DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

CONTROLLED DOCUMENT

DMEA ~~DMA~~ Docket No. 2504

DO NOT DETACH THIS SLIP

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

This document has been recorded as

EXPLORATION PROJECT

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

Routing Slip Copies to USBM & USGS. One c copy was retained by Region II.

To: Code 400, Rm. 3538 Date 5-2-52

To: Operating Com Date 5-14-52

To: _____ Date _____

To: _____ Date _____

To: _____ Date _____

To: _____ Date _____

To: _____ Date _____

To: _____ Date _____

To: _____ Date _____

To: _____ Date _____

To: _____ Date _____

To: _____ Date _____

To: _____ Date _____

To: _____ Date _____

To: _____ Date _____

DO NOT DETACH

CONTROLLED DOCUMENT

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

400

FEB 1 0 1956

Mr. Harold Hightower
Inchelium, Washington

Re: Docket No. DMEA 2504 - Tungsten
Vernon A. Hoar & Lester E. Olson
Silver Lief Mine
Ferry County, Washington

Dear Mr. Hightower:

Your letter of January 30, 1956, addressed to Hon. Glenn L. Emmons, Commissioner of Indian Affairs, has been referred to Defense Minerals Exploration Administration for reply, as your request for a copy of a mining engineer's report on your mining property, the Silver Leaf mine, Enterprise Mining District, Ferry County, Washington, apparently applies to the subject docket.

After noting your statement that Mr. Ray Horseman, Wallace, Idaho, examined your same property on April 1, 1952, we determine from our file that no report accompanied the application for exploration aid submitted to us by Messrs. Hoar and Olson. With their application we received, however, copies of a claim map, and a mine plan and section, for the Silver Leaf Mine, both signed by R. J. Horsman, Eng., and dated "April 18, 1952," and "Jan. 1952", respectively.

Such maps could not be released by us to you unless we received written permission from the individuals who originally submitted the material. It is suggested, therefore, that you make your request directly to Mr. Vernon A. Hoar, P. O. Box 723, Wallace, Idaho, and Mr. Lester E. Olson, Box 1023, Wallace, Idaho.

Sincerely yours,

C O Mutteudorf

Administrator

Copy to:
Mr. Vernon A. Hoar
Mr. Lester E. Olson

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

OFFICIAL BUSINESS

Returned TO Writer

REASON CHECKED
Unclaimed.... Refused.....
Unknown.....
For better address.....
Moved, Left no address.....
No such office in state.....

Declined

Mr. Vernon A. Hoar
P. O. Box 723
Wallace, Idaho

WASHINGTON 18 D.C.
FEB 10
8-PM
1956

BUILD YO
WISELY
U.S.SAVI

400

RECEIVED
FEB 17 1956

WALLACE
FEB 14
1956
11 AM
IDAHO

Save this letter & envelope
oh so carefully

400

FEB 1 0 1956

Mr. Harold Hightower
Inchelium, Washington

Re: Docket No. DMEA 2504 - Tungsten
Vernon A. Hoar & Lester E. Olson
Silver Leaf Mine
Ferry County, Washington

Dear Mr. Hightower:

Your letter of January 30, 1956, addressed to Hon. Glenn L. Emmons, Commissioner of Indian Affairs, has been referred to Defense Minerals Exploration Administration for reply, as your request for a copy of a mining engineer's report on your mining property, the Silver Leaf mine, Enterprise Mining District, Ferry County, Washington, apparently applies to the subject docket.

After noting your statement that Mr. Ray Horseman, Wallace, Idaho, examined your same property on April 1, 1952, we determine from our file that no report accompanied the application for exploration aid submitted to us by Messrs. Hoar and Olson. With their application we received, however, copies of a claim map, and a mine plan and section, for the Silver Leaf Mine, both signed by R. J. Horseman, Eng., and dated "April 18, 1952," and "Jan. 1952", respectively.

Such maps could not be released by us to you unless we received written permission from the individuals who originally submitted the material. It is suggested, therefore, that you make your request directly to Mr. Vernon A. Hoar, P. O. Box 723, Wallace, Idaho, and Mr. Lester E. Olson, Box 1023, Wallace, Idaho.

Sincerely yours,

C. O. Mittendorf

Administrator

Copy to:
Mr. Vernon A. Hoar
Mr. Lester E. Olson

Glenn L. Emmons, Comm.
Bur. of Indian Affairs

cc: Docket
Code 400
Adm. Read. File
FT, Reg. I-NW
T. Kiilsgaard, USGS
R. W. Geehan, USBM

WSMartin/ls 2/10/56

Re: DMEA 2504 (Denial)

-c o p y-

Inchelium, Washington

January 30th, 1956

To Hon. Glenn L. Emmons

Commissioner of Indian Affairs

Washington, D. C.

Dear Sir:

I am writing you in regard to my mining property. I am the owner of The Silver Leaf Mine, which is located in the Enterprise Mining district, Ferry County, Washington. As you know, I am a tribal member. Now on April 1st, 1952, a Mining Engineer came and looked my Silver Leaf property over and we agreed to a bond and lease. Then the people from Wallace, Idaho, Vern Hoar and Lester Olson, both of Wallace, Idaho, made application to the Dept. of Interior for a Government loan to work the tungsten values in this Silver Leaf mine.

Now, Commissioner, what I am interested in is to get these reports that were made to the Government by Vern Hoar and Lester Olson on the Silver Leaf mine. The name of the engineer who made the report is a Mr. Ray Horseman, Mining Engineer, Wallace, Idaho. I would appreciate it if it is possible to get these reports.

Very respt. yours

/s/ Harold Hightower

(The agreement was that these reports would be turned over to me.)

IN REPLY REFER TO:
C-MD-DML

400

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

May 5, 1952

Memorandum

To: George C. Selfridge, DMEA

From: D. M. Lemmon, USGS

Subject: Exploration application $38,127.44 DMEA 2504 - Tungsten
Vernon A. Hoar and Lester E. Olsen
Wallace, Idaho

Property: Tungsten Nos 1 and 2 lode claims (Formerly Silver Leaf mine)
Secs 30 and 31, T. 32 N., R. 37 E.
Enterprise Mining District
Ferry County, Washington

Proposal: It is proposed to extend the upper tunnel 50 feet, to re-open the lower tunnel and extend it 200 feet, to drive 10 crosscuts each 20 feet long from the lower tunnel, and to drill 6 holes each 200 feet deep below the lower tunnel.

Comment: The Silver Leaf property was worked on a small scale since 1912, with a small output of sorted silver ore. A few tons of tungsten ore were mined in 1915 and 1942. Small amounts of scheelite are irregularly distributed in quartz veins less than one inch thick in a breccia zone 30 to 50 feet wide. Tetrahedrite, stibnite, pyrite, chalcopyrite and galena are also present. The distribution of scheelite is very erratic, and most of the vein zone contains no scheelite.

The property was examined in 1942 by S. W. Hobbs of the Geological Survey. Hobbs reported that the scheelite content of the ore was insignificant, and that the property should not be considered as a tungsten prospect.

Recommendation: It is recommended that the exploration proposal be denied because there is very little chance of making a significant discovery from which commercial production of tungsten could be made.

To help substantiate a denial, I enclose three copies of Hobb's memorandum written in 1942.

Copy retained 400

COPY

Memorandum Report on the

Silver Leaf Mine, Enterprise Mining District

Ferry County, Washington

With reference to the tungsten content of the ore

by

S. W. Hobbs, October 1942

Report based on a one day visit to the property, including examination of the surface at night with an ultra-violet light.

Location and ownership

The old Silver Leaf Mine is located in Sec. 30 of T. 32 N., R. 37 E., a few miles northeast of the Covada P. O., and about 6 miles south of the town of Inchelium, Ferry County, Washington. The mine is difficult to find, and access is best accomplished by directions from the owner, Mr. Hal Hightower, who can be located through the Covada P. O.

Development, production and equipment

The mine is an old property and consists of several old tunnels, now caved, of undetermined length, and a small glory hole from which ore was drawn by means of a short adit. The new development work includes a tunnel 60 feet long which has been driven along the east side of the glory hole in the vein zone, and a series of trenches and open cuts across the vein between the glory hole and the top of the hill. Thirty feet inside the portal of the new tunnel there is a small opening which connects to the west with a partly filled space in the back of the old glory hole. The tunnel continues on the vein for 30 feet beyond this point.

No record of past production is known, and Mr. Hightower has shipped only a few tons for testing purposes. All work has been done by hand mining, and there is no equipment of any consequence on the property.

Geology and ore deposits

The deposit is located on the south nose of a semi-wooded hillside and the vein is exposed in tunnels and cuts in natural outcrops for a distance of 500 to 1000 feet from the base to the top of the hill beyond.

The country rock of the district is a steeply dipping series of limestones, impure limestones, and fine grained schists of

Copy retained 400

undetermined age, probably Paleozoic. These beds strike a little west of north, and they have been intruded by a stock of granodiorite, the margin of which is more or less parallel to the bedding. The dip of the contact was not definitely determined, but it is probably steep.

Mineralization is confined to a 30-50 foot wide zone located within the sediments and at a distance of 100 to 150 feet from the contact. This mineralized zone, localized by both lithology and shearing, is essentially parallel to the sedimentary beds and consequently appears parallel to the contact. The vein zone strikes N 13 degrees west, and dips vertically. Ore minerals in the zone are stibnite, ruby silver, native silver (?), sphalerite, scheelite, pyrite, and some alteration products of these minerals. The ore minerals are not uniformly distributed through the vein zone but occur as small stringers and narrow layers, none of which is very continuous in itself. Quartz is present as a gangue mineral in some of the stringers, particularly in those which carry the higher silver content. Most of the stibnite occurs as disseminations or massive bunches in more or less silicified country rock. Scheelite occurs in small pockets and seams in the ore zone but is very erratic and discontinuous.

Distribution and grade of ore

The best silver ore has been found in the new tunnel, in which assays up to 1,800 Oz. per ton have been obtained from 2-3 inch stringers of quartz rich in ruby silver and possibly native silver. Small amounts of silver occur throughout most of the ore zone.

Antimony ore is best exposed in the 50 foot trench and open cut above the glory hole. Although stibnite is sprinkled throughout the zone, some 40 feet wide at this place, only a few of the bands or stringers in the ore zone carry massive stabnite. Nothing is known of the average tenor of the ore, but it is probably low, and exposures are insufficient to block out any appreciable amount of ore.

The only scheelite concentration of any importance is in the lower part of the back of the glory hole. This is accessible through a hole from the small drift, and consists of a face about 4 feet wide and three feet high on which several good patches of scheelite are located. None is to be found on the low roof of this part of the old workings, and no scheelite is present in the open cut on the surface 20 feet directly above this zone. Below the level of the new adit there are no exposures, but the dump of the lower tunnel, 80 feet below, contains no scheelite on its surface, and it appears likely that none was encountered in the lower workings. Scheelite was found in only one other place on the property, in an open cut about 100 feet above the glory hole,

and there only as a ¼ inch stringer which could be traced for 5 or 6 feet. The few exposures of granodiorite contact showed no tungsten mineralization.

The only figures on grade of tungsten ore are based on a mill run of 3 tons of ore from the new tunnel. The report on this material gave 2 1/8 percent WO_3 present in the form of wolframite. No wolframite was seen in the mine, and no scheelite was detected in the new adit by use of the ultra-violet lamp. It is possible that a pod of scheelite was mined with the three tons of ore, but no evidence of its presence exists today.

Outlook and recommendations

The property has no future as a tungsten producer. Some tungsten might result from operation of the mine, but the silver content would probably have to support the operations.

It would probably be worthwhile for someone working on antimony to visit the property at some convenient time, but no further work on the tungsten is warranted.

No other recommendations are made.

Respectfully submitted,

S. Warren Hobbs
U. S. Geological Survey
October, 1942

Mr. Vernon A. Moor
P. O. Box 723
Wallace, Idaho

Re: Docket No. DMEA 2504 - Tungsten
Silver Lief Mine
Ferry County, Washington

Dear Mr. Moor:

Your application for exploration assistance and other information relating to your application available to us in Washington have been carefully reviewed.

This information, while noting a small amount of a complex low-grade ore on your property, indicates that geologically there is very little probability of making a significant mineral discovery.

We regret, therefore, to inform you that your application is denied.

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

Sincerely yours,

C. O. Mittendorf

Acting Administrator
Defense Minerals Exploration
Administration

NJHurley:le
5/8/52

CC: Admn. Reading File
Docket
Field Team, Region 2
G. C. Selfridge
N. J. Harley
Operating Committee
D. M. Lemmon, USGS
R. W. Geehan, USBM

Acting Administrator, DMEA May 9, 1952

Iron and Ferro-Alloy Division, DMEA

Denial of exploration project in the amount of $28,595.50
Docket No. DMEA 2504X - Tungsten
Vernon A. Hear and Lester E. Olson
Silver Lief Mine
Ferry County, Washington

The subject application is denied by this Division for the following reasons:

1. The deposit consists of an undefined shear zone in limestones and schists, probably of Paleozoic age, bordering a granodiorite intrusion, the margin of which is approximately parallel to the bedding. A heterogeneous mineralization of copper, antimony, lead, zinc, silver, tungsten, and iron is traceable in small discontinuous pods and stringers erratically distributed through the sedimentaries bordering the contact for a distance of some 500 to 1000 feet. The scheelite content of the ore is almost nil and even in its best local concentrations the grade is too low to be of any economic significance. Assays presented by the Operator in support of the request show only one sample carrying as much as 1.5 per cent WO_3. All the remaining samples show less than 0.10 per cent WO_3. In view of the discontinuity of the structures and the lean but complex mineralization, there seems to be no likelihood of making a significant discovery.

2. In the 40 years' history of the mine, three small shipments of ore totaling some three or four tons have been made. One of these shipments was reported to assay 2.125 per cent WO_3, but no records exist of the remaining production. The principal values of the small production to date were presumably found in the silver content of the ore.

3. The Field Team of the U. S. Geological Survey reports that because of the lean and sporadic depositions the property has no future as a tungsten producer.

4. The Commodity Division of the U. S. Geological Survey recommends that the exploration proposal be denied because of the unlikelihood of making any significant discovery.

cc: Admn. Reading File
Docket
G. C. Selfridge
N. J. Hurley

George C. Selfridge
Copy

G. C. Selfridge, Chief
Iron and Ferro-Alloy Division

NJHurley'lm - 5/9/52

DOCKET
Surname:
Martin

FEB 10 1956

Mr. Harold Hightower
Inchelium, Washington

Re: Docket No. DMMA 2504 - Tungsten
Vernon A. Hoar & Lester E. Olson
Silver Leaf Mine
Ferry County, Washington

Dear Mr. Hightower:

Your letter of January 30, 1956, addressed to Hon. Glenn L. Emmons, Commissioner of Indian Affairs, has been referred to Defense Minerals Exploration Administration for reply, as your request for a copy of a mining engineer's report on your mining property, the Silver Leaf Mine, Enterprise Mining District, Ferry County, Washington, apparently applies to the subject docket.

After noting your statement that Mr. Roy Horseman, Wallace, Idaho, examined your same property on April 1, 1952, we determine from our file that no report accompanied the application for exploration aid submitted to us by Messrs. Hoar and Olson. With their application we received, however, copies of a claim map, and a mine plan and section, for the Silver Leaf Mine, both signed by R. J. Horseman, Eng., and dated "April 18, 1952," and "Jan. 1952", respectively.

Such maps could not be released by us to you unless we received written permission from the individuals who originally submitted the material. It is suggested, therefore, that you make your request directly to Mr. Vernon A. Hoar, P. O. Box 723, Wallace, Idaho, and Mr. Lester E. Olson, Box 1023, Wallace, Idaho.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

Copy to:
Mr. Vernon A. Hoar
Mr. Lester E. Olson

Glenn L. Emmons, Comm.
Bur. of Indian Affairs

cc: Docket
Code 400
Adm. Read. File
FT, Reg. I-NW
T. Kiilsgaard, USGS
R. W. Geehan, USBM

WSMartin/ls 2/10/56

F.C.

Docket 2504 - Tungsten
Hoar, Vernon, and Olson,
Lester E.

Mr. Schlick, Bureau of Indian Affairs, Room 4229, Ext. 3824, came in, asking for the location of the property concerned in the above application.

He was given, by phone, the location as published in Bulletins 16 and 34 of the Washington Geological Survey, since there would be no restriction in giving him information from a published source.

SPH - 1.5.58

Inchelium Washington
Jan 30TH 1956

BUREAU OF INDIAN AFFAIRS
RECEIVED
FEB - 3 1956
1398
Washington, D.C.

To Hon Glenn L Emmons
Commissioner of Indian affairs
Washington D C

RECEIVED
FEB - 8 1956

350

Dear Sir I am writing you in reguard to my mining property I am the owner of the Silver Leaf mine which is located in the Enterprise mining district Ferry County Washington. as you know I am a tribe member. Now on april 1st 1952 a mining Engineer came and looked my Silver Leaf property over and we agreed to a Bond and Lease then the people from Wallace Ida Vern Hoar and Lester Olson both of Wallace Idaho. Made application to the dept of Interior for a government loan to work the Tungsten Values in the Silver Leaf mine. Now Commissioner what I am interested in is to get these Reports that were made to the government by Vern Hoar and Lester Olson on the silver Leaf mine the name of the Engineer who made the report is a Mr Ray Horseman Mining Engineer Wallace Ida I would appreciate it if its possible to get these reports

Very Respt yours
Harold Hightower

The agreement was that these reports would be turned over to me.)

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

May 16, 1952

Memorandum

To: George Selfridge, DMEA - Rm. 3538

From: Robert W. Geehan

Subject: Docket DMEA 2504 - Silver Leaf Mine, Ferry County, Washington Tungsten

Attached is a copy of the subject docket.

Since I surnamed your denial letter on May 12, 1952, and agree to the comments in your memo, no further action is necessary.

Robert W. Geehan

Robert W. Geehan

Attachment

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 19 1952

FILE COPY
Surname:

Geehan
Mulches

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

May 16, 1952

Memorandum

To: George Selfridge, DMEA - Rm. 3538

From: Robert W. Geehan

Subject: Docket DMEA 2504 - Silver Leaf Mine, Ferry County, Washington Tungsten

Attached is a copy of the subject docket.

Since I surnamed your denial letter on May 12, 1952, and agree to the comments in your memo, no further action is necessary.

Robert W. Geehan

Attachment

Copy to Mr. Geehan
Ferrous Metals
F i l e s

400

FILE COPY
SURNAME:

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

Hurley
Selfridge
Geehan
Lemmon
Hedges
H. Johnson

MAY 15 1952

Mr. Vernon A. Hoar
P. O. Box 723
Wallace, Idaho

Re: Docket No. DMEA 2504 - Tungsten
Silver Lief Mine
Ferry County, Washington

Dear Mr. Hoar:

Your application for exploration assistance and other information relating to your application available to us in Washington have been carefully reviewed.

This information, while noting a small amount of a complex low-grade ore on your property, indicates that geologically there is very little probability of making a significant mineral discovery.

We regret, therefore, to inform you that yourapplication is denied.

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

Sincerely yours,

C. O. Mittendorf (for) 5/15

Acting Administrator
Defense Minerals Exploration
Administration

NJHurley:ls
5/8/52

CC: Admn. Reading File
Docket
Field Team, Region 2
G. C. Selfridge
N. J. Hurley
Operating Committee
D. M. Lemmon, USGS
R. W. Geehan, USBM
Lester E. Olson, P.O.Box 1023, Wallace, Idaho

400

FILE COPY
SURNAME:

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

Acting Administrator, DMEA

May 9, 1952

Hurley
Selfridge
Kuhn
Lemmon
Hedges

Iron and Ferro-Alloy Division, DMEA

Denial of exploration project in the amount of $28,595.50
Docket No. DMEA 2504X - Tungsten
Vernon A. Hoar and Lester N. Olson
Silver Lief Mine
Ferry County, Washington

The subject application is denied by this Division for the following reasons:

1. The deposit consists of an undefined shear zone in limestones and schists, probably of Paleozoic age, bordering a granodiorite intrusion, the margin of which is approximately parallel to the bedding. A heterogeneous mineralization of copper, antimony, lead, zinc, silver, tungsten, and iron is traceable in small discontinuous pods and stringers erratically distributed through the sedimentaries bordering the contact for a distance of some 500 to 1000 feet. The scheelite content of the ore is almost nil and even in its best local concentrations the grade is too low to be of any economic significance. Assays presented by the Operator in support of the request show only one sample carrying as much as 1.5 per cent WO_3. All the remaining samples show less than 0.10 per cent WO_3. In view of the discontinuity of the structures and the lean but complex mineralization, there seems to be no likelihood of making a significant discovery.

2. In the 40 years' history of the mine, three small shipments of ore totaling some three or four tons have been made. One of these shipments was reported to assay 2.125 per cent WO_3, but no records exist of the remaining production. The principal values of the small production to date were presumably found in the silver content of the ore.

3. The Field Team of the U. S. Geological Survey reports that because of the lean and sporadic depositions the property has no future as a tungsten producer.

4. The Commodity Division of the U. S. Geological Survey recommends that the exploration proposal be denied because of the unlikelihood of making any significant discovery.

cc: Admn. Reading File
Docket
G. C. Selfridge
N. J. Hurley

Copy retained 400

G. C. Selfridge, Chief
Iron and Ferro-Alloy Division

NJHurley'lm - 5/9/52

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : Acting Administrator, DMEA DATE: May 9, 1952

FROM : Iron and Ferro-Alloy Division, DMEA

SUBJECT: Denial of exploration project in the amount of $28,595.50
Docket No. DMEA 2504X - Tungsten
Vernon A. Hoar and Lester E. Olson
Silver Lief Mine
Ferry County, Washington

The subject application is denied by this Division for the following reasons:

1. The deposit consists of an undefined shear zone in limestones and schists, probably of Paleozoic age, bordering a granodiorite intrusion, the margin of which is approximately parallel to the bedding. A heterogeneous mineralization of copper, antimony, lead, zinc, silver, tungsten, and iron is traceable in small discontinuous pods and stringers erratically distributed through the sedimentaries bordering the contact for a distance of some 500 to 1000 feet. The scheelite content of the ore is almost nil and even in its best local concentrations the grade is too low to be of any economic significance. Assays presented by the Operator in support of the request show only one sample carrying as much as 1.5 per cent WO_3. All the remaining samples show less than 0.10 per cent WO_3. In view of the discontinuity of the structures and the lean but complex mineralization, there seems to be no likelihood of making a significant discovery.

2. In the 40 years' history of the mine, three small shipments of ore totaling some three or four tons have been made. One of these shipments was reported to assay 2.125 per cent WO_3, but no records exist of the remaining production. The principal values of the small production to date were presumably found in the silver content of the ore.

3. The Field Team of the U. S. Geological Survey reports that because of the lean and sporadic depositions the property has no future as a tungsten producer.

4. The Commodity Division of the U. S. Geological Survey recommends that the exploration proposal be denied because of the unlikelihood of making any significant discovery.

G. C. Selfridge

G. C. Selfridge, Chief
Iron and Ferro-Alloy Division

G-MD-DML

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

May 5, 1952

Memorandum

To: George C. Selfridge, DMEA

From: D. M. Lemmon, USGS

Subject: Exploration application $38,127.44 DMEA 2504 - Tungsten
Vernon A. Hoar and Lester E. Olson
Wallace, Idaho

Property: Tungsten Nos 1 and 2 lode claims (Formerly Silver Leaf mine)
Secs 30 and 31, T. 32 N., R. 37 E.
Enterprise Mining District
Ferry County, Washington

Proposal: It is proposed to extend the upper tunnel 50 feet, to re-open the lower tunnel and extend it 200 feet, to drive 10 crosscuts each 20 feet long from the lower tunnel, and to drill 6 holes each 200 feet deep below the lower tunnel.

Comment: The Silver Leaf property was worked on a small scale since 1912, with a small output of sorted silver ore. A few tons of tungsten ore were mined in 1915 and 1942. Small amounts of scheelite are irregularly distributed in quartz veins less than one inch thick in a breccia zone 30 to 50 feet wide. Tetrahedrite, stibnite, pyrite, chalcopyrite and galena are also present. The distribution of scheelite is very erratic, and most of the vein zone contains no scheelite.

The property was examined in 1942 by S. W. Hobbs of the Geological Survey. Hobbs reported that the scheelite content of the ore was insignificant, and that the property should not be considered as a tungsten prospect.

Recommendation: It is recommended that the exploration proposal be denied because there is very little chance of making a significant discovery from which commercial production of tungsten could be made.

To help substantiate a denial, I enclose three copies of Hobb's memorandum written in 1942.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 6 1952

D M Lemmon

Copy retained 400

COPY

Memorandum Report on the

Silver Leaf Mine, Enterprise Mining District

Ferry County, Washington

With reference to the tungsten content of the ore

by

S. W. Hobbs, October 1942

Report based on a one day visit to the property, including examination of the surface at night with an ultra-violet light.

Location and ownership

The old Silver Leaf Mine is located in Sec. 30 of T. 32 N., R. 37 E., a few miles northeast of the Covada P. O., and about 6 miles south of the town of Inchelium, Ferry County, Washington. The mine is difficult to find, and access is best accomplished by directions from the owner, Mr. Hal Hightower, who can be located through the Covada P. O.

Development, production and equipment

The mine is an old property and consists of several old tunnels, now caved, of undetermined length, and a small glory hole from which ore was drawn by means of a short adit. The new development work includes a tunnel 60 feet long which has been driven along the east side of the glory hole in the vein zone, and a series of trenches and open cuts across the vein between the glory hole and the top of the hill. Thirty feet inside the portal of the new tunnel there is a small opening which connects to the west with a partly filled space in the back of the old glory hole. The tunnel continues on the vein for 30 feet beyond this point.

No record of past production is known, and Mr. Hightower has shipped only a few tons for testing purposes. All work has been done by hand mining, and there is no equipment of any consequence on the property.

Geology and ore deposits

The deposit is located on the south nose of a semi-wooded hillside and the vein is exposed in tunnels and cuts in natural outcrops for a distance of 500 to 1000 feet from the base to the top of the hill beyond.

The country rock of the district is a steeply dipping series of limestones, impure limestones, and fine grained schists of

Copy retained 400

undetermined age, probably Paleozoic. These beds strike a little west of north, and they have been intruded by a stock of granodiorite, the margin of which is more or less parallel to the bedding. The dip of the contact was not definitely determined, but it is probably steep.

Mineralization is confined to a 30-50 foot wide zone located within the sediments and at a distance of 100 to 150 feet from the contact. This mineralized zone, localized by both lithology and shearing, is essentially parallel to the sedimentary beds and consequently appears parallel to the contact. The vein zone strikes N 13 degrees west, and dips vertically. Ore minerals in the zone are stibnite, ruby silver, native silver (?), sphalerite, scheelite, pyrite, and some alteration products of these minerals. The ore minerals are not uniformly distributed through the vein zone but occur as small stringers and narrow layers, none of which is very continuous in itself. Quartz is present as a gangue mineral in some of the stringers, particularly in those which carry the higher silver content. Most of the stibnite occurs as disseminations or massive bunches in more or less silicified country rock. Scheelite occurs in small pockets and seams in the ore zone but is very erratic and discontinuous.

Distribution and grade of ore

The best silver ore has been found in the new tunnel, in which assays up to 1,800 Oz. per ton have been obtained from 2-3 inch stringers of quartz rich in ruby silver and possibly native silver. Small amounts of silver occur throughout most of the ore zone.

Antimony ore is best exposed in the 50 foot trench and open cut above the glory hole. Although stibnite is sprinkled throughout the zone, some 40 feet wide at this place, only a few of the bands or stringers in the ore zone carry massive stabnite. Nothing is known of the average tenor of the ore, but it is probably low, and exposures are insufficient to block out any appreciable amount of ore.

The only scheelite concentration of any importance is in the lower part of the back of the glory hole. This is accessible through a hole from the small drift, and consists of a face about 4 feet wide and three feet high on which several good patches of scheelite are located. None is to be found on the low roof of this part of the old workings, and no scheelite is present in the open cut on the surface 20 feet directly above this zone. Below the level of the new adit there are no exposures, but the dump of the lower tunnel, 80 feet below, contains no scheelite on its surface, and it appears likely that none was encountered in the lower workings. Scheelite was found in only one other place on the property, in an open cut about 100 feet above the glory hole,

and there only as a $\frac{1}{4}$ inch stringer which could be traced for 5 or 6 feet. The few exposures of granodiorite contact showed no tungsten mineralization.

The only figures on grade of tungsten ore are based on a mill run of 3 tons of ore from the new tunnel. The report on this material gave 2 1/8 percent WO_3 present in the form of wolframite. No wolframite was seen in the mine, and no scheelite was detected in the new adit by use of the ultra-violet lamp. It is possible that a pod of scheelite was mined with the three tons of ore, but no evidence of its presence exists today.

Outlook and recommendations

The property has no future as a tungsten producer. Some tungsten might result from operation of the mine, but the silver content would probably have to support the operations.

It would probably be worthwhile for someone working on antimony to visit the property at some convenient time, but no further work on the tungsten is warranted.

No other recommendations are made.

Respectfully submitted,

S. Warren Hobbs
U. S. Geological Survey
October, 1942

EXPLORATION

Subject: DMEA-2504
Re: Exploration Loan
Silver Lief Mine
May 2, 1952

Mr. Vernon A. Hoar
Box 723
Wallace, Idaho

My dear Mr. Hoar:

This will acknowledge receipt of your application dated April 23, 1952 for a loan under the Defense Production Act of 1950.

Your application was assigned Docket Number DMEA-2504 and referred to the Iron and Ferro-Alloys Division.

Kindly refer to DMEA-2504 in any future correspondence relating to your application.

Sincerely yours,

ROBERT E. ADAMS

Robert E. Adams
Administrative Officer

7862

DMEA-2504

OFFICE OF THE ADMINISTRATOR

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

So. 157 Howard Street
Spokane 4, Washington

April 28, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY - 2 1952

Mr. Frank E. Johnson
Chairman, Operating Committee
Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D. C.

Dear Mr. Johnson:

Enclosed are three copies each of forms MF-100 and MF-103 plus six signed copies of Owner's Consent to Lien. This application is for exploration assistance to explore for tungsten in a shear zone near a granodiorite contact near Covada, Ferry County, Washington.

One copy each of forms MF-103 and MF-100 is being retained here for use by the examining team.

Yours very truly,

Thor H. Kiilsgaard

Thor H. Kiilsgaard
For: A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region II

Enclosures.

cc: USBM

DMEA-2504

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

[illegible]

[illegible]

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY - 2 1952

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

MF-103 Should Be Filed With General Technical Data Form MF-100

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

Not To Be Filled in by Applicant

Docket No. DMEA-2504
Metal or Mineral
Date Received 5-2-52
Amount $
Participation (Government %)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY - 2 1952

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

Vernon A. Kerr
Box 723, Wallace, Idaho

Lester E. Olson
Box 1023, Wallace, Idaho

Name and address of applicant

Date April 23, 1952

If you have already filed MF-100, give date filed ....., type of assistance requested Loan,

DMA Docket Number (if available) .....

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four copies each, of the signed application form, General Technical Data Form MF-100, and answers to questions as specified, to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive office thereof, with your name and address on each sheet of the application and all accompanying papers. If you have previously filed MF-100, it is not necessary to file it again. However, you should indicate in space provided above the type of assistance previously applied for (loans, procurement contracts, etc.) and DMA Docket Number, if available. *When a question is inapplicable it should be so stated in the form.* Additional sheets should be attached in answering any questions or in supplying additional information. IF YOU CANNOT ANSWER A QUESTION, SO STATE.

1. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.

   (*b*) If you are not the owner of the property, submit a copy of the lease, purchase option, or other agreements under which you are authorized to operate the property with each copy of your application.

   (*c*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

   NOTE: (1) If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*c*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

   (2) If applicant is not the owner of the property or if there are any liens or encumbrances against the property, copy of agreements of claimants, lienors, encumbrances, and lessors subordinating their interests in the property to the interest of the Government under the Exploration Project Contract will be required for attachment to the Contract.

2. (*a*) What metals or minerals do you expect to find?

   (*b*) Furnish statement of the geologic features of your property, giving type of ore deposit and reasons for expecting to find commercial ore bodies. Illustrate with maps or sketches. If you have a geologic or engineering report, or assay maps showing width and grade, please send them with application, stating whether or not you wish to have them returned.

The information requested in questions 3, 4, 5, 6, 7, 8, and 9 below should be answered specifically and in detail, as this information will be attached to and incorporated as part of the Exploration Project Contract, if such contract is entered into with you by the Government.

ANSWER EACH QUESTION ON SEPARATE SHEETS OF PAPER AND SUBMIT A COPY OF EACH ANSWER FOR EACH COPY OF YOUR APPLICATION.

3. (*a*) Describe fully the proposed work and give the total cost of the project.

   (*b*) State the time required to start the project and to complete it.

4. Submit a map or sketch of the property involved showing a plan (and cross section, if needed) of the present mine workings and the *location of the proposed exploration work* as related to geologic features, such as contacts, veins, ore-bearing beds, etc.

5. Furnish an itemized list of existing facilities, buildings, installations, and fixtures with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition.

6. Furnish a detailed list of additional facilities, buildings, and fixtures to be purchased, installed, or erected by you, with the estimated cost of each item.

7. Furnish a detailed list of operating equipment, separated into items to be—

   (*a*) Rented

   (*b*) Purchased

   (*c*) Furnished by you

   with the rental, purchase price, or depreciation of each item, as the case may be, to be charged as a cost of the project.

8. Furnish an itemized schedule of labor, by numbers and classes (miners, muckers, etc.) and of supervisors by numbers and positions, with the maximum wages or salaries to be paid to each.

9. Furnish a detailed list with estimated cost of each item for materials, supplies, engineering, assaying, accounting, power, water, utilities, and any other items not provided for above.

10. (*a*) How much are you prepared to invest in the proposed project?

    (*b*) Is this amount sufficient to pay your part of the cost of the project, in accordance with the regulations on Government participation (Sec. 9 of MO–5)?

11. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

(Name of company)	By Vernon R. Hoar (Signature of authorized official) Partner
April 23 - 1952 (Date)	Lester E. Olson (Title) Partner

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—64067-2

Form [illegible]-103

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

Vernon A. Moor
Box 7[illegible], Wallace, Idaho

Lester [illegible] Moor
Box 10[illegible], Wallace, Idaho

1. (a) Unpatented mining claims, Tungsten No. 1 lode and [illegible] No. 2 lode situated in Secs. 30 & 31, T. 30 N., R. 37 E. W. M., Stevenson Mining District, Ferry County, Washington.

(b) Copy of lease and option is enclosed.

(c) Same as (a) above.

2. (a) Tungsten and silver.

(b) The proposed exploration will be carried on within a shear zone about 50 feet in width, striking North 10° West with the beds and nearly vertical. The surface outcrop, being [illegible] the granodiorite, can be followed for better than 1,000 feet to the North of the present openings. At a point about 100 feet West of the mill, there is a contact between a granodiorite intrusion and the metamorphosed beds. The shear zone is intensely fractured and crushed with the seams being filled with quartz and acidic portions of the granodiorite magma carrying scheelite and other minerals. A system of jointing parallels the beds and small quartz veins follow along the jointing as well as running in other directions within the shear zone. This shear zone, being near the contact, makes it seem reasonable that tungsten in commercial quantities may be present. The accompanying sketch, with the included assays for tungsten, show the conditions as they exist from what can be seen of the surface outcrop and the openings from exploration work that has been carried on over a period of years.

Defense Minerals Administration
Department of the Interior
Form MT-105 Washington 25, D. C.

Vernon A. Moar
Box 725, Wallace, Idaho

Lester R. Olson
Box 1023, Wallace, Idaho

3. (a) Drive a 5' X 7' drift North on the shear zone from the face of the adit to the open cut, 50 ft. at $20.00 per ft. ——— $1,000.00

Open the lower adit, which is caved for an estimated distance of 60 ft.: spilling at $20.00 per ft. ——— 1,200.00

Drive a 5' X 7' drift North from the present face of the lower adit, 200 ft. at $20.00 per ft. ——— 4,000.00

Drive crosscuts, 5' X 7' in size, from the lower tunnel spaced at 50 ft. intervals, 200 ft. at $20.00 per ft. ——— 4,000.00

Diamond drilling from crosscuts on the lower tunnel, downward, to test for mineralization below the present and proposed workings— 6 - 200 ft. holes at $5.00 per ft. ——— 6,000.00

Total cost of project ——— $16,200.00

(b) It will take about 30 days to start the project and four months to complete the proposed work

Form MF-103

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

Vernon A. Hoar
Box 725, Wallace, Id.

Lester E. Olson
Box 1023, Wallace, Id.

4. Sketch of property attached.

Form MF-103

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

Vernon A. Hoar
Box 725, Wallace, Id.

Lester E. Olson
Box 1023, Wallace, Id.

5. One only, 8' X 10' frame building in fair condition to be used for tool shed. No repairs necessary.

6. One tent floor ---------- $150.00
One only, 16' X 24' frame building for bunk house ---------- $1,800.00

Total cost of facilities ---- $1,950.00

Form MF-103

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

Vernon A. Hoar
Box 725, Wallace, Id.

Lester E. Olson
Box 1023, Wallace, Id.

7. (b)

50 ft. of ½" water hose at 0.45 per ft.	22.50
50 ft. of 1" air hose at o.82 per ft.	41.00
Water & air fittings, est.	10.00
5 - 5 ft. 7/8" Hex. steel at $6.00 each	30.00
20 - carbide bits at $13.50 each	272.00
Repair drill steel	50.00
1½ ton of 12# rail	256.50
200 ties	30.00
500 - 3/8" X 3" track spikes at 0.021	10.50
20 pr. 12# fish plates at o.58	11.60
1 - 12# switch point	15.00
500 ft. of 2" black pipe at $34.75	173.75
200 ft. of ½" water pipe at 0.12 per ft.	60.00
Pipe unions and connections	27.00
1,700# - 1 1/8" powder at $22.50	378.00
3,000 ft. of blasting fuse at 10.90m	32.70
1,000 No. 6 blasting caps	21.60
2,000 gal. diesel fuel oil at 0.18	360.00
150 gal. gasoline for truck	46.50
54 gal. diesel lube oil at 0.88½	47.79
Picks, shovels, bars and wrenches	60.00
3 - A-6 Skoocum pulleys at $21.00	63.00
Total supplies	$2,019.44

Form MF-103

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

Vernon A. Moar
Box 723, Wallace, Id.

Lester E. Olson
Box 1023, Wallace, Id.

8. 1 - miner at $13.00 per day for 90 days ---------- $1, 170.00
2 - muckers at $12.00 per day for 90 days ---------- 2,160.00
1 - supervisor at $400.00 per month for 4 months ------ 1,600.00

Total labor ----- $4,930.00

Form MF-103

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

Vernon A. Hoar
Box 723, Wallace, Id.

Lester E. Olson
Box 1023, Wallace, Id.

9. 1 - WH 210D Diesel driven compressor 5½" X 4⅛" X 4" powered by cat. D318 engine price, F. O. B. Quincy, Ill., mounted on skids ---------- $6,815.00
1 - s48 Sinker drill, Gardner Denver ---------- 345.00
1 - F12A - 5 Sinker Feed leg ---------- 205.00
1 - HEE Airslusher complete ---------- 980.00
1 - 26" scraper hoe and 300 ft. of cable ---------- 144.00
1 - 21 cu. ft. end dump ore car ---------- 200.00
1 - 73 - 25 McBulloch chain saw ---------- 339.00
1 - ½ ton pickup for hauling water and supplies ---------- 1,800.00

Dozer hire for leveling yard, building road to upper dump, opening tunnel and dragging in timber ---------- 600.00

Assaying ---------- 1,000.00
Engineering ---------- 200.00
Accounting ---------- 400.00

Total ---------- $13,028.00

Form [illegible]-103

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

Vernon A. Moar
Box 723, Wallace, Id.

Lester E. Olson
Box 1023, Wallace, Id.

10. (a) $9,531.86

(b) The total cost of the project will be $30,127.44 and 25% of this amount or $9,531.86 will be sufficient to pay our cost of the project in accordance with regulations on Government participation.

Form MF-100
(May 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA
FOR USE UNDER THE
DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. DMEA-2504

Date received 5-2-52

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY - 2 1952

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

Vernon A. Hoar
Box 723, Wallace, Idaho

Lester E. Olson
Box 1023, Wallace, Idaho

Name and address of applicant

Date April 23, 1952

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (5) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products?
   (*b*) What are the byproducts, if any?
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☒ Lessee.
   - ☐ Contractor.
5. Number of years in production _____

   If not in production or operation, estimated date when production will begin _____
6. Experience of operators:

   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation		Life Insurance Carried for Benefit of Applicant	
				Common (e)	Preferred (f)	Amount (g)	Net Cash Surrender Value After Loans (h)
	Total		x x x x x			x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$	$	$		
Preferred stock	$	$	$		

*Indicate period covered.

10. Production:

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)					
2. Quantity of product processed (specify unit of measure and type of process)					
3. Quantity and grade of product sold or shipped (specify units of measure)					

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change.

12. Ore or Mineral Reserves:

(a) Describe the ore or mineral deposit briefly. Accompany the application by any available report on the geology and ore reserves.

Vernon A. Hoar
Box 723, Wallace, Idaho

Lester E. Olson
Box 1023, Wallace, Id.

Form MF-100

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

1. Materials produced:

   (a) Tungsten, Silver

   (b) Unknown

2. Known as Silver Lief Mine in old records.

   (a) Old records show 40 ft. of shaft. The shaft is filled and inaccessible.

   (b) There is 170 ft. of drifting and 40 ft. of crosscut open for inspection.

   (c) The lower adit is caved and the old records show about 200 ft. of drifting Northerly along the shear zone at this elevation.

   (d) There is an open cut South of the No. 2 portal, within the shear zone, ending in a 20 ft. adit with a 9 X 10 ft. face.

   The mine openings are dry as they are all above the present water table.

3. (a) 35 miles from Kittle Falls, Washington.

   (b) Enterprise Mining District.

   (c) Section 30 & 31, T. 32 N., R. 37 E. W. M.

   (d) Ferry County, Washington.

4. The property is not in operation.

   (b) Lessee.

5. There has been no steady production. Development headings will start as soon as loan is approved.

6. Vernon A. Hoar has had 18 years experience as a mining and mill operator and will direct the work at the property in a business and workman like manner. Lester E. Olson has had many years experience as a miner and Diamond Drill operator. (b) Same as applicant.

7. (a) The only information available on previous exploration, development and production of the property comes from Bulletin No. 34, Tungsten Resourses of Washington by Harold E. Culver and W. A. Broughton, 1945 and Bulletin No. 16, Geology and Ore Deposits of the Covada Mining District by Charles

Form IF-100 continued

E. Weaver, 1913, in which it is stated that in 1905 a shipment of 2,800 lbs. of ore was made to Trail B. C. from the Silver Leaf mine and in 1912 two small shipments were made to the Granby Smelter all showing net profit to the owners.

(b) Bulletin No. 16 gives a brief history of production from neighboring properties but apparently none of these properties have been opened up enough to determine the possible extent of the orebodies. All mining in this area at this early period was done with the principal interest in Gold and Silver.

(c) Answered in (a) above.

8. Not a corporation.

9. Not applicable.

10. No production except as indicated in (a) above.

11. Not applicable.

12. (a) The mine workings are within a shear zone striking about N. 10° W. and running parallel with the beds. At a point about 100 ft. West of the adit there is a contact between a granodiorite intrusion and the metamorphosed beds which can be traced Northerly for some distance on the surface. This shear zone, about 50 ft. in width, is intensely fractured and crushed and the seams have been filled with quartz and acidic portions of the granodiorite magma carrying tungsten and other minerals. There is some, nearly vertical jointing, running parallel with the beds with small quartz veins running parallel to each set of joints as well as running in other directions across the shear zone.

(b) Not applicable.

13. The property is located about 7½ miles Southeast of Inchelium, Washington a supply and residence point and 35 miles from Kettle Falls, Washington by improved gravel road to railroad and shipping point.

Form MF-100 continued

14. As the property is above the present water table, it will be necessary to haul water for this exploration project. There is reported to be adequate water for year around operation about 1,500 feet South of the lower adit.

15. Diesel power will be used as electric power is not available at the property.

16. Not applicable.

17. There is no equipment at the property. There is one small building on the dump in fair condition, 8 X 10 ft. in size, that may be used as a tool shed.

18. No.

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)					
Indicated (probable)					

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, even or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

(Name of company)

By Vernon P. Hoar
(Signature of authorized official) Partner

April 23 1952
(Date)

Lester E Olson
(Title) Partner

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—63792-1

Form MF-100
(May 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA
FOR USE UNDER THE
DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. DMEA-2504

Date received 5-2-52

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY - 2 1952

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

Vernon A. Hoar
Box 723, Wallace, Idaho

Lester E. Olson
Box 1023, Wallace, Idaho

Name and address of applicant

Date April 23, 1952

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (5) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products?
   (*b*) What are the byproducts, if any?
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☒ Lessee.
   - ☐ Contractor.
5. Number of years in production _____

   If not in production or operation, estimated date when production will begin _____
6. Experience of operators:
   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation		Life Insurance Carried for Benefit of Applicant	
				Common (e)	Preferred (f)	Amount (g)	Net Cash Surrender Value After Loans (h)
	Total		x x x x x			x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$	$	$		
Preferred stock	$	$	$		

*Indicate period covered.

10. Production:

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)					
2. Quantity of product processed (specify unit of measure and type of process)					
3. Quantity and grade of product sold or shipped (specify units of measure)					

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change.

12. Ore or Mineral Reserves:

(a) Describe the ore or mi[illegible] deposit briefly. Accompany the application [illegible] any available report on the geology and ore reserves.

Vernon A. Hoar
Box 723, Wallace, Idaho

Form [illegible]-100 Defense Minerals Administration
Department of the Interior
Washington 25, D. C.

Lester E. Olson
Box 1023, Wallace, Id.

1. Materials produced:

(a) Tungsten, Silver

(b) Unknown

2. Known as Silver Idol Mine in old records.

(a) Old records show 80 ft. of shaft. The shaft is filled and inaccessible.

(b) There is 170 ft. of drifting and 40 ft. of crosscut open for inspection.

(c) The lower adit is caved and the old records show about 200 ft. of drifting Northerly along the shear zone at this elevation.

(d) There is an open cut South of the No. 2 portal, within the shear zone, ending in a 20 ft. adit with a 9 X 10 ft. face.

The mine openings are dry as they are all above the present water table.

3. (a) 35 miles from Kettle Falls, Washington.

(b) Enterprise Mining District.

(c) Section 30 & 31, T. 32 N., R. 37 E. W. M.

(d) Ferry County, Washington.

4. The property is not in operation.

(b) Lessee.

5. There has been no steady production. Development headings will start as soon as loan is approved.

6. Vernon A. Hoar has had 18 years experience as a mining and mill operator and will direct the work at the property in a business and workman like manner. Lester E. Olson has had many years experience as a miner and Diamond Drill operator. (b) Same as applicant.

7. (a) The only information available on previous exploration, development and production of the property comes from Bulletin No. 34, Tungsten Resources of Washington by Harold F. Culver and W. A. Broughton, 1945 and Bulletin No. 16, Geology and Ore Deposits of the Covada Mining District by Charles

Form MF-100 continued

E. Weaver, 1913, in which it is stated that in 1905 a shipment of 2,800 lbs. of ore was made to Trail B. C. from the Silver Leaf mine and in 1912 two small shipments were made to the Granby Smelter all showing net profit to the owners.

(b) Bulletin No. 16 gives a brief history of production from neighboring properties but apparently none of these properties have been opened up enough to determine the possible extent of the orebodies. All mining in this area at this early period was done with the principal interest in Gold and Silver.

(c) Answered in (a) above.

8. Not a corporation.

9. Not applicable.

10. No production except as indicated in (a) above.

11. Not applicable.

12. (a) The mine workings are within a shear zone striking about N. 10° W. and running parallel with the beds. At a point about 100 ft. West of the adit there is a contact between a granodiorite intrusion and the metamorphosed beds which can be traced Northerly for some distance on the surface. This shear zone, about 50 ft. in width, is intensely fractured and crushed and the seams have been filled with quartz and acidic portions of the granodiorite magma carrying tungsten and other minerals. There is some, nearly vertical jointing, running parallel with the beds with small quartz veins running parallel to each set of joints as well as running in other directions across the shear zone.

(b) Not applicable.

15. The property is located about 7½ miles Southeast of Inchelium, Washington a supply and residence point and 55 miles from Little Falls, Washington by improved gravel road to railroad and shipping point.

Form MF-100 continued

14. As the property is above the present water table, it will be necessary to haul water for this exploration project. There is reported to be adequate water for year around operation about 1,500 feet South of the lower adit.

15. Diesel power will be used as electric power is not available at the property.

16. Not applicable.

17. There is no equipment at the property. There is one small building on the dump in fair condition, 8 X 10 ft. in size, that may be used as a tool shed.

18. No.

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)					
Indicated (probable)					

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, even or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

(Name of company)

By Vernon R. Hogar
(Signature of authorized officer)

April 23-1952
(Date)

Lester E Olson
(Title) Partner

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—63792-1

DMEA-2504

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

[illegible] Street
[illegible] 4, [illegible]

April [illegible], [illegible]

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY - 2 1952

Mr. [illegible] Johnson
Chairman, [illegible] Committee
Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D. C.

Dear Mr. Johnson:

Enclosed are three copies each of Forms [illegible]-1[illegible] and [illegible]-1[illegible] plus six signed copies of Lessee's Bonds for [illegible]. We appreciate [illegible] in being of assistance to us in the development of a [illegible] zone near a permanently [illegible] road [illegible], Harry County, Washington.

[illegible] copy each of Forms [illegible]-1[illegible] and [illegible]-1[illegible] is being retained here for use by the [illegible] team.

Very truly yours,

[illegible]
[illegible]
Executive Officer, [illegible]
[illegible], Washington

Enclosures.

cc: [illegible]

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

MF-103 Should Be Filed With General Technical Data Form MF-100

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

Not To Be Filled in by Applicant

Docket No. DMEA-2504
Metal or Mineral
Date Received 5-2-52
Amount $
Participation (Government %)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY - 2 1952

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

Name and address of applicant

Vernon A. Hoar
Box 723, Wallace, Idaho

Lester E. Olson
Box 1023, Wallace, Idaho

Date April 23, 1952

If you have already filed MF-100, give date filed ....., type of assistance requested Loan,

DMA Docket Number (if available) .....

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four copies each, of the signed application form, General Technical Data Form MF-100, and answers to questions as specified, to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive office thereof, with your name and address on each sheet of the application and all accompanying papers. If you have previously filed MF-100, it is not necessary to file it again. However, you should indicate in space provided above the type of assistance previously applied for (loans, procurement contracts, etc.) and DMA Docket Number, if available. *When a question is inapplicable it should be so stated in the form.* Additional sheets should be attached in answering any questions or in supplying additional information. IF YOU CANNOT ANSWER A QUESTION, SO STATE.

1. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.

   (*b*) If you are not the owner of the property, submit a copy of the lease, purchase option, or other agreements under which you are authorized to operate the property with each copy of your application.

   (*c*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

   NOTE: (1) If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*c*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

   (2) If applicant is not the owner of the property or if there are any liens or encumbrances against the property, copy of agreements of claimants, lienors, encumbrances, and lessors subordinating their interests in the property to the interest of the Government under the Exploration Project Contract will be required for attachment to the Contract.

2. (*a*) What metals or minerals do you expect to find?

   (*b*) Furnish statement of the geologic features of your property, giving type of ore deposit and reasons for expecting to find commercial ore bodies. Illustrate with maps or sketches. If you have a geologic or engineering report, or assay maps showing width and grade, please send them with application, stating whether or not you wish to have them returned.

The information requested in questions 3, 4, 5, 6, 7, 8, and 9 below should be answered specifically and in detail, as this information will be attached to and incorporated as part of the Exploration Project Contract, if such contract is entered into with you by the Government.

ANSWER EACH QUESTION ON SEPARATE SHEETS OF PAPER AND SUBMIT A COPY OF EACH ANSWER FOR EACH COPY OF YOUR APPLICATION.

3. (*a*) Describe fully the proposed work and give the total cost of the project.

   (*b*) State the time required to start the project and to complete it.

4. Submit a map or sketch of the property involved showing a plan (and cross section, if needed) of the present mine workings and the *location of the proposed exploration work* as related to geologic features, such as contacts, veins, ore-bearing beds, etc.

5. Furnish an itemized list of existing facilities, buildings, installations, and fixtures with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition.

6. Furnish a detailed list of additional facilities, buildings, and fixtures to be purchased, installed, or erected by you, with the estimated cost of each item.

7. Furnish a detailed list of operating equipment, separated into items to be—

   (*a*) Rented

   (*b*) Purchased

   (*c*) Furnished by you

   with the rental, purchase price, or depreciation of each item, as the case may be, to be charged as a cost of the project.

8. Furnish an itemized schedule of labor, by numbers and classes (miners, muckers, etc.) and of supervisors by numbers and positions, with the maximum wages or salaries to be paid to each.

9. Furnish a detailed list with estimated cost of each item for materials, supplies, engineering, assaying, accounting, power, water, utilities, and any other items not provided for above.

10. (*a*) How much are you prepared to invest in the proposed project?

    (*b*) Is this amount sufficient to pay your part of the cost of the project, in accordance with the regulations on Government participation (Sec. 9 of MO–5)?

11. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

(Name of company)	By Vernon R. Hoover (Signature of authorized official) Partner
April 23, 1952 (Date)	Lester E. Olson (Title) Partner

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—64067-2

Form [illegible]-103

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

Vernon A. Bear
Box 725, Wallace, Idaho

Lester E. Olsen
Box 1023, Wallace, Idaho

1. (a) Unpatented mining claims, Tungsten No. 1 lode and Tungsten No. 2 lode situated in Secs. 30 & 31, T. 32 N., R. 37 E. W. M., Enterprise Mining District, Ferry County, Washington.

(b) Copy of lease and option is enclosed.

(c) Same as (a) above.

2. (a) Tungsten and silver.

(b) The proposed exploration will be carried on within a shear zone about 50 feet in width, striking North 10° West with the beds and nearly vertical. The surface outcrop, being less resistent that the granodiorite, can be followed for better than 1,000 feet to the North of the present openings. At a point about 100 feet West of the adit, there is a contact between a granodiorite intrusion and the metamorphosed beds. The shear zone is intensely fractured and crushed with the seams being filled with quartz and acidic portions of the granodiorite magma carrying scheelite and other minerals. A system of jointing parallels the beds and small quartz veins follow along the jointing as well as running in other directions within the shear zone. This shear zone, being near the contact, makes it seem reasonable that tungsten in commercial quantities may be present. The accompanying sketch, with the included assays for tungsten, show the conditions as they exist from what can be seen of the surface outcrop and the openings from exploration work that has been carried on over a period of years.

Defense Minerals Administration
Department of the Interior
Form IF-103 Washington 25, D. C.

Vernon A. Hoar
Box 725, Wallace, Idaho

Lester E. Olson
Box 1023, Wallace, Idaho

3. (a) Drive a 5' X 7' drift North on the shear zone from the face of the adit to the open cut, 50 ft. at $20.00 per ft. ———— $1,000.00

Open the lower adit, which is caved for an estimated distance of 60 ft.: spilling at $20.00 per ft. ———— 1,200.00

Drive a 5' X 7' drift North from the present face of the lower adit, 200 ft. at $20.00 per ft. ———— 4,000.00

Drive crosscuts, 5' X 7' in size, from the lower tunnel spaced at 50 ft. intervals, 200 ft. at $20.00 per ft. ———— 4,000.00

Diamond drilling from crosscuts on the lower tunnel, downward, to test for mineralization below the present and proposed workings-- 6 - 200 ft. holes at $5.00 per ft. ———— 6,000.00

Total cost of project ———— $16,200.00

(b) It will take about 30 days to start the project and four months to complete the proposed work

Form 1F-103

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

Vernon A. Roar
Box 725, Wallace, Id.

Lester E. Olson
Box 1023, Wallace, Id.

4. Sketch of property attached.

Form PT-103

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

Vernon A. Hoar
Box 725, Wallace, Id.

Lester E. Olson
Box 1023, Wallace, Id.

5. One only, 8' X 10' frame building in fair condition to be used for tool shed. No repairs necessary.

6. One tent floor ———————————————— $150.00
One only, 16' X 24' frame building for bunk house ———— $1,800.00

Total cost of facilities ——— $1,950.00

Form DT-103

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

Vernon A. Hoar
Box 725, Wallace, Id.

Lester E. Olson
Box 1023, Wallace, Id.

7. (b)

50 ft. of ½" water hose at 0.45 per ft.	22.50
50 ft. of 1" air hose at 0.82 per ft.	41.00
Water & air fittings, est.	10.00
5 - 5 ft. 7/8" Hex. steel at $6.00 each	30.00
20 - carbide bits at $13.50 each	272.00
Repair drill steel	50.00
1½ ton of 12# rail	256.50
200 ties	50.00
500 - 3/8" x 5" track spikes at 0.021	10.50
20 pr. 12# fish plates at 0.58	11.60
1 - 12# switch point	15.00
500 ft. of 2" black pipe at $34.75	173.75
200 ft. of ½" water pipe at 0.12 per ft.	60.00
Pipe unions and connections	27.00
1,700# - 1 1/8" powder at $22.50	378.00
3,000 ft. of blasting fuse at 10.90m	32.70
1,000 No. 6 blasting caps	21.60
2,000 gal. diesel fuel oil at 0.18	360.00
150 gal. gasoline for truck	36.50
54 gal. diesel lube oil at 0.08½	7.79
Picks, shovels, bars and wrenches	60.00
3 - A-6 Skoocum pulleys at $21.00	63.00
Total supplies	$2,919.44

Form DM-103

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

Vernon A. Hoar
Box 723, Wallace, Id.

Lester T. Olson
Box 1023, Wallace, Id.

8. 1 - miner at $13.00 per day for 90 days ———— $1,170.00
2 - muckers at $12.00 per day for 90 days ———— 2,160.00
1 - supervisor at $400.00 per month for 4 months ——— 1,600.00

Total labor ——— $4,930.00

Form [illegible]-103

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

Vernon A. Hoar
Box 723, Wallace, Id.

Lester E. Olson
Box 1023, Wallace, Id.

9. 1 - [illegible] 210[illegible] Diesel driven compressor 5½" x 4½" x 4" powered by cat. [illegible]18 engine price, F. O. B. Quincy, Ill., mounted on skids ——— 6,815.00
1 - s48 Sinker drill, Gardner Denver ——— 3[illegible]5.00
1 - F124 - 5 Sinter feed leg ——— 225.00
1 - MSE Airslusher complete ——— 980.00
1 - 26" scraper hoe and 300 ft. of cable ——— 144.00
1 - [illegible]1 cu. ft. end dump ore car ——— 200.00
1 - [illegible]3 - 25 McCulloch chain saw ——— 339.00
1 - [illegible] ton pickup for hauling water and supplies ——— 1,[illegible]00.00

Dozer hire for leveling yard, building road to upper dump, opening tunnel and dragging in timber ——— 600.00

Assaying ——— 1,000.00
Engineering ——— 200.00
Accounting ——— 400.00

Total ——— 13,028.00

Form DF-103

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

Vernon A. Moar
Box 723, Wallace, Id.

Lester E. Olson
Box 1023, Wallace, Id.

10. (a) $9,531.86

(b) The total cost of the project will be $38,127.44 and 25% of this amount or $9,531.86 will be sufficient to pay our cost of the project in accordance with regulations on Government participation.

LEASE AND OPTION

This Agreement, made this 26th day of March, 1952, between Harold Hightower, a bachelor, of Covada, Washington, as lessor, and first party, and Lestor E. Olsen, and Vernon A. Hoar of Wallace, Idaho, as lessees and second parties, Witnesseth:

For Value Received, and in consideration of the mutual covenants herein contained, the lessor hereby leases and lets to the lessees herein, for the term of ten (10) years, commencing April 1, 1952, and subject to the terms and conditions herein set forth, those certain unpatented lode mining claims known and described as Tungsten No. 1 and Tungsten No. 2, situated in the Enterprise Mining District, Ferry County, Washington.

The lessees agree to lease said mining claims for said term, and shall have the right to go upon and in said premises, and prospect for, mine and remove ores and minerals, and agree to do same in a good, minerlike manner. As rental herein, the lessees agree to pay to the lessor a royalty equal to ten (10%) per cent of the net proceeds derived from the sale of ores and minerals from said premises, said royalties to be paid direct to the lessor by the smelter, plant or refinery to which same is sent for treatment and smelting.

The lessor hereby gives to the lessees the exclusive right and option, at any time during the term of this lease, to purchase said mining property for the agreed sum of $60,000.00. In the event the lessees should exercise said option to purchase, it is agreed that the purchase price shall be paid in the following manner:

All payments of royalty to be made herein, shall be applied upon the payment or payments first to become due herein. The lessees agree to pay a minimum of $6000.00 per year, commencing April 1, 1954, it being understood that any prior payments as royalty shall be first deducted from the current payment of $6000.00 becoming due herein. It is agreed and understood that the total purchase price shall be due and payable on or before April 1, 1963, unless sooner paid by royalty payments, or shall have been paid by the lessees prior to said date.

In the event that the lessees desire to exercise this option to purchase, they shall notify the lessor to that effect on or before April 1, 1954, when the first payment of $6000.00 shall be due herein. It is agreed and understood that should the royalty payments exceed the minimum payments herein provided for, that they shall nevertheless be made and stipulated, and shall be credited to the lessor herein, either as rental or upon the purchase price, as the case may be.

It is agreed and understood that the lessees shall pay the lessor the sum of $400.00 upon the execution of this agreement, which amount shall be applied to the purchase price herein, should the option above referred to be exercised.

Upon the exercise of such option, and the payment of the sum of at least $6000.00, as herein provided, the lessor agrees to execute a mining deed, and furnish an abstract of title, showing clear and merchantable title to said mining claims in the lessor. Should the option to purchase be exercised, a copy of this agreement, together with the deed and abstract, shall be deposited in escrow with the Colville Branch, National Bank of Commerce, as escrow holder, such deed and abstract to be delivered to the lessees or their assigns, upon the full purchase price being paid as herein agreed.

It is agreed and understood that the lessees shall be entitled to remove any machinery or equipment brought on them upon said premises, should they decide to abandon operations under this lease, or the same should be forfeited, as herein provided.

In the event that any dispute should arise between the parties in connection with this agreement, and they are unable to settle and determine the same, such dispute shall be settled by arbitration, in the following manner:

Each of the parties hereto shall select one person, and the two so selected shall choose a third, and these three persons shall act as arbitrators to settle and determine any matter or issue which is referred to them by the parties. The decision of the majority of said arbitrators shall be final, and the costs of arbitration shall be divided equally between first and second parties.

Time is of the essence hereof, and should the lessees fail to make the payments or carry out the terms of this agreement as herein specified, the lessor shall have the right to terminate this agreement by giving the lessees registered, written notice, addressed to the lessees as follows:

Lester E. Olson
Box 1023
Wallace, Idaho

Vernon A. Moar
Box 723
Wallace, Idaho

Such notice to set forth the defaults complained of, and such defaults are not corrected within thirty (30) days after the mailing of such notice. Upon the forfeiture of this agreement, the lessees shall surrender the possession of said premises to the lessor, and all payments theretofore made shall be forfeited as liquidated damages, for the non performance hereof.

Nothing herein shall be construed as requiring the lessees to do or perform any particular amount or kind of labor on said premises, so as to subject said property to a claim for labor or material by reason thereof.

In Witness Whereof, the parties have set their hands the day and year first above written.

First Party

Lester E. Olson

Vernon A. Moar

Second parties.

STATE OF WASHINGTON }
County of Stevens } ss.

I, _____, a Notary Public in and for said county and State, do hereby certify that on this 26th day of March, 1952, personally appeared before me Harold Lightcap, a bachelor, to me known to be the individual described in and who executed the within instrument, and acknowledged that he signed and sealed the same as his free and voluntary act and deed, for the uses and purposes therein mentioned.

Given under my hand and official seal the day and year last above written.

Notary Public for Washington,
residing at Colville, Washington.

STATE OF IDAHO)
) ss.
COUNTY OF SHOSHONE)

On this 29th day of March, A. D. 1952 before me, Margaret Featherstone, a Notary Public in and for the State of Idaho, personally appeared LEITH E. OLSEN AND VERNON A. MOAK, personally known to me to be the persons who signed the within instrument, and acknowledged to me that they executed the same.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my official seal of my office in Wallace, Idaho, the day and year in this certificate first above written.

Margaret Featherstone
Notary Public in and for the State of Idaho, residing at Wallace, Idaho

File No. 104002

PROOF OF LABOR ON MINING CLAIM

STATE OF WASHINGTON)
)ss.
COUNTY OF STEVENS)

Harold Hightower being first duly sworn, on his oath says;
I am over the age of twenty-one years an am well aquainted with the Anna Lee, Sunrise, Consolidated Perry and Tungston #1 & Tungston #2 Mining Claims situated in Enterprise Mining District, County of Ferry, State of Washington; that during the months of Sept. Oct. 1949 April & May 1950 at least Five Hundred Dollars worth of work was performed, or of improvements were made, upon said Mining Claims, said work and improvements consisting of no improvements, that such expenditures was made by, for, or at the expense of Harold Hightower the owners of said claims, for the purpose of holding said Claims for the year 190__ as required by law.

Harold Hightower/s

Subscribed and sworn to before me this 24th day of June, 1950

Archer R. Squire/s

Notarial Seal

Notary Public in and for the State of Washington residing at Colville.

Filed for record at the request of Harold Hightower 29th day of June 1950 at 8:03 O'Clock A. M. and recorded in Mico-file Roll No,11 29th day of June 1950.

Robert R. Lackey/s
County Auditor

LEASE AND OPTION

This Agreement, made this 26th day of March, 1952, between Harold Hightower, a bachelor, of Covada, Washington, as lessor, and first party, and Lester E. Olsen, and Vernon A. Roar of Wallace, Idaho, as lessees and second parties, Witnesseth:

For Value Received, and in consideration of the mutual covenants herein contained, the lessor hereby leases and lets to the lessees herein, for the term of ten (10) years, commencing April 1, 1952, and subject to the terms and conditions herein set forth, those certain unpatented lode mining claims known and described as Tungsten No. 1 and Tungsten No. 2, situated in the Enterprise Mining District, Ferry County, Washington.

The lessees agree to lease said mining claims for said term, and shall have the right to go upon and in said premises, and prospect for, mine and remove ores and minerals, and agree to do same in a good, minerlike manner. As rental herein, the lessees agree to pay to the lessor a royalty equal to ten (10%) per cent of the net proceeds derived from the sale of ores and minerals from said premises, said royalties to be paid direct to the lessor by the smelter, plant or refinery to which same is sent for treatment and smelting.

The lessor hereby gives to the lessees the exclusive right and option, at any time during the term of this lease, to purchase said mining property for the agreed sum of $60,000.00. In the event the lessees should exercise said option to purchase, it is agreed that the purchase price shall be paid in the following manner:

All payments of royalty to be made herein, shall be applied upon the payment or payments first to become due herein. The lessees agree to pay a minimum of $6000.00 per year, commencing April 1, 1954, it being understood that any prior payments as royalty shall be first deducted from the current payment of $6000.00 becoming due herein. It is agreed and understood that the total purchase price shall be due and payable on or before April 1, 1963, unless sooner paid by royalty payments, or shall have been paid by the lessees prior to said date.

In the event that the lessees desire to exercise this option to purchase, they shall notify the lessor to that effect on or before April 1, 1954, when the first payment of $6000.00 shall be due herein. It is agreed and understood that should the royalty payments exceed the minimum payments herein provided for, that they shall nevertheless be made and stipulated, and shall be credited to the lessor herein, either as rental or upon the purchase price, as the case may be.

It is agreed and understood that the lessees shall pay the lessor the sum of $400.00 upon the execution of this agreement, which amount shall be applied to the purchase price herein, should the option above referred to be exercised.

Upon the exercise of such option, and the payment of the sum of at least $6000.00, as herein provided, the lessor agrees to execute a mining deed, and furnish an abstract of title, showing clear and merchantable title to said mining claims in the lessor. Should the option to purchase be exercised, a copy of this agreement; together with the deed and abstract, shall be deposited in escrow with the Colville Branch, National Bank of Commerce, as escrow holder, such deed and abstract to be delivered to the lessees or their assigns, upon the full purchase price being paid as herein agreed.

It is agreed and understood that the lessees shall be entitled to remove any machinery or equipment brought by them upon said premises, should they decide to abandon operations under this lease, or the same should be forfeited, as herein provided.

In the event that any dispute should arise between the parties in connection with this agreement, and they are unable to settle and determine the same, such dispute shall be settled by arbitration, in the following manner:

Each of the parties hereto shall select one person, and the two so selected shall choose a third, and these three persons shall act as arbitrators to settle and determine any matter or issue which is referred to them by the parties. The decision of the majority of said arbitrators shall be final, and the costs of arbitration shall be divided equally between first and second parties.

Time is of the essence hereof, and should the lessees fail to make the payments or carry out the terms of this agreement as herein specified, the lessor shall have the right to terminate this agreement by giving the lessees registered, written notice, addressed to the lessees as follows:

STATE OF IDAHO)
COUNTY OF BONNER) ss.

On this 20th day of March, A. D. 1952 before me, [illegible] Pontbriand, a Notary Public in and for the State of Idaho, personally appeared [illegible] known to me to be the person who signed the within instrument, and acknowledged to me that [illegible] executed the same.

In Witness Whereof, I have hereunto set my hand [illegible] seal of my office in Sandpoint, Idaho, the day and year in said certificate first above written.

Notary Public in and for the State of Idaho, residing at Sandpoint, Idaho.

File No. 104002

PROOF OF LABOR ON MINING CLAIM

STATE OF WASHINGTON)
COUNTY OF STEVENS)ss.

Harold Hightower being first duly sworn, on his oath says; I am over the age of twenty-one years an am well acquainted with the Anna Lee, Sunrise, Consolidated Perry and Tungston #1 & Tungston #2 Mining Claims situated in Enterprise Mining District, County of Ferry, State of Washington; that during the months of Sept. Oct. 1949 April & May 1950 at least Five Hundred Dollars worth of work was performed, or of improvements were made, upon said Mining Claims, said work and improvements consisting of no improvements, that such expenditures was made by, for, or at the expense of Harold Hightower the owners of said claims, for the purpose of holding said Claims for the year 190__ as required by law.

Harold Hightower/s

Subscribed and sworn to before me this 24th day of June, 1950

Notarial Seal

Archer R. Squire/s
Notary Public in and for the State of Washington residing at Colville.

Filed for record at the request of Harold Hightower 29th day of June 1950 at 8:03 O'Clock A. M. and recorded in Micro-file Roll No, 11 29th day of June 1950.

Robert R. Lackey/s
County Auditor

Affidavit of Labor Performed

STATE OF WASHINGTON, } ss. No. 106489

County of Ferry

BEFORE ME, the subscriber, personally appeared Harold Hightower

who, being first duly sworn, on oath according to law, saith that at least One Hundred Dollars worth of work or improvements were performed or made upon the Tungston No. 1 and 2 Anna Lee

Mining Claims, situated Enterprise Mining District, Ferry County, in State of Washington, between the First day of January, 1951 and the ~~Thirty-first~~ Thirty-th day of ~~December,~~ June 1951. Such expenditure was made by or at the expense of Harold Hightower owner (or one of the owners) of said claim. Such work was done before the 15th day of June, 1951

Harold Hightower/s

Subscribed and sworn to before me this 15th day of June, 1951

Richard Perry/s.

Notary Public in and for the State of Washington, residing at Republic, Washington

Filed for record at the request of Harold Hightower

at 3.46 M., and recorded

County Auditor.

FORM 111½-D YAKIMA BINDERY & PTG. CO. 103178

STATE OF WASHINGTON,
County of FERRY } ss.

Certificate of Transcript

I, Robert R. Lackey, Auditor of said County, do hereby certify that the foregoing is a true and correct copy of Proof of Labor on Mining Claim

as the same appears of record on ~~page~~ Roll #11 Micofilm record of Proof of Labor File ~~volume~~ number 104002 of the records of said County.

Witness my hand and official seal, this 9th day of April, A. D. 19 52.

Robert R Lackey
County Auditor.

By _____ Deputy.

YAKIMA BINDERY & PTG. CO. 103178

STATE OF WASHINGTON,

County of FERRY } ss.

Certificate of Transcript

I, Robert R. Lackey, Auditor of said County, do hereby certify that the foregoing is a true and correct copy of Affidavit of Proof of Labor as the same appears of record on ~~page~~ Roll #28 Microfilm record of Proof of Labor File No. ~~volume~~ number 106489 of the records of said County.

Witness my hand and official seal, this 9th day of April, A. D. 19 52

Robert R. Lackey
County Auditor.

By _____
Deputy.

YAKIMA BINDERY & PTG. CO. 103178

STATE OF WASHINGTON,
FERRY } ss.

Certificate of Transcript

Robert R. Lackey, Auditor of said County, do hereby
certify that the following is a true copy of Notice of Quartz(or Placer) Location

[illegible]

[illegible] of record on page 22[illegible] [illegible] record of Quartz(or Placer) Locat[illegible]
[illegible] Volume Number [illegible] (9) [illegible] records of said County.

[illegible]

[illegible] hereunto set my official seal, this 9th
[illegible], A. D. 19 52

Robert R. Lackey
County Auditor.

By [illegible]
Deputy.

YAKIMA BINDERY & PTG. CO 103178

FORM 111½-D

STATE OF WASHINGTON, }
County of FERRY } ss.

Certificate of Transcript

I, Robert R. Lackey, Auditor of said County, do hereby certify that the foregoing is a true and correct copy of Notice of Quartz(or Placer) Location

as the same appears of record on page 229 record of Quartz(or Placer)Location volume number Vine(9) of the records of said County.

Witness my hand and official seal, this 9th day of April, A. D. 19 52

Robert R Lackey
County Auditor.

By _____ Deputy.

Affidavit of Labor Performed

STATE OF WASHINGTON, } ss. No. 106489

County of Ferry

BEFORE ME, the subscriber, personally appeared Harold Hightower

who, being first duly sworn, on oath according to law, saith that at least One Hundred Dollars in worth of work or improvements were performed or made upon Tungston No. 1 and 2 Anna Lee

Mining Claim s, situated Enterprise Mining District, Ferry County, in State of Washington, between the First day of January, 1951 and the ~~Thirty-first~~ Thirty th day of ~~December~~ June, 1951. Such expenditure was made by or at the expense of Harold Hightower owner (or one of the owners) of said claim. Such work was done before the 15th day of June, 1951

Harold Hightower/s

Subscribed and sworn to before me this 15th day of June, 1951

Richard L. Perry/s

Notary Public in and for the State of Washington, residing at Republic, Washington

Filed for record at the request of Harold Hightower at 3.46 M., and recorded

County Auditor.

STATE OF WASHINGTON,

County of FERRY } ss.

Certificate of Transcript

I, Robert R. Lackey, Auditor of said County, do hereby certify that the foregoing is a true and correct copy of Affidavit of Proof of Labor

as the same appears of record on ~~page~~ Roll #28 Misc. Record of Proof of Labor

File No.

~~volume~~ number 106439 of the records of said County.

Witness my hand and official seal, this 9th day of April, A. D. 19 52

Robert R. Lackey

County Auditor.

By

Deputy.

FORM 1111½-D

YAKIMA BINDERY & PTG. CO. 103178

STATE OF WASHINGTON,

County of FERRY } ss.

Certificate of Transcript

I, Robert R. Lackey, Auditor of said County, do hereby certify that the foregoing is a true and correct copy of Proof of Labor on Mining Claim

as the same appears of record on ~~page~~ Roll #11 Micofilm File record of Proof of Labor ~~volume~~ number 104002 of the records of said County.

Witness my hand and official seal, this 9th day of April, A. D. 19 52

Robert R Lackey

County Auditor.

By _____

Deputy.

FORM 1116-D

YAKIMA BINDERY & PTG. CO. 103178

STATE OF WASHINGTON, } ss.

County of FERRY

Certificate of Transcript

I, Robert R. Lackey, Auditor of said County, do hereby certify that the foregoing is a true and correct copy of Notice of Quartz(or Placer) Location

as the same appears of record on page 228 record of Quartz(or Placer) Loc

volume number Nine (9) of the records of said County.

Witness my hand and official seal, this 9th

day of April, A. D. 19 52.

Robert R Lackey

County Auditor.

By _____ Deputy.

FORM 111½-D

YAKIMA BINDERY & PTG. CO 103118

STATE OF WASHINGTON,
County of FERRY } ss.

Certificate of Transcript

I, Robert R. Lackey, Auditor of said County, do hereby certify that the foregoing is a true and correct copy of Notice of Quartz(or Placer) Location

as the same appears of record on page 229 record of Quattz(or Placer)Location volume number Vine(9) of the records of said County.

Witness my hand and official seal, this 9th day of April, A. D. 19 52

Robert R. Lackey
County Auditor.

By _____ Deputy.

Form MF-103
(Revised June 1951)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.1.

MF-103 Should Be Filed With General Technical Data Form MF-100

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

Not To Be Filled in by Applicant

Docket No. DMEA-2504
Metal or Mineral
Date Received 5-2-52
Amount $
Participation (Government %)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY - 2 1952

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

Name and address of applicant

Vernon A. Hoar
Box 723, Wallace, Idaho

Lester E. Olson
Box 1023, Wallace, Idaho

Date April 23, 1952

If you have already filed MF-100, give date filed ....., type of assistance requested Loan,

DMA Docket Number (if available) .....

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four copies each, of the signed application form, General Technical Data Form MF-100, and answers to questions as specified, to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive office thereof, with your name and address on each sheet of the application and all accompanying papers. If you have previously filed MF-100, it is not necessary to file it again. However, you should indicate in space provided above the type of assistance previously applied for (loans, procurement contracts, etc.) and DMA Docket Number, if available. *When a question is inapplicable it should be so stated in the form.* Additional sheets should be attached in answering any questions or in supplying additional information. IF YOU CANNOT ANSWER A QUESTION, SO STATE.

1. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.

   (*b*) If you are not the owner of the property, submit a copy of the lease, purchase option, or other agreements under which you are authorized to operate the property with each copy of your application.

   (*c*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

   NOTE: (1) If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*c*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

   (2) If applicant is not the owner of the property or if there are any liens or encumbrances against the property, copy of agreements of claimants, lienors, encumbrances, and lessors subordinating their interests in the property to the interest of the Government under the Exploration Project Contract will be required for attachment to the Contract.

2. (*a*) What metals or minerals do you expect to find?

   (*b*) Furnish statement of the geologic features of your property, giving type of ore deposit and reasons for expecting to find commercial ore bodies. Illustrate with maps or sketches. If you have a geologic or engineering report, or assay maps showing width and grade, please send them with application, stating whether or not you wish to have them returned.

The information requested in questions 3, 4, 5, 6, 7, 8, and 9 below should be answered specifically and in detail, as this information will be attached to and incorporated as part of the Exploration Project Contract, if such contract is entered into with you by the Government.

ANSWER EACH QUESTION ON SEPARATE SHEETS OF PAPER AND SUBMIT A COPY OF EACH ANSWER FOR EACH COPY OF YOUR APPLICATION.

3. (*a*) Describe fully the proposed work and give the total cost of the project.

   (*b*) State the time required to start the project and to complete it.

4. Submit a map or sketch of the property involved showing a plan (and cross section, if needed) of the present mine workings and the *location of the proposed exploration work* as related to geologic features, such as contacts, veins, ore-bearing beds, etc.

5. Furnish an itemized list of existing facilities, buildings, installations, and fixtures with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition.

6. Furnish a detailed list of additional facilities, buildings, and fixtures to be purchased, installed, or erected by you, with the estimated cost of each item.

7. Furnish a detailed list of operating equipment, separated into items to be—

   (*a*) Rented

   (*b*) Purchased

   (*c*) Furnished by you

   with the rental, purchase price, or depreciation of each item, as the case may be, to be charged as a cost of the project.

8. Furnish an itemized schedule of labor, by numbers and classes (miners, muckers, etc.) and of supervisors by numbers and positions, with the maximum wages or salaries to be paid to each.

9. Furnish a detailed list with estimated cost of each item for materials, supplies, engineering, assaying, accounting, power, water, utilities, and any other items not provided for above.

10. (*a*) How much are you prepared to invest in the proposed project?

    (*b*) Is this amount sufficient to pay your part of the cost of the project, in accordance with the regulations on Government participation (Sec. 9 of MO–5)?

11. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

(Name of company)	By Vernon R. Hoover (Signature of authorized official) Partner
April 23 1952 (Date)	Lester E. Olson (Title) Partner

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—64067-2

Form DP-103

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

Vernon A. Moar
Box 725, Wallace, Idaho

Lester M. Olson
Box 1023, Wallace, Idaho

1. (a) Unpatented mining claims, Tungsten No. 1 lode and Tungsten No. 2 lode situated in Secs. 30 & 31, T. 32 N., R. 37 E. W. M., Enterprise Mining District, Ferry County, Washington.

   (b) Copy of lease and option is enclosed.

   (c) Same as (a) above.

2. (a) Tungsten and silver.

   (b) The proposed exploration will be carried on within a shear zone about 50 feet in width, striking North 10° West with the beds and nearly vertical. The surface outcrop, being less resistant that the granodiorite, can be followed for better than 1,000 feet to the North of the present openings. At a point about 100 feet West of the adit, there is a contact between a granodiorite intrusion and the metamorphosed beds. The shear zone is intensely fractured and crushed with the seams being filled with quartz and acidic portions of the granodiorite magma carrying scheelite and other minerals. A system of jointing parallels the beds and small quartz veins follow along the jointing as well as running in other directions within the shear zone. This shear zone, being near the contact, makes it seem reasonable that tungsten in commercial quantities may be present. The accompanying sketch, with the included assays for tungsten, show the conditions as they exist from what can be seen of the surface outcrop and the openings from exploration work that has been carried on over a period of years.

Defense Minerals Administration
Department of the Interior
Form MF-103 Washington 25, D. C.

Vernon A. Hoar
Box 725, Wallace, Idaho

Lester E. Olson
Box 1023, Wallace, Idaho

3. (a) Drive a 5' X 7' drift North on the shear zone from the face of the adit to the open cut, 50 ft. at $20.00 per ft. ---------- $1,000.00

Open the lower adit, which is caved for an estimated distance of 60 ft.: spilling at $20.00 per ft. ---------- 1,200.00

Drive a 5' X 7' drift North from the present face of the lower adit, 200 ft. at $20.00 per ft. ---------- 4,000.00

Drive crosscuts, 5' X 7' in size, from the lower tunnel spaced at 50 ft. intervals, 200 ft. at $20.00 per ft. ---------- 4,000.00

Diamond drilling from crosscuts on the lower tunnel, downward, to test for mineralization below the present and proposed workings-- 6 - 200 ft. holes at $5.00 per ft. ---------- 6,000.00

Total cost of project --------$16,200.00

(b) It will take about 30 days to start the project and four months to complete the proposed work

Form IP-103

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

Vernon A. Hoar
Box 725, Wallace, Id.

Lester E. Olson
Box 1023, Wallace, Id.

4. Sketch of property attached.

Form TF-103

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

Vernon A. Hoar
Box 725, Wallace, Id.

Lester E. Olson
Box 1023, Wallace, Id.

5. One only, 8' X 10' frame building in fair condition to be used for tool shed. No repairs necessary.

6. One tent floor ---------- $150.00
One only, 16' X 24' frame building for bunk house ---------- $1,800.00

Total cost of facilities ---- $1,950.00

Form DF-103

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

Vernon A. Hoar
Box 725, Wallace, Id.

Lester E. Olson
Box 1023, Wallace, Id.

7. (b)

50 ft. of ½" water hose at 0.45 per ft.	22.50
50 ft. of 1" air hose at o.82 per ft.	41.00
Water & air fittings, est.	10.00
5 - 5 ft. 7/8" Hex. steel at $6.00 each	30.00
20 - carbide bits at $13.50 each	272.00
Repair drill steel	50.00
1½ ton of 12# rail	256.50
200 ties	30.00
500 - 3/8" x 5" track spikes at 0.021	10.50
20 pr. 12# fish plates at o.58	11.60
1 - 12# switch point	15.00
500 ft. of 2" black pipe at $34.75	173.75
200 ft. of ¾" water pipe at 0.12 per ft.	60.00
Pipe unions and connections	27.00
1,700 - 1 1/8" powder at $22.50	378.00
3,000 ft. of blasting fuse at 10.90m	32.70
1,000 No. 6 blasting caps	21.60
2,000 gal. diesel fuel oil at 0.18	360.00
150 gal. gasoline for truck	46.50
54 gal. diesel lube oil at 0.88½	47.79
Picks, shovels, bars and wrenches	60.00
3 - A-6 Skoocum pulleys at $21.00	63.00
Total supplies	$2,019.44

Form PF-103

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

Vernon A. Hoar
Box 723, Wallace, Id.

Lester E. Olson
Box 1023, Wallace, Id.

8. 1 - miner at $13.00 per day for 90 days ———————— $1,170.00
2 - muckers at $12.00 per day for 90 days ———————— 2,160.00
1 - supervisor at $400.00 per month for 4 months ——— 1,600.00

Total labor ——— $4,930.00

Form MF-103

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

Vernon A. Hoar
Box 723, Wallace, Id.

Lester E. Olson
Box 1023, Wallace, Id.

9. 1 - WH 210E Diesel driven compressor 5½" x 4½" x 4" powered by cat. D318 engine price, F. O. B. Quincy, Ill., mounted on skids ---------- $6,815.00
1 - s48 Sinker drill, Gardner Denver ---------- 345.00
1 - F12A - 5 Sinker feed leg ---------- 205.00
1 - HEE Airslusher complete ---------- 980.00
1 - 26" scraper hoe and 300 ft. of cable ---------- 144.00
1 - 21 cu. ft. end dump ore car ---------- 200.00
1 - 43 - 25 McBulloch chain saw ---------- 339.00
1 - ½ ton pickup for hauling water and supplies ---------- 1,000.00

Dozer hire for leveling yard, building road to upper dump, opening tunnel and dragging in timber ---------- 600.00

Assaying ---------- 1,000.00
Engineering ---------- 200.00
Accounting ---------- 400.00

Total ---------- $13,028.00

Form MF-103

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

Vernon A. Moar
Box 723, Wallace, Id.

Lester E. Olson
Box 1023, Wallace, Id.

10. (a) $9,531.86

(b) The total cost of the project will be $38,127.44 and 25% of this amount or $9,531.86 will be sufficient to pay our cost of the project in accordance with regulations on Government participation.

Form MF-100
(May 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA FOR USE UNDER THE DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. DMEA-2504

Date received 5-2-52

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY - 2 1952

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

Vernon A. Hoar
Box 723, Wallace, Idaho

Lester E. Olson
Box 1023, Wallace, Idaho

Name and address of applicant

Date April 23, 1952

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (5) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products?
   (*b*) What are the byproducts, if any?
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☒ Lessee.
   - ☐ Contractor.
5. Number of years in production .....

   If not in production or operation, estimated date when production will begin .....
6. Experience of operators:

   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation		Life Insurance Carried for Benefit of Applicant	
				Common (e)	Preferred (f)	Amount (g)	Net Cash Surrender Value After Loans (h)
	Total		x x x x x			x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$	$	$		
Preferred stock	$	$	$		

*Indicate period covered.

10. Production:

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)					
2. Quantity of product processed (specify unit of measure and type of process)					
3. Quantity and grade of product sold or shipped (specify units of measure)					

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change.

12. Ore or Mineral Reserves:

(*a*) Describe the ore or mineral deposit briefly. Accompany the application by an available report on the geology and ore reserves.

Form MF-100

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

Vernon A. Hoar
Box 723, Wallace, Idaho

Lester E. Olson
Box 1023, Wallace, Id.

1. Materials produced:

   (a) Tungsten, Silver

   (b) Unknown

2. Known as Silver Lief Mine in old records.

   (a) Old records show 40 ft. of shaft. The shaft is filled and inaccessible.

   (b) There is 170 ft. of drifting and 40 ft. of crosscut open for inspection.

   (c) The lower adit is caved and the old records show about 200 ft. of drifting Northerly along the shear zone at this elevation.

   (d) There is an open cut South of the No. 2 portal, within the shear zone, ending in a 20 ft. adit with a 9 X 10 ft. face.

   The mine openings are dry as they are all above the present water table.

3. (a) 35 miles from Kittle Falls, Washington.

   (b) Enterprise Mining District.

   (c) Section 30 & 31, T. 32 N., R. 37 E. W. M.

   (d) Ferry County, Washington.

4. The property is not in operation.

   (b) Lessee.

5. There has been no steady production. Development headings will start as soon as loan is approved.

6. Vernon A. Hoar has had 18 years experience as a mining and mill operator and will direct the work at the property in a business and workman like manner. Lester E. Olson has had many years experience as a miner and Diamond Drill operator. (b) Same as applicant.

7. (a) The only information available on previous exploration, development and production of the property comes from Bulletin No. 34, Tungsten Resourses of Washington by Harold E. Culver and W. A. Broughton, 1945 and Bulletin No. 16, Geology and Ore Deposits of the Covada Mining District by Charles

E. Weaver, 1913, in which it is stated that in 1905 a shipment of 2,800 lbs. of ore was made to Trail B. C. from the Silver Leaf mine and in 1912 two small shipments were made to the Granby Smelter all showing net profit to the owners.

(b) Bulletin No. 16 gives a brief history of production from neighboring properties but apparently none of these properties have been opened up enough to determine the possible extent of the orebodies. All mining in this area at this early period was done with the principal interest in Gold and Silver.

(c) Answered in (a) above.

8. Not a corporation.

9. Not applicable.

10. No production except as indicated in (a) above.

11. Not applicable.

12. (a) The mine workings are within a shear zone striking about N. 10° W. and running parallel with the beds. At a point about 100 ft. West of the adit there is a contact between a granodiorite intrusion and the metamorphosed beds which can be traced Northerly for some distance on the surface. This shear zone, about 50 ft. in width, is intensely fractured and crushed and the seams have been filled with quartz and acidic portions of the granodiorite magma carrying tungsten and other minerals. There is some, nearly vertical jointing, running parallel with the beds with small quartz veins running parallel to each set of joints as well as running in other directions across the shear zone.

(b) Not applicable.

13. The property is located about 7½ miles Southeast of Inchelium, Washington a supply and residence point and 35 miles from Kittle Falls, Washington by improved gravel road to railroad and shipping point.

Form MF-100 continued

14. As the property is above the present water table, it will be necessary to haul water for this exploration project. There is reported to be adequate water for year around operation about 1,500 feet South of the lower adit.

15. Diesel power will be used as electric power is not available at the property.

16. Not applicable.

17. There is no equipment at the property. There is one small building on the dump in fair condition, 8 X 10 ft. in size, that may be used as a tool shed.

18. No.

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)					
Indicated (probable)					

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

(Name of company)

By Vernon R. Hoor Partner
(Signature of authorized official)

April 23 1952
(Date)

Lester E Olson Partner
(Title)

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—63792-1

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 Washington, County of Ferry, 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 1/ Vernon A. Hoar - Partner and Lester E. Olson, Partner.

hereinafter called the "Operator"; and

WHEREAS, under certain provisions of said Contract which are set forth on the reverse side hereof, the Government will acquire certain 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 and Operator to enter into same, undertakes and agrees as follows:

1. The Government's equity in and right to remove facilities, buildings, fixtures, and equipment, as provided in the Contract, shall prevail over and be prior and superior to any conflicting or adverse rights of the undersigned.

2. The Government's percentage royalty on net smelter returns or other net proceeds realized from ore, concentrates, or metal produced within ten (10) years from the date of the Contract, and the Government's lien for the payment of said percentage royalty shall attach to the mineral deposit and the production therefrom, in the amount of the Government's contribution, not in excess of 2/ $ 28,675.38, all upon the terms and conditions set forth in said 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 the said Contract. This agreement shall be binding upon the heirs, executors, administrators, successors, and assigns of the undersigned.

Dated this 11th day of April, 1952.

Harold Hightower

1/ Insert the name of the Operator as it will appear in the Exploration Project Contract.

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

RELEVANT CONTRACT PROVISIONS

Title to and disposition of property. All facilities, buildings, fixtures, equipment, or other items costing more than $50 each, paid for or purchased with funds contributed jointly by the Operator and the Government, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

Repayment by Operator. If, upon the completion of the exploration project or termination of the contract, the Government considers that a discovery or development has resulted from the work from which commercial production of ore may be made, the Government, within 6 months thereafter, shall so certify to the Operator, particularly describing and delimiting its estimate of the discovery or the development. Thereafter, if and as ore is produced as a result of such discovery or development, the Operator and his successor in interest shall be and become obligated to pay to the Government a percentage royalty on the net smelter returns or other net proceeds realized from such ore, concentrates, or metal produced within ten (10) years from the date of this contract, until the total amount contributed by the Government, without interest, is fully repaid or said 10 years have elapsed, whichever occurs first, as follows:

> Of net smelter returns or other net proceeds not in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent.
>
> Of net smelter returns or other net proceeds in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent, plus one-half (½) percent for each additional full fifty cents ($0.50) in excess of eight dollars ($8.00) per ton of ore, but not in excess of a maximum of five (5) percent.

This obligation to repay from net returns or proceeds shall be and remain a claim and lien upon the mineral deposit which is the subject of the exploration project and upon any production resulting from such discovery or development, in favor of the Government, until fully paid, or until said 10-year period has elapsed; and this claim and lien and the Government's right to repayment shall survive any termination of the contract, whether by completion of the exploration project or otherwise. This article is not to be construed as imposing any obligation on the Operator or his successor in interest to produce ore from any such discovery or development.

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 Washington, County of Ferry, 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 1/ Vernon A. Hoar - Partner and Lester E. Olson, Partner.

hereinafter called the "Operator"; and

WHEREAS, under certain provisions of said Contract which are set forth on the reverse side hereof, the Government will acquire certain 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 and Operator to enter into same, undertakes and agrees as follows:

1. The Government's equity in and right to remove facilities, buildings, fixtures, and equipment, as provided in the Contract, shall prevail over and be prior and superior to any conflicting or adverse rights of the undersigned.

2. The Government's percentage royalty on net smelter returns or other net proceeds realized from ore, concentrates, or metal produced within ten (10) years from the date of the Contract, and the Government's lien for the payment of said percentage royalty shall attach to the mineral deposit and the production therefrom, in the amount of the Government's contribution, not in excess of 2/ $ 28,675.38, all upon the terms and conditions set forth in said 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 the said Contract. This agreement shall be binding upon the heirs, executors, administrators, successors, and assigns of the undersigned.

Dated this 11th day of April, 1952.

Harold Hightower

1/ Insert the name of the Operator as it will appear in the Exploration Project Contract.

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

RELEVANT CONTRACT PROVISIONS

Title to and disposition of property. All facilities, buildings, fixtures, equipment, or other items costing more than $50 each, paid for or purchased with funds contributed jointly by the Operator and the Government, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

Repayment by Operator. If, upon the completion of the exploration project or termination of the contract, the Government considers that a discovery or development has resulted from the work from which commercial production of ore may be made, the Government, within 6 months thereafter, shall so certify to the Operator, particularly describing and delimiting its estimate of the discovery or the development. Thereafter, if and as ore is produced as a result of such discovery or development, the Operator and his successor in interest shall be and become obligated to pay to the Government a percentage royalty on the net smelter returns or other net proceeds realized from such ore, concentrates, or metal produced within ten (10) years from the date of this contract, until the total amount contributed by the Government, without interest, is fully repaid or said 10 years have elapsed, whichever occurs first, as follows:

> Of net smelter returns or other net proceeds not in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent.
>
> Of net smelter returns or other net proceeds in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent, plus one-half (½) percent for each additional full fifty cents ($0.50) in excess of eight dollars ($8.00) per ton of ore, but not in excess of a maximum of five (5) percent.

This obligation to repay from net returns or proceeds shall be and remain a claim and lien upon the mineral deposit which is the subject of the exploration project and upon any production resulting from such discovery or development, in favor of the Government, until fully paid, or until said 10-year period has elapsed; and this claim and lien and the Government's right to repayment shall survive any termination of the contract, whether by completion of the exploration project or otherwise. This article is not to be construed as imposing any obligation on the Operator or his successor in interest to produce ore from any such discovery or development.

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 Washington, County of Ferry, 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 1/ Vernon A. Hoar - Partner and Lester D. Olson, Partner.

hereinafter called the "Operator"; and

WHEREAS, under certain provisions of said Contract which are set forth on the reverse side hereof, the Government will acquire certain 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 and Operator to enter into same, undertakes and agrees as follows:

1. The Government's equity in and right to remove facilities, buildings, fixtures, and equipment, as provided in the Contract, shall prevail over and be prior and superior to any conflicting or adverse rights of the undersigned.

2. The Government's percentage royalty on net smelter returns or other net proceeds realized from ore, concentrates, or metal produced within ten (10) years from the date of the Contract, and the Government's lien for the payment of said percentage royalty shall attach to the mineral deposit and the production therefrom, in the amount of the Government's contribution, not in excess of 2/ $- 28,675.38, all upon the terms and conditions set forth in said 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 the said Contract. This agreement shall be binding upon the heirs, executors, administrators, successors, and assigns of the undersigned.

Dated this 11th day of April, 1952.

Harold Hightower

1/ Insert the name of the Operator as it will appear in the Exploration Project Contract.

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

RELEVANT CONTRACT PROVISIONS

Title to and disposition of property. All facilities, buildings, fixtures, equipment, or other items costing more than $50 each, paid for or purchased with funds contributed jointly by the Operator and the Government, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

Repayment by Operator. If, upon the completion of the exploration project or termination of the contract, the Government considers that a discovery or development has resulted from the work from which commercial production of ore may be made, the Government, within 6 months thereafter, shall so certify to the Operator, particularly describing and delimiting its estimate of the discovery or the development. Thereafter, if and as ore is produced as a result of such discovery or development, the Operator and his successor in interest shall be and become obligated to pay to the Government a percentage royalty on the net smelter returns or other net proceeds realized from such ore, concentrates, or metal produced within ten (10) years from the date of this contract, until the total amount contributed by the Government, without interest, is fully repaid or said 10 years have elapsed, whichever occurs first, as follows:

> Of net smelter returns or other net proceeds not in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent.
>
> Of net smelter returns or other net proceeds in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent, plus one-half (½) percent for each additional full fifty cents ($0.50) in excess of eight dollars ($8.00) per ton of ore, but not in excess of a maximum of five (5) percent.

This obligation to repay from net returns or proceeds shall be and remain a claim and lien upon the mineral deposit which is the subject of the exploration project and upon any production resulting from such discovery or development, in favor of the Government, until fully paid, or until said 10-year period has elapsed; and this claim and lien and the Government's right to repayment shall survive any termination of the contract, whether by completion of the exploration project or otherwise. This article is not to be construed as imposing any obligation on the Operator or his successor in interest to produce ore from any such discovery or development.

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 Washington, County of Ferry, 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 1/ Vernon A. Hoar - Partner and Lester E. Olson, Partner.

hereinafter called the "Operator"; and

WHEREAS, under certain provisions of said Contract which are set forth on the reverse side hereof, the Government will acquire certain 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 and Operator to enter into same, undertakes and agrees as follows:

1. The Government's equity in and right to remove facilities, buildings, fixtures, and equipment, as provided in the Contract, shall prevail over and be prior and superior to any conflicting or adverse rights of the undersigned.

2. The Government's percentage royalty on net smelter returns or other net proceeds realized from ore, concentrates, or metal produced within ten (10) years from the date of the Contract, and the Government's lien for the payment of said percentage royalty shall attach to the mineral deposit and the production therefrom, in the amount of the Government's contribution, not in excess of 2/ $ 28,675.38, all upon the terms and conditions set forth in said 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 the said Contract. This agreement shall be binding upon the heirs, executors, administrators, successors, and assigns of the undersigned.

Dated this 11th day of April, 1952.

Harold Hightower

1/ Insert the name of the Operator as it will appear in the Exploration Project Contract.

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

RELEVANT CONTRACT PROVISIONS

Title to and disposition of property. All facilities, buildings, fixtures, equipment, or other items costing more than $50 each, paid for or purchased with funds contributed jointly by the Operator and the Government, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

Repayment by Operator. If, upon the completion of the exploration project or termination of the contract, the Government considers that a discovery or development has resulted from the work from which commercial production of ore may be made, the Government, within 6 months thereafter, shall so certify to the Operator, particularly describing and delimiting its estimate of the discovery or the development. Thereafter, if and as ore is produced as a result of such discovery or development, the Operator and his successor in interest shall be and become obligated to pay to the Government a percentage royalty on the net smelter returns or other net proceeds realized from such ore, concentrates, or metal produced within ten (10) years from the date of this contract, until the total amount contributed by the Government, without interest, is fully repaid or said 10 years have elapsed, whichever occurs first, as follows:

> Of net smelter returns or other net proceeds not in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent.
>
> Of net smelter returns or other net proceeds in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent, plus one-half (½) percent for each additional full fifty cents ($0.50) in excess of eight dollars ($8.00) per ton of ore, but not in excess of a maximum of five (5) percent.

This obligation to repay from net returns or proceeds shall be and remain a claim and lien upon the mineral deposit which is the subject of the exploration project and upon any production resulting from such discovery or development, in favor of the Government, until fully paid, or until said 10-year period has elapsed; and this claim and lien and the Government's right to repayment shall survive any termination of the contract, whether by completion of the exploration project or otherwise. This article is not to be construed as imposing any obligation on the Operator or his successor in interest to produce ore from any such discovery or development.

(6)

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 Washington, County of Ferry, 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 1/ Vernon A. Hoar - Partner and Lester E. Olson, Partner.

hereinafter called the "Operator"; and

WHEREAS, under certain provisions of said Contract which are set forth on the reverse side hereof, the Government will acquire certain 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 and Operator to enter into same, undertakes and agrees as follows:

1. The Government's equity in and right to remove facilities, buildings, fixtures, and equipment, as provided in the Contract, shall prevail over and be prior and superior to any conflicting or adverse rights of the undersigned.

2. The Government's percentage royalty on net smelter returns or other net proceeds realized from ore, concentrates, or metal produced within ten (10) years from the date of the Contract, and the Government's lien for the payment of said percentage royalty shall attach to the mineral deposit and the production therefrom, in the amount of the Government's contribution, not in excess of 2/ $ 28,675.38, all upon the terms and conditions set forth in said 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 the said Contract. This agreement shall be binding upon the heirs, executors, administrators, successors, and assigns of the undersigned.

Dated this 11th day of April, 1952.

Harold Slightower

1/ Insert the name of the Operator as it will appear in the Exploration Project Contract.

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

RELEVANT CONTRACT PROVISIONS

Title to and disposition of property. All facilities, buildings, fixtures, equipment, or other items costing more than $50 each, paid for or purchased with funds contributed jointly by the Operator and the Government, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

Repayment by Operator. If, upon the completion of the exploration project or termination of the contract, the Government considers that a discovery or development has resulted from the work from which commercial production of ore may be made, the Government, within 6 months thereafter, shall so certify to the Operator, particularly describing and delimiting its estimate of the discovery or the development. Thereafter, if and as ore is produced as a result of such discovery or development, the Operator and his successor in interest shall be and become obligated to pay to the Government a percentage royalty on the net smelter returns or other net proceeds realized from such ore, concentrates, or metal produced within ten (10) years from the date of this contract, until the total amount contributed by the Government, without interest, is fully repaid or said 10 years have elapsed, whichever occurs first, as follows:

> Of net smelter returns or other net proceeds not in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent.
>
> Of net smelter returns or other net proceeds in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent, plus one-half (½) percent for each additional full fifty cents ($0.50) in excess of eight dollars ($8.00) per ton of ore, but not in excess of a maximum of five (5) percent.

This obligation to repay from net returns or proceeds shall be and remain a claim and lien upon the mineral deposit which is the subject of the exploration project and upon any production resulting from such discovery or development, in favor of the Government, until fully paid, or until said 10-year period has elapsed; and this claim and lien and the Government's right to repayment shall survive any termination of the contract, whether by completion of the exploration project or otherwise. This article is not to be construed as imposing any obligation on the Operator or his successor in interest to produce ore from any such discovery or development.

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 Washington, County of Ferry, 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

1/ Vernon A. Hoar - Partner and Lester E. Olson, Partner.

hereinafter called the "Operator"; and

WHEREAS, under certain provisions of said Contract which are set forth on the reverse side hereof, the Government will acquire certain 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 and Operator to enter into same, undertakes and agrees as follows:

1. The Government's equity in and right to remove facilities, buildings, fixtures, and equipment, as provided in the Contract, shall prevail over and be prior and superior to any conflicting or adverse rights of the undersigned.

2. The Government's percentage royalty on net smelter returns or other net proceeds realized from ore, concentrates, or metal produced within ten (10) years from the date of the Contract, and the Government's lien for the payment of said percentage royalty shall attach to the mineral deposit and the production therefrom, in the amount of the Government's contribution, not in excess of 2/ $ 28,675.00, all upon the terms and conditions set forth in said 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 the said Contract. This agreement shall be binding upon the heirs, executors, administrators, successors, and assigns of the undersigned.

Dated this 11th day of April, 1952.

Harold Hightower

1/ Insert the name of the Operator as it will appear in the Exploration Project Contract.

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

RELEVANT CONTRACT PROVISIONS

Title to and disposition of property. All facilities, buildings, fixtures, equipment, or other items costing more than $50 each, paid for or purchased with funds contributed jointly by the Operator and the Government, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

Repayment by Operator. If, upon the completion of the exploration project or termination of the contract, the Government considers that a discovery or development has resulted from the work from which commercial production of ore may be made, the Government, within 6 months thereafter, shall so certify to the Operator, particularly describing and delimiting its estimate of the discovery or the development. Thereafter, if and as ore is produced as a result of such discovery or development, the Operator and his successor in interest shall be and become obligated to pay to the Government a percentage royalty on the net smelter returns or other net proceeds realized from such ore, concentrates, or metal produced within ten (10) years from the date of this contract, until the total amount contributed by the Government, without interest, is fully repaid or said 10 years have elapsed, whichever occurs first, as follows:

> Of net smelter returns or other net proceeds not in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent.
>
> Of net smelter returns or other net proceeds in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent, plus one-half (½) percent for each additional full fifty cents ($0.50) in excess of eight dollars ($8.00) per ton of ore, but not in excess of a maximum of five (5) percent.

This obligation to repay from net returns or proceeds shall be and remain a claim and lien upon the mineral deposit which is the subject of the exploration project and upon any production resulting from such discovery or development, in favor of the Government, until fully paid, or until said 10-year period has elapsed; and this claim and lien and the Government's right to repayment shall survive any termination of the contract, whether by completion of the exploration project or otherwise. This article is not to be construed as imposing any obligation on the Operator or his successor in interest to produce ore from any such discovery or development.

BUNKER HILL AND SULLIVAN MINING AND CONCENTRATING COMPANY

KELLOGG, IDAHO

TO: Mr.R.J.Horsman Plant

305 3rd Street
Wallace,Idaho

DATE: November 14,1951

GENTLEMEN: Below please find our results on the following controls.

OUR LOT	SMELTER LOT	LEAD %	SILVER OZ.	ZINC %	~~XXXXXX~~ WO_3 %	IRON %	MANG. %	INSOL. %	GOLD OZ.
No.1					0.042				
No.2					0.081				
No.3					0.058				
No.4					0.066				
No.5					0.038				
No.6					1.470				
No.7			0.48		0.038				

BUNKER HILL & SULLIVAN M. & C. COMPANY

Per J. H. Laskey

LEASE AND OPTION

This Agreement, made this 26th day of March, 1952, between Harold Hightower, a bachelor, of Covada, Washington, as lessor, and first party, and Lester E. Olsen, and Vernon A. Moar of Wallace, Idaho, as lessees and second parties, Witnesseth:

For Value Received, and in consideration of the mutual covenants herein contained, the lessor hereby leases and lets to the lessees herein, for the term of ten (10) years, commencing April 1, 1952, and subject to the terms and conditions herein set forth, those certain unpatented lode mining claims known and described as Tungsten No. 1 and Tungsten No. 2, situated in the Enterprise Mining District, Ferry County, Washington.

The lessees agree to lease said mining claims for said term, and shall have the right to go upon and in said premises, and prospect for, mine and remove ores and minerals, and agree to do same in a good, minerlike manner. As rental herein, the lessees agree to pay to the lessor a royalty equal to ten (10%) per cent of the net proceeds derived from the sale of ores and minerals from said premises, said royalties to be paid direct to the lessor by the smelter, plant or refinery to which same is sent for treatment and smelting.

The lessor hereby gives to the lessees the exclusive right and option, at any time during the term of this lease, to purchase said mining property for the agreed sum of $60,000.00. In the event the lessees should exercise said option to purchase, it is agreed that the purchase price shall be paid in the following manner:

All payments of royalty to be made herein, shall be applied upon the payment or payments first to become due herein. The lessees agree to pay a minimum of $6000.00 per year, commencing April 1, 1954, it being understood that any prior payments as royalty shall be first deducted from the current payment of $6000.00 becoming due herein. It is agreed and understood that the total purchase price shall be due and payable on or before April 1, 1963, unless sooner paid by royalty payments, or shall have been paid by the lessees prior to said date.

In the event that the lessees desire to exercise this option to purchase, they shall notify the lessor to that effect on or before April 1, 1954, when the first payment of $6000.00 shall be due herein. It is agreed and understood that should the royalty payments exceed the minimum payments herein provided for, that they shall nevertheless be made and stipulated, and shall be credited to the lessor herein, either as rental or upon the purchase price, as the case may be.

It is agreed and understood that the lessees shall pay the lessor the sum of $400.00 upon the execution of this agreement, which amount shall be applied to the purchase price herein, should the option above referred to be exercised.

Upon the exercise of said option, and the payment of the sum of at least $6000.00, as herein provided, the lessor agrees to execute a mining deed, and furnish an abstract of title, showing clear and merchantable title to said mining claims in the lessor. Should the option to purchase be exercised, a copy of this agreement; together with the deed and abstract, shall be deposited in escrow with the Colville Branch, National Bank of Commerce, as escrow holder, such deed and abstract to be delivered to the lessees or their assigns, upon the full purchase price being paid as herein agreed.

It is agreed and understood that the lessees shall be entitled to remove any machinery or equipment brought by them upon said premises, should they decide to abandon operations under this lease, or the same should be forfeited, as herein provided.

In the event that any dispute should arise between the parties in connection with this agreement, and they are unable to settle and determine the same, such dispute shall be settled by arbitration, in the following manner:

Each of the parties hereto shall select one person, and the two so selected shall choose a third, and these three persons shall act as arbitrators to settle and determine any matter or issue which is referred to them by the parties. The decision of the majority of said arbitrators shall be final, and the costs of arbitration shall be divided equally between first and second parties.

Time is of the essence hereof, and should the lessees fail to make the payments or carry out the terms of this agreement as herein specified, the lessor shall have the right to terminate this agreement by giving the lessees registered, written notice, addressed to the lessees as follows:

Lester E. Olson
Box 1023
Wallace, Idaho

Vernon A. Hoar
Box 723
Wallace, Idaho

Such notice to set forth the defaults complained of, and such defaults are not corrected within thirty (30) days after the mailing of such notice. Upon the forfeiture of this agreement, the lessees shall surrender the possession of said premises to the lessor, and all payments theretofore made shall be forfeited as liquidated damages, for the non performance hereof.

Nothing herein shall be construed as requiring the lessees to do or perform any particular amount or kind of labor on said premises, so as to subject said property to a claim for labor or material by reason thereof.

In Witness Whereof, the parties have set their hands the day and year first above written.

First Party

Lester E Olson

Vernon A. Hoar

Second parties.

STATE OF WASHINGTON }
County of Stevens } ss.

I, _____, a Notary Public in and for said county and State, do hereby certify that on this 26th day of March, 1952, personally appeared before me Harold Nightower, a bachelor, to me known to be the individual described in and who executed the within instrument, and acknowledged that he signed and sealed the same as his free and voluntary act and deed, for the uses and purposes therein mentioned.

Given under my hand and official seal the day and year last above written.

Notary Public for Washington,
residing at Colville, Washington.

STATE OF IDAHO)
) ss.
COUNTY OF SHOSHONE)

On this 22th day of March, A. D. 1952 before me, Margaret Featherstone, a Notary Public in and for the State of Idaho, personally appeared MARIE E. CLARK and WILLIAM A. CLARK, personally known to me to be the persons who signed the within instrument, and acknowledged to me that they executed the same.

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

Notary Public in and for the State
of Idaho, residing at Wallace, Idaho

File No. 104002

PROOF OF LABOR ON MINING CLAIM

STATE OF WASHINGTON)
)ss.
COUNTY OF STEVENS)

Harold Hightower being first duly sworn, on his oath says;
I am over the age of twenty-one years an am well aquainted with the Anna Lee, Sunrise, Consolidated Perry and Tungston #1 & Tungston #2 Mining Claims situated in Enterprise Mining District, County of Ferry, State of Washington; that during the months of Sept. Oct. 1949 April & May 1950 at least Five Hundred Dollars worth of work was performed, or of improvements were made, upon said Mining Claims, said work and improvements consisting of no improvements, that such expenditures was made by, for, or at the expense of Harold Hightower the owners of said claims, for the purpose of holding said Claims for the year ending as required by law.

Harold Hightower/s

Subscribed and sworn to before me this 24th day of June, 1950

Archer R. Squire/s

Notarial Seal

Notary Public in and for the State of Washington residing at Colville.

Filed for record at the request of Harold Hightower 29th day of June 1950 at 8:00 O'Clock A. M. and recorded in Micro-file Roll No, 11 29th day of June 1950.

Robert R. Lackey/s

County Auditor

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
[illegible] TOWA[illegible]
[illegible]ane 8, Wash.

OFFICIAL BUSINESS

PAYMENT OF POSTAGE, $300
(PMGC)

SPOKANE
JAN 8
830PM
1952
WASH.

2

Chairman, Operating Committee

Defense Minerals Exploration Administration

Department of Interior

Washington 25, D. C.

Affidavit of Labor Performed

STATE OF WASHINGTON, } ss. No. 106489

County of Ferry

BEFORE ME, the subscriber, personally appeared Harold Hightower

who, being first duly sworn, on oath according to law, saith that at least One Hundred Dollars worth of work or improvements were performed or made upon the Tungston No. 1 and 2 Anna Lee

Mining Claim s, situated Enterprise Mining District, Ferry County, in State of Washington, between the First day of January 19 1 and the ~~Thirty-first~~ thirtieth day of ~~December,~~ June 1951. Such expenditure was made by or at the expense of Harold Hightower owner (or one of the owners) of said claim. Such work was done before the 15th day of June, 1951

Harold Hightower/s

Subscribed and sworn to before me this 15th day of June, 1951

Ralph Perry/s

Notary Public in and for the State of Washington, residing at Republic, Wash.

Filed for record at the request of Harold Hightower

at 3.46 M., and recorded

County Auditor.

YAKIMA BINDERY & PTG. CO. 103178

STATE OF WASHINGTON,

County of FERRY } ss.

Certificate of Transcript

I, Robert R. Lackey, Auditor of said County, do hereby certify that the foregoing is a true and correct copy of Affidavit of Proof of Labor

as the same appears of record on ~~page~~ Roll #28 Microfilm File No. ~~volume~~ number 106489 record of Proof of Labor of the records of said County.

Witness my hand and official seal, this 9th day of April, A. D. 19 52

Robert R. Lackey
County Auditor.

By _____
Deputy.

FORM 111½-D

YAKIMA BINDERY & PTG. CO. 103179

STATE OF WASHINGTON,

County of FERRY } ss.

Certificate of Transcript

I, Robert R. Lackey, Auditor of said County, do hereby certify that the foregoing is a true and correct copy of Proof of Labor on Mining Claim

as the same appears of record on ~~page~~ Roll #11 Micofilm File ~~volume~~ number 104002 of record of Proof of Labor of the records of said County.

Witness my hand and official seal, this 9th day of April, A. D. 19 52

Robert R Lackey

County Auditor.

By

Deputy.

YAKIMA BINDERY & PTG. CO. 103178

STATE OF WASHINGTON,
County of FERRY } ss.

Certificate of Transcript

I, Robert R. Lackey, Auditor of said County, do hereby certify that the foregoing is a true and correct copy of Notice of Quartz(or Placer) Location

as the same appears of record on page 228 record of Quartz(or Placer) Loc

volume number Nine (9) of the records of said County.

Witness my hand and official seal, this 9th

day of April, A. D. 19 52

Robert R Lackey
County Auditor.

By _____
Deputy.

YAKIMA BINDERY & PTG. CO

FORM 111½-D

STATE OF WASHINGTON,
County of FERRY } ss.

Certificate of Transcript

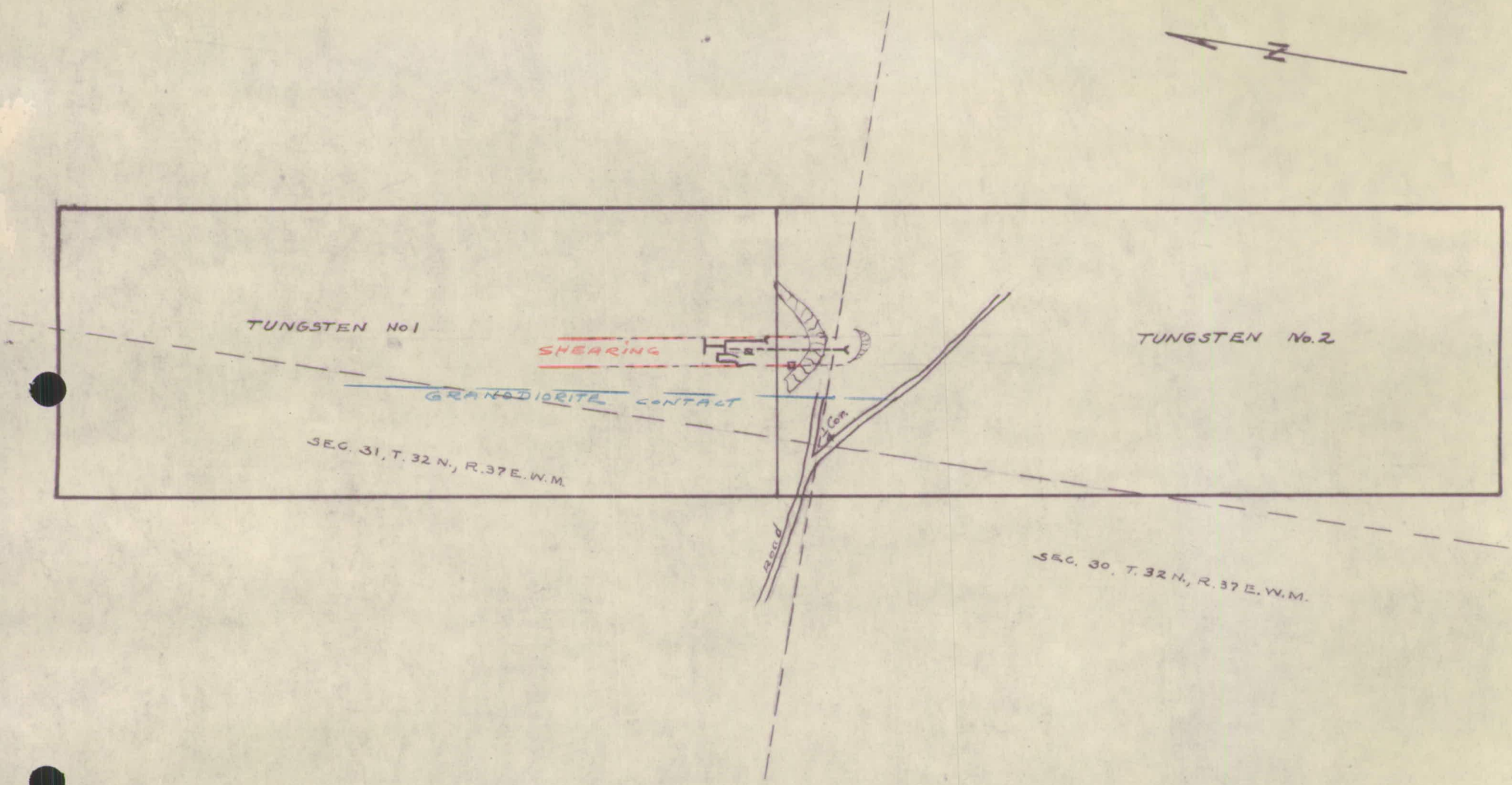
I, Robert R. Lackey, Auditor of said County, do hereby certify that the foregoing is a true and correct copy of Notice of Quartz(or Placer) Location

as the same appears of record on page 229 record of Quartz(or Placer)Location volume number Nine(9) of the records of said County.

Witness my hand and official seal, this 9th day of April, A. D. 19 52

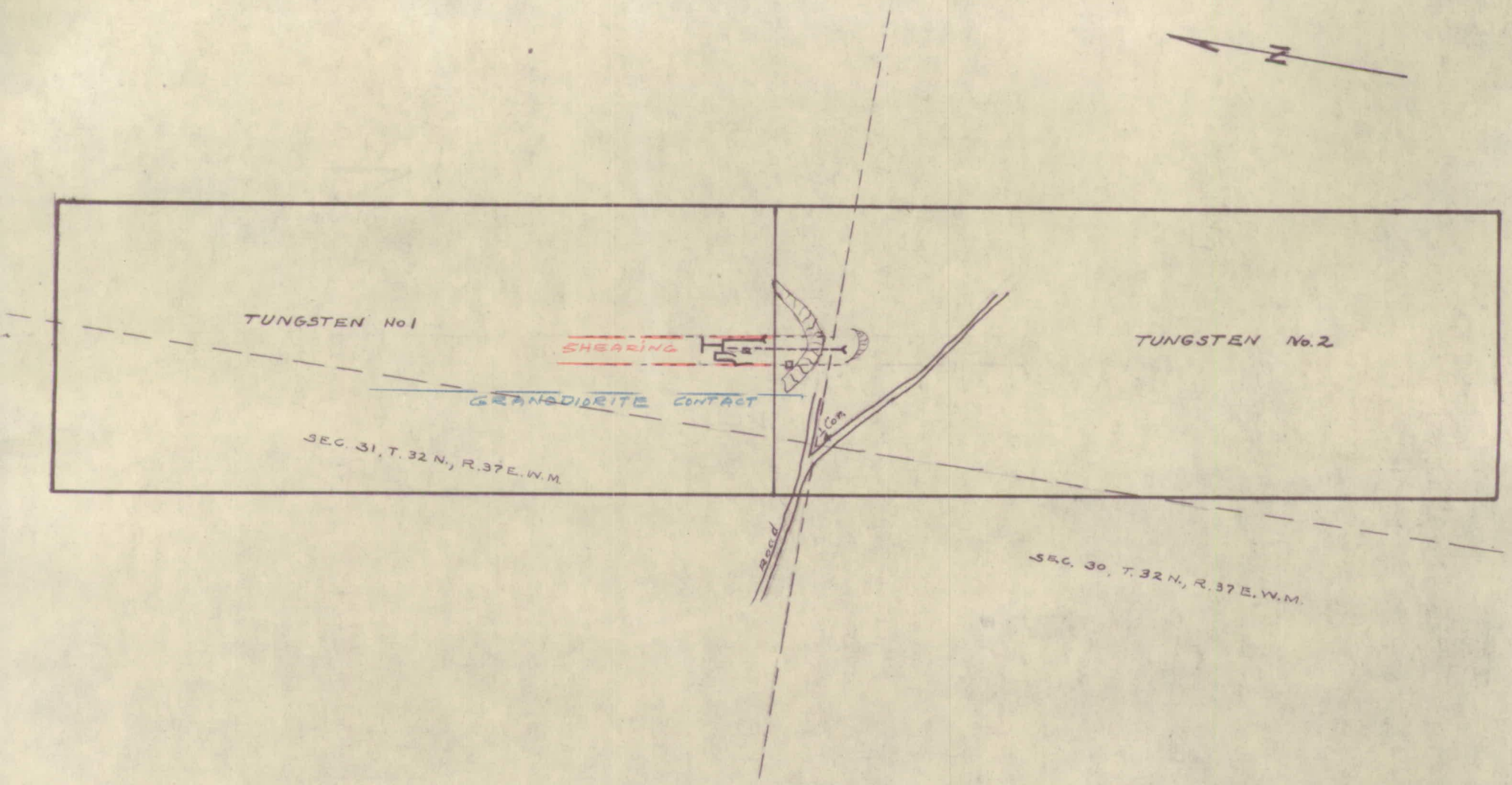
Robert R Lackey
County Auditor.

By _____ Deputy.



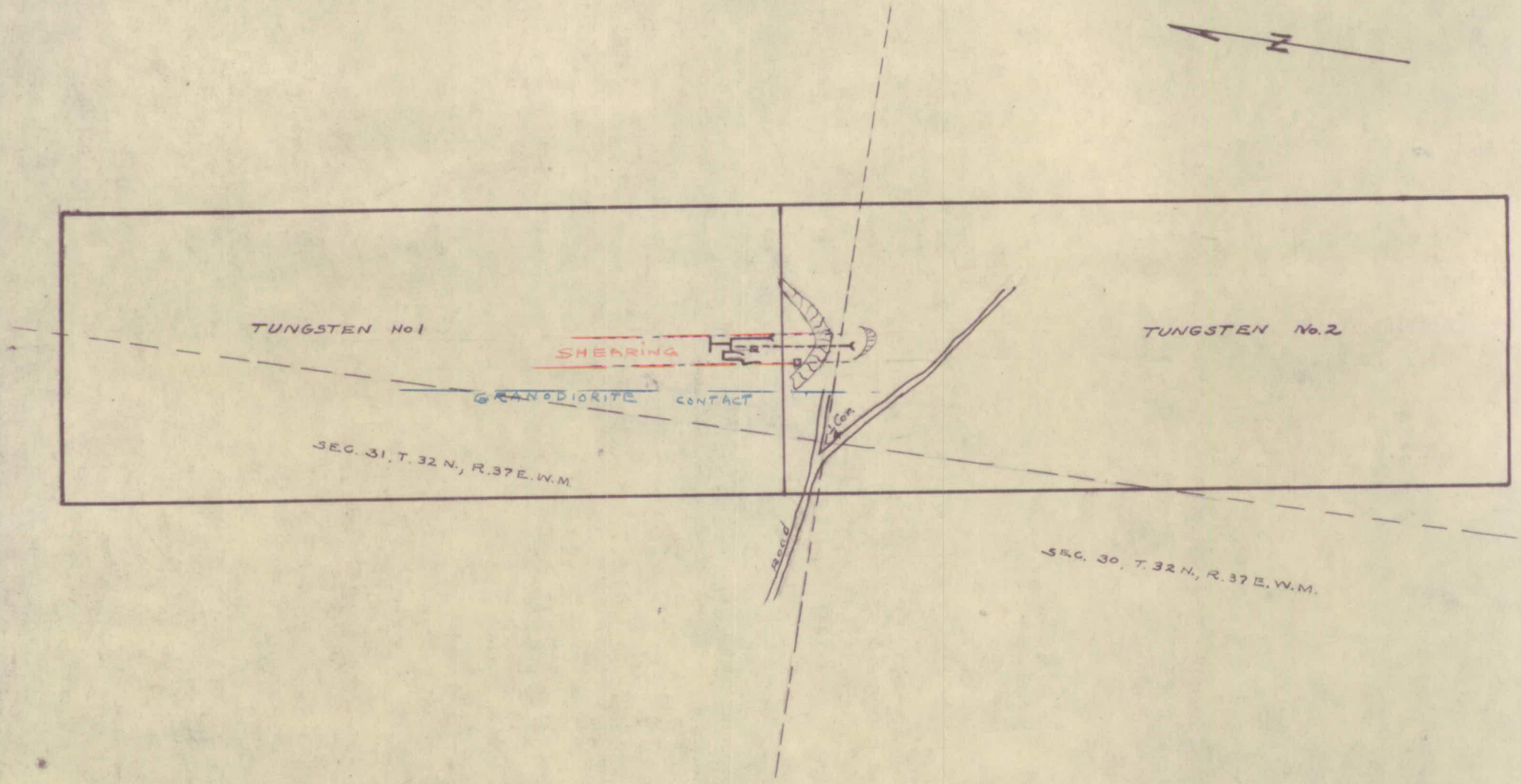
SILVER LEAF MINE
ENTERPRISE MINING DIST.
FERRY COUNTY, WASHINGTON
Scale 1" = 300'
April, 18, 1952

R.J. Horsman
Eng.



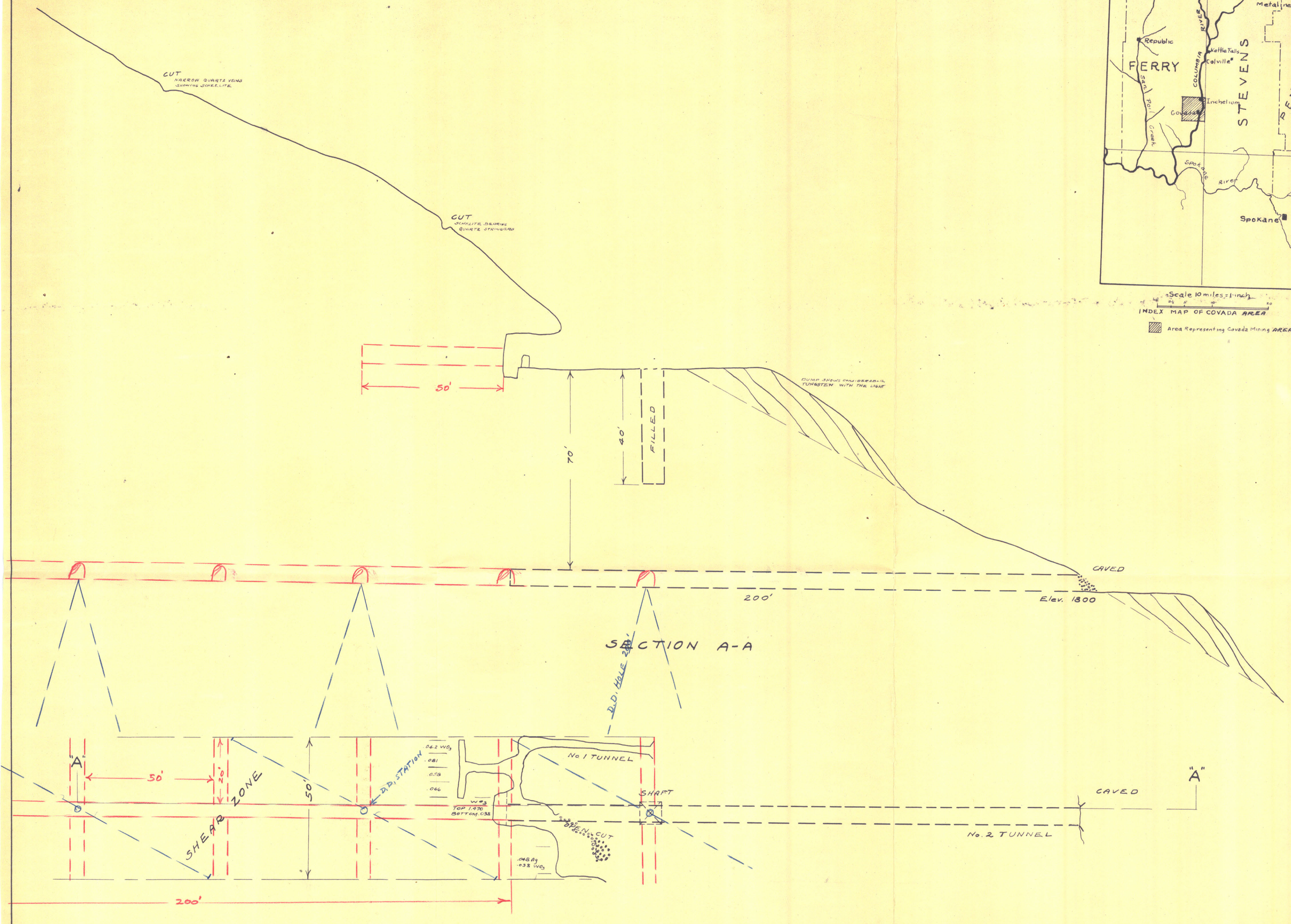
SILVER LEAF MINE
ENTERPRISE MINING DIST.
FERRY COUNTY, WASHINGTON
Scale 1" = 300'
April, 18, 1952

R.J. Horsmon
Eng.

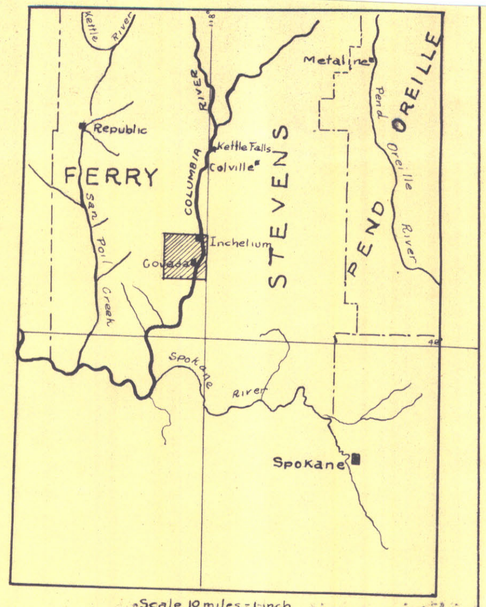


SILVER LEAF MINE
ENTERPRISE MINING DIST.
FERRY COUNTY, WASHINGTON
Scale 1" = 300'
April, 18, 1952

R.J. Horsman
Eng.



PLAN OF WORKINGS
STRIKE N10°W



INDEX MAP OF COVADA AREA

Area Representing Covada Mining AREA

SILVER LEAF MINE

SE¼ SW¼ SEC. 30 T. 32 N., R. 37 E. 7½ MILES
SW OF INCHELIUM, FERRY CO. WASHINGTON
Scale 1" = 20'
JAN. 1952

R. H. Hannan Eng.