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JUN 26 1953

2958 Tung

Memorandum

To: Administrator, DMSA

From: Iron and Ferro-Alloys Division, DMSA

Subject: Denial of Application by Field Team, Region IV
Docket No. DMSA 2958 - Tungsten
Dee and John Harrington
Roose Tunnel
Boulder County, Colorado

The applicant requested exploration assistance in the amount of $6,000.00 to extend the Roose tunnel and explore the Town Lot and Roose veins on the Roose claims, Boulder County, Colorado.

The rocks exposed in this area are largely biotite schist and quartzite of the Idaho Springs formation of pre-Cambrian age that have been intruded by both acidic and basic dikes.

Two prominent sets of fractures are found in the area - one striking northwesterly and the younger striking northeasterly. The tungsten veins are in the younger set.

The Field Team concludes that the Town Lot vein has already been cut by the tunnel where it is barren and unpromising, and finds no evidence of mineralization on the Roose vein at the surface. In addition, if the Roose tunnel were extended to the Roose vein, less than 70 feet of back would be available for mining.

The Field Team could find no verification of the claims of former production from the Roose vein.

The Field Team concludes that untilmore favorable data are available, the extension of the Roose tunnel is not considered as a sound exploration project and therefore has recommended that the applicant's request for Government assistance in the proposed exploration work be denied.

We concur in the denial.

JHopkins/esf (6/25/53)
cc: Docket
Code 400
Admr. Read. File
Operating Committee

/s/ W. S. Martin

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

400

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

224 New Customhouse
Denver 2, Colorado

June 18, 1953.

WHK

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: 200

From: Field Team, Region IV

Subject: Final Report, DMEA Docket 2958 (Tungsten), Dee and John Harrington, Roose Tunnel, Boulder County, Colorado.

Enclosed are the original and three copies of the final report on the subject docket, the original and one copy of Form 3b, and a copy of the letter of denial to the applicants.

W. H. King
W. H. King

W.H.K.

A. H. Koechmann
A. H. Koechmann

Enclosures

400

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

224 New Customhouse
Denver 2, Colorado

June 18, 1953.

Mr. Dee Harrington
Mr. John Harrington
Nederland, Colorado

Re: Docket DMEA-2958

Gentlemen:

Reference is made to your application for Government aid on the Roose Tunnel.

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

A careful study of your property and data available to this agency reveals that the probability of disclosing mineable reserves of Tungsten by your proposed exploration program is not considered sufficiently promising to justify Government participation. Under these circumstances, we regret to advise that your application for exploration aid is denied.

Very truly yours,

W. H. King

W. H. King
Field Team, Region IV

HMC:cwm

cc: Administrator, DMEA
WMTraver
AHKoschmann (2)
Subject
Chron.

A. H. Koschmann

A. H. Koschmann
Field Team, Region IV

400

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

COPY

June 18, 1953.

224 New Customhouse
Denver 2, Colorado

Mr. Dee Harrington
Mr. John Harrington
Nederland, Colorado

Re: Docket DMEA-2958

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A careful study of your property and data available to this agency reveals that the probability of disclosing mineable reserves of Tungsten by your proposed exploration program is not considered sufficiently promising to justify Government participation. Under these circumstances, we regret to advise that your application for exploration aid is denied.

Very truly yours,

/s/ W. H. KING
W. H. King
Field Team, Region IV

/s/ A. H. KOSCHMANN
A. H. Koschmann
Field Team, Region IV

HMC:cwm

cc: Administrator, DMEA
WMTraver
AHKoschmann (2)
Subject
Chron.

Reviewed by
DMEA OPERATING COMMITTEE
6-26-53
(date)

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

C O P Y

224 New Customhouse
Denver 2, Colorado

June 18, 1953.

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: 200

From: Field Team, Region IV

Subject: Final Report, DMEA Docket 2958 (Tungsten) Dee and John Harrington, Roose Tunnel, Boulder County, Colorado.

Enclosed are the original and three copies of the final report on the subject docket, the original and one copy of Form 3b, and a copy of the letter of denial to the applicants.

/s/ W. H. KING
W. H. King

/s/ A. H. KOSCHMANN
A. H. Koschmann

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
6-26-53
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

June 18, 1953.

Memorandum

To: Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Final Report, DMEA Docket 2958 (Tungsten), Dee and John Harrington, Roose Tunnel, Boulder County, Colorado.

Enclosed are eight copies of the final engineering report on the subject docket.

The applicant requested $6,000.00 to extend the Roose tunnel and explore the Town Lot and Roose veins.

The examining engineer found no evidence to warrant the proposed exploration and recommends the application be denied.

We concur in this recommendation.

W. H. King
W. H. King

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
6-26-53
(Date)

Region IV

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
June 3, 1953

Memorandum

To: Executive Officer, Field Team, Region IV

From: Chief, Mineral Resources Branch, Mining Division, Region IV

Subject: DMEA 2958, Roose Tunnel, (Tungsten), Dee and John Harrington, Lessees, Boulder County, Colorado

Please find enclosed the original and eight copies of an engineering report by Carl Belser on the above Defense Minerals Exploration Administration docket. The "Summary, Conclusions, and Recommendations" is being typed by the U. S. Geological Survey and will be submitted with their geologic report.

The lessees propose extension of the Roose tunnel to intersect the projection of two veins, the Town Lot and Roose. Belser concludes the Town Lot vein has already been crossed and was not mineralized. Inspection of surface cuts on the Roose vein and dumps failed to disclose any ferberite and past production records from two shallow shafts on the vein cannot be verified. In addition, if the tunnel were extended to the Roose vein, less than 70 feet of back would be available for mining. There is no dump space available at the tunnel portal due to interference with Colorado State Highway 160 and presently waste has to be hauled across the highway by truck for disposal. For these reasons Belser recommends denial.

I concur with his conclusion and recommendation.

for Walter Hagen
W. M. Traver

enclosures

WMT/cb

cc: 8
DMEA 2958
Chron.

Reviewed by
DMEA OPERATING COMMITTEE
6-26-53
(date)

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

200 New Customhouse
Denver 2, Colorado

May 20, 1953

Memorandum

To: DMEA Field Team, Region IV

From: Ogden Tweto, U. S. Geological Survey

Subject: DMEA Docket 2958, Roose Tunnel, (Tungsten) Boulder County, Colorado. Dee and John Harrington, applicants.

Attached are 8 copies of a geologic report on subject docket by D. R. MacLaren, of the Geological Survey, and accompanying copies of "Summary, Conclusions, and Recommendations" by MacLaren and Carl Belser, of the Bureau of Mines.

The applicants proposed to extend the Roose tunnel 80 feet to cut the Townlot and Roose veins, and drift on each vein. MacLaren concludes that the Townlot vein has already been cut in the tunnel, where it is barren and unpromising, and finds no evidence of mineralization on the Roose vein at the surface. He concludes that the chances of making a significant discovery are poor and recommends that the application be denied.

I concur in this recommendation.

The brochure is enclosed.

Ogden Tweto

Ogden Tweto
Acting Supervising Geologist
Colorado-Wyoming

Enclosures (9)

Reviewed by
DMEA OPERATING COMMITTEE
6-26-53
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA 2958, Dee and John Harrington

Roose Tunnel

Boulder County, Colorado

Tungsten

D. R. MacLaren, Geologist
Geological Survey

Carl Belser, Mining Engineer
Bureau of Mines

June 3, 1953

Reviewed by
DMEA OPERATING COMMITTEE
6-26-53
(date)

THE ROOSE TUNNEL

BOULDER COUNTY, COLORADO

DEE AND JOHN HARRINGTON

DMEA DOCKET 2958

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

by D. R. MacLaren, U. S. Geological Survey
and
Carl Belser, U. S. Bureau of Mines

THE ROOSE TUNNEL
BOULDER COUNTY, COLORADO

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Dee and John Harrington of Nederland, Colorado, have applied to the Defense Minerals Exploration Administration for assistance to explore for tungsten on the Roose claims, Boulder County, Colorado. The applicants propose to spend $6,000 (Government's share $4,500) to extend the Roose tunnel 80 feet to cut the Town Lot and Roose veins, and to drift an unspecified distance along each vein.

An examination of the property discloses that the Town Lot vein has already been cut and does not warrant further exploration from the tunnel, while pits on the Roose vein indicate that the chances of making a significant discovery on that vein are poor.

It is recommended that this application be denied.

THE ROOSE TUNNEL

BOULDER COUNTY, COLORADO

DEE AND JOHN HARRINGTON

DMEA DOCKET 2058

Geologic Report

By D. R. MacLaren
U. S. Geological Survey

THE ROOSE TUNNEL
BOULDER COUNTY, COLORADO

INTRODUCTION

Dee and John Harrington of Nederland, Colorado, have applied to the Defense Minerals Exploration Administration for assistance to explore for tungsten on the Roose claims, Boulder County, Colorado. The applicants propose to extend the Roose tunnel 80 feet to cut the Town Lot and Roose veins, and to drift an unstated distance along each vein, at an estimated cost of $6,000 (Government's share to be 75% or $4,500).

The Roose claims are located in the N½ sec. 13, T. 1 S., R. 73 W., 6th Principal Meridian, in the Grand Island Mining District, Boulder County, Colorado. The claims are easily accessible throughout the year. The portal of the tunnel is about 50 feet west of State Highway 160, about 100 feet north of the north boundary of the town of Nederland.

The property was examined on April 10, 1953, in the company of Dee Harrington, one of the applicants, and Carl Beiser of the U. S. Bureau of Mines. Because of snow conditions the surface examination was not satisfactory, and the property was visited again on April 29, 1953, accompanied by Carl Beiser.

It is concluded that the tunnel has already cut the Town Lot vein, about 25 or 30 feet from the breast, and that the vein is represented by an unmineralized, clayey shear now tightly lagged. No ferberite or horn quartz was seen in any of the dumps at shallow pits or shafts along the Roose vein. The applicants' statement that 50 to 60 tons of ore averaging 6% WO_3 had been produced from this vein could not be verified, and from

the lack of any tungsten minerals on the dumps appears doubtful. Therefore, it is recommended that this application be denied.

GEOLOGY

The western part of the Boulder tungsten district is largely in biotite schist and associated quartzite of the Idaho Springs formation of pre-Cambrian age. Aplite and pegmatite form small intrusive bodies in the schist. Monzonite and andesite dikes are not uncommon.

There are two prominent sets of fractures, the earlier striking northwesterly and the younger striking northeasterly. The tungsten bearing veins are in the younger set. The veins follow pre-mineral faults, most of which show only small displacement. The veins in the western part of the district are usually short but highly productive. They trend from north to northeast and for the most part dip to the east.

About 420 feet southwest of the Roose tunnel, and about 30 feet lower elevation, the Town Lot vein strikes N. 30° E., and dips 58° E. This vein has been worked from shafts at this point to a depth of 150 feet and has produced 425 tons of ore averaging 4.34% WO_3. The vein projected along the strike to the northeast and allowing for the dip should cut the tunnel about 5 feet short of a heavily timbered section (fig. 2). All that could be seen of the walls along the timbered part of the tunnel indicated a zone of clay-filled shears roughly paralleling the foliation of the schist. It seems reasonable to assume that had there been any evidence of tungsten mineralization in this zone, it would have been followed by drifting.

About 250 feet due west of the portal of the tunnel, and about 65 feet higher elevation, there is a shallow pit on the Roose vein. As seen in this pit and one about 40 feet to the north, the Roose vein strikes N. 15° E., and dips 50°-62° E. (fig. 2). A third pit about 245 feet north of the

second one shows a vein striking N. 15° E., and dipping 70° E. Apparently, the three pits are on the same vein. Due west of the breast of the tunnel, the dip will approach 65° and projected down at this dip would lie between 95 and 100 feet west of the breast at tunnel level. The applicant stated that from the first or second pit some 50 to 60 tons of ore averaging 6% WO_3 has been mined. This statement could not be verified, and because of the complete lack of any ferberite or horn quartz in the dumps the accuracy of the statement is questionable.

CONCLUSIONS AND RECOMMENDATIONS

It is concluded that the Town Lot vein has already been cut by the tunnel and that it offers no encouragement for further exploration at the tunnel level. It is concluded that the exposures of the Roose vein do not indicate any evidence of tungsten mineralization, and that claims of former production from this vein are of doubtful veracity.

It is, therefore, recommended that this application be denied.

DMEA 2958

DEE AND JOHN HARRINGTON
ROOSE TUNNEL
BOULDER COUNTY, COLORADO

Engineering Report

By Carl Balser
Mining Engineer
Bureau of Mines

DMEA 2958

DEE AND JOHN HARRINGTON
ROOSE TUNNEL
BOULDER COUNTY, COLORADO

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ILLUSTRATIONS

Figure	Follows page
1. Location map, Roose tunnel, Boulder County, Colo.	2
2. Map of Roose tunnel showing relation to Town Lot and other veins	*

*See figure following Geologic Report.

DMEA 2958

DEE AND JOHN HARRINGTON
ROOSE TUNNEL
BOULDER COUNTY, COLORADO

ENGINEERING REPORT

By

Carl Belser

INTRODUCTION

Dee and John Harrington, who have a mining lease on the Roose patent, located adjacent to the north side of Nederland townsite, have applied for a Defense Minerals Exploration Administration loan to explore this property for tungsten. The applicants submitted a proposal estimated to cost $6,000.00—Government participation 75 percent, or $4,500.00—to explore the Town Lot and Roose veins, known to have produced tungsten in the past, at points which are impossible to examine from surface or from existing workings.

The proposal called for the extension of the Roose tunnel about 80 feet to cut the Town Lot and Roose veins at depths below surface of 80 and 115 feet, respectively, and the driving of short drifts on both of the veins.

ACKNOWLEDGMENTS

Project proposals and anticipated over-all mining costs were discussed with engineers of the Bureau of Mines familiar with similar crosscutting and drifting operations in the main tungsten area of Boulder County.

LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES

The portal of the Roose tunnel is about 100 feet north of the north line of Nederland townsite in the NE1/4NW1/4 sec. 13, T. 1 S., R. 73 W., sixth principal meridian, in the Grand Island Mining District, Boulder County, Colo. (fig. 1). State Highway 160 passes within 50 feet of the portal of the tunnel. Nederland—population, 300—is 18 miles west of Boulder, a commercial center 29 miles northwest of Denver. The nearest railheads are at Rollinsville, which is 4-1/2 miles south of the property and is a station on the main line of the Denver and Rio Grande Western Railroad, and at Boulder on the Union Pacific and Colorado and Southern railroads.

The tungsten district is located on the eastern slope of the Colorado Front Range at altitudes ranging between 6,000 and 9,000 feet. It is an area of rounded mountain tops and flat ridges, separated by deep gorges which dissect the terrain. The altitude of the portal of the Roose tunnel is about 8,400 feet. Although the winters are somewhat severe, the main roads are kept open and interruptions to year-around operations are few. Timber in the vicinity is suitable for most types of mining. The nearest permanent stream is North Beaver Creek, which the highway crosses at the foot of the hill below the tunnel. Service lines of the Public Service Company of Colorado pass within 300 feet of the Roose tunnel. Housing facilities are available in Nederland.

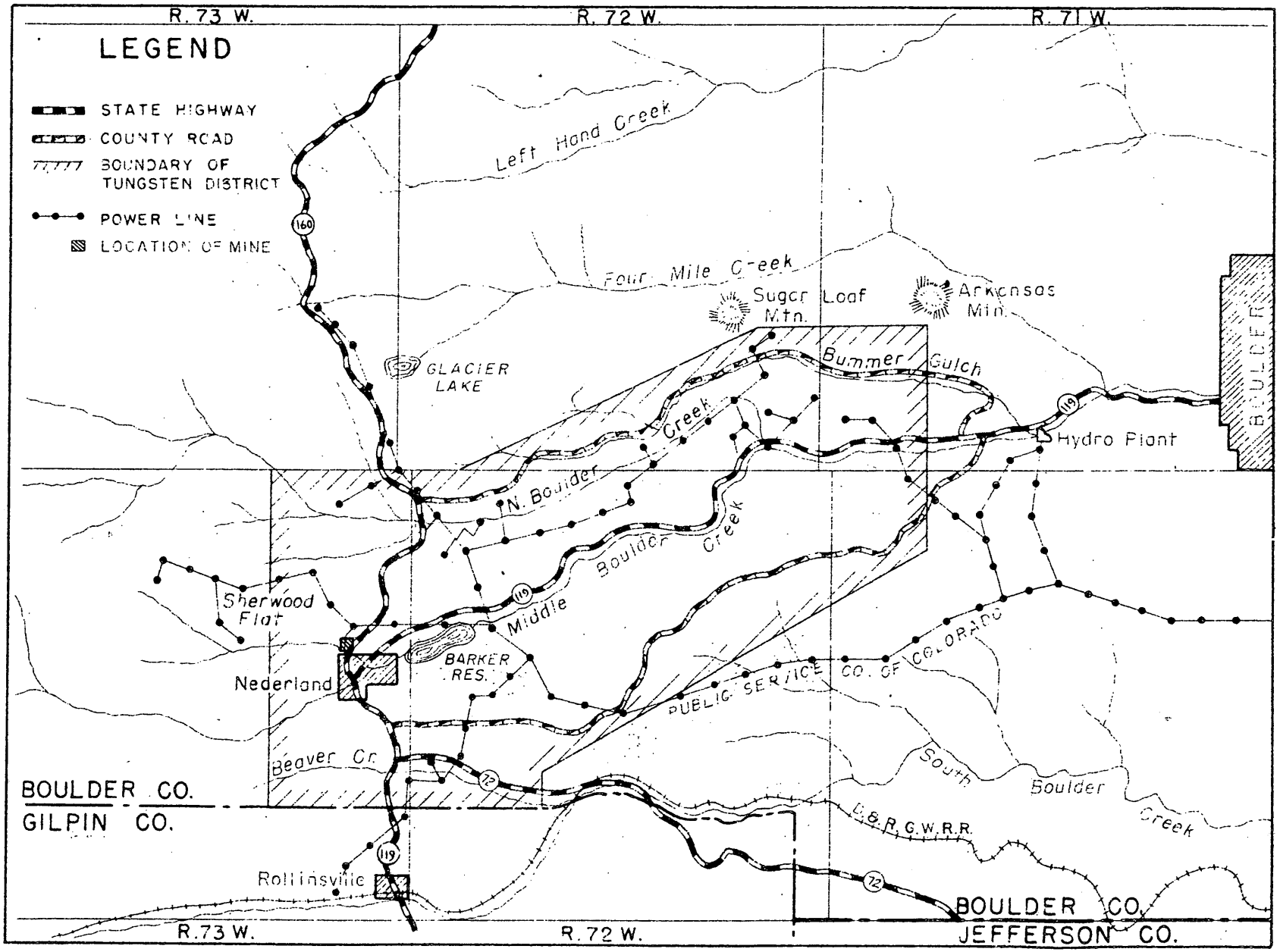

FIGURE 1. - LOCATION MAP, ROOSE TUNNEL, BOULDER COUNTY, COLO. (DMEA 2958).

HISTORY AND PRODUCTION

Tungsten was discovered near Nederland in 1899 and ferberite was first mined in 1900. The largest yearly production from the district—2,707 tons of 60 percent WO_3—was in 1917 when the price reached a high of $105.00 a unit. Beginning with the year 1918, production rapidly declined and was at a low in 1950. Total production for the district through 1950 is estimated as 24,000 short tons—1,440,000 units—of 60 percent WO_3 concentrates.

The portion of the Roose patent included in the application contains two known veins which were discovered in the early nineteen hundreds. The Town Lot vein was opened by the Wolf Tongue Mining Company to a depth of 150 feet and is said to have been worked up to the line of the Roose patent. A second shaft was opened on the Town Lot in 1951 and sunk to a depth of 41 feet. The Roose vein was opened by a few shallow shafts before World War I. The Roose tunnel, known also as the Harrington tunnel, was started in 1906 and driven 60 feet into the hill. The Harrington brothers cleaned the tunnel out and extended it 81 feet in 1952. Work was suspended during the past winter.

Production from the Town Lot has been 524.54 tons of 4.34 percent WO_3—2,274.3 units—valued at $47,519.00. The past production from the two small shafts on the Roose vein is said to have been from 50 to 60 tons of 6 percent WO_3—about 330 units.

OWNERSHIP AND EXTENT

The Roose patent is a patented homestead with full mineral rights. Ownership was not investigated, but the date of proof by B. O. Cutter was on July 22, 1871, and is recorded in book 233, page 7, of the records of Boulder County. Mary Roose acquired the NE1/4NW1/4, and 60 acres of the W1/2NE1/4 sec. 13, T. 1 S., R. 73 W., sixth principal meridian, on October 6, 1897, for the payment of $10.98 in back taxes. The NE1/4NW1/4 of the section is now assessed to Frank W. Roose, et al.

The applicants are said to have a lease to mine the NE1/4NW1/4 sec. 13, T. 1 S., R. 73 W., from Mr. Roose. A copy of the lease was not included with the application.

DESCRIPTION OF THE DEPOSITS

Two known veins strike northeast across the southern part of the property. The Town Lot vein has a strike of N. 30° E. and dips southeast 65°. This vein has been developed on the adjacent Nederland townsite but the outcrop is hidden by surface wash on the Roose patent. The Roose vein strikes about N. 16° E. and dips from 70° to 50° southeast. The Roose vein has been opened on surface by three small shafts and appears to be a fairly strong fissure in altered granite. The shafts have caved so that only the surface could be inspected.

The Roose tunnel--141 feet long--cuts through schist for the first 110 feet. This schistosity strikes northeast with a southeast dip. At 110 feet the tunnel follows a strong fissure which strikes N. 36° W. and dips 60° northeast. An outcrop of pegmatite is adjacent and parallel to the Roose vein on surface.

The Roose tunnel cuts the projected strike of the Town Lot vein. This vein could not be found in the tunnel and may have been cut off by the northwesterly striking fissure or may have changed its strike and be ahead of the present breast.

MINEABLE ORE RESERVES

The Town Lot vein is reported to have contained good ore up to the line of the Roose patent, where work was discontinued. The two 35-foot shafts on the Roose vein are said to have bottomed in ore; the workings on both veins, however, are completely caved. Mineable ore reserves are nonexistent.

PRESENT STATUS

Exploration and Development

The mine workings are shown on the map (fig. 2 with the geological report). The applicants have rehabilitated the Roose tunnel and driven it an additional 80 feet.

Mining and Milling Equipment and other Facilities

The following facilities are on the property:

10- by 15-foot compressor house
10- by 10-foot change house
Small tipple (for loading waste into trucks)
Track (to breast of Roose tunnel)
2-inch air line (to breast of Roose tunnel)

The applicants have agreed to furnish the following equipment for the property:

Item	Value	5 months' Depreciation
Gardner-Denver 11XD21, 6- by 6-inch, two stage compressor, driven by 6-cylinder Dodge engine	$600.00	$50.00
Winsh-type hoist, driven by 4-cylinder Chevrolet engine (tipple)	75.00	6.25
16-cubic-foot mine car	60.00	5.00

Hetzer Mines, Inc., operates a tungsten mill for the beneficiation of custom tungsten ores at Nederland.

PROJECT PROPOSALS, WITH COSTS

The applicants propose to drive the Roose tunnel 20 feet to cut the Town Lot vein and 60 feet farther to cut the Roose vein. They also propose to drift about 50 feet each way on both veins, at a total cost of about $6,000.00. From figure 2 with the geological report it is indicated that the projection of the Town Lot vein has been cut by the tunnel.

It is suggested that, if the tunnel extension is undertaken, the direction be changed to N. 76° W., or 40° to the left of the present course.

The applicants' estimate of $20.00 per foot for drifting and crosscutting appears too low. A more realistic estimate would be between $28.00 and $29.00 per foot.

CONCLUSIONS

Projection of the Town Lot vein indicates that it will not be encountered by extending the Roose tunnel farther into the hill. Past production from the two small shafts on the Roose vein cannot be verified. Ferberite was not found in any of the surface exposures or near the collars of the shafts.

The extension of the Roose tunnel will cut the Roose vein in the vicinity of the old shaft at a depth of less than 70 feet below the surface. State Highway 160 has deprived the tunnel of a dump site. At present, all waste from the tunnel is loaded into trucks and dumped across the road. Any substantial future production from the Roose vein would be through a shaft from surface.

Until other more favorable data are available, the extension of the Roose tunnel is not considered as a sound exploration project.

RECOMMENDATIONS

It is recommended that the applicants' request for Government assistance in exploration work on the Roose tunnel be denied.

cb

Memorandum

To: M. Administrator, DMA

From: Iron and Ferro-Alloys Division, DMA

Subject: Denial of Application by Field Team, Region IV
Docket No. DMA 2/53 - Tungsten
Lee and John Harrington
Loose Tunnel
Boulder County, Colorado

The applicant requested exploration assistance in the amount of $6,000.00 to extend the Loose tunnel and explore the Town Lot and Loose veins on the Loose claims, Boulder County, Colorado.

The rocks exposed in this area are largely biotite schist and quartzite of the Idaho Springs formation of pre-Cambrian age that have been intruded by both acidic and basic dikes.

Two prominent sets of fractures are found in the area: one striking northwesterly and the younger striking northeasterly. The tungsten veins are in the younger set.

The Field Team concludes that the Town Lot vein has already been cut by the tunnel where it is barren and unpromising, and finds no evidence of mineralization on the Loose vein at the surface. In addition, if the Loose tunnel were extended to the Loose vein, less than 70 feet of back would be available for mining.

The Field Team could find no verification of the claims of former production from the Loose vein.

The Field Team concludes that until more favorable data are available, the extension of the Loose tunnel is not considered as a sound exploration project and therefore has recommended that the applicant's request for Government assistance in the proposed exploration work be denied.

We concur in the denial.

JHopkins/esf (6/25/53)
cc: Docket
Code 400
Admr. Read. File
Operating Committee

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

400

FILE COPY
SURNAME:

Hoe
Rutledge
Martin

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

JUN 26 1953

Memorandum

W. S. in R. & R.

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Denial of Application by Field Team, Region IV
Docket No. DMEA 2958 - Tungsten
Dee and John Harrington
Roose Tunnel
Boulder County, Colorado

The applicant requested exploration assistance in the amount of $6,000.00 to extend the Roose tunnel and explore the Town Lot and Roose veins on the Roose claims, Boulder County, Colorado.

The rocks exposed in this area are largely biotite schist and quartzite of the Idaho Springs formation of pre-Cambrian age that have been intruded by both acidic and basic dikes.

Two prominent sets of fractures are found in the area - one striking northwesterly and the younger striking northeasterly. The tungsten veins are in the younger set.

The Field Team concludes that the Town Lot vein has already been cut by the tunnel where it is barren and unpromising, and finds no evidence of mineralization on the Roose vein at the surface. In addition, if the Roose tunnel were extended to the Roose vein, less than 70 feet of back would be available for mining.

The Field Team could find no verification of the claims of former production from the Roose vein.

The Field Team concludes that untilmore favorable data are available, the extension of the Roose tunnel is not considered as a sound exploration project and therefore has recommended that the applicant's request for Government assistance in the proposed exploration work be denied.

We concur in the denial.

JHopkins/esf (6/25/53)
cc: Docket
Code 400
Admr. Read. File
Operating Committee

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

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

Noted
CDM

Memorandum JUN 26 1953

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Denial of Application by Field Team, Region IV
Docket No. DMEA 2958 - Tungsten
Dee and John Harrington
Roose Tunnel
Boulder County, Colorado

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The rocks exposed in this area are largely biotite schist and quartzite of the Idaho Springs formation of pre-Cambrian age that have been intruded by both acidic and basic dikes.

Two prominent sets of fractures are found in the area - one striking northwesterly and the younger striking northeasterly. The tungsten veins are in the younger set.

The Field Team concludes that the Town Lot vein has already been cut by the tunnel where it is barren and unpromising, and finds no evidence of mineralization on the Roose vein at the surface. In addition, if the Roose tunnel were extended to the Roose vein, less than 70 feet of back would be available for mining.

The Field Team could find no verification of the claims of former production from the Roose vein.

The Field Team concludes that until more favorable data are available, the extension of the Roose tunnel is not considered as a sound exploration project and therefore has recommended that the applicant's request for Government assistance in the proposed exploration work be denied.

We concur in the denial.

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

Docket

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

224 New Customhouse
Denver 2, Colorado

June 18, 1953.

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: 200

From: Field Team, Region IV

Subject: Final Report, DMEA Docket 2958 (Tungsten), Dee and John Harrington, Roose Tunnel, Boulder County, Colorado.

Enclosed are the original and three copies of the final report on the subject docket, the original and one copy of Form 3b, and a copy of the letter of denial to the applicants.

W. H. King
W. H. King

A. H. Koschmann
A. H. Koschmann

Enclosures

Copy retained 400

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

June 18, 1953.

Memorandum

To: Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Final Report, DMEA Docket 2958 (Tungsten), Dee and John Harrington, Roose Tunnel, Boulder County, Colorado.

Enclosed are eight copies of the final engineering report on the subject docket.

The applicant requested $6,000.00 to extend the Roose tunnel and explore the Town Lot and Roose veins.

The examining engineer found no evidence to warrant the proposed exploration and recommends the application be denied.

We concur in this recommendation.

W. H. King
W. H. King

Enclosures

Region IV

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
June 3, 1953

Memorandum

To: Executive Officer, Field Team, Region IV

From: Chief, Mineral Resources Branch, Mining Division, Region IV

Subject: DMEA 2958, Roose Tunnel, (Tungsten), Dea and John Harrington, Lessee, Boulder County, Colorado

Please find enclosed the original and eight copies of an engineering report by Carl Belser on the above Defense Minerals Exploration Administration docket. The "Summary, Conclusions, and Recommendations" is being typed by the U. S. Geological Survey and will be submitted with their geologic report.

The lessees propose extension of the Roose tunnel to intersect the projection of two veins, the Town Lot and Roose. Belser concludes the Town Lot vein has already been crossed and was not mineralized. Inspection of surface cuts on the Roose vein and dumps failed to disclose any ferberite and past production records from two shallow shafts on the vein cannot be verified. In addition, if the tunnel were extended to the Roose vein, less than 70 feet of back would be available for mining. There is no dump space available at the tunnel portal due to interference with Colorado State Highway 160 and presently waste has to be hauled across the highway by truck for disposal. For these reasons Belser recommends denial.

I concur with his conclusion and recommendation.

for W. M. Traver

enclosures

WMT/cb

cc: 8
DMEA 2958
Chron.

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

200 New Customhouse
Denver 2, Colorado

May 20, 1953

Memorandum

To: DMEA Field Team, Region IV

From: Ogden Tweto, U. S. Geological Survey

Subject: DMEA Docket 2958, Roose Tunnel, (Tungsten) Boulder County, Colorado. Dee and John Harrington, applicants.

Attached are 8 copies of a geologic report on subject docket by D. R. MacLaren, of the Geological Survey, and accompanying copies of "Summary, Conclusions, and Recommendations" by MacLaren and Carl Belser, of the Bureau of Mines.

The applicants proposed to extend the Roose tunnel 80 feet to cut the Townlot and Roose veins, and drift on each vein. MacLaren concludes that the Townlot vein has already been cut in the tunnel, where it is barren and unpromising, and finds no evidence of mineralization on the Roose vein at the surface. He concludes that the chances of making a significant discovery are poor and recommends that the application be denied.

I concur in this recommendation.

The brochure is enclosed.

Ogden Tweto
Acting Supervising Geologist
Colorado-Wyoming

Enclosures (9)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA 2958, Dee and John Harrington

Roose Tunnel

Boulder County, Colorado

Tungsten

D. R. MacLaren, Geologist
Geological Survey

Carl Belser, Mining Engineer
Bureau of Mines

June 3, 1953

THE ROOSE TUNNEL

BOULDER COUNTY, COLORADO

DEE AND JOHN HARRINGTON

DMEA DOCKET 2958

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

by D. R. MacLaren, U. S. Geological Survey
and
Carl Belser, U. S. Bureau of Mines

THE ROOSE TUNNEL
BOULDER COUNTY, COLORADO

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Dee and John Harrington of Nederland, Colorado, have applied to the Defense Minerals Exploration Administration for assistance to explore for tungsten on the Roose claims, Boulder County, Colorado. The applicants propose to spend $6,000 (Government's share $4,500) to extend the Roose tunnel 80 feet to cut the Town Lot and Roose veins, and to drift an unspecified distance along each vein.

An examination of the property discloses that the Town Lot vein has already been cut and does not warrant further exploration from the tunnel, while pits on the Roose vein indicate that the chances of making a significant discovery on that vein are poor.

It is recommended that this application be denied.

THE ROOSE TUNNEL

BOULDER COUNTY, COLORADO

DEE AND JOHN HARRINGTON

DMEA DOCKET 2958

Geologic Report

By D. R. MacLaren
U. S. Geological Survey

THE ROOSE TUNNEL
BOULDER COUNTY, COLORADO

INTRODUCTION

Dee and John Harrington of Nederland, Colorado, have applied to the Defense Minerals Exploration Administration for assistance to explore for tungsten on the Roose claims, Boulder County, Colorado. The applicants propose to extend the Roose tunnel 80 feet to cut the Town Lot and Roose veins, and to drift an unstated distance along each vein, at an estimated cost of $6,000 (Government's share to be 75% or $4,500).

The Roose claims are located in the N½ sec. 13, T. 1 S., R. 73 W., 6th Principal Meridian, in the Grand Island Mining District, Boulder County, Colorado. The claims are easily accessible throughout the year. The portal of the tunnel is about 50 feet west of State Highway 160, about 100 feet north of the north boundary of the town of Nederland.

The property was examined on April 10, 1953, in the company of Dee Harrington, one of the applicants, and Carl Belser of the U. S. Bureau of Mines. Because of snow conditions the surface examination was not satisfactory, and the property was visited again on April 29, 1953, accompanied by Carl Belser.

It is concluded that the tunnel has already cut the Town Lot vein, about 25 or 30 feet from the breast, and that the vein is represented by an unmineralized, clayey shear now tightly lagged. No ferberite or horn quartz was seen in any of the dumps at shallow pits or shafts along the Roose vein. The applicants' statement that 50 to 60 tons of ore averaging 6% WO_3 had been produced from this vein could not be verified, and from

the lack of any tungsten minerals on the dumps appears doubtful. Therefore, it is recommended that this application be denied.

GEOLOGY

The western part of the Boulder tungsten district is largely in biotite schist and associated quartzite of the Idaho Springs formation of pre-Cambrian age. Aplite and pegmatite form small intrusive bodies in the schist. Monzonite and andesite dikes are not uncommon.

There are two prominent sets of fractures, the earlier striking northwesterly and the younger striking northeasterly. The tungsten bearing veins are in the younger set. The veins follow pre-mineral faults, most of which show only small displacement. The veins in the western part of the district are usually short but highly productive. They trend from north to northeast and for the most part dip to the east.

About 420 feet southwest of the Roose tunnel, and about 30 feet lower elevation, the Town Lot vein strikes N. 30° E., and dips 58° E. This vein has been worked from shafts at this point to a depth of 150 feet and has produced 425 tons of ore averaging 4.34% WO_3. The vein projected along the strike to the northeast and allowing for the dip should cut the tunnel about 5 feet short of a heavily timbered section (fig. 2). All that could be seen of the walls along the timbered part of the tunnel indicated a zone of clay-filled shears roughly paralleling the foliation of the schist. It seems reasonable to assume that had there been any evidence of tungsten mineralization in this zone, it would have been followed by drifting.

About 250 feet due west of the portal of the tunnel, and about 65 feet higher elevation, there is a shallow pit on the Roose vein. As seen in this pit and one about 40 feet to the north, the Roose vein strikes N. 15° E., and dips 50°-62° E. (fig. 2). A third pit about 245 feet north of the

second one shows a vein striking N. 15° E., and dipping 70° E. Apparently, the three pits are on the same vein. Due west of the breast of the tunnel, the dip will approach 65° and projected down at this dip would lie between 95 and 100 feet west of the breast at tunnel level. The applicant stated that from the first or second pit some 50 to 60 tons of ore averaging 6% WO_3 has been mined. This statement could not be verified, and because of the complete lack of any ferberite or horn quartz in the dumps the accuracy of the statement is questionable.

CONCLUSIONS AND RECOMMENDATIONS

It is concluded that the Town Lot vein has already been cut by the tunnel and that it offers no encouragement for further exploration at the tunnel level. It is concluded that the exposures of the Roose vein do not indicate any evidence of tungsten mineralization, and that claims of former production from this vein are of doubtful veracity.

It is, therefore, recommended that this application be denied.

DMEA 2958

DEE AND JOHN HARRINGTON
ROOSE TUNNEL
BOULDER COUNTY, COLORADO

Engineering Report

By Carl Belser
Mining Engineer
Bureau of Mines

DMEA 2958

DEE AND JOHN HARRINGTON
ROOSE TUNNEL
BOULDER COUNTY, COLORADO

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ILLUSTRATIONS

Figure	Follows page
1. Location map, Roose tunnel, Boulder County, Colo	2
2. Map of Roose tunnel showing relation to Town Lot and other veins	*

*See figure following Geologic Report.

DMEA 2958

DEE AND JOHN HARRINGTON
ROOSE TUNNEL
BOULDER COUNTY, COLORADO

ENGINEERING REPORT

By

Carl Belser

INTRODUCTION

Dee and John Harrington, who have a mining lease on the Roose patent, located adjacent to the north side of Nederland townsite, have applied for a Defense Minerals Exploration Administration loan to explore this property for tungsten. The applicants submitted a proposal estimated to cost $6,000.00--Government participation 75 percent, or $4,500.00--to explore the Town Lot and Roose veins, known to have produced tungsten in the past, at points which are impossible to examine from surface or from existing workings.

The proposal called for the extension of the Roose tunnel about 80 feet to cut the Town Lot and Roose veins at depths below surface of 80 and 115 feet, respectively, and the driving of short drifts on both of the veins.

ACKNOWLEDGMENTS

Project proposals and anticipated over-all mining costs were discussed with engineers of the Bureau of Mines familiar with similar crosscutting and drifting operations in the main tungsten area of Boulder County.

LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES

The portal of the Roose tunnel is about 100 feet north of the north line of Nederland townsite in the NE1/4NW1/4 sec. 13, T. 1 S., R. 73 W., sixth principal meridian, in the Grand Island Mining District, Boulder County, Colo. (fig. 1). State Highway 160 passes within 50 feet of the portal of the tunnel. Nederland--population, 300--is 18 miles west of Boulder, a commercial center 29 miles northwest of Denver. The nearest railheads are at Rollinsville, which is 4-1/2 miles south of the property and is a station on the main line of the Denver and Rio Grande Western Railroad, and at Boulder on the Union Pacific and Colorado and Southern railroads.

The tungsten district is located on the eastern slope of the Colorado Front Range at altitudes ranging between 6,000 and 9,000 feet. It is an area of rounded mountain tops and flat ridges, separated by deep gorges which dissect the terrain. The altitude of the portal of the Roose tunnel is about 8,400 feet. Although the winters are somewhat severe, the main roads are kept open and interruptions to year-around operations are few. Timber in the vicinity is suitable for most types of mining. The nearest permanent stream is North Beaver Creek, which the highway crosses at the foot of the hill below the tunnel. Service lines of the Public Service Company of Colorado pass within 300 feet of the Roose tunnel. Housing facilities are available in Nederland.

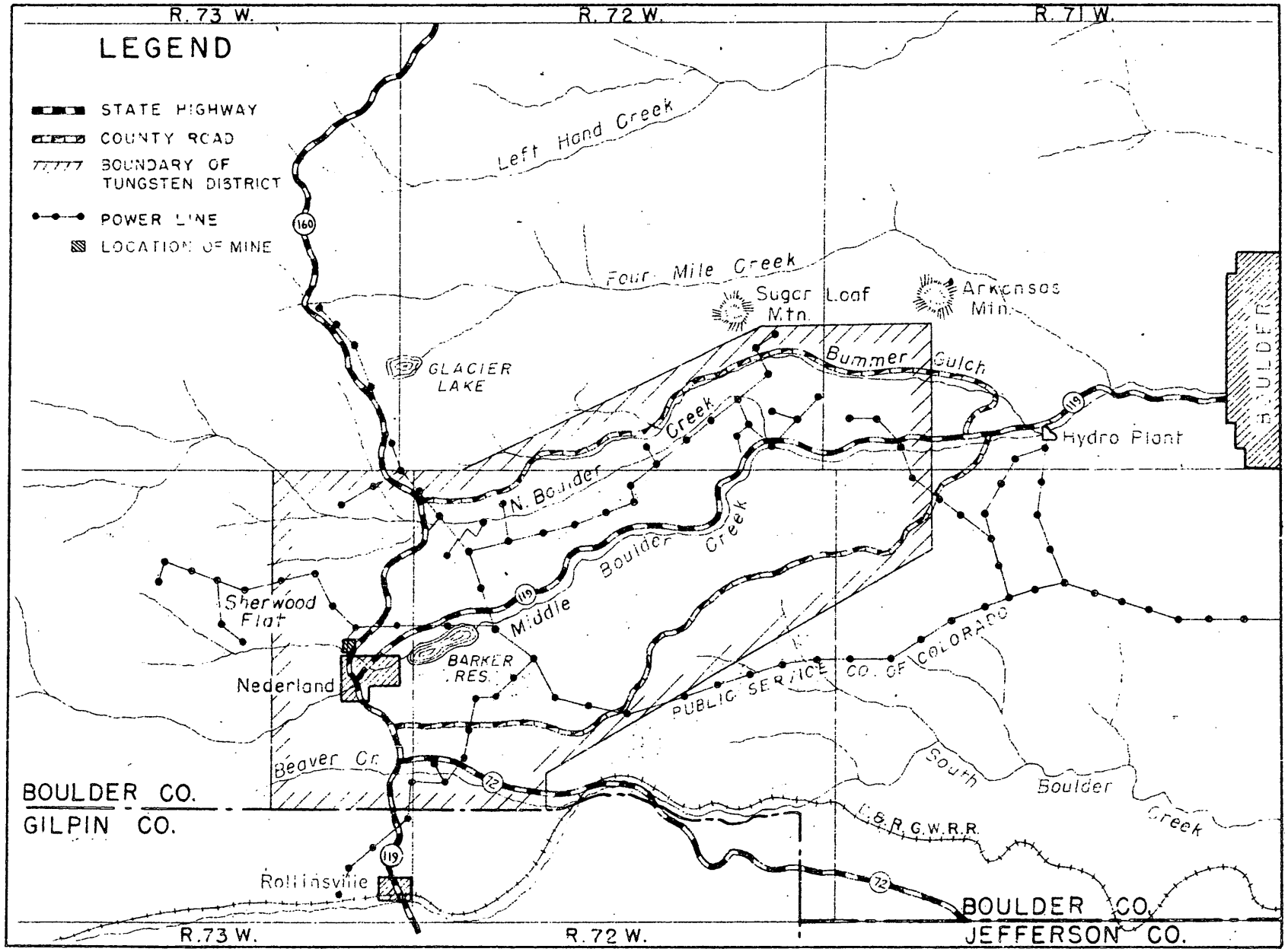


FIGURE 1. - LOCATION MAP, ROOSE TUNNEL, BOULDER COUNTY, COLO. (DMEA 2958).

HISTORY AND PRODUCTION

Tungsten was discovered near Nederland in 1899 and ferberite was first mined in 1900. The largest yearly production from the district--2,707 tons of 60 percent WO_3--was in 1917 when the price reached a high of $105.00 a unit. Beginning with the year 1918, production rapidly declined and was at a low in 1950. Total production for the district through 1950 is estimated as 24,000 short tons--1,440,000 units--of 60 percent WO_3 concentrates.

The portion of the Roose patent included in the application contains two known veins which were discovered in the early nineteen hundreds. The Town Lot vein was opened by the Wolf Tongue Mining Company to a depth of 150 feet and is said to have been worked up to the line of the Roose patent. A second shaft was opened on the Town Lot in 1951 and sunk to a depth of 41 feet. The Roose vein was opened by a few shallow shafts before World War I. The Roose tunnel, known also as the Harrington tunnel, was started in 1906 and driven 60 feet into the hill. The Harrington brothers cleaned the tunnel out and extended it 81 feet in 1952. Work was suspended during the past winter.

Production from the Town Lot has been 524.54 tons of 4.34 percent WO_3--2,274.3 units--valued at $47,519.00. The past production from the two small shafts on the Roose vein is said to have been from 50 to 60 tons of 6 percent WO_3--about 330 units.

OWNERSHIP AND EXTENT

The Roose patent is a patented homestead with full mineral rights. Ownership was not investigated, but the date of proof by B. O. Cutter was on July 22, 1871, and is recorded in book 233, page 7, of the records of Boulder County. Mary Roose acquired the NE1/4NW1/4, and 80 acres of the W1/2NE1/4 sec. 13, T. 1 S., R. 73 W., sixth principal meridian, on October 6, 1897, for the payment of $10.98 in back taxes. The NE1/4NW1/4 of the section is now assessed to Frank W. Roose, et al.

The applicants are said to have a lease to mine the NE1/4NW1/4 sec. 13, T. 1 S., R. 73 W., from Mr. Roose. A copy of the lease was not included with the application.

DESCRIPTION OF THE DEPOSITS

Two known veins strike northeast across the southern part of the property. The Town Lot vein has a strike of N. 30° E. and dips southeast 65°. This vein has been developed on the adjacent Nederland townsite but the outcrop is hidden by surface wash on the Roose patent. The Roose vein strikes about N. 16° E. and dips from 70° to 50° southeast. The Roose vein has been opened on surface by three small shafts and appears to be a fairly strong fissure in altered granite. The shafts have caved so that only the surface could be inspected.

The Roose tunnel--141 feet long--cuts through schist for the first 110 feet. This schistosity strikes northeast with a southeast dip. At 110 feet the tunnel follows a strong fissure which strikes N. 36° W. and dips 60° northeast. An outcrop of pegmatite is adjacent and parallel to the Roose vein on surface.

The Roose tunnel cuts the projected strike of the Town Lot vein. This vein could not be found in the tunnel and may have been cut off by the northwesterly striking fissure or may have changed its strike and be ahead of the present breast.

MINEABLE ORE RESERVES

The Town Lot vein is reported to have contained good ore up to the line of the Roose patent, where work was discontinued. The two 35-foot shafts on the Roose vein are said to have bottomed in ore; the workings on both veins, however, are completely caved. Mineable ore reserves are nonexistent.

PRESENT STATUS

Exploration and Development

The mine workings are shown on the map (fig. 2 with the geological report). The applicants have rehabilitated the Roose tunnel and driven it an additional 80 feet.

Mining and Milling Equipment and other Facilities

The following facilities are on the property:

10- by 15-foot compressor house
10- by 10-foot change house
Small tipple (for loading waste into trucks)
Track (to breast of Roose tunnel)
2-inch air line (to breast of Roose tunnel)

The applicants have agreed to furnish the following equipment for the property:

Item	Value	5 months' Depreciation
Gardner-Denver 11XD21, 6- by 6-inch, two stage compressor, driven by 6-cylinder Dodge engine	$600.00	$50.00
Winch-type hoist, driven by 4-cylinder Chevrolet engine (tipple)	75.00	6.25
16-cubic-foot mine car	60.00	5.00

Hetzer Mines, Inc., operates a tungsten mill for the beneficiation of custom tungsten ores at Nederland.

PROJECT PROPOSALS, WITH COSTS

The applicants propose to drive the Roose tunnel 20 feet to cut the Town Lot vein and 60 feet farther to cut the Roose vein. They also propose to drift about 50 feet each way on both veins, at a total cost of about $6,000.00. From figure 2 with the geological report it is indicated that the projection of the Town Lot vein has been cut by the tunnel.

It is suggested that, if the tunnel extension is undertaken, the direction be changed to N. 76° W., or 40° to the left of the present course.

The applicants' estimate of $20.00 per foot for drifting and crosscutting appears too low. A more realistic estimate would be between $28.00 and $29.00 per foot.

CONCLUSIONS

Projection of the Town Lot vein indicates that it will not be encountered by extending the Roose tunnel farther into the hill. Past production from the two small shafts on the Roose vein cannot be verified. Ferberite was not found in any of the surface exposures or near the collars of the shafts.

The extension of the Roose tunnel will cut the Roose vein in the vicinity of the old shaft at a depth of less than 70 feet below the surface. State Highway 160 has deprived the tunnel of a dump site. At present, all waste from the tunnel is loaded into trucks and dumped across the road. Any substantial future production from the Roose vein would be through a shaft from surface.

Until other more favorable data are available, the extension of the Roose tunnel is not considered as a sound exploration project.

RECOMMENDATIONS

It is recommended that the applicants' request for Government assistance in exploration work on the Roose tunnel be denied.

cb

DMEA Form 3
(Revised)

DEFENSE MINERALS EXPLORATION ADMINISTRATION

CONTROLLED DOCUMENT
Revised Abstract

DMEA Docket No. 2958

Name of Applicant Dee and John Harrington

Change:	From		To	
	III 1	☐	III 1	☐
	III 2	☐	III 2	☒ 6-16-53
	III 3	☐	III 3	☐
	III 4	☒	III 4	☐
	III 5	☐	III 5	☐
			III 6	☐
			III 7	☐

Add:

II 7 $ 6,000.00

II 8 $ None

II 8a %

II 9 $

Remarks:

Initials of person preparing sheet HMC

Date sheet prepared 6-16-53

33978

DMEA Form 3B
(Revised)

DEFENSE MINERALS EXPLORATION ADMINISTRATION

CONTROLLED DOCUMENT
Revised Abstract

DMEA Docket No. 2958

Name of Applicant Dee and John Harrington

Change:	From		To	
	III 1	☐	III 1	☐
	III 2	☐	III 2	☒ 6-16-53
	III 3	☐	III 3	☐
	III 4	☒	III 4	☐
	III 5	☐	III 5	☐
			III 6	☐
			III 7	☐

Add:

II 7 $ 6,000.00

II 8 $ None

II 8a % _____

II 9 $ _____

_____

Remarks:

Initials of person preparing sheet BMC

Date sheet prepared 6-16-53

33978

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

224 New Customhouse
Denver 2, Colorado

March 27, 1953.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 30 1953

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: 200

From: Executive Officer, Field Team, Region IV

Subject: Docketing for Exploration Assistance

Enclosed herewith in duplicate is DMA Form 3a and Form MF-103 in duplicate and supporting data pertaining to the following applications for Government assistance in exploration work:

H. C. Gamblin
1307 Colorado Avenue
Grand Junction, Colorado

and

J. M. Knowles
337 North Avenue
Grand Junction, Colo.

Dee Harrington and
John Harrington
Nederland, Colorado

Wothree Mines
George Blonsky, General Manager
Box 448
Kingman, Arizona

W. H. King
W. H. King

Enclosures

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
Form Approved
Budget Bureau No. 42-R1036.1
RECEIVED
MAR 30 1953

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

Not to be filled in by applicant

Docket No. DMEA-2958
Metal or Mineral
Date Received 3-30-53
Estimated Cost
Participation (Government %)

INSTRUCTIONS

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

(*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 Roos tunnel in gulch North of Meeker Dal same being in NE ¼ of NW ¼ Sec 13 T 1 S R 93 West in Boulder Co lease extend to Shell line of Roos property on North 1300 ft or any on all Veins which might be found within said land.

(*b*) State any mine name by which the property is known. Roos tunnel air shaft.

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Lease known as Roos Tunnel & Shaft.

(*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. open any time.

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades. about 50 tons 10 per cent tungsten

(*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. Vein in old shaft 4 to about 12 to 16 inch wide.

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points. one Mile to Mill on Main. Road open all Winter

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power. Only three men needed until mine is on production Boxes plenty Help available.

100 feet to Main Power line from Mine Building.

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. 30 years mine on Mell.

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.). None

(*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. None

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel. $200.00 per Month two Hundred dollar per month

(*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. all Machinery Cars on so forth furnish by me No charge

(*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. None

(*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. None

(*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)?

(*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 March 16, 1953

Lee Harrington
(Applicant)

By Lee Harrington
Nederland Colo

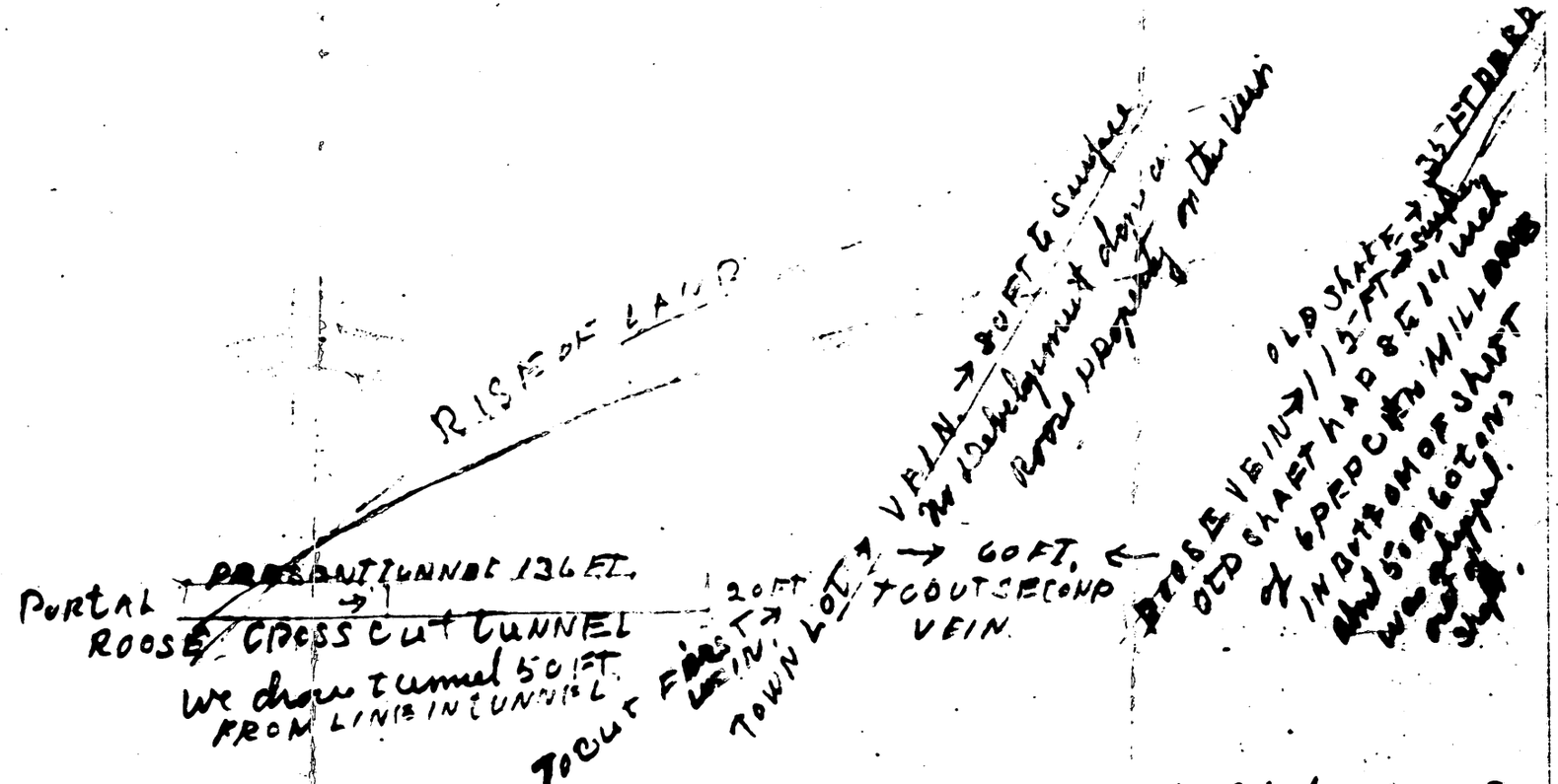
Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

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

C O P Y

To date we have invested in money, manual labor over $1500 in opening up portal of tunnel an retimbering an moving in necessary buildings an so forth to house compressor an shop. We have personel bought an paid for all machinery an building an timber that has so far went into the mining operation an we have the crosscut tunnel from it former length of 60 ft. to the present 140 feet all round material for timbering is included on lease an available on the property only the labor of cutting an hauling it about 1 mile to the mine.

We do not plan to spend very little more if any money on outside work until we get into the vein just as map shows we should cut within neet 15 or 20 feet on the second in about 50 or 60 ft. from present heart of crosscut tunnel every dollar we get if any on a loan we plan to put in underground work an for our own interest as well as the loaner. We are operating on a conservative base so we have placed the total sum need to explore an open the both veins an do some drifting on same at about $6000.00 as the macuma which we will need an maybe not that.



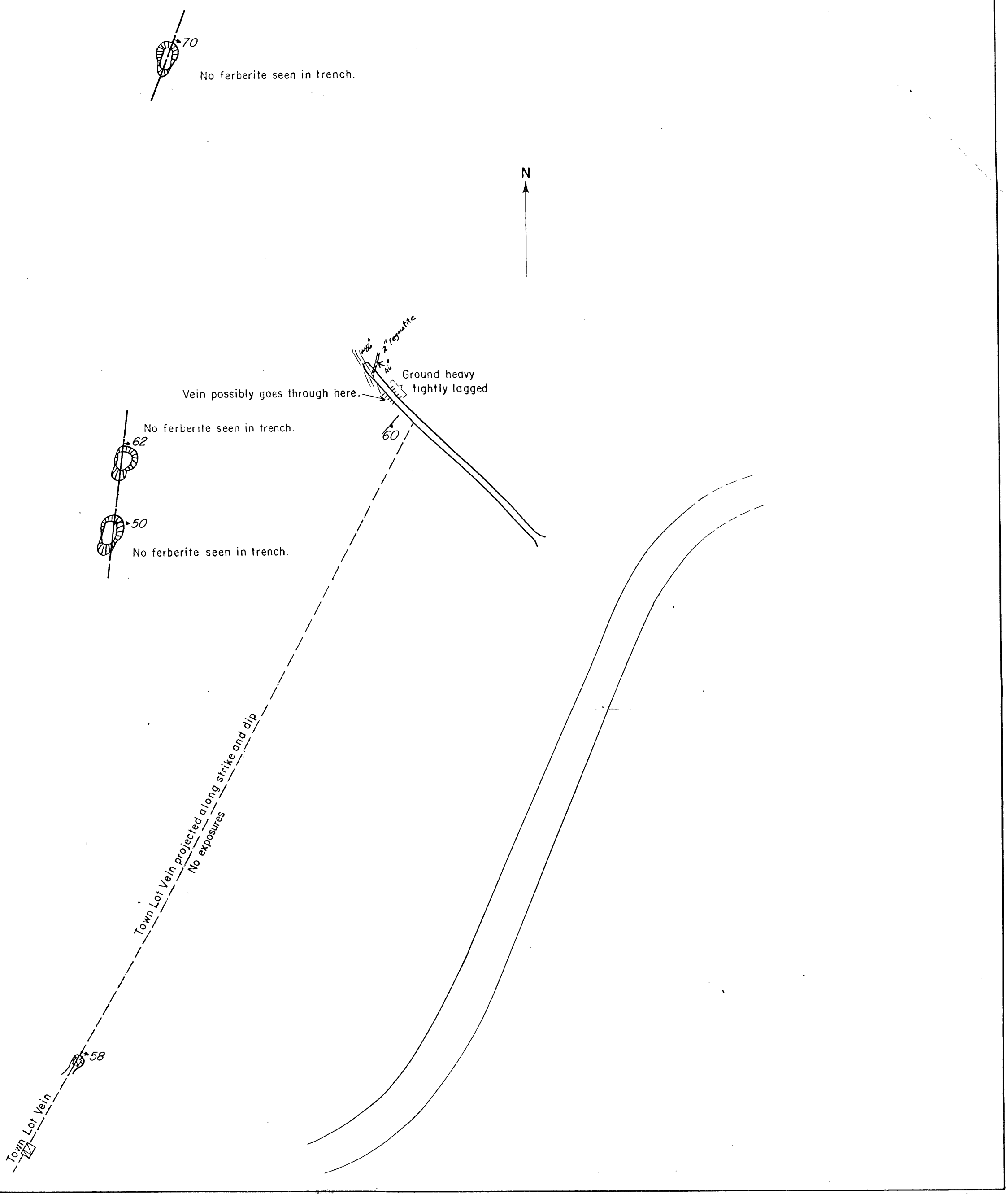
Note: The town lot vein extends on to the property of the Hetzyer Mines Co. on the south west line as Records show that the old Town lot mine produce large quantity of ore during the entire operation as had ore in payguarantee on the 50 FT 100 FT and 150 FT level when they reached the North East line which joins the Roose property shown above. We should cut this vein to show as showing with in the next 20 FT as has good prospects of showing ore 12 feet wide or more.

1 copy of map enclosed
3-30-53

Mr Geo. C. Lethridge

Room 462 (Interior)

~~300 Facts~~



By D. R. MacLaren, April 1953

FIG. 2- MAP OF ROOSE TUNNEL SHOWING RELATION TO TOWN LOT AND OTHER VEINS