMITTEES:
Public Lands, Chairman
Mines and Mining
Irrigation and Reclamation

VETERANS
SUBCOMMITTEES:
Hospital
Housing
Education and Training

March [illegible]

Mr. W. T. Pecora, Director
Office of Geological [illegible]
Department of the [illegible]
General [illegible]
Washington, [illegible]

Dear Mr. [illegible]

[illegible] in acknowledgment [illegible] a copy of [illegible] from Mr Peter [illegible] Government report made [illegible] Lander County, Nevada [illegible] application [illegible] for aid in an exploration [illegible] Defense [illegible] Exploration Administration [illegible] you were unable to [illegible] such reports are [illegible] only [illegible]

Now [illegible] dated March 23, [illegible] an attach[illegible] for your information. I will appreciate [illegible] will [illegible] a reply [illegible] responsive to his request [illegible]

Sincerely,

WALTER S. BARING
Congressman for Nevada

WSB/dp

Attachment

171497

PETER J. BURFENING
SUITE 206 · 150 NORTH CENTER STREET
P.O. BOX 518 · PHONE FA 9-7311
RENO NEVADA

March 23, 1966.

Hon. Walter S. Baring
Congressman for Nevada
House Office Building
Washington, D. C. 20515

Dear Walter:

I find that it is necessary for me to again bother your good office for some much needed assistance regarding the Lakin matter covered in your letter to me of March 5.
What I need now from the Geological Survey is their consent to Henry W. Jones, E. M. to give us testimony by Deposition as to his best recollection of the results and findings of his work in connection with the Lakin property. Mr. Jones who is with the Forest Service advises that since he was working in an official capacity when the information was obtained that he cannot give testimony without prior approval of the U. S. G. S. Since the Department will not release to us Mr. Jones' report Attorney Tucker has suggested the above method [illegible]
tion.
Please see what you can do for us, Walter, and by all means get the Department on the ball as we would like to take the deposition on April 12, the date already set.
Nice seeing you last week. With thanks and kindest personal regards,

Sincerely,

Peter J. Burfening

MME Form 7
(2/63)

OFFICIAL FILE COPY

Date	Surname	Code
3/21	Johnson	110
	Tony	140
		220

SOLICITOR
C-66-2144.11
MAR 21 1966

INTERIOR DEPT.

MAR 24 1966

Mr. Peter J. Burfening
Suite 206-150 No. Center Street
P. O. Box 815
Reno, Nevada

RE: DMEA-3676 (Tungsten)
Ray Ryan
Lakin Property
Lander County, Nevada

Dear Mr. Burfening:

In compliance with your request of March 15, 1966, we are enclosing a certified copy of the letter of denial relating to the subject application.

We will appreciate your cooperation in furnishing us with confirmation from Mr. Ray Ryan, the applicant in this case (not Ryan Oil Company), for the release to you of information relating to his application.

Sincerely yours,

FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

Enclosure

cc: Director's reading file
Division file
Economic Geology file
OME file
OME reading file

FEJohnson/bih 3/21/66

RECEIVED
MAR 2 1966
Division of Land Resources
Reno, Nevada

23263

UNITED STATES OF AMERICA

Department of the Interior
Geological Survey
Office of Minerals Exploration
Washington, D. C.

March 21, 1966

Pursuant to Title 28, Section 1733, United States Code, I hereby Certify that each annexed paper is a true copy of a document comprising part of the official records of the Office of Minerals Exploration, Geological Survey, Department of the Interior:

Letter dated June 2, 1955, to Mr. Ray Ryan, 218 Court Building, Evansville, Indiana, signed by C. O. Mittendorf, Administrator, Defense Minerals Exploration Administration, Washington, D. C.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name, and caused the seal of the Department of the Interior to be affixed on the day and year first above written.

FRANK E. JOHNSON

Chief, Office of Minerals Exploration

PETER J. BURFENING
SUITE 206 - 150 NORTH CENTER STREET
P.O. BOX 815 - PHONE FA 9-7311
RENO, NEVADA

OFFICIAL
COPY

March 15, 1966.

U. S. Dept. of Interior
Office of Minerals Exploration
Attn. Frank E. Johnson, Chief
Washington 25, D. C.

110
120 m

Dear Mr. Johnson:

Reference is had to your letter of March 3 in re DMEA-3676, Ray Ryan Lakin Tungsten of Lander County, Nevada:

Thanks! for your good letter. I return herewith one of the copies of the letter to Ray Ryan which you sent me. What I require is a certified copy of the original of this copy.

Would you be kind enough to send me one together with a statement of any charges for the same.

Very truly yours,

Peter J. Burfening

enc 1

JUN-2 1955

Mr. Ray Ryan
218 Court Building
Evansville, Indiana

Re: Contract No. DMEA 3676 - Tungsten
Lakin Property
Lander County, Nevada

Dear Mr. Ryan:

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 for 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

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
		110
		220

AIRMAIL

MAR 3 1966

Mr. Peter J. Burfening
Suite 208
150 North Center Street
P. O. Box 815
Reno, Nevada

Re: IMMA-3676 (Tungsten)
Ray Ryan
Lakin Property
Lander County, Nevada

Dear Mr. Burfening:

This will acknowledge receipt of your letter of March 1, 1966, enclosing your letter of February 7, 1966, to Mr. Ray Ryan of Evansville, Indiana, with authorization indicated on the back thereof to release available data to you on the subject application.

We cannot release the Government's report which you requested as it is for confidential use of the Government only. In accordance with our discussion with Congressman Baring, however, we are enclosing two copies of the letter of denial to the applicant dated June 2, 1955.

We trust this will be of assistance to you in your court case. We will appreciate receiving confirmation from Mr. Ryan, the applicant, of his authorization to release available data. Upon receipt of such authorization, we shall be glad to furnish you with a copy of the application submitted by Mr. Ryan, if you desire this material.

Your letter of February 7, 1966, to Mr. Ryan is returned as requested.

cc: Director's reading file
Division file
Economic Geology file
OME file
OME reading file
Cong. Walter S. Baring

FEJohnson/bih 3/3/66

Sincerely yours,

(Signed) FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

Enclosures

43683

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
WASHINGTON

REFERRED BY Associate CHIEF GEOLOGIST, TO Powell

FOR INFORMATION

" REPORT TO

" ACTION

" DRAFT OF REPLY

" CONFERENCE WITH

PLEASE NOTE:

At request of Cong. Banning's office I talked on phone with Burpening. I indicated that tho we could not send the Bill Mans confidential admin report, we could send a copy of the denial letter immediately upon receipt of an OK of Ryan. I would consider the attached note from Gorman in behalf of Ryan Oil Co such an authorization. Would you therefore please see that copy of denial be sent promptly as some court action is underway. I suggest returning the Burpening - Ryan letter to him & retaining a picture copy for our file.

Wally

INT.-DUP. SEC., WASH., D.C. 13417

PETER J. BURFENING
SUITE 206 - 150 NORTH CENTER STREET
P.O. BOX 815 - PHONE FA 9-7311
RENO, NEVADA

March 1, 1966.

Mr. M. Klepper
U. S. Geological Survey
Washington, D. C. 20242

Dear Mr. Klepper:

Pursuant to our conversation of this P. M. I enclose you herewith my original letter to the Ryan Oil Company upon the back of which is their reply authorizing you to release to me such material as you can in connection with the loan application and the result of the finding of the Defense Minerals Exploration Administration.

Thanking you, I am,

Very truly yours,

Peter J. Burfening

enc 1

NOTED
MAR 3 1966
M. R. Klepper
Assoc. Chief Geologist

Return to

PETER J. BURFENING
SUITE 206 - 150 NORTH CENTER STREET
P.O. BOX 815 - PHONE FA 9-7311
RENO, NEVADA

February 7, 1966

Mr. Ray Ryan
218 Court Bldg.
Evansville, Indiana

Dear Mr. Ryan:

During the year 1955 the DMEA made an examination of the Lee Lakin Tungsten property either for you or Mr. Smith.

The Office of Minerals Exploration advises that they sent you, rather informed you, on June 2nd of that year of their findings.

I would appreciate your file in this matter if it is still available.

I might say that I desire this information, which the Department says they cannot release, because a question of the value of the Lakin property at that time is in issue. As Administrator of the Lakin Estate I did not do the assessment work on the claims which were held under location for the reason that I considered them worthless after your Mr. Smith 'phoned me of the decision not to make the exploration loan. Now the Lakin heirs challenge my judgment and I would like some proof of the fact that the Interior Department did not consider them of any value to the tungsten program.

I would particularly like the report made by a Mining Engineer by the name of Jones who did the work for the Department.

Thanking you for any help, I am,

Very truly yours,

Peter J. Burfening

Over for reply

Mr. Darling:

9/22/66

Regret that we have not returned in our files here the report in question; we usually try to keep files for ten years, but sometimes, when we abandon a project, we do not keep them that long.

If you can be gratified by signing an authorization for the Office of Minerals Exploration to release the data to you, please prepare what is necessary and send it to us for signature.

Very truly yours
Wm J Norman
Gen. Mgr.
Ryan Oil Co.

PETER J. BURFENING
SUITE 206 - 150 NORTH CENTER STREET
P.O. BOX 815 - PHONE FA 9-7311
RENO, NEVADA

March 1, 1966.

Mr. M. Klepper
U. S. Geological Survey
Washington, D. C. 20242

Dear Mr. Klepper:

Pursuant to our conversation of this P. M. I enclose you herewith my original letter to the Ryan Oil Company upon the back of which is their reply authorizing you to release to me such material as you can in connection with the loan application and the result of the finding of the Defense Minerals Exploration Administration.

Thanking you, I am,

Very truly yours,

Peter J. Burfening

enc 1

NOTED
MAR 3 1966
M. R. Klepper
Assoc. Chief Geologist

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
2/25	Johnson	
	Hollandsworth	
2/28	Kulstad	
2/28	Tweto	
3/1	Ryan	

MAR 1 1966

Hon. Walter S. Baring
U. S. House of Representatives
Washington, D. C. 20515

Dear Mr. Baring:

We are in receipt of your letter of February 15, 1966, enclosing a copy of a letter to you dated February 8, 1966, from Mr. Peter J. Burfening, Reno, Nevada, requesting a copy of a Government report made by Mr. Henry W. Jones on the Lakin Tungsten property, Lander County, Nevada, in connection with the application of Ray Ryan for aid in an exploration project under the former Defense Minerals Exploration Administration program.

We regret that we are unable to furnish a copy of the cited report to Mr. Burfening. Such reports are considered confidential and for Government use only. We could, however, furnish Mr. Burfening with a copy of the application and accompanying data submitted by the applicant along with a copy of our letter of denial, upon receipt of Mr. Ryan's written authorization.

Sincerely yours,

Arthur A. Baker

Acting Director

cc: General files
Division file
Director's chron. file
Economic Geology file
OME file
OME reading file

170439

FEJohnson/bih 2/18/66
Rewritten: FEJohnson/Tweto/bih 2/25/66

43683

WALTER S. BARDING
Las Vegas, Nevada

Rayburn House Office Building
Room 2414

Washington, D.C. 20515

Congress of the United States
House of Representatives
Washington, D.C. 20515

COMMITTEES:
INTERIOR AND INSULAR AFFAIRS
SUBCOMMITTEES:
PUBLIC LANDS, CHAIRMAN
MINES AND MINING
WATER AND POWER RESOURCES

VETERANS
SUBCOMMITTEES
HOSPITALS
HOUSING
EDUCATION AND TRAINING

February [illegible]

Mr. W. T. [illegible]
Director
Office [illegible]
Department [illegible]
General [illegible]
Washington [illegible]

Dear Mr [illegible]

I [illegible] letter that I have recently received from Mr [illegible] Nevada, in which he has adv[illegible] Mineral Exploration Administration [illegible] Mr. Ray Ryan on the Lake [illegible] report subsequently has been [illegible] in the matter and the reason [illegible] this report, if at all possible.

I will [illegible] possible to comply with his [illegible]

With kind regards, I am

Sincerely,

WALTER S. BARDING
Congressman for Nevada

WSB/jp

Attachment

70439

PETER J. BURFENING

SUITE 200 - 100 NORTH SIERRA STREET

P. O. BOX 818 PHONE FA 6-7811

RENO NEVADA

February 8, 1966

Hon. Walter Baring, M. C.

House Office Bldg.

Washington, D. C.

Dear Walter:

I find myself obliged to ask a personal favor and it is this:

During the year 1955 the Defense Minerals Exploration Admr. made an examination and report for one Ray Ryan on the Lakin Tungsten property in Lander County. The Mineral Exploration Office at Menlo Park, Cal., advises that the Field Team's report has been forwarded to the Office of Minerals Exploration, U. S. Geological Survey, Room 4460, Interior Building, Washington, D. C. and that Certified Copies of the material should be obtained from there.

It is my understanding that they are reluctant to release this information at times, therefor this request to you.

For your information DMEA turned down the request for a loan for the reason that the property did not show definite promise of improving the mineral supply position. I am the Special Administrator of the Lee Lakin Estate. On the strength of the DMEA findings I dropped the property not doing further assessment work after Mr. Ryan gave up his lease. Now the Lakin heirs, after 10 years, are trying to give me a bad time for my action. It therefor becomes necessary for me to establish the value of the property as worthless as of that time.

I particularly require the report and sampling map of the field engineer one Henry W. Jones who did the work; he lives in Quincy and is available to testify but no longer has a copy of his report.

Thanks, Walter, and my best to you with regards to Marg.

Sincerely,

Peter J. Burfening

DOCKET
SURNAME
Chapman
Martin
400
Kiilsgaard
Hedges
Selfridge
Johnson

JUN - 2 1955

Mr. Ray Ryan
218 Court Building
Evansville, Indiana

Re: Docket No. DMEA 3676 - Tungsten
Lakin Property
Lander County, Nevada

Dear Mr. Ryan:

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 for 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 5/27/55
cc to: Docket
Code 400
Adm. Reading File
Operating Comm.
FT. REG. II
Messrs: Holliday, USBM
Kiilsgaard, USGS

A.C.S.

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

May 27, 1955

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Denial of application for exploration assistance to the amount of $41,850.00
Docket No. DMEA 3676 - Tungsten
Ray Ryan
Lakin Property
Lander County, Nevada

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

1. The applicant, Ray Ryan, 218 Court Building, Evansville, Indiana, requested exploration assistance to the amount of $41,850.00 for 3,500 feet of diamond drilling, bulldozer trenching and a magnetometer survey.

2. The property consists of three unpatented lode mining claims as follows:

	Book No.	Page No.
Big Chief	12	137
Betty Louise	12	182
Betty Louise No. 1	12	182

located in section 36, T. 28 N., R. 46 E., Lander County, Nevada

3. A lease and option, dated March 10, 1954, was issued by the owner, Lee Lakin, Beowawe, Nevada, to Harvey W. Smith, lessee, who assigned this lease and option to Ray Ryan, on November 19, 1954.

4. The predominant rocks of the area are limestone, quartzite and shales which have been intruded by grano-diorite and grano-diorite porphyry. Rhyolite and andesite are extrusive within the area. Tactite bands have been formed in the limestones at and near the contact zones. Scheelite and powellite (?) are scattered through the tactite zones.

5. These claims were located as gold prospects and a few pits, with one shallow shaft with some drifting, were put down by the locator. No minable ore was found. Later the presence of scheelite was noted and some bulldozer trenches were opened up on the property.

Two small shipments of tungsten ore were made to the Getchell mill; the first 11.316 tons assayed 0.54 percent WO_3 and the second 9.2455 tons assayed 0.35 percent WO_3. It is reported that the mill had difficulties in treating the rock to produce a satisfactory concentrate.

Eight samples taken by the Field Team indicated that the ore was low grade and that there was little probability of opening up any significant bodies of minable ore.

The Field Team recommends denial of the application and the Commodity Divisions of the Geological Survey and the Bureau of Mines concur in the recommendation.

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

DOCKET
SURNAME
400 Chapman
Martin

May 27, 1955

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Denial of application for exploration assistance to the amount of $41,850.00
Docket No. DMEA 3676 - Tungsten
Ray Ryan
Lakin Property
Lander County, Nevada

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Big Chief	12	137
Betty Louise	12	182
Betty Louise No. 1	12	182

located in section 36, T. 28 N., R. 46 E., Lander County, Nevada

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4. The predominant rocks of the area are limestone, quartzite and shales which have been intruded by grano-diorite and grano-diorite porphyry. Rhyolite and andesite are extrusive within the area. Tactite bands have been formed in the limestones at and near the contact zones. Scheelite and powellite (?) are scattered through the tactite zones.

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The Field Team recommends denial of the application and the Commodity Divisions of the Geological Survey and the Bureau of Mines concur in the recommendation.

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

TLChapman:foc
5-27-55
cc to: Docket
Code 400
Adm. Read. File
Operating Comm.

IN REPLY REFER TO:

Docket

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 26 1955

May 25, 1955

Copy returned 400

Re: DMEA-3676
Ray Ryan
Lakin Property
Lander Co., Nev.
Tungsten

Memorandum

W-509

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

From: R. D. Trace, U. S. Geological Survey

Subject: Review of Field Team report

The operator proposes a 3-stage program of exploration: (1) diamond drill 1,510 feet and magnetometer survey of area, (2) bulldozing and trenching, and geologic mapping and sampling, and (3) 2,000 feet of diamond drilling.

The ore deposits consist of Powellite(?) and scheelite locally disseminated in layers through tactite. About 20 tons of ore has been produced that averaged 0.45 percent WO_3. The Field Team reports this part of the ore was unsalable because of the high Powellite content.

The known deposits appear to be either too low in grade or too small and spotty to warrant exploration.

I concur with the Field Team and recommend that the application be denied.

R. D. Trace

R. D. Trace

IN REPLY REFER TO:

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

May 25, 1955

Re: DMEA-3676
Ray Ryan
Lakin Property
Lander Co., Nev.
Tungsten

Memorandum

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

From: R. D. Trace, U. S. Geological Survey

Subject: Review of Field Team report

The operator proposes a 3-stage program of exploration: (1) diamond drill 1,510 feet and magnetometer survey of area, (2) bulldozing and trenching, and geologic mapping and sampling, and (3) 2,000 feet of diamond drilling.

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The known deposits appear to be either too low in grade or too small and spotty to warrant exploration.

I concur with the Field Team and recommend that the application be denied.

R. D. Trace

RDTrace:hlm
G-5/25/55

Copy to: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
R. W. Holliday, 3513 Interior

IN REPLY REFER TO:

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

May 25, 1955

Re: DMEA-3076
Ray Ryan
Lakin Property
Lander Co., Nev.
Tungsten

Memorandum

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

From: R. D. Trace, U. S. Geological Survey

Subject: Review of Field Team report

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The known deposits appear to be either too low in grade or too small and spotty to warrant exploration.

I concur with the Field Team and recommend that the application be denied.

R. D. Trace

RDTrace:hlm
G-5/25/55

Copy to: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
R. W. Holliday, 3513 Interior

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

Docket

May 18, 1955

Memorandum

WSM

To: W. S. Martin, Room 3538

Copy filed 400

From: R. W. Holliday

Subject: Docket No. DMEA - 3676 (Tungsten)
Ray Ryan
Lakin Property
Lander County, Nevada

Because of the difficulty in treatment, the spotty occurrence and questionable grade of the ore, it seems likely that this property will be marginal at best.

It is recommended that this application be denied.

R W Holliday
R. W. Holliday

DMEA

Docket

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

Bureau of Mines
RECEIVED
MAY 12 1955

1605 Evans Avenue
Reno, Nevada

May 10, 1955

Memorandum

WBM

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

From: Executive Officer, DMEA Field Team, Region II

Subject: Docket No. DMEA-3676 (Tungsten)
Ray Ryan
Lakin Property
Lander County, Nevada

In accordance to your letter of February 25, 1955 referring to this office the above docketed application for exploration assistance, we are attaching four copies of report on subject property by Earl H. Pampeyan, geologist, U. S. Geological Survey and H. W. Jones, mining engineer, U. S. Bureau of Mines, dated May 6, 1955.

The report recommends that the application be denied due to lack of evidence that an economic body of tungsten ore can be developed. Roscoe Smith and I concur in the recommendation.

S. Ricker

S. Ricker

Attach.

Reviewed by
DMEA OPERATING COMMITTEE
5-16-55
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

Defense Minerals Exploration Administration
RECEIVED
MAY 12 1955

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION II

APPLICATION REPORT

DMEA-3676 (Tungsten)
Ray Ryan
Lakin Property, Lander County, Nevada

by

Henry W. Jones
Mining Engineer
U. S. Bureau of Mines

Earl H. Pampeyan
Geologist
U. S. Geological Survey

May 6, 1955

Reviewed by
DMEA OPERATING COMMITTEE
5-16-55
(date)

INTRODUCTION

Mr. Ray Ryan, 218 Court Building, Evansville, Indiana, applied for an exploration loan under the Defense Minerals Exploration Administration, docket 3676, to explore for tungsten at the Lakin property, Lander County, Nevada.

A field examination was made March 23, 1955 by H. W. Jones, U. S. Bureau of Mines and E. H. Pampeyan, U. S. Geological Survey accompanied by the applicant's representative, Mr. Harvey Smith.

The applicant's proposal requests Government aid in a three-stage exploration program which consists of the following: Stage I, 1,510 feet of diamond drilling to test present exposures of tungsten-bearing tactite, a detailed magnetometer survey over a 1,500 by 2,400-foot area, and a reconnaissance magnetic survey on the surrounding area; Stage II, bulldozing and trenching of magnetic anomalies and geological mapping and sampling; Stage III, 2,000 feet of diamond drilling.

CONCLUSIONS AND RECOMMENDATIONS

Tactite on the Lakin property contains a notable amount of powellite and scheelite but it is not of sufficient grade to support a mining operation. The few spotty high-grade tactite layers exposed are not extensive enough to contain an economic amount of ore. There is an excessive amount of powellite intermingled with the scheelite that is not amenable to concentration in local mills; the nearest mill capable of handling this type ore is at Pine Creek near Bishop, California, a truck haul of over 300 miles.

The mineralized zones on the Lakin property are not adequately exposed to determine structural or lithologic controls, a large expectant tonnage of low grade reserves is not evident, and high grade reserves are spotty and confined to narrow layers which can be traced for only a few tens of feet. If the applicant could demonstrate that other tactite zones containing larger or higher grade ore bodies do exist on the property perhaps a very small exploration program at the applicant's expense would be in order. On the strength of available exposures, it is recommended that the request for a DMEA loan on the Lakin property be denied.

LOCATION, ACCESSIBILITY, LOCAL RESOURCES

The Lakin property is in sec. 36, T. 28 N., R. 46 E., directly south of and adjacent to the Bullion mining district near Tenabo, Nevada. It is reached from Beowawe (fig. 1) on a well maintained gravelled road southwesterly 22.6 miles to Tenabo. Continue on the county road an additional 3.7 miles, take the left fork over the Gold Acres mill tailings 1.7 miles. Turn left on the first road past the tailings, then right to the surface trenches of the mine. Total distance from Beowawe is 28 miles.

The claims are located on the southeastern foothills of the Shoshone Range at an approximate elevation of 5,400 feet. The Big Chief claim, on which most of the work has been done, is situated on a small rounded knoll. The two adjoining claims to the north and east are on shallow alluvium.

The climate of the area is arid. The mine area is accessible the year around. Domestic and mine water could probably be temporarily obtained from the Gold Acres well in Crescent Valley, about 4 miles below the claims.

HISTORY AND PRODUCTION

A sketchy history of the mine area was supplied by the applicant's representative. The property was located as a gold prospect in 1932 by Lee Lakin of Beowawe, who dug several small prospect pits and a 27-foot vertical shaft with short drifts extending from the bottom. No shipments of ore were made prior to the time the applicant leased the property on March 10, 1954. After that date the applicant contracted a bulldozer to strip the surface overburden from the tactite and surrounding area. About 18 days of bulldozing and several short shallow trenches were completed (see map).

Two truckload shipments of scheelite ore were made to the Getchell mill at Redhouse, Nevada, about 100 miles distant. The first truckload (April 1954) contained 9.25 tons of ore that averaged 0.35 percent WO_3. The second 11.32-ton truckload shipped in May 1954 averaged 0.54 percent WO_3. Due to the high powellite content, it was reported, the shippers were requested not to furnish any more of this type ore.

PROPERTY AND OWNERSHIP

The Lakin property consists of three unpatented lode claims: the Big Chief, Betty Louise, and the Betty Louise #1. They are

recorded in the Lander County Courthouse at Austin, Nevada, and listed in Book 12, pages 157 and 182 respectively, under the name of Lee Lakin. An agreement of lease and option was drawn up between the applicant and Mr. Lakin dated March 10, 1954, a copy of which accompanies the application form. Mr. Lee Lakin died on March 16, 1955 so accordingly all future dealings and payments will be through an administrator.

The applicant, Mr. Ray Ryan, states that he owns the Ryan Oil Company of Indiana; therefore he is probably well qualified financially. The mining engineer, Harvey W. Smith, representing Mr. Ryan in the mining ventures is a graduate of the Colorado School of Mines. He stated that he has had considerable mining and administrative work and therefore well qualified to supervise any mining activity.

GEOLOGY

The Lakin property lies on the east slope of the Shoshone Range. Gentle slopes are covered with one to three feet of soil and rock exposures are few and poor. The area is underlain by Lower (?) Paleozoic limestone locally altered to tactite. Nearby in this same district quartzite and shale crop out and also granodiorite and granodiorite porphyry intrusives as well as rhyolite and andesite extrusives.

The limestone is commonly dark gray, and cut by numerous thin calcite stringers. It strikes north and dips steeply east where best exposed. Near the tactite zone the limestone is broken up and strikes and dips vary greatly.

The tactite evidently formed along a favorable horizon in the limestone, and is predominately a very fine-grained epidote-quartz-garnet rock with small amounts of magnetite, powellite (?) and scheelite included.

Within 10 feet of the tactite the limestone has been bleached and has a fine-grained "sugary" texture. Locally the limestone has been strongly altered to clay minerals which are stained by iron oxides.

No intrusive rock was seen in tactite area, but the Roberts Mountain thrust fault, a large regional structural feature, has localized intrusions of granitic rocks into limestone nearby suggesting that granodiorite may underlie the limestone at shallow depth and may be the source of the mineralizing solutions.

ORE DEPOSITS

Powellite (?) and scheelite, the ore minerals, are locally disseminated in layers through tactite. The mineralized layers have random orientation and structural control could not be determined from the available exposures. Three zones of tactite surrounded by limestone have been uncovered by bulldozer trenching (fig. 3).

The main tactite zone (fig. 2, 3) is exposed in an area measuring about 200 by 370 feet. It is cut by several quartz veinlets ranging up to 8 inches in thickness and containing copper, iron, tungsten and lead minerals. Powellite or molybdenum-bearing scheelite and scheelite are disseminated through much of the tactite but seem to be most common within 15 feet of the limestone contact. Two persistent layers of tactite containing powellite (?) and

scheelite were lamped and sampled in the No. 1 trench. These appeared to be the best showings of tungsten on the property but were both very spotty and less than two feet thick. A third layer six inches thick was sampled in No. 5 trench. This layer lamped high-grade but was very spotty and could not be projected more than a few feet beyond its exposed length. Tactite containing traces of scheelite is reported on the east edge of the main tactite area in a vertical shaft 27 feet deep.

Tactite zone No. 2, approximately 80 feet in diameter, contains very little, if any, tungsten-bearing rock. Some scheelite was lamped here in float which probably originated up slope in the main tactite zone. Much of the rock exposed in this area has been highly altered and more closely resembles iron stained clay than tactite.

The third tactite zone, which may be a continuation of the one just described (see fig. 3), contains two bands of tactite separated by a 60-foot band of highly altered limestone. The tactite bands are both approximately 20 feet wide and strike N. 30° W. towards No. 2 tactite zone. This zone did contain traces of scheelite but in quantities too small to warrant sampling.

A zone six feet wide of limonitic gossan striking N. 5° E. and dipping 70° W. is explored by a 15-foot prospect shaft 150 feet north of tactite zone No. 3. No tungsten minerals were seen on the dump or in the hole.

Total production from the Lakin property is 20.57 tons of ore averaging about 0.45 percent WO_3. The first shipment of 9.25 tons

assaying 0.35 percent WO_3 was from the north edge of trench No. 1 along the east high-grade streak. A second shipment of 11.32 tons assaying 0.54 percent WO_3 came from the No. 1 trench.

SAMPLING

Eight representative samples were taken at the property at locations shown on the accompanying map, fig. 2, and described as follows:

Sample No.	Width Ft.	% WO_3	% Mo	Description and sample location
175	1.3	0.06	0.02	Lower part trench #1, considerable powellite, opallite, intermingled with scheelite in a highly-brecciated tactite.
176	2.5	0.09	0.09	Head trench #1, scheelite and powellite in brecciated tactite zone about 12 ft. below limestone-tactite contact.
177	2.6	4.00	0.30	Contact of zone sampled by #176. Hard siliceous tactite, considerable scheelite between softer hematitic gouge zones.
178	3.0	<0.01	0.09	Small trench north of #175, considerable powellite, some scheelite.
179	1.0	0.90	0.50	#2 trench, band of scheelite and powellite in tactite.
180	Grab sample	1.05	0.45	South of shaft, some WO_3 and powellite in a soft, altered semi-clay, highly colored area.
181	2.0	0.35	0.01	Siliceous material exposed in bank of cut, between soft altered walls. Some WO_3.
182	0.5	0.37	<0.01	High grade seam of scheelite (quartzitic) cutting soft altered tactite structure.

ORE RESERVES

There are no measured reserves. Indicated reserves of about 250 tons of tactite ranging in grade from less than 0.01 to 4.0 percent WO_3 and averaging less than 0.3 percent WO_3 are in trenches No. 1, 2 and 5. At the west end of trench No. 1 a mineralized layer 50 feet long, about two feet wide and about 10 feet along the dip ranges from 0.09 to 4.0 percent WO_3. A second layer at the east end of this trench is 50 feet long, about two feet wide and 10 feet along the dip and ranges in grade from less than 0.01 to 0.06 percent WO_3. In trench No. 2 one sample cut from a mineralized zone 30 feet long, one foot wide and possibly 10 feet deep assayed 0.9 percent WO_3. A fourth mineralized zone in trench No. 5, almost 30 feet long, a half to two feet wide and less than 10 feet deep, averaged less than 0.4 percent WO_3. Inferred reserves of several hundred tons of tactite averaging less than 0.2 percent WO_3 are in the remainder of the main tactite zone.

PROPOSED EXPLORATION

In the original application submitted by the Ryan Oil Co. a three-stage exploration program was proposed as follows:

Stage I

A. Diamond drill 1,510 feet of hole to test at depth the mineralized zones now exposed: Proposed drill hole data:

No.	Bearing	Dip	Depth
1	N 47 E	-45°	325'
2	"	-60°	245'
3	"	-45°	200'
4	"	-45°	200'
5	Vertical		540'

Holes would be located as shown on fig. 2. Holes 1 through 4 would cut the projected mineralized zones at depths of about 100 feet below the surface. Hole 5 would be drilled to determine the depth to intrusive rock which presumably lies beneath this area.

B. Detailed magnetometer survey of an area measuring 1,500 by 2,400 feet (fig. 3), with readings taken on 50-by 100-foot centers, to determine the size and shape of additional tactite zones.

C. Reconnaissance magnetometer survey on the surrounding area to extend anomalies.

Stage II

A. Bulldozing and trenching of magnetic anomalies determined by Stage I work.

B. Geologic mapping and sampling of newly exposed areas.

Stage III

An additional 2,000 feet of diamond drilling to explore at depth any mineralized zones discovered by diamond drilling, the magnetic survey and trenching in Stage I and II.

The diamond drilling proposed in this program would offer the least expensive method of obtaining widespaced subsurface information in the mineralized area. Total footage requested in Stage I, however, is excessive for testing the tactite and mineralized zones now exposed, and hole 4 would have a better angle of intersection if it is collared 60 feet east of the proposed location and bears N. 27° W. According to the applicant's claim map (fig. 3) some of the magnetometer work and possibly some of the trenching and drilling would be done outside the boundaries of the three claims held by the Ryan Oil Co. When questioned, the applicant reported that he could probably lease all the ground that would benefit from exploratory work done in the proposed program. The magnetometer survey would be useful if the tactite is magnetic enough to be detected.

The mineralized tactite now exposed is not high enough in grade or large enough to justify the proposed exploration program. It was suggested to the applicant that the magnetometer survey be done at company expense before any other exploratory work began, and that the remainder of the program be dependent upon the results of this work. The applicant does not wish to alter his proposed program but stated that if DMEA approves the application his company would finance the magnetometer survey.

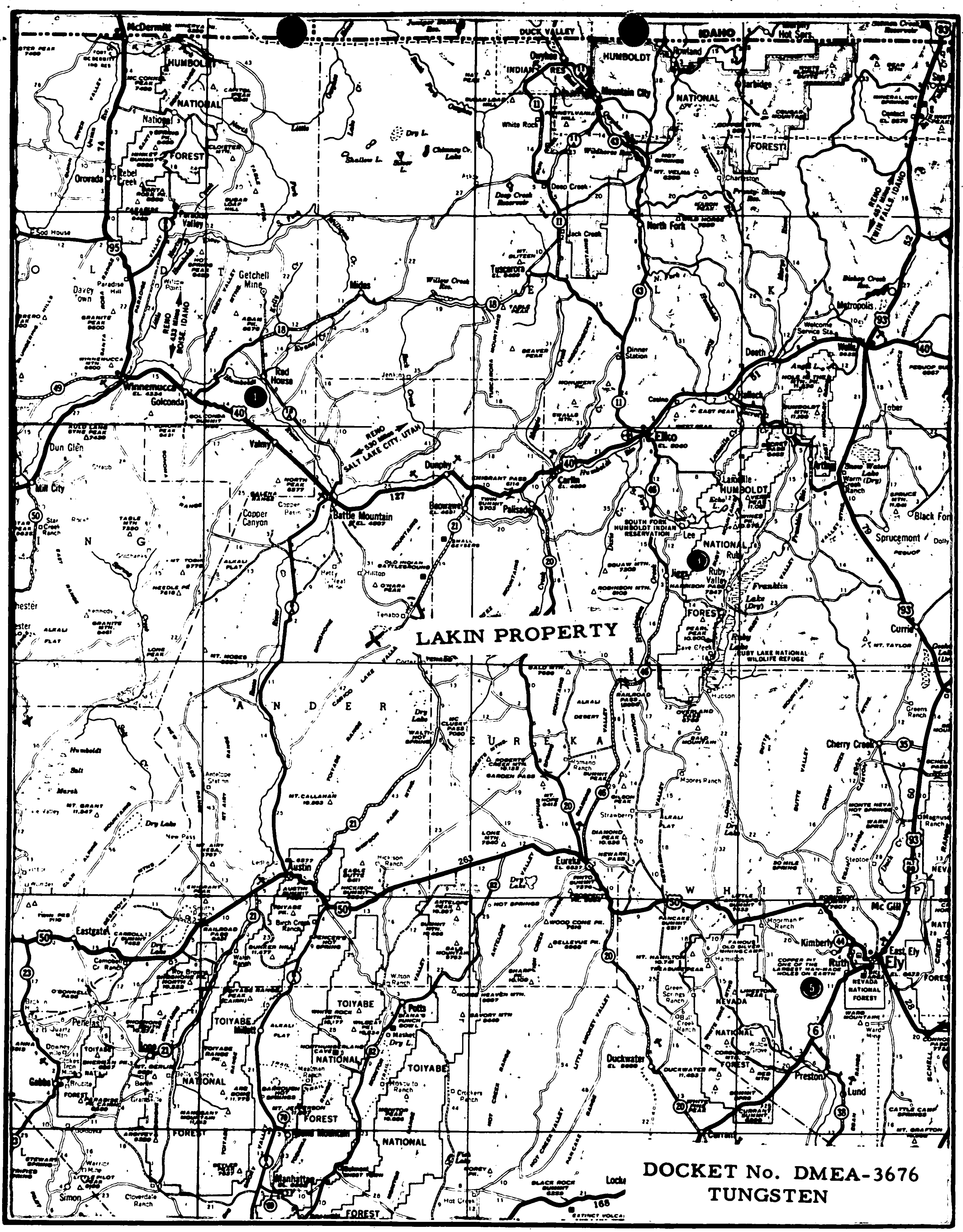


FIG. I LOCATION MAP *Nevada*

Minerals Admin.
RECEIVED
MAY 12 1955

400

DOCKET
Surname:
Rutledge
Martin
McInnis
Hedges
Kiilsgaard
Selfridge
Fleman

FEB 25 1955

Mr. Ray Ryan
218 Court Building
Evansville, Indiana

Re: Docket No. DMEA 3676 - Tungsten
Lakin property
Lander County, Nevada

Dear Mr. Ryan:

The above-docketed application for exploration assistance has been reviewed by the Iron and Ferro-Alloys Division of the Defense Minerals Exploration Administration and referred to Mr. Spangler Ricker, Executive Officer, DMEA Field Team, Region II, 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,

C. O. Mittendorf
by EST
Administrator

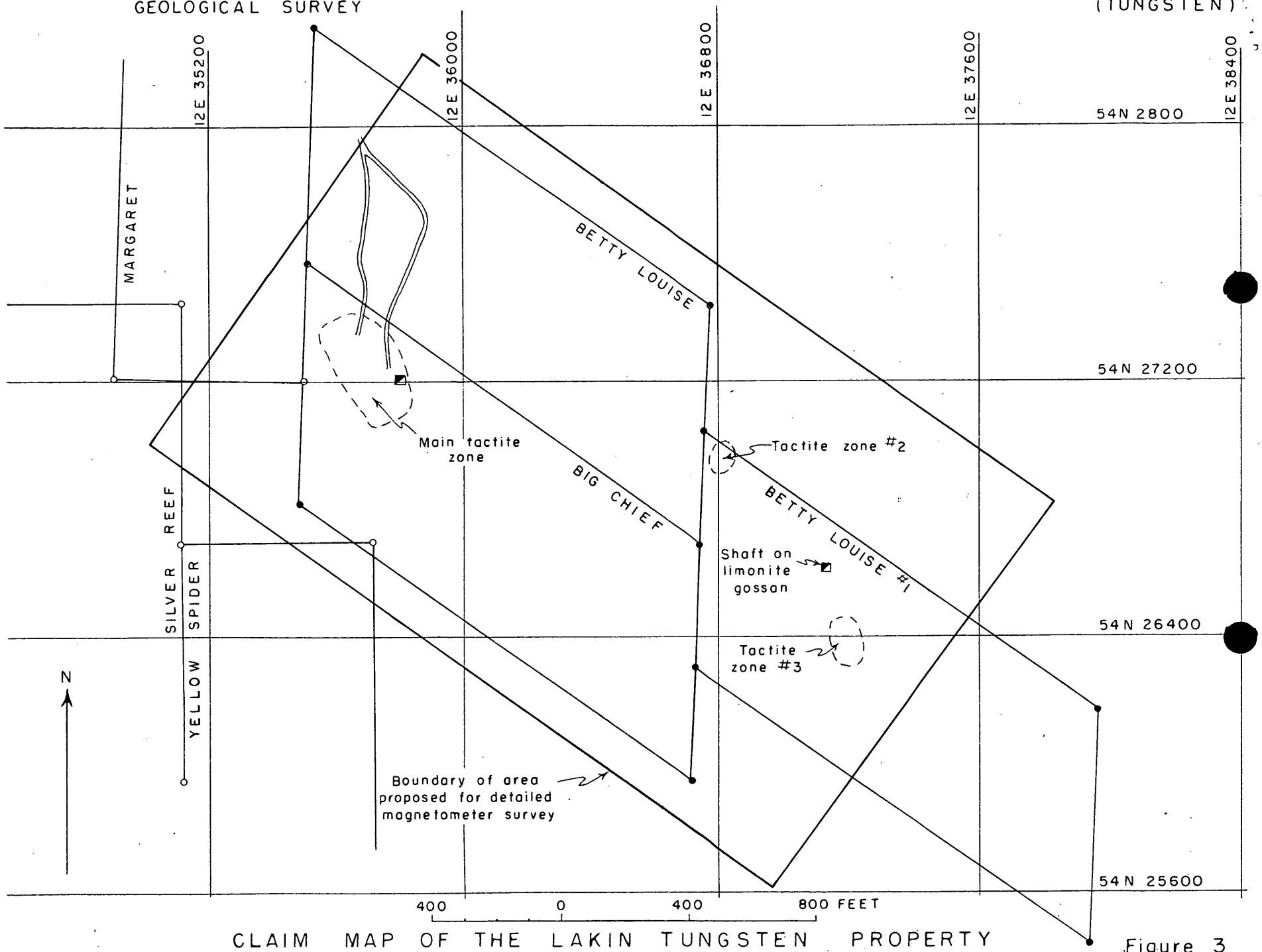
cc: FT, Reg. 2 - San Francisco
Docket
Code 400
Oper. Comm.
Adm. Read. File
W. McInnis, USBM
T. Kiilsgaard, USGS

FARutledge/ls
2/21/55

R.C.S.

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA 3676
(TUNGSTEN)



CLAIM MAP OF THE LAKIN TUNGSTEN PROPERTY

Figure 3

400

DOCKET
Surname:
Rutledge
Martin
McInnis
Selfridge
Johnson

FEB 25 1955

Mr. Spangler Ricker, Executive Officer
DMEA Field Team, Region II
420 Custom House, 555 Battery Street
San Francisco 11, California

Re: Docket No. DMEA 3676-Tungsten
Ray Ryan
Lakin property
Lander County, Nevada

Dear Mr. Ricker:

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

In reviewing the subject application it was noted that adjoining claims may be benefitted by the proposed exploration. If an exploration project is warranted and the adjoining claims are controlled by the applicant, these claims should be included in the property which is the subject of the requested exploration contract. In any case if an exploration project is recommended by the Field Team, an Owner's Consent to Lien should be obtained.

Two copies of a relevant memorandum dated February 17, 1955, by E. L. Newcomb, Geological Survey, are enclosed for your information.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (SHB)

Enclosures

cc: Docket
Adm. Read. File
Oper. Comm.
Code 400
FT, Reg. II
T. Kiilsgaard, USGS
W. McInnis, USBM

APPROVED:

J. H. Hedges

Member, Bureau of Mines (SHB)

Thor H. Kiilsgaard

Member, Geological Survey (SHB)

FARutledge/ls
2-21-55

R.C.G.

Docket

IN REPLY REFER TO:

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 17 1955

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

February 17, 1955

Copy retained 400

Re: DMEA-3676
Ray Ryan
(Lakin Property)
Bullion District
Lander Co., Nevada
$41,850 - Tungsten

WSM

Memorandum

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

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

Subject: Review of application

The operator has proposed a three stage exploration project to develop possible tungsten ore bodies in tactite zones formed by contact metamorphism.

Further exploration appears to be warranted, but the stages of work should be modified. Rather than diamond drilling in Stage I, additional trenching is needed to define the trend of the tactite zones and the continuity of mineralization. If the trenching results are favorable, then diamond drilling might be considered for a second stage. I do not believe the Government should participate in a magnetometer survey. This work may be informative, but to be most useful it should be carried out by the operator before trenching and drilling are done.

The operator's samples contain significant amounts of WO_3, but many of them are below ore grade. However, the operator has produced 20 tons of ore containing about 0.43 percent WO_3 from high grade parts of the ore zones.

This application should be referred to the Field Team for an examination and a report with their recommendations.

E. L. Newcomb

E. L. Newcomb

February 10, 1955
Subject: DMEA 3676
Re: Exploration Assistance
Big Chief, Betty Louise,
& Betty Louise #1 Lode
Mines

Mr. Ray Ryan
218 Court Bldg.
Evansville, Indiana

Dear Mr. Ryan,

The receipt of your application dated November 26, 1954 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA 3676 and referred to the Iron and Ferro-Alloys Division.

Kindly identify all future correspondence relating to your application by this docket number.

Sincerely yours,

Robert E. Adams, Chief
Operations Control and
Statistics Division

6601-14th Street, N.W.
Washington, 12, D.C.
February 7, 1955

Telephone: Taylor 9-4280

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 8 1955

Mr. Wm. Ernest Ellis
Defense Minerals Exploration Administration
U.S. Department of the Interior
Washington, 25, D.C.

Dear Mr. Ellis:

Enclosed herewith is the application of Mr. Ray Ryan 218 Court Building, Evansville, Indiana for a tungsten exploration loan on the Big Chief Lode Claim, Betty Louise Lode Claim and Betty Louise #1 Lode Claim situated in the Bullion Mining District, County of Lander, State of Nevada.

Sincerely yours,

Michael F. Reilly

Michael F. Reilly

Enclosures
Original and three copies

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

FEB - 8 1955

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. 3676
Metal or Mineral Tungsten
Date Received 2-8-55
Estimated Cost $41,850
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:

Ray Ryan
218 Court Bldg.
Evansville, Indiana

(*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 Big Chief Lode Claim, Betty Louise Lode Claim and Betty Louise #1 Lode Claim. See attached map.

(*b*) State any mine name by which the property is known. None

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

(*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. Lease attached with assignment.

(*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. See attached sheet.

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

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

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

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

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

See attached sheets.

5. *The exploration project.*—(*a*) State the mineral or minerals for which you will 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. See attached sheet.

(*c*) The work will start within 30 days and be completed within 12 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. See attached sheet

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: See att. sheets

(*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 [X] 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 November 26, 1954

Ray Ryan
(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

Ray Ryan
218 Court Bldg.
Evansville, Indiana

3 (f). Book and page number of each recorded location notice:

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB - 8 1955

Claim Name	Book No.	Page No.
Big Chief	12	157
Betty Louise	12	182
Betty Louise #1	12	182

Ray Ryan
218 Court Bldg.
Evansville, Indiana

4 (a). I have done, through my field engineer, a considerable amount of bulldozing and trenching to expose the mineralized and altered limestone areas. An examination of the attached maps will show this work. Prior to my taking over the property, a shaft twenty-seven feet deep had been put down to explore for gold. At the bottom of the shaft there are stub drifts. This shaft is adjacent to the mineralized area and is accessible by ladder. However, a safety rope should be used in descending.

(b). During the bulldozing operations to expose the mineralized and altered limestone areas, two truck loads of ore--one of approximately nine tons and averaging 0.35% WO_3 and the second approximately eleven tons averaging 0.54% WO_3--were shipped to Getchell Mine, Inc. Copies of the settlement sheets are attached. No ore reserves can be calculated at this time from present workings.

(d). The property is located thirty miles southwest of Beowawe, Nevada via a county graded dirt road. The Southern Pacific and Western Pacific Railroads pass through Beowawe. The latter is forty miles west of Elko, Nevada. Milling facilities are located at the Getchell mine northeast of Golconda, Nevada, approximately one hundred twenty-five miles distant, and Salt Lake City, approximately 300 miles distant.

The nearest major supply point is Elko, Nevada, seventy-five miles distant.

For residence facilities, a camp would have to be established.

(e). As Nevada is an important mining state, it is believed sufficient manpower will be available. All the necessary materials, supplies and equipment can be obtained in Elko, Nevada.

It is believed a temporary supply of water for exploration can be obtained from the Goldacres mine of Harry Bishop. This supply point is approximately four miles distant. If our exploration is successful, probably a well will have to be drilled in Crescent Valley to supply a mine camp.

Power will have to be generated locally.

5 (b). The exploration work is to consist of a combination of methods and is set up in stages, each dependent on the results of the prior stage. Following is an outline of the proposed exploration:

STAGE I

(1). Diamond core drilling in the amount of 1,500 feet to test the presently known mineralized and highly altered area. The location of the first five holes is as shown on the accompanying map.

Ray Ryan
218 Court Bldg.
Evansville, Indiana

Hole #1. This hole should cut the two well mineralized zones which crop out in the large cut and possibly intersect a third zone, which shows in the shaft and bears toward the large cut.

Bearing:	N 47° E
Angle of inclination:	45°
Estimated depth:	325 feet

Hole #2. This hole will be put down from the same set-up as Number One but will have a greater angle of inclination. It should cut the top two mineralized zones of Hole Number One but at greater depth.

Bearing:	N 47° E
Angle of inclination:	60°
Estimated depth:	245 feet

Hole #3. This hole will test for the mineralized zones between the outcrops to the northwest and southeast.

Bearing:	N 47° E
Angle of inclination:	45°
Estimated depth:	200 feet

Hole #4. This hole will test for depth the outcrop at the position of sample M-7 and the mineralization indicated in the bottom of the shaft.

Bearing:	N 47° E
Angle of inclination:	45°
Estimated depth:	200 feet

Hole #5. This will be a vertical hole to test for mineralization at depth and to locate the intrusive. It is estimated this hole may go to a depth of 540 feet.

(2). Simultaneously with the core drilling a ground magnetometer survey encompassing in detail an area 2,400 feet long by 1,500 feet wide as indicated on the accompanying map. This area will be gridded into 50 feet by 100 feet rectangles and magnetic stations established at all grid intersections.

In addition, a more loose grid of the adjacent area would be run to determine its magnetic character in relation to the known tactite zone and to possibly extend the tactite area.

STAGE II

This phase would consist of bulldozing and trenching magnetic anomalies as discovered with the magnetometer survey and geologic mapping and sampling of the exposed areas.

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STAGE III

This phase would consist of 2,000 feet of additional diamond core drilling to determine the extent of the ore body as indicated from the magnetometer survey and bulldozing and trenching.

5 (d). I, Ray Ryan, have been an oil producer for many years and have drilled many wells and am continuing "exploration activities." I own Ryan Oil Company, whose main office is in Evansville, Indiana. Ryan Oil Company conducts oil drilling and producing activities in Indiana, Illinois, Kentucky, Oklahoma, Texas, New Mexico, Colorado, Wyoming, Nebraska, and West Virginia.

My mining engineer, Harvey W. Smith, has had considerable experience, practical, engineering and administrative. He is a graduate mining engineer of the Colorado School of Mines and has worked in lead and copper mines in California and Arizona. He also served about a year with the Denver Exploration Branch of the Atomic Energy Commission. Mr. Smith, who will be the project supervisor, has had considerable administrative experience with the Army, having served seven years of active duty in the Corps of Engineers and Ordnance Corps as an officer.

6. Estimate of Costs - Stage I

Category (1). Independent Contracts.

(a) Core drilling 1,500 feet @ $7.00/ft. -	$ 10,500.00
(b) Drill-site preparation Bulldozer 2 days @ $100.00/day plus transportation to area	250.00
(c) Magnetometer survey 20 days @ $150.00/day	3,000.00
Total Independent Contracts	$ 13,750.00

Category (2). Personal Services

(a) Supervision Project supervisor rate of $700.00/mo. prorated on time spent	1,100.00
(b) Technical Services Project geologist @ $650.00/mo. for three months	1,950.00
(c) Labor General laborer @ $400.00/mo. for three months	1,200.00
Total Personal Services	$ 4,250.00

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Evansville, Indiana

Category (3). Operating Materials and Supplies

(a) Fuel for truck	$	200.00
(b) Core boxes		150.00
Total Operating Materials and Supplies	$	350.00

Category (4). Operating Equipment

None

Category (5). Initial rehabilitation and Repairs

None

Category (6). New Buildings, Fixtures and Installations

None

Category (7). Miscellaneous

(a) Sampling and analysis Approximately 40 chemical assays for WO_3 and 10 for MoO_2 @ $4.00 ea.	$	200.00
(b) Payroll Taxes and Insurance		200.00
Total Miscellaneous	$	400.00

TOTAL STAGE I $ 18,750.00

Estimate of Costs - Stage II

Category (1). Independent Contracts

(a) Bulldozing and trenching @ $100.00/day plus transportation to area	$	1,575.00
Total Independent Contracts	$	1,575.00

Category (2). Personal Services

(a) Supervision Project supervisor rate of $700.00/mo. prorated on time spent	$	350.00
(b) Technical Services Project geologist @ $650.00/mo.		325.00
(c) Labor General laborer @ $400.00/mo.		400.00
Total Personal Services	$	1,175.00

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Evansville, Indiana

Category (3). Operating Materials and Supplies

(a) Fuel for truck	$ 50.00	
Total Operating Materials and Supplies	$ 50.00	

Category (4). Operating Equipment

None

Category (5). Initial rehabilitation and Repairs

None

Category (6). New Buildings, Fixtures and Installations

None

Category (7). Miscellaneous

(a) Sampling and analysis Approximately 25 chemical assays for WO_3 and MoO_2 @ $4.00/assay	$ 100.00	
(b) Payroll Taxes and Insurance	50.00	
Total Miscellaneous	$ 150.00	
TOTAL STAGE II		$ 2,950.00

Estimate of Costs - Stage III

Category (1). Independent Contracts

(a) Core drilling 2,000 feet @ $7.00/ft.	$ 14,000.00
(b) Drill-site preparation Bulldozer 2 days @ $100.00/day	200.00
Total Independent Contracts	$ 14,200.00

Category (2). Personal Services

(a) Supervision Project supervisor rate of $700.00/mo. prorated on time spent	$ 1,400.00
(b) Technical Services Project geologist @ $650.00/mo.	2,600.00
(c) Labor General laborer @ $400.00/mo.	1,200.00
Total Personal Services	$ 5,200.00

Ray Ryan
218 Court Bldg.
Evansville, Indiana

Category (3). Operating Materials and Supplies

(a) Fuel for truck	$ 200.00	
Total Operating Materials and Supplies	$ 200.00	

Category (4). Operating Equipment

None

Category (5). Initial rehabilitation and Repairs

None

Category (6). New Buildings, Fixtures and Installations

None

Category (7). Miscellaneous

(a) Sampling and analysis Approximately 75 assays for WO_3 and MoO_2 @ $4.00 ea.	$ 300.00	
(b) Payroll Taxes and Insurance	250.00	
Total Miscellaneous	$ 550.00	
TOTAL STAGE III		$ 20,150.00

SUMMARY

Estimated Cost Stage I	$ 18,750.00	
Estimated Cost Stage II	2,950.00	
Estimated Cost Stage III	20,150.00	
Total Estimated Cost of Project		$ 41,850.00
Government Participation @ 75%		$ 31,387.50

SUMMARY OF ESTIMATED COSTS

Drilling costs are based on an estimate from Boyles Brothers Drilling Company of Salt Lake City, Utah. A representative of this company examined the property and made the following estimates:

Ray Ryan
218 Court Bldg.
Evansville, Indiana

1. Drilling to 500 feet $5.60/ft.

2. Water hauling costs to be added to drilling cost.

3. Reaming if necessary @ $2.00/ft.

4. Cementing if necessary @ $9.00/hr. plus cost of cement.

Considering all these factors plus a mobilization charge for a project of less than 2,000 feet of drilling probably will bring the overall cost to around $7.00/ft.

7 (b). I, Ray Ryan will furnish my share of the cost primarily with money. However, the project supervisor, Harvey W. Smith, is an employee of mine and the amount of time he spends on the project will be charged against the costs and credited to me as a portion of my share of the costs.

GEOLOGICAL EVALUATION
of the

LAKIN TUNGSTEN PROPERTY
Bullion Mining District
Lander County, Nevada

MINERALS EXPLORATION RESEARCH CORPORATION

October 1954

GEOLOGICAL EVALUATION
of the
LAKIN TUNGSTEN PROPERTY

Bullion Mining District

Lander County, Nevada

A. LOCATION and PROPERTY

The Lakin tungsten property is located 30 miles southwest of Beowawe, Nevada in T 28 N, R 46 E, Sec. 36 in the Shoshone Range. The property has been located by three unpatented claims, the Betty Louise, Betty Louise # 1, and Big Chief. These claims are owned by Mr. Lee Lakin and are under lease to the Ryan Oil Company.

B. PURPOSE and SUMMARY of INVESTIGATIONS

The purpose of this investigation was to evaluate the potential of the Lakin tungsten mineralization, and, if favorable, to outline further exploration and development work. During September 28-30, 1954, an examination was made of the property by Mr. Charles E. Melbye, accompanied by Mr. Harvey Smith and assisted by Mr. Woody Wise. Stadia survey points were set for base-map control and the geology of the mineralized and immediate adjacent area was mapped on 50 scale. All mineralized outcrops and cuts were checked with a fluorescent light and 10 representative samples were cut. Library investigations were made to determine the criteria for ore localization in other tungsten deposits of northern Nevada.

C. HISTORY

The Bullion mining district has produced mostly gold-silver ore and the first production was recorded in 1869. The total production to 1940 was $450,369, but considerable additional gold ore has been mined in recent years from the London Extension open-pit mine, commonly known as the Goldacres property. The presence of tungsten mineralization has only been known in recent years and the first two truckloads of ore were shipped by the Ryan Oil Company early in 1954.

D. GEOLOGY

1. Regional Setting

The property is located on the east edge of the Shoshone Range, which is an eastward-dipping monocline. Extensive faulting has complicated the geology of the area. The Paleozoic sediments are intruded by granodiorite and granodiorite porphyry at a number of places in the range, and small contact metamorphic deposits are known at a number of these places. The region is well-mineralized with the Tenabo, Lander, and Mud Springs districts a few miles to the north and the Cortez and Mill Canyon districts across the valley to the east. Other commercial contact metamorphic tungsten deposits are found in north-central and northeastern Nevada, but no conclusions can be drawn in regard to mineralization trends.

2. Local Geology

a. Stratigraphy - The only sedimentary rock mapped on the property was a dark gray, poorly bedded Paleozoic limestone with numerous calcite stringers. Inasmuch as little geological work has been done in the district the exact age of the limestone is not known. The limestone is fairly resistant and the beds are contorted in places. The strike on top of the hill and away from the effect of the faulting in the tactite zone is generally N-S and dips 65° - 90° East. Siliceous yellow-brown shales are present in the next hill to the south and reddish-gray quartzite in the next hill to the west, but time did not permit mapping of these formations. In the southeast part of the property the limestone is light gray to white and more dense. Some of this change in color maybe due to bleaching at the time of formation of the tactite rock or just a change in the formation.

b. Igneous Rocks - No outcrops of igneous rocks could be found on the property, although the presence of an intrusive below the surface can be strongly inferred because the deposit is a typical contact metamorphic type. Rhyolite and andesite are present in the Goldacres mine area and on Squaw Butte, but these are believed to be extrusive. These rocks could not be examined in the limited time available to the writer.

c. Structure - The general dip of the limestone is 65° - 90° East in accordance with the east monoclinal structure of the Shoshone Range. A fault exposed in the large exploration cut and in the next cut to the south has caused a change in strike to N 20° E - N 50° E and a reversal in dip to 50° - 70° West. However, the gaoge is gritty, indicating small movement, and the movement is believed to be largely rotational. Small faults and brecciation are present throughout the tactite zone. A few hundred feet to the north and west of the property, as well as in the Goldacres Mine, large breccia zones in the limestone contain low-grade gold mineralization.

d. Mineralization and Alteration - The limestone has been metamorphosed and altered to a rock commonly known as tactite. The tactite rock is composed largely of garnet and epidote with smaller amounts of actinolite, tremolite, bronzite, magnetite, and galena and other sulphides. Tungsten with associated molybdenum is found as scheelite $CaWO_4$ or powellite Ca (M_oWO_4). All the remnants of limestone are extremely altered and are bleached and friable. Extreme oxidation has resulted in the formation of large amounts of limonite and gypsum and some jarossite, hematite, tungstite, malachite, and other unidentified minerals. Calcite stringers and limonite specks are present in the limestone outside the tactite zone and may be regarded as a low-intensity alteration. The mineralization is definitely of the high-intensity type found near intrusive contacts.

Two roughly-parallel northwest zones contain the greatest amount of scheelite and powellite. They are both 2-3 feet wide and are only roughly defined as a zone of somewhat greater crushing, brecciation, and alteration. The presence of mineralization can usually be detected only with the fluorescent light, but the two zones have a slight

yellow-green color which is probably due to the oxidation mineral, tungstite. Scheelite and powellite are disseminated in small amounts throughout the tactite and in the soil overlying the deposit.

A shaft 27 feet deep, showing some mineralization (Sample M-1) below a fault, is the deepest exposure of the tactite. At 1200 feet and 1800 feet east of the main cuts two other tactite zones have been exposed with the bulldozer. Some mineralization was observed in each but all of it was very low-grade. Another tactite zone has been explored with a shaft on the Priest property a half mile to the northwest, and low grade mineralization was found.

The heavy limonite gossan just northwest of the shaft is probably localized in a breccia zone and was derived from the oxidation of sulphides. Considerable malachite and green copper sulphates are present in the gossan and Samples M-4 and M-5 show appreciable silver, copper, lead, and zinc. The amount of copper and zinc in the assays is significant because those two metals are easily leached and carried away. Limestone breccia zones with gold mineralization are present on the west and north sides of the hill, but the relationship of these to the tungsten mineralization is not known.

It should be noted that the contact metamorphic minerals as well as limonite and other oxides are found throughout the mineralized area as veins, disseminations, and irregular masses.

The assay results are as follows, and all samples are located on Plate II.

Sample No	Type	Au	Ag	Cu	Pb	Zn	WO_3	Mo
M1	Cut-1.5'						0.14%	Nil
M2	Cut-2.5'						0.08%	Nil
M3	Cut-2.7'						0.60%	1.27%
M4	Grab	Trace	1.40	1.81	2.39	0.31	0.07%	0.017%
M5	Cut-17.0'	0.01	0.58	0.20	0.25	0.20	0.04%	Nil
M6	Cut-2.3'						0.26%	0.11%
M7	Grab						1.10%	Nil
M8	Grab						0.16%	Trace
M9	Grab						0.08%	Nil
M10	Cut (Dump) 6'						0.06%	Trace

e. Ore Controls - The best ore is localized in zones which can only be vaguely defined as zones of more intense crushing, brecciation, and alteration. The ore zone is often a pale yellow to green color due to the oxide minerals, tungstite or possibly molybdite. There are some zones which exhibit these criteria but which are not well minerlized in the present cuts. However these zones might "make ore" if further explored. No relationship could be observed between the amount of garnet and other tactite minerals and the amount of scheelite, as some zones of massive garnet showed very little scheelite. No criteria

could be established for determining the relative amount of scheelite and powellite in the ore zones. The location of the tactite zone is directly controlled by the position of the intrusive body. Inasmuch as the intrusive does not outcrop on the property, subsurface exploration must be carried out to determine its position and the resulting control on ore deposition.

E. ECONOMIC EVALUATION

1. In view of the intense contact metamorphism and alteration and the presence of some commercial tungsten mineralization, the property definitely warrants further exploration work to determine the extent and size of the deposit and possible extensions of the known deposit.

2. The size of the mapped deposit is small and if present by itself would not be too favorable. However, the fact that there is mineralized tactite at the Priest property and also 1200 - 1800 feet east makes a strong possibility of a major tungsten mineralization. It is very important to determine whether the mineralization is continuous between the three localites or in isolated bodies.

3. The depth of mineralization is limited by the intrusive depth. In typical contact metamorphic deposits there are three zones: silicate, oxide, and sulphide, in that order away from the intrusive. Inasmuch as the three types of minerals are found together in the deposit, depth evaluations cannot be made from the zonation. Tungsten ore has been mined to a depth of at least 500 feet in other similar northern Nevada deposits.

4. The limonite gossan, with base-metal values although very small in extent, may be indicative of a commercial deposit at depth. Contact metamorphic deposits are very irregular and the outcrop size is seldom indicative of the size at depth. The presence of appreciable copper and zinc in the heavily - oxidized outcrop is significant, because those metals are easily leached by ground waters.

5. Two vein like zones contain the highest grade ore and subsurface exploration should be directed toward those zones, but the possibility of commercial, large, low-grade tonnage is present, as the mineralization is found throughout the tactite rock.

F. RECOMMENDATIONS

1. Inasmuch as contact metamorphic deposits commonly contain magnetite, a magnetometer survey should first be run on the area between the two tactite zones on the Lakin property and possibly toward the Priest property to determine the extent of the tactite. Additional bulldozer cuts should then be made on any anomalies. These cuts should be mapped and the geology integrated with what is now known.

2. A drilling program should then be outlined for the entire property. An investigation of the exploration programs at other similar northern Nevada tungsten properties has disclosed that drilling was a satisfactory exploration tool, and it is beleved that drilling should also be satisfactory for the Lakin deposit. If a contractor does not believe core recovery

would be satisfactory, the present shaft should be rehabilitated and a cross cut driven approximately N 70° W. Other favorable zones would also have to be explored with underground methods.

3. The three claims should be surveyed and on investigation made of the land status immediately adjacent. If the above outlined exploration program locates extensions of the known mineralization, the company should be in a position to immediately stake unclaimed land.

4. The above outlined exploration program is planned to start with lower cost methods first and work into higher cost methods in order to obtain the maximum information at lowest cost.

Charles E. Melbye

Charles E. Melbye

MINERALS EXPLORATION RESEARCH CORPORATION
CONSULTANTS AND CONTRACTORS IN MINERAL EXPLORATION, EVALUATION, DEVELOPMENT AND EXPLOITATION
MAIN OFFICE 2120 FORD STREET GOLDEN, COLORADO PHONE 937
DISTRICT OFFICE 1103 WHITE STREET GRAND JUNCTION, COLORADO PHONE 241

ASSIGNMENT OF MINING LEASE

KNOW ALL MEN BY THESE PRESENTS:

THAT, HARVEY W. SMITH and Vernell Lee Smith, his wife, for and in consideration of the sum of One and No/100 ($1.00) Dollar, and other good and valuable considerations, the receipt of which is hereby acknowledged, do hereby sell, assign, set over and convey unto

RAY RYAN
218 Court Building
Evansville, Indiana

all right, title and interest in and to a certain mining property and mining claims located in Bullion Mining District, County of Lander, State of Nevada, and more particularly described as follows:

Big Chief, Betty Louise and Betty Louise #1 Lode Claims, all in Lander County, Nevada, as described in lease dated March 2, 1954 executed by Lee Lakin of Beowawe, Eureka County, Nevada as lessor, to Harvey W. Smith, as lessee, which lease is recorded in book 10 at page 118 records of said Lander County, Nevada.

And for the same consideration the undersigned covenants with the said Ray Ryan, his heirs, successors or assigns that they are the lawful owners of said lease and rights and interests thereunder and that they have good right and authority to sell and convey the same, and that said rights, interest and property are free and clear from all liens and encumbrances and that all things necessary to keep said lease in force have been performed.

IN WITNESS WHEREOF, we sign this 19 day of November, 1954.

Harvey W. Smith
Vernell Lee Smith

STATE OF COLORADO)
)SS
COUNTY OF Mesa)

I, Medford R. Klein a Notary Public in and for said County and State, do hereby certify that Harvey W. Smith and Vernell Lee Smith, his wife, personally known to me to be the persons whose names are subscribed to the within instrument, appeared before me this day in person and acknowledged that they signed, sealed and delivered the said instrument of writing as their free and voluntary act and deed for the uses and purposes therein set forth.

Witness my hand and official seal this 19 day of November, A.D.1954.

Medford R. Klein
Notary Public

My commission expires:

My Commission Expires April 8 1970

LEASE AGREEMENT

This agreement and lease made and entered into this ~~2nd~~ 10th day of March 1954, by and between Lee Lakin of Beowawe, Nevada in the County of Eureka hereinafter known as the Lessor and Harvey W. Smith of the City of Golden, County of Jefferson, State of Colorado, hereinafter known as the Lessee, witnesseth;

That the Lessor, for and in consideration of the rents, royalties, covenants and agreements hereinafter set forth and expressed to be paid, kept and performed by the said Lessee, and the payment of ONE HUNDRED DOLLARS ($100.00) upon execution of this instrument, receipt of which is hereby acknowledged, and the payment of ONE HUNDRED DOLLARS ($100.00) on the second day of May and other good and valuable considerations to the Lessor, Has LEASED, LET and DEMISED and by these presents does lease, let and demise unto the said Lessee the following named mining property and mining claims situated in Bullion Mining District, County of Lander, State of Nevada to-wit:

Big Chief Lode Claim located 8/6/31, Filed 7/2/32, File No. 14587 recorded in Book Page of the Deed Records of Lander County, Nevada; Betty Louise Lode Claim located 7/11/32, Filed 10/4/32, File No. 14704 recorded in Book Page of the Deed Records of Lander County, Nevada; and Betty Louise Number 1 Lode Claim located 7/11/32, Filed 10/4/32 File No. 14705 recorded in Book Page of the Deed Records of Lander County, Nevada, for the sum of ONE HUNDRED THOUSAND DOLLARS ($100,000.00) on the following terms to wit:

The Lessee agrees to pay Ten Percent (10%) royalty to the Lessor on any and all ores or minerals mined and removed from the above mentioned property and in addition the Lessee does hereby agree to pay the Lessor advanced cash payments in lieu of royalty at the rate of TWO HUNDRED AND FIFTY DOLLARS ($250.00) per month beginning on the Second Day of ~~May~~ June 1954 and on the same date of each succeeding month for a period of six months at which time the Lessee agrees to increase the cash payment in lieu of royalty to FIVE HUNDRED DOLLARS ($500.00) per month providing the Ten Percent royalty has not totaled that amount for each and every month beginning with ~~October~~ November Second 1954.

It is further agreed that all cash payments in lieu of royalties and/or royalties so paid shall apply on the purchase price of ONE HUNDRED THOUSAND DOLLARS ($100,000.00) Upon receipt of the first royalty or cash payment in lieu of royalty the said Lessor shall prepare a Deed in Fee Simple conveying to Lessee the above mentioned property in its entirety and without reservation, said Deed to be placed in Escrow with the Nevada Bank of Commerce of Elko, Nevada, to be held until full and final payment of ONE HUNDRED THOUSAND DOLLARS ($100,000.00) has been made by Lessee to Lessor.

The Lessee further agrees that he will move upon the premises, that is the aforementioned mining claims and begin prospecting, developing and operating the same in a miner-like fashion, in accordance with good mining practices and in accordance with the laws of the State of Nevada and with due regard for developing and extracting the

largest amount of ore in a safe and proper manner. The Lessee or his assigns do further agree to keep the property posted so as to keep the Lessor and his property free from all liens for labor, equipment and materials whatsoever. Further, the Lessee shall and does assume all responsibility for damages resulting from accident to themselves or to any of their agents or employees incurred in or about said property; and agrees to keep all employees of the said Lessee engaged on the said premises hereby leased, or employed in connection therewith, fully insured with the Nevada Industrial Commission, at the sole cost and expense of the said Lessee.

The Lessee further agrees to keep any and all of his workings properly timbered and free from loose rock and bad timber and to keep complete and accurate accounts of all ores mined and shipped from the aforesaid Claims and Mining Properties and to have his accounts subject to inspection by the Lessor at any and all times.

It is further understood and agreed that Lessor shall have the right to enter upon and inspect the property and operations thereon at his convenience and own risk.

The Lessee further agrees that he will do any and all necessary assessment work on these claims and record the same in the name of owner, the Lessor, on or before Thirty Days (30) prior to June Thirtieth of each year.

It is further agreed that all royalty payments or cash payments in lieu of royalties due from the Lessee to the Lessor shall be deposited in the Nevada Bank of Commerce at Elko, Nevada to the credit of Lee Lakin, Lessor.

Upon the violation of any covenant or condition herein contained, notice thereof shall be given to Lessee in writing by Lessor, and said Lessee shall have Thirty Days (30) during which to correct such violations, in which event the said Lease shall continue to exist until an additional violation is asserted by said Lessor, in which event the same procedure shall be followed, unless it is the desire of both parties, Lessor and Lessee, that the said lease be terminated. Such termination will be accomplished in writing.

Upon demand for forfeiture, it is mutually understood and agreed that all machinery, equipment and tools which may be placed upon said premises by said Lessee may be removed therefrom within Thirty Days (30) after the termination of this Lease, provided however, that no such machinery, equipment or tools shall be so removed while the said Lessee may be indebted in any manner to the said Lessor under any obligation incurred under this Lease.

Time is of the essence in this agreement, and each and every clause of this indenture and all the covenants and conditions, expressed or implied, contained herein, shall extend to the successors, heirs, executors, administrators and lawful assigns of each and all of the parties hereto.

Filed for Record at the Request of

John M. Del Curto

October 19th., A. D. 19 54

at 3:00 P. M., and recorded on

page 118 of Book 10 of

MISCELLANEOUS

Records of LANDER COUNTY, NEVADA.

Bert Acree

County Recorder.

By _____

Deputy

File No. 30181.

GETCHELL MINE INC.

Red House, Nevada

Custom Ore Settlement Sheet

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 28 1955

Received of: Ryan Oil Co.
1019 Midlands Savings Bldg
Denver, Colorado

Date Rec'd 4-20-54

Shipper's Mark

Lot No.

By GETCHELL MINE INC.

1	Trucks weighing	39,980	Gross Lbs.
2.0	% Moisture	21.110	Tare Lbs.
0.35	% WO_3	18,870	Net Wet Lbs.
9.2465	Net Dry Tons	377	Moisture Lbs.
3.236	Contained STU WO_3	18,493	Net Dry Lbs.

PAYMENT:

Pay for 80% contained STU WO_3 2.589 at $ 46.00 @ * $ 119.09

LESS CHARGES:

Treatment of 9.2465 Net Dry Tons at $ 8.00 @ * $ 73.97

Sampling & Assaying $ 10.00

$

TOTAL $ 83.97

NET PROCEEDS $ 35.12

* (equals)

IN WITNESS [illegible]: the parties hereto have hereunto subscribed their names this the 10th day and year first above written. 1954

Witness
D. R. Dutton
Roy F. Posebury

Lee Larkin
LEE LARKIN

HARVEY SMITH

Filed for Record at the Request of

John M. Del Curto

October 19th., A. D. 19 54

at 3:00 P. M., and recorded on

page 118 of Book 10 of

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Records of LANDER COUNTY, NEVADA.

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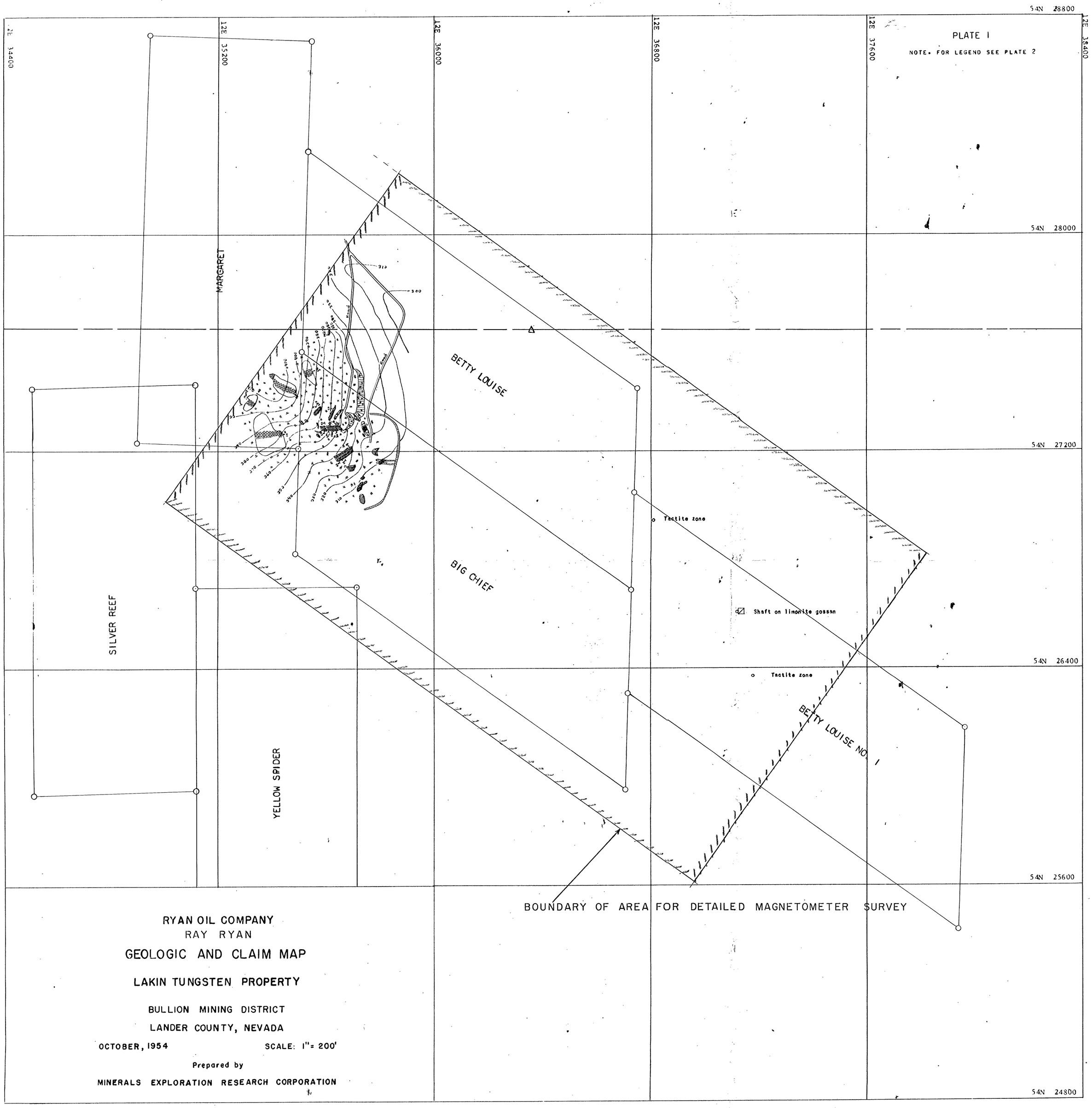
NET PROCEEDS $ 35.12

* (equals)

RAY RYAN
218 COURT BLDG.
EVANSVILLE, INDIANA



RYAN OIL COMPANY
RAY RYAN

GEOLOGIC AND CLAIM MAP

LAKIN TUNGSTEN PROPERTY

BULLION MINING DISTRICT
LANDER COUNTY, NEVADA

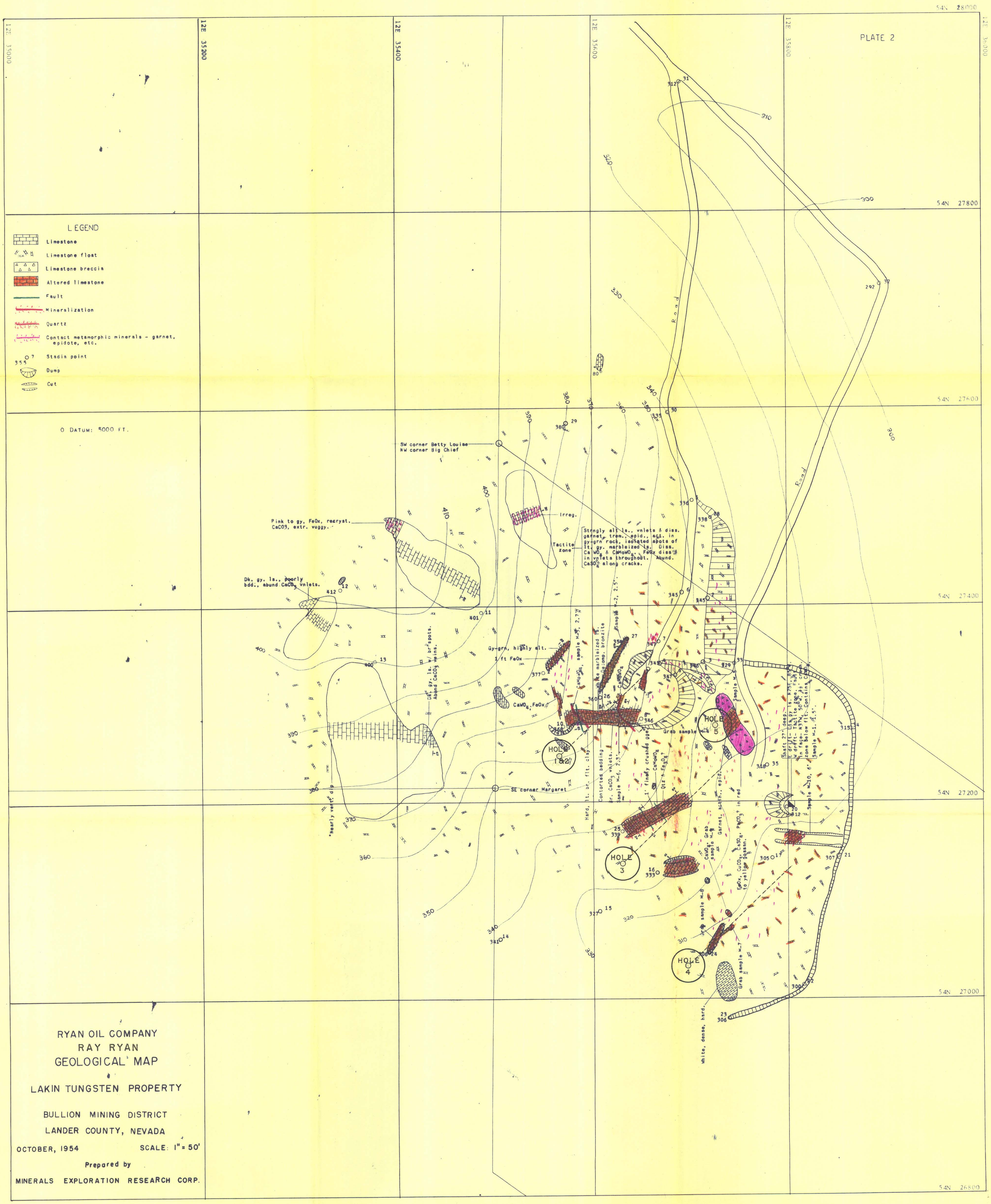
OCTOBER, 1954 SCALE: 1" = 200'

Prepared by

MINERALS EXPLORATION RESEARCH CORPORATION

RAY RYAN
218 COURT BLDG.
EVANSVILLE, INDIANA

PLATE 2



RYAN OIL COMPANY
RAY RYAN
GEOLOGICAL MAP

LAKIN TUNGSTEN PROPERTY

BULLION MINING DISTRICT
LANDER COUNTY, NEVADA

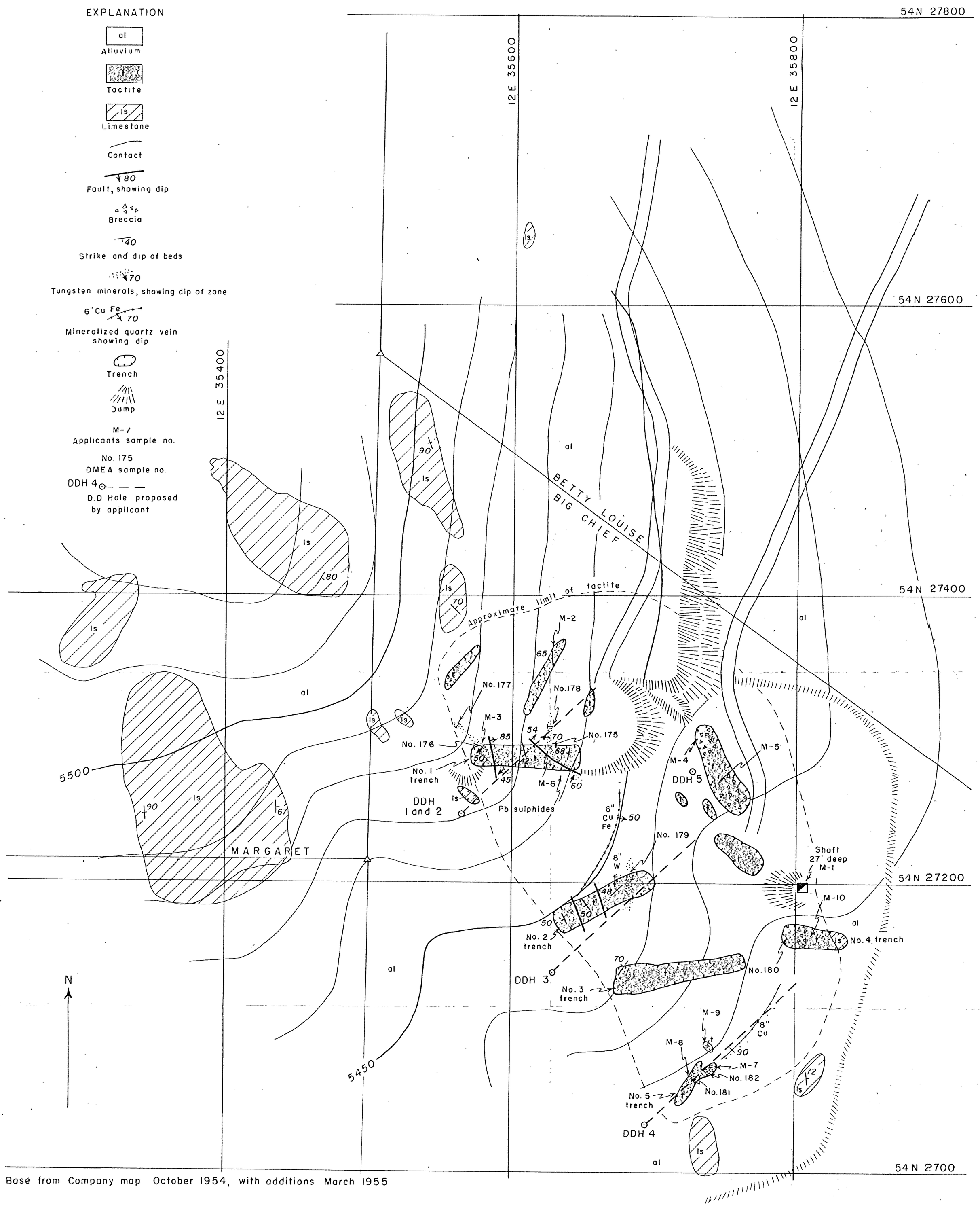
OCTOBER, 1954 SCALE: 1" = 50'

Prepared by

MINERALS EXPLORATION RESEARCH CORP.

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA 3676
(TUNGSTEN)



Base from Company map October 1954, with additions March 1955

LAKIN PROPERTY, LANDER COUNTY, NEVADA

50 0 50 100 Feet

Contour interval 10 feet
Datum assumed

Figure 2