DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE — Idm-E NO. 657 — DMEA NO. 3173

Application
- [ ] Denied
- [ ] Withdrawn

Contract
- [ ] Terminated - Not Certified
- [x] Terminated - Certified
- [ ] Cancelled
- [ ] Royalty Agreement

The records contained in this file are marked (x) and arranged in this order:

Folder No. 1:

Left Side

- [x] Royalty Audits
- [x] Certification of Discovery
- [ ] Closing Letter
- [x] Cost Audits
- [ ] Termination Notice or Agreement
- [ ] Recision Notice
- [ ] Assignment of Contract
- [x] Contract Amendments
- [x] Contract with all exhibits and annexes
- [x] Owner's Consent to Lien and Subordination Agreement
- [x] Application and attachments

Right Side

- [x] Project summary (final)
- [x] Work Completed analysis (final)

All other material filed in chronological order including the following reports if checked:

- [ ] Field Team Semi-Annual Report for Certified Project
- [x] Final Field Team Report (Tab)
- [x] Operator's Final Report (Tab)
- [ ] Interim Field Team Reports
- [ ] Operator's monthly reports and all attachments
- [x] On-site Exam Report (Tab)
- [ ] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Left Side

Folders No. 2 : Reports
- [x] Analysis of Semi-Annual Inspection Reports
- [ ] Project Summary (Interim) by DMEA Engineers

Right Side

- [x] Field Team Semi-Annual Report for Certified Project
- [x] Field Team Interim Reports
- [x] Operator's Monthly Reports with transmittal, narrative and maps.

Folders No. There is one : Maps (Use pocket folder or envelope)

Folders No. _____ : Settlement Sheets

Folders No. _____ : Drill Logs

Folders No. 3 : Royalty material

Inactive 1960 (v-13-61)

17861

OFFICE OF MINERALS EXPLORATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF ROYALTY REVIEW

I have reviewed the files of the Washington office pertaining to Contract Idm-8657, Docket DMEA-3173 (tungsten), dated January 18, 1954, with

Johnson Bros. & Prime
c/o Ralph L. Johnson
500 Grant Avenue
Louisville, Colorado

for the purpose of determining the amount of royalty payable to the U. S. Government on sales of minerals from property referred to as the Hoosier Mine located in Boulder County, Colorado, during the period May 22, 1957, through December 26, 1961.

A certification of discovery or development was issued on March 12, 1956, and, in accordance with Amendment No. 2 and Annex II of the contract, royalty is payable on all minerals produced from the land described in Article 2 and Amendment No. 2 of the contract for a period of 10 years from the date of the contract or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first. A Report of Review dated March 9, 1956, indicated accepted costs under the exploration contract amounting to $37,744.00 with the Government's contribution on a 75 percent basis being $28,308.00.

The status of the project, the scope of review, and the reasons therefor are stated on page 2.

This review established no sales subject to the Government's royalty subsequent to the period covered by a prior Report of Royalty Review, which found the sales subject to the Government's royalty through May 21, 1957, to be $79,742.24. The royalty account as of May 21, 1957, was:

Total Royalty Payable	$3,982.37
Total Royalty Paid	3,982.37
Balance of Royalty Due	$ -0-

As of December 26, 1961, the royalty account of this project was found to be:

Total Royalty Payable	$3,982.37
Total Royalty Paid	3,982.37
Balance of Royalty Due	$ -0-

E. D. Talbert

January 4, 1962

E. D. Talbert, OME Auditor

Idm-E657 Johnson Bros. & Prime DMEA-3173

STATUS OF PROJECT, SCOPE OF REVIEW
AND REASONS THEREFOR

At the time the exploration contract was executed, the Operator (a partnership composed of Ralph L. Johnson, Roy W. Johnson, and George A. Prime) held possession of three of the claims (Hoosier, Hummer, and Phillip) by virtue of a three-year lease dated September 1, 1953, from Hetzer Mines, Inc. On February 15, 1954, the lease was extended to a period of ten years from the date of the exploration project contract. By a September 1, 1953, amendment to the lease the fourth claim (McKenna) under the contract, as amended, was added.

The exploration project contract, as amended, provides that the Operator, as principal if the producer or as surety if not the producer, shall pay the Government's percentage royalty on all minerals produced from the four claims under the contract and, also, on all production from the adjoining Crow patented claim that is transported through any workings described in the contract. An Owner's Consent to Lien executed by Hetzer Mines, Inc., on September 28, 1954, further secures the payment of royalty by granting the Government a lien on the land under the contract and any production therefrom.

On August 20, 1954, Hetzer Mines, Inc., was acquired by Cold Spring Tungsten, Inc., 1036 First National Bank Building, Denver 2, Colorado, through the purchase of all outstanding stock and, on May 31, 1955, it was fully integrated and lost its identity. The Operator completed the exploration work on May 31, 1955. All operations ceased and the lease was relinquished on January 1, 1957.

All sales of production from the date of the contract are covered by a prior Report of Royalty Review. Upon cessation of operations an estimated 750 pounds of 50% tungsten concentrates was stockpiled at the Hoosier Mill at Nederland, Colorado. The exploration project contract provides that the Government, at its option, may require the computation and payment of royalty on the value of such concentrates at any time after the lapse of six months from the date of extraction of the ore.

No record of sale in docket 11-4-62

This review was made in lieu of an on-site audit of the Operator's accounts and records for the following reasons:

(1) The property has been inactive since January 1957;
(2) All sales of production since the date of the contract have been accounted for and proper royalty thereon paid; and

Royalty paid Feb. 24, 1962

(3) The administrative cost to the Government of an on-site royalty audit at this time would be excessive in relation to the amount of possible additional royalty which might be disclosed.

MME Form 22
Dec. 60

DEPARTMENT OF THE INTERIOR
Office of Minerals Exploration

CHECK SHEET OF EXAMINING ENGINEER

OFFICIAL FILE COPY
O. M. E
RECEIVED DEC 28 1961

DATE	INITIALS	CODE
		~~120~~
		~~500~~
1/22/62	S.P.H.	~~500~~

* Operator's Name and Address

Mr. Ralph L. Johnson
Johnson Bros. & Prime
500 Grant Avenue

Louisville, Colorado

Contract No.	Docket No.
Idm E657	DMEA-3173

Prepared by (Signature) T. M. Romslo — Date December 26, 1961

Yes	No	
		1. (a) Does the Operator stockpile ore subject to royalty repayment?
		(b) If so, is segregation and identification procedure adequate?
		2. (a) Does the Operator commingle production subject to DMEA or OME royalties with exempt production?
		(b) If so, is the allocation of the commingled production equitable?
		3. (a) Does the Operator stockpile mine or mill rejects (low grade ore, tailing, middlings, etc.) that may have potential value within the royalty payment period?
		(b) If so, are adequate records maintained on such material to protect the Government's interest?
		4. Are the assay controls in effect adequate?
		5. Does the manner of disposing of production give the Government its fair royalty returns?
		6. Do your periodic examinations of operations indicate the Operator is properly reporting his production of ores subject to DMEA or OME royalties?
		7. Does the Operator buy from or sell to other Operators?
		8. Current status of property. (Check one).
		Operating.
	X	Inactive.
		Abandoned.

*** Jan. 1957 Date of last production if not operating.

Comment on items 1(b), 2(b), 3(b), and 4 to 6, if answer is No:

* Operator reported Dec. 19, 1959, lease agreement with Cold Spring Tungsten, Inc. (Present address unknown) was relinquished Jan. 1, 1957. ?

*** Confirmed by U.S.B.M. production records.

84861-60

[redacted] MINERALS EXPLORATION AD[redacted]
[redacted] ADMINISTRATION AND AUD[redacted]

REPORT OF ROYALTY REVIEW

I have reviewed the files of the Executive Officer, DMEA Field Team, Region III, Denver, Colorado, pertaining to Contract Idm-8657, Docket No. DMEA-3173, dated January 18, 1954, with

Johnson Brothers and Prime
500 Grand Avenue
Louisville, Colorado

for the purpose of determining the amount of royalties due the U. S. Government on sales of tungsten ore and concentrates, from property referred to as Hoosier Tungsten Mine located in Boulder County, Colorado, during the period January 18, 1954 to May 21, 1957.

A certification of discovery or development was issued on March 12, 1956, and in accordance with the contract as amended, royalty is payable on production from the land described in the contract until January 18, 1964.

A Report of Review in lieu of a final cost audit dated March 9, 1956, indicated accepted costs under the exploration contract amounting to $37,440.00, with the Government's contribution on a 75 percent basis being $28,308.00.

My review included a tabulation and recomputation of all settlement sheets, a conference with Mr. Carl Balser, Mining Engineer, Denver, Colorado, who is thoroughly familiar with the project.

This review was made in lieu of an on-site audit of the Operator's accounts and records for the following reasons:

(a) The Engineer consulted, is of the opinion that all sales of ore and concentrates produced during the period January 18, 1954 to May 21, 1957, for which settlement sheets have been released, have been properly accounted for.

(b) The administrative cost to the Government of an on-site royalty audit at this time would be excessive in relation to the amount of possible additional royalty which might be disclosed.

The review established the total net sales of tungsten ore and concentrates to be $79,742.24. Royalty due the U. S. Government at contract rates is $3,982.37.

The royalty paid and the balance due are as follows:

Total Royalty Due	$3,982.37
Total Royalty Paid	$3,982.37
Balance of Royalty Due	$ 0.00

May 29, 1957

DMEA COPY
DMEA
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DATE	INITIALS	CODE
6-4	Chambers	300
		100
	W Bradley	120
T. H. Breding, Auditor		
6/4	WSM	400

Check Sheet of Examining Engineer

EXTRA COPY
DMEA
RECEIVED JUN 3 1957

DATE	INITIALS	CODE

Operator's Name John Brothers and Prime

Address 500 Grant Avenue

Louisville, Colorado

Exploration Contract No. Idm-E657 Docket No. DMEA-3173

		Check One Yes	No
1. (a)	Does the Operator stockpile ore subject to royalty repayment?	X	
(b)	If so, is segregation and identification procedure adequate?	X	
2. (a)	Does Operator commingle production subject to DMEA royalties with exempt production?	X	
(b)	If so, do you consider the allocation of the commingled production equitable?	X	
3. (a)	Does the Operator stockpile mine or mill rejects (low grade ore, tailing, middlings, etc.) that may have potential value within the royalty payment period?	X	
(b)	If so, are adequate records maintained on such material to protect the Government's interest?		X
4.	Do you consider the assay controls in effect are adequate?	X	
5.	Do you consider that the manner of disposing of production gives the Government its fair royalty returns?	X	
6.	Do your periodic examinations of operations indicate the Operator is properly reporting his production of ores subject to DMEA royalties?	X	
7.	Does the Operator buy from or sell to other Operators?	X	

8. Comment on any item 2 (b) to 6 if answer is No.

3.b Tailings go into common tailing dump, which may be rerun under favorable market conditions

Date May 21, 1957

Carl Belser
Mining Engineer

Martin:

Bill:

DOCKET
Surname:
Chapman
Martin
Johnson
Rubin
Langer
"Appd. subj. on."
Geehan
Kilsgaard
Selfridge
T B Johnson

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

CERTIFICATION BY THE UNITED STATES OF AMERICA
OF A DISCOVERY OR DEVELOPMENT UNDER
AN EXPLORATION PROJECT CONTRACT

To: Johnson Brothers and Prime
500 Grand Avenue
Louisville, Colorado

Pursuant to the provisions of Exploration Project Contract No. Idm-2657, dated January 18, 1954, as amended (Docket No. DMEA-3173), hereinafter called the "contract," between Johnson Brothers and Prime, a partnership, and the United States of America, hereinafter called the "Government"; to establish and fix the Government's percentage royalty on production and its lien therefor and on the land described in the contract, the Government considers and therefore certifies that a discovery or development from which production may be made has resulted from the exploration work.

The nature of said development or discovery is described broadly or indicated as follows:

Tungsten occurs in the form of ferberite ($FeWO_4$) in ore shoots along the Hoosier, Phillips, and Hummer veins. The ore shoots are composed chiefly of vuggy, medium-grained ferberite associated with horn quartz that forms the matrix of the brecciated vein material within granite walls.

Sinking, drifting, raising, and crosscutting have indicated a minable tonnage of tungsten ore, mainly on the Hummer vein.

THE UNITED STATES OF AMERICA

Dated: MAR 1 2 1956

By C D Mitendorf
Administrator, Defense Minerals
Exploration Administration

Copy to:
Docket
Code 400
Code 110
Code 800
FT, Region 3
Adm. Read. File
Oper. Committee
T. Kiilsgaard, USGS

Copy to: Hetzer Mines, Inc.
C.A.Fredell, Act.Dir.,Mater.Div.,EP AS
R. W. Geehan, USBM
R. W. Holliday, USBM
Finance Officer

TLChapman/ls
2/28/56

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

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MAR 12 1956

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WSM

REPORT OF REVIEW

I have reviewed the Monthly Reports of

Johnson Brothers and Prime
500 Grand Avenue
Louisville, Colorado

pertaining to Exploration Project Contract No. Idm-2637, Docket No. DMEA-3173, including Amendments Nos. 1 and 2, for the months of February, 1954 to May, 1955, inclusive, covering a project for the exploration of Tungsten on property known as Hoosier Tungsten Mine located in Boulder County, Colorado, two miles northeast of Nederland.

My review included an examination of the Monthly Reports (Form MF-104) and supporting documents attached thereto, comparison of the costs claimed with the contract and pertinent schedules, conference with the Executive Officer, DMEA Field Team, Region III, and a determination of the reasonableness and propriety of the costs.

This review was made in lieu of a final audit of the Operator's accounts and records for the following reason:

> All of the costs incurred were under a contract provision for payment by the Government on the basis of agreed estimated costs of units of work actually performed.

The review disclosed the following facts in regard to the amount paid or to be paid the contractor:

Total cost as billed by Contractor		$37,744.00
Exceptions:		
by DMEA Finance Officer	$0.00	
Herewith	0.00	0.00
Total Accepted Cost		$37,744.00

The contract calls for a 75 percent participation of exploration expenses by the United States Government. Therefore, payment to the Contractor by the Government in the amount of Twenty-eight thousand, three hundred eight and 00/100ths Dollars

** $28,308.00 **

is considered valid and proper, provided that the Regional Executive Officer, the Administrator, or other competent official has accepted or will accept the project as having otherwise met the terms of the contract.

Donald T. Finch

March 9, 1956

Donald T. Finch, Auditor

Docket Copy

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EXPLORATION PROJECT CONTRACT
JOHNSON BROTHERS & PRIME
DOCKET NO. DMEA-3173

AMENDMENT NO. 2

It is agreed this 8th day of September, 1954, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and Ralph Johnson, Roy Johnson, and George Prime, that Exploration Project Contract Idm-E657 (Docket No. DMEA-3173), dated January 18, 1954, as amended, hereinafter called the "Contract," is further amended effective January 18, 1954, as follows:

1. The Hummer and McKenna patented lode mining claims (U. S. Survey No. 18340) are added to the land referred to in Article 2 of the Contract, and the Owner's Consent to Lien is attached.

2. In Article 3 of the Contract, delete the period "ten (10) months" and substitute the period "eighteen (18) months."

3. In Article 4 of the Contract, delete the sums "$16,500.00" and "$22,000.00," and substitute the sums "$28,500.00" and "$38,000.00," respectively.

4. Annex I attached to the Contract is cancelled, and Annex II, attached hereto and made a part hereof, is substituted for Article 6 of the Contract.

5. In Article 7 of the Contract, that part of the second sentence beginning with the word "Provided" is deleted.

6. Exhibit "A," as amended by Amendment No. 1, is deleted and a new Exhibit "A" is substituted, as follows:

EXHIBIT "A"

Description of the Work

The work consists of three stages and is indicated on the map attached hereto entitled "Figure 3 - Plan of Underground Workings, Hoosier Mine, Boulder County, Colorado (DMEA 3173)."

All drifts and crosscuts shall be timbered as necessary and shall be not less than 4 feet by 6½ feet in the clear of timber.

Stage I

The work under this stage is divided into two phases:

Phase 1

This work consists of work set forth in original Exhibit "A" which was completed prior to date of execution of Amendment No. 2.

(1) Extend the Hoosier shaft an additional 75 feet from the bottom of the present sump.

(2) Cut a station at the 300-foot level of the Hoosier shaft and drift on the Hoosier vein a maximum of 100 feet westerly and 140 feet easterly from the shaft.

(3) If ore is not encountered by the drifting authorized in Item 2 above, raises will be driven on the Hoosier vein from the new 300-foot level to the bottom of the ore shoots, at locations approved in writing by the DMEA Region IV Field Team. The raises under this item shall not exceed an aggregate of 50 feet.

Phase 2

This work consists of work set forth in original Exhibit "A," as amended by Amendment No. 1, which remains to be completed, as follows:

(4) On the new 300-foot level of the Hoosier shaft, drift easterly along the Hoosier vein for an additional 60 feet.

(5) Drift a maximum of 150 feet easterly on the Phillip vein from the 225-foot level crosscut which extends south from the Hoosier shaft.

Stage II

(1) From a point on the 225-foot level of the Hoosier mine approximately 30 feet west of the Hoosier shaft, crosscut not in excess of 300 feet northerly to intersect the Hummer vein.

(2) From its intersection on the 225-foot level of the Hoosier mine, drift easterly on the Hummer vein for 100 feet.

Stage III

If the Government approves it in advance, dependent upon the results of Stage II, the following work shall be performed:

On the 225-foot level of the Hoosier mine, drift easterly along the Hummer vein for an additional 100 feet.

Estimated Cost of the Project

Agreed Unit Costs

Stage I

Phase 1

Sink 75 feet shaft @ $80.00/ft.	$6,000.00	
Drift 240 feet @ $32.00/ft.	7,680.00	
Raise 50 feet @ $32.00/ft.	1,600.00	
	15,280.00	

Phase 2

Drift 210 feet @ $32.00/ft.	6,720.00	$22,000.00

Stage II

Drift and/or crosscut 400 feet @ $32.00/ft.	12,800.00

Stage III

Drift 100 feet @ $32.00/ft.	$3,200.00
Agreed Estimated Total Cost of Project	$38,000.00
Government Participation @ 75%	$28,500.00

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By O O Mittendorf
Administrator, Defense
Minerals Exploration
Administration

Porter
Rutledge
Martin
Taffiet
Selfridge
E E Johnson

JOHNSON BROTHERS & PRIME

By Ralph L Johnson

Partner

EXPLORATION PROJECT CONTRACT
JOHNSON BROTHERS & PRIME
DOCKET NO. DMEA-3173

Department of the Interior
Defense Minerals Administration
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OCT 11 1954

ANNEX II

The following provisions are in lieu of Article 6 :

Repayment by Operator.--a. Certification.--If the Government considers that a discovery or development from which production may be made has resulted from the work, the Government, at any time not later than six months after the Operator has rendered the final report and final account, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development.

b. Royalty on production.--The Operator, as principal, if the Operator is the producer, or as surety, if the Operator is not the producer, shall pay to the Government a royalty on all minerals mined or produced from the land,* as follows: (1) regardless of any certification of discovery or development, from the date of the contract until the lapse of the time within which the Government may make such certification, or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first; or (2) if the Government makes a certification of discovery or development, for a period of ten years from the date of the contract, or until the total net amount contributed by the Government without interest is fully repaid, whichever occurs first.

c. Basis for computation.--The Government's royalty shall be a percentage of the gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrates, metal, or equivalent), at the point of delivery (the f.o.b. point); except, that charges of the buyer arising in the regular course of business, and shown as deductions on the buyer's settlement sheets, on account of the cost of treatment processes performed by the buyer, sampling and assaying to determine the value of the production sold, and freight paid by the buyer to a carrier (not the Operator), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. Any costs of treatment processes, sampling or assaying, or transportation, performed or paid by the

* The "land" referred to in this subparagraph is the land described in Article 2 of the Contract. See also the added provision on page 3 of this annex.

Operator or by anyone other than the buyer, are not deductible in arriving at the "gross proceeds" as that term is here used. The term "treatment processes," as here used, means those processes (such as milling, concentrating, smelting, refining, or equivalent) applied to the raw ore or other production after it is extracted from the ground, to put it into a commercially marketable form; excluding fabricating or manufacturing.

d. Unsold production.--If any production (ore, concentrates, metal, or equivalent), after the lapse of six months from the date the ore was extracted from the ground, remains neither sold nor used by the Operator in integrated manufacturing or fabricating operations (for instance, if it is stockpiled), the Government, at its option, as long as it so remains, may require the computation and payment of its royalty on the value of such production in the form (ore, concentrates, metal, or equivalent) it is in when the Government elects to require computation and payment. If any production is used by the Operator in integrated manufacturing or fabricating operations before the Government makes its election, the Government's royalty on such production shall be computed on the value thereof in the form in which and at the time when it is so used. "Value" as here used means what is or would be gross income from mining operations for percentage depletion purposes in Federal income tax determination, or the market value, whichever is greater.

e. Percentages of royalty.--The percentages of the Government's royalty shall be as follows:

> One and one-half ($1\frac{1}{2}$) percent of amounts ("gross proceeds" or "value") not in excess of eight dollars ($8.00) per ton of production in the form in which sold, held, or used, plus one-half ($\frac{1}{2}$) percent for each additional full fifty cents ($0.50) by which such amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) percent of such amounts.
>
> (For instance: the royalty on an amount of five dollars ($5.00) per ton, would be one and one-half ($1\frac{1}{2}$) percent; on an amount of ten dollars ($10.00) per ton, three and one-half ($3\frac{1}{2}$) percent.)

f. Lien for payment.--To secure the payment of its percentage royalty, there is hereby granted to the Government a lien upon the land or the Operator's interest in the land and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

g. Notice to purchasers.--The Operator shall give notice of the Government's claim for royalty to any purchaser of the production, and shall authorize and direct such purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets. If the records of any production and sales or other disposition of production, whether the production is by the Operator or by others, are not made available to the Government, the amount of the royalty may be estimated by the Administrator, Defense Minerals Exploration Administration, or his successor, and his estimate thereof shall be final and binding upon the Operator.

h. No obligation to produce.--Nothing in this contract is to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any mining or production operations.

i. Government not obligated to buy.--Nothing in this contract shall be construed as imposing any obligation on the Government to purchase any minerals mined or produced from the land.

Added provision.--The following subparagraph is added to paragraph "b" of this annex:

> The Operator, regardless of certification, and regardless of who the producer is, shall pay a royalty on all production from the Crow patented lode mining claim that is transported or extracted through any workings described in Exhibit "A" of the Contract.

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DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 11 1954

MF-203
(Revised July 1, 1954)

OWNER'S CONSENT TO LIEN

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

Hoosier, Hummer, McKenna, and Phillip Lode Mining Claims, U. S. Survey No. 18340, Grand Island Mining District, Boulder County, Colorado,

which is the subject of ~~a proposed~~ an Amendment No. 2 to the exploration project contract, hereinafter called the "contract", between the United States of America, hereinafter called the "Government", and

2/ Johnson Brothers & Prime, a partnership consisting of Ralph Johnson, 500 Grant Ave., Louisville, Colorado; Roy Johnson, Nederland, Colorado; and George Prime, Nederland, Colorado,

hereinafter called the "Operator"; and

WHEREAS, under the provisions of said contract the Government is entitled to a percentage royalty on production and to other rights and equities which do or may conflict with or be adverse to the rights of the undersigned:

NOW THEREFORE, the undersigned, in consideration of said ~~contract~~ Amendment No. 2 and as an inducement to the Government to enter into same, undertakes and agrees as follows:

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

2. To secure the payment to the Government of the percentage royalty on production3/ provided for under the terms of said exploration project contract or any amendment thereof there is hereby granted to the Government a lien upon the land above referred to and upon any production of minerals therefrom until said royalty is fully paid or ten years have elapsed from the date of the contract, whichever occurs first.

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

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

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

(OVER)

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

4. Changes and added provisions In addition to the four claims set forth above, the provisions of paragraphs numbered 2 and 3 of this Owner's Consent to Lien also shall apply to the Crow Patented Lode Mining Claim to the extent that production from said claim is extracted or transported through any workings described in the Contract.

Dated this 24th day of September, 195[illegible].

HETZER MINES, INC. [Seal]

By [illegible] [Seal]

[Seal]

Rubin 8/26/4 Parnes

No. 1

AMENDMENT OF CONTRACT: No. IDm-E657

Contract Docket No. DMEA 3173, dated January 18, 1954, between the United States of America and Johnson Brothers & Prime, a partnership consisting of Ralph Johnson, Roy Johnson, and George Prime, is hereby amended as follows, effective July 8, 1954:

> Referring to 'EXHIBIT A' attached to Exploration Project Contract Form RP-200(A) (February 1952), heading 'Description of the Work', items '3' and '4', the drift easterly on the 300 foot level of the Hoosier shaft, described under said item '3', will be extended an additional 50 feet easterly, or not to exceed a maximum distance of 200 feet from the Hoosier shaft, in lieu of performing 50 feet of raise described under said item '4'.

This amendment shall not be construed to increase the estimated total cost of the project, the amount of the Government's contribution, or any item of allowable cost which is expressly designated 'allowable maximum'.

Dated JUL 20 1954

JOHNSON BROTHERS & PRIME

By Ralph Johnson
Ralph Johnson, Agent for the partnership

UNITED STATES OF AMERICA

By W.H. King
W.H. King, Executive Officer, DMEA Field Team, Region IV

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
July 13, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region IV

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

Subject: DMEA 3173, contract Idm-2657 (Tungsten), Johnson Brothers and Prime (Hoosier mine), Boulder County, Colorado - Request for authority to drift on the Hoosier vein in lieu of the presently authorized raising

Enclosed are the original and seven copies of a memorandum by R. L. Bolmer covering the above amendment request.

The recommendation that the request for 50 feet of drifting east on the 300-foot level in lieu of 50 feet of raising at the identical unit cost as provided by the contract be allowed by amendment has my approval.

Floyd D Everett
Floyd D. Everett, for
W. M. Traver

enclosures

cc 7
2657
DMEA Chron

WMT pam

Work authorized

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
July 9, 1954

Memorandum

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

From: R. L. Bolmer

Subject: DMEA 3173, contract Idm-E657 (Tungsten), Johnson Brothers and Prime (Hoosier mine), Boulder County, Colorado - Request for authority to drift on the Hoosier vein in lieu of the presently authorized raising

The operator under the subject contract has written the DMEA Field Team, Region IV, requesting authority to drift an additional 50 feet easterly on the Hoosier vein. The drifting requested will be in lieu of an equivalent amount of raising presently authorized under the contract but, as yet, not completed.

The operator has just completed the 150 feet of drifting authorized on the Hoosier vein east of the shaft on the new 300-foot level. The final few feet of this drift exposed a few inches of good grade ferberite. Up to this point, the vein had occurred in a heavy schist and was weak and unmineralized. The present breast of the drift has exposed pegmatite, aplite, and granite gneiss, all favorable host rocks for ore deposition.

The investigation of the present favorable showing by extending the drift an additional 50 feet easterly is considered well warranted and more promising than raising the authorized 50 feet in the earlier and barren sections of the drift. Under the contract, the agreed unit price for drifting and raising are the same and the requested authority to substitute an equivalent amount of drifting for the presently authorized but unexpended 50 feet of raising is recommended.

R. L. Bolmer
Mining Engineer

cc 7
E657
DMEA Chron

RLB/pam

July 9, 1954

Memorandum

To: A. H. Koschmann E.N.H. for A.H.K.

From: E. N. Harshman

Subject: DMEA Docket 3173 (tungsten), Contract Ida-E657, Johnson Brothers and Prime, Hoosier Mine, Boulder County, Colorado

Work under the subject contract on the 300 foot level of the Hoosier mine has been prosecuted in a satisfactory manner and is nearly completed. Southwest of the Hoosier shaft a 100 foot drift and a 50 foot raise were driven in schist and no ore was discovered. Northeast of the shaft, 149 out of a permissible 150 feet of drift have been completed and a 50 foot raise remains to be driven.

About 143 feet of the northeast drift is in schist and the vein consists of clay gouge, somewhat silicified, but no ore was found. The last four feet of the drift is in granite gneiss and pegmatite and the vein in this part of the drift consists of 12 inches of horn quartz containing a 3/4 to 3 inch streak of ferberite.

The applicants have requested that in lieu of the 50 foot raise from the northeast drift, allowed under the contract, they be permitted to continue the northeast drift an additional 50 feet or a total distance of 200 feet.

It appears that the present northeast drift has entered the southwest part of an ore shoot and that it is to the best interest of the Government and the applicant to continue exploration by extending this drift. Under the short form contract both drifting and raising are paid for at a rate of $32.00 per foot and the requested amendment will not effect the total contract price.

The requested amendment appears justified and is recommended for approval.

Nederland, Colo.
July 1 1954

Mining Division
Date Rec'd
JUL 6 1954

Mr. W. H. King
Executive Officer
DMEA Field Team. Region IV

Doket. No. DMEA 3173
No. Idm. E 657

Dear Sir:

I am writing this letter requesting your permission to continue drifting in an easterly direction on the three hundred foot level of the Hoosier mine an additional fifty feet in lieu of a fifty foot raise as authorized in present contract.

The reason for requested change being, We have encountered a definite change in ground formation and a fair showing of ferberite ore in drift one hundred and forty nine foot from shaft on the three hundred foot level, east.

Thanking you in advance. Very Truly Yours.

Ralph L. Johnson
Nederland, Colo.

P. 5 dve

1. The letter of trans. to Operator ought to say something like this: WSM

By the terms of the ....., all production from the land described in the contract and all production from the Crow claim that is transported or extracted through any workings described in Exhibit A of the Contract... (See Pg. 3 of Annex to Amend. 2)

2. Likewise, the letter to Hetzer Mines should have the same reference as above. In addition to referring to the four claims.

HCR 1/3/56
RPD

MF-200 (A)
(February 1952)

DOCKET NO. DMEA 3173

COMMODITY Tungsten

Idm-D657

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

EXPLORATION PROJECT CONTRACT[1]
(Short Form)

IT IS AGREED this 18th day of January, 1954, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] Johnson Brothers & Drew, a partnership consisting of Ralph Johnson, Leo and Inc., Scottsville, Colorado; Ray Johnson, Idaho Springs, Colorado, and George Drew, Idaho Springs, Colorado

hereinafter called the "Operator," as follows: and as set forth in Exhibit I attached hereto and made a part hereof:

ARTICLE 1. *Authority for contract.*—This agreement is entered into under the authority of the Defense Production Act of 1950, as amended, pursuant to DMEA Order 1 entitled "Government Aid in Defense Exploration Projects."

ARTICLE 2. *Operator's property rights.*—With respect to that certain land situated in the State of Colorado, County of Lowlor, described as follows:[3] Lowlor and Millie lode mining claims, [illegible] Survey 1630

the Operator represents and undertakes:[4]

(*a*) That the Operator is the owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached:

None

(*b*) That the Operator is a lessee, in possession and entitled to possession, and the Owner's Consent to Lien is attached.

The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof.

ARTICLE 3. *Exploration project.*—The Operator, within sixty (60) days from the date of this contract shall commence work on a project of exploration for[5] Tungsten

in or upon the described land; and shall bring the project to completion within a period of ten (10) months from the date of this contract. The work to be performed is more fully described in Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, are made a part of this contract. The Government will contribute to the cost of this work as hereafter provided. The work shall be performed by the Operator or by independent contractor or contractors efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for workmen's compensation and employers' liability insurance, with suitable and adequate equipment, materials, and labor, to bring the project to completion within the time fixed. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

ARTICLE 4. *Costs of the project.*—The agreed, estimated costs of performing the work, expressed in terms of units of work to be performed (per foot of drifting, per foot of drilling, per cubic yard of material to be moved, etc.) are set forth in Exhibit "A," attached hereto. The Government will pay seventy-five (75) percent of these agreed, estimated costs, as they accrue, for units of work actually performed that conform with the description or specifications for the work set forth in this contract, in an aggregate total amount not in excess of $ 16,500.00, which is 75 percent of $ 22,000.00, the agreed, estimated total cost of the project in which the Government will participate: *Provided,* That until the Operator's final report and final accounting have been rendered to the Government and any final check or auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last voucher or vouchers such sums as it sees fit not in excess of ten (10) percent of the maximum total which the Government might have been called upon to pay under the terms of the contract. The Government may, as it sees fit, make payments direct to the Operator's independent contractors, if any, for the account of the Operator, rather than to the Operator.

ARTICLE 5. *Reports, accounts, audits.*—(*a*) *Progress reports.* The Operator shall provide the Government with monthly reports of units of work performed under the contract, in quintuplicate (five copies), upon forms provided by the Government. These progress reports shall be certified by the Operator, and shall constitute both the Operator's invoice of units of work performed on the project during the period covered by the report and his voucher for repayment by the Government, unless the Government requires the use of a standard voucher form with invoice attached. Progress reports shall include surface and/or underground engineering-geological maps or sketches showing the progress of the exploration, with assay-reports on samples taken concurrently with the advance in mineralized ground.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property, particularly excluding any land or interest therein to which the Government's lien is not to attach or the production from which is not to be subject to the Government's percentage royalty.
[4] Strike out the provision not applicable.
[5] Name of mineral or minerals.

16—66329-1

(*b*) *Final report.*—Upon completion of the exploration work or termination of the contract the Operator shall provide the Government with an adequate geological and engineering report, in quintuplicate (five copies), including an estimate of ore reserves resulting from the exploration work.

(*c*) *Compliance with requirements.*—If, in the opinion of the Government, any of the Operator's reports are insufficient or incomplete, the Government may procure the making or completion of such reports and attachments as an expense of the exploration work; and the Government may withhold approval and payment of any vouchers depending upon insufficient or incomplete reports.

(*d*) *Accounts and audits.*—The Operator shall keep suitable records and accounts of the units of work performed, which the Government may inspect and audit at any time. The Government may at any time require a check of the work performed and an audit of the Operator's records and accounts, by a certified public accountant or otherwise, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract. Upon the completion of the project or termination of the contract the Operator shall render a final account and statement of work performed to accompany his final report.

ARTICLE 6. *Repayment by Operator.*—(*a*) If, at any time, the Government considers that a discovery or a development from which production may be made has resulted from the exploration work, the Government, at any time not later than 6 months after the Operator has rendered the required final report and final account, may so certify in writing to the Operator. The certification shall describe broadly or indicate the nature of the discovery or development. In the event of such certification, any minerals mined or produced from the land described in Article 2 within 10 years from the date of this contract, including any mined or produced before the certification, shall be subject to a percentage royalty which the Operator or his successor in interest shall pay to the Government, upon the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production, in whatever form disposed of, including ore, concentrates, or metal, until the total amount contributed by the Government, without interest, is fully repaid, or said 10 years have elapsed, whichever occurs first, as follows: See Annex I substituted for that part of 6(a) preceding the colon.

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

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

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

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

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

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

ARTICLE 7. *Assignment, transfer, or loss of Operator's interest.*—Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder. The Operator shall not make any voluntary nor permit any involuntary transfer or conveyance of the Operator's rights in the land described in Article 2, without making suitable provision for the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof; *Provided*, that mere failure by the Operator to maintain the Operator's rights in the land, without any consideration running to the Operator other than relief from the cost of maintaining such rights (as by surrender of a leasehold, failure to perform assessment work, or failure to exercise an option), coupled with complete abandonment by the Operator of all interest in or operations on the land for a period of 10 years from the date of this contract, shall not constitute such a transfer or conveyance. Should the Operator make or permit any transfer or conveyance in violation of this provision, the Operator shall be and remain liable for payment to the Government of the same amounts, at the same times, as would have been paid under the terms of the percentage royalty on production. If for any reason the net smelter returns, net concentrator returns, or other net amounts realized from the sale or other disposition of such production are not available as a means of measuring the amount of the Operator's liability, the amount thereof shall be estimated as well as may be, and in the event of dispute as to such estimates, the determination thereof by the Administrator of Defense Minerals Exploration Administration or by his successor shall be final and binding upon the Operator.

ARTICLE 8. *Termination and completion.*—The Government may, at any time, by written notice to the Operator, terminate this contract: (*a*) If the Operator fails to provide his share of the money necessary to prosecute operations pursuant to the terms of the contract; (*b*) if the Operator, in the opinion of the Government, fails to prosecute operations pursuant to the terms of the contract; or (*c*) if, in the opinion of the Government, operations up to the time of the notice have not indicated the probability of making any worth while discovery and in the opinion of the Government further operations are not justified.

ARTICLE 9. *Changes and added provisions* _____

_____

_____

_____

_____

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

Johnson Bros + Prime
(Operator)

By W. H. King
Executive Officer, DMEA
Field Team, Section IV

By Ralph L. Johnson
Roy Johnson Jr.
George Prime

I, _____, certify that I am the _____ secretary of the corporation named as Operator herein; that _____, who signed this contract on behalf of the Operator, was then _____ of said corporation; that said contract was duly signed for and in behalf of said corporation by authority of its governing body, and is within the scope of its corporate powers.

_____ [CORPORATE SEAL]

U. S. GOVERNMENT PRINTING OFFICE 16—66329-1

EXHIBIT A

Description of the Work

1. Drift a maximum of 150 feet easterly on the Phillip vein from the 275-foot level crosscut which extends south from the Hoosier shaft.

2. Sink the Hoosier shaft an additional 75 feet from the bottom of the present sump.

3. Cut a station at the 300-foot level of the Hoosier shaft and drift on the Hoosier vein a maximum of 100 feet westerly and 150 feet easterly from the shaft.

4. If ore is not encountered by the drifting authorized in Item 3, above, raises will be driven on the Hoosier vein from the new 300-foot level to the bottom of the ore shoots, at locations approved in writing by the DMA Region IV Field Team. These raises are not to exceed an aggregate total of 100 feet nor more than 50 feet for any single raise.

The location of the work is shown on Figure 3 which is attached and made a part of Exhibit A. The location of the raises are tentative and may be varied dependent on conditions encountered in the performance of the drifting.

Estimated Costs of the Project

Drifting 400 feet at $32.00 per foot -	$12,800.00
Sinking Hoosier shaft 75 feet at $80.00 per foot -	6,000.00
Raising 100 feet at $32.00 per foot -	3,200.00
Total estimated cost -	$22,000.00
Government participation at 75% -	$16,500.00

The above costs include supervision, equipment rental and depreciation, assaying and any and all other costs incurred in the completion of the work.

ANNEX I

The following provisions are in lieu of all of paragraph (a) of Article 6 which precedes the colon:

If the Government considers that a discovery or development from which production may be made has resulted from the exploration work, the Government, at any time not later than six months after a sufficient, complete, final report and final account referred to in the contract has been rendered, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development. The Operator, or his successor in interest, shall pay to the Government a royalty on all minerals mined or produced from the land described in Article 2, as follows: (1) Regardless of any certification of discovery or development, from the date of the contract until the lapse of the time within which the Government may make such certification of discovery or development, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first, unless the Government waives its right to a royalty; or (2) if the Government makes a certification of discovery or development, for a period of ten years from the date of the contract, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first. Said royalty shall be a percentage of the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production (including any bonuses), in whatever form disposed of, including ore, concentrates, or metal, as follows:

MF-203
(Revised July 1, 1953)

OWNER'S CONSENT TO LIEN

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

Section and Fractl Sec Mining Claim, U. S. Survey 10390

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

2/ Johnson Brothers and Paine, a partnership consisting of Ralph Johnson, 900 Grant Avenue, Louisville, Colorado, and Roy Johnson and George Paine of Boulder, Colorado,

hereinafter called the "Operator"; and

WHEREAS, under the provisions of said contract the Government is entitled to a percentage royalty on production (as set forth on the reverse side hereof) and to other rights and equities which do or may conflict with or be adverse to the rights of the undersigned:

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

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

2. To secure the payment to the Government of the percentage royalty on production3/ provided for under the terms of said exploration project contract, or any amendment thereof, there is hereby granted to the Government a lien upon the land above referred to and upon any production of minerals therefrom, until said royalty is fully paid or ten years have elapsed from the date of the contract, whichever occurs first.

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

4. Changes and added provisions _____

Dated this 14 day of January, 1954.

Fitzer Mines, Inc. [Seal]

by Becky D. Sutherland [Seal]

[Seal]

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

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

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

Repayment by Operator.--a. Certification.--If at any time the Government considers that a discovery or development from which production may be made has resulted from the exploration work, the Government, at any time not later than six months after the Operator has rendered the final report and final account, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development.

b. Percentage royalty.--The Operator, or his successor in interest, shall pay to the Government a royalty on all minerals mined or produced from the land described in Article 2,--(1) regardless of any certification of discovery or development, from the date of the contract until the lapse of the time within which the Government may make such certification of discovery or development, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first, unless the Government waives its right to a royalty; or (2) if the Government makes a certification of discovery or development, for a period of ten years (or other period fixed by the contract) from the date of the contract, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first. Said royalty shall be a percentage of the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production, in whatever form disposed of, including ore, concentrates, or metal, as follows:

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

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

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

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

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

e. Notice to Purchasers.--The Operator shall notify any purchaser of the production of the Government's royalty interest, and shall authorize and direct the purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets; but failure or refusal by the purchaser to comply shall not relieve the Operator of liability to pay any royalty falling due.

f. No Obligation to Produce.--This article is not to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any mining or production operations.

Interior--Duplicating Section, Washington, D. C. 47318

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

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-3173
Metal or Mineral
Date Received 9-21-53
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: JOHNSON BROS. & PRIME, NEDERLAND, COLORADO (Partnership, Colo.
Ralph Johnson, 500 Grant Ave., Louisville, Colorado
Roy Johnson, Nederland, Colorado
George Prime, Nederland, 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 Hoosier, Hummer and Phillips Lode Mining Claims, Survey Lot No. 18340, situate in Grand Island Mining District, Boulder County, Colorado.

(*b*) State any mine name by which the property is known. Hoosier Mine, and Phillips Mine

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Lessee, Lease from HETZER MINES, INC.

(*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. (On accompanying papers)

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 will explore Ferberite 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 7 days and be completed within 10 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.). 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.

(*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. 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)? Yes

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

[X] Money [X] 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 _____, 1953

JOHNSON BROS. & PRIME
(Applicant)

By Ralph L. Johnson
Roy W. Johnson

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

4.

(a) The existing mine workings in Hoosier mine consist of
1. Shaft, 225 ft. deep.
2. First level at 150 ft.
Second level at 225 ft.

Drift east on 150 ft. level, 275 ft. with two stopes, one about 80 ft. high, one 50 ft.
Drift west on 150 ft. level, 110 ft.
Cross cut on 150 ft. level, 180 ft. to Phillips vein.

Drifts on Phillips, 140 ft. west with stope up 110 ft.
Drift east, 200 ft. with stope to near surface

Drifting on 225 ft. level, 300 ft. on Hoosier vein,
Two stopes to level above, one stope started,
Cross cut on 225 ft. level, 180 ft. to Phillips vein with 60 ft. of drift on vein.

All workings are accessible for examination now.

(b) The Hoosier mine has been in production for the past three years under lease by JOHNSON BROS. & PRIME from HETZER MINES, INC., and has produced 2,467.83 units WO_3 during this time.

Previous production records are not available, although both the Hoosier and the Phillips have produced quantities of tungsten ore previous to this operation.

We have complete mining equipment on the property (owned and leased, except for some pipe and rails) also a thirty-ton concentrating mill and all necessary buildings (owned).

(c) Ore occurs in fissure veins, dipping approximately 70% to 80%.

(d) Good access roads; approximately two miles to Nederland, the nearest shipping point.

(e) Manpower, materials and supplies, available. Electric power supplied by THE PUBLIC SERVICE COMPANY OF COLORADO.

5.

(b) Proposed work includes 220 ft. of drifting on 225 ft. level of Phillips vein, to cut ore shoots that have been stoped out from 150 ft. level to surface.
Two raises of 50 ft. each on Phillips vein.
50 ft. of cross cut south from Phillips on the 150 ft. level to cut paralleling vein in foot wall of Phillips vein, which shows ore in previously drilled core drill hole; then 140 ft. of drift west on vein, and 150 ft. of drift east on said vein.
Two raises of 50 ft. each on foot wall vein

Making	510 ft.	of drifting on veins
	50 ft.	of cross cut drifting
	200 ft.	of raising
Total of	760 ft.	of work

(d) I, Ralph Johnson, have had better than twenty years mining experience.

Roy Johnson (partner) has had about fifteen years of mining and tunnel construction supervisory experience.

6.

(b) Labor:

One Foreman	$2.25 per hour
One Machine man	1.75 per hour
One Mucker	1.65 per hour
One Hoist man	1.65 per hour

Total labor costs for proposed exploration work, $15,184.00

(c) Operating materials and supplies:

Powder, 3 4/5 Tons @ $430.00	$1,634.00
Fuse	320.00
Caps	70.00
Carbide insert steel, ave. price $12.00, 21 pieces	252.00
Lamp Carbide	36.00
Track Spikes	38.00
Power, $130.00 per month	1,300.00
Oil and Grease	45.00
	3,695.00

(d) Operating Equipment:

Air Compressor)
Hoist) Leased from HETZER MINES, INC.

OWNED:
Atlas Jackleg Drifting Machine
Sullivan Stopeing Machine
Two Sets Hoses and Oilers
Sullivan Electric Slusher Hoist
Two Tram Cars
Bit Grinder

Estimated use allowance on all equipment:
$300.00 per month for 10 months, $3,000.00

To be purchased:

500 ft. of 1 in. pipe	$110.00
500 ft. of 1/2 in. pipe	110.00
500 ft. of Rails	375.00
Total	595.00

6.

(g) Miscellaneous:

Operating Equipment, Repairs and Maintenance, estimated	$450.00
Accounting, $25.00 per month	250.00
Workmen's Compensation	409.00
Payroll Taxes	683.00
Total	1792.00

(h) Contingencies:

Timber and Mine Ties	$110.00

TOTAL ESTIMATED COST OF PROPOSED EXPLORATION:

Labor	15,184.00
Material and Supplies	3,695.00
Use Allowance of Equipment	3,000.00
Pipe and Rails, to be Purchased	595.00
Equipment, Operating Repairs	450.00
Accounting	250.00
Timber and Ties	110.00
Workmen's Compensation	409.00
Payroll Taxes	683.00
Total	$24,376.00

7.

(b) We propose to furnish our share of cost of the proposed project:

1. By use of equipment owned
2. By money earned in wages
3. Also by money from current production.

DOCKET
SURNAME
400 Chapman
Martin

February 27, 1956

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Certification of Discovery or Development = Project Summary
Docket No. DMEA 3173 - Tungsten
Johnson Brothers and Prime
Hoosier Mine
Boulder County, Colorado
Contract No. Idm-E657

Operator: Johnson Brothers and Prime. Ralph Johnson, Attorney in Fact, 500 Grand Avenue, Louisville, Colorado

Contract: Dated January 18, 1954, with two amendments. Contract time 10 months.
Amendment No. 2, increased time to 18 months.
Contract cost $22,000.00; Government participation 75 percent, $16,500.00, by Amendment No. 2 was increased to $38,000.00 and $28,500.00.
Total work alloted by contract and amendments, shaft sinking, 75 feet; drifting and crosscutting, 950 feet; and raising, 50 feet.

Property Ownership: Original contract Hoosier and Phillip Lode Mining claims, patented, Amendment No. 2 added Hummer and McKenna Lode Mining claims, patented.
All have Survey No. 18340.
The property is owned by Hetzer Mines Company and was leased to Johnson Brothers and Prime, by a lease dated September 1, 1953.

Work Completed:

Shaft sinking	75 feet
Drifting and crosscutting	942 feet
Raising	50 feet

Total cost, subject to audit	$37,744.00
Government participation 75%	$28,308.00

History and Production: This area was discovered in the early days and first opened up about 1901.
About 13,594 units of WO_3 have been produced from the property.

Ore Values & Tonnage: No ore of material value was found on the Hoosier and Phillips veins. On the 225-foot level on the Hummer vein an ore shoot 130 feet long was found. This shoot to January 1, 1956, had been mined to a height of 30 feet over an indicated average width of 2½ feet. This ore shoot has an indicated and inferred tonnage of about 4,000 tons. Of this approximately 800 tons have been mined.

From the 800 tons mined, 14.749 tons were shipped as high grade and concentrates, with an average grade of 47.86 percent WO_3. These had a sale value of $40,211.00 or approximately $50.00 for each ton of ore mined. The average grade of ore mined is indicated to be 1.18 percent WO_3. $2,007.00 in royalties have been paid on the above shipments.

The indicated and inferred ore amounting to 4,000 tons at $50.00 per ton would have a value of $200,000.00 from which we should receive royalties of about $10,000.00.

Certification: A certification of discovery or development was recommended by the Field Team. A certification of discovery or development was prepared by the DMEA on February 27, 1956.

Comments: The project was established to explore the Phillips, Hoosier and Hummer veins for tungsten in the Boulder District of Colorado. The ore-shoots on the Phillips and Hoosier vein did not carry down to the 300 foot level. The Operators requested an amendment to explore the Hummer vein on the 300 foot level which was denied (See memorandum of February 10, 1956) by this Division, although recommended by the Field Team and the Commodity Divisions of the Geological Survey and the Bureau of Mines.

TLChapman/foc
2/27/56
cc to: Docket
Code 400
Adm. Read. File
Operating Comm.

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

☐ Audited

☐ Certified

WORK ANALYSIS SHEET - DMEA PROJECT

Analysis as of MARCH 31, 55
Incl. Voucher for _____

☐ Actual Cost

☒ Agreed Unit Costs

Name JOHNSON BROS. & PRIME

Docket No. 3173

State COLORADO

Commodity TUNGSTEN

Idm-E No. 657

OPERATION	AUTHORIZED Units THRU MARCH 31, 1955	AUTHORIZED Cost	COMPLETED Units	COMPLETED Cost	NET COST
Drifting & Crosscutting	892	28,544.00			
Raising	50	1,600.00			
Shafts	75	6,000.00			
Winzes					
Drilling (Specify)					
Surface Excavation					
Underground Excavation					
Roads and Trails					
Operating Equipment Purchased					
Surface Rehabilitation & Repairs					
Underground Rehabilitation					
New Building, Improvements, etc.					
Other (Specify)					
Totals		36,144.00			

Prepared by DRC

71626

☐ Audited

☐ Certified

WORK ANALYSIS SHEET - DMEA PROJECT

Analysis as of 12-16-54
Incl. Voucher for Oct 54

☐ Actual Cost

☐ Agreed Unit Costs

Name Johnson Bros Mtal

Docket No. 3173

State Colorado

Commodity Fluorspar

Idm-E No. 657

OPERATION	AUTHORIZED Units	AUTHORIZED Cost	COMPLETED Units	COMPLETED Cost	NET COST
Drifting & Crosscutting	950	30400	842 ~~500~~	26,944 ~~16000~~	16000
Raising	50	1600	50	1,600	1600
Shafts	75	6000	75	6000	6000
Winzes					
Drilling (Specify)					
Surface Excavation					
Underground Excavation					
Roads and Trails					
Operating Equipment Purchased					
Surface Rehabilitation & Repairs					
Underground Rehabilitation					
New Building, Improvements, etc.					
Other (Specify)					
Totals		38000		~~23600~~ 34,544	23600

Prepared by [signature]

4/12/55 GPR.

71626

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

JAN 21 1964

Cold Spring Tungsten, Inc.
1036 First National Bank Building
Denver 2, Colorado

Re: DMEA-3173 (Tungsten)
Johnson Brothers & Prime
Hoosier Mine
Boulder County, Colorado
Contract Idm-E657

Gentlemen:

Enclosed is a self-explanatory letter of today to the Operator under the subject contract.

This correspondence relates to the Owner's Consents to Lien, dated January 14, 1954, and September 28, 1954, executed by Hetzer Mines, Inc., covering the subject property.

Sincerely yours,

Acting Director

Enclosure

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

JAN 21 1964

Johnson Brothers & Prime
500 Grant Avenue
Louisville, Colorado

Re: DMEA-3173 (Tungsten)
Johnson Brothers & Prime
Hoosier Mine
Boulder County, Colorado
Contract Idm-E657

Gentlemen:

Thank you for returning the completed Form 63's mailed to you on January 2, 1964.

By the terms of the subject Exploration Project Contract, as amended, and the certification of discovery or development dated March 12, 1956, all minerals mined or produced from January 18, 1954, to January 18, 1964, were subject to the Government's royalty as set forth in said contract.

As the period during which production was subject to royalty has now expired, the Government according to its present records retains no claim or lien against the property subject to the contract or any future production therefrom. We, therefore, are closing our books and records on this contract. Your attention, however, is called to the provisions of the contract which require the Operator to keep and preserve certain records for the periods indicated.

Sincerely yours,

George Fumich, Jr.

ACTING Director

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
WASHINGTON 25, D. C. 20240

OFFICIAL BUSINESS

POSTAGE AND
U. S. DEPARTMENT

102

MOVED-LEFT NO ADDRESS
NO SUCH NUMBER
UNKNOWN
UNCLAIMED
CARRIER NO. 243

Cold Spring Tungsten, Inc.
1036 First National Bank Bldg.
Denver 2, Colorado

RETURN
TO
WRITER

15

DENVER
JAN 24
3 30PM
1964
COLO.

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
1/20	Murphy	500
1/20	Talbot	800
	Selbridge	120
		110
	Fumich	100
		220

JAN 21 1964

Johnson Brothers & Prime
500 Grant Avenue
Louisville, Colorado

Re: DMEA-3173 (Tungsten)
Johnson Brothers & Prime
Hoosier Mine
Boulder County, Colorado
Contract Idm-E657

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Sincerely yours,

George Fumich, Jr.

ACTING Director

MMerrithew/mm (1/18/64)
cc: Cold Spring Tungsten, Inc., 1036 First National Bank Bldg., Denver 2, Colo.
Director's Reading File
CA&A Division
Region III w/cy of Form 63 dated 1/2/64
Docket
Code 500

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
1/20	Murphy	500
1/20	Talbitt	800
	[illegible]	120
1/20	[illegible]	110
4	[illegible]	100
		220
		[illegible]

JAN 21 1964

Cold Spring Tungsten, Inc.
1036 First National Bank Building
Denver 2, Colorado

Re: DMEA-3173 (Tungsten)
Johnson Brothers & Prime
Hoosier Mine
Boulder County, Colorado
Contract Idm-E657

Gentlemen:

Enclosed is a self-explanatory letter of today to the Operator under the subject contract.

This correspondence relates to the Owner's Consents to Lien, dated January 14, 1954, and September 28, 1954, executed by Hetzer Mines, Inc., covering the subject property.

Sincerely yours,

George Fumich, Jr.

Acting Director

Enclosure

MMerrithew/mm
1/20/64
cc: Director's Reading File
Region III
✓Docket
Code 500

43683

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

January 2, 1964

Re: DMEA-3173 (Tungsten)
Johnson Bros. & Prime
Hoosier Mine
Boulder County, Colorado
Contract Idm-E657

Mr. Ralph L. Johnson
Johnson Bros. & Prime
500 Grant Avenue
Louisville, Colorado

Dear Sir:

After the completion of the approved exploration work under the contract identified above, we asked to be informed about changes in the status of the property and production from it during the period of royalty obligation.

To assist you to furnish this information and to assure the accuracy of our records, please answer the questions on the back of this letter and return two copies to this office with copies of any pertinent documents.

This report need not include the lot of ore on which you paid $14.07 in royalty on February 24, 1962.

Sincerely yours,

F. M. Murphy

F. M. Murphy, Acting Chief
Division of Minerals

OFFICIAL FILE COPY
O. M. E
RECEIVED JAN 14 1964

DATE		
1/15		80.0
1/8		10.0
1/15		1.0
	Murphy	500

MME Form 63
Revised 3-62

REQUEST FOR INFORMATION ON CERTIFIED PROJECT AND PROJECT UNDER ROYALTY AGREEMENT

From December 22, 1959 to January 1, 1964

1. ~~Since~~ , has there been a change in ownership, lease, or sublease? If yes, please state details of the transaction below and provide a true or signed copy of the pertinent documents, unless they have been provided before. Yes ☐ No ☒

From December 22, 1959, to January 1, 1964

2. ~~Since~~ , has there been any production from the land subject to the contract? Yes ☐ No ☒

A. If so and it was shipped, give quantity, value, and name and address of purchaser.

	Quantity	Value

B. If stockpiled awaiting sale, state quantity, grade, and location.

Type	Quantity	Estimated Grade	Location
Ore	Tons		
Concentrates	Tons		
Other	Tons		

3. Since , has any production been transported through workings (see of contract)? Yes ☐ No ☒

A. If so, state quantity, value, and disposition of material.

Disposition of Material	Quantity	Value

Submitted by:

Name Ralph L. Johnson Title partner

Address 500 Grant ave Date Jan 9 1964
Louisville Colo

4511

Building 20 - Federal Center
Denver 25, Colorado

February 23, 1962

OFFICIAL FILE COPY
O. M. E
RECEIVED FEB 26 1962

DATE		
2/26	check	800
"	Vouch	500
		220

Mr. Ralph L. Johnson
Johnson Bros. & Prime
500 Grant Avenue
Louisville, Colorado

Re: DMEA-3173 (Tungsten)
Contract Idm-E657
Johnson Bros. & Prime
(Hoosier Mine)
Boulder County, Colorado

Dear Mr. Johnson:

This has further reference to your letter to me dated February 1, 1962 regarding sale of the stockpiled ore.

The Washington Office OME advises that the Government is willing to accept payment of royalty due the Government under the terms of the contract on the small lot, estimated weight 750 pounds, price $15.00 per unit of WO_3, as offered in your letter of February 1, 1962.

The Government will also accept the assay value of 50 percent WO_3 noted in your letter.

Please send your check for the above mentioned royalty to this office.

Paid - see letter below

Yours very truly,

Original signed by
Hugh M. Commore
Acting Field Officer, OME
Region III

HMC/lm
cc Chief, Division of Field Operations, OME (2)
Idm-E657 Royalty Corres.
Chron

OME
DEPARTMENT OF THE INTERIOR

Louisville, Colorado
February 24, 1962

MAR 2 1962
O.M.E.

Office of Minerals Exploration
Building 20 Federal Center
Denver 25, Colorado
Hugh M. Connors
Acting Field Officer, O.M.E.

D.M.E.A. 3173 (tungsten)
Contract IdmE657
Johnson Bros. & Prime
(Hoosier Mine)
Boulder County, Colorado

Dear Mr. Connors:

Thank you for your letter of Februaary 23, 1962 advising me of the Government's decision on the last lot of ore we mixed under the said Government contract from Hoosier mine at Nederland, Colorado.

Enclosed please find our check in the amount of $14.07, as payment in full of Royalty due the Government on this lot.

Yours very truly,

JOHNSON BROS. & PRIME

Ralph L. Johnson

Ralph L. Johnson

Enclosure

skw

Re.

D.M.F.A. 3173 (tungsten)

Contract Idm-657

Johnson Bros. & Prime

Hoosier Mine

Boulder County, Colorado

Gross weight 750 Lbs.

Assay 50% Wo3 = 375 Lbs. Wo3

@ $15.00 per ton unit or $ .75 per Lb. $281.25

Government Royalty 5% = $14.07.

MME Form 7
(10-58)

SOLICITOR

FEB 15 1962

INTERIOR DEPT.

OFFICIAL FILE COPY

Date	Surname	Code
2/14	Holt	500
	On leave	500
2/14	Fallert	800
	Fuller	140
	Brown	140
2/19	Johnson	110
2-19	Turnick	100
		220

FEB 19 1962

Memorandum

To: Acting Field Officer, Region III

From: Chief, Division of Field Operations

Subject: DMEA-3173 (Tungsten)
Johnson Brothers and Prime
Hoosier Mine
Boulder County, Colorado
Contract Idm-E657

Please advise the Operator under the subject contract that the Government is willing to accept payment of royalty due the Government under the terms of the contract on the small lot, estimated weight 750 pounds, price $15.00 per unit of WO_3, as offered in Mr. Johnson's letter of February 1, 1962, and recommended in your memorandum of February 5, 1962.

You may also advise the Operator that the Government will accept the assay value of 50 percent WO_3 noted in Mr. Johnson's letter.

/s/ George C. Selfridge

SPHolt/gla
2-14-62
cc to: Director's Reading File
Review Committee
Docket

RECEIVED
FEB 15 1962
ASSOC. SOLICITOR
MINERAL RESOURCES

FROM SOLICITOR

FOR SIGNATURE

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
2/14	S.P.H.	500
	On leave	500
		800
		~~130~~
		~~110~~
		100
		220
		500

February 14, 1962

Memorandum

To: The Files

From: Stephen P. Holt, Mining Engineer
Division of Minerals

Subject: DMEA-3173 (Tungsten)
Johnson Brothers and Prime
Hoosier Mine
Boulder County, Colorado
Contract Idm-E657

The Operator, by letter of February 1, 1962, to the Acting Field Officer, Region III, offered to settle the question of royalty due the Government on a small lot of tungsten concentrate produced and remaining unsold since the cessation of operations under the subject contract in January 1957.

The estimated weight of the concentrate is 750 pounds, assay 50 percent WO_3. The Operator offered to pay royalty on the basis of a price of $15.00/unit. Using the above figures, royalty due the Government at the rate of 5 percent would be $14.06.

Recent quotations for tungsten, U. S. scheelite, range from $18.00 - $22.00/unit of WO_3. The concentrate in question would be penalized at the rate of $0.20 for each 1 percent below 60 percent WO_3, or $2.00 per unit. There seems to be no reason to expect better prices for tungsten concentrate in the near future.

Therefore, it seems to be in the interest of the Government to accept the Operator's offer, in concurrence with the recommendation of the Acting Field Officer, Region III, and to thereby close this old D MEA account.

Stephen P. Holt
Stephen P. Holt

43683

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
Building 20 - Federal Center
Denver 25, Colorado

February 5, 1962

Memorandum

To: George C. Selfridge, Chief,
Division of Field Operations, OME
Washington 25, D. C.

From: Acting Field Officer, OME, Region III

Subject: DMEA-3173 (Tungsten)
Contract Idm-E657
Johnson Bros. & Prime
(Hoosier Mine)
Boulder County, Colorado

Attached are the original and one copy of the Operator's letter dated February 1, 1962 and copies of my reply.

I recommend that we accept the Operator's proposal.

Hugh M. Connors

Hugh M. Connors

Attachments

OFFICIAL FILE COPY
O. M. E
RECEIVED FEB 8 1962

DATE	INITIALS	CODE
2/8	HMC	800
"	Hoeft	500
	SMH	
		220

(2)

Hmc

OME
DEPARTMENT OF THE INTERIOR
FEB 5 1962
REGION III
DENVER, COLORADO

February 1, 1962

United States Office of Minerals Exploration
Building 20, Federal Center
Denver 25, Colorado

Attention Mr. Hugh M. Connors, Acting Field Officer OME, Region III

Dear Sir:

DMTA3173 (tungsten) Contract 7 dm. E657
Hoosier Mine, Johnson Bros. & Prime

Rec: your letter of January 26, 1962 and note especially the paragraph regarding the small lot of tungsten concentrates we had on hand at the cessation of operations of the Hoosier Mine January 1, 1957.

Although there is no local market for this type ore, the highest local quotation I have been able to get is fifteen ($15) dollars per short ton unit.

In order to close our books, I would like to know if it would be possible to pay the Government's royalty based on that price.

Also would our original assay of 50% WO_3 be accepted in order not to have additional expense on such a small lot.

Sincerely yours,

Johnson Bros. & Prime, Nederland, Colo.

Ralph L. Johnson

Ralph L. Johnson

skw

OFFICE FILE COPY
RECEIVED
O M E
FEB 8 1962
DATE
CODE

Building 20 - Federal Center
Denver 25, Colorado

OFFICIAL FILE COPY
O. M. E.
RECEIVED JAN 29 1962

29	gla	500
		220

January 26, 1962

Johnson Bros. & Prime
c/o Ralph L. Johnson
500 Grant Avenue
Louisville, Colorado

Re: DMEA-3173 (Tungsten)
Contract Idm-E657
Johnson Bros & Prime
(Hoosier Mine)
Boulder County, Colorado

Gentlemen:

Enclosed is a copy of the Report of Royalty Review on the subject contract dated January 4, 1962 covering the period May 22, 1957, through December 26, 1961, which shows that no royalty is due the Government at this time.

Yours very truly,

Original signed by

Hugh M. Connors
Acting Field Officer, OME
Region III

Enclosure
HMC/lm
cc Chief, Division of Field Operations, OME
E. D. Talbert, Acting Chief
Contract Administration and Audit Division
Royalty Corres. E657
Chron

Building 20 - Federal Center
Denver 25, Colorado

January 26, 1962

Memorandum

To: Fiscal Section, Division of Administrative Services
Office of the Secretary, Department of the Interior
Washington 25, D. C.

From: Acting Field Officer, OME, Region III

Subject: DMEA-3173 (Tungsten)
Contract Idm-E657
Johnson Bros. & Prime
(Hoosier Mine)
Boulder County, Colorado

Attached is the original Report of Royalty Review on the subject property dated January 4, 1962 covering the period May 22, 1957, through December 26, 1961.

Original signed by

Hugh M. Connors

Attachment
HMC/lm
cc Chief, Division of Field Operations, OME
E. D. Talbert, Acting Chief
Contract Administration and Audit Division
Royalty Corres E657
Chron

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
		220

JAN 18 1962

Memorandum

To: Acting Field Officer, Region III

From: E. D. Talbert, Acting Chief (Signed) E. D. Talbert
Contract Administration and Audit Division

Subject: DMEA-3173 (Tungsten)
Johnson Bros. & Prime
Hoosier Mine
Boulder County, Colorado
Contract Idm-E657

The original and two copies of a Report of Royalty Review covering the subject contract are enclosed. If you concur in the facts stated therein, please make the following distribution:

(a) Original to the Fiscal Section, Division of Administrative Services, Office of the Secretary, Department of the Interior, Washington 25, D. C.;
(b) One copy for the Operator; and
(c) One copy for your files.

As evidence of your concurrence, a copy of your letter transmitting the copy of the report to the Operator should be furnished this Division. If for any reason you do not concur, the original and both copies of the report should be returned to this Division with your comments.

Enclosures

EDTalbert/ama 1-18-62

cc:
Docket
Director's Reading File
CA & A Division
Mr. Rothrock

43683

MME Form 7
(10-58)

OFFICIAL FILE COPY

Date	Surname	Code
		220

DEC 21 1961

Memorandum

To: Acting Field Officer, Region III

From: E. D. Talbert, Acting Chief (Signed) E. D. Talbert
Contract Administration and Audit Division

Subject: DMEA-3173 (Tungsten)
Johnson Bros. & Prime
Hoosier Mine
Boulder County, Colorado
Contract Idm-E657

This Division is preparing a Report of Royalty Review on the subject contract. Accordingly, your submission of an original and one copy of MME Form 22, Check Sheet of Examining Engineer, will be appreciated.

It appears that the property under this contract has been inactive since January 1, 1957. If this is so, please confirm by an appropriate statement under item 8 of MME Form 22.

EDTalbert/ama 12-21-61

cc:
Docket
Director's Reading File
CA & A Division

43683

12-19-59

J. W. Townsend
Executive Officer OME
Field Team. Region III

OME
DEPARTMENT OF THE INTERIOR
DEC 22 1959
REGION III
DENVER, COLORADO

Re. Docket No DMEA 3173
Contract No Idm. C 657
Johnson Bros & Prime
(Hoover Mine)
Nederland Colo

OFFICIAL FILE COPY
O. M. E.
RECEIVED DEC 28 1959

DATE	INITIALS	CODE
12/28	C	220
"	EEP	800
12/29	S.P.H.	500
		225

Re Your letter of Dec 7 1959

Dear Sir:

The land under contract No Idm C657 is owned by Cold Spring Tungsten Inc. 818 17th St Denver Colo.

We (Johnson Bros & Prime) operated this mine under lease until Jan 1 1957 at which time we closed down operations and relinquished our lease because of market conditions.

There has been no further operations of this property up until the present time. Also no production since Jan 1 1959

Yours Very Truly
Ralph L Johnson (partner)
600 Grant Ave
Louisville
Colo

Johnson Bros & Prime
Nederland Colo

Chairman (?)

OFFICIAL FILE COPY
O. M. E.
RECEIVED DEC 21 1959

DATE	INITIALS	CODE
12/21	RCW	225
"	EEP	800
12/22	Hoet	500
		225

Building 20 - Federal Center
Denver 25, Colorado
December 17, 1959

CERTIFIED MAIL

Mr. Ralph Johnson, Agent
Johnson Bros. & Prime
500 Grant Avenue
Louisville, Colorado

Re: Docket No. DMEA 3173 (Tungsten)
Contract No. Dm-E657
Johnson Bros. & Prime
(Hoosier mine)
Boulder County, Colorado

Dear Mr. Johnson:

In reference to the instructions in the last paragraph of the letter to you from C. O. Mittendorf, Administrator, DMEA, forwarding Certification of Contract Dm-E657 dated March 12, 1956, please advise the status of land ownership, current operations at the project, and whether or not there has been any production from the land subordinated under the contract since January 1, 1959.

Very truly yours,

Original signed by

J. W. Townsend
Executive Officer, OME
Field Team, Region III

JWT:ltm

cc: Chmn. Op. Comm. (2)
Roy. Corres. E657
Semiannual Rept. File, E657
Susp.
Chron.

OME
DEPARTMENT OF THE INTERIOR
NOV 23 1959
REGION III
DENVER, COLORADO

Nov. 21 1959

Re. Doket No 3173 Tungsten
Contract No 9dm E657
Johnson Brost Prime
(Hoosier mine)
Nederland Colo

Office of Minerals Exploration
Denver 25 Colo.

Your letter of Nov 16 1959 recieved and the information you have on the last lot of tungsten concentrates from the Hoosier mine is incorrect.

The said concentrates are stored at our mill at Nederland, and to my knowledge have never been assayed or weighed.

No disposition has as yet been made of said concentrates as you know we have no local market for tungsten

Very Truly Yours
Ralph L Johnson
500 Grant ave
Louisville
Colo

11/23/59
copy distributed to
Chairman (2)
Haslar

OFFICIAL FILE COPY
O. M. E.
RECEIVED NOV 27 1959

DATE	INITIALS	CODE
11-27	gad	220
11/30	[illegible]	800
"	[illegible]	500
		225

OFFICIAL FILE COPY
O. M. E.
RECEIVED NOV 19 1959

DATE	INITIALS	CODE
11-19	gad	VNO
11/19	[illegible]	800
11/20	Hacff	500
		225

Building 20 - Federal Center
Denver 25, Colorado
November 16, 1959

[illegible]ED MAIL

Mr. Ralph L. Johnson
Johnson Bros. & Prime
P. O. Box 336
Nederland, Colorado

Re: Docket No. DMEA 3173 (Tungsten)
Contract No. IAm-E657
Johnson Bros. & Prime
(Hoosier mine)
Boulder County, Colorado

Dear Mr. Johnson:

We have had no reply to our letter to you dated October 8, 1959, in which we asked what disposition has been made of the 750 pounds of Tungsten concentrates which were stored at Ralph Johnson's house in Lafayette, Colorado, as of January 14, 1959, the date of our last inspection. Will you please advise.

Very truly yours,

Original signed by

J. W. Townsend
Executive Officer, OME
Field Team, Region III

HMC:ltm

cc: Chmn. Op. Comm. (2)
Roy. Corres. E657
Chron.

OFFICIAL FILE COPY
O. M. E.
RECEIVED OCT 16 1959

DATE	INITIALS	CODE
10-16	gad	910
10/19	[illegible]	800
10/19	Hall	500
		225

Building 20 - Federal Center
Denver 25, Colorado

October 8, 1959

Mr. Ralph L. Johnson
Johnson Bros. & Prime
P. O. Box 336
Nederland, Colorado

Re: Docket No. DMEA 3173 (Tungsten)
Contract No. Ida-E657
Johnson Bros. & Prime
(Hoosier mine)
Boulder County, Colorado

Dear Mr. Johnson:

The last inspection of the Hoosier mine was made January 14, 1959. At that time, it was noted that 750 pounds of concentrates, estimated to run 50 percent WO_3, was stored at Ralph Johnson's house in Lafayette, Colorado.

Will you please advise what disposition has been made of the tungsten concentrates.

Very truly yours,

Original signed by

J. W. Townsend
Executive Officer, OME
Field Team, Region III

HMC:ltm

cc: Chmn. Op. Comm. (2)
Roy. Corres. E657
Semiannual file
Chron.

MME Form 7
(10-58)

DMEA 3173
OFFICIAL FILE COPY

Date	Surname	Code
3/13	Holt	400
3/13	Martin	400
3-13	Lucas	800
3/16	Lynch	140
	Hoffman	140
3/17	[illegible]	130
	Johnson	110
3/18	[illegible]	225

MAR 17 1959

MEMORANDUM

To: Executive Officer, OME Field Team, Region III

From: Chairman, Operating Committee, OME

Subject: Semi-Annual Reports of Certified Projects
Dockets Nos. DMEA 1567, 2343, and 3173 - All Tungsten
Eureka Tungsten Mining Company
George Jump
Johnson & Prime
Contract Nos. E53, E333, and E657

The Semi-Annual Report of Certified Projects for each of the above-cited contracts shows that some comparatively small tonnage of tungsten ore or concentrate is being held unsold by each Operator, presumably for a better price than presently offered.

It is not our present intention to ask any Operator to sell tungsten ore or concentrate under present market conditions. Neither is it our present intention to exercise the Government's option to require the computation of royalty on the value of the stored ore, in those cases where the contracts provide for such option.

We are confident that you are maintaining contact with operators named above and any other operators of certified contracts who are holding unsold ore or concentrate in storage; and that, by periodic inspections and otherwise, you are making sure that payment of the Government's royalty will be made if such stored material is eventually sold.

/s/ George C. Selfridge

APPROVED:

H. G. Iverson
Member, Bureau of Mines

Thor H. Kiilsgaard
Member, Geological Survey

SPHOLT:fec 3-13-59
cc to: Code 400
Director's Read. File
Operating Comm.
FT. REG. III
R. W. Holliday, USBM
T. H. Kiilsgaard, USGS

43683

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

Mr. J. W. Townsend, Executive Officer
OME Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

HCL
2/17/59

Re: Semi-Annual Reports of Certified Projects
Dockets Nos. D~~MEA 1567~~, 1567, 2343, and
3173 - all Tungsten
~~Cold Spring Tungsten, Inc.~~
Eureka Tungsten Mining Company
Shiprock Uranium Corporation - Hes Jumps
Johnson Brothers & Prime
Contract Nos. Idm-E54, E53, E333, and
E667

Dear Mr. Townsend:

The Semi-Annual Report of Certified Projects for each of the above-cited contracts shows that some comparatively small tonnage of tungsten ore or concentrate is being held unsold by each Operator, presumably for a better price than presently offered.

It is not our present intention to ask any Operator to sell tungsten ore or concentrate under present market conditions. Neither is it our present intention to exercise the Govt's option to require the computation of royalty on the value of the stored ore, in those cases where the Contract's provide for such option. ~~Nor to demand, under Article 6(a), 9(b), or whatever other article of the contract is appropriate in the individual case, that royalty be paid to the Government on ore or concentrate held in storage.~~

We are confident that you are maintaining contact with operators named above and any other operators of certified contracts who are holding unsold ore or concentrate in storage; and that, by periodic inspections and otherwise, you are making sure that payment of the Government's royalty will be made if such stored material is sold eventually ~~within the required period of time.~~

Sincerely yours,

APPROVED:

Chairman, Operating Committee

Member, Bureau of Mines

Member, Geological Survey

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
224 New Customhouse
Denver 2, Colorado

June 18, 1957

OFFICIAL FILE COPY
DMEA
RECEIVED JUN 21 1957

DATE	INITIALS	CODE
6 21	C	220
	WSM	400
		225

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3173 (Tungsten), Contract Idm-E657, Johnson Brothers and Prime (Hoosier Mine), Boulder County, Colo.

In reply to your letter of June 13, 1957, the examining engineer has been instructed to contact the Operator and devise a simple system of bookkeeping, whereby more adequate production records will be maintained to protect the Government's interests.

W H King
W. H. King

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
6-11	Chapman	400
6-11	Martin	400
		800
6/12	Johnson	110
13	Mathews	100
6/13	C	220
		400
6/12	GCS	130
		225

JUN 13 1957

Mr. William H. King, Executive Officer
DMEA Field Team, Region III
224 New Customhouse
Denver 2, Colorado

Re: Docket No. DMEA 3173 - Tungsten
Johnson Brothers and Prime
Hoosier Mine
Boulder County, Colorado
Contract No. Idm-2657

Dear Mr. King:

Reference is made to Report of Royalty Review dated May 29, 1957, and attached Check Sheet of Examining Engineer.

We note that "1.(a)", "1. (b)", "2. (a)", "2. (b)", and "3. (a)" are checked as "Yes", while 3. (b) is check "No".

The question in "3. (b)" is whether adequate records are maintained on such material to protect the Government's interest. Therefore, if "No" is the intended answer, we would appreciate hearing whether the Operator has been given instructions for maintaining records to protect the Government's interest.

Sincerely yours

George C. Selfridge

Chairman, Operating Committee (GCS)

APPROVED:

Frank D. Lamb (GCS)
Member, Bureau of Mines

Thor H. Kiilsgaard (GCS)
Member, Geological Survey

TLChapman/dlm 6-11-57
cc to: Docket
400
Oper. Comm.
Adm. Read. File
DMEA FT Reg. III
Messrs. R. W. Holliday, USBM
T. H. Kiilsgaard, USGS

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
		130

June 12, 1957

Memorandum

To: Chairman, Operating Committee

From: Jay L. Chambers, Director
Contract Administration and Audit Division

Subject: Docket No. DMEA-3173 (Tungsten)
Johnson Brothers and Prime, Hoosier Mine
Boulder County, Colorado, Contract No. Idm-E657

I do not believe this letter should be sent to Mr. King.

The engineer gave sufficient explanation in a footnote entitled 3.b to point 3. (b) referred to in Mr. Chapman's proposed letter. (See Report of Royalty Review dated May 29, 1957.)

It would seem unreasonable to require the Operator to keep detailed records of tailings which may never have any value. If such tailings should ever have market value, a statistical approach would be necessary anyway and more reasonable.

Attachment

JLChambers/wb
June 12, 1957

Copy to: Docket
Admr. Reading File
Mr. Chambers

OFFICIAL FILE COPY
DMEA
RECEIVED JUN 7 1957

DATE	INITIALS	CODE
6/10	C	220
6/10	WJ	800
		225

224 New Customhouse
Denver 2, Colorado

June 5, 1957

Hetzer Mines, Inc.
P. O. Box 641
Boulder, Colorado

Re: Docket DMEA 3173 (Tungsten), Contract Idm-E657, Johnson Bros. & Prim (Hoosier Mine), Boulder County, Colorado

Dear Sir:

Enclosed is a photocopy of a letter dated May 21, 1957 for which we have not received a reply.

We would appreciate your providing this office with the requested information at your earliest convenience.

Very truly yours,

Original signed by
E. N. HARSHMAN

E. N. Harshman
Acting Executive Officer
DMEA Field Team, Region III

Enclosure

MHM/vj

cc: Royalty File E657
Sec. Opr. Comm. (2)
Brading
Marshall
Chron.

OFFICIAL FILE COPY
DMEA
RECEIVED JUN 7 1957

DATE	INITIALS	CODE
6/10		220
6/10		800
		225

224 New Customhouse
Denver 2, Colorado

June 5, 1957

Cold Spring Tungsten, Inc.
P. O. Box 641
Boulder, Colorado

Re: Docket DMEA 3173 (Tungsten), Contract Idm-E657, Johnson Bros. & Prime (Hoosier Mine), Boulder County, Colorado

Dear Sir:

Enclosed is a photocopy of a letter dated May 21, 1957 for which we have not received a reply.

We would appreciate your providing this office with the requested information at your earliest convenience.

Very truly yours,

Original signed by
E. N. HARSHMAN

E. N. Harshman
Acting Executive Officer
DMEA Field Team, Region III

Enclosure

MHM/vj

cc: Royalty File E657
Sec. Opr. Comm. (2)
Brading
Marshall
Chron.

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
6/4	Talbert	800
6/4	C	220
		225

JUN 4 1957

Mr. Thomas H. Brading
DMEA Auditor
224 New Customhouse Building
Denver 2, Colorado

Re: Report of Royalty Review
Johnson Brothers and Prime
Contract No. Idm-1657
Docket No. DMEA-3173

Dear Mr. Brading:

Receipt is acknowledged of the Washington copies of your Report of Royalty Review covering the above-cited project.

The report is acceptable and normal distribution is authorized.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Director
Contract Administration
and Audit Division

EDTalbert/wb
June 4, 1957

Copy to: Docket
Admr. Reading File
Mr. Chambers

8623

OFFICIAL FILE COPY
D M E A
RECEIVED MAY 21 1957

DATE	INITIALS	CODE
5/24	JWD	220
5/24	[illegible]	800
		225

224 New Customhouse
Denver 2, Colorado

May 21, 1957

Hetzer Mines, Inc.
P. O. Box 641
Boulder, Colorado

Re: Docket DMEA 3173 (Tungsten), Contract Idm-E657, Johnson Bros. & Prime (Hoosier Mine), Boulder County, Colo.

Dear Sir:

We would appreciate your providing this office with one copy of your standard smelter schedule on tungsten for the years 1954 and 1955.

Very truly yours,

Original signed by
E. N. HARSHMAN

E. N. Harshman
Acting Executive Officer
DMEA Field Team, Region III

MHM/vj

cc: Royalty File E657
Sec. Opr. Comm. (2)
Brading
Marshall
Chron.

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 24 1957

DATE	INITIALS	CODE
5/24	2WJ	220
5/24	[illegible]	800
		225

224 New Customhouse
Denver 2, Colorado

May 21, 1957

Wah Chang Corporation
Marion Mill
Boulder, Colorado

Re: Docket DMEA 3173 (Tungsten), Contract Idm-E657, Johnson Bros. & Prime (Hoosier Mine), Boulder County, Colo.

Dear Sir:

We would appreciate your providing this office with one copy of your standard smelter schedule on tungsten for the years 1955 - 1957.

Very truly yours,

Original signed by
E. N. HARSHMAN

E. N. Harshman
Acting Executive Officer
DMEA Field Team, Region III

MHM/vj

cc: Royalty File E657
Sec. Opr. Comm. (2)
Brading
Marshall
Chron.

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 24 1957

DATE	REMARKS	CODE
5/24	FWD	220
5/24		800
		225

224 New Customhouse
Denver 2, Colorado

May 21, 1957

Cold Spring Tungsten, Inc.
P. O. Box 641
Boulder, Colorado

Re: Docket DMEA 3173 (Tungsten), Contract Idm-E657, Johnson Bros. & Prime (Hoosier Mine), Boulder County, Colo.

Dear Sir:

We would appreciate your providing this office with one copy of your standard smelter schedule on tungsten for the years 1955 and 1956.

Very truly yours,

Original signed by
E. N. HARSHMAN

E. N. Harshman
Acting Executive Officer
DMEA Field Team, Region III

MHM/vj

cc: Royalty File E657
Sec. Opr. Comm. (2)
Brading
Marshall
Chron.

OFFICIAL FILE COPY
DMEA
RECEIVED MAY 24 1957

DATE	INITIALS	CODE
5/28	JOW	220
5/24	[illegible]	800
		225

224 New Customhouse
Denver 2, Colorado

May 21, 1957

Tungsten Refining, Inc.
250 Pearl Street
Boulder, Colorado

Re: Docket DMEA 3173 (Tungsten), Contract Idm-E657, Johnson Bros. & Prime (Hoosier Mine), Boulder County, Colo.

Dear Sir:

We would appreciate your providing this office with one copy of your standard smelter schedule on tungsten for the years 1955 and 1956.

Very truly yours,

Original signed by
E. N. HARSHMAN

E. N. Harshman
Acting Executive Officer
DMEA Field Team, Region III

MHM/vj

cc: Royalty File E657
Sec. Opr. Comm. (2)
Brading
Marshall
Chron.

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

OFFICIAL FILE COPY
DMEA
RECEIVED JAN 30 1957

DATE	INITIALS	CODE
1-30	C	220
1-30	BEP	800
		225

224 New Customhouse
Denver 2, Colorado

January 25, 1957

Mr. Ralph L. Johnson
Johnson Bros. & Prime
P. O. Box 336
Nederland, Colorado

Re: Royalty payments, Docket DMEA 3173 (Tungsten), Contract Idm-E657, Johnson Bros. & Prime (Hoosier Mine), Boulder County, Colorado

Dear Mr. Johnson:

Enclosed is your personal copy of the Acceptance and Invoice submitted to this office with your letter of January 23, 1957.

We thank you for the use of this data and request that for future production your royalty check and computation be accompanied by the applicable Acceptance and Invoice. Our offer to duplicate the required number of copies of the invoice for our files remains in force. All personal copies submitted will be promptly returned.

You report that of Lot No. 2 production, 3407 wet lbs. of tungsten concentrates are from Colorado Tungsten Corporation and 1998 wet lbs. are subject to DMEA royalty. Whenever DMEA production is reported comingled with other production, we are naturally interested in knowing how the Operator determines the assay and weight of the DMEA production. Accordingly, please submit evidence to support your basis for reporting 1998 wet lbs. of DMEA production at the stated assay value.

Very truly yours,

Original signed by
W. M. TRAVER

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

EHM/ugure
cc: Royalty File E657
Corres. File E657
Sec. Opr. Comm. (2)
J. F. Shaw (2)
Marshall
Chron.

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

OFFICIAL FILE COPY
DMEA
RECEIVED JAN 24 1957

DATE	INITIALS	CODE
1-24	C	220
1/29	EW	800
		225

224 New Customhouse
Denver 2, Colorado

January 21, 1957

Mr. Ralph L. Johnson
Johnson Bros. & Prime
P. O. Box 336
Nederland, Colorado

Re: Royalty payments, Docket DMEA 3173 (Tungsten), Contract Idm-E657, Johnson Bros. & Prime (Hoosier Mine), Boulder County, Colo.

Dear Mr. Johnson:

Your statement of royalty computation and check for $143.97 as royalty due on production, shipped December 10, 1956 to the General Services Administration, has been received by this office.

We require that four (4) copies of each settlement sheet accompany royalty payments. You are requested to submit four (4) copies of the Acceptance and Invoice sheet issued by the GSA upon which you based your computation. If you have but one copy of the Acceptance and Invoice and are unable to have it reproduced, submit your copy to this office; we will then duplicate the required number and return your copy immediately.

Very truly yours,

Original signed by
W. M. TRAVER

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

MHM/vj

cc: Royalty File E657
Corres. File E657
Sec. Opr. Comm. (2)
J. F. Shaw (2)
Marshall
Chron.

Docket

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

Date November 26, 1956

DMEA Docket No. 3173
DMEA Contract No. Idm-E657
Commodity Tungsten
Name of applicant Johnson Bros.
Name of property Hoosier mine
Location of property Boulder County, Colorado
Estimated cost of project

Memorandum

To: W. S. Martin, Chief, Iron and Ferroalloys Division-DMEA
Through: Chief, Branch of Ferrous Metals & Ferroalloys HHR

From: R. W. Holliday, Commodity Specialist, Branch of Ferrous Metals & Ferroalloys

Subject: Review of Final Report
(Application, Field Team Report, etc.)

1. Date of subject document: 10/25/56. 2. Date received by reviewer: 11/1/56.

3. Prior reports on this property known to reviewer: Yes [ ] No [X]

4. Prior reports on nearby properties known to reviewer: Yes [ ] No [X]

5. Information available on past production: Yes [ ] No [X]

6. Other pertinent factors known to reviewer: Yes [ ] No [X]

7. Explain items marked yes above:

8. Factors needing special consideration:
   a. Location [ ]
   b. Ownership [ ]
   c. Evidence of mineralization [ ]
   d. Geology [ ]
   e. Proposed exploration method [ ]
   f. Alternate exploration method [ ]
   g. Costs [ ]
   h. [ ]

9. Action advised:
   a. Obtain information from applicant [ ]
   b. Refer to Field Team [ ]
   c. Denial [ ]
   d. Agree with Field Team [X]
   e. Disagree with Field Team [ ]
   f. Suggest alternate plan [ ]
   g. Request another examination [ ]
   h. Approval [ ]
   i. Consult with Mr. _____ at _____ AEC office.

10. Remarks: (Use back of page if necessary)

R W Holliday
R. W. Holliday

Copy retained 400

400
Docket
Surname
Holt
Martin
Talbot
Selfridge
Johnson

NOV 28 1956

Mr. Clarence A. Fredell
Acting Director
Technical Services Division
Defense Materials Service
General Services Administration
7th and D Streets, S. W.
Washington 25, D. C.

Re: Docket No. DMEA 3173 - Tungsten
Johnson Brothers and Prime
Hoosier Mine
Boulder County, Colorado
Contract No. Idm-R657

Dear Mr. Fredell:

Reference is made to our letter of March 13, 1956, which transmitted a copy of a certification of discovery or development issued under the subject contract, and stated that when final reports were received we would supply such data as have accompanied your copies of previous certifications. Such final reports have been received, and we can now supply the following data on the subject contract:

Contract No. Idm-R657 for the exploration of the Hoosier mine tungsten deposits was executed January 18, 1954. Expenditures up to $38,000.00 were authorized by the contract as amended, of which the Government's share at 75 percent was $28,500.00. The cost of the work completed was $37,744.00, of which the Government's share was $28,308.00.

The object of the exploration program was to test the possible tungsten occurrences in ore shoots along the Hoosier, Phillips, and Hummer quartz veins, which occur within walls of granitic rocks in the Hoosier mine. The program employed shaft sinking, drifting, crosscutting, and raising along and within the veins to explore the mineralized zones.

The contract as amended allowed shaft sinking 75 feet; drifting and crosscutting 950 feet; and raising 50 feet.

Work completed comprised all the allowable shaft sinking and raising, and 942 feet of drifting and crosscutting.

Tungsten ore discovered, mainly on the Hummer vein, by project work was estimated by the Field Team as about 4,000 tons of ore, containing 4,000 short-ton units of tungsten trioxide (WO_3).

Sincerely yours,

C. O. Mittenbuhler

Administrator

cc to: FT. REG. III

cc to: Admr. Read. File
Oper. Comm.
Messrs. F. D. Lamb, USBM
R. W. Holliday, USBM
T. H. Kilsgaard, USGS

SPHolt:am 11-21-56
cc to: Docket
Code 110
Code 400
Code 800

R.C.J.

IN REPLY REFER TO:

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

RECEIVED NOV 5 1956

November 2, 1956

Re: DMEA 3173, Idm-E657
Johnson Bros. & Prime
Hoosier Mine
Boulder County, Colorado
$37,744.00 - Tungsten

Memorandum

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

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of Field Team Final Report.

The contract approved the expenditure of a total of $38,000.00 on the exploration of the downward and lateral extensions of the Hoosier, Phillip and Hummer veins; $37,744.00 was spent.

The work resulted in the 'discovery' of an estimated 4,000 tons of 1% WO_3 material worth at 75% recovery from $112,000 to $150,000. The ore is in the Hummer vein. No ore was found in the Hoosier and Phillip veins.

An application for an amendment approving additional work on the Hummer vein was denied February 20, 1956.

A certification of discovery was issued March 12, 1956. I concur with that action.

N. E. Nelson

N. E. Nelson

Cw

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

RECEIVED
OCT 31 1956

224 New Customhouse
Denver 2, Colorado

October 25, 1956

Memorandum

To: Chairman, Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: Docket No. DMEA 3173 (Tungsten), Contract No. Idm-E657, Johnson Brothers & Prime (Hoosier mine), Boulder County, Colorado - FINAL REPORT

Enclosed are the original and three copies of a joint final engineering and geologic report, dated October 12, 1956, by R. L. Bolmer, Mining Engineer, Bureau of Mines, and D. R. MacLaren, Geologist, Geological Survey, and transmittal thereof, dated October 17, 1956, from E. N. Harshman and John F. Shaw.

The original and one copy of the Operator's final report were forwarded to your Washington Office by memorandum of May 14, 1956.

Reimbursement to the Operator, in processing form MF-104, Operator's Monthly Report and Voucher, for the month of May, 1955, constituted final payment under the terms of the contract, and the total reimbursement was verified as acceptable by the Report of Review of reported project expenditures by the Contract Administration and Audit Division, dated March 9, 1956.

The exploration work completed consisted of 75 feet of shaft sinking, 942 feet of drifting and crosscutting, and 50 feet of raising, at a total accepted cost of $37,744.00, toward which the Government contributed 75%, or an amount of $28,308.00.

The exploration work resulted in the discovery or development of a significant quantity of tungsten ore, on which a Certification was issued March 12, 1956.

FINAL F.T. REP.

W. M. Traver
W. M. Traver

E. N. Harshman
E. N. Harshman

Reviewed by
DMEA OPERATING COMMITTEE
11/2/56
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

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REGION III

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Memorandum

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DEPARTMENT OF THE INTERIOR
OCT 18 1956
REGION III
DENVER, COLORADO

To: Executive Officer, DMEA Field Team, Region III

From: E. N. Harshman
John F. Shaw

Subject: Joint Final Engineering and Geologic Report, Docket DMEA 3173 (Tungsten) Contract Idm-E657, Johnson Brothers & Prime (Hoosier Mine) Boulder County, Colorado

Enclosed are the original and seven copies of a final report by R. L. Bolmer, mining engineer, and D. R. MacLaren, geologist, covering the work performed under Contract Idm-E657.

Johnson Brothers & Prime applied for aid to explore for tungsten in the Hoosier mine, Boulder County, Colorado. A contract was entered into July 18, 1954, that provided for 75 feet of shaft sinking, 50 feet of raising, 292 feet of crosscutting, and 650 feet of drifting. Payment was calculated on a basis of unit costs and amounted to $37,744.00, of which the Government's participation was $28,308.00.

Exploration of the Hoosier and Phillips veins was unrewarding, but a significant ore body was discovered in the Hummer vein. This ore body constitutes an indicated reserve of about 4,000 tons of ore, containing 4,000 short-ton units of tungsten trioxide which can be profitably mined at present prices. A certificate of discovery was issued and ore is currently being produced.

E. N. Harshman
Member Field Team

John F. Shaw
Supervising Mining Engineer

JFS:sh
Enc.

cc: 7
ENHarshman
Idm-E657
Chron.

Reviewed by
DMEA OPERATING COMMITTEE
11/2/56
(date)

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UNITED STATES
DEPARTMENT OF THE INTERIOR
FRED A. SEATON, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

JOINT FINAL REPORT OF EXAMINATION BY EXAMINING TEAM
REGION III

DMEA 3173
CONTRACT Idm-E657

HOOSIER MINE

JOHNSON BROTHERS & PRIME

BOULDER COUNTY, COLORADO

Tungsten

Joint Final Engineering and Geologic Report

By

R. L. Bolmer
Mining Engineer
Bureau of Mines

D. R. MacLaren
Geologist
Geological Survey

October 12, 1956

Reviewed by
DMEA OPERATING COMMITTEE
11/2/56
(date)

DMEA 3173
CONTRACT Idm-E657

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HOOSIER MINE
JOHNSON BROTHERS & PRIME
BOULDER COUNTY, COLORADO

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DMEA 3173
CONTRACT Idm-E657

HOOSIER MINE
JOHNSON BROTHERS & PRIME
BOULDER COUNTY, COLORADO

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INTRODUCTION AND SUMMARY

The exploration project at the Hoosier mine, Boulder County, Colo., which was authorized under Exploration Project Contract Idm-E657 and carried out by Johnson Brothers & Prime during the period February 15, 1954 to May 31, 1955, resulted in the discovery of significant reserves of tungsten ore. The Government, on March 12, 1956, officially certified that a discovery or development from which production may be made had resulted from the project work.

The authorized exploration program at the Hoosier mine was carried out and completed according to the terms of the contract. During the project period, the Hoosier, Phillip, and Hummer veins were explored in the Hoosier mine by 75 feet of shaft sinking, 50 feet of raising, 292 feet of crosscutting, and 650 feet of drifting. The accepted costs of the project--equivalent to the completed units of work at the fixed unit prices agreed upon in the contract--totaled $37,744.00. The Government contributed 75 percent of the accepted costs of the project, or a total of $28,308.00.

Project exploration of the Hoosier and Phillip veins was unsuccessful, but a sizable body of ferberite ore was discovered on the Hummer vein. Reserves of approximately 4,000 tons of indicated ore containing 4,000 short-ton units of tungsten trioxide were estimated for the discovery. Production from the discovery was feasible. It commenced immediately

following completion of project operations, and is now in progress. All production since the date of the contract is subject to the Government's royalty. Through June 30, 1956, crude ore and concentrates containing a total of 1,337 short-ton units of tungsten trioxide and having a net value of $75,967.02 had been produced from the discovery ore shoot and from other sources within the Hoosier mine. The Government's royalty on this production totaled $3,796.61 and represented a repayment of 13.4 percent of its contribution to the cost of the project.

In September 1953, Johnson Brothers & Prime, a partnership comprised of Ralph L. Johnson, Roy W. Johnson, and George A. Prime, made application for aid in a project of exploration for tungsten pursuant to DMEA Order 1, under the Defense Production Act of 1950, as amended. The applicant-partners, lessees of the Hoosier mine (Hoosier and Phillip lode claims), proposed to explore both the Phillip and an unnamed footwall vein in that mine by means of 760 feet of work consisting of drifting, crosscutting and raising, at an estimated total cost of $24,376.00.

The applicant's property was inspected by an examining team from the Bureau of Mines and Geological Survey in October 1953. The productive Hoosier and Phillip veins had been developed to a depth of 225 feet below the surface. Fairly continuous ore shoots had been mined along the Hoosier vein to the 225-foot or lowest-level drift off the Hoosier shaft, and ore was still exposed along the bottom of that drift. More erratic ore shoots were mined on the Phillip vein to the 150-foot level of the mine. Although ore was still exposed along the bottom of the 150-foot level drift on the Phillip vein, recent exploration of the structure

west of the Hoosier shaft, on the 225-foot level, had disproved the extension of ore at depth within this section. Little was known of the vein in the footwall of the Phillip vein. It had been worked to shallow depths below the surface but was not developed on the lower levels of the Hoosier shaft.

The examining team concluded that only part of the proposed program was acceptable, and that more effective exploration could be performed in the Hoosier mine. The Hoosier vein, at depth below existing ore shoots, was considered the most promising exploration objective in the mine. Exploration of the Phillip vein at depth below known ore shoots, but only east of the Hoosier shaft, was acceptable. The remainder of the applicant's proposal was not considered justified. A revised program, involving exploring the Hoosier vein on a new 300-foot level and the Phillip vein easterly on the existing 225-foot level, was acceptable to the applicant and was recommended by the examining team. The revised exploration program was approved by the DMEA Field Team, and short-form Exploration Project Contract Idm-E657, authorizing the recommended modified project, was drawn up between the Government and the applicant. The contract was dated January 18, 1954.

The contract provided for sinking the Hoosier shaft 75 feet on the Hoosier vein, and drifting 100 feet westerly and 150 feet easterly along the vein on a new 300-foot level to be turned from the shaft. It also provided for 100 feet of raising on the vein from the new level. A maximum of 150 feet of drifting easterly along the Phillip vein from the existing 225-foot level crosscut was also authorized. The estimated total cost of the project was $22,000.00. A fixed cost for each unit of

work performed was provided for in the contract. The Government would contribute 75 percent of the fixed unit costs as the units of work were performed in a total sum not in excess of $16,500.00. Operations were to commence within 60 days from the date of the contract and were to be completed within a period of 10 months from that date, or by November 18, 1956.

On July 20, 1954, the contract was amended to permit an additional 50 feet of drifting, easterly along the Hoosier vein on the new 300-foot level, in lieu of an equivalent amount of raising originally authorized for this section of the vein. In June 1954, the operator had requested Government aid to explore the Hummer vein from the 225-foot level of the Hoosier mine. The request was approved and, on September 8, 1954, the contract was amended to provide for 300 feet of crosscutting to, and 200 feet of drifting easterly along that vein. The estimated cost of the project was increased to $38,000.00, and the Government's maximum participation to $28,500.00. The adjoining McKenna and Hummer lode claims were added to the property rights described in the original contract and the completion period for the project was extended to 18 months from the date of the contract, or to June 18, 1957.

Initial project operations--preparations for deepening the Hoosier shaft--commenced February 15, 1954; the final authorized project work--drifting easterly along the Hummer vein--was completed May 31, 1955. All of the authorized program, with the exception of 8 feet of the 225-foot level crosscut to the Hummer vein, was completed by the operator. Project operations were carried out efficiently and according to good mining standards.

In August 1955, the operator requested that the amended contract be extended to provide for exploration of the Hummer and possibly other veins from the 300-foot level of the mine. The request was denied by the Administrator, DMEA, on February 20, 1956.

The operator's final project report, which had been received June 14, 1955, but held in deferment pending the outcome of its subsequent request for an extension of the program, was considered inadequate. A revised and acceptable report was submitted May 11, 1956.

LOCATION AND PHYSICAL FEATURES

The property, which comprises the contiguous Phillip, Hoosier, Hummer, and McKenna lode claims and contains the workings of the Hoosier mine, is in the W 1/2 sec. 7, T. 1 S., R. 72 W., sixth principal meridian, Boulder County, Colo. The Hoosier mill is on the Crow agricultural patent about 250 feet west of the property in section 12 of the adjoining township. The property is in the central part of the Boulder County tungsten district approximately 2 miles northeast of Nederland, Colo. It is reached by way of State Highway 160 and a county road (fig. 1). The roads are maintained, and both the mine and mill are accessible throughout the year. The altitude of the immediate mine area is about 8,400 feet. The weather at this altitude, although somewhat severe during the winter months, generally does not hamper operations at the mine or mill.

The property contains no permanent streams; water pumped from the Hoosier shaft, and from the nearby Clyde mine is ample for mining and milling operations. Timber suitable for mining purposes is not available on the property, but can be secured from local sawmills. Electric power, supplied by the Public Service Company of Colorado, is transmitted to

the mine and mill. Boulder, Colorado, a city of 30,000 population and the nearest supply center, is 11 miles east of the property; Denver, Colo., the commercial and financial center of the region, is 30 miles to the southeast.

OWNERSHIP AND EXTENT

The operator's property rights, as described under Article 2 of the amended contract, include the following patented lode mining claims:

Phillip	U. S. Mineral Survey No. 18340
Hoosier	"
Hummer	"
McKenna	"

The four contiguous claims, each 1,500 feet in length by 150 feet in width, have an area of approximately 20 acres. The boundaries of the claims, with respect to the exploration work completed during the project and to other property not covered by the contract, are indicated on figure 3.

On September 1, 1953, Hetzer Mines, Inc., then owners of the property, leased the Phillip, Hoosier, and Hummer claims to Ralph L. Johnson of 500 Grant Ave., Louisville, Colo., Roy Johnson of Nederland, Colo., and George Prime of Nederland, Colo. Johnson Brothers & Prime, a partnership composed of the three lessees, was the applicant for exploration assistance at the property (Docket No. DMEA 3173) and the designated operator under Exploration Project Contract Idm-E657. The original lease was for a period of 3 years and provided for a royalty of 16 percent of the net proceeds from the sale of any ores produced from the property. Hetzer Mines, Inc., retained the right to purchase all ores produced from the leased premises provided its schedule of prices was at least equal to

that offered by any other party. On February 15, 1954, the terms of the original lease were extended for a period of 10 years from the date of the exploration project contract, or to January 18, 1964. On June 17, 1954, the lease was amended to include the McKenna claim.

In September 1954, all of the outstanding capital stock in Hetzer Mines, Inc., was purchased by the owners of Cold Spring Tungsten, Inc. On May 31, 1955, Hetzer Mines, Inc., was officially integrated with the latter organization and lost its identity. Cold Spring Tungsten, Inc., the present owner of the claims, maintains offices in the First National Bank Bldg., Denver, Colorado.

The adjoining Crow patent is owned by the defunct Colorado Tungsten Corporation. The partners have an informal, unwritten working agreement, made with an official of that company that applies to a small part of the ground covered by this patent. Annex II, which was added by amendment to the original exploration project contract, provides that the operator, regardless of certification and regardless of who the producer is, shall pay a royalty on all production from the Crow patent that is transported or extracted through any workings described in Exhibit "A" of the contract.

HISTORY AND PRODUCTION

The Hoosier vein, one of the earlier discoveries in the district, was first worked between 1901-07. Production from the vein during this initial period is not known. The vein was mined intermittently between 1907-15 down to the 150-foot level of the Hoosier shaft during which period it reportedly produced 442 tons of ferberite ore containing 11.57 percent tungsten trioxide. Part of this output probably was derived from the Phillip vein. The mine was under water from 1917 until 1943,

when it was reopened and the shaft sunk from the 150- to the 225-foot level. The mine was worked intermittently until 1942 and was again under water from 1946 to 1950 when the present lessees began operations.

The Phillip vein was first developed from the surface of the Phillip claim by two shallow shafts. Its deeper development was carried out by crosscutting from the 150- and 225-foot levels of the Hoosier shaft. The vein extends southwesterly onto the Crow patent where it was developed to depths of about 200 feet below the surface in the Phillip Extension mine. This mine produced 12,000 short-ton units of tungsten trioxide during the period 1938-46. The total production from the extension of the vein on the Crow patent is estimated at 15,000 units.

The shaft on the Hummer vein was sunk by the Johnson brothers in 1940. A short level drift was turned from the shaft at a depth of 63 feet below the surface. Good ore was encountered in the shaft but very little was found by drifting and the work was abandoned.

The total recorded production from veins within the Phillip, Hoosier, Hummer, and McKenna claims during the period 1907-53 is as follows:

	Tons	% WO_3	Units WO_3
Hoosier vein	1,365	7.84	10,702
Phillip vein	172	16.71	2,868
Hummer vein	16	12.47	201

The property leased by the operator was included in 183 acres of surrounding mineral land (45 claims) patented September 30, 1907, by the Wolf Tongue Mining Company (a subsidiary of Firth Sterling Steel & Carbide Corp.) and held by that company until 1950. In 1950, all of the Wolf Tongue holdings were purchased by Hetzer Mines, Inc.

The existing development of the Hoosier, Hummer, and Phillip veins, prior to the start of project operations, is indicated on figure 3. The development work in the Hoosier mine and other pertinent data regarding the status of the property, its facilities, etc. prior to the project are detailed in the examination report which was prepared in response to the original application for exploration assistance (Docket No. DMEA 3173).

GEOLOGY

The geology of the Boulder County Tungsten District is described by Lovering and Tweto in Geological Survey Professional Paper 245 (1953). In the vicinity of the Hoosier mine, the exposed rocks are Precambrian schist of the Idaho Springs formation and Boulder Creek granite overlain by a body of aplite. The schist is seamed by dikes of pegmatite, and both the schist and the aplite are sericitized and locally silicified along three veins, the Phillip, the Hoosier, and the Hummer.

In the Hoosier mine, the Phillip vein has been developed by about 320 feet of drift on the 150-foot level and 70 feet of drift on the 225-foot level that was driven prior to the DMEA contract, and by 150 feet of drift on the 225-foot level driven under the DMEA contract (fig. 2). The vein ranges in strike from S. 85° E., to N. 75° E., and in dip from 81° S. to 63° N. The north wall is displaced a few feet up and to the east. Wall-rock alteration is relatively weak along the vein. The ore consists of seams of crystalline ferberite in sheeted rock, and of brecciated rock and horn quartz cemented by ferberite. Near the west property line the vein is only a few inches wide, but in stopes farther east, above the 150-foot level, it is 12 to 18 inches wide. On the 150-foot level, eastward from the west property line, the wall rock is

aplite for 50 feet, pegmatite for the next 65 feet, schist for about 110 feet, and finally, injection gneiss for 105 feet. On the 225-foot level wall rock is schist, cut by many small dikes and lenses of pegmatite. Although there is some ore in the Phillip vein in the floor of the 150-foot level drift, no ferberite was found in this vein on the 225-foot level.

The Hoosier vein is about 80 feet north of the Phillip vein. In the Hoosier mine, it has been developed by a 300-foot inclined shaft; by approximately 1,200 feet of drifting along the 65-, 150-, 225-, and 300-foot levels turned from that shaft; and by an undetermined amount of raising between the levels. Of this, the lower 75 feet of the shaft, 300 feet of drift along the new 300-foot level, and 50 feet of raise above the new level were completed under the DMEA contract (fig. 2). The vein strikes about N. 70° E., and dips 65° to 85° NW. The north wall has been displaced down and to the west a total distance of about 20 feet. On and above the 225-foot level wall rock is aplite and granite with an occasional dike or narrow lens of pegmatite. The vein walls are sericitized and locally silicified. The Hoosier vein is generally wider and more silicified than the Phillip vein and contains considerably more black horn quartz. Near the edges of old stopes ferberite is fine grained and somewhat horny, but within the ore shoots above the 225-foot level it is said to have been soft and free from horn. On the 300-foot level, for a distance of about 130 feet from the westerly end, the vein is mostly a clay-filled seam between walls of schist. In the last 50 feet at the easterly end of the drift, the walls are coarse grained to porphyritic granite, and with some pegmatite along the schist-granite contact. In the granite, the vein widens and

contains a few small pods and lenses of ferberite. This is probably the lower limits of an ore shoot, some 120 feet long, found in the eastern part of the 225-foot level. West of the shaft, a raise was driven on the vein and in schist, to a height of 50 feet, without encountering any ferberite. This raise subsequently was extended to the 225-foot level at the operator's expense. The contact between the schist and the overlying granite was found to be about 15 feet below the 225-foot level. The vein contained ferberite after it entered the granite. This same contact may be seen in a crosscut on the 225-foot level about half way between the Hoosier and the Phillip veins.

The Hummer vein, about 220 feet north of the Hoosier, strikes about N. 75° E., and dips 70° to 80° N. Prior to the DMEA contract, the vein had been developed by about 150 feet of drift turned from the bottom of a 63-foot inclined shaft (fig. 2). Along this drift, the vein occupies a moderately strong fracture in granite, gneissic aplite, and pegmatite. It ranges in width from a few inches to 1-1/2 feet and consists of crushed wall rock, horn quartz, and narrow ferberite stringers.

Under the DMEA contract a crosscut was driven 292 feet northerly from the Hoosier drift on the 225-foot level and intersected the Hummer vein at a distance of 220 feet. The vein was so narrow, tight, and poorly mineralized that, although it was believed to be the Hummer, it was considered advisable to continue the crosscut to be sure of the correlation before starting to drift. The crosscut is entirely in granite. Between the Hoosier and the Hummer veins the crosscut intersected two intermediate veins, each 2 to 6 inches wide, that contained

a little horn quartz but no ferberite. The first of these veins, about 65 feet north of the Hoosier drift, strikes N. 65° E., and dips 75° NW; the second, about 112 feet from the Hoosier drift, strikes N. 50° E., and dips 73° NW.

From the project crosscut, drifts were driven 45 feet westerly and 280 feet easterly along the Hummer vein. Of this work, 200 feet in the easterly drift was driven with DMEA assistance. The remaining 80 feet in the easterly drift, and the entire 45 feet in the westerly drift were driven at the operator's expense.

For about 30 feet west of the crosscut, the Hummer vein is a narrow and tight seam of quartz in granite. At that point it is joined by a similar vein that strikes northeasterly and dips vertically. For the remaining 15 feet to the west, the vein consists of 8 to 12 inches of broken quartz with seams of ferberite.

For about 50 feet to the east of the crosscut, the Hummer vein is a narrow, tight seam of quartz between walls of granite. From 50 feet to 110 feet, the granite becomes fine grained to aplitic, while the vein widens to a maximum of 2 feet but is still tight and highly silicified. From about 110 feet to 180 feet east of the crosscut, the drift is in a pegmatite lens, and for the first 20 feet the vein weakens and is filled by gouge and narrow quartz seams. About 130 feet from the crosscut, the quartz becomes more horny and ferberite first appears as small irregularly scattered pods and streaks which increase in frequency toward the east. About 150 feet from the crosscut, the strike of the vein swings to nearly due east and the vein becomes much stronger and is filled by quartz stringers and lenses in brecciated wall rock. Ferberite occurs as lenses several feet long and up to 2 inches wide, and as fine

to coarse crystals lining vugs and filling openings between fragments of wall rock. From a point 150 feet east of the crosscut, the vein contains an ore shoot about 130 feet long and up to 4 feet wide.

PROJECT OPERATIONS

Description of Work Completed

Initial project operations at the Hoosier mine--preparations for deepening the Hoosier shaft--commenced February 15, 1954. The existing shaft had been sunk on the Hoosier vein an inclined distance of 242.5 feet below the surface. The 17.5 feet of shaft below the 225-foot or lowest level of the mine had served as a sump for previous operations and required cleaning out and retimbering before project sinking could commence. The shaft was sunk the authorized 75 feet to a new inclined depth of 317.5 feet by April 21, 1954.

Sinking operations were carried out with contract labor. The shaft was excavated to a 5- by 9-foot cross section and timbered with 2-compartment sets framed from round, native timber. The manway compartment was provided with ladders and platforms; the hoisting compartment with a wooden skidway for hoisting by means of a bucket. The lower section of the shaft was sunk in the footwall of the Hoosier vein to take advantage of more favorable ground. The wall rock in the new sections of the shaft was a soft biotite-schist, within which the Hoosier vein remained poorly defined and barren of tungsten. According to the records of the operator, the actual cost of sinking and timbering the shaft approximated $83.25 per foot or $3.25 per foot in excess of the fixed unit price agreed upon in the contract.

A new 300-foot level was turned from the shaft at an inclined depth of approximately 307 feet below the surface and advanced simultaneously in both directions along the Hoosier vein. The west drift had been extended the authorized 100 feet from the shaft by June 1954. The 50 feet of raising authorized from the west drift also was completed. In this direction, the Hoosier vein continued within schist and remained poorly defined and barren of tungsten.

The 300-foot-level east drift had been extended a total of 200 feet from the shaft by July 1954. This drift had entered granite and encountered ferberite mineralization along the vein at a distance of approximately 150 feet from the shaft. The operator was permitted to extend this heading an additional 50 feet easterly along the vein (Amendment 1 to contract) in lieu of an equivalent amount of raising originally authorized for this section of the vein. The mineralized section of the vein proved to be very limited. The vein was barren along the final 30 feet of the drift. A subsequent non-project raise from this section of the drift revealed only weak mineralization.

The authorized exploration of the Phillip vein commenced in August 1954. An easterly drift along this vein was started from a crosscut on the 225-foot level of the Hoosier shaft. The drift had been advanced the authorized 150 feet east of the crosscut by September 1954. The Phillip vein remained in schist and was barren of tungsten throughout the length of the drift.

The project exploration completed on the Hoosier and Phillip veins is indicated on figure 3. Drifts were driven to 5- by 7-foot minimum cross section and were not timbered. Certain sections of the drifts,

especially those in the softer schist, sloughed badly and became inaccessible within a short period.

The above mentioned work on the Hoosier and Phillip veins completed all of the exploration authorized under the terms of the original contract. The program had not resulted in the discovery or development of significant reserves of tungsten ore.

In June 1954, the operator requested additional Government aid to explore the Hummer vein from the 225-foot level of the Hoosier mine. The request was granted and on September 8, 1954, the original contract was amended to provide for 300 feet of crosscutting to the vein and 200 feet of drifting along it.

The authorized crosscut to the Hummer vein was started in October 1954, and had been extended a total of 292 feet northerly from the 225-foot level west drift on the Hoosier vein by January 1955 (fig. 3). In asmuch as no other significant veins had been encountered within this distance, a weakly-mineralized quartz structure that had been intersected at a distance of 220 feet in the crosscut was assumed to represent the Hummer vein, and the operator was granted permission to drift 100 feet easterly along it. This drift was completed in February 1955, and as the structure had been definitely identified by then as the Hummer vein and had improved in appearance, the operator was allowed to proceed with an additional 50 feet of drifting. The vein continued to improve and the operator was ultimately permitted to complete the full 200 feet of drifting authorized under the amended contract. Project operations were officially recessed during the month of April. The final 50 feet of drifting easterly along the Hummer vein was completed May 31, 1955.

The drift had encountered ferberite mineralization on the Hummer vein beginning at a point approximately 130 feet east of the crosscut. The ferberite content of the vein increased as the drift advanced toward the east and, at a distance of 150 feet, a definite ore shoot was encountered. The ore shoot continued to the end of the drift and continued along an 80-foot extension of this drift, which the operator subsequently completed on its own account. In June 1955, the operator started to develop and mine the ore shoot above the 225-foot level.

In August 1955, the operator requested that the amended contract be extended and revised to provide for exploration of the Hummer and possibly other veins on the 300-foot level of the mine. The additional work proposed by the operator involved crosscutting 250 feet northerly from the Hoosier 300-foot level east drift to intersect the Hummer vein below the ore shoot opened earlier along the 225-foot level. The operator also proposed to drift 150 feet easterly and 150 feet westerly along the Hummer vein from the new 300-foot level crosscut, and to drift 200 feet along any intermediate veins that might be encountered by that crosscut. The DMEA Field Team, Region III, considered that the operator's proposal offered a reasonable chance of enlarging the ore reserves discovered as a result of project exploration, and recommended a reduced program involving only 400 feet of combined crosscutting and drifting at an estimated total cost of $12,800.00. The recommended extension of the project was denied by the Administrator, DMEA, on February 20, 1956.

On March 12, 1956, the Government certified that a discovery or development from which production may be made had resulted from the work carried out under the terms of the exploration contract.

The operator's final project report, which had been received June 14, 1955, but held in deferment pending the outcome of the subsequent request for an enlargement of the program, was considered inadequate. A suitable final engineering and geologic report was requested on March 9, 1956. A revised and acceptable final report was submitted by the operator on May 11, 1956.

Cost of the Project

Exploration Project Contract Idm-E657 was a short-form, unit-cost-type contract prepared on form MF-200A (February 1952). Under this type of contract, an estimated fixed cost was agreed upon for each authorized unit of work. The Government would reimburse the operator a stipulated percentage of such costs as the units of work were completed. The total estimated cost of the originally authorized project was $22,000.00. The Government would pay 75 percent of the fixed unit costs as the authorized units of work were performed, but not in excess of $16,500.00. Amendment 2 to the contract increased the total estimated cost of the project to $38,000.00 and the Government's maximum participation to $28,500.00.

The units of work and the fixed unit costs authorized under the amended contract are summarized in Table I. Table I also indicates the total units of work actually completed by the operator and the costs in which the Government participated.

The accepted costs of the project, based on the authorized units of work actually completed at the agreed upon unit prices, totaled $37,744.00. The Government reimbursed the operator for 75 percent of the accepted costs, or $28,308.00. The final amount due the operator was paid on June 14, 1955. A final report and review of the project

account was released by the DMEA Contract Administration and Audit Division on March 9, 1956.

Table I -- Summary of authorized and accepted costs of the project

Project Work Authorized				Project Work Completed	
Type of work	Units	Unit cost	Total cost	Units	Accepted cost
Shaft sinking	75 feet	$80.00	$6,000.00	75 feet	$6,000.00
Drifting	650 feet	32.00	20,800.00	650 feet	20,800.00
Crosscutting	300 feet	32.00	9,600.00	292 feet	9,344.00
Raising	50 feet	32.00	1,600.00	50 feet	1,600.00
Total cost of project:			$38,000.00		$37,744.00
Government participation:			$28,500.00		$28,308.00

Project Equipment

Under the short-form type of contracts, the agreed-upon unit prices reflect a reduction for the estimated salvage value of any unexpended project materials, supplies, or other property. The Government, therefore, was not concerned with the disposition of such property at the completion of project operations.

Efficiency of Project Operations

Project operations at the Hoosier mine were performed efficiently and according to good mining standards. The authorized exploration program was carried out to completion within the contract period. All of the completed project work conformed to specifications stipulated in the contract. Ralph and Roy Johnson, who were in active charge of all operations at the property, cooperated to the fullest extent with DMEA representatives.

Results of Project Exploration

Description of the Discovery

The only significant reserves of tungsten ore discovered as a result of project exploration are on the Hummer vein, a parallel structure

lying about 220 feet within the hanging wall of the Hoosier vein. A ferberite ore shoot on this structure was exposed along the final 50 feet of the 225-foot level project drift and along an 80-foot extension of that drift which the operator subsequently completed on its own account.

The mineralized section of the Hummer vein strikes about N. 80° E., and dips 75°-80° N.W., in wall rocks of granite and pegmatite. This section of the vein consists of a 15- to 30-inch zone of sheared and brecciated wall rock, which has been filled and cemented to a greater or lesser degree by fine-grained quartz and/or ferberite ($FeWO_4$). In places, ferberite is disseminated across the full width of the vein. Along most of the shoot length, however, it is confined to a 6- to 15-inch streak located centrally between the foot and hanging walls of the fissure zone.

When last inspected, the discovery ore shoot had been stoped for 30 feet above the 225-foot level drift. The ore exposed in the back of the stope was similar to that which had been opened along the drift. The stope was about 30 inches wide. The grade of the crude ore, as broken in the stope, reportedly averaged between 1 and 3 percent WO_3. Some of the coarser barren rock broken with the ore was left as fill in the stope. The crude ore was hoisted to the surface where it was upgraded by screening and hand sorting before being concentrated by gravity methods in the Hoosier mill. The ore concentrated readily. The high grade and middling concentrates often were combined into a single marketable product that ranged in grade from 59 to 64 percent WO_3.

Ore shoots in the Hoosier and the surrounding mines commonly are greater in vertical than in lateral extent. For the purpose of an ore reserve estimate, it is assumed that the vertical extent of the ore shoot on the Hummer vein will not exceed its lateral extent along the 225-foot level. The ore shoot, therefore, is assumed to be 130 feet long, 130 feet high (50 feet above back of stope and 50 feet below 225-foot level), and to contain 1 percent WO_3 over a width of 30 inches. Reserves of approximately 4,000 tons of ore containing about 4,000 short ton units of tungsten trioxide are estimated for the discovery ore shoot on the Hummer vein. Assuming an overall milling efficiency of 70 percent, the discovery would contain 2,800 recoverable units of tungsten trioxide with a present market value of $112,000 to $150,000.

Production from the Discovery

The total production from the Hoosier mine from the date of the exploration project contract through June 30, 1956 is summarized below. This production was derived from the upper levels of both the Hoosier and Phillip veins as well as from the discovery ore shoot on the Hummer vein. In accordance with terms of the certification of discovery or development issued March 12, 1956, any and all production from the four claims described in the contract is subject to the Government's royalty until the Government's total contribution to the costs of the project is repaid, or until 10 years from the date of the contract has elapsed, whichever occurs first. The crude ore derived from the various sections of the mine generally is comingled in the Hoosier mill, and only the concentrates produced therefrom are reported to the Government when

marketed. The settlement sheets submitted to the Government describe the production only as being derived from the Hoosier mine.

Summary of crude ore and concentrates produced from Hoosier mine during the period January 18, 1954 through June 30, 1956

Net dry weight:	49.2185 short tons
Average grade:	27.16 % WO_3
Tungsten trioxide content:	1,336.995 short ton units

Net value subject to Government royalty:	$75,967.02
Royalty paid to Government:	$3,796.61

Percentage repayment of Government's contribution in costs of project: $\frac{\$3,796.61}{\$28,308.00} \times 100 = 13.41\%$

CONCLUSIONS AND RECOMMENDATIONS

The exploration project at the Hoosier mine was carried out and completed according to the terms of the contract. Government participation in the accepted costs of the project was valid and proper.

It is apparent from project exploration that the known ore shoots on the Hoosier and Phillip veins did not extend to any appreciable depth in the Hoosier mine. With increased depth, these veins enter schist which generally is not a favorable host for ore deposition in the tungsten district. Further exploration of these veins within the Hoosier mine, is considered unwarranted.

Project exploration found ore on the Hummer vein. This vein is relatively unexplored in the Hoosier mine. Its present exposures are within granite or pegmatite, both of which are favorable host rocks for tungsten ore deposits. Although not considered of sufficient merit to

justify Government assistance, the continued exploration of the Hummer vein within such rock, both easterly along the 225-foot level and at depth below that level, would appear to be the most logical follow-up work for the operator to perform on its own account.

The exploration project carried out at the Hoosier mine resulted in the discovery of significant reserves of tungsten ore from which production was feasible and was forthcoming immediately following the completion of project operations. The issuance of an official certification of discovery or development by the Government was justified and conformed with the general provisions of the exploration project contract.

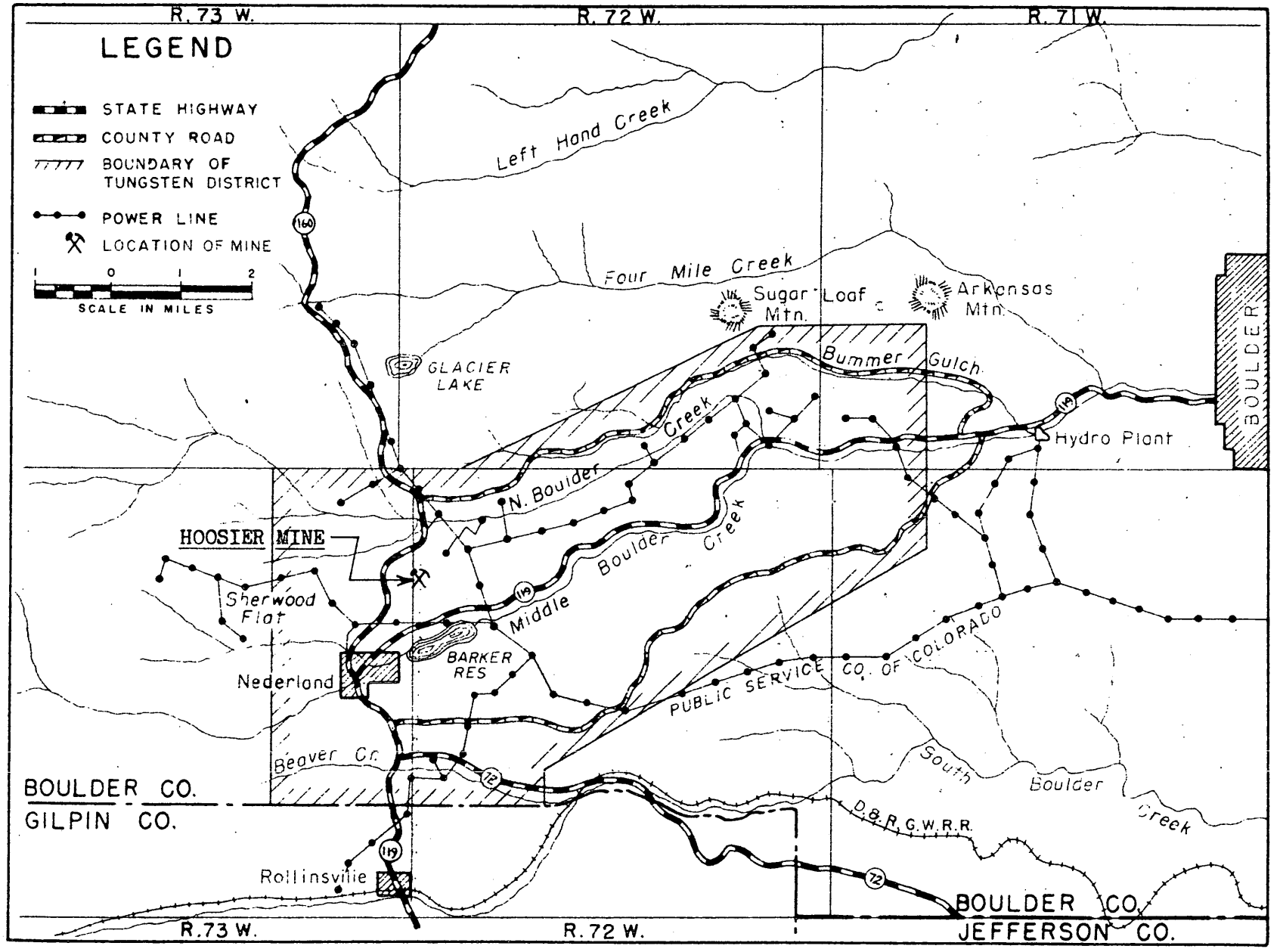
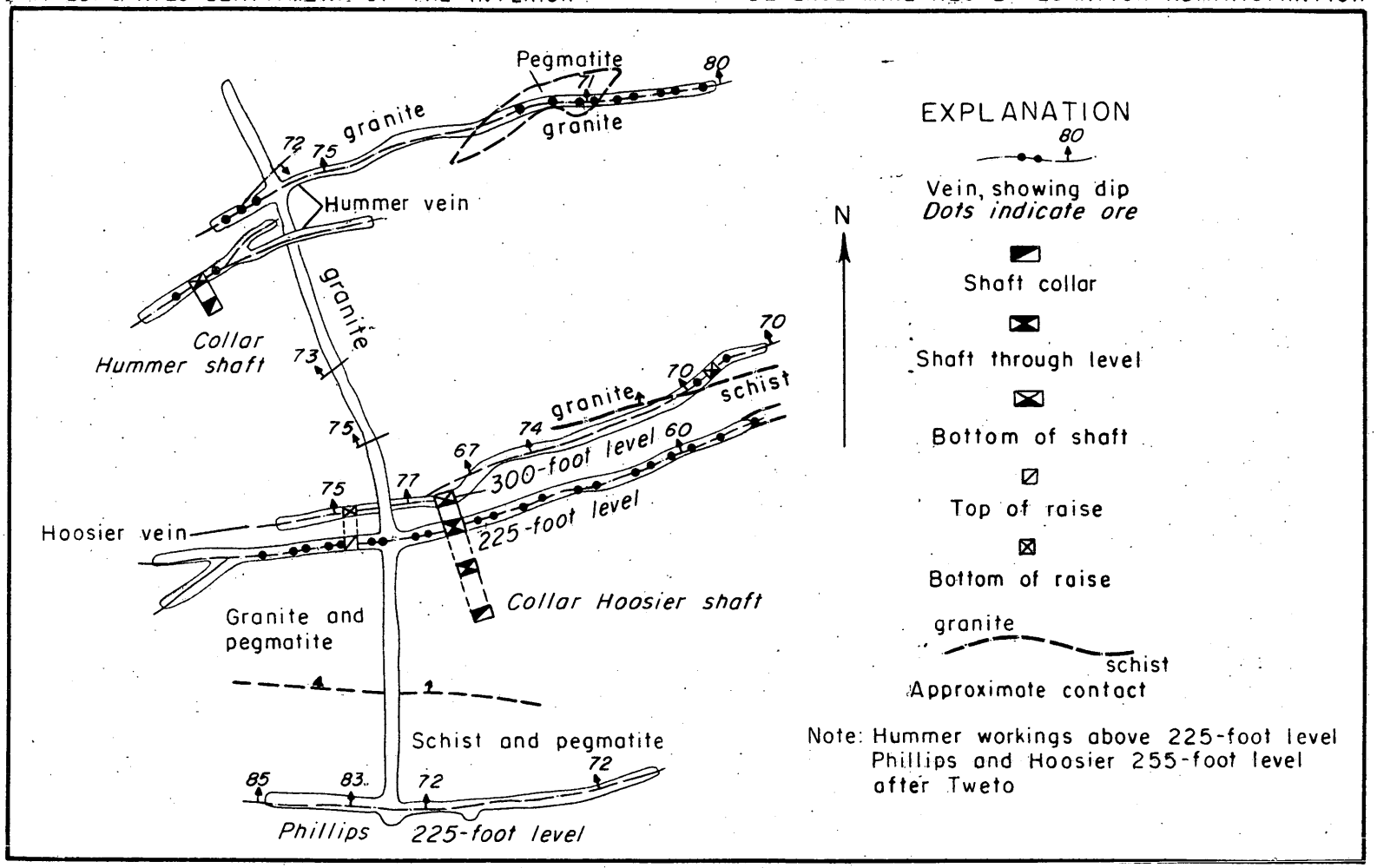


FIGURE 1 - INDEX MAP OF THE BOULDER COUNTY TUNGSTEN DISTRICT, COLO. SHOWING LOCATION OF HOOSIER MINE (JOHNSON BROTHERS & PRIME DMEA 3173 EXPLORATION PROJECT CONTRACT Idm-E657)



October 1955

FIGURE 2 – COMPOSITE PLAN SHOWING WORKINGS ON 225- AND 300-FOOT LEVELS, PHILLIPS HOOSIER, AND HUMMER VEINS, HOOSIER MINE, BOULDER COUNTY, COLORADO

100 50 0 100 Feet

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

RECEIVED
MAY 17 1956

224 New Customhouse
Denver 2, Colorado

May 14, 1956

Memorandum

To: Chairman, Operating Committee, DMEA

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3173 (Tungsten), Contract Idm-E657, Johnson Brothers and Prime, (Hoosier mine), Boulder County, Colo.

Enclosed are the original and one copy of a revised final engineering and geologic report rendered by the Operator, which was received in this office May 11, 1956.

E. N. Harshman

E. N. Harshman

Enclosures

Nederland, Colorado
May 8, 1956

RECEIVED
MAY 11 1956
Div. of Mineral Technology
BUREAU OF MINES
Denver Experiment Station
Denver, Colorado

United States Bureau of Mines
Denver Federal Center
Building 20, Room 137
Denver, Colorado

Gentlemen:

Narrative report on Hoosier Mine consisting of all work done on contract.

Docket No. D.M.E.A. 3173
Contract No. Ida E657 (Tungsten)
Johnson Bros. & Prime (Operator)

Including additional exploration aid granted on contract.

Commenced sinking Hoosier mine shaft starting at a point 17'6" below 225' level on Feb.15, 1954.

Formation: granite aplite changing to schist within the first 10' of sinking vein, becoming irregular with no traces of ore as soon as schist was encountered.

Completed sinking shaft 75' below starting point Apr.21, 1954.

Then driving drift westerly on 300' level for a total distance of 100' from shaft , complete westerly drift in schist formation vein pinched with no values.

Then driving raise 50' west of shaft for a height of 50' (as per contract) still in schist except for last 6' of raise changing to pegmatite.

We then continued raise on through to 225' level encountering bottom of o re shaft we had previously mined out above 225' level at approximately 12' below 225' level.

We mined out what ore we found here. Apparently this was the bottom of ore shoot and what ore was left did not amount to a great deal.

We then drove drift easterly on Hoosier vein a distance of 200' from shaft on 300' level.

Formation: Schist changing to granite at about 140' from shaft, with a small showing of ferberite ore at 149' from shaft, continuing for about 15' above drift.

As a follow-up to this work we then run a short raise of about 25' and another about 15' above back of drift, ore completely pinching out in both raises.

We then drove a drift from south end of existing cross cut on 225' level of Hoosier shaft easterly on Phillips vein, a total distance of 150'.

Formation was mostly schist with some pegmatite and granite

No ore was encountered in this work, apparently the ore shoots that had been previously mined on the levels above did not reach this depth.

We also drilled a core drill hole in the foot wall of this vein. This was mostly in pegmatite and core recovery was poor, sludge recovery showed no values.

Starting work on the additional exploration work allowed on contract consisting of cross cut north westerly from Hoosier vein on 225' level, intended to cut the Hummer vein, thence to drift easterly on Hummer vein a distance of 200 ' in Oct. 1954.

At about 29' from Hoosier we crossed two small veinlets showing quartz but no mineral.

Then at 110' from Hoosier we crossed a larger vein consisting of about 4" to 8" of horn quartz and at 145' we crossed another vein consisting of from 8" to 12" of quartz.

At 222'-from Hoosier vein we crossed another vein showing black horn quartz and some ferberite.

We drove cross cut a total distance of 292' from Hoosier vein crossing no additional veins. So we decided the vein crossed at 222' was the Hummer vein.

We also drilled a 20' test hole in breast of cross cut without cutting any noticeable veins or fractures.

Cross cut was driven in granite aplite for entire distance.

W e then drove a drift easterly on Hummer vein 200' (as per contract). There was a small showing of ferberite for first few feet, then vein pinched for the next 75', opening up again at about 100' from starting point, showing about 2' of quartz with some ferberite.

Formation up to this point was granite, then changing to pegmatite for about 75', then back to granite aplite.

Vein showing no ore while in pegmatite dike, opening up again so granite was encountered on east side of dike, and still showing ferberite inbreastof drift.

As a follow-up to this work we intend to continue driving drift as long as ore is showing in drift, and also to run a 50' raise at about 100' from cross cut, and another at 200' from cross cut.

We also drove a 50' drift westerly from cross cut on the Hummer vein.

Formation here was granite, vein showing some ferberite ore.

Estimated ore reserves resulting from exploration work:

5000 short tons containing an estimated 1% to 1½% WO_3.

Mineral contained in ore is ferberite concentrating to an average of 55% to 60% WO_3, through gravity concentration.

Very truly yours,

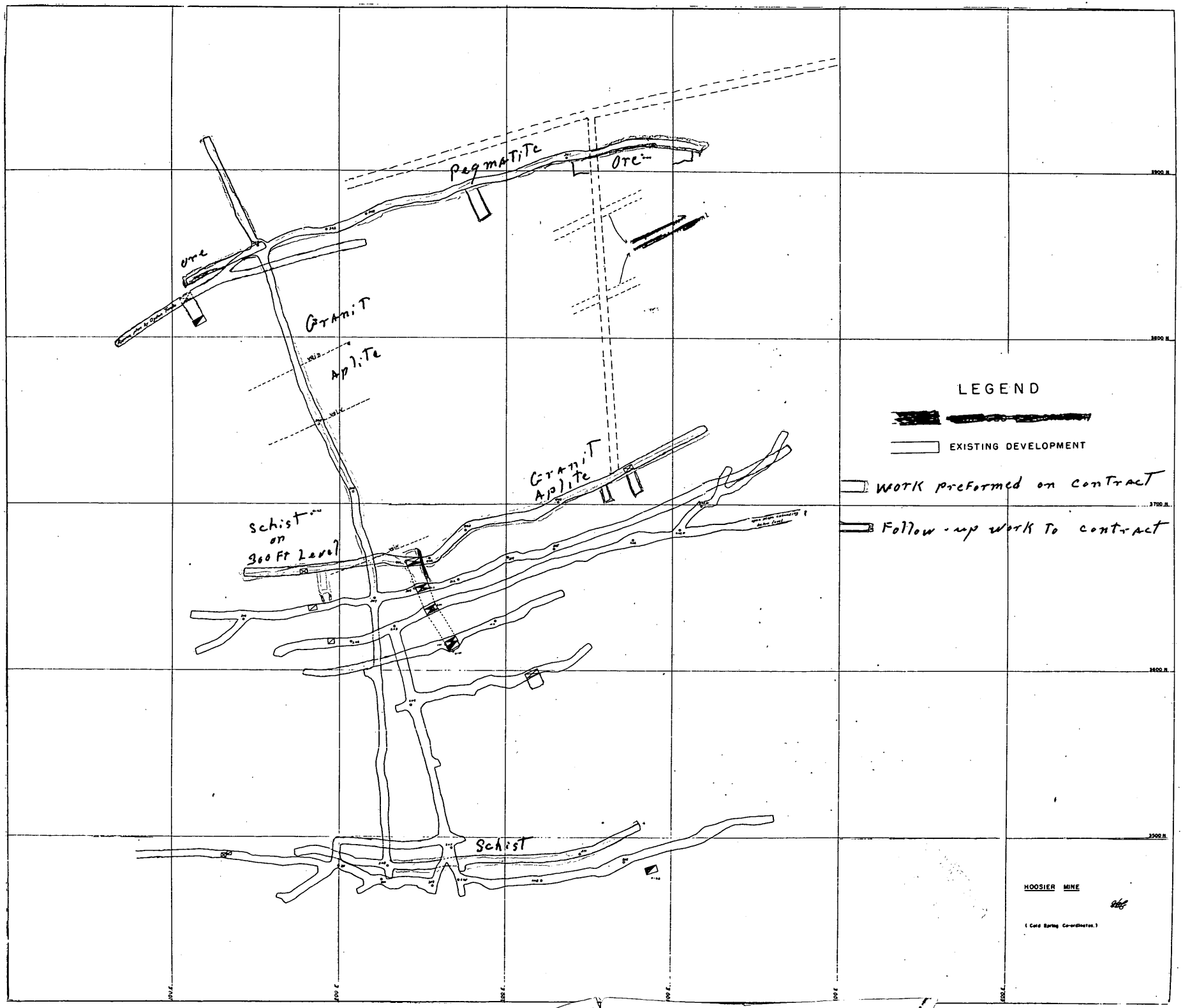
Johnson Bros & Prairie

by

Ralph L Johnson

iq

open trial pit (Rir)


Pegmatite
Ore
Ore
Granit
Aplite
Granit
Aplite
Schist on 900 Ft Level
Schist
LEGEND
EXISTING DEVELOPMENT
Work preformed on contract
Follow-up work to contract
HOOSIER MINE
(Cold Spring Coordinates.)

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

RECEIVED
MAY 7 - 1956

224 New Customhouse
Denver 2, Colorado

May 4, 1956

Mr. Ralph Johnson
Johnson Brothers and Prime
500 Grand Avenue
Louisville, Colorado

Re: Docket DMEA 3173 (Tungsten)
Contract No. Idn-E657
Johnson Brothers and Prime
(Hoosier Mine)
Boulder County, Colorado

Dear Mr. Johnson:

Reference is made to my letter of March 19, 1956, in which it was requested that you submit a suitable final engineering and geologic report, in accordance with Article 5(b) of the captioned contract.

The Washington DMEA office has informed us that they are anxious to close the files on this project as soon as possible. Will you, therefore, please furnish the required report promptly, or advise when we may expect it.

Very truly yours,

W. M. TRAVER

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

WMT:bh
cc-Chairman, Op. Comm. (2)
Harshman
Shaw (2)
Townsend
Corres. File E-657
Chron.

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

RECEIVED
MAR 22 1956

224 New Customhouse
Denver 2, Colorado

March 20, 1956

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 1906 (Tungsten), Contract Idm-E319, Louise W. Garrick;
Docket DMEA 3159 (Tungsten), Contract Idm-E718, Spider Uranium Mining Company, Inc.;
Docket DMEA 3173 (Tungsten), Contract Idm-E657, Johnson Brothers & Prime.

Enclosed are two copies of our letter of March 19, 1956, to Ralph Johnson, of Johnson Brothers & Prime, which is in compliance with advice to us in your letter of March 15, 1956.

Further in reference to Contract Idm-E657, Johnson Brothers & Prime, and Contract Idm-E718, Spider Uranium Mining Co., Inc., we must admit that developments as you commented on were largely due to our fault and oversight in keeping you advised currently of all developments under the contracts.

In reference to Contract Idm-E319, Louise W. Garrick, it appears that developments there were more or less the result of a misunderstanding. We were advised by your teletype of September 21, 1955, that a certification of discovery or development was being prepared and you requested our wiring you promptly the summary of proposed recommendations with respect to such a discovery, which was accomplished by our teletype to you of September 23, 1955.

Your letter of December 19, 1955, relative to your receipt of the Operator's and Field Team's final reports was not interpreted as implying that receipt of the reports was a prerequisite to the issuance of a certification of discovery or development. Therefore, our teletype of March 1, 1956, was merely a follow-up of matters discussed in your teletype of September 21 and our reply of September 23, 1955.

Please advise if anything further is needed from this office, prior to forwarding the Field Team's final report, before the certification can be completed.

W. M. Traver

W. M. Traver

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

RECEIVED
MAR 22 1956

224 New Customhouse
Denver 2, Colorado

March 19, 1956

Mr. Ralph Johnson
Johnson Brothers and Prime
500 Grand Avenue
Louisville, Colorado

Re: Docket DMEA 3173 (Tungsten)
Contract Idm-E657
Johnson Brothers and Prime
Hoosier Mine
Boulder County, Colorado

Dear Mr. Johnson:

Under date of June 8, 1955, you submitted a "narrative report on Hoosier Mine consisting of all work done on the contract."

We assume that you intended the report as your final engineering and geologic report in conformance with Article 5(b) of the contract. In that respect the report is not considered as adequate because it did not contain an estimate of ore reserves resulting from the exploration work as stipulated under Article 5(b) of the contract form.

We will appreciate receiving at an early date a revised report of the work performed under the contract. The report should include a map showing the work performed and your estimate of the ore reserves resulting from the exploration work.

Very truly yours,

W. M. TRAVER

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

JWT:prl
cc: Chairman, Oper. Comm. (2)
Burchman
Shaw
Townsend
Corres. file
Chron.

400

DOCKET DMEA-3173

Martin
Butin
Dwyer
Chambers
Selbridge
Fellmer
Mittendorf

MAR 1 5 1956

Mr. W. N. Traver, Executive Officer
DMEA Field Team, Region III
224 New Custom House
Denver 2, Colorado

Re: Docket No. DMEA 1906 - Tungsten
Louise N. Garrick
Contract No. Idm-E319

Docket No. DMEA 3159 - Tungsten
Spider Uranium Mining Company, Inc.
Contract No. Idm-E718

Docket No. DMEA 3173 - Tungsten
Johnson Brothers & Prime
Contract No. Idm-E657

Dear Mr. Traver:

Please review your teletype of March 1, 1956, letter of February 24, 1956, and teletype of February 23, 1956, relating respectively to the three captioned dockets. We find in each of them suggestions that disturb us and indicate misunderstanding of the requirements, both procedural and substantive, for certification of a discovery or development.

The following review should help to clarify some of the problems that now face us.

The Government is required to make a certification within the time limited by the contract, in order to establish its rights to royalty and lien. (See paragraph 5 of DMEA Circular 26, Supplement No. 1). In the earlier contract forms, that time limit was 6 months after completion of the exploration project or termination of the contract, but many of the contracts written on these forms were subsequently amended to fix the time limit, as in our 1952 and our more recent contract forms, at 6 months after the Operator has rendered a "sufficient" or "adequate" final report.

Under the earlier contract forms, it was required that a certification contain a particular description and delimitation of the Government's estimate of the discovery or development. Under the later forms it is necessary that the certification describe broadly or indicate the nature of the

P.C.G.

discovery or development. We depend to a great extent on the Field Teams for the data upon which such certifications are based, but we also wish to have the benefit of any further information that the Operator may provide. Moreover, we should have the Field Team's recommendations for, or against, certification, before we make the final decision. Consequently, upon termination of a project, we ordinarily ask the appropriate Field Team to obtain for us the Operator's Final Report and also to submit the Final Field Team Report. Heretofore, in making such requests we have not attempted to name the starting date of the time limit within which the particular certification must be made, as each Field Team has copies of its contracts for reference and is familiar with the facts concerning them.

You undoubtedly appreciate that we require your report, or a summary thereof if your work load makes it inconvenient to provide a complete report so soon, well ahead of the expiration date for certifying. We require this information in order that we ourselves may have time to review all data available to us on the subject and still make the certification, if warranted, within the allowable time limit. This is just as true when the time runs from the date of the completion of the work as when it runs from the date of receipt of the required final report from the Operator.

With the foregoing background, we can now consider the individual problems raised by your above-referenced advices. The least disturbing case is found in Docket No. DMEA-1906, Louise W. Garrick. We had asked by letter of December 19, 1955, when we could expect the final reports of the Field Team and of the Operator, and you advised us by letter of January 5, 1956, that the Field Team's report was being held awaiting the Operator's Final Report, for which you had sent a follow-up letter to the Operator on December 21, 1955. We then received your teletype of March 1, 1956, inquiring of us about the status of certification in this instance. A reference to your own files would have shown that in order to determine the status, we would require the same reports about which we had already asked you. In our opinion, someone on your staff should have had that answer ready for you.

Concerning Docket No. DMEA-3159, Spider Uranium, you have raised a more serious problem. Your letter of October 6, 1955, had recommended certification. By letters of November 2 and December 5, 1955, we had asked for substantiating data, and by letter of December 9, 1955, you had advised us that a certification would be questionable. Through your office we were concurrently in correspondence with the Operator about enforcement of an amendment affecting the conditions of termination of the project. Nevertheless, by letter of February 24, 1956, you recommended that the Operator's narrative report for November 1954 be accepted as an adequate final report. That

is a thoroughly sound recommendation made at a most inappropriate time. Obviously, if the report is acceptable (and we agree that it is), our 6 months is over and, regardless of our intentions in the matter, we cannot certify. Fortunately, in this case we have no intention of certifying.

What could have had more serious results was your teletype of February 23, 1956, concerning Docket No. DMEA-3173, Johnson Brothers and Prime. In that wire you recommended certification and also informed us for the first time that you had received the Operator's Final Report on June 14, 1955. By letter of November 18, 1955, we had asked you to inform the Operator that we were awaiting his final report, and it seemed to us then and still seems to us that your letter of November 30, 1955, was an implied denial that you had received the report. In this case also we foresee no grave consequences from your failure to provide us with what would normally be essential information. The contract (Article 6) gives us 6 months from receipt of an adequate final report, and [Article 5(b)] provides that the final report shall include "an estimate of ore reserves resulting from the exploration work." Inasmuch as no ore reserve estimate is contained in the report dated June 8, 1955, received here with letter of February 24, 1956, that report is not adequate and you should so inform the Operator. Consequently, the 6-month period has not yet started; therefore, we are able to issue a certification of discovery or development for the project, and we have done so. Your copies of the same are being transmitted under separate cover.

After reading the foregoing comments, you can probably share our satisfaction that, as you advised us in your two teletypes of February 29, 1956, you made no commitments to the respective operators about the adequacy of the final reports submitted for Dockets Nos. DMEA-3159 and DMEA-3173.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (GB)

Approved:

/s/ Robert W. Geehan (GB)
Member, Bureau of Mines

Thor H. Kiilsgaard (GB)
Member, Geological Survey

cc: Docket DMEA 1906, 3159, 3173
Code 400
Oper. Committee
Adm. Read. File
FT, Reg. 3 (2 cc)
T. Kiilsgaard, USGS
R. W. Holliday, USBM

WSMartin/HCRubin/ls 3/12/56

400

DOCKET
SURNAME
Chapman
Martin
Talbut
Geehan
Kilsgaard
Selbridge
H P Johnson

MAR 13 1956

Mr. Ralph Johnson
Johnson Brothers and Prime
500 Grand Avenue
Louisville, Colorado

Re: Docket No. DMEA 3173 - Tungsten
Hoosier Mine
Boulder County, Colorado
Contract No. Idm-3657

Dear Mr. Johnson:

Transmitted herewith is a certification of discovery or development issued under the subject contract which was executed January 18, 1954.

By the terms of the exploration project contract and of the certification, all production from the land described in the contract and any production from the Crew claim that is transported or extracted through any workings described in Exhibit "A" of the Contract is subject to the Government's percentage royalty as set forth in the contract until the sum of $28,308.00 (subject to audit) is paid or until January 18, 1964, whichever occurs first. Royalty payments should be made as heretofore.

You are requested to notify Mr. Traver of any changes in ownership or production rights that might have any effect on the Government's right to its percentage royalty. Also, if production ceases at any time for an extended period, please notify Mr. Traver at 6-month intervals that no production has been made, when that is the case.

TLChapman/foc / 3/5/56

Sincerely yours,

C. O. Ritterbart

Administrator

cc to: Docket
Code 400
Adm. Read. File
Code 800 - Mr. Chambers
Code 110 - Mr. Johnson
Oper. Comm.
T. Kiilsgaard, USGS

Enclosure

R. W. Geehan, USBM
R. W. Holliday, USBM
Hetzer Mines, Inc.
C. A. Fredell, EPS, GSA
Ft. REG. 3

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

Mr. Ralph Johnson
Johnson Brothers and Prime
500 Grand Avenue
Louisville, Colorado

Re: Docket No. DMEA-3173, Tungsten
Hoosier Mine
Boulder County, Colorado
Contract No. Idm-E657

Dear Mr. Johnson:

Transmitted herewith is a certification of discovery or development issued under the subject contract which was executed January 18, 1954.

By the terms of the exploration project contract and of the certification, all production from the lands described in the referenced contract from the date of the exploration project contract is subject to the Government's percentage royalty as set forth in the contract and amendments until the sum of $28,308.00 is paid or until January 18, 1964, whichever occurs first.

Royalty payments, etc.

Payments should be made to Mr [illegible] Officer, DMEA Field Team, Region III, 2[illegible] (2), Colorado. Checks should be payable [illegible] Exploration Administration. The purchas[illegible] deduct the royalties from the amount due [illegible] ward check direct to the Executive Offic[illegible] the Government should be accompanied by [illegible] as copies of settlement sheets, showing [illegible] tungsten or other products sold, the name [illegible] the price and charges certified to be cor[illegible]

You are requested to notify Mr. [illegible] in ownership or production rights that mi[illegible] the Government's right to its percentage [illegible] duction ceases at any time for an extende[illegible] Mr. Traver at 6-month intervals that no pr[illegible] when that is the case.

Sincerely yo[illegible]

Administrator

Enclosure

ROYALTY PAYMENTS SHOULD BE MADE AS HERETOFORE.

400

Chapman
Martin
Chambers

Mr. Ralph Johnson
Johnson Brothers and Prime
500 Grand Avenue
Louisville, Colorado

Re: Docket No. DMEA-3173, Tungsten
Moosier Mine
Boulder County, Colorado
Contract No. Idm-E657

Dear Mr. Johnson:

Transmitted herewith is a certification of discovery or development issued under the subject contract which was executed January 18, 1954.

By the terms of the exploration project contract and of the certification, all production from the lands described in the referenced contract from the date of the exploration project contract is subject to the Government's percentage royalty as set forth in the contract and amendments until the sum of $28,308.00 (subject to audit) is paid or until January 18, 1964, whichever occurs first. Royalty payments should be made as heretofore.

You are requested to notify Mr. Traver of any changes in ownership or production rights that might have any effect on the Government's right to its percentage royalty. Also, if production ceases at any time for an extended period, please notify Mr. Traver at 6-month intervals that no production has been made, when that is the case.

Sincerely yours,

cc:

TLChapman/ls
3/1/56

Administrator

Enclosure

cc: Docket
Code 400
Code 110
Code 800
Adm. Read. File
Oper. Comm.

cc: T. Kiilsgaard, USGS
R. W. Geehan, USBM
R. W. Holliday, USBM
Hetzer Mines, Inc.
C. A. Fredell, EPS, GSA
FT, Region 3

DOCKET
SURNAME
400 Chapman
Martin
Chambers
Selfridge
Johnson

MAR 13 1956

Mr. W. M. Traver, Executive Officer
DMEA Field Team, Region III
224 New Customhouse
Denver 2, Colorado

Re: Docket No. DMEA 3173 - Tungsten
Johnson Brothers and Prize
Hoosier Mine
Boulder County, Colorado
Contract No. Idm-E657

Dear Mr. Traver:

Enclosed are copies of a certification of discovery or development for the above noted property and of related correspondence.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (GCS)

Enclosure

TLChapman/foc 2/27/56
cc to: Docket
Code 400
Code 110 - Mr. Johnson
Code 800 - Mr. Chambers
Admr. Read. File
Operating Comm.
FT. REG. III
Messrs. Geehan, USBM
Holliday, USBM
Kiilsgaard, USGS

APPROVED:

/s/ Robert W. Geehan (GCS)
Member, Bureau of Mines

Thor H. Kiilsgaard (GCS)
Member, Geological Survey

RAH

DOCKET
SURNAME
Chapman
Martin
Chambers
400 Geehan
Kiilsgaard
Selfridge
Johnson

MAR 13 1956

Mr. Clarence A. Fredell, Acting Director
Materials Division
Emergency Procurement Service
General Services Administration
Washington 25, D. C.

Re: Docket No. DMEA 3173 - Tungsten
Johnson Brothers and Prime
Hoosier Mine
Boulder County, Colorado
Contract No. Idm-8657

Dear Mr. Fredell:

Enclosed is a copy of a certification of discovery or development issued under the subject contract.

When we receive the final reports, we shall supply such data as have accompanied the transmittal to the Materials Division, Emergency Procurement Service, of previous certifications.

Sincerely yours,

C. O. Mittendorf

Administrator

Enclosure

TLChapman/foc 2/27/56
cc to: Docket
Code 400
Code 800 - Mr. Chambers
Code 110 - Mr. Johnson
Admr. Read. File
Operating Comm.
FT. REG. III
Messrs. Geehan, USBM
Holliday, USBM
Kiilsgaard, USGS

DOCKET
SURNAME
400 Chapman
Martin
Talbot
Geehan
Kiilsgaard
Selfridge
Johnson

MAR 13 1956

Hatzer Mines, Inc.
P. O. Box 150
Boulder, Colorado

Re: Docket No. DMEA 3173 - Tungsten
Johnson Brothers and Prime
Hoosier Mine
Boulder County, Colorado
Contract No. Idm-3657

Gentlemen:

Transmitted herewith for your information is a copy of the certification of discovery or development issued as a result of the exploration program under the above-referenced contract. The property as set forth in the contract was leased to Ralph L. Johnson, Roy W. Johnson, and George A. Prime, a partnership, on September 1, 1953, with an amendment dated February 15, 1954, increasing the time to ten years, and a second amendment dated June 17, 1954, adding the McKenna lode to the original lease, and is the same property referred to in the Owner's Consent to Lien, dated September 28, 1954.

By the terms of the exploration project contract and of the certification, all production from the land described in the contract and any production from the Crow claim that is transported or extracted through any workings described in Exhibit "A" of the Contract is subject to the Government's percentage royalty as set forth in the contract until the sum of $28,308.00 (subject to audit) is paid or until January 18, 1964, whichever occurs first.

TLChapman/foc 3/7/56
cc to: Docket
Code 400
Adm. Read. File
Oper. Comm.
Code 800 - Mr. Chambers
Code 110 - Mr. Johnson
FT. REG. III

Sincerely yours,

G. O. Mittendorf

Administrator

Enclosure

R. W. Geehan, USBM
R. W. Holliday, USBM
T. H. Kiilsgaard, USGS

R.G.G.

400

Chapman
Martin
Chambers

Hetzer Mines, Inc.
P. O. Box 150
Boulder, Colorado

Re: Docket No. DMEA-3173, Tungsten
Johnson Brothers and Prime
Hoosier Mine
Boulder County, Colorado
Contract No. Idm-E657

Gentlemen:

Transmitted herewith for your information is a copy of the certification of discovery or development issued as a result of the exploration program under the above-referenced contract. The property as set forth in the contract was leased to Ralph L. Johnson, Roy W. Johnson, and George A. Prime, a partnership, on September 1, 1953, with an amendment dated February 15, 1954, increasing the time to ten years, and a second amendment dated June 17, 1954, adding the McKenna lode to the original lease, and is the same property referred to in the Owner's Consents to Lien, dated January 14, 1954, and June 29, 1954.

By the terms of the exploration project contract and of the certification, all production from the aforesaid lands from the date of the exploration project contract is subject to the Government's percentage royalty as set forth in the contract until the sum of $28,308.00 (subject to audit) is paid or until January 18, 1964, whichever occurs first.

Sincerely yours,

Administrator

Enclosure

cc: Docket
Code 400
Code 110
Code 800
Adm. Read. File

cc: R. W. Geehan, USBM
R. W. Holliday, USBM
T. Kiilsgaard, USGS
FT, Region 3
Operating Committee

TLChapman/ls
3/1/56

400

DOCKET
Surname:
Chapman
Martin

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

Hetzer Mines, Inc.
P. O. Box 150
Boulder, Colorado

Re: Docket No. DMEA 3173, Tungsten
Johnson Brothers and Prime
Hoosier Mine
Boulder County, Colorado
Contract No. Idm-E657

Gentlemen:

Transmitted herewith for your information is a copy of the certification of discovery or development issued as a result of the exploration program under the above-referenced contract. The property as set forth in the contract was leased to Ralph L. Johnson, Roy W. Johnson and George A. Prime, a partnership, on September 1, 1953, with an amendment dated February 15, 1954, increasing the time to ten years, and a second amendment dated June 17, 1954, adding the McKenna lode to the original lease, and is the same property referred to in the Owner's Consents to Lien, dated January 14, 1954, and June 29, 1954.

By the terms of the exploration project contract and of the certification, all production from the aforesaid lands from the date of the exploration project contract is subject to the Government's percentage royalty as set forth in the contract until the sum of $28,308.00 is paid or until January 18, 1964, whichever occurs first. (SUBJECT TO AUDIT)

Sincerely yours,

Administrator

Enclosure

Copy to: Docket
Code 400
Code 110
Code 800
Adm. Read. File
Oper. Committee

Copy to: R. W. Geehan, USBM
R. W. Holliday, USBM
T. Kiilsgaard, USGS
Field Team, Region 3

TLChapman/ls 2/28/56

DOCKET
SURNAME
Chapman
Martin

400

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

Hetner Mines, Inc.
P. O. Box 150
Boulder, Colorado

Re: Docket No. DMEA 3173 - Tungsten
Johnson Brothers and Prime
Hoosier Mine
Boulder County, Colorado
Contract No. Idm-E657

Gentlemen:

Transmitted herewith for your information is a copy of the certification of discovery or development issued as a result of the exploration program under the above-referenced contract. The property as set forth in the contract was leased to Ralph L. Johnson, Roy W. Johnson, and George A. Prime, a partnership, on September 1, 1953, with an amendment dated February 15, 1954, increasing the time to ten years, and a second amendment dated June 17, 1954, adding the McEmma lode to the original lease, and is the same property referred to in the Owner's Consents to Idm, dated January 14, 1954, and June 29, 1954.

By the terms of the exploration project contract and of the certification, all production from the land described in the contract and any production from the Crow claim that is transported or extracted through any workings described in Exhibit "A" of the Contract is subject to the Government's percentage royalty as set forth in the contract until the sum of $28,308.00 (subject to audit) is paid or until January 18, 1964, whichever occurs first.

TLChapman/foc 3/2/56

Sincerely yours,

cc to: Docket
Code 400
Code 110 - Mr. Johnson
Code 800 - Mr. Chambers
Adm. Read. File
Operating Comm.

Administrator

Enclosure

FT. REG. III
Messrs. R. W. Geehan, USBM
R. W. Holliday, USBM
T. H. Killsgaard, USGS

C Mr. George Selfridge

RECEIVED
MAR - 1 1956

DN 235 BUR MINES 2-29-56 4-17

CHAIRMAN, OPERATING COMMITTEE, DMEA

REURTTS FEBRUARY 24 AND FEBRUARY 29 REGARDING DOCKET DMEA 3173, JOHNSON BROTHERS AND PRIME, CONTRACT IDM-E657. MATERIAL REQUESTED YOUR TT FEBRUARY 24 FORWARDED AIRMAIL FEBRUARY 27. THIS OFFICE MADE NO COMMITMENTS TO OPERATOR RELATIVE TO ADEQUACY OF THE REPORT.

W M TRAVER

Denver, Colo.

DOCKET
Surname:
Martin

Kiilsgaard
Selfridge
Johnson
Mittenthal

2/29/56

T E L E T Y P E

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

Please teletype reply today to specific question in our teletype of February 24 regarding Docket DMEA 3173, Johnson Brothers and Prime, Contract Idm-E657.

George C. Selfridge
Chairman, Operating Committee (2/28)

cc: Docket
Code 400
Oper. Comm.
Adm. Read. File
T. Kiilsgaard, USGS
R. W. Holliday, USBM
FT, Reg. 3

WSMartin/ls
2/29/56

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

RECEIVED
FEB 28 1956

224 New Customhouse
Denver 2, Colorado

VIA AIR MAIL

February 24, 1956

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3173 (Tungsten), Contract Idm-E657, Johnson Brothers and Prime, Boulder County, Colorado

In compliance with your teletype of February 24, 1956, we are enclosing the original and one copy of the Operator's Final Report and three copies each of three letters which are all the correspondence we have on file which would have a bearing on holding open the accounts under the subject contract.

We have no correspondence relative to the Operator's Final Report, neither did this office make any commitments relative to the adequacy of the report.

W. M. Traver

W. M. Traver

Enclosures

RECEIVED
FEB 28 1956

COPY

224 New Customhouse
Denver, Colorado

August 23, 1955

Mr. Ralph L. Johnson
P. O. Box 336
Nederland, Colorado

Re: DMEA Docket 3173 (Tungsten)
Contract Idm-E657

Dear Mr. Johnson:

This is to inform you that your letter of August 15, 1955 wherein you requested an amendment to Contract Idm-E657 for additional work was forwarded to the field for recommendation. When an amendment is requested for additional work with an attendant increase of funds, such requests with field recommendations are forwarded to Washington for decision.

Yours very truly,

/s/ W. M. Traver
W. M. Traver
Executive Officer, DMEA
Field Team, Region III

WLD:dja

cc: Harshman
Shaw (2)
Townsend
Corresp. E657
Chron

RECEIVED
FEB 28 1956

224 New Customhouse
Denver, Colorado

July 13, 1955

Mr. Ralph L. Johnson
Johnson Brothers and Prime
P. O. Box
Nederland, Colorado

Re: DMEA 3172 (Tungsten)
Contract Idm-E657

Dear Mr. Johnson:

With reference to your inquiry of July 13, 1955 regarding the status of the captioned contract and additional work thereunder.

If you intend to request some additional work under the DMEA program, it would be preferable to do it under an amendment to the present contract. I understand you are presently doing work on your own account.

We will hold the contract open a reasonable length of time, say not to exceed forty-five days from now. During this period you can prepare a request for performing the additional work as an amendment to the contract.

Please submit your request in sextuplicate and supply us with nine copies of a map to accompany it, outlining clearly the work you propose to do and include an estimate of costs.

Very truly yours,

/s/ W. M. Traver
W. M. Traver
Executive Officer, DMEA
Field Team, Region III

WMT:dja
cc: Subject
Chron
Shaw
Harshman
Townsend

J.Bn 336.

RECEIVED
FEB 28 1956

Nederland, Colorado
July 11. 1955

DMEA
Date Rec'd.
JUL 13 1955
BUREAU OF MINES
Denver, Colorado

Mr. W. M. Traver
Executive Officer, DMEA
Field Team, Region 111
234 New Customhouse
Denver 2, Colorado

Re: Docket DMEA 3173 (Tungsten)
Idm. E657

Dear Mr. Traver:

After completion of work on original contract and the additional exploration work granted on same, we have continued to drive drift easterly on the Hummer vein an additional 50 ft.

The ore we encountered in the last few feet on contract work has continued to get better, until at the point we are now we have a good commercial grade of ore.

It looks good enough now that it may justify additional explosion work at a deeper level.

I would like to know if our contract has been closed, or would it be possible for us to acquire additional aid on the contract.

If so, would you please inform me of same and also hold contract open until we can complete development work now in progress so as we may know if it would justify additional work.

Very truly yours,
JOHNSON BROS. & PRIMM
Ralph L Johnson
Partner

iq

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DMEA
Date Rec'd
JUN 14 1955

Region III

Building 20, Room
Denver Federal Center
Denver 2, Colorado
June 13, 1955

BUREAU OF MINES
RECEIVED
Denver, Colorado
FEB 28 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: John F. Shaw

Subject: Final report, DMEA 3173, Contract No. Idm-E657 (Tungsten) Hoosier mine, Johnson Bros. & Prime, Boulder County, Colorado

Enclosed are four copies of a final report covering the work performed under Contract Idm-E657.

One copy of the report has been retained in this office.

John F. Shaw
Supervising Mining Engineer

Enclosure

cc 3
Idm-E657
Chron

JFS/cm

DIST. ENGR.
EXAMINATION
DIST. CLERK
PERSONNEL
FILES

Nederland, Colorado
June 8, 1955

Data Rec'd
JUN 13 1955
BUREAU OF MINES
Denver, Colorado

RECEIVED
FEB 28 1956

United Staes Bureau of Mines
Denver Federal Center
Building 20 Room 137
Denver, Colorado

Gentlemen:

Narrative report on Hoosier Mine, consisting of all work done on contract.

Docket No. DMEA 3173
Contract No. Idm E657 (Tungsten)
Johnson Bros.,& Prime (Operator)

Including additional exploration aid granted on contract.

Commenced sinking Hoosier mine shaft starting at a point 17'6" below 225' level on February 15, 1954.

Formation: granite appelite changing to schist within the first 10' of sinking vein, becoming irregular with no traces of ore. As soon as schist was encountered, completed sinking shaft 75' below starting point April 21, 1954.

Then driving drift westerly on 300' level for a total distance of 100' from shaft, complete westerly drift in schist formation vein pinched, with no values.

Then driving raise 50' west of shaft for a height of 50' (as per contract) still in schist, except for last 6' of raise changing to pegmatite.

We then continued raise on through to 225' level, encountering bottom of ore shoot we had previously mined out above 225' level at approximately 12' below 225' level.

We mined out what ore we found here. Apparently this was the bottom of ore shoot a nd what ore was left did not amount to a greatvdeal.

We then drove drift easterly on Hoosier vein, a distance of 200' from shaft on 300' level.

Formation: Schist changing to granite and pegmatite at about 140' from shaft, with a small showing of ferberite ore at 149' from shaftm continuing for about 15' ~~above~~ drift.
Along

Open at right

As a follow up to this work we then run a short raise of about 25' and another about 15' back of drift; ore completely pinching out in both raises.

We then drove a drift from south end of existing cross cut on 225' level of Hoosier shaft, easterly on Phillips vein, a total distance of 150'.

Formation was mostly schist, with some pegmatite and granite. No ore was encountered in this work, apparently the ore shoots that had been previously mined on the levels above did not reach this depth.

We also drilled a core drill hole in the foot wall of this vein. This was mostly in pegmatite, and core recovery was very poor, sludge recovery showed no values.

Starting work on the additional exploration work allowed on contract, consisting of cross cut north westerly from Hoosier vein on 225' level, intended to cut the Hummer vein ~~a distance of 200'~~, in October 1954. Then drive drift 200' east on Hummer vein. At about 20' from Hoosier we crossed two small veinlets showing quartz but no mineral.

Then at 110' from Hoosier we crossed a larger vein consisting of about 4" to 8" of horn quartz and at 145' we crossed another vein consisting of from 8" to 12" of quartz.

At 222' from Hoosier vein we crossed another vein showing black horn quartz and some ferberite.

We drove cross cut a total distance of 292' from Hoosier vein, crossing no additional veins. So we decided the vein crossed at 222' was the Hummer vein.

We also drilled a 20' test hole in breast of cross cut without cutting any noticeable veins or fractures. Cross cut was driven in granite for entire distance.

We then drove a drift easterly on Hummer vein, 200'(as per contract) . There was a small showing of ferberite for first few feet, then vein pinched for the next 75', opening up again at about 100' from starting point, showing about 2' of quartz with some ferberite.

Formation up to this point was granite, then changing to pegmatite for about 75', then back to granite appelite,

Vein showing no ore while in pegmatite dike, opening up again as granite was encountered on east side of dike, and still showing ferberite in breast of drift.

As a follow up of this work we intend to continue driving drift as long as ore is showing in drift and also to run a 50' raise at about 100' from cross cut and another at 200' from cross cut.

We also drove a 50' drift westerly from cross cut on the Hummer vein. Formation here was granite vein showing some ferberite ore.

Very truly yours,

Ralph L. Johnson

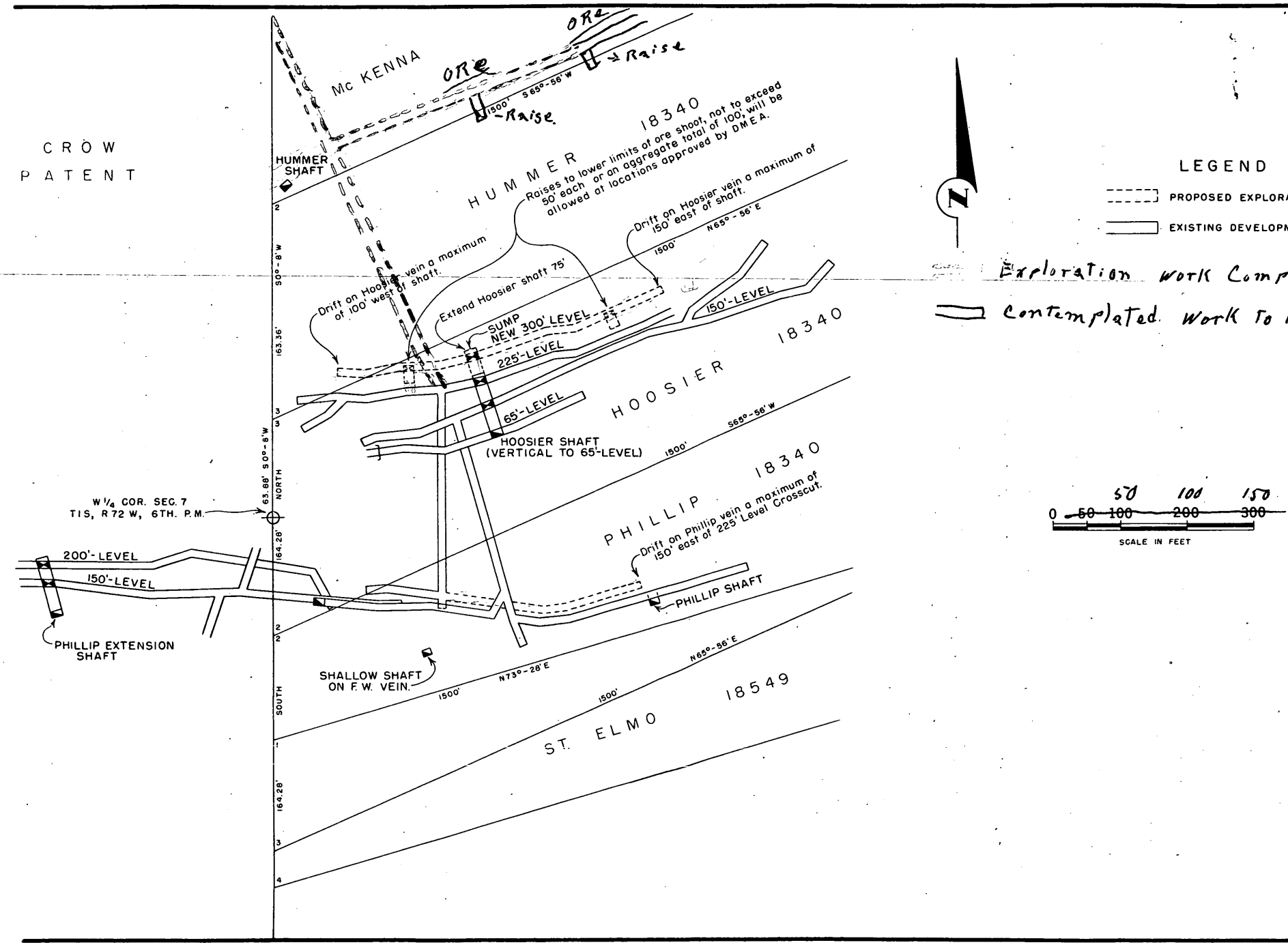


FIGURE 3 - PLAN OF UNDERGROUND WORKINGS, HOOSIER MINE, BOULDER COUNTY, COLO. (DMEA 3173)

RECEIVED
FEB 28 1956

Docket
Martin
Selfridge
Johnson
Nettendorf

FEB 2 4 1956

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

Reurtt February 23, Docket DMEA 3173, Contract 1dm-2057, Johnson Brothers & Prime. Air mail immediately Operator's Final Report and copies all correspondence relating thereto. Advise specifically whether you made any commitment to Operator regarding adequacy of his report.

George C. Selfridge (HB)
Chairman, Operating Committee

cc: Docket
Code 400
Oper. Comm.
Adm. Read. File
T. Kiilsgaard, USGS
R. W. Holliday, USBM
FT, Region 3 - CONFIRMATION

WSMartin/ls
2/24/56

Chairman, Opg. Comm., D. M. E. A.

RECEIVED

FEB 24 1956

DN 235 BUR MINES 2-23-56 4-26

CHAIRMAN, OPERATING COMMITTEE, DMEA

RE DOCKET DMEA 3173, CONTRACT IDM E657, JOHNSON BROTHERS AND PRIME, ADMINISTRATOR S LETTER OF 2-29-56 XXX 2-20-56, TO OPERATOR DENYING REQUEST FOR ADDITIONAL FUNDS. OPERATOR S FINAL REPORT ON WORK PERFORMED UNDER ORIGINAL PROJECT AUTHORIZATION RECEIVED JUNE 14, 1955 BUT HELD IN DEFERMENT PENDING OUTCOME OF REQUEST FOR ADDTIONAL WORK AND FUNDS BECAUSE FAVORABLE ACTION WAS ANTICIPATED. EXTENT OF DISCOVERY INDICATES PROJECT SHOULD HAVE BEEN CERTIFIED AND WE SO RECOMMEND.

W M TRAVER

400
Chapman
Martin
Selfridge
R. Johnson

FEB 20 1956

Mr. Ralph Johnson
Johnson Brothers and Prime
500 Grand Avenue
Louisville, Colorado

Re: Docket No. DMEA 3173 - Tungsten
Hoosier Mine
Boulder County, Colorado
Contract No. Idm-E657

Dear Mr. Johnson:

Your application for an amendment allowing additional work under the subject contract and other information available to us in Washington 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 all our information, based in part on the results of the work completed to date, indicates to us that further Government participation to explore the ore shoot found on the 225-foot level on the Hummer vein to greater depth is not warranted. We regret to advise you, under these circumstances, that your application for additional exploration assistance under the referenced contract is denied.

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

Sincerely yours,

G. G. Mittendorf

Administrator

cc: Docket
Code 400
Oper. Comm.
Adm. Read. File
Thor Kiilsgaard, USGS
R. W. Holliday, USBM
Code 800
FT, Reg. 3

TLChapman/GCSelfridge/ls
2/15/56

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

Not used

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

Re: Docket No. DMEA 3173 - Tungsten
Johnson Brothers and Prime
Hoosier Mine
Boulder County, Colorado
Contract No. Idm-E657

Dear Mr. Traver:

Enclosed are the original and five copies of a proposed Amendment No. 3 to the above-referenced contract, signed by the Administrator for the Government, together with one map (Fig. 1). Two extra copies are enclosed for the use of the Field Team.

If the terms and conditions of this proposed amendment are satisfactory to you and the Operator, all six copies should be signed by the Operator and the usual distribution made.

If any part of the proposed amendment does not have your approval or that of the Operator and cannot be altered within your delegated authority, the original and all copies are to be returned to this office, together with the proposed changes for consideration.

Your attention is called to the fact that Amendment No. 3 would extend the royalty period to 12 years and the present Consent to Lien is valid for only 10 years. Hence a new Consent to Lien should be obtained before the amendment is delivered to the Operator.

Sincerely yours,

George C. Selfridge, noted.
Chairman, Operating Committee

Enclosures

APPROVED:

Robert W. Gerhon
Member, Bureau of Mines

N. E. Kelsey
Member, Geological Survey

Government's copy

not used

AMENDMENT NO. 3
to
EXPLORATION PROJECT CONTRACT Idm-E657
Dated January 18, 1954
DOCKET NO. DMEA-3173
between
THE UNITED STATES OF AMERICA
and
JOHNSON BROTHERS & PRIME

It is agreed this _____ day of _____, 1956, that the Contract, as amended, is further amended as follows:

1. The period for completion of the work under the Contract, which was extended by Item 2 of Amendment No. 2 to eighteen months from the date of the Contract, is further extended to July 18, 1956.

2. In Item 3 of Amendment No. 2, dealing with the estimated total costs of the project and the estimated amount of the Government's participation in those costs, delete the sums $28,500.00 and $38,000.00 and substitute the sums $38,100.00 and $50,800.00, respectively.

3. The Government shall not contribute to any costs of rehabilitation or repair which in its opinion would not have been incurred if there had been no extension of time.

4. The maximum period for royalty payments and lien to secure the payment thereof, provided for in the Contract, is extended to twelve (12) years.

5. In Exhibit "A" which follows Item 6 in Amendment No. 2, make the following changes:

(a) In the first paragraph of Exhibit "A" following the heading Description of the Work, delete the words "and is"; and add the following words immediately preceding the period at the end of the paragraph: ", and a fourth stage indicated on the map attached hereto as a part hereof, which is dated Oct. 1955 and is entitled "Fig. 1, Composite plan, showing workings on 225- and 300-foot levels, Phillips, Hoosier, and Hummer veins and work recommended on the 300-foot level, Hoosier Mine, Boulder County, Colorado.'"

(b) In Exhibit "A" immediately following the description of the Stage III work under the heading Description of the Work, add the following paragraph:

Stage IV

On the 300 level of the Hoosier shaft from a point 110 feet east of the shaft, crosscut approximately 210 feet north to intersect the Hummer vein and, with the prior approval of the Government, drift easterly or westerly or both easterly and westerly for a total distance not to exceed 190 feet.

(c) In Exhibit "A", under the heading Agreed Unit Costs, delete the following two lines:

Agreed Estimated Total Cost of Project	$38,000.00
Government Participation @ 75%	$28,500.00

and add the following lines:

Total Estimated Costs of Stages I, II, and III (subject to audit)	$38,000.00	
Stage IV		
Crosscutting and drifting, 400 feet at $32.00 per foot	$12,800.00	
Estimated Total Cost of Project		$50,800.00
Government Participation @ 75%		$38,100.00

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By _____
Administrator, Defense Minerals
Exploration Administration

JOHNSON BROTHERS & PRIME

By _____

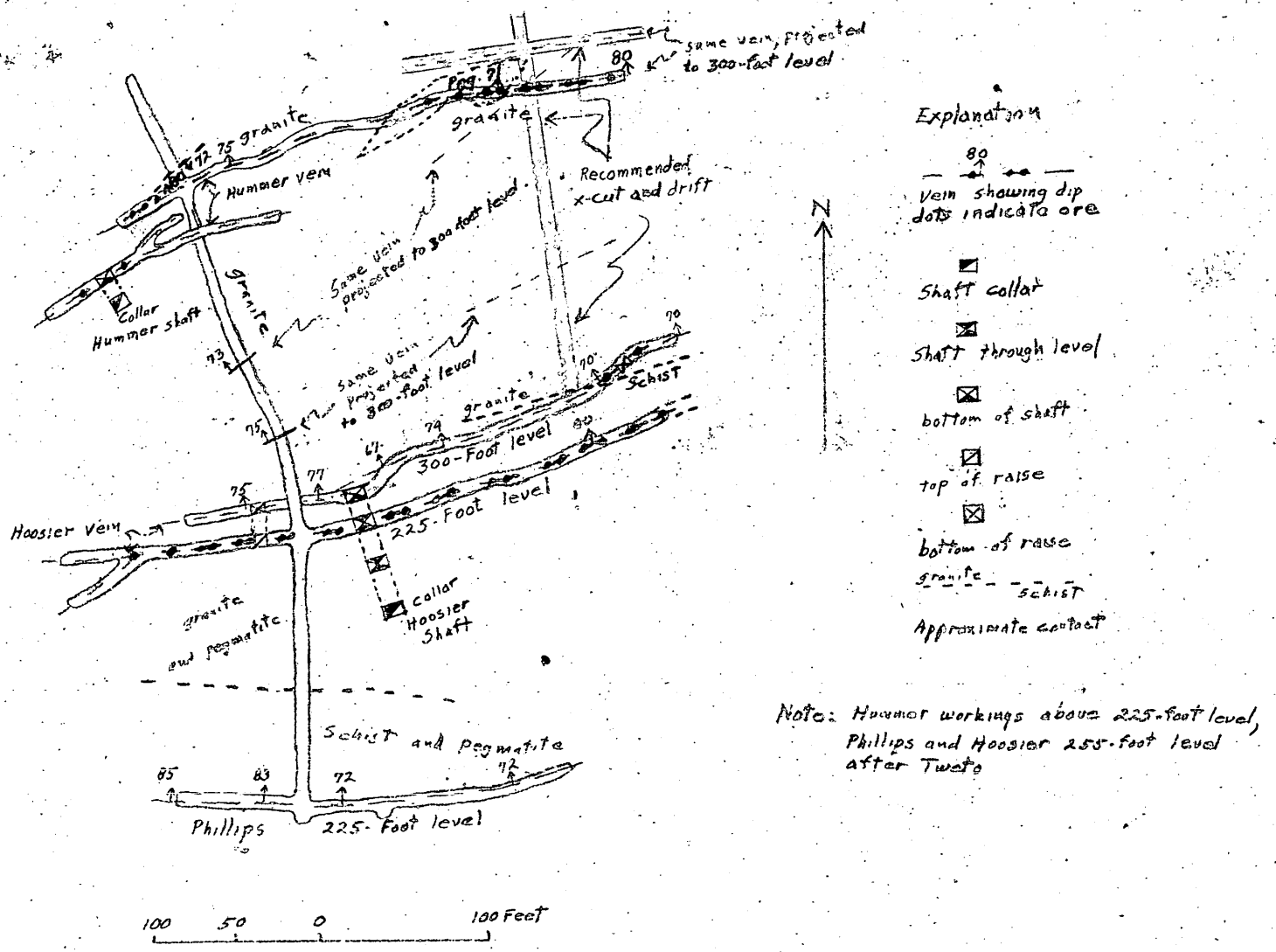


Fig. 1 Composite plan, showing workings on 225- and 300-foot levels, Phillips, Hoosier, and Hummer veins and work recommended on the 300-foot level. Hoosier Mine, Boulder County, Colorado Oct. 1955.

RECEIVED
DEC - 8 1955

Frank:

I noted this because of Nelson's memo of Dec. 19, 1955 especially. There is nothing in the docket that gives any tonnages, some of the monthly reports don't indicate much, and the operator has paid less than 2000 royalty. Dra. Dr. or sinking could have been considered.

Was considered [illegible] rejected. FEJ

Please also see Nelson's memo of February 8, 1956, commenting on Supplemental Field Team report.

WSM
2/10/56

Summary Memo -

Should mention that Field Team and Commodity Members of Mines and Survey recommended project. However, DMEA does not agree. Proposal has aspects of development of orebody discovered by DMEA work, estimated costs are questionable, strong possibility that orebody would bottom above proposed new work, and ore on which estimated royalties would be $10,000, if certified, would be made accessible at a cost to the Government of $9,600.00. This would be trading dollars on ore that we would be paid royalties on anyway, if mined.

Frank E. Johnson

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

February 10, 1956

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division

Subject: Denial of the request for an amendment increasing exploration assistance to the extent of $24,000.00
Docket No. DMEA 3173 - Tungsten
Johnson Brothers and Prime
Hoosier Mine
Boulder County, Colorado
Contract No. Idm-E657

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

Operator:

Johnson Brothers and Prime, Ralph Johnson, Attorney in Fact, 500 Grand Avenue, Louisville, Colorado.

Contract:

Dated January 18, 1954, with two amendments. Contract time 10 months. Amendment No. 1 was deleted by Amendment No. 2. Amendment No. 2 increased time to 18 months. Contract cost $22,000.00; Government participation 75 percent, $16,500.00, by Amendment No. 2 cost was increased to $38,000.00 and $28,500.00. Total work alloted by contract and amendments, shaft sinking, 75 feet: drifting and crosscutting, 950 feet; and raising, 50 feet.

Property Ownership:

Original contract Hoosier and Phillip Lode Mining claims, patented, Amendment No. 2 added Hummer and McKenna Lode Mining claims, patented. All have Survey No. 18340. The property is owned by Hetzer Mines Company and was leased to Johnson Brothers and Prime, by a lease dated September 1, 1953.

Work Completed:

Shaft sinking	75 feet	
Drifting and crosscutting	942 feet	
Raising	50 feet	
Total cost, subject to audit		$37,744.00
Government participation 75%		$28,308.00

History and Production: This area was discovered in the early days and first opened up about 1901.

About 13,594 units of WO_3 have been produced from the property.

Ore Values and Tonnages: No ore of material value was found on the Hoosier and Phillips veins. On the 225-foot level on the Hummer vein an ore shoot 130 feet long was found. This shoot to January 1, 1956, had been mined to a height of 30 feet over an indicated average width of $2\frac{1}{2}$ feet. This ore shoot has an indicated an inferred tonnage of about 4,000 tons. Of this approximately 800 tons have been mined.

From the 800 tons mined, 14,749 tons were shipped as high grade and concentrates, with an average grade of 47.86 percent WO_3. These had a sale value of $40,211.00 or approximately $50.00 for each ton of ore mined. The average grade of ore mined is indicated to be 1.18 percent WO_3. $2,007.00 in royalties have been paid on the above shipments.

The indicated and inferred ore amounting to 4,000 tons at $50.00 per ton would have a value of $200,000.00 from which we should receive royalties of about $10,000.00.

Comments: While it is quite possible that some additional ore may be opened up by the proposed program, all indications are that the possible royalties to the Government would not cover the cost and the production of tungsten would not be significant.

A certification of discovery or development will be issued on the project.

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

[illegible]

IN REPLY REFER TO:

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

RECEIVED
FEB 9 1956

February 8, 1956

Re: DMEA 3173, Idm-E657
Johnson Bros. and Prime
Hoosier-Hummer Mines
Boulder County, Colorado
$24,000.00 - Tungsten

Memorandum

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

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of supplemental Field Team report, supporting recommendation of the report of December 1, 1955.

I accept the grade, tonnage, and value estimate of the supplemental report and concur with the recommendation of the examiners and Field Team that an amendment allowing additional crosscutting and drifting on the 300 level of the Hoosier mine be approved.

N. E. Nelson

N. E. Nelson

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

RECEIVED
FEB - 1 1956

224 New Customhouse
Denver 2, Colorado

January 30, 1956

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3173 (Tungsten), Contract Idm-E657, Johnson Brothers and Prime, Hoosier mine, Boulder County, Colo.

Complying with the request in your teletype of January 17, 1956, we are enclosing the original and three copies of a joint memorandum report, dated January 25, 1956, from D. R. MacLaren, Geologist, U. S. Geological Survey, and R. L. Bolmer, Mining Engineer, U. S. Bureau of Mines.

The examining team, in their memorandum report, outline in detail the extent of discovery as a result of the exploration work performed on the 225-foot and 300-foot levels of the mine and provide an estimate of costs for sinking the winze in lieu of drifting and crosscutting as originally proposed.

This office concurs in the recommendation of the examining team that exploration of the Hummer vein be by crosscutting and drifting as originally proposed.

W. M. Traver

W. M. Traver

Enclosures

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Defense Minerals Exploration Administration
Denver Federal Center
Denver, Colorado

DMEA
Date Rec'd
JAN 27 1956

BUREAU OF MINES
Denver, Colorado

January 25, 1956

RECEIVED
FEB - 1 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III
Through: E. N. Harshman
John F. Shaw

From: D. R. MacLaren
R. L. Bolmer

Subject: DMEA 3173, Contract Idm-E 657 (Tungsten) Johnson Brothers and Prime, Hoosier Mine, Boulder County, Colorado. Estimate of ore discovery and cost data on crosscutting to versus sinking on the Hummer vein.

The DMEA Operating Committee has requested an estimate of ore reserves resulting from the work completed to date under the subject contract. The committee also has asked for cost data to support a previously requested and recommended 300-foot level crosscut to the Hummer vein as compared to a suggested alternative of sinking on that vein from the 225-foot level.

No significant quantities of ore were discovered by project exploration of the Phillip and Hoosier veins along the 225- and 300-foot levels of the mine. The final stage of the completed project work involved crosscutting northerly to and drifting easterly along the Hummer vein. Ore was exposed on this vein along the final 40 feet of the project drift. The operator, at his own expense, continued the drift easterly along the mineralized vein for another

90 feet or so. The vein exposed along the eastern 130 feet of drift contained ore grade tungsten mineralization and its exposure in the breast of the heading, although somewhat weaker, is yet mineralized.

When last inspected, the operator had stoped the vein for a length of about 100 feet along, and to a height of some 30 feet above the 225-foot level drift. The mineralized streak within the structure ranged from 6 to 15 inches in width. The vein was stoped to a minimum width that averaged about 30 inches. The grade of the crude ore, as broken in the stope, reportedly ranged between 1 and 3 percent WO_3. The ore concentrates readily. The high grade and the middling concentrates that are produced from the upgraded crude ore often are combined into a single marketable product that ranges in grade from 59 to 64 percent WO_3.

Ore shoots in this and in the surrounding mines commonly are greater in vertical than in lateral extent. For the purpose of an ore estimate, however, it is assumed that the vertical extent of the ore shoot on the Hummer vein is no greater than its present lateral exposure along the drift. This shoot, therefore, is inferred to be 130 feet long, 130 feet high (50 feet above back of stope and 50 feet below 225-foot level), and to average 2 percent WO_3 over an average mining width of 2.5 feet. Reserves of about 4,000 tons of inferred ore containing some 8,000 short ton units of WO_3 are estimated for the discovery. Assuming an overall mill recovery of 75 percent, the discovery contains 6,000 recoverable units of WO_3 having a present market value of about $360,000.00. The additional

exploration that was proposed by the operator and recommended by the Region III Field Team is designed principally to extend the inferred reserves on the Hummer vein to greater depth and also to test at depth two parallel intermediate veins that lie between it and the Hoosier vein.

To reach the same objective, namely the Hummer vein at a depth of the 300-foot level of the Hoosier mine, will require some 200 feet of crosscutting from an existing 300-foot level drift on the Hoosier vein or approximately 75 feet of sinking from the 225-foot level drift on the Hummer vein.

The actual cost of previous project drifting and crosscutting has approximated the unit price of $32.00 per foot that was estimated in the original engineering report on the project and subsequently agreed upon in the contract. It is expected that the recommended 300-foot level crosscut can be driven by a crew of one miner-timberman and one trammer-mucker. The need for additional tramming labor is not anticipated.

Initially under the contract, the operator deepened the Hoosier shaft from the existing 225-foot level to a new 300-foot level. The shaft was sunk to a minimum cross sectional area and timbered the full distance. The unit price for sinking this shaft, as estimated in the original engineering report and agreed upon in the contract was $80.00 per foot. A review of the operator's accounts indicated the actual incurred costs of sinking the

75 feet approached $82.00 per foot. The work was performed with better than average efficiency.

The suggested alternative winze will necessarily require the same cross section as the shaft and be fully timbered. Although experienced sinking labor is not always available in the district, it is expected that the actual breaking and timbering costs for such a winze would approach those experienced previously in sinking the shaft, or approximately $82.00 per foot.

Certain additional operating expenses will tend to increase the overall costs of sinking the winze. The cost of hoisting through the Hoosier shaft must be prorated to the winze operation. The 75 feet of winze probably would require the same overall time to complete as would the 200 feet of crosscut and the hoisting costs proratable to either operation would be about the same. Such hoisting costs already are included in the unit price of crosscutting but would have to be added to the direct costs of winzing. Actual hoisting costs are difficult to compute. For the purpose of this estimate, 1/3 of the hoistman's wages, 1/3 of the depreciation on the hoist, and 1/10 of the mine's total electrical power are prorated to the winze.

The winze will require two miner-timberman, one hoistman, and a part-time supervisor, as did the shaft. The distance from the winze collar to the shaft along the 225-foot level is some 450 feet and a trammer, which was unnecessary in shaft sinking operations, will be required. In addition, a winze station

must be excavated alongside the Hummer drift. The station will have to provide sufficient area for a hoist and motor and sufficient head room to dump a sinking bucket into a storage pocket or chute. Power will have to be extended from the Hoosier shaft. Any lateral exploration off the winze on the 300-foot level would necessitate a sump at least 10 feet below that level. Such lateral exploration from the winze would necessarily be more expensive than if performed from the 300-foot level crosscut due to the additional material handling costs that would be involved. The comparable costs between the recommended crosscut and the suggested winze are summarized below.

Crosscutting

Crosscut 200 feet to Hummer vein from 300-foot level Hoosier drift: (200 feet at $32.00 per foot)	$6,400.00

Sinking

Sink 75 feet of winze plus 10 feet of sump from the 225-foot level Hummer drift: (85 feet at $82.00 per foot)	$6,970.00
Additional tramming labor: (68 shifts at $14.30/shift)	972.40
Excavate, equipment and extend power to winze station:	1,000.00
Prorated share of hoisting costs in Hoosier shaft: Hoistman (68/3 shifts at $14.30/shift)	324.13

Prorated share of hoisting costs in Hoosier shaft:	
Equipment (68/3 shifts at $50.00/month)	45.33
Power (68/10 shifts at $130.00/month)	35.36
Total sinking costs:	$9,347.22
Estimated additional cost of suggested alternative winze:	$2,947.22

Sinking on the Hummer vein in lieu of crosscutting to that vein was considered by the examining team as were any other possible methods of reaching the same objective. All such methods were weighed in relation to their initial overall cost and as to the feasibility and the comparable expense of performing other desirable secondary exploration once the primary objective had been attained. Such reasoning has been standard policy on all the engineering recommendations made on this and other contracts.

A winze admittedly would be driven its full distance within the vein. A crosscut to the vein and a raise on the vein to the 225-foot level, however, could be completed for less than the cost of the winze alone and would give the same results. Vertical exploration by raising probably would not be necessary once the structure had been intersected by the crosscut. The crosscut would have additional value over the winze in that it would intersect two intermediate veins. Lateral exploration along the Hummer or the intermediate veins may prove warranted. Such work either would not be feasible at all from the winze or would be more expensive than from the crosscut.

The Johnson brothers are experienced and efficient mining operators in the district. They did not request additional exploration by means of sinking and do not consider it as feasible nor as economical as the method proposed. They already have shared in the cost of deepening the mine to the 300-foot level and feel that the additional exploration, if warranted at all, should take the best advantage of the previous work and be carried out on the lower level.

The reserves discovered to date admittedly are insufficient to repay in full the Government's present cost in the project. It is believed, however, that the proposed exploration will enlarge these reserves at least to a degree sufficient to repay the Government's share in its added cost and possibly to an extent that will materially effect the repayment of the Government's aid in the previous project work.

The examining team considers the additional work proposed by the operator to be warranted and therefore, reiterates its previous recommendation for exploration of the Hummer vein at depth by means of crosscutting and, if justified by conditions, then encountered, by drifting.

D. R. MacLaren

D. R. MacLaren
Geologist

R. L. Bolmer

R. L. Bolmer
Mining Engineer

DOCKET
Surname:
Chapman
Martin
K Johnson
Gehan
Selfridge
Mittenday

JAN 17 1956

T E L E T Y P E

Mr. W. M. Traver, Executive Officer
DMEA Field Team, Region 3
224 New Custom House
Denver, Colorado

Reurtt January 13, Docket DMEA#3173, Contract Idm-E657, Johnson Brothers and Prime.

To consider application for amendment we need estimate of ore reserve resulting from work completed. Would also appreciate substantiating data with cost estimate to show superior merit for horizontal workings proposed as compared to suggested possible alternative of winze following ore down Hummer vein.

George C. Selfridge
Chairman, Operating Committee

cc: Docket
Code 400
Adm. Read. File
Oper. Committee
T. Kiilsgaard, USGS
R. W. Holliday, USBM
FT, Reg. 3

TLChapman/WSMartin/ls
1-16-56

P.S.G.

C

Mr George Schlicke

RECEIVED

JAN 13 1956

DN 235 BUR MINES 11- 1-13-56 10-20

CHAIRMAN, OPERATING COMMITTEE, DMEA

RE DOCKET DMEA 3173, CONTRACT IDM-E657, JOH NSON BROTHERS AND PRIME, OUR MEMORANDUM OF 12-5-55. PLEASE TELETYPE ADVICE ASTO STATUS OF PROPOSED AMENDMENT.

W M TRAVER

END PLS ACK VT 10-22

Denver, Colo.

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SOLICITOR
WASHINGTON 25, D. C.

JAN 4 1956

Memorandum

To: The Administrator, DMEA
Attention: Chief, Iron and Ferro-Alloy Division

From: Associate Solicitor, Division of Mineral Resources

Subject: Docket No. DMEA-3173, Johnson Brothers & Prime, Contract Idm-E657 (Tungsten) Amendment No. 3

Your attention is called to the fact that Amendment No. 3 would extend the royalty period to 12 years and that the present Consent to Lien is valid for only 10 years. Hence, a new Consent to Lien should be obtained before the Amendment is delivered to the Operator.

Robert P. Dwyer

Docket
Chapman
Martin

December 28, 1955

MEMORANDUM

To: Associate Solicitor, Div. of Mineral Resources

From: Iron and Ferro-Alloys Division, DMEA

Subject: Preparation of Amendment No. 3
Docket No. DMEA-3173, Tungsten
Johnson Brothers and Prime
Hoosier and Phillip lode mining claims
Boulder County, Colorado
Contract No. Idm-E657

Transmitted herewith is a rough draft of an Amendment No. 3 to the above-captioned contract for your use in preparing the final draft.

[illegible]

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

Attachment

cc: Docket

Code 400

TLChapman/ls

EXHIBIT "A"

Description of the Work

Attached to this amendment is Figure 1, showing the location of the proposed work.

The work completed has been in 3 stages and the new work will constitute Stage IV.

ESTIMATED COST OF THE PROJECT

AGREED UNIT COSTS

Stages I, II and III (Subject to audit)	$38,000.00	
STAGE IV		
Crosscutting and drifting, 400 feet at $32.00 per foot	12,800.00	
Estimated total cost of project		$50,800.00
Government participation, 75 percent		$38,100.00

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

By _____
Administrator, Defense Minerals
Exploration Administration

JOHNSON BROTHERS AND PRIME

By _____

IN REPLY REFER TO:

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

December 19, 1955

RECEIVED
DEC 19 1955

Re: DMEA 3173, Idm-E657
Johnson Bros. and Prime
Hoosier Mine
Boulder Co., Colorado
$24,000 - Tungsten

Memorandum

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

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of application for amendment No. 3.

The applicants now ask for assistance in doing more and deeper work on the Hummer vein.

The original application concerned (a) deeper work on the Phillips vein easterly of the crosscut on the 225-foot level of the Hoosier shaft, (b) sinking of the Hoosier Shaft to the 300 level, and (c) drifting on the Hoosier vein at the new level. The expenditure of $22,000 was approved. Ore was discovered in the easterly end of the 300 level drift on the Hoosier vein and some ore in the floor of the 225-foot level on the Hoosier vein was made available to raises from the 300 level.

The first amendment permitted substitution of drifting for raising without change in the amount of the expenditure.

The second amendment approved the expenditure of $16,000 on a crosscut northerly to the Hummer vein from the 225-foot level of the Hoosier mine, and drifting on the vein. As noted in memorandum of McLaren and Bolmer, the work in the Hummer vein resulted in an "ore shoot about 130 feet long and up to 4 feet wide. Ferberite occurs in lenses several feet long and up to 2 inches wide, and as fine to coarse crystals lining vugs and filling openings between brecciated fragments of wall rock." No estimate of tonnage and grade is given. Probably the 100 units (3291 lbs. at 61.92%) mentioned in the application for Amendment No. 2 came from this ore shoot.

Amendment No. 3, if approved for $24,000, will provide for another crosscut to the Hummer vein, this time from the 300-foot level of the Hoosier mine, and drifting on the Hummer vein beneath the ore shoot opened on the 225-foot level.

The total expenditure to date is:--

Original contract	$22,000		
1st amendment	16,000	Accrued royalty	$28,500
Sub Total	$38,000		$28,500
2nd amendment (if approved)	24,000	Forward royalty	18,000
Totals	$62,000		$46,500

The production of the Phillip, Hoosier and Hummer mines to date has been:--

Hoosier	10,525 units		
Hummer	301	"	(201 + 100 recent)
Phillip	2,868	")	
		)	Report of Examination, Jan. 8, 1954
	13,694	")	

Gross value at $63.00 unit $862,722

If it appears probable that mining of the ore shoot above the 225-foot level in the Hummer mine will correct the present imbalance, I concur with the recommendation of the Field Team that the application for an amendment be accepted. Otherwise I recommend that the application be denied.

N. E. Nelson

N. E. Nelson

DRAFT

EXPLORATION PROJECT CONTRACT
JOHNSON BROTHERS AND PRIME
DOCKET NO. DMEA-3173

AMENDMENT NO. 3

It is agreed this ___ day of _____, 1955, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, and Johnson Brothers and Prime, that Contract No. Idm-E657 (Docket No. DMEA 3173), dated January 18, 1954, as amended, hereinafter called the "Contract," is further amended as follows:

1. In Item 2, of Amendment No. 2, delete the period 18 months and substitute the period 30 months.

2. In Item 3 of Amendment No. 2, delete the sums $28,500.00 and $38,000.00 and substitute the sums $38,100.00 and $50,800.00, respectively.

3. The Government shall not contribute to any costs of rehabilitation or repair which in its opinion would not have occurred if there had been no extension of time.

4. The maximum period for royalty payments and lien to secure the payment thereof, provided for in the Contract, is extended to twelve (12) years.

5. On the 300 level of the Hoosier shaft from a point 110 feet east of the shaft, cross-cut approximately 210 feet north to intersect the Hummer vein and, with the approval of the Government, drift easterly or westerly or both easterly and westerly for a total distance not to exceed 190 feet.

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

December 16, 1955

Memorandum

To: Chief, Iron & Ferroalloys Division-DMEA
Through: Acting Chief, Branch of Ferrous Metals & Ferroalloys

From: Commodity Specialist-Tungsten

Subject: Amendment to contract
Docket No. DMEA-3173-Tungsten
Hoosier Mine, Boulder County, Colorado
Johnson Bros. and Prime
$12,800-Tungsten

Re: Memorandum of December 1, 1955 from R. L. Bolmer and D. R. Mac Laren to Executive Officer of Field Team.

The amendment proposed expenditure of $24,000.00 additional but the alternate proposal prepared by the field team would allow $12,800.00 for the Hoosier vein north to the Hummer vein and limited drifting on any promising mineralization.

I concur with the field team recommendation in the amount of $12,800.00 but suggest that all parties concerned should be fully aware that Government purchase of concentrates may terminate in mid-1956.

R W Holliday
R. W. Holliday

Copy to: Mr. Holliday
Mr. Geehan
Files
Docket file DMEA-3173

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

RECEIVED
DEC - 8 1955

224 New Customhouse
Denver 2, Colorado

December 5, 1955

Memorandum

To: Chairman, Operating Committee, DMEA

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3173 (Tungsten), Contract Idm-E657, Johnson Brothers and Prime, Hoosier mine, Boulder County, Colo.

In conjunction with the matter discussed in our memorandum to you of November 30, 1955, we are enclosing the following material:

1. Original and ~~two~~ 3 copies of the Operator's letter of August 15, 1955, requesting an amendment to authorize additional work and funds under Contract Idm-E657.

2. Original and three copies of a joint memorandum from D. R. MacLaren and R. L. Bolmer, relative to the Operator's request.

The Operator requests an amendment to Contract Idm-E657 to authorize an additional 750 feet of crosscutting and drifting at a total estimated cost of $24,000.00, with Government participation at 75%, or an amount of $18,000.00.

The examining team recommends a reduced program consisting of a maximum of 400 feet of crosscutting and drifting at an estimated total cost of $12,800.00, with Government participation at 75%, amounting to $9,600.00.

This office concurs in the recommendations of the examining team, that an amendment be prepared as they outline.

We are enclosing nine copies of a map for use with the Amendment if such is approved.

E. N. Harshman

Enclosures

E. N. Harshman

DMEA
Date Rec'd.

AUG 19 1955

BUREAU OF MINES
Denver, Colorado

RECEIVED
DEC - 8 1955

Nederland, Colorado
August 15, 1955

Mr. W. M. Traver
Executive Officer, DMEA
Field Team, Region 111
224 New Customhouse
Denver 2, Colorado

Re: Docket DMEA 3173
Idm. E657 (Tungsten)

Dear Mr. Traver:

Hoosier, Phillips, Hummer and McKenna Lode Mining Claims U.S. Survey 18340.

Application for additional exploration aid on present exploration contract between the U.S. Government (DMEA) and Johnson Bros. and Prime, Box 336, Nederland, Colorado.

Discription of proposed additional work:
To drive a crosscut drift a maximum of 250° north from Hoosier vein.

Beginning at a point approximately 110° east of Hoosier shaft on the 300 foot level to cut the Hummer vein.

Then drive drift 150°, easterly on Hummer vein. Then drive drift 150° westerly on same vein for a total of 300° of drift on the Hummer vein.

Also to drift up to a total of 200° on any intermediate veins encountered in crosscut, depending upon DMEA approval after veins have been cut in crosscut drift.

Object of proposed exploration work primarily is to cut through intermediate veins in an area which apparently has been an ore zone in all paralelling veins, including the Phillips vein and Hoosier vein to the south and the Hummer and Clyde veins to the north.

Production of the Hummer vein up to the present time:
32,194 lbs. ore averaging 12.47% WO_3, 4105 lbs, WO_3 from surface workings in 1939, 1940.

Then the present production of 3291 lbs. mill concentrates assaying 61.92% WO_3 mined so far in 1955 by Johnson Bros. & Prime from the 225° level.

Estimated costs of additional project:

Crosscut drifting 250° @ $32.00	$ 8000.00
Drifting on vein 500° @ $32.00	$16000.00
Total	$24000.00

The above costs to include supervision, equipment rental and depreciation on owned equipment, assaying and all other costs in the completion of the proposed work.

Estimated time required to complete proposed project, 11 months from time of beginning of work.

Very truly yours,
Ralph L. Johnson
Partner
JOHNSON BROS. & PRIME

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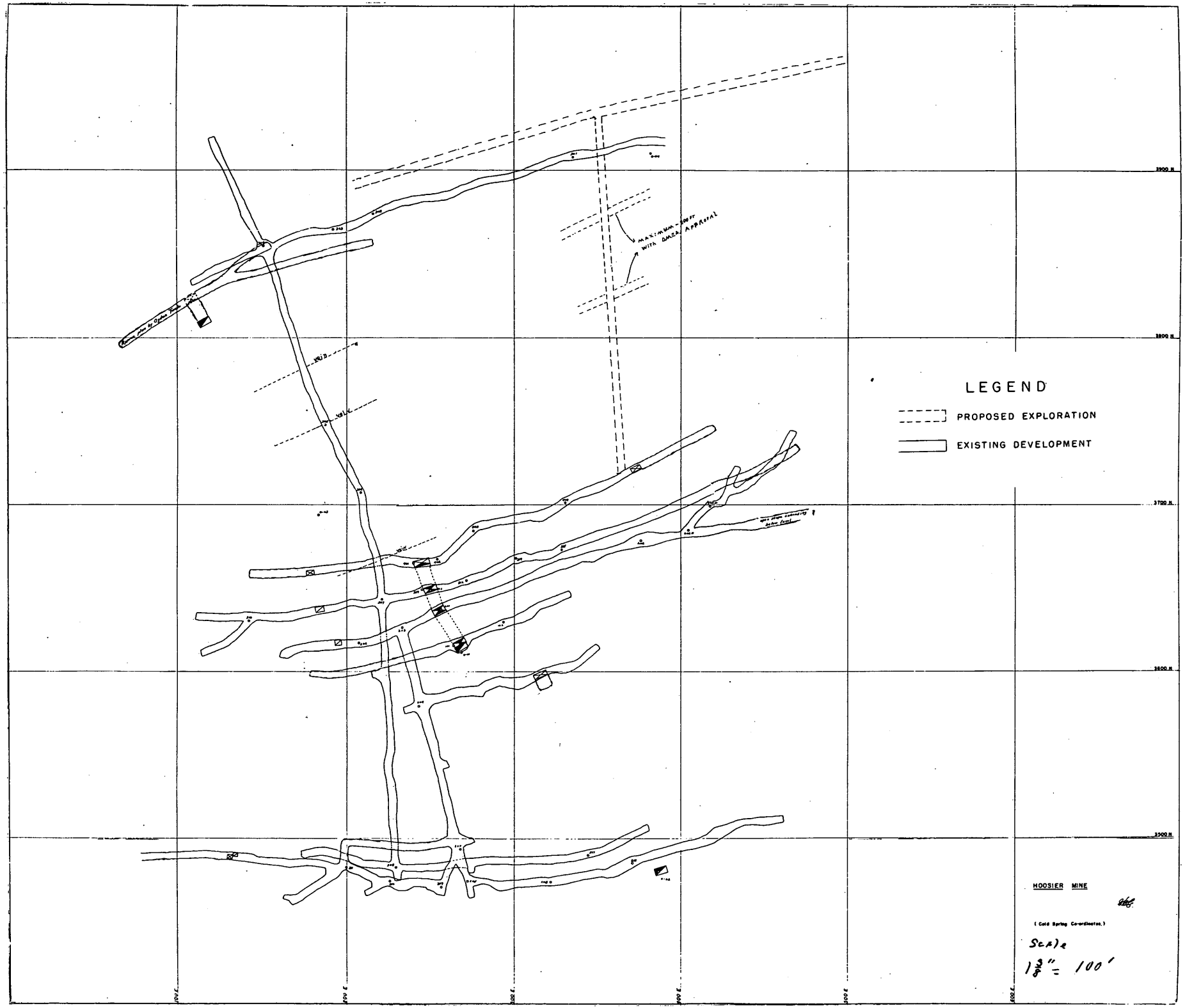

3900 N
3800 N
3700 N
3600 N
3500 N
100 E
200 E
300 E
400 E
500 E
600 E
MAXIMUM DRIFT WITH GENERAL APPROVAL
LEGEND
PROPOSED EXPLORATION
EXISTING DEVELOPMENT
HOOSIER MINE
(Cold Spring Co-ordinates.)
Scale
1 3/8" = 100'

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

REGION III

Building 20
Denver Federal Center
Denver 2, Colorado
December 1, 1955

DMEA Dom Docket
DEC 2 1955
BUREAU OF MINES Denver, Colorado

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: E. N. Harshman EMH
John F. Shaw JFS

RECEIVED
DEC - 8 1955

From: D. R. MacLaren
R. L. Bolmer

Subject: DMEA Docket 3173 (Tungsten), Contract Idm-E657, Johnson Brothers and Prime, Hoosier mine, Boulder County, Colo.

In a letter dated August 5, 1955, the subject operators requested that contract Idm-E657 be amended to increase the authorized project cost by $24,000 (Government's share of the increase $18,000) in order to explore the Hummer vein, and possibly others, on the 300-foot level of the Hoosier mine. The operators proposed to drive a crosscut a maximum of 250 feet northerly from a point 110 feet east of the Hoosier shaft to cut the Hummer vein beneath an ore shoot found on the 225-foot level, to drift 150 feet easterly and 150 feet westerly from the crosscut on the Hummer vein, and, with prior DMEA approval, to drift a total of 200 feet on any other vein or veins that may be encountered in the crosscut.

An inspection of the mine (fig. 1) was made in the company of Mr. Ralph Johnson, one of the operators, on October 17, 1955. The following work has been completed under the contract:

1. The Hoosier shaft has been deepened 75 feet to the 300-foot level, drifts have been driven from the bottom of the shaft 100 feet westerly and 200 feet easterly on the Hoosier vein, and a raise has been driven on the Hoosier vein to a height of 50 feet from the west drift on the 300-foot level.

2. On Phillips vein, a drift has been driven 150 feet easterly from the south crosscut on the 225-foot level.

3. A crosscut has been driven 298 feet northerly from the Hoosier drift on the 225-foot level, and 200 feet of drifting easterly from the crosscut has been driven on the Hummer vein.

On their own account the operators have:

1. Completed the raise from the west drift on the 300-foot level to the 225-foot level and raised 12 feet from the east drift on the 300-foot level.

2. Drifted on the Hummer vein 45 feet westerly from the north crosscut on the 225-foot level and drove the east drift on the Hummer vein an additional 80 feet.

All the work on the Phillips vein was done in schist and pegmatite, while most of the work on the Hoosier vein was done in schist. The final 50 feet of the east drift on the 300-foot level is in coarse-grained to porphyritic granite, while the top 15 to 20 feet of the raise from the west drift, 300-foot level, was in granite. The north crosscut and the drifting on the Hummer vein were in granite except for a short distance where the east drift cut a pegmatite dike.

The north crosscut on the 225-foot level intersected the Hummer vein at a distance of 220 feet but the vein was so narrow, tight, and poorly mineralized that, although it was believed to be the Hummer, it was considered advisable to continue the crosscut to be sure of the correlation before starting the drift. Between the Hoosier and the Hummer veins the crosscut intersected two veins each 2 to 6 inches wide, that contained a little horn quartz but no ferberite. The first vein, 65 feet north of the Hoosier vein strikes N. 65° E. and dips 75° NW; the second one, about 112 feet north of the Hoosier, strikes N. 50° E. and dips 73° NW.

Three occurrences of ore were found, one on the Hoosier vein at the east end of the 300-foot level, one in the west Hummer drift, and one in the eastern part of the east Hummer drift. In each case the vein is between walls of granite. The ore shoots in the east end of the 300-foot level and the west Hummer drift are apparently limited to short segments of vein, 10 to 15 feet long, that contain streaks of ferberite up to 2 feet long and one-half inch wide in a gangue of quartz. The ore shoot in the east Hummer drift is about 130 feet long and up to 4 feet wide. Ferberite occurs in lenses several feet long and up to 2 inches wide, and as fine to coarse crystals lining vugs and filling openings between brecciated fragments of wall rock. Within the schist, the veins comprises narrow seams of quartz and gouge and contains little if any ferberite. The contact between the schist and granite is irregular but from exposures in the 225-foot level south crosscut, in the raise from the 300-foot level west drift, and near the east end of the 300-foot level east drift, it is probable that most of the proposed crosscut and all of the proposed drift will be driven in granite.

It is concluded that the two veins exposed between the Hoosier and the Hummer veins in the 225-foot level north crosscut are too poorly mineralized to justify by themselves the proposed 300-foot level crosscut. However, the chance of finding additional ore on the Hummer vein is very good. Therefore, it is recommended that the application be approved with the following modifications which are acceptable to the operator:

Allow a maximum of 400 feet of combined crosscut and drift located approximately as indicated in figure 1. The length of the crosscut will be about 210 feet if started 110 feet east of the Hoosier shaft as requested by the operator and if the dip of the Hummer vein does not change. Should it be possible to start the crosscut farther to the east (this section of the drift is now caved), the length of the crosscut would be about 190 feet. The remainder of the recommended footage should be ample for lateral exploration along the Hummer vein and for any other promising intermediate vein intersected in the crosscut.

Both the start and the extent of any and all drifting from the crosscut will be dependent upon the conditions encountered and will require the prior approval of the DMEA Field Team.

The unit price for drifts and crosscuts, previously agreed upon in the contract, is $32.00 per foot. At this rate the total estimated cost of the recommended additional 400 feet of drifting and crosscutting will be $12,800.00.

E. M. Harshman

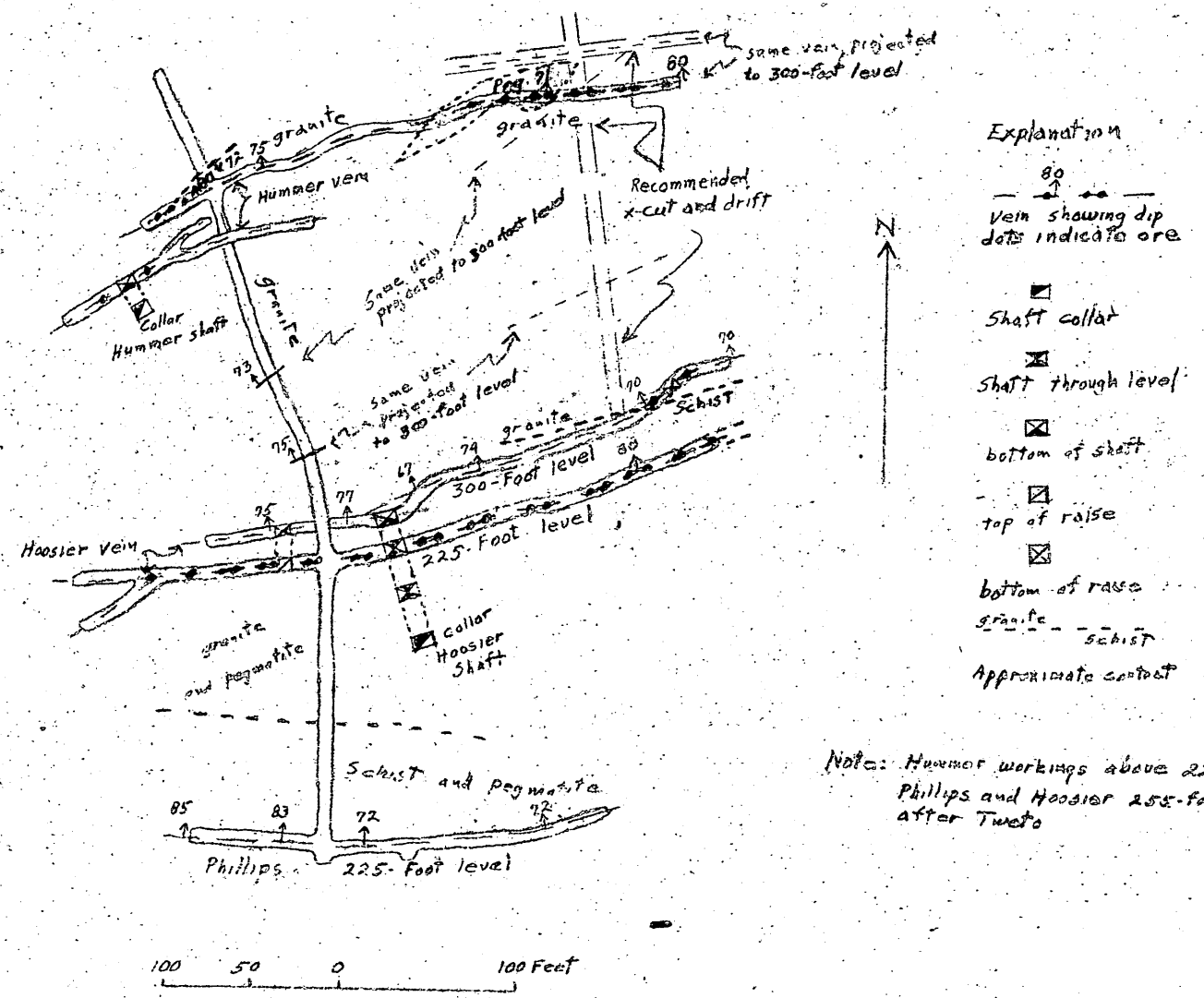
for D. R. MacLaren
Geologist

R. L. Bolmer

R. L. Bolmer
Mining Engineer

RLB:ph

cc 8
ENHarshman
Idm-E657
Chron.



Note: Hummer workings above 225-foot level, Phillips and Hoosier 255-foot level after Tweto

Fig. 1 Composite plan, showing workings on 225- and 300-foot levels, Phillips, Hoosier, and Hummer veins and work recommended on the 300-foot level. Hoosier Mine, Boulder County, Colorado Oct. 1955

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

224 New Customhouse
Denver 2, Colorado

November 30, 1955

Memorandum

To: Chairman, Operating Committee, DMEA

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3173 (Tungsten), Contract Idm-E657, Johnson Brothers and Prime, Hoosier mine, Boulder County, Colo.

Reference is made to your letter of November 18, 1955, relative to final report pertaining to work performed under the contract.

The operator has requested an amendment to the contract to authorize additional work and funds, and field recommendations in the matter are in the process of preparation.

E. N. Harshman

E. N. Harshman

RECEIVED
DEC - 2 1955

Mr. W. M. Traver, Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA 3173 - Tungsten
Johnson Brothers and Prince
Rossier Mine
Boulder County, Colorado
Contract No. Idm-8657

Dear Mr. Traver:

Reference is made to your memorandum of June 22, 1955, enclosing Operator's Monthly Progress Report, Forms MT-104 and 104A, Operators Narrative Report, for the month of May 1955, and Inspecting Engineer's Narrative Report, dated June 9, 1955, for the above contract.

The Engineer's report mentioned that the Operator expected to do some more work on his own account. We would appreciate your including with your final report and recommendations concerning certification any data that you may have obtained concerning the results of such additional work.

The Operator should be advised that we are awaiting his final report.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

APPROVED:

[illegible]

Member, Bureau of Mines

A. E. [illegible]

Member, Geological Survey

TLChapman:foc
11-17-55
cc to: Docket
Code 400
Admr. Read. File
Operating Comm.
FT. REG. III
Messrs. Holliday, USBM
Killingsard, USGS

Docket Contract File

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

RECEIVED
JUN 13 1955

224 New Customhouse
Denver 2, Colorado

June 9, 1955

Copy retained 400

3173

Mr. G. C. Ridland, Manager
Hetzer Mines, Inc.
P. O. Box 641
Boulder, Colorado

Re: Royalty Payments, CMEA Docket 3173 (Tungsten) Contract Idm-8657, Johnson Brothers and Prime, Hoosier Mine, Boulder County, Colorado

Dear Mr. Ridland:

Settlement sheets and royalty payment in the amount of $19.00 for production of tungsten by Johnson Brothers and Prime from the Hoosier mine have been received.

We have determined that the "Processing Charge of $60.00 paid to A. D. Moore" is an allowable deduction to be considered in the calculation of DMEA royalty. Correct royalty should therefore be $16.00 resulting in an overpayment of $3.00. You may deduct this amount of $3.00 from your next royalty payment for Johnson Brothers and Prime.

Very truly yours,

W. M. TRAVER

W. M. Traver

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

224 New Customhouse
Denver 2, Colorado

April 18, 1955

Memorandum

To: Chairman of the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3173 (Tungsten), Contract Idm-E657, Johnson Bros. and Prime (Hoosier mine), Boulder County, Colorado

Enclosed for your information and records are four copies of project work approval issued by the DMEA Field Team, Region III pertaining to the balance of work to be performed under the subject contract.

Also enclosed are the original and three copies of the joint memorandum from the examining team recommending approval of the work.

W. M. Traver

W. M. Traver

Enclosures

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

224 New Customhouse
Denver 2, Colorado

April 15, 1955

Mr. Ralph Johnson, Agent
Johnson Bros. & Prime
500 Grant Avenue
Lewisville, Colorado

Re: Docket DMEA 3173 [redacted])
Contract Idm-E657

Dear Mr. Johnson:

Reference is made to your letter of April 8, 1955 wherein you request the Government's approval for the performance of the remaining 50 feet of drifting in an easterly direction of the Hummer vein under Stage III of the contract.

In conjunction with Field Team approval by letter of March 18, 1955 you are hereby authorized to perform the remaining 50 feet of drifting easterly along the Hummer vein under Stage III of the contract.

Nothing in this work authority shall be construed to increase the estimated total cost of the project, the amount of the Government's contribution, or any item of allowable cost which is expressly designated "allowable maximum".

Very truly yours,

JWT:sr

cc Chairman Op. Comm. (4)
Amendment File
Subject
Chron
Harshman
Shaw
Townsend

W. M. TRAVER
W. M. Traver

E. N. Harshman
E. N. Harshman
DMEA Field Team, Region III

DMEA
Date Rec'd.
APR 14 1955

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

BUREAU OF MINES
Denver, Colorado

Region III

Building 20, Room 137
Denver Federal Center
Denver 2, Colorado
April 13, 1955

DEPARTMENT OF THE INTERIOR
Bureau of Mines Administration
RECEIVED
APR 21 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw
Supervising Mining Engineer

From: R. L. Bolmer

Subject: DMEA 3173, Contract Idm-E657 (Tungsten), Johnson Bros. & Prime (Hoosier mine), Boulder County, Colorado - Recommendations regarding the completion of Stage III of the project.

The operator under the subject contract, in a letter dated April 8, 1955, requested permission to complete the final 50 feet of project drifting authorized along the Hummer vein.

The contract authorizes crosscutting to, and drifting a total of 200 feet easterly along, the Hummer vein from the 225-foot level of the Hoosier mine. The completion of the final 100 feet of drift on the vein (Stage III of the contract) was dependent upon the conditions encountered and required the prior approval of the Government. To date, the Government has approved and the operator has completed only the first 50 feet of the drifting allowable under Stage III.

The Hummer vein exposed along the exploration drift continued in granite for a distance of about 110 feet northeast of the crosscut. The structure along the final 40 feet of the completed drift occurred in pegmatite. In the pegmatite, the Hummer vein is represented by a vuggy and brecciated zone up to 30 inches in width. The zone contains appreciable horn quartz but only minor amounts of ferberite. The tungsten mineralization along one short section of the zone within the pegmatite appeared concentrated enough for commercial extraction. The zone exposed in the breast of the drift (some 150 feet northeast of the crosscut) contains a number of quartz stringers aggregating about 8 inches in width and several minor streaks and patches of ferberite. The structure itself at this location is strong and well defined.

DMEA 3173
Idm-E657
4-13-55

The exposure of the vein along the eastern sections of the drift is considered sufficiently promising to warrant the extension of the drift for the additional 50 feet allowable under Stage III of the contract. The completion of this final authorized project work, therefore, is recommended.

R. L. Bolmer

R. L. Bolmer
Mining Engineer

cc 7
Idm-E657
DMEA Chron

RLB/cm

I concur with the above recommendation.

E. N. Hawkinson

for D. R. MacLaren
Geologist

PO Box 336
Nederland, Colorado
April 8, 1955

DEPARTMENT OF THE INTERIOR
Bureau of Mines Administration
RECEIVED
APR 21 1955

DMEA
Date Rec'd.
APR 11 1955
BUREAU OF MINES
Denver, Colorado

W. M. Traver
Executive Officer, DMEA
Field Team, Region 111
224 New Customhouse
Denver 2, Colorado

Re: Docket DMEA 3173 (Tungsten)

Dear Mr. Traver:

We have completed the last fifty feet of drifting easterly on the Hummer vein, as authorized by your letter of March 18, 1955.

The formation is still pegmatite, showing a fairly strong vein, consisting of quartz with traces of ferberite.

We feel the showing would warrant the last fifty feet of drifting as authorized by our contract: (with your approval).

Especially if by so doing we might reach the contact of the pegmatite with the granite on the east side.

Yours truly,
JOHNSON BROS. & PRIME

Partner
Ralph L. Johnson

iq

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

RECEIVED APR 11 1955

224 New Customhouse
Denver 2, Colorado

April 7, 1955

Memorandum

To: Chairman of the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA-3173 (Tungsten), Contract Idm-E657, Johnson Brothers and Prime (Hoosier mine), Boulder County, Colorado

Reference is made to your letter of April 4, 1955 wherein you request clarification in the deficiency of enclosures with our memorandum of March 23, 1955 whereby we forwarded the Field Team's approval of work to be performed under the contract.

Our records indicate correct distribution and that you should have received three copies of Bolmer's memorandum dated March 8, 1955. We are unable to determine what actually transpired when distribution was made; therefore, we are enclosing for your records four copies of Bolmer's memorandum dated March 8, 1955.

W. M. Traver

W. M. Traver

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

DMEA Date Rec'd MAR 9 1955

Region III

Building 20, Room 137
Denver Federal Center
Denver 2, Colorado
March 8, 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: John F. Shaw

From: R. L. Bolmer

Subject: DMEA 3173, Contract Idm-E657 (Tungsten) Johnson Brothers and Prime (Hoosier mine) Boulder County, Colorado - Operator's request to commence work under Stage III of contract

On February 24, 1955, Ralph Johnson notified this office by telephone that the 100 feet of drifting authorized easterly on the Hummer vein under Stage II of the subject contract had been completed. He stated that the appearance of the vein had improved considerably along the last few feet of the heading and requested the Government's approval to extend the drift an additional 50 feet easterly along the vein as provided for under Stage III of the contract.

Stage III of the contract authorizes an additional 100 feet of drifting easterly along the Hummer vein on the 225-foot level of the Hoosier mine. The performance of this work is dependent upon the results of Stage II and requires the prior approval of the Government.

The favorable appearance of the Hummer vein was verified during an inspection of the property March 1, 1955. Governmental approval for the requested additional 50 feet of drifting under Stage III of the contract, effective February 24, 1955, therefore, is recommended.

R. L. Bolmer

R. L. Bolmer
Mining Engineer

cc 5
EHarshman
E657
DMEA Chron.

RLB/pah

400

DOCKET
Surname:
Rutledge
Martin
Selfridge
Hedges

APR - 4 1955

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

Re: Docket No. DMEA 3173 - Tungsten
Johnson Brothers and Prime
Hoosier mine
Boulder County, Colorado
Contract No. Idm-R657

Dear Mr. Traver:

This will acknowledge your letter of March 23, 1955, transmitting four copies of project work approval as authorized by the DMEA Field Team, Region III, but omitting three copies mentioned as enclosed of a memorandum dated March 8, 1955, from R. L. Bolmer, Bureau of Mines, relative to the same work.

With your letter of March 21, however, you forwarded copies of a Bolmer memorandum dated March 4, but received in Denver on March 8, 1955, which could qualify as the one referred to above. Please clarify the matter for us.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (JHB)

Approved:

J. H. Hedges (JHB)
Member, Bureau of Mines

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

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

FARutledge/WSMartin/ls
3/31/55

R.C.S.

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

224 New Customhouse
Denver 2, Colorado

March 23, 1955

Memorandum

To: Chairman of the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3173 (Tungsten), Contract Idm-E657, Johnson Brothers and Prime (Hoosier Mine), Boulder County, Colorado

Enclosed for your records are four copies of project work approval as authorized by the DMEA Field Team, Region III, in conjunction with stipulations contained in Contract Idm-E657.

Also enclosed are three copies of a memorandum dated March 8, 1955 from R. L. Bolmer, Mining Engineer, U. S. Bureau of Mines, relative to the project work approval. — these were not enclosed

W. M. Traver

W. M. Traver

Enclosures

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

Defense Minerals Administration
RECEIVED
MAR 28 1955

224 New Customhouse
Denver 2, Colorado

March 18, 1955

Mr. Ralph Johnson, Agent
Johnson Bros. & Prime
500 Grand Avenue
Louisville, Colorado

Re: Docket DMEA 3173 (Lead)
Contract Idm-E657

Dear Mr. Johnson:

Consistent with stipulations contained under Exhibit A of Amendment No. 2 to Contract Idm-E657 and confirming verbal approval of February 24, 1955 you are hereby authorized to perform 50 feet of drifting under Stage 3 easterly along the Hummer vein.

Government approval of any additional drifting on the Hummer vein is contingent upon results obtained in performing the drifting hereby authorized.

Nothing in this work authority shall be construed to increase the estimated total cost of the project, the amount of the Government's contribution, or any item of allowable cost which is expressly designated "allowable maximum."

Very truly yours,

W. M. Traver

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

JWT:sr

E. N. Harshman

E. N. Harshman

cc: Chairman Op. Comm. (4)
Harshman
Shaw
Amendment File
Townsend
Subject
Chron

Defense Minerals Exploration Adm.
REC'D
OCT 18 1954

224 New Customhouse
Denver 2, Colorado

October 13, 1954

Mr. Ralph Johnson, Agent
Johnson Brothers and Prime
500 Grant Avenue
Louisville, Colorado

Re: Docket DMEA 5173 (~~Lease~~) Inspection
Contract I&m-2657

Dear Mr. Johnson:

We have been informed that production is being made from stope fill from ground described under Article 2 of Contract I&m-2657.

In that respect your attention is directed to the provisions of the contract wherein any production from the ground described under Article 2 of the contract is subject to the Government's percentage royalty thereon. Under the provisions of Amendment No. 2 this includes the Hammer, McKenna, Hoosier and Phillip lode mining claims.

You should advise the purchaser of production from the foregoing ground to deduct royalty to the Government under the provisions of the contract and make check payable to the Defense Minerals Exploration Administration and forward it to the Executive Officer, DMEA Field Team, Region IV, 224 New Customhouse, Denver 2, Colorado, together with four copies of the settlement sheet or sheets involved.

Very truly yours,

W. H. King
Executive Officer, DMEA
Field Team, Region IV

JWT:jp
cc Subject
Royalty
Chron
Chairman, Oper. Comm.
RDBerkenkotter
WMTraver
AHKoschmann
JWTownsend

Copy retained here

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

224 New Customhouse
Denver 2, Colorado

October 7, 1954

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 3173 (Tungsten), Contract Idm-E657, Johnson Brothers and Prime, Hoosier Mine, Boulder County, Colorado

Enclosed are the Government, Division and Docket copies of Amendment No. 2 to Contract Idm-E657 which was prepared in Washington and signed by the Administrator, DMEA, for the Government, and forwarded to this office for signature of the operator by your letter of September 9, 1954.

Also enclosed are the original and two copies of Form MF-203 Owner's Consent to Lien which has been executed by the owners as instructed in your letter of September 9.

Copies of the amendment and Form MF-203 have been given to the operator, the Finance Office, Region IV, and a copy has been retained for our files.

W. H. King

W. H. King

Enclosures

DOCKET
Surname:
Rutledge
Martin
Selfridge
Johnson
Rutledge

Interior Department
Defense Minerals Exploration
Administration
14x4401(01) Revolving Fund,
Defense Production Act,
Interior (Allocated Working
Fund to the Office of Secy.)

T E L E T Y P E

To: W. H. King, Executive Officer, DMEA Field Team, Region 4,
Denver, Colorado

Reurtt September 7, 1954, Docket DMEA 3173, Johnson Brothers and Prime, Contract Idm-8657. Proposed amendment authorizing additional work and funds mailed September 9.

George C. Selfridge
Chairman, Operating Committee (275)

Cc: DOCKET
FT, REG. IV
CODE 400
ADM. READING FILE
OPERATING COMMITTEE
R. W. GEEHAN, USBM
THOR KIILSGAARD, USGS

FARutledge/ls
9-9-54

SENT
SEP 9 1954
Clerical Service Section

R.C.S.

400

DOCKET
Surname:
Rutledge
Martin
Talbut
Davis
Selfridge
Johnson

SEP 9 1954

Mr. W. H. King, Executive Officer
DMEA Field Team, Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA 3173 - Tungsten
Johnson Brothers and Prime
Hoosier mine
Boulder County, Colorado
Contract No. Idm-E857

Dear Mr. King:

Enclosed are the original and five copies of Amendment No. 2 to the subject contract signed by the Administrator for the Government.

If the terms and conditions of this proposed amendment are satisfactory to you and the Operator, and subject to the attachment of new Owner's Consent to Lien forms enclosed, all six copies of the amendment should be signed and the usual distribution made.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (JHB)

Enclosures

APPROVED:

Thor H. Kiilsgaard

Member, Geological Survey (THK)

J. H. Hedges

Member, Bureau of Mines (JHB)

copy to: Docket
FT, Reg. 4
Adm. Read. File
Code 400
Operating Comm.
R. W. Geehan, USBM
Thor Kiilsgaard, USGS

FARutledge/ls
9/3/54

R.C.G.

Mr. George Selfridge
Sept. 7, 1954
Unattended service

Defense Minerals Administration
SEP - 8 1954

BUR MINES DN 235 9-754 1-19 PM

CHAIRMAN OPERATING COMMITTEE DMEA

RE DOCKET DMEA 3173, CONTRACT IDM-E657, JOHNSON BROTHERS AND PRIME OUR EXXXX MEMO JULY 22,1954. PLEASE TELTXXXX TELETYPE ADVICE AS TO YOUR DECISION IN THE MATTER AND STATUS OF PROPOSED AMENDMENT ATXXXX AUTHORIZING ADDITIONAL FUNDS.

W H KING

Denver, Colo.

SEP 8 8 18 AM '54
BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

DMEA
File Copy

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SOLICITOR
WASHINGTON 25, D. C.

August 26, 1954

Memorandum

To: The Administrator, DMEA
Through: Mr. W. S. Martin

From: Acting Assistant Solicitor, Defense Minerals

Subject: Johnson Brothers & Prime, Docket No. DMEA-3173 (Tungsten), Contract Idm-E657, Amendment No. 2

Attached is Amendment No. 2 to the above-described contract in satisfactory legal form for execution, subject to the attachment of a new Owners' Consent to Lien, forms for which have been prepared by us and attached to this memorandum.

/s/ Henry C. Rubin
For J. L. Hofflund
Acting Assistant Solicitor
Defense Minerals

Attachments 14

HCRubin:ep

Copy to: Solicitor's Docket
DMEA Docket
Mr. Martin
Mr. Hofflund
Mr. Rubin
Chron.

Docket
Rutledge
Martin

INTERIOR DEPT.
AUG 11 1954
SOLICITOR

Acting Assistant Solicitor,
Defense Minerals

August 10, 1954

Chief, Iron and Ferro-Alloys Division, DMEA

Review and preparation of Amended Contract
Docket No. DMEA 3173 - Tungsten
Johnson Brothers & Prime
Hoosier Mine
Boulder County, Colorado
Contract No. Idm-E657

Transmitted herewith is the rough draft of a proposed amended exploration project contract for your use in preparing the contract in final form.

Copies of the map referred to in the proposed amended contract are enclosed.

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

Attachment

cc: Docket
Code 400
Adm. Reading File

FARutledge/ls

IN REPLY REFER TO:

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

August 2, 1954

Re: DMEA-3173
Johnson Brothers and Prime
Boulder County, Colo.
Tungsten
Proposed amendment - $16,000

Memorandum

To: W. S. Martin
Defense Minerals Exploration Administration

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

Subject: Concurrence with Field Team recommendation for approval

The applicant requests additional funds to drive a crosscut from the 225 level of the Hoosier mine a distance of 250 feet north and to drift 250 feet in the Hummer vein zone.

The Field Team has recommended the proposed work be approved.

Though the old workings on the Hummer vein are inaccessible, an examination in 1942 by Ogden Tweto, Survey geologist, indicated that ore in the 70 foot shaft was of excellent grade and good width.

The proposed exploration will be in favorable host rocks and will explore a strong, mineralized ore structure.

I concur with the Field Team recommendation for approval.

E. L. Newcomb
E. L. Newcomb

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

224 New Customhouse
Denver 2, Colorado

July 22, 1954

Memorandum

To: Chairman, Operating Committee, DMEA

From: DMEA Field Team, Region IV

Subject: Docket DMEA 3173 (Tungsten), Contract Idm-E657, Johnson Brothers and Prime, Hoosier Mine, Boulder County, Colorado

Enclosed is the following material relative to and in conjunction with authorization of additional work and allocation of additional funds under the subject contract:

1. Original and three copies of the operator's request of June 21, 1954, wherein they request Government assistance in additional exploration work consisting of crosscutting 250 feet northerly on the 225 foot level of the Hoosier shaft to cut the Hummer vein and two intermediate veins showing on the surface between the Hoosier vein and the Hummer vein, and 250 feet of drifting easterly on the Hummer vein when it is encountered, at a total estimated cost of $16,000.00.

2. Original and three copies of a memorandum from E.N. Harshman, Geologist, U.S. Geological Survey, dated July 20, 1954, relative to the operator's request.

3. Original and three copies of a memorandum from R.L. Bolmer, Mining Engineer, U.S. Bureau of Mines, dated July 14, 1954, and transmittal thereof from the Chief, Mineral Resources Branch, Mining Division, Region IV, dated July 20, 1954, also relative to the operator's request.

4. Original and five copies of Form MF-203 Owner's Consent to Lien which has been executed by the owner in conjunction with including the McKenna and Hummer claims under Article 2 of the contract.

The examining engineer and geologist recommend that the operator's request be granted, in which we concur. Processing of the operator's request is not within the authority delegated to this office, therefore the matter is forwarded for your consideration and appropriate action.

W. H. King

W. H. King

A. H. Koschmann

A. H. Koschmann

Encls.

Nederland, Colorado
June 21, 1954

Application for additional exploration aid on present Exploration Contract between the United States Government and Johnson Bros. & Prime,

Hoosier and Phillips Lode Mining Claims, U. S. Survey 18340
Docket No. DMEA 3173
Idm E657 Tungsten

Discription of proposed additional work:

To drive a cross cut drift from 225 ft. level of Hoosier shaft 250 ft. north to cut the Hummer vein and two intermediate veins showing on surface between the Hoosier vein and the Hummer vein. Then drift 250 ft. easterly on Hummer vein.

Existing work on Hummer vein consists of a shaft 70 ft. deep and about 25 ft. of drift westerly from shaft, and 180 ft. drift easterly from shaft, all on 70 ft. level.

Production up until present time, 32,194 lb. ore averaging 12.47% WO_3: 4.105 lb. WO_3 came mostly from shaft sinking. Entire easterly drift in granite formation, strong vein showing quartz and some ferberite ore the entire length of present drift.

All present work was done by applicants, Ralph Johnson and Roy Johnson, in 1939 and 1940.

Estimated cost of additional project:

Cross cut drifting	250 ft. @ $32.00 per ft.	$8,000.00
Drifting on vein	250 ft. @ $32.00 per ft.	$8,000.00
	Total	$16,000.00

The above costs to include supervision, equipment rental, and

depreciation on owned equipment, assaying, and all other costs incurred in the completion of the work proposed.

Estimated time required to complete proposed work: 7 months

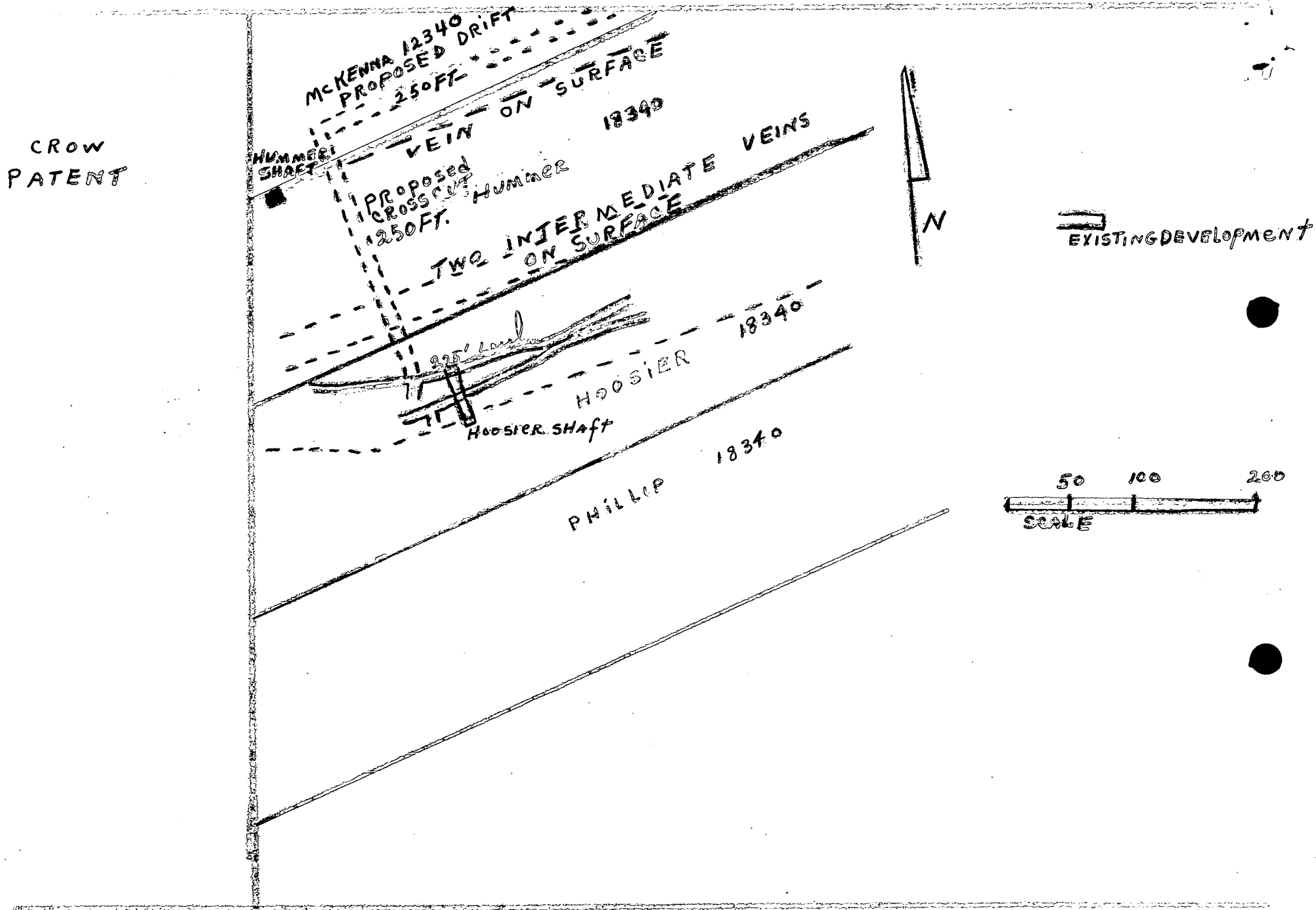
Attached is letter extending present lease from Hetzer Mines Inc. consisting of Hoosier, Phillips, and Hummer Lode mining claims, to include the McKenna Lode mining claim paralleling the Hummer on the north.

JOHNSON BROS. & PRIME

by Ralph Johnson

Ralph Johnson

pc


CROW PATENT
McKENNA 12340
PROPOSED DRIFT
250FT
VEIN ON SURFACE
18340
HUMMER SHAFT
PROPOSED CROSSCUT HUMMER
250FT.
TWO INTERMEDIATE VEINS ON SURFACE
N
EXISTING DEVELOPMENT
225' Level
HOOSIER
18340
HOOSIER SHAFT
PHILLIP
18340
50
100
200
SCALE

AMENDMENT TO LEASE

WHEREAS, on the 1st day of September, 1953, Hetzer Mines, Inc., a Corporation, as Lessor, entered into a Mining Lease with Ralph L. Johnson, Roy W. Johnson, and George A. Prime, as Lessees, by which Lease the Lessor leased to the Lessees the Hoosier, Hummer and Phillip Lode Mining Claims, Survey Lot No. 18340, and;

WHEREAS, on February 15, 1954, the said Lessor extended the term of said Lease for a term of ten years from the date the Lessees obtained the loan from the United States Government, and;

WHEREAS, the Lessees desire a Lease on the McKenna Claim, Survey Lot No. 18340, so that they can properly develop said three lode mining claims first above mentioned, and;

WHEREAS, it is to the best interests of the Lessor that the Lessor leases said McKenna Lode Mining Claim.

NOW, THEREFORE, the Lessor hereby leases to said Lessees said McKenna Lode Mining Claim for a term coextensive of the Lease on said Hoosier, Hummer and Phillip Lode Mining Claims and said McKenna Lode Mining Claim shall be included within said Lease above mentioned, the same as if originally incorporated therein, and shall be for the same term as pertains to said Hoosier, Hummer and Phillip Lode Mining Claims.

Dated this 17th day of June, 1954.

HETZER MINES, INC.

BY Elmer Hetzer
President

ATTEST:

Dudley D. McMunn
Secretary

July 20, 1954

Memorandum

To: A. H. Koschmann E.N.H. for A.H.K.

From: E. N. Harshman

Subject: DMEA Docket 3173 (tungsten), Contract Idm-E657, Johnson Brothers and Prime, Boulder County, Colorado

By a letter of June 24, 1954, Ralph Johnson requested authorization for additional work and funds under the subject contract. The requested work, estimated to cost $16,000.00, consists of driving a crosscut from the 225-foot level of the Hoosier mine to cut the Hummer vein at a point about 250 feet north of the shaft, and drifting 250 feet northeast on the Hummer vein.

No field examination was made in response to the request since the claims were thoroughly examined at the time of the original investigation and the Hummer workings are not accessible for examination.

Figure 1, accompanying this memorandum, is taken from a map by Ogden Tweto who examined the Hummer mine in 1942; much of the following discussion is based on data obtained from him.

The Hummer vein occupies a moderately strong, northeast trending fracture in granite, gneissic aplite, and pegmatite. The vein on the 70-foot level ranges in width from a few inches to 1-1/2 feet and consists of crushed wall rock, horn quartz, and narrow ferberite stringers. The vein has been developed by a 40-foot drift southwest of the shaft and a 110-foot drift northeast of the shaft.

The applicants report a production of about 15 tons of ore averaging 12.47% WO_3. Most of this ore was mined from the shaft while it was being sunk, although some of it came from 2 smallstopes on the 70-foot level northeast of the shaft. Tweto reports that the ore in the

shaft was of excellent grade and good width.

Exploration in the Hoosier mine, 250 feet south of the Hummer shaft, has shown the upper contact of a large schist body to lie immediately below the 225-foot level and to dip northerly. Thus the proposed exploration on the Hummer vein should be in granite and dike rocks favorable for deposition of ore.

The cost of the proposed exploration on the Hummer vein appears high but any reduction in the amount of work proposed by the applicants would of necessity reduce the amount of drifting and thus lessen the exploratory value of the program.

Little is known regarding the ore potential of the Hummer vein. Limited exploration in the Hummer mine has proven that ore has been deposited in small high grade ore bodies, and larger ore shoots may well be present along the structure.

Although the ratio of potential ore to cost of exploration does not favor a large repayment of the Government's share of the cost, limited exploration of the Hummer vein appears warranted and approval of the applicant's request for additional work and funds is recommended.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Date Rec'd
JUL 21 1954
BUREAU OF MINES
Denver, Colorado

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
July 20, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region IV

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

Subject: DMEA 3173, contract Idm-E657 (Tungsten), Johnson Brothers and Prime (Hoosier mine), Boulder County, Colorado

Enclosed are the original and seven copies of a memorandum report by R. L. Bolmer recommending an amendment to the subject contract to allow a 250-foot crosscut on the 225-foot level of the Hoosier mine to intersect the Hummer and intermediate veins and 250 feet of drifting easterly on the Hummer vein at a cost of $16,000.00. I approve the recommendation.

W. M. Traver

W. M. Traver

enclosures

cc 7
E657
DMEA Chron

WMT/pam

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
July 14, 1954

Memorandum

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

From: R. L. Bolmer

Subject: DMEA 3173, contract Idm-E657 (Tungsten), Johnson Brothers and Prime (Hoosier mine), Boulder County, Colorado

The operator has requested authority and additional funds under the subject contract to explore the Hummer and two intermediate veins from the 225-foot level of the Hoosier mine. The operator proposes a 250-foot crosscut to the Hummer vein and 250 feet of drift easterly on that vein. The cost of the work is estimated at $32.00 per foot or a total of $16,000.00. The operator's present lease on the Phillip, Hoosier, and Hummer claims has been amended to include also the McKenna claim, on which ground the proposed work will extend.

The parallel Hummer vein outcrops about 250 feet north of the Hoosier vein. It is developed from the surface by a 70-foot inclined shaft on the vein and about 200 feet of drifting off the bottom of the shaft. All of its existing development was performed by the operator during 1939-1940. The shaft timbers have rotted and fallen out but the workings reportedly are dry and are accessible by means of a rope. The workings were mapped by the Geological Survey when accessible several years ago.

To its developed depth, the Hummer vein reportedly was a narrow but strong and continuous quartz structure occurring mostly in granite. Ferberite ore reportedly was encountered on the vein during shaft sinking. Laterally the vein contained no extensive ore shoots but it was mineralized along much of the drift length and was stoped to a small extent in at least one section. It has a very small recorded production. The low tungsten prices during its development period discouraged more extensive work on the vein.

Little is known about the two intermediate structures occurring between the Hoosier and Hummer veins. They have not been developed either on the surface or underground. Limited surface exposures disclose them to be narrow quartz veins in granite, one of which reportedly contained patches of ferberite.

The location of the proposed work has been shown on the map accompanying the operator's request. The point selected to begin crosscutting probably is the most feasible. Beginning the crosscut at the westernmost end

of the Hoosier 225-foot level might shorten its distance a few feet. This eastern section of the level, however, has been underhanded and would require considerable rehabilitation. The amount of drifting requested on the Hummer vein appears reasonable; probably 200 feet would be sufficient and the completion of the final 100 feet of drift might be made contingent on the appearance of the vein up to that point.

The proposed work will explore the Hummer vein some 225 feet below the surface and some 150 feet below its existing development. At this depth, the parallel Hoosier vein was mostly in granite, aplite, and pegmatite, all favorable host rocks for ore deposition. The heavy schist encountered on the Hoosier 300-foot level appears to be dipping flatly towards the north and it is reasonable to assume that the proposed drift on the Hummer will be in the more favorable crystalline rocks above the schist.

At the present time, the operator essentially has completed authorized exploration of the Hoosier vein on the new 300-foot level. While the vein at this depth was barren and unpromising for most of the distance, the final few feet of the east drift did pass out of schist into pegmatite and aplite. In this new formation, the vein immediately widened and contained a few inches of good grade ferberite. The extent of this recent ore occurrence has yet to be determined. The authorized 225-foot level drifting on the Phillip vein will be started shortly. The operator has been very cooperative and is performing the project work expertly and in the manner authorized.

From an engineering point of view, the work proposed by the operator is considered feasible. While exploration of the Hummer vein does not appear as promising as does that work presently authorized for the Hoosier and Phillip veins, it nevertheless is considered pure exploration of better than average merit. Tungsten ore occurrences in this district are very erratic and it therefore is very difficult to determine whether the amount of work proposed and the expense involved is reasonable, high, or low in relation to the size and value of the target sought.

The proposed work will explore at greater depth a strong enough mineralized vein occurring within favorable host rocks and in a productive area of the district. The present limited development of the vein is insufficient to prove or disprove the existence of economic ore shoots at greater depth. The proposed work appears to meet the necessary requirements for Government exploration assistance and, therefore, is recommended. The unit costs estimated by the operator for the proposed drifting and crosscutting are the same as those agreed upon for drifting in the presently approved project, and are acceptable.

R. L. Bolmer
Mining Engineer

cc 7
E657, DMEA Chron.
RLB/pam

MF-203
(Revised July 1, 1953)

OWNER'S CONSENT TO LIEN

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

Hummer and McKenna Lode Mining Claims, Survey Lot No. 18340,
Grand Island Mining District, Boulder County, Colorado.

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

2/ Ralph L. Johnson, Roy W. Johnson and George A. Prime

hereinafter called the "Operator"; and

WHEREAS, under the provisions of said contract the Government is entitled to a percentage royalty on production (as set forth on the reverse side hereof) and to other rights and equities which do or may conflict with or be adverse to the rights of the undersigned:

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

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

2. To secure the payment to the Government of the percentage royalty on production3/ provided for under the terms of said exploration project contract, or any amendment thereof, there is hereby granted to the Government a lien upon the land above referred to and upon any production of minerals therefrom, until said royalty is fully paid or ten years have elapsed from the date of the contract, whichever occurs first.

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

4. Changes and added provisions

Dated this 29th day of June, 1954.

HETZER MINES, INC. [Seal]

BY: Elmer Hetzer, President [Seal]

ATTEST: Dudley J. Hutchinson Secretary [Seal]

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

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

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

Repayment by Operator.--a. Certification.--If at any time the Government considers that a discovery or development from which production may be made has resulted from the exploration work, the Government, at any time not later than six months after the Operator has rendered the final report and final account, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development.

b. Percentage royalty.--The Operator, or his successor in interest, shall pay to the Government a royalty on all minerals mined or produced from the land described in Article 2,--(1) regardless of any certification of discovery or development, from the date of the contract until the lapse of the time within which the Government may make such certification of discovery or development, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first, unless the Government waives its right to a royalty; or (2) if the Government makes a certification of discovery or development, for a period of ten years (or other period fixed by the contract) from the date of the contract, or until the total net amount contributed by the Government, without interest, is fully repaid, whichever occurs first. Said royalty shall be a percentage of the net smelter returns, the net concentrator returns, or other net amounts realized from the sale or other disposition of any such production (including any bonuses), in whatever form disposed of, including ore, concentrates, or metal, as follows:

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

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

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

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

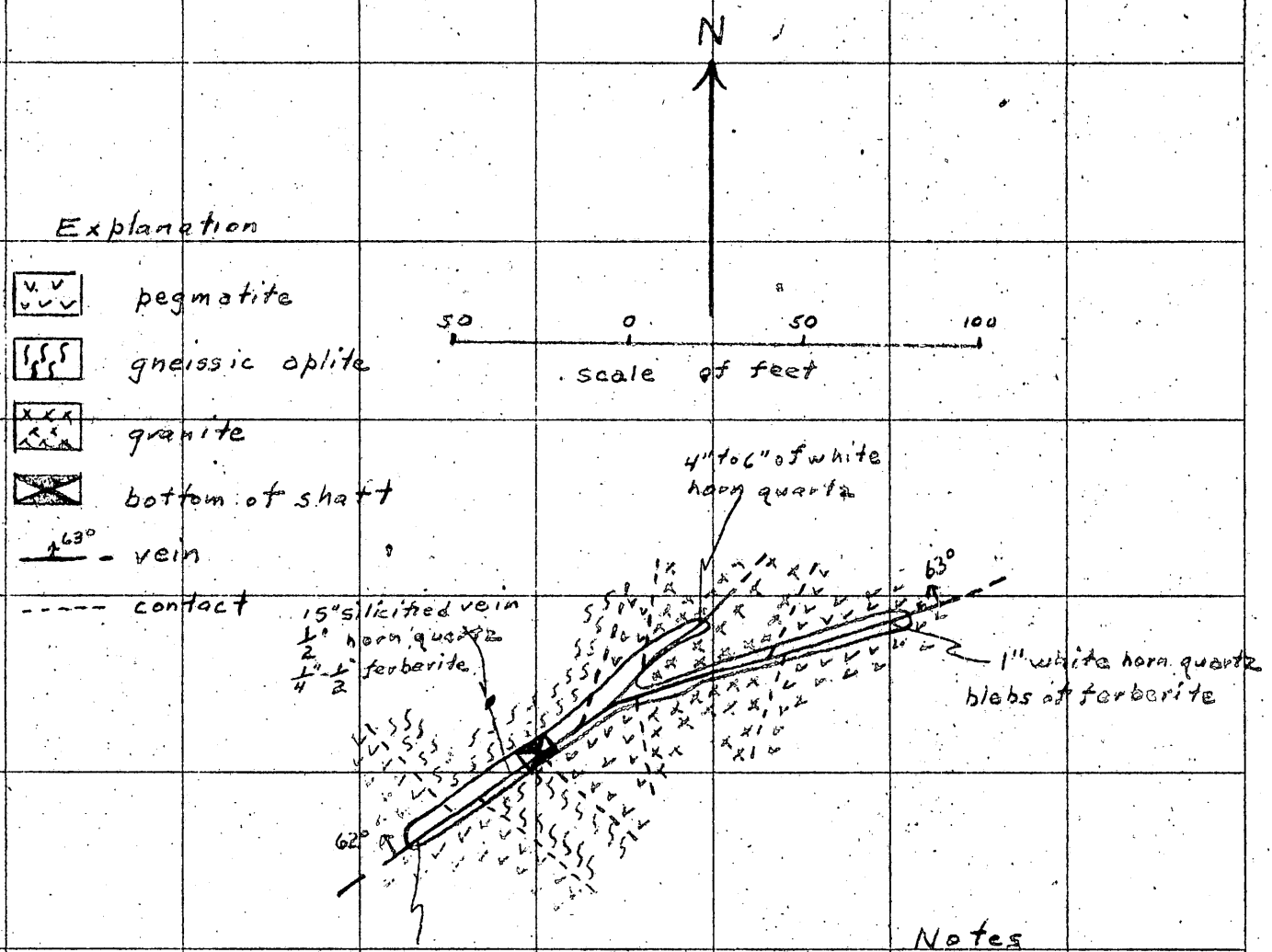
d. Lien for Payment.--To secure the payment of its percentage royalty, the Government shall have and is hereby granted a lien upon the land described in Article 2 and upon any production of minerals therefrom, until the royalty claim is extinguished by lapse of time or is fully paid.

e. Notice to Purchasers.--The Operator shall notify any purchaser of the production of the Government's royalty interest, and shall authorize and direct the purchaser to pay the royalty directly to the Government and to furnish the Government with copies of the settlement sheets; but failure or refusal by the purchaser to comply shall not relieve the Operator of liability to pay any royalty falling due.

f. No Obligation to Produce.--This article is not to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any mining or production operations.

Department of the Interior
U.S. Geological Survey

DMEA Docket 3173
Contract Idm-E 657



Notes

1) From map by Ogden Tweto 10-8-42
2) Shaft inclined 74° NW
3) Level is 63' vertically below surface

Figure 1

Geologic Plan Map of 70-foot Level
Hummer Mine, Boulder County, Colo.

E.N. Harshman July 1954

K·E ALBANENE 196M TRACING PAPER 374

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

224 New Customhouse
Denver 2, Colorado

July 20, 1954

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 3173 (Tungsten), Contract Idm-E657, Johnson Brothers & Prime, Hoosier Mine, Boulder County, Colorado

Enclosed are the original and two copies of Amendment No. 1 to Contract Idm-E657 which has been executed to authorize a modification of the description of work to be performed under the contract. Also enclosed are three sets of data relevant to the modification of work description.

Copies of the amendment have been given to the operator, the Fiscal Officer, Region IV, and a copy has been retained for our files.

W. H. King

Encls.

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

224 New Customhouse
Denver 2, Colorado

June 14, 1954

Mr. Ralph Johnson
Attorney in Fact
Johnson Brothers and Prime
500 Grand Avenue
Louisville, Colorado

Re: Docket DMEA 3173 (Tungsten)
Contract Idm-E657

Dear Mr. Johnson:

Consistent with stipulations contained in Exhibit "A", caption "Description of the Work", item 4, you are hereby authorized to drive a raise not to exceed 50 feet in height from a position in the 300 level drift within the distance between 35 to 50 feet west of the shaft.

Nothing in this work authority shall be construed to increase the estimated total cost of the project, the amount of the Government's contribution, or any item of allowable cost which is expressly designated "allowable maximum".

Very truly yours,

W H King
W. H. King

for E. M. Hackman
A. H. Koschmann

JWT:jp

cc Contract
Amdt.
Chron
COMittendorf (3)
AHKoschmann
WMTraver
JWTownsend

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
June 10, 1954

Memorandum

To: Executive Officer, DMEA Field Team, Region IV

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

Subject: DMEA 3173, Contract Idm-E657 (Tungsten), Johnson Brothers & Prime (Hoosier mine), Boulder County, Colo.--Progress report for May 1954

Enclosed are the original and four copies of the fourth progress report, the one for April 1954, on the above contract--forms MF-104 and MF-104A, with narrative, progress map--and the original and six copies of R. L. Bolmer's memorandum covering his inspection of drifting progress and checking the reporting forms. The contract is unit cost on short form MF-200(A) and documentation is not required.

Bolmer's inspection showed the new 300-foot level drifts from the Hoosier shaft had been extended 55-1/2 feet east and 70-1/2 feet west from the shaft, a total of 126 feet as reported in the narrative and entered on the MF-104A forms. Accumulative totals are now 75 feet of shaft sinking and 149 feet of drifting. Entries and extensions are correct on the reporting forms and work performance was in accordance with the terms of the contract. Bolmer describes conditions encountered adequately in his memorandum, as does the contractor in his narrative. Conditions westerly are disappointing.

It is recommended, with the concurrence of both the Mineral Resources Branch inspecting engineer and the Geological Survey geologist, that the Region IV Field Team notify the operator to proceed to start the raising authorized by the contract at the point in the west drift designated.

Payment is approved and certified on the MF-104 forms of $3,024.00, or 75 percent of the total $4,032.00 claimed by the contractor.

(signed) W. M. Traver

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
June 9, 1954

Memorandum

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

From: R. L. Bolmer

Subject: DMEA 3173, Contract Idm-E657 (Tungsten), Johnson Brothers & Prime (Hoosier mine), Boulder County, Colo.--Progress report for May 1954

Progress reported under the subject contract during May--a total of 126 feet of drifting along the new 300-foot level off the Hoosier shaft--was confirmed during an inspection of the property June 2, 1954. The inspection was made with E. N. Harshman of the Geological Survey and in the company of Ralph and Roy Johnson.

On the date of inspection, the new 300-foot level drifts had been extended on the Hoosier vein to distances 64-1/2 feet easterly and 84-1/2 feet westerly from the Hoosier shaft, actual advances during the reporting period of 55-1/2 and 70-1/2 feet, respectively.

The vein, both easterly and westerly along the level, has continued as a narrow and barren structure in schist. Its appearance near the breast of the east drift improves somewhat and there is some indication that the vein in this direction would enter granite and pegmatite and would widen. The vein westerly along the level, while still a traceable structure in the schist, is tighter, more broken up, and less promising in appearance. It is doubtful that the structure will improve within the remaining 15 feet of drift authorized in this direction.

If ore is not encountered along the new 300 foot level drifts, the operator is authorized under the contract to raise to the bottom of the ore shoots at locations approved in writing by the DMEA Region IV Field Team. The operator believes that one favorable location for raising from the new level is at a distance of from 35 to 50 feet west of the shaft. Both the inspecting engineer and geologist concur with the operator that such a location is favorable and recommend that the Field Team so notify the operator.

The $4,032.00 total cost reported by the operator for this period on form MF-104--equivalent to the verified 126 feet of drifting at the agreed unit cost of $32.00 per foot--is approved. Payment of 75 percent of the total reported cost, or $3,024.00, is recommended.

(signed) R. L. Bolmer
Mining Engineer

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

Department of the Interior
Defense Minerals Administration
RECEIVED
MAR 25 1954

224 New Customhouse
Denver 2, Colorado

March 23, 1954

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 3173 (Tungsten), Contract Idm-E657, Johnson Brothers & Prime, Hoosier Mine, Boulder County, Colorado

Enclosed for your records are the original and two copies of a Power of Attorney executed by Roy Johnson and George Prime in favor of Ralph Johnson to act as agent of the subject partnership in conducting affairs under Contract Idm-E657.

A copy of the Power of Attorney has been given to the Fiscal Officer, Region IV, and a copy retained for our files.

for John F. Shaw
W. H. King

Enclosures

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 25 1954

POWER OF ATTORNEY

We, the undersigned, members of a partnership, consisting of Ralph Johnson, Roy Johnson, and George Prime, do hereby appoint Ralph Johnson to act as agent of said partnership in all matters connected with the United States Department of the Interior, Defense Minerals Exploration Administration, Exploration Project Contract, Docket No. DMEA 3173, Contract Idm-E657, between Johnson Brothers and Prime and the United States of America, and in behalf of said partnership to submit to the Government all necessary reports and information required under said contract; and said agent is authorized to receive individually and to receipt for any monies that are now or may hereafter become due to said partnership by reason of said Contract Idm-E657.

Dated: 3:18:54

Signed: Roy Johnson
Roy Johnson

George Prime
George Prime

400

DOCKET
SURNAME

Hopkins
Martin
Selfridge
Johnson
Whitaker

MAR 8 1954

Mr. V. E. King, Executive Officer
DMEA Field Team, Region IV
224 Post Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA 3173 - Tungsten
Johnson Brothers and Prime
Hoosier Mine
Boulder County, Colorado
Contract No. Ida-8957

Dear Mr. King:

The above referenced contract has been reviewed by the Iron and Ferro-Alloys Division.

During this review it was noted that the owner of the property, Betsey Mines, Inc., has leased three claims - Phillip, Hoosier and Hummer - to the applicant but the assaying engineer recommended that only the Hoosier and the Phillip be included under Article 2 (Operator's Property Rights) of the contract, because the work will be performed on and will benefit only these claims. This will probably hold true if the Hoosier vein does not flatten below the 225 foot level. However, there is a possibility that the vein may flatten to such an extent that drifts on the proposed 300 foot level will be wholly or in part within the boundaries of the Hummer claim.

As the contract and the Owner's Consent to Lien have been executed covering only two claims, nothing can be done about the Hummer claim at this time; however, on the first occasion for amending the contract for any reason, a provision of the amendment should be the inclusion of the Hummer claim in Article 2 of the contract and requirement of an Owner's Consent to Lien for that claim.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (JHB)

APPROVED:

J. H. Hedges (JHB)
Member, Bureau of Mines

Philip W. Guild (JHB)
Member, Geological Survey

JHopkins:roc 3-4-54
cc: Docket
Code 400
Adm. Reading File
Oper. Comm.
FT. Reg. IV
R. W. Geehan, USBM
T. P. Thayer, USGS

400

DOCKET
SURNAME

Hopkins
Martin
Guild

MAR 8 1954

MEMORANDUM

To: Administrator

From: Iron and Ferro-Alloys Division

Subject: Review of Docket No. DMEA 3173 - Tungsten
Johnson Brothers and Prime
Hoosier Mine
Boulder County, Colorado
Contract No. Idm-R657

The subject contract was prepared and executed by Mr. W. H. King, Executive Officer, DMEA Field Team, Region IV.

The applicants requested exploration assistance in the amount of $24,376.00 to explore for tungsten in the Hoosier Mine, Boulder County, Colorado. The work was to consist of drifting, crosscutting and raising on the Phillip Vein.

The examining engineer recommended a modification of the above proposal including exploration of the Hoosier vein at a total estimated cost of $22,000.00.

The Hoosier vein has been worked to a depth of 225 feet through an inclined shaft on the vein. The Phillip vein similarly has been worked down to the 150 ft. level of the Hoosier shaft.

Between 1907 and 1953 the total output of the three claims that comprise the Hoosier mining property was 1554 tons with an assay value of 8.75 percent WO_3 or a total of 13,594 units WO_3. Approximately 80 percent of this production came from the Hoosier vein and 20 percent from the Phillip vein and a short footwall split. Both are well defined fissure veins occuring in schist, pegmatite and aplite. The ore mineral is ferberite associated with quartz. The mineralized portions of the veins range from 8 inches to 16 inches in width in the upper workings but narrow slightly in depth. Mineralization appears to favor aplite as a host rock.

R.C. Sick
3-8-54

The proposal recommended by the Field Team involves sinking the Hoosier shaft 75 feet; exploring the Hoosier vein with not more than 250 feet of drifting on a new 300 foot level; and drifting a maximum of 150 feet on the Phillip vein from an existing crosscut that has been driven from the 225-level of the Hoosier vein.

The project work will then explore the downward extension of oreshoots found and successfully worked on the upper levels of the two veins.

The Field Team reports that ore exists in the floors of levels under the worked out shoots and some underhand stopping was done but apparently no ore was sampled during the examination.

The recorded owner of the property, Hetzer Mines, Inc., has leased three claims - Phillip, Hoosier and Hummer - to the applicant, but the examining engineer recommended that only the Hoosier and the Phillip claims be included under Article 2 (Operator's Property Rights) of the contract, because the work will be performed on and will benefit only these claims. This will probably hold true if the Hoosier vein does not flatten considerably below the 225 foot level. However there is a possibility that the vein may flatten to such an extent that drifts on the 300 foot level will be wholly or in part within the boundaries of the Hummer claim.

As the contract and the Owner's Consent to Lien have been executed covering only two claims, nothing can be done about the Hummer claim at this time; however, on the first occasion for amending the contract for any reason, a provision of the Amendment should be the inclusion of the Hummer claim in Article 2 of the contract and requirement of an Owner's Consent to Lien for that claim.

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

JHopkins/foc
3-4-54
cc to: Docket ✓
Code 400
Adm. Read. File
Oper. Comm.
Mr. Hopkins

400

Meeting
Selfridge
Johnson
Wittendorf

FEB 17 1954

Mr. W. H. King, Executive Officer
DMEA Field Team, Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA 3173 (Tungsten)
Johnson Brothers and Prime
Hoosier Mine
Boulder County, Colorado
Contract No. Idm-E657

Dear Mr. King:

Enclosed for your information and guidance is a copy of a memorandum of February 11, 1954, received from the Commodity Division of the U. S. Geological Survey with reference to the subject contract.

In our preliminary review of the contract, we note that the graphic scale on the map attached to the contract is approximately one inch equals 66-2/3 feet, although the map itself--or at least the new work indicated thereon--appears to be on a scale of one inch equals 50 feet.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (JHB)

Enclosure

APPROVED:

J. H. Hedges

Member, Bureau of Mines (JHB)

Philip W. Guild

Member, Geological Survey (JHB)

CC: DOCKET
FT, REG. IV
OPER. COMM.
CODE 400
ADM. READ. FILE
T. P. THAYER, USGS
R. W. GEEHAN, USBM

WSMartin/ls
2/16/54

R.C.S.
2-17-54

IN REPLY REFER TO:

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

Defense Minerals Administration
RECEIVED
FEB 16 1954

February 11, 1954

Memorandum

To: W.S. Martin, DMEA

From: P.W. Guild, USGS

Subject: Review of Field Team reports on DMEA-3173 (Tungsten), Johnson Brothers and Prime, Hoosier Mine, Boulder County, Colorado

E.N. Harshman, USGS, and R.L. Bolmer, B.M., describe the geology, development and history of the subject property, which has produced some 12,000 units of WO_3. The applicant now proposes, following recommendations of the Field Team, to sink the Hoosier shaft 75 feet and explore the Hoosier vein with not more than 250 feet of drifting on a new 300 foot level, and to drift a maximum of 150 feet on the Phillips vein from an existing crosscut from the 225-level of the Hoosier vein. If the ore shoots are not encountered in the new workings, a total if 100 feet of raises may be driven to find them, but prior approval must be granted by the DMEA representative. This work is estimated to cost $22,000, of which the Government participation at 75 percent will amount to $16,500.00

Both the Geological Survey and Bureau of Mines members recommend granting the loan. The mine has a good record, and similar work elsewhere in the vicinity has been successful. The only question I might raise would be that the proposed work seems more like development work to block out measured reserves than like true exploration, inasmuch as ore is said to be present in the lowermost workings and may be presumed to extend downward for some distance. The work will probably contribute to the production of several thousand units of WO_3, however, at a relatively modest cost.

I concur in the recommendation.

Philip W. Guild

P.W. Guild

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

Defense Minerals Exploration Administration
RECEIVED
FEB 8 1954

224 New Customhouse
Denver 2, Colorado

February 5, 1954

REGISTERED

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 3173 (Tungsten), Contract Idm-E657, Johnson Brothers & Prime, Boulder County, Colorado

Enclosed are the original and two copies of Contract Idm-E657. Copies of this contract have been given to the operator, the Fiscal Officer, Region IV, and a copy has been retained for our files.

W. H. King

Enclosures

RECEIVED
FEB 26 1954
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

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

224 New Customhouse
Denver 2, Colorado

February 5, 1954

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 3173 (Tungsten), Johnson Brothers & Prime, Hoosier Mine, Boulder County, Colorado

Enclosed are four copies of a Report of Examination under the subject docket on which Contract Idm-E657 has been prepared and is in force.

W H King
W. H. King

Enclosures

071- Site exam Rpt.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

224 New Customhouse
Denver 2, Colorado

January 8, 1954.

Memorandum

To: Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Report of Examination - DMEA Docket 3173 (Tungsten), Johnson Brothers & Prime, Hoosier Mine, Boulder County, Colorado.

Enclosed are nine copies of the engineering report of examination on the subject property.

The applicant requested $24,376.00 to explore the Phillip vein by drifting, crosscutting and raising.

The examining engineer recommends a modification of this work and to include exploration of the Hoosier vein at a total estimated cost of $22,000.00. The applicant approves the recommended work.

We concur in the examining engineer's recommendation.

W. H. King

W. H. King

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
December 30, 1953

Memorandum

To: Executive Officer, Field Team, Region IV

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

Subject: DMEA 3173 (Tungsten), Johnson Brothers and Prime (Hoosier mine), Boulder County, Colorado

Transmitted herewith are the original and eight copies of the "Summary, Conclusions, and Recommendations," by E. N. Harshman and R. L. Bolmer, and Bolmer's engineering report on the above docket.

The applicant originally proposed exploration of the Phillip and an unnamed footwall vein by 760 feet of drifting, crosscutting, and raising at an estimated cost of $24,376.00. After consultation with the examining team, the proposal was revised with the applicant's approval to include exploration of the Hoosier vein on a new 300-foot level and of the Phillip vein from the 225-foot level of the Hoosier mine at an estimated cost of $22,000.00--Government participation 75 percent, or $16,500.00.

Bolmer concludes the proposed revised program is feasible, will explore the Hoosier and Phillip veins below known ore shoots that appear to continue with depth, has possibilities of developing sufficient reserves to warrant Government participation, and that the applicants are experienced operators in the Boulder tungsten district and competent to carry through the work to a successful conclusion. He recommends a short-form exploration project contract authorizing 75 feet of sinking the Hoosier shaft and 500 feet of drifting and raising, as outlined in the report, at unit costs of $80.00 per foot and $32.00 per foot, respectively.

I concur with his conclusions and recommendations.

The brochure furnished with the Region IV Field Team's instructions by memorandum of September 16, 1953, to prepare a suitable report is also transmitted herewith and includes a copy of the applicant's lease from Hetzer Mines, Inc., and a copy of their revised estimate of shaft sinking furnished at a later date.

W. M. Traver

W. M. Traver

enclosures

cc 8
DMEA 3173
DMEA Chron.

WMT/pam

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Defense Minerals Exploration Administration
Denver Federal Center
Denver 2, Colorado

December 15, 1953

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 3173, Hoosier Tungsten Mine, Boulder County, Colorado

Attached are 9 copies of the geologic report by E. N. Harshman covering DMEA Docket 3173, Hoosier Tungsten Mine, Boulder County, Colorado.

The applicant proposes to explore the Phillip vein on the 225 foot level of the Hoosier mine and a footwall split of the Phillip vein on the 150-foot level. The exploration program was discussed by E. N. Harshman and R. L. Bolmer, U. S. Bureau of Mines, with the applicant, and exploration of the Hoosier vein at greater depths was suggested, which the applicant approved and put in writing in a subsequent letter received November 16, 1953.

Mr. Harshman recommends a modified exploration program to cost approximately $22,000.

I concur in this recommendation.

A. H. Koschmann

A. H. Koschmann
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 3173

Johnson Brothers and Prime

Hoosier mine

Boulder County, Colorado

Tungsten

E. N. Harshman
Geological Survey

R. L. Bolmer
Bureau of Mines

December 16,1953

DMEA 3173

JOHNSON BROTHERS AND PRIME
HOOSIER MINE
BOULDER COUNTY, COLORADO

Summary, Conclusions, and Recommendations

By E. N. Harshman
Geologist
Geological Survey

R. L. Bolmer
Mining Engineer
Bureau of Mines

DMEA 3173

JOHNSON BROTHERS AND PRIME
HOOSIER MINE
BOULDER COUNTY, COLORADO

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

By E. N. Harshman and R. L. Bolmer

Johnson Brothers and Prime, a partnership currently operating the Hoosier tungsten mine, Boulder County, Colo., made application for Government assistance (DMEA 3173) to explore both the Phillip and an unnamed footwall vein in that mine by a total of 760 feet of underground exploration at an estimated cost of $24,376.00.

The productive Hoosier and Phillip veins have been developed to depths of 225 feet below the surface in the Hoosier mine. Both are well defined fissure veins occurring in schist, pegmatite, and aplite. The ore mineral is ferberite ($FeWO_4$). A production in excess of 13,000 units of tungsten trioxide has been reported for both veins since 1907.

Fairly continuous ore shoots have been mined along the Hoosier vein down to the 225-foot or bottom level drift off the Hoosier shaft and ore is exposed along the bottom of that drift. More erratic ore occurrances were mined on the Phillip vein to depths of the Hoosier 150-foot level. Although ore is exposed along the bottom of a 150-foot level drift on the Phillip vein, recent development of the vein west of shaft on the Hoosier 225-foot level has disproved the extension of ore with depth in that section. Little is known of the vein occurring in the footwall of the Phillip. It was worked to shallow depths from the surface but was not developed at lower depths from the Hoosier shaft.

Although its exploration was not proposed by the applicant, the Hoosier vein at depths below existing ore shoots was considered by the

examining team as the most favorable exploration objective in the mine. Exploration of the Phillip vein at depths below known ore shoots, but only in the area east of the Hoosier shaft, also was considered favorably. It was concluded that the remainder of the applicant's proposal was not justified. The applicant concurred that such exploration of the Hoosier and Phillip veins was more promising and agreed to such a revision of its original proposal.

The revised program, exploration of the Hoosier vein on a new 300-foot level and of the Phillip vein easterly on the 225-foot level, was recommended by the examining team. Such a program will explore both veins below known ore shoots that appear to continue with depth. The recommended program, involving 75 feet of shaft sinking, 400 feet of drifting, and 100 feet of raising, was estimated to cost $22,000.00--Government participation 75 percent, or $16,500.00.

HOOSIER TUNGSTEN MINE

JOHNSON BROTHERS AND PRIME

BOULDER COUNTY, COLORADO

DMEA DOCKET 3173

Geologic Report

By E. N. Harshman
U. S. Geological Survey

HOOSIER TUNGSTEN MINE
BOULDER COUNTY, COLORADO

INTRODUCTION

Ralph Johnson, 500 Grant Avenue, Louisville, Colorado, Roy Johnson and George Prime, both of Nederland, Colorado, have applied for Government assistance, DMEA Docket 3173, to explore for tungsten ore in the Hoosier mine, located about 1.2 miles northeast of Nederland, Boulder County, Colorado. The applicants have under lease the Hoosier, Hummer, and Phillip Lode Mining Claims, Survey Lot No. 18340, Grand Island Mining District from Hetzer Mines, Incorporated.

The applicants propose to explore the Phillip vein on the 225-foot level of the Hoosier mine by a 220-foot drift and 2 fifty-foot raises and to explore a footwall split from the Phillip vein, on the 150-foot level, by a 50-foot crosscut, a 290-foot drift, and 2 fifty-foot raises.

The mine was examined on October 20, 1953, in company with R. L. Bolmer, U. S. Bureau of Mines. The exploration program requested by the applicants was discussed with the Johnson brothers and the examining team suggested consideration of exploration at greater depths on the Hoosier vein. In an undated letter received November 16, 1953, the applicants amended their original request to include exploration on the Hoosier vein below the 225-foot level.

Exploration on the Hoosier and Phillip veins, as subsequently outlined, appears warranted and is recommended.

GEOLOGY

Figure 2 is a plan map of the Hoosier and Phillip veins, as

developed in the Hoosier mine. The Hoosier vein is in aplite and pegmatite. It is 4 to 18 inches wide, and consists of silicified, brecciated, and sheeted country rock containing ferberite and horn quartz. The average strike is N. 75° E. and the dip ranges from 60° to 85° N. Ore has been mined on the vein from the lowest (225-foot) level to the surface, and is present in the floor of the lowest level.

The principal ore shoot is over 100 feet long at the surface and on the 65-foot level. It lengthens considerably on the 150-foot level but contains several sections of low grade or barren vein material. On the 225-foot level the vein has been stoped for a length of over 200 feet. Two short barren sections were encountered, one near the shaft and one 75 feet east of the shaft. Near the western boundary of the Hoosier claim on the 150 and 225-foot levels, the vein splits into 2 narrow stringers containing some ferberite (figure 2).

On the 150-foot level of the Hoosier mine the Phillip vein consists of a sheeted fracture zone 6 inches to 3 feet wide in schist, aplite, and pegmatite. Its position and altitude appear to have been governed to a considerable extent by the competence of the wall rocks. The general strike of the vein is east and the dip steeply north. Abrupt changes in dip and strike are common. Several stopes between the 150-foot level and the surface are reported to have contained narrow but high-grade ferberite ore, particularly where one or both walls were aplite or pegmatite.

The Phillip vein has been explored by a short drift on the 225-foot level of the Hoosier mine (figure 1). At this horizon the vein, a strong fracture in schist, consists of 6 inches to 2 feet of heavy gouge but contains little or no ferberite.

The footwall split of the Phillip vein is not exposed in the

accessible Hoosier mine workings. Some ore is reported to have been mined at the intersection of the footwall split and the Phillip vein but that area of the mine is now caved.

PRODUCTION AND ORE RESERVES

Production from the Hoosier mine between 1907 and 1942 is reported as 5114 units of WO_3. It is estimated that at least 7,000 units have been produced since that time. The total production has thus been at least 12,000 units of WO_3, 20% of which may have come from the Phillip vein.

Although some ore remains to be stoped on the Hoosier vein between the 225 and 150-foot levels, no ore reserves are estimated.

CONCLUSIONS AND RECOMMENDATIONS

It is probable that exploration below the 225-foot level on the Hoosier vein will discover significant ferberite ore similar in grade and character to that already mined above the 225-foot level. Exploration on the Phillip vein west of the present 225-foot level workings does not appear advisable for it is probable that the wall rocks will be schist and that little or no tungsten ore will be found. Exploration on the 225-foot level eastward on the Phillip vein may encounter aplite in which case the possibilities of discovering ore are good. Exploration on the footwall split of the Phillip vein, as requested by the applicant, may develop some ore but this project can be completed by the applicant without Government assistance.

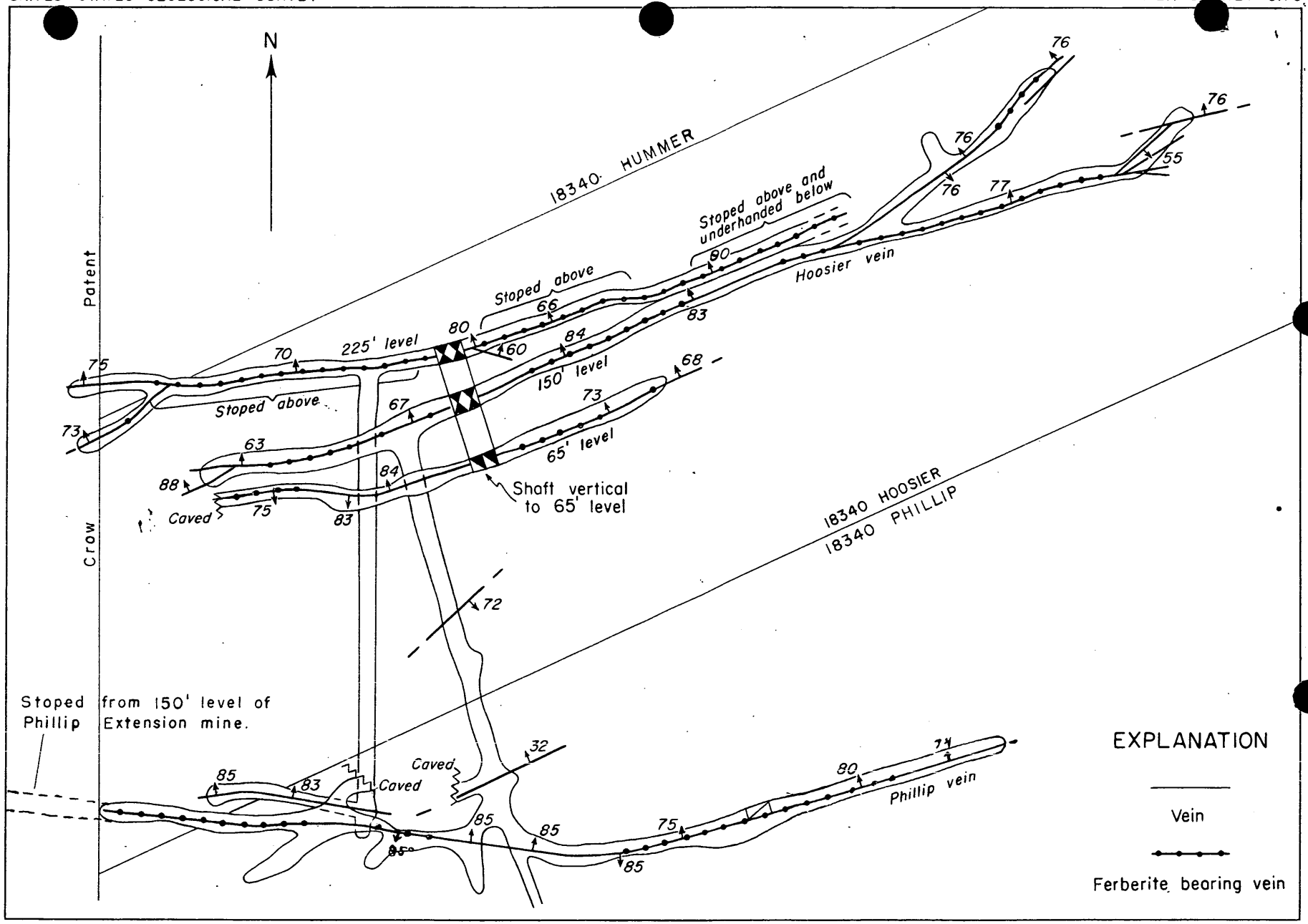
The following exploration program, estimated by the U. S. Bureau of Mines to cost $22,000 (Government participation $16,500) is recommended:

1. Sink the Hoosier shaft an additional 75 feet to the 300-foot level.

2. Drift on the Hoosier vein to the east and west limits of the ore shoot but not to exceed 100 feet west from the shaft or 150 feet east from the shaft.

3. Drift on the Phillip vein to a point 150 feet east of the 225-foot level crosscut.

4. If ore is not encountered in the 300-foot level drift (Hoosier vein) raise at two points on the vein to the bottom of the ore shoot but not to exceed 50 feet in either raise. Approval for raising should be obtained from a representative of DMEA before the start of this tentative phase of the program.



In part from map by Ogden Tweto, 1941 and 1952

E. N. Harshman, October 1953

FIGURE 2.- GEOLOGIC PLAN OF HOOSIER MINE, BOULDER COUNTY, COLORADO

50 0 50 100 Feet

DMEA 3173

JOHNSON BROTHERS AND PRIME
HOOSIER MINE
BOULDER COUNTY, COLORADO

Engineering Report

By R. L. Bolmer
Mining Engineer
Bureau of Mines

DMEA 3173

JOHNSON BROTHERS AND PRIME
HOOSIER MINE
BOULDER COUNTY, COLORADO

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*See figure with geologic report.

DMEA 3173

JOHNSON BROTHERS AND PRIME
HOOSIER MINE
BOULDER COUNTY, COLORADO

ENGINEERING REPORT

By R. L. Bolmer

INTRODUCTION

Johnson Brothers and Prime, a partnership comprised of Ralph L. Johnson, Roy W. Johnson, and George A. Prime, made application for Government assistance to explore the Hoosier mine, Boulder County, Colo., for tungsten. The applicant proposed exploration of the Phillip and an unnamed footwall vein by 760 feet of drifting, crosscutting, and raising at an estimated cost of $24,376.00.

The application, assigned Docket No. DMEA 3173, was referred to the Mineral Resources Branch, Mining Division, Region IV, Bureau of Mines, for field examination. The property was examined October 2, 1953, by a Bureau of Mines engineer accompanied by Ralph and Roy Johnson. A geological examination of the property was made by a geologist of the Geological Survey on October 20, 1953. This report is compiled from data obtained during the examination and is prepared for the purpose of assisting the Defense Minerals Exploration Administration Region IV Field Team, in evaluating the applicant's request and proposal.

The productive Hoosier and Phillip veins have been developed to depths of 225 feet below the surface. Fairly continuous ore shoots have been mined along the Hoosier vein down to the 225-foot or bottom level drift off the Hoosier shaft and ore is exposed along the bottom of that drift. More erratic ore shoots were mined on the Phillip vein to

depths of the 150-foot level. Although ore is exposed along the bottom of the 150-foot level drift on the Phillip vein, recent development of this vein west of the shaft on the 225-foot level disproved the extension of ore with depth in that section. Little is known of the vein occurring in the footwall of the Phillip vein. It was worked to shallow depths from the surface but was not developed at lower depths from the Hoosier shaft.

It was concluded that only part of the proposed program was acceptable and that other more favorable exploration could be performed in the Hoosier mine. The Hoosier vein at depths below existing ore shoots was considered the most favorable exploration objective in the mine. Exploration of the Phillip vein at depths below known ore shoots, but only east of the Hoosier shaft, was acceptable. The remainder of the applicant's proposal was not considered justified. The matter was discussed with the applicant and a revised program was mutually agreed upon.

The revised program, exploration of the Hoosier vein on a new 300-foot level and of the Phillip vein on the 225-foot level east of the shaft, is recommended in this report. The work recommended will explore both veins below known ore shoots that appear to continue with depth. The recommended program is estimated to cost $22,000.00--Government participation 75 percent, or $16,500.00.

ACKNOWLEDGMENTS

The cooperation of the applicant and of Hetzer Mines, Inc., owner of the property, in providing maps, production records, and other

data relating to the property, is acknowledged. The underground workings of the Hoosier mine, as shown on illustrations with this report, are after an original geologic map prepared by O. Tweto and brought up to date by E. N. Harshman of the Geological Survey.

The applicant, in 1951, requested Government aid to perform certain exploration in the Hoosier mine. The application, Docket No. DMEA 1885, was approved; later the applicant decided to perform the work without Government assistance and withdrew the application. Certain data included in the engineering and geological reports on Docket No. DMEA 1885 have been incorporated in this report.

LOCATION AND PHYSICAL FEATURES

The adjoining Hoosier, Hummer, and Phillip lode mining claims, Grand Island Mining District, are in the W1/2 sec. 7, T. 1 S., R. 72 W., sixth principal meridian, Boulder County, Colo. The property, including the Hoosier mine and mill, is 2 miles northeast of Nederland, Colo., via State Highway 160 and a county road (fig. 1). The roads are maintained and the mine is accessible throughout the year. The altitude of the mine is about 8,400 feet. Climate in the district is moderate and mining operations generally are carried out all year.

Operating materials and supplies are obtainable in Boulder, Colo., some 17 miles to the east, or in Denver, a distance of about 52 miles. Water pumped from the Hoosier shaft has been sufficient for mining and milling operations. Timber suitable for mining purposes is not available on the property but can be secured from local sawmills.

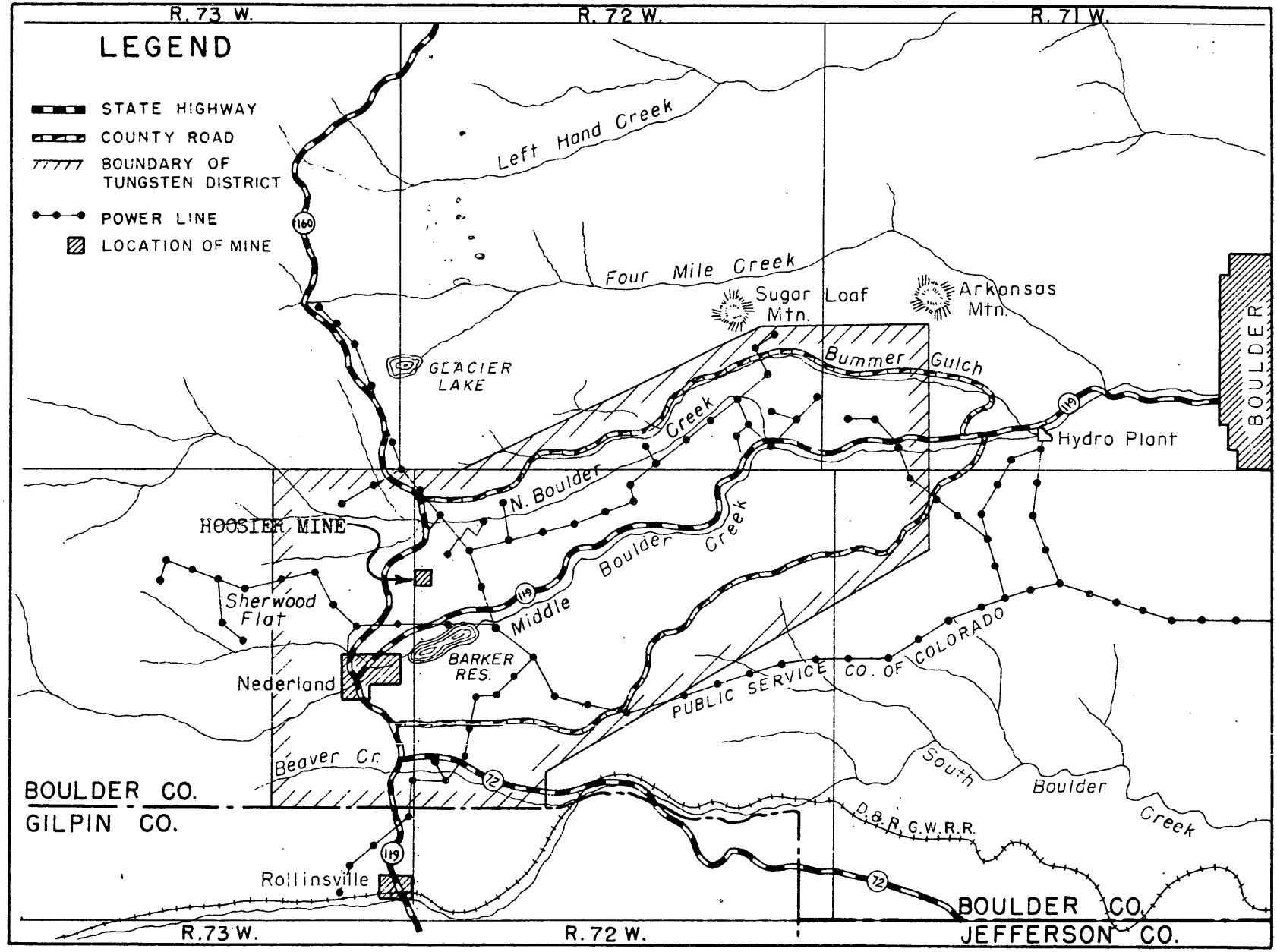

FIGURE 1. - LOCATION MAP, HOOSIER MINE, BOULDER COUNTY, COLO. (DMEA 3173)

Electric power, supplied by the Public Service Company of Colorado, is transmitted to the mine and mill. Crude ore or concentrates probably will be sold to Hetzer Mines, Inc., who operate a custom tungsten concentrating mill at Nederland. At the present time, competent mining labor is available in the district; however, housing is scarce.

OWNERSHIP AND EXTENT

The property rights of the applicant include the patented Hoosier, Hummer, and Phillip lode mining claims (U. S. Mineral Survey No. 18340). The three adjoining claims, each 1,500 feet in length and 150 feet in width, comprise an area of approximately 15.5 acres in the W1/2 sec. 7, T. 1 S., R. 72 W., sixth principal meridian, Boulder County, Colo. (fig. 3).

The recorded owner of the property, Hetzer Mines, Inc., 250 Pearl Street, Boulder, Colo., has leased the three claims to Ralph L. Johnson, Roy W. Johnson, and George A. Prime, who, as the partnership of Johnson Brothers and Prime, are the applicant under Docket No. DMEA 3173. The lease, dated September 1, 1953, is for a period of 3 years and provides for a royalty payment to the lessor of 16 percent of the net proceeds from the sale of any ores produced by the lessee. The lessor has the right to purchase, and the lessee agrees to sell to the lessor, all ores produced from the leased premises, provided that the schedule of prices maintained by the lessor is at least equal to the price which may be offered the lessee by any other party.

The proposed exploration will be performed on and will benefit only the Hoosier and Phillip claims. As the Hummer claim will not benefit

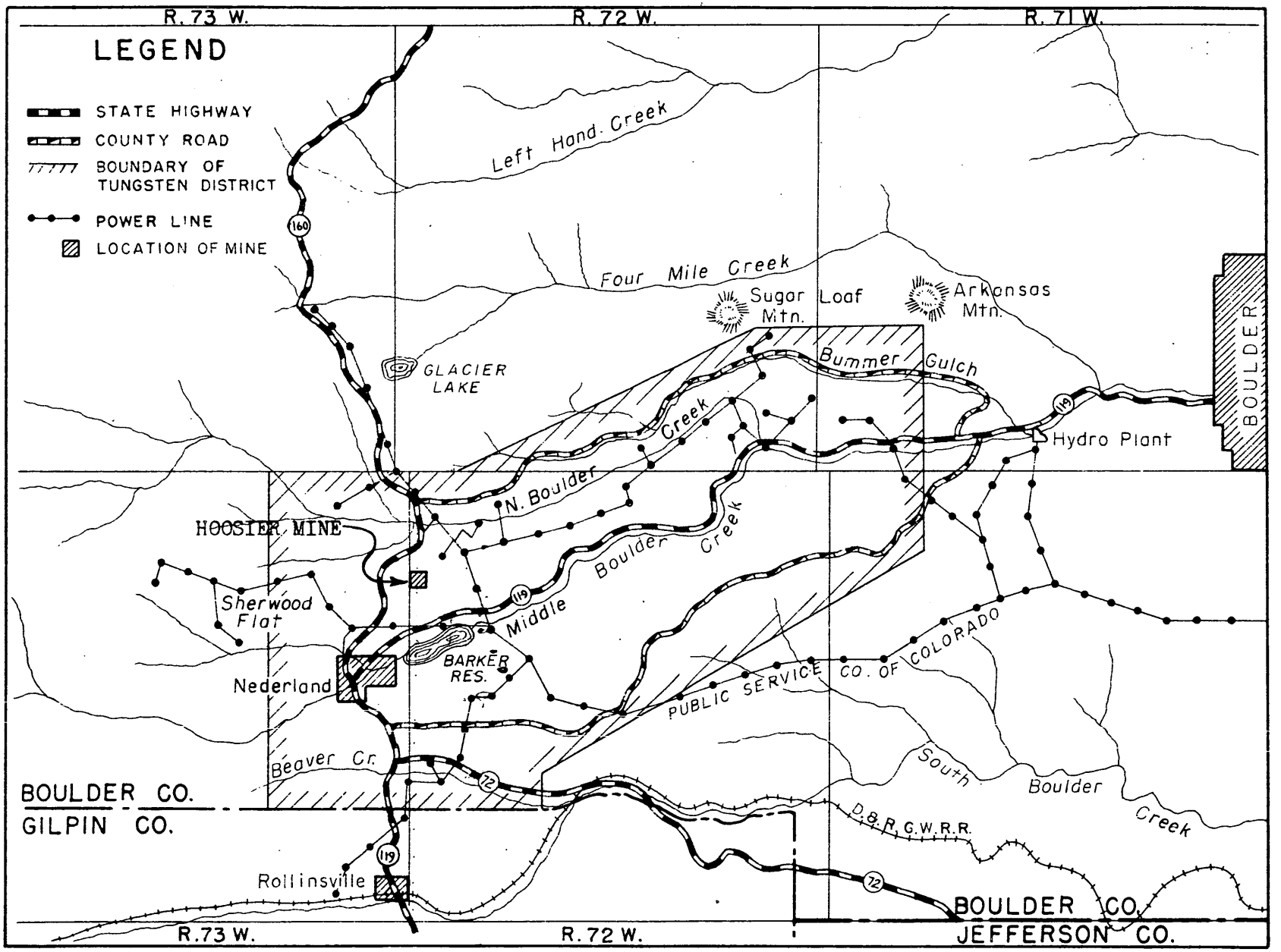

FIGURE 1. - LOCATION MAP, HOOSIER MINE, BOULDER COUNTY, COLO. (DMEA 3173)

from the program, it need not be included with the property rights of the applicant nor subordinated by the owner. It will be necessary for the owner to subordinate its rights in the Hoosier and Phillip claims to those of the Government as provided under the exploration project contract.

HISTORY AND PRODUCTION

The Hoosier vein, one of the earlier discoveries in the district, was first worked between 1901-1907 but its output is unrecorded. The mine was worked intermittently between 1907-1917 down to the 150-foot level and it reportedly produced 442 tons of ore averaging 11.57 percent tungsten trioxide. Part of this output probably came from the Phillip vein. The mine was under water from 1917 to 1943 when it was reopened and the shaft sunk from the 150- to the 225-foot level. The mine was worked intermittently until 1946 and was again under water from 1946 to 1950 when the present lessees began operations.

The three claims were included with 183 acres of surrounding mining ground (45 claims) patented September 30, 1907, by the Wolf Tongue Mining Company, a subsidiary of the Firth Sterling Steel and Carbide Corporation, and held by that company until 1950. In 1950 all the property of the Wolf Tongue Mining Company was purchased by the present owner, Hetzer Mines, Inc.

The total output of the three adjoining claims between 1907 and 1953, taken from records of both the Wolf Tongue Mining Company and the present operators, follows:

Claim	Year	Tonnage	Percent WO_3	Units WO_3
Hoosier	1953	66	5.52	364
	1952	169	7.93	1,338
	1951	15	46.61	713
	1950	3	49.59	162
	1907-1949	1,113	7.14	7,948
		1,366	7.70	10,525
Hummer	1907-1949	16	12.47	201
Phillip	1907-1949	172	16.71	2,868
		1,554	8.75	13,594

DESCRIPTION OF THE DEPOSIT

The Hoosier vein outcrops along the southwestern portion of the Hoosier claim, extending beyond the western end line of the claim onto the Crow Patent (fig. 3). It strikes northeast-southwest and dips steeply northwest in granite gneiss, aplite, and pegmatite. In most exposures it consists of from 6 to 18 inches of brecciated and silicified wall rock and veinlets of horn quartz.

The vein was developed from the surface to a depth of 245 feet by the two-compartment, inclined Hoosier shaft. Laterally it was developed by level drifts in both directions off the shaft at depths of 65, 150, and 225 feet.

Ferberite ($FeWO_4$) was encountered on the vein throughout most of its developed length. In the upper and western part of the mine the ore was relatively wide (6 to 18 inches) and was rather siliceous. In the lower and eastern sections of the vein the ore generally occurred as thinner seams of crystaline ferberite free of horn quartz.

One main ore shoot, which lengthens and branches downward, has been mined from the surface to the 225-foot level and ore is present in

the floor of the 225-foot level drift beneath the lowest stope (figure 2 with the geologic report). The shoot lies on either side of the shaft at the surface and on the 65-foot level where it has a stope length of about 100 feet. It rakes easterly across the shaft between the 65- and 150-foot levels and lengthens. A stope, begun on this shoot from the 225-foot level, is yet to be completed to the 150-foot level by the present operators.

A second ore shoot occurring farther east of the shaft was stoped from a point 30 feet above the 150-foot level down to and a few feet below the 225-foot level. It is separated from the first main shoot by a 35-foot barren pillar. The shoot was stoped for lengths of about 100 feet along the 150- and 200-foot levels. Ore is exposed in the bottom of a shallow underhand stope below the 225-foot level.

A third main ore shoot occurring west of the shaft was stoped from the 225-foot level through and to a short distance above the 150-foot level. The shoot lengthened from 30 feet along the 150-foot level to nearly 100 feet along the 225-foot level. It was underhanded for a few feet below the lower level and ore reportedly is exposed in the bottom of the underhand stope.

The Phillip vein outcrops along the western end of the Phillip claim and extends westerly onto the Crow Patent. A hanging wall split of the main Phillip vein was mined for some 350 feet west of the Phillip claim in the Phillip Extension mine. A footwall vein splitting from the main Phillip vein in the vicinity of the Phillip shaft, was mined to shallow depths from the surface on both the Phillip claim and the Crow Patent.

The main Phillip vein roughly parallels the Hoosier vein in both strike and dip some 100 to 200 feet to the south. It has been developed from the surface by the two Phillip shafts and from the 150- and 225-foot levels of the Hoosier mine. The development of the vein presently accessible from the Hoosier 150- and 225-foot levels is shown on figure 3. The vein reportedly was stoped more or less continuously from the surface down to the 150-foot level. The vein occurs in schist and pegmatite and its ore shoots reportedly were more erratic than those on the Hoosier vein. The mineral, although narrower in width, reportedly was of higher grade and was capable of producing high-grade concentrates.

The Phillip vein has not been developed below the 150-foot level east of the Hoosier shaft and ore is exposed along the bottom of the drift in that section. Ore also is exposed along the bottom of the 150-foot level west of the shaft; the vein in this section, however, has been developed to some extent below the level, both from the 225-foot level of the Hoosier mine and from the 150- and 200-foot levels of the Phillip Extension mine. The vein, as exposed along its lower development from the Hoosier shaft, is narrow, in schist, and barren of mineral. The 150-foot level of the Phillip Extension mine, some 20 feet lower than the corresponding Hoosier level, did encounter ore along a section of the vein occurring on either side of the Phillip end line. The vein developed by the 200-foot level of this mine, however, was barren up to the property line.

Crude ore, as broken to widths of about 30 inches in the stopes, probably has averaged from 1 to 3 percent WO_3. Occasionally, some coarse waste is sorted from the crude ore in the stopes and utilized as backfill.

Usually the crude ore is hoisted directly to the surface. If milling facilities are not available, the crude ore is up graded by screening, hand sorting and to some extent by hand cobbing. The undersize screenings or fines, approximately 50 percent of the crude ore, generally average 1 to 3 percent WO_3 and are marketed separately. The oversize coarse ore is hand sorted from the coarse waste. It aggregates from 5 to 15 percent of the crude ore and generally averages 4 to 8 percent WO_3. A small gravity mill, such as the applicant is operating, will produce a high-grade concentrate averaging 48 to 57 percent WO_3 and a middling product averaging anywhere between 30 and 40 percent WO_3. Excessive mineral losses due to sliming result if the middlings are finely crushed and remilled. The over-all milling recovery on the Hoosier ore has been about 70 percent. The phosphorous content of the concentrates generally is below 0.07 percent, the minimum acceptable by the local buyers without penalty.

MINEABLE ORE RESERVES

A few hundred tons of ore remain unmined in a stope on the Hoosier vein east of the shaft between the 150- and 225-foot levels. The applicant currently is working this stope and probably will have mined the ore shoot to the 150-foot level before an exploration project can be authorized. Except for a small tonnage of ore remaining in shaft and level pillars, no other developed ore reserves exist in the mine. As is typical of other small mines in the district, reserves of ore were not developed in advance of mining operations.

Indicated and inferred reserves, based on evidence of the continuation with greater depths of presently developed ore shoots, do

exist centrally on the Hoosier vein below the 225-foot level and easterly on the Phillip vein below the 150-foot level. Ore similar to that mined previously (1 to 3 percent WO_3 over mining widths of 30 inches) is exposed fairly continuously for 250 feet along the bottom of a 225-foot level drift on the Hoosier vein and for 100 feet along the bottom of a 150-foot level drift on the Phillip vein (fig. 2 with geologic report). Ore shoots on the Hoosier vein appear to be lengthening with depth, and it is reasonable to assume that the length of ore now exposed in the lowest development on these veins will continue for an additional 50 to 75 feet in depth.

About 5,000 tons of crude ore reserves averaging approximately 2 percent WO_3 (10,000 units of contained WO_3) are indicated and inferred on the Hoosier and Phillip veins to depths of 75 feet below their present development. The current value of such reserves will vary from $27.00 to about $33.00 per unit depending upon whether they are marketed as crude ore or as ore which has been up graded by hand sorting. Little, if any, of the metal content is lost through sorting. The current value of 30 to 57 percent WO_3 concentrates, such as could be produced in the applicants' mill, is from $40.00 to $58.00 per unit. The expense of milling the ore and the mineral loss entailed therein is more than offset by the higher market price commanded by the higher grade product.

PRESENT STATUS

Mining and Milling Equipment and Other Facilities

The Hoosier mine currently is being operated by the applicant. Its present underground development is shown on figure 3. All workings

indicated are accessible and in good condition. No rehabilitation or repair work, or any additional facilities or equipment will be necessary before underground exploration can commense. The facilities and equipment on the property, both on the surface and underground, are in good repair and are adequate for a small to medium mining operation.

Surface facilities include a headframe and a combination hoist, compressor, and shop building located at the collar of the Hoosier shaft. The headframe is equipped with dumping facilities. Hoisted material is hand trammed in mine cars across the surface to a screening and sorting plant or to the waste disposal dump. Sorted and washed ore is trucked to the applicant's 25-ton gravity mill (rolls, jigs, table, et cetera). The mill is located near the collar of the Phillip Extension shaft on the Crow Patent some 365 feet southwest of the Hoosier shaft. Graveled access roads to both the mine and mill are maintained by Boulder County. Electric power lines of the Public Service Company of Colorado are connected to both the mill and shaft buildings and power is extended to a pump station near the bottom of the Hoosier shaft.

A 280-c.f.m. air compressor and a 20-h.p. electric mine hoist are installed in the shaft house. Underground equipment available includes mine cars, hoisting buckets, slusher hoist, drilling machines, small tools, et cetera. Air and water pipe and mine track are extended into most of the underground drifts and crosscuts.

Exploration and Development

The two-compartment, inclined Hoosier shaft is approximately 5 feet by 9 feet in cross section. The shaft is timbered with round stulls

and wall plates on about 5-foot centers and is provided with wooden skids for hoisting by means of a bucket. Sections of the shaft are lagged and cribbed. The manway compartment is provided with ladders and platforms and is lagged off from the hoisting compartment. A 20-h.p. electric pump is installed in the shaft just above the 225-foot level. The shaft extends 20 feet below the lowest level. Its lower 20 feet serve as a sump. A similar sump will be required below any new level. The mine makes considerable water and intermittent pumping is required each shift. The water made by the mine is utilized for both mining and milling purposes.

Drifts and crosscuts are driven to a 5- by 7-foot cross section and are mostly untimbered. Material broken in the headings is loaded into mine cars by means of a slusher hoist and an inclined ramp. Raises are driven two-compartment, about 4 feet by 8 feet in cross section. Stull timbering is employed and the chute compartment is lagged from the manway.

The mine is ventilated by natural means; deeper development probably will entail some type of auxiliary, mechanical ventilation.

PROJECT PROPOSALS WITH COSTS

Proposed Exploration

The original proposal submitted by the applicant included the following work:

1. Drift 220 feet on the Phillip vein to both the east and west of a 225-foot level crosscut.
2. Raise 50 feet at each of two locations on the Phillip vein from the new 225-foot level drifts.

3. Crosscut 50 feet south from the Phillip vein on the 150-foot level to intersect a parallel footwall vein.

4. Drift 290 feet on the footwall vein to both the east and west of the new 150-foot level crosscut.

5. Raise 50 feet at each of two locations on the footwall vein from the new 150-foot level drifts.

The 760 feet of drifting, crosscutting, and raising were estimated by the applicant to cost $24,376.00, an over-all unit cost of approximately $32.00 per foot.

Certain portions of the proposed project were not acceptable to the examining team. Enough information was not available on the footwall vein to justify its proposed exploration. The footwall vein splits from the Phillip vein in the vicinity of the old Phillip shaft and it reportedly contained mineral and was stoped to a small extent at the junction. The only apparent reason for not continuing deeper development on this vein was that its mineral content either weakened or died out. The fact that a short footwall crosscut was never driven from the Phillip workings, bears this out. Crosscutting to the vein is something that the applicant can do himself with very little expense. A drift on the Phillip vein east from the 225-foot level crosscut will approach the junction of the footwall vein and thereby lessen the crosscut distance to it.

The Phillip vein for 55 feet west of the 225-foot level crosscut already has been explored by the applicant. The vein was very weak and barren in this distance and was not expected to improve in the additional 70 feet of drifting required to reach the property line. Exploration of this section of the vein, just beyond the property line, was disappointing.

Sinking the Hoosier shaft another lift and drifting on the Hoosier vein to below known ore shoots was considered the most promising exploration for the property. Although somewhat less promising, exploration easterly on the Phillip vein to below known ore shoots was considered favorably. Such a program was discussed with the partners, and they agreed to a revision of their original proposal to include only the more favorable work. The applicant thereupon submitted a cost estimate of $6,201.00 for deepening the Hoosier shaft by 75 feet.

The revised exploration program, acceptable to both the applicant and the examining team and as recommended in this report, is as follows:

1. Drift a maximum of 150 feet easterly on the Phillip vein from a 225-foot level crosscut south from the Hoosier shaft.
2. Extend the Hoosier shaft an additional 75 feet from its present depth of approximately 245 feet below the surface.
3. On a newly established 300-foot level off the Hoosier shaft, drift on the Hoosier vein a maximum of 100 feet westerly and 150 feet easterly from the shaft.
4. If ore is not encountered by the drifting authorized in Item 3, above, raising on the Hoosier vein from the new 300-foot level to the bottom of the ore shoots, at locations designated by the DMEA Region IV Field Team, but not to exceed a maximum total of 100 feet of raising nor more than 50 feet for any single raise, will be permitted.

The location and the extent of the proposed exploration, as revised and recommended, is shown on figure 3. The estimated total cost of the proposed work is summarized in Table I.

New Equipment and Facilities

The present surface facilities at the Hoosier mine are adequate and will require no additional rehabilitation and repair.

The operating equipment presently owned or rented by the applicant is in good condition and is adequate for the type of work proposed. The only equipment not on hand at the mine and which will be required during the proposed project is a pneumatic sump pump for use during shaft sinking and an electric blower for auxiliary ventilation in drift and raise headings. These items can be rented during the project as needed.

The following listed operating equipment, owned by the applicant, will be used during the project:

Description	Estimated value or cost
Two 1,600-pound capacity hoisting buckets	$ 100.00
Two 2,000-pound capacity mine cars	100.00
M and S electric bit sharpener (detachable jack bits)	150.00
Atlas RH-656-4W Rock drill; BMK-41A pusher	515.00
Joy S-91 stoper drill	790.00
Fairbanks-Morse, 2-inch electric pump	700.00
Joy S-211, 5-h.p. electric, double-drum slusher hoist	1,000.00
Two sets, air and water hoses, line oilers	60.00
Water pressure tank	40.00
Electric bit sharpener (tungsten carbide bits)	75.00
Air receiver	70.00
Total estimated value or cost	$3,600.00

Monthly depreciation for the use of the above equipment, computed at the standard rate of 1/60 of its value, or $60.00, has been included in the estimated costs of the project.

The following listed operating equipment will be rented during the project:

Description	Actual or anticipated monthly rental
H and B, 30-inch D x 16-inch single drum, geared hoist; 20-h.p. electric motor, complete with grids, controller, et cetera; 300 feet 7/8-inch 6 x 19 hoisting cable	$ 50.00
I-R, Imperial Type 10, 7-1/2 x 12 x 14 air compressor; 50-h.p., GE induction motor	50.00
Single-stage pneumatic sump pump ($30.00 per month during sinking operations only)	30.00
5-h.p. electric blower ($30.00 per month during drifting and raising operations only)	
Total monthly rental	$130.00

Power

The minimum charge for electrical power, based on the horsepower demand of the forementioned operating equipment, is $130.00 per month. It is not expected that the minimum charge will be exceeded.

Manpower

One of the partners will supervise project operations and serve as a working foreman. Besides actual supervision, the foreman will purchase and transport supplies, repair equipment, sharpen bits, service the pump, and generally assist with the surface and underground operations. A single surface employee will be required to operate the hoist, service the compressor, dump and tram hoisted rock, prepare primers, et cetera. It is possible that a second partner will perform the surface duties.

The size of the underground labor force necessarily will depend upon the number of shifts worked and the number of exploration headings undertaken at one time. Because of limited underground storage and the hoisting capacity of the Hoosier shaft, it is anticipated that only one heading will be advanced on a single shift. A single miner-timberman plus a single trammer-mucker will be required in drift and raise headings. Two miner-timbermen will be required during sinking operations. Operations will be carried out six 8-hour shifts per week; overtime wages will be paid all employees for work in excess of 40 hours per week.

The following labor schedule is prevalent in the district and has been used in computing the estimated costs of the proposed work:

Classification	Rate per hour	Rate per week (including overtime)
Foreman	$2.25	$117.00
Miner-timberman	1.75	91.00
Trammer-mucker	1.65	85.80
Hoistman-compressorman	1.65	85.80

It is possible that the direct labor for advancing the headings will be paid on a piece work or units completed basis. Based on the foregoing labor rates, the direct labor costs for advancing the headings have been estimated in Table I as $24.77 per foot for sinking and $8.84 per foot for drifting and raising. Subcontracting shaft sinking labor on a footage basis might reflect lower over-all costs if a rate of advance higher than 1.25 feet per shift was obtained. It is doubtful that any appreciable saving in over-all costs would result from subcontracting either the raises or drifts.

The current rates in the district for State Workman's Compensation and Occupational Disease Insurance are respectively $2.09 and $0.43 per

to 400 feet of drifting and $3,200.00 to 100 feet of raising. The net unit costs for sinking, drifting, and raising are $80.00, $32.00, and $32.00 per foot, respectively.

It is not anticipated that production operations will be carried on concurrently with the exploration project. If ore is discovered through the exploration program, it is of course possible that its production may begin during the final stages of the project. Due to the hoisting capacity of the shaft and the lack of shaft pockets, it probably would be necessary to carry out such operations on a second shift and thereby affect the estimated exploration costs little, if any.

TABLE 1. - Estimated costs of exploration project proposed at the Hoosier mine, Boulder County, Colo.

Items of cost	Estimated costs	Distribution of estimated costs to proposed operations		
		Sinking	Drifting	Raising
Labor and Supervision:				
Miner-timberman	$ 3,185.00	$ 910.00	$ 1,820.00	$ 455.00
Miner-timberman	910.00	910.00	-	-
Trammer-mucker	2,145.00	-	1,716.00	429.00
Hoistman-compressorman	3,003.00	858.00	1,716.00	429.00
Foreman	4,095.00	1,170.00	2,340.00	585.00
	$13,338.00	$3,848.00	$ 7,592.00	$1,898.00
Operating Materials and Supplies:				
Timber	$ 738.45	$ 269.54	$ 297.70	$ 171.21
Explosives	1,773.75	343.67	1,171.56	258.52
Pipe	453.75*	93.75*	300.00*	60.00*
Track	400.00*	-	400.00*	-
Power	1,061.66	303.33	606.66	151.67
Drill steel, bits	560.33	104.63	372.00	83.70
Ventilation tubing	192.50*	52.50*	105.00*	35.00*
Small tools, other supplies	650.00	150.00	400.00	100.00
	$ 5,830.44	$1,317.42	$ 3,652.92	$ 860.10

Items of cost	Estimated costs	Distribution of estimated costs to proposed operations		
		Sinking	Drifting	Raising
Operating Equipment:				
Rental	$ 1,061.66	$ 303.33	$ 606.66	$ 151.67
Depreciation	490.00	140.00	280.00	70.00
	$ 1,551.66	$ 443.33	$ 886.66	$ 221.67
Miscellaneous:				
Repairs to equipment	$ 210.00	$ 60.00	$ 120.00	$ 30.00
Assaying	345.00	45.00	240.00	60.00
Accounting	245.00	70.00	140.00	35.00
Liability insurance	336.12	96.97	191.32	47.83
Payroll taxes	666.90	192.40	379.60	94.90
	$ 1,803.02	$ 464.37	$ 1,070.92	$ 267.73
TOTAL ESTIMATED COSTS	$22,523.12	$6,073.12	$13,202.50	$3,247.50
Less salvage value on nonexpendable materials*	523.12	73.12	402.50	47.50
NET ESTIMATED COSTS	$22,000.00	$6,000.00	$12,800.00	$3,200.00
Units to be completed		75 feet	400 feet	100 feet
Net unit costs		$80.00/foot	$32.00/foot	$32.00/foot

PROPOSED FINANCING OF PROJECT

The applicant's share of the estimated net costs of the project work is 25 percent, or $5,500.00. The expected labor of two of the partners on the project and the allowance estimated for the use of owned equipment is more than sufficient to cover the applicant's share of the estimated cost.

A stockpile of crude ore and dump material will be available at the start of the project. The applicant can mill such material and market the concentrates to meet current and unforeseen expenses. If it is necessary in order to begin the project, Hetzer Mines, Inc., the owner of the property, has indicated a willingness to aid the applicant financially. Any ore

recovered from exploration headings during the project also can be marketed to cover current operating expenses.

CONCLUSIONS

It is concluded that the proposed exploration of the Hoosier mine, as outlined herein, is technically feasible.

The proposed work will explore the Hoosier and Phillip veins below known ore shoots that appear to continue with depth. The tungsten ore reserves indicated and inferred to moderate depths below the lowest development of the two veins are of sufficient tonnage and grade to justify Government participation in the cost of an exploration project such as is proposed.

The applicant partners are experienced and reputable mining operators in the Boulder Tungsten district and should be able to complete the proposed work efficiently and as authorized.

RECOMMENDATIONS

An exploration project at the Hoosier mine, as outlined in this report, is recommended for approval.

A short-form exploration project contract, authorizing net project costs of $22,000.00--Government participation 75 percent, or $16,500.00--and providing for net unit costs of $80.00 per foot for 75 feet of shaft sinking and $32.00 per foot for 500 feet of drifting and raising, is recommended.

It is recommended that only the Hoosier and Phillip claims be included under Article 2 (Operator's Property Rights) of the contract.

pam

SURNAME COPY

Defense Minerals Exploration Administration
Robert E. Adams Ext. 2017

14X3923.970, Working Fund, Interior, DMEA
January 19, 1954
11:30 a.m.
To: W. H. King, Executive Officer, Region IV, 224 New Customhouse Bldg., Denver 2, Colorado

SUBJECT: Assignment of Contract Number

MESSAGE:

REURTEL 1-18-54, DOCKET NO. DMEA 3173, JOHNSON BROS. AND PRIME, PROPERTY LOCATED IN BOULDER COUNTY, COLORADO, COMMODITY TUNGSTEN. CONTRACT NUMBER IDN-R-657 ASSIGNED THIS CONTRACT.

C. O. Mittendorf

AUTHORIZED: ADMINISTRATOR

REAdams/meb
cc to: Adm. Reading File
Mails & Files Br.
Bu. of Mines, Audits Div., Rm. 2509

SENT
JAN 19 1954
Clerical Service Section

R.C.B. 1-19-54

$100.00 of an operator's gross payroll. State and Federal unemployment taxes, totaling 3 percent of payroll earnings, and the employer's share of social security taxes, 2 percent of payroll earnings effective January 1, 1954, also have been included in the estimated expense of the project.

Time Schedule for Completion of the Project

Operation	Estimated time for completion	Average advance per shift
Sink 75 feet	60 shifts or 10 weeks	1.25 feet
Drift 400 feet	120 shifts or 20 weeks	3.33 feet
Raise 100 feet	30 shifts or 5 weeks	3.33 feet

The estimated time for completion of the 575 feet of exploration on a single shift-single heading basis is 35 weeks or approximately 8 months. Operations can begin immediately.

ESTIMATED COSTS OF PROJECT

The estimated costs of the proposed exploration project are summarized in Table I. The cost estimate is based on average operating efficiency as has been experienced for comparable work elsewhere in the district with special consideration given to particular problems involved in the specific operation. Certain operating materials included in the estimate, such as pipe, track, and ventilation tubing, will not be expended and will have a salvage value at the completion of the project. A salvage value of about 50 percent of the original cost of such items is expected and has been deducted from the total estimated costs of the project.

The estimated total net costs of the project are $22,000.00 of which $6,000.00 has been distributed to 75 feet of shaft sinking, $12,800.00

C.O. Mittendorf
1-18-54
6:11 P.M.

DEPARTMENT OF THE INTERIOR
Bureau of Mines
Bureau Mines Administration
RECEIVED
JAN 18 1954

DN 235 BUREAU MINES 1-18-54 4-11 PM

C O MITTENDORF

PLEASE ASSIGN NUMBER TO CONTRACT COVERING DOCKTXXX DOCKET NO. DMEA 3173, JOHNSON BROS. AND PRIME, A PARTNERSHIP CONCIXXX CONSISTING OF RALPH JOHNSON, ROY JOHNSON, AND GEORGE PRIME, BOULDER COUNTY, COLORADOM COMMODITY TUNGSTEN. CONTRACT DATED JANUARY 18,1954, AMOUNT OF CONTRACT $22,000.00, GOVERNMENT,S PARTICIPATION $16,500.00.

W H KING

F. 657 7570

Denver, Colo.

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 18 1954

224 New Customhouse
Denver 2, Colorado

January 8, 1954.

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: 200

From: Field Team, Region IV

Subject: Report of Examination - DMEA Docket 3173 (Tungsten), Johnson Brothers and Prime, Hoosier Mine, Boulder County, Colorado.

Exploration assistance in the amount of $22,000.00, Government participation $16,500.00 has been approved and the contract will be prepared by this office.

Four copies of the report of examination will be forwarded you when the contract is executed.

The original and one copy of Form 3b is attached.

W. H. King

W. H. King

A. H. Koschmann

A. H. Koschmann

Enclosures

FILE COPY
SURNAME:

200

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

OCT 16 1953

Mr. W. M. King
Executive Officer
Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-3173 (Tungsten)
Johnson Brothers and Prine
Boulder County, Colorado
Docket No. DMEA-3174 (Beryl-Columbite-Tantalite-Mica)
Hepburn T. Armstrong
Fremont County, Wyoming
Docket No. DMEA-3175 (Uranium)
Dante Exploration Company
San Miguel County, Colorado

Dear Mr. King:

This will acknowledge your memorandum dated October 7, 1953, in which you request that we make a further check of our records concerning the return of the above-mentioned applications.

A further check of our records indicates that the three applications mentioned in the above subject, identifying the docket numbers assigned, were returned to Region IV on September 21, 1953.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (24B)

APPROVED:

J. H. Hedges (24B)
Member, Bureau of Mines

T. P. Thayer (24B)
Member, Geological Survey

REAdams/meb
10-14-53
cc to: Adm.Reading File
Mails & Files Br.
Operating Committee

R.C.S.
10-16-53

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

ew Customhouse
Denver 2, Colorado

October 7, 1953

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Assignment of Docket Numbers

Reference is made to your teletype of October 2, 1953 concerning the still missing applications:

DMEA 3173 - Johnson Brothers and Prime
DMEA 3174 - Hepburn T. Armstrong
DMEA 3175 - Dante Exploration Company.

These applications were forwarded to your office for docketing together with two applications from Mining Ventures, Inc. with our transmittal letter of September 18.

The Mining Ventures, Inc. applications were docketed DMEA 3171 and DMEA 3172, and were returned to us September 24, but we have not, as yet, received the above-mentioned three applications, and we are wondering if you would care to make another check of your records.

W. H. King

W. H. King

Sept 21

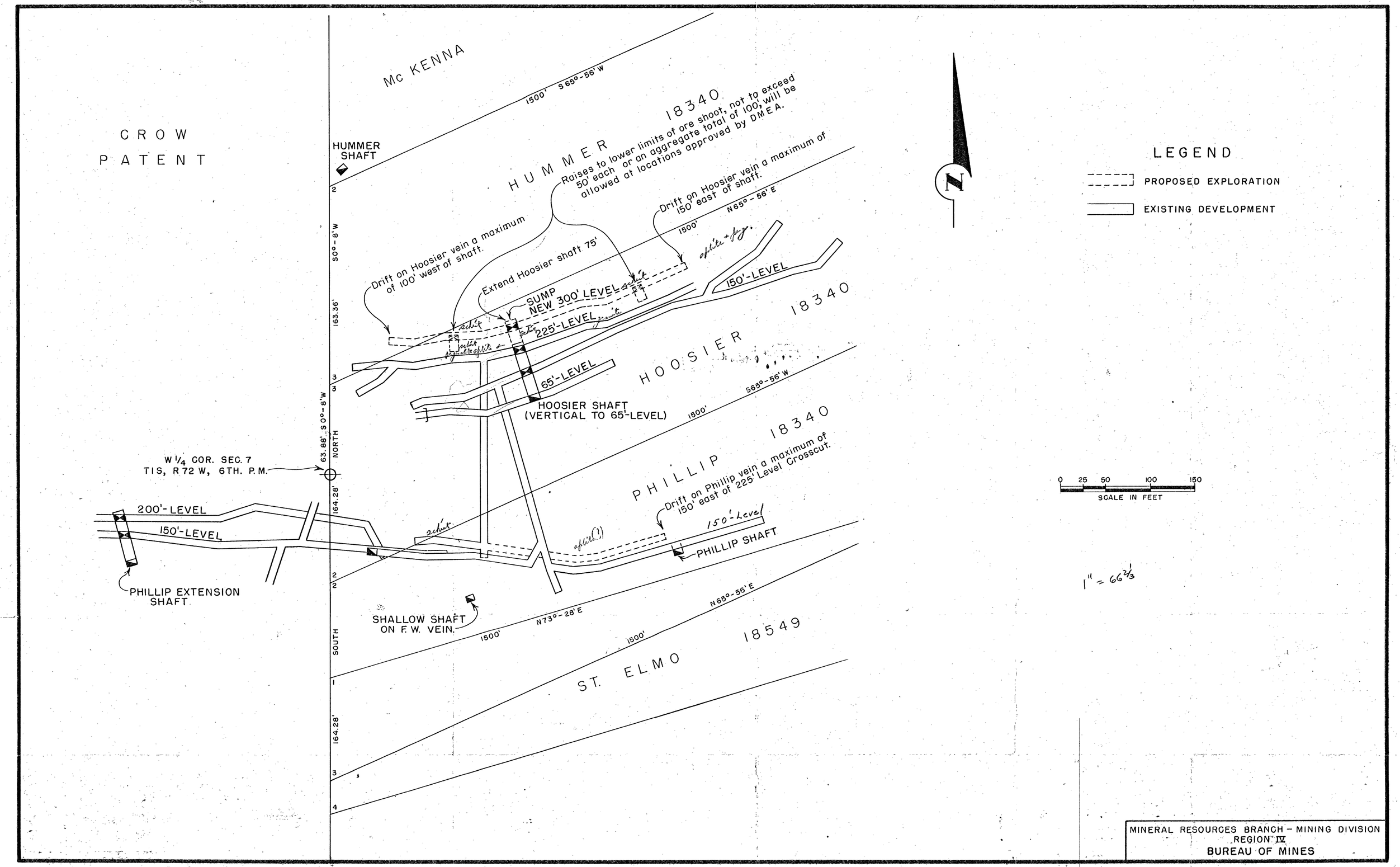

FIGURE 3 - PLAN OF UNDERGROUND WORKINGS, HOOSIER MINE, BOULDER COUNTY, COLO. (DMEA 3173)

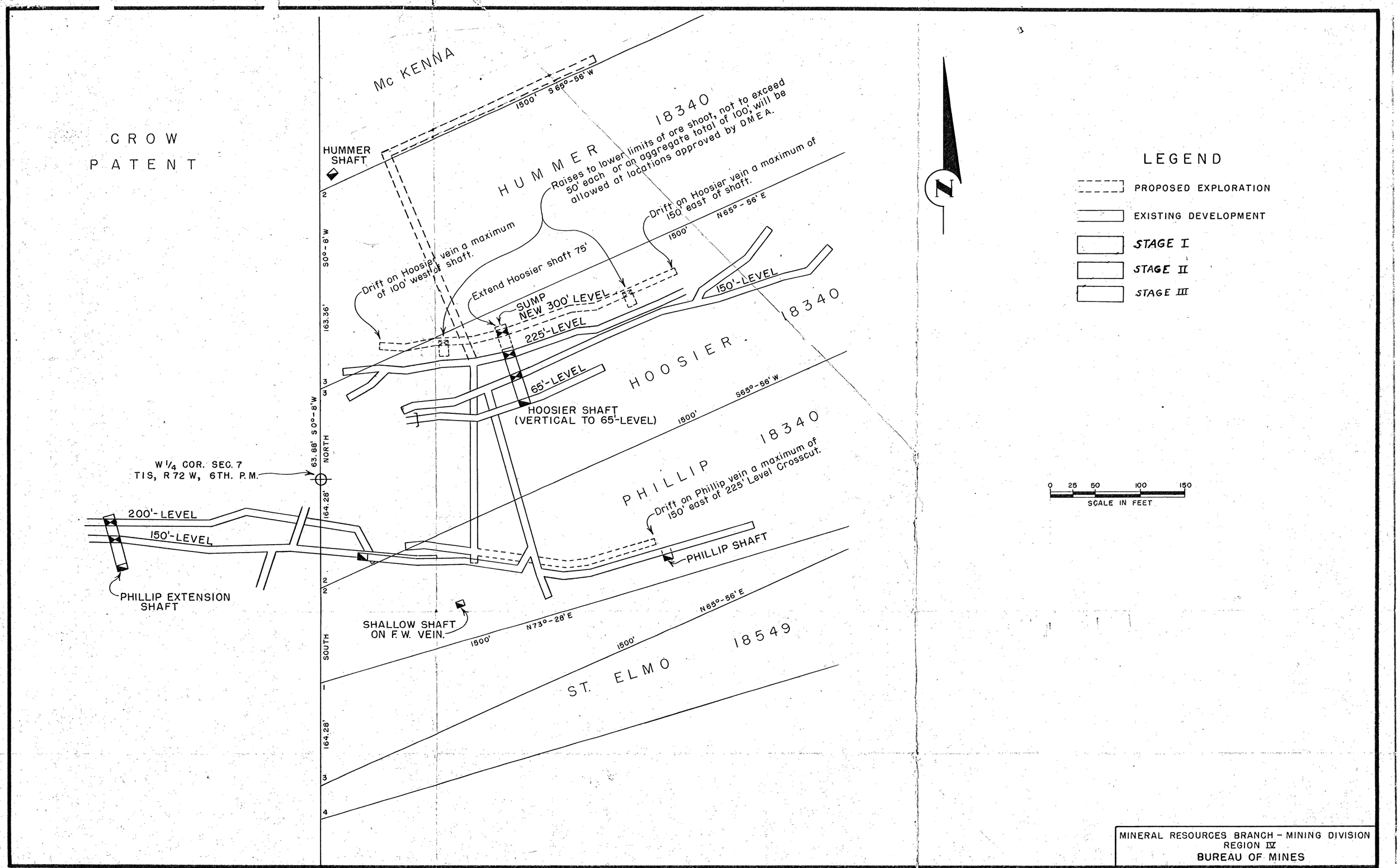

FIGURE 3 - PLAN OF UNDERGROUND WORKINGS, HOOSIER MINE, BOULDER COUNTY, COLO. (DMEA 3173)

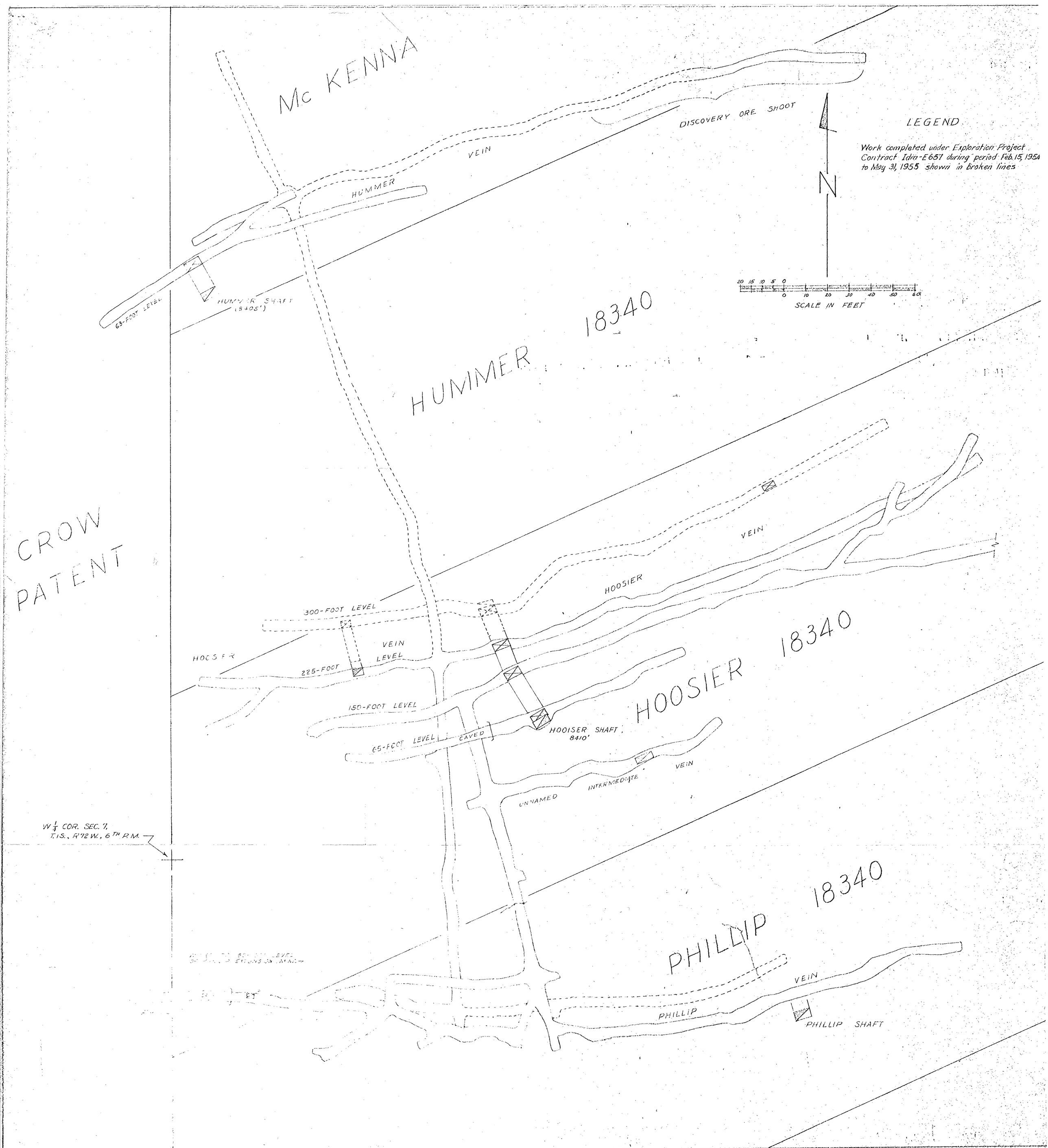

Fig. 3 – Composite plan of Hoosier mine, Boulder County, Colo. showing work completed under Exploration Project Contract Idm-E657
(Johnson Brothers & Prime DMEA 3173)