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DOCKET
Surname:
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AUG 22 1955

Messrs. John L. Overley, Loren D. Overley,
and Eugene A. Scoby,
Route 2, Box 444
Boulder, Colorado

Re: Docket No. DMEA 3785, Tungsten
Elsie Mine
Boulder County, Colorado

Gentlemen:

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

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

Careful study of our information indicates that although tungsten ore has been mined from the property, the probability of disclosing minable ore reserves by your proposed program is not sufficiently promising to justify Government participation. We regret to advise you, therefore, that your application for exploration assistance is denied.

Our denial, however, is made without prejudice to the property. If at some future date additional prospecting finds evidence of significant tungsten mineralization, we shall be glad to consider a revised application for exploration assistance. The revised application should contain all of the necessary supporting data required by Form MF-103 and refer to the present docket.

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

Sincerely yours,

C. O. Mittendorf

Administrator

cc: Docket
Adm. Read. File
Operating Committee
Code 400
Thor Kiilsgaard, USGS
Robt. Helliday, USBM
FT, Region 3

SPHolt/ls
8/16/55

DOCKET
Surname: ~~Hol~~ Chapman Holliday

August 16, 1955

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Denial of request for exploration assistance in the amount of $15,165.00
Docket No. DMEA 3785 - Tungsten
John L. Overley, Loren D. Overley, and Eugene A. Scohy
Elsie Mine
Boulder County, Colorado

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

(1) The applicants, John L. Overley, Loren D. Overley, and Eugene A. Scohy, Route 2, Box 444, Boulder, Colorado, requested exploration assistance in the amount of $15,165.00 for drifting and raising on and from the 4th level of the Elsie mine.

(2) The applicants control, by lease from the owners, W. L. Tanner, S. H. Tanner, Nina Tryon and Guy Tanner, the following patented mining claims:

Elsie No. 5 lode mining claim,	U.S. Min. Sur. No. 18534
Elsie Mill Site	U.S. Min. Sur. No. 19120
Windy lode mining claim	U.S. Min. Sur. No. 19640

located in the Grand Island Mining District, Boulder County, Colorado.

(3) The proposed program is to explore the property by 400 feet of drifting and 100 feet of raising on and from the 4th (320 ft.) level of the Elsie mine.

(4) Although there has been significant production of tungsten ore from the Elsie vein on upper levels, on the 4th level, where the applicants propose to explore, the vein has been cut 15 to 20 feet below the bottom of the ore shoot. It there contains no visible ferberite and only very minor amounts of quartz. The zone of shearing is relatively strong.

(5) The Field Team concludes that there is little probability of making a significant discovery and recommends denial. The Commodity Divisions of the Geological Survey and the Bureau of Mines concur in this recommendation.

(6) The applicant is now drifting southwesterly from the Elsie shaft on the 3rd level. Should this work indicate geological conditions favorable for ore southwest of the shaft, a new application for exploration assistance would be in order.

Thos. L. Chapman, Acting Chief
Iron and Ferro-Alloys Division

cc: Docket
Adm. Read. File
Code 400
Oper. Committee

SPHolt/ls
8/16/55

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

August 16, 1955

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Denial of request for exploration assistance in the amount of $15,165.00
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Thos. L. Chapman

Thos. L. Chapman, Acting Chief
Iron and Ferro-Alloys Division

IN REPLY REFER TO:

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

Docket

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AUG - 9 1955

August 9, 1955

Memorandum

Copy retained 400

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

From: W. P. Williams, U. S. Geological Survey

Subject: Review of Field Team Report, DMEA Docket No. 3785, Overley, Overley, and Scoky, Elsie Mine (Tungsten), Boulder County, Colorado.

I have studied both the subject application and the report of field examination. The property is located in the well-known and highly productive Beaver Creek area of the Boulder County tungsten district. According to the report, " . . . the Elsie vein reportedly contained some of the purest, highest grade ferberite mineral in the district." From these facts it would seem that prospects for new discoveries by exploring extensions of the Elsie vein would be excellent.

However, the examining geologist is of the opinion that the known ore shoot on the Elsie vein has been fully developed and mined.

The applicant is conducting exploration work in the mine on his own account. Under the conditions I must concur with the examining team's recommendation that the application for DMEA assistance be denied. Should the work currently being done by the applicant show geologic criteria favorable for the occurrence of ore then it would undoubtedly be appropriate to consider a new application covering the subject property.

WPW

W. P. Williams

WPWilliams:iml
G-8/9/55
cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
R. Holliday, 3513

Docket

IN REPLY REFER TO:

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

RECEIVED
AUG - 9 1955

Copy retained 400

August 9, 1955

Memorandum

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

From: W. P. Williams, U. S. Geological Survey

Subject: Review of Field Team Report, DMEA Docket No. 3785, Overley, Overley, and Scohy, Elsie Mine (Tungsten), Boulder County, Colorado.

VSM

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However, the examining geologist is of the opinion that the known ore shoot on the Elsie vein has been fully developed and mined.

The applicant is conducting exploration work in the mine on his own account. Under the conditions I must concur with the examining team's recommendation that the application for DMEA assistance be denied. Should the work currently being done by the applicant show geologic criteria favorable for the occurrence of ore then it would undoubtedly be appropriate to consider a new application covering the subject property.

W P Williams

W. P. Williams

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

Docket

224 New Customhouse
Denver 2, Colorado

July 28, 1955

Memorandum

To: Secretary to the Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: Joint Report of Examination, DMEA Docket 3785 (Tungsten), J. L. Overley, L. D. Overley and E. A. Scohy, (Elsie mine), Boulder County, Colorado

Enclosed are the original and three copies of the report pertaining to the above application.

The examining team concludes that there is little chance of finding significant amounts of tungsten ore by the proposed exploration and they recommend denial of the application.

We concur in this recommendation.

DMEA Field Team, Region III

W. M. Traver

E. N. Harshman

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
8-8-55
(date)

IN REPLY REFER TO:

Date Rec'd.

JUL 25 1955

BUREAU OF MINES
Denver, Colorado

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Defense Minerals Exploration Administration
Denver Federal Center
Denver, Colorado

July 22, 1955

TRANSMITTED
JUL 28 1955

Memorandum

To: Executive Officer
DMEA Field Team, Region III

From: E. N. Harshman
John F. Shaw

Subject: DMEA Docket 3785 (tungsten), J. L. Overley, L. D. Overley, and E. A. Scohy, Elsie Mine, Boulder County, Colorado

Enclosed are the original and eight copies of a joint geologic and engineering report by E. N. Harshman, U. S. Geological Survey, and R. L. Bolmer, U. S. Bureau of Mines, covering their examination of the subject property.

The applicants applied for Government assistance to explore for tungsten ore by 400 feet of drifting and 100 feet of raising on and from the 4th level of the Elsie mine at an estimated cost of $15,165.00.

A field examination was made on May 27, 1955, and again on July 5, 1955. The examining team concludes that there is little chance of finding significant amounts of tungsten ore by the proposed exploration and recommends denial of the application for exploration assistance.

We concur in this recommendation.

E. N. Harshman
E. N. Harshman
Member, Field Team

John F. Shaw
John F. Shaw
Supervising Mining Engineer

Enclosures (9)

ENHarshman:arh

Reviewed by
DMEA OPERATING COMMITTEE
8-8-55
(date)

RECEIVED
AUG - 4 1955

DMEA
Date Rec'd
JUL 25 1955
BUREAU OF MINES
Denver, Colorado

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA 3785

Elsie Mine

Grand Island Mining District

Boulder County, Colorado

Tungsten

Joint Engineering and Geologic Report

by

R. L. Bolmer, Mining Engineer
Bureau of Mines

E. N. Harshman, Geologist
Geological Survey

Reviewed by
DMEA OPERATING COMMITTEE
8-8-55
(date)

July 21, 1955

DMEA 3785
ELSIE MINE
GRAND ISLAND MINING DISTRICT
BOULDER COUNTY, COLORADO

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INTRODUCTION

J. L. Overley, L. D. Overley, and E. A. Scholy of Nederland, Colorado, have made application for Government assistance to explore for tungsten ore (ferberite) in the Elsie mine, Grand Island mining district, Boulder County, Colorado. Their proposed program consists of 400 feet of drifting on the 320-foot level of the Elsie mine and 100 feet of raising from the proposed drift southwest of the Elsie shaft. Their estimated cost of the proposed work is $15,165.00.

The property was examined on May 27, 1955, by R. L. Bolmer, U. S. Bureau of Mines, and E. N. Harshman, U. S. Geological Survey. The applicants were present at the time of the examination. The property was re-examined by R. L. Bolmer on July 5, 1955, to ascertain if the applicants were successful in locating old workings reported to exist southwest of the Elsie shaft third level.

It is concluded that the known ore shoot on the Elsie vein has been fully developed and mined out. It is further concluded the chance of finding new ore shoots by the proposed exploration program or a modification of that program is remote. Denial of the application for exploration assistance is therefore recommended.

LOCATION, TOPOGRAPHIC, AND PHYSICAL FEATURES

The Elsie mine is located in the SE 1/4 sec. 19, T. 1 S., R. 72 W., 6th principal meridian, Grand Island Mining District, Boulder County, Colo. It is in the Beaver Creek area at the southwestern end of the Boulder County tungsten district (fig. 1). The property is accessible south and east from Nederland, Colo., via 3 miles of State Highway 119 and 1 mile of State Highway 72. The surface plant and the collar of the Elsie shaft are reached by a short but steep mine road that branches northeasterly from Highway 72. The property is accessible the year around.

The portal of the Windy Tunnel (1st level of the Elsie shaft) is adjacent to Beaver Creek and Highway 72 at an altitude of approximately 8,280 feet. The collar of the Elsie shaft is some 300 feet northeast of the tunnel portal and about 100 feet higher in elevation on the southern flank of Tungsten Mountain. Tungsten Mountain rises to an altitude of 8,922 feet about one-third mile northeast of the shaft.

The nearest custom mill for tungsten ores is located at Nederland. Boulder, Colo., the nearest commercial center, is 17 miles east of Nederland on Highway 119. Rollinsville, a shipping point on the D & RGW RR, is 4 miles south of the mine on Highway 119. The transmission lines of the Public Service Company of Colorado extend to the surface plant. Ample water for mining purposes is available from the underground workings and from Beaver Creek.

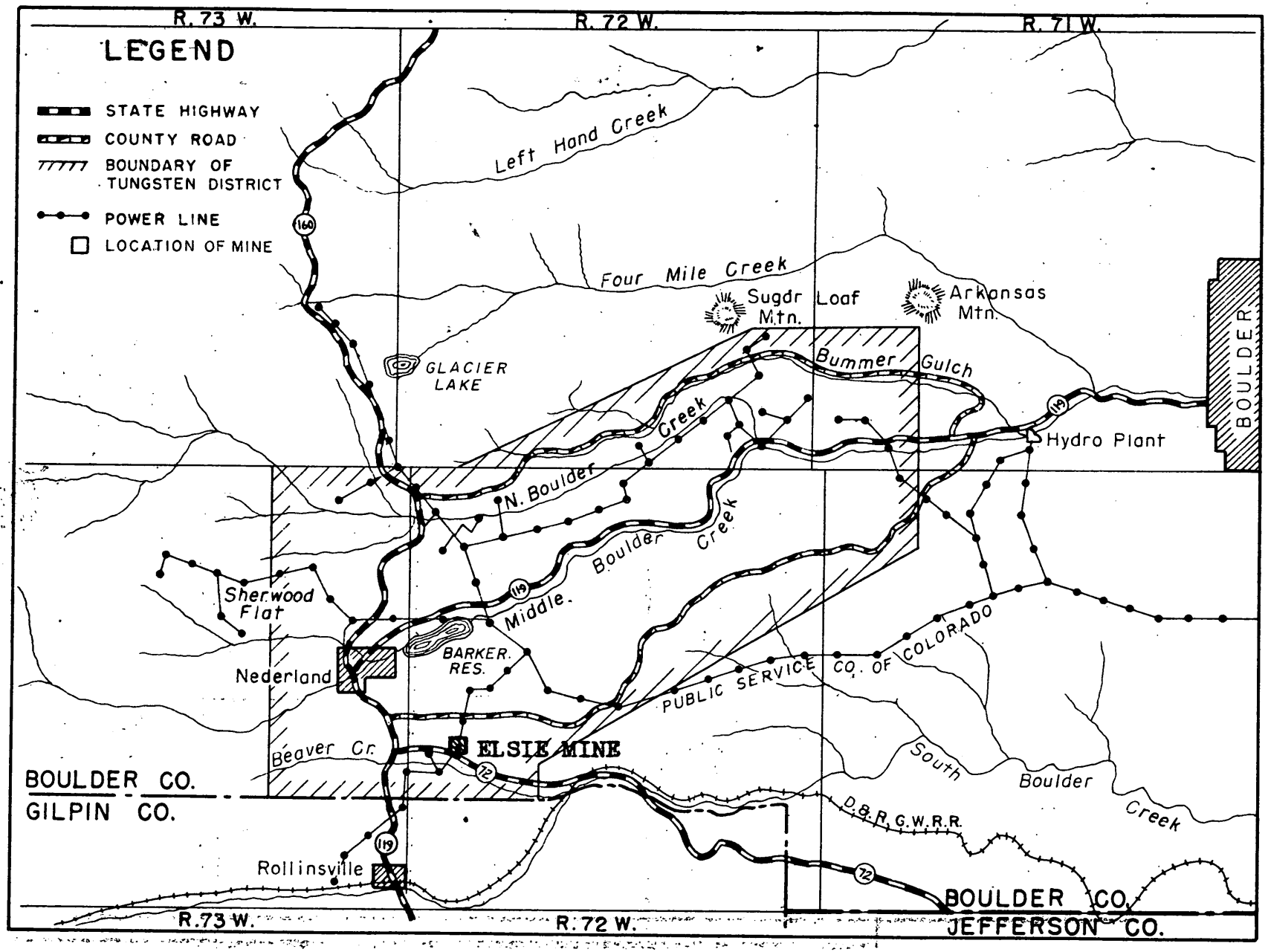


FIGURE 1 - INDEX MAP OF THE BOULDER COUNTY TUNGSTEN DISTRICT, COLORADO SHOWING LOCATION OF ELSIE MINE. (Overley, Overley, and Scohy - DMEA 3785)

HISTORY AND PRODUCTION

The Elsie vein was discovered in 1905. During the period 1906-10, its outcrop was developed and mined by means of a series of surface pits and shallow shafts. The Windy Tunnel was started in 1910 and extended at various periods until 1917. The Elsie mine was operated again during 1916-18. Production during this period, mostly from below the tunnel level, is estimated at about 2,000 short ton units tungsten trioxide valued at from $40,000 to $50,000. The mine was reactivated during World War II by its present owners who deepened the shaft and extended the lower laterals. The production during this period reportedly was small and was obtained mostly from the old stope fill. The total production from the Elsie vein since its discovery has been estimated at about 16,180 short ton units of tungsten trioxide.

The single continuous ore shoot on the Elsie vein reportedly contained some of the purest, highest grade ferberite mineral in the district. The mineral was finely crystaline. The ore was easily milled and produced concentrates containing up to 70 percent WO_3. The vein, which was mined up to widths of 5 feet, reportedly averaged 6 to 8 percent WO_3.

The Beaver Creek area is a highly productive section of the tungsten district. Several mines to the north, east, and west of the Elsie have a large past production of tungsten. In addition, a number of smaller mines, all with some reported past production, occur in the immediate vicinity. The principal mines in the area, with their total reported or estimated past production, are listed below.

Mine	Location	Production through 1953 (short ton units WO_3)
Mamouth	Sec. 19, T. 1 S., R. 72 W.	45,513
Fitzsimmons No. 1	" " "	3,550
Fitzsimmons No. 2	" " "	4,000
Sunday	" " "	6,238
Tungsten	" " "	68,887
Black Rover	Sec. 20, " "	8,757
Rambler	Sec. 24, " R. 73 W.	19,099
Blackhawk	" " "	8,255

In 1954 the Elsie claim was leased by Glen W. Thau and R. E. Stark who started unwatering the workings and rehabilitating the Elsie shaft and, in October of that year, made application for exploration assistance (Docket No. DMEA 3538). An examination of the property was scheduled by the DMEA Field Team but, at the time, only the upper workings of the mine had been unwatered and a decision regarding the application was deferred until the lower levels were accessible. There also was a question as to the ownership and status of the Black Metal claim (U. S. Mineral Survey 17710), which, according to Government land maps, was in conflict with the applicants' leased property. The applicants continued work at the mine and eventually unwatered and rehabilitated the shaft to a depth of 265 feet. Their request to the Bureau of Land Management, Washington, D. C., regarding clarification as to the status of the property, was never acknowledged. Their application for exploration assistance was withdrawn March 17, 1955, due to the illness of one applicant.

The present applicants for exploration assistance (Overley, Overley, and Scohy - Docket No. DMEA 3785) leased the property in April 1955. They unwatered and reopened the workings to the bottom of the shaft (320 feet). They started drifts on the Elsie vein from the bottom of the shaft and began pulling old stope fill from along the 2nd level. To the date of examination, they had recovered some 100 tons of fill material which reportedly would average about 0.75 percent WO_3.

OWNERSHIP AND EXTENT

The applicants - John Overley, Eugene Scohy, and Loren Overley - are lessees of the following patented and contiguous mining property:

Elsie No. 5 lode mining claim	- U. S. Mineral Survey No.	18534
Elsie mill site	- " " " " "	19120
Windy lode mining claim	- " " " " "	19640

Most of the exposed surface outcrop and most of the underground development of the Elsie vein occurs within the boundaries of the Elsie claim. The lower developed sections of the vein to the northeast of the Elsie shaft, occur on the extralateral rights of that claim. The mill site and the Windy claim would include any possible southwesterly extension of the vein.

The owners (W. L. Tanner, S. H. Tanner, Nina Tryon, and Guy Tanner of Boulder, Colo.) have leased the property to the applicants for a period of two years, beginning April 12, 1955. The lease provides for a royalty payment to the lessors of 20 percent of the proceeds from the sale of all ores mined or removed from the property. The Tanner family owns a

block of some 20 other claims in the vicinity of the Elsie mine which adjoin, overlap, and are contiguous with those leased to the applicants.

The Black Metal claim (U. S. Mineral Survey No. 17710), as shown on both the section and plat maps in the records of the Bureau of Land Management, covers essentially the same area as does the Elsie claim and also includes the workings on the Elsie claim. The survey number indicates that this claim may be the earlier location. Whether or not this claim actually was patented and, if so, who presently owns it, will have to be determined. Any other conflicts with the property leased to the applicants would involve ground owned by the Tanner family and probably could be resolved without difficulty.

GEOLOGY

The Boulder tungsten district lies on the east flank of the Front Range on the northeastern end of what has been termed the Front Range Mineral Belt. The district is underlain by Precambrian rocks, including coarse-grained gneissic granite (quartz monzonite) of the Boulder Creek batholith, and older schists and gneisses of the Idaho Springs formation. Pegmatite and gneissic aplite, probably related to the Boulder Creek granite, occur in dikes and irregular masses. The Precambrian rocks are intruded by a number of dikes of various rock types, all believed to be Tertiary in age.

The most conspicuous structural feature in the district is a series of persistent northwest striking brecciated shears known as "breccia reefs". They are probably Paleocene in age and pre-date the northeasterly

to easterly trending fractures that contain the ferberite-bearing veins. Some of the "breccia reefs" have strike lengths of as much as 15 miles.

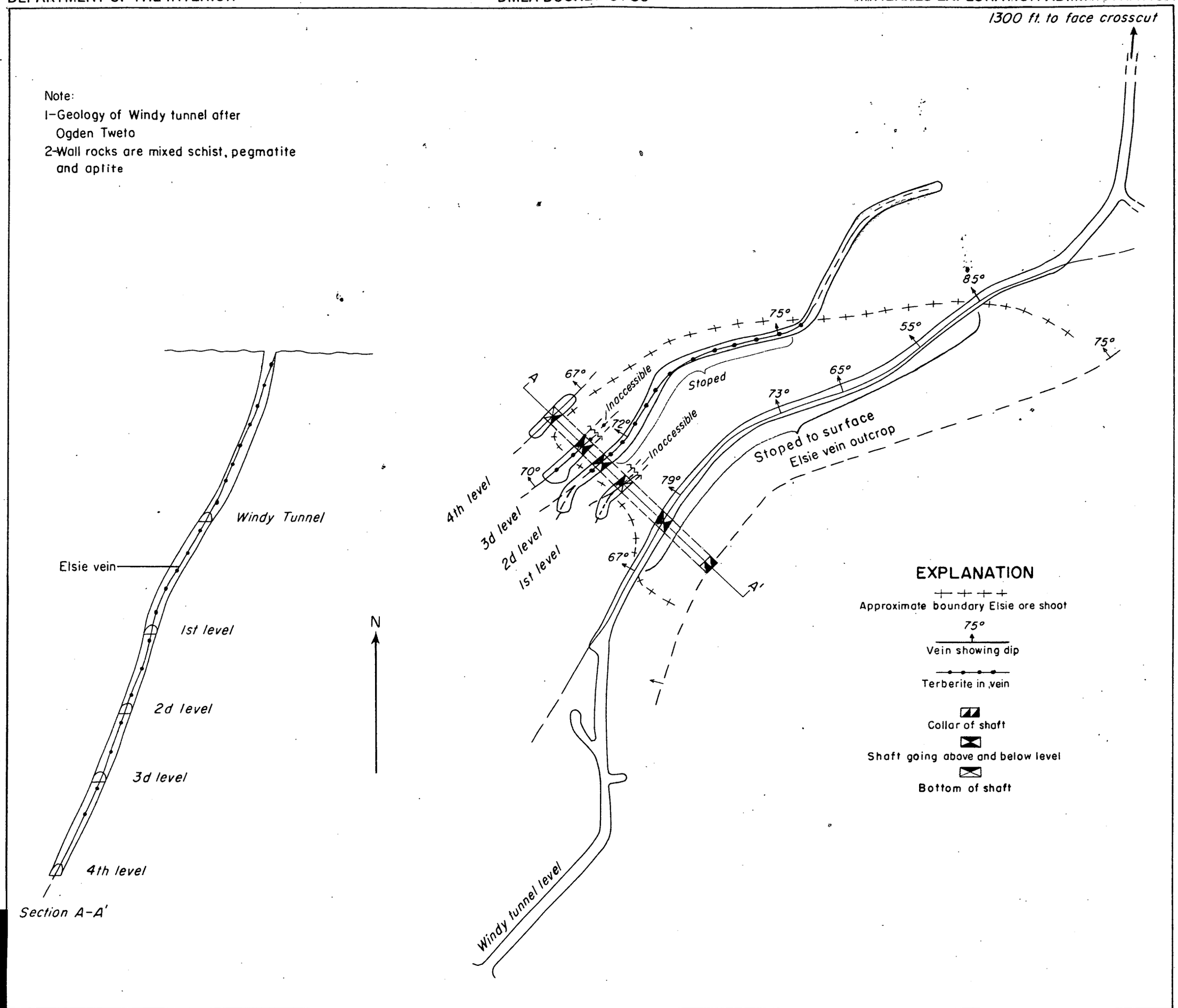
The Elsie mine is in the Beaver Creek area, the southernmost of three distinct productive areas in the Boulder tungsten district. A significant production has been made from several ore shoots in north and northeasterly striking veins cutting schist, aplite, and pegmatite.

The Elsie vein follows a strong fracture in schist and gneissic aplite. The strike of the vein ranges from N. 25° E. to N. 60° E., and the dip ranges from 60° to 70° northwest (fig. 2). Wall rock alteration has not been intense except in the more micaceous or chloritic parts of the schist where considerable greenish clay has been formed.

Although most of the ore has been removed from the known shoot on the Elsie vein, an examination of the now accessible workings confirms the report that the ore was as much as 5 feet wide in that part of the shoot on and above the Windy Tunnel level. Below that level maximum ore widths appear to have decreased with increasing depth. Near the surface the shoot was about 250 feet long but with increasing depth the length decreased rapidly. As shown on figure 2 the southwestern edge of the ore body is almost vertical while the northeast edge plunges southwesterly.

Ferberite is reported to have occurred along with horn quartz as a cement in brecciated country rock. The mineral was coarsely crystaline and of high WO_3 content. Ore assayed from 6 to 8 percent WO_3.

On the 4th or bottom level, where the applicants propose to explore, about 30 feet of drifting has exposed the Elsie vein 15 to 20 feet below



E. N. Harshman, July, 1955

FIGURE 2.-PLAN AND SECTION ELSIE MINE, BOULDER COUNTY, COLORADO

60 0 120 Feet

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AUG - 4 1955

the apparent bottom of the ore shoot. The vein is in aplitic granite and consists of somewhat silicified wall rock. It contains no visible ferberite and only very minor amounts of horn quartz. The zone of shearing is relatively strong.

A review of data on the elevations of the bottoms of known ore shoots in other mines in the immediate vicinity of the Elsie, shows that without exception those ore shoots ended somewhat above the elevation of the bottom level in the Elsie mine. From the data at hand it appears that exploration on the bottom level offers little possibility of discovering significant amounts of tungsten ore.

Workings on the Elsie 2nd level are reported to extend several hundred feet southwesterly from the shaft. Two stopes are reported to have been worked from the purported workings. Although the present operator, and prior operators, have attempted to locate the reported drift, no evidence of its existence has been found. The reported workings are, therefore, assumed to be the 2nd level northeast drift shown on Figure 2.

Southwest of the present workings is a block of ground that has not been explored below the Windy Tunnel level. Although this block of ground might contain ore, geologic data from the Windy Tunnel level and from the short drifts southwesterly from the shaft do not indicate its presence in that area.

PRESENT STATUS

Exploration and Development

The existing development of the Elsie vein is shown on Figure 2. The Elsie shaft and the levels off that shaft are free of water, timbered, and accessible except where indicated.

The Windy Tunnel crosscut a number of veins in its 1,600-foot extension to the north of the Elsie shaft. None of the veins intersected were mineralized at the tunnel level and the tunnel north of the Elsie vein has no recorded production.

Mining Equipment and Other Facilities

The mine has been unwatered and is in operating condition. A large surface building at the collar of the Elsie shaft houses a gasoline-powered mine hoist and a Diesel air compressor. The building also serves as a repair shop and a change house. The two-compartment shaft is equipped with skids for a hoisting bucket and a suitable manway. It is provided with an adequate headframe. A compressed air line, a pump column, and a power cable to the sump pump are extended down the shaft. Mine rail is laid along only part of the old laterals. The applicants own most of the equipment and tools necessary for a small scale mining operation.

Project Proposals with Costs

The applicants propose to explore the Elsie vein in either direction from the bottom or 320-foot level of the Elsie shaft by means of

drifting a total of 400 feet on the vein (200 feet northeasterly and 200 feet southwesterly from the shaft) and raising on the vein a total of 100 feet from the southwest drift (fig. 2). They estimate that the proposed project will cost a total of $15,165.00.

The costs of the project, as estimated by the applicants, are considered reasonable and are about average for similar work being performed elsewhere in the district. The drifting proposed by the applicants is straight forward enough and is a technically feasible method of exploring the structure. No unusual difficulties should be encountered in the proposed work.

CONCLUSIONS AND RECOMMENDATIONS

It appears that the known ore shoot on the Elsie vein has been fully developed and, with the exception of a few pillars and possibly a small amount of ore immediately below the 3rd level, it has been mined out. Although the structure along which the vein occurs is well defined on the 4th or bottom level, it contains no visible ferberite and it is believed that the exploration requested by the applicant on this level will not lead to the discovery of significant amounts of tungsten ore.

The most likely area to explore for a new ore shoot is the block of ground southwest of the Elsie shaft and between the Windy Tunnel and the 3rd level. There is no data to indicate a geological probability of finding ore in that area, in fact the "hungry" character of the Elsie vein on the Windy Tunnel southwest of the shaft has discouraged exploration in that readily accessible portion of the mine.

It is concluded that the requested exploration will not lead to the discovery of significant amounts of tungsten ore, and it is recommended that the request for exploration assistance (DMEA Docket 3785) be denied.

The applicant is now drifting southwesterly from the Elsie shaft on the 3rd level. Should this work indicate geological conditions favorable for the occurrence of ore southwest of the shaft, a new application for exploration assistance would be in order.

DOCKET
SURNAME
400 Chapman
Martin
Holliday
Johnson

MAY 1 0 1955

Mr. W. M. Trever, Executive Officer
DMEA Field Team, Region III
224 New Custom House Building
Denver 2, Colorado

Re: Docket No. DMEA 3785 - Tungsten
J. L. Overlay, L. D. Overlay,
and E. A. Seeley
Elsie Mine
Boulder County, Colorado

Dear Mr. Trever:

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

Two copies of a relevant memorandum dated May 2, 1955, by E. L. Newcomb, Geological Survey, are enclosed for your information.

Sincerely yours,

W. S. Martin
ACTING Chairman, Operating Committee (SLB)

Enclosure

TLChapman:fec 5-6-55
cc to: Docket
Code 400
Adm. Reading File
Operating Comm.
FT. REG. III
Messrs. Holliday, USBM
Kiilsgaard, USGS

APPROVED:

/s/ C. H. Johnson (SLB)
Member, Bureau of Mines

/s/ R. D. Trace (SLB)
Member, Geological Survey

R.C.S.

DOCKET
SURNAME
Chapman
400 Martin
Trace
Johnson

MAY 10 1955

Messrs. John L. Overley, Loren D. Overley,
and Eugene I. Rocky
Route 2, Box 444
Boulder, Colorado

Re: Docket No. DMEA 3765 - Tungsten
Klein Mine
Boulder County, Colorado

Gentlemen:

The above-docketed application for exploration assistance for tungsten has been reviewed by the Iron and Ferro-Alloys Division of the Defense Minerals Exploration Administration and referred to Mr. W. M. Trover, Executive Officer, DMEA Field Team, Region III, 224 New Custom House Building, Denver 2, Colorado, for a field examination of the property.

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

Sincerely yours,

Frank E. Johnson (for)

ACTING Administrator

TLChapman:foc
5-6-55
cc to: Docket
Code 400
Adm. Reading File
Operating Comm.
FT. REG. III
Messrs. Holliday, USBM
Kiilsgaard, USGS

R.C.S.

Mining Lease expires
April 12, 1957
Renewable for two years

Docket

IN REPLY REFER TO:

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

Defense Minerals Administration
RECEIVED
MAY 3 1955

May 2, 1955

3785

Copy retained 400

Re: E. A. Scohy, J. L. Overley & L. D. Overley
(Elsie Mine)
Boulder Co., Colo.
$14,265 - Tungsten

WSM

Memorandum

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

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

Subject: Review of application

The operator has proposed to drift 400 feet on the 320 level and raise 100 feet from the drift southwest of the Elsie shaft.

All of the old workings are accessible for examination. However, the mine apparently is not currently in production.

A brief description of the property is given in the U.S.G.S. Prof. Paper 245 (1953), Geology and Ore Deposits of the Boulder County Tungsten District, Colorado by T. S. Lovering and O. Tweto.

The Windy tunnel portal is 300 feet S. 25 W. of Elsie shaft. The tunnel is the first level of the Elsie shaft. Ore shoot is about 250 feet long near the surface. Some ore mined on level below tunnel. Ore shoot plunges steeply southwest. Coarsely crystalline and very pure ferberite in veinlets and cementing breccia of country rock in sheeted zone up to 5 feet wide. Ore assayed 6 to 8 percent WO_3.

The Elsie vein was mined from 1906 to 1910, from 1913-1914, 1916-1917 and from 1943 to 1944. Total output of Elsie shaft unknown but fairly large. Production in 1916-1918 valued at $50,000 for about 2,000 units of WO_3.

Inasmuch as the property is accessible for inspection and there is some possibility that further exploration is warranted, I recommend the application be referred to the Field Team for their review and recommendation.

E. L. Newcomb

E. L. Newcomb

April 22, 1955
Subject: DMEA 3785
Re: Exploration Assistance
Elsie Mine, Windy Tunnel

Messrs. John L. Overley, Eugene A.
Scohy, and Loren D. Overley
Route 2, Box 444
Boulder, Colorado

Gentlemen:

The receipt of your application dated April 15, 1955 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA 3785 and referred to the Iron and Ferro-Alloys Division.

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

Sincerely yours,

Robert E. Adams, Chief
Operations Control and
Statistics Division

60932

April 22, 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number

There is listed below the assigned docket number to an application recently received from Region III.

DMEA-3785 John L. Overley, Eugene A. Scohy, Loren D. Overley

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

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

Department of the Interior
Defense Minerals Administration
RECEIVED
APR 25 1955

224 New Customhouse
Denver 2, Colorado

April 18, 1955

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region III

Subject: Application for DMEA assistance (Tungsten), Eugene A. Scohy, John L. Overley and Loren D. Overley - Elsie mine, Grand Island Mining District, Boulder County, Colo.

Enclosed are the original and two copies of the subject application for Government assistance to explore the Elsie mine for tungsten at an estimated cost of $15,165.00. One copy of the operating lease is enclosed with the original copy of the application.

W. M. Traver

Enclosures

W. M. Traver

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

Department of the Interior
Defense Minerals Administration
RECEIVED
APR 22 1955

224 New Customhouse
Denver 2, Colorado

April 18, 1955

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region III

Subject: Application for DMEA assistance (Tungsten), Eugene A. Scohy, John L. Overley and Loren D. Overley - Elsie mine, Grand Island Mining District, Boulder County, Colo.

Enclosed are the original and two copies of the subject application for Government assistance to explore the Elsie mine for tungsten at an estimated cost of $15,165.00. One copy of the operating lease is enclosed with the original copy of the application.

W. M. TRAVER

Enclosures

W. M. Traver

The Elsie Lode Mining Claim No. 5, U. S. Survey Lot No. 18534; the Elsie Mill Site, U. S. Survey Lot No. 19120, and the Windy Claim, U. S. Survey Lot No. 19640, situated in the Grand Island Mining District in the County of Boulder and State of Colorado, together with all the privileges and appurtenances thereunto belonging, and subject to exemp

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
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APR 22 1955

DMEA
Date Rec'd
APR 15 1955
BUREAU OF MINES
Denver, Colorado

Form Approved.
Budget Bureau No. 42-R[illegible]

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

Not to be filled in by applicant

Docket No. 3785
Metal or Mineral Tungsten
Date Received 4-22-55
Estimated Cost $14,265
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address:

Eugene A. Scohy 2012 Marine St. Boulder, Colorado
Persons contacted: John L. Overley Rt. 2 Box 444 Boulder, Colorado
Loren D. Overley Rt. 2 Box 444 Boulder, Colorado

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

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

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

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

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

(*b*) State any mine name by which the property is known. Elsie Mine--Windy Tunnel

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

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

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

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

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

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

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

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

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

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

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

(*c*) The work will start within 10 days and be completed within 8 months from the date of an exploration project contract.

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

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

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

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

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

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

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

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

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

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

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

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

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

☐ Money ☒ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated 15 April, 1955

(Applicant)

By John F. Overley

Eugene Sroby

Karen D. Overley

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

(4A) At the present time working consists of 320 feet of shaft. Ore shoot mined from Windy Tunnel level to surface, approximately 250 feet in length and 102 feet in height. Drift driven on the two hundred foot level northeast and stoped approximately 150 feet in length. No drift to southwest. Drift driven on 250 foot level northeast stope through three raises. No drift to suthwest. New lift sunk in shaft to 320 foot level. No drift driven. We are the present lessees. Mine is completely unwatered, retimbered, and accessible throughout.

DEPARTMENT OF THE INTERIOR
Bureau of Mines-Minerals Administration
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APR 22 1955

(4B) Mine discovered in 1905 and worked continually through 1918--only production record available was 1916 through 1918. Value of ore mined during these two years about $ 50,000.00. Vein is as much as 5 feet wide--ore assayed 6 to 8 percent WO_3. Total output large.

(4C) Ore was coarsely crystalline to very pure ferberite in veinlets and cementing breccia of country rock in sheeted zones as much as 5 feet wide.

Our reason for wishing to explore is that no drifting or exploration has been made southwest of the shaft on any levels. Also in the new lift sunk the pitch of the vein steepens and the rock changes to pegmatite and aplite--two things which help to influence the locations of ore.

(4D) Elsie Mine located a few hundred feet from Colorado Highway 72--2½ miles from Nederland for milling.

(4E) No shortage of supplies, equipment, or water or power. We plan to do the work ourselves so no manpower problem.

(5B) Our greatest interest lies in the fact that, although this shaft is 320 feet deep, no work has been done on any level to the South west. We wish to drive two hundred feet of drift each way from the new lift sunk in the shaft, and one hundred feet of raise in the South west drift if no ore is found in the drift.

(5D) Operating experience:

Eugene A. Scohy--22 years hard rock mining experience

John L. Overley--9 years hard rock mining experience

Loren D. Overley--5 years hard rock mining experience

The above time is chiefly years that we have leased or operated property of our own.

(6B) Labor

One hoistman	$ 1.75 per hour	
Two miners	$ 1.75 per hour	
Total labor cost for proposed exploration work		$ 8736.00

(6C)	Powder 3½ tons @ $ 430.00 per ton	$ 1505.00
	Fuse	$ 160,00
	Caps	$ 70.00
	Carbide insert steel (9 pieces)	$ 180.00
	Lamp carbide	$ 16.00
	Track spikes	$ 25,00
	Power (Public Service Co. of Colorado) per month	$ 100.00
	Oil and grease	$ 30.00
		$ ~~2906.00~~ 2086.00

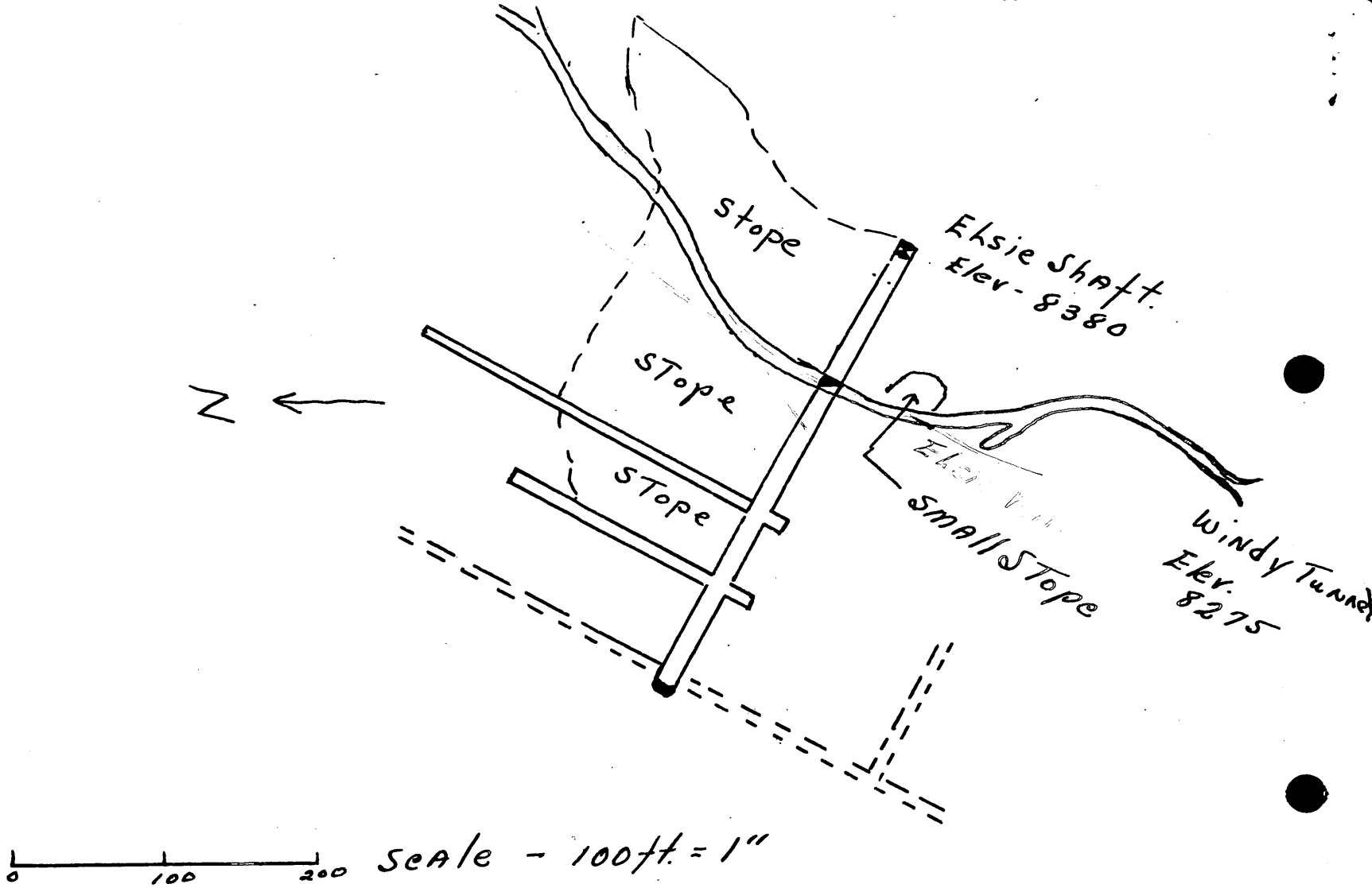
(6D)	Gardner Denver WBC mod. 1943 compressor 315 cu. ft./min.	$ 2000.00
	50 H. P. G.E. motor for compressor	$ 750.00
	Morse Bros. Hoist and cable	$ 600.00
	Ingersol Rand mod. 25 sump pump	$ 200.00
	2 Atlas jack leg drifting mach.ines	$ 900.00
	Fairbank Morse 1½ electric pump	$ 300.00
	Ingersol Rand IR-48 stoper	$ 450.00
	Ingersol Rand tugger hoist	$ 300.00
	Ventilating blower and electric motor ventilating tubing	$ 100.00
	1000 ft. 2" air line @ 25¢ per ft.	$ 250.00
	3 ton rail @ $ 80.00 per ton	$ 240.00
	2 Air hoses and oilers	$ 6090.00
	2 Water hoses	
	3 Mine cars	
	3 Muck buckets	
	2 Dolly cars	
	1 Sheave wheel	
	All necessary hand tools	

(6E) None

(6F) None

(6G) Total estimated cost of exploration

Labor	$ 8736.00
Material and supplies	$ ~~2986.00~~ 2086.00
Use allowance of equipment	$ 2650.00
Equipment operating rep.	$ 415.00
Timber and ties	$ 90.00
Workmen's compensation	$ 288.00
	$~~15165.00~~ 14265.00



——————— Existing workings

- - - - - - - - - Proposed work.
400 ft. drift + 100 ft. Raise
320 ft. below collar of Elsie shaft.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
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APR 22 1955

MINING LEASE

This Memorandum of Agreement, Made and entered into this 12th day of April, A. D. 1955, by and between

W. L. Tanner, S. H. Tanner, Nina Tryon, and Guy Tanner,

of the County of Boulder and State of Colorado, parties of the first part, hereinafter for convenience designated as Lessors, and

John Overley, Eugene Scohy, and Loren Overley,

of the County of Boulder and State of Colorado, parties of the second part, hereinafter for convenience designated as Lessees, WITNESSETH:

That in consideration of the royalties hereinafter provided for to be paid by the Lessees, and of the promises, covenants and agreements of the Lessees hereinafter set forth to be punctually and faithfully kept and performed by them, and upon and subject to the terms and conditions herein expressed, the Lessors do hereby let and demise to the Lessees the following described mining property, to-wit:

> The Elsie Lode Mining Claim No. 5, U. S. Survey Lot No. 18534; the Elsie Mill Site, U. S. Survey Lot No. 19120, and the Windy Claim, U. S. Survey Lot No. 19640, situated in the Grand Island Mining District in the County of Boulder and State of Colorado, together with all the privileges and appurtenances thereunto belonging, and subject to exceptions and reservations of record and on the ground;

TO HAVE AND TO HOLD the said mining property, subject to and upon all the terms, covenants and conditions of this agreement, for the purpose of developing the said mining property for the production of valuable ores therefrom and for the mining of such ores, from noon of the 12th day of April, A. D. 1955, to and until noon of the 12th day of April, A. D. 1957, unless this agreement be sooner terminated as is allowed by its terms and conditions.

In consideration of the execution by the Lessors of this agreement, upon the terms and conditions herein expressed, the Lessees, for so long as this agreement shall remain in force, do hereby covenant and agree to and with the Lessors and they hereby promise the Lessors:

(a) That they will enter upon said demised mining property and commence work thereon on or before April 12, 1955, and that from the time work on said premises is so begun they will develop and mine the same continuously, working not less than two men who, in each calendar month, shall perform at least 25 shifts of work each.

(b) That they will do all work and will conduct all operations upon and within the said mining property in mine fashion and in an economical and a thorough, skillful and workmanlike manner and so as to produce the greatest amount of ore possible with due regard to the development, safety and preservation of the demised premises as a workable mining property and with due regard to the terms and conditions of this agreement and the inherencies hereof; that in all work upon and within said premises, at all times, they will observe and comply with all laws and regulations of the State of Colorado and also of the United States, and of any bureaus of either thereof, which are now in force or which may be enacted or promulgated hereafter.

(c) Without, by the following enumeration or any other covenant or term hereof, limiting or lessening the undertaking of the Lessees, hereinabove expressed, to mine said premises in mine fashion and economically as above agreed, the Lessees promise hereby: That they will well and sufficiently timber all workings of said premises; that they will repair or replace all old timbering within the demised premises wherever and whenever necessary in accordance with good mining practice; that they will neither commit nor permit waste to be committed upon the demised premises or within any underground workings thereof; that, at all times, they will keep the shafts, drifts, tunnels, winzes and other underground workings thoroughly drained and clear of loose rock and rubbish and in a safe, unobstructed and secure condition except only as so prevented by extraordinary mining casualty; that they will stow no waste underground except in accordance with good mining practice and also with the written consent of the Lessors or their duly authorized representative; that they will make all shafts seven (7) feet long by four (4) feet wide in the clear and all drifts six (6) feet high by three (3) feet wide in the clear; that all shafts shall be measured along the strike of the vein and that they will follow the hanging or footwall subject to the approval and according to the directions of the Lessors; that they will do no stoping, development work or mining within ten (10) feet of any shaft, incline or upraise without the written consent of the Lessors first had; that they will run all drifts, levels and cross-cuts of uniform grade so as to establish and constitute one entire general scheme of mine workings suitable for drainage and gravity tramming; that they will occupy and hold all cross or parallel lodes, spurs or mineral deposits of any kind which may be discovered in any manner by working within or from the demised premises as the property of the Lessors, the Lessees reserving the privilege of working the same, however, under the terms of this lease.

(d) That they will not assign this lease, or any interest thereunder, and that they will not sublet said premises, or any part thereof, without the written consent of the Lessors, and that they will not allow any party not in privity with the parties hereto to take or hold possession of said premises, or any part thereof, under any pretense whatever; but if the Lessors shall consent hereafter to an assignment of this lease, such consent shall not have the effect, by implication or otherwise, of permitting any succeeding assignment or subletting without the consent of Lessors first had and obtained; that even though the consent of the Lessors to one assignment or subletting be had, no other subletting or assignment of the lease, or of any interest therein or thereunder, will be made unless the same be assented to in writing by the Lessors.

(e) That they will keep and preserve accurate payroll records for all payrolls of the Lessees for work done on the demised premises and that they will keep and preserve accurate records showing the weekly, daily value or monetary value and cost of transportation of all ores taken or mined from said premises, and that upon request they will present the Lessors, or any of them, or their engineers or agents, during business hours, to inspect such payroll records, and to make such extracts and to the extent therefrom, that they will furnish to the Lessors, or their agents, full, true and accurate information, either daily or in writing, as they shall be directed, of and from mining the ores taken from said premises and the production and sale thereof within the demised premises.

(f) That they will take out and at all times during the term of this lease, they will keep in full force and effect, in the [illegible] State Compensation Insurance Fund, such insurance under [illegible]

to the Workmen's Compensation Act of Colorado and the Colorado Occupational Disease Disability Act, as the same are now or as they may be from time to time if amended, as will fully insure the Lessees themselves and the Lessees' liability as employers with respect to any and all persons employed by the Lessees in or under the demised premises or in any operations of the Lessees under this lease, including said John Overley, Eugene Scohy, and Loren Overley, themselves.

(g) That neither because of this lease nor of anything herein contained, nor in any event at all, shall the said Lessees or their respective heirs, executors or administrators, as the case may be, or any employee, agent, sublessee or contractor of or with the Lessees, or the heirs, executors or administrators of any of them respectively, as the case may be, be authorized, empowered or entitled to charge the Lessors themselves, nor any of them, in any event or circumstance, with any liability for injury to or with any liability for the death of either the said John Overley or the said Eugene Scohy or the said Loren Overley, or any of the employees, agents, contractors or sublessees of the Lessees; and that the Lessees will indemnify and save harmless the Lessors from and against any and all consequences, including any and all claims, demands, costs and expenses, which may arise or grow out of accidents or injuries to or the death of the said Lessees themselves and any and all persons while in any manner employed by or under the Lessees in operations under this agreement.

(h) Inasmuch as it is the intention that such production shall be made from the demised premises, that the same will be taxed as producing mines under Colorado Revised Statutes 1953, Vol. 5, Section 137-5-4, and other applicable statutes, that Lessees will pay when due the taxes on the demised premises based on production made therefrom during the life of this agreement, and that they will pay also, when due, all governmental taxes and charges, if any there are or shall be provided hereafter, on the production and sale, or either thereof, of ores mined or removed from the demised premises under this agreement.

(i) That they will pay promptly and punctually for all labor employed by them in their operations under this agreement and for all services rendered in the course thereof; that they will pay promptly and punctually also for all materials and supplies furnished to them for operations upon or in the demised premises; that, at all times during the life of this agreement, they will keep the demised premises, and every part thereof, and all improvements thereupon or thereto belonging to the Lessors, or which shall become a part of the realty, whether the same be made by the Lessees or not, free and clear of and from all liens and encumbrances of every kind and character whatsoever, will keep posted in conspicuous places on the shaft hereof, or the usual entrance on the demised premises, notices that the demised premises are being operated and mined by them as Lessees and that all labor thereon is performed and materials furnished for them as Lessees; that nothing in this agreement contained shall authorize the Lessees or any person or persons in privity with them to charge the demised premises, or any part thereof, or any interest therein, with any lien or encumbrance, whatsoever.

(j) That they will deliver to the Lessors said demised premises, with the improvements and all improvements thereon and thereto, in good order and condition, with all drifts, shafts, tunnels and other workings thoroughly clear of loose rock and rubbish and drained and the mine or mines ready for immediate continued working thereof

(extraordinary mining casualty alone excepted), without demand or further notice at noon of the 12th day of April, A. D. 1957, or at any time previous thereto, upon demand for forfeiture; that if the term of this lease be extended by renewal or otherwise, they will surrender peaceable possession of the demised premises to the Lessors in such said condition and ready for the immediate continued mining thereof upon the expiration of the extended term or at any time previous thereto upon demand for forfeiture; that upon the termination of this agreement, either in the initial or any succeeding term hereof, whether by lapse of time or otherwise, the Lessees will not remove any underground improvements and they will leave in the mine all such improvements, including all timbering, rails and pipelines, as well as underground improvements of other kind; that they will not remove from the demised premises any surface improvements which have become a part of the realty, such as ore bins, buildings, power lines and [illegible] and any other such improvements; that they will remove, however, their own machinery, tools and supplies; that all improvements and installations of equipment made by the Lessees and which they shall not remove shall be and remain the property of the Lessors.

(h) That they will neither hold nor attempt to hold the Lessees liable for disturbed or interrupted possession of the demised premises, or any ground thought by the parties hereto or any of them to be a part of the demised premises, if such possession be disturbed or interrupted in consequence of or by any legal or equitable proceeding in Court, or other proceedings in the nature of judicial proceedings, of whatsoever kind.

(i) That the Lessors, except at their option, shall not be obliged in consequence of this lease either by implication or otherwise, to undertake legal or equitable proceedings or other proceedings, or to defend any legal or equitable proceedings, in order to establish or defend title of the Lessees to any veins, lodes, ore bodies or to ascertain or determine whether or not any particular lode, vein or ore body is or is not a part of the demised premises or is subject to mining operations of the Lessees hereunder.

The Lessees shall pay to the Lessors as royalty a sum equal to twenty per cent (20%) of the proceeds of the sale of all ores mined or removed from the demised premises, calculated without any deduction of any charges against Lessees, or for their expenses, whether or not reflected in the settlement sheet, for mining, milling, hauling or any other cost of the Lessees' operation. The settlement shall be made promptly on each sale of concentrates or ores. Settlement shall be made promptly by the payment of the royalty to W. L. Tanner for Lessors out of each shipment, and ores and concentrates shall be sold promptly when ready for sale.

Time is and shall be of the essence of this agreement in each and every particular.

OTHER COVENANTS AND AGREEMENTS OF THE PARTIES HERETO

The Lessors agree, if they are satisfied with the work of the Lessees during the initial term of this lease, that then, at the end thereof, they will grant in writing a two year renewal of the term of this lease beyond April 12, 1957, upon all other terms and conditions of the lease.

The Lessors state and certify that the demised premises are owned by them in undivided fourth interests and that they are so conveyed by this agreement and that their respective interests in the royalties are one-fourth each.

Page four

The Lessees agree that upon request they will permit the Lessors, or any of them, or their engineers or agents, to enter upon and into the said mining property for the purpose of inspection.

AND THIS INDENTURE FURTHER WITNESSETH:

The Lessors and the Lessees agree that no waiver by the Lessors of any term or condition of this lease or of the performance by the Lessees of any of their covenants hereunder shall operate as a waiver of such term or condition or covenant at any subsequent time or prevent the cancellation of this agreement of lease by the Lessors, as allowed by the terms hereof, if the Lessees shall fail to observe such covenant at any subsequent time or shall make the same or any other default under this agreement at any subsequent time; the Lessors may terminate this lease for a repetition of a prior default as to which no forfeiture was declared.

The Lessors and the Lessees agree further that if the Lessees shall fail to keep and perform seasonably any of the covenants of this lease on their part to be performed or if they shall make default in any term or condition, express or implied, of this lease; even though such covenants, terms and conditions are not repeated or set forth in the paragraph, then the Lessors have and they reserve and there is granted to them by the Lessees hereby, the privilege of cancelling and terminating this lease, and if the Lessors shall elect to cancel and end this agreement, they shall mail a notice of cancellation to the Lessees, addressing them by registered United States mail, with postage prepaid, at Route 2, Box 444, Boulder, Colorado, or to any other proper address, and therein shall be set forth the nature of the Lessees' default, and it shall be declared that the agreement evidenced by this indenture shall be cancelled, terminated and ended at noon of the thirtieth day after the day whereon said notice shall be so mailed, and at the expiration of said period of time this said agreement shall be terminated and thereupon the Lessees shall forthwith surrender peaceably to the Lessors the said demised premises in the condition and together with the improvements thereon and therein as above agreed; provided, however, that during the period succeeding the mailing of the notice and prior to the time fixed for the termination of this agreement in said notice and by this agreement, the Lessees may fully remedy any such default or defaults of which notice be so given and if such defaults be so remedied and the Lessors be made whole in respect thereto within said period of time, this agreement shall be and remain in force and effect the same as if no default had been declared. Anything to the contrary herein contained notwithstanding, the Lessors have and there is granted to them hereby the right, at their election, to cancel and terminate this agreement of lease forthwith, and without notice, if the Lessees shall fail to keep Workmen's Compensation Insurance or Occupational Disease Disability insurance in force and effect, as above agreed, or to pay the premiums thereon, as above agreed, and thereupon the Lessors shall be entitled, without notice or previous demand, to the immediate possession of the demised premises, in the agreed condition and with the agreed improvements therein and thereupon; a letter, signed by said Lessors, shall be mailed by registered mail to the Lessees at the said address, or to any other proper address, setting forth that this agreement of lease is ended for such default of the Lessees; the letter shall be sent not to end but to evidence the fact that this agreement is ended because the Lessees have failed to keep in force or to pay for Workmen's Compensation insurance or Occupational Disease Disability insurance as above agreed.

All ores within said mining premises, either standing or broken down, and all ores either in bins or dumps, or otherwise assembled, upon the surface of said demised premises, at the termination of this lease, either by lapse of time or forfeiture or otherwise, shall be and remain the property of the Lessors; from the time of the receipt by the Lessees (or

their successors or assigns as the case may be) of any notice of default by the Lessees (or their successors or assigns) of such a nature that the lease shall stand terminated and ended at noon of the thirtieth day after the day whereon such notice shall be mailed, the Lessees shall neither ship nor in any wise remove, and they promise hereby that they will neither ship nor remove, any ores whatever from said premises, unless and until they shall have remedied their default and reinstated the lease as allowed by the terms hereof within said period of thirty days.

Anything to the contrary herein contained notwithstanding, the Lessors agree that if the Lessees be prevented from working the stipulated number of shifts in said demised premises in any calendar month or months because of the severity of the weather or because of strikes, that then such failure to work the stipulated number of shifts shall not entitle the Lessors to cancel and terminate the lease for such failure to work the mine the agreed number of shifts in such month or months.

The terms and conditions of this lease shall extend to, be binding upon and inure to the benefit of the successors and lawful assigns of the parties hereto.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals to this memorandum of agreement in duplicate originals.

_____ (SEAL)

_____ (SEAL)

_____ (SEAL)

_____ (SEAL)

Lessors

Seth T. Crosby (SEAL)

Eugene Crosby (SEAL)

Lorin C. Crosby (SEAL)

Lessees