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

Re: Docket No. DMEA 3705, Tungsten
Klein 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 DF-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, WGGS
Robt. Holliday, WHM
DF, Region 2

RPHelt/ls

400

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. Seehy
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. Seehy, 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

400

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

224 New Customhouse
Denver 2, Colorado

May 13, 1955

3785

WSM

Memorandum

To: John F. Shaw (w/brochure)
E. N. Harshman

From: DMEA Field Team, Region III

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

Enclosed are copies of the subject loan application for $15,165.00, its transmittal by the Acting Chairman of the Operating Committee, and a review of the application by E.L. Newcomb of the U.S.G.S.

Members of both your staffs are familiar with the Elsie property as well as the applicants.

A field examination and suitable covering reports are required.

W. M. TRAVER
W. M. Traver

E. N. Harshman
E. N. Harshman

Encls.

WMT/JP
cc Subject
Chron
Sec. Op. Comm.

400

MAY 1 0 1955

Messrs. John L. Crowley, Loren D. Crowley,
and Eugene L. Kelly
Route 2, Box 444
Boulder, Colorado

Re: Docket No. DMEA 3785 - Tungsten
Kiplin 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. M. M. Tyrrell, Executive Officer, DMEA Field Team, Region III, 7th Floor 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

ACTING Administrator

TL/Chapman:fee
5-6-55
cc to: Docket
Code 400
Adm. Reading File
Operating Comm.
FT. REG. III
Messrs. Holliday, WSEN
Kiilsgaard, WSOE

400

MAY 10 1955

Mr. W. M. Trower, Executive Officer
DMEA Field Team, Region III
22d New Custom House Building
Denver 2, Colorado

Re: Docket No. DMEA 3785 - Tungsten
J. L. Overley, L. D. Overley,
and R. A. Scaby
Klein Mine
Boulder County, Colorado

Dear Mr. Trower:

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 R. L. Newcomb, Geological Survey, are enclosed for your information.

Sincerely yours,

W. S. Martin

ACTING Chairman, Operating Committee

Enclosure

TLChapman:fcc 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
Member, Bureau of Mines

/s/ R. D. Trace
Member, Geological Survey

0785

400

IN REPLY REFER TO:

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

May 2, 1955

Copy retained 400

Re: E. A. Scohy, J. L. Overley & L. D. Overley
(Elsie Mine)
Boulder Co., Colo.
$14,865 - Tungsten

Memorandum

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

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

Subject: Review of application

The operator has proposed to drift 400 feet off the 320 level and raise 100 feet from the drift southeast 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 southeast. 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 190c 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.

ELNewcomb:hlm
G-5/2/55
CC: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
R. W. Holliday, 3513 Interior

E. L. Newcomb

460

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

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

W. M. Traver

E. N. Harshman

E. N. Harshman

Enclosures

DMEA
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. Belmer, 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

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

July 21, 1955

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

CONTENTS

Geologic and Engineering Report

	Page
Introduction	1
Location, Topographic, and Physical Features	2
History and Production	3
Ownership and Extent	5
Geology	6
Present Status	9
Exploration and Development	9
Mining Equipment and Other Facilities	9
Project Proposals with Costs	9
Conclusions and Recommendations	10

ILLUSTRATIONS

Figure	Follows Page
1. Index Map of Boulder County Tungsten District, Colorado, showing Location of Elsie Mine	2
2. Plan and Section Elsie Mine, Boulder County, Colorado	7

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 520-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.

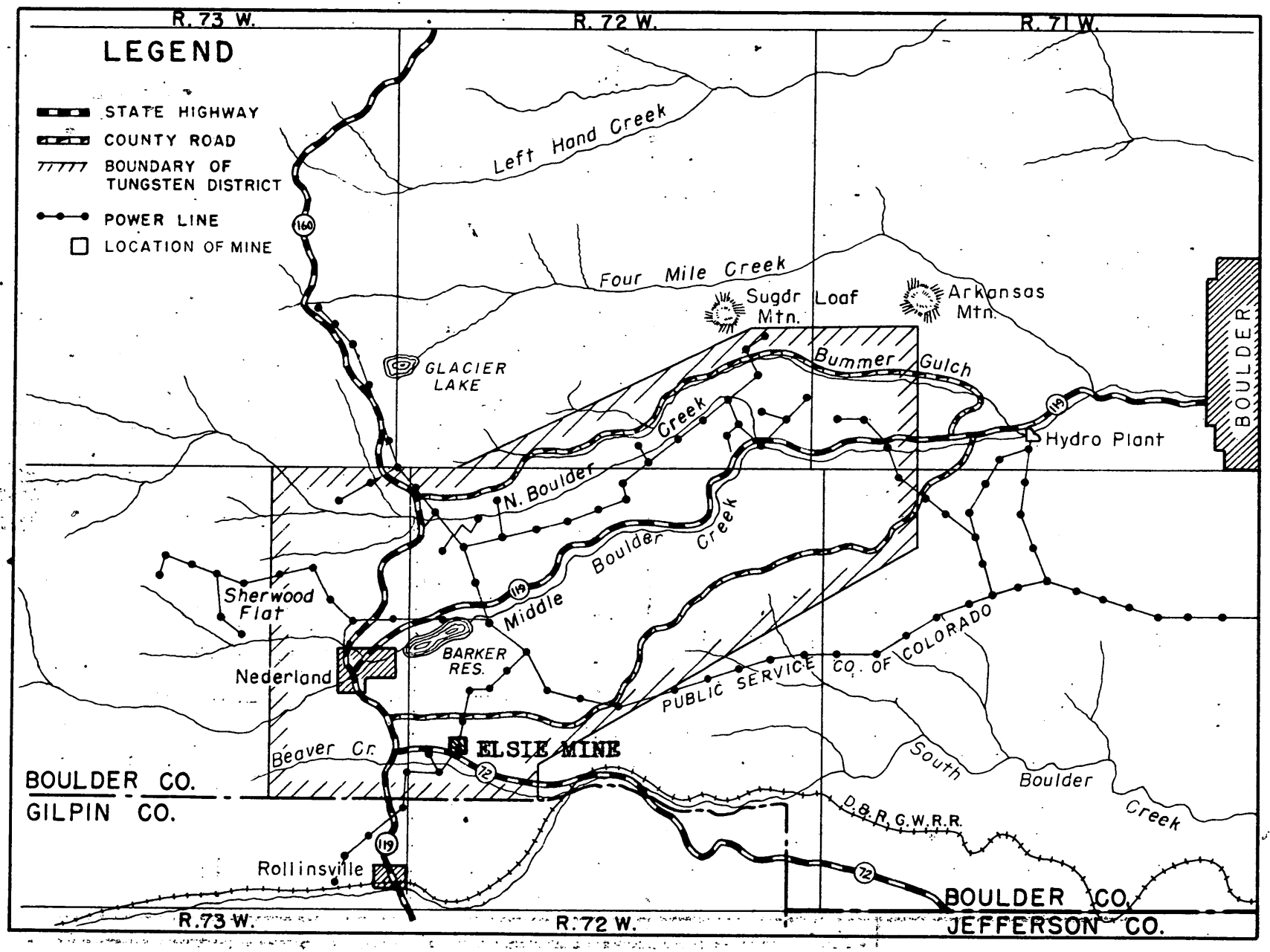


FIGURE 1 - INDEX MAP OF THE BOULDER COUNTY TUNGSTEN DISTRICT, COLORADO SHOWING LOCATION OF ELSIE MINE. (Overley, Overley, and Scohy - DMEA 3785)

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)
Mammouth	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. 29, " "	8,737
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 Scahy - 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 Scahy, 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 lessers 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.

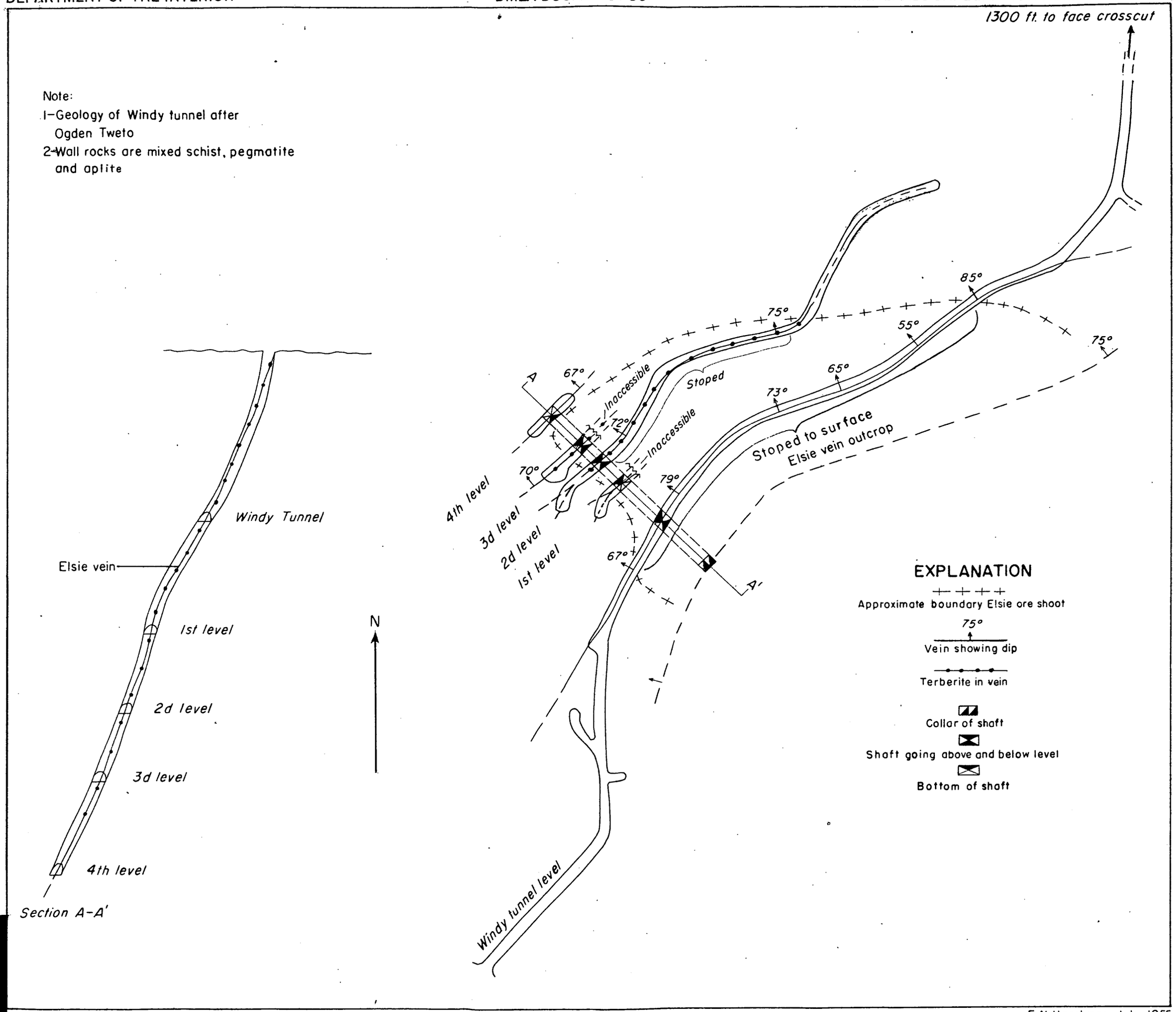
The Elsie mine is in the Beaver Creek area, the southernmost of three distinct productive areas in the Boulder tungsten district. A significant production has been made from several ore shoots in north and northeasterly striking veins cutting schist, aplite, and pegmatite.

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 crystalline 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

RECEIVED
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.