MF-200 (A)
(February 1952)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
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DOCKET NO. DMEA 2650

COMMODITY Tungsten

IDM-E 415

DOCKET COPY

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

EXPLORATION PROJECT CONTRACT[1]
(Short Form)

IT IS AGREED this 6th day of October, 1952, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] James L. McBroom, Box 372A, Rt. 2, Boulder, Colorado, and L.H. Allen, Grand Junction, Colorado, a partnership under the name of Hallie "A" Mining Company

hereinafter called the "Operator," as follows:

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 Boulder described as follows:[3] Hallie "A" Mining Claim recorded in Book 629, Page 292, in the County Clerk and Recorder's Office of Boulder County

the Operator represents and undertakes:[4]

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

(*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 14 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 $9,450.00, which is 75 percent of $12,600.00, 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.

(*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:

(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

Hallie "A" Mining Company
(Operator)

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

By James L. McBroom
L. R. Allen

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

MF-203

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/

The Hallie "A" Lieing Claim recorded in Book 629, Page 292, official records of said County

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/ James L. Fulbrook

L. F. Allen

hereinafter called the "Operator"; and

WHEREAS, under certain provisions of said contract which are set forth on the reverse side hereof, the Government is entitled to a percentage royalty on production and to certain other rights and equities which do or may conflict with or be adverse to the interest of the undersigned in said property;

NOW THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government 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 which does not increase the maximum amount of the Government's claim here stated or alter the provisions for repayment, there is hereby granted to the Government a lien upon the land herein described and upon any production of minerals therefrom, until the royalty claim is fully paid in the amount of the Government's contribution, not in excess of 4/$ 7,500.00, or ten years have elapsed from the date of the contract.

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

Dated this 3 day of September, 195 2.

[Seal]

Norris G. Mitts [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.

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

RELEVANT CONTRACT PROVISIONS

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 six 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:

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

(2) One and one-half (1½) per cent of any such net amounts, plus one-half (½) per cent 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.)

(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, 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.

(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.

Title to and disposition of property. All facilities, buildings, fixtures, equipment, or other items costing more than $50.00 each, paid for or purchased with funds contributed jointly by the Operator and the Government, although title may be taken in the name of the Operator, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the completion of the work or the termination of the contract shall be disposed of promptly by the Operator for the joint account of the Government and the Operator, either by return to the vendor, by sale to others, or purchase by the Operator at a price at least as high as could otherwise be obtained, as may appear to be for the best interest of the Government, unless the Government, in writing, waives its interest in any such item. If necessary to accomplish such disposition, the Operator shall dismantle, sever from the land, and remove any such item, the cost thereof to be for the joint account of the parties in proportion to their respective interests. If the Operator, within 90 days after the receipt of written notice from the Government, fails, neglects, or refuses to dispose of such property, the Government may itself enter upon the land, take possession of, and remove and dispose of any such property as above provided.

EXHIBIT "A"

Description of the Work

Bulldoze a surface site for shaft and hoist house at about the same elevation as the upper adit dump.

Raise the shaft from the lower adit 30 feet to the surface.

Erect a headframe and an 8x12 foot hoist house.

Sink the shaft 85 feet, including a 10 foot sump, below the No. 2 adit level.

Drift 160 feet in a northeasterly direction on the vein on the bottom level which is 75 feet below the No. 2 adit.

The work is shown on Figure 4 which is attached hereto. Figures 3 and 4 are hereby made a part of EXHIBIT "A".

Estimated Costs of the Project

Bulldozing surface site 1/	$ 300.00
Construct hoist house 1/	300.00
Erect headframe 1/	300.00
Raising shaft 30 feet @ $60.00 per foot	1,800.00
Sink 85 feet @ $60.00 per foot	5,100.00
Drift 160 feet @ $30.00 per foot	4,800.00
Total	$12,600.00
Government participation at 75%	$9,450.00

1/ The entire work constitutes the unit of work.

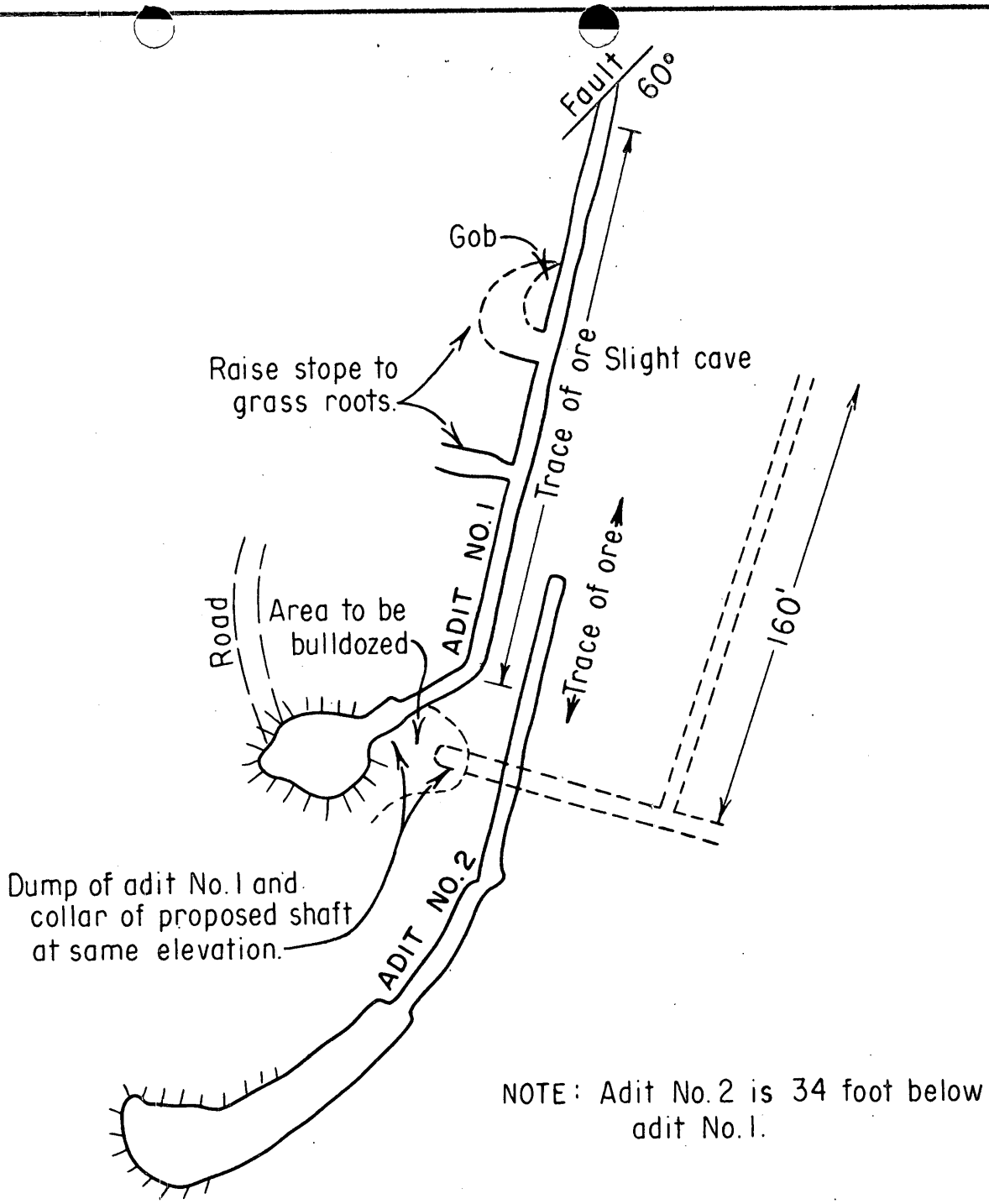

FIG. 4.- HALLIE A. TUNGSTEN WORKINGS AND PROPOSED WORK, AUG. 1952 D.M.E.A. 2650

FIG. 3.- HALLIE A TUNGSTEN PROPERTY CLAIM MAP, BOULDER CO. COLO. D.M.E.A. 2650

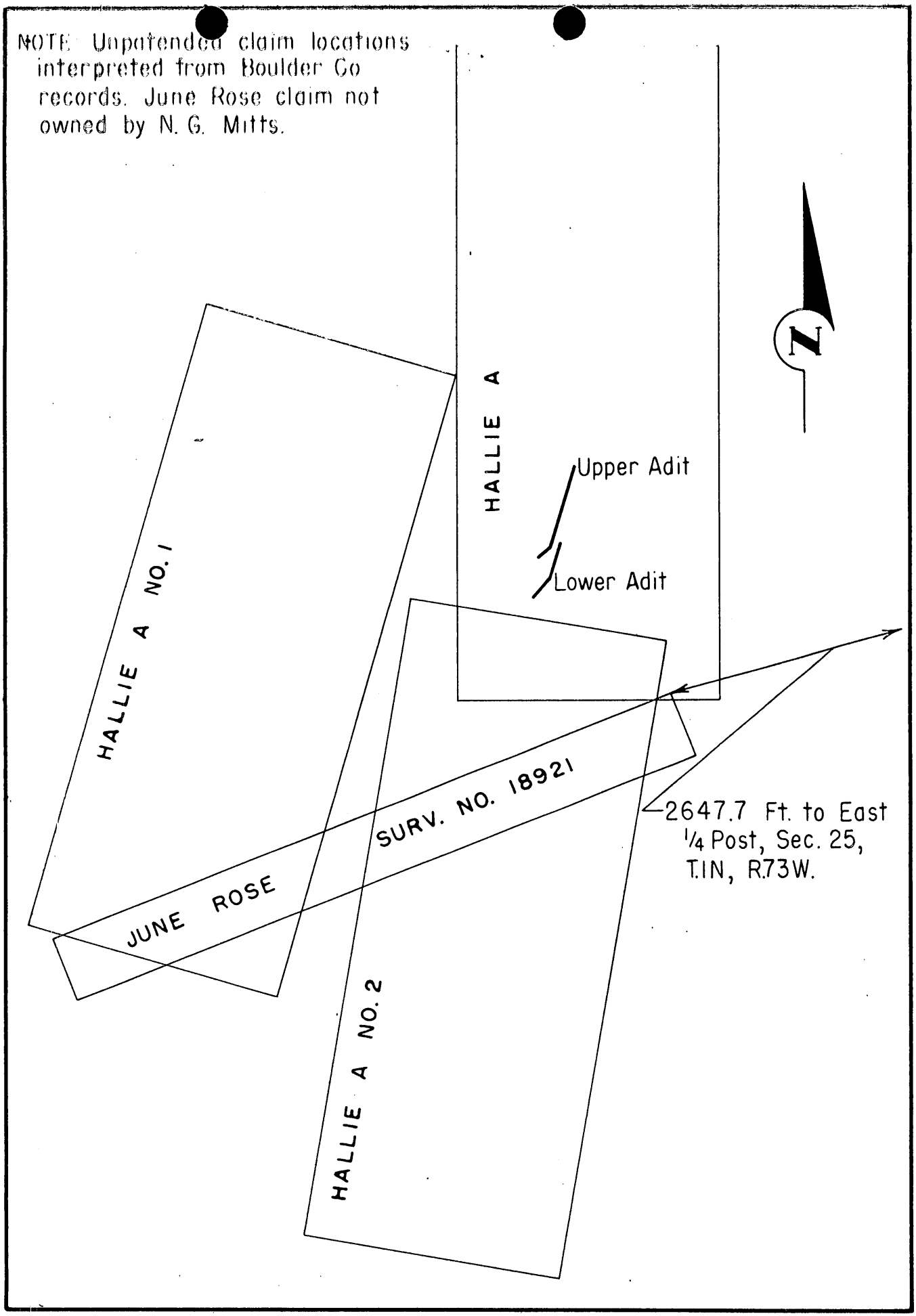

FIG. 3.- HALLIE A TUNGSTEN PROPERTY CLAIM MAP, BOULDER CO. COLO. D.M.E.A. 2650

FILE COPY
SURNAME:

MDV
Rutledge
Martin
Talbitt
McKinney
Brown

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

NOV 13 1953

Mr. James L. McBroom
Hallie "A" Mining Company
Box 372 A, Rt. 2
Boulder, Colorado

Re: Docket No. DMEA 2650 - Tungsten
James L. McBroom & L. R. Allen
Hallie "A" mine
Boulder County, Colorado
Contract No. Idm-E415

Dear Mr. McBroom:

This is with reference to the subject exploration project between the Hallie "A" Mining Company and the Government.

The final audit of the contract expenditures and the final reports of the Operator and the Field Team have been received and accepted by this Administration. Of the total amount of $12,600.00 approved under the contract, the sum of $12,000.00 was expended, 75 percent of which, or $9,000.00, represented the Government's share. There were no unused supplies, material, or equipment remaining to be disposed of for the joint account of the Operator and the Government. The exploration work was completed in a satisfactory manner.

Because the results of the exploration were unfavorable, it is not our intention to make a certification of discovery or development which would create a lien against the subject property. We are, therefore, closing our books and records with respect to this project. Your attention is called, however to Article 5(d) of the Contract which requires the Operator to "keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract."

Your interest in the Exploration Program of the Defense Minerals Exploration Administration and your willingness to participate therein are appreciated.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

cc: Operating Comm.
R. W. Geehan, USBM
T. P. Thayer, USGS
FARutledge:foc 11-12-53

cc: Docket
Code 400
FT. Reg. IV
Admr. Reading File

R.C.B.
11-13-53

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

224 New Customhouse
Denver 2, Colorado

October 28, 1953

Memorandum

To: Secretary to the Operating Committee, DMEA

From: DMEA Field Team, Region IV

Subject: Docket No. DMEA 2650 (Tungsten), Contract Idm-E415, James L. McBroom and L. R. Allen, a partnership under the name of Hallie A Mining Company, Boulder County, Colorado

Enclosed are the following final reports pertaining to work performed under the subject contract:

1. Original and three copies of the final geologic report by the Geological Survey.

2. Original and three copies of the final engineering report by the Bureau of Mines.

The operator's report attached to Form MF-104 for the month of June 1953 is considered to be adequate as a final report under the circumstances, and it is recommended that it be accepted as such.

Final payment to the operator was processed in this office October 28, 1953, which was in conformance with the final report of review by the Contract Administration and Audit Division dated September 14, 1953, which was released to this office August 26, 1953.

The Washington office copies of the operator's report for the month of June will be forwarded upon return from the Fiscal Office, Region IV.

The contract authorized performance of 160 feet of drifting, 30 feet of raising, and 80 feet of shaft sinking, at a total expenditure of $12,600.00. The actual work performed consisted of 160 feet of drifting, 28 feet of raising, and 77 feet of sinking, at a total expenditure of $12,000.00. The exploration work did not result in a discovery of commercial grade ore, therefore no certification of discovery is recommended.

W. H. King
W. H. King

Reviewed by
DMEA OPERATING COMMITTEE

11-6-53
(date)

E. N. Hardman
for A. H. Koschmann

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
200 New Customhouse
Denver 2, Colorado

September 11, 1953

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 2650, Hallie A Mine, Contract Idm-E415, Boulder County, Colorado

Attached are 8 copies of the final geologic report by E. N. Harshman covering DMEA Docket 2650, Contract Idm-E415, Hallie A Mine, Boulder County, Colorado.

The Hallie A vein is a narrow structure. It carries a few inches of quartz and relatively minor amounts of ferberite. Although some ferberite was found by exploration under subject contract Idm-E415, Harshman concludes that the low grade of the ore and the narrow and short length of the ferberite-bearing zones preclude mining this vein, and therefore recommends that a certificate of discovery not be issued.

I concur in this recommendation.

A. H. Koschmann

A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (8)

Reviewed by
DMEA OPERATING COMMITTEE
11-6-53
(date)

RECEIVED

HALLIE A MINE

BOULDER COUNTY, COLORADO

DMEA DOCKET 2650

Final Geologic Report

By E. N. Harshman
U. S. Geological Survey

Reviewed by
DMEA OPERATING COMMITTEE
11-6-53
(date)

HALLIE A MINE
BOULDER COUNTY, COLORADO

INTRODUCTION

James L. McBroom and R. L. Allen applied to the Defense Minerals Exploration Administration, DMEA Docket 2650, for assistance to explore for tungsten ore in the Hallie A mine, 4 miles airline north of Nederland, Boulder County, Colorado. A prior application for exploration assistance, DMEA Docket 2058, had been filed by Norris G. Mitts, and an amended program had been approved by the examining team. Mitts requested that his program be cancelled in favor of McBroom and Allen who had leased the property.

DMEA Docket 2650 was approved in the amount of $12,600 for a project as follows:

(1) Prepare the surface site for a shaft

(2) Raise from the lower adit to the surface, a distance of 30 feet

(3) Erect a head frame and hoist house

(4) Sink 85 feet, including a 10-foot sump, and drift 160 feet on the Hallie A vein.

Contract Idm-E415 was signed in October 1952 and work started in November 1952. At the applicants' request, and with approval of DMEA representatives, the proposed depth of the shaft was reduced from 85 feet below the second adit level to 77 feet below that level.

The contract was completed satisfactorily on June 23, 1953.

GEOLOGY AND EXPLORATION

The regional geology and a description of the accessible portions of the upper levels of the Hallie A mine are given in the examination report by Ogden Tweto, DMEA Docket 2058.

The Hallie A vein occupies a shear zone in granite and granite gneiss. It has an average strike of N. 10° E. and on the upper mine levels dips about 65° east. The shear zone is one to three feet wide and moderately well defined. It contains brecciated country rock as well as one to two inch seams of clay gouge. On the adit levels the Hallie A vein is well defined, narrow, and consists of one-half to six inches of horn quartz and ferberite. Total production of tungsten ore, taken from two stopes above the upper adit level (figure 3), amounts to 119 tons containing 1.4% WO_3.

As exposed in the shaft the Hallie A vein is a narrow structure consisting of a few inches of quartz and relatively minor amounts of ferberite. From the surface to a point about 35 feet above the third or 100-foot level, the vein and shear zone dip 65° E., from this point to the bottom of the shaft the dip is vertical. Below the change in dip the vein weakens and ferberite is not found. The strength of the shear zone is not effected noticeably by the change in dip.

On the 100-foot level the Hallie A vein is a weak, poorly mineralized structure consisting of one-half to six inches of silicified granite and quartz in a two to three foot shear zone. The dips of the shear zone and the vein are essentially vertical (figure 3). Shearing is not intense although in places one to two inch seams of gouge are present in the zone.

Ferberite was found in two limited sections of the 162-foot drift. Between 70 and 78 feet north of the shaft a two to six-inch zone of silicified wall rock, horn quartz, and ferberite is exposed. A sample taken by a U. S. Bureau of Mines engineer assayed 1.2% WO_3. Between 114 and 119 feet north of the shaft a similar zone three to ten inches wide assayed 1.0% WO_3. Sample locations are shown on Figure 3. At the north

face of the drift it is difficult to distinguish the vein, although the intensity of shearing has not diminished appreciably.

Sufficient exploration has been done on the 100-foot level of the Hallie A mine to prove that the small ore shoots mined above the upper (No. 1) adit level do not extend to any appreciable depth. The change in dip of both the shear zone and the vein at a point about 35 feet above the 100-foot level may well account for the downward termination of the ore.

McBroom and Allen applied for an amendment to their contract and for additional funds to be used in raising on the two short mineralized sections of the vein on the 100-foot level. Since these sections are below the two stopes on the upper levels (figure 2 in engineering report) and since the change in dip of the vein may account for the lack of ore on the 100-foot level the examining team concluded that exploration of one of the zones was justified. The applicants, however, withdrew the request for additional funds and ceased operations; the mine is now flooded.

Although ferberite was found on the 100-foot level of the Hallie A mine by exploration under Contract Idm-E415, it is concluded that the low grade, narrow and short length of the ferberite bearing zones precludes mining of this material. Certification of a discovery is therefore not recommended.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Denver
AUG 25 1953
Bureau of Mines
Denver, Colorado

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
August 24, 1953

Memorandum

To: Executive Officer, Field Team, Region IV

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

Subject: DMEA 2650, Contract Idm-E415 (Tungsten), J. L. McBroom and L. R. Allen (Hallie "A" mine) Boulder County, Colorado

Submitted herewith are the original and eight copies of a final engineering report on the above docket by R. L. Bolmer.

The report is complete and adequately describes all phases of operation of the short-form unit-cost project with especially satisfactory conclusions and recommendations. It has my approval.

W. M. Traver

W. M. Traver

enclosures

cc 8
E415
DMEA Chron.

WMT/pam

Reviewed by
DMEA OPERATING COMMITTEE
11-6-53
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

FINAL ENGINEERING REPORT

DMEA 2650, Exploration Project Contract Idm-E415

J. L. McBroom and L. R. Allen

Hallie "A" Claim

Boulder County, Colorado

Tungsten

R. L. Bolmer, Mining Engineer
Bureau of Mines

August 24, 1953

Reviewed by
DMEA OPERATING COMMITTEE
11-6-53
(date)

DMEA 2650
Contract Idm-E415

J. L. McBROOM AND L. R. ALLEN
HALLIE "A" CLAIM
BOULDER COUNTY, COLORADO

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DMEA 2650
Contract Idm-E415

J. L. McBROOM AND L. R. ALLEN
HALLIE "A" CLAIM
BOULDER COUNTY, COLORADO

FINAL ENGINEERING REPORT

By

R. L. Bolmer

SUMMARY AND INTRODUCTION

Certain exploratory work for tungsten at the Hallie "A" claim, Boulder County, Colo., as authorized under Exploration Project Contract Idm-E415, was completed June 23, 1953. Under the contract, the Hallie "A" vein was explored below surface sections which had been the source of earlier, small-scale production. No significant discovery of tungsten ore resulted from the program. Further exploration at the property was not recommended.

The short-form exploration contract provided for Government participation in the expense of the program on an established unit-cost basis. The actual work completed, in which the Government participated in the established unit cost, consisted of (1) preparing a surface site for the shaft collar and hoist house (2) raising a shaft 28 feet on the vein from a Lower Adit level to the prepared surface site (3) erecting a headframe and hoist house (4) sinking a shaft on the vein 77 feet below the Adit level, and (5) drifting 160 feet on the vein at a depth of 100 feet in the shaft. The total cost of the program, computed on the actual units of work completed at the prescribed unit price, subject to final review by the Contract Administration and Audit Division, was $12,000.00. Government participation in the cost of the program was 75 percent, or $9,000.00.

Contract work commenced in November 1952 and was pursued fairly continuously until the authorized units of work had been completed. The work was interrupted and delayed to some extent by weather conditions, a labor shortage, and the financial ability of the operators. The work was performed according to standard mining practice and with about average efficiency. The work completed, for which the Government participated in the established unit cost, was as authorized in the contract.

LOCATION AND OWNERSHIP

The unpatented Hallie "A" lode mining claim is in sec. 25, T. 1 N., R. 73 W., sixth principal meridian, Sugar Loaf Mining District, Boulder County, Colo. The property is 7-1/2 miles north of Nederland, Colo., via State Highway 160 (fig. 1). The claim is held through location by Norris G. Mitts of Pekin, Ill. Mitts originally sought exploration assistance on the property himself (DMA 2058) but later leased the property to James L. McBroom. The owner's application for assistance was withdrawn in favor of one submitted by McBroom and L. R. Allen, the operators under contract Idm-E415.

HISTORY AND PRODUCTION

The property reportedly was worked to a small extent during World War I and then abandoned. The Hallie "A" claim later was relocated and worked on a small scale in 1939-1940 and again in 1944-1945. Total production during these periods, wholly from the Upper Adit level, was approximately 119 tons averaging about 1.4 percent WO_3.

DESCRIPTION OF DEPOSIT

The Hallie "A" vein is a shear zone in the granite and gneiss country rock in which quartz and, to a minor extent, ferberite later were introduced. The zone consists of brecciated granite and gneiss with a filling of horn quartz and gouge. The vein strikes north-south, dips steeply to the east, and varies in width from a few inches to 3 feet. Its outcrop is obscured under a talus and boulder cover occurring at the foot of steep granite cliffs.

The development of the vein, including the exploration completed under the contract, is shown on figure 2. The Upper Adit exposed for approximately 180 feet along the zone a narrow streak of "peanut" ferberite. Two small ore shoots, apparently the only commercial showings along the adit, were stoped to the surface. The Adit and the two stopes probably are the source of the small production reported. The Adit is partly caved but mineral of a grade similar to that indicated by samples 123, 124, and 124A is reported to occur along the bottom of the drift and in an 8-foot winze below the drift.

The vein along the Lower Adit, some 33 feet below the Upper Adit, contains a few spots of low-grade siliceous mineral but for the most part, it is barren. This level was not extended to below the productive sections of the upper level; however, it is below the short winze in which ore was reported. In the breast, the zone is 2-1/2 feet wide and contains from 1/8 to 3 inches of horn ferberite which assayed 0.9 percent WO_3.

The vein exposed in the exploratory shaft steepened with depth, becoming nearly vertical some 30 feet below the Lower Adit. The zone did contain an occasional fragment of ferberite in the 77-foot section of the shaft below the Lower Adit but essentially it was barren.

A lower level drift, 67 feet below the Lower Adit, explored the zone for 160 feet north of the shaft. Along this section the zone was nearly vertical and contained from 1/2 to 3 feet of gouge, crushed wall rock, and quartz. For most of the distance it was barren or contained only an occasional fragment of mineral. Between 70 and 78 feet from the shaft and again between 114 to 119 feet, the zone contained brecciated fragments of siliceous ferberite over a maximum width of a few inches. Sampling of these showings indicated the mineral was not commercial.

WORK COMPLETED, EXPENDITURES UNDER CONTRACT

Initial work by the operators involved bulldozing a site on the surface adjacent to the portal of the Upper Adit for the collar of the shaft and for a small hoist building. The site was covered with large boulders which required a reduction in size in order to be moved by the dozer. Upon completion of the site, a raise was driven to the surface from the Lower Adit. For most of its distance, the raise was driven through unconsolidated material and required close timbering and lagging. After completing the raise, a headframe was erected at its collar, a small shelter building for the hoist was constructed, hoisting equipment installed, and track for waste disposal was laid.

The operators proceded to extend the shaft 77 feet below the Lower Adit level. The contract authorized 85 feet of sinking, including a 10-foot sump, below the Lower Adit, but the operators requested permission to sink no deeper than 77 feet and to establish the new level 67 feet below the Adit (100 feet below the shaft collar). Conditions then encountered did not warrant sinking deeper and permission was granted. The level drift was extended north from the shaft the authorized 160 feet.

Below the Lower Adit level, the ground was solid and little timber support was required. The level drift was not timbered and only wall plates and enough stulls to support the skids and ladderway were installed in the lower section of the shaft.

The lower workings made considerable water which necessitated constant bailing during the project. Shaft sinking was performed during the winter months. The water, both from seepage and that spilled during bailing, froze on the skids and ladderway and caused difficult operating conditions. Occasionally, during the winter months, the County Highway Department cleared the snow from the mine access road; there were periods, however, when the road was not open and the operation was isolated.

The operators attempted to contract the shaft sinking. What labor was available, however, was not dependable and the later phases of the program were completed by the operators themselves.

Apparently the operators were not financially able to undertake a project of this type. They anticipated that the Government participation in the established unit price alone would cover all the operational costs, including nominal wages for their own labor. Such

was not the case; actual costs to the operator probably equaled or slightly exceeded 100 percent of the established unit price. The operators had no reserve funds with which to finance their share of the expense. Even by furnishing their own labor at the project, the operators discovered that the Government participation alone would not finance both the operational costs of the project and their own living expenses.

Summary of Work Completed and Expenditures

Description	Units completed	Authorized unit cost	Total cost*
Preparation of surface site	job	$300.00	$ 300.00
Construction of hoist house	job	300.00	300.00
Erection of headframe	job	300.00	300.00
Raise shaft to surface	28 feet	60.00	1,680.00
Sink shaft below lower adit	77 feet	60.00	4,620.00
Drift on 100-foot level	160 feet	30.00	4,800.00
Total cost of project			$12,000.00
Government participation (75 percent)			9,000.00

*Subject to final review by the Contract Administration and Audit Division.

Two feet of authorized raising and 8 feet of authorized sinking were not completed. A total of $600.00 of the authorized contract amount of $12,600.00 was unexpended--Government participation $450.00.

CONCLUSIONS AND RECOMMENDATIONS

It is concluded that commercial grade ferberite on the Hallie "A" vein does not extend to any appreciable depth below the Upper Adit level. The mineral exposed along two short sections of the 100-foot level is siliceous and not considered to be of commercial grade or extent. The mineral indicated by exploration below the Lower Adit is

too insignificant to warrant a certification of discovery under the exploration project contract.

The mineral showings on the 100-foot level are below and may represent the projection of the small ore shoots mined from above the Upper Adit level. The operators requested funds to explore these showings by means of two short raises to be driven at a unit cost of $60.00 per foot. On the supposition that the steepening of the vein may have limited the downward extension of ore, the Defense Minerals Exploration Administration representatives, while not too favorably impressed, would have approved a single short raise from the lower level. The unit cost requested, however, was considered excessive and it was pointed out to the operators that approval of the proposed work necessarily would be delayed for 30 days or possibly more. As the operators did not possess necessary funds to keep the workings unwatered and maintain themselves for such a period, they withdrew their request and abandoned the property.

Further exploration from the 100-foot level is not warranted before the extension of ore to at least the depth of the Lower Adit level is confirmed. It was recommended to the owner of the property that his assessment would be most profitably spent in extending this level to below the productive sections of the Upper Adit. At best, only moderate reserves could be developed by such work; it would, however, determine whether ore extended to that depth and whether deeper development is warranted.

Ore shoots in this district often are very limited in extent. The extension of the Lower Adit level to below productive sections of the vein, as originally requested by the operators, would have been more practical exploration under this contract. A 50-foot extension of this level drift at a cost of about $1,500.00 would have proved or disproved the extension of the ore to moderate depths. Deeper exploration could have been authorized contingent upon the results of that work.

FILE COPY
SURNAME:

Chambers

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

OCT 23 1953

Mr. Donald T. Finch
DMTA Auditor
224 New Customhouse Building
Denver 2, Colorado

Re: J. L. Melbroom and L. R. Allen
(Hallie "A" Mining Company)
Idm-1415, DMTA-2650

Dear Mr. Finch:

Reference is made to your letter of October 19, 1953, concerning the release of a Report of Review covering the above-cited project. This Report has been accepted.

In this respect please refer to a letter addressed to Mr. King dated March 11, 1953, in regard to final payments of short form contracts which is self-explanatory. A copy of this letter is enclosed for your ready information.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Chief
Contract Administration
and Audit Division

Enclosure

WBorovies/wb
October 23, 1953

Copy to: Docket
Admr. Reading File
Mr. Chambers

FILE COPY
SURNAME:

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

Rudlich
MacGrir
Butin
McKone
Selfridge
Fitzsimmons

DEFENSE MINERALS EXPLORATION
ADMINISTRATION

Originator: T. L. Chapman
Ext.: 5285 Room: 3538

Approp.: 14X3923.970 - Working Fund - DMEA
Date: October 15, 1953

To: W. H. King, DMEA Executive Officer, Region IV, Denver, Colorado

Reurtt October 13, 1953, Contract Idm-E415, McBroom and Allen, Docket DMEA 2650. Work completed to date constitutes substantial compliance with contract. No formal termination agreement required.

G. C. Selfridge
Chairman, Operating Committee

TLChapman/ls
10/15/53

cc: Docket
Adm. Read. File
Confirm.-FT, Reg. 4
Oper. Committee
Code 400
R. W. Geehan, USBM
T. P. Thayer, USGS
Audits Division, Bur. Mines

SENT
OCT 15 1953
Clerical Service Section

R.C.S.
10-15-53

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

October 15, 1953

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Memorandum of Non-Discovery
Docket No. DMEA 2650 - Tungsten
Hallie "A" Mining Company
Boulder County, Colorado
Contract No. Idm-E415 (Issued from Region IV)

This Division hereby concludes that the work done on the subject property, as described under Exhibit "A" of the contract, has resulted in no discovery or development from which commercial production may be made.

Contract dated - October 6, 1953
Contract amount - $12,600.00; Government share (75%) - $9,450.00

The property consisted of one unpatented lode mining claim, the Hallie "A", recorded in Book 629, Page 292, Boulder, Colorado.

The work consisted of bulldozing surface site, constructing shaft house, erecting head frame, raising shaft 30 feet, sinking 85 feet and drifting 160 feet.

The target was to cut a vein at depth. Ore had been mined from an upper adit to surface.

The work completed was as follows: Bulldozing surface site, construction of shaft house, erection of head frame, raising shaft 28 feet, sinking shaft 77 feet, and drifting 160 feet, at a total cost of $12,000.00, leaving a balance of $600.00.

The work was carried out efficiently and at the unit costs as designated in the contract.

Inasmuch as the work completed constitutes substantial compliance with the requirements of the contract, formal termination is unnecessary.

No ore was found and there will be no certification of the project.

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

400

FILE COPY
SURNAME:

Rutledge
Martin
Rubin

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

October 15, 1953

MEMORANDUM

To: Administrator, DMEA

From: Iron and Ferro-Alloys Division, DMEA

Subject: Memorandum of Non-Discovery
Docket No. DMEA 2650 - Tungsten
Hallie "A" Mining Company
Boulder County, Colorado
Contract No. Idm-E415 (Issued from Region IV)

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No ore was found and there will be no certification of the project.

TLChapman/ls
10/15/53

cc: Docket
Adm. Read. File
Code 400
Oper. Comm.
FT, Region 4

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

R.C.S.
10-15-53

1-1027
(April 1946)

UNITED STATES
DEPARTMENT OF THE INTERIOR

AGENCY Bureau of Mines

Originator:

TELETYPE

Ext.: Room:

Appro.:
Date: October 13, 1953
Time:
No.:
To: C. Q. Mittendorf DMEA Washington, D. C.

Subject:

Reference Docket 2650, Contract Idm-E415, McBroom and Allen, Hallie "A" Mining Company. Work suspended leaving two feet raising, eight feet sinking, and funds in the amount of $600.00 unexpended. In the opinion of operator and Government further work not warranted. Please teletype authority for us to prepare termination by mutual agreement.

for W. H. King

Authorized:
Confirmation Copy

Sign original message and transmit to Room ..... in duplicate

U. S. GOVERNMENT PRINTING OFFICE 16—50915-1

Mr. C. O. Mittendorf
October 13, 1953
2:40 pm.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 13 1953

$8 235 BUR MINES 10-13-53 12-15 PM

C O MITTENDORF, DMEA

REFERENCE DOCKEYXXX DOCKET 2650, CONTRACT IDM1 E415, MC BROOM AND ALLEN, HALLIE " A" MINING COMPAMY. WORK SUSPENDED LEAVING TWO FEET RAISING, EIGHT FEET SINKING, AND FUNDS IN THE AMOUNT OF $600.00 UNEXPENDED. IN THE IXXX OPINION OF OPERATOR AND GOVERNMENT FURTHER WORK NOT WARRANTED. PLEASE TELETYPE AUTHORITY FOR US TO PREPARE TERMINATION BY MUTUAL AGREEMENT.

JOHN F SHAW FOR
W H KING

Denver, Colo.

OCT 13 3 08 PM
BUREAU OF MINE
MAIL ROOM
WASHINGTON, D.C.

Docket

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 9 1953

224 New Customhouse
Denver 2, Colorado

January 6, 1953

Memorandum

To: C. O. Mittendorf, Administrator

From: Executive Officer, Field Team, Region IV

Subject: Docket No. DMEA 2650, Contract Idm-E415, (Tungsten), McBroom and Allen (Hallie "A" mine), Boulder County, Colorado

Enclosed are two copies of a memorandum from Scott W. Hazen, Jr., Bureau of Mines Engineer, in reply to the letter dated December 11, 1952 from the Acting Chairman of the Operating Committee to the Executive Officer, Region IV.

John F. Shaw
John F. Shaw for
W. H. King

Enclosures

Copy retained 400

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
December 30, 1952

Mining Division
Date Rec'd.

DEC 31 1952

BUREAU OF MINES
Denver, Colorado

Memorandum

To: Executive Officer, Field Team, Region IV

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

Subject: DMEA 2650, Contract Idm-E415 (Tungsten), McBroom and Allen (Hallie "A" mine), Boulder County, Colorado

Please find enclosed the original and two copies of a memorandum from Scott W. Hazen, Jr., replying to Ernest William Ellis's letter of December 11, 1952, to you on the above docket.

Hazen was assigned to write the memorandum after he had consulted with Floyd D. Everett, who made the two original engineering reports on the project, as well as with R. L. Bolmer, who made the first inspection and established the starting point. Both of these engineers were involved in other work that made them unavailable for preparing the memorandum.

Apparently the claim map mentioned has not been forthcoming and, if one is required, McBroom and Allen should be notified.

W. M. Traver, Jr.

W. M. Traver, Jr.

enclosures

WMT/cb

cc WHKing (2)
E415
DMEA Chron

Region IV

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Building 20, Room 137
Denver Federal Center
Denver 14, Colorado
December 30, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 9 1953

GCS
1/12/53

Memorandum

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

From: Scott W. Hazen, Jr.

Subject: DMEA 2650, Contract Idm-E415 (Tungsten), McBroom and Allen (Hallie "A" mine), Boulder County, Colorado

Referring to the letter dated October 11, 1952, signed by Ernest William Ellis, Acting Chairman, Operating Committee, regarding the subject mine, the following reasons are listed for favoring the shaft versus the winze:

1. The operator and applicant preferred the shaft method.

2. The winze would require station cutting for the hoist and service area.

3. Underground hoisting would require compressed air hoist power which, in turn, requires much more compressor capacity than is now available. The larger compressor capacity would require about 5 gallons of gasoline per hour as against about 1 gallon per hour for a surface hoist powered by gasoline.

4. If the winze had been selected it would require 20 to 25 feet of "head" room for timbering, sheave wheel, hoisting overwind or safety leeway so the bucket would not be pulled into the sheave, cable clamps and bight for attachment to bucket, and for bucket and dumping apron above car height at drift level. This footage is essentially equivalent to the distance between the tunnel level and the surface. It would be sufficiently close to "hole" into overburden and the larger boulders above the winze site.

5. The underground hoist would require the hoistman to remain at the hoist and necessitate a trammer to move the hoisted rock to the dump.

6. The shaft will allow the hoistman to handle the short tram to the dump and eliminate the cost of the trammer.

7. Natural ventilation through the shaft will be better than through the winze located underground.

8. The ore in the upper tunnel is found within a short distance of the shaft. Drifting footage will be almost the same from the shaft as drifting both ways from the bottom of the winze to the limits of mineralization.

9. The winze would possibly be put down on ore, but it would require pillars left in ore to protect the winze from caving. The shaft, located on the edge of mineralization, will require pillars but they will be in waste and all the ore found can be mined.

10. Although the "raising" cost for the portion of the shaft between the first level and surface may seem high, it is believed to be less than holing the winze headroom into an inaccessible area under the cliff face.

Inasmuch as the lower tunnel encountered ore in the last 45 feet, the shaft is only 15 feet from this first showing of ore. This appears to be indicative of a rake to the south, but it is not definitely established from the evidence available.

The scales were inadvertently omitted from the two sketch maps. The correct scales, as noted, are 1 inch = 300 feet for figure 3, and 1 inch = 50 feet for figure 4.

Scott W. Hazen, Jr.
Mining Engineer

SWH/cb

cc WHKing (2)
E415
DMEA Chron

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

224 New Customhouse
Denver 2, Colorado

December 19, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
DEC 22 1952

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, Field Team, Region IV

Subject: Form MF-104, DMRA Docket 2650, Contract Idm-R415 (Tungsten) James L. McBrown and L. R. Allen (Hallie "A" Claim) Boulder County, Colorado

Enclosed are two copies of the Operator's Monthly Progress Report MF-104 and 104a, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data for the month of November, 1952, pertaining to DMRA Docket 2650, Contract Idm-R415, James L. McBrown and L. R. Allen.

John F. Shaw
John F. Shaw for
W. H. King

Enclosures

400

FILE COPY
SURNAME:

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

BS

Martin
Selzer
Mattendorf

DEC 11 1952

Mr. W. H. King
Executive Officer, Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA 2650 - Tungsten
McBroom and Allen
Mallie "A" Mining Claim
Boulder County, Colorado
Contract No. Idm-M415

Dear Mr. King:

Our letter of October 9, 1952, returned to you three copies of the subject contract to which we had assigned the appropriate contract number at your request. At the same time we asked: "Would it have been more feasible to sink an exploratory winze between the two stopes on the No. 1 adit level rather than sink the shaft to the south and then drift in under the same area?"

Although we have received no reply to the above inquiry, we received on November 24, 1952, copies of your final report of August 22, 1952, covering the same project. The contract, on the "Short Form," allows, among other items: "Raising shaft 30 feet at $60.00 per foot - - - - $1,800." According to the final report, "The $60.00 a foot for raising is allowed because of the unconsolidated material to be expected near surface, which probably will require heavy timbering." Inasmuch as DMEA has approved the contract as written, with its proposal to raise through unconsolidated material, we believe that, in addition to your usual careful supervision, particular attention should be given to the safety aspects of the project.

The final report adds that since June 1952 the upper adit has been made accessible and that the ore showings in that adit are encouraging. After reviewing Docket No. DMA 2058 (covering the application of Mr. N. G. Mitts, now the lessor), we note that the final report makes no mention of two previous items: (1) the winze from the upper adit, 8 feet deep, which reportedly had good ore in the bottom, and (2) the 2-percent ore said to be present in the floor of the upper

adit. Dependable information about the ore in winze and adit floor might give some indication about the rake, if any, of the ore body already stoped out above the adit level. Unless that ore body rakes strongly southward, we believe that our above comment of October 9, 1952, is still applicable.

We note that the plans appended to Mr. F. D. Everett's field report of August 18, 1952, show no scales. Possibly the scales should be 1" = 300' for fig. 3 and 1" = 50' for fig. 4. It will be appreciated if you will send us, promptly after it is made available to you, a copy of the claim map which, according to the same report, a Boulder County engineer has agreed to make.

Sincerely yours,

Ernest Wm. Ellis

ACTING Chairman, Operating Committee (WB)

Approved:

J. E. Hodges (WB)

Member, Bureau of Mines

A. R. Kinkel, Jr. (WB)

Member, Geological Survey

12-11-52

Copy to: Docket
Admn. Read. File
Field Team, Region 4
W. S. Martin
G. C. Selfridge
Oper. Committee
D. M. Lemmon, USGS
R. W. Geehan, USBM

WSMartin:ls 12/10/52

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 24 1952

224 New Customhouse
Denver 2, Colorado

November 17, 1952

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: 210

From: Field Team, Region IV

Subject: Final Report, DMEA Docket 2650 (Tungsten) McBroom and Allen, Boulder County, Colorado

Enclosed are four copies of the final report on the subject docket.

The contract has been signed and is in effect.

W. H. King
W. H. King

for Ogden Lewis
A. H. Koschmann

Enclosures

FILE COPY 400
SURNAME:

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

Selfridge
Chandler
Mutt

OCT 9 1952

Mr. W. H. King
Executive Officer, Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA 2650 - Tungsten
McBroom and Allen
Hallie "A" Mining Claim
Boulder County, Colorado
Exploration Contract Idm-E415

Dear Mr. King:

Returned herewith are three copies of the subject contract which has been given the number Idm-E415. These are for the Operator, the Field Team and the Regional Finance Officer.

Would it have been more feasible to sink an exploratory winze between the two stopes on the No. 1 adit level rather than sink the shaft to the south and then drift in under the same area?

Sincerely yours,

(signed) FRANK E. JOHNSON
(JHB)

Chairman, Operating Committee

Enclosures

GCSelfridge'lm
10/7/52

F.H. 10-9-52

Approved:

J. H. Hedges
(JHB)
Member, Bureau of Mines

Mayer
(JHB)
Member, Geological Survey

cc: Admn. Reading File
Docket
R. W. Geehan, USBM
D. M. Lemmon, USGS
Field Team Reg. IV
Operating Committee
G. C. Selfridge

BL

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 6 1952

224 New Customhouse
Denver 2, Colorado

October 1, 1952

REGISTERED 86915

Memorandum

To: C. O. Mittendorf, Administrator
Defense Minerals Exploration Administration

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA 2650 (Tungsten), Hallie "A" Mining Company

Enclosed are six copies of an Exploration Project Contract between the Government and the Hallie "A" Mining Company. All copies have been signed by the Government and the applicant. Please assign a contract number and return the required number of copies of the contract to this office.

W. H. King
W. H. King

Enclosure

RECEIVED
OCT 30 1952
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

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

OCT 6 1952

224 New Customhouse
Denver 2, Colorado

October 1, 1952

REGISTERED

Memorandum

To: C. O. Mittendorf, Administrator
Defense Minerals Exploration Administration

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA 2650 (Tungsten), Hallie "A" Mining Company

Enclosed are six copies of an Exploration Project Contract between the Government and the Hallie "A" Mining Company. All copies have been signed by the Government and the applicant. Please assign a contract number and return the required number of copies of the contract to this office.

W. H. King
W. H. King

Enclosure

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 28 1952

224 New Customhouse
Denver 2, Colorado

August 22, 1952

BE

Memorandum

To: Acting Administrator, Defense Minerals Exploration Administration, Attention: 210

From: Field Team, Region IV

Subject: Final Report, DMEA Docket 2650 (Tungsten), McBroom and Allen, Hallie "A" Claims, Boulder County, Colorado

Exploration assistance in the amount of $12,600 has been approved and the contract will be prepared by this office.

Four copies of the report will be forwarded you when the contract is signed.

The original and one copy of Form 3b is attached.

for John F. Shaw
W. H. King

A. H. Koschmann
A. H. Koschmann

Enclosures

Region 4 case.

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

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for John F. Shaw
J. H. King

A. H. Koschmann
A. H. Koschmann

Enclosures

cc WMTraver w/copy final report
AHKoschmann w/copy final report
Mining Div. w/copy final report
DMEA Final Report

DMEA Form 3b
(Revised)

DEFENSE MINERALS EXPLORATION ADMINISTRATION

CONTROLLED DOCUMENT
Revised Abstract

DMEA Docket No. 2650

Name of Applicant McBroom and Allen

Change:	From		To		
	III 1	☐	III 1	☒	8-22-52
	III 2	☐	III 2	☐	
	III 3	☐	III 3	☐	
	III 4	☐	III 4	☐	
	III 5	☐	III 5	☐	

Add:

II 7 $ 13,679.26

II 8 $ 12,600.00

II 8a % _____

Remarks:

Initials of person preparing sheet HMC

Date sheet prepared 8-22-52

17367

DMEA Form 3b
(Revised)

DEFENSE MINERALS EXPLORATION ADMINISTRATION

CONTROLLED DOCUMENT
Revised Abstract

DMEA Docket No. 2650

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	III 2	☐	III 2	☐	
	III 3	☐	III 3	☐	
	III 4	☐	III 4	☐	
	III 5	☐	III 5	☐	

Add:

II 7 $ 13,679.26

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II 8a % _____

Remarks:

Initials of person preparing sheet HMC

Date sheet prepared 8-22-52

17367

NOV 2 - 1952

Mining Division
Region IV

August 22, 1952

Memorandum

To: Field Team, Region IV

From: Acting Chief, Mining Division, Region IV

Subject: Final Report, DMEA 2650 (Tungsten), McBreen and Allen, Hallie "A" Claims, Boulder County, Colorado

Enclosed are the original and eight copies of the engineering supplement to cancelled DMA 2053 which is now DMEA 2650.

The examining engineer estimates the project can be completed for $12,600 and recommends that the loan be granted.

We concur in this recommendation.

for W. M. Ring

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE

11-26-52.
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Room 137, Building 20
Denver Federal Center
Denver 14, Colorado
August 20, 1952

Memorandum

To: Executive Officer, Field Team, Region IV

From: Chief, Colorado Branch, Mining Division, Region IV

Subject: RMMA 2690 (Tungsten), McBroom and Allen, Mallie "A" claims, Boulder County, Colorado - Revision and supplement to canceled RMA 2095

Please find enclosed the original and eight copies of the above-mentioned memorandum by F. D. Everett.

This is mainly a revision of a project approved by an examining team, September 1951, under docket RMA 2095.

Everett estimates the suggested work under the new application can be done for $12,600.00 and considers it to have the same favorable possibilities for delineating tungsten reserves as the original project. He recommends the loan on a 75 percent participation basis and I concur.

The brochure submitted with the Region IV Field Team's memorandum of instruction to make the examination is also enclosed.

W. M. Traver, Jr.

W. M. Traver, Jr.

Enclosures

WMT/mah

cc: 8
RMMA 2690
RMMA Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Region IV

Building 20
Denver Federal Center
Denver 14, Colorado

August 18, 1952

Memorandum

To: Chief, Colorado Branch, Mining Division, Region IV

From: F. D. Everett

Subject: DMEA 2050 (Tungsten), McBroom and Allen, Hallie "A" claims, Boulder County, Colorado - Revision and supplement to cancelled DMA 2058

The Hallie A claims (fig. 3) were revisited August 13, 1952, by the Bureau of Mines member of the Defense Minerals Administration examining team to obtain data from new work and to clarify a substitute project proposal by James L. McBroom to replace a loan application by Morris G. Mitts submitted under DMA 2058 in September 1951. The Mitts project was approved but he requested cancellation in favor of James L. McBroom and L. R. Allen who leased the property June 1, 1952. James L. McBroom's address is P. O. Box 3724, Route 2, Boulder, Colorado, and L. R. Allen's, Grand Junction, Colorado. A copy of the lease agreement is attached to McBroom's application. The Jane Rose claim shown on figure 3 is not owned by either Morris G. Mitts or James L. McBroom and, therefore, is not a part of the property.

Since June 1952, McBroom advanced the lower adit about 95 feet, the last 45 feet containing low-grade tungsten ore, and made the upper adit accessible. The ore showings in the upper adit were encouraging.

The revised proposal shown on figure 4 is:

1. Bulldoze a surface site for a shaft at about the same elevation as the upper adit dump,

2. Raise from the lower adit 30 feet to the surface,

3. Erect a headframe and an 8- by 12-foot building for sheltering the hoist, et cetera, and

4. Sink 85 feet, including a 10-foot sump, and drift 160 feet on the vein excluding about 10 feet of drifting allowed where the shaft intersects the two levels.

The applicant agrees to perform the above under a Defense Minerals Exploration Administration short form contract for the following project cost allowances:

Bulldozing surface	$ 300.00
Construct building (8 feet by 12 feet)	300.00
Erect headframe	300.00
Raise 30 feet at $60.00 per foot	1,800.00
Sink 85 feet at $60.00 per foot	5,100.00
Drift 160 feet at $30.00 per foot	4,800.00
	$12,600.00

The cost allowances are somewhat less than those estimated in the Norris G. Mitts application, but, according to Defense Minerals Exploration Administration Circular 21, estimates should be made close and, if possible, less than calculated costs. The $60.00 a foot for raising is allowed because of the unconsolidated material to be expected near surface which probably will require heavy timbering.

The Government participation in a $12,600.00 tungsten loan is 75 percent, or $9,450.00. The applicant, an experienced tungsten miner, states that he is able to finance his portion of the project. The project is estimated to require 12 months for completion; work will probably have to be suspended during January, February, and March.

The location of the claims as shown on figure 3 was taken from the engineer's interpretation of the Boulder County records. The applicant was unable to show the exact location of claim corners. The workings on the Hallie A claim were located by compass and tape traverse from the northeast claim corner of the June Rose patented claim which was pointed out on the ground by McBroom. Arrangements have been made by the owner with a Boulder County engineer to survey the claims as soon as possible.

The lease attached to the application is made out to McBroom and it will be necessary for him to furnish an assignment to the partnership. Mitts should be supplied with subordination forms for signature when the contract is drawn up.

F. D. Everett
F. D. Everett
Mining Engineer

Attachments

FDE/bam

cc 8
DMEA 2650

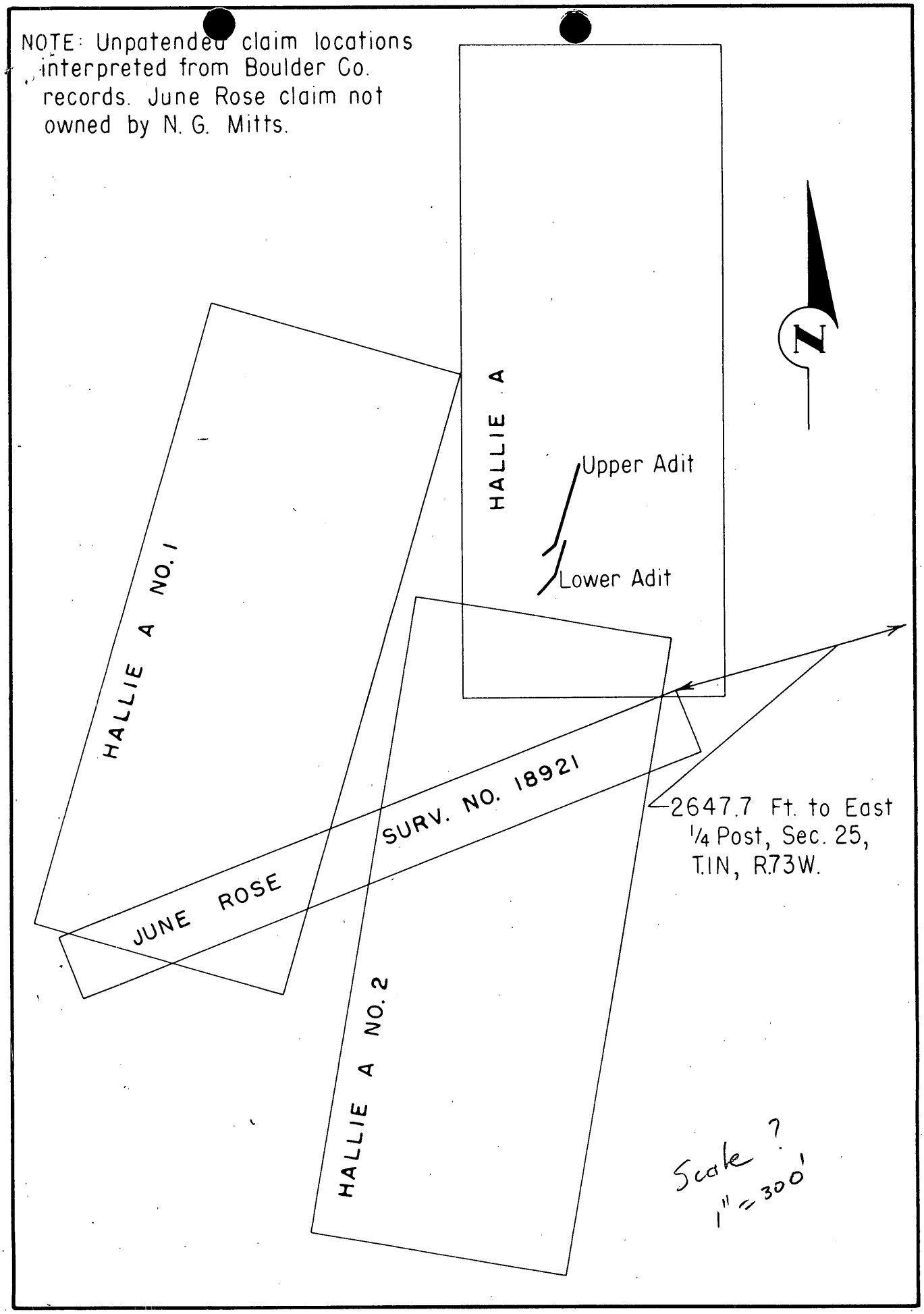
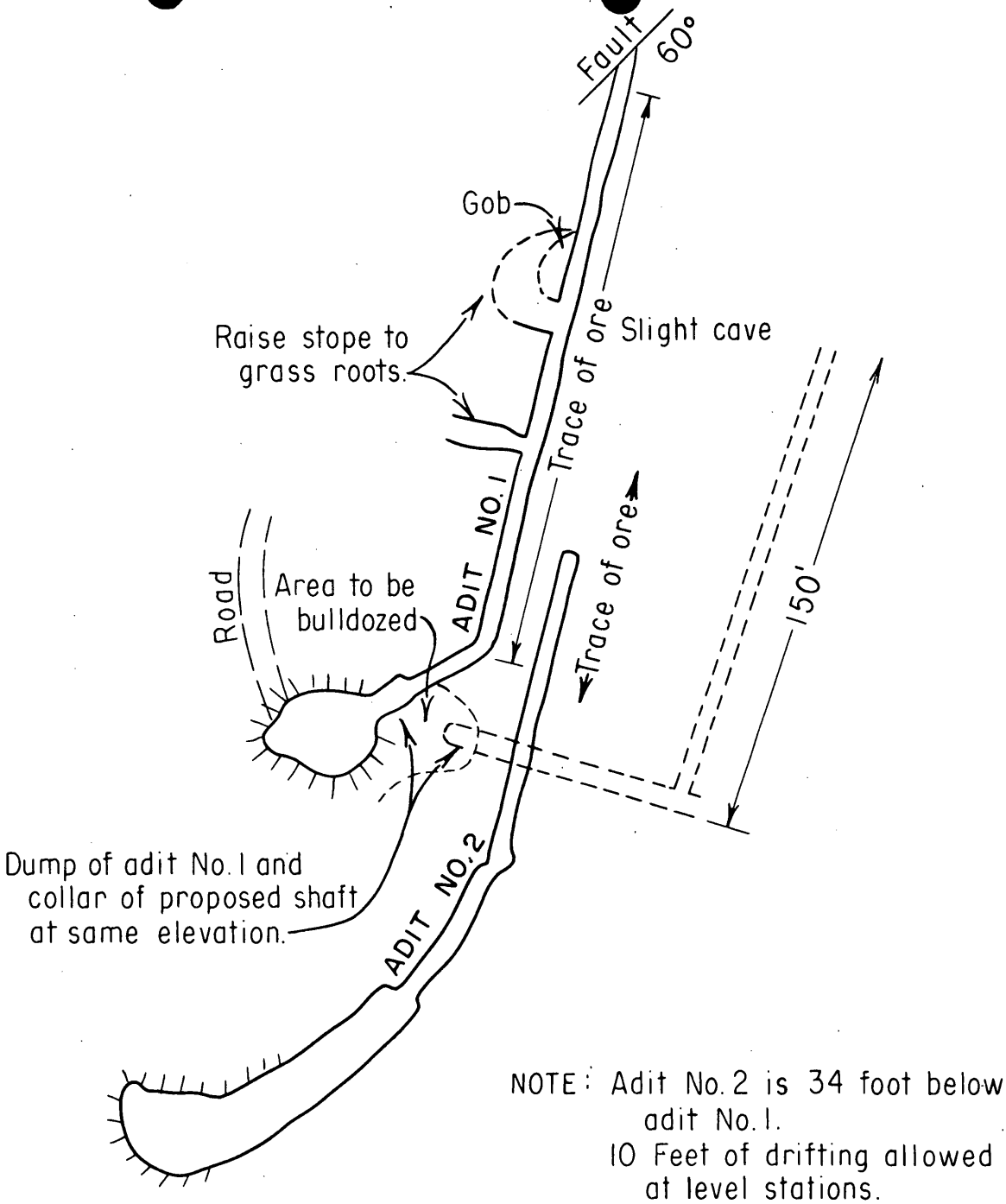


FIG. 3.- HALLIE A TUNGSTEN PROPERTY CLAIM MAP, BOULDER CO. COLO. D.M.E.A. 2650



Scale ?
1" = 50' (?)

FIG. 4. - HALLIE A. TUNGSTEN WORKINGS AND PROPOSED WORK, AUG. 1952 D.M.E.A. 2650

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

AUG 14 19

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-2650
Metal or Mineral
Date Received 8-14-52
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: James L. McBroom Box 372A Rt. 2 Boulder, Colo
L. R. Allen Grand Junction, Colo

(*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 Book recording No & other description Sec. 25 T1-73 Book no. 629, page 292 Corner no. 1 which is identical with center state on Claim known as Hallie A. thence 1500' X 17° W X S thence 600" 17° N X W thence 1500" 17° E X N thence 600" 17° S X E to place of beginning. Discovery tunnel is 300' from each side line, 200' from S boundary leaving 1300' along vein for development.

(*b*) State any mine name by which the property is known. Hallie A.

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

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

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

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

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

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

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

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

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

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

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

(*c*) The work will start within 5 days and be completed within 7 months from the date of an exploration project contract.

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

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

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

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

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

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

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

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

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

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

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

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

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

[X] Money [ ] Use of equipment owned by you [X] 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 July 31, 1952

James L McBroom
(Applicant)

By

L. R. Allen by J McB

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) Cross drifting tunnel approximately 30 ft, lower level to cut Hallie A Vein 130 ft With all producting facilities. Have driven this to Contact the Vein. The accessibilities of mine working is very good.

(b) It was a producer during the first World War and during the 1940's. From one to three percent vein.

(c) Bedded vein running in old workings to 3 ft. wide. Tungsten.

(d) Gravel road. distance to shipping 8 miles. Distance to supplies 25 miles. 8 or 25 miles to resident point.

(e) Have available manpower, materials supplies, equipment, water + power.

5.(d) Am a local miner, having leased mines, also worked in mines about 12 years in Boulder County.

Supervise own operations.

6.(a) none

(B) muckers @ 1.61 per hr.

Chucktender @ 1.61 " "

Hoistman @ 1.70 " "

Machine man @ 1.70 " "

Superviser @ 2.00 " "

Timberman @ 1.70 " "

Trackman @ 1.70 " "

Bookeeper @ $100.00 per mo.

(c) 2 pcs. 24" X 1" hep. collard timken Rod 9.10

2 pcs. 48" X 1" Collard timken Rod 12.20

2 " 72" X 1" " " " 15.30

Power is gasoline operated. Water is available & fuel is gasoline.

(d) Month lease rental on air Compressor plant, two stage. 150.00

Insurance Cost 3.00

State sales tax 3.00

One Month lease Charge on Gardner Denver light drifter drill Complete with all accessories 75.00

Insurance 1.20

6. Haistman @ 1.70 per hr	707.20
Muckers on shaft & Drift @ 1.61 per hr	1450.44
Chuck Tender @ 1.61	1450.44
Machine Man @ 1.70	1502.80
Timberman, Trackman, Compressorman @ 1.70	1502.80
Supervisor @ 2.00 per hr.	1768.00
Bookeeper & acc part time @ 100.00 per mo.	450.00
Rent for Compressor & Drill	934.80
Dynamite, Caps, fuse Carbide & Misc	931.58
Gasoline for Compressor also oils	988.40
New Change Room bldg. lumber & supp.	200.00
Rail Spikes, Nails	85.00
Rent on Hoist & equip. per mo. $70.00	350.00
Air Sinker & water pump (no rent, sell)	300.00
Track	95.00
Pipe & fittings	137.00
Bulldozing & excavating for shaft	200.00
Gasoline for Hoist	65.80
Compensation Insurance	270.00
Drill bits & sharpening	255.00
10 assays	35.00
Total	12,679.26

Calo. Sales tax 1.50

Purchase price on Compressor $290.00

Purchase price on drilling rig + drill 847.00

(f) 8X12 Change room bldg, lumber + material 200.00

(g) none

(h) none

7a) Yes

BOND AND LEASE

This agreement of lease made and entered into this 1st day of June, 1952, by and between NORRIS G. MITTS, of Pekin, Illinois, hereinafter called the lessor, and JAMES L. MC BROOM, of Boulder, Colorado, hereinafter called the lessee;

WITNESSETH that the lessor for and in consideration of the rents, royalties, covenants and agreements hereinafter expressed to be paid, kept and performed the lessee, has leased, let and demised, and by these presents does lease, let and demise unto the lessee the following described mining property and premises, situate in the Sugar Loaf mining district, Boulder County, State of Colorado, to-wit: Hallie "A" Mining Claim; Hallie "A" No. 1 Mining Claim and Hallie "A" No. 2 Mining Claim .

To have and to hold the above described premises for the purpose of mining, from the 1st day of June, 1952, to the 1st day of June, 1956, unless sooner forfeited or terminated through the violation of any of the covenants and conditions herein contained, with no power to assign this lease or any part thereof or to sublet the whole or any part of said leased premises without the written consent of the lessor first had and obtained.

The lessee in consideration of the premises has covenanted, contracted and agreed and by these presents does covenant, contract and agree to and with the lessor, his executors, administrators and assigns, as follows:

1. To enter upon said leased premises and to work the same in mine fashion in manner necessary to good and economical mining, so as to take out the greatest amount of ore possible, with due regard to the development and preservation of said mine or mining premises, as a workable mining property, and to the special covenants herein contained.

2. To work and mine said premises as aforesaid, steadily and continuously during the period of this lease and in doing said work to perform at least fifteen (15) shifts of mining labor per month each and every month during the life of this lease, provided however that excess shifts in any one month may be applied to other months during the lease.

3. To repair all old timbering wherever it may become necessary, and to well and sufficiently timber said mine and mining premises at all points where proper and necessary in accordance with good and safe mining; continuing the timbering in the working shafts now upon said premises with timber of the same dimensions as heretofore used, unless it becomes necessary for safety to use larger timber, in which event timbers of sufficient size for safety and permanent mining shall be used.

4. To allow the lessor or his agent from time to time to enter upon and descent into all parts of said leased premises, for the purpose of inspection, surveys or taking samples therefrom, and to render to said parties proper assistance in making such inspection, surveys or examination.

5. To occupy and hold as the property of the lessor all cross and parallel lodes, spurs and mineral deposits of every kind which may be uncovered, disclosed or discovered within said leased ground by the said lessee or any person or persons under or in privity with him, with privilege to said lessee to work and mine the same as part and parcel of said premises.

6. To keep at all times, the drifts, shafts, tunnels and other workings, thoroughly drained and clear of loose rock and rubbish, unless prevented by extraordinary mining casualty.

7. The lessor reserves the property and right of property in and to all ores extracted from said premises during the period of this lease, and the lessee covenants and agrees to pay and allow the lessor as royalty upon all ores mined, shipped or sold from said leased

premises in any manner during the life of this lease, as follows, to-wit: to mail to said lessor at 2511 Court Street, Pekin, Illinois or to any other address subsequently designated in writing fifteen (15%) per cent of the net smelter or mill returns along with a copy of the smelter or mill settlement sheet for each shipment.

All settlements to be made upon the smelter, mill or sampler net assay values, deducting therefrom only the actual cost of transportation and treatment.

8. The lessee shall and hereby does assume all responsibility in case of accident to said lessee or any of his employees in or about said property.

9. All taxes assessed against said demised premises for ores mined and shipped under this lease shall be prorated fifteen (15%) per cent payable by lessor and eighty five (85%) per cent payable by lessee.

10. Lessee is to comply with all laws of the State of Colorado with regard to Workmens Compensation and is to carry insurance in sufficient amount so as to cover all claims of compensation for injury or death resulting from labor of any kind in connection with this lease and is to abide by all mining rules, regulations and laws of the State of Colorado.

11. All bills and expenses incurred by the lessee or those in privity with him shall be promptly paid by the lessee, and by such prompt payment said lessee shall prevent the filing of any and all liens of miners, mechanics or materialmen, against said demised premises; and, if by reason of the failure of lessee to pay such bills or expenses, any lien or liens shall be filed against said premises the lessor may forthwith pay off and discharge the same, and the lessee holds himself bound to pay to lessor all sums so advanced or paid to clear said premises from liens which may be filed as aforesaid, and the lessor may also at his election declare a forfeiture of this lease.

12. Lessee further covenants that no person not in privity with the parties hereto shall be allowed to hold possession of said premises or any part thereof under any pretext whatever.

13. Further, that lessee will deliver to lessor quiet and peaceable possession of said demised premises in good order and condition with all drifts, tunnels and other passages thoroughly drained and cleared of loose rock and rubbish and said premises ready for immediate continued working, without demand or further

notice, on the 1st day of June, 1956, at noon, or any any time previous thereto, upon demand for forfeiture, and it is mutually understood that all machinery and tools which may be placed upon said premises by the lessee may be removed therefrom within ten days after the termination of this lease, provided, however, that no such tools or machinery shall be so removed while the lessee may be in any manner indebted to the lessor under any obligation incurred under this lease, and further provided thal all track shall be left in the mine together with one mine car.

14. Lessee agrees that no stopping will be done within twenty (20) feet of working shafts; that all working shafts shall be made four (4) feet by eight (8) feet in the clear and that all mining shall be done according to accepted mining practice.

15. Upon the violation of any covenant or condition herein contained, this lease shall at the option of lessor expire, and terminate, and the said premises with the appurtenances and all buildings and other improvements shall become forfeited to the lessor, and the lessor or his agent may thereupon, after demand in writing for possession, enter upon said premises and dispossess all persons occupying the same, with or without force, and with or without process of law, or at the option of the lessor the lessee and all persons found occupying said premises or any part thereof may be proceeded against as guilty of unlawful detainer.

Time is of the essence of this agreement, and each and every clause of this indenture and all the covenants and conditions contained herein expressed or implied shall extend to the successors, heirs, executors, administrators and lawful assigns of all of the parties hereto.

IN WITNESS WHEREOF, the parties hereto have hereunto subscribed their names the day and year first above written.

KNOW ALL MEN BY THESE PRESENTS, that NORRIS G. MITTS, of Pekin, Illinois, described as the lessor in the foregoing lease, party of the first part, is held and firmly bound unto JAMES L. MC BROOM, of Boulder, Colorado, described as the lessee in said lease, party of the second part, in the penal sum of Sixty Thousand ($60,000.00) Dollars, for the payment of which well and truly to be made, I hereby bind myself, my heirs, executors and administrators firmly by these presents.

WITNESSETH, my hand and seal this 1st day of June, A. D. 1952.

But the condition of the foregoing obligations is such that whereas the above bounden party of the first part has on this day agreed to sell to the party of the second part the following described mining property, to-wit: Hallie "A" Mining Claim; Hallie "A" No. 1 Mining Claim and Hallie "A" No. 2 Mining Claim, situate, lying and being in the County of Boulder in the State of Colorado; and being the same property embraced in the foregoing lease, which is simultaneously executed herewith upon the following terms: the sum of Sixty Thousand ($60,000.00) Dollars to be paid by party of the second part to the party of the first part on or before the 1st day of June, 1956, the above mentioned royalty payments not to apply to the purchase price.

Now if the said party of the second part shall well and truly make the aforesaid payments within the time above limited, the party of the first part will forthwith convey said property to the party of the second part by a good and sufficient mining deed, and will also furnish an abstract of title to said premises, certified by a competent abstractor, showing a good and valid title to said premises in NORRIS G. MITTS, free and clear of all liens and incumbrances at the time of said conveyance.

The further condition of this bond is that if by reason of the violation of any of the covenants or conditions contained in the foregoing lease said lease shall be forfeited under the terms thereof, then the forfeiture of said lease shall likewise operate to terminate this bond and to release the party of the first part from any further obligations hereunder.

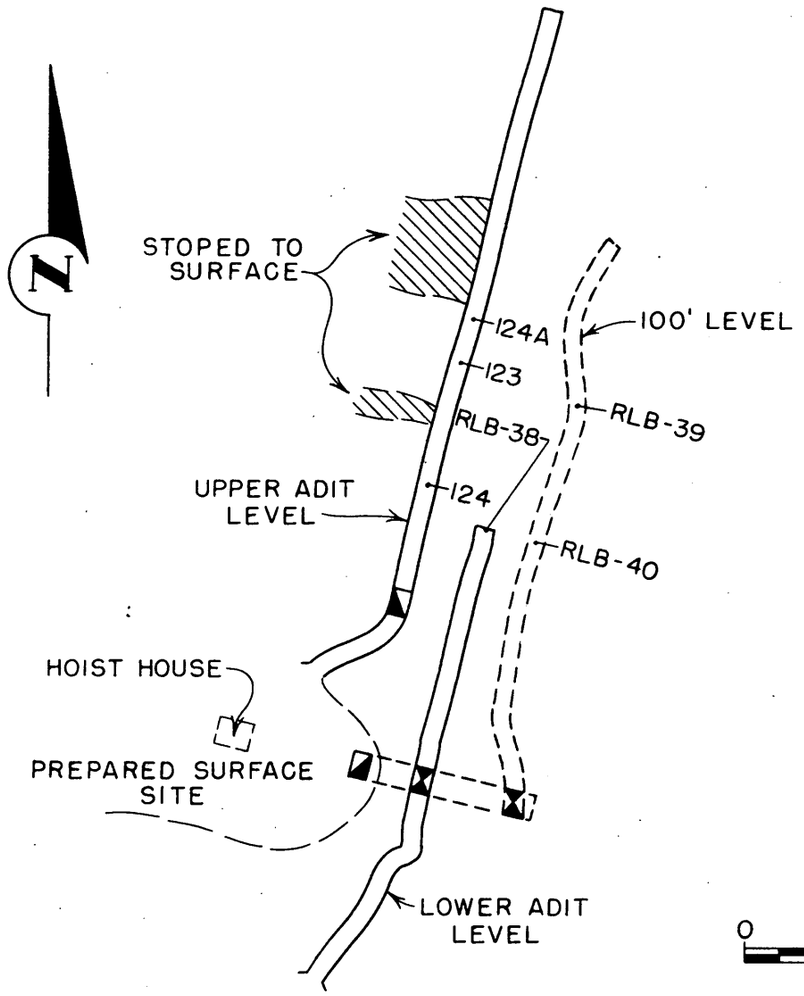
Now if the party of the first part shall well and faithfully perform the foregoing covenants and conditions then this obligation to be null and void, otherwise to remain in full force and effect according to the terms hereof.

IN WITNESS WHEREOF, the parties hereto have hereunto subscribed their names the day and year first above written.

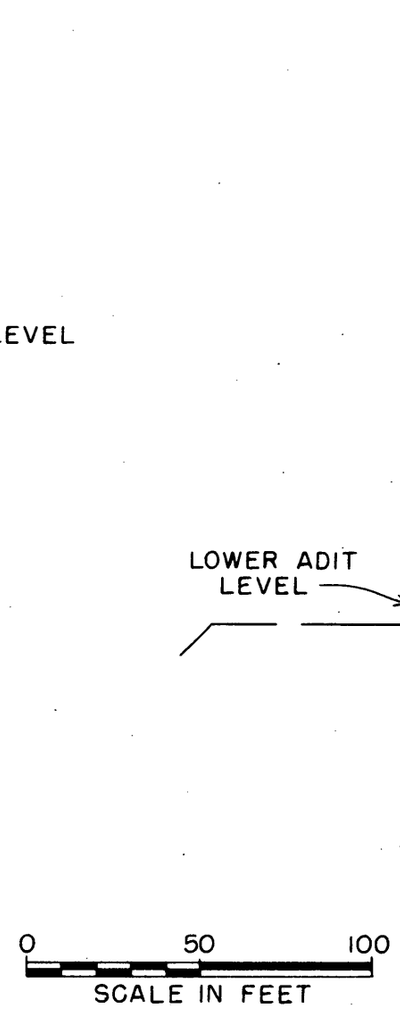
Morris G. Mitte
Party of the First Part

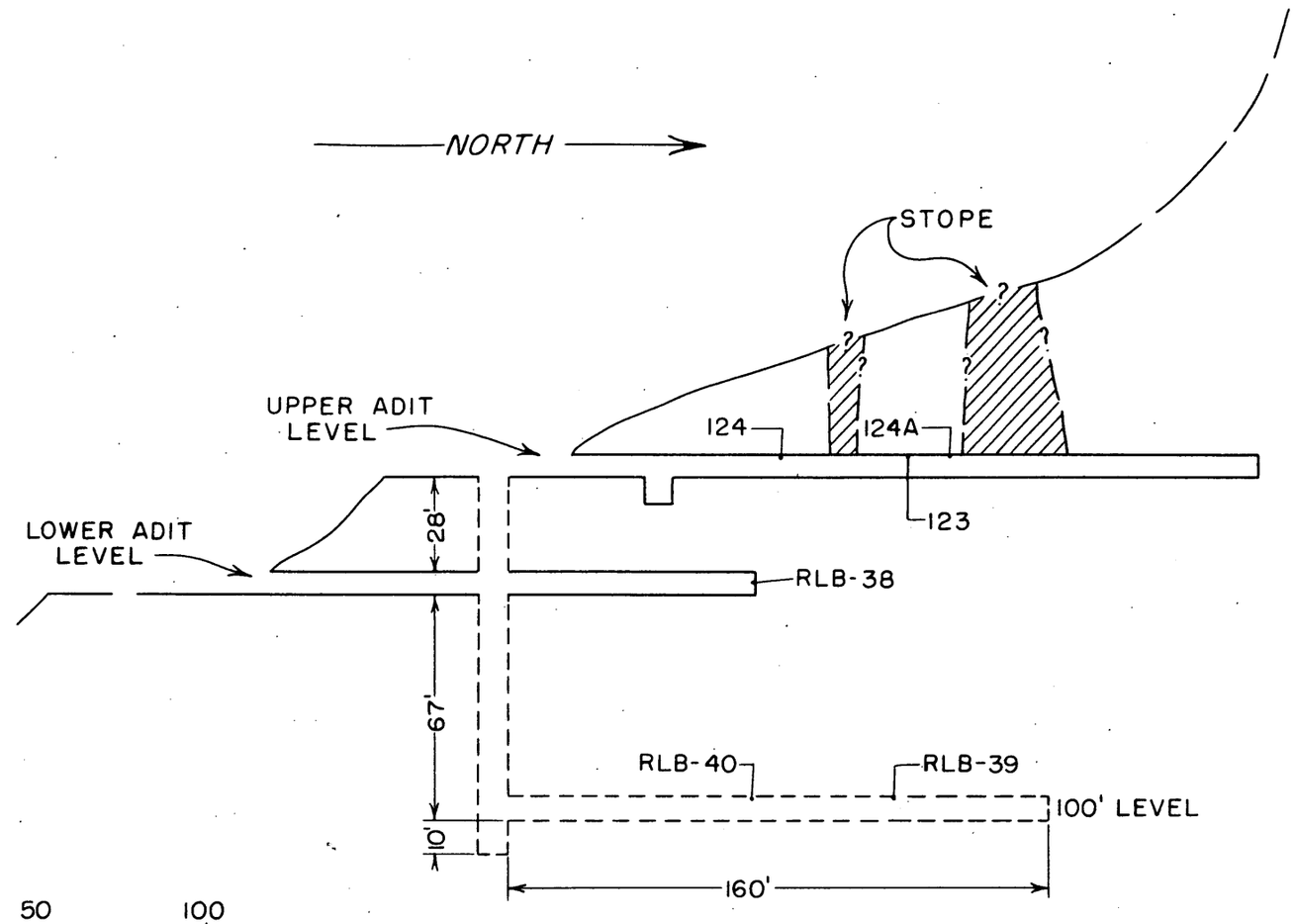
Emma L. McBroom
Party of the Second Part

S
New Drift cross-cut 135' 30' lower than old Drift
Proposed Drift
100'
Proposed Drift
35'
100'
W
E
Hole 115' Drift
Proposed Drift
A Joint
160' old Drift
N



PLAN





LONGITUDINAL SECTION

SAMPLE DATA

SAMPLE NO.	WIDTH OF SAMPLE (FEET)	ANALYSIS %WO_3
123	1.50	0.81
124	4.00	0.27
124A	2.00	2.82
RLB-38	0.25	0.90
RLB-39	1.00	1.00
RLB-40	0.75	1.20

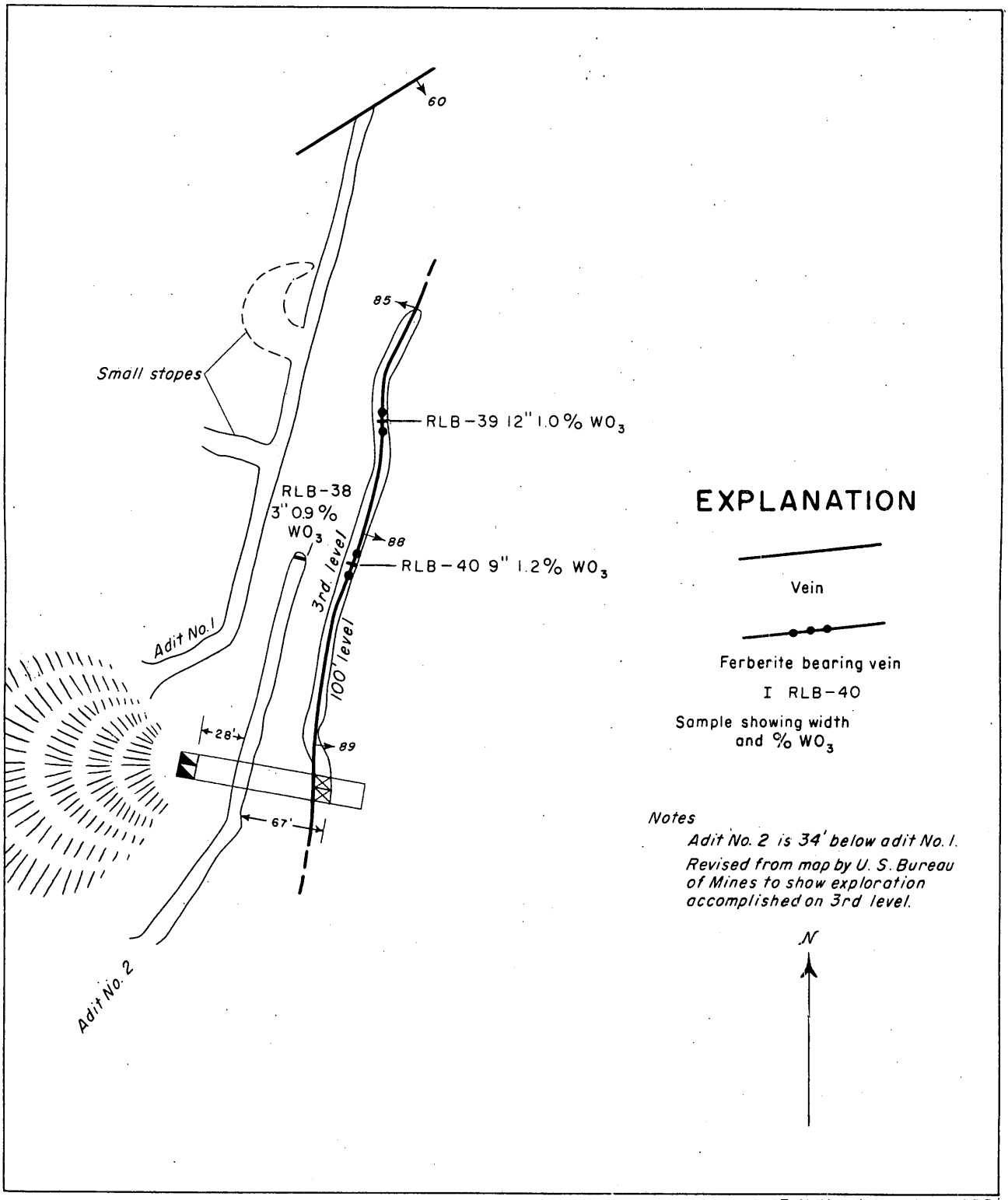
LEGEND

MINE DEVELOPMENT PRIOR TO 1952

EXPLORATION COMPLETED UNDER EXPLORATION PROJECT CONTRACT Idm - E415

MINERAL RESOURCES BRANCH - MINING DIVISION
REGION IV
BUREAU OF MINES

FIGURE 2 - PLAN AND SECTION OF HALLIE "A" MINE, BOULDER COUNTY, COLO. (DMEA 2650, CONTRACT Idm-E415)



E. N. Harshman July 1953

FIGURE 3—. GEOLOGIC PLAN OF HALLIE A MINE

50 0 50 100 FEET

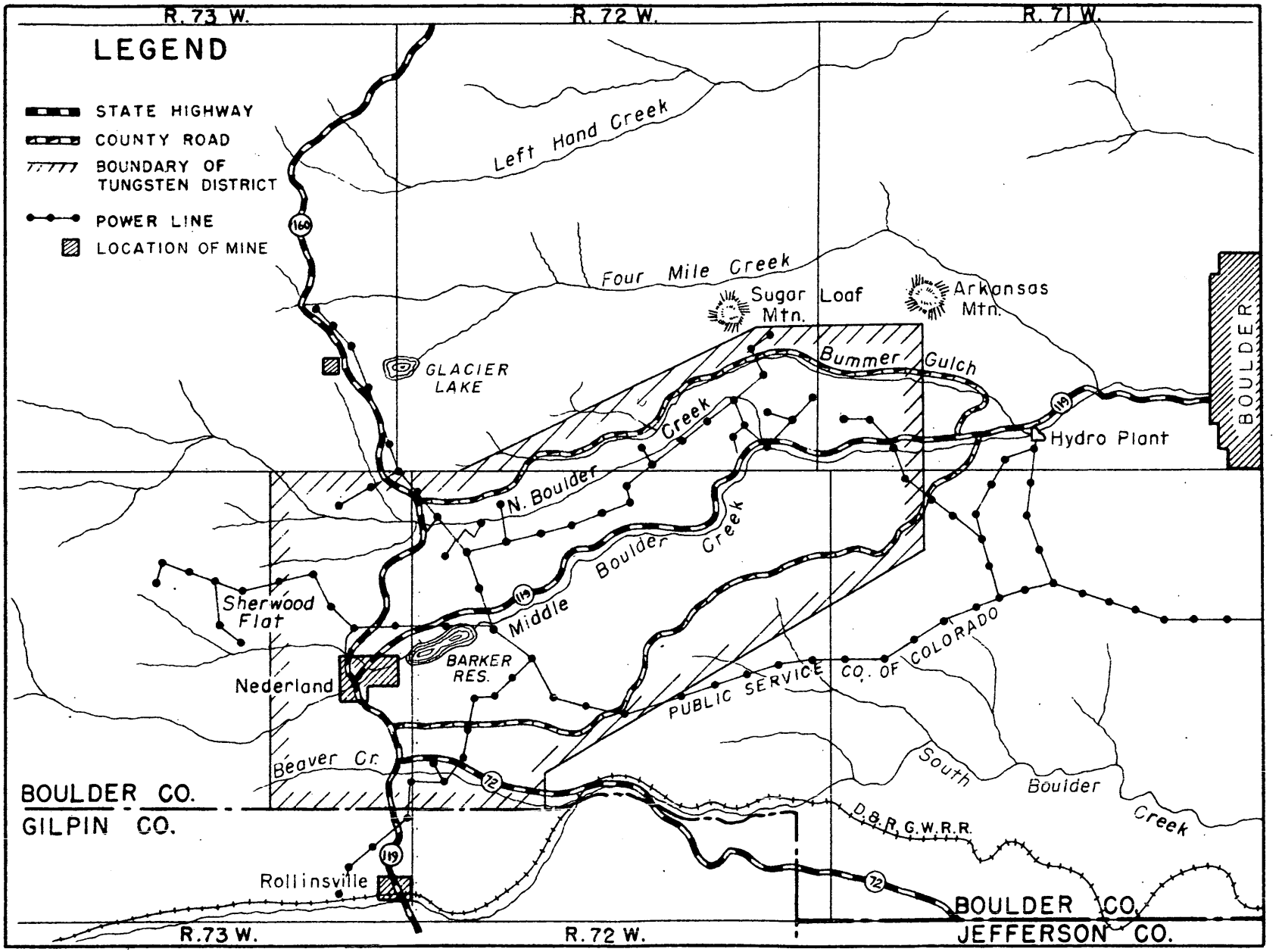


Figure 1.— Location Map, Hallie "A" Claim, Boulder County, Colo. DMEA 2650 Contract Idm-E115

1952
ALASKA

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