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DEFENSE MINERALS ADMINISTRATION
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DMA Docket No. 2797

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400

JUN 4 1953

2797

Mr. Edward M. Cregar, President
U. S. Tungsten Corporation
7125 East Firestone Boulevard
Downey, California

Re: Docket No. [illegible] 2797 - Tungsten
U. S. Tungsten Corporation
Jumbo mine
Inyo County, California

Dear Mr. Cregar:

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

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

Careful study of all our information, although noting a small amount 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, under these circumstances, that your application for exploration assistance is denied.

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

Sincerely yours,

C. O. Mittendorf

Administrator

Copy to: Docket
Adm. Read. File
Code 400
Field Team, Reg. 3
Operating Committee
D. M. Lemmon, USGS
R. W. Geehan, USBM

JHopkins/ls
~~x3/22/53~~ 5/29/53

IN REPLY REFER TO:

G-MD-DML

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

June 1, 1953

Memorandum

To: W. S. Martin, DMEA

From: D. M. Lemmon, USGS

Subject: Field Team Report
U. S. Tungsten Corporation
Jumbo Mine
Inyo County, California

DMEA-2797
Tungsten

The Jumbo prospect was examined April 16, 1953, by E. M. MacKevett and J. F. Robertson of the Geological Survey, and R. R. Trengove of the Bureau of Mines. Their report, dated May 13, 1953, recommends denial of the application because the known deposits are small and of low grade.

I concur with the recommendation that the application be denied.

D. M. Lemmon

May 29, 1953

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Denial of application for exploration assistance in the amount of $54,000.00
Docket No. DMEA 2797 - Tungsten
U. S. Tungsten Corporation
Jumbo mine
Inyo County, California

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

(1) The present Jumbo mine was formerly operated as a gold mine before it was abandoned by the owner in 1926. The area and mine were prospected for tungsten in 1950, when scheelite was discovered in the old workings and the Jumbo group of claims -- Nos. 1 to 6 -- was located.

(2) The mine was examined by a U. S. Bureau of Mines' engineer, September 5 and 7, 1951, in connection with an application for Government assistance for an access road. As a result of this examination, the application was denied.

(3) The deposit was sampled very thoroughly during this examination. Fourteen samples were taken in the Jumbo No. 1 adit that showed values ranging from 0.05% to 0.77% WO_3. Four samples taken in the Jumbo No. 2 workings showed values that ranged from 0.03% to 0.88% WO_3.

(4) The Company reports that it shipped 5,434 tons of ore having an average grade of 0.285% WO_3 to United States Vanadium Corporation, Bishop, California. As the grade was less than 0.3% WO_3, no profit was realized.

(5) The mine was examined by the DMEA Field Team on April 16, 1953. Ore sampled by U. S. Bureau of Mines' engineer in 1951 had been mined. Two samples were taken in Jumbo No. 2 that assayed < 0.01% and 0.70% WO_3 respectively.

(6) The tungsten deposits are contact metamorphic in origin. Scheelite occurs irregularly disseminated in tactite found in a few places within the limestone which has been invaded by a porphyritic quartz monzonite, the predominant rock of the area.

(7) The Field Team concludes that the occurence of scheelite in the tactite is too meager to constitute ore and the potential tonnage too small to warrant Government participation in exploring the Jumbo claims. They recommend that the application for Government assistance in an exploration program be denied. The Iron and Ferro-Alloys Division of DMEA concurs in this denial.

(8) The commodity divisions of the U. S. Geological Survey and U. S. Bureau of Mines concur in this denial.

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

JH opkins/ls
5/29/53

Copy to: Docket
Adm. Read. File
Code 400
Operating Committee

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

402

C O P Y

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

Office of
DMEA Field Team
Region III

May 21, 1953

Memorandum

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

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 2797 (Tungsten)
U. S. Tungsten Corporation, Jumbo Mine
Inyo County, California

Reference is made to your letter dated April 2, 1953, requesting a field examination of the subject mine.

Attached are four copies of a report entitled "DMEA-2797, Tungsten, Jumbo Mine, Inyo County, California," by E. M. MacKevett and J. F. Robertson, Geologists, U. S. Geological Survey, and Russell R. Trengove, Mining Engineer, U. S. Bureau of Mines, dated May 13, 1953.

The examining geologists and engineer are in accord that the property does not contain sufficient merit to warrant exploration with Government funds, and in this the Field Team concurs.

/s/ H. C. MILLER
H. C. Miller
Executive Officer
DMEA Field Team, Region III

Attachment

Copy to: E. H. Bailey, USGS

Reviewed by
DMEA OPERATING COMMITTEE

5-29-53
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA-2797--Tungsten

Jumbo Mine, Inyo County, California

A. M. MacKevett, Geologist
U. S. Geological Survey

J. F. Robertson, Geologist
U. S. Geological Survey

Russell A. Irengovo, Mining Engineer
U. S. Bureau of Mines

May 13, 1953

Reviewed by
DMEA OPERATING COMMITTEE

5-29-53
(date)

SUPPLEMENTAL REPORT

Docket No.: DMEA-2757 (Tungsten)

Name and address of applicant: U. S. Tungsten Corp.,
E. M. Gregar, Pres.,
10245 So. Paramount Blvd.,
Downey, Calif.

Name and location of property: Jumbo Mine,
Inyo County, Calif.

SUMMARY

The grade and potential tonnage of the scheelite deposits at the Jumbo mine are too low grade to justify government participation in exploration. On the Jumbo No. 1 claim only a few small disseminations of scheelite exposed in the mine workings and in outcrops of the small tactite bodies occur. The low overall WO_3 content of the Jumbo No. 2 tactite, and the probable small size of the tactite body, are not favorable for successful exploration.

The U. S. Tungsten Corporation (Jumbo Mine), a gold prospect, was examined by an engineer[1] of the U. S. Bureau of Mines on September 5 and 7, 1951. The purpose of that examination was to determine if the construction of three miles of access road to the deposit at Government expense was justified. The Bureau engineer sampled the deposit very thoroughly at that time and the request for Government assistance in the construction of the access road was denied.

1/ Benjamin H. Sheahan.

The corporation had already completed the construction of six miles of access road when they requested assistance on the remaining three miles. When this assistance was denied, they completed the nine miles of one-way road at a cost of $130,000. Most of the road was cut into solid rock of the steep mountain slope with a maximum grade of about 23 percent and rock cuts 30 feet in height.

They later requested Government assistance for an exploration loan (docket WPA-2797, Tungsten).

A Bureau engineer[2], accompanied by two geologists[3] of the U. S. Geological Survey and S. M. Cregar, president of the corporation, examined the property April 16, 1953. No additional exploration was done since the Bureau engineer's examination in September 1951.

With no attempt at sorting, according to Mr. Cregar, 5,000 tons of mineralized tactite was shipped to the U. S. Vanadium's mill at Bishop. This production analyzed from 0.28% to 0.48% WO_3 and 0.0085% Mo, but as the average of the entire shipment was below 0.3% WO_3, the corporation did not realize a cent from the shipment. There is about 500 tons stockpiled near a truck loading pocket at the foot of the mountain. This was lamped by the Bureau engineer. There were large chunks (2 to 3 cu. ft.) of barren tactite in the stockpile. There is not sufficient scheelite present to make commercial ore by sorting.

2/ Russell R. Trengove.
3/ S. M. Mackewett and J. F. Robertson.

ing.

Mr. Cregar stated that he was not shipping the stockpile and that they had invested a total of $165,000 in the enterprise.

GEOLOGY

The Jumbo Nos. 1 and 2 claims include scheelite-bearing tactite deposits on a west-trending spur on the highly dissected west flank of the Inyo Mountains. Quartzite and limestone occur in the mine area as a southwest-dipping wedge-shaped mass, thin and tapering to the east but thick and broad to the west. (Fig. 1 sketch map of Jumbo 1 and 2 claims). The sedimentary rocks were intruded by porphyritic quartz monzonite, which is the dominant rock at the Jumbo No. 1 claim and areas to the east. Salients of quartz monzonite cut the sedimentary rocks and crop out in several places in the mine area. Thin, fine-grained basic dikes occupy zones of the faults. Medium-bedded, gray limestone prevails in the unit mapped as limestone. The quartzite is white with local iron staining and cross bedding. On the basis of similarity of lithology and stratigraphic relationship, the sedimentary rocks are believed to be Ordovician Pogonip limestone and Eureka quartzite. Tactite, locally containing disseminated scheelite, occurs in a few places within the limestone, and also as a small lens in quartz monzonite.

Broad folds and fractures which are the commonest structural features of the sedimentary rocks, probably resulted from the forceful intrusion of the quartz monzonite. Strikes of the southwest-dipping strata range from about N. 30° W. in the eastern part of the

mine area to N. 85° W. in the western part. The dominant fractures dip steeply and strike northeasterly. The tactite lenses probably extend to a very shallow depth, as is suggested by their restricted surface extent and interruption by quartz monzonite salients, by the surface proximity of quartz monzonite throughout most of the mine area, and by the low dip of the intrusive-sedimentary contact.

ORE DEPOSITS

The tungsten deposits are contact metamorphic in origin. Scheelite occurs irregularly disseminated in tactite that was formed as partial metasomatic replacements of favorable limestone horizons. Garnet is the chief constituent of the tactite. Less common are epidote, oxidized iron and copper minerals, calcite, and quartz. The scheelite occurs mainly as nearly equidimensional crystals as large as 4 mm but commonly less than 1 mm in diameter. Subordinate amounts of scheelite occur in veinlets less than 1 mm thick transecting the tactite, and as minor disseminations in quartz monzonite near the tactite.

Tactite at the Jumbo No. 1 claim contains small areas of widely scattered grains and fracture coatings of scheelite which are too lean and discontinuous to constitute ore. (Fig. 2, Geologic map of Jumbo No. 1 workings). The scheelite-bearing tactite sampled by U. S. Bureau of Mines engineer[4] (see fig. 3, Detail sketch of Jumbo No. 1 adit) in 1951 has been mined, but most was too low grade or too diluted during mining operations to warrant transportation to the mill.

4/ Sheahan, B. M., Report of Examination by Field Team Region III: Access Road, Jumbo Mine, Inyo County, California. Oct. 29, 1951.

The tactite body at the Jumbo No. 2 claim is on the gently dipping west-striking western limb of a flexure, and it pinches out to the east where the strike of the bedding changes. It is 2 to 12 feet thick and is exposed along its strike for about 240 feet. The surface exposures were lumped, and are estimated to contain an average of less than 0.20 percent WO_3 throughout a length of about 200 feet and an average thickness of 3 feet with most values in irregular scheelite-rich concentrations near the Jumbo No. 2 adit. Tactite exposed down-dip in old mine workings driven on steep, northeast-striking auriferous quartz veins that cut the tactite, however, is nearly barren of scheelite 10 to 20 feet below the surface.

ORE RESERVES

The meager scheelite occurrences at the Jumbo No. 1 claim are too lean and widely scattered to constitute ore. At the Jumbo No. 2 claim, scheelite occurs in tactite over a length of approximately 200 feet, an average thickness of 3 feet, and extends to an estimated depth of 15 feet. Figure 4 shows the grade and locations of samples of the Jumbo No. 2 tactite body. Chip sample E-1 was taken across the rich-appearing scheelite zone near the Jumbo No. 2 adit, but this zone lacks lateral and down-dip continuity. Chip sample E-2 is typical of the scattered scheelite near the Jumbo No. 2 shaft. Lamping with an ultra-violet lamp indicates most of the tactite contains about 0.10 percent or less WO_3.

PROPOSED EXPLORATION

Proposed exploration as shown on a map by Dion L. Garner[5], which accompanies docket DMEA-2797, includes a drift about 700 feet long driven in a westerly direction from the heading of the Jumbo No. 1 adit, two raises of unspecified lengths and locations, a winze about 75 feet deep near the portal of Jumbo No. 1 adit, six diamond drill holes of unspecified lengths, four of which are to be drilled horizontally from the proposed drift, and two holes drilled from the surface on the Jumbo No. 2 claim. The applicant is amenable to any changes in the submitted exploration proposals.

The applicant's proposal does not seem feasible. Drifting from the Jumbo No. 1 adit would be blind exploration as there are no surface indications of ore zones that would be cut by the drift. The proposed raises are contingent on intersecting tactite in the drift, and the winze at its proposed site would cut very little favorable rock before penetrating quartz monzonite, probably at a depth of 10 or 15 feet below the collar. Underground diamond drilling is without geologic targets.

Exploring the down-dip extension of the Jumbo No. 2 tactite by diamond drilling has some merit but does not appear worthy of government participation. Probably the grade and distribution of scheelite in the Jumbo No. 2 tactite is similar to that in the better parts of the Jumbo No. 1 tactite, which were mined but not worth milling. Scheelite diminishes in down-dip parts of the Jumbo No. 2 tactite exposed in mine workings and the probable overall WO_3 content of the

5/ Consulting geologist, Red Mountain, Calif.

tactite body is very low. The tactite body is probably small and chances are that it is truncated by quartz monzonite at a shallow depth. It is accessible only by a poor trail.

Geologists' Conclusions

The scheelite-bearing tactite is too low in grade and the potential tonnage too small to warrant government participation in exploring the Jumbo claims. Inaccessibility and lack of nearby water are other undesirable factors. Diamond drilling the concealed parts of the Jumbo No. 2 tactite offers the best possibilities for exploration, but the chances of finding ore in quantity and grade to justify exploration are remote.

Bureau Engineer's Conclusions and Recommendations

Jumbo No. 1 workings have been mined out and the little scheelite showing in Jumbo No. 2 workings is not of sufficient interest to justify the expenditure of several thousand dollars on an extension of the present access road to make Jumbo No. 2 working accessible.

The Bureau engineer recommends that the application for Government assistance in an exploration program be denied.

SAN FRANCISCO, CALIFORNIA
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REGION III
BUREAU OF MINES
DEPARTMENT OF INTERIOR

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
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1953 MAY 13 AM 10:58

SAN FRANCISCO, CALIFORNIA

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APR 2 1953

Air Mail

Mr. H. C. Miller, Executive Officer
DMEA Field Team, Region III
1012 Flood Building
870 Market Street
San Francisco 2, California

Re: Docket No. DMEA 2797 - Tungsten
U. S. Tungsten Corporation
Jumbo Mine
Inyo County, California

Dear Mr. Miller:

Reference is made to the subject application for exploration assistance which is being referred to your office for a field examination.

Neither the property nor the tungsten occurrence is adequately described in the application. Cost estimates are high and the allowance for supervision excessive. We explained this to Mr. Kregar, President, U. S. Tungsten Corporation in our letter of December 17, 1952, and asked for additional information. Partial data have since been received and are enclosed for your information. During the field examination, the missing information and the items disallowed as being for production should be discussed with the applicant, and the cost data should be revised.

A memorandum by M. D. Crittenden, Jr., dated December 12, 1952, is enclosed for your information.

Sincerely yours,

Chairman, Operating Committee

Enclosures

Approved:

Member, Bureau of Mines

Member, Geological Survey

cc: Docket
Field Team, Region 3
Code 400
Admn. Read. File
Operating Committee
R. W. Geehan, USBM
D. M. Lemmon, USGS

FARutledge/hhb
3/30/53

400

400

APR 2 1953

[illegible], President
[illegible] Corporation
[illegible] Boulevard
Downey, California

Re: [illegible] - Kingston
[illegible] Corporation
[illegible]
Orange County, California

Dear Mr. [illegible]:

Your application for [illegible] California, [illegible] claims at [illegible] and the [illegible] contained in your letters of January 19 and March 10, 1953, have been reviewed by the Iron and Ferroalloys Division, [illegible], and have been referred to Mr. [illegible] Miller, Executive Officer, [illegible] Field Team, Region III, 1112 Flood Building, 870 Market Street, San Francisco 2, California, for a field review and examination.

The Regional Office will contact you [illegible] early date in regard to the [illegible] of your property. Any assistance that you can render the members of the field team during the examination will be appreciated.

Sincerely yours,

C. O. Mittendorf

Administrator

cc: Docket
Field Team, Region 3
Code 400
Admin. Read. File
R. [illegible] Geehan, [illegible]
R. [illegible] Lemmon, [illegible]

WHutledge/hhb
3/27/53

400

UNITED STATES TUNGSTEN CORP.

Mines
Independence, California

Main Offices
7125 East Firestone Blvd.
~~10248 S. Paramount Blvd.~~
Downey, California

TOpaz 2-1161

March 19th, 1953.

United States Department of the Interior,
Defense Minerals Exploration Administration,
Washington 25, D. C.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 23 1953

Re: Docket No. DMEA 2797 - Tungsten
U. S. Tungsten Corporation
Jumbo Mine, Inyo County, California.

Attention: Mr. C. O. Mittendorf, Administrator.

Gentlemen:

Acknowledgment is made of your letter of March 13th, 1953.

We must apologize for the delay in getting final, corrected data to you. The delay was due to the serious illness of Mr. Gardner.

You will find enclosed prints of the revised tracing prepared by Mr. Gardner, which, in his opinion, answer the objections you made.

To these prints we have added in red pencil the points at which Engineer Nasland sampled the property, exclusive of the tunnel samples which he described in detail in his report.

In Mr. Martin's letter of February 12th, 1953, he queried why the dump samples ran only .17% WO_3.

You will recall that the tunnel was an old gold operation and the Nasland sample was taken haphazard from a dump composed of tunnel cuttings, overburden and extraneous rock.

Mr. Nasland's examination showed no values on the hanging wall side of the tunnel. The writer, who was present, has no idea why Mr. Nasland sampled the dump, and as he is now reported to be in Mexico, we cannot get in touch with him.

Copy retained 400

United States Department of the Interior,
Defense Minerals Exploration Administration. March 19th, 1953.

It is believed that Mr. Gardner's maps showing proposed work are self-explanatory.

Moreover, we shall be only too happy to revise our application in accordance with your own engineering reports. We shall be glad to sub-contract the continuation of the drift and the diamond drilling work so as to comply quite fully with Mr. Mittendorf's letter of December 17th, 1952.

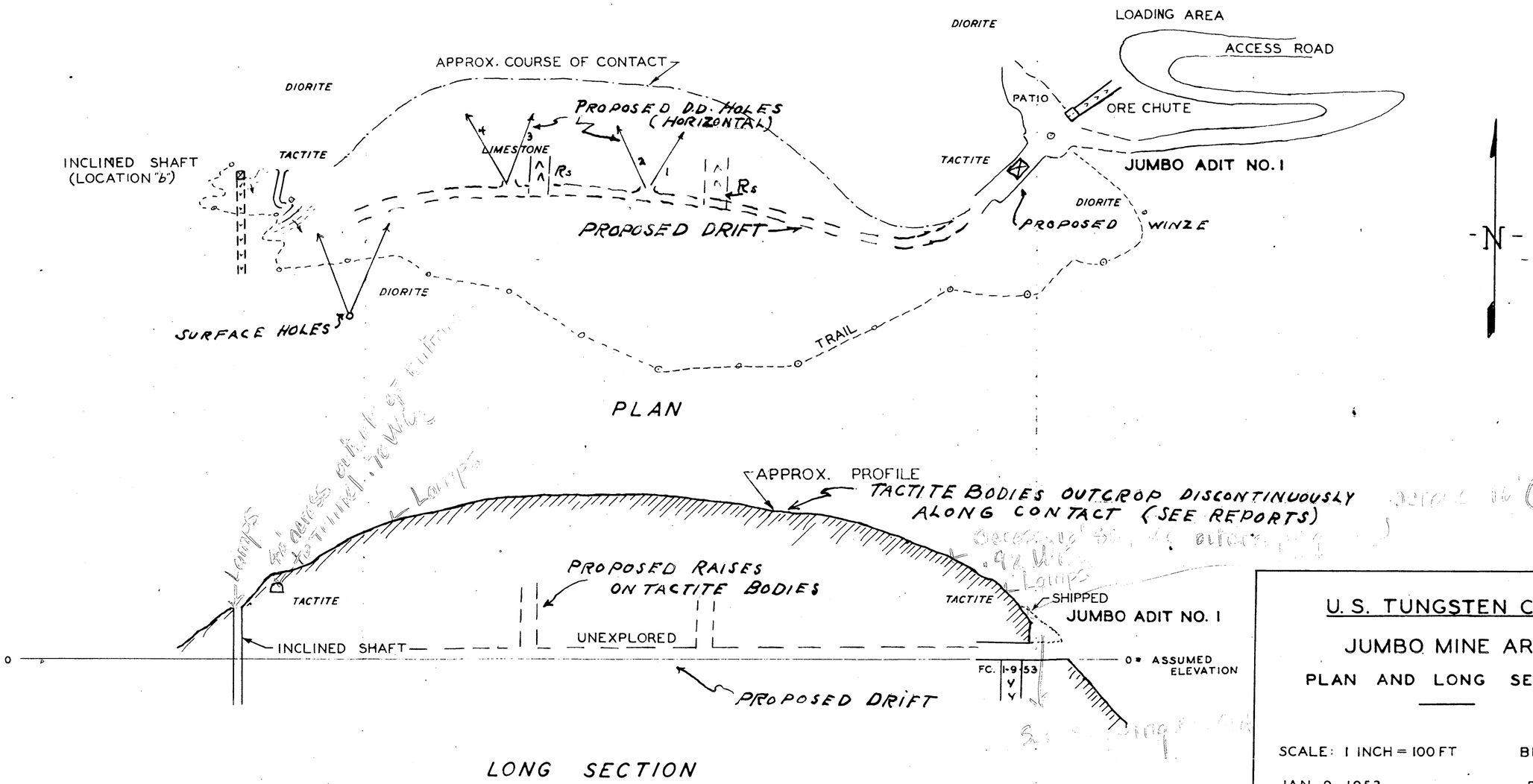
This Company has extended itself now to the limit and shall await your further advices before proceeding further.

Yours very truly,

UNITED STATES TUNGSTEN CORPORATION

E. M. Cregar, President.

EMC:VM



U. S. TUNGSTEN CORP.

JUMBO MINE AREA

PLAN AND LONG SECTION

SCALE: 1 INCH = 100 FT

JAN. 9 1953

BRUNTON & TAPE

DION L. GARDNER

Mr. Edward M. Gregar, President
U. S. Tungsten Corporation
7125 East Firestone Boulevard
Downey, California

MAR 1 3 1953

Re: Docket No. DMRA 2797 - Tungsten
U. S. Tungsten Corporation
Jumbo Mine
Inyo County, California

Dear Mr. Gregar:

Reference is made to your application for exploration assistance at the Jumbo Mine. On December 17, 1952, we wrote you requesting additional information needed to process the subject application. Part of this information was received with your letter of January 19, 1953, and notation was made that you were aware of the missing data.

On February 12, 1953, we again wrote you requesting that these data be furnished. We wish to cooperate fully in the matter of allowing ample time for the submission of the necessary data, but if the required data have not been received by April 15, 1953, we will then remove the application from the active file and consider the matter closed.

Sincerely yours,

C. O. Mittendorf

Administrator

CC: DOCKET
FIELD TEAM, REG. III
CODE 400
ADMN. READ. FILE
R. W. GEEHAN, USBM
D. M. LEMMON, USGS

FARutledge/ls
3/12/53

7125 East Firestone Blvd.

xxxxxxxxxxxxxxx

400

January 19, 1953

United States Department of the Interior
Defense Minerals Exploration Administration
Washington 25, D. C.

Re: Docket No. DMEA 2797 - Tungsten
U. S. Tungsten Corporation
Jumbo Mine
Inyo County, California

Gentlemen:

Acknowledgment is made of your letter of December 17, 1952 with reference to the above docket number and this Corporation's application for exploration assistance.

Attached to this letter will be found four (4) copies of a Geologic Map prepared by Dion L. Gardner, M.E.

Your attention, however, is drawn to the copy of the report previously furnished you and drawn up by Harry Naslund, M.E. which reported in detail all of Mr. Naslund's sampling methods.

Notation is made of your exceptions to the application.

For your further information the Corporation is in process of making an operational contract so in large measure your objections could be satisfactorily adjusted. We have expended so much money on this property and Engineers from various Governmental and State Departments have given us so much encouragement that we hate to see the property not adequately explored.

You will find enclosed also four (4) copies ech of the assignments to the American Tungsten Corporation (later changed to United States Tungsten Corporation) by Edward M. Cregar and wife, O. E. Goodwin and wife and Katie A. Steinen.

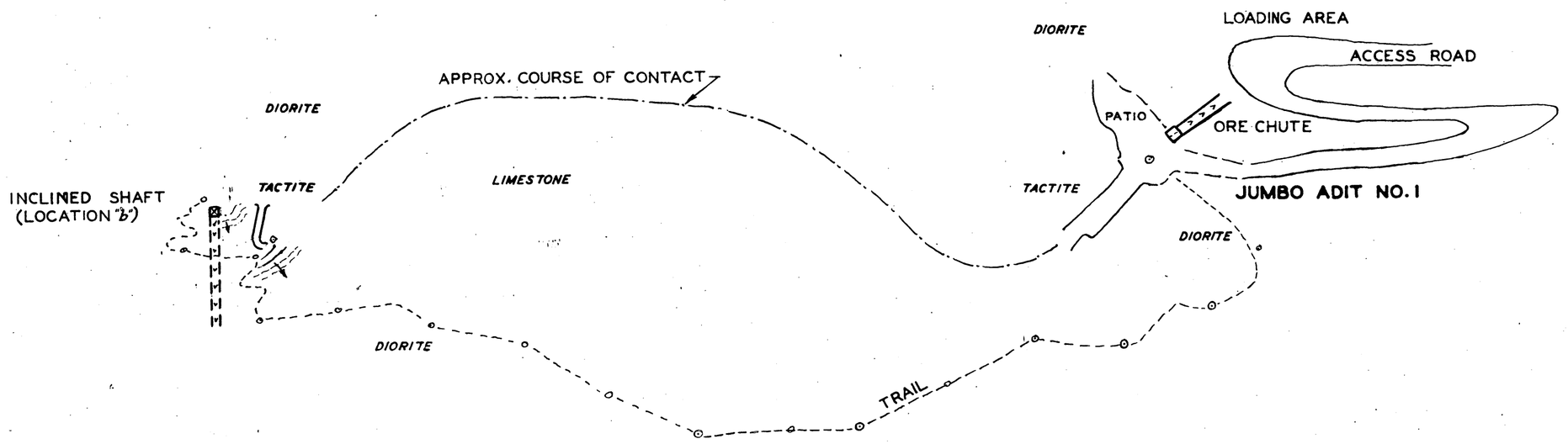
Yours very truly,

UNITED STATES TUNGSTEN CORP.

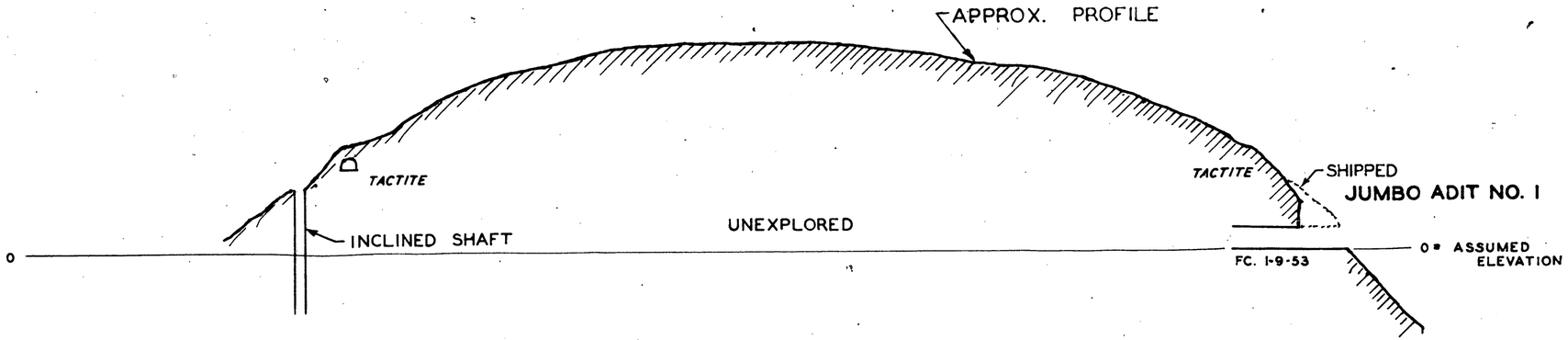
Edward M. Cregar

Edward M. Cregar, President

EMC/bd



PLAN



LONG SECTION

Docket No. DMM-A-2799

U. S. TUNGSTEN CORP.

JUMBO MINE AREA

PLAN AND LONG SECTION

SCALE: 1 INCH = 100 FT

BRUNTON & TAPE

JAN. 9 1953

DION L. GARDNER

FEB 12 1953

Mr. Edward L. Gregar, President
U. S. Tungsten Corporation
7125 East Firestone Boulevard
Downey, California

Re: Docket No. MRS 2797 - Tungsten
U. S. Tungsten Corporation
Jumbo Mine
Inyo County, California

Dear Mr. Gregar:

Reference is made to the subject docket and your letter of January 19, 1953, transmitting a plan and section of the Jumbo Mine area by Dion L. Gardner.

Gardner's map shows the location of the present workings and also the general geology of the immediate area but does not show the location of the proposed exploration program. In addition, though tactite is shown at two locations, Jumbo Adit No. 1 and inclined shaft (location "b"), the possibility of this tactite being continuous along the limestone-diorite contact, which may or may not be true, is not indicated, but the tactite is shown as two separate patches.

The report by Harry Naslund submitted with the original application was noted. Though he gave a description of his sampling, we were unable to determine why the dump ran only 0.17 percent WO_3 while his two samples of the tunnel ran 0.76 and 2.65 percent WO_3.

It is noted that you are aware of the data missing from the original application and requested in our letter of December 17, 1952. Processing of your application will be held in abeyance until this information is received.

Sincerely yours,

SIGNED

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

cc: Docket
Field Team, Region 3
Code 400
Admn. Read. File
R. W. Geehan, USBM
D. M. Lemmon, USGS

FARutledge/hhb

2/11/53

DEC 17 1952

Mr. Edward M. Creger, President
U. S. Tungsten Corporation
10248 South Paramount Boulevard
Downey, California

Re: Docket No. [illegible] - Tungsten
U. S. Tungsten Corporation
Jamo Mine
Inyo County, California

Dear Mr. Creger:

Your application for exploration assistance and other data concerning the above-noted property available to us in [illegible] have been carefully reviewed.

The information submitted with your application is insufficient to justify a field examination. No detailed plan of exploration and no map showing either the local geology or the target of the proposed exploration were included with your application.

Before we can process your application, we must have more data to justify including your property in the Defense Minerals Exploration Administration's program. It will be necessary for you to furnish us with a geologic map showing the following: present workings, location and length of the samples reported by Harry Hoeland, and the proposed exploration. Your attention is called to question 5b of Form MF-103, Application for Aid in an Exploration Project, which you failed to include with the data submitted with your application: "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."

In addition, DMEA considers the items included under supervision excessive for a small exploration project in which a large proportion of the work will be contracted. It has been the policy in the past to allow one engineer-supervisor for such projects. The requested fee for the geologic consultant also is at a considerably higher rate than that allowed by the Government. A rate of $50.00 a day plus $15.00 per diem is in use at present.

Several items of equipment listed would not be needed for an exploration program. In addition, since the U. S. Tungsten Corporation has already purchased or is purchasing the equipment to be used, the cost to the project of such equipment would be calculated at 1/60 of the fair market value per month as depreciation on the equipment in use.

We will also need to have copies of the assignments to the American Tungsten Corporation (later changed to U. S. Tungsten Corporation) by Edward E. Gregar and wife, G. E. Goodwin and wife, and Katie A. Steinen.

In reviewing your application for exploration assistance under the subject docket, we also noted that part of the $54,000.00 requested will be spent for trucking ore to a mill at Bishop, California, and for stockpiling any additional ore produced during the exploration program. In addition, the list of equipment included several items that would be used for production and not exploration. While the Defense Minerals Exploration Administration under its delegated authority can grant assistance for approved exploration projects, it cannot grant assistance for production. Authority to grant such assistance has been delegated to the Defense Materials Procurement Agency, General Services Administration Building, 19th and F streets, N. W., Washington 25, D. C. You could apply to DMPA for a production loan to cover any contemplated production, but that Agency might not be willing to consider your application favorably until the results of an exploration program showed that your property had sufficient merit.

For your information, we are enclosing a copy of "The Defense Minerals Exploration Program," which explains the mineral assistance program.

Your application for exploration assistance will be held in abeyance until the above-referenced information is received.

Sincerely yours,

C. O. Mittendorf

Administrator

Enclosure

FARutledge/ls 12/17/62

cc: Docket
Admn.Read. File
F.T., Reg. 3
F. A. Rutledge
G. C. Selfridge
D. M. Lemmon, USGS
R. W. Geehan, USBM

IN REPLY REFER TO:

G-MD-CF

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

December 12, 1952

Memorandum

To: G. C. Selfridge

From: M. D. Crittenden

Subject: DMSA 2797 (Tungsten)
United States Tungsten Corporation
10248 South Paramount Boulevard
Downey, California

The Proposal

The applicants failed to specifically answer question 5-B, but from other parts of the docket, I infer they propose to spend a total of $54,000 to do (1) 3,000 feet of diamond drilling, and (2) an unspecified amount of underground work.

Actually, only part of the $54,000 appears to be exploration; the rest is ordinary operating or development cost. For example, it includes $6,000 for trucking.

The Property

The applicant is lessee of a former gold property known as the Jumbo, and owned by G. F. Land and W. J. Thompson. It would be in the E. ½ of Sec. 15, T 13 S, R 36 E (unsectioned). Workings are reported to consist of a 110 foot adit, a 260 foot shaft, a 50 foot drift and other shallow prospect openings, all sunk prior to 1919. The only recent work consisted of enlarging and extending the 110 foot drift, and making a 40 x 60 feet open pit at the mouth.

The company reports that they shipped 5,484 tons of development ore from these workings to U. S. Vanadium Company. The average grade was .285 percent WO_3, but (of course) they are sure that the undeveloped ore will be much better.

Geology

The only information available is contained in an unpublished War Minerals Report prepared by the Bureau of Mines in January 1943. The property is in an area of steep ridges and deep

canyons on the western slope of the Inyo Mountains. It lies on a steep dipping contact between granitic rocks on the east and metamorphics on the west. The general dip of the contact is westward, but the mine is on a local fault contact that dips 73° east.

Scheelite was observed in the first 60 feet of the adit where it followed the contact closely. Two selected samples ran 2.49 and 1.40 percent WO_3, but the average grade is undoubtedly much nearer the .285 of the shipments.

Recommendation

The present application does not appear to me to be suitable for referral to the field team. The company should be asked to specify the details of the proposed exploration in the usual way, and to eliminate the excessive overhead and the extraneous items not included.

When this has been done, it probably should be referred to the field for a re-check on the grade and the potential tonnage, with careful attention to the possible relation between tungsten and gold mineralization.

M. D. Crittenden

402

November 26, 1952

United States Department of the Interior
Defense Minerals Exploration Administration
Washington 25, C. C.

Gentlemen:

There is submitted herewith formal application for a development loan on the tungsten property of the undersigned.

There has been expended on this property, mostly in the form of an access road, over $150,000 The major development has been in the form of widening and extending a drift which tended to prove the most optimistic hopes of the Corporation.

As is shown in the answer to 4-B of the formal application, the Company has mined and delivered 5484 tons to the U. S. Vanadium Corporation at Bishop, California. On the various lots of ore included in these shipments, ores were assayed and paid for on a basis of from approximately .30% to .45% WO_3.

There was absolutely no attempt made to sort the ore or make selective shipments. It was the desire to make mine run shipments to present a more objective picture. The Company was determined to prove or disprove adequate tungsten ore bodies that would justify a mill on its own mill site.

Hence, the work done has proved this to the complete satisfaction of the Company although there remains the diamond drilling of the veins that have been opened up and some further development work actually to block out tonnage that would completely justify a mill.

It is, therefore, vital that an examination by a competent Government Engineer be made at the earliest possible date so the Corporation may have the benefit of his advice and recommendations.

Fundamentally what the Corporation desires to accomplish so that it may become a major producer of WO_3, is:

(a.) An intensive diamond drilling campaign to prove conclusively the extent of bodies of ore already partially developed.

(b.) The extension of the present drift so as to outline definitely and make certain the existence of tremendous bodies of milling ore.

The Vanadium Corporation's purchases of ore showed values ranging from .28% to .45% WO_3. In fairness to United States Tungsten Corporation it should be pointed out that in a number of different lots an umpire's decision gave ore shipments a much higher return, while substantially higher assays were given by independent assayers of samples run by Vanadium Corporation. It should be mentioned that the Corporation has assays running as high as 3.88 WO_3 and every indication is that development work will uncover or should uncover substantial bodies of higher grade ore than heretofore mined and shipped.

The Vanadium Corporation will do no custom milling at a flat price per ton, hence, the necessity of a mill adjacent to the Corporation's property.

The Company has already been assured of such a mill, contingent on the success of the development outlined.

On the Corporation's own mill site there is a proven adequate water supply.

On the basis of shipments which the Company has already made and which prove minimum values, the Company can deliver profitably to its own mill site ores of minimum values, while, with selective mining the values can be increased enormously.

Under the above circumstances, the Company presents a proposed budget totaling $17,998.65 a month. On this basis a loan is requested of $54,000 sufficient to explore for additional ore bodies on a two shift basis for 90 days, while at the sametime carrying on an energetic diamond drilling program.

It is the consensus of all competent observers that this program should define ore bodies of far greater milling values than any that have heretofore been uncovered.

United States Department of the Interior November 26, 1952

It is further reasonable to assume, on the basis of the Company's past operations, that an appreciable amount of high grade ore can be mined and shipped while carrying on the development program.

This ore will help materially in defraying the development costs or helping to meet any contingent expenditures.

At the sametime the extension of the drift and the diamond drilling should block out such a substantial tonnage of ores of known value that would insure the economic operation of the mill for many years to come.

Respectfully submitted,

UNITED STATES TUNGSTEN CORPORATION

By Edward M. Cregar

Edward M. Cregar, President

EC/bd

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

Defense Minerals Administration

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

Not to be filled in by applicant

Docket No. Dmea - 2797
Metal or Mineral
Date Received 12-1-52
Estimated Cost
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: United States Tungsten Corporation
10248 South Paramount Boulevard
Downey, California

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

16—66551-1

See file attached as to all the above.

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore Tungsten WO^3.

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

(*c*) The work will start within 30 days and be completed within 3 to 4 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.

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

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

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants. See page 4 of exhibits.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel. See page 4 of exhibits.

(*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. See exhibit headed Equipment and Machinery Account.

(*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?

☐ Money ☒ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated November 20, 1952, 195__

UNITED STATES TUNGSTEN CORPORATION
(Applicant)

By Edward M. Cregar
Edward M. Cregar, President

O. E. Goodwin, Secretary

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

3-A Mining claims known as the Betty Jumbo #1, #2, #3, #4, #5 and #6 having been leased to the applicant Company. All located in the Union Mining District of Inyo, California.

3-B The United States Tungsten Corporation Jumbo Mine.

3-C Lessee as to Betty Jumbo #1, #2, #3, #4, #5 and #6.

3-D See Attached.

3-F #1, #2, #3, & #4, Feb. 17, 1942, Inyo County, Vol. 55, Pages 344 to 347 incl. #5 and #6, Jan. 8, 1951, Vol. 62, Pages 133 and 134.

4-A A 110' 4' x 6' drift, 260' 54° incline shaft, 50' drift, together with numerous small cuts and shafts on mineralized zones. The present lessee has enlarged the old 4' x 6' drift to a 10' x 12' drift for a distance of 128'. This drift has been drilled on the tactite vein. The lessee has also completed a pit 45' x 60' at the portal of the old drift. An 8-1/2 mile access raod has been built to the mine from the county road by the lessee. The existing mine workings are open for inspection and may be reached over the Company's access road by automobile right to the portal.

The inclined shaft and various small cuts are easy in reach from portal by foot.

4-B The Company has mined and delivered 5,484 tons to U. S. Vanadium Corporation, average WO^3 content .285%, on Vanadium Company's settlement. While the Company has no known ore reserve, reference to report by Engineer Harry Naslund of Los Angeles estimates that there are approximately 100,000 tons of ore in sight not including what might be obtained by later development.

4-C (1) Copy of preliminary report by Harry Naslund of Los Angeles, California, which is attached to this application. Original is in Company's files.

(2) Extract from the January, 1950 issue of the State of California Journal of Mining reads as follows:

"JUMBO MINE. Location: On the West slope of the Inyo Range 4 miles East of Kearsarge in the E1/2 Sec. 15, T. 13S, R. 36E, M.D.M. (projected) at an altitude of 7000 to 7500 feet. Ownership: J. W. Thompson, Independence, California, and G. F. Lund, Jr., Los Angeles, California, own 6 unpatented claims.

The scheelite is typically disseminated in tactite along a contact between granite and lime and shale. The tungsten content of the lenses of tactite along the contact ranges from 1.40 to 2.49 percent WO^3.

"Iron oxides and copper carbonates, carrying gold and silver, are in a quartz vein which trends Northeast and dips 75° along the contact.

"The vein ranges from 1 feet to 3 feet wide.

"A 120 foot adit has been driven Southwest along the contact, which has also been interesected by a 60 foot crosscut adit. An inclined shaft has also been sunk on the contact to a depth of 240 feet.

"There has been no production and the property is idle."

(2) Extracts from a preliminary report made Norman Whitmore, Los Angeles Mining Engineer says in part:

"I spent July 3rd and 4th at your property eight miles Southeast of Independence in the Inyo Mountains. Your superintendent, John Thompson, was very cooperative in giving all the assistance possible. I was surprised to see that such a good truck road had been built to the property and that the main vein was so wide. The equipment that has been purchased so far is exceptionally good for such an operation. The ore body is in an area of intense faulting and mineralization. There was such a large area that should be geologised that we confined our efforts to the fault block where the power shovel is now working. The easterly wall of this main vein was quite plainly visible but the Westerly wall was undetermined.

"Indications show that the vein is enlarging with depth. A cross vein carrying gold values cuts this tungsten vein just South of the saddle above the present workings. This vein was probably formed at a latter date than the tungsten so it will cut the tungsten vein a short distance ahead of the present workings.

****

"The air maps of the district should be gotten and the area in the vicinity where the work is now being done should be enlarged as much as it will show the detail. This enlargement will help to plan future work and show where ore bodies may be expected. The preliminary study should be made of the ore to

determine the best milling method for recovery.

"We can see no reason why this cannot become a profitable mining venture if properly managed."

4-D The mine is located 15 miles from the town of Independence, California. 6-1/2 miles is an excellent County road; mainly paved. 8-1/2 miles represents the Company's own road which is easily traversed by automobile or truck. Lone Pine is located 31 miles away. The Company has no necessity to maintain a camp at the mine because the crew prefers to live in Independence or Lone Pine. The Company has been transporting the men to work from Independence taking about 40 minutes each way. Most materials are available at Lone Pine or Independence and supplies not available in the valley are obtained in Los Angeles and delivered at Independence by regular truck lines overnight.

4-E The Company has been very fortunate in a supply of experienced man power.

Material supply and equipment are either on the property or are available as shown in 4-D. Electricity is generated by a gasoline-driven generator and used for lighting, etc. Water needed for drilling is trucked 11 miles to the mine.

5 Tungsten WO^3.

5-C Within 7 days of loan being granted and to be completed within 3 to 4 months.

5-D E. M. Cregar, General Superintendent. 15 years mining experience
Steve Novak, General Mining Foreman. 35 years mining experience.
Dion L. Gardener, M.A., Consulting Geologist and Engineer.

Sb?

6. Estimated costs of development project: these costs estimated on a monthly basis - two shifts per day - average 25 working days per month.

Superintendent	$125.00 per wk.	$541.66 per mo.	
Foreman	$125.00 per wk.	$541.66 per mo.	
Consulting Engineer	$100.00 per day	$300.00 per mo.	
Consulting Engineer per diam	20.00 per day	60.00 per mo.	
Total Supervision and Engineering per month			$1,443.32
6 miners @ $2.20 per hour-8hrs per day x 25 days		2,682.00	
1 maintenance and Truck Driver @ $2.00 per hour- 8 hrs per day x 25 days		400.00	
Total Direct Labor and Costs per month			3,082.00
Analytical work per month			150.00
Insurance: Compensation $9.81 per $100 underground			
4.96 per $100 Surface		341.58	
P. L. & P. D. Comprehensive		100.00	
S. S. & State Unemployment		113.13	
			554.71
Fuel: Gasoline, Oil & Diesel Fuel			375.00
Powder: 1 ton		430.00	
5000' fuse .01-1/4 per foot		62.50	
1500 Caps $2.65 per 100		39.75	
Total Powder Costs per Month			532.25
Steel & Bits: Costs based on 216 hole drilled per shaft X 50 shifts per month-10,800 holes per mo.			
Tungsten Carbide Bit cost per foot...17¢		625.00	
Drill Steel per foot $2.17		150.00	
Total Drill Steel & Bit Costs			775.00
Ventilating Pipe: 900' @ 1.00		900.00	
Timber: For stopes, raises and occasional square sets 7M' @ $150 per M		1,050.00	
Total Ventilating Pipe and Timber			1,950.00
Track: 25 lb. Rail @ .45¢ per lb.		90.00	
Ties & Spikes .15¢ per foot		45.00	
Total Track Cost			135.00

Transportation: Carryall to transport miners	$300.00	
3/4 Ton Pick-up Truck to transport water and supplies	75.00	
Total transportation costs		375.00
Road Maintenance:		200.00
Telephone:	200.00	
Bookkeeping and Office Help:	400.00	
		600.00
Trucking:		
Trucking of 2-2000 ton lot loads to Vanadium Corporation at Bishop to obtain adequate mill runs @ $5.00 per ton.	2,000.00	
Trucking of estimated production of 2000 tons for bulk storage at millsite @ $2.00 a ton to stock pile at millsite	4,000.00	
Total trucking on 3 months basis	6,000.00	
Monthly trucking average		2,000.00
Maintenance & Repair of Equipment:		150.00
Equipment, Machinery & Motor Vehicles:		
Machinery being purchased on sales contract:		
D-6 Cat. Bulldozer per month	264.45	
Welding Machine " "	60.19	
Joy Wagon Drill	99.25	
1951 GMC Carryall	92.03	
1951 GMC 3/4 Ton Pick-up	72.96	
#10 Cat. Motor Grader	107.49	
Joy 2 Jib Drilling Jumbo	390.00	
Joy HL-20 Mucking Machine	340.00	
Total monthly cost of purchasing equipment		1,426.37

COMPLETE LIST OF EQUIPMENT ATTACHED HERETO:

6-A The Company proposes to let a contract to Eugene Kraft Drilling Co., Bishop, Calif. for 3000' of Diamond Drilling @ $4.25 per foot to be drilled 1000' per month.		4,250.00
Total Monthly Expenditures:		17,998.65

Company has contract with A-I Trucking Co., Independence, California to transport ore from the mill to U. S. Vanadium Corporation, Bishop, California @ $5.00 per ton.

****

Cost per foot Diamond Drilling	$ 4.25
Cost per foot Drifting 8' x 7' Tunnel	30.22

6-B See page 4 of exhibit.

6-E There are no buildings to be rehabilitated and all equipment is in excellent condition subject, of course, to minor operating repairs.

7-B The Company's program as outlined should result in the development of a large body of shipable ore or millable ore. All costs approximately as shown somewhat over $40,000. The application, therefore, is for this sum as a net loan as the Company is applying more then its prorate share in equipment available for use without rental costs, in access road work done and development already accomplished.

It must be further pointed out that the Corporation has made arrangements for a 100 ton mill to be erected on its own milling site by independent capital and the mill operators agree to commence construction of the mill on the granting of this loan.

UNITED STATES TUNGSTEN CORPORATION
Equipment and Machinery Account
November 5, 1952

	Cost	Balance - Due	Equity
1 D-6 Cat. Bulldozer	7,576.80	2,195.86	5,380.94
1 Gardner Denver 105# Compressor	1,934 75	967.34	967.41
1 GMC #1951 Suburban	2,580.48	1,760.18	920.30
1 Hobart Welding Machine "gas"	722.28	361.14	361.14
1 10# Cat. Motor Grader "Diesel"	2,558.78	1,848.03	710.75
1 GMC 1951 3/4 ton Pick-up	2,355.90	1,751.04	604.86
1 Joy Wagon Drill	1,390.50	794.00	596.50
1 Joy Mucking Machine #H. L. 20	5,026.40	3,740.00	1,286.40
1 Joy Drilling Jumbo "2Jibs"	5,774.18	4,680.18	1,094.18
	29,920.07	18,097.77	11,922.48

All of the Equipment is owned and fully paid for with a cost of approximately $18,000.

1 10 KW Generator "gas")
1 7 1/2 KW Generator "gas")
2 Moran Mine Cars 1 cu. yd.)
1 Electric Bench Grinder)
1 Electric Portable Drill)
1 I. R. Tugger Hoist "air")
1 5 Ton Hoist "gas")
2 I. R. #J-50 Jackhammers)
1 Black Light for Sorting)
1 I. R. Jack Leg)
3 Water Tanks 125# Pressure)
1 1/2 Ton 25# Rail) Owned by United States Tungsten Corp.
1 Keg Rail Spikes)
10,000 feet Telephone Cable "Copper")
Electric Lighting Equipment)
Miscellaneous Shovels, Picks & Small Tools)
1 175 Ton Ore Storage Bin at Millsite)
1 100 Ton Ore Bin at Mine)
1200 feet 2[illegible] 1/2" 1" Galvanized Pipe)
Main Dri[illegible]lly equipped with water and)
Air Lines)
1 315# I. R. Compressor "Diesel")
Air and Water Hose)
Miscellaneous Carbide Bits)

A PRELIMINARY REPORT
ON THE
JUMBO GROUP OF MINERAL CLAIMS
UNION MINING DISTRICT
INYO COUNTY, CALIFORNIA

By

Harry Nasland

For

E. M. Cregar
4221 Coldwater Canyon
North Hollywood, California

THE JUMBO GROUP OF MINERAL CLAIMS

LOCATION

The Jumbo group of mineral claims consists of 6 unpatented claims known as the Jumbo No.'s 1 - 2 - 3 - 4 - 5 - 6. The respective locations of these claims are indicated on claim map attached hereto.

The property is situated ten miles in an easterly direction from Independence, Inyo County, California and approximately 200 miles from Los Angeles. The road which reaches to within 2½ miles from the property runs through Kearsage, a depot and oreloading station on the Southern Pacific Railroad which terminates at Bishop, California. Kearsage is located at the halfway point between Independence and the property. The claims are in the Union Mining District, Inyo County, at the southern end of the White Mountain Range and just within the south border line of Inyo National Forest.

The old camp site on the property is at an elevation of approximately 7500 feet and from 2500 to 3000 feet above the floor of Owens Valley directly below. The property is located in its entirety on the western slope of the White Mountain Range, about 1500 feet below its highest points, and affords an uninterrupted view of the valley as well as the Sierra Nevadas in the West.

HISTORY

The early history of this property is by hearsay only. It is a well known fact that the entire region is highly mineralized and there are innumerable deposits of Gold, Lead, Zinc, Copper, Tungsten, etc., some of which have been worked quite extensively. In recent years the area has become well known for its activity in the mining of high-grade tungsten ore.

In the early days, however, all interest centered around gold and much of other valuable mineral deposits were completely ignored and neglected. The

present workings on this group of claims were developed about forty-five years ago by a Mr. Johnson, an old time prospector and miner. Mr. Johnson passed on recently at Independence, which had been his home since the beginning of the century. Most of this work was done on high-grade veins of gold ore, which is free-milling in nature, and was treated in an old fashioned arasts, the remnants of which still can be seen at the base of the mountain near a small spring. Mr. Johnson is reputed to have recovered over $100,000 worth of gold from veins assaying from one to three ounces of gold to the ton. One of these veins also shows a considerable copper content. Mr. Johnson abandoned his claims about 1926 and lived in retirement until his death.

Mr. John Thompson of Van Nuys, California, and formerly residing in Lone Pine and Independence, prospected the ground for scheelite in 1940 and discovered strong showings in a 100 foot crosscut tunnel on the north end of the present Jumbo No. 1. As a result of this discovery he filed claims known as Jumbo No.'s 1, 2, 3, and 4 the same year and erected proper location monuments. In 1950 he added the claims known as Jumbo No.'s 5 and 6 on the east side of the other claims.

Mr. Thompson has not made his discovery genecally known and even today people in the district believe that he proposes to eventually open up the old gold workings. Outside of a limited amount of sampling, Mr. Thompson has done very little work on the property. A short time ago Mr. Thompson entered into a lease agreement with Mr. E. M. Cregar of North Hollywood, California, which provides for the further development of this property.

WATER

It is a well known fact that a tremendous water reservoir underlies the entire Owens Valley floor directly below the property. However, adequate water is available at a distance of 2½ miles from the Coyote Springs. There are located at the foot of the mountain range and have furnished all water for the various small mining enterprises in the neighborhood since the early days. According to Mr. Thompson the present flow of these springs is adequate to supply a mill.

POWER

Independence and the other towns in Owens Valley get their power supply from the local Inyo County Power Company. The Los Angeles Water and Power Company has just completed a hightension power line through the middle of the valley, touching Kearsage, and the cable and wire installations on this line are expected to be completed in the very near future. It is presumed that whenever power is needed for mill operations, such could be obtained from one of these sources. For the first stages of development of this property, either Diesel or Gasoline driven motors should supply the power.

ROADS

From Independence to Kearsage, a distance of five miles, there is a hard surfaced county road. From Kearsage to the base of the mountain, a distance of three miles, there is a dirt road which could be brought into first rate condition with very little expense and which at present is used for motor vehicle traffic. From this point into the property a steep animal trail about 2½ miles long furnishes the only access to the campsite. Mr. Thompson has furveyed a truck access road which would run in a southwesterly direction towards Coyote Springs, covering a distance of approximately six miles and with a degree of decent of 7%. There are other automobile roads to properties in the immediate vicinity at the same or even higher elevation, and over the same kind of terrain, and this eventual road construction should not present any difficult problems.

CAMP

There are only some remnants of the old camp still in existance which would be of no use for future activities. The old campsite is well chosen, furnishing protection from wind and cold.

CLIMATE

Although the Sierra Nevadas to the West and across the Owens Valley are heavily covered with snow at elevations even lower than this property, the

White Mountain Range at this point very rarely receives any snowfall. This is of great importance inasmuch as other tungsten operations in the district are greatly hampered by snowfall. In fact the Tungsten Mine as well as the U. S. VANADIUM properties are severely retarded in operations for as much as five months each year due to heavy snows and extreme colds. This property can anticipate a year round operation as far as climatic conditions are concerned.

DEVELOPMENT

The principal gold working is found on the present Jumbo No. 2 and consists of an inclined shaft sunk to a depth of 160 feet and a horizontal tunnel about 60 feet in length, both on the vein, which still continues strong and well defined. Work probably was abandoned when more efficient equipment was needed for work at greater depth. In the approximate center of the present Jumbo No. 1 there is a 100 foot vertical shaft sunk on another gold vein. Two crosscut tunnels have been started from the North and the South endlines of this claim, towards this shaft and about 100 feet below the top of the shaft. It is on the western face of the North tunnel, or tunnel No. 1, where a strong vein of scheelite appears in the pegmatite. There is still another working on a gold vein on Jumbo No. 3 which also shows strong copper coloring.

There is no attempt to cover the geology of the property in this report. The mineralized orebody occurs in the granite well above the limestone formations typical of this region. This mineralized zone can be seen to a width of 100 feet in the North Tunnel and is traceable on the surface over a distance of 1000 feet in a westerly direction. Strong enrichments occur in definite stratas throughout the west wall of Tunnel No. 1. The floor of this tunnel indicates the continuation of the deposit, the depth of which must be ascertained through further prospecting work.

SAMPLING AND ASSAYS

Sampling of a prospect always presents problems and are never conclusive as to the ultimate value of a mining property. Although only surface indications can be covered in this report, the sampling of the North crosscut Tunnel on Jumbo No. 1, gives an unusual opportunity to test values at least 50 feet below the surface. The sampling of the west wall of this tunnel was taken by crisscrossing the entire surface, including part of the roof and floor. At least 250 feet were covered and approximately 300 pounds of material gathered in the master sample. Through conventional procedure of quartering, this sample was eventually reduced to 10 pounds for assay. The other samples were taken by the same methods. Other tests were made on the property by panning and under a fluorescent prospecting lamp, all showing strong indications of scheelite.

	% Scheelite	Value Per Ton
Jumbo No. 1		
No. 1 Tunnel - 100 ft. long, 7 ft. high	.76	$ 35.75
" " " - Highgrade through center 50 ft. long, 2 ft. wide	2.65	124.55
" " " - 100 ton dump, outside of entrance, mixed material	.17	7.99
" " " - Across 10 ft. of surface outcropping, 200 ft. above tunnel floor, 200 ft. west	.92	43.24
Jumbo No. 2		
No. 3 Tunnel - 40 ft. across outside of entrance to tunnel, 1000 ft. west of Tunnel No. 1	.70	32.90

Values are calculated at the latest quotation of $47.00 per unit.

SUMMARY AND RECOMMENDATIONS

There is every reason to believe that an orebody of unusual proportions exists on this property. The approximate guess of ore in sight at the North crosscut Tunnel on Jumbo No. 1, would cover an orebody 100 feet wide, 200 feet deep and 300 feet in length, or approximately 100,000 tons. This in itself, disregarding all other parts of the property would justify considerable further development. The first part of such a program would be the immediate construction

of an access road suitable for trucking. It is estimated that the cost for the projected road to Coyote Springs would cost from $8,000.00 to $10,000.00. Although Congress has appropriated funds for mine access roads to strategic mineral deposits in National Forests, the procedure by which such funds are made available are cumbersome, tedious and always consumes valuable time, which in this case may not be worth while. Such a road would enhance the value of the property, for obvious reasons, well in excess of its cost even though no other work may be done. In view of word conditions and the steadily increasing price of tungsten ores, all such deposits will receive more interest and attention and without an adequate access road would suffer undue handicaps in its further promotion.

The construction of a small temporary camp should be the next step. In this case the expenditure of less than $1,000 should suffice to provide adequate accomodations for such purpose. A complete survey of the property, covering the topography should be made. With funds available, further prospecting and development of ore should be undertaken. The extention of some of the present workings could be compined to develop ore as well as provide for efficient means of ore removal and furnish natural loading facilities. A program for limited core drilling should be considered. As the topography of the property is ideally suited for the extraction of ore by stoping methods; a main crosscut horizontal tunnel at an elevation of at lease 500 feet under the highest surface outcroppings would eliminate all hoisting expenses and tend to keep mining costs at an absolute minimum.

Even though the eventual construction of a mill would provide the most profits for the operator, recent revival of stockpiling program by the Government may very well enable the operator to produce saleable material at the very outset of operations. As previously mentioned there are several veins of apparently quite high grade gold ore which should be sampled and surveyed. It is possible

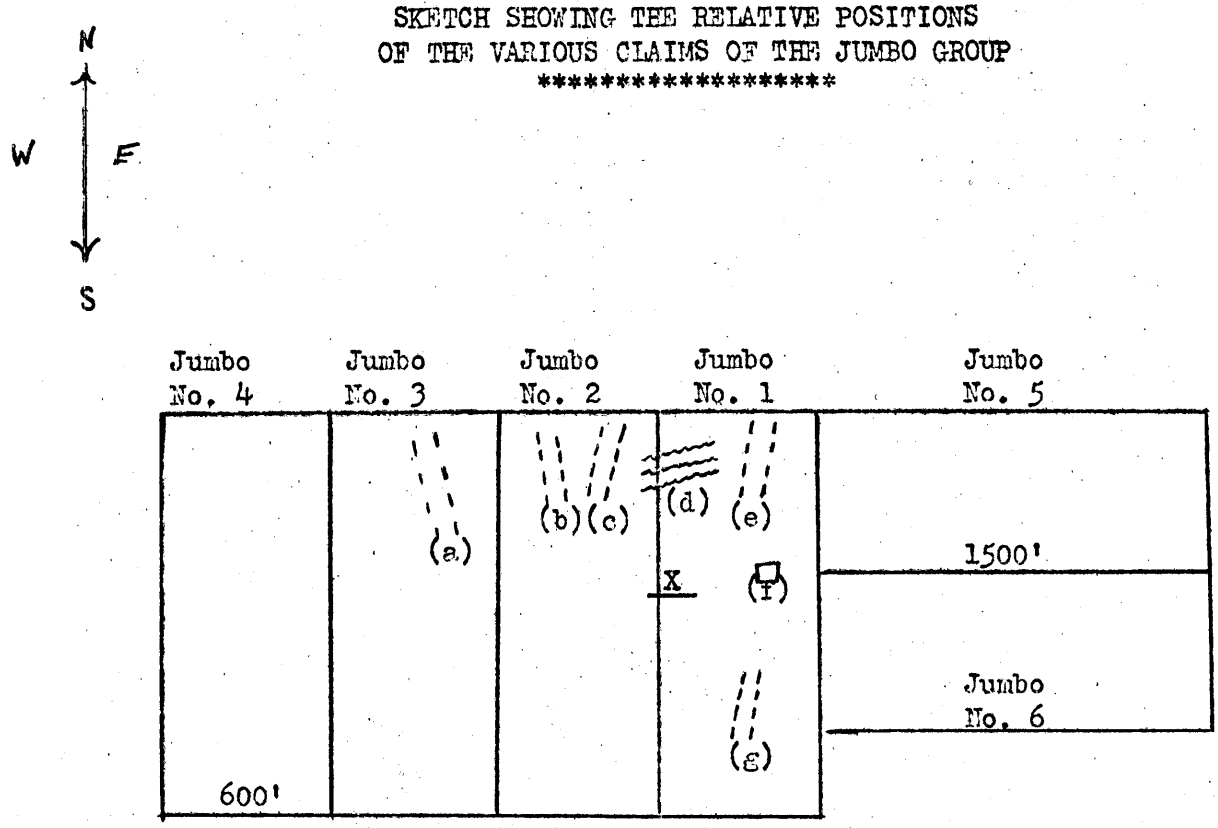
that profitable shipping ore could be developed at small expense. The highest expense in all preliminary development work will be the purchase of equipment. If this could be obtained through loan or other similar means a tremendous amount of valuable work could be done at low cost.

In conclusion and in view of the findings of this preliminary survey, I can unhesitatingly recommend further work on this property along the lines as outlined above.

Harry Nasland
Los Angeles, California

December 14, 1950

SKETCH SHOWING THE RELATIVE POSITIONS
OF THE VARIOUS CLAIMS OF THE JUMBO GROUP
****



(a) Tunnel No. 4 - 100 ft long, developed on vein of Gold and Copper

(b) Inclined Shaft - 160 ft in length, working on Gold vein.

(c) Tunnel No. 3 - 60 ft long, on Gold vein. Sampling done outside of North entrance.

(d) Surface outcroppings - Various widths and lengths. Sampling across 10 ft.

(e) Tunnel No. 1 - 100 ft long, crosscut working. Extensive sampling of the west wall of this tunnel, strong showings of Scheelite.

(f) Vertical Shaft - Over 100 ft in depth, sunk on a Gold vein.

(g) Tunnel No. 2 - 100 ft crosscut working not examined.

(X) Campsite -

UNITED STATES TUNGSTEN CORPORATION
10248 South Paramount Boulevard
Downey, California

EXHIBIT 3-B

Recorded March 13, 1951 in Vol. 90, Page 91 of Official Records of Inyo Co., Calif.

LEASE AGREEMENT

THIS AGREEMENT, made and entered into this 15th day of December, 1950, by and between W. J. THOMPSON, BETTY THOMPSON and G. F. LUND, hereinafter referred to as Lessors, and EDWARD M. CREGAR, hereinafter referred to as Lessee -

W I T N E S S E T H:

WHEREAS, the Lessors are the owners of certain mining claims located in the Union mining district, County of Inyo, State of California, and are desirous of leasing the same and all mineral rights thereto to the Lessee: and

WHEREAS, the Lessee is desirous of conducting mining operations and extracting ore from the Lessors' mining claims and is desirous of entering into a lease to provide for mining operations and the extraction of ore from the said described mining claims;

NOW, THEREFORE, in consideration of the mutual covenants and agreements, the parties agree as follows:

(1) The Lessors are the owners of mining claims known as Betty Jumbo Claims, No. 1, No. 2, No. 3, and No. 4, situated in the Union mining district in the County of Inyo, State of California, described in Volume 4 on Page 274 of the Records of Inyo County at Independence, California, and hereby lease the same and all mineral rights contained therein and all rights which Lessors have in the said properties to the Lessee, to have the same mined and/or extracted for a period of twenty-five years from the date of this agreement.

(2) The Lessee agrees to pay the Lessors ten percent (10%) of gross mill returns on all ores or by-products of ores derived from the said properties described in this lease during the period in which this lease is in existence.

The Lessee further agrees to pay a minimum guarantee of not less than $500.00 per month. A six-month period of grace is agreed upon for the payment of the said minimum guarantee and the minimum guarantee provision provided for

UNITED STATES TUNGSTEN CORPORATION
10248 South Paramount Boulevard
Downey, California

EXHIBIT 3-B

herein will not be affected until after a period of six months from the date of the execution of this lease. Such a waiver of a minimum guarantee, however, will not affect the ten percent (10%) royalty provided for in this agreement.

(3) The Lessee agrees to build a road to the mine, which road is for the purpose of egress and ingress. Construction of the road is to commence within a period of thirty days after the completion of a survey for the road construction, which survey is to be made by the Lessors.

(4) It is further agreed between the parties that any new claim or new mining property which may be developed by any party to this agreement, which is adjoining or pertaining to the Betty Jumbo mining claims, shall be included in and made subject of the part of the terms of this lease agreement and subject to the conditions provided for herein.

Any violation of the provisions of this lease agreement shall constitute a forefeiture of the entire agreement. In the event a violation occurs the violating party shall have a period of sixty days from the date of receipt of written notice of the occurence of such violation to correct the same and if the correction is made within the said sixty day period no forfeiture of the entire lease agreement shall occur.

(5) The Lessee shall have an option to renew this lease agreement for a period of twenty-five years at the expiration of the present lease agreement, by giving notice in writing of such intention, three months before the expiration date of this agreement.

(6) The Lessors shall have the right to enter upon the said property and shall have access to the said mine and the premises at any time within the reasonable hours of the working day for the purpose of inspection and shall have the right to use the roadway to be constructed to the said mine at all times for any purpose.

(7) The Lessee agrees to continuously operate the said mining prop-

erties in accordance with good mining practices and in a sound and economical manner, so as to take out the greatest amount of ore, with due regard to the development and preservation of the said premises as a workable mine.

(8) It is agreed that all labor to be performed and all mining work to be conducted in the mine shall be the cost, expense, liability and responsibility of the Lessee and shall not be chargeable in any manner to the Lessors, and the Lessee agrees to comply with all State and Federal regulations pertaining to the working and operation of mining operations, and the Lessee agrees to hold the Lessor harmless from any liability arising because of accident, illness or other type of liability incurred in the operation of the mine, on or off of the mining premises.

(9) The royalty payments and payments provided for herein as rentals for the leased properties shall be due and payable on the 15th day of each month, for the preceding month. The royalty payments are to be based on the confirmed market price. Copies of assay reports and core drilling reports shall be delivered to each party to this agreement.

(10) The Lessee shall have the right to assign this lease, with the written consent of the Lessors. It is further agreed that in the event the Lessee applies to the government for mining assistance, either financially or otherwise, that the Lessors will execute any agreements required to secure such government assistance.

(11) The terms of this lease shall be binding upon all of the parties, their heirs, representatives or assignees.

IN WITNESS WHEREOF, the said parties have hereunto set their hands and seals the day and year first above written.

(Signed) W. J. Thompson
W. J. Thompson

(Signed) Betty Thompson
Betty Thompson

(Signed) G. F. Lund
G. F. Lund

LESSORS

(Signed) Edward M. Cregar
Edward J. Cregar LESSEE

United States Tungsten Corporation
10248 South Paramount Boulevard
Downey, California

Exhibit 3-B

CONSENT OF ASSIGNMENT

Notice is hereby given to the Lessors, W. J. Thompson, Betty Thompson and G. F. Lund by the Lessee, Edward M. Cregar, that the Lessee intends to immediately assign said Mining Lease enteres into between the parties hereto, dated December 15th, 1950, to a Corporation that is to be organized to operate the Mining Properties under the terms and conditions of said lease.

This Corporation shall be known as the Sun Mining Company, Inc., if this name cannot be used in the State of California, then and in that event, Cregar will use some other suitable name for said Corporation.

Consent of the assignment is acknowledged by your respective signatures.

(Signed) W. J. Thompson
W. J. Thompson

(Signed) Betty Thompson
Betty Thompson

(Signed) G. F. Lund
G. F. Lund

C
O
P
Y

UNITED STATES TUNGSTEN CORPORATION
10248 South Paramount Boulevard
Downey, California

Exhibit 3-B

Recorded March 13, 1951 in
Vol 90, Page 96 of Official
Records of Inyo Co. Calif.

ASSIGNMENT OF LEASEHOLD ESTATE

FOR VALUE RECEIVED, the undersigned, EDWARD M. CREGAR, hereby grants, assigns and transfers to KATIE A. STEINEN an undivided forty-five percent (45%) interest, and to O. E. GOODWIN an undivided ten percent (10%) interest in and to that certain lease agreement dated December 15, 1950, by and between W. J. Thompson, Betty Thompson, and G. F. Lund, lessors, and Edward M. Cregar, lessee, covering a leasehold interest in and to real property described as:

> Mining Claims known as Betty Jumbo Claims, No. 1, No. 2, No. 3 and No. 4, situated in the Union mining district in the County of Inyo, State of California, described in Volume 4 on Page 274 of the Records of Inyo County at Independence, California, and all mineral rights which lessors have in such properties.

DATED: December 18, 1950.

(Signed) Edward M. Cregar

STATE OF CALIFORNIA)
) ss.
COUNTY OF LOS ANGELES)

On this 18th day of December, 1950, before me, the undersigned, a Notary Public in and for said County and State, personally appeared EDWARD M. CREGAR, known to me to be the person whose name is subscribed to the within Assignment of Leasehold Estate, and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

SEAL

(Signed) Dyke Lansdale
Notary Public in and for said State and County.

My commission expires July 12, 1954

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UNITED STATES TUNGSTEN CORPORATION
10248 Paramount Boulevard
Downey, California

CONSENT TO ASSIGNMENT

W. J. THOMPSON, BETTY THOMPSON and G. F. LUND, the lessors of that lease dated December 15, 1950, by and between said lessors and Edward M. Gregar, by these premises hereby give their written consent to the lessee to assign said lease, or any portion thereof.

DATED: December 15, 1950.

(Signed) W. J. Thompson

(Signed) Betty Thompson

(Signed) G. F. Lund

(SEAL)

Pearl M. Lava
My Commission expires Sept. 7, 1951.

March 13, 1951
Recorded in Vol. 90, Page 96
of Official Records of Inyo,
County, California

United States Tungsten Corporation
10248 South Paramount Boulevard
Downey, California

Exhibit 3-B

LEASES ALL ASSIGNED TO UNITED STATES TUNGSTEN CORP.

On May 11, 1951 there were recorded Quitclaim Deeds by the undersigned to the American Tungsten Corporation covering all the properties contained in the foregoing leases.

These documents were recorded as follows:

Quitclaimed by Edward M. Cregar and his wife, recorded in Inyo County in Volume 91, Page 249.

Quitclaimed by O. E. Goodwin and his wife, recorded in Inyo County in Volume 91, Page 251.

Quitclaimed by Katie A. Steinen as her separate and distinct property recorded in Inyo County in Volume 91, Page 247 of Official Records.

Shortly thereafter at the request of the Secretary of State the Corporation changed its name from American Tungsten Corporation to United States Tungsten Corporation, as somewhat belatedly the Secretary of State's office discovered there was another American Tungsten Corporation.

C
O
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United States Tungsten Corporation
10248 South Paramount Boulevard
Downey, California

Gentlemen:

Reference is made to a certain lease agreement executed by W. J. Thompson, Betty Thompson and G. F. Lund to Edward M. Cregar and recorded in records of Inyo County, State of California, Volume 90, Page 91 of official records.

With the consent of the undersigned, a 45% undivided interest in this lease was subsequently assigned to Katie A. Steinen and a 10% undivided interest to O. E. Goodwin and was subsequently assigned by them to the United States Tungsten Corporation, all with the consent and approval of the undersigned.

It is a matter of record that the United States Tungsten Corporation has expended the sum of $150,000.00 on developing the property, in building an access road and in purchasing equipment to carry on development work and at the present is engaged in preparing an application for a development loan to the United States Department of Interior, Defense Minerals Exploration Administration.

No part of this loan, if granted, can be used to defray outstanding obligations and if granted a 25% contribution must be made by the United States Tungsten Corporation to perfect the initial procedure for the loan.

Paragraph 2 of said lease calls for a minimum guarantee of not less than $500.00 per month after a period of six months. It is conceded that this was predicated on the assumption that the property would be in full production within that period. The lessors, therefore, agree to amend the clause setforth in Paragraph 2 to the following terms and conditions:

Said Lessors waive any minimum royalties that may be due them for a period of one year from the date of this letter. This waiver of royalties for a period of one year shall by no means to be construed as a waiver of the royalties presently due and oweing the said Lessors. The said Lessors do hereby grant an extention of one year from the date of this letter, to the Lessees, to pay in full, any and all minimum royalties due them to date, as setforth in Paragraph 2 of that certain Lease Agreement hereinabove mentioned.

It is distinctly to be understood that any royalties due or that may be due under the 10% provision of the agreement are not waived or varied by reason of the amendment to the agreement.

Said Lessees agree to the following amendments to a certain lease agreement herein mentioned:

That upon the violation of any of the terms and conditions or the provisions hereof of said lessee, and the failure to commence to remedy the same within "90 days" after the written notice from the lessors,

specifying such default, this lease and all the rights of lessee hereunder shall terminate, at the option of lessors, and lessors may, either with or without process of law, enter into and upon such premises and remove all persons therefrom and have and repossess the same as in their former state, all damages for such entry and repossession being hereby waived.

That in the event that such lessee shall fail to promptly provide for the payment of royalties due lessors as herein provided, and should such default continue for a period of 15 days, then in that event lessors may, at their option, terminate this lease and agreement by giving 5 days notice to lessee of their intention so to do, and may there upon and at the exppiration of said 5 day period enter into and upon said premises, and remove all persons therefrom and repossess the same as in their former state, provided, however, that such entry and repossession shall not releave lessee from the obligation to pay such royalties and/or rentals as they may be due and payable.

The lessees agree to furnish lessors a monthly statement showing all ore shipped add sold for each calendar month, together with the value and weights of each individual shipment during said calendar month This statement shall be rendered the lessors on the 15th day of the month after each calendar months shipments. Also, the lessee agrees to furnish the lessors a copy of all shipping documents and invoices received by the lessee from the buyers of said ores.

The lessee also agrees to furnish the lessors a copy of all and any of the engineering. Assay reports or other technological information they have or will obtain, from time to time pertaining to the development and exploration project of the Jumbo Mine.

Yours very truly,

The foregoing is accepted to and agreed by the United States Tungsten Corporation.

(Signed) W. J. Thompson
W. J. Thompson

(Signed) Edward M. Cregar
Edward M. Cregar, Pres.

(Signed) Betty Thompson
Betty Thompson

Signed) O. E. Goodwin
O. E. Goodwin, Secty. & Treas.

(Signed) G. F. Lund
G. F. Lund

(Signed) Hazel Lund
Hazel Lund

ALL SIGNATURES NOTARIZED.

Docket

IN REPLY REFER TO:

G-MD-DML

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

June 1, 1953

W59

Memorandum

To: W. S. Martin, DMEA

From: D. M. Lemmon, USGS

Subject: Field Team Report
U. S. Tungsten Corporation
Jumbo Mine
Inyo County, California

DMEA-2797
Tungsten

The Jumbo prospect was examined April 16, 1953, by E. M. MacKevett and J. F. Robertson of the Geological Survey, and R. R. Trengove of the Bureau of Mines. Their report, dated May 13, 1953, recommends denial of the application because the known deposits are small and of low grade.

I concur with the recommendation that the application be denied.

DM Lemmon

D. M. Lemmon

Department of Defense
MAR 1953

Copy retained 400

IN REPLY REFER TO:

G-MD-DML

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

June 1, 1953

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I concur with the recommendation that the application be denied.

D. M. Lemmon

IN REPLY REFER TO:

C-MD-DML

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

June 1, 1953

Memorandum

To: W. S. Martin, DMEA

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D. M. Lemmon

400

FILE COPY
SURNAME:

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

Hopkins
Rutledge
Martin
Lemmon
Geehan
Kunkel
Hodges
Gottfredsen
Hjornsen

BF

JUN 4 1953

Mr. Edward M. Cregar, President
U. S. Tungsten Corporation
7125 East Firestone Boulevard
Downey, California

Re: Docket No. DMEA 2797 - Tungsten
U. S. Tungsten Corporation
Jumbo mine
Inyo County, California

Dear Mr. Cregar:

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

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

Careful study of all our information, although noting a small amount 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, under these circumstances, that your application for exploration assistance is denied.

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

Sincerely yours,

C. O. Mittendorf

Administrator

P.N. 6-4-53

Copy to: Docket
Adm. Read. File
Code 400
Field Team, Reg. 3
Operating Committee
D. M. Lemmon, USGS
R. W. Geehan, USBM

JHopkins/ls
~~5/28/53~~ 5/29/53

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

May 29, 1953

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Denial of application for exploration assistance in the amount of $54,000.00
Docket No. DMEA 2797 - Tungsten
U. S. Tungsten Corporation
Jumbo mine
Inyo County, California

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

(1) The present Jumbo mine was formerly operated as a gold mine before it was abandoned by the owner in 1926. The area and mine were prospected for tungsten in 1950, when scheelite was discovered in the old workings and the Jumbo group of claims -- Nos. 1 to 6 -- was located.

(2) The mine was examined by a U. S. Bureau of Mines' engineer, September 5 and 7, 1951, in connection with an application for Government assistance for an access road. As a result of this examination, the application was denied.

(3) The deposit was sampled very thoroughly during this examination. Fourteen samples were taken in the Jumbo No. 1 adit that showed values ranging from 0.05% to 0.77% WO_3. Four samples taken in the Jumbo No. 2 workings showed values that ranged from 0.03% to 0.88% WO_3.

(4) The Company reports that it shipped 5,484 tons of ore having an average grade of 0.285% WO_3 to United States Vanadium Corporation, Bishop, California. As the grade was less than 0.3% WO_3, no profit was realized.

(5) The mine was examined by the DMEA Field Team on April 16, 1953. Ore sampled by U. S. Bureau of Mines' engineer in 1951 had been mined. Two samples were taken in Jumbo No. 2 that assayed $<$ 0.01% and 0.70% WO_3 respectively.

(6) The tungsten deposits are contact metamorphic in origin. Scheelite occurs irregularly disseminated in tactite found in a few places within the limestone which has been invaded by a porphyritic quartz monzonite, the predominant rock of the area.

(7) The Field Team concludes that the occurence of scheelite in the tactite is too meager to constitute ore and the potential tonnage too small to warrant Government participation in exploring the Jumbo claims. They recommend that the application for Government assistance in an exploration program be denied. The Iron and Ferro-Alloys Division of DMEA concurs in this denial.

(8) The commodity divisions of the U. S. Geological Survey and U. S. Bureau of Mines concur in this denial.

W S Martin

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

400

FILE COPY
SURNAME:

Hopkins
Rutledge
Martin
Lemmon
Kuhan

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

May 29, 1953

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

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U. S. Tungsten Corporation
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(2) The mine was examined by a U. S. Bureau of Mines' engineer, September 5 and 7, 1951, in connection with an application for Government assistance for an access road. As a result of this examination, the application was denied.

(3) The deposit was sampled very thoroughly during this examination. Fourteen samples were taken in the Jumbo No. 1 adit that showed values ranging from 0.05% to 0.77% WO_3. Four samples taken in the Jumbo No. 2 workings showed values that ranged from 0.03% to 0.88% WO_3.

(4) The Company reports that it shipped 5,484 tons of ore having an average grade of 0.285% WO_3 to United States Vanadium Corporation, Bishop, California. As the grade was less than 0.3% WO_3, no profit was realized.

(5) The mine was examined by the DMEA Field Team on April 16, 1953. Ore sampled by U. S. Bureau of Mines' engineer in 1951 had been mined. Two samples were taken in Jumbo No. 2 that assayed < 0.01% and 0.70% WO_3 respectively.

(6) The tungsten deposits are contact metamorphic in origin. Scheelite occurs irregularly disseminated in tactite found in a few places within the limestone which has been invaded by a porphyritic quartz monzonite, the predominant rock of the area.

(7) The Field Team concludes that the occurence of scheelite in the tactite is too meager to constitute ore and the potential tonnage too small to warrant Government participation in exploring the Jumbo claims. They recommend that the application for Government assistance in an exploration program be denied. The Iron and Ferro-Alloys Division of DMEA concurs in this denial.

(8) The commodity divisions of the U. S. Geological Survey and U. S. Bureau of Mines concur in this denial.

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

JH opkins/ls
5/29/53

Copy to: Docket
Adm. Read. File
Code 400
Operating Committee

Docket

RECEIVED

MAY 25 1953

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

Office of
DMEA Field Team
Region III

1012 Flood Building
870 Market Street
San Francisco 2, Calif.

May 21, 1953

Memorandum

WSM

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

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-2797 (Tungsten)
U. S. Tungsten Corporation, Jumbo Mine
Inyo County, California

Reference is made to your letter dated April 2, 1953, requesting a field examination of the subject mine.

Attached are four copies of a report entitled "DMEA-2797, Tungsten, Jumbo Mine, Inyo County, California," by E. M. MacKevett and J. F. Robertson, Geologists, U. S. Geological Survey, and Russell R. Trengove, Mining Engineer, U. S. Bureau of Mines, dated May 13, 1953.

The examining geologists and engineer are in accord that the property does not contain sufficient merit to warrant exploration with Government funds, and in this the Field Team concurs.

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

Attachment

Copy to: E. H. Bailey, USGS

Thru O.C.
5/29/53

Reviewed by
DMEA OPERATING COMMITTEE

5-29-53
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

6/3/53

DMEA-2797--Tungsten

Jumbo Mine, Inyo County, California

E. M. MacKevett, Geologist
U. S. Geological Survey

J. F. Robertson, Geologist
U. S. Geological Survey

Russell R. Trengove, Mining Engineer
U. S. Bureau of Mines

May 13, 1953

Reviewed by
DMEA OPERATING COMMITTEE

5-29-53
(date)

SUPPLEMENTAL REPORT

Docket No.: DMEA-2797 (Tungsten)

Name and address of applicant: U. S. Tungsten Corp.,
E. M. Gregar, Pres.,
10245 So. Paramount Blvd.,
Downey, Calif.

Name and location of property: Jumbo Mine,
Inyo County, Calif.

SUMMARY

The grade and potential tonnage of the scheelite deposits at the Jumbo mine are too low grade to justify government participation in exploration. On the Jumbo No. 1 claim only a few small disseminations of scheelite exposed in the mine workings and in outcrops of the small tactite bodies occur. The low overall WO_3 content of the Jumbo No. 2 tactite, and the probable small size of the tactite body, are not favorable for successful exploration.

The U. S. Tungsten Corporation (Jumbo Mine), a gold prospect, was examined by an engineer[1/] of the U. S. Bureau of Mines on September 5 and 7, 1951. The purpose of that examination was to determine if the construction of three miles of access road to the deposit at Government expense was justified. The Bureau engineer sampled the deposit very thoroughly at that time and the request for Government assistance in the construction of the access road was denied.

1/ Benjamin H. Sheahan.

The corporation had already completed the construction of six miles of access road when they requested assistance on the remaining three miles. When this assistance was denied, they completed the nine miles of one-way road at a cost of $130,000. Most of the road was cut into solid rock of the steep mountain slope with a maximum grade of about 23 percent and rock cuts 30 feet in height.

They later requested Government assistance for an exploration loan (docket DMEA-2797, Tungsten).

A Bureau engineer[2/], accompanied by two geologists[3/] of the U. S. Geological Survey and E. M. Cregar, president of the corporation, examined the property April 16, 1953. No additional exploration was done since the Bureau engineer's examination in September 1951.

With no attempt at sorting, according to Mr. Cregar, 5,000 tons of mineralized tactite was shipped to the U. S. Vanadium's mill at Bishop. This production analyzed from 0.28% to 0.48% WO_3 and 0.0085% Mo, but as the average of the entire shipment was below 0.3% WO_3, the corporation did not realize a cent from the shipment. There is about 500 tons stockpiled near a truck loading pocket at the foot of the mountain. This was lamped by the Bureau engineer. There were large chunks (2 to 3 cu. ft.) of barren tactite in the stockpile. There is not sufficient scheelite present to make commercial ore by sorting.

2/ Russell R. Trengove.
3/ E. M. MacKevett and J. F. Robertson.

ing.

Mr. Cregar stated that he was not shipping the stockpile and that they had invested a total of $165,000 in the enterprise.

GEOLOGY

The Jumbo Nos. 1 and 2 claims include scheelite-bearing tactite deposits on a west-trending spur on the highly dissected west flank of the Inyo Mountains. Quartzite and limestone occur in the mine area as a southwest-dipping wedge-shaped mass, thin and tapering to the east but thick and broad to the west. (Fig. 1 sketch map of Jumbo 1 and 2 claims). The sedimentary rocks were intruded by porphyritic quartz monzonite, which is the dominant rock at the Jumbo No. 1 claim and areas to the east. Salients of quartz monzonite cut the sedimentary rocks and crop out in several places in the mine area. Thin, fine-grained basic dikes occupy some of the faults. Medium-bedded, gray limestone prevails in the unit mapped as limestone. The quartzite is white with local iron staining and cross bedding. On the basis of similarity of lithology and stratigraphic relationship, the sedimentary rocks are believed to be Ordovician Pogonip limestone and Eureka quartzite. Tactite, locally containing disseminated scheelite, occurs in a few places within the limestone, and also as a small lens in quartz monzonite.

Broad folds and fractures which are the commonest structural features of the sedimentary rocks, probably resulted from the forceful intrusion of the quartz monzonite. Strikes of the southwest-dipping strata range from about N. 30° W. in the eastern part of the

mine area to N. 85° W. in the western part. The dominant fractures dip steeply and strike northeasterly. The tactite lenses probably extend to a very shallow depth, as is suggested by their restricted surface extent and interruption by quartz monzonite salients, by the surface proximity of quartz monzonite throughout most of the mine area, and by the low dip of the intrusive-sedimentary contact.

ORE DEPOSITS

The tungsten deposits are contact metamorphic in origin. Scheelite occurs irregularly disseminated in tactite that was formed as partial metasomatic replacements of favorable limestone horizons. Garnet is the chief constituent of the tactite. Less common are epidote, oxidized iron and copper minerals, calcite, and quartz. The scheelite occurs mainly as nearly equidimensional crystals as large as 4 mm but commonly less than 1 mm in diameter. Subordinate amounts of scheelite occur in veinlets less than 1 mm thick transecting the tactite, and as minor disseminations in quartz monzonite near the tactite.

Tactite at the Jumbo No. 1 claim contains small areas of widely scattered grains and fracture coatings of scheelite which are too lean and discontinuous to constitute ore. (Fig. 2, Geologic map of Jumbo No. 1 workings). The scheelite-bearing tactite sampled by U. S. Bureau of Mines engineer[4/] (see fig. 3, Detail sketch of Jumbo No. 1 adit) in 1951 has been mined, but most was too low grade or too diluted during mining operations to warrant transportation to the mill.

4/ Sheahan, B. H., Report of Examination by Field Team Region III: Access Road, Jumbo Mine, Inyo County, California. Oct. 29, 1951.

The tactite body at the Jumbo No. 2 claim is on the gently dipping west-striking western limb of a flexure, and it pinches out to the east where the strike of the bedding changes. It is 2 to 12 feet thick and is exposed along its strike for about 240 feet. The surface exposures were lamped, and are estimated to contain an average of less than 0.20 percent WO_3 throughout a length of about 200 feet and an average thickness of 3 feet with most values in irregular scheelite-rich concentrations near the Jumbo No. 2 adit. Tactite exposed down-dip in old mine workings driven on steep, northeast-striking auriferous quartz veins that cut the tactite, however, is nearly barren of scheelite 10 to 20 feet below the surface.

ORE RESERVES

The meager scheelite occurrences at the Jumbo No. 1 claim are too lean and widely scattered to constitute ore. At the Jumbo No. 2 claim, scheelite occurs in tactite over a length of approximately 200 feet, an average thickness of 3 feet, and extends to an estimated depth of 15 feet. Figure 4 shows the grade and locations of samples of the Jumbo No. 2 tactite body. Chip sample E-1 was taken across the rich-appearing scheelite zone near the Jumbo No. 2 adit, but this zone lacks lateral and down-dip continuity. Chip sample E-2 is typical of the scattered scheelite near the Jumbo No. 2 shaft. Lamping with an ultra-violet lamp indicates most of the tactite contains about 0.10 percent or less WO_3.

PROPOSED EXPLORATION

Proposed exploration as shown on a map by Dion L. Garner[5/], which accompanies docket DMEA-2797, includes a drift about 700 feet long driven in a westerly direction from the heading of the Jumbo No. 1 adit, two raises of unspecified lengths and locations, a winze about 75 feet deep near the portal of Jumbo No. 1 adit, six diamond drill holes of unspecified lengths, four of which are to be drilled horizontally from the proposed drift, and two holes drilled from the surface on the Jumbo No. 2 claim. The applicant is amenable to any changes in the submitted exploration proposals.

The applicant's proposal does not seem feasible. Drifting from the Jumbo No. 1 adit would be blind exploration as there are no surface indications of ore zones that would be cut by the drift. The proposed raises are contingent on intersecting tactite in the drift, and the winze at its proposed site would cut very little favorable rock before penetrating quartz monzonite, probably at a depth of 10 or 15 feet below the collar. Underground diamond drilling is without geologic targets.

Exploring the down-dip extension of the Jumbo No. 2 tactite by diamond drilling has some merit but does not appear worthy of government participation. Probably the grade and distribution of scheelite in the Jumbo No. 2 tactite is similar to that in the better parts of the Jumbo No. 1 tactite, which were mined but not worth milling. Scheelite diminishes in down-dip parts of the Jumbo No. 2 tactite exposed in mine workings and the probable overall WO_3 content of the

5/ Consulting geologist, Red Mountain, Calif.

tactite body is very low. The tactite body is probably small and chances are that it is truncated by quartz monzonite at a shallow depth. It is accessible only by a poor trail.

Geologists' Conclusions

The scheelite-bearing tactite is too low in grade and the potential tonnage too small to warrant government participation in exploring the Jumbo claims. Inaccessibility and lack of nearby water are other undesirable factors. Diamond drilling the concealed parts of the Jumbo No. 2 tactite offers the best possibilities for exploration, but the chances of finding ore in quantity and grade to justify exploration are remote.

Bureau Engineer's Conclusions and Recommendations

Jumbo No. 1 workings have been mined out and the little scheelite showing in Jumbo No. 2 workings is not of sufficient interest to justify the expenditure of several thousand dollars on an extension of the present access road to make Jumbo No. 2 working accessible.

The Bureau engineer recommends that the application for Government assistance in an exploration program be denied.

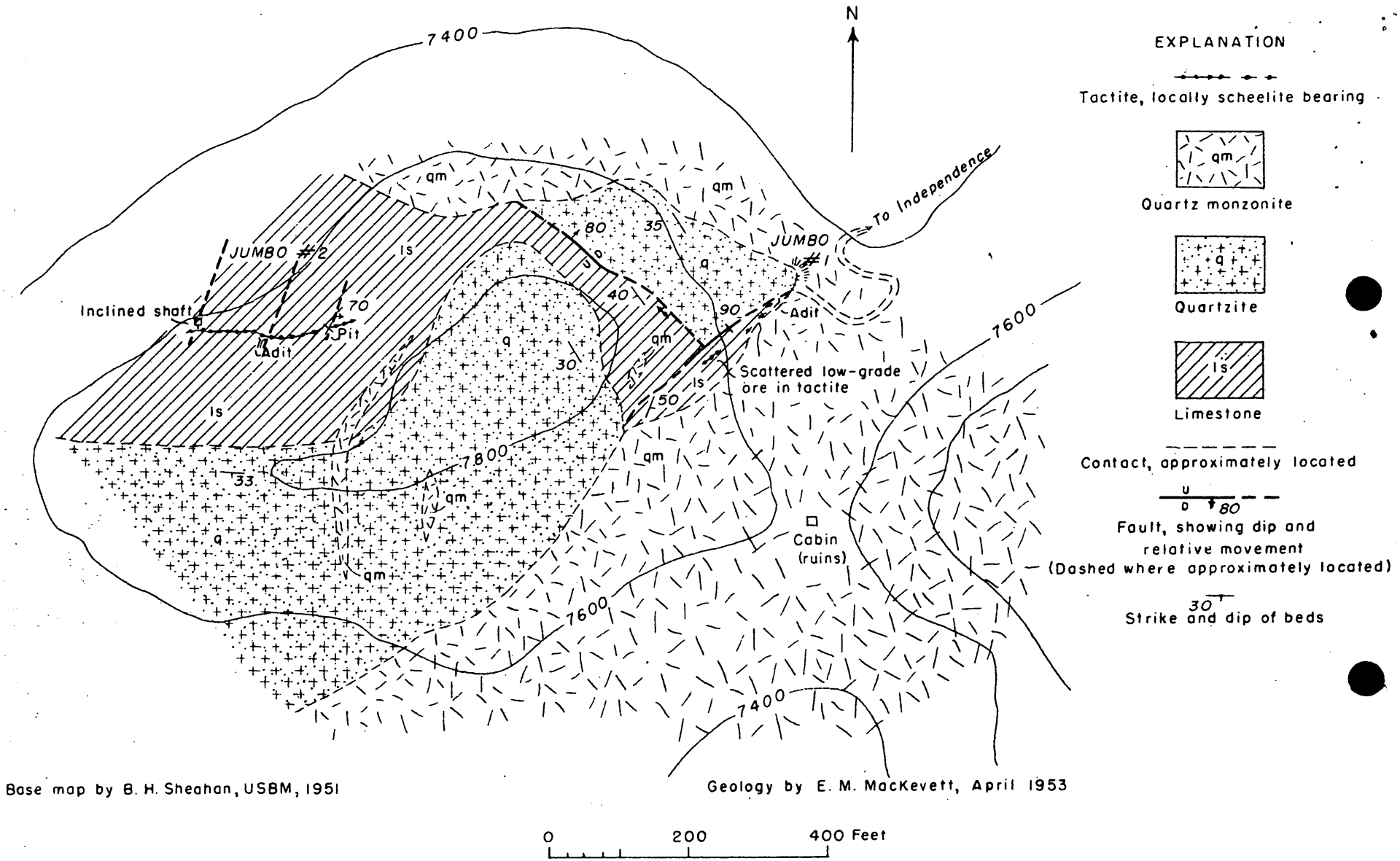
DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED

1953 MAY 18 AM 10:56

SAN FRANCISCO, CALIFORNIA

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

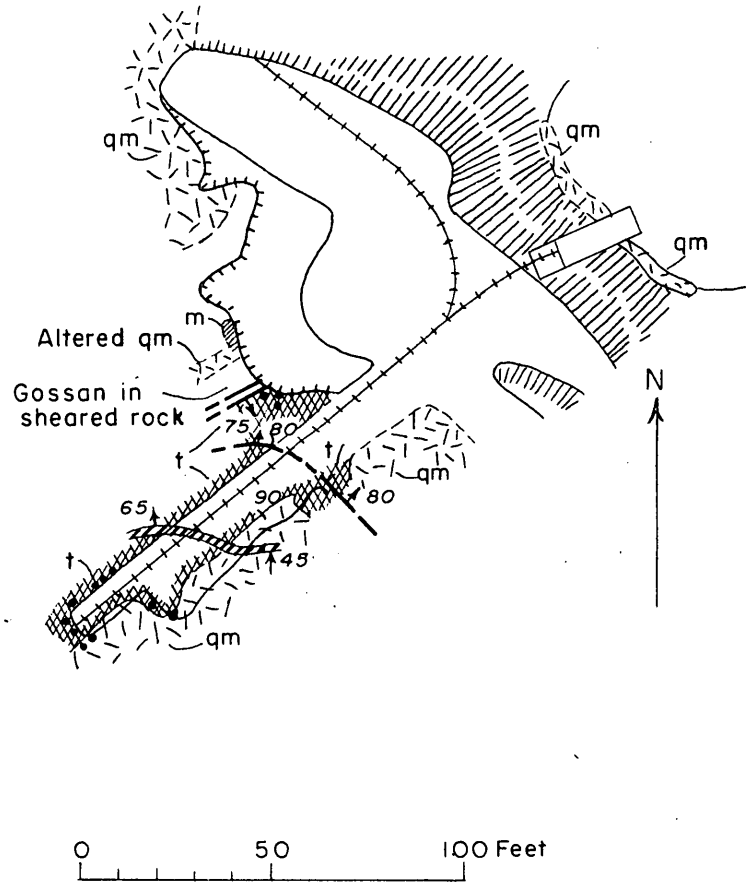
DMEA—27-97
(TUNGSTEN)



Base map by B. H. Sheahan, USBM, 1951

Geology by E. M. MacKevett, April 1953

Fig. 1. Sketch map of Jumbo 1 and 2 claims, Inyo County, California



EXPLANATION

Diabasic dike

Marble

Tactite

Quartz monzonite

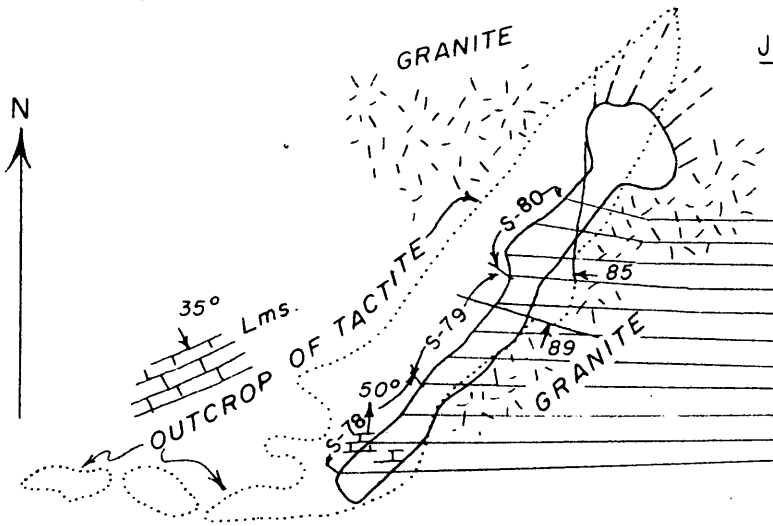
Scheelite

45
Contact, showing dip
(Dashed where approximately located)

75
Fault, showing dip
(Dashed where approximately located)

Mapped by J. F. Robertson, April 1953
Brunton and tape survey

Fig. 2. Geologic map of Jumbo No. 1 workings.

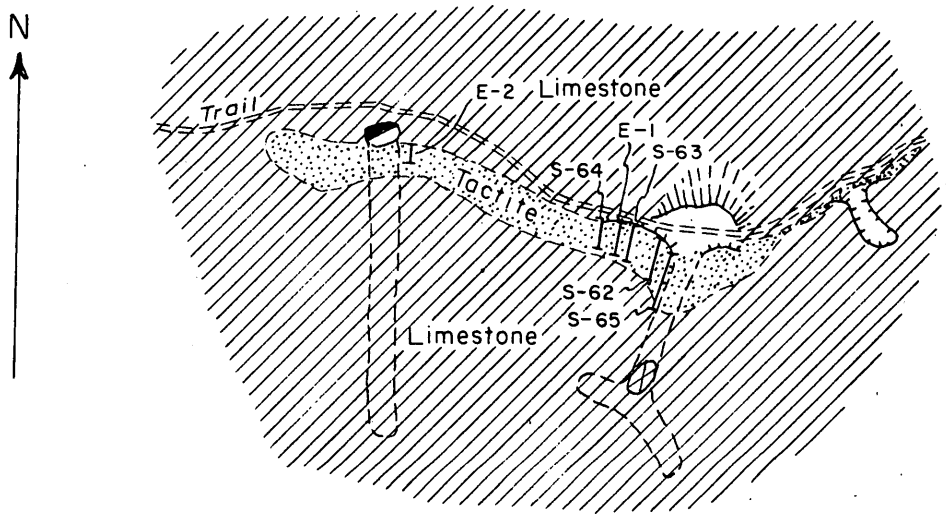


SCALE 1" = 50'

Jumbo #1 Tunnel

Sample No.	Length	% WO_3	
S—80	20'	0.75	HORIZ.
S—77	6'	0.59	VERT.
S—76	6'	0.45	"
S—75	4'	0.17	HORIZ.
S—74	6'	0.45	VERT.
S—73	6'	0.40	"
S—72	6'	0.77	"
S—71	6'	0.05	"
S—70	6'	0.58	"
S—69	6'	0.08	"
S—68	6'	0.36	"
S—67	6'	0.25	"
S—78	30'	0.64	HORIZ.
S—79	40'	0.20	HORIZ.

Fig. 3 Detail sketch of Jumbo No. 1 adit, as mapped and sampled by B. H. Sheahan, USBM, 1951



Sample No.	Length	Percent WO_3
E-1	8'	0.70
E-2	4'	<0.01
S-62	12'	0.28
S-63	10'	0.88
S-64	8'	0.03
S-65	17'	0.49

.44% - 11.7'

E — Sampled by MacKevett, 1953
S — Sampled by Sheahan, 1951

0 50 100 FEET

Fig. 4 Detail sketch of Jumbo No. 2 workings, showing sample data. (modified after Sheahan)

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED

1953 MAY 18 AM 10:55

SAN FRANCISCO, CALIFORNIA

400

FILE COPY
SURNAME:

Rutledge
Martin
Geehan
Lemmon
Hodges
Gallagher
Fitzsimon

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

APR 2 1953

Mr. Edward M. Cregar, President
U. S. Tungsten Corporation
7125 East Firestone Boulevard
Downey, California

Re: Docket No. DMEA 2797 - Tungsten
U. S. Tungsten Corporation
Jumbo Mine
Inyo County, California

Dear Mr. Cregar:

Your application for assistance in exploring tungsten occurrences at the Jumbo mine and the data contained in your letters of January 19 and March 19, 1953, have been reviewed by the Iron and Ferro-Alloys Division, DMEA, and have been referred to Mr. H. C. Miller, Executive Officer, DMEA Field Team, Region III, 1012 Flood Building, 870 Market Street, San Francisco 2, California, for a field review and examination.

The Regional Office will contact you at an early date in regard to an examination of your property. Any assistance that you can render the members of the field team during the examination will be appreciated.

Sincerely yours,

C. O. Mittenderf (fw)

Administrator

4/2/53

cc: Docket
Field Team, Region 3
Code 400
Admn. Read. File
R. W. Geehan, USBM
D. M. Lemmon, USGS

FARutledge/hhb
3/27/53

400

FILE COPY
SURNAME:

Rutledge
Kanen
Selfridge
McJunkin

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

APR 2 1953

Air Mail

Mr. H. C. Miller, Executive Officer
DMEA Field Team, Region III
1012 Flood Building
870 Market Street
San Francisco 2, California

Re: Docket No. DMEA 2797 - Tungsten
U. S. Tungsten Corporation
Jumbo Mine
Inyo County, California

Dear Mr. Miller:

Reference is made to the subject application for exploration assistance which is being referred to your office for a field examination.

Neither the property nor the tungsten occurrence is adequately described in the application. Cost estimates are high and the allowance for supervision excessive. We explained this to Mr. Cregar, President, U. S. Tungsten Corporation, in our letter of December 17, 1952, and asked for additional information. Partial data have since been received and are enclosed for your information. During the field examination, the missing information and the items disallowed as being for production should be discussed with the applicant, and the cost data should be revised.

A memorandum by M. D. Crittenden, Jr., dated December 12, 1952, is enclosed for your information.

Sincerely yours,

George A. Selfridge (HB)

Chairman, Operating Committee

4/2/53

Enclosures

Approved:

J. H. Geehan (HB)

Member, Bureau of Mines

A. R. Kinsel, Jr. (HB)

Member, Geological Survey

cc: Docket
Field Team, Region 3
Code 400
Admn. Read. File
Operating Committee
R. W. Geehan, USBM
D. M. Lemmon, USGS

FARutledge/hhb
3/30/53

Docket

UNITED STATES TUNGSTEN CORP.

Mines
Independence, California

Main Offices
7125 East Firestone Blvd.
~~XXXXXXXXXXXXXXXX~~
Downey, California

TOpaz 2-1161

March 19th, 1953.

WSM

United States Department of the Interior,
Defense Minerals Exploration Administration,
Washington 25, D. C.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 23 1953

Re: Docket No. DMEA 2797 - Tungsten
U. S. Tungsten Corporation
Jumbo Mine, Inyo County, California.

Attention: Mr. C. O. Mittendorf, Administrator.

Gentlemen:

Acknowledgment is made of your letter of March 13th, 1953.

We must apologize for the delay in getting final, corrected data to you. The delay was due to the serious illness of Mr. Gardner.

You will find enclosed prints of the revised tracing prepared by Mr. Gardner, which, in his opinion, answer the objections you made.

To these prints we have added in red pencil the points at which Engineer Nasland sampled the property, exclusive of the tunnel samples which he described in detail in his report.

In Mr. Martin's letter of February 12th, 1953, he queried why the dump samples ran only .17% WO_3.

You will recall that the tunnel was an old gold operation and the Nasland sample was taken haphazard from a dump composed of tunnel cuttings, overburden and extraneous rock.

Mr. Nasland's examination showed no values on the hanging wall side of the tunnel. The writer, who was present, has no idea why Mr. Nasland sampled the dump, and as he is now reported to be in Mexico, we cannot get in touch with him.

Copy retained 400

United States Department of the Interior,
Defense Minerals Exploration Administration.

March 19th, 1953.

It is believed that Mr. Gardner's maps showing proposed work are self-explanatory.

Moreover, we shall be only too happy to revise our application in accordance with your own engineering reports. We shall be glad to sub-contract the continuation of the drift and the diamond drilling work so as to comply quite fully with Mr. Mittendorf's letter of December 17th, 1952.

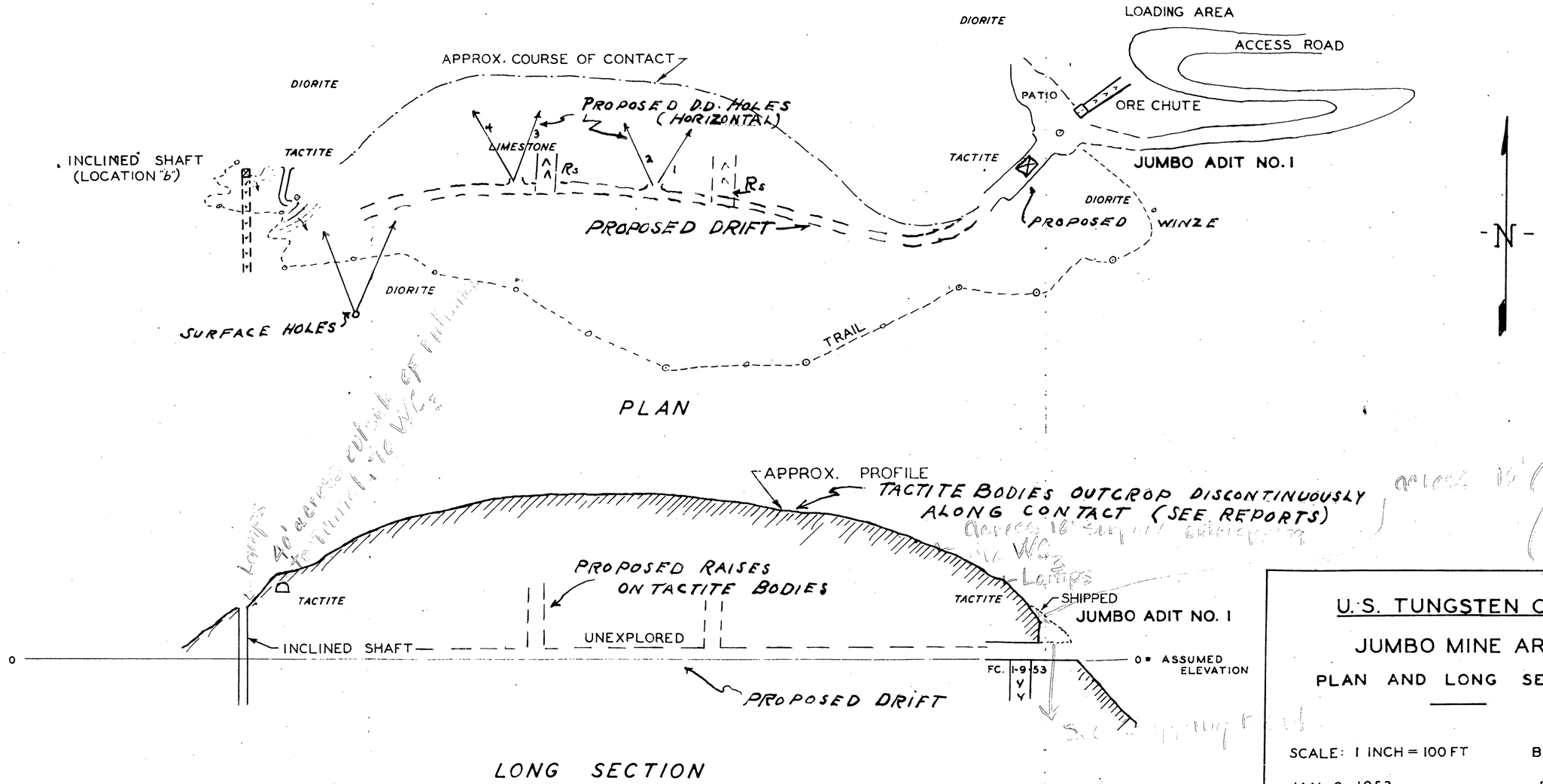
This Company has extended itself now to the limit and shall await your further advices before proceeding further.

Yours very truly,

UNITED STATES TUNGSTEN CORPORATION

E. M. Cregar, President.

EMC:VM



U.S. TUNGSTEN CORP.

JUMBO MINE AREA

PLAN AND LONG SECTION

SCALE: 1 INCH = 100 FT

BRUNTON & TAPE

JAN. 9 1953

DION L. GARDNER

UNITED STATES TUNGSTEN CORP.

Mines
Independence, California

Main Offices
7125 East Firestone Blvd.
10248 So. Paramount Blvd.
Downey, California
•
TOpaz 2-1161

March 19th, 1953.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 23 1953

United States Department of the Interior,
Defense Minerals Exploration Administration,
Washington 25, D. C.

Re: Docket No. DMEA 2797 - Tungsten
U. S. Tungsten Corporation
Jumbo Mine, Inyo County, California.

Attention: Mr. C. O. Mittendorf, Administrator.

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United States Department of the Interior,
Defense Minerals Exploration Administration.

March 19th, 1953.

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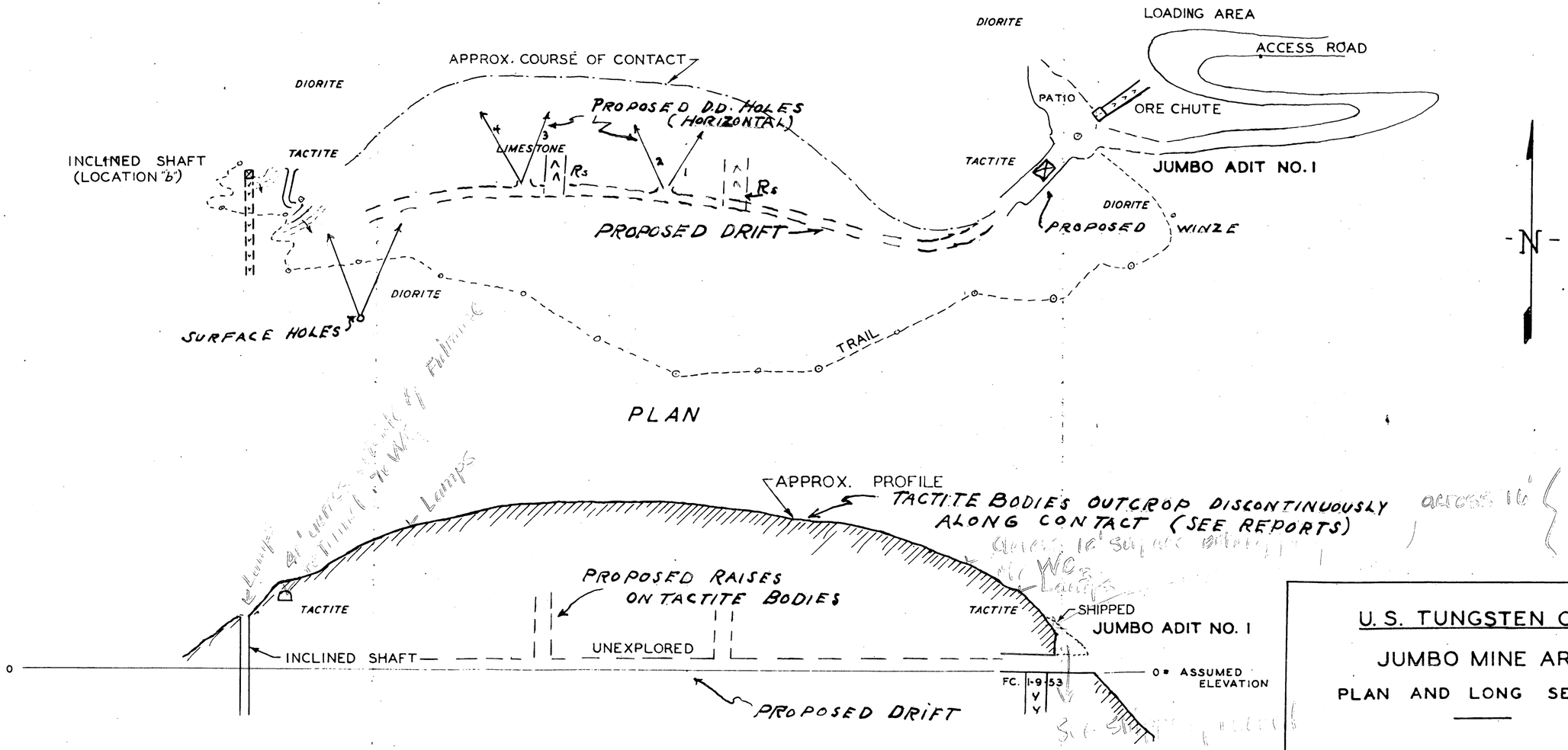
Yours very truly,

UNITED STATES TUNGSTEN CORPORATION

E. M. Cregar, President.

EMC:VM



U. S. TUNGSTEN CORP.

JUMBO MINE AREA

PLAN AND LONG SECTION

SCALE: 1 INCH = 100 FT

JAN. 9 1953

BRUNTON & TAPE

DION L. GARDNER

FILE COPY
SURNAME:

400

Rutledge
Matthews

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

Mr. Edward M. Cregar, President
U. S. Tungsten Corporation
7125 East Firestone Boulevard
Downey, California

MAR 13 1953

Re: Docket No. DMSA 2797 - Tungsten
U. S. Tungsten Corporation
Jumbo Mine
Inyo County, California

J.C. 3/13/53

Dear Mr. Cregar:

Reference is made to your application for exploration assistance at the Jumbo Mine. On December 17, 1952, we wrote you requesting additional information needed to process the subject application. Part of this information was received with your letter of January 19, 1953, and notation was made that you were aware of the missing data.

On February 12, 1953, we again wrote you requesting that these data be furnished. We wish to cooperate fully in the matter of allowing ample time for the submission of the necessary data, but if the required data have not been received by April 15, 1953, we will then remove the application from the active file and consider the matter closed.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

CC: DOCKET
FIELD TEAM, REG. III
CODE 400
ADMN. READ. FILE
R. W. GEEHAN, USBM
D. M. LEMMON, USGS

FARutledge/ls
3/12/53

400

FILE COPY
SURNAME:

Rutledge
Martin

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

FEB 12 1953

Mr. Edward M. Cregar, President
U. S. Tungsten Corporation
7125 East Firestone Boulevard
Downey, California

Re: Docket No. DMEA 2797 - Tungsten
U. S. Tungsten Corporation
Jumbo Mine
Inyo County, California

Dear Mr. Cregar:

Reference is made to the subject docket and your letter of January 19, 1953, transmitting a plan and section of the Jumbo Mine area by Dion L. Gardner.

Gardner's map shows the location of the present workings and also the general geology of the immediate area but does not show the location of the proposed exploration program. In addition, though tactite is shown at two locations, Jumbo Adit No. 1 and inclined shaft (location "b"), the possibility of this tactite being continuous along the limestone-diorite contact, which may or may not be true, is not indicated, but the tactite is shown as two separate patches.

The report by Harry Naslund submitted with the original application was noted. Though he gave a description of his sampling, we were unable to determine why the dump ran only 0.17 percent WO_3 while his two samples of the tunnel ran 0.76 and 2.65 percent WO_3.

It is noted that you are aware of the data missing from the original application and requested in our letter of December 17, 1952. Processing of your application will be held in abeyance until this information is received.

Sincerely yours,

SIGNED

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

P.H. 2-12-53

cc: Docket
Field Team, Region 3
Code 400
Admn. Read. File
R. W. Geehan, USBM
D. M. Lemmon, USGS

FARutledge/hhb

2/11/53

UNITED STATES TUNGSTEN CORP.

7125 East Firestone Blvd.

Mines
Independence, California

Main Offices
~~10248 So. Paramount Blvd.~~
Downey, California

TOpaz 2-1161

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
FEB 2 1953

January 19, 1953

United States Department of the Interior
Defense Minerals Exploration Administration
Washington 25, D. C.

Re: Docket No. DMEA 2797 - Tungsten
U. S. Tungsten Corporation
Jumbo Mine
Inyo County, California

Gentlemen:

Acknowledgment is made of your letter of December 17, 1952 with reference to the above docket number and this Corporation's application for exploration assistance.

Attached to this letter will be found four (4) copies of a Geologic Map prepared by Dion L. Gardner, M.E.

Your attention, however, is drawn to the copy of the report previously furnished you and drawn up by Harry Naslund, M.E. which reported in detail all of Mr. Naslund's sampling methods.

Notation is made of your exceptions to the application.

For your further information the Corporation is in process of making an operational contract so in large measure your objections could be satisfactorily adjusted. We have expended so much money on this property and Engineers from various Governmental and State Departments have given us so much encouragement that we hate to see the property not adequately explored.

You will find enclosed also four (4) copies ech of the assignments to the American Tungsten Corporation (later changed to United States Tungsten Corporation) by Edward M. Cregar and wife, O. E. Goodwin and wife and Katie A. Steinen.

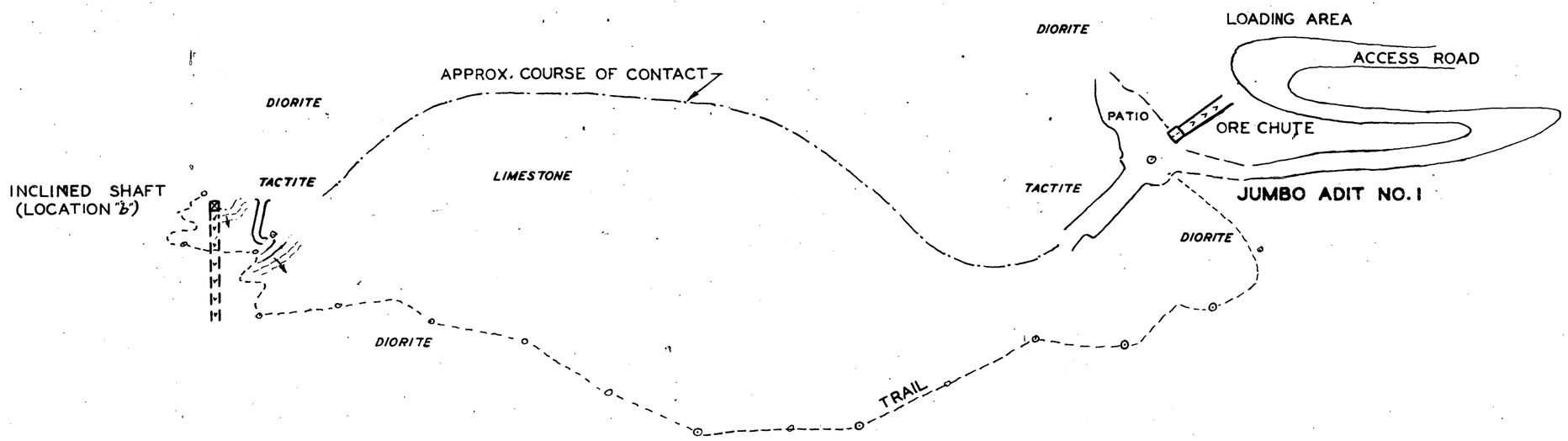
Yours very truly,

UNITED STATES TUNGSTEN CORP.

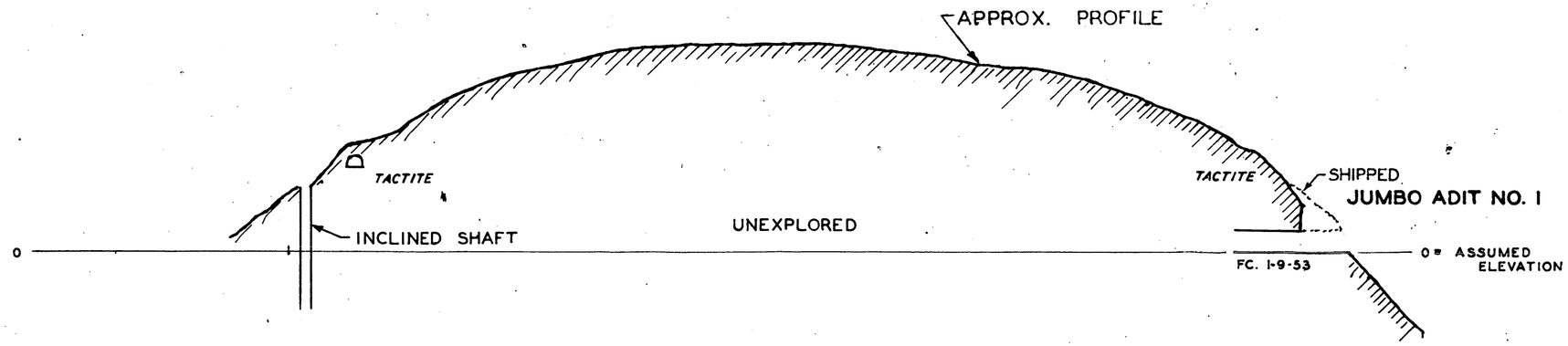
Edward M Cregar

Edward M. Cregar, President

EMC/bd



PLAN



LONG SECTION

Docket No. 6 MEA 2191

U. S. TUNGSTEN CORP.

JUMBO MINE AREA

PLAN AND LONG SECTION

SCALE: 1 INCH = 100 FT

BRUNTON & TAPE

JAN. 9 1953

DION L. GARDNER

Recorded VOL 91 PAGE 247

QUITCLAIM DEED

IN CONSIDERATION of $1.00, receipt of which is hereby acknowledged.

KATIE A. STEINEN, as her separate and distinct property

does hereby remise, release and forever quitclaim to American Tungsten Corporation

the real property in the _____ County of Inyo
State of California, described as:

all her right, title and interest in a lease hold interest and to real property described as:

Mining Claims known as Betty Jumbo Claims, No. 1, No. 2, No.s, and No. 4, situated in the Union mining district in the County of Inyo, State of California, described in Volume 4 on Page 274 of the Records of Inyo County at Independence, California, and all mineral rights which lessors have in such properties.

Dated this 6th day of April 1951

(Signed) Katie A. Steinen
Katie A. Steinen

(Signed) Fred Steinen
Fred Steinen

Notarized April 6th, 1951 by Sarah O. Henry, Notary Public in and for the County of Los Angeles, State of California.

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Dated this 6th day of April 1951

(Signed) E. M. Cregar

(Signed) Wilhelmina W. Cregar

Notarized on the 9th day of April 1951 by Sarah O. Henry, Notary Public in and for County of Los Angeles, State of California

Recorded VOL 91 PAGE 251

Place Internal Revenue Stamps in this Space

QUITCLAIM DEED

FOR A VALUABLE CONSIDERATION, receipt of which is hereby acknowledged,

O. E. GOODWIN and KAY GOODWIN

,does hereby

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AMERICAN TUNGSTEN CORPORATION

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O. E. Goodwin

(Signed) Kay Goodwin
His Wife

Notarized April 9th, 1951 by Sarah O. Henry, Notary Public for the County of Los Angeles, State of California.

Not sent letter rec'd from Regan

Mr. Edward M. Cregar, President
U S. Tungsten Corporation
10248 South Paramount Boulevard
Downey, California

Re: Docket No. DMEA 2797 - Tungsten
U. S. Tungsten Corporation
Jumbo Mine
Inyo County, California

Dear Mr. Cregar:

On December 17, 1952, we wrote you requesting additional information needed to process the subject application for exploration assistance at the Jumbo Mine.

In the interest of expediting the Defense Minerals Program, it will ~~would~~ be appreciated if you will promptly furnish the required information.

Sincerely yours,

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

WSM

FAR/

400

FILE COPY
SURNAME:

Rutledge - Selfridge

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

DEC 17 1952

Mr. Edward M. Cregar, President
U. S. Tungsten Corporation
10248 South Paramount Boulevard
Downey, California

Re: Docket No. DMEA 2797 - Tungsten
U. S. Tungsten Corporation
Jumbo Mine
Inyo County, California

Dear Mr. Cregar:

Your application for exploration assistance and other data concerning the above-noted property available to us in Washington have been carefully reviewed.

The information submitted with your application is insufficient to justify a field examination. No detailed plan of exploration and no map showing either the local geology or the target of the proposed exploration were included with your application.

Before we can process your application, we must have more data to justify including your property in the Defense Minerals Exploration Administration's program. It will be necessary for you to furnish us with a geologic map showing the following: present workings, location and length of the samples reported by Harry Nasland, and the proposed exploration. Your attention is called to question 5b of Form MF-103, Application for Aid in an Exploration Project, which you failed to include with the data submitted with your application: "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."

In addition, DMEA considers the items included under supervision excessive for a small exploration project in which a large proportion of the work will be contracted. It has been the policy in the past to allow one engineer-supervisor for such projects. The requested fee for the geologic consultant also is at a considerably higher rate than that allowed by the Government. A rate of $50.00 a day plus $15.00 per diem is in use at present.

Several items of equipment listed would not be needed for an exploration program. In addition, since the U. S. Tungsten Corporation has already purchased or is purchasing the equipment to be used, the cost to the project of such equipment would be calculated at 1/60 of the fair market value per month as depreciation on the equipment in use.

We will also need to have copies of the assignments to the American Tungsten Corporation (later changed to U. S. Tungsten Corporation) by Edward M. Cregar and wife, O. E. Goodwin and wife, and Katie A. Steinen.

In reviewing your application for exploration assistance under the subject docket, we also noted that part of the $54,000.00 requested will be spent for trucking ore to a mill at Bishop, California, and for stockpiling any additional ore produced during the exploration program. In addition, the list of equipment included several items that would be used for production and not exploration. While the Defense Minerals Exploration Administration under its delegated authority can grant assistance for approved exploration projects, it cannot grant assistance for production. Authority to grant such assistance has been delegated to the Defense Materials Procurement Agency, General Services Administration Building, 19th and F Streets, N. W., Washington 25, D. C. You could apply to DMPA for a production loan to cover any contemplated production, but that Agency might not be willing to consider your application favorably until the results of an exploration program showed that your property had sufficient merit.

For your information, we are enclosing a copy of "The Defense Minerals Exploration Program," which explains the mineral assistance program.

Your application for exploration assistance will be held in abeyance until the above-referenced information is received.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

J.H.
12-17-58

Enclosure

FARutledge/ls 12/17/62

cc: Docket
Admn. Read. File
F.T., Reg. 3
F. A. Rutledge
E. C. Selfridge
D. M. Lemmon, USGS
R. W. Geehan, USBM

IN REPLY REFER TO:

G-MD-CF

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

Docket

GCS 12/15/52

December 12, 1952

Memorandum

To: G. C. Selfridge

From: M. D. Crittenden Max D. Crittenden Jr.

Subject: DMEA 2797 (Tungsten)
United States Tungsten Corporation
10248 South Paramount Boulevard - ?
Downey, California

The Proposal

The applicants failed to specifically answer question 5-B, but from other parts of the docket, I infer they propose to spend a total of $54,000 to do (1) 3,000 feet of diamond drilling, and (2) an unspecified amount of underground work.

Actually, only part of the $54,000 appears to be exploration; the rest is ordinary operating or development cost. For example, it includes $6,000 for trucking.

The Property

The applicant is leasee of a former gold property known as the Jumbo, and owned by G. F. Lund and W. J. Thompson. It would be in the E. ½ of Sec. 15, T 13 S, R 36 E (unsectioned). Workings are reported to consist of a 110 foot adit, a 260 foot shaft, a 50 foot drift and other shallow prospect openings, all sunk prior to 1919. The only recent work consisted of enlarging and extending the 110 foot drift, and making a 40 x 60 foot open pit at the mouth.

The company reports that they shipped 5,484 tons of development ore from these workings to U. S. Vanadium Company. The average grade was .285 percent WO_3, but (of course) they are sure that the undeveloped ore will be much better.

Geology

The only information available is contained in an unpublished War Minerals Report prepared by the Bureau of Mines in January 1943. The property is in an area of steep ridges and deep

Copy retained

canyons on the western slope of the Inyo Mountains. It lies on a steep dipping contact between granitic rocks on the east and metamorphics on the west. The general dip of the contact is westward, but the mine is on a local fault contact that dips 73° east.

Scheelite was observed in the first 60 feet of the adit where it followed the contact closely. Two selected samples ran 2.49 and 1.40 percent WO_3, but the average grade is undoubtedly much nearer the .285 of the shipments.

Recommendation

The present application does not appear to me to be suitable for referral to the field team. The company should be asked to specify the details of the proposed exploration in the usual way, and to eleminate the excessive overhead and the extraneous items not included.

When this has been done, it probably should be referred to the field for a re-check on the grade and the potential tonnage, with careful attention to the possible relation between tungsten and gold mineralization.

M. D. Crittenden

December 3, 1952

Mr. Edward M. Cregar, President
U. S. Tungsten Corporation
10248 South Paramount Boulevard
Downey, California

Subject: DMEA-2797
Re: Exploration Assistance
U. S. Tungsten Corp. Jumbo Mine

My dear Mr. Cregar:

The receipt of your application dated November 20, 1952 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-2797 and referred to the Iron & Ferro-Alloy Division.

Kindly refer to DMEA-2797 in any future correspondence relating to your application.

Sincerely yours,

ROBERT E. ADAMS

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

25451

UNITED STATES TUNGSTEN CORP.

Mines
Independence, California

Main Offices
10248 So. Paramount Blvd.
Downey, California

TOpaz 2-1161

November 26, 1952

Dmea-2797

Department of the Interior
Defense Minerals Administration
DEC 1 1952

United States Department of the Interior
Defense Minerals Exploration Administration
Washington 25, C. C.

Gentlemen:

There is submitted herewith formal application for a development loan on the tungsten property of the undersigned.

There has been expended on this property, mostly in the form of an access road, over $150,000. The major development has been in the form of widening and extending a drift which tended to prove the most optimistic hopes of the Corporation.

As is shown in the answer to 4-B of the formal application, the Company has mined and delivered 5484 tons to the U. S. Vanadium Corporation at Bishop, California. On the various lots of ore included in these shipments, ores were assayed and paid for on a baais of from approximately .30% to .45% WO_3.

There was absolutely no attempt made to sort the ore or make selective shipments. It was the desire to make mine run shipments to present a more objective picture. The Company was determined to prove or disprove adequate tungsten ore bodies that would justify a mill on its own mill site.

Hence, the work done has proved this to the complete satisfaction of the Company although there remains the diamond drilling of the veins that have been opened up and some further development work actually to block out tonnage that would completely justify a mill.

It is, therefore, vital that an examination by a competent Government Engineer be made at the earliest possible date so the Corporation may have the benefit of his advice and recommendations.

Fundamentally what the Corporation desires to accomplish so that it may become a major producer of WO_3, is:

(a.) An intensive diamond drilling campaign to prove conclusively the extent of bodies of ore already partially developed.

(b.) The extension of the present drift so as to outline definitely and make certain the existence of tremendous bodies of milling ore.

The Vanadium Corporation's purchases of ore showed values ranging from .28% to .45% WO_3. In fairness to United States Tungsten Corporation it should be pointed out that in a number of different lots an umpire's decision gave ore shipments a much higher return, while substantially higher assays were given by independent assayers of samples run by Vanadium Corporation. It should be mentioned that the Corporation has assays running as high as 3.88 WO_3 and every indication is that development work will uncover or should uncover substantial bodies of higher grade ore than heretofore mined and shipped.

The Vanadium Corporation will do no custom milling at a flat price per ton, hence, the necessity of a mill adjacent to the Corporation's property.

The Company has already been assured of such a mill, contingent on the success of the development outlined.

On the Corporation's own mill site there is a proven adequate water supply.

On the basis of shipments which the Company has already made and which prove minimum values, the Company can deliver profitably to its own mill site ores of minimum values, while, with selective mining the values can be increased enormously.

Under the above circumstances, the Company presents a proposed budget totaling $17,998.65 a month. On this basis a loan is requested of $54,000 sufficient to explore for additional ore bodies on a two shift basis for 90 days, while at the sametime carrying on an energetic diamond drilling program.

It is the consensus of all competent observers that this program should define ore bodies of far greater milling values than any that have heretofore been uncovered.

It is further reasonable to assume, on the basis of the Company's past operations, that an appreciable amount of high grade ore can be mined and shipped while carrying on the development program.

This ore will help materially in defraying the development costs or helping to meet any contingent expenditures.

At the sametime the extension of the drift and the diamond drilling should block out such a substantial tonnage of ores of known value that would insure the economic operation of the mill for many years to come.

Respectfully submitted,

UNITED STATES TUNGSTEN CORPORATION

By Edward M. Cregar

Edward M. Cregar, President

EC/bd

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

Defense Minerals Exploration Administration

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

Not to be filled in by applicant

Docket No. Dmea-2797
Metal or Mineral
Date Received 12-1-52
Estimated Cost
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: United States Tungsten Corporation
10248 South Paramount Boulevard
Downey, California

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

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

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

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

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

See exhibit attached.

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

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

See exhibit attached.

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

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

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

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

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

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

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

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

16—66551-1

See file attached as to all the above.

5. *The exploration project.*—(*a*) State the mineral or minerals for which you wish to explore Tungsten WO_3

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

(*c*) The work will start within 30 days and be completed within 3 to 4 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.

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

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

(*b*) *Labor, supervision, consultants.*—Include an itemized schedule of numbers, classes and rates of wages, salaries or fees for necessary labor, supervision and engineering and geological consultants. See page 4 of exhibits.

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel. See page 4 of exhibits.

(*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. See exhibit headed Equipment and Machinery Account.

(*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?

☐ Money ☒ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated November 20, 1952, 195

UNITED STATES TUNGSTEN CORPORATION
(Applicant)

By Edward M. Cregar
Edward M. Cregar, President

O. E. Goodwin, Secretary
O. E. Goodwin

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

3-A Mining claims known as the Betty Jumbo #1, #2, #3, #4, #5 and #6 having been leased to the applicant Company. All located in the Union Mining District of Inyo, California.

3-B The United States Tungsten Corporation Jumbo Mine.

3-C Lessee as to Betty Jumbo #1, #2, #3, #4, #5 and #6.

3-D See Attached.

3-F #1, #2, #3, & #4, Feb. 17, 1942, Inyo County, Vol. 55, Pages 344 to 347 incl. #5 and #6, Jan. 8, 1951, Vol. 62, Pages 133 and 134.

4-A A 110' 4' x 6' drift, 260' 54° incline shaft, 50' drift, together with numerous small cuts and shafts on mineralized zones. The present lessee has enlarged the old 4' x 6' drift to a 10' x 12' drift for a distance of 128'. This drift has been drilled on the tactite vein. The lessee has also completed a pit 45' x 60' at the portal of the old drift. An 8-1/2 mile access raod has been built to the mine from the county road by the lessee. The existing mine workings are open for inspection and may be reached over the Company's access road by automobile right to the portal.

The inclined shaft and various small cuts are easy in reach from portal by foot.

4-B The Company has mined and delivered 5,484 tons to U. S. Vanadium Corporation, average WO^3 content .285%, on Vanadium Company's settlement. While the Company has no known ore reserve, reference to report by Engineer Harry Naslund of Los Angeles estimates that there are approximately 100,000 tons of ore in sight not including what might be obtained by later development.

4-C (1) Copy of preliminary report by Harry Naslund of Los Angeles, California, which is attached to this application. Original is in Company's files.

(2) Extract from the January, 1950 issue of the State of California Journal of Mining reads as follows:

"JUMBO MINE. Location: On the West slope of the Inyo Range 4 miles East of Kearsarge in the E1/2 Sec. 15, T. 13S, R. 36E, M.D.M. (projected) at an altitude of 7000 to 7500 feet. Ownership: J. W. Thompson, Independence, California, and G. F. Lund, Jr., Los Angeles, California, own 6 unpatented claims.

The scheelite is typically disseminated in tactite along a contact between granite and lime and shale. The tungsten content of the lenses of tactite along the contact ranges from 1.40 to 2.49 percent WO^3.

"Iron oxides and copper carbonates, carrying gold and silver, are in a quartz vein which trends Northeast and dips 75° along the contact.

"The vein ranges from 1 foot to 3 feet wide.

"A 120 foot adit has been driven Southwest along the contact, which has also been interesected by a 60 foot crosscut adit. An inclined shaft has also been sunk on the contact to a depth of 240 feet.

"There has been no production and the property is idle."

(2) Extracts from a preliminary report made Norman Whitmore, Los Angeles Mining Engineer says in part:

"I spent July 3rd and 4th at your property eight miles Southeast of Independence in the Inyo Mountains. Your superintendent, John Thompson, was very cooperative in giving all the assistance possible. I was surprised to see that such a good truck road had been built to the property and that the main vein was so wide. The equipment that has been purchased so far is exceptionally good for such an operation. The ore body is in an area of intense faulting and mineralization. There was such a large area that should be geologized that we confined our efforts to the fault block where the power shovel is now working. The easterly wall of this main vein was quite plainly visible but the Westerly wall was undetermined.

"Indications show that the vein is enlarging with depth. A cross vein carrying gold values cuts this tungsten vein just South of the saddle above the present workings. This vein was probably formed at a latter date than the tungsten so it will cut the tungsten vein a short distance ahead of the present workings.

****

"The air maps of the district should be gotten and the area in the vicinity where the work is now being done should be enlarged as much as it will show the detail. This enlargement will help to plan future work and show where ore bodies may be expected. The preliminary study should be made of the ore to

determine the best milling method for recovery.

"We can see no reason why this cannot become a profitable mining venture if properly managed."

4-D The mine is located 15 miles from the town of Independence, California. 6-1/2 miles is an excellent County road; mainly paved. 8-1/2 miles represents the Company's own road which is easily traversed by automobile or truck. Lone Pine is located 31 miles away. The Company has no necessity to maintain a camp at the mine because the crew prefers to live in Independence or Lone Pine. The Company has been transporting the men to work from Independence; taking about 40 minutes each way. Most materials are available at Lone Pine or Independence and supplies not available in the valley are obtained in Los Angeles and delivered at Independence by regular truck lines overnight.

4-E The Company has been very fortunate in a supply of experienced man power.

Material supply and equipment are either on the property or are available as shown in 4-D. Electricity is generated by a gasoline-driven generator and used for lighting, etc. Water needed for drilling is trucked 11 miles to the mine.

5 Tungsten WO^3.

5-B Description of proposed exploration

5-C Within 7 days of loan being granted and to be completed within 3 to 4 months.

5-D E. M. Cregar, General Superintendent. 15 years mining experience.
Steve Novak, General Mining Foreman. 35 years mining experience.
Dion L. Gardener, M.A., Consulting Geologist and Engineer.

6. Estimated costs of development project; these costs estimated on a monthly basis - two shifts per day - average 25 working days per month.

Superintendent	$125.00 per wk.	$541.66 per mo.	
Foreman	$125.00 per wk.	$541.66 per mo.	
Consulting Engineer	$100.00 per day. 50	$300.00 per mo.	
Consulting Engineer per diam	20.00 per day 15	60.00 per mo.	
Total Supervision and Engineering per month			$1,443.32
6 miners @ $2.20 per hour-8hrs per day x 25 days		2,682.00	
1 maintenance and Truck Driver @ $2.00 per hour- 8 hrs per day x 25 days		400.00	
Total Direct Labor and Costs per month			3,082.00
Analytical work per month			150.00
Insurance: Compensation $9.81 per $100 underground			
4.96 per $100 Surface		341.58	
P. L. & P. D. Comprehensive		100.00	
S. S. & State Unemployment		113.13	
			554.71
Fuel: Gasoline, Oil & Diesel Fuel .			375.00
Powder: 1 ton		430.00	
5000' fuse .01-1/4 per foot		62.50	
1500 Caps $2.65 per 100		39.75	
Total Powder Costs per Month			532.25
Steel & Bits: Costs based on 216 hole drilled per shaft X 50 shifts per month-10,800 holes per mo.			
Tungsten Carbide Bit cost per foot. . . 17¢		625.00	
Drill Steel per foot $2.17		150.00	
Total Drill Steel & Bit Costs			775.00
Ventilating Pipe: 900' @ 1.00		900.00	
Timber: For stopes, raises and occasional square sets 7M' @ $150 per M		1,050.00	
Total Ventilating Pipe and Timber			1,950.00
Track: 25 lb. Rail @ .45¢ per lb.		90.00	
Ties & Spikes .15¢ per foot		45.00	
Total Track Cost			135.00

Transportation: Carryall to transport miners	$300.00	
3/4 Ton Pick-ip Truck to transport water and supplies	75.00	
Total transportation costs		375.00
Road Maintenance:		200.00
Telephone:	200.00	
Bookkeeping and Office Help:	400.00	
		600.00
Trucking:		
Trucking of 2-2000 ton lot loads to Vanadium Corporation at Bishop to obtain adequate mill runs @ $5.00 per ton.	2,000.00	
Trucking of estimated production of 2000 tons for bulk storage at millsite @ $2.00 a ton to stock pile at millsite	4,000.00	
Total trucking on 3 months basis	6,000.00	
Monthly trucking average		2,000.00
Maintenance & Repair of Equipment:		150.00
Equipment, Machinery & Motor Vehicles:		
Machinery being purchased on sales contract:		
D-6 Cat. Bulldozer per month	264.45	
Welding Machine " "	60.19	
Joy Wagon Drill	99.25	
1951 GMC Carryall	92.03	
1951 GMC 3/4 Ton Pick-up	72.96	
#10 Cat. Motor Grader	107.49	
Joy 2-Jib Drilling Jumbo	390.00	
Joy HL-20 Mucking Machine	340.00	
Total monthly cost of purchasing equipment		1,426.37

COMPLETE LIST OF EQUIPMENT ATTACHED HERETO:

6-A	The Company proposes to let a contract to Eugene Kraft Drilling Co., Bishop, Calif. for 3000' of Diamond Drilling @ $4.25 per foot to be drilled 1000" per month.	4,250.00
	Total Monthly Expenditures:	17,998.65

Company has contract with A-I Trucking Co., Independence, California to transport ore from the mill to U. S. Vanadium Corporation, Bishop, California @ $5.00 per ton.

****

Cost per foot Diamond Drilling	$ 4.25
Cost per foot Drifting 8' x 7' Tunnel	30.22

6-B See page 4 of exhibit.

6-E There are no buildings to be rehabilitated and all equipment is in excellent condition subject, of course, to minor operating repairs.

7-B The Company's program as outlined should result in the development of a large body of shipable ore or millable ore. All costs approximately as shown somewhat over $40,000. The application, therefore, is for this sum as a net loan as the Company is applying more then its prorate share in equipment available for use without rental costs, in access road work done and development already accomplished.

It must be further pointed out that the Corporation has made arrangements for a 100 ton mill to be erected on its own milling site by independent capital and the mill operators agree to commence construction of the mill on the granting of this loan.

UNITED STATES TUNGSTEN CORPORATION
Equipment and Machinery Account
November 5, 1952

	Cost	Balance - Due	Equity
1 D-6 Cat. Bulldozer	7,576.80	2,195.86	5,380.94
1 Gardner Denver 105# Compressor	1,934.75	967.34	967.41
1 GMC #1951 Suburban	2,580.48	1,760.18	920.30
1 Hobart Welding Machine "gas"	722.28	361.14	361.14
1 10# Cat. Motor Grader "Diesel"	2,558.78	1,848.03	710.75
1 GMC 1951 3/4 ton Pick-up	2,355.90	1,751.04	604.86
1 Joy Wagon Drill	1,390.50	794.00	596.50
1 Joy Mucking Machine #H. L. 20	5,026.40	3,740.00	1,286.40
1 Joy Drilling Jumbo "2Jibs"	5,774.18	4,680.18	1,094.18
	29,920.07	18,097.77	11,922.48

All of the Equipment is owned and fully paid for with a cost of approximately $18,000.

1 10 KW Generator "gas"
1 7 1/2 KW Generator "gas"
2 Moran Mine Cars 1 cu. yd.
1 Electric Bench Grinder
1 Electric Portable Drill
1 I. R. Tugger Hoist "air"
1 5 Ton Hoist "gas"
2 I. R. #J-50 Jackhammers
1 Black Light for Sorting
1 I. R. Jack Leg
3 Water Tanks 125# Pressure
1 1/2 Ton 25# Rail
1 Keg Rail Spikes
10,000 feet Telephone Cable "Copper"
Electric Lighting Equipment
Miscellaneous Shovels, Picks & Small Tools
1 175 Ton Ore Storage Bin at Millsite
1 100 Ton Ore Bin at Mine
1200 feet 2' 1 1/2" 1" Galvanized Pipe
Main Drift fully equipped with water and Air Lines
1 315# I. R. Compressor "Diesel"
Air and Water Hose
Miscellaneous Carbide Bits

Owned by United States Tungsten Corp.

A PRELIMINARY REPORT
ON THE
JUMBO GROUP OF MINERAL CLAIMS
UNION MINING DISTRICT
INYO COUNTY, CALIFORNIA

By

Harry Nasland

For

E. M. Cregar
4221 Coldwater Canyon
North Hollywood, California

THE JUMBO GROUP OF MINERAL CLAIMS

LOCATION

The Jumbo group of mineral claims consists of 6 unpatented claims known as the Jumbo No.'s 1 - 2 - 3 - 4 - 5 - 6. The respective locations of these claims are indicated on claim map attached hereto.

The property is situated ten miles in an easterly direction from Independence, Inyo County, California and approximately 200 miles from Los Angeles. The road which reaches to within 2½ miles from the property runs through Kearsage, a depot and oreloading station on the Southern Pacific Railroad which terminates at Bishop, California. Kearsage is located at the halfway point between Independence and the property. The claims are in the Union Mining District, Inyo County, at the southern end of the White Mountain Range and just within the south border line of Inyo National Forest.

The old camp site on the property is at an elevation of approximately 7500 feet and from 2500 to 3000 feet above the floor of Owens Valley directly below. The property is located in its entirety on the western slope of the White Mountain Range, about 1500 feet below its highest points, and affords an uninterrupted view of the valley as well as the Sierra Nevadas in the West.

HISTORY

The early history of this property is by hearsay only. It is a well known fact that the entire region is highly mineralized and there are innumerable deposits of Gold, Lead, Zinc, Copper, Tungsten, etc., some of which have been worked quite extensively. In recent years the area has become well known for its activity in the mining of high-grade tungsten ore.

In the early days, however, all interest centered around gold and much of other valuable mineral deposits were completely ignored and neglected. The

present workings on this group of claims were developed about forty-five years ago by a Mr. Johnson, an old time prospector and miner. Mr. Johnson passed on recently at Independence, which had been his home since the beginning of the century. Most of this work was done on high-grade veins of gold ore, which is free-milling in nature, and was treated in an old fashioned arrastre, the remnants of which still can be seen at the base of the mountain near a small spring. Mr. Johnson is reputed to have recovered over $100,000 worth of gold from veins assaying from one to three ounces of gold to the ton. One of these veins also shows a considerable copper content. Mr. Johnson abandoned his claims about 1926 and lived in retirement until his death.

Mr. John Thompson of Van Nuys, California, and formerly residing in Lone Pine and Independence, prospected the ground for scheelite in 1940 and discovered strong showings in a 100 feet crosscut tunnel on the north end of the present Jumbo No. 1. As a result of this discovery he filed claims known as Jumbo No.'s 1, 2, 3, and 4 the same year and erected proper location monuments. In 1950 he added the claims known as Jumbo No.'s 5 and 6 on the east side of the other claims.

Mr. Thompson has not made his discovery generally known and even today people in the district believe that he proposes to eventually open up the old gold workings. Outside of a limited amount of sampling, Mr. Thompson has done very little work on the property. A short time ago Mr. Thompson entered into a lease agreement with Mr. E. M. Cregar of North Hollywood, California, which provides for the further development of this property.

WATER

It is a well known fact that a tremendous water reservoir underlies the entire Owens Valley floor directly below the property. However, adequate water is available at a distance of 2½ miles from the Coyote Springs. These are located at the foot of the mountain range and have furnished all water for the various small mining enterprises in the neighborhood since the early days. According to Mr. Thompson the present flow of these springs is adequate to supply a mill.

POWER

Independence and the other towns in Owens Valley get their power supply from the local Inyo County Power Company. The Los Angeles Water and Power Company has just completed a hightension power line through the middle of the valley, touching Kearsage, and the cable and wire installations on this line are expected to be completed in the very near future. It is presumed that whenever power is needed for mill operations, such could be obtained from one of these sources. For the first stages of development of this property, either Diesel or Gasoline driven motors should supply the power.

ROADS

From Independence to Kearsage, a distance of five miles, there is a hard ~~surfaced~~ county road. From Kearsage to the base of the mountain, a distance of three miles, there is a dirt road which could be brought into first rate condition with very little expense and which at present is used for motor vehicle traffic. From this point into the property a steep animal trail about 2½ miles long furnishes the only access to the campsite. Mr. Thompson has furveyed a truck access road which would run in a southwesterly direction towards Coyote Springs, covering a distance of approximately six miles and with a degree of decent of 7%. There are other automobile roads to properties in the immediate vicinity at the same or even higher elevation, and over the same kind of terrain, and this eventual road construction should not present any difficult problems.

CAMP

There are only some remnants of the old camp still in existance which would be of no use for future activities. The old campsite is well chosen, furnishing protection from wind and cold.

CLIMATE

Although the Sierra Nevadas to the West and across the Owens Valley are heavily covered with snow at elevations even lower than this property, the

White Mountain Range at this point very rarely receives any snowfall. This is of great importance inasmuch as other tungsten operations in the district are greatly hampered by snowfall. In fact the Tungstan Mine as well as the U. S. VANADIUM properties are severely retarded in operations for as much as five months each year due to heavy snows and extreme colds. This property can anticipate a year round operation as far as climatic conditions are concerned.

DEVELOPMENT

The principal gold working is found on the present Jumbo No. 2 and consists of an inclined shaft sunk to a depth of 160 feet and a horizontal tunnel about 60 feet in length, both on the vein, which still continues strong and well defined. Work probably was abandoned when more efficient equipment was needed for work at greater depth. In the approximate center of the present Jumbo No. 1 there is a 100 feet vertical shaft sunk on another gold vein. Two crosscut tunnels have been started from the North and the South endlines of this claim, towards this shaft and about 100 feet below the top of the shaft. It is on the western face of the North tunnel, or tunnel No. 1, where a strong vein of scheelite appears in the pegmatite. There is still another working on a gold vein on Jumbo No. 3 which also shows strong copper coloring.

There is no attempt to cover the geology of the property in this report. The mineralized orebody occurs in the granite well above the limestone formations typical of this region. This mineralized zone can be seen to a width of 100 feet in the North Tunnel and is traceable on the surface over a distance of 1000 feet in a westerly direction. Strong enrichments occur in definite stratas throughout the west wall of Tunnel No. 1. The floor of this tunnel indicates the continuation of the deposit, the depth of which must be ascertained through further prospecting work.

SAMPLING AND ASSAYS

Sampling of a prospect always presents problems and are never conclusive as to the ultimate value of a mining property. Although only surface indications can be covered in this report, the sampling of the North crosscut Tunnel on Jumbo No. 1, gives an unusual opportunity to test values at least 50 feet below the surface. The sampling of the west wall of this tunnel was taken by crisscrossing the entire surface, including part of the roof and floor. At least 250 feet were covered and approximately 300 pounds of material gathered in the master sample. Through conventional procedure of quartering, this sample was eventually reduced to 10 pounds for assay. The other samples were taken by the same methods. Other tests were made on the property by panning and under a fluorescent prospecting lamp, all showing strong indications of scheelite.

	% Scheelite	Value Per Ton
Jumbo No. 1		
No. 1 Tunnel - 100 ft. long, 7 ft. high	.76	$ 35.75
" " " - Highgrade through center 50 ft. long, 2 ft. wide	2.65	124.55
" " " - 100 ton dump, outside of entrance, mixed material	.17	7.99
" " " - Across 10 ft. of surface outcropping, 200 ft. above tunnel floor, 200 ft. west	.92	43.24
Jumbo No. 2		
No. 3 Tunnel - 40 ft. across outside of entrance to tunnel, 1000 ft. west of Tunnel No. 1	.70	32.90

Values are calculated at the latest quotation of $47.00 per unit.

SUMMARY AND RECOMMENDATIONS

There is every reason to believe that an orebody of unusual proportions exists on this property. The approximate guess of ore in sight at the North crosscut Tunnel on Jumbo No. 1, would cover an orebody 100 feet wide, 200 feet deep and 300 feet in length, or approximately 100,000 tons. This in itself, disregarding all other parts of the property would justify considerable further development. The first part of such a program would be the immediate construction

of an access road suitable for trucking. It is estimated that the cost for the projected road to Coyote Springs would cost from $8,000.00 to $10,000.00. Although Congress has appropriated funds for mine access roads to strategic mineral deposits in National Forests, the procedure by which such funds are made available are cumbersome, tedious and always consumes valuable time, which in this case may not be worth while. Such a road would enhance the value of the property, for obvious reasons, well in excess of its cost even though no other work may be done. In view of world conditions and the steadily increasing price of tungsten ores, all such deposits will receive more interest and attention and without an adequate access road would suffer undue handicaps in its further promotion.

The construction of a small temporary camp should be the next step. In this case the expenditure of less than $1,000 should suffice to provide adequate accomodations for such purpose. A complete survey of the property, covering the topography should be made. With funds available, further prospecting and development of ore should be undertaken. The extention of some of the present workings could be combined to develop ore as well as provide for efficient means of ore removal and furnish natural leading facilities. A program for limited core drilling should be considered. As the topography of the property is ideally suited for the extraction of ore by stoping methods; a main crosscut horizontal tunnel at an elevation of at lease 500 feet under the highest surface outcroppings would eliminate all hoisting expenses and tend to keep mining costs at an absolute minimum.

Even though the eventual construction of a mill would provide the most profits for the operator, recent revival of stockpiling program by the Government may very well enable the operator to produce saleable material at the very outset of operations. As previously mentioned there are several veins of apparently quite high grade gold ore which should be sampled and surveyed. It is possible

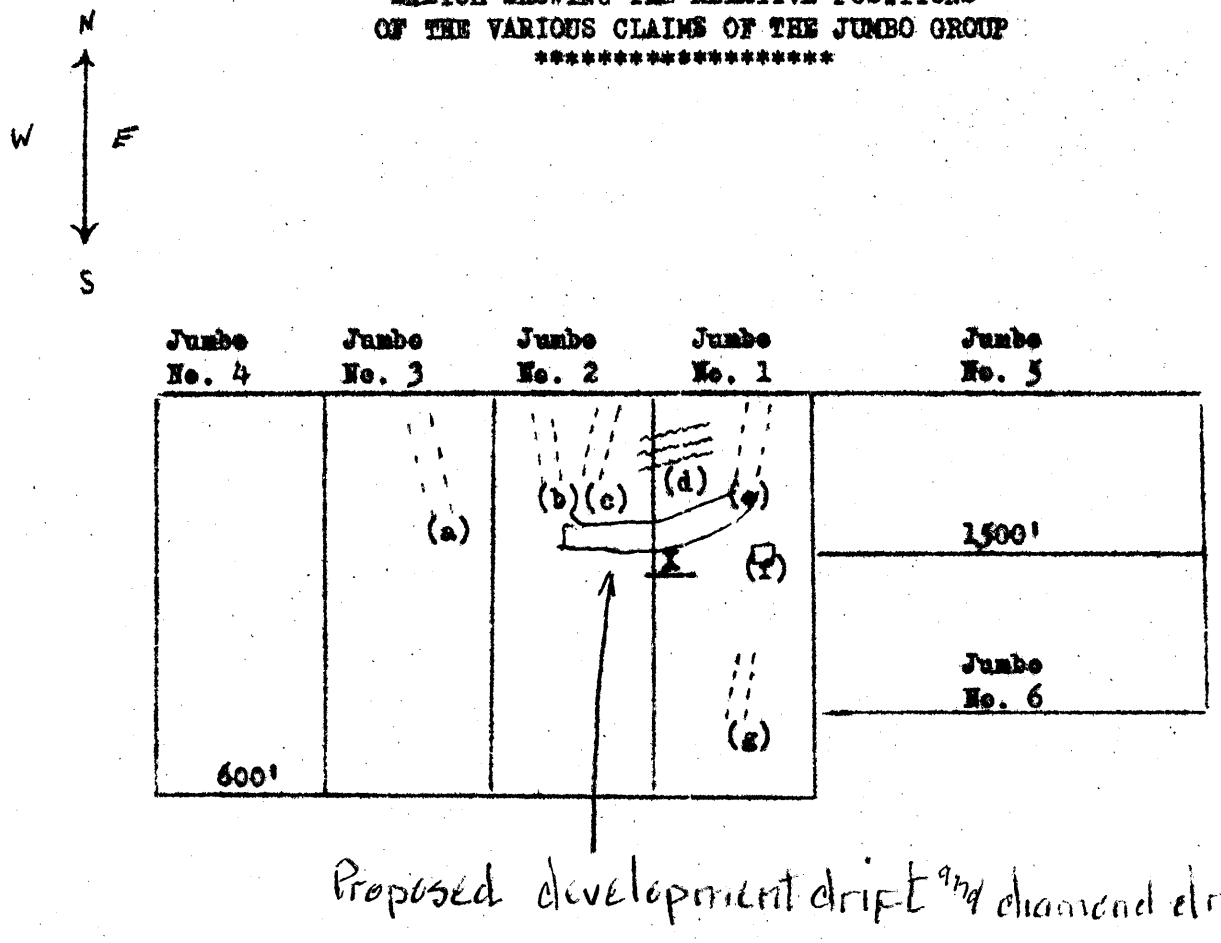
that profitable shipping ore could be developed at small expense. The highest expense in all preliminary development work will be the purchase of equipment. If this could be obtained through lease or other similar means a tremendous amount of valuable work could be done at low cost.

In conclusion and in view of the findings of this preliminary survey, I can unhesitatingly recommend further work on this property along the lines as outlined above.

Harry Nasland
Los Angeles, California

December 14, 1950

SKETCH SHOWING THE RELATIVE POSITIONS
OF THE VARIOUS CLAIMS OF THE JUMBO GROUP
****



Proposed development drift and diamond drilling

(a) Tunnel No. 4 - 100 ft long, developed on vein of Gold and Copper

(b) Inclined Shaft - 160 ft in length, working on Gold vein.

(c) Tunnel No. 3 - 60 ft long, on Gold vein. Sampling done outside of North entrance.

(d) Surface outcroppings - Various widths and lengths. Sampling across 10 ft.

(e) Tunnel No. 1 - 100 ft long, crosscut working. Extensive sampling of the west wall of this tunnel, strong showings of Scheelite.

(f) Vertical Shaft - Over 100 ft in depth, sunk on a Gold vein.

(g) Tunnel No. 2 - 100 ft crosscut working not examined.

(X) Campsite -

UNITED STATES TUNGSTEN CORPORATION
10248 South Paramount Boulevard
Downey, California

EXHIBIT 3-B

Recorded March 13, 1951 in Vol. 90, Page 91 of Official Records of Inyo Co., Calif.

LEASE AGREEMENT

THIS AGREEMENT, made and entered into this 15th day of December, 1950, by and between W. J. THOMPSON, BETTY THOMPSON and G. F. LUND, hereinafter referred to as Lessors, and EDWARD M. CREGAR, hereinafter referred to as Lessee -

W I T N E S S E T H:

WHEREAS, the Lessors are the owners of certain mining claims located in the Union mining district, County of Inyo, State of California, and are desirous of leasing the same and all mineral rights thereto to the Lessee: and

WHEREAS, the Lessee is desirous of conducting mining operations and extracting ore from the Lessors' mining claims and is desirous of entering into a lease to provide for mining operations and the extraction of ore from the said described mining claims;

NOW, THEREFORE, in consideration of the mutual covenants and agreements, the parties agree as follows:

(1) The Lessors are the owners of mining claims known as Betty Jumbo Claims, No. 1, No. 2, No. 3, and No. 4, situated in the Union mining district in the County of Inyo, State of California, described in Volume 4 on Page 274 of the Records of Inyo County at Independence, California, and hereby lease the same and all mineral rights contained therein and all rights which Lessors have in the said properties to the Lessee, to have the same mined and/or extracted for a period of twenty-five years from the date of this agreement.

(2) The Lessee agrees to pay the Lessors ten percent (10%) of gross mill returns on all ores or by-products of ores derived from the said properties described in this lease during the period in which this lease is in existence.

The Lessee further agrees to pay a minimum guarantee of not less than $500.00 per month. A six-month period of grace is agreed upon for the payment of the said minimum guarantee and the minimum guarantee provision provided for

herein will not be affected until after a period of six months from the date of the execution of this lease. Such a waiver of a minimum guarantee, however, will not affect the ten percent (10%) royalty provided for in this agreement.

(3) The Lessee agrees to build a road to the mine, which road is for the purpose of egress and ingress. Construction of the road is to commence within a period of thirty days after the completion of a survey for the road construction, which survey is to be made by the Lessors.

(4) It is further agreed between the parties that any new claim or new mining property which may be developed by any party to this agreement, which is adjoining or pertaining to the Betty Jumbo mining claims, shall be included in and made subject of the part of the terms of this lease agreement and subject to the conditions provided for herein.

Any violation of the provisions of this lease agreement shall constitute a forefeiture of the entire agreement. In the event a violation occurs the violating party shall have a period of sixty days from the date of receipt of written notice of the occurence of such violation to correct the same and if the correction is made within the said sixty day period no forfeiture of the entire lease agreement shall occur.

(5) The Lessee shall have an option to renew this lease agreement for a period of twenty-five years at the expiration of the present lease agreement, by giving notice in writing of such intention, three months before the expiration date of this agreement.

(6) The Lessors shall have the right to enter upon the said property and shall have access to the said mine and the premises at any time within the reasonable hours of the working day for the purpose of inspection and shall have the right to use the roadway to be constructed to the said mine at all times for any purpose.

(7) The Lessee agrees to continuously operate the said mining prop-

erties in accordance with good mining practices and in a sound and economical manner, so as to take out the greatest amount of ore, with due regard to the development and preservation of the said premises as a workable mine.

(8) It is agreed that all labor to be performed and all mining work to be conducted in the mine shall be the cost, expense, liability and responsibility of the Lessee and shall not be chargeable in any manner to the Lessors, and the Lessee agrees to comply with all State and Federal regulations pertaining to the working and operation of mining operations, and the Lessee agrees to hold the Lessor harmless from any liability arising because of accident, illness or other type of liability incurred in the operation of the mine, on or off of the mining premises.

(9) The royalty payments and payments provided for herein as rentals for the leased properties shall be due and payable on the 15th day of each month, for the preceding month. The royalty payments are to be based on the confirmed market price. Copies of assay reports and core drilling reports shall be delivered to each party to this agreement.

(10) The Lessee shall have the right to assign this lease, with the written consent of the Lessors. It is further agreed that in the event the Lessee applies to the government for mining assistance, either financially or otherwise, that the Lessors will execute any agreements required to secure such government assistance.

(11) The terms of this lease shall be binding upon all of the parties, their heirs, representatives or assignees.

IN WITNESS WHEREOF, the said parties have hereunto set their hands and seals the day and year first above written.

(Signed) W. J. Thompson
W. J. Thompson

(Signed) Betty Thompson
Betty Thompson

(Signed) G. F. Lund
G. F. Lund

LESSORS

(Signed) Edward M. Cregar
Edward J. Cregar LESSEE

United States Tungsten Corporation
10248 South Paramount Boulevard
Downey, California

Exhibit 3-B

C O N S E N T O F A S S I G N M E N T

Notice is hereby given to the Lessors, W. J. Thompson, Betty Thompson and G. F. Lund by the Lessee, Edward M. Cregar, that the Lessee intends to immediately assign said Mining Lease enteres into between the parties hereto, dated December 15th, 1950, to a Corporation that is to be organized to operate the Mining Properties under the terms and conditions of said lease.

This Corporation shall be known as the Sun Mining Company, Inc., if this name cannot be used in the State of California, then and in that event, Cregar will use some other suitable name for said Corporation.

Consent of the assignment is acknowledged by your respective signatures.

(Signed) W. J. Thompson
W. J. Thompson

(Signed) Betty Thompson
Betty Thompson

(Signed) G. F. Lund
G. F. Lund

C
O
P
Y

UNITED STATES TUNGSTEN CORPORATION
10248 South Paramount Boulevard
Downey, California

Exhibit 3-B

Recorded March 13, 1951 in
Vol 90, Page 96 of Official
Records of Inyo Co. Calif.

ASSIGNMENT OF LEASEHOLD ESTATE

FOR VALUE RECEIVED, the undersigned, EDWARD M. CREGAR, hereby grants, assigns and transfers to KATIE A. STEINEN an undivided forty-five percent (45%) interest, and to O. E. GOODWIN an undivided ten percent (10%) interest in and to that certain lease agreement dated December 15, 1950, by and between W. J. Thompson, Betty Thompson, and G. F. Lund, lessors, and Edward M. Cregar, lessee, covering a leasehold interest in and to real property described as:

> Mining Claims known as Betty Jumbo Claims, No. 1, No. 2, No. 3 and No. 4, situated in the Union mining district in the County of Inyo, State of California, described in Volume 4 on Page 274 of the Records of Inyo County at Independence, California, and all mineral rights which lessors have in such properties.

DATED: December 18, 1950.

(Signed) Edward M. Cregar

STATE OF CALIFORNIA)
) ss.
COUNTY OF LOS ANGELES)

On this 18th day of December, 1950, before me, the undersigned, a Notary Public in and for said County and State, personally appeared EDWARD M. CREGAR, known to me to be the person whose name is subscribed to the within Assignment of Leasehold Estate, and acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal the day and year in this certificate first above written.

SEAL

(Signed) Dyke Lansdale
Notary Public in and for said State and County.

My commission expires July 12, 1954

C
O
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Y

UNITED STATES TUNGSTEN CORPORATION
10248 Paramount Boulevard
Downey, California

CONSENT TO ASSIGNMENT

W. J. THOMPSON, BETTY THOMPSON and G. F. LUND, the lessors of that lease dated December 15, 1950, by and between said lessors and Edward M. Cregar, by these premises hereby give their written consent to the lessee to assign said lease, or any portion thereof.

DATED: December 15, 1950.

(Signed) W. J. Thompson

(Signed) Betty Thompson

(Signed) G. F. Lund

(SEAL)

Pearl M. Lava
My Commission expires Sept. 7, 1951.

March 13, 1951
Recorded in Vol. 90, Page 96
of Official Records of Inyo,
County, California

United States Tungsten Corporation
10248 South Paramount Boulevard
Downey, California

Exhibit 3-B

LEASES ALL ASSIGNED TO UNITED STATES TUNGSTEN CORP.

On May 11, 1951 there were recorded Quitclaim Deeds by the undersigned to the American Tungsten Corporation covering all the properties contained in the foregoing leases.

These documents were recorded as follows:

Quitclaimed by Edward M. Cregar and his wife, recorded in Inyo County in Volume 91, Page 249.

Quitclaimed by O. E. Goodwin and his wife, recorded in Inyo County in Volume 91, Page 251.

Quitclaimed by Katie A. Steinen as her separate and distinct property recorded in Inyo County in Volume 91, Page 247 of Official Records.

Shortly thereafter at the request of the Secretary of State the Corporation changed its name from American Tungsten Corporation to United States Tungsten Corporation, as somewhat belatedly the Secretary of State"s office discovered there was another American Tungsten Corporation.

C
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United States Tungsten Corporation
10248 South Paramount Boulevard
Downey, California

Gentlemen:

Reference is made to a certain lease agreement executed by W. J. Thompson, Betty Thompson and G. F. Lund to Edward M. Cregar and recorded in records of Inyo County, State of California, Volume 90, Page 91 of official records.

With the consent of the undersigned, a 45% undivided interest in this lease was subsequently assigned to Katie A. Steinen and a 10% undivided interest to O. E. Goodwin and was subsequently assigned by them to the United States Tungsten Corporation, all with the consent and approval of the undersigned.

It is a matter of record that the United States Tungsten Corporation has expended the sum of $150,000.00 on developing the property, in building an access road and in purchasing equipment to carry on development work and at the present is engaged in preparing an application for a development loan to the United States Department of Interior, Defense Minerals Exploration Administration.

No part of this loan, if granted, can be used to defray outstanding obligations and if granted a 25% contribution must be made by the United States Tungsten Corporation to perfect the initial procedure for the loan.

Paragraph 2 of said lease calls for a minimum guarantee of not less than $500.00 per month after a period of six months. It is conceded that this was predicated on the assumption that the property would be in full production within that period. The lessors, therefore, agree to amend the clause setforth in Paragraph 2 to the following terms and conditions:

Said Lessors waive any minimum royalties that may be due them for a period of one year from the date of this letter. This waiver of royalties for a period of one year shall by no means to be construed as a waiver of the royalties presently due and oweing the said Lessors. The said Lessors do hereby grant an extention of one year from the date of this letter, to the Lessees, to pay in full, any and all minimum royalties due them to date, as setforth in Paragraph 2 of that certain Lease Agreement hereinabove mentioned.

It is distinctly to be understood that any royalties due or that may be due under the 10% provision of the agreement are not waived or varied by reason of the amendment to the agreement.

Said Lessees agree to the following amendments to a certain lease agreement herein mentioned:

That upon the violation of any of the terms and conditions or the provisions hereof of said lessee, and the failure to commence to remedy the same within "90 days" after the written notice from the lessors,

specifying such default, this lease and all the rights of lessee hereunder shall terminate, at the option of lessors, and lessors may, either with or without process of law, enter into and upon such premises and remove all persons therefrom and have and repossess the same as in their former state, all damages for such entry and repossession being hereby waived.

That in the event that such lessee shall fail to promptly provide for the payment of royalties due lessors as herein provided, and should such default continue for a period of 15 days, then in that event lessors may, at their option, terminate this lease and agreement by giving 5 days notice to lessee of their intention so to do, and may there upon and at the exppiration of said 5 day period enter into and upon said premises, and remove all persons therefrom and repossess the same as in their former state, provided, however, that such entry and repossession shall not releave lessee from the obligation to pay such royalties and/or rentals as they may be due and payable.

The lessees agree to furnish lessors a monthly statement showing all ore shipped and sold for each calendar month, together with the value and weights of each individual shipment during said calendar month. This statement shall be rendered the lessors on the 15th day of the month after each calendar months shipments. Also, the lessee agrees to furnish the lessors a copy of all shipping documents and invoices received by the lessee from the buyers of said ores.

The lessee also agrees to furnish the lessors a copy of all and any of the engineering. Assay reports or other technological information they have or will obtain, from time to time pertaining to the development and exploration project of the Jumbo Mine.

Yours very truly,

(Signed) W. J. Thompson
W. J. Thompson

(Signed) Betty Thompson
Betty Thompson

(Signed) G. F. Lund
G. F. Lund

(Signed) Hazel Lund
Hazel Lund

The foregoing is accepted to
and agreed by the United States Tungsten
Corporation.

(Signed) Edward M. Cregar
Edward M. Cregar, Pres.

(Signed) O. E. Goodwin
O. E. Goodwin, Secty. & Treas.

ALL SIGNATURES NOTARIZED.

MF-203

OWNER'S CONSENT TO LIEN

WHEREAS, the undersigned, as owner, co-owner, lessor, or seller has an interest in certain property in the State of California, County of Inyo, described as follows:1/ Betty Jumbo Mining Claims #1, #2, #3, #4, #5 and #6 and which were recorded in the office of the County Recorder of Inyo County as follows:

(1) (2)

which is the subject of a proposed exploration project contract, hereinafter called the "contract", between the United States of America, hereinafter called the "Government", and

2/ The United States Tungsten Corporation, a Corporation of Downey, California.

hereinafter called the "Operator"; and

WHEREAS, under certain provisions of said contract which are set forth on the reverse side hereof, the Government is entitled to a percentage royalty on production and to certain other rights and equities which do or may conflict with or be adverse to the interest of the undersigned in said property;

NOW THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government to enter into same, undertakes and agrees as follows:

1. The Government's equity in and right to dismantle, sever, take possession of, and remove and dispose of facilities, buildings, fixtures, equipment, or other items as provided in the contract, or any amendment thereof, shall prevail over and be prior and superior to any conflicting or adverse rights of the undersigned, and the Government is authorized to enter upon the land for such purposes.

2. To secure the payment to the Government of the percentage royalty on production3/ provided for under the terms of said exploration project contract, or any amendment thereof which does not increase the maximum amount of the Government's claim here stated or alter the provisions for repayment, there is hereby granted to the Government a lien upon the land herein described and upon any production of minerals therefrom, until the royalty claim is fully paid in the amount of the Government's contribution, not in excess of 4/$ 75,000.00, or ten years have elapsed from the date of the contract.

3. The undersigned shall commit no act nor assert any claim that may contravene or conflict with the lien, claim, or rights of the Government under the provisions of said contract. This agreement shall be binding upon the heirs, executors, administrators, successors, and assigns of the undersigned.

Dated this NOV 13 1952 day of _____, 195 ___.

W. J. Thompson [Seal]
W. J. Thompson

Betty Thompson [Seal]
Betty Thompson

G. F. Lund [Seal]
G. F. Lund

Hazel Lund
Hazel Lund

1/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease or contract, deed, or other document] dated _____, and recorded in book _____ page _____ official records of said county." If (b) is used, the book and page of recordation cannot be dispensed with. If the space provided is insufficient, use an Annex, and refer to the Annex in the space.

2/ Insert the name of the Operator as it will appear in the exploration project contract.

3/ Mining or production from the land is not required, and in the absence of production there is no obligation to repay the Government.

4/ Insert the maximum amount of the Government's contribution.

RELEVANT CONTRACT PROVISIONS

Repayment by Operator. (a) If, at any time, the Government considers that a discovery or a development from which production may be made has resulted from the exploration work, the Government, at any time not later than six months after the Operator has rendered the required final report and final account, may so certify in writing to the Operator. The certification shall describe broadly or indicate the nature of the discovery or development. In the event of such certification, any minerals mined or produced from the land described in Article 2 within 10 years from the date of this contract, including any mined or produced before the certification, shall be subject to a percentage royalty which the Operator or his successor in interest shall pay to the Government, upon the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production, in whatever form disposed of, including ore, concentrates, or metal, until the total amount contributed by the Government, without interest, is fully repaid, or said 10 years have elapsed, whichever occurs first, as follows:

(1) One and one-half (1½) per cent of any such net amounts not in excess of eight dollars ($8.00) per ton.

(2) One and one-half (1½) per cent of any such net amounts, plus one-half (½) per cent such net amounts for each additional full fifty cents ($0.50) by which such net amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) per cent of such net amounts.

(For instance: the percentage royalty on a net amount of five dollars ($5.00) per ton, would be one and one-half (1½) per cent; on a net amount of ten dollars ($10.00) per ton, three and one-half (3½) per cent.)

(b) As here used, "net smelter returns", "net concentrator returns", and "other net amounts realized from the sale or other disposition", mean gross revenue from sales; or if not sold, the market value, the market value of the material after it is mined in the form in which and the place where it is held. In the case of integrated operations in which the material is not disposed of as such, these terms mean what is or would be gross income from mining operations for percentage depletion purposes in income tax determination.

(c) To secure the payment of its percentage royalty, the Government shall have and is hereby granted a lien upon the land described in Article 2 and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

(d) This article is not to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any mining or production operations.

Title to and disposition of property. All facilities, buildings, fixtures, equipment, or other items costing more than $50.00 each, paid for or purchased with funds contributed jointly by the Operator and the Government, although title may be taken in the name of the Operator, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the completion of the work or the termination of the contract shall be disposed of promptly by the Operator for the joint account of the Government and the Operator, either by return to the vendor, by sale to others, or purchase by the Operator at a price at least as high as could otherwise be obtained, as may appear to be for the best interest of the Government, unless the Government, in writing, waives its interest in any such item. If necessary to accomplish such disposition, the Operator shall dismantle, sever from the land, and remove any such item, the cost thereof to be for the joint account of the parties in proportion to their respective interests. If the Operator, within 90 days after the receipt of written notice from the Government, fails, neglects, or refuses to dispose of such property, the Government may itself enter upon the land, take possession of, and remove and dispose of any such property as above provided.

MF-203

OWNER'S CONSENT TO LIEN

WHEREAS, the undersigned, as owner, co-owner, lessor, or seller has an interest in certain property in the State of California, County of Inyo, described as follows:1/ Betty Jumbo Mining Claims #1, #2, #3, #4, #5 and #6 and which were recorded in the office of the County Recorder of Inyo County as follows:

(1) (2)

which is the subject of a proposed exploration project contract, hereinafter called the "contract", between the United States of America, hereinafter called the "Government", and

2/ The United States Tungsten Corporation, a Corporation of Downey, California.

hereinafter called the "Operator"; and

WHEREAS, under certain provisions of said contract which are set forth on the reverse side hereof, the Government is entitled to a percentage royalty on production and to certain other rights and equities which do or may conflict with or be adverse to the interest of the undersigned in said property;

NOW THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government to enter into same, undertakes and agrees as follows:

1. The Government's equity in and right to dismantle, sever, take possession of, and remove and dispose of facilities, buildings, fixtures, equipment, or other items as provided in the contract, or any amendment thereof, shall prevail over and be prior and superior to any conflicting or adverse rights of the undersigned, and the Government is authorized to enter upon the land for such purposes.

2. To secure the payment to the Government of the percentage royalty on production3/ provided for under the terms of said exploration project contract, or any amendment thereof which does not increase the maximum amount of the Government's claim here stated or alter the provisions for repayment, there is hereby granted to the Government a lien upon the land herein described and upon any production of minerals therefrom, until the royalty claim is fully paid in the amount of the Government's contribution, not in excess of 4/$ 75,000.00, or ten years have elapsed from the date of the contract.

3. The undersigned shall commit no act nor assert any claim that may contravene or conflict with the lien, claim, or rights of the Government under the provisions of said contract. This agreement shall be binding upon the heirs, executors, administrators, successors, and assigns of the undersigned.

Dated this NOV 13 1952 day of _____, 195 ___.

W. J. Thompson [Seal]
W. J. Thompson

Betty Thompson [Seal]
Betty Thompson

G. F. Lund [Seal]
G. F. Lund

1/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease [or contract, deed, or other document] dated _____, and recorded in book _____ page _____ official records of said county." If (b) is used, the book and page of recordation cannot be dispensed with. If the space provided is insufficient, use an Annex, and refer to the Annex in the space.

2/ Insert the name of the Operator as it will appear in the exploration project contract.

3/ Mining or production from the land is not required, and in the absence of production there is no obligation to repay the Government.

4/ Insert the maximum amount of the Government's contribution.

RELEVANT CONTRACT PROVISIONS

Repayment by Operator. (a) If, at any time, the Government considers that a discovery or a development from which production may be made has resulted from the exploration work, the Government, at any time not later than six months after the Operator has rendered the required final report and final account, may so certify in writing to the Operator. The certification shall describe broadly or indicate the nature of the discovery or development. In the event of such certification, any minerals mined or produced from the land described in Article 2 within 10 years from the date of this contract, including any mined or produced before the certification, shall be subject to a percentage royalty which the Operator or his successor in interest shall pay to the Government, upon the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production, in whatever form disposed of, including ore, concentrates, or metal, until the total amount contributed by the Government, without interest, is fully repaid, or said 10 years have elapsed, whichever occurs first, as follows:

(1) One and one-half (1½) per cent of any such net amounts not in excess of eight dollars ($8.00) per ton.

(2) One and one-half (1½) per cent of any such net amounts, plus one-half (½) per cent such net amounts for each additional full fifty cents ($0.50) by which such net amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) per cent of such net amounts.

(For instance: the percentage royalty on a net amount of five dollars ($5.00) per ton, would be one and one-half (1½) per cent; on a net amount of ten dollars ($10.00) per ton, three and one-half (3½) per cent.)

(b) As here used, "net smelter returns", "net concentrator returns", and "other net amounts realized from the sale or other disposition", mean gross revenue from sales; or if not sold, the market value, the market value of the material after it is mined in the form in which and the place where it is held. In the case of integrated operations in which the material is not disposed of as such, these terms mean what is or would be gross income from mining operations for percentage depletion purposes in income tax determination.

(c) To secure the payment of its percentage royalty, the Government shall have and is hereby granted a lien upon the land described in Article 2 and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

(d) This article is not to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any mining or production operations.

Title to and disposition of property. All facilities, buildings, fixtures, equipment, or other items costing more than $50.00 each, paid for or purchased with funds contributed jointly by the Operator and the Government, although title may be taken in the name of the Operator, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the completion of the work or the termination of the contract shall be disposed of promptly by the Operator for the joint account of the Government and the Operator, either by return to the vendor, by sale to others, or purchase by the Operator at a price at least as high as could otherwise be obtained, as may appear to be for the best interest of the Government, unless the Government, in writing, waives its interest in any such item. If necessary to accomplish such disposition, the Operator shall dismantle, sever from the land, and remove any such item, the cost thereof to be for the joint account of the parties in proportion to their respective interests. If the Operator, within 90 days after the receipt of written notice from the Government, fails, neglects, or refuses to dispose of such property, the Government may itself enter upon the land, take possession of, and remove and dispose of any such property as above provided.

MF-203

OWNER'S CONSENT TO LIEN

WHEREAS, the undersigned, as owner, co-owner, lessor, or seller has an interest in certain property in the State of California, County of Inyo, described as follows:1/ Betty Jumbo Mining Claims #1, #2, #3, #4, #5 and #6 and which were recorded in the office of the County Recorder of Inyo County as follows:

(1) (2)

which is the subject of a proposed exploration project contract, hereinafter called the "contract", between the United States of America, hereinafter called the "Government", and

2/ The United States Tungsten Corporation, a Corporation of Downey, California.

hereinafter called the "Operator"; and

WHEREAS, under certain provisions of said contract which are set forth on the reverse side hereof, the Government is entitled to a percentage royalty on production and to certain other rights and equities which do or may conflict with or be adverse to the interest of the undersigned in said property;

NOW THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government to enter into same, undertakes and agrees as follows:

1. The Government's equity in and right to dismantle, sever, take possession of, and remove and dispose of facilities, buildings, fixtures, equipment, or other items as provided in the contract, or any amendment thereof, shall prevail over and be prior and superior to any conflicting or adverse rights of the undersigned, and the Government is authorized to enter upon the land for such purposes.

2. To secure the payment to the Government of the percentage royalty on production3/ provided for under the terms of said exploration project contract, or any amendment thereof which does not increase the maximum amount of the Government's claim here stated or alter the provisions for repayment, there is hereby granted to the Government a lien upon the land herein described and upon any production of minerals therefrom, until the royalty claim is fully paid in the amount of the Government's contribution, not in excess of 4/$ 25,000.00, or ten years have elapsed from the date of the contract.

3. The undersigned shall commit no act nor assert any claim that may contravene or conflict with the lien, claim, or rights of the Government under the provisions of said contract. This agreement shall be binding upon the heirs, executors, administrators, successors, and assigns of the undersigned.

Dated this NOV 13 1952 day of _____, 195 ___.

W. J. Thompson [Seal]
W. J. Thompson

Betty Thompson [Seal]
Betty Thompson

C. F. Lund [Seal]
C. F. Lund

1/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease, contract, deed, or other document] dated _____, and recorded in book _____ page _____ official records of said county." If (b) is used, the book and page of recordation cannot be dispensed with. If the space provided is insufficient, use an Annex, and refer to the Annex in the space.

2/ Insert the name of the Operator as it will appear in the exploration project contract.

3/ Mining or production from the land is not required, and in the absence of production there is no obligation to repay the Government.

4/ Insert the maximum amount of the Government's contribution.

RELEVANT CONTRACT PROVISIONS

Repayment by Operator. (a) If, at any time, the Government considers that a discovery or a development from which production may be made has resulted from the exploration work, the Government, at any time not later than six months after the Operator has rendered the required final report and final account, may so certify in writing to the Operator. The certification shall describe broadly or indicate the nature of the discovery or development. In the event of such certification, any minerals mined or produced from the land described in Article 2 within 10 years from the date of this contract, including any mined or produced before the certification, shall be subject to a percentage royalty which the Operator or his successor in interest shall pay to the Government, upon the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production, in whatever form disposed of, including ore, concentrates, or metal, until the total amount contributed by the Government, without interest, is fully repaid, or said 10 years have elapsed, whichever occurs first, as follows:

(1) One and one-half (1½) per cent of any such net amounts not in excess of eight dollars ($8.00) per ton.

(2) One and one-half (1½) per cent of any such net amounts, plus one-half (½) per cent such net amounts for each additional full fifty cents ($0.50) by which such net amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) per cent of such net amounts.

(For instance: the percentage royalty on a net amount of five dollars ($5.00) per ton, would be one and one-half (1½) per cent; on a net amount of ten dollars ($10.00) per ton, three and one-half (3½) per cent.)

(b) As here used, "net smelter returns", "net concentrator returns", and "other net amounts realized from the sale or other disposition", mean gross revenue from sales; or if not sold, the market value, the market value of the material after it is mined in the form in which and the place where it is held. In the case of integrated operations in which the material is not disposed of as such, these terms mean what is or would be gross income from mining operations for percentage depletion purposes in income tax determination.

(c) To secure the payment of its percentage royalty, the Government shall have and is hereby granted a lien upon the land described in Article 2 and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

(d) This article is not to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any mining or production operations.

Title to and disposition of property. All facilities, buildings, fixtures, equipment, or other items costing more than $50.00 each, paid for or purchased with funds contributed jointly by the Operator and the Government, although title may be taken in the name of the Operator, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the completion of the work or the termination of the contract shall be disposed of promptly by the Operator for the joint account of the Government and the Operator, either by return to the vendor, by sale to others, or purchase by the Operator at a price at least as high as could otherwise be obtained, as may appear to be for the best interest of the Government, unless the Government, in writing, waives its interest in any such item. If necessary to accomplish such disposition, the Operator shall dismantle, sever from the land, and remove any such item, the cost thereof to be for the joint account of the parties in proportion to their respective interests. If the Operator, within 90 days after the receipt of written notice from the Government, fails, neglects, or refuses to dispose of such property, the Government may itself enter upon the land, take possession of, and remove and dispose of any such property as above provided.

MF-203

OWNER'S CONSENT TO LIEN

WHEREAS, the undersigned, as owner, co-owner, lessor, or seller has an interest in certain property in the State of [illegible], County of [illegible], described as follows:1/ [illegible]

which is the subject of a proposed exploration project contract, hereinafter called the "contract", between the United States of America, hereinafter called the "Government", and

2/ [illegible]

hereinafter called the "Operator"; and

WHEREAS, under certain provisions of said contract which are set forth on the reverse side hereof, the Government is entitled to a percentage royalty on production and to certain other rights and equities which do or may conflict with or be adverse to the interest of the undersigned in said property;

NOW THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government to enter into same, undertakes and agrees as follows:

1. The Government's equity in and right to dismantle, sever, take possession of, and remove and dispose of facilities, buildings, fixtures, equipment, or other items as provided in the contract, or any amendment thereof, shall prevail over and be prior and superior to any conflicting or adverse rights of the undersigned, and the Government is authorized to enter upon the land for such purposes.

2. To secure the payment to the Government of the percentage royalty on production3/ provided for under the terms of said exploration project contract, or any amendment thereof which does not increase the maximum amount of the Government's claim here stated or alter the provisions for repayment, there is hereby granted to the Government a lien upon the land herein described and upon any production of minerals therefrom, until the royalty claim is fully paid in the amount of the Government's contribution, not in excess of 4/$ _____, or ten years have elapsed from the date of the contract.

3. The undersigned shall commit no act nor assert any claim that may contravene or conflict with the lien, claim, or rights of the Government under the provisions of said contract. This agreement shall be binding upon the heirs, executors, administrators, successors, and assigns of the undersigned.

NOV 13 1952

Dated this _____ day of _____, 195 ___.

W J Thompson [Seal]

Betty Thompson [Seal]

G F Lund [Seal]

Hazel Lund

1/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease [or contract, deed, or other document] dated _____, and recorded in book _____ page _____ official records of said county." If (b) is used, the book and page of recordation cannot be dispensed with. If the space provided is insufficient, use an Annex, and refer to the Annex in the space.

2/ Insert the name of the Operator as it will appear in the exploration project contract.

3/ Mining or production from the land is not required, and in the absence of production there is no obligation to repay the Government.

4/ Insert the maximum amount of the Government's contribution.

RELEVANT CONTRACT PROVISIONS

Repayment by Operator. (a) If, at any time, the Government considers that a discovery or a development from which production may be made has resulted from the exploration work, the Government, at any time not later than six months after the Operator has rendered the required final report and final account, may so certify in writing to the Operator. The certification shall describe broadly or indicate the nature of the discovery or development. In the event of such certification, any minerals mined or produced from the land described in Article 2 within 10 years from the date of this contract, including any mined or produced before the certification, shall be subject to a percentage royalty which the Operator or his successor in interest shall pay to the Government, upon the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production, in whatever form disposed of, including ore, concentrates, or metal, until the total amount contributed by the Government, without interest, is fully repaid, or said 10 years have elapsed, whichever occurs first, as follows:

(1) One and one-half (1½) per cent of any such net amounts not in excess of eight dollars ($8.00) per ton.

(2) One and one-half (1½) per cent of any such net amounts, plus one-half (½) per cent such net amounts for each additional full fifty cents ($0.50) by which such net amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) per cent of such net amounts.

(For instance: the percentage royalty on a net amount of five dollars ($5.00) per ton, would be one and one-half (1½) per cent; on a net amount of ten dollars ($10.00) per ton, three and one-half (3½) per cent.)

(b) As here used, "net smelter returns", "net concentrator returns", and "other net amounts realized from the sale or other disposition", mean gross revenue from sales; or if not sold, the market value, the market value of the material after it is mined in the form in which and the place where it is held. In the case of integrated operations in which the material is not disposed of as such, these terms mean what is or would be gross income from mining operations for percentage depletion purposes in income tax determination.

(c) To secure the payment of its percentage royalty, the Government shall have and is hereby granted a lien upon the land described in Article 2 and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

(d) This article is not to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any mining or production operations.

Title to and disposition of property. All facilities, buildings, fixtures, equipment, or other items costing more than $50.00 each, paid for or purchased with funds contributed jointly by the Operator and the Government, although title may be taken in the name of the Operator, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the completion of the work or the termination of the contract shall be disposed of promptly by the Operator for the joint account of the Government and the Operator, either by return to the vendor, by sale to others, or purchase by the Operator at a price at least as high as could otherwise be obtained, as may appear to be for the best interest of the Government, unless the Government, in writing, waives its interest in any such item. If necessary to accomplish such disposition, the Operator shall dismantle, sever from the land, and remove any such item, the cost thereof to be for the joint account of the parties in proportion to their respective interests. If the Operator, within 90 days after the receipt of written notice from the Government, fails, neglects, or refuses to dispose of such property, the Government may itself enter upon the land, take possession of, and remove and dispose of any such property as above provided.