Extra copy

MF-200A
(Revised June 1954)

Docket No. DMEA 3075

Commodity Copper

Contract No. Idm-E 729

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
EXPLORATION PROJECT CONTRACT[1]
(Short Form)

It is agreed this 19th day of October, 1954 between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and [2] J. & M. Mining Company, a partnership composed of McMurrin Wulfenstein of 446 West 400 North, St. George, Utah, and James E. Wulfenstein of 171 East 300 South, St. George, Utah, whose mailing address is 446 West 400 North St. George, Utah, hereinafter called the "Operator," as follows:

ARTICLE 1. *This contract* is entered into under the authority of the Defense Production Act of 1950, as amended. It consists of this form (MF-200A), the attached Exhibit "A," Annex I, and

The Operator shall not transfer or assign this contract or any right thereunder without the written consent of the Government.

ARTICLE 2. *Operator's property rights.*—(a) The land which is the subject of this contract (hereinafter called "the land") is in the State of Arizona, County of Mohave, and is described in Annex I.[3]

(b) The Operator represents and undertakes that:

(1) The Operator is the [4] See Annex I of [5] in the land, in possession and entitled to possession for all of the purposes of this contract, under and by virtue of a [6] , [7] recorded in Book , page , official records of said County; and

(2) The Operator's right, title, or interest (whether as owner, lessee, or otherwise) is subject only to the following claims, liens, or encumbrances:

(c) The Subordination Agreement of the holder of any claim, lien, or encumbrance listed above, and (if the Operator does not hold the legal title) the Consent to Lien of any holder of the legal title of the land (lessor, seller, optionor, etc.), are attached, as follows: Subordination Agreement of the mortgagees and Owner's Consent to Lien of the lessors.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] Insert name, and if an organization, its nature (corporation and place of incorporation, partnership with names of partners, etc.).
[3] State on a separate sheet marked "Annex I" the legal description or enough to identify the property, particularly excluding any areas from which the production is not to be subject to the Government's percentage royalty.
[4] Insert "owner," "lessee," "contract purchaser," "locator," etc.
[5] Insert "the entire interest," "the mineral rights," "an undivided one-third," etc.
[6] Insert "deed," "lease," "contract," "location notice," "patent," etc.
[7] If not recorded, so indicate by inserting "un."

16—70619-1

(d) The Operator shall preserve and maintain his right, title, and interest in the land and his right to the possession thereof for the purposes of this contract, and shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of this contract. Until the lapse of the time within which the Government may make a certification of discovery or development without any such certification having been made, and after any such certification has been made, the Operator shall neither transfer, convey, nor surrender the land nor any right, title, or interest therein, nor permit nor suffer any claim, lien, or encumbrance thereon, without expressly referring to and providing in the instrument of conveyance, lien, or encumbrance for the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof. If the Government makes no certification of discovery or development within the time limited in Article 7, it shall thereafter have no claim against the land or any production therefrom except for any production referred to in Article 7(b)(1).

ARTICLE 3. *The exploration project.*—The project is a search for indicated or undeveloped deposits of copper. The work to be performed is described in Exhibit "A." The Operator on or before [illegible] days from date* shall commence the work, and on or before [illegible] months from date* (unless the Operator's obligation to complete the work is terminated—see Article 8) shall complete the work.

ARTICLE 4. *Performance of the work.*—(a) *Operator's responsibility.*—The work shall be performed with reasonable diligence, efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for liability insurance covering employment; and with suitable and adequate equipment, facilities, materials, supplies, and labor, to bring it to completion within the time fixed.

(b) *Government may inspect.*—The Operator shall consult with and inform the Government on all phases of the work as it progresses. The Government may enter at all reasonable times to inspect the work under the contract, and also after a certification of discovery or development to inspect production operations and underground workings. The operator shall provide the Government with all reasonable means of access for such inspections.

ARTICLE 5. *Contribution by the Government.*—A fixed cost for each unit of work to be performed (per foot of drifting, per foot of drilling, per hour of operations, etc.) is hereby agreed upon, and is set forth in Exhibit "A" in connection with the estimated total cost of the project in the sum of $27,060.00. The Government will contribute 50 percent of the fixed unit costs as work is performed, in a total sum not in excess of $13,530.00: *Provided,* That until the Operator has rendered to the Government his final report, and any final 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 10 percent of the estimated total cost of the work. The Government will make its contribution on the basis of the monthly vouchers referred to in Article 6(b), but all payments by the Government are provisional only, subject to audit, until the account between the Operator and the Government is finally audited and settled. To the extent that excesses over fixed unit costs or any excess over the estimated total cost may be necessary for the performance of the work, the Operator shall incur and pay such excesses for his own account without contribution by the Government. The Government may make payments directly to independent contractors and suppliers for the account of the Operator rather than to the Operator.

ARTICLE 6. *Reports, accounts, audits.*—(a) *Operator's records.*—The Operator shall keep suitable records and accounts of the units of work performed and of any production in which the Government may have an interest; and shall preserve those with respect to work performed for at least three years after final payment by the Government, and those with respect to production for at least three years after any obligation to pay royalties to the Government has terminated. The Government may inspect and audit said records and accounts at any time, either by itself or by a certified public accountant. The Comptroller General of the United States or his representative, until the expiration of said three-year periods, shall have access to and the right to examine any pertinent books, documents, papers, and records of the Operator. All of the Operator's vouchers and records and accounts relating thereto and the Government's payments thereof remain subject to adjustment until final audit by the Government.

(b) *Progress reports and vouchers.*—The Operator shall provide the Government with five copies of monthly progress reports in three sections as follows: (1) Operator's Monthly Report and Voucher showing a detailed statement of units of work performed during the reporting period; (2) Operator's Unit Cost and Progress Report showing the various types of work performed during the reporting period and the fixed unit costs incurred for each type of work; and (3) a Narrative Report of the work

* The word "date" means the date of the contract.

performed during the reporting period including adequate engineering-geological maps or sketches, drill hole logs and locations, and assay reports on samples taken concurrently with advance in mineralized ground. (Forms for reporting under (1) and (2) above will be provided by the Government.)

(c) *Final report.*—Upon completion of the work or termination of the Government's obligation to contribute to costs, the Operator shall furnish the Government with five copies of a final report (in addition to the final progress report and voucher). This final report shall include a geological and engineering evaluation of the results of the work performed under the contract with an estimate of the ore reserves resulting from such work, complete assay data, adequate geological and engineering maps or sketches, and a summary of the work performed and the unit costs thereof.

(d) *Report of sales.*—The Operator shall provide the Government with suitable accounting and documentary evidence covering all production to which the Government's percentage royalty relates, such as copies of smelter or concentrator settlement sheets, and certified accounts of production and sale or other disposition of production.

(e) *Compliance with requirements.*—If in the opinion of the Government any of the Operator's reports, records, or accounts are insufficient or incomplete, or if the Operator fails to make them, the Government may procure the making or completion of such with suitable attachments as an expense of the work to which the Operator shall contribute. The Government may withhold approval and payment of any vouchers relating to insufficient or incomplete reports, records or accounts.

ARTICLE 7. *Repayment by Operator.*—(a) *Certification.*—If the Government considers that a discovery or development from which production may be made has resulted from the work, the Government, at any time not later than six months after a sufficient final report and final account (see Article 6) has been rendered, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development.

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

(c) *Basis for computation.*—The Government's royalty shall be a percentage of the gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrates, metal, or equivalent), at the point of delivery (the f. o. b. point); *except,* that charges of *the buyer* arising in the regular course of business, and shown as deductions on the buyer's settlement sheets, on account of the cost of treatment processes performed by *the buyer,* sampling and assaying to determine the value of the production sold, and freight paid by *the buyer* to a carrier (not the Operator), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. Any costs of treatment processes, sampling or assaying, or transportation, performed or paid by the Operator or by anyone other than the buyer, are not deductible in arriving at the "gross proceeds" as that term is here used. The term "treatment processes," as here used, means those processes (such as milling, concentrating, smelting, refining, or equivalent) applied to the crude ore or other production after it is extracted from the ground, to put it into a commercially marketable form; excluding fabricating or manufacturing.

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

(e) *Percentages of royalty.*—The percentages of the Government's royalty shall be as follows:

One and one-half (1½) percent of amounts ("gross proceeds" or "value") not in excess of eight dollars ($8.00) per ton of production in the form in which sold, held, or used, plus one-half (½) percent for each additional full fifty cents ($0.50) by which such amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) percent of such amounts.

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

(f) *Time for computation and payment.*—The Government's royalty shall be computed and paid currently upon each lot sold, held, or used in integrated operations, as the case may be, as above provided in this article.

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

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

(i) *No obligation to produce.*—Nothing in this contract is to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any production operations.

(j) *Government not obligated to buy.*—Nothing in this contract shall be construed as imposing any obligation on the Government to purchase any minerals mined or produced from the land.

ARTICLE 8. *Termination of the Government's obligations.*—(a) If in the opinion of the Government operations at any time have failed to achieve anticipated results that indicate the probability of making a worthwhile discovery, and in the opinion of the Government further operations are not justified, the Government may give the Operator written notice thereof, and thereupon the Government shall be free of all obligation to pay on account of units of work not then performed, and the Operator shall be free of all further obligation to prosecute the work other than such as may be necessary and incidental to winding up, reporting, and accounting.

(b) If in the opinion of the Government the Operator is in any manner in default under the terms of the contract, the Government may give the Operator written notice of such default with a specification of reasonable time within which the default must be cured; and if the Operator fails to cure such default as required, thereupon the Government shall be relieved of all obligation to pay on account of units of work not performed when the notice was given, and the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to winding up, reporting, and accounting. The remedy provided for the Government in this paragraph "(b)" is in addition to any other remedy provided in this contract, and in addition to any other remedy the law may provide for breach of contract.

(c) The giving of any notice by the Government under the provisions of this Article 8 shall not affect the Government's rights as provided for in the contract with respect to a percentage royalty, and such rights shall be fully preserved.

ARTICLE 9. *Notices to be given by the Government* may be delivered to the Operator, or may be sent by registered mail addressed to the Operator at his mailing address stated in this contract. If mailed, notices are deemed to have been delivered five days after the date of mailing.

ARTICLE 10. *Officials not to benefit.*—No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 11. *Changes and added provisions.*—

Executed in sextuplicate the day and year first above written.

J. & K. LEASING COMPANY
(Operator)

By ..... (Partner)

..... (Partner)

THE UNITED STATES OF AMERICA

By C. O. Mittendorf
Administrator, Defense Minerals Exploration Administration

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—70618-1

EXPLORATION PROJECT CONTRACT
J. & M. LEASING COMPANY
DOCKET NO. DMSA-3075

ANNEX I

The land referred to in Article 2 of the contract consists of the following unpatented mining claims which were leased (three-fourths interest) by Mary Etta Cox, V. Lorraine Cox, Anna C. Cox, Kenneth Cox, and Anna F. Cox, to Lorin Whitmore, L. O. Whitmore, and Gale Whitmore by an instrument dated February 2, 1949, and subleased by the Whitmores to the Operator by an instrument dated June 29, 1952:

Cox and Rogs Mine Claim, recorded on page 285 of Book 3-W;

Cox and Rogs Mine Claim No. 1, recorded on page 286 of Book 3-W;

and also the following unpatented mining claims which are owned by the Operator:

Copper Mountain No. 1, recorded on page 53 in Book 4-D;

Copper Mountain No. 2, recorded on page 54 in Book 4-D;

Copper Mountain No. 5, recorded on page 57 in Book 4-D;

Copper Mountain No. 6, recorded on page 58 in Book 4-D.

All of the cited unpatented mining claims, are recorded in the Office of the County Recorder of Mohave County, at Kingman, Arizona. Such claims are shown on the attached map entitled "Claim Map, Copper Mountain Mine, Mohave County, Arizona."

EXPLORATION PROJECT CONTRACT
J. & M. LEASING COMPANY
DOCKET NO. DMEA-3075

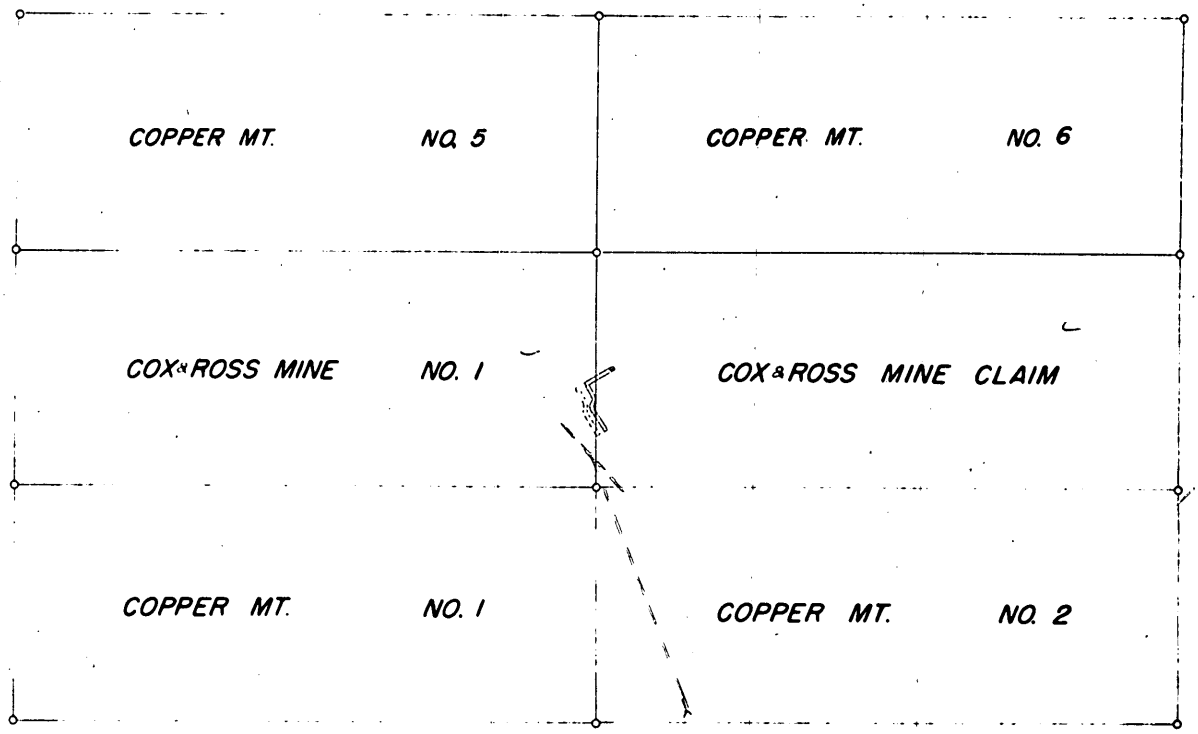
EXHIBIT "A"

Description of the Work

The purpose of the project is to explore for copper ores. The work is to consist of approximately 900 feet of drifting and crosscutting to intersect and explore the vein. Such work is roughly indicated on the attached map entitled "Topographic map Compiled by A.E.C. Copper Mt. Mine, Mohave County, Arizona." The exact location of the work is subject to the advance approval of the Government.

Fixed Unit Costs

900 feet of crosscutting and drifting @ $30.00/ft.	$27,000.00	
40 assays @ $1.50/each	60.00	
Estimated Total Cost of Project		$27,060.00
Government's Participation @ 50%		$13,530.00



U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

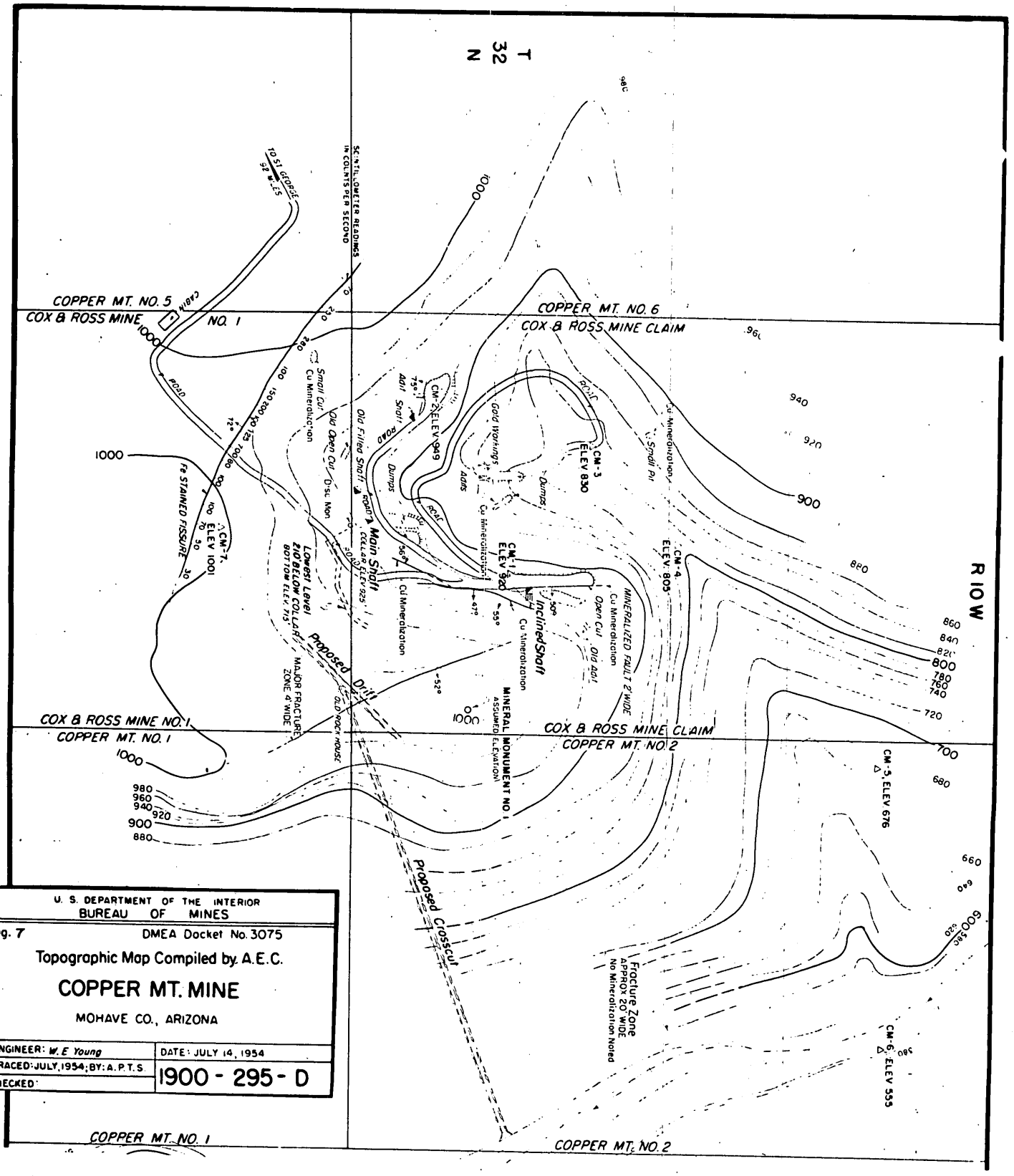
Fig. [redacted] DMEA Docket No. 3075

Claim Map

COPPER MT. MINE

MOHAVE CO., ARIZONA

ENGINEER: W. E. Young	DATE: JAN. 31, 1954
DRAWN: JAN., 1954; BY: A. P. T. S.	1900 - 277 - D
CHECKED:	



U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Fig. 7 DMEA Docket No. 3075

Topographic Map Compiled by A.E.C.

COPPER MT. MINE

MOHAVE CO., ARIZONA

ENGINEER: W. E. Young	DATE: JULY 14, 1954
TRACED: JULY, 1954; BY: A. P. T. S.	1900 - 295 - D
CHECKED:	

Please duplicate and send the copies to Dave Shearer, 155 S., 100 W., 8814, Hurricane, Utah 84737. He will pay the bill.

Return the originals to: Thor Kilgard 1565, 904 W. Riverside Rm 202, Spokane, WA 99201.

Thor Kilgard

Thor H. Kiilsgaard
U.S. Geological Survey
W. 904 Riverside Ave.
Spokane, WA 99201-1087

April 20, 1998

David Shearer
155S, 100W, 8814
Hurricane, UT, 84737

Dear Dave:

At your telephoned request, I am having certain DMEA information on DMEA Docket 3075, which concerns the Copper Mtn. mine, Mohave Co., Arizona, sent to you. The docket file is extensive and contains many different documents. Those that appear pertinent are being duplicated and sent to you by the local Abadan Duplicating Co. By agreement, you will pay Abadan for duplicating and mailing costs.

Normally, in instances of requests for information on a mining property that has been involved in DMEA activity, the U.S. Geological Survey requires a release authorization letter from the concern that conducted the DMEA operations, or from the present owner of the property. We are waiving such a request in the present instance because the concerned property consists of unpatented claims on government land that has been withdrawn from mineral entry.

The DMEA file is complex and, as I understand you are a student primarily interested in the history of the mine, I shall try and help you by reviewing the various procedures that were involved.

The J and M Leasing Co. (which was essentially James and McMurrin Wulfenstein) submitted an application to DMEA (Defense Minerals Exploration Administration) in November, 1953 to explore the Copper Mtn. mine for uranium. Under the DMEA program, the government paid 90% of the exploration costs on DMEA contracts that explored uranium-bearing properties, whereas it paid only 50% of the costs of a contract that explored for copper. This difference led to applicant identification of many prospects as uranium properties, when, in fact, there were few uranium minerals at the prospect site, as was the case at the Copper Mtn. property.

A rather elaborate exploration program was proposed by the J and M company. It consisted of shaft rehabilitation, further shaft sinking, crosscutting, and drifting on the mineralized structure. The proposed work is shown on the AEC surface map, which accompanies the Field Team (Bureau of Mines-Geological Survey) report. Cost of the work was

estimated at $84,508.00. Most of the mine workings, and the area to be explored, was on the Cox and Ross and the Cox and Ross No. 1 claims (see Topographic Map), which the applicant held by lease. Adjoining were the Copper Mt. claims, which the applicants reportedly held by right of location (see Claim Map).

For leased property held by an applicant, DMEA required a Subordination Agreement, signed by the owners, which subordinated the property to be explored by the applicant. In the case of Copper Mtn., J and M Co., working through their attorneys, were able to get subordination from people who held 3/4th ownership of the property, but not from those who held the remaining 1/4th ownership. Many letters and legal documents in the file concern this matter, in which the government finally agreed that the 1/4 interest subordination could be waived.

The subordination matter delayed processing of the exploration application but DMEA administrators in Washington D.C. finally requested the Field Team, which was headquartered in Denver, Co., to make a field examination of the Copper Mtn. property. This examination was made by W.E. Young, Bureau of Mines, and C.G. Tillman, Geological Survey, on December 1, 1953. The two men wrote separate reports, but submitted joint recommendations. Both men recommended that a DMEA contract be granted to the applicant.

Subsequent review of the application and the Field Team report by Bureau of Mines engineers and USGS geologists in Washington D.C. (Johnson and Butler) led to a proposed modification of the applicants exploration project. Rather than explore through the shaft, a cheaper and more efficient exploration adit was proposed to be driven from the hillside below the old workings (see Topographic Map). Cost of this proposed work was estimated at $27,060. Also, field investigation revealed the property to have been worked primarily for copper and that little uranium was present.

Review of the modified exploration proposal resulted in a Supplemental Engineering Report by W.E. Young, and a USGS report by R.W. Osterstock. Both Field Team reports approved the modified plan. A letter from Stephan Wilson, dated July 15, 1954, discusses the matter.

A problem that concerned all who had been involved in processing the J and M application was the validity of the Copper Mt. claims. These claims were contiguous to the Cox and Ross claims and were filed on Lake Mead Recreation Area lands that had been withdrawn from mineral entry. The need for validation of the claims was noted in Administrator C. O. Mittendorf's letter of March 10, 1954 to the applicant. The matter also is discussed in Osterstock's letter of November 9, 1954, and in Executive Officer W.R. King,s

letter of October 22, 1954 to the applicant. The problem was particularly pertinent because the adit proposed in the modified exploration project would be chiefly in the Copper Mt. No. 2 claim.

A DMEA contract, for copper exploration, was prepared but never submitted to the applicant, and never was active, because the applicant never submitted any evidence that the Copper Mt. claims were valid. A final letter of Jan. 11, 1955, informed the applicant that since requested validity documentation had not been presented, the contract was being withdrawn. That letter is the last information in the file on Docket DMEA 3075.

Sincerely

Thor Kiilsgaard
(USGS, retired)

cc:
Mike Zientek
USGS Scientist in Charge

File Copy
Surname

500

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

JAN 11 1955

Mr. McMurrin Wulfenstein, Partner
J. & M. Leasing Company
446 West 400 North
St. George, Utah

Re: Docket No. DMEA-3075 (Copper)
J. & M. Leasing Company
Cox & Ross et al Mining Claims
Mohave County, Arizona

Dear Mr. Wulfenstein:

We are advised by Mr. W. H. King, Executive Officer, DMEA Field Team, Region IV, Denver, Colorado, that your company has not provided the necessary documents to make effective a contract which was prepared covering the cited project.

Therefore, we must consider that you are no longer interested in your application for an exploration loan and are withdrawing it from our active files.

Sincerely yours,

C. O. Mittendorf

Administrator

WRGriswold/bjl (1/10/55)

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. C. H. Johnson
Mr. Kiilsgaard
Region IV (2)
Chron.

R.C.S.

File Copy
Surname

500

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

January 10, 1955

Memorandum

To: Chief, Operations Control & Statistics Division

From: Chief, Base Metals Division

Subject: Withdrawal of application Docket No. DMEA-3075 (Copper), J. & M. Leasing Company, Cox & Ross et al Mining Claims, Mohave County, Arizona

Please note that the cited contract which had been forwarded to the field is being withdrawn due to the failure of the Applicant to furnish certain necessary documents.

W. R. Griswold
W. R. Griswold

WRGriswold/bjl

Copy to: Docket
Base Metals
Chron.

UNITED STATES 500
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

January 10, 1955

Memorandum

To: Chief, Operations Control & Statistics Division

From: Chief, Base Metals Division

Subject: Withdrawal of application Docket No. DMEA-3075 (Copper), J. & M. Leasing Company, Cox & Ross et al Mining Claims, Mohave County, Arizona

Please note that the cited contract which had been forwarded to the field is being withdrawn due to the failure of the Applicant to furnish certain necessary documents.

W. R. Griswold

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 7 1954

224 New Customhouse
Denver 2, Colorado

December 1, 1954

Messrs. McMurrin Wulfenstein
and James E. Wulfenstein
446 West 400 North
St. George, Utah

Pending

Re: Docket DMEA 3075 (Copper)
Mohave County, Arizona

Gentlemen:

Reference is made to our letters of October 22 and November 17, 1954, wherein we advised that certain additional documents would be necessary before the proposed exploration project contract could be released to you.

As you have not complied with our request in supplying the additional documents it appears that you are no longer interested in obtaining Government assistance in exploration work under the Defense Minerals Exploration Administration program. However, we will defer closing the matter, giving you 30 days from the date of this letter to supply the requested documents before closing our files on your application, which was docketed No. DMEA 3075.

Very truly yours,

W H King

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

JWT:jp
cc Subject
Chron
Chairman, Oper. Comm.
Wilson
Roberts
Koschmann
Townsend

File Copy
Surname
Griswold
Ellis
Johnson
Mitkendorf

UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

NOV 29 1954

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

Re: Docket No. DMEA-3075 (Copper)
J & M Leasing Company
Cox & Ross et al Mining Claims
Mohave County, Arizona

Dear Mr. King:

We have your letter of November 17 with enclosures, covering the cited project. We are returning the revised contract copies which contain the proviso permitting the proposed change in work program.

If the Applicants do not present the necessary documents, as outlined in your letters to them of October 22 and November 17, we suggest that you write them again advising that, if the material is not received within the following thirty days, their application will be considered as having been withdrawn.

Sincerely yours,

Ernest Wm. Ellis

ACTING Chairman, Operating Committee

Enclosure

APPROVED:
J. H. Hedges

Member, Bureau of Mines

Thor H. Kiilsgaard

Member, Geological Survey

WRGriswold/er 11/23 & 24/54

Copy to: Docket
Admr. R. File
Op. Committee
Base Metals
Mr. C. H. Johnson, USBM
Mr. Kiilsgaard, USGS
Chron.

R.C.H.

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 22 1954

224 New Customhouse
Denver 2, Colorado

November 17, 1954

Memorandum

To: Chairman, Operating Committee
Defense Minerals Exploration Administration

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 3075 (Copper), Proposed Contract Idm-E729, J. &. M. Leasing Company, Mohave County, Arizona

Enclosed are the original and five copies of the subject proposed contract which were forwarded to this office by your letter dated October 19, 1954. In conjunction with the comments by C. H. Johnson in his memorandum dated August 25, 1954, we are enclosing the following material:

1. The original and three copies of a memorandum dated November 9 from R. W. Osterstock, Utah-Nevada District Office, U. S. Geological Survey.

2. The original and three copies of a memorandum dated November 15, 1954, from the Chief, Minerals Development Branch, Mining Division, Region IV.

The examining engineer and geologist concur in the change in the work description as suggested by Johnson in his memorandum dated August 25. Therefore, we are returning all copies of the contract for such revisions as you deem desirable.

In addition to the foregoing material we are enclosing for your information two copies of our letter of October 22 and follow-up letter of November 17 to the applicants regarding certain additional required documents as outlined in the memorandum dated October 7, 1954, from the Acting Assistant Solicitor, a copy of which was forwarded with your letter of October 19.

J. F. Shaw

J. F. Shaw for
W. H. King

Enclosures

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 22 1954

224 New Customhouse
Denver 2, Colorado

November 17, 1954

Memorandum

To: Chairman, Operating Committee
Defense Minerals Exploration Administration

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 3075 (Copper), Proposed Contract Idm-E729, J. &. M. Leasing Company, Mohave County, Arizona

Enclosed are the original and five copies of the subject proposed contract which were forwarded to this office by your letter dated October 19, 1954. In conjunction with the comments by C. H. Johnson in his memorandum dated August 25, 1954, we are enclosing the following material:

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J. F. Shaw

J. F. Shaw for
W. H. King

Enclosures
JWTild
Copy to: SRWilson
RJRoberts
AJKoschmann
JWTownsend

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 22 1954

224 New Customhouse
Denver 2, Colorado

November 17, 1954

Messrs. McMurrin Wulfenstein
and James E. Wulfenstein
J. & M. Leasing Company
446 West 400 North
St. George, Utah

Re: Docket DMEA 3075 (Copper)

Gentlemen:

Reference is made to our letter of October 22, 1954, wherein we stated that before the proposed contract could be released to you for signature you provide this office with Form MF-203, Owner's Consent to Lien, executed by the original lessors covering their 3/4 interest in the Cox and Ross mine claims, and that you provide this office with six photostat copies of the document which validates your claim to the Copper Mountain claim.

We urge that your prompt attention be given to this matter, or that you advise by return mail as to whether or not you are still desirous of obtaining Government assistance in exploration work as outlined in the second paragraph of our letter dated October 22.

Yours very truly,

J. F. Shaw

J. F. Shaw for
W. H. King
Executive Officer
DMEA Field Team, Region IV

JWT:ld

Copy to: Chairman, Operating Committee (2)
S. R. Wilson
Ralph Roberts
J. W. Townsend
A. H. Koschmann

sub
chron

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 22 1954

224 New Customhouse
Denver 2, Colorado

November 17, 1954

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

JWT:ld

Copy to: Chairman, Operating Committee (2)
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sub
chron

UNITED STATES
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DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 22 1954

224 New Customhouse
Denver 2, Colorado

October 22, 1954

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and James E. Wulfenstein
J. & M. Leasing Company
446 West 400 North
St. George, Utah

Re: Docket DMEA 3075 (Copper)

Gentlemen:

Reference is made to your application for Government assistance in exploration under the Defense Minerals Exploration Administration which has been docketed DMEA 3075.

The Washington office, DMEA, has prepared a proposed exploration contract for the commodity of copper alone involving 900 feet of crosscutting and drifting at $30.00 per foot, and 40 assays at $1.50 each, at a total estimated cost of $27,060 in which the Government will participate to the extent of 50% or an amount of $13,530.

Before the contract can be released to you it is necessary that Form MF-203 Owner's Consent to Lien be executed by the original lessors covering their 3/4 interest in the Cox and Ross mine claims; for which purpose we are enclosing the original and six copies for signature by the lessors as indicated on the form. Please have all copies of the form signed by the lessors and return the original and five copies to this office.

In addition you are referred to the last paragraph of the letter dated March 10, 1954 from the Administrator, DMEA, to Mr. James Wulfenstein, which is relative to validification of your Copper Mountain claim. Records in this office do not indicate that the validity of the Copper Mountain claims was ever established as requested in the Administrator's letter, therefore please supply this office with six photostat copies of the document which validates the claims as set forth in Volume 43, Code of Federal Regulations, Section 185.36.

When the above documents have been received and other matters resolved which are pending in this office, we will then be in a position to release the contract to you for execution.

Very truly yours,

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

JWT:jp
cc Subject
Chon.
SRWilson
RJRoberts
AHKoschmann
JWTownsend

Encls.

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 22 1954

224 New Customhouse
Denver 2, Colorado

October 22, 1954

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and James E. Wulfenstein
J. & M. Leasing Company
446 West 400 North
St. George, Utah

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Executive Officer, DMEA
Field Team, Region IV

JWT:jp
cc Subject
Chon.
SRWilson
RJRoberts
AHKoschmann
JWTownsend

Encls.

UNITED STATES
DEPARTMENT OF THE INTERIOR

BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

Mining Division
Date Rec'd.
NOV 17 1954

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
BUREAU OF MINES
Denver, Colorado
NOV 22 1954

November 15, 1954

Memorandum

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

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: Docket No. DMEA-3075 (Copper), Proposed Contract Idm-E729, J and M Leasing Co., Cox and Ross claims, Mohave County, Arizona

Reference is made to your memorandum of October 22, 1954, concerning the subject proposed contract. Information transmitted with your memorandum included copies of the following:

1. A memorandum dated August 25, 1954, from C. H. Johnson to E. W. Ellis.

2. A memorandum dated October 7, 1954, from J. L. Hofflund to the Administrator, DMEA.

3. A letter from your office dated October 22, 1954, to Messrs. McMurrin Wulfenstein and James E. Wulfenstein.

This office has no objection to the proposal made by C. H. Johnson that the planned crosscut be started from a point northwest of the portal site, as suggested in the Supplemental Engineering Report. Since the location and attitude of the expected ore zone at the elevation of the proposed crosscut are not definitely known, it appears that either of the proposed portal locations will be suitable. Johnson's proposed adit more closely parallels the trend of the ore shoot as indicated in the accessible workings, and thus will be more in the nature of a drift than crosscut. A drift could conceivably miss any parallel mineralized zones. It is possible that the adit as suggested by Johnson would intersect the ore zone with less lateral work, and also decrease the length of access road required. The latter is not considered to be of considerable significance, inasmuch as the saving in road distance is small and only bulldozing equipment will be required in the immediate vicinity of the proposed portal area.

Stephen R. Wilson
Stephen R. Wilson

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

Mining Resources of America
Defense Minerals Administration
RECEIVED
NOV 17 1954
BUREAU OF MINES
Denver, Colorado

November 15, 1954

Memorandum

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

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: Docket No. DMEA-3075 (Copper), Proposed Contract Idm-E729, J and M Leasing Co., Cox and Ross claims, Mohave County, Arizona

Reference is made to your memorandum of October 22, 1954, concerning the subject proposed contract. Information transmitted with your memorandum included copies of the following:

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Stephen R. Wilson

Stephen R. Wilson

Mining Division
Date Rec'd. 2 2 1954
NOV 17 1954
BUREAU OF MINES
Denver, Colorado

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1000 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

November 18, 1954

Memorandum

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

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: Docket No. DMEA-3075 (Copper), Proposed Contract Idm-E729, J and M Leasing Co., Cox and Ross claims, Mohave County, Arizona

Reference is made to your memorandum of October 22, 1954, concerning the subject proposed contract. Information transmitted with your memorandum included copies of the following:

1. A memorandum dated August 25, 1954, from C. H. Johnson to E. W. Ellis.

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Stephen R. Wilson
Stephen R. Wilson

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN - 7 1955

224 New Customhouse
Denver 2, Colorado

January 4, 1955

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3075 (Copper), J. & M. Leasing Company, Cox and Ross et al. Mining Claims, Mohave County, Arizona

Enclosed for your disposition are the original and five copies of proposed Exploration Project Contract No. Idm-E729 which was prepared in Washington and has been signed by the Administrator for the Government and forwarded by your letter of November 29, 1954.

Inasmuch as the applicants have failed to supply the additional documents stipulated by you within the prescribed time as indicated in our letter to them of December 1, 1954, a copy of which was furnished to you, we recommend that the docket file be closed and this office so notified for our records.

W. H. King

Enclosures

Docket copy

MF-200A
(Revised June 1954)

Docket No. DMEA - 3075

Commodity Copper

Contract No. Idm-E - 729

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
EXPLORATION PROJECT CONTRACT[1]
(Short Form)

It is agreed this 19th day of October, 1954, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] J. & M. Leasing Company, a partnership comprised of McMurrin Wulfenstein of 446 West 400 North, St. George, Utah, and James E. Wulfenstein of 172 East 300 South, St. George, Utah, whose mailing address is 446 West 400 North St. George, Utah, hereinafter called the "Operator," as follows:

ARTICLE 1. *This contract* is entered into under the authority of the Defense Production Act of 1950, as amended. It consists of this form (MF-200A), the attached Exhibit "A," Annex I, and .....

The Operator shall not transfer or assign this contract or any right thereunder without the written consent of the Government.

ARTICLE 2. *Operator's property rights.*—(a) The land which is the subject of this contract (hereinafter called "the land") is in the State of Arizona, County of Mohave, and is described in Annex I.[3]

(b) The Operator represents and undertakes that:

(1) The Operator is the[4] see Annex I of[5] ..... in the land, in possession and entitled to possession for all of the purposes of this contract, under and by virtue of a[6] ....., [7] ....recorded in Book ....., page ....., official records of said County; and

(2) The Operator's right, title, or interest (whether as owner, lessee, or otherwise) is subject only to the following claims, liens, or encumbrances: .....

(c) The Subordination Agreement of the holder of any claim, lien, or encumbrance listed above, and (if the Operator does not hold the legal title) the Consent to Lien of any holder of the legal title of the land (lessor, seller, optionor, etc.), are attached, as follows: Subordination Agreement of the sublessors and Owner's Consent to Lien of the lessors.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] Insert name, and if an organization, its nature (corporation and place of incorporation, partnership with names of partners, etc.).
[3] State on a separate sheet marked "Annex I" the legal description or enough to identify the property, particularly excluding any areas from which the production is not to be subject to the Government's percentage royalty.
[4] Insert "owner," "lessee," "contract purchaser," "locator," etc.
[5] Insert "the entire interest," "the mineral rights," "an undivided one-third," etc.
[6] Insert "deed," "lease," "contract," "location notice," "patent," etc.
[7] If not recorded, so indicate by inserting "un."

16—70615-1

(d) The Operator shall preserve and maintain his right, title, and interest in the land and his right to the possession thereof for the purposes of this contract, and shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of this contract. Until the lapse of the time within which the Government may make a certification of discovery or development without any such certification having been made, and after any such certification has been made, the Operator shall neither transfer, convey, nor surrender the land nor any right, title, or interest therein, nor permit nor suffer any claim, lien, or encumbrance thereon, without expressly referring to and providing in the instrument of conveyance, lien, or encumbrance for the preservation of the Government's right to a percentage royalty on production and lien for the payment thereof. If the Government makes no certification of discovery or development within the time limited in Article 7, it shall thereafter have no claim against the land or any production therefrom except for any production referred to in Article 7(b)(1).

ARTICLE 3. *The exploration project.*—The project is a search for indicated or undeveloped deposits of copper. The work to be performed is described in Exhibit "A." The Operator on or before 90 days from date* shall commence the work, and on or before 18 months from date* (unless the Operator's obligation to complete the work is terminated—see Article 8) shall complete the work.

ARTICLE 4. *Performance of the work.*—(a) *Operator's responsibility.*—The work shall be performed with reasonable diligence, efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for liability insurance covering employment; and with suitable and adequate equipment, facilities, materials, supplies, and labor, to bring it to completion within the time fixed.

(b) *Government may inspect.*—The Operator shall consult with and inform the Government on all phases of the work as it progresses. The Government may enter at all reasonable times to inspect the work under the contract, and also after a certification of discovery or development to inspect production operations and underground workings. The operator shall provide the Government with all reasonable means of access for such inspections.

ARTICLE 5. *Contribution by the Government.*—A fixed cost for each unit of work to be performed (per foot of drifting, per foot of drilling, per hour of operations, etc.) is hereby agreed upon, and is set forth in Exhibit "A" in connection with the estimated total cost of the project in the sum of $27,060.00. The Government will contribute 50 percent of the fixed unit costs as work is performed, in a total sum not in excess of $13,530.00: *Provided,* That until the Operator has rendered to the Government his final report, and any final 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 10 percent of the estimated total cost of the work. The Government will make its contribution on the basis of the monthly vouchers referred to in Article 6(b), but all payments by the Government are provisional only, subject to audit, until the account between the Operator and the Government is finally audited and settled. To the extent that excesses over fixed unit costs or any excess over the estimated total cost may be necessary for the performance of the work, the Operator shall incur and pay such excesses for his own account without contribution by the Government. The Government may make payments directly to independent contractors and suppliers for the account of the Operator rather than to the Operator.

ARTICLE 6. *Reports, accounts, audits.*—(a) *Operator's records.*—The Operator shall keep suitable records and accounts of the units of work performed and of any production in which the Government may have an interest; and shall preserve those with respect to work performed for at least three years after final payment by the Government, and those with respect to production for at least three years after any obligation to pay royalties to the Government has terminated. The Government may inspect and audit said records and accounts at any time, either by itself or by a certified public accountant. The Comptroller General of the United States or his representative, until the expiration of said three-year periods, shall have access to and the right to examine any pertinent books, documents, papers, and records of the Operator. All of the Operator's vouchers and records and accounts relating thereto and the Government's payments thereof remain subject to adjustment until final audit by the Government.

(b) *Progress reports and vouchers.*—The Operator shall provide the Government with five copies of monthly progress reports in three sections as follows: (1) Operator's Monthly Report and Voucher showing a detailed statement of units of work performed during the reporting period; (2) Operator's Unit Cost and Progress Report showing the various types of work performed during the reporting period and the fixed unit costs incurred for each type of work; and (3) a Narrative Report of the work

* The word "date" means the date of the contract.

performed during the reporting period including adequate engineering-geological maps or sketches, drill hole logs and locations, and assay reports on samples taken concurrently with advance in mineralized ground. (Forms for reporting under (1) and (2) above will be provided by the Government.)

(c) *Final report.*—Upon completion of the work or termination of the Government's obligation to contribute to costs, the Operator shall furnish the Government with five copies of a final report (in addition to the final progress report and voucher). This final report shall include a geological and engineering evaluation of the results of the work performed under the contract with an estimate of the ore reserves resulting from such work, complete assay data, adequate geological and engineering maps or sketches, and a summary of the work performed and the unit costs thereof.

(d) *Report of sales.*—The Operator shall provide the Government with suitable accounting and documentary evidence covering all production to which the Government's percentage royalty relates, such as copies of smelter or concentrator settlement sheets, and certified accounts of production and sale or other disposition of production.

(e) *Compliance with requirements.*—If in the opinion of the Government any of the Operator's reports, records, or accounts are insufficient or incomplete, or if the Operator fails to make them, the Government may procure the making or completion of such with suitable attachments as an expense of the work to which the Operator shall contribute. The Government may withhold approval and payment of any vouchers relating to insufficient or incomplete reports, records or accounts.

ARTICLE 7. *Repayment by Operator.*—(a) *Certification.*—If the Government considers that a discovery or development from which production may be made has resulted from the work, the Government, at any time not later than six months after a sufficient final report and final account (see Article 6) has been rendered, may so certify in writing to the Operator. Such certification shall describe broadly or indicate the nature of the discovery or development.

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

(c) *Basis for computation.*—The Government's royalty shall be a percentage of the gross proceeds (including any bonuses, premiums, allowances, or other benefits) from the production sold, in the form sold (ore, concentrates, metal, or equivalent), at the point of delivery (the f. o. b. point); *except,* that charges of *the buyer* arising in the regular course of business, and shown as deductions on the buyer's settlement sheets, on account of the cost of treatment processes performed by *the buyer,* sampling and assaying to determine the value of the production sold, and freight paid by *the buyer* to a carrier (not the Operator), shall be allowed as deductions in arriving at the "gross proceeds" as that term is used herein. Any costs of treatment processes, sampling or assaying, or transportation, performed or paid by the Operator or by anyone other than the buyer, are not deductible in arriving at the "gross proceeds" as that term is here used. The term "treatment processes," as here used, means those processes (such as milling, concentrating, smelting, refining, or equivalent) applied to the crude ore or other production after it is extracted from the ground, to put it into a commercially marketable form; excluding fabricating or manufacturing.

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

(e) *Percentages of royalty.*—The percentages of the Government's royalty shall be as follows:

One and one-half (1½) percent of amounts ("gross proceeds" or "value") not in excess of eight dollars ($8.00) per ton of production in the form in which sold, held, or used, plus one-half (½) percent for each additional full fifty cents ($0.50) by which such amounts exceed eight dollars ($8.00) per ton, but not in excess of five (5) percent of such amounts.

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

(f) *Time for computation and payment.*—The Government's royalty shall be computed and paid currently upon each lot sold, held, or used in integrated operations, as the case may be, as above provided in this article.

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

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

(i) *No obligation to produce.*—Nothing in this contract is to be construed as imposing any obligation on the Operator or the Operator's successor in interest to engage in any production operations.

(j) *Government not obligated to buy.*—Nothing in this contract shall be construed as imposing any obligation on the Government to purchase any minerals mined or produced from the land.

ARTICLE 8. *Termination of the Government's obligations.*—(a) If in the opinion of the Government operations at any time have failed to achieve anticipated results that indicate the probability of making a worthwhile discovery, and in the opinion of the Government further operations are not justified, the Government may give the Operator written notice thereof, and thereupon the Government shall be free of all obligation to pay on account of units of work not then performed, and the Operator shall be free of all further obligation to prosecute the work other than such as may be necessary and incidental to winding up, reporting, and accounting.

(b) If in the opinion of the Government the Operator is in any manner in default under the terms of the contract, the Government may give the Operator written notice of such default with a specification of reasonable time within which the default must be cured; and if the Operator fails to cure such default as required, thereupon the Government shall be relieved of all obligation to pay on account of units of work not performed when the notice was given, and the Operator shall be free of all obligation to prosecute the work other than such as may be necessary and incidental to winding up, reporting, and accounting. The remedy provided for the Government in this paragraph "(b)" is in addition to any other remedy provided in this contract, and in addition to any other remedy the law may provide for breach of contract.

(c) The giving of any notice by the Government under the provisions of this Article 8 shall not affect the Government's rights as provided for in the contract with respect to a percentage royalty, and such rights shall be fully preserved.

ARTICLE 9. *Notices to be given by the Government* may be delivered to the Operator, or may be sent by registered mail addressed to the Operator at his mailing address stated in this contract. If mailed, notices are deemed to have been delivered five days after the date of mailing.

ARTICLE 10. *Officials not to benefit.*—No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this contract or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 11. *Changes and added provisions.*—

Executed in sextuplicate the day and year first above written.

J. & M. LEASING COMPANY
(Operator)

By ..... (Partner)

..... (Partner)

THE UNITED STATES OF AMERICA

By Administrator, Defense Minerals Exploration Administration

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—70618-1

EXPLORATION PROJECT CONTRACT
J. & M. LEASING COMPANY
DOCKET NO. DMEA-3075

ANNEX I

The land referred to in Article 2 of the contract consists of the following unpatented mining claims which were leased (three-fourths interest) by Mary Etta Cox, V. Lorraine Cox, Anna C. Cox, Kenneth Cox, and Anna F. Cox, to Lorin Whitmore, L. O. Whitmore, and Gale Whitmore by an instrument dated February 2, 1949, and subleased by the Whitmores to the Operator by an instrument dated June 29, 1952:

Cox and Rose Mine Claim, recorded on page 285 of Book 3-U;

Cox and Rose Mine Claim No. 1, recorded on page 286 of Book 3-U;

and also the following unpatented mining claims which are owned by the Operator:

Copper Mountain No. 1, recorded on page 53 in Book 4-D;

Copper Mountain No. 2, recorded on page 54 in Book 4-D;

Copper Mountain No. 5, recorded on page 57 in Book 4-D;

Copper Mountain No. 6, recorded on page 58 in Book 4-D.

All of the cited unpatented mining claims, are recorded in the Office of the County Recorder of Mohave County, at Kingman, Arizona. Such claims are shown on the attached map entitled "Claim Map, Copper Mountain Mine, Mohave County, Arizona."

EXPLORATION PROJECT CONTRACT
J. & M LEASING COMPANY
DOCKET NO. DMEA-3075

EXHIBIT "A"

Description of the Work

The purpose of the project is to explore for copper ores. The work is to consist of approximately 900 feet of drifting and crosscutting to intersect and explore the vein. Such work is roughly indicated on the attached map entitled "Topographic map Compiled by A.E.C. Copper Mt. Mine, Mohave County, Arizona." The exact location of the work is subject to the advance approval of the Government.

Fixed Unit Costs

900 feet of crosscutting and drifting @ $30.00/ft.	$27,000.00	
40 assays @ $1.50/each	60.00	
Estimated Total Cost of Project		$27,060.00
Government's Participation @ 50%		$13,530.00

MF-201
(Revised February 1953)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the holder of a mortgage, claim, lien, or encumbrance identified and described as follows*:

Sublessors under a lease dated June 29, 1952, between Leland O. Whitmore, Gale S. Whitmore, and Lorin B. Whitmore, by Sidney R. Whitmore their Attorney-in-Fact and James E., and M. Wulfenstein

upon that certain parcel of ground described in a proposed Exploration Project Contract

between James E., and McMurrin Wulfenstein

and the United States of America;

NOW, THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government to enter into same, does by these presents subordinate all of his right, title, and interest in said mortgage, claim, lien, or encumbrance to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof, and agrees that the lien and claim of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof, shall be prior to the undersigned's rights under the provisions of said mortgage, claim, lien, or encumbrance; and

The undersigned agrees to commit no act nor assert any right, title, or interest under said mortgage, claim, lien, or encumbrance that might contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof.

This undertaking and covenant shall be binding upon the heirs, successors, and assigns of the undersigned.

Dated this 23 day of July, 1953

Sidney R. Whitmore [SEAL]
Sidney R. Whitmore, Attorney-in-Fact
and by Powers of Attorney, [SEAL]
for and in behalf of the lessors

I, ..., certify that I am the .....

(Secretary, etc.) of the corporation named herein; that .....

who signed this agreement was then ..... (President or Vice-President, etc.) of said corporation; that said agreement was duly signed for and in behalf of said corporation by authority of its governing body, and was within the scope of its corporate powers.

.....
[CORPORATE SEAL]

*Include date of the instrument, and if recorded, book, page, and county of record.

16—68181-1 U. S. GOVERNMENT PRINTING OFFICE

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

Mining Division
Date Rec'd.
NOV 17 1954
BUREAU OF MINES
Denver, Colorado

November 15, 1954

Memorandum

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

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: Docket No. DMEA-3075 (Copper), Proposed Contract Idm-E729, J and M Leasing Co., Cox and Ross claims, Mohave County, Arizona

Reference is made to your memorandum of October 22, 1954, concerning the subject proposed contract. Information transmitted with your memorandum included copies of the following:

1. A memorandum dated August 25, 1954, from C. H. Johnson to E. W. Ellis.

2. A memorandum dated October 7, 1954, from J. L. Hofflund to the Administrator, DMEA.

3. A letter from your office dated October 22, 1954, to Messrs. McMurrin Wulfenstein and James E. Wulfenstein.

This office has no objection to the proposal made by C. H. Johnson that the planned crosscut be started from a point northwest of the portal site, as suggested in the Supplemental Engineering Report. Since the location and attitude of the expected ore zone at the elevation of the proposed crosscut are not definitely known, it appears that either of the proposed portal locations will be suitable. Johnson's proposed adit more closely parallels the trend of the ore shoot as indicated in the accessible workings, and thus will be more in the nature of a drift than crosscut. A drift could conceivably miss any parallel mineralized zones. It is possible that the adit as suggested by Johnson would intersect the ore zone with less lateral work, and also decrease the length of access road required. The latter is not considered to be of considerable significance, inasmuch as the saving in road distance is small and only bulldozing equipment will be required in the immediate vicinity of the proposed portal area.

Stephen R. Wilson
Stephen R. Wilson

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

Rubin per Hofflund

October 7, 1954

Memorandum

To: The Administrator, DMEA
Through: W. R. Griswold

From: Acting Assistant Solicitor, Defense Minerals

Subject: Docket No. DMEA-3075 (Copper), J. & M. Leasing Company

Pursuant to the request in your memorandum dated September 22, we have prepared the attached contract, subject to the following requirements prior to execution:

1. The Operator is sublessee of three-fourths interest in two Cox and Ross Mine claims. Therefore, an Owner's Consent to Lien on the latest form is required from the five lessors of the three-fourths interest (Coxes). Our letter dated July 17, 1953, to Applicant's counsel, waived requirement for an Owner's Consent to Lien in the outstanding one-fourth interest.

2. The Administrator's letter to the Applicant dated March 10 required validation of the four Copper Mountain claims as therein set forth. We find no evidence in the docket that such validation has been made.

J. L. Hofflund

J. L. Hofflund
Acting Assistant Solicitor
Defense Minerals

Attachments 8
HCRubin/emd
Copy to: DMEA Docket
Solicitor's Docket
W. R. Griswold (2)
J. L. Hofflund
H. C. Rubin
chron.

File Copy
Surname

UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

September 22, 1954

Memorandum

To: Acting Assistant Solicitor, DMEA

From: Chief, Base Metals Division

Subject: Docket No. DMEA-3075 (Copper), J & M Leasing Company, Cox and Ross Claims, Mohave County, Arizona

Will you kindly prepare a short form contract for the cited project, along the lines indicated in the rough draft.

W. R. Griswold

W. R. Griswold

WRG:er 9/22/54

Copy to: Docket
Base Metals
Chron.

Ernest E. Thurlow, Chief, Salt Lake Exploration Branch, DRM, Salt Lake City, Utah

April 21, 1954

Stephen R. Steinhauser, Chief, Richfield Sub-office, SLEB, DRM, Richfield, Utah

"REPORT OF EXAMINATION, J. AND M. LEASING COMPANY (COPPER MOUNTAIN MINE) MOHAVE COUNTY, ARIZONA, DOCKET NO. DMEA-3075, "REVIEW AND RECOMMENDATIONS BY EARL N. KING

SYMBOL: RSO: ENK:mcg

Two brunton and tape traverses have been made on the Cox and Ross (Copper Mountain Mine) claims--one from the shaft to the bottom of the wash, and the other from the shaft to the rim of the wash. (See Attached map). From these traverses and other available data, a rough map has been drafted in an attempt to give information pertinent to the mining area. As a result of data compiled to date, it appears that crosscutting and drifting would be a more beneficial exploration program for this property than the program proposed by the DMEA examining team.

Using 47 and one-half degrees as the average dip of the uranium and copper ore, a 600-foot crosscut from the wash should cut the downward projection of the mineralization approximately 150 feet below the present 210-foot level. Drifting could then be done along the mineralization. Such a crosscut would give an additional 50 feet of depth (DMEA proposed total depth of shaft is 310 feet) and also explore 600 feet of virgin ground for about the same amount as is proposed by the examining team for shaft rehabilitation and sinking 100 feet on the present shaft. The suggested crosscut would be 20 feet above the bottom of the wash, leaving ample room for a dump and ore bin.

Since the present shaft is not within the mineralized zone, sinking an additional 100 feet would disclose nothing in the way of pertinent geology, whereas the crosscut would explore an area that does have surface mineralization showing. Another matter for consideration is the limited usefulness of the present shaft as stated by Mr. Young in his Engineering Report, page 11. The distance from the bottom of the shaft to the ore shoot increases with increased depth, thus limiting it economically as a working shaft.

Considering all aspects, the most logical and economical way to explore this property is by crosscutting and drifting. It is, therefore, recommended that a crosscut approximately 600 feet be

COPY

driven to the ore sheet and then 200 feet of drift should be driven along the mineralization. The allocation of the 200 feet of drifting should be flexible in order to satisfactorily explore the ore sheet as work progress.

An "Estimate of Costs" list, using per unit costs as determined by the DMEA examining team wherever possible, is submitted for 800 feet of crosscutting and drifting.

Enclosures:
1. maps (4)
2. Itemized statements (2)

COPY

IN REPLY REFER TO:

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

September 3, 1954

Re: DMEA-3075
J. and M. Leasing Co.
(Cox and Ross Claims)
Mohave Co., Arizona
$23,682.33 - Copper

Memorandum

To: W. R. Griswold
Defense Minerals Exploration Administration

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

Subject: Recommendation for approval

This application was submitted as a copper-uranium project. However, the data presented by two Field Team reports, and an A.E.C. report indicate that DMEA assistance should be limited only to copper.

In light of the past copper production on this property and the possibility that additional high grade copper ore may be found, I recommend the proposed 900 feet of crosscutting and drifting be approved. The amount and cost of the project appears to be commensurate with the size of the potential ore discovery which may be made.

E. L. Newcomb

E. L. Newcomb

IN REPLY REFER TO:

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

September 3, 1954

Re: DMEA-3075
J. and M. Leasing Co.
(Cox and Rose Claims)
Mohave Co., Arizona
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E. L. Newcomb

ELNewcomb:hlm
G-9/3/54

Copy to: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
C. H. Johnson, 3621

IN REPLY REFER TO:

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

September 3, 1954

Re: DMEA-3075
J. and M. Leasing Co.
(Cox and Ross Claims)
Mohave Co., Arizona
$23,682.33 - Copper

Memorandum

To: W. H. Griswold
Defense Minerals Exploration Administration

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U. S. Geological Survey

Subject: Recommendation for approval

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E. L. Newcomb

ELNewcomb:hlm
G-9/3/54

Copy to: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
C. H. Johnson, 3621

IN REPLY REFER TO:

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

September 3, 1954

Re: DMEA-3075
J. and M. Leasing Co.
(Cox and Rose Claims)
Mohave Co., Arizona
$23,682.33 - Copper

Memorandum

To: W. R. Griswold
Defense Minerals Exploration Administration

From: E. L. Kennedy
U. S. Geological Survey

Subject: Recommendation for approval

This application was submitted on a copper-uranium project. However, the data presented by the Field Team reports, and an A.E.C. report indicate that DMEA assistance should be limited only to copper.

In light of the past copper production on this property and the possibility that additional high grade copper ore may be found, I recommend the proposed 900 feet of crosscutting and drifting be approved. The amount and cost of the project appears to be commensurate with the size of the potential ore discovery which may be made.

E. L. Kennedy

ELKennedy:hlm
G-9/3/54

Copy to: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
C. E. Johnson, 3621

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

August 26, 1954

MEMORANDUM

To: Mr. Robert E. Adams, Operations Control & Statistics Division

From: F. L. Knouse, Acting Chief, Rare & Miscellaneous Metals Div.

Subject: Case Transfer - Classification Change - Uranium to Copper
Docket No. DMEA-3075
J. & M. Leasing Company
Cox and Ross Claims
Mohave County, Arizona

The subject case is transferred herewith to Base Metals for processing as it has been determined by the Field Team that the application should be for copper instead of uranium as originally submitted.

F. L. Knouse

F. L. Knouse, Acting Chief
Rare & Miscellaneous Metals
Division

STANDARD FORM NO. 64

8-23-54
A.W.

Office Memorandum • UNITED STATES GOVERNMENT

TO : E. Wm. Ellis, DMEA Member, Uranium Commodity Committee

DATE: August 19, 1954

FROM : Arthur P. Butler, Jr., USGS Member, Uranium Commodity Committee

SUBJECT: Memorandum from Region IV and other supplementary information DMEA Docket 3075 (Copper-Uranium) J & M Leasing Co., Copper Mountain mine, Cox and Ross claims, Mohave County, Arizona

The supplementary information submitted by the examining members of the Field Team concerning exploration of this property were discussed with Mr. Koschmann, Geological Survey and Mr. Shaw, Bureau of Mines representatives of the Field Team.

The supplementary geologic report says that all the uranium samples of ore--grade are "picked samples", and all the samples that might be called representative are below ore-grade for uranium. For this reason and because the area in which radioactivity and uranium occur in the mine is small and small relative to the area from which copper has been produced, we agreed that it seems extremely dubious that the proposed exploration would find a significant amount of uranium. My approval of the Field Team's recommendations, therefore, is confined to agreeing that the prospects of making a significant discovery of uranium are so poor that the exploration should be appraised solely on its merit for finding copper ore, and should not be construed to pertain either to the plan of exploration or its worthiness for copper.

Arthur P. Butler Jr.

Copy to: E. Wm. Ellis (2)

8/20/54 gla

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

224 New Customhouse
Denver 2, Colorado

August 16, 1954.

To: Chairman of the Operating Committee, DMEA

From: DMEA Field Team, Region IV

Subject: Supplemental examination report, Docket No. DMEA-3075 (Copper-Uranium), J. and M. Leasing Company, Cox and Ross claims, Mohave County, Arizona.

Enclosed are four copies of a supplemental engineering memorandum from a Bureau of Mines engineer, four copies of a supplemental geologic memorandum from a Geological Survey geologist, and four copies of a memorandum from an Atomic Energy Commission geologist pertaining to Docket No. DMEA-3075.

The report of examination was transmitted to the Secretary of the Operating Committee on February 12, 1954.

In a letter dated March 24, 1954, the Chairman of the Operating Committee requested that the application be discussed with Ernest E. Thurlow, Atomic Energy Commission, Salt Lake City, Utah.

On March 29, 1954, the Chairman of the Operating Committee requested certain additional information which was requested by Arthur P. Butler, A. R. Kinkel, Jr., and C. H. Johnson in memoranda attached to the above letter.

The original examination report recommended that the applicant be granted a loan of $24,253.00 to rehabilitate the main shaft from the surface to the 210-foot level, sink the shaft 100 feet, and drift and crosscut 250 feet on the 310-foot level.

The Atomic Energy Commission geologist stated that the most logical and economical way to explore this property is by crosscutting and drifting. He recommended that a crosscut be driven approximately 600 feet to the mineralized zone and 200 feet of drift be driven along the mineralization.

A supplemental engineering memorandum recommended that a tunnel be driven approximately 700 feet in a southwesterly direction

to intersect the zone of mineralization and 200 feet of drift be driven along the mineralized zone. The estimated cost of 900 feet of work at $30.00 per foot is $27,000.00.

The applicant agreed to construct a road at no expense to the Government from the main shaft to the site of the proposed adit portal.

The records of the Minerals Development Branch at Denver indicate that a significant amount of copper, lead and zinc has been produced from this property. It appears that any uranium mineralization would be accompanied by copper mineralization. The ore would in all probability be shipped to a copper smelter and the uranium content would be lost. We doubt if a significant amount of uranium would be discovered as a result of the proposed exploration. We recommend that this exploration be approved for copper alone on the basis of 50% Government participation.

If it is agreeable to the applicant a contract should be prepared authorizing 700 feet of adit and 200 feet of drifting along the mineralized zone at the unit cost of $30.00 per foot.

The location of the proposed work is shown on the map attached to the engineering report. However, the applicant should agree to construct the road to the site of the proposed tunnel portal at no expense to the Government.

These recommendations were discussed with and approved by A. P. Butler, Jr.

W. H. King

E. N. Haschmann
for A. H. Koschmann

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

July 15, 1954

Memorandum

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

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: Docket No. DMEA 3075 (Uranium), J. and M. Leasing Co., Cox and Ross claims, Mohave County, Arizona

Attached are the original and 10 copies of a supplemental engineering report relative to the subject docket. This information is presented as a result of conversations with personnel of the AEC, requested by the Chairman, Operating Committee, in a letter to your office dated March 24, 1954. Additional comment concerning the docket is contained in a memorandum from this office dated June 3, 1954.

The original engineering report, mailed to your office February 5, 1954, contains a recommendation that the applicant be granted a loan of $24,253 to rehabilitate the main shaft from the surface to the 210-foot level, sink the shaft 100 feet, and drift and crosscut 250 feet on the 310-foot level.

The property was mapped by the AEC and after discussions with personnel of this agency, it was believed that consideration should be given to a proposed crosscut to intersect a projection of the ore zone below the 210-foot level. It is proposed that a crosscut be driven approximately 700 feet in a southwesterly direction from a point in the gulch, east of the main shaft. After the ore zone is intersected, provision should be made for 200 feet of drifting along the zone. It is estimated that the work could be accomplished for $30 per foot, or a total of $27,000 for 900 feet of lateral work. The above work is recommended in lieu of the recommendation in the original engineering report, estimated to cost $24,253. The proposed crosscut is shown on figure 7 attached to Young's supplemental report.

It will be necessary to construct a road from the main shaft to the site of the adit portal. The length of road necessary will be at least 1/2 mile over steep terrain. However, the operator has indicated willingness to construct the necessary road with his own funds, thus the cost of the road is not included in the total for the proposed crosscutting and drifting.

As suggested in a memorandum dated March 23, 1954, from C. H. Johnson, Bureau of Mines, to E. Wm. Ellis, DMEA, the records of the Mineral Industry Division at Denver, Colorado, were checked to obtain the production record of the Copper Mountain property. The available record is as follows:

Year	Ore Shipped, Dry Tons	Gross Metal Content				
		Copper, pounds	Lead, pounds	Zinc, pounds	Gold, ounces	Silver ounces
1934	16	3,779	—	—	0.40	81
1937	6	1,750	—	—	—	20
1949	195	12,628	8,387	37,994	163	1,728
1950	151	94,000	—	—	2	476
1951	23	4,934	—	—	—	47
1952	21	4,774	—	—	—	31
1953	133	3,814	—	—	—	28
Total	545	127,681	8,387	37,994	165.40	2,411

C. H. Johnson, in his memorandum of above date, requests information pertaining to the feasibility of obtaining additional samples of underground exposures. The examining team did not sample the existing underground workings during the period of examination. The limited lateral workings, water in openings below the levels, the erratic character of the mineralization and removal of mineralized bodies on and above the levels, resulted in a conclusion that additional sampling is not feasible.

A memorandum dated March 15, 1954, from A. R. Kinkel, Jr., U.S.G.S., to E. Wm. Ellis, DMEA, includes a statement, " * * * I doubt that it is advisable to do additional work on this small mine in such an isolated locality. Possibly this property could be considered if and when AEC puts in an access road."

The property is accessible now and the applicant is willing to spend his own funds constructing a new road and maintaining the present roads. It appears that evaluation of the area as a potential uranium producer can only be accomplished by exploration of favorable deposits. Appraisal of known deposits should precede large expenditures for road construction.

A memorandum from Arthur P. Butler, Jr., W.S.G.S., to E. Wm. Ellis, DMEA, dated March 5, 1954, raises several questions concerning the reports prepared by the examining team. These questions have been covered in a memorandum dated July 15, 1954, from C. G. Tillman and R. W. Ostenstock to A. H. Koschmann.

Stephen R. Wilson

Stephen R. Wilson

Enclosure

Room 206 - 222 So. West Temple
Salt Lake City 1, Utah
July 15, 1954

Memorandum

To: A. H. Koschmann, Field Team, Region IV E.M.H. for A.H.K

From: R. W. Outerstock, for R. J. Roberts, Utah-Nevada District Office

Subject: DMEA docket 3075 (Copper-uranium). J. & M. Leasing Company, Copper Mountain mine, Gem and Ross claims, Mohave County, Arizona - Supplemental geologic report.

In order to satisfactorily answer the questions raised by A. P. Butler and A. R. Kinkel the DMEA examining team would be required to spend an excessive amount of time on this property. Factual data such as that requested could only be gained by extensive topographic and geologic mapping at the surface, remapping of the underground workings and surface pits, and a methodical and detailed sampling program. Such detailed work would probably take two geologists two to three weeks to complete and does not appear to be warranted. It is our understanding, moreover, that such a study does not fall within the domain of the examining team.

This supplemental report will attempt to dispose of some of the points raised regarding the property, based on a recent brief field re-examination of the surface workings. The ladder providing access into the inclined shaft is rotten and unsafe, consequently the mine is to all intents and purposes inaccessible. The initial examination was made in spite of these conditions but the risk is not worth repeating. We have suggested that the owners repair the ladders but have learned that they do not intend to do so.

A. P. Butler has requested clarification of the following points:

(1) "The size and significance of visible uranium zones." Only one area has been located that contains ore grade uranium mineralization. On the 210-foot level in a small underhand stope on the hangingwall of a fracture zone, A.E.C. sampling disclosed a pod of ore which assayed 0.46 percent U_3O_8 (sample F 3955). As was stated in the original report further drifting to the northeast along the fracture exposed no more ore grade uranium mineralization. Thus the size of the uranium bearing pod must be relatively small, perhaps a few tens of tons. The significance of the pod is questionable, it may or may not portend the existence of like bodies on similar structures laterally or at depth. Perhaps the most interesting feature of this pod is its existence at the present water table, consequently the possibility of enrichment or concentration cannot be discounted.

(2) "The significance of the few 'ore-grade' uranium assays in contrast to the low grade assays on channel samples." The ore grade assays have in all cases been hand picked either in the mine or from the ore pile on the surface. All of the channel samples which might be regarded as representative assayed below ore grade for uranium. Consequently there is no known location within the mine from which ore grade material has been obtained in representative samples.

(3) "The inferred size and significance of copper and uranium bearing zones beneath the present workings." There is no way of knowing with any degree of certainty whether copper-uranium bearing zones exist below the deepest level of the mine which is at the present

water table. It seems likely that some copper enrichment has taken place, but the elevation of the water table at the time of enrichment is unknown. The operator reports that the amount of chalcocite relative to the amount of oxide-carbonate ore has increased steadily with depth which would tend to indicate a radical depression of the water table during enrichment. If the copper ore continues below the present deepest workings it may be assumed that the size of the ore bodies will approximate those already mined at higher elevations. If the amount of chalcocite continues to increase it may be expected that the average copper content will increase.

The likelihood of discovery of significant uranium ore shoots by means of the recommended exploration was stated in the original report to be only fair. This conclusion resulted from considering the generally low scintillometer readings throughout the mine as recorded on the A.E.C. longitudinal section and from the fact that only a single sample which was a grab sample of mud taken by the applicant from under water in the underhand stope (sample F 3955) contained ore grade uranium. Mineralogical studies by the A.E.C. indicated that no primary uranium mineral has yet been found on the property. Only the secondary uranium mineral metatorbernite has been identified and it is found intimately associated with chalcocite, malachite, azurite, cuprite, and limonite. Whether this association continues below the present 210-foot level, and if so with sufficiently high grade to be classified as ore, is indeterminable without further exploration. The size and shape of inferred uranium ore shoots below the 210-foot level likewise is indeterminable without further exploration.

(4) "Geologic evidence to indicate that mineralized zones can be expected beneath the present workings." Discussed under 3 above.

The following comments refer to R. N. King's A.E.C. memorandum to E. E. Thurlow dated April 21, 1954 which was transmitted to S. R. Wilson May 5, 1954.

Mr. King proposes an adit bearing S. 41° W. to extend 600 feet in that direction to cut the "downward projection of the mineralization approximately 150 feet below the present 210-feet level. Drifting could then be done along the mineralization. Such a crosscut would give an additional 50 feet of depth (DMEA proposed total depth of shaft is 310 feet) and also explore 600 feet of virgin ground for about the same amount as is proposed by the examining team for shaft rehabilitation and sinking 100 feet on the present shaft...

Since the present shaft is not within the mineralized zone, sinking an additional 100 feet would disclose nothing in the way of pertinent geology, whereas the crosscut would explore an area that does have surface mineralization showing...

It is, therefore, recommended that a crosscut approximately 600 feet be driven to the ore shoot..."

(1) A projection of the target "fissure" to the tunnel level indicates the "fissure" should be intersected at approximately 370 feet using Mr. King's assumed dip of 47.5° northeast.

(2) This "fissure" appears to be a weak fracture zone in sandstone along which no copper mineralization was observed by the examining geologists. Consequently it was not sampled. This "fissure" is of the same order of magnitude as many other weak fractures and joints in the mine area which are not shown on the map.

(3) The Copper Mountain shaft was inclined so as to follow copper mineralization from its collar to the lowest level of the mine where it is approximately 8 feet from the vein. The shaft was put down on the then most promising and subsequently most productive vein in the area.

(4) The proposed adit actually parallels the productive vein explored in the Copper Mountain mine.

The examining geologists conclude that a tunnel driven approximately 770 feet in a direction S. 51° W. from the proposed portal and a crosscut driven approximately 20 feet northeasterly from the end of the tunnel at right angles to it would cut the downward continuation of the Copper Mountain vein. This appears to be the shortest possible tunnel from the proposed portal that would reach the projected position of the vein on the tunnel level. An additional 200 feet of drifting on the vein in a northeasterly and southwesterly direction would be required to adequately explore it. This work would be approximately 155 feet below the lowest level of the mine. At $30.00 per foot the cost of 990 feet of drifting and crosscutting is $29,700.00 and it is assumed that the access road required to reach the portal site would be built by the applicant at his own expense.

No mineralized structures significant from a DMEA viewpoint were observed on the surface over the proposed tunnel. Exploration of this ground by the tunnel does not seem warranted on that basis alone.

Due to the somewhat higher cost of this exploration program than that earlier proposed by the examining geologist and engineer it is concluded that the earlier proposal remains the desirable exploration method if a project is approved for this property.

The position of the water table at the time of enrichment is unknown, if it was below the present water table then it is quite possible that the enriched chalcocite zone will continue below the present lowest workings of the mine. The exact association between copper and uranium mineralization is not fully understood, therefore, the liklihood of the existence of uranium ore at depth is unknown.

Ernest E. Thurlow, Chief, Salt Lake Exploration Branch, DRM, Salt Lake City, Utah

April 21, 1954

Stephen R. Steinhauser, Chief, Richfield Sub-office, SLEB, DRM, Richfield, Utah

"REPORT OF EXAMINATION, J. AND M. LEASING COMPANY (COPPER MOUNTAIN MINE) MOHAVE COUNTY, ARIZONA, DOCKET NO. DMEA-3075, "REVIEW AND RECOMMENDATIONS BY EARL N. KING

SYMBOL: RSO: ENK:mcg

Two brunton and tape traverses have been made on the Cox and Ross (Copper Mountain Mine) claims--one from the shaft to the bottom of the wash, and the other from the shaft to the rim of the wash. (See Attached map). From these traverses and other available data, a rough map has been drafted in an attempt to give information pertinent to the mining area. As a result of data compiled to date, it appears that crosscutting and drifting would be a more beneficial exploration program for this property than the program proposed by the DMEA examining team.

Using 47 and one-half degrees as the average dip of the uranium and copper ore, a 600-foot crosscut from the wash should cut the downward projection of the mineralization approximately 150 feet below the present 210-foot level. Drifting could then be done along the mineralization. Such a crosscut would give an additional 50 feet of depth (DMEA proposed total depth of shaft is 310 feet) and also explore 600 feet of virgin ground for about the same amount as is proposed by the examining team for shaft rehabilitation and sinking 100 feet on the present shaft. The suggested crosscut would be 20 feet above the bottom of the wash, leaving ample room for a dump and ore bin.

Since the present shaft is not within the mineralized zone, sinking an additional 100 feet would disclose nothing in the way of pertinent geology, whereas the crosscut would explore an area that does have surface mineralization showing. Another matter for consideration is the limited usefulness of the present shaft as stated by Mr. Young in his Engineering Report, page 11. The distance from the bottom of the shaft to the ore shoot increases with increased depth, thus limiting it economically as a working shaft.

Considering all aspects, the most logical and economical way to explore this property is by crosscutting and drifting. It is, therefore, recommended that a crosscut approximately 600 feet be

COPY

driven to the ore shoot and then 200 feet of drift should be driven along the mineralization. The allocation of the 200 feet of drifting should be flexible in order to satisfactorily explore the ore shoot as work progress.

An "Estimate of Costs" list, using per unit costs as determined by the DMEA examining team wherever possible, is submitted for 800 feet of crosscutting and drifting.

Enclosures:
1. maps (4)
2. Itemized statements (2)

COPY

J. AND M. LEASING CO.
COX AND ROSS CLAIMS
MOHAVE COUNTY, ARIZONA
DMEA-3075
Copper-Uranium

Supplemental Engineering Report

By W. E. Young
Mining Engineer
Bureau of Mines

INTRODUCTION

The alternate proposal for exploration of the Copper Mountain mine recommended by the Atomic Energy Commission, has been studied and reviewed. This proposal consists of exploration by crosscut from an adit site near the bottom of the wash to intersect the downward projection of mineralization. The work outlined will include driving 700 feet of crosscut and 200 feet of drifts. Estimated costs indicate that this plan may be accomplished by an expenditure of little more than for work proposed in the original reports of the Bureau of Mines and the Geological Survey. This work would intersect the mineralization at 60 to 75 feet greater depth than the proposed work as submitted in the original reports. Additional advantages are that the ore may be mined at lower cost and that the crosscut would afford drainage in the event water is encountered.

However, an additional expense which has not been considered previously, will be incurred by the adoption of this proposal. It will be necessary to construct at least ½ mile of access road from the shaft collar to the site of the adit portal. The surface map indicates a grade of 30 percent in the gulch. Construction of switchbacks will be necessary to establish a suitable grade. Erosion has denuded the area of most of the soil, thus it is anticipated that considerable rock work and blasting will be required in road construction. During the course

of the examination, road construction was not investigated, but it is believed this work will involve considerable expense. The applicant has expressed willingness to assume this responsibility and the expense of the road construction in order to complete the project by cross-cutting and drifting.

ESTIMATE OF COSTS

Crosscutting and Drifting 900 feet

(Time for completion - 10 months)

Labor and supervision

2 men, 250 days at $14 per day	$7,000.00
1 supervisor, $400 per month	4,000.00
1 bookkeeper (part time) $50	500.00
Payroll taxes, liability insurance, etc., 12% of above $11,500 x .12	1,380.00
	$12,880.00

Operating materials and supplies

Explosives, 900 feet at $2.10 per foot	$1,890.00
Pipe, 900 feet, 2" black at $.40 per foot	360.00
Pipe, 900 feet, 1" black at $.24 per foot	216.00
Track, 900 feet, 12-lb., complete, at $770 M	693.00
Drill steel and bits, 900 feet at $1.00 per foot	900.00
Miscellaneous small tools, gas, oil, etc.	2,700.00
Equipment repairs and replacements	700.00
	$7,459.00

Operating equipment depreciation

1 trailer house	$ 250.00
1 105-cfm. compressor	500.00
1 mucking machine	500.00
1 International 2½-ton truck	333.33
1 Studebaker ½-ton truck	250.00

1 HD7W Allis Chalmers tractor	$ 280.00*
1 jackhammer, mounted	100.00
1 bar and column	60.00
2 mine cars	70.00
	$2,343.33

*Allow for use 1/3 of the time. Superintendent to serve as operator.

Drifting and crosscutting, grand total	$22,682.33
Consulting geologist, 20 days at $50 per day	1,000.00
Total estimated project cost, crosscutting and drifting, consulting geologist	$23,682.33

Depreciation	Value	1 mo.	10 mo.
1 trailer house	$1,500	$25.00	$ 250.00
1 105-cfm. compressor	3,000	50.00	500.00
1 International 2½-ton truck	2,000	33.33	333.33
1 Studebaker ½-ton truck	1,500	25.00	250.00
1 jackhammer, mounted	600	10.00	100.00
1 bar and column	360	6.00	60.00
2 mine cars	420	7.00	70.00
1 mucking machine	3,000	50.00	500.00
1 HD7W Allis Chalmers tractor	1,680	28.00	280.00
Total equipment cost			$2,343.33

SUMMARY OF COSTS

Labor and supervision	$12,880.00
Operating materials and supplies	7,459.00
Operating equipment cost	2,343.33
Consulting geologist	1,000.00
Total	$23,682.33

It is recommended that this proposed plan of exploration be adopted in place of the work originally proposed by the Bureau of Mines and

Geological Survey. The estimated cost of performing 900 feet of cross-cutting and drifting is $23,682.33. The unit cost is calculated at $26.31 per foot. In view of the isolated location of the property and the cost of transporting materials and supplies, it is recommended that a unit figure of $30 per foot be used in preparing a short-form contract.

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

July 1, 1954

Memorandum

To: File

From: F. L. Knouse, Mining Engineer
Rare and Miscellaneous Metals Division

Subject: Docket No. DMEA-3075 (Uranium)
J. & M. Leasing Company
Cox and Ross Mining claims
Mohave County, Arizona

George Gallagher, A.E.C. Raw Materials Division, phoned re owner's mining claims, location dates, lessees, and amount of exploration requested by the Applicant. The information was furnished as requested.

FLK.
F. L. Knouse

T E L E T Y P E

XXXXXXXXXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXXXXXXXXX

DMEA - Department of the Interior
14X4501(01) Revolving Fund,
Defense Production Act, Interior
(Allocated Working Fund to the
Office of the Secy.)

DOCKET
SURNAME

APR 29 1954

W. R. KING, EXECUTIVE OFFICER
DMEA FIELD TEAM, REGION IV
224 NEW CUSTOMHOUSE BUILDING
DENVER 2, COLORADO

REFERENCE APRIL 22 AND OUR LETTERS MARCH 24 AND 29 DOCKET 3075 J & M LEASING COMPANY. UNABLE TO ACT ON YOUR REQUEST ~~RECOMMEND MANUAL FIELD TEAM REPORT AVAILABLE NATIONAL PARK SERVICE~~ UNTIL OUR REQUESTED FIELD TEAM REPORT SUPPLEMENT IS RECEIVED.

W. S. Martin
ACTING CHAIRMAN, OPERATING COMMITTEE

FLKNOUSE:fec
4-27-54
cc to: Admr. Reading File
Docket
Operating Comm.
Code 700
Mr. Knouse
Mr. Keiser, Rm. 3641, USBM
Mr. Butler, Rm. 3212, USGS

SENT
APR 29 1954
Clerical Service Section

R.C.G.

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

224 New Customhouse
Denver 2, Colorado

April 22, 1954

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA 3075, J. & M. Leasing Company

Enclosed is a copy of a letter dated April 20, 1954 from George F. Baggley, Superintendent, National Park Service, to J. H. East, Jr., regarding the validity of the Cox Ross and other mining claims located in Mohave County, Arizona.

The report of examination was forwarded to the Washington office on February 12, 1954.

As a matter of policy is involved in sending copies of examination reports to other agencies, we are forwarding this letter to you for your appropriate action.

W. H. King

Enclosure (to Code 700)

4/26/54 gla

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

224 New Customhouse
Denver 2, Colorado

April 22, 1954

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA 3075, J. & M. Leasing Company

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The report of examination was forwarded to the Washington office on February 12, 1954.

As a matter of policy is involved in sending copies of examination reports to other agencies, we are forwarding this letter to you for your appropriate action.

W H King
W. H. King

Enclosure

C
O
P
Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

Lake Mead National Recreation Area
Boulder City, Nevada

April 20, 1954

Air Mail

Mr. J. H. East, Jr.,
Regional Director, Region Four
Bureau of Mines
224 New Custom House
Denver 2, Colorado

Dear Mr. East:

We appreciated your letter of January 27, concerning the uranium interests of Wulfenstein Brothers and the so-called Cox Ross and other mining claims located in Mohave County, Arizona, and inside the Lake Mead National Recreation Area.

Representatives of this Service have recently returned from a field examination of the area in which Wulfenstein Brothers are interested. A report on their findings is in process of preparation. It is to be forwarded in the next few days, and will undoubtedly be used, in part at least, as a basis for the Service position so far as mining in these properties is concerned.

It would be very helpful if we might have available copies of the engineering and geological reports which the Bureau of Mines has prepared on the property. I understand that perhaps these are of a confidential nature and they will be treated so if made available to the National Park Service. If, for any reason these reports cannot be made available to this office, it is requested that at least one copy be furnished to Mr. Conrad L. Wirth, Director of the National Park Service for his examination.

Sincerely yours,

(signed) George F. Baggley

Superintendent

Surname
Docket copy

700

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

F L Knouse
Ellis
Selfridge
Johnson
Mathewson

MAR 29 1954

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

Re: Docket No. DMEA-3075
(Uranium and Copper)
J. & M. Leasing Company
Cox and Ross claims
Mohave County, Arizona

Dear Mr. King:

In addition to the supplementary information requested on the subject project in our letter of March 24, we are enclosing the following memoranda to be covered by your supplementary report:

1. Mr. Arthur P. Butler, Jr., March 5, 1954
2. Mr. A. R. Kinkel, Jr., March 15, 1954
3. Mr. C. H. Johnson, March 23, 1954

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (246)
FLKnouse/gla 3-26-54

Enclosures 3

APPROVED:

J. H. Hedges
Member, Bureau of Mines (246)

D. M. Larrabee
Member, Geological Survey (246)

cc to: Adm.Reading File
Operating Committee
Docket
Messrs. APButler, Jr. Rm. 3212, GSA
ARKinkel, Jr., Rm. B-242A, GSA
HDKeiser, Rm. 3641
JOHosted, Rm. 3210, GSA
Code 700
Mr.Knouse

RCB 3-29-54

700

Docket
Surname
F L Knouse
Selfridge
F Johnson
Mottenday

MAR 24 1954

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

Re: Docket No. DMEA-3075 (Uranium)
J. & M. Leasing Company
Cox and Rose Mining claims
Mohave County, Arizona

Dear Mr. King:

Reference is made to our letter dated August 10, 1953, which requested a field examination of the subject project. Copies of memoranda were enclosed from Mr. H. D. Keiser and Mr. Arthur P. Butler, Jr., outlining questions to be covered by the examining engineers reports.

Mr. Keiser requested that the application be discussed with Mr. Ernest E. Thurlow, Atomic Energy Commission, Salt Lake City, Utah.

As the Field Team report did not include the comments and recommendations of Mr. Thurlow kindly furnish a supplement that covers these points.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (JB)

APPROVED:

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

Philip W. Guild
Member, Geological Survey (JB)

FLKnouse/foc 3-22-54
cc to: Adm. Reading File
Operating Comm.
Docket
Messrs. H. D. Keiser, Rm. 3641
A. P. Butler, Rm. 3212 - GSA
Code 700
J. O. Hosted, Rm. 3210 - GSA
DMEA Field Team, Region IV

R.C.S. 3-24-54

3/25/54 gla

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

Defense Minerals Administration
RECEIVED
MAR 24 1954

March 23, 1954

Memorandum

To: E. W. Ellis, DMEA

From: C. H. Johnson, Bureau of Mines

Subject: DMEA-3075 (Copper-Uranium), J and M Leasing Company, Copper Mountain Mine, Mohave County, Arizona

I have reviewed the report by Tillman and Young transmitted January 12, 1954 to the operating committee by the Field Team of Region IV. The Field Team concurred in the examining engineer's and geologist's recommendation for a modified shaft sinking and drifting exploration project.

I understand you are requesting some advice from the AEC with reference to the possibilities for uranium. I understand also that there are some questions to be cleared up with reference to ownership or other matters of a legal nature. If time permits, therefore, I would suggest that the Field Team be asked whether or not in its opinion any sampling of the existing workings would assist in appraising the possibilities for finding additional reserves of copper and whether or not such sampling is feasible. It would be well, also, for the Bureau of Mines records in the Mineral Industry Division at Denver to be checked for data on production in years past.

Whether or not further information can be obtained, it seems to me some exploration is justified on the basis of the information already available. Even a small tonnage of such rich ore is worth knowing about, and is likely to be profitable almost regardless of the remote location.

C. H. Johnson

C. H. Johnson

Copy to - Mr. Newcomb, GSA
Minerals Division
C. H. Johnson
Files

3/16/54 gla

IN REPLY REFER TO:

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

March 15, 1954

Re: DMEA-3075
J. & M. Leasing Company
Mohave County, Arizona
Copper-uranium
$84,508.00

Memorandum

To: E. Wm. Ellis

From: A. R.Kinkel, Jr.

Subject: Review of field team's recommendations

I have reviewed the field team's recommendations on Docket DMEA-3075, as they concern copper. The proposed project does not appear to be warranted on the basis of copper alone. As Mr. Butler does not approve the project for uranium alone, I doubt that it is advisable to do additional work on this small mine in such an isolated locality. Possibly this property could be reconsidered if and when A. E. C. puts in an access road.

A R Kinkel Jr

A. R. Kinkel, Jr.

3/10/54 gla

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : E. Wm. Ellis, DMEA Member, Uranium Commodity Committee

DATE: March 5, 1954

Defense Minerals Administration
RECEIVED
MAR 10 1954

FROM : Arthur P. Butler, Jr., USGS Member, Uranium Commodity Committee

SUBJECT: Report of examination - DMEA Docket 3075 (Copper - Uranium), J. & M. Leasing Company, Cox and Ross claims, Mohave County, Arizona

The Field Team engineering and geologic report concerning exploration on the property identified above has been reviewed. Although recommendations are made by the Field Team that the applicant be granted a loan of $24,253 to explore for copper and uranium by rehabilitating and sinking the present shaft 100 feet and 250 feet of drifting, factual data contained in the report are insufficient to substantiate the recommendations. Data are lacking in regard to 1) the size and significance of visible uranium-bearing zones, 2) the significance of the few "ore grade" uranium assays in contrast to the low grade assays on channel samples, 3) the inferred size and significance of copper- and uranium-bearing zones beneath the present workings, and 4) geologic evidence to indicate that mineralized zones can be expected beneath the present workings.

The lack of factual data is no basis for either concurring with, or denying, the recommendations. On the evidence presented in the report and the interpretation of that evidence the proposed kind and amount of exploration does not seem to be warranted for uranium alone. The property may, however, merit exploration solely for copper and I, therefore, recommend that the application and Field Team report be reviewed by the Survey member of the Copper Commodity Committee.

Arthur P. Butler, Jr.

Copies to: E. Wm. Ellis (2)

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

FEB 25 1954

For Butler
Whitteadey

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

Dear Mr. King:

This acknowledges receipt of your memorandum, with attachments, of February 12, 1954, relating to DMEA-3075, J. & M. Leasing Company, Mohave County, Arizona. The attachments included the original and three copies of the field team report pertaining to the application.

In the future will you please send one copy of all such reports dealing with applications not to be processed by your office to Mr. Butler for review, similarly as you are now sending a copy of applications received in your office, in accordance with the instructions given in our letters of October 6 and 22, 1953.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (2/23)

Approved:

J. H. Hedges
Member, Bureau of Mines (2/23)

Philip W. Guild
Member, Geological Survey (2/23)

GCSelfridge/enf (2/24/54)

cc to: Admr. R. File
Selfridge
Chron.

2/18/54 gla

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 17 1954

224 New Customhouse
Denver 2, Colorado

February 12, 1954.

Memorandum

To: Secretary to the Operating Committee, Defense Minerals Exploration Administration

From: Field Team, Region IV

Subject: Report of Examination - DMEA Docket 3075 (Copper-Uranium), J. & M. Leasing Company, Mohave County, Arizona.

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

We recommend a short form contract to include proposals outlined in the engineering and geologic reports provided that the legal matters involved are found to be satisfactory.

The following material is enclosed:

1. One copy of Form MF-203 signed by Anna C. Cox, Lorain Cox, Anna F. Cox, Kenneth Cox, and Etta Cox.

2. Letter dated August 24, 1953 from Pickett & Pickett and the enclosures to that letter consisting of one map and five pages of sample data.

3. Letter dated September 11, 1953 from Pickett & Pickett and the enclosures to that letter which are one rough sketch of the six mining claims and Location Notices on the Copper Mountain #1, Copper Mountain #2, Copper Mountain #5, and Copper Mountain #6 mining claims.

4. Copy of a letter dated January 20, 1954 from George F. Baggley of the National Park Service to John H. East, Jr.

5. Copy of a letter dated January 20, 1954 from George Baggley to Ellis J. Pickett.

6. Copy of our reply to George F. Baggley dated January 27, 1954.

Reviewed by
DMEA OPERATING COMMITTEE
2-24-54
(date)

W H King
W. H. King

A H Koschmann
A. H. Koschmann

Enclosures

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 17 1954

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

224 New Customhouse
Denver 2, Colorado

February 15, 1954.

Mr. James Wulfenstein
172 East 3rd South
St. George, Utah

Re: Docket No. DMEA-3075

Dear Mr. Wulfenstein:

The report of examination on the Cox and Ross claims was forwarded to the Washington Office this date for their consideration and appropriate action.

Very truly yours,

W H King

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

HMC:cwm

cc: Docket
Administrator, DMEA
BRWilson
AHKoschmann
Chron.

Reviewed by
DMEA OPERATING COMMITTEE
2-24-54
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

February 12, 1954.

Memorandum

To: Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Report of Examination - DMEA Docket 3075 (Copper-Uranium), J. & M. Leasing Company, Mohave County, Arizona.

Enclosed are eleven copies of the engineering report of examination on the subject docket.

The applicants requested $84,508.00 for sinking, drifting and crosscutting. The examining engineer believes the applicants' exploratory proposals are too ambitious and he discussed with the applicants, who accompanied the field examiners, a modified exploration program. It is believed that this modified program is acceptable to the applicants, although clear affirmation was not given.

The exploration recommended by the examining engineer, and in which we concur, consists of construction of a head frame, 210 feet of shaft rehabilitation, 100 feet of shaft sinking, and 250 feet of drifting and crosscutting on the 310-foot level. The total cost of this work is estimated to be $24,253.00.

This property, in the past, has produced a good grade of copper ore and the uranium mineralization on the 210-foot level is in line with the zone of high copper mineralization. Therefore, Government participation in the cost of the project should be on a 70% basis.

W. H. King

W. H. King

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
2-24-54
(Date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

February 5, 1954

Memorandum

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

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: Docket No. DMEA-1075, J. and M. Leasing Co., Cox and Ross Claims (Copper-Uranium), Mohave County, Arizona

Enclosed are the original and 10 copies of an engineering report covering examination of the subject property by W. E. Young. A separate section, Summary, Conclusions and Recommendations, is also included, together with three copies each of forms 6-803 and 6-993. The geologic report was transmitted by the Survey January 29, 1954.

The examining team recommends a program of exploration estimated to cost $24,253. The recommended project includes part of the work proposed by the applicant. The property is in an isolated area, and access may be difficult because of the road conditions. Exploratory costs will be somewhat higher than average as a result of the distance to supply centers and transportation problems. Transportation difficulties could be solved by construction of a road over the Kaibab-Coconino rim, a project which will serve other properties in the area as well as the subject property.

It is believed the property has promise for discovery of a moderate tonnage of copper-uranium ore. Recommendation is made that a contract be drawn on the short form to include proposals outlined in the engineering and geologic reports. I concur in this recommendation.

Stephen R. Wilson
Stephen R. Wilson

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
2-24-54
(2230)

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Defense Minerals Exploration Administration
Denver Federal Center
Denver 2, Colorado

February 1, 1954

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 3075 (copper-uranium), J. & M. Leasing Company, Copper Mountain Mine, Mohave County, Arizona

Enclosed are 11 copies of a geologic report on the Copper Mountain Mine, DMEA Docket 3075, by C. G. Tillman, geologist, U. S. Geological Survey.

A. H. Koschmann
A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (11)

Reviewed by
DMEA OPERATING COMMITTEE
2-24-54
(date)

Room 208, 222 South West Temple
Salt Lake City 1, Utah
January 29, 1954

Memorandum

To: A. H. Koschmann, Field Team, Region IV

From: C. G. Tillman, for R. J. Roberts,
Utah-Nevada District Office

Subject: DMEA Docket 3075 (copper-uranium), J. and M. Leasing Company, Copper Mountain Mine, Mohave County, Arizona

Enclosed are 11 copies of a geologic report on the Copper Mountain Mine, DMEA Docket 3075, by C. G. Tillman, geologist, U. S. Geological Survey.

The J. and M. Leasing Company, St. George, Utah applied for a DMEA loan to aid in exploration for uranium ore at the Copper Mountain Mine, Mohave County, Arizona.

Copper minerals occur along faults and replacing the groundmass of sandstone breccia around the periphery of a circular area in the Permian Queantoweap sandstone or Hermit formation. Abnormal radioactivity exists throughout the mine and a little uranium ore exists on the lowest level.

Qualified approval of a modified exploration program is recommended subject to DMEA consideration of the possible prohibitive expense of road maintenance.

Ralph J. Roberts

By: _____

C. G. Tillman

Reviewed by
DMEA OPERATING COMMITTEE

2-24-54
(date)

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

September 7, 1954

Memorandum

To: Ernest William Ellis, DMEA Member Uranium Commodity Committee, Room 4640

From: John E. Crawford, Bureau of Mines Member Uranium Commodity Committee

Subject: DMEA Docket 3075 (Copper) J&M Leasing Company, Cox and Ross Claims, Mohave County, Arizona

I have reviewed the subject report and have discussed it with Joseph O. Hosted, representative of the Atomic Energy Commission.

Mr. Hosted has indicated that the AEC recommends DMEA participation on this project up to 62½ percent.

I concur however with the recommendation of the field team that DMEA participation be limited to 50 percent.

John E. Crawford

John E. Crawford

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

September 7, 1954

Memorandum

To: Ernest William Ellis, DMEA Member Uranium Commodity Committee, Room 4640

From: John E. Crawford, Bureau of Mines Member Uranium Commodity Committee

Subject: DMEA Docket 3075 (Copper) J&M Leasing Company, Cox and Ross Claims, Mohave County, Arizona

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I concur however with the recommendation of the field team that DMEA participation be limited to 50 percent.

Signed

John E. Crawford

FILE COPY
SURNAME:

140

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

Ruth
F Gloyne
Ellis

MAR 1 8 1954

Air Mail

Mr. James Wulfenstein
172 East Third South
St. George, Utah

Re: Docket No. DMEA-3075 (Copper-Uranium)
J. and M. Leasing Company
Copper Mountain Mine
Mohave County, Arizona

Dear Mr. Wulfenstein:

This responds to your telegram dated March 5 inquiring as to the status of the subject application.

Your telegram stated that, in answer to your inquiries concerning the status of the application, the Denver regional office and this office each informed you that it was being handled by the other office. Our review of the matter discloses that you were given accurate information in each instance.

Your application was received in this office on June 11, 1953. It was held in this office until August 10, 1953, while certain questions concerning the interests of the J. and M. Leasing Company in the property which is the subject of the proposed exploration project were being clarified through correspondence with you and your attorney, Mr. Ellis J. Pickett. On that date, the file was transmitted to the regional office for further processing. Also, on that date, we wrote to you requesting that you furnish us with certain additional information and send a copy of it to the Executive Officer, Region IV. In a letter dated August 14, 1953, the Executive Officer informed you that he would continue processing your application when he received the information requested in our letter to you dated August 10, 1953. Subsequently, you sent a claim map and sample data to the Executive Officer, and in a letter dated September 2, 1953, he informed you that all of the exploration work which you proposed was so near the east side line of the property which you held at that time, that you were required to submit evidence of your rights to the lands beyond the east side line before processing of your application could be continued.

R.C.G.
3-11-54

With a memorandum dated February 12, 1954, the Field Team, Region IV, returned the application to us for our review of copies of correspondence concerning the validity of your four Copper Mountain mining claims, between your counsel, Mr. Pickett, and the Superintendent of the Lake Mead National Recreation Area, Mr. George F. Baggley. It appears from this correspondence that you located the Copper Mountain claims on lands which were under reclamation withdrawal, and that to validate these claims you are required to follow the procedure set forth in Vol. 43, Code of Federal Regulations, sec. 185.36.

In our copy of the letter dated January 20, 1954, from the Superintendent of the Lake Mead National Recreation Area to your counsel, Mr. Pickett, it is stated that you and your brother had visited him sometime during the week of January 11, 1954, and had been advised concerning the first steps to be taken to validate your Copper Mountain mining claims. Your counsel was also informed, by the Superintendent, that he would be advised further as to how to proceed in the matter.

It is regretted that the question of the validity of the Copper Mountain claims has delayed our further consideration of the subject application. However, it is incumbent upon the applicant to resolve questions concerning the sufficiency of his interest in land for the purposes of an exploration project contract.

As soon as the validity of your Copper Mountain claims is established, we shall continue processing the application.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

HCRubin:ep 3-10-54

Copy to: Docket
Administrator
Admr. Reading File
Oper. Committee
Mr. C. H. Johnson, B/M
Mr. A. R. Kinkel, Jr., USGS
Field Team, Reg. IV (2)
Mr. Ellis
Mr. Hofflund
Mr. Rubin
Chron.
Pending

3/8/54 gla

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable symbol above or preceding the address.

WESTERN UNION

(02)..

W. P. MARSHALL, PRESIDENT

FX-1201

SYMBOLS
DL=Day Letter
NL=Night Letter
LT=Int'l Letter Telegram
VLT=Int'l Victory Ltr.

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C O MITTENDORF ADMIN DEFENCE MINERALS EXPLORATION
INTERIOR DEPT
ADMINISTOR =WASHDC=

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 8 - 1954

:IN REFERENCE TO DMEA-3075 J AND M LEASING CO: W H KING DENVER ADVISED USOUR APPLICATION WAS IN WASHINGTON. C O MITTENDORF ADVISED US IT WAS IN DENVER. DENVER IN RETURN ADVISED US IT WAS IN WASHINGTON. IS OUR APPLICATION THERE AND WHATS THE STATIS?=

JAMES WULFENSTEIN=

DMEA-3075 J M =

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

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

COPY

224 New Customhouse
Denver 2, Colorado

August 16, 1954

To: Chairman of the Operating Committee, DMEA

From: DMEA Field Team, Region IV

Subject: Supplemental examination report, Docket No. DMEA-3075 (Copper-Uranium), J. and M. Leasing Company, Cox and Ross claims, Mohave County, Arizona.

Enclosed are four copies of a supplemental engineering memorandum from a Bureau of Mines engineer, four copies of a supplemental geologic memorandum from a Geological Survey geologist, and four copies of a memorandum from an Atomic Energy Commission geologist pertaining to Docket No. DMEA-3075.

The report of examination was transmitted to the Secretary of the Operating Committee on February 12, 1954.

In a letter dated March 24, 1954, the Chairman of the Operating Committee requested that the application be discussed with Ernest E. Thurlow, Atomic Energy Commission, Salt Lake City, Utah.

On March 29, 1954, the Chairman of the Operating Committee requested certain additional information which was requested by Arthur P. Butler, A. R. Kinkel, Jr., and C. H. Johnson in memoranda attached to the above letter.

The original examination report recommended that the applicant be granted a loan of $24,253.00 to rehabilitate the main shaft from the surface to the 210-foot level, sink the shaft 100 feet, and drift and crosscut 250 feet on the 310-foot level.

The Atomic Energy Commission geologist stated that the most logical and economical way to explore this property is by crosscutting and drifting. He recommended that a crosscut be driven approximately 600 feet to the mineralized zone and 200 feet of drift be driven along the mineralization.

A supplemental engineering memorandum recommended that a tunnel be driven approximately 700 feet in a southwesterly direction

Reviewed by
DMEA OPERATING COMMITTEE
8-23-54
(date)

to intersect the zone of mineralization and 200 feet of drift be driven along the mineralized zone. The estimated cost of 900 feet of work at $30.00 per foot is $27,000.00.

The applicant agreed to construct a road at no expense to the Government from the main shaft to the site of the proposed adit portal.

The records of the Minerals Development Branch at Denver indicate that a significant amount of copper, lead and zinc has been produced from this property. It appears that any uranium mineralization would be accompanied by copper mineralization. The ore would in all probability be shipped to a copper smelter and the uranium content would be lost. We doubt if a significant amount of uranium would be discovered as a result of the proposed exploration. We recommend that this exploration be approved for copper alone on the basis of 50% Government participation.

If it is agreeable to the applicant a contract should be prepared authorizing 700 feet of adit and 200 feet of drifting along the mineralized zone at the unit cost of $30.00 per foot.

The location of the proposed work is shown on the map attached to the engineering report. However, the applicant should agree to construct the road to the site of the proposed tunnel portal at no expense to the Government.

These recommendations were discussed with and approved by A. P. Butler, Jr.

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

/s/ E. N. HARSHMAN
for A. H. Koschmann

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

GEOLOGICAL SURVEY
TEPCO
RECEIVED
AUG 27 1954
Denver

July 15, 1954

Memorandum

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

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: Docket No. DMEA 3075 (Uranium), J. and M. Leasing Co., Cox and Ross claims, Mohave County, Arizona

Attached are the original and 10 copies of a supplemental engineering report relative to the subject docket. This information is presented as a result of conversations with personnel of the AEC, requested by the Chairman, Operating Committee, in a letter to your office dated March 24, 1954. Additional comment concerning the docket is contained in a memorandum from this office dated June 3, 1954.

The original engineering report, mailed to your office February 5, 1954, contains a recommendation that the applicant be granted a loan of $24,253 to rehabilitate the main shaft from the surface to the 210-foot level, sink the shaft 100 feet, and drift and crosscut 250 feet on the 310-foot level.

The property was mapped by the AEC and after discussions with personnel of this agency, it was believed that consideration should be given to a proposed crosscut to intersect a projection of the ore zone below the 210-foot level. It is proposed that a crosscut be driven approximately 700 feet in a southwesterly direction from a point in the gulch, east of the main shaft. After the ore zone is intersected, provision should be made for 200 feet of drifting along the zone. It is estimated that the work could be accomplished for $30 per foot, or a total of $27,000 for 900 feet of lateral work. The above work is recommended in lieu of the recommendation in the original engineering report, estimated to cost $24,253. The proposed crosscut is shown on figure 7 attached to Young's supplemental report.

It will be necessary to construct a road from the main shaft to the site of the adit portal. The length of road necessary will be at least 1/2 mile over steep terrain. However, the operator has indicated willingness to construct the necessary road with his own funds, thus the cost of the road is not included in the total for the proposed crosscutting and drifting.

Reviewed by
DMEA OPERATING COMMITTEE
8-23-54
(date)

As suggested in a memorandum dated March 23, 1954, from C. H. Johnson, Bureau of Mines, to E. Wm. Ellis, DMEA, the records of the Mineral Industry Division at Denver, Colorado, were checked to obtain the production record of the Copper Mountain property. The available record is as follows:

Year	Ore Shipped, Dry Tons	Gross Metal Content: Copper, pounds	Lead, pounds	Zinc, pounds	Gold, ounces	Silver ounces
1934	16	5,779	—	—	0.40	81
1937	6	1,790	—	—	—	20
1949	195	12,628	8,387	37,994	163	1,728
1950	151	94,000	—	—	2	476
1951	23	4,936	—	—	—	47
1952	21	4,774	—	—	—	31
1953	133	3,814	—	—	—	28
Total	545	127,681	8,387	37,994	165.40	2,411

C. H. Johnson, in his memorandum of above date, requests information pertaining to the feasibility of obtaining additional samples of underground exposures. The examining team did not sample the existing underground workings during the period of examination. The limited lateral workings, water in openings below the levels, the erratic character of the mineralization and removal of mineralized bodies on and above the levels, resulted in a conclusion that additional sampling is not feasible.

A memorandum dated March 15, 1954, from A. R. Kinkel, Jr., U.S.G.S., to E. Wm. Ellis, DMEA, includes a statement, " * * * I doubt that it is advisable to do additional work on this small mine in such an isolated locality. Possibly this property could be considered if and when AEC puts in an access road."

The property is accessible now and the applicant is willing to spend his own funds constructing a new road and maintaining the present roads. It appears that evaluation of the area as a potential uranium producer can only be accomplished by exploration of favorable deposits. Appraisal of known deposits should precede large expenditures for road construction.

A memorandum from Arthur P. Butler, Jr., W.S.G.S., to E. Wm. Ellis, DMEA, dated March 5, 1954, raises several questions concerning the reports prepared by the examining team. These questions have been covered in a memorandum dated July 15, 1954, from C. G. Tillman and R. W. Ostenstock to A. N. Koechmann.

Stephen R. Wilson

Stephen R. Wilson

Enclosure

Reviewed by
DMEA OPERATING COMMITTEE

(date)

Room 206 - 222 So. West Temple
Salt Lake City 1, Utah
July 15, 1954

Memorandum

To: A. N. Koschmann, Field Team, Region IV E.M.H. for AHK.

From: R. W. Outerbeck, for R. J. Roberts, Utah-Nevada District Office

Subject: DMEA docket 3075 (Copper-uranium). J. & M. Leasing Company, Copper Mountain mine, Gem and Rose claims, Mohave County, Arizona - Supplemental geologic report.

In order to satisfactorily answer the questions raised by A. P. Butler and A. R. Kinkel the DMEA examining team would be required to spend an excessive amount of time on this property. Factual data such as that requested could only be gained by extensive topographic and geologic mapping at the surface, remapping of the underground workings and surface pits, and a methodical and detailed sampling program. Such detailed work would probably take two geologists two to three weeks to complete and does not appear to be warranted. It is our understanding, moreover, that such a study does not fall within the domain of the examining team.

This supplemental report will attempt to dispose of some of the points raised regarding the property, based on a recent brief field re-examination of the surface workings. The ladder providing access into the inclined shaft is rotten and unsafe, consequently the mine is to all intents and purposes inaccessible. The initial examination was made in spite of these conditions but the risk is not worth repeating. We have suggested that the owners repair the ladders but have learned that they do not intend to do so.

A. P. Butler has requested clarification of the following points:

(1) "The size and significance of visible uranium zones." Only one area has been located that contains ore grade uranium mineralization. On the 210-foot level in a small underhand stope on the hangingwall of a fracture zone, A.E.C. sampling disclosed a pod of ore which assayed 0.46 percent U_3O_8 (sample F 3955). As was stated in the original report further drifting to the northeast along the fracture exposed no more ore grade uranium mineralization. Thus the size of the uranium bearing pod must be relatively small, perhaps a few tens of tons. The significance of the pod is questionable, it may or may not portend the existence of like bodies on similar structures laterally or at depth. Perhaps the most interesting feature of this pod is its existence at the present water table, consequently the possibility of enrichment or concentration cannot be discounted.

(2) "The significance of the few 'ore-grade' uranium assays in contrast to the low grade assays on channel samples." The ore grade assays have in all cases been hand picked either in the mine or from the ore pile on the surface. All of the channel samples which might be regarded as representative assayed below ore grade for uranium. Consequently there is no known location within the mine from which ore grade material has been obtained in representative samples.

(3) "The inferred size and significance of copper and uranium bearing zones beneath the present workings." There is no way of knowing with any degree of certainty whether copper-uranium bearing zones exist below the deepest level of the mine which is at the present

water table. It seems likely that some copper enrichment has taken place, but the elevation of the water table at the time of enrichment is unknown. The operator reports that the amount of chalcocite relative to the amount of oxide-carbonate ore has increased steadily with depth which would tend to indicate a radical depression of the water table during enrichment. If the copper ore continues below the present deepest workings it may be assumed that the size of the ore bodies will approximate those already mined at higher elevations. If the amount of chalcocite continues to increase it may be expected that the average copper content will increase.

The likelihood of discovery of significant uranium ore shoots by means of the recommended exploration was stated in the original report to be only fair. This conclusion resulted from considering the generally low scintillometer readings throughout the mine as recorded on the A.E.C. longitudinal section and from the fact that only a single sample which was a grab sample of mud taken by the applicant from under water in the underhand stope (sample F 3955) contained ore grade uranium. Mineralogical studies by the A.E.C. indicated that no primary uranium mineral has yet been found on the property. Only the secondary uranium mineral metaautunite has been identified and it is found intimately associated with chalcocite, malachite, azurite, cuprite, and limonite. Whether this association continues below the present 210-foot level, and if so with sufficiently high grade to be classified as ore, is indeterminable without further exploration. The size and shape of inferred uranium ore shoots below the 210-foot level likewise is indeterminable without further exploration.

(4) "Geologic evidence to indicate that mineralized zones can be expected beneath the present workings." Discussed under 3 above.

The following comments refer to E. N. King's A.E.C. memorandum to E. E. Thurlow dated April 21, 1954 which was transmitted to S. R. Wilson May 5, 1954.

Mr. King proposes an adit bearing S. 41° W. to extend 600 feet in that direction to cut the "downward projection of the mineralization approximately 150 feet below the present 210-foot level. Drifting could then be done along the mineralization. Such a crosscut would give an additional 50 feet of depth (UMA proposed total depth of shaft is 310 feet) and also explore 600 feet of virgin ground for about the same amount as is proposed by the examining team for shaft rehabilitation and sinking 100 feet on the present shaft...

Since the present shaft is not within the mineralized zone, sinking an additional 100 feet would disclose nothing in the way of pertinent geology, whereas the crosscut would explore an area that does have surface mineralization showing...

It is, therefore, recommended that a crosscut approximately 600 feet be driven to the ore shoot..."

(1) A projection of the target "fissure" to the tunnel level indicates the "fissure" should be intersected at approximately 370 feet using Mr. King's assumed dip of 47.5° northeast.

(2) This "fissure" appears to be a weak fracture zone in sandstone along which no copper mineralization was observed by the examining geologists. Consequently it was not sampled. This "fissure" is of the same order of magnitude as many other weak fractures and joints in the mine area which are not shown on the map.

(3) The Copper Mountain shaft was inclined so as to follow copper mineralization from its collar to the lowest level of the mine where it is approximately 8 feet from the vein. The shaft was put down on the then most promising and subsequently most productive vein in the area.

(4) The proposed adit actually parallels the productive vein explored in the Copper Mountain mine.

The examining geologists conclude that a tunnel driven approximately 770 feet in a direction S. 51° W. from the proposed portal and a crosscut driven approximately 20 feet northwesterly from the end of the tunnel at right angles to it would cut the downward continuation of the Copper Mountain vein. This appears to be the shortest possible tunnel from the proposed portal that would reach the projected position of the vein on the tunnel level. An additional 200 feet of drifting on the vein in a northeasterly and southwesterly direction would be required to adequately explore it. This work would be approximately 155 feet below the lowest level of the mine. At $30.00 per foot the cost of 990 feet of drifting and crosscutting is $29,700.00 and it is assumed that the access road required to reach the portal site would be built by the applicant at his own expense.

No mineralized structures significant from a DMEA viewpoint were observed on the surface over the proposed tunnel. Exploration of this ground by the tunnel does not seem warranted on that basis alone.

Due to the somewhat higher cost of this exploration program than that earlier proposed by the examining geologist and engineer it is concluded that the earlier proposal remains the desirable exploration method if a project is approved for this property.

The position of the water table at the time of enrichment is unknown, if it was below the present water table then it is quite possible that the enriched chalcocite zone will continue below the present lowest workings of the mine. The exact association between copper and uranium mineralization is not fully understood, therefore, the liklihood of the existence of uranium ore at depth is unknown.

J. AND M. LEASING CO.
COX AND BOBS CLAIMS
MOHAVE COUNTY, ARIZONA
DMEA-3075
Copper-Uranium

Supplemental Engineering Report

By W. E. Young
Mining Engineer
Bureau of Mines

Reviewed by
DMEA OPERATING COMMITTEE
8-23-54
(date)

INTRODUCTION

The alternate proposal for exploration of the Copper Mountain mine recommended by the Atomic Energy Commission, has been studied and reviewed. This proposal consists of exploration by crosscut from an adit site near the bottom of the wash to intersect the downward projection of mineralization. The work outlined will include driving 700 feet of crosscut and 200 feet of drifts. Estimated costs indicate that this plan may be accomplished by an expenditure of little more than for work proposed in the original reports of the Bureau of Mines and the Geological Survey. This work would intersect the mineralization at 60 to 75 feet greater depth than the proposed work as submitted in the original reports. Additional advantages are that the ore may be mined at lower cost and that the crosscut would afford drainage in the event water is encountered.

However, an additional expense which has not been considered previously, will be incurred by the adoption of this proposal. It will be necessary to construct at least ½ mile of access road from the shaft collar to the site of the adit portal. The surface map indicates a grade of 30 percent in the gulch. Construction of switchbacks will be necessary to establish a suitable grade. Erosion has denuded the area of most of the soil, thus it is anticipated that considerable rock work and blasting will be required in road construction. During the course

of the examination, road construction was not investigated, but it is believed this work will involve considerable expense. The applicant has expressed willingness to assume this responsibility and the expense of the road construction in order to complete the project by cross-cutting and drifting.

ESTIMATE OF COSTS

Prospecting and Drifting 900 feet

(Time for completion - 10 months)

Labor and supervision

2 men, 250 days at $14 per day	$7,000.00
1 supervisor, $400 per month	4,000.00
1 bookkeeper (part time) $50	500.00
Payroll taxes, liability insurance, etc., 12% of above $11,500 x .12	1,380.00
	$12,880.00

Operating materials and supplies

Explosives, 900 feet at $2.10 per foot	$1,890.00
Pipe, 900 feet, 2" black at $.40 per foot	360.00
Pipe, 900 feet, 1" black at $.24 per foot	216.00
Track, 900 feet, 12-lb., complete, at $770 M	693.00
Drill steel and bits, 900 feet at $1.00 per foot	900.00
Miscellaneous small tools, gas, oil, etc.	2,700.00
Equipment repairs and replacements	700.00
	$7,459.00

Operating equipment depreciation

1 trailer house	$ 250.00
1 185-cfm. compressor	500.00
1 mucking machine	500.00
1 International 2½-ton truck	333.33
1 Studebaker ½-ton truck	250.00

1 HP'W Allis Chalmers tractor	$ 280.00*
1 jackhammer, mounted	100.00
1 bar and column	60.00
2 mine cars	70.00
	$2,343.33

*Allow for use 1/3 of the time. Superintendent to serve as operator.

Drifting and crosscutting, grand total	22,682.33
Consulting geologist, 20 days at $50 per day	1,000.00
Total estimated project cost, crosscutting and drifting, consulting geologist	$23,682.33

Depreciation	Value	1 mo.	10 mo.
1 trailer house	$1,500	$25.00	$ 250.00
1 105-cfm. compressor	3,000	50.00	500.00
1 International 2½-ton truck	2,000	33.33	333.33
1 Studebaker ½-ton truck	1,500	25.00	250.00
1 jackhammer, mounted	600	10.00	100.00
1 bar and column	360	6.00	60.00
2 mine cars	420	7.00	70.00
1 mucking machine	3,000	50.00	500.00
1 HP'W Allis Chalmers tractor	1,680	28.00	280.00
Total equipment cost			$2,343.33

SUMMARY OF COSTS

Labor and supervision	$12,800.00
Operating materials and supplies	7,499.00
Operating equipment cost	2,343.33
Consulting geologist	1,000.00
Total	$23,682.33

It is recommended that this proposed plan of exploration be adopted in place of the work originally proposed by the Bureau of Mines and

Geological Survey. The estimated cost of performing 900 feet of cross-cutting and drifting is $23,682.13. The unit cost is calculated at $26.31 per foot. In view of the isolated location of the property and the cost of transporting materials and supplies, it is recommended that a unit figure of $30 per foot be used in preparing a short-form contract.

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

AUG 25 1954

August 25, 1954

Memorandum

To: E. W. Ellis, DMEA

From: C. H. Johnson, Bureau of Mines

Subject: DMEA-3075 (Copper) J&M Leasing Company, Cox and Ross Claims, Mohave County, Arizona

I have reviewed the reports from the field transmitted by the Field Team, August 16, 1954, entitled "Supplemental Examination Report."

It appears that the prospects for a worthwhile discovery of uranium are insufficient in the opinion of the field team to merit much consideration on the part of the DMEA. In any event, the Field Team recommends only 50 percent participation.

It appears to me that the proposal to explore the deposit by means of an adit is sensible and well justified. My only suggestion on this is that the proposed course of the adit is wasteful of footage. I would suggest that it be started -say, at about elevation of 550 feet on a bearing South 55° West from a point about 75 feet down stream from the "fracture zone approximately 20 feet wide" shown on the map. This bearing will bring it to the same target point in the same distance, namely, 700 feet, and will possibly strike the ore shoot or ore zone, considerably sooner. It will also shorten the access road to the portal about 250 feet, assuming the road comes down the gulley north of the mine. Provisions should be made, of course, that the adit would follow the ore whenever ore is encountered and that if no ore is encountered by the time the target point is reached (approximately under the "old rock house" shown on the map) that a crosscut might be turned off to the northwest for 100 feet or so in an endeavor to intersect the ore-bearing fissure.

C. H. Johnson

C. H. Johnson

Copy to - Minerals Division
Rare & Precious Metals Branch
C. H. Johnson
Files

E. Wm. Ellis, DMEA Member, Uranium Committee August 30, 1954
Committee

Arthur P. Butler, Jr., DMEA Member, Uranium
Committee Committee

Memorandum from Region IV and other supplementary information
DMEA Docket 3975 (Copper-Uranium) J & N Leasing Co., Copper
Mountain mine, Cue and Rose claims, Mohave County, Arizona

The supplementary information submitted by the committee members of the Field Team concerning exploration of this property were discussed with Mr. Kleinhampl, Geological Survey and Mr. Shaw, Bureau of Mines representatives of the Field Team.

The supplementary geologic report says that all the uranium samples of ore-grade are "picked samples", and all the samples that might be called representative are below ore-grade for uranium. For this reason and because the area in which radioactivity and uranium occur in the mine is small and small relative to the area from which copper has been produced, we agreed that it seems extremely dubious that the proposed exploration would find a significant amount of uranium. My approval of the Field Team's recommendation, therefore, is confined to agreeing that the prospects of making a significant discovery of uranium are so poor that the exploration should be approved solely on the merit for finding copper ore, and should not be construed to pertain either to the plan of exploration or the worthiness for copper.

Copy to: E. Wm. Ellis (2)

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Mining Division
Date Rec'd
NOV 15 1954
BUREAU OF MINES
Denver, Colorado

Room 208 - 222 So. West Temple
Salt Lake City 1, Utah
November 9, 1954

DRM
for ABR

Memorandum

To: A. H. Koschmann, DMEA Field Team, Region IV

From: R. W. Osterstock, Utah-Nevada District Office

Subject: DMEA Docket 3075 (Copper), Proposed Contract Idm-E729, J. & M. Leasing Company, a partnership composed of McMurrin Wulfenstein and James E. Wulfenstein, Mohave County, Arizona.

Following are the recommendations and comments relative to C. H. Johnson's suggested changes in the work to be performed under the subject contract as requested by W. H. King in his memo dated October 22, 1954.

Johnson's new adit bearing is more in the nature of a drift than a crosscut and is very nearly on strike with the downward projection of the northeasterly trending ore zone, consequently, it is possible that the ore zone will be encountered earlier than is anticipated in the proposed 700 foot adit. It should be pointed out that the downdip projection of the ore zone to the proposed adit level (see fig. 7, accompanying "Supplemental Report") probably is inexact due to irregularities in the structural setting.

The suggestion that the bearing of the proposed adit be changed to S. 55° W. appears to be well founded in that this new bearing reaches the "target area" with somewhat less footage in the adit than that required in the adit proposed in the "Supplemental Report" dated August 16, 1954.

JJJ

However, since this new adit bearing approaches the ore zone from a very acute angle, I believe it will be advisable to provide for 50 feet of cross cutting in a northwesterly direction and 100 feet of crosscutting in a southeasterly direction in order to assure intersection of the downward projection of the ore zone as mapped in existing workings. The drifting as originally proposed may be started after the ore zone is intersected.

Regarding the validation of the four Copper Mountain claims as noted in J. H. Hofflund's memo dated October 7, 1954, a brief conversation with McMurrin Wulfenstein has disclosed that the mine property is within the boundaries of the Lake Mead Recreation area. Apparently the property was tax delinquent for a brief period during 1939 at which time the park officials felt that the title of the property reverted to the Lake Mead Recreation area. As yet no clearance has been received by the operators which will permit reentering the area for mining purposes.

It may be that DMEA officials in Washington or one of the Regional offices can determine whether such clearance will be granted the operators, and consequently whether there is justification for any further action concerning this docket.

R. W. Osterstock

R. W. Osterstock

RWO/rs
cc: S. R. Wilson

DEPARTMENT OF THE INTERIOR
Defense Materials Administration
RECEIVED
NOV 12 1954

Room 206 - 222 So. West Temple
Salt Lake City 1, Utah
November 9, 1954

GRM
for AHK

Memorandum

To: A. H. Koschmann, DMA Field Team, Region IV

From: R. W. Osterstock, Utah-Nevada District Office

Subject: DMA Docket 3075 (Copper), Proposed Contract Idm-5729, J. & M. Lansing Company, a partnership composed of McMurrin Wulfenstein and James E. Wulfenstein, Mohave County, Arizona.

Following are the recommendations and comments relative to C. H. Johnson's suggested changes in the work to be performed under the subject contract as requested by W. H. King in his memo dated October 22, 1954.

Johnson's new adit bearing is more in the nature of a drift than a crosscut and is very nearly on strike with the downward projection of the northeasterly trending ore zone, consequently, it is possible that the ore zone will be encountered earlier than is anticipated in the proposed 700 foot adit. It should be pointed out that the downdip projection of the ore zone to the proposed adit level (see fig. 7, accompanying "Supplemental Report") probably is incorrect due to irregularities in the structural setting.

The suggestion that the bearing of the proposed adit be changed to S. 55° W. appears to be well founded in that this new bearing reaches the "target area" with somewhat less footage in the adit than that required in the adit proposed in the "Supplemental Report" dated August 16, 1954.

However, since this new adit bearing approaches the ore zone from a very acute angle, I believe it will be advisable to provide for 50 feet of cross cutting in a northwesterly direction and 100 feet of crosscutting in a southeasterly direction in order to assure intersection of the downward projection of the ore zone as mapped in existing workings. The drifting as originally proposed may be started after the ore zone is intersected.

Regarding the validation of the four Copper Mountain claims as noted in J. H. Mefflund's memo dated October 7, 1954, a brief conversation with Maurrin Wulfenstein has disclosed that the zinc property is within the boundaries of the Lake Mead Recreation area. Apparently the property was tax delinquent for a brief period during 1939 at which time the park officials felt that the title of the property reverted to the Lake Mead Recreation area. As yet no clearance has been received by the operators which will permit reentering the area for mining purposes.

It may be that BLM officials in Washington or one of the Regional offices can determine whether such clearance will be granted the operators, and consequently whether there is justification for any further action concerning this docket.

H. W. Osterstock

HWO/rs
cc: B. R. Wilson

Room 208 - 222 So. West Temple
Salt Lake City 1, Utah
November 9, 1954

DRM
for AHK

Memorandum

To: A. H. Kaufmann, DMA Field Team, Region IV

From: R. W. Waterstock, Utah-Nevada District Office

Subject: DMA Docket 3075 (Kepper), Proposed Contract Ida-8729, J. & W. Leasing Company, a partnership composed of Sherrin Wulfenstein and James E. Wulfenstein, Mohave County, Arizona.

Following are the recommendations and comments relative to C. H. Johnson's suggested changes in the work to be performed under the subject contract as requested by A. H. King in his memo dated October 22, 1954.

Johnson's new adit bearing is more in the nature of a drift than a crosscut and is very nearly on strike with the downward projection of the northwesterly trending ore zone, consequently, it is possible that the ore zone will be encountered earlier than is anticipated in the proposed 700 feet adit. It should be pointed out that the downdip projection of the ore zone to the proposed adit level (see fig. 7, accompanying "Supplemental Report") probably is inexact due to irregularities in the structural setting.

The suggestion that the bearing of the proposed adit be changed to S. 55° W. appears to be well founded in that this new bearing reaches the "target area" with somewhat less footage in the adit than that required in the adit proposed in the "Supplemental Report" dated August 16, 1954.

However, since this new adit bearing approaches the ore zone from a very acute angle, I believe it will be advisable to provide for 50 feet of cross cutting in a northwesterly direction and 100 feet of crosscutting in a southeasterly direction in order to assure intersection of the downward projection of the ore zone as mapped in existing workings. The drifting as originally proposed may be started after the ore zone is intersected.

Regarding the validation of the Four Copper Mountain claims as noted in J. E. Muffland's memo dated October 7, 1954, a brief conversation with Mr. Marvin Wolfenstein has disclosed that the mine property is within the boundaries of the Lake Mead Recreation area. Apparently the property was tax delinquent for a brief period during 1939 at which time the park officials felt that the title of the property reverted to the Lake Mead Recreation area. As yet no clearance has been received by the operators which will permit reentering the area for mining purposes.

It may be that DSA officials in Washington or one of the Regional offices can determine whether such clearance will be granted the operators, and consequently whether there is justification for any further action concerning this docket.

R. W. Ostenstock

RWO/rs
cc: S. R. Wilson

Room [illegible] - 222 So. West Temple
Salt Lake City 1, Utah
November 9, 1954

DRM
for AHK

Memorandum

To: [illegible] Field Team, Region IV

From: [illegible], Area-Domain District Office

Subject: [illegible] Lease [illegible] (Copper), Proposed Contract [illegible],
J. [illegible] Leasing Company, a partnership composed of [illegible]
Wolfenstein and James S. Wolfenstein, [illegible] County, Virginia.

Following are the recommendations and comments relative to [illegible] Johnson's suggested changes in the work to be performed under the subject contract as requested by [illegible] King in his memo dated October 22, 1954.

Johnson's new adit bearing is more in the nature of a drift than a crosscut and is very nearly on strike with the downward projection of the northwesterly trending ore zone, consequently, it is possible that the ore zone will be encountered earlier than is anticipated in the proposed 700 foot adit. It should be pointed out that the downdip projection of the ore zone to the proposed adit level (see fig. 7, accompanying "Supplemental Report") probably is longer due to irregularities in the structural setting.

The suggestion that the bearing of the proposed adit be changed to [illegible] 55° W. appears to be well founded in that this new bearing reaches the "target area" with somewhat less footage in the adit than that required in the adit proposed in the "Supplemental Report" dated August 16, 1954.

However, since his new adit bearing approaches the ore zone from a very acute angle, I believe it will be advisable to provide for 50 feet of cross cutting in a northeasterly direction and 100 feet of crosscutting in a southeasterly direction in order to assure intersection of the downward projection of the ore zone as mapped in existing workings. The drifting as originally proposed may be started after the ore zone is intersected.

Regarding the validation of the four Copper Mountain claims as noted in J. R. Duffland's memo dated October 7, 1954, a brief conversation with Murrin Wulfenstein has disclosed that the mine property is within the boundaries of the Lake Mead Recreation area. Apparently the property was tax delinquent for a brief period during 1938 at which time the park officials felt that the title of the property reverted to the Lake Mead Recreation area. As yet no clearance has been received by the operators which will permit reentering the area for mining purposes.

It may be that BLM officials in Washington or one of the Regional offices can determine whether such clearance will be granted the operators, and consequently whether there is justification for any further action concerning this docket.

A. W. Guterstock

AWG/rs
cc: J. R. Wilson

File Copy
Surname

Griswold
Chairman Selfridge
Johnson

UNITED STATES
DEPARTMENT OF THE INTERIOR 500
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

OCT 19 1954

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

Re: Docket No. DMEA-3075 (Copper)
J & M Leasing Company
Cox & Ross et al Mining Claims
Mohave County, Arizona

Dear Mr. King:

We are enclosing the original and five copies of a contract for the cited project. Please note the two stipulations of the enclosed memorandum dated October 7 from the Acting Assistant Solicitor. After such requirements have been satisfied the contract and all copies may be presented to the Applicant for signature and the copies distributed in the usual manner.

We also call your attention to the enclosed memorandum dated August 25 of Mr. C. H. Johnson, USBM. You will note he suggests some change in the proposed crosscut location.

In the event that the contract may not meet with your approval, all copies should be returned to this office with your comments.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (JHB)

WRGriswold/er 10/12/54

Enclosures 3

APPROVED:

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

Thor H. Kiilsgaard
Member, Geological Survey (JHB)

Copy to: DOCKET
Admr. R. File
Op. Committee
Base Metals
Mr. Kiilsgaard, USGS
Mr. C. H. Johnson, USBM
Chron

R.C.S.

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

October 7, 1954

Memorandum

To: The Administrator, DMEA
Through: Mr. W. R. Griswold

From: Acting Assistant Solicitor, Defense Minerals

Subject: Docket No. DMEA-3075 (Copper), J. & M. Leasing Company

Pursuant to the request in your memorandum dated September 22, we have prepared the attached contract, subject to the following requirements prior to execution:

1. The Operator is sublessee of three-fourths interest in two Cox and Ross Mine claims. Therefore, an Owner's Consent to Lien on the latest form is required from the five lessors of the three-fourths interest (Coxes). Our letter dated July 17, 1953, to Applicant's counsel, waived requirement for an Owner's Consent to Lien in the outstanding one-fourth interest.

2. The Administrator's letter to the Applicant dated March 10 required validation of the four Copper Mountain claims as therein set forth. We find no evidence in the docket that such validation has been made.

J. L. Hofflund

J. L. Hofflund
Acting Assistant Solicitor
Defense Minerals

Attachments 8

GGS
3/23/54

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By C. G. Tillman and W. E. Young

The Cox and Ross claims in Mohave County, Arizona, held under lease by J. and M. Leasing Co., were examined by DMEA personnel during December 1953. The claims cover the Copper Mountain mine, an intermittent producer of high-grade copper ores for many years. An examination of the property was made for the purpose of appraisal of a loan request under docket No. DMEA 3075.

The Copper Mountain property is located in an isolated area on the north drainage of the Colorado River, approximately 6 miles from the river. The area is reached from St. George, Utah, over roads that are difficult to maintain.

Predominant rocks in the area are sandstone and shale of the Supai formation of Pennsylvanian age. Copper-uranium mineralization occurs in steeply dipping, lenticular zones in the sandstone, the mineralization and form of the ore shoots apparently having a relation to a circular zone of alteration appearing at the surface. Principal copper minerals are malachite and azurite, with smaller amounts of cuprite and bornite. Uranium is associated with the copper mineralization, chiefly as the mineral zeunerite. No developed ore reserves are present on the property. The ore body appears to continue below the 210-foot level, the lowest level in the shaft.

Reviewed by
DMEA OPERATING COMMITTEE

2-24-54
(date)

The applicant has proposed a program of shaft sinking and drifting and crosscutting. It is proposed that the main shaft be deepened 200 feet, with a total of 500 feet of drifting and 400 feet of crosscutting on two levels. In addition to the above proposals, the applicant requests funds to rehabilitate 210 feet of shaft and for construction of a headframe, hoist house, ore bin and combination boarding house and bunk house. The estimated cost of the applicant's proposed project is $84,508.

The examining engineer and geologist believe the applicant's exploratory proposals are too ambitious, and recommend an alternate program which includes part of the applicant's proposals, consists of construction of a headframe, 210 feet of shaft rehabilitation, 100 feet of shaft sinking and 250 feet of drifting and crosscutting on the 310-foot level.

Recommendation is made that the applicant be granted a loan of $24,253 to perform work as outlined by the examiners. Government participation in the cost of the project should be 70 percent, or an average of 50 percent participation for copper and 90 percent for uranium. A short-form contract is recommended.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

3/24/54

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA Docket 3075 (Copper-Uranium)

J. and M. Leasing Company, Cox and Ross Claims

Mohave County, Arizona

By

C. G. Tillman
U. S. Geological Survey

January 28, 1954

GEOLOGIC REPORT

DMEA DOCKET 3075 (URANIUM-COPPER)

J. AND M. LEASING COMPANY, COX AND ROSS CLAIMS

MOHAVE COUNTY, ARIZONA

3/24/54

Summary

The J. and M. Leasing Company of St. George, Utah applied for DMEA assistance to aid in exploration for uranium ore on the Cox and Ross claims, Mohave County, Arizona.

The applicants' property is reached by an access road which is subject to washout during heavy rain or thaw. Mr. W. E. Young's U. S. Bureau of Mines engineering report deals with the problem in detail.

The Copper Mountain mine on the Cox and Ross claims is in the Permian Queantoweap sandstone or Hermit formation near the extreme southeastern corner of the Shivwits Plateau. Copper mineralization appears to be circular in plan. Ore is localized in breccia and fault zones which dip outward from this area. Principal ore bodies consist of copper-sulfide replacement of the groundmass of lenticular breccia zones. A few thousand tons of medium to high grade ore are estimated to have been shipped.

Uranium-bearing material of ore-grade occurs near an underhand stope on the lowest level. Abnormal radioactivity is present throughout the mine. To learn more of the distribution of the uranium as well as to explore for copper and uranium ore, an exploration program is outlined involving rehabilitation of the inclined shaft, 100 feet of shaft deepening, 50 feet of crosscutting to the mineralized zone if necessary, and 200 feet of drifting along this zone to the east and northeast.

INTRODUCTION

The J. and M. Leasing Company of St. George, Utah applied for a loan, DMEA Docket 3075, May 29, 1953 to aid in exploration for uranium ore on the Cox and Ross claims, Mohave County, Arizona (fig. 1).

The property was examined December 1, 1953 by C. G. Tillman, U. S. Geological Survey and W. E. Young, U. S. Bureau of Mines. It had been inaccessible due to road washouts previous to this date. Mr. J. E. Wulfenstein and Mr. McM. Wulfenstein, the applicants, were present during the examination.

Weather conditions did not permit time for more than a very brief examination of the surface and underground workings.

Location and accessibility

The Copper Mountain mine is at the southeast edge of the Shivwits Plateau on Parashont Wash near its junction with Andrus Wash. Parashont Wash drains southeastward to join the Queantoweap Valley drainage a short distance north of the Colorado River.

The claims are probably in secs. 2 or 3, T. 32 N., R. 10 W., G. & SR. B. and M. and may be reached by driving south from St. George, Utah on Utah Highway 64 for 50 miles to the Walking X Ranch; bear south and continue 18.6 miles, then turn southeast off the state road onto a dirt access road and continue approximately 36 miles by way of Andrus Wash to the mine. The part of the road in Andrus Wash is washed out during every heavy rain storm or thaw. The engineering report by W. E. Young discusses this matter in detail. The continued profitable operation of the mine will depend in large part on the expense required to keep this road open.

History and production

The Copper Mountain mine has probably produced several thousand tons of medium- to high-grade copper ore although no production figures are available. Abnormal radioactivity was discovered recently when the A. E. C. mapped the mine and made a thorough scintillometer survey of the surface and underground workings. Sample data accompanies the A. E. C. map. The last shipment by present operators was 125 tons of ore which averaged 15.4 percent copper.

GEOLOGY

The Shivwits Plateau is a part of the Colorado Plateau province bounded on the south by the Colorado River, on the east by the Hurricane Cliffs, and on the west by the Grand Wash Cliffs. Northward, in the vicinity of the Utah-Arizona border south of St. George, Utah, it loses its identity along a low north-facing escarpment.

The oldest sedimentary rocks underlying this plateau are exposed along the Colorado River. Cambrian rocks at the canyon bottom include the Tapeats sandstone, Bright Angel shale, Muav limestone, and unnamed dolomitic limestone. Overlying these rocks are the Devonian Temple Butte limestone, the Mississippian Redwall limestone, the Pennsylvanian Callville limestone, the Permian Queantoweap sandstone, Hermit formation, Coconino sandstone, Toroweap formation and Kaibab formation. The Triassic Moenkopi formation is found along the west side of the Hurricane fault and on the north edge of the plateau. Large areas of Kaibab formation in the central part of the plateau and Moenkopi formation on the north edge of the plateau are overlain by Tertiary and Quaternary lavas. All of these beds have a small regional dip to the east. Along the western, downdropped side of the Hurricane fault they dip as much as 14° to the east.

Copper-uranium mineralization occurs, it is believed, either in the upper part of the Queantoweap sandstone or the lower part of the Hermit formation. In areas where these formations cannot be differentiated, they are known collectively as the Supai formation. Along the South Hurricane Cliffs, the Queantoweap sandstone consists of about 400 feet of massive, generally thick-bedded, cliff and ledge-forming, cross-bedded to regularly-bedded, gray to pink, fine-grained calcareous sandstone in which the crossbedding dips southeast (McNair, 1951, p. 527). The Hermit formation, which overlies the Queantoweap with gradational contact, is about 930 feet thick and consists of gray to red, fine- to very fine-grained, thick- to thin-bedded sandstone with the finer-grained, thinner-bedded intervals being darker red in color and softer; thus yielding more readily to erosion.

The Hermit formation is stripped back off the top of the Queantoweap; as a result, the latter forms the upper canyon floors.

The generally north-striking, steeply west dipping Hurricane fault is present in Queantoweap Valley about 6 miles east of the mine area.

ORE DEPOSITS

At the surface the shaft is seen to be collared on the south central part of an apparently circular zone of copper mineralization which has a diameter of perhaps 600 feet 1/ The Central part of this circular area is cut to a depth of more than 100 feet by a steep-walled gully. Copper mineralization is known on the northern continuation of the circular trend and on the northwestern side as well. The sandstone within this area is altered from its normal pale reddish color to white or tan.

The Copper Mountain ore bodies appear to be localized along small, east- to northeast-striking, steeply dipping faults and particularly in

1/ For a description of what may be a structurally similar copper deposit in this area, see: Hill, J. M., 1914, the Grand Gulch Mining Region, Mohave County, Arizona: U. S. G. S. Bull. 580-D, p. 39-58.

associated lenticular sandstone breccia of the Permian Queantoweap sandstone or Hermit formation. The faults and stopes appear to curve northeastward away from the shaft, being convex to the southeast. There is an apparent tendency for the stopes to steepen with depth or to dip irregularly. This may be due to the fact that in some places copper mineralization extends out from the fault or breccia zone along the nearly flat or gently east-dipping beds of undisturbed sandstone whereas in other places it follows more steeply dipping fault and breccia zones. The stopes between the 155- and 200-foot levels, with the exception of the stope nearest the shaft, dip regularly at about 50 degrees southeast (fig. 2). The largest of these measures approximately 40' x 40' x 5'. The large stope between the 100- and 155-foot levels dips approximately 40° southeast and measures approximately 50' x 50' x 5'. Copper mineralization is more or less continuous, though over a narrower width, from the shaft to the face on the various levels. Copper-bearing faults may be offset by oblique cross faults.

Copper minerals appear along northeast-striking faults, as replacements of groundmass and some fragments of sandstone breccia, and to a limited extent as replacements of undisturbed sandstone adjacent to fault and breccia zones. Bornite appears to be the most abundant sulfide and the principal ore mineral. Malachite and possibly cuprite are the principal secondary copper minerals. The green, micaceous appearing, secondary uranium mineral zeunerite coats fracture surfaces and is reported to form veinlets in copper ore. A black uranium mineral may also be present.

A small pod of ore-grade uranium mineralization occurs on the 210-foot level in the hangingwall of the vein near the underhand stope. Two A. E. C. samples taken under water in the underhand stope averaged more than

0.10 percent U_3O_8. An additional twenty feet of drifting along the vein to the northeast on the 210-foot level exposed no ore-grade uranium mineralization. High scintillometer readings were obtained by the A. E. C. at several places in the stopes between 155- and 210-foot levels. Abnormal, but low, radioactivity is present throughout the mine.

Oxidation extends to the lowest level as indicated by the presence of abundant iron oxide stains and malachite. Water was encountered on the lowest level and now stands several inches deep near the water-filled underhand stope.

ORE RESERVES

There is insufficient sample data to make a reliable copper and uranium ore reserve estimate.

PROPOSED EXPLORATION

The applicants propose to explore the ore-grade uranium showings exposed on the 210-foot level by deepening the inclined shaft an additional 200 feet and by driving two 250-foot exploratory drifts along the vein at the 300- and 390-foot levels. A 100-foot crosscut to the north from the drift on the 300-foot level is proposed to ensure testing the mineralized zone.

In addition, it is proposed to crosscut 300 feet southwest on the 210-foot level to explore the projected position of a northwest striking, vertical fracture which is exposed at the surface 200 feet southwest of the shaft. This fracture shows iron-oxide and copper carbonate stain and abnormal radioactivity over a width of a few inches and a strike length of several hundred feet at the surface.

The examining team recommends that part of the applicants' plan of exploration be approved as follows: Rehabilitate and deepen the inclined

shaft an additional 100 feet to the 300-foot level. If the shaft does not follow the mineralized fault zone, crosscut 25 to 50 feet southeast to intersect this zone. Drift along the mineralized zone to the east and northeast 200 feet.

The plan is designed to test the downward continuation of the most promising uranium showing in the mine as well as the downward continuation of copper mineralization.

CONCLUSIONS AND RECOMMENDATIONS

An additional 20 feet of drifting northeasterly along the copper-uranium vein on the 210-foot level has carried the work beyond the zone of uranium ore exposed at the underhand stope. To determine the vertical extent of this uranium mineralization the shaft should be deepened 100 feet after shaft rehabilitation. From the foot of the shaft a crosscut should be driven, if necessary, to the copper-uranium bearing fault zone and a drift should be driven northeasterly along this zone under the ore-grade mineralization of the 210-foot level. It is estimated that the following work will be required: 100 feet of shaft sinking, 50 feet of crosscutting, and 200 feet of drifting.

It is recommended that allowance be made for the services of a consulting geologist for 20 days to aid the applicant in the proper execution of this work, to describe and map the work done with DMEA aid, and to do such other detailed geologic mapping on the surface and/or underground as time may allow or as will be conducive to the successful completion of the project.

Considering that this exploration has a good chance of discovering a small tonnage of copper ore and a fair chance of discovering a small tonnage of uranium ore it is recommended that funds be provided for 70 per-

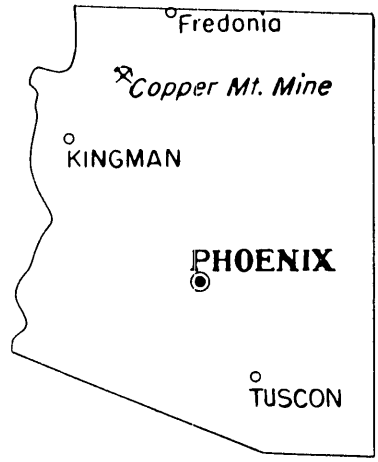
cent of the total cost of the project; i.e. the average of 50 percent government participation for copper and 90 percent government participation for uranium.

Approval of the modified exploration program described herein for the Copper Mountain mine is recommended provided the susceptibility of the access road to washout is not regarded by DMEA as a reason for denial of the application.

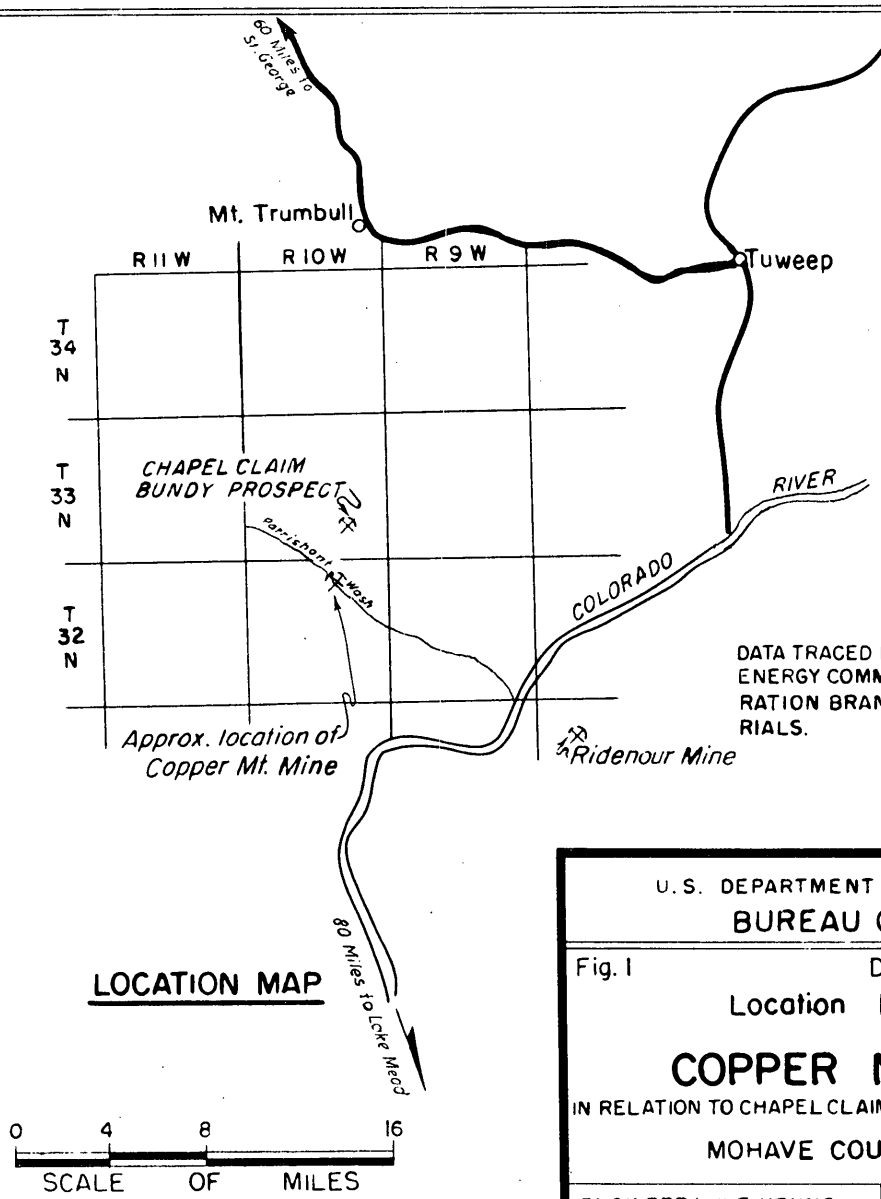
What about [illegible]

References Cited:

McNair, A. H., 1951, Paleozoic stratigraphy of part of northwestern Arizona: Bull. AAPG, vol. 35, no. 3, p. 503-541, March, 1951.



MAP OF ARIZONA



LOCATION MAP

NOTE

DATA TRACED FROM DRWG. OF U. S. ATOMIC ENERGY COMMISSION, SALT LAKE EXPLORATION BRANCH, DIVISION OF RAW MATERIALS.

U. S. DEPARTMENT OF THE INTERIOR

BUREAU OF MINES

Fig. 1 DMEA Docket No. 3075

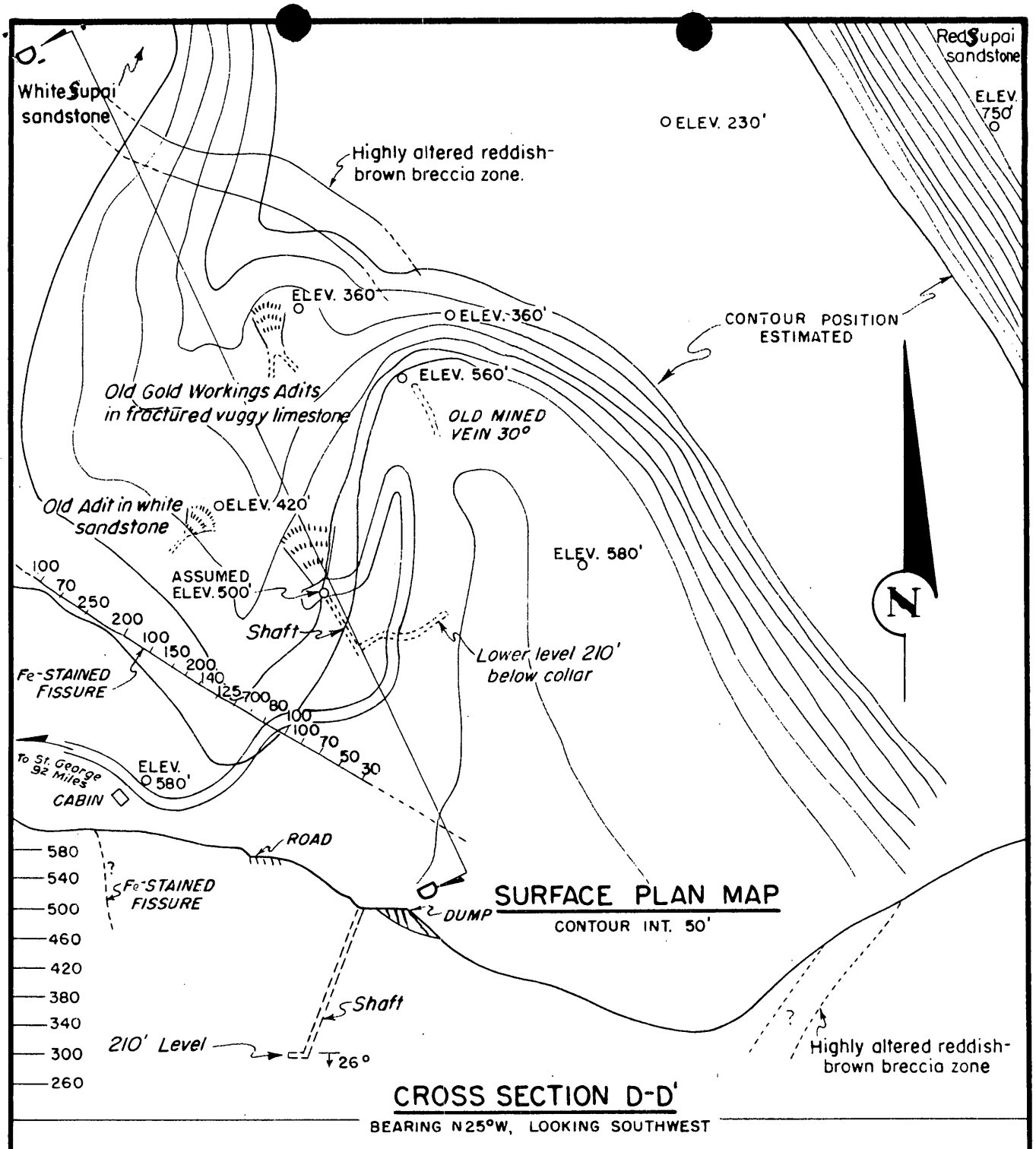
Location Maps of

COPPER MT. MINE

IN RELATION TO CHAPEL CLAIMS AND RIDENOUR MINE

MOHAVE COUNTY, ARIZONA

ENGINEER: W. E. YOUNG	DATE: JAN. 18, 1954
TRACED: JAN., 1954; A. P. T. S.	1900 - 270 - E
CHECKED	



NOTE

DATA TRACED FROM DRWG. OF U.S. ATOMIC ENERGY COMMISSION, SALT LAKE EXPLORATION BRANCH, DIVISION OF RAW MATERIALS.

0 200 400

SCALE OF FEET

U. S. DEPARTMENT OF THE INTERIOR

BUREAU OF MINES

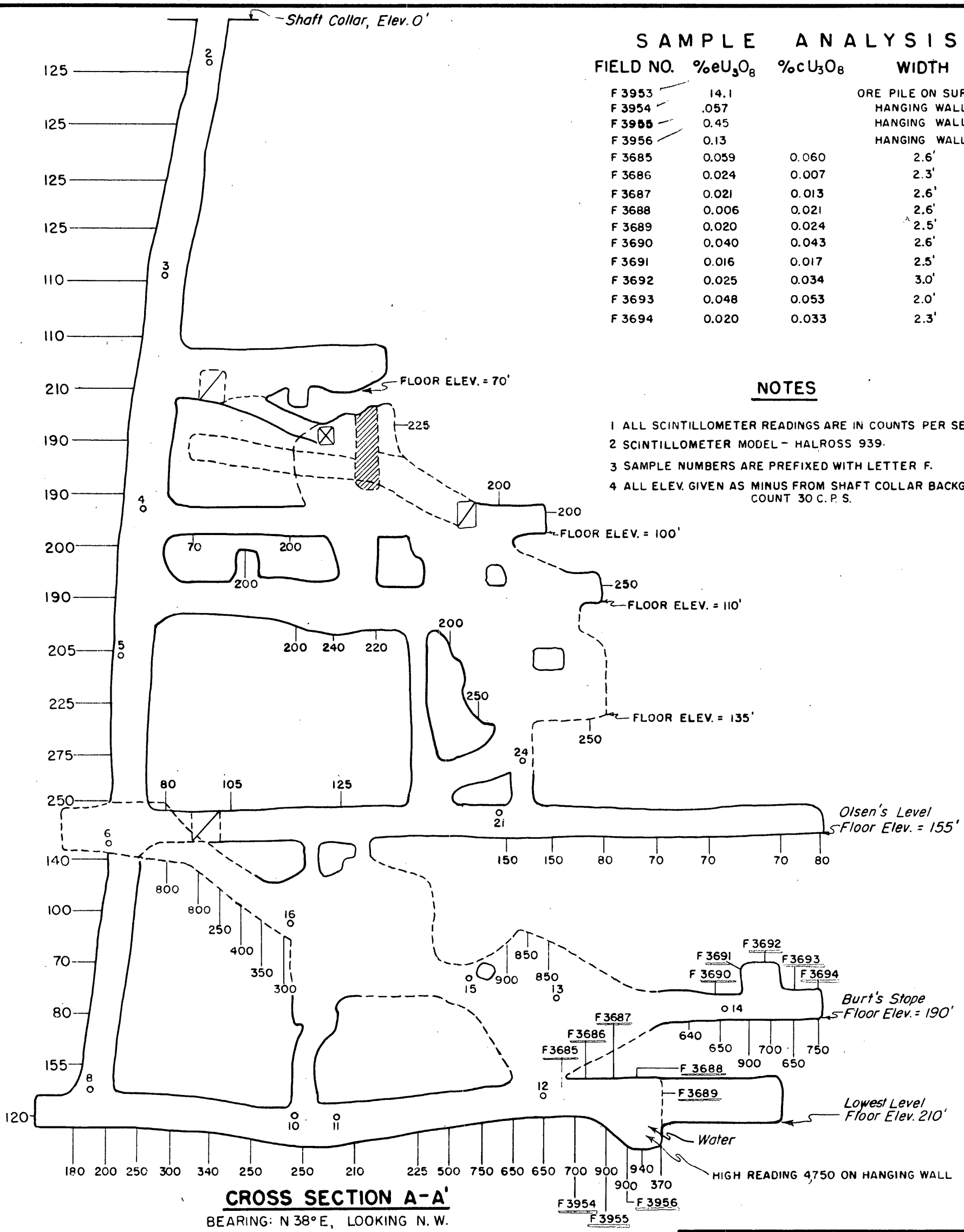
Fig. 2 DMEA Docket No. 3075

Surface Plan Map and Cross Section D-D'

COPPER MT. MINE

MOHAVE COUNTY, ARIZONA

ENGINEER: *W. E. YOUNG*	DATE: JAN. 19, 1954
TRACED: JAN., 54; A.P.T.S.	1900 - 271 - E
CHECKED:	



SAMPLE ANALYSIS

FIELD NO.	%eU$_3$O$_8$	%cU$_3$O$_8$	WIDTH
F 3953	14.1		ORE PILE ON SURFACE
F 3954	.057		HANGING WALL
F 3955	0.45		HANGING WALL
F 3956	0.13		HANGING WALL
F 3685	0.059	0.060	2.6'
F 3686	0.024	0.007	2.3'
F 3687	0.021	0.013	2.6'
F 3688	0.006	0.021	2.6'
F 3689	0.020	0.024	2.5'
F 3690	0.040	0.043	2.6'
F 3691	0.016	0.017	2.5'
F 3692	0.025	0.034	3.0'
F 3693	0.048	0.053	2.0'
F 3694	0.020	0.033	2.3'

NOTES

1 ALL SCINTILLOMETER READINGS ARE IN COUNTS PER SECOND.
2 SCINTILLOMETER MODEL – HALROSS 939.
3 SAMPLE NUMBERS ARE PREFIXED WITH LETTER F.
4 ALL ELEV. GIVEN AS MINUS FROM SHAFT COLLAR BACKGROUND COUNT 30 C. P. S.

CROSS SECTION A-A'

BEARING: N 38° E, LOOKING N. W.

NOTES

DATA TRACED FROM DRWG. OF U.S. ATOMIC ENERGY COMMISSION, SALT LAKE EXPLORATION BRANCH, DIVISION OF RAW MATERIALS.

0 20 40
SCALE OF FEET

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Fig. [redacted] DMEA Docket No. 3075

Cross Section A - A'
SCINTILLOMETER SURVEY AND SAMPLE MAP

COPPER MT. MINE

MOHAVE COUNTY, ARIZONA

ENGINEER: W. E. YOUNG	DATE: JAN. 22, 1954
TRACED: JAN., 54; A. P. T. S.	1900 - 273 - F
CHECKED:	

J. AND M. LEASING CO.
COX AND ROSS CLAIMS
MOHAVE COUNTY, ARIZONA
DMEA-3075
Copper-Uranium

3/24/54

Engineering Report

By W. E. Young
Mining Engineer
Bureau of Mines

Reviewed by
DMEA OPERATING COMMITTEE
2-24-54
(date)

J. AND M. LEASING CO.
COX AND ROSS CLAIMS
MOHAVE COUNTY, ARIZONA

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ILLUSTRATIONS

Fig. 1 Location map, J. and M. Leasing Co., Copper Mt. mine, Mohave County, Arizona
Fig. 2 Surface plan and section through shaft
Fig. 3 Scintillometer and sample map
Fig. 4 Composite plan of underground workings
Fig. 5 Sections through underground workings
Fig. 6 Claim map

SUMMARY

The Cox and Ross claims, held by J. & M. Leasing Co., were examined on December 1, 1953, in response to a DMEA application for Government assistance. The claims include the Copper Mountain mine, an old property which has been worked intermittently over a long period for high-grade copper ores. The small size of the ore body in conjunction with inaccessibility of the property has undoubtedly limited development at an earlier date. The mine has been opened to the 210-foot level by an inclined shaft with levels at various intervals driven into the main ore shoot.

Access to the property is via a deep, narrow canyon, typical of the plateau country. Road maintenance in the canyon is costly and impractical. Further development of the area is dependent upon construction of an access road over the Kaibab-Coconino rim to eliminate the canyon road.

Recent discovery of uranium in the copper ore has enhanced the value of the property and interest therein. The Atomic Energy Commission mapped the underground workings of the Copper Mountain mine and is now studying the surrounding area. A project to make the area accessible by a road over the rim is under consideration by this agency.

Recommendation is made that a DMEA loan be granted. Proposals submitted by the loan applicants, however, are considered too ambitious

and a modified program is recommended. The recommended program consists of construction of a headframe, rehabilitation of 210 feet of shaft, 100 feet of shaft sinking, and 250 feet of drifting and crosscutting. The estimated cost of this work is $24,253. It is recommended that Government participation be at the rate of 70 percent of the cost of the project. This is an average of the participation of 50 percent for copper and 90 percent for uranium. It is suggested that a short-form contract be drawn covering the recommended work.

INTRODUCTION

The Cox and Ross claims were examined December 1, 1953, by a geologist of the Geological Survey and an engineer of the Bureau of Mines. The examination was made in response to a request from the Field Team, Region IV, for appraisal of an application under docket No. DMEA 3075.

Examination of the underground workings of the Copper Mountain property was greatly facilitated by the use of maps supplied by the Atomic Energy Commission. Examination of the surface was limited to a short period because of inclement weather.

LOCATION AND PHYSICAL FEATURES

The Cox and Ross claims are in Mohave County, Arizona, on the north side of the Colorado River (fig. 1). The mine area lies in Andrus Spring Wash, approximately 6 miles northwesterly from the point where this drainage empties into the Colorado River. The specific

location appears to be Secs. 2 or 3, T. 32 N., R. 10 W., G. and S. R. B. and M.

The property is reached by driving south from St. George, Utah, on Highway 64 for 50 miles to the Walking X Ranch. At this point the road branches. The left-hand road leads to the town of Mt. Trumble (Bundyville). The right-hand road, which leads to the mine, continues south—a slightly improved county road. At a point 18.6 miles from the above fork, another poorly marked road branches to the left. This road leads to the head of Andrus Spring Wash and down the wash to the mine. The total distance from St. George to the mine is 96 miles.

The last 14 miles of the road in Andrus Spring Wash is subject to washout during flash floods. Over part of this distance, the road is in the bottom of a straight-walled, narrow canyon. Over much of the remaining distance, the road is on a wide, gravel-bottomed flood plain, strewn with coarse boulders of all sizes. Any shifting of the gravels by flood waters in either section completely obliterates any trace of the road. The nature of the terrain is such that any permanent improvement of the existing road is impossible. The yearly cost of keeping the existing road open has undoubtedly exhausted most of the profits from sale of the ores hauled from the property. The only permanent solution to the road problem lies in the construction of a road over the Kaibab-Coconino rim. Such a project is under consideration by the Atomic Energy Commission to make accessible this property and two other similar properties in the area. ? Hoxtool

The nearest shipping point is Cedar City, Utah. This point, on a branch line of the Union Pacific Railroad, is 150 miles from the mine. Shipment by rail from Cedar City to Garfield, Utah, is approximately 265 miles.

HISTORY AND PRODUCTION

Little is known of the early history of the mine. The first ore produced is reported to have been packed out on burros. Later, attempts were made to haul the ore in wagons through Andrus Spring Wash. The present lessees have attempted to keep this route open for trucking by use of a bulldozer. The small tonnage mined will not justify the expense for the use of this type equipment.

No figures are available for the tonnage and grade of ore mined previous to the period of the present lease. Smelter records for 1953 show the lessees shipped 125 tons which had an average grade of 15.4 percent copper. Although records are incomplete, the size of the stoped areas indicate that in excess of 3,000 tons of ore has been mined. There is very little waste material on the dump. The small amount present may be accounted for by the various drifts driven from the shaft. There is little or no material used as fill in the mine; thus most of the broken material from the stopes must have been shipped. It is unlikely that ore assaying below 15 percent copper could be mined because expenses incidental to mining, shipping and processing would preclude any profits. Reference is made by Hill[1/] of shipments from

1/ J. M. Hill, U.S.G.S. Bull. 580, p. 56, Copper King Mine.

this property in 1913 which were said to carry 23 to 26 percent copper and from $3 to $4 per ton in silver.

Recent discovery of uranium in the ore has interested the Atomic Energy Commission. This agency has mapped the mine and made a scintillometer survey of the surface and underground workings.

OWNERSHIP AND EXTENT

The original property consists of two claims, the Cox and Ross Mine Claim and the Cox and Ross Mine Claim No. 1. Owners of an undivided three-fourths interest in these claims are: Mary Etta Cox, V. Loraine Cox, Anna C. Cox, Kenneth Cox, and Anna F. Cox, all of St. George, Utah. Donald M. Carter of Chicago, Illinois, is owner of one-fourth interest. Owner's consent to lien has been secured from the undivided three-fourths interest only.

? Legal Dubious

James Wulfenstein and McMurrin Wulfenstein of St. George, Utah, have a lease on the two claims. In addition, the lessees hold by right of location four other claims surrounding the two held under lease (fig. 6).

DESCRIPTION OF THE DEPOSIT

The rocks of the area are Pennsylvanian sandstone and shales of the Supai formation. The mine area is situated midway on the long bench between the steep-walled canyon of the Colorado and the Kaibab-Coconino rim which has been eroded and stepped back to the north. The sandstone beds are essentially flat lying in the area. The ore

body occurs on the periphery of a circular zone of alteration. Within the zone the flat-lying sandstone beds are apparently undisturbed, but have been altered to a tan or buff color from the pink-to-reddish hues seen in the surrounding rocks. The alteration zone is probably 500 to 600 feet in cross section. Surface pits and diggings are seen on the south and east edges. It is reported that occurrences of copper mineralization encircle the zone. No copper is known to have been found within the zone of alteration, although it is reported that a small amount of gold ore has been mined from the central area.

The outcropping mineralization on which the shaft is sunk is on the southeast edge of the zone. The ore shoot dips steeply to the southeast. A slightly radioactive, iron-stained fissure which strikes N. 60° W., passes 200 feet south of the shaft (fig. 2).

ORE DEPOSITS

Copper mineralization has been worked at several points on the surface. The outcrop at the location of the shaft is the only one that has been developed to depth. The shaft is 210 feet deep and mineralization appears to have been persistent from the surface to the bottom level. Any separation between the zone of alteration and the surrounding sandstones is relatively indistinct. Minor breaks or faults may be mapped and brecciated sandstone is seen, but, for the most part, both are local. Structural control, in the form of

a break or wall between the altered sandstone and the unaltered sandstone, while not entirely lacking, is certainly not a marked feature of this deposit.

The shaft dips to the southeast about 75 degrees. A divergence in direction exists between the coarse of the shaft and the rake of the ore shoot. The distance between the mineralized zone and the shaft increases with each succeeding level. The distance from the shaft to the ore shoot on the 210-foot level is about 120 feet. At the 310-foot level it is estimated that the ore shoot is 150 feet northeast of the shaft.

The principal copper minerals are malachite and azurite with smaller amounts of cuprite and bornite. The ore was recently found to be radioactive and to contain uranium. A scintillometer survey and sample map (fig. 3) prepared by the Atomic Energy Commission shows a concentration of uranium mineralization on the 210-foot level in line with the zone of high copper mineralization. The uranium mineral has been identified as zeunerite.

All work has been done within the zone of oxidation. The increase of uranium mineralization at the same elevation at which the workings encountered water may be significant. The present work has not progressed far enough to indicate the effect a water table may have on copper mineralization. A criterion for depth of mineralization for

this type of deposit is not known. A deposit in the area which may be of similar occurrence has been described by Hill.[2/] Mineralization in this deposit was limited to a depth of 250 feet.

ORE RESERVES

There are no developed ore reserves on the property. The ore has been mined from the stopes between the surface and the 210-foot level (fig. 4). The present lessees attempted to sink on the ore below this level, but encountered water and were forced to abandon the work at a depth of 8 feet. The ore appears to continue below the 210-foot level.

No information is at hand regarding the grade of other outcrops on the periphery of the altered zone.

PROPOSED EXPLORATION

The applicant proposes to explore the deposit by deepening the shaft 200 feet and drifting to intersect the ore shoot at 100-foot intervals. The drifts proposed will bear northeast from the shaft and are to be driven 250 feet on the 300-foot level and 250 feet on the 400-foot level. In addition, the applicant proposes two crosscuts. One is to be driven on the 200-foot level in a S. 65° W. direction in order to intersect a projection of the radioactive, iron-stained fissure seen on the surface. This crosscut will be 300 feet in length. It is also proposed to crosscut from the 300-foot level in a N. 25° W. direction for a distance of 100 feet to intersect the main mineralized zone.

2/ See reference cited in footnote 1, p. 46, Grand Gulch Mine.

Incidental to doing this work, the applicant asks for assistance in rehabilitating 210 feet of shaft and in construction of a headframe, hoist house, ore bin, and combination boarding house and bunk house. The estimated cost of the project is $84,508.

The application lists the following equipment available for use on the project:

1 1941 Ford 1½-ton truck

1 1948 International 2½-ton truck

1 1949 Studebaker ½-ton truck

1 Gardner-Denver compressor, 105-cfm.

1 hoist

1 HD7W Allis Chalmers caterpillar

4 jackhammers

1 steel bar and column

1 stoper

Hoses - 300 feet

Steel and bits for machines.

The application states that the applicant proposes to furnish his share of the project costs by depreciation from use of the above equipment. The applicant has given no figure regarding the values of the above pieces of equipment. It is estimated that the value of all the equipment is not in excess of $15,000. Only part of the equipment will be needed on the proposed project.

The following part of the applicant's plan of exploration is recommended by the examining team:

1. Construct small headframe over shaft, with skip dump.
2. Rehabilitate shaft from surface to 210-foot level.
3. Sink shaft an additional 100 feet.
4. Crosscut from bottom of shaft to intersect mineralized zone — 25 to 50 feet.
5. Drift along mineralized zone in a northeast direction 200 feet.

The above plan is designed to test the downward continuation of the uranium-copper mineralization and to serve as a basis from which to appraise the property for development on a larger scale.

The examining team does not recommend more than 100 feet of shaft work at this time because it appears the property can be developed at depth to better advantage by driving an adit 800 to 1,000 feet. The increased distance between the bottom of the shaft and the ore shoot, as each succeeding level is reached, limits the serviceability of the shaft.

Because of the remoteness and inaccessibility of the property, it is estimated that 9 months will be required to complete the above work. It is recommended that construction of a bunk house, hoist house and ore bin be held up pending completion of the recommended project work. Construction of the headframe is necessary to accomplish the proposed work. The steepness of the area at the shaft collar will

necessitate a headframe of unusual design. Rehabilitation of the 1½-compartment, inclined shaft from the surface to the 210-foot level is also a necessity. The timber has rotted and fallen out in places and the shaft is now considered unsafe. The applicant stated his intention of retimbering with a full set and lagging solid all around the shaft. This is not considered necessary because of the good condition of the wall rock. It is recommended that timbering consist of 6" x 6" wall plates, spaced at 6-foot intervals along the footwall. These are to be lined vertically with two 2" x 12" lagging on which the skip rails are to be placed. A 2" x 4" ladderway is to be installed on one side of the shaft. The shaft was timbered in this manner previously. It is recommended that bulkheads be installed at 50-foot intervals in the shaft with necessary clearance openings for skip and manway.

It is believed that any water encountered in sinking the shaft can be bailed from the shaft. No pumping equipment is believed necessary.

The hoist now located on the property is makeshift equipment powered by an International truck engine. It is doubtful if it would be adequate to sink to the 300-foot level. It is recommended that a hoist be rented to complete the project work.

ESTIMATE OF COSTS

Construction of headframe and skip dump

(Time for completion - one month)

Labor and supervision		
3 men - 25 days at $14 per day	$1,050.00	
1 supervisor, $400 per month	400.00	
1 bookkeeper (part time) $50 per month	50.00	
Payroll taxes, liability insurance, etc., at 12 percent of above, 1,500 x .12	180.00	$1,680.00
Operating materials and supplies		
1,500 board feet lumber, 8" x 8" at $130 M	$ 195.00	
500 board feet lumber, 3" x 12" at $130 M	65.00	
500 board feet lumber, "dimentional" at $130 M	65.00	
Nails, bolts, etc.	25.00	
Miscellaneous small tools, gas, oil, etc.	150.00	$ 500.00
Operating equipment - depreciation		
Trailer house	$ 25.00	
1 International 2½-ton truck	33.33	
1 Studebaker ½-ton truck	25.00	83.33
Total		$2,263.33

Rehabilitation of 210 feet of shaft

(Time for completion - one month)

Labor and supervision		
3 men - 25 days at $14 per day	$1,050.00	
1 supervisor, $400 per month	400.00	
1 bookkeeper (part time) $50 per month	50.00	
Payroll taxes, liability insurance, etc., at 12 percent of above, 1,500 x .12	180.00	$1,650.00

Operating materials and supplies

1,000 board feet lumber, 6" x 6" at $130 M	$130.00	
1,000 board feet lumber, 2" x 4" at $130 M	130.00	
500 board feet lumber, 2" x 4" at $130 M	65.00	
Nails, blocks, wedges, etc.	35.00	
Rails, 12-lb., 225 feet at $770 M, complete	173.25	
Miscellaneous small tools, gas, oil, etc.	250.00	$ 783.25

Operating equipment - purchase

Skip, 1-ton capacity	350.00	$ 350.00

Operating equipment - rental

1 gasoline-driven, single-drum hoist	$ 63.00	$ 63.00

Operating equipment - depreciation

Trailer house	$ 25.00	
1 105-cfm. compressor	50.00	
1 International 2½-ton truck	33.33	
1 Studebaker ½-ton truck	25.00	133.33
		$3,009.58

Shaft sinking 100 feet

(Time for completion - 4 months)

Labor and supervision

3 men - 100 days at $14 per day	$4,200.00	
1 supervisor, $400 per month	1,600.00	
1 bookkeeper (part time) $50 per month	200.00	
Payroll taxes, liability insurance, etc., at 12 percent of above, 6,000 x .12	720.00	$6,720.00

Operating materials and supplies

1,750 board feet lumber at $135 M	$236.25	
Explosives, 100 feet at $2.50 per foot	250.00	
Pipe, 100 feet 2-inch black, at $0.40 per foot	40.00	
Track, 100 feet 12-lb., complete, at $770 M	77.00	
Drill steel and bits, 100 feet at $1.00 per foot	100.00	
Nails, bolts, etc.	50.00	
Miscellaneous small tools, gas, oil, etc.	1,400.00	
Repairs to equipment	300.00	$2,453.25

Operating equipment - rental

1 gasoline-driven, single-drum hoise	$252.00	$ 252.00

Operating equipment - depreciation

1 trailer house	$100.00	
1 105-cfm. compressor	200.00	
1 International 2½-ton truck	133.33	
1 Studebaker 1/2-ton truck	100.00	
1 HD7W Allis Chalmers tractor	109.76	
1 jackhammer, mounted	40.00	
1 bar and column	24.00	
1 mine car	13.32	$ 720.41
Total		$10,145.66

Drifting and crosscutting 250 feet

(Time for completion - 3 months)

Labor and supervision

3 men - 75 days at $14 per day	$3,150.00	
1 supervisor, $400 per month	1,200.00	
1 bookkeeper (part time) $50 per month	150.00	
Payroll taxes, liability insurance, etc., at 12 percent of above, 4,500 x .12	540.00	$5,040.00

Operating materials and supplies

Explosives, 250 feet at $2.10 per foot--	$525.00	
Pipe, 250 feet 2-inch black, ---------- at $0.40 per foot	100.00	
Track, 250 feet 12-lb., complete, ------ at $770 M	192.50	
Drill steel and bits, 250 feet---------- at $1.00 per foot	250.00	
Miscellaneous small tools, gas, oil,---- etc.	800.00	
Repairs to equipment ----------	200.00	$2,067.50

Operating equipment - rental

1 gasoline-driven, single-drum hoist --	$189.00	$ 189.00

Operating equipment - depreciation

1 trailer house----------	$ 75.00	
1 105-cfm. compressor----------	150.00	
1 International 2½-ton truck ----------	100.00	
1 Studebaker ½-ton truck ----------	75.00	
1 HD7W Allis Chalmers tractor----------	80.00	
1 jackhammer, mounted ----------	30.00	
1 bar and column ----------	18.00	
1 mine car ----------	10.00	$ 538.00
		$7,834.50

Consulting geologist, 20 days at $50 per day --------	$1,000.00
Grand Total ----------	$24,253.07

Total Project Labor and Supervision Costs

Construction of headframe----------	$1,050.00	
Rehabilitation of shaft----------	1,050.00	
Shaft sinking ----------	4,200.00	
Drifting and crosscutting ----------	3,150.00	
1 superintendent, $400 per month,----- 9 months	3,600.00	
1 bookkeeper (part time) $50 per month, 9 months	450.00	$13,500.00

Payroll taxes, liability insurance, at 12 percent of above, $13,500 x 12 percent	$1,620.00
Consulting geologist, 20 days at $50	1,000.00
Total	$16,120.00

Total Project Operating Materials and Supplies Costs

Headframe	$500.00	
Shaft rehabilitation	783.25	
Shaft sinking	2,453.25	
Drifting and crosscutting	2,067.50	
Total		$ 5,804.00

Total Project Operating Equipment Cost

Purchase

Skip, 1-ton capacity	$ 350.00

Rental

1 gasoline-driven, single-drum hoist, 8 months at $63	$ 504.00

Depreciation

	Value	9 months	8 months	7 months
1 105-cfm. compressor	$3,000	--	$400.00	--
1 International 2½-ton truck	2,000	$300.00	--	--
1 Studebaker ½-ton truck	1,500	225.00	--	--
1 HD7W Allis Chalmers tractor	5,000	--	--	$189.76*
1 jackhammer, mounted	600	--	--	70.00
1 bar and column	360	--	--	42.00
1 mine car	200	--	--	23.32
1 trailer house	1,500	$225.00	--	--
Total		$ 750.00	$400.00	$325.08

Total equipment cost ---------- $2,329.07

*Allow for use 1/3 of the time. Superintendent to serve as operator.

SUMMARY OF COSTS

Labor and supervision	$16,120.00
Operating material and supplies	5,804.00
Operating equipment	2,329.07
Total	$24,253.07

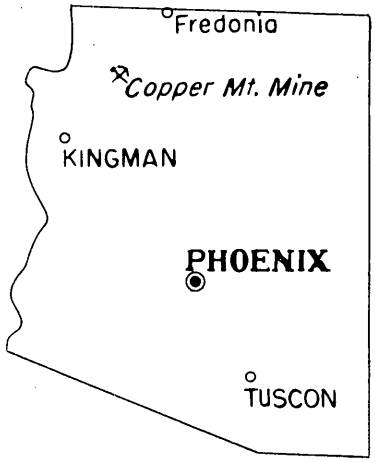
CONCLUSIONS AND RECOMMENDATIONS

Copper-uranium mineralization of interest occurs at the Copper Mountain mine in Mohave County, Arizona. The mine is located in one of the most isolated, inaccessible areas of the United States. A few thousand tons of high-grade copper ore has been mined and shipped from the property in the past. Recently the ore was found to be radioactive and to contain uranium. An ore shoot has been mined from the surface to the 210-foot level and the ore appears to continue below this level. An increase in uranium content occurs near the 210-foot level.

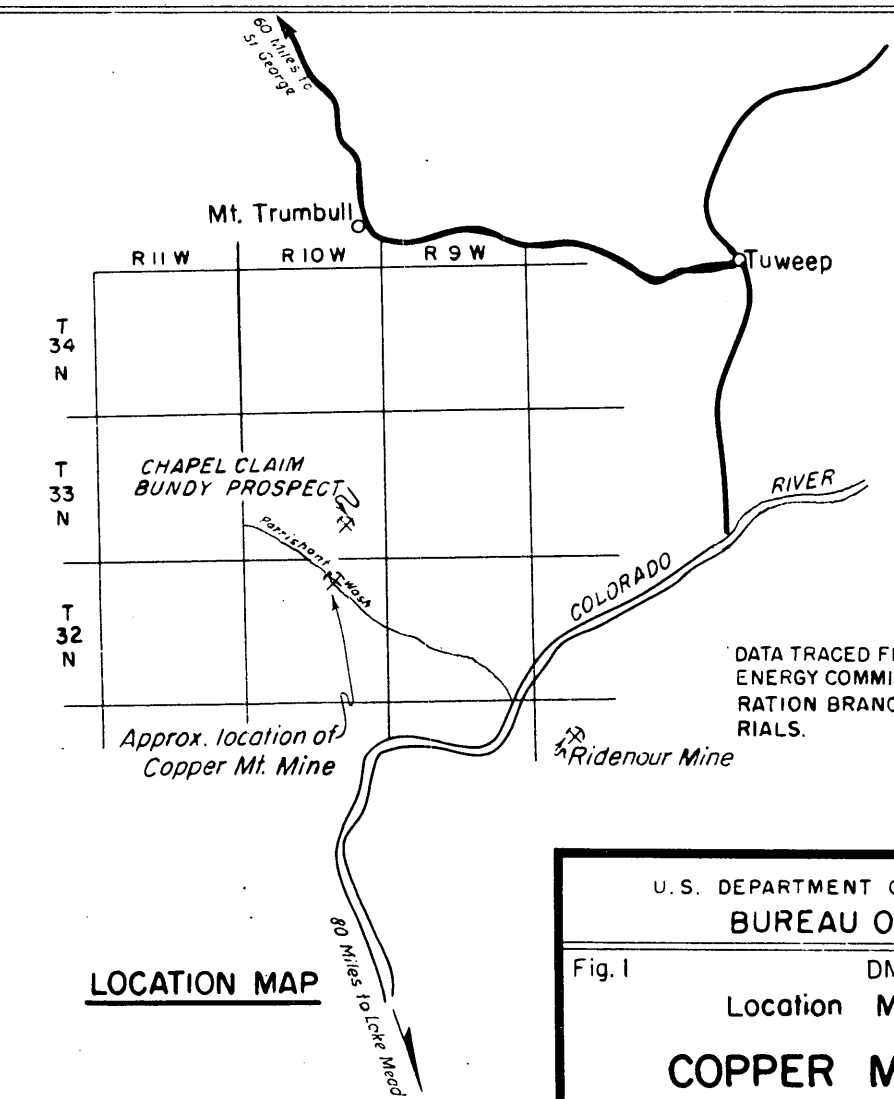
It is recommended that a projection of the ore shoot be explored 100 feet below the 210-foot level. To perform this work, it will be necessary to construct a headframe over the shaft, rehabilitate 210 feet of shaft, sink the shaft 100 feet deeper, and drift? and crosscut? 250 feet on the 310-foot level. It is suggested that provision be made for the services of a consulting geologist for 20 days, to be available and to aid in execution of the work.

The cost of the recommended work is estimated to total $24,253. Based on the figures shown under "Estimate of Costs," a short-form contract is recommended with the following unit costs:

Description	Total Cost	Unit Cost
Headframe construction	$2,263.33	$2,263.33
Shaft rehabilitation - 210 feet	3,009.58	14.33
Shaft sinking - 100 feet	10,145.66	101.46
Drifting and crosscutting - 250 feet	7,834.50	31.34
Services of geologist - 20 days	1,000.00	50.00
	$24,253.07	



MAP OF ARIZONA



LOCATION MAP

0 4 8 16
SCALE OF MILES

NOTE

DATA TRACED FROM DRWG. OF U.S. ATOMIC ENERGY COMMISSION, SALT LAKE EXPLORATION BRANCH, DIVISION OF RAW MATERIALS.

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Fig. 1 DMEA Docket No. 3075

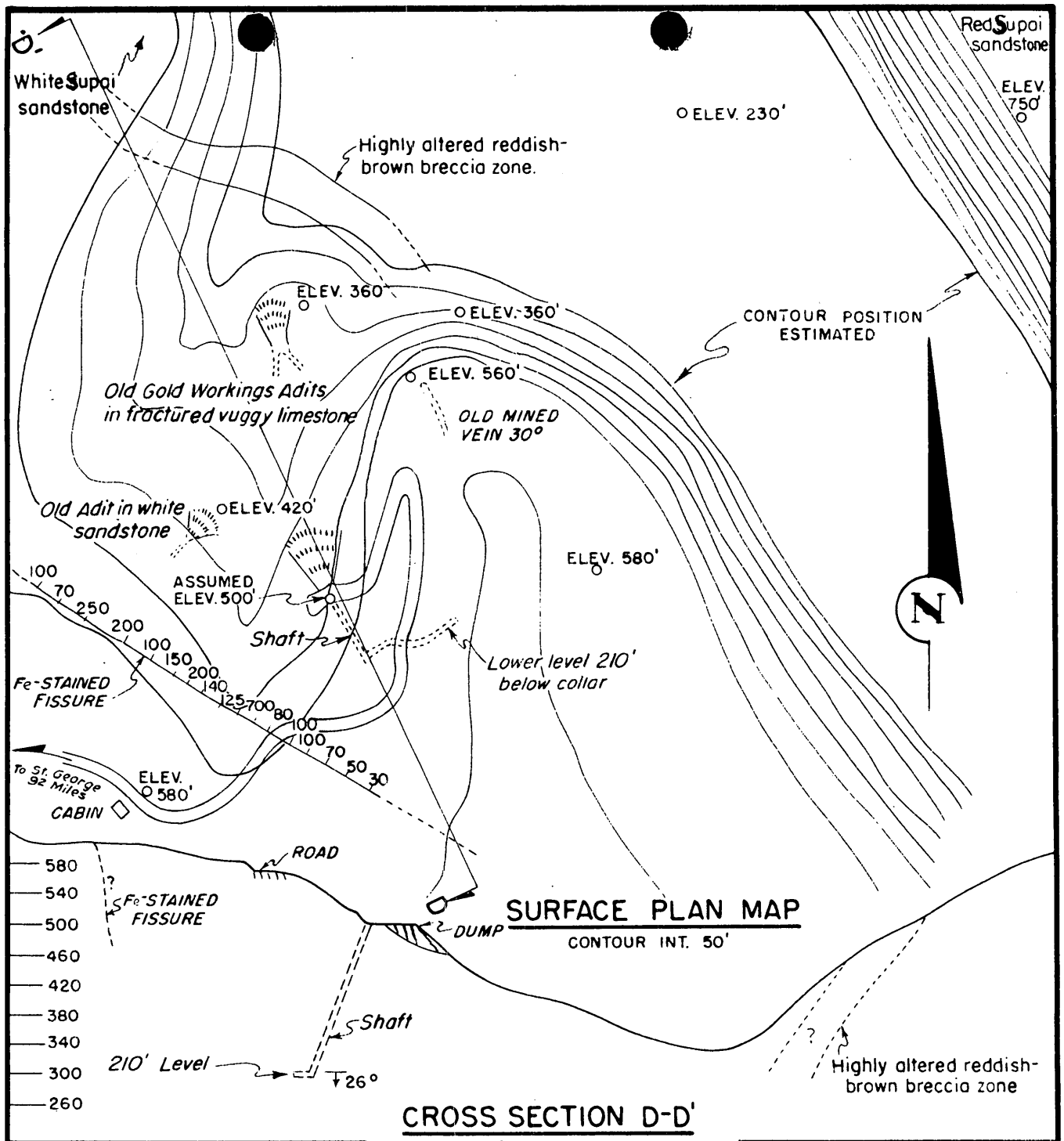
Location Maps of

COPPER MT. MINE

IN RELATION TO CHAPEL CLAIMS AND RIDENOUR MINE

MOHAVE COUNTY, ARIZONA

ENGINEER: W.E. YOUNG	DATE: JAN. 18, 1954
TRACED: JAN., 1954, A.P.T.S.	1900 - 270 - E
CHECKED	



NOTE

DATA TRACED FROM DRWG. OF U.S. ATOMIC ENERGY COMMISSION, SALT LAKE EXPLORATION BRANCH, DIVISION OF RAW MATERIALS.

0 200 400

SCALE OF FEET

U. S. DEPARTMENT OF THE INTERIOR

BUREAU OF MINES

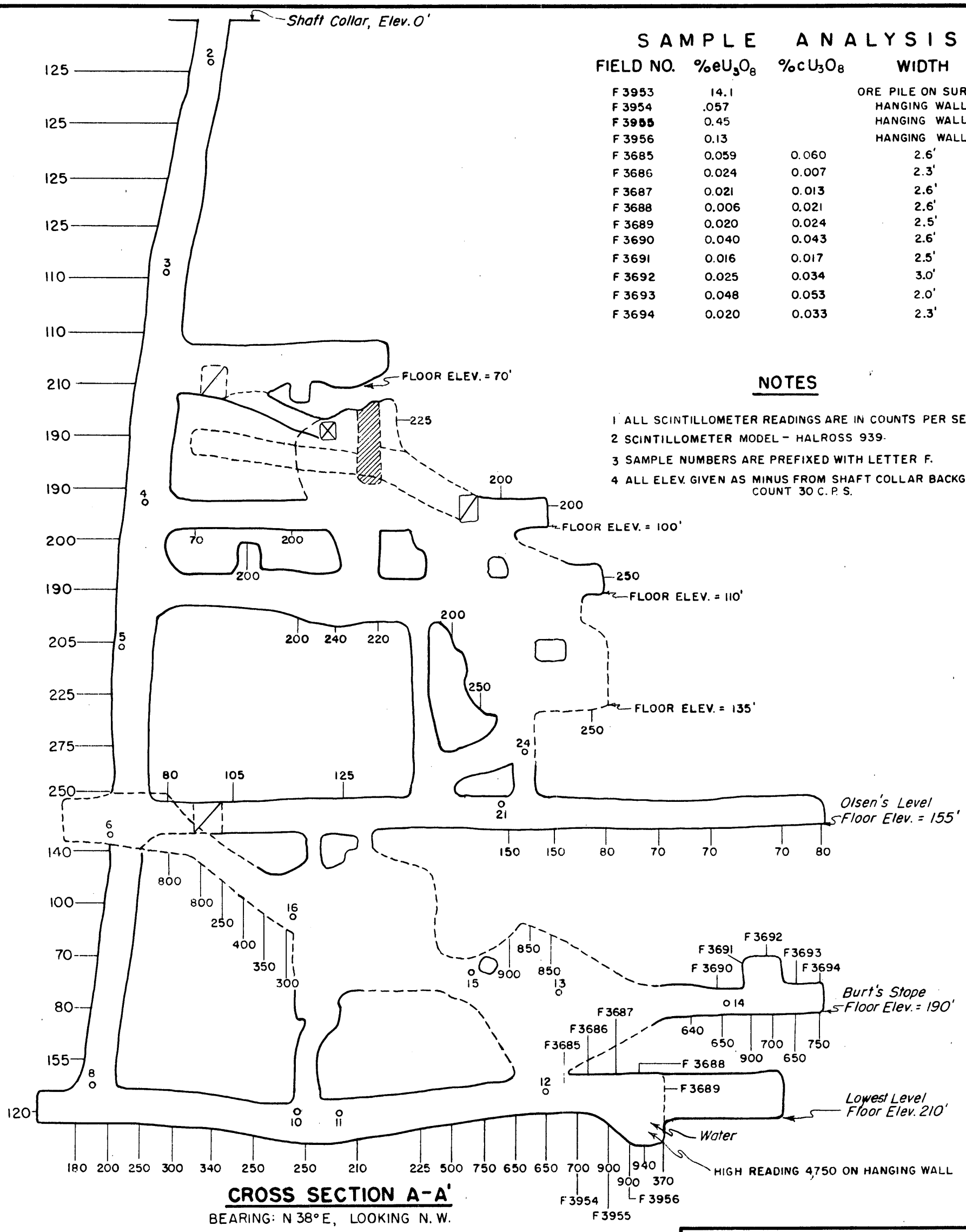
Fig. 2 DMEA Docket No. 3075

Surface Plan Map and Cross Section D-D'

COPPER MT. MINE

MOHAVE COUNTY, ARIZONA

ENGINEER: *W. E. YOUNG*	DATE: JAN. 19, 1954
TRACED: JAN., 54; A.P.T.S.	1900 - 271 - E
CHECKED:	



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F 3956	0.13		HANGING WALL
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F 3686	0.024	0.007	2.3'
F 3687	0.021	0.013	2.6'
F 3688	0.006	0.021	2.6'
F 3689	0.020	0.024	2.5'
F 3690	0.040	0.043	2.6'
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F 3692	0.025	0.034	3.0'
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F 3694	0.020	0.033	2.3'

NOTES

1 ALL SCINTILLOMETER READINGS ARE IN COUNTS PER SECOND.
2 SCINTILLOMETER MODEL – HALROSS 939.
3 SAMPLE NUMBERS ARE PREFIXED WITH LETTER F.
4 ALL ELEV. GIVEN AS MINUS FROM SHAFT COLLAR BACKGROUND COUNT 30 C. P. S.

CROSS SECTION A-A'

BEARING: N 38° E, LOOKING N. W.

NOTES

DATA TRACED FROM DRWG. OF U. S. ATOMIC ENERGY COMMISSION, SALT LAKE EXPLORATION BRANCH, DIVISION OF RAW MATERIALS.

0 20 40
SCALE OF FEET

U. S DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

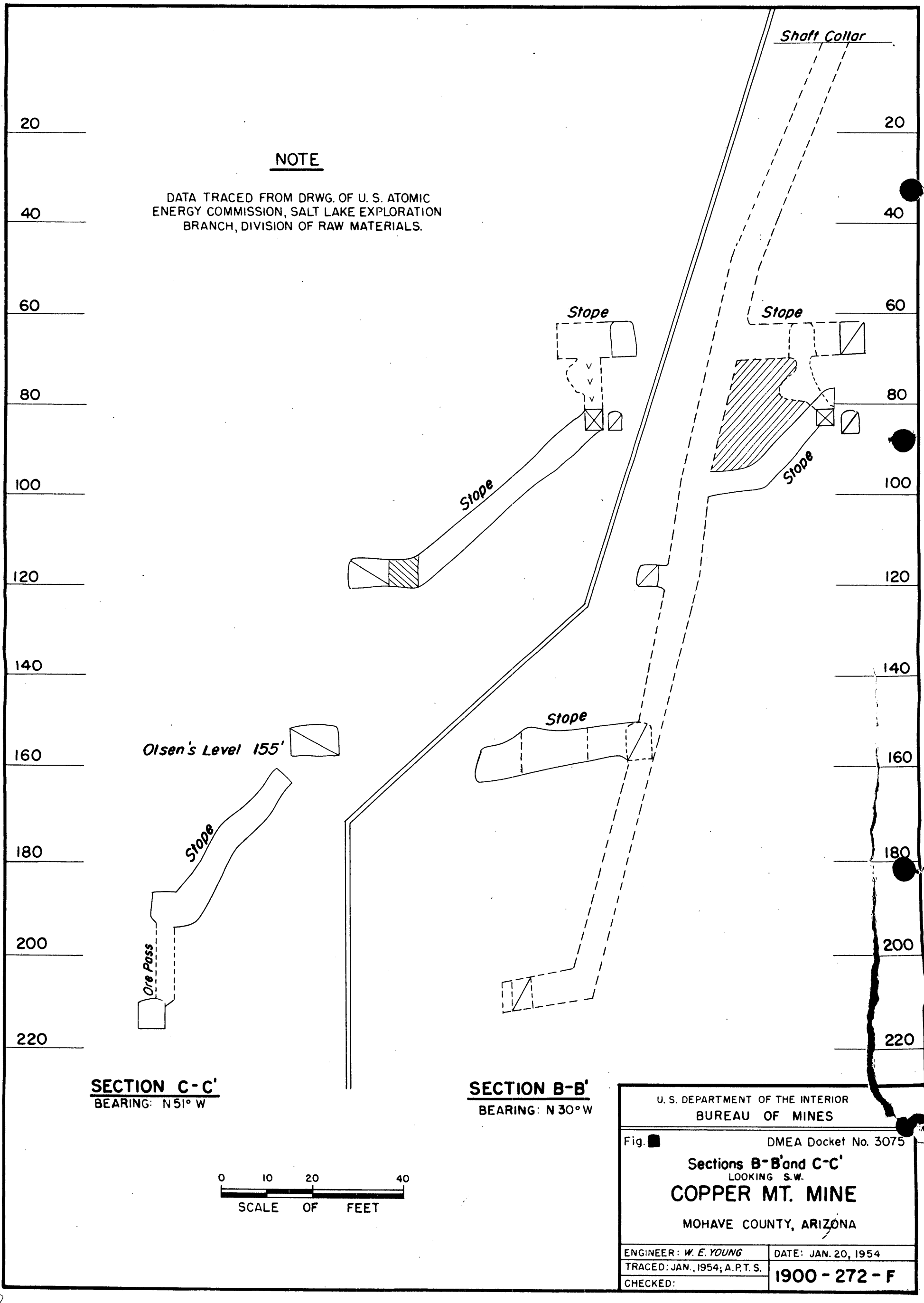
Fig. 3 DMEA Docket No. 3075

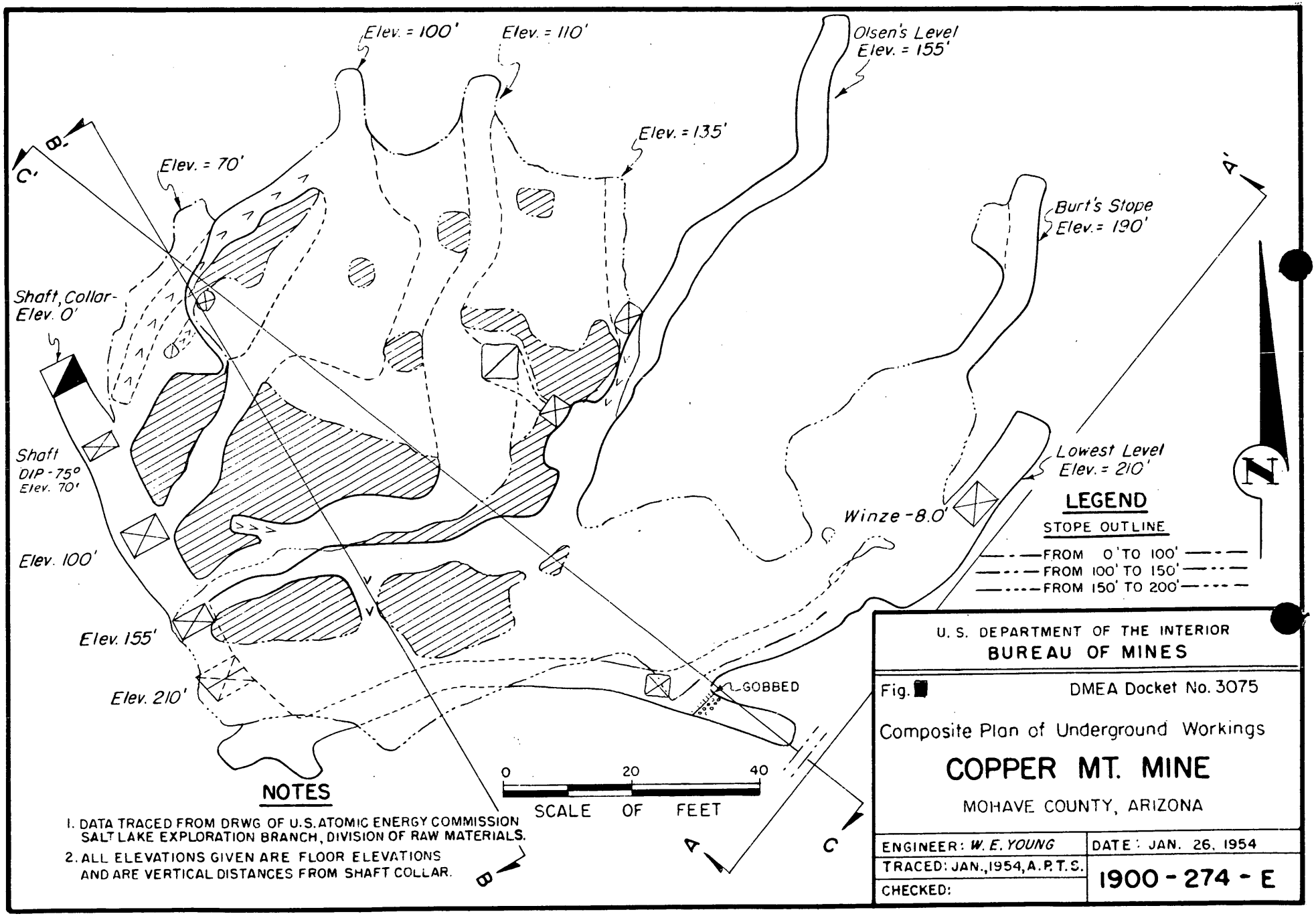
Cross Section A - A'
SCINTILLOMETER SURVEY AND SAMPLE MAP

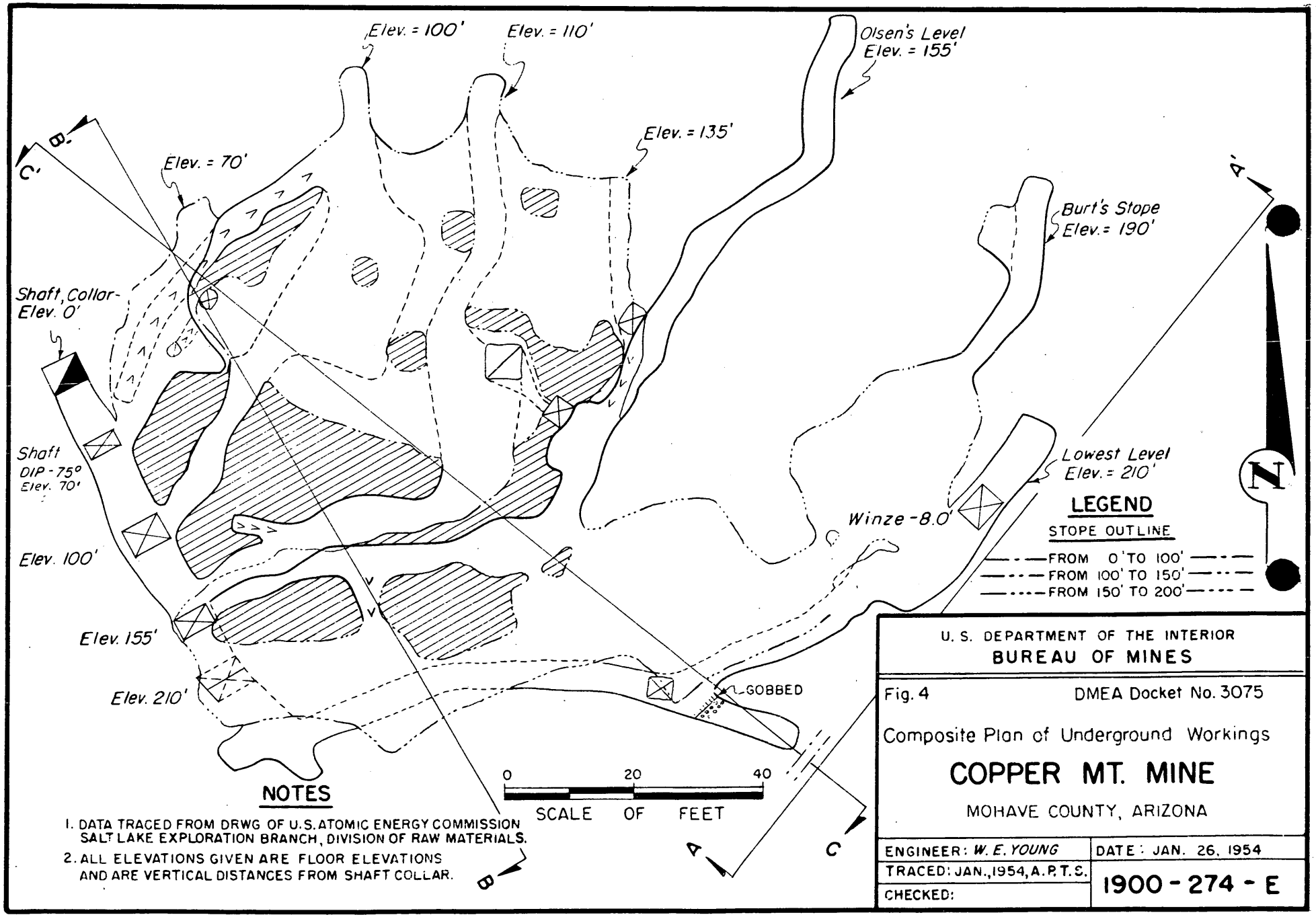
COPPER MT. MINE

MOHAVE COUNTY, ARIZONA

ENGINEER: W. E. YOUNG	DATE: JAN. 22, 1954
TRACED: JAN., 54; A. P. T. S.	1900 - 273 - F
CHECKED:	


NOTE
DATA TRACED FROM DRWG. OF U. S. ATOMIC ENERGY COMMISSION, SALT LAKE EXPLORATION BRANCH, DIVISION OF RAW MATERIALS.
Shaft Collar
Stope
Stope
Stope
Stope
Stope
Stope
Olsen's Level 155'
Ore Pass
20
40
60
80
100
120
140
160
180
200
220
SECTION C-C'
BEARING: N 51° W
SECTION B-B'
BEARING: N 30° W
0 10 20 40
SCALE OF FEET
U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Fig. ■
DMEA Docket No. 3075
Sections B-B' and C-C'
LOOKING S.W.
COPPER MT. MINE
MOHAVE COUNTY, ARIZONA
ENGINEER: W. E. YOUNG
DATE: JAN. 20, 1954
TRACED: JAN., 1954; A.P.T.S.
CHECKED:
1900-272-F


Elev. = 100'
Elev. = 110'
Olsen's Level
Elev. = 155'
Elev. = 135'
Elev. = 70'
B'
C'
A'
Burt's Stope
Elev. = 190'
Shaft, Collar-
Elev. 0'
Shaft
DIP - 75°
Elev. 70'
Lowest Level
Elev. = 210'
Winze -8.0'
Elev. 100'
Elev. 155'
Elev. 210'
GOBBED
N
LEGEND
STOPE OUTLINE
FROM 0' TO 100'
FROM 100' TO 150'
FROM 150' TO 200'
0
20
40
SCALE OF FEET
A
B
C
NOTES
1. DATA TRACED FROM DRWG OF U.S. ATOMIC ENERGY COMMISSION SALT LAKE EXPLORATION BRANCH, DIVISION OF RAW MATERIALS.
2. ALL ELEVATIONS GIVEN ARE FLOOR ELEVATIONS AND ARE VERTICAL DISTANCES FROM SHAFT COLLAR.
U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Fig. [redacted]
DMEA Docket No. 3075
Composite Plan of Underground Workings
COPPER MT. MINE
MOHAVE COUNTY, ARIZONA
ENGINEER: W. E. YOUNG
DATE: JAN. 26, 1954
TRACED: JAN., 1954, A.P.T.S.
CHECKED:
1900 - 274 - E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Elev. = 155'
Elev. = 135'
Elev. = 70'
B'
C'
A'
Burt's Stope
Elev. = 190'
Shaft, Collar-
Elev. 0'
Shaft
DIP - 75°
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Elev. = 210'
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Elev. 100'
Elev. 155'
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20
40
SCALE OF FEET
A
B
C
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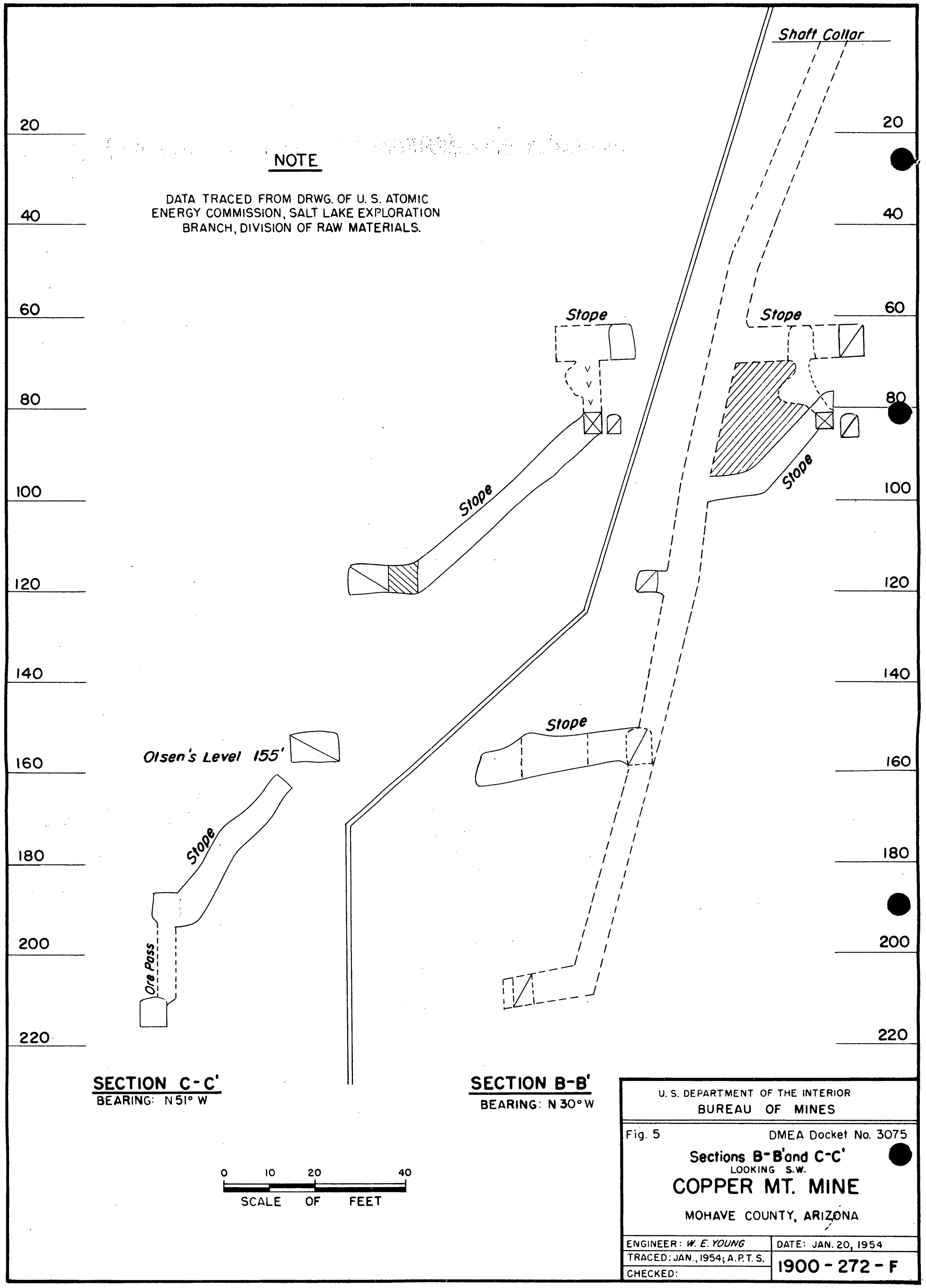
U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Fig. 4
DMEA Docket No. 3075
Composite Plan of Underground Workings
COPPER MT. MINE
MOHAVE COUNTY, ARIZONA
ENGINEER: W. E. YOUNG
DATE: JAN. 26, 1954
TRACED: JAN., 1954, A.P.T.S.
CHECKED:
1900 - 274 - E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Stope
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SECTION C-C'
BEARING: N 51° W
SECTION B-B'
BEARING: N 30° W
0 10 20 40
SCALE OF FEET
U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Fig. 5
DMEA Docket No. 3075
Sections B-B' and C-C'
LOOKING S.W.
COPPER MT. MINE
MOHAVE COUNTY, ARIZONA
ENGINEER: W. E. YOUNG
DATE: JAN. 20, 1954
TRACED: JAN., 1954; A.P.T.S.
CHECKED:
1900 - 272 - F

(Copy)

In reply refer to:
L3023

(Recd. Chief Clerk's Office
Ntl Park Service
1954 Feb 18)

Region Three
Santa Fe, New Mexico

January 12, 1954
(February?)

Memorandum

To: Superintendent, Lake Mead

From: Acting Regional Director

Subject: Application of Wulfenstein Brothers for Lease of Mining Claims, Section 14, T. 32 N., R. 10 W., G. & S. R. M.

We received your memorandum of January 20, to which were attached copies of your correspondence with Mr. Ellis J. Pickett, St. George, Utah, attorney for the Wulfenstein Brothers, who are interested in obtaining mineral interests in Section 14, T. 32 N., R. 10 W., G.& S.R.M.

Mr. Pickett's letter is not entirely clear. He refers to old claims, and also refers to what are apparently new discoveries which the Wulfenstein Brothers wish to develop under proper authority as new mining claims. The two types of interests are entirely distinct and should in no circumstances be confused.

If there are claims that have been patented, or were located before the lands were placed under Reclamation withdrawal, no procedure is necessary to authorize their use for mining purposes. In that event, the main problem would be that of providing access to the claims. Reasonable means of access would have to be afforded, but we would have some control over the means used for access. Except as an access road might have the status of a public road, the parties entitled to access are not also entitled to unregulated rights of construction and selection of route.

We think Mr. Pickett should be called upon to disclose the status and citations to the recording of any mining claims which are patented or which were located before the Reclamation withdrawal. The Phoenix office of the Bureau of Land Management would, of course, have a record of any patents issued, but they would not have a record of any mining locations established at any time.

As to discoveries made recently, or at any time since the lands were placed under Reclamation withdrawal, the only means of locating valid mining claims is through the provisions of the act of April 23, 1932 (47 Stat. 136; 43 U.S.C. 154), of which you have a copy. The procedure for opening lands to location under that act is set forth in Section 185.36, Volume 43, Code of Federal Regulations. Under that procedure you have correctly stated to Mr. Pickett that formal applications should be made to the office of the Bureau of Land Management in Phoenix. Since the Bureau of Land Management is certain to refer the question to the Bureau of Reclamation, which is equally certain to refer it to you, the preliminary inquiry serves a good purpose in enabling our investigation to start sooner. Please inform us whether you have a copy of 43 CFR 185.36.

You have specifically requested advice regarding the situation in which the only, or principal, mineral on a proposed claim consists of uranium ores or other ores utilized in the production of fissionable materials. Under the Atomic Energy Act of August 1, 1946 (60 Stat. 755; 42 U.S.C. 1801-1809) minerals of that character are reserved to the United States, and they may not be disposed of to any other recipient than the Atomic Energy Commission. However, the Atomic Energy Commission has preferred not to take possession of the minerals in the ground, but instead has developed a system of purchasing such minerals extracted by others. We are not entirely familiar with their system of bonuses, guaranteed expenses, and payments for extraction. The means by which "the others" obtain interests in land, for the purpose of extracting the uranium and other ores, is the general mining law, including the provisions for the locating and patenting of claims. This is somewhat illogical, in view of the fact that the locator of a claim does not technically obtain title to the minerals, but the construction of the Atomic Energy Act as adopted by the Bureau of Land Management recognizes this procedure as the normal one.

Where the mining laws do not apply at all, the Atomic Energy Commission may still make provision for extracting the minerals through private operations, as they have done at Capitol Reef National Monument under a basic permit issued by the Secretary of the Interior to the Atomic Energy Commission.

For your purposes the uranium ore should be treated as any other mineral in considering a proposed justification for opening portions of lands under the Reclamation withdrawal for the location of mining claims, except that the opinion of the Atomic Energy Commission would be relevant and should carry some weight in making your determination. In this connection, we think it would be advisable to consult the office of the Atomic Energy Commission which the Wulfenstein Brothers are alleged to have consulted. We suspect there is a tendency to exaggerate the degree of sponsorship claimed by one who has entered into negotiations with the Atomic Energy Commission. In other words, each would-be seller of uranium ores is likely to represent himself as a necessary supplier to the Atomic Energy Commission.

/s/ Hugh M. Miller
Acting Regional Director

Copy to: Director

(Copy)

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(Copy)

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Ntl Park Service
1954 Feb 18)

Region Three
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January 12, 1954
(February?)

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/s/ Hugh M. Miller
Acting Regional Director

Copy to: Director

2/10/54

Mr. C. O. Mittendorf
Feb. 9, 1954
Unattended service after 4:15

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 10 1954

DN 235 BUREAU MINES 2-9-54 4-13 PM

C O MITTENDORF

REFERENCE TELETXXX TELEPHONE CONVERSATION WITH KNOUS TODAY RE DMEA 3075, J. AND M. LEASING COMPANY. REPORT OF EXAMINATION AND RECOMMENDATIONS OF FIELD TEAM WILL BE FORWARDED YOUR OFFICE FOR PREPARATION OF CONTRACT BECAUSE OF LEGAL MATTERS INVOLVED.

W H KING

Denver, Colo.

Surname
Docket copy

700

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

FI Knouse
RWis

FEB 10 1954

FIKnouse/gla 2-9-54

DMEA - Department of the Interior

14X3923.970 Working Fund

DMEA

James Rulfenstein
172 E. 3rd South
St. George, Utah

REURTEL FEBRUARY NINTH DMEA-3075 J. & M. LEASING COMPANY, W. H. KING
DENVER OFFICE of DMEA WILL CONTACT YOU AT AN EARLY DATE REGARDING YOUR

APPLICATION.

C. O. Mittendorf

C. O. MITTENDORF, ADMINISTRATOR

cc to: Adm. Reading file
Docket
Messrs. HDKeiser, Rm. 3641
APButler, Jr. Rm. 3212, GSA
Code 700
Mr. Knouse
DMEA Field Team, Region IV

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable symbol above or preceding the address.

WESTERN UNION

W. P. MARSHALL, PRESIDENT

FX-1201

SYMBOLS
DL=Day Letter
NL=Night Letter
LT=Int'l Letter Telegram
VLT=Int'l Victory Ltr.

The filing time shown in the date line on telegrams and day letters is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination

1 0A499 =0

O.SLA331 NL PD=ST GEORGE UTAH 8=

U S DEPT OF INTERIOR, DEFENSE MINERALS EXPORTATION=

WASHDC=

IN REFERENCE TO DOCKET #DMEA 3075 J & M LEASING CO (URANIUM)=:MOHAVE CO ARIZONA HOW DOES THE APPLICATION STAND? HOW SOON CAN WE EXPECT ACTION?=

JAMES WULFENSTEIN 172 E. 3RD SOUTH=

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 9 1954

#DMEA 3075 J & M 172 E 3RD=..

REGIONAL DIRECTOR

2/5/54 gla

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

January 27, 1954.

Mr. George F. Baggley, Superintendent
National Park Service
Lake Mead National Recreation Area
Boulder City, Nevada

Re: Docket DMEA-3075 (Uranium),
J & M Leasing Company,
Cox and Ross Mining Claims,
Mohave County, Arizona

Dear Mr. Baggley:

Messrs. McMurrin Wulfenstein and James E. Wulfenstein, 446 West 400 North, St. George, Utah made an application for Defense Minerals Exploration Administration assistance on the Cox and Ross Mining Claims located in Mohave County, Arizona.

Most of the applicants' proposed work was too close to the east sideline of the Cox and Ross Mining Claims and we asked them to submit proof of their rights to mine ore on the property adjoining their east sideline. The applicants then declared that they had located mining claims adjacent to the Cox and Ross Mining Claims. The burden of proof that these are valid mining claim locations rests with the Wulfensteins as far as DMEA is concerned.

Engineering and geologic reports on the property are now in preparation and it is known by this office that exploration assistance will be recommended provided the applicants establish their rights to mine ore on the property.

Very truly yours,

J. H. East, Jr.

J. H. East, Jr.
Regional Director
Region IV

HMC:cwm

cc: C.O.Mittendorf
Docket
WRStorms
AHKoschmann (2)
Chron.

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Lake Mead National Recreation Area
Boulder City, Nevada

COPY

January 20, 1954

Mr. John H. East, Jr.
Regional Director, Region Four
U. S. Bureau of Mines
224 New Customs House
Denver 2, Colorado

Dear Mr. East:

Wulfenstein Brothers of St. George, Utah, claim to have located uranium bearing ore in Sec. 14, T. 32 S., R. 10 W., G. & S. R. M. in the northern part of Mohave County, Arizona, and are making application for a portion of this section to be released from withdrawal status so they might conduct mining activities thereon.

Wulfenstein Brothers claim, among other things, to have arranged a loan of some $80,000 to finance the opening of this property. It is our understanding, however, from talking with a representative of the Bureau of Mines laboratory here at Boulder City that any federal loans on uranium mining property must have the prior concurrence or approval of a group of three persons qualified to pass on the possibilities of the property, the quality of the ore, and other characteristics of the proposal. We were informed that you or your office would probably be called upon topass judgment on such a project. It will be helpful to us in passing on the desirability of releasing this property from withdrawal status to have such information as you may be able to supply us concerning this property if you have knowledge of it.

Could you tell us what type of ore is involved, where it would probably be marketed, and the probability of a successful operation financially. We shall greatly appreciate your assistance.

Sincerely yours,

/s/ George F. Baggley

George F. Baggley
Superintendent

COPY

Lake Mead National Recreation Area
Boulder City, Nevada

January 20, 1954

Mr. Ellis J. Pickett
Attorney at Law
St. George, Utah

Dear Mr. Pickett:

We have your letter of January 14, concerning the interests of Wulfenstein Brothers of St. George, who are reported to have an interest in mining claims in Sec. 14, T. 32 N., R. 10 W., G & S R M.

Your letter raises a number of questions for which we do not have a ready answer. We shall promptly go into the matter, however, and advise you just how to proceed as soon as we can do so.

When the Wulfenstein Brothers were in this office last week, however, they were advised to prepare a good map of the area involved, with a complete statement of their findings, their filings, mineral or minerals involved, their methods of access, intended type of operation, and other data of that nature, for presentation to the District Manager of the Bureau of Land Management, Phoenix, Arizona. This is the first step in any process of having land removed from withdrawal for mining entry. Since uranium is involved, there are a number of other regulations which must in this case be taken into account. We are not too familiar with these and are asking our Regional Director's advice thereon.

Under the present status of the withdrawn lands, the area is open to mineral prospecting but such activities as road construction or the opening of mining prospects with heavy equipment must have the prior approval of the National Park Service if on withdrawn lands in the Recreation Area.

We will advise you just as soon as we have additional information which will be helpful to you.

Sincerely yours,

George Baggley
Superintendent

cc: Region Three
U.S.B. R., B. C.
Mr. John East, Jr.

COPY

January 27, 1954

Mr. George F. Baggley, Superintendent
National Park Service
Lake Mead National Recreation Area
Boulder City, Nevada

Re: Docket DMEA-3075 (Uranium)
J & M Leasing Company
Cox and Ross Mining Claims
Mohave County, Arizona

Dear Mr. Baggley:

Messrs. McMurrin Wulfenstein and James E. Wulfenstein, 446 West 400 North, St. George, Utah made an application for Defense Minerals Exploration Administration assistance on the Cox and Ross Mining Claims located in Mohave County, Arizona.

Most of the applicants' proposed work was too close tothe east sideline of the Cox and Ross Mining Claims and we asked them to submit proof of their rights to mine ore on the property adjoining their east sideline. The applicants then declared that they had located mining claims adjacent to the Cox and Ross Mining Claims. The burden of proof that these are valid mining claim locations rests with the Wulfensteins as far as DMEA is concerned.

Engineering and geologic reports on the property are now in preparation and it is known by this office that exploration assistance will be recommended provided the applicants establish their rights to mine ore on the property.

Very truly yours,

/s/ J. H. East, Jr.

J. H. East, Jr.
Regional Director
Region IV

HMC:cwm

cc: C. O. Mittendorf
Docket
WRStorms
AHKoschmann (2)
Chron.

9/21/53 gla

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

224 New Customhouse
Denver 2, Colorado

September 15, 1953

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 3075 (Uranium), J & M Leasing Co., Cox & Ross Mining Claims, Mohave County, Arizona

On September 2, 1953 we advised you that the subject application has been placed in the inactive file until such time that the applicant submitted proof of his rights to mine ore on the property adjoining his east sideline.

The applicant has submitted proof that he has located claims adjacent to the Cox and Ross mining claims. We have reactivated the docket, and we have sent the brochure to the field for an examination.

W. H. King
W. H. King

JB

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

224 New Customhouse
Denver 2, Colorado

September 15, 1953

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 3075 (Uranium), J & M Leasing Co., Cox & Ross Mining Claims, Mohave County, Arizona

On September 2, 1953 we advised you that the subject application has been placed in the inactive file until such time that the applicant submitted proof of his rights to mine ore on the property adjoining his east sideline.

The applicant has submitted proof that he has located claims adjacent to the Cox and Ross mining claims. We have reactivated the docket, and we have sent the brochure to the field for an examination.

W. H. King

W. H. King

ELLIS J. PICKETT
CHARLES M. PICKETT

PRACTICE IN COURTS OF
UTAH AND ARIZONA

PICKETT & PICKETT
ATTORNEYS AT LAW
OFFICE, PICKETT BUILDING
ST. GEORGE, UTAH

September 11, 1953

Mining Division
Date Rec'd.
SEP 14 1953
BUREAU OF MINES
Denver, Colorado

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

In re: Docket No. DMEA-3075 (Uranium)
J. & M. Leasing Company
Cox & Ross Mining Claims
Mohave County, Arizona

Dear Mr. King:

The Wulfenstein boys brought me your letter of September 3, together with the enclosures which will show that they own by location four mining claims surrounding the Cox & Ross and Cox & Ross #1 claims which you are considering for exploration funds. I am enclosing the map which they drew of the two Cox & Ross mines, together with the Copper Mountain No. 1, 2, 5, and 6 owned by the Wulfenstein boys. Also enclosing Notice of Location on the four claims which gives the name, date and description of the claims, together with the record of filing and recording in the office of the County Recorder of Mohave County.

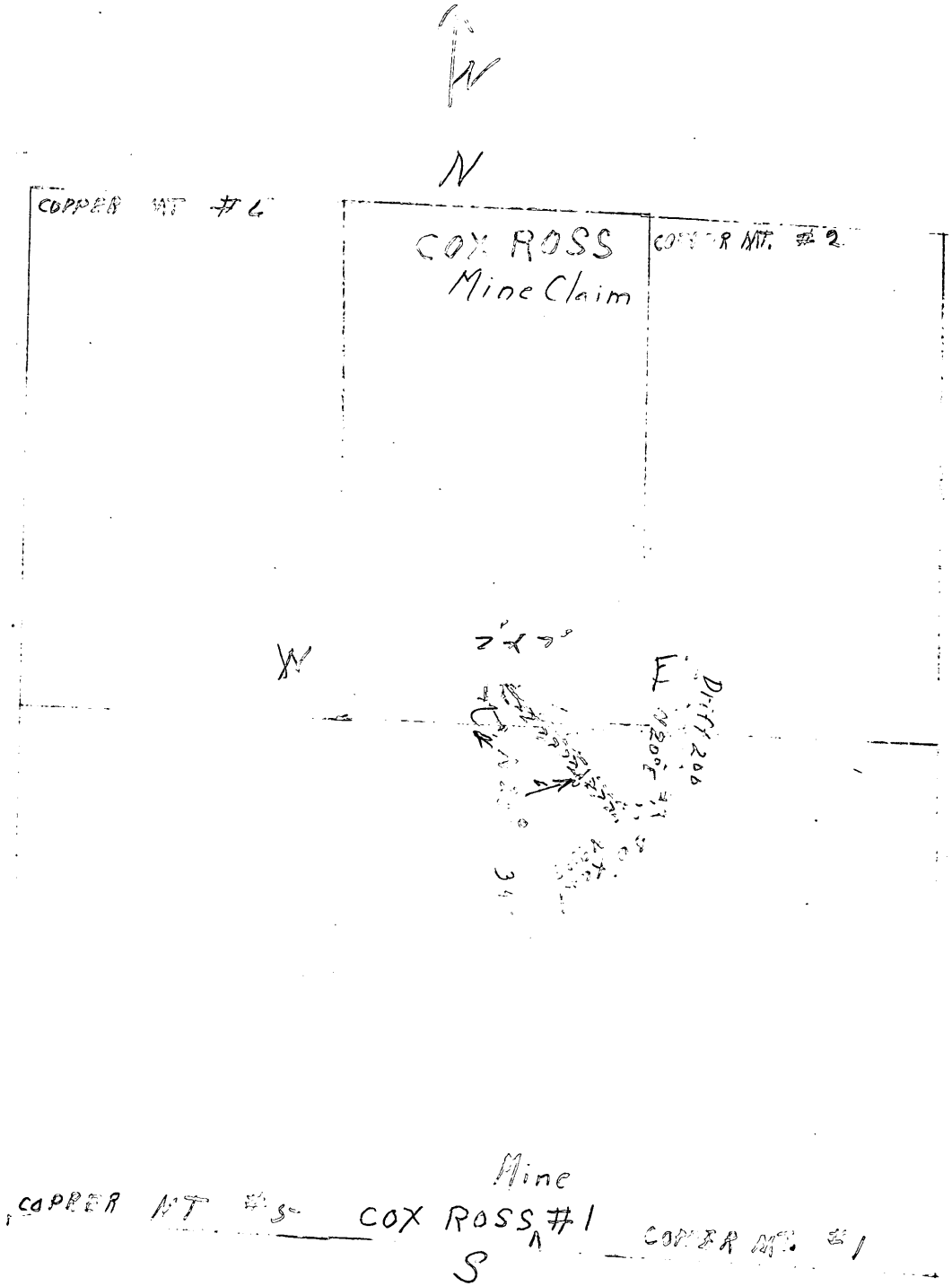
If there is anything further that you need or any papers to execute so that you can proceed with processing their application, please let me know at once and I will have them prepared and send them to you.

Very truly yours,

Ellis J. Pickett

EJP:kb

Enclosures


N
COPPER MT #6
COX ROSS
Mine Claim
COPPER MT. #2
W
E
Drift 200
Mine
COPPER MT #5
COX ROSS #1
COPPER MT. #1
S

NOTICE OF LOCATION

NOTICE IS HEREBY GIVEN, That the undersigned, having complied with the requirements of **SECTION 2324** of the **REVISED STATUTES** of the United States, and the Local Laws, Customs and Regulations of this District, ha.... located 1500 feet in length by 600 feet in width, on this the Copper Mountain Lode, Vein or Deposit bearing Gold, Silver, Copper, Lead, and other valuable minerals, situated about 9 m. South of Mt. Trumbel + 12. m. East of Grassy springs

in the [illegible] Mining District Mohave County, State of Arizona

the location being described and marked on the ground as follows, to-wit:

Beginning North feet end Center of this location (Discovery) Monument, at the North end center monument, and running

thence West 300 feet to N. W corner of monument No. 1;

thence South 1500 feet to S. W. corner of monument No. 2;

thence East 300 feet to South end center monument;

thence East 300 feet to S. E corner of monument No. 3;

thence North 1500 feet to N. E corner of monument No. 4;

thence West 300 feet to place of beginning; including all Dips, Spurs, Angles and Variations

This claim joins Cox Ross Claim on Cox Ross East Side line

The above described Mining Claim shall be known as the Copper Mountain #1

Located this First day of April, 1953.

NOTE

* DIAGRAM of CLAIM—The location (discovery point) and corner monuments should be designated on the accompanying diagram to make the record of claim more perfect.

A mining claim must not exceed 1500 feet in length along the vein or lode, by 600 feet in width, 300 feet on each side of center of vein at surface.

No location of a mining claim can be made until the discovery of the vein or lode within the limits of the ground claimed.

The claim must be distinctly marked on the ground, so its boundaries can be readily traced.

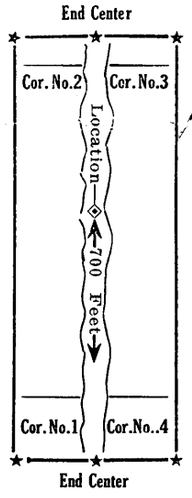
A severe penalty is provided by law for removing or defacing the stakes or monuments of a mining claim.

Claims located on Sunday or holidays are legal.

All valuable mineral deposits in lands of the Government are locatable by citizens of the United States only, and those who have declared their intentions to become such.

This location notice must be filed for Record with the County Recorder of the county in which claim is located.

†DIAGRAM OF CLAIM



NAMES OF LOCATORS

James Wulfenstein

[illegible]

Filed and Recorded at Request of

James Wulfenstein

April 23 A.D. 1953

at minutes past 9 o'clock A. M.

in book 4-D of MINES

Pages 53

Records of Mohave County, Arizona.

Peggy B. Smith

County Recorder

By Annie J. Kane

Deputy

THE NEWS - - ST. GEORGE, UTAH

INDEXED

57277

NOTICE OF LOCATION

NOTICE IS HEREBY GIVEN, That the undersigned, having complied with the requirements of **SECTION 2324** of the **REVISED STATUTES** of the United States, and the Local Laws, Customs and Regulations of this District, ha.... located 1500 feet in length by 600 feet in width, on this the Copper Mountain Lode, Vein or Deposit bearing Gold, Silver, Copper, Lead, and other valuable minerals, situated about 30 m. South of Mt. Trumbull & 12 m. East of Grassy Spring in the UNKNOWN Mining District Mohave County, State of Arizona the location being described and marked on the ground as follows, to-wit:

Beginning At South feet End Center of this location (Discovery) Monument, at the South end center monument, and running

thence West 300 feet to S. W corner of monument No. 1;

thence North 1500 feet to N. W corner of monument No. 2;

thence East 300 feet to N end center monument;

thence East 300 feet to N.E. corner of monument No. 3;

thence South 1500 feet to S.E corner of monument No. 4;

thence West 300 feet to place of beginning; including all Dips, Spurs, Angles and Variations.

This claim adjoins Bassett & and joins Cop Rose claims

The above described Mining Claim shall be known as the Copper Mountain #2

Located this First day of April, 1953.

NOTE

* DIAGRAM of CLAIM—The location (discovery point) and corner monuments should be designated on the accompanying diagram to make the record of claim more perfect.

A mining claim must not exceed 1500 feet in length along the vein or lode, by 600 feet in width, 300 feet on each side of center of vein at surface.

No location of a mining claim can be made until the discovery of the vein or lode within the limits of the ground claimed.

The claim must be distinctly marked on the ground, so its boundaries can be readily traced.

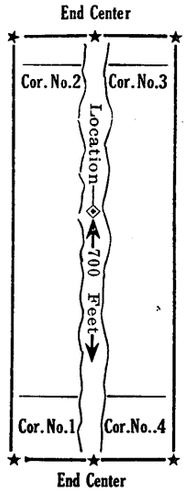
A severe penalty is provided by law for removing or defacing the stakes or monuments of a mining claim.

Claims located on Sunday or holidays are legal.

All valuable mineral deposits in lands of the Government are locatable by citizens of the United States only, and those who have declared their intentions to become such.

This location notice must be filed for Record with the County Recorder of the county in which claim is located.

†DIAGRAM OF CLAIM



NAMES OF LOCATORS

James Wulfenstein
Myrna Wulfenstein

Filed and Recorded at Request of

James Wulfenstein
April 23, A.D. 1953
at minutes past 9 o'clock A M.
in book 4-D of MINES
Pages 54
Records of Mohave County, Arizona.

Peggy B. Sm
County R
By Annie J. Kau
Deputy

THE NEWS - - ST. GEORGE, UTAH

INDEXED

57278

NOTICE OF LOCATION

NOTICE IS HEREBY GIVEN, That the undersigned, having complied with the requirements of SECTION 2324 of the REVISED STATUTES of the United States, and the Local Laws, Customs and Regulations of this District, ha.... located 1500 feet in length by 600 feet in width, on this the Coppar Mountain Lode, Vein or Deposit bearing Gold, Silver, Copper, Lead, and other valuable minerals, situated about 20 m. South of Mt. Trumbel + 12 m. East of Grassy Spring in the Mining District Mohave County, State of Arizona the location being described and marked on the ground as follows, to-wit:

Beginning North End Center of this location (Discovery) Monument, at the North end center monument, and running

thence East 300 feet to N. E corner of monument No. 1;

thence South 1500 feet to S. E corner of monument No. 2;

thence West 300 feet to South end center monument;

thence West 300 feet to S. W corner of monument No. 3;

thence North 1500 feet to N. W corner of monument No. 4;

thence East 300 feet to place of beginning; including all Dips, Spurs, Angles and Variations

This Claim is paralell + Joins Cox Ross Claim on Cox Ross West Side line

The above described Mining Claim shall be known as the Coppar Mountain #5.

Located this First day of April, 1953.

NOTE

* DIAGRAM of CLAIM—The location (discovery point) and corner monuments should be designated on the accompanying diagram to make the record of claim more perfect.

A mining claim must not exceed 1500 feet in length along the vein or lode, by 600 feet in width, 300 feet on each side of center of vein at surface.

No location of a mining claim can be made until the discovery of the vein or lode within the limits of the ground claimed.

The claim must be distinctly marked on the ground, so its boundaries can be readily traced.

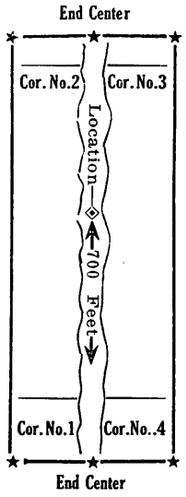
A severe penalty is provided by law for removing or defacing the stakes or monuments of a mining claim.

Claims located on Sunday or holidays are legal.

All valuable mineral deposits in lands of the Government are locatable by citizens of the United States only, and those who have declared their intentions to become such.

This location notice must be filed for Record with the County Recorder of the county in which claim is located.

† DIAGRAM OF CLAIM



NAMES OF LOCATORS

James Wulfenstein
Lyman Wulfenstein

Filed and Recorded at Request of

James Wulfenstein
April 23, A.D. 1953
at ..... minutes past 9 o'clock A. M.
~~in book~~ 4-D of MINES
Pages 57
Records of Mohave County, Arizona.

Reggy B. Sm
County Recor
By Annie J. Fausel,

PHOTO COPIED

THE NEWS - - ST. GEORGE, UTAH

57281

NOTICE OF LOCATION

NOTICE IS HEREBY GIVEN, That the undersigned, having complied with the requirements of SECTION 2324 of the REVISED STATUTES of the United States, and the Local Laws, Customs and Regulations of this District, ha.... located 1500 feet in length by 600 feet in width, on this the.....Lode, Vein or Deposit bearing Gold, Silver, Copper, Lead, and other valuable minerals, situated about 20 mi. South of Mt. Trumbel + 12 mi. East of grassy Spring

in the.....Mining District Mohave County, State of Arigona

the location being described and marked on the ground as follows, to-wit:

Beginning at South feet End Center of this location (Discovery) Monument, at the South end center monument, and running

thence East 300 feet to S. E corner of monument No. 1;

thence North 1500 feet to N. E corner of monument No. 2;

thence West 300 feet to North end center monument;

thence West 300 feet to N. W corner of monument No. 3;

thence South 1500 feet to S. W corner of monument No. 4;

thence East 300 feet to place of beginning; including all Dips, Spurs, Angles and Variations.....

This Claim is parallell + Joins Cox Ross Claim on Cox Ross West Side Line

The above described Mining Claim shall be known as the Copper Mountain #6

Located this First day of April, 1953.

NOTE

* DIAGRAM of CLAIM—The location (discovery point) and corner monuments should be designated on the accompanying diagram to make the record of claim more perfect.

A mining claim must not exceed 1500 feet in length along the vein or lode, by 600 feet in width, 300 feet on each side of center of vein at surface.

No location of a mining claim can be made until the discovery of the vein or lode within the limits of the ground claimed.

The claim must be distinctly marked on the ground, so its boundaries can be readily traced.

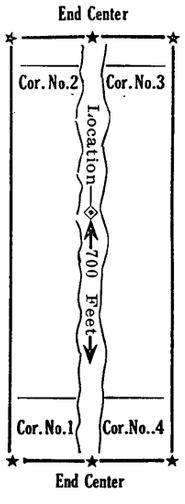
A severe penalty is provided by law for removing or defacing the stakes or monuments of a mining claim.

Claims located on Sunday or holidays are legal.

All valuable mineral deposits in lands of the Government are locatable by citizens of the United States only, and those who have declared their intentions to become such.

This location notice must be filed for Record with the County Recorder of the county in which claim is located.

†DIAGRAM OF CLAIM



NAMES OF LOCATORS

James Wulfenstein
Theodore Wulfenstein

Filed and Recorded at Request of

James Wulfenstein

April 23, A.D. 1953

at minutes past 9 o'clock A. M.

in book 4-D of MINES

Page 58

Records of Mohave County, Arizona.

Reggy B. Smith
County Recorder

By Annie J. Kau
Deputy R

PHOTO COPIED
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THE NEWS - - ST. GEORGE, UTAH

57282

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

224 New Customhouse
Denver 2, Colorado

DEPARTMENT OF THE INTERIOR
Bureau of Mines, Tucson
RECEIVED
SEP 8 - 1953

September 2, 1953

Messrs. McMurri
James E. Wulfen Wulfenstein and
446 West 400 N stein
St. George, Ut rth
ah

Re: Docket No. DMEA 3075
(Uranium) J & M Leasing Co.
Cox and Ross Mining Claims
Mohave County, Arizona

Gentlemen:

for This will acknowledge receipt of a claim map and sample data
arded to us by Pickett & Pickett of St. George, Utah, as requested
Mr. Mittendorf's letter to you under date of August 10, 1953.

It is noted that all of your proposed exploration work is
close to the east sideline of your property, and extends beyond the
sideline in one of the proposed drifts.

We have placed your application in our inactive file until
u submit proof of your rights to mine ore on the property adjoining
our east sideline.

Very truly yours,

W. H. King

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

HMC:es

cc: Docket
Chron.
Mittendorf
Storms
Connors
Koschmann (2)

C O P Y

PICKETT & PICKETT
Attorneys at Law
Office, Pickett Building
St. George, Utah

August 24, 1953

Re: Docket No. DMEA-3075 (Uranium)
J & M Leasing Company
Cox and Ross Mining Claims
Mohave County, Arizona

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

Dear Mr. King:

We are enclosing certain information about the above captioned matter as we have been instructed to do by Mr. Mittendorf of the Grand Junction Office. ?

The papers enclosed include a map, and sample data. Two mining claims are involved, the Cox-Ross and the Cox-Ross #1. They are located in the Copper Mountain Mining District in Mohave County, Arizona and are recorded in Book 3-U, page 285 and 286 of the mining claim record book in the office of the County Recorder of Mohave County. We do not know the date of their location by Cox and Ross, but it was approximately ten or twelve years ago. If this information is necessary, we will obtain it for you. If there is any other information that we should send to you, please let us know and it will be forth coming.

Very truly yours,

/s/ Ellis J. Pickett

Ellis J. Pickett

EJP:kb

Enclosures

FILE COPY
SURNAME:

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

SEP 3 1953

Mr. Ellis J. Pickett
Pickett & Pickett
Pickett Building
St. George, Utah

Re: Docket No. DMEA-3075 (Uranium)
J & M Leasing Company
Cox and Rose Mining Claims
Mohave County, Arizona

Dear Mr. Pickett:

This will acknowledge receipt of your letter of August 24, concerning the information requested in our letter of August 10 to Messrs. McMurrin and James E. Wulfenstein.

The information requested should be sent only to Mr. W. H. King, Executive Officer, DMEA Field Team, Region IV, 224 New Customhouse Building, Denver 2, Colorado.

Sincerely yours,

C. O. Mittendorf

Administrator

Flknouse/db
9-3-53
cc to: Adm. Reading File
Docket
Messrs: H.D.Keiser, Rm. 3641
A.P.Butler, Jr., Rm. 3206, GSA
Ellis
Knouse
DMEA Field Team, Region IV (2)

R.C.H.
9-3-53

ELLIS J. PICKETT
CHARLES M. PICKETT

PRACTICE IN COURTS OF
UTAH AND ARIZONA

Mining Div.
Date Rec'd.
AUG 27 1953
BUREAU OF MINES
Denver, Colorado

PICKETT & PICKETT
ATTORNEYS AT LAW
OFFICE, PICKETT BUILDING
ST. GEORGE, UTAH

August 24, 1953

3075

Re: Docket No. DMEA-~~305~~ (Uranium)
J & M Leasing Company
Cox and Ross Mining Claims
Mohave County, Arizona

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

Dear Mr. King:

We are enclosing certain information about the above caption~~d~~ matter as we have been instructed to do by Mr. Mittendorf of the Grand Junction Office.

The papers enclosed include a map and sample data. Two mining claims are involved, the Cox-Ross and the Cox-Ross #1. They are located in the Copper Mountain Mining District in Mohave County, Arizona and are recorded in Book 3-U, page 285 and 286 of the mining claim record book in the office of the County Recorder of Mohave County. We do not know the date of their location by Cox and Ross, but it was approximately ten or twelve years ago. If this information is necessary, we will obtain it for you. If there is any other information that we should send to you, please let us know and it will be forth coming.

Very truly yours,

Ellis J. Pickett

EJP:kb

Enclosures

C
O
P
Y

Lloyd J. Conklin, Acting Chief
Salt Lake Exploration Branch

May 25, 1953

Muriel Mathez, Chief, Technical Services Branch,
Division of Raw Materials, New York

SAMPLES FOR ANALYSIS FROM ARIZONA - OUR REFERENCE NUMBER 4685

SYMBOL: RMT:JP:Ce

This is in reference to the five samples collected by James Henderson and Earl N. King from the Arizona Copper Mountain mine, Mohave County, Arizona, submitted with your memorandum of April 6, 1953. The radiometric assays of these samples were sent to you in our letter of April 22, 1953.

The chemical and radiometric analysis for these samples are tabulated below. The semi-quantitative spectrographic results are given on a separately enclosed form. The spectrographic analysis were performed on representative splits of each sample.

Your Sample Number	Our Reference Number	Percent U_3O_8 Equivalent	Chemical (duplicate analyses)
1	4685A	0.8	0.73, 0.73
2	4685B	5.	4.3 , 4.4
3	4685C	3.	3.2 , 3.2
4	4685D	0.7	0.55, 0.55
5	4685E	0.06	0.05, 0.05

The mineralogy of these samples is as follows:

Sample number 4685 A, your number 1, approximate weight one pound, consists largely of chalcocite and bornite, with minor chalcopyrite, malachite, and meta-zuenerite. The radioactivity results from the meta-zuenerite which occurs as green plates in masses coating the surface of the chalcocite and finely intergrown with a clay-like surface coating.

Sample number 4685 B, your number 2, approximate weight one and three quarter pounds, is largely cuprite and limonite with abundant meta-zuenerite. The meta-zuenerite occurs as scattered masses of thick plates intergrown with the cuprite and limonite. The radioactivity results from the meta-zuenerite.

Sample number 4685 C, your number 3, approximate weight one pound, is another copper ore containing malachite, azurite, cuprite, chalcocite, barite and meta-zuenerite. The radioactivity results largely from the meta-zuenerite; however, bead tests indicate that the malachite and chalcocite are also uraniferous.

Sample number 4685 D, your number 4, is a fine-textured sandstone impregnated with chalcocite. Quartz grains are visible in the sandstone, some of them coated with a yellow clay-like material. Minor iron-oxide staining and some yellow jarosite (?) is also present. The radioactivity again results from meta-zuenerite which is present as fine, platy masses disseminated in the sandstone. Some of the meta-zuenerite is concentrated on flat planes, possibly bedding planes, in the sandstone.

Sample number 4685 E, your number 5, is a fine-textured, variegated sandstone composed of iron oxides, quartz, malachite and azurite and clay-like material. No uranium mineral was detected but bead tests on the malachite and hematite indicate that they contain uranium.

Enclosure:
Spec. rpt.

CC: H. E. Nelson, Richfield

C
O
P
Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
Geological Survey

Report No. TDC-2661 For Harry E. Nelson Date May 15, 1953

Requested by

Lot. No. 1646

Four (4) samples from Copper Mountain, Mohave County, Arizona.

Serial No.	Field No.	% eU	% U	C U_3O_8
D-85591	F-3953	12.0	14.5	17.110
85592	3954	0.064	0.052	0.06136
85593	3955	0.46	0.46	0.5428
85594	3956	0.11	0.13	0.1534

Analysis of AEC Raw Materials
By Analyst: S. Furman, I. Frost,
W. Mountjoy, J. Meadows

Leonard B. Riley
Denver Coordinator
Geochemistry and Petrology Branch

Project Leader: Lewis F. Rader, Jr.

C
O
P
Y

Lloyd J. Conklin, Acting Chief
Salt Lake Exploration Branch

April 22, 1953

Muriel Mathez, Chief, Technical Services Section,
Division of Raw Materials, New York

SAMPLES FOR ANALYSIS FROM ARIZONA - OUR REFERENCE NUMBER 4685

SYMBOL: RMT:JP:ce

This is in reference to the five samples collected by James Henderson and Earl King from the Arizona Copper Mountain mine, Mohave County, Arizona, submitted with your memorandum of April 6, 1953.

The following radiometric assays were obtained:

Your Sample Number	Our Reference Number	Percent U_3O_8 Equivalent
1	4685 A	0.8
2	4685 B	5.
3	4685 C	3.
4	4685 D	0.7
5	4685 E	0.06

As soon as we have finished examination of the samples we shall furnish you with a complete report.

CC: H. E. Nelson

cc: E. E. Thurlow

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Salt Lake City, Utah

No 10

All samples from Arizona Copper Mountain
Mohave County, Arizona

Report to Mr. Harry E. Nelson

Chemical Laboratory Report

Date received April 1, 1953

Date reported April 7, 1953

Serial No.	DESCRIPTION	Lot No.	eU_3O_8	cU_3O_8		WIDTH
11861	Sandstone, Copper and Iron	F-3685	0.059	0.060		2.6'
62	" " "	3686	0.024	0.007		2.3'
63	" " "	3687	0.021	0.013		2.6'
64	" " "	3688	0.006	0.021	These samples from lowest level	2.6'
65	" " "	3689	0.020	0.024	This sample from face of level	2.5'
11866	" " "	3690	0.040	0.043		2.6'
67	" " "	3691	0.016	0.017		2.5'
68	" " "	3692	0.025	0.034		3.0'
69	" " "	3693	0.048	0.053	Burt's Store and Level	2.0'
11870	" " "	3694	0.020	0.033	Face of level	2.3'

Signed H. E. Peterson

9/2/53 gla

ELLIS J. PICKETT
CHARLES M. PICKETT

PRACTICE IN COURTS OF
UTAH AND ARIZONA

PICKETT & PICKETT
ATTORNEYS AT LAW
OFFICE, PICKETT BUILDING
ST. GEORGE, UTAH

August 24, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 31 1953

Mr. C. O. Mittendrof, Administrator
Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D. C.

In re: Docket No. DMEA-3075(Uranium)
J & M Leasing Company
Cox and Ross Mining Claims
Mohave County, Arizona

Dear Mr. Mittendrof:

Your letter of August 10 to McMurrin and James E. Wulfenstein of 446 West 400 North, St. George, Utah was handed to me to answer.

We have obtained the information which you request in the letter. You state that this information should be sent to the Executive Officer Mr. King at Denver, Colorado. I am not sure whether the same information should be sent to you as is sent to Mr. King, if so, we will have to obtain another map and other papers to file in your office. Will you please let me know at once whether it is necessary to have the information requested filed in your office as well as with Mr. King. We will appreciate this.

Very truly yours,

Ellis J. Pickett

EJP:kb

mbb

GSA FORM 14
JANUARY 1950

GENERAL SERVICES ADMINISTRATION

ROUTING SLIP

TO— NAME	BUILDING, ROOM NUMBER, ETC.
1. Mr. F. Knouse	Room 4640, Interior
2.	
3.	
4.	
5.	

FOR—

- [ ] APPROVAL
- [x] AS REQUESTED
- [ ] CORRECTION
- [ ] FILING
- [ ] FULL REPORT
- [ ] HANDLE DIRECTLY
- [ ] PREPARE REPLY FOR
- [ ] IMMEDIATE ACTION
- [ ] INITIALS
- [ ] NECESSARY ACTION
- [ ] NOTE AND RETURN
- [ ] READ AND DESTROY
- [ ] _____
- [ ] RECOMMENDATION
- [ ] SEE ME
- [ ] SIGNATURE
- [ ] YOUR COMMENT
- [x] YOUR INFORMATION
- [ ] _____

SIGNATURE OF _____

ANSWER OR ACKNOWLEDGE BEFORE _____

FROM Mining Requirements Division
W B Gross

DATE 8/20/53

REMARKS

Attached is a copy of the letter from Mr. Ellis J. Pickett regarding the application for access road from the J & M Leasing Co., which you requested today by phone.

File with docket file
J. M.
8-21-53

COPY

JUL 31 1953

PICKETT & PICKETT
Attorneys at Law
Office, Pickett Building
St. George, Utah

July 27, 1953

Defense Materials Procurement Agency
GSA Building
Washington 25, D. C.

Gentlemen:

Mr. T. E. Gilingham of the AEC Exploration Board of New York City suggested that the Wulfenstein boys of St. George file an application for funds for access roads and in so doing to send you assay sheets, etc. showing the contents of the minerals in the mine which they desire to get the access road to. I am therefore sending the application signed by the Two Wulfenstein boys, also two sets of copies of assay sheets for your consideration.

If you wish any further information as to quality to ore shipped, you might get in touch with the American Smelting and Refining Company, 700 Pacific Life Building, Salt Lake City, Utah, they can give you information as to ore that has been shipped to them for treatment.

Very truly yours,

Ellis J. Pickett

EJP:kb

Enclosures

cc to
Mr. T. E. Gilingham
New York, New York

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

224 New Customhouse
Denver 2, Colorado

August 14, 1953

Messrs. McMurrin Wulfenstein
and James E. Wulfenstein
445 West 400 North
St. George, Utah

Re: Docket No. DMEA-3075 (Uranium)
J & H Leasing Company
Cox and Ross Mining Claims
Mohave County, Arizona

Gentlemen:

We have received a copy of C. O. Mittendorf's letter to you under date of August 10, 1953, in which he requested additional information to accompany your application for exploration assistance.

When we receive this information we will be glad to continue to process your application.

Very truly yours,

W. H. KING

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

HMC:jp
cc Subject
Chron
WRStorms)
AHKoschmann) w/copy Mittendorf's ltr
RFRobinson)
COMittendorf

August 10, 1953

File DMEA-3075

Mr. Ellis J. Pickett
Pickett & Pickett
Attorneys at Law
Pickett Building
St. George, Utah

Dear Mr. Pickett:

This is in reply to your letter of July 27 enclosing application for an access road to the Copper Mountain Mine of the J. and M. Leasing Company and including copies of assays from the Copper Mountain Mine.

In August, 1952, we received an application from the J. and M. Leasing Company for an access road to the Copper Mountain Mine based on the production of copper which was denied by our letter of September 11, 1952 to Mr. I. H. Wulfenstein.

Since the present application appears to be based on the production of uranium, the Atomic Energy Commission has the responsibility for establishing the essentiality of such roads and their importance to the national defense. They determine through their field force the necessity for such a road and, if needed, they request the Bureau of Public Roads to make an investigation of the project including estimated cost.

Under the circumstances, we are returning the application to you and suggest that you make the application directly to the Grand Junction Operations Office of the Atomic Energy Commission, Grand Junction, Colorado.

Very truly yours,

Geo. H. Roll, Acting Director
Mining Requirements Division

Enclosure

GHRoll:cg
Copy to: F. Knouse -DMEA
Rm 4640

FILE COPY
SURNAME: B

Docket.
J L Lupum
Ellis
Nelson
Dunton
Selfridge
Hopkinson

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

Messrs. McDurwin Wulfenstein
and James R. Wulfenstein
146 West 400 North
St. George, Utah

AUG 1 0 1955

Re: Docket No. DMEA-3075 (Uranium)
J & M Leasing Company
Cox and Ross Mining Claims
Mohave County, Arizona

Gentlemen:

Reference is made to your application for Government exploration aid to explore the captioned project at a total estimated cost of $8,508.00.

In order for us to continue with the processing of your application we will require the following information:

1. Furnish a map or sketch showing the mining claim boundaries in relation to the mine workings as shown on the map of the U. S. Atomic Energy Commission submitted with your application.

2. It is not clear in your application if more than one mining claim is proposed for exploration. In either case, we will require all the recorded claim names, dates recorded, book, page, and where recorded.

3. Supply any available sample data, production records, etc., showing the ore mined from this property. Also describe the geology or mineralization which you believe justifies the proposed work.

A copy of this information should be sent to the Executive Officer of Region IV at the following address:

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

Your application has been referred to Mr. King to make an examination of your property at a mutually convenient time upon receipt of the above information.

Sincerely yours,

C. O. Mittendorf (for)

Administrator

MDA
8-10-53

FLKnouse/db
8-5-53
cc to: Adm. Reading File
Docket
Messrs: H.D.Keiser, Rm. 3641
A.P.Butler, Jr., Rm. 3206, OSA
Ellis
Knouse
IMEA Field Team, Region IV (2)

FILE COPY
SURNAME:

Docket.
F. L. Knouse
Selfridge
F. J. Knudson

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

Mr. W. H. King
Executive Officer
DMEA Field Team, Region IV
2nd New Customhouse Building
Denver 2, Colorado

AUG 1 0 1953

Re: Docket No. DMEA-3075 (Uranium)
J & M Leasing Co.
Cox and Ross Mining Claims
Mohave County, Arizona

Dear Mr. King:

The captioned application is referred to your office for a field examination of the proposed project.

Copies of memoranda from Mr. Arthur P. Butler, Jr., dated June 18, 1953, and Mr. H. D. Keiser, dated June 16, 1953, outlining questions to be covered in the examining engineer's report are enclosed. We are also enclosing a copy of a letter received from Ellis J. Pickett, Attorney for the Applicant, dated July 27, 1953, together with two copies of our letter written today to the Applicant requesting additional information to be supplied. A copy of the Applicant's reply is to be sent to you prior to the field examination.

If your office recommends either the program as submitted, or an alternate one approved by the Applicant, kindly furnish us the detailed information required to draft a contract. Some of the proposed work may be in the category of development, i.e. drifts along the vein at 100 foot intervals from the proposed shaft sinking. Therefore, the examining engineers should carefully consider these questions when making their recommendations.

In your memorandum of June 5, 1953, that transmitted the application to this office, we note that you retained a copy for your files.

Sincerely yours,

George C. Selfridge
ES7

MFK 8-10-53

Chairman, Operating Committee

Enclosures

APPROVED:
W. H. Hedges ES7
Member, Bureau of Mines
A. R. Kinkel, Jr.
ES7
Member, Geological Survey

FLKnouse/db
8-5-53
cc to: Adm. Reading File
Operating Committee
Docket
Messrs: H.D.Keiser, Rm. 3641
A.P.Butler, Jr., Rm.3206, OSA

C O P Y

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

June 16, 1953

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4640

From: H. D. Keiser, Bureau of Mines Member
Uranium Commodity Committee

Subject: DMEA Docket 3075, J. & M. Leasing Co., McMurrin Wulfenstein, 446 West 400 North, and James E. Wulfenstein, 172 East 300 South, St. George, Utah.

I have reviewed the application included in the subject docket and have discussed it with Joseph O. Hosted, representative of the Atomic Energy Commission.

It is recommended that the application be referred to the field team for investigation and report, and that the field team be requested to discuss the application with Ernest E. Thurlow, Atomic Energy Commission, Salt Lake City, Utah.

/s/ H. D. Keiser

Attachment

/ C O P Y /

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

June 16, 1953

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4640

From: H. D. Keiser, Bureau of Mines Member
Uranium Commodity Committee

Subject: DMEA Docket 3075, J. & M. Leasing Co., McMurrin Wulfenstein, 446 West 400 North, and James E. Wulfenstein, 172 East 300 South, St. George, Utah.

I have reviewed the application included in the subject docket and have discussed it with Joseph O. Hosted, representative of the Atomic Energy Commission.

It is recommended that the application be referred to the field team for investigation and report, and that the field team be requested to discuss the application with Ernest E. Thurlow, Atomic Energy Commission, Salt Lake City, Utah.

/s/ H. D. Keiser

Attachment

7/29/53 gla

ELLIS J. PICKETT
CHARLES M. PICKETT

PRACTICE IN COURTS OF
UTAH AND ARIZONA

PICKETT & PICKETT
ATTORNEYS AT LAW
OFFICE, PICKETT BUILDING
ST. GEORGE, UTAH

July 27, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 29 1953

Mr. Frank E. Johnson, Administrator
Department of the Interior
Defense Minerals Exploration Administration
Washington 25, D. C.

In Re: Dockett No. DMEA-3075
J. & M. Leasing Company (Uranium)
Mohave County, Arizona

Dear Mr. Johnson:

The question that you propound in your letter July 17, 1953, relative to the above matter is whether or not the Wulfenstein Brothers, who are sub-lessees of 3/4 interest in the Cox & Ross Mine, Mohave County, Arizona, have the right to operate said mines, whether or not they are joined in the operation by the owners of the other 1/4 interest or whether or not they are able to operate the 3/4 interest of a mining claim even though the owner of the 1/4 interest would actively oppose said operation.

In my opinion the Wulfensteins will be able to operate the mines with the 3/4 interest in question without interference from the owner of the other 1/4 interest because they are tenants in common with the owners of the other 1/4 interest in said mining claims, and one of the incidents of tenancy in common of a mining claim is the right of each tenant in common with his co-tenants to possession of the premises held in common,

Thompson on Real Property,
Permanent Edition, Sec. 101

"As in the case of co-tenancies of other properties, each co-owner (of a mining claim) has the right to open and work the mine. (parentheses ours). I. D. Sec. 101, page 137

If there is any question whether or not the lessee or sub-lessee of a tenancy in common or a co-tenancy becomes himself a co-tenant I would refer to the same authority on page 138 as follows:

"One tenant in common may lease his undivided interest and the lessee becomes a tenant in common in his lessor's stead."

2 Fed. (2d) 566
40 ALR 1389

The rights of co-tenants are set forth in 14 American Jurisprudence, page 93, Sec. 32 wherein: "It is a rule of general application that any co-owner of real property has a right to enter upon the common estate and take possession of the free hold thereof, subject only to the equal right of his companions in interest, with whose possession he may not interfere." And in Sec. 25 of the same text we find the following, "A tenant in common of a mine has a right to work it, and does not become a trespasser in so doing, even though his co-tenants object."

I do not find a case in point where the question has been decided by the Supreme Court of the State of Arizona, but there are many cases in Western states holding with the rulings and statement of the law as given above and there is no question but what Arizona would follow and does follow the same rule of law. A Colorado case in 94 Pac. 292 holds that where a single co-tenant works a mine he cannot demand contributions from those not working, but if pay ore is taken out he can deduct their proper share for all expenditures which improve the value of the mine or lead to the discovery of ore, but not for the expenses of unsuccessful prospecting. This is also quoted in Morrisons Mining Rights 16th edition, page 423; and quoting from the same book and page, "At common law each could work without accounting to the other. This was changed by the Statue of 4 Aime Ch-16, Sec. 27, "Most states have adopted the tenor of that statue, to-wit: that the excluded co-tenant may have his proper action for his share of the proceeds of the workings."

"When an such statue has been enacted giving the right to an account and taking away the common law right of each to work at his own risk but to his own exclusive profit, the law seems to be; that any co-tenant may work the common property, at his own risk if he works to a loss, but must account to his co-tenants if he works to a profit."

In the same tenor we find the following, 36 American Jurisprudence, page 398, Sec. 169, "A co-tenant of mineral lands or mines has a right to develope the same and remove the minerals, even without the consent or approval of the other co-tenants."

In Lindley on Mines, 3d edition, paragraph 790, page 1949 the author is discussing the rights of co-tenants of mines says this, "The working co-tenant who does not exclude his co-owner nor wrongfully assert entire ownership may deduct from the gross product all the legitimate expenses of workings; but in case of

loss, he cannot compel his co-owners to contribute. ----- Tenants in common are not bound to use the common property jointly by means of a contract of partnership between them, but may possess, use, and enjoy accounting to the co-tenants for so much of the rents, profits as they may receive beyond their just share and portion."

The law seems to be well settled that tenants in common of real property may use the same independly of each other subject to an accounting to the co-tenant not participating, and it seems to be well settled in the western states that tenants in common of mining claims may work the property together or each co-tenant or a group of the same may operate the jointly owned property without the consent of the other owners.

It would seem from the above that the Wulfensteins would have the right to go upon the two mining claims in question and work the same but would have to account for proportionate share of the profits to the owner of the 1/4 interest belonging to the Carter estate in Chicago. The Wulfensteins would have right of possession under the lease from the owners of the 3/4 interest, they would have the right to go upon the property, develop, explore, and mine the same without the consent of the owner of the other 1/4 interest and in fact they could do so even though the owner of the 1/4 interesteobjected.

I trust that the above is sufficient to warrant you in proceeding to process the application for loan by the Wulfensteins and that the loan may be comsumated so that they can proceed in the exploration of this property. If any other information is needed or if you wish further search of the authorities as to the legal right to proceed with this work, please let me know and I will do what I can.

Very truly yours,

Ellis J. Pickett

EJP:kb

386814

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENT that I, ELLAND C. WHITMORE, of Overton, Nevada, have hereby made, constituted and appointed SIDNEY R. WHITMORE, Esq., of Suite 1 Cornet Bldg., Las Vegas, Nevada, my true and lawful attorney for me and in my name to sell, lease, convey, or in anyway to deal with those certain mining claims of which I have a property interest under a lease, dated February 2, 1949, for such price or prices and on such terms as my said attorney shall think best, and to execute, acknowledge and deliver good and sufficient deed and conveyances for the same together with such other documents or instruments as may be necessary to give full force and effect to the use of said property, either with or without covenants and warranty, and generally to act in the premises as effectually as I could do if personally present.

The property referred to herein and for which the authority is conferred by this Power of Attorney, is described as follows:

> Two mining claims situated in the Copper Mountain Mining District in Mohave County, State of Arizona, known as the Cox and Ross Mine Claim, and as the Cox and Ross Mine Claim No. 1, recorded in the aforesaid county in Book 3H of Mines at Page 265 and 266.
>
> Together with all improvements, and fixtures located thereon.

I hereby ratify and confirm all that my said attorney has already done or shall lawfully do by virtue hereof.

IN WITNESS WHEREOF, I have hereunto set my hand this 9th day of April, 1952.

ELLAND C. WHITMORE

STATE OF NEVADA)
) SS
COUNTY OF CLARK)

On this 9th day of April 1952, personally appeared before me, the undersigned, a Notary Public in and for said County and State, ELLAND C. WHITMORE, known to me or proved to me to be the person described in and who executed the foregoing instrument, who acknowledged to me that he executed the same freely and voluntarily and for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto signed my name and affixed the official seal of my office the day and year first above written.

NOTARIAL SEAL

Notary Public in and for said County and State.

(S E A L)

No. 33681

Recorded at the Request of Sidney R. Whitmore

Date JUN 30 1952 At 11:14 A.M. In Book 1 Mines

Clark County, Nevada Records, Paul C. O'Malley, Recorder

Fee $ 1.50 Paid Bv B M

Suite 3 - Cornet Bldg.
City

BOOK 33 of 283

386816

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS that I, Lorin B. Whitmore of the AGD Hq. Det., Fort Lawton, Washington, have hereby made, constituted and appointed Sidney R. Whitmore, Esq., of Suite 1 Cornet Bldg., Las Vegas, Nevada, my true and lawful attorney for me and in my name to sell, lease, convey, or in anyway to deal with those certain mining claims of which I have a property interest under a lease, dated February, 2, 1949, for such price or prices and on such terms as my said attorney shall think best, and to execute, acknowledge and deliver good and sufficient deed and conveyance for the same together with such other documents or instruments as may be necessary to give full force and effect to the use of said property, either with or without covenants and warranty, and generally to act in the premises as effectually as I would do if personally present.

The property referred to herein and for which the authority is conferred by this Power of Attorney, is described as follows:

> Two mining claims situated in the Copper Mountain Mining District in Mohave County, State of Arizona, known as the Cox and Ross Mine Claims, recorded in the aforesaid county in the Book 3U of Mines at Page 285, and as the Cox and Ross Mine #1 Claim, recorded in the aforesaid county in the Book 3U of mines at page 286.

Together with all improvements, and fixtures located thereon.

I do hereby ratify and confirm all that my said attorney has already done or shall lawfully do by virtue hereof.

IN WITNESS THEREOF, I have hereunto set my hand this 17th day of ~~February~~ March, 1952.

Lorin B. Whitmore
Lorin B. Whitmore

STATE OF ~~WASHINGTON~~ Nevada :
: SS
COUNTY OF Clark :

On this 17th day of ~~February~~ March, 1952, personally appeared before me, the undersigned, a Notary Public in and for said County and State, LORIN B. WHITMORE, known to me or proved to me to be the person described in and who executed the foregoing instrument, who acknowledged to me that he executed the same freely and voluntarily and for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto signed my name and affixed the official seal of my office the day and year first above written.

(NOTARIAL SEAL)

Hollis Mazzella
Notary Public in and for said County and State.

(SEAL)

My Commission expires: 1-11-55

No. 33384

Recorded at the Request of Sidney R. Whitmore

Date JUN 30 1952 At 11:16 A.M. In Book 1 Misc

Clark County, Nevada, Records, Page ... Official Records

For $ 1.50 Indexed ... Buck ... Deputy

BOOK 33 PAGE 283

386815

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS that I, GALE G. WHITMORE of Henderson, Nevada have hereby made, constituted and appointed SIDNEY R. WHITMORE, Esq., of Suite 1 Cornet Bldg., Las Vegas, Nevada, my true and lawful attorney for me and in my name to sell, lease, convey, or in anyway to deal with those certain mining claims of which I have a property interest under a lease, dated February 2, 1949, for such price or prices and on such terms as my said attorney shall think best, and to execute, acknowledge and deliver good and sufficient deed and conveyances for the same together with such other documents or instruments as may be necessary to give full force and effect to the use of said property, either with or without covenants and warranty, and generally to act in the premises as effectually as I could do if personally present.

The property referred to herein and for which the authority is conferred by this Power of Attorney, is described as follows:

> Two mining claims situated in the Copper Mountain Mining District in Mohave County, State of Arizona, known as the Cox and Ross Mine Claims, recorded in the aforesaid county in the Book 3U of Mines at Page 2[illegible], and as to Cox and Ross Mine #1 Claim, recorded in the aforesaid county in the Book 3U of mines as page 2[illegible]6.

Together with all improvements, and fixtures located thereon.

I do hereby ratify and confirm all that my said attorney has already done or shall lawfully do by virtue hereof.

IN WITNESS WHEREOF, I have hereunto set my hand this 4th day of April, 1952.

Gale G. Whitmore
GALE G. WHITMORE

STATE OF NEVADA)
) SS
COUNTY OF CLARK)

On this 4th day of April, 1952, personally appeared before me, the undersigned, a Notary Public in and for said County and State, GALE G. WHITMORE, known to me or proved to me to be the person described in and who executed the foregoing instrument, who acknowledged to me that he executed the same freely and voluntarily and for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto signed my name and affixed the official seal of my office the day and year first above written.

(NOTARIAL SEAL)

Notary Public in and for said County and State.

My Commission expires Jan. 11, 1955

(S E A L)

No. 386815
Recorded at the Request of Sidney R. Whitmore
Date JUN 30 1952 At 11:15 A.M. in Book Misc.
Clark County, Nevada, Records, Fee C[illegible]
Fee $1.50 Indexed [illegible] BN

Suite 3. Cornet Bldg.
City.

FILE COPY
SURNAME:

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

Portine
Gilpone
J. Lawson
Ellis

JUL 17 1953

Ellis J. Pickett, Esq.
Pickett Building
St. George, Utah

Re: Docket No. DMEA-3075
J. & M. Leasing Co. (Uranium)
Mohave County, Arizona

Dear Mr. Pickett:

This responds to your letters dated July 3 and July 8 in reply to my letter of June 25 to Messrs. McMurrin and James E. Wulfenstein regarding the above-referenced project.

My letter pointed out that an applicant must have a sufficient interest in the land for the purposes of an exploration project contract, and that as a one-fourth interest in the land is outstanding we require legal evidence of your right to use the land. Your letter states that the outstanding one-fourth interest is involved in the administration of an estate for which there is presently no executor, and you question whether the outstanding interest can be acquired readily. We can appreciate the complexities and delay which would be involved in attempting to acquire the outstanding interest, and therefore, do not insist upon it. However, as stated in my letter of June 25, we must have assurance in the form of legal evidence, of the applicant's right to explore and mine the property without any interruption. Accordingly, in lieu of acquiring ownership or a lease of the outstanding one-fourth interest, we require that you demonstrate legally that a lessee (in this case a sublessee) from a tenant in common has the right, in the state where the land is located (Arizona), to use the leased land without interruption for the full term of the lease.

You transmitted with your letter of July 8 seven copies of a Subordination Agreement, which your letter stated was signed by Sidney R. Whitmore for Leland O., Gale S., and Lorin B. Whitmore, the sublessors. However, although the sublease was executed by Sidney R. Whitmore as Attorney-in-Fact,

F.C.G.
7-17-53

the signature on the Subordination Agreement was not so affixed to the agreement. Also, the recital in the agreement described the Whitmores as an Operator. Therefore, we are enclosing Subordination Agreement forms which we have prepared for signature, in lieu of the ones which you submitted.

Sincerely yours,

ACTING FRANK E. JOHNSON (B.D.H.)
Administrator

Enclosures - 7

HCRubin/ema 7-15-53
cc: Mails & Files
Adm. R. File
Op. Comm.
C. O. Mittendorf
Field Team, Reg. IV (2)
E. W. Ellis
J. L. Hofflund
H. C. Rubin
Chron.
Pending

MF-201
(Revised February 1953)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the holder of a mortgage, claim, lien, or encumbrance identified and described as follows*:

Sublessors under a lease dated June 29, 1952, between Leland O. Whitmore, Gale S. Whitmore, and Lorin B. Whitmore, by Sidney R. Whitmore their Attorney-in-Fact and James E., and M. Wulfenstein upon that certain parcel of ground described in a proposed Exploration Project Contract

between James E., and McMurrin Wulfenstein

and the United States of America;

NOW, THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government to enter into same, does by these presents subordinate all of his right, title, and interest in said mortgage, claim, lien, or encumbrance to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof, and agrees that the lien and claim of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof, shall be prior to the undersigned's rights under the provisions of said mortgage, claim, lien, or encumbrance; and

The undersigned agrees to commit no act nor assert any right, title, or interest under said mortgage, claim, lien, or encumbrance that might contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract, and any amendments thereof.

This undertaking and covenant shall be binding upon the heirs, successors, and assigns of the undersigned.

Dated this ..... day of ....., 1953

[SEAL]
Sidney R. Whitmore, Attorney-in-Fact
and by Powers of Attorney, [SEAL]
for and in behalf of the lessors

I, ..., certify that I am the .....

(Secretary, etc.) of the corporation named herein; that .....

who signed this agreement was then ..... (President or Vice-President, etc.) of said corporation; that said agreement was duly signed for and in behalf of said corporation by authority of its governing body, and was within the scope of its corporate powers.

.....
[CORPORATE SEAL]

*Include date of the instrument, and if recorded, book, page, and county of record.

16—68181-1 U. S. GOVERNMENT PRINTING OFFICE

ELLIS J. PICKETT
CHARLES M. PICKETT

PRACTICE IN COURTS OF
UTAH AND ARIZONA

PICKETT & PICKETT
ATTORNEYS AT LAW
OFFICE, PICKETT BUILDING
ST. GEORGE, UTAH

July 8, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 10 1953

Mr. C. O. Withendrof, Administrator
Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D. C.

In Re: Docket No. DMEA-3075
J. &. M. Leasing Co. (Uranium)
Mohave County, Arizona

Dear Sir:

Reference is had to your June 25th letter to the Wulfenstein boys in which you request Subordination Agreement signed by sub-lessors, the Whitmores. I am enclosing seven copies of Subordination Agreement signed by Sidney R. Whitmore for Leland O. Whitmore, Gale S. Witmore, and Lorin B. Witmore.

I trust this will be sufficient, if not, kindly advise what else you require.

As I told you in my letter of July 3, it is extremely unlikely that we can get consent to lien from the Carter Estate for the reasons as set forth in said letter. I trust that your consideration in this matter will lead to the Government loan without the consent of the 1/4 interest.

Very truly yours,

Ellis J. Pickett

EJP:kb

Enclosures

RECEIVED
JUL 13 1953
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

DMT-201
(June-1951)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 10 1953

SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the holder of a mortgage, claim, lien, or encumbrance identified and described as follows: a lease on the following Claims:

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Cox Ross Mining Claim #1 Recorded in the County of Mohave in Book 30, Page 286.

upon that certain parcel of ground described in a certain Exploration Project Contract dated,

_____, 195__, between Mahurrin Gulfenstein and James M. Gulfenstein d/b/a/ J. & M. Leasing Co., a partnership as operators and lessees and Sidney R. Whitmore, by Power of Attorney for Leland G. Whitmore, Gale G. Whitmore, and Lorin G. Whitmore, to an undivided three-fourth interest in said Claims

and the United States of America;

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This undertaking and covenant shall be binding upon the heirs, successors, and assigns of the undersigned.

Dated this 7th day of July, 1953.

Sidney R. Whitmore

*Include date of the instrument, and if recorded, book, page and county of record.

COPY

U. S. Government printing Office 16-64581-2

MF-201
(June-1951)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

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DEPARTMENT OF THE INTERIOR
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MF-201
(June-1951)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

RECEIVED
JUL 10 1953

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Sidney R. Whitmore

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MF-201
(June-1951)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

SUBORDINATION AGREEMENT

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Sidney R. Whitmore

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U. S. Government printing Office 16-64581-2

MF-201
(June-1951)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

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Sidney R. Whitmore

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U. S. Government printing Office 16-64581-2

MF 201
(June-1951)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

FILED
JUL 1 1953

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Dated this 7th day of July, 1953.

Sidney R. Whitmore

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COPY

7/9/53 gla

ELLIS J. PICKETT
CHARLES M. PICKETT

PRACTICE IN COURTS OF
UTAH AND ARIZONA

PICKETT & PICKETT
ATTORNEYS AT LAW
OFFICE, PICKETT BUILDING
ST. GEORGE, UTAH

July 3, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL - 7 1953

Mr. C. O. Withendrof, Administrator
Defense Minerals Exploration Administration
Department of the Interior
Washington 25, D. C.

In Re: Docket No. DMEA-3075
J. &. M. Leasing Co. (Uranium)
Mohave County, Arizona

Dear Sir:

The Wulfenstein boys brought me your letter of June 25, 1953, together with enclosures and wanted me to answer the same because I am acquainted with the facts in the case.

The 1/4 interest outstanding in the property involved in the application for loan is owned by the Donald M. Carter estate of Chicago. There is not now an executor for the estate and I question whether or not this estate can be opened so as to get the consent of the Administrator and the Court for the execution of the consents and papers which you desire. We have been negotiating with them for some time trying to get them to reopen the estate so that a sale or lease of the 1/4 interest might be made, but the attorney and the executor who was discharged by the Court dislikes to open the case for a matter involved in such uncertainties as 1/4 of a mining prospect way out West and it looks like we might be impossible to get this done. However, we did feel that if the Wulfensteins guarantee the repayment of the Government loan from the 3/4 interest that the working of the mine could not be prevented by the owner of the 1/4 interest, but their share of the proceeds of the mining operations would have to be set aside for their use. If this was done we see no good reason why the mine could not be operated and with the Wulfensteins guaranteeing the full payment of a Government loan it seems that the Government would be fully protected in this matter. if they approved the loan without the consent to lien by the executor of the Carter estate.

Please consider this situation and let me know what is you decisinn in this matter.

Very truly yours,

Ellis J. Pickett

ejp:kb

140

FILE COPY
SURNAME:

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

JUN 25 1953

Bustin
atkom
Ellis

Air Mail

Messrs. McMurrin Wulfenstein
and James E. Wulfenstein
446 West 400 North
St. George, Utah

Re: Docket No. DMEA-3075
J. & M. Leasing Co. (Uranium)
Mohave County, Arizona

Gentlemen:

In reviewing the application of your company for an exploration project contract, it is noted that McMurrin and James E. Wulfenstein are sublessees of a three-fourths interest in that land leased February 2, 1949, to Lorin, L. G., and Gale Whitmore, and that the Owner's Consent to Lien of the owners of the three-fourths interest is attached. With respect to the other one-fourth interest, owned by Donald M. Carter, Chicago, the application states: "We have assurance that the other 1/4 interest will not stand in the way of a Government Loan." There is no other explanation in the application concerning the outstanding one-fourth interest.

In order to qualify for an exploration project contract, it is necessary that the applicant have a sufficient interest in the land for the purposes of the project. As a one-fourth interest is outstanding in the land for which you propose an exploration project, and as there is not before us any legal evidence of your right to use the land with that interest outstanding, we require such evidence before proceeding with the processing of your application.

In the event that a project is approved for the property involved, we will also require an Owner's Consent to Lien signed by Donald M. Carter, and a Subordination Agreement signed by the sublessors (Whitmores) before executing a contract. Eight copies of each agreement are enclosed, and seven executed copies of each should be returned to us.

HCRubin/emd 6/24/53
Copy to: Docket
Adm. R. File
Op. Comm.
Field Team, Reg. IV(2)
E.W.Ellis
J.L.Hofflund
H.C.Rubin
chron. pending

Sincerely yours,

C. O. Mittendorf (fw)

Administrator

f.t.
6-25-53

FILE COPY
SURNAME:

Docket.
F.L. Knouse
Ellis

FLKnouse/db

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

14X3923.970 Working Fund,
Interior, Defense Minerals Exploration Administration

JUN 25 1953

James E. Wulfenstein
J. and M. Leasing Co.
446 West 400 North
St. George, Utah

RETEL JUNE 23 INQUIRING STATUS APPLICATION DOCKET NO. DMEA 3075 AIRMAIL LETTER OUTLINING STATUS ENROUTE

C. O. Mittendorf (for)

C. O. MITTENDORF, ADMINISTRATOR

6-25-53

FLKnouse/db
6-24-53
cc to: ADm. Reading File
Docket
Messrs: H.D.Keiser, Rm. 3641
A.P.Butler, Jr., Rm. 3206, GSA
Mr. Ellis
Mr. Knouse
DMEA Field Team, Region IV (2)

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable symbol above or preceding the address.

WESTERN UNION

W. P. MARSHALL, PRESIDENT

FX-1201

SYMBOLS
DL=Day Letter
NL=Night Letter
LT=Int'l Letter Telegram
VLT=Int'l Victory Ltr.

The filing time shown in the date line on telegrams and day letters is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination

PB731 LA572

L=SLC325 NL PD=WUX ST GEORGE UTAH 23= 1953 JUN 23 PM 8 35

=ROBERT E ADAMS CHIEF= INTERIOR DEPT

DEFENSE MINERALS ADMIN WASHDC=

=PLEASE ADVISE HOW APPLICATION DOCKET # D M E A 3075

STANDS=

JAMES E WULFENSTEIN=

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 24 1953

D M E A 3075=

STANDARD FORM NO. 64

6/22/53 gla

Office Memorandum • UNITED STATES GOVERNMENT

TO : E. Wm. Ellis, DMEA Member
Uranium Commodity Committee

DATE: June 18, 1953

FROM : Arthur P. Butler, Jr., USGS Member
Uranium Commodity Committee

SUBJECT: Application, J & M Leasing (Wulfenstein partnership), applicant, St. George, Utah; Cox and Ross Mine claims, Copper Mtn. District, Mohave Co., Ariz; DMEA Docket 3075 (uranium)

The application for DMEA exploration assistance at the property described above has been reviewed and discussed with H. D. Keiser, Bureau of Mines member, Uranium Commodity Committee, and J. O. Hosted, Atomic Energy Commission.

Proposal

The applicant proposes to explore a moderate to steeply dipping structure for uranium ore by rehabilitating and extending for 200 ft. an existing shaft and driving 900 feet of drift and cross cut at a total cost of $84,508.00.

Comment

Relatively good maps are furnished with the application but otherwise it is very poorly drawn, and the specific location is not given. The reasons for the location and amount of proposed exploratory work also are not given.

Analyses of samples collected by the Atomic Energy Commission at locations shown on the longitudinal projection indicate that small concentrations of uranium ranging from 0.017 to 0.06 percent U_3O_8 occur, probably in a metallized vein, for horizontal and vertical distances of about 40 feet. Locally samples of ore grade and some high grade samples have been obtained. No data are given as to what these samples represent.

Although the mine maps and sections suggest that the principal structure is a vein there is also a suggestion from the shape and inclination of the stopes that ore minerals have spread laterally in adjoining sandstone. The precise form and distribution of uranium and other ore minerals are so inadequately described as to preclude constructive comment.

The amount of exploration proposed, however, appears grossly excessive with respect to the extent and grade of the indicated mineralized rock. Probably winze sinking and extending the lowest drift in the vicinity of the known uranium minerals is all the work that would be warranted from the information included in the application.

Recommendation

I recommend that the applicant be requested to furnish 1) more exact description of the location of the property; 2) furnish a description, written, or sketch related to maps already submitted, of the form of the uranium bearing structure or rock; 3) the kind and approximate amount of any other metalliferous mineral or what the ore is that has been mined and 4) and explanation and justification of the exploration requested. If your office beleives that handling will be expedited by referring to the Field Team while the additional information is being obtained I am agreeable to that course of action. If the docket is sent to the Field Team, the examining members should be advised to consult with geologist of the Salt Lake City Exploration Branch, Division of Raw Materials, Atomic Energy Commission, as the mine has been examined by them and they can probably contribute useful information and suggestions.

Arthur P. Butler Jr

Copy to: E. Wm. Ellis (2)

IN REPLY REFER TO:

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

E. Wm. Ellis, DMEA Member
Uranium Commodity Committee
Arthur P. Butler, Jr., USGS Member
Uranium Commodity Committee

June 18, 1953

DMEA Docket 3075 (uranium)

Application, J & M Leasing (Wulfenstein partnership), applicant, St. George, Utah; Cox and Ross Mine claims, Copper Mtn. District, Mohave Co., Ariz.

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Copy to: E. Wm. Ellis (2)

6/17/53 gh

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

June 16, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 17 1953

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4640

From: H. D. Keiser, Bureau of Mines Member
Uranium Commodity Committee

Subject: DMEA Docket 3075, J. & M. Leasing Co., McMurrin Wulfenstein, 446 West 400 North, and James E. Wulfenstein, 172 East 300 South, St. George, Utah.

I have reviewed the application included in the subject docket and have discussed it with Joseph O. Hosted, representative of the Atomic Energy Commission.

It is recommended that the application be referred to the field team for investigation and report, and that the field team be requested to discuss the application with Ernest E. Thurlow, Atomic Energy Commission, Salt Lake City, Utah.

H. D. Keiser

H. D. Keiser

Attachment

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

June 11, 1953

Memorandum

To: Executive Officer, DMEA Field Team, Region IV

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number

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

DMEA - 3075, J. & M. Leasing Company.

ROBERT E. ADAMS

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

38226

June 11, 1953

Mr. Mc Murrin Wulfenstein
J. & M. Leasing Company
446 West 400 North
St. George, Utah

Subject: DMEA-3075
Re: Exploration Assistance
Cox and Ross Mine

My dear Mr. Wulfenstein:

The receipt of your application dated May 29, 1953, for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-3075 and referred to the Rare and Miscellaneous Metals Division.

Kindly refer to DMEA-3075 in any future correspondence relating to your application.

Sincerely yours,

ROBERT E. ADAMS

Robert E. Adams
Chief, Operations Control
and Statistics Division

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

224 New Customhouse
Denver 2, Colorado

June 8, 1953.

Memorandum

To: Secretary to the Operating Committee

From: Field Team, DMEA, Region IV

Subject: Application - (Uranium), J. & M. Leasing Company, St. George, Utah.

Enclosed are three copies of an application for exploration assistance submitted by the J. & M. Leasing Company. The application consists of Form MF-103 with answers, the signed copies of Owner's Consent to Lien, photostat of a mining lease, photostat of a sub-lease and a map. A copy of this application is being retained in this office.

The estimated cost of the exploration project is $84,508.00.

John F. Shaw
For W. H. King

A. H. Koschmann

Enclosures

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

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

Not to be filled in by applicant

Docket No. 3075
Metal or Mineral
Date Received 4/11/53
Estimated Cost
Participation (Government %)

INSTRUCTIONS

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

J. & M. Leasing Co.
Mc Murrin Wulfenstein & James E. Wulfenstein Partnership
446 West 400 North 172 East 300 South St. George, Utah

(*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 Copper Mountain Mining District, Mohave County, State of Arizona known as the Cox & Ross Mine Claims recorded in Book 3 U of Mines at Page 285 Cox & Ross Claim No. 1 recorde in Book 3U of Mines at Page 286

(*b*) State any mine name by which the property is known. Cox & Ross Mine Formerly Copper Mountain

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

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

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

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

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

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

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

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

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

5. *The exploration project.*—(State the mineral or minerals for which you to explore Uranium

(*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. Refer to A. L. C. Map

(*c*) The work will start within 30 days and be completed within 24 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. 15 years Foreman & Other mine work.

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

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

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

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

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

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

(*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?

☐ Money ☒ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated May 29, 195

J & M. Leasing Co
(Applicant)

By M. Wulfenstein
James Wulfenstein

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

NOTATIONS ON CONTRACT FORM MF-103

No. 4D 92 miles from St. George Dirt roads, 92 miles to residence & Supply center

No. 6 Bunk & Boarding House 16 ft Wide by 42 ft long at $6.00 per square ft. total $4,508.00 Head Frame Hoist House & Bins $6,000.00

Shaft Rehabilitation 210 ft $10,000.00
Shaft Sinking 200 Ft @$140.00 per Ft. total $28,000.00
Drifting 500 ft @$40.00 per ft.
Cross Cut 400 ft @40.00 per ft. 900 ft @40.00 36,000.00

Bunks & Boarding House	$4,508.00
Headframe Hoist House & Bins	6,000.00
Shaft rehabilitation	10,000.00
Shaft Sinking	28,000.00
Drifting & Crosscutting	36,000.00
	$84,508.00

This Figure includes the overall cost.

No. 7 Trucks 1941 Ford 1½ Tons
1948 International 2½ tons
1949 Studebaker ½ Ton
Gardner & Denver Compressor 132Cu. In.
Hoist, 300 Ft. Hose 4 Jackhammers 1 Stoper 1 Cross Bar 1 Chlumar Bar
1 HD 7W Allis Chalmers Cat. Steel & Bits

✓ Refering to Lease the 3/4 interest will guarentee the full royalty to the Government. We have assurance that the other 1/4 interest will not stand in the way of a Govenment Loan.

Refering to No. 4 b Get Information from American Smelting & Refining Co. Salt, Lake City, Utah

April 28, 1953

The Following radiometric assays were obtained on samples from the Copper Mountain Mine, Mohave County, Arizona, submitted to the New York Laboratory by James Henderson and Earl King April 6, 1953. New York's reference number is 4685.

Our Samples Number	Their Reference Number	Percent U_3O_8 Equivalent
1	4685 A	0.8
2	4685 B	5.
3	4685 C	3.
4	4685 D	0.7
5	4685 E	0.06

The following radiometric assay returns were received verbally from the U. S. Geological Survey Laboratory in Denver, Colorado:

Field No.	Type*	Geographic location and Description of Material	eU
F-3953	C	Radioactive Copper Mineral -from ore pile on surface	14.1%
F-3954	B*-	" " " Hanging wall bottom level 250' below Shaft collar	.075%
F-3955	B	" " " Hanging wall bottom level, at water level.	0.54%
F-3956	C	" " " Below water level at bottom of drift.	0.13%

These samples were from the Copper Mountain Mine, Mohave County, Arizona

Note: Material sent to Vitro by J. Henderson from Copper Mountain.

Assays:

2.65% U_3O_8 - Chemical

20.67% Cu.

4 Pulps from Garfield:	Radiometric	Chemical
Lot No. 4 - 1/23/53	0.032% U_3O_8	0.030% U_3O_8
Lot No. 5 - 2/3/53	0.028	0.027
Lot No. 6 - 2-24-53	0.107	0.106
Lot No. 7 - 3/13/53	0.063	0.056

SUB-LEASE

THIS AGREEMENT made and entered into this 29th day of June, 1952, by and between LORIN WHITMORE, L. O. WHITMORE, and GALE WHITMORE, hereinafter known as the Lessors and JAMES WULFFENSTEIN and M. WULFFENSTEIN, hereinafter known as the Lessees.

WHEREAS the Lessors herein have and hold a certain lease on a 3/4 interest in and to the Cox and Ross Mine Claim and the Cox and Ross Mine Claim No. 1 as more fully described in the lease annexed and attached hereto.

Now, therefore, in consideration of FOUR HUNDRED FIFTY ($450.00) Dollars to be paid within Five (5) days from date, upon which payment this lease and agreement will become effective, the Lessors herein grant this sub-lease and option to purchase upon the following terms and conditions:

1. This agreement is for a period of Fifteen (15) years from date, with right to renewals under this lease and the lease attached hereto.

2. The Lessees herein agree to fulfill all of the obligations under the attached lease and to comply with the provisions of this agreement.

3. The Lessees herein agree to take possession and commence operation of the said claims within Twenty (20) days from date.

4. The Lessees herein agree and covenant to authorize payment directly from the smelter to V. Loraine Cox, at St. George, Utah a royalty in the sum of 7½% upon all ores and minerals shipped and sold from the said claims. The Lessees herein agree and covenant to authorize payment directly from the smelter to Sidney R. Whitmore, as agent of the Lessors herein, a royalty in the sum of 5½% on all ores and minerals shipped and sold from said claims. Upon the securing to the Lessees herein the outstanding Quarter (¼) interest to said claims the royalty payable to the Lessors herein will immediately be reduced to 2½% on all ore and minerals shipped and sold.

5. The Lessors and Lessees herein agree and covenant that any sale or transfer of the said claims will be done only by the consent and mutual agreement of the Lessors and Lessees herein. It is further mutually agreed by and between the Lessors and Lessees herein that upon such sale or transfer any downpayment obtained will be divided in equal portions between the Lessors and Lessees. That in the event such sale or transfer is accomplished the Lessors and Lessees herein will equally divided the purchase price and royalties to be paid above the purchase price and royalties to be paid to the owners of said claims.

6. The Lessees herein retain the right to secure financial assistance for development and operation of said claims and to transfer any portion of their interest in and to said claims for such purpose but the Lessees herein agree not to transfer the entire interest of the Lessors herein or the interest in the lease hereto annexed without complying with the provisions of paragraph Five (5) hereof. No share in financial assistance is due or expected by Lessors.

7. The Lessees herein agree to comply with State and Federal law pertaining to Workmen's compensation and insurance; to post all notices required upon the property to secure the non-liability of the owners of said claims and to secure the non-liability of the Lessors herein; to keep said premises free from liens, judgments or claim of any nature.

8. If the Lessees shall at any time be in default in the performance of any of the terms and conditions hereof upon them made incumbent, such default shall not operate to or give the Lessors the right to cancel, forfeit or terminate this agreement, unless the Lessors shall notify the Lessees in writing specifying the exact nature of such default and unless the Lessors shall, within Forty Five (45) days from the date of the receipt of such notification, fail to proceed diligently to cure such default.

LAW OFFICES
WHITMORE & HIMES
LAS VEGAS, NEVADA

9. In the event that any default is served upon the Lessors herein by the Owners of said claims it is agreed that the Lessees herein will cure such default and reimburse the Lessors or pay to the Owners any settlement required in the event the Lessees herein desire to retain possession and continue operations.

10. Any Notices, instruments or papers of any nature may be served upon Sidney R. Whitmore at Suite 3, Cornet Bldg, Las Vegas, Nevada, for and in behalf of the Lessors and such will be notice to all the Lessors herein. Any agreements necessary to be made with the Lessors may be made by and through this said agent on behalf of the Lessors, until further notice is given.

11. Any Notices, instruments or papers of any nature are to be served upon James Wulffenstein at 172 E Street, St. GEorge, Utah and upon M. Wulffenstein at 537 Elm Street, Boulder City, Nevada for the Lessees herein and until further notice is given.

12. This agreement inures to the benefit of an shall be binding upon the heirs, representatives and assigns of the parties hereto.

James Wulffenstein
JAMES WULFFENSTEIN, Lessee

Sidney R. Whitmore
SIDNEY R. WHITMORE, Attorney in Fact, and by Powers of Attorney, for and in behalf of the Lessors

M. Wulffenstein
M. WULFFENSTEIN, Lessee

STATE OF NEVADA)
) SS
COUNTY OF CLARK)

On this 29th day of June, the parties hereto waive said fact of being on Sunday, 1952, personally appeared before me, the undersigned, a Notary Public in and for said County and State, SIDNEY R. WHITMORE, JAMES WULFFENSTEIN, and M. WULFFENSTEIN, known to me or proved to me to be the persons described in and who executed the foregoing instrument, who acknowledged to me that they executed the same freely and voluntarily and for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto signed my name and affixed the official seal of my office the day and year first above written.

(S E A L)

Hallie Mosteller
Notary Public in and for said County and State.
HALLIE MOSTELLER

My commission expires Jan. 11, 1955

C O P Y

MINING PROPERTY LEASE

THIS AGREEMENT MADE and entered into this 2nd th day of February 1949 by and between:

MARY ETTA COX, V. LORAINE COX, ANNA C. COX, his wife, and KENNETH COX, and ANNA F. COX, his wife, all of Saint George, Utah.

Hereinafter called the "Lessors",

Parties of the First Part.

and

LORIN WHITMORE, L. O. WHITMORE, and GALE WHITMORE, of the town of OVERTON, NEVADA.

Hereinafter Called the "Lessee",

Parties of the Second Part.

WHEREAS, the Lessors are the owners of a three-fourth (3/4) share, and DONALD M. CARTER, of Chicago, Illinois, is the owner of a one-fourth (1/4) share, of the entire right, title and interest in and to two mining claims situated in the Copper Mountain Mining District in Mohave County, State of Arizona known as the Cox and Ross Mine Claims, recorded in the aforesaid county in the Book 3U of Mines at page 285, and as the Cox and Ross Mine #1 Claim, recorded in the aforesaid county in the Book 3U of Mines at page 286; and

NOW THEREOFRE, in consideration of the premises and the covenants and agreements hereinafter set forth, and other good and valuable consideration, receipt of which is hereby acknowledged, the parties hereto DO HEREBY MUTUALLY AGREE AS FOLLOWS:

1. The Lessors have granted, demised, leased and let, and by these presents do hereby grant, demise, lease and let unto the Lessee the exclu-ive right to prospect, explore, by core drills or otherwise, to mine, operate, produce, store and remove there-from and dispose of metals, ores, copper, gold, silver, and metal bearing quartz, rock and earth therein, together with all minerals therein contained on the surface and beneath the surface, including all underlying minerals, and including all dups, shafts, underground workings now on the premises, and to mill, concentrate, leach smelt, refine or otherwise treat the foregoing minerals, and including all springs and water right, including those located and recorded by V. Loraine Cox, et al, to wit: As filed and record-ed at request of V. Loraine Cox, June 24, 1940 at 9 o'clock in book 4 of Mill Sites & W Rts Page 84 in Records of Mohave County, Arizona; and to do all things necessary or desirable in carrying out any and all mining operation on, in, under or in connection with the two (2) mining claims situated in Mohave County, State of Arizona, in a more particularly described as follows:

A certain lode mining claim known as the Cox and Ross Mine #1 Claim, situated and docated in the Copper Mountain Mining District in Mojave County in the State of Arizona about six (6) miles in a Northerly direction from where the Andrus Spring Wash empties into the Colorado River. This claim is a part of what has been known as the Copper Mountain Mine. The surfact boundaries of the claim are marked upon the ground as follows: Beginning at this Discovery and North Center end Monument. The North end of this claim joins the South end of the Cox and Ross Mine Claim, being in the center of the North-easterly end line of said claim, thence Southeresterly 300 feet to a Monument, being the Northeasterly corner of said claim; thence Southeasterly 1500 feet to a Monument, being at the Southeasterly corner of said claim; thence 300 feet to a Monument at the center of the Southwesterly end of claim; thence 300 feet to a Monument, being at the Southwesterly corner of said claim; thence Northeasterly 1500 feet to a Monument at the Northwesterly corner of said claim; thence Southeasterly 300 feet to the place of beginning, and recorded in the County of Mohave in Book 3U at Page 286; and

A certain lode mining claim known as the Cox and Ross Mine, situated and located in the Copper Mountain Mining District in Mohave County in the State of Arizona about six (6) miles in a Northerly direction from where the Andrus Spring Wash empties into the Colorado River and this property is what has been known as the Copper Mountain Mine. The surfact boundaries of this claim are marked upon the gound as follows: Beginning at this Monument which is the Discovery and Southwesterly center end monument. The South end of this claim

joins the North end of the Cox and Ross Mine #1 Claim, being in the center of the Southerwesterly end line of said claim, thence Southeasterly 300 feet to a monument, being the Southeasterly corner of said claim; thence Northeasterly 1500 feet to a Monument, being at the Northeasterly corner of said claim; thence Northeasterly 300 feet to a Monument at the center of the Northeasterly end of said claim; thence Northwesterly 300 feet to a Monument, being at the Northwesterly corner of said claim; thence Southerwesterly 1500 feet to a Monument at the Southwesterly corner of said claim; ehence southeasterly 300 feet to the place of the beginning. and recorded in Mohave County in Book 3 U at Page 285;

for a termof twenty (20) years, beginning December 31, 1948, and so long thereafter as copper or other minerals shall be produced therefrom in paying quantities, unless sooner surrendered or terminated as hereinafter provided.

2. The Lessee agrees to enter upon mining operations upon said two (2) claims, and to dispose of ore from the said mining properties, either as originally found thereon or as concentrates or bullion, and to see that said ore is delivered to a smelter or smelters or a refinery or to purchasers of the products, and to pay to said Lessors seven and one-half percent (7½) on all net smelter or refinery returns or returns from the purchasers of the products, less the cost of transportation from the leased property to the point where the products are sold, and to authorize the smelter or refinery or purchasers of the products to pay the said seven and one-half percent (7½) royalty directly to the Lessors or their agent designated by them in writing, notification of which is to be sent to the smelter or smelters or refinery or purchaser.

3. Lessee agrees that said mining operations shall be begun on or before January 31, 1949, and be continued in a good and minerlike manner at such times and so long as the ore and the price of metals sold make such operation profitable to the Lessee; provided, HOWEVER:

(a) That in case mining operations shall not have been begun on January 31, 1949, the Lessee may at his option nevertheless keep this Lease in full force and effect by paying to the Lessors a minimum rental or royalty of ONE HUNDRED FIFTY ($150.00) DOLLARS a month. Such minimum royalty to be paid for the month of February 1949, on the 15th day of March 1949, and on the 15th of each month thereafter until mining operations are begun.

(b) That in case mining operations shall have been begun and thereafter discontinued during a period when the price of refined copper in the Connecticut Valley (so called) shall be ten cents (10¢) or more per pound, the Lessee may at his option keep this Lease in full force and effect by paying to the Lessor a minimum rental or royalty of ONE HUNDRED FIFTY ($150.00) DOLLARS per month, on the 15th day of the following month, and to continue until the price of copper shall fall below ten cents (10¢) per pound as hereinafter provided, or until mining operations are resumed.

(c) No minimum rental or royalty shall be payable at any time proper to January 31, 1949. No minimum rental or royalty shall be payable for any month in which the price of refined copper shall be less than ten cents (10¢) per pound for fifteen or more days of such month.

(d) In case the policy of the United States Government, or governmentla regulations, should make it impossible or unprofitable for the Lessee to continue mining operations, or in case the Government should take charge or control of the management of such mines or mining properties; or in case of strikes, floods, bad weather, bad roads, fire or other unavoidable condition beyond the control of the Lessee, then, and in any such event, the Lessee shall not be obliged to begin or to continue mining operations, the Lessee shall not be obliged to begin or to continue mining operations, so long [illegible] obtain, are [illegible] to do so is extended accordingly, and [illegible] such period.

[illegible] option to [illegible] by the [illegible] the Lessors

in and to the said two mining claims and properties herein [illegible] in the cent[illegible] purchase price of Seventy-five Thousand Dollars ($75,000.00) [illegible] fee [illegible] ion may be exercised at any time during the term of this Lease by the Le[illegible] the [illegible] giving to the Lessors a notice in writing to that effect. [illegible] claim

5. The Lessors agree upon receipt of such notice to execute a good and sufficient Deed, transferring, assigning and quitclaiming their entire right title and interest in and to the said two (2) claims herein designated, to the Lessee, and to deposit such Deed with the Bank of Saint George, at Saint George, Utah, with an authorization to said bank to deliver the said deed to the Lessee as soon as the Seventy-five Thousand Dollars ($75,000.00) payment has been completed. All royalty or rental payments made prior to the depositing of said Deed are to apply upon the purchase price of Seventy-five Thousand Dollars ($75,000.00), and the Lessors shall certify to the said bank the balance remaining to be paid before said Deed shall be delivered, and shall furnish a like certificate to the Lessee. After the said Deed is deposited with said Bank of Saint George, at St. George, Utah, all further royalty or minimum rental or royalty payments shall be deposited with the said Bank of Saint George, at St. George, Utha, all further royalty or minimum rental or royalty payments shall be deposited with the said Bank of Saint George, at Saint George, Utah, to the account of the Lessors, or of their agent designated in writing by the Lessors, and all such subsequent depósits shall reduce the purchase price by the amount thereof. The entire purchase price of Seventy-five Thousand Dollars ($75,000.00 shall, however, be paid in full on or before the 31st day of January 1968.

6. The Lessors agree that the Lessee may make additional payments on the Seventy-five Thousand Dollar ($75,000.00) purchase price in addition to the royalty payments, at any time, if he so desires, all of such additional payments being applied to reduce the amount of the said paurchase price.

7. The Lessee herein agrees to do the annual assessment work for the year of 1949, and to complete the same on or before April 1, 1949, and to do [illegible] assessment work in each year thereafter, and to complete the same on or before December 1st in each year until patent shall be issued, or until this Lease shall be surrendered or terminated.

The Lessors shall give Lessee in each year thirty (30) days' notice in writing, addressed to the Lessee at Overton, Nevada, requiring such assessment work to be done, If such assessment work shall not be completed and recorded on or before the date hereinafter specified, and such written notice shall have been given to the Lessee, then and in any such case this Lease and all rights of the Lessee hereunder shall immediately and automatically cease and terminate, and the Lessors shall have no other recourse whatsoever against the Lessee for his failure to do such assessment work or for any loss sustained by Lessors as a result thereof.

8. In the event at any time after January 31, 1949 the Lessee shall remain in default for three months in the payment of any installment of royalties or minimum rentals or any part thereof, or shall fail and cease, except when prevented by causes beyond his control, as herein provided, to prosecute mining operations for a period of six months consecutively without having paid the minimum rental or royalties, the Lessors may, at their option, give sixty (60) days' notice in writing to the Lessee, requiring performance of those covenants wherein the default has been made, and if such default shall not have been cured on or before the expiration of said sixty (60) days period, then this Lease shall cease and terminate at the end of such sixty day period, and the Lessors, their respective heirs, executors or assigns shall be entitled thereupon to re-enter and take possession of the premises leased hereunder, and all further rights and obligations on the part of the Lessee hereunder shall thereupon terminate. All payments theretofore made by the Lessee to or for the account of the Lessors shall be retained by them as liquidated damages and not as a penalty.

Notwithstanding [illegible] by [illegible] to [illegible] herein contained, the [illegible]ee may at [illegible] cancel this [illegible] by giving to the Lessors thirty day[illegible] [illegible] and upon the expiration of said thirty [illegible] and any contract arising from the exer[illegible] shall cease and terminate with out further [illegible] to the Lessors, and the Lessors their [illegible] shall be entitled thereunon to [illegible] leased hereunder. All payments [illegible] account of the Lessors shall be [illegible] ages, and not as a penalty.

[illegible] accurate books of account of the [illegible] ry returns and/or returns from the [illegible] of said [illegible] Mining property, which books [illegible] ers, or their duly authorized representative, at [illegible] the town of Overton, Nevada, at all reasonable times, and the Lessee shall deliver to the Lessors, by mail, addressed [illegible] or to any other point designated in writing [illegible] ts or reports on the 15th days of [illegible] smelter or [illegible] for the [illegible] and shall authorize and direct the [illegible] proceeds to pay the seven and one-half [illegible] are made to the [illegible] ssors by mail at St. George, Utah or [illegible] ing.

[illegible] the benefit of and shall be binding [illegible] ators and assigns of the respective parties [illegible]

SIGNED BY ALL THE PARTIES AND sealed by a Notary Public.

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

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Not to be filled in by applicant

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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:

J. & M. Leasing Co.
Mc Murrin Wulfenstein & James E. Wulfenstein Partnership
446 West 400 North 172 East 300 South St. George, Utah

(*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 Copper Mountain Mining District, Mohave County, State of Arizona known as the Cox & Ross Mine Claims recorded in Book 3 U of Mines at Page 285 Cox & Ross Claim No. 1 recorde in Book 3U of Mines at Page 286

(*b*) State any mine name by which the property is known. Cox & Ross Mine Formerly Copper Mountain

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

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

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

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

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

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

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

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

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

16—66551-1

6/11/53

5. *The project.*—State the mineral or minerals for which you wish to explore Uranium

(*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. Refer to Map

(*c*) The work will start within 30 days and be completed within 24 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. 15 Years Foreman & Other mine work.

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

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

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

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

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

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

(*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?

☐ Money ☒ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated May 29, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 11 1953

J & M Leasing Co.
(Applicant)
By M. Weissenstein
James Weissenstein

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

NOTATIONS ON CONTRACT FORM MF-103

No. 4D 92 miles from St. George Dirt roads, 92 miles to residence & Supply center

No. 6 Bunk & Boarding House 16 ft Wide by 42 ft long at $6.00 per square ft. total $4,508.00 Head Frame Hoist House & Bins $6,000.00

Shaft Rehabilitation 210 ft $10,000.00
Shaft Sinking 200 Ft @$140.00 per Ft. total $28,000.00
Drifting 500 ft @$40.00 per ft.
Cross Cut 400 ft @40.00 per ft. 900 ft @40.00 36,000.00

Bunks & Boarding House	$4,508.00
Headframe Hoist House & Bins	6,000.00
Shaft rehabilitation	10,000.00
Shaft Sinking	28,000.00
Drifting & Crosscutting	36,000.00
	$84,508.00

This Figure includes the overall cost.

No. 7 Trucks 1941 Ford 1½ Tons
1948 International 2½ tons
1949 Studebaker ½ Ton
Gardner & Denver Compressor 132Cu. In.
Hoist, 300 Ft. Hose 4 Jackhammers 1 Stoper 1 Cross Bar 1 Calumar Bar
1 HD 7W Allis Chalmers Cat. Steel & Bits

Refering to Lease the 3/4 interest will guarentee the full royalty to the Government. We have assurance that the other 1/4 interest will not stand in the way of a Government Loan.

Refering to No. 4 b Get Information from American Smelting & Refining Co. Salt, Lake City, Utah

April 28, 1953

The Following radiometric assays were obtained on samples from the Copper Mountain Mine, Mohave County, Arizona, submitted to the New York Laboratory by James Henderson and Earl King April 6, 1953. New York's reference number is 4685.

Our Samples Number	Their Reference Number	Percent U_3O_8 Equivalent
1	4685 A	0.8
2	4685 B	5.
3	4685 C	3.
4	4685 D	0.7
5	4685 E	0.06

The following radiometric assay returns were received verbally from the U. S. Geological Survey Laboratory in Denver, Colorado:

Field No.	Type*	Geographic location and Description of Material	eU
F-3953	C	Radioactive Copper Mineral -from ore pile on surface	14.1%
F-3954	B*-	" " " Hanging wall bottom level 250' below Shaft collar	.075%
F-3955	B	" " " Hanging wall bottom level, at water level.	0.54%
F-3956	C	" " " Below water level at bottom of drift.	0.13%

These samples were from the Copper Mountain Mine, Mohave County, Arizona

Note: Material sent to Vitro by J. Henderson from Copper Mountain.

Assays:

2.65% U_3O_8 - Chemical

20.67% Cu.

4 Pulps from Garfield:	Radiometric	Chemical
Lot No. 4 - 1/23/53	0.032% U_3O_8	0.030% U_3O_8
Lot No. 5 - 2/3/53	0.028	0.027
Lot No. 6 - 2-24-53	0.107	0.106
Lot No. 7 - 3/13/53	0.063	0.056

SUB-LEASE

THIS AGREEMENT made and entered into this 29th day of June, 1952, by and between LORIN WHITMORE, L. O. WHITMORE, and GALE WHITMORE, hereinafter known as the Lessors and JAMES WULFFENSTEIN and M. WULFFENSTEIN, hereinafter known as the Lessees.

WHEREAS the Lessors herein have and hold a certain lease on a 3/4 interest in and to the Cox and Ross Mine Claim and the Cox and Ross Mine Claim No. 1 as more fully described in the lease annexed and attached hereto.

Now, therefore, in consideration of FOUR HUNDRED FIFTY ($450.00) Dollars to be paid within Five (5) days from date, upon which payment this lease and agreement will become effective, the Lessors herein grant this sub-lease and option to purchase upon the following terms and conditions:

1. This agreement is for a period of Fifteen (15) years from date, with right to renewals under this lease and the lease attached hereto.

2. The Lessees herein agree to fulfill all of the obligations under the attached lease and to comply with the provisions of this agreement.

3. The Lessees herein agree to take possession and commence operation of the said claims within Twenty (20) days from date.

4. The Lessees herein agree and covenant to authorize payment directly from the smelter to V. Loraine Cox, at St. George, Utah a royalty in the sum of 7½% upon all ores and minerals shipped and sold from the said claims. The Lessees herein agree and covenant to authorize payment directly from the smelter to Sidney R. Whitmore, as agent of the Lessors herein, a royalty in the sum of 5½% on all ores and minerals shipped and sold from said claims. Upon the securing to the Lessees herein the outstanding Quarter (¼) interest to said claims the royalty payable to the Lessors herein will immediately be reduced to 2½% on all ore and minerals shipped and sold.

5. The Lessors and Lessees herein agree and covenant that any sale or transfer of the said claims will be done only by the consent and mutual agreement of the Lessors and Lessees herein. It is further mutually agreed by and between the Lessors and Lessees herein that upon such sale or transfer any downpayment obtained will be divided in equal portions between the Lessors and Lessees. That in the event such sale or transfer is accomplished the Lessors and Lessees herein will equally divided the purchase price and royalties to be paid above the purchase price and royalties to be paid to the owners of said claims.

6. The Lessees herein retain the right to secure financial assistance for development and operation of said claims and to transfer any portion of their interest in and to said claims for such purpose but the Lessees herein agree not to transfer the entire interest of the Lessors herein or the interest in the lease hereto annexed without complying with the provisions of paragraph Five (5) hereof. No share in financial assistance is due or expected by Lessors.

7. The Lessees herein agree to comply with State and Federal law pertaining to Workmen's compensation and insurance; to post all notices required upon the property to secure the non-liability of the owners of said claims and to secure the non-liability of the Lessors herein; to keep said premises free from liens, judgments or claim of any nature.

8. If the Lessees shall at any time be in default in the performance of any of the terms and conditions hereof upon them made incumbent, such default shall not operate to or give the Lessors the right to cancel, forfeit or terminate this agreement, unless the Lessors shall notify the Lessees in writing specifying the exact nature of such default and unless the Lessors shall, within Forty Five (45) days from the date of the receipt of such notification, fail to proceed diligently to cure such default.

LAW OFFICES
WHITMORE & HIMES
LAS VEGAS, NEVADA

9. In the event that any default is served upon the Lessors herein by the Owners of said claims it is agreed that the Lessees herein will cure such default and reimburse the Lessors or pay to the Owners any settlement required in the event the Lessees herein desire to retain possession and continue operations.

10. Any Notices, instruments or papers of any nature may be served upon Sidney R. Whitmore at Suite 3, Cornet Bldg, Las Vegas, Nevada, for and in behalf of the Lessors and such will be notice to all the Lessors herein. Any agreements necessary to be made with the Lessors may be made by and through this said agent on behalf of the Lessors, until further notice is given.

11. Any Notices, instruments or papers of any nature are to be served upon James Wulffenstein at 172 E Street, St. GEorge, Utah and upon M. Wulffenstein at 537 Elm Street, Boulder City, Nevada for the Lessees herein and until further notice is given.

12. This agreement inures to the benefit of an shall be binding upon the heirs, representatives and assigns of the parties hereto.

James Wulffenstein
JAMES WULFFENSTEIN, Lessee

Sidney R. Whitmore
SIDNEY R. WHITMORE, Attorney in Fact, and by Powers of Attorney, for and in behalf of the Lessors

M. Wulffenstein
M. WULFFENSTEIN, Lessee

STATE OF NEVADA)
) SS
COUNTY OF CLARK)

On this 29th day of June, the parties hereto waive said fact of being on Sunday, 1952, personally appeared before me, the undersigned, a Notary Public in and for said County and State, SIDNEY R. WHITMORE, JAMES WULFFENSTEIN, and M. WULFFENSTEIN, known to me or proved to me to be the persons described in and who executed the foregoing instrument, who acknowledged to me that they executed the same freely and voluntarily and for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto signed my name and affixed the official seal of my office the day and year first above written.

(S E A L)

Hallie Mosteller
Notary Public in and for said
County and State.
HALLIE MOSTELLER

My commission expires Jan. 11, 1955

C O P Y

MINING PROPERTY LEASE

THIS AGREEMENT MADE and entered into this 2nd th day of February 1949 by and between:

MARY ETTA COX, V. LORAINE COX, ANNA C. COX, his wife, and KENNETH COX, and ANNA F. COX, his wife, all of Saint George, Utah.

Hereinafter called the "Lessors",
Parties of the First Part.

and

LORIN WHITMORE, L. O. WHITMORE, and GALE WHITMORE, of the town of OVERTON, NEVADA.

Hereinafter Called the "Lessee",
Parties of the Second Part.

WHEREAS, the Lessors are the owners of a three-fourth (3/4) share, and DONALD M. CARTER, of Chicago, Illinois, is the owner of a one-fourth (1/4) share, of the entire right, title and interest in and to two mining claims situated in the Copper Mountain Mining District in Mohave County, State of Arizona known as the Cox and Ross Mine Claims, recorded in the aforesaid county in the Book 3U of Mines at page 285, and as the Cox and Ross Mine #1 Claim, recorded in the aforesaid county in the Book 3U of Mines at page 286; and

NOW THEREOFRE, in consideration of the premises and the covenants and agreements hereinafter set forth, and other good and valuable consideration, receipt of which is hereby acknowledged, the parties hereto DO HEREBY MUTUALLY AGREE AS FOLLOWS:

1. The Lessors have granted, demised, leased and let, and by these presents do hereby grant, demise, lease and let unto the Lessee the exclu-ive right to prospect, explore, by core drills or otherwise, to mine, operate, produce, store and remove there-from and dispose of metals, ores, copper, gold, silver, and metal bearing quartz, rock and earth therein, together with all minerals therein contained on the surface and beneath the surface, including all underlying minerals, and including all dups, shafts, underground workings now on the premises, and to mill, concentrate, leach smelt, refine or otherwise treat the foregoing minerals, and including all springs and water right, including those located and recorded by V. Loraine Cox, et al, to wit: As filed and record-ed at request of V. Loraine Cox, June 24, 1940 at 9 o'clock in book 4 of Mill Sites & W Rts Page 84 in Records of Mohave County, Arizona; and to do all things necessary or desirable in carrying out any and all mining operation on, in, under or in connection with the two (2) mining claims situated in Mohave County, State of Arizona, in a more particularly described as follows:

A certain lode mining claim known as the Cox and Ross Mine #1 Claim, situated and docated in the Copper Mountain Mining District in Mojave County in the State of Arizona about six (6) miles in a Northerly direction from where the Andrus Spring Wash empties into the Colorado River. This claim is a part of what has been known as the Copper Mountain Mine. The surfact boundaries of the claim are marked upon the ground as follows: Beginning at this Discovery and North Center and Monument. The North end of this claim joins the South end of the Cox and Ross Mine Claim, being in the center of the North-easterly end line of said claim, thence Southeresterly 300 feet to a Monument, being the Northeasterly corner of said claim; thence Southeasterly 1500 feet to a Monument, being at the Southeasterly corner of said claim; thence 300 feet to a Monument at the center of the Southwesterly end of claim; thence 300 feet to a Monument, being at the Southwesterly corner of said claim; thence Northeasterly 1500 feet to a Monument at the Northwesterly corner of said claim; thence Southeasterly 300 feet to the place of beginning, and recorded in the County of Mohave in Book 3U at Page 286; and

A certain lode mining claim known as the Cox and Ross Mine, situated and located in the Copper Mountain Mining District in Mohave County in the State of Arizona about six (6) miles in a Northerly direction from where the Andrus Spring Wash empties into the Colorado River and this property is what has been known as the Copper Mountain Mine. The surfact boundaries of this claim are marked upon the gound as follows: Beginning at this Monument which is the Discovery and Southwesterly center end monument. The South end of this claim

joins the North end of the Cox and Ross Mine #1 Claim, being in the center of the Southerwesterly end line of said claim, thence Southeasterly 300 feet to a monument, being the Southeasterly corner of said claim; thence Northeasterly 1500 feet to a Monument, being at the Northeasterly corner of said claim; thence Northeasterly 300 feet to a Monument at the center of the Northeasterly end of said claim; thence Northwesterly 300 feet to a Monument, being at the Northwesterly corner of said claim; thence Southerwesterly 1500 feet to a Monument at the Southwesterly corner of said claim; ehence southeasterly 300 feet to the place of the beginning. and recorded in Mohave County in Book 3 U at Page 285;

for a termof twenty (20) years, beginning December 31, 1948, and so long thereafter as copper or other minerals shall be produced therefrom in paying quantities, unless sooner surrendered or terminated as hereinafter provided.

2. The Lessee agrees to enter upon mining operations upon said two (2) claims, and to dispose of ore from the said mining properties, either as originally found thereon or as concentrates or bullion, and to see that said ore is delivered to a smelter or smelters or a refinery or to purchasers of the products, and to pay to said Lessors seven and one-half percent (7½) on all net smelter or refinery returns or returns from the purchasers of the products, less the cost of transportation from the leased property to the point where the products are sold, and to authorize the smelter or refinery or purchasers of the products to pay the said seven and one-half percent (7½) royalty directly to the Lessors or their agent designated by them in writing, notification of which is to be sent to the smelter or smelters or refinery or purchaser.

3. Lessee agrees that said mining operations shall be begun on or before January 31, 1949, and be continued in a good and minerlike manner at such times and so long as the ore and the price of metals sold make such operation profitable to the Lessee; provided, HOWEVER:

(a) That in case mining operations shall not have been begun on January 31, 1949, the Lessee may at his option nevertheless keep this Lease in full force and effect by paying to the Lessors a minimum rental or royalty of ONE HUNDRED FIFTY ($150.00) DOLLARS a month. Such minimum royalty to be paid for the month of February 1949, on the 15th day of March 1949, and on the 15th of each month thereafter until mining operations are begun.

(b) That in case mining operations shall have been begun and thereafter discontinued during a period when the price of refined copper in the Connecticut Valley (so called) shall be ten cents (10¢) or more per pound, the Lessee may at his option keep this Lease in full force and effect by paying to the Lessor a minimum rental or royalty of ONE HUNDRED FIFTY ($150.00) DOLLARS per month, on the 15th day of the following month, and to continue until the price of copper shall fall below ten cents (10¢) per pound as hereinafter provided, or until mining operations are resumed.

(c) No minimum rental or royalty shall be payable at any time proper to January 31, 1949. No minimum rental or royalty shall be payable for any month in which the price of refined copper shall be less than ten cents (10¢) per pound for fifteen or more days of such month.

(d) In case the policy of the United States Government, or governmentla regulations, should make it impossible or unprofitable for the Lessee to continue mining operations, or in case the Government should take charge or control of the management of such mines or mining properties; or in case of strikes, floods, bad weather, bad roads, fire or other unavoidable condition beyond the control of the Lessee, then, and in any such event, the Lessee shall not be obliged to begin or to continue mining operations, the Lessee shall not be obliged to begin or to continue mining operations, so long as such conditions obtain, and his time to do so is extended accordingly, and no minimum royalties shall be payable during any such period.

4. The Lessors hereby grant the Lessee the right and option to purchase from the said Lessors by the royalties paid to the Lessors by the Lessee under this Agreement, the entire right, title and interest of the Lessors

[illegible] to the said two mining claims and properties herein s[illegible] in the cent[illegible] a purchase price [illegible] Seventy-five Thousand Dollars ($75,000.00). [illegible]y 300 fee[illegible]ion may be exercised at any time during the term of this Lease by the Le[illegible]rtheast [illegible] giving to the Lessors a notice in writing to that effect.

5. The Lessors agree upon receipt of such notice to execute a good and sufficient Deed, transferring, assigning and quitclaiming their entire right, title and interest in and to the said two (2) claims herein designated, to the Lessee, and to deposit such Deed with the Bank of Saint George, at Saint George, Utah, with an authorization to said bank to deliver the said deed to the Lessee as soon as the Seventy-five Thousand Dollars ($75,000.00) payment has been completed. All royalty or rental payments made prior to the depositing of said Deed are to apply upon the purchase price of Seventy-five Thousand Dollars ($75,000.00), and the Lessors shall certify to the said bank the balance remaining to be paid before said Deed shall be delivered, and shall furnish a like certificate to the Lessee. After the said Deed is deposited with said Bank of Saint George, at St. George, Utah, all further royalty or minimum rental or royalty payments shall be deposited with the said Bank of Saint George, at St. George, Utha, all further royalty or minimum rental or royalty payments shall be deposited with the said Bank of Saint George, at Saint George, Utah, to the account of the Lessors, or of their agent designated in writing by the Lessors, and all such subsequent deposits shall reduce the purchase price by the amount thereof. The entire purchase price of Seventy-five Thousand Dollars ($75,000.00) shall, however, be paid in full on or before the 31st day of January 1968.

6. The Lessors agree that the Lessee may make additional payments on the Seventy-five Thousand Dollar ($75,000.00) purchase price in addition to the royalty payments, at any time, if he so desires, all of such additional payments being applied to reduce the amount of the said paurchase price.

7. The Lessee herein agrees to do the annual assessment work for the year of 1949, and to complete the same on or before April 1, 1949, and to do such annual assessment work in each year thereafter, and to complete the same on or before December 1st in each year until patent shall be issued, or until this Lease shall be surrendered or terminated.

The Lessors shall give Lessee in each year thirty (30) days' notice in writing, addressed to the Lessee at Overton, Nevada, requiring such assessment work to be done, If such assessment work shall not be completed and recorded on or before the date hereinafter specified, and such written notice shall have been given to the Lessee, then and in any such case this Lease and all rights of the Lessee hereunder shall immediately and automatically cease and terminate, and the Lessors shall have no other recourse whatsoever against the Lessee for his failure to do such assessment work or for any loss sustained by Lessors as a result thereof.

8. In the event at any time after January 31, 1949 the Lessee shall remain in default for three months in the payment of any installment of royalties or minimum rentals or any part thereof, or shall fail and cease, except when prevented by causes beyond his control, as herein provided, to prosecute mining operations for a period of six months consecutively without having paid the minimum rental or royalties, the Lessors may, at their option, give sixty (60) days' notice in writing to the Lessee, requiring performance of those covenants wherein the default has been made, and if such default shall not have been cured on or before the expiration of said sixty (60) days period, then this Lease shall cease and terminate at the end of such sixty day period, and the Lessors, their respective heirs, executors or assigns shall be entitled thereupon to re-enter and take possession of the premises leased hereunder, and all further rights and obligations on the part of the Lessee hereunder shall thereupon terminate. All payments theretofore made by the Lessee to or for the account of the Lessors shall be retained by them as liquidated damages and not as a penalty.

Notwithstanding the exercise by him of the option to purchase herein contained, the Lessee may at any time surrender and cancel this lease by giving to the Lessors thirty days' notice of his intention to do so, and upon the expiration of said thirty (30) days period this lease and any contract arising from the exercise of the option herein contained shall cease and terminate without further liability on the part of the Lessee to the Lessors, and the Lessors, their respective heirs, executors or assigns shall be entitled thereupon to re-enter and take possession of the premises leased hereunder. All payments theretofore made by the Lessee to or for the account of the Lessors shall be retained by the Lessors as liquidated damages, and not as a penalty.

9. The Lessee agrees to keep accurate books of account of the business, and of the net smelter or refinery returns and/or returns from the purchasers of products of said Copper Mountain Mining property, which books shall be open to the inspection of the Lessors, or their duly authorized representative, at the office the Lessee in the town of Overton, Nevada, at all reasonable times, and the Lessee shall deliver to the Lessors, by mail, addressed to them at Saint George, Utah, or to any other point designated in writing by the Lessors, quarterly statements or reports on the 15th days of July, October, January and April of each year, setting out the net smelter or refinery returns, or returns from the purchasers of the products, for the three calendar months preceding each report and shall authroize and direct the smelter or refinery or purchasers of the products to pay the seven and one-half (7½) percent royalty at the time payments for such products are made to the Lessee, such payments to be made to the Lessors by mail at St. George, Utah or to any other point which they may designate in writing.

10. This agreement inures to the benefit of and shall be binding upon the heirs, executors, administrators and assigns of the respective parties hereto.

SIGNED BY ALL THE PARTIES AND sealed by a Notary Public.

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 Arizona, County of Mohave, described as follows:1/

Cox Ross Mining Claim, Recorded in the County of Mohave in Book 3U at page 285

Cox Ross Mining Claim #1, Recorded in the County of Mohave in Book 3U at page 286

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/ McMurrin Wulfenstein and James E. Wulfenstein d/b/a J. & M. Leasing Co., a partnership as operators and lessees and Etta Cox, V. Loraine Cox, Anna C. Cox, his wife and Kenneth Cox and Anna F. Cox, his wife as owners in an undivided three-fourths interest in said claims.

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/$ 84,508.00, or ten years have elapsed from the date of the contract. 84,508.00

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 29 day of May, 195 3.

Etta Cox [Seal]

Anna C. Cox V. Loraine Cox [Seal]

Anna F. Cox Kenneth Cox [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.

Bureau of Mines
Bureau Minerals Administration
RECEIVED
FEB 17 1954

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.

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 11 1953

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

Not to be filled in by applicant

Docket No. 3075
Metal or Mineral Manganese
Date Received 6/11/53
Estimated Cost
Participation (Government %)

INSTRUCTIONS

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

J. & M. Leasing Co.
Mc Murrin Wulfenstein & James E. Wulfenstein Partnership
446 West 400 North 172 East 300 South St. George, Utah

(*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 Copper Mountain Mining District, Mohave County, State of Arizona known as the Cox & Ross Mine Claims recorded in Book 3 U of Mines at Page 285 Cox & Ross Claim No. 1 recorde in Book 3U of Mines at Page 286

(*b*) State any mine name by which the property is known. Cox & Ross Mine Formerly Copper Mountain

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

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

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

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

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

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

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

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

(*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 Uranium

(*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. Refer to A. E. C. Map

(*c*) The work will start within 30 days and be completed within 24 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. 15 Years Foreman & Other mine work.

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

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

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

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

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

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

(*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?

☐ Money ☒ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated May 29, 1953

J + M. Leasing Co.
(Applicant)

By M. Wapelsenstein
James Wapelsenstein

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

NOTATIONS ON CONTRACT FORM MF-103

No. 4D 92 miles from St. George Dirt roads, 92 miles to residence & Supply center

No. 6 Bunk & Boarding House 16 ft Wide by 42 ft long at $6.00 per square ft. total $4,508.00 Head Frame Hoist House & Bins $6,000.00

Shaft Rehabilitation 210 ft $10,000.00
Shaft Sinking 200 Ft @$140.00 per Ft. total $28,000.00
Drifting 500 ft @$40.00 per ft.
Cross Cut 400 ft @40.00 per ft. 900 ft @40.00 36,000.00

Bunks & Boarding House	$4,508.00
Headframe Hoist House & Bins	6,000.00
Shaft rehabilitation	10,000.00
Shaft Sinking	28,000.00
Drifting & Crosscutting	36,000.00
	$84,508.00

This Figure includes the overall cost.

No. 7 Trucks 1941 Ford 1½ Tons
1948 International 2½ tons
1949 Studebaker ½ Ton
Gardner & Denver Compressor 132Cu. In.
Hoist, 300 Ft. Hose 4 Jackhammers 1 Stoper 1 Cross Bar 1 Columnar Bar
1 HD 7W Allis Chalmers Cat. Steel & Bits

Refering to Lease the 3/4 interest will guarentee the full royalty to the Government. We have assurance that the other 1/4 interest will not stand in the way of a Govenment Loan.

Refering to No. 4 b Get Information from American Smelting & Refining Co. Salt, Lake City, Utah

April 28, 1953

The Following radiometric assays were obtained on samples from the Copper Mountain Mine, Mohave County, Arizona, submitted to the New York Laboratory by Names Henderson and Earl King April 6, 1953. New York's reference number is 4685.

Our Samples Number	Their Reference Number	Percent U_3O_8 Equivalent
1	4685 A	0.8
2	4685 B	5.
3	4685 C	3.
4	4685 D	0.7
5	4685 E	0.06

The following radiometric assay returns were received verbally from the U. S. Geological Survey Laboratory in Denver, Colorado:

Field No.	Type*	Geographic location and Description of Material	eU
F-3953	C	Radioactive Copper Mineral -from ore pile on surface	14.1%
F-3954	B*-	" " " Hanging wall bottom level 250' below Shaft collar	.075%
F-3955	B	" " " Hanging wall bottom level, at water level.	0.54%
F-3956	C	" " " Below water level at bottom of drift.	0.13%

These samples were from the Copper Mountain Mine, Mohave County, Arizona

Note: Material sent to Vitro by J. Henderson from Copper Mountain.

Assays:

2.65% U_3O_8 - Chemical

20.67% Cu.

4 Pulps from Garfield:	Radiometric	Chemical
Lot No. 4 - 1/23/53	0.032% U_3O_8	0.030% U_3O_8
Lot No. 5 - 2/3/53	0.028	0.027
Lot No. 6 - 2-24-53	0.107	0.106
Lot No. 7 - 3/13/53	0.063	0.056

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 Arizona, County of Mohave, described as follows 1/

Cox Ross Mining Claim, Recorded in the County of Mohave in Book 3U at page 285

Cox Ross Mining Claim #1, Recorded in the County of Mohave in Book 3U at page 286

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/ McKurrin Wulfenstein and James E. Wulfenstein d/b/a J. & M. Leasing Co., a partnership as operators and lessees and Etta Cox, V. Lorraine Cox, Anna C. Cox, his wife and Kenneth Cox and Anna F. Cox, his wife as owners in an undivided three-fourths interest in said claims.

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/$ 84,508.00, 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 29 day of May, 195 3.

Etta Cox [Seal]

Anna C. Cox V. Lorraine Cox [Seal]

Anna F. Cox Kenneth Cox [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.

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

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sert 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.

7 copies

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 Arizona, County of Pima, described as follows:1/

Fox Rose Mining Claim, recorded in the County of Pima in Book 3 at page 235

Fox Rose Mining Claim #1, Recorded in the County of Pima in Book 3 at page 235

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/ Security National and Jesse M. Whitehead d/b/a J. & R. Samples Co., a partnership as operators and lessees and Etta Cox, T. Lorraine Coy, Anna C. Coy, his wife and Kenneth Cox and Anna P. Cox, his wife as owners in an undivided three-fourths interest in said claims.

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/$ 4,000.00, 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 29 day of May, 1953.

Etta Cox [Seal]

Anna C. Cox T. Lorraine Coy [Seal]

Anna P. Coy Kenneth Coy [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:

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(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.

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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 Arizona, County of Yavapai, described as follows:1/

Cox Boss Mining Claim, Recorded in the County of Yavapai in Book 30 at page 205

Cox Boss Mining Claim #1, Recorded in the County of Yavapai in Book 30 at page 206

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/ Laurrin Goldenstein and James E. Goldenstein d/b/a J. & L. Leasing Co., a partnership as operators and lessees and Etta Cox, V. Lorraine Cox, Anna C. Cox, his wife and Kenneth Cox and Anna F. Cox, his wife as owners in an undivided three-fourths interest in said claims.

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/$ 84,500.00, 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 29 day of May, 195 3.

Etta Cox [Seal]

Anna C. Cox V. Lorraine Cox [Seal]

Anna F. Cox Kenneth Cox [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.

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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.

SUB-LEASE

THIS AGREEMENT made and entered into this 29th day of June, 1952, by and between LORIN WHITMORE, L. C. WHITMORE, and GALE WHITMORE, hereinafter known as the Lessors and JAMES WULFFENSTEIN and M. WULFFENSTEIN, hereinafter known as the Lessees.

WHEREAS the Lessors herein have and hold a certain lease on a 3/4 interest in and to the Cox and Ross Mine Claim and the Cox and Ross Mine Claim No. 1 as more fully described in the lease annexed and attached hereto.

Now, therefore, in consideration of FOUR HUNDRED FIFTY ($450.00) Dollars to be paid within Five (5) days from date, upon which payment this lease and agreement will become effective, the Lessors herein grant this sub-lease and option to purchase upon the following terms and conditions:

1. This agreement is for a period of Fifteen (15) years from date, with right to renewals under this lease and the lease attached hereto.

2. The Lessees herein agree to fulfill all of the obligations under the attached lease and to comply with the provisions of this agreement.

3. The Lessees herein agree to take possession and commence operation of the said claims within Twenty (20) days from date.

4. The Lessees herein agree and covenant to authorize payment directly from the smelter to V. Loraine Cox, at St. George, Utah a royalty in the sum of 7½% upon all ores and minerals shipped and sold from the said claims. The Lessees herein agree and covenant to authorize payment directly from the smelter to Sidney R. Whitmore, as agent of the Lessors herein, a royalty in the sum of 5½% on all ores and minerals shipped and sold from said claims. Upon the securing to the Lessees herein the outstanding Quarter (¼) interest to said claims the royalty payable to the Lessors herein will immediately be reduced to 2½% on all ore and minerals shipped and sold.

5. The Lessors and Lessees herein agree and covenant that any sale or transfer of the said claims will be done only by the consent and mutual agreement of the Lessors and Lessees herein. It is further mutually agreed by and between the Lessors and Lessees herein that upon such sale or transfer any downpayment obtained will be divided in equal portions between the Lessors and Lessees. That in the event such sale or transfer is accomplished the Lessors and Lessees herein will equally divided the purchase price and royalties to be paid above the purchase price and royalties to be paid to the owners of said claims.

6. The Lessees herein retain the right to secure financial assistance for development and operation of said claims and to transfer any portion of their interest in and to said claims for such purpose but the Lessees herein agree not to transfer the entire interest of the Lessors herein or the interest in the lease hereto annexed without complying with the provisions of paragraph Five (5) hereof. No share in financial assistance is due or expected by Lessors.

7. The Lessees herein agree to comply with State and Federal law pertaining to Workmen's compensation and insurance; to post all notices required upon the property to secure the non-liability of the owners of said claims and to secure the non-liability of the Lessors herein; to keep said premises free from liens, judgments or claim of any nature.

8. If the Lessees shall at any time be in default in the performance of any of the terms and conditions hereof upon them made incumbent, such default shall not operate to or give the Lessors the right to cancel, forfeit or terminate this agreement, unless the Lessors shall notify the Lessees in writing specifying the exact nature of such default and unless the Lessors shall, within Forty Five (45) days from the date of the receipt of such notification, fail to proceed diligently to cure such default.

9. In the event that any default is served upon the Lessors herein by the Owners of said claims it is agreed that the Lessees herein will cure such default and reimburse the Lessors or pay to the Owners any settlement required in the event the Lessees herein desire to retain possession and continue operations.

10. Any Notices, instruments or papers of any nature may be served upon Sidney R. Whitmore at Suite 3, Cornet Bldg, Las Vegas, Nevada, for and in behalf of the Lessors and such will be notice to all the Lessors herein. Any agreements necessary to be made with the Lessors may be made by and through this said agent on behalf of the Lessors, until further notice is given.

11. Any Notices, instruments or papers of any nature are to be served upon James Wulffenstein at 172 E Street, St. GEorge, Utah and upon M. Wulffenstein at 537 Elm Street, Boulder City, Nevada for the Lessees herein and until further notice is given.

12. This agreement inures to the benefit of and shall be binding upon the heirs, representatives and assigns of the parties hereto.

James Wulffenstein
JAMES WULFFENSTEIN, Lessee

Sidney R. Whitmore
SIDNEY R. WHITMORE, Attorney in Fact, and by Power of Attorney, for and in behalf of the Lessors

M. Wulffenstein
M. WULFFENSTEIN, Lessee

STATE OF NEVADA)
) SS
COUNTY OF CLARK)

On this 29th day of June, the parties hereto waive said fact of being on Sunday, 1952, personally appeared before me, the undersigned, a Notary Public in and for said County and State, SIDNEY R. WHITMORE, JAMES WULFFENSTEIN, and M. WULFFENSTEIN, known to me or proved to me to be the persons described in and who executed the foregoing instrument, who acknowledged to me that they executed the same freely and voluntarily and for the uses and purposes therein mentioned.

IN WITNESS WHEREOF, I have hereunto signed my name and affixed the official seal of my office the day and year first above written.

(S E A L)

Hallie Mosteller
Notary Public in and for said
County and State.
HALLIE MOSTELLER

My commission expires Jan. 11, 1955

C O P Y

MINING PROPERTY LEASE

THIS AGREEMENT MADE and entered into this 2nd th day of February 1949 by and between:

MARY ETTA COX, V. LORAINE COX, ANNA C. COX, his wife, and KENNETH COX, and ANNA F. COX, his wife, all of Saint George, Utah.

Hereinafter called the "Lessors",
Parties of the First Part.

and

LORIN WHITMORE, L. O. WHITMORE, and GALE WHITMORE, of the town of OVERTON, NEVADA.

Hereinafter Called the "Lessee",
Parties of the Second Part.

WHEREAS, the Lessors are the owners of a three-fourth (3/4) share, and DONALD M. CARTER, of Chicago, Illinois, is the owner of a one-fourth (1/4) share, of the entire right, title and interest in and to two mining claims situated in the Copper Mountain Mining District in Mohave County, State of Arizona known as the Cox and Ross Mine Claims, recorded in the aforesaid county in the Book 3U of Mines at page 285, and as the Cox and Ross Mine #1 Claim, recorded in the aforesaid county in the Book 3U of Mines at page 286; and

NOW THEREOFRE, in consideration of the premises and the covenants and agreements hereinafter set forth, and other good and valuable consideration, receipt of which is hereby acknowledged, the parties hereto DO HEREBY MUTUALLY AGREE AS FOLLOWS:

1. The Lessors have granted, demised, leased and let, and by these presents do hereby grant, demise, lease and let unto the Lessee the exclu-ive right to prospect, explore, by core drills or otherwise, to mine, operate, produce, store and remove there-from and dispose of metals, ores, copper, gold, silver, and metal bearing quartz, rock and earth therein, together with all minerals therein contained on the surface and beneath the surface, including all underlying minerals, and including all dups, shafts, underground workings now on the premises, and to mill, concentrate, leach smelt, refine or otherwise treat the foregoing minerals, and including all springs and water right, including those located and recorded by V. Loraine Cox, et al, to wit: As filed and record-ed at request of V. Loraine Cox, June 24, 1940 at 9 o'clock in book 4 of Mill Sites & W Rts Page 84 in Records of Mohave County, Arizona; and to do all things necessary or desirable in carrying out any and all mining operation on, in, under or in connection with the two (2) mining claims situated in Mohave County, State of Arizona, in a more particularly described as follows:

A certain lode mining claim known as the Cox and Ross Mine #1 Claim, situated and docated in the Copper Mountain Mining District in Mojave County in the State of Arizona about six (6) miles in a Northerly direction from where the Andrus Spring Wash empties into the Colorado River. This claim is a part of what has been known as the Copper Mountain Mine. The surfact boundaries of the claim are marked upon the ground as follows: Beginning at this Discovery and North Center and Monument. The North end of this claim joins the South end of the Cox and Ross Mine Claim, being in the center of the North-easterly end line of said claim, thence Southeresterly 300 feet to a Monument, being the Northeasterly corner of said claim; thence Southeasterly 1500 feet to a Monument, being at the Southeasterly corner of said claim; thence 300 feet to a Monument at the center of the Southwesterly end of claim; thence 300 feet to a Monument, being at the Southwesterly corner of said claim; thence Northeasterly 1500 feet to a Monument at the Northwesterly corner of said claim; thence Southeasterly 300 feet to the place of beginning, and recorded in the County of Mohave in Book 3U at Page 286; and

A certain lode mining claim known as the Cox and Ross Mine, situated and located in the Copper Mountain Mining District in Mohave County in the State of Arizona about six (6) miles in a Northerly direction from where the Andrus Spring Wash empties into the Colorado River and this property is what has been known as the Copper Mountain Mine. The surfact boundaries of this claim are marked upon the gound as follows: Beginning at this Monument which is the Discovery and Southwesterly center end monument. The South end of this claim

joins the North end of the Cox and Ross Mine #1 Claim, being in the center of the Southerwesterly end line of said claim, thence Southeasterly 300 feet to a monument, being the Southeasterly corner of said claim; thence Northeasterly 1500 feet to a Monument, being at the Northeasterly corner of said claim; thence Northeasterly 300 feet to a Monument at the center of the Northeasterly end of said claim; thence Northwesterly 300 feet to a Monument, being at the Northwesterly corner of said claim; thence Southerwesterly 1500 feet to a Monument at the Southwesterly corner of said claim; ehence southeasterly 300 feet to the place of the beginning. and recorded in Mohave County in Book 3 U at Page 285;

for a termof twenty (20) years, beginning December 31, 1948, and so long thereafter as copper or other minerals shall be produced therefrom in paying quantities, unless sooner surrendered or terminated as hereinafter provided.

2. The Lessee agrees to enter upon mining operations upon said two (2) claims, and to dispose of ore from the said mining properties, either as originally found thereon or as concentrates or bullion, and to see that said ore is delivered to a smelter or smelters or a refinery or to purchasers of the products, and to pay to said Lessors seven and one-half percent (7½) on all net smelter or refinery returns or returns from the purchasers of the products, less the cost of transportation from the leased property to the point where the products are sold, and to authorize the smelter or refinery or purchasers of the products to pay the said seven and one-half percent (7½) royalty directly to the Lessors or their agent designated by them in writing, notification of which is to be sent to the smelter or smelters or refinery or purchaser.

3. Lessee agrees that said mining operations shall be begun on or before January 31, 1949, and be continued in a good and minerlike manner at such times and so long as the ore and the price of metals sold make such operation profitable to the Lessee; provided, HOWEVER:

(a) That in case mining operations shall not have been begun on January 31, 1949, the Lessee may at his option nevertheless keep this Lease in full force and effect by paying to the Lessors a minimum rental or royalty of ONE HUNDRED FIFTY ($150.00) DOLLARS a month. Such minimum royalty to be paid for the month of February 1949, on the 15th day of March 1949, and on the 15th of each month thereafter until mining operations are begun.

(b) That in case mining operations shall have been begun and thereafter discontinued during a period when the price of refined copper in the Connecticut Valley (so called) shall be ten cents (10¢) or more per pound, the Lessee may at his option keep this Lease in full force and effect by paying to the Lessor a minimum rental or royalty of ONE HUNDRED FIFTY ($150.00) DOLLARS per month, on the 15th day of the following month, and to continue until the price of copper shall fall below ten cents (10¢) per pound as hereinafter provided, or until mining operations are resumed.

(c) No minimum rental or royalty shall be payable at any time proper to January 31, 1949. No minimum rental or royalty shall be payable for any month in which the price of refined copper shall be less than ten cents (10¢) per pound for fifteen or more days of such month.

(d) In case the policy of the United States Government, or governmentla regulations, should make it impossible or unprofitable for the Lessee to continue mining operations, or in case the Government should take charge or control of the management of such mines or mining properties; or in case of strikes, floods, bad weather, bad roads, fire or other unavoidable condition beyond the control of the Lessee, then, and in any such event, the Lessee shall not be obliged to begin or to continue mining operations, the Lessee shall not be obliged to begin or to continue mining operations, so long as such conditions obtain, and his time to do so is extended accordingly, and no minimum royalties shall be payable during any such period.

4. The Lessors hereby grant the Lessee the right and option to purchase from the said Lessors by the royalties paid to the Lessors by the Lessee under this agreement, the entire right, title and interest of the Lessors

in and to the said two mining claims and properties herein in the central purchase price of Seventy-five Thousand Dollars ($75,000.00). By 300 feet in the northeast corner may be exercised at any time during the term of this Lease by the Lessee giving to the Lessors a notice in writing to that effect.

5. The Lessors agree upon receipt of such notice to execute a good and sufficient Deed, transferring, assigning and quitclaiming their entire right, title and interest in and to the said two (2) claims herein designated, to the Lessee, and to deposit such Deed with the Bank of Saint George, at Saint George, Utah, with an authorization to said bank to deliver the said deed to the Lessee as soon as the Seventy-five Thousand Dollars ($75,000.00) payment has been completed. All royalty or rental payments made prior to the depositing of said Deed are to apply upon the purchase price of Seventy-five Thousand Dollars ($75,000.00), and the Lessors shall certify to the said bank the balance remaining to be paid before said Deed shall be delivered, and shall furnish a like certificate to the Lessee. After the said Deed is deposited with said Bank of Saint George, at St. George, Utah, all further royalty or minimum rental or royalty payments shall be deposited with the said Bank of Saint George, at St. George, Utha, all further royalty or minimum rental or royalty payments shall be deposited with the said Bank of Saint George, at Saint George, Utah, to the account of the Lessors, or of their agent designated in writing by the Lessors, and all such subsequent deposits shall reduce the purchase price by the amount thereof. The entire purchase price of Seventy-five Thousand Dollars ($75,000.00) shall, however, be paid in full on or before the 31st day of January 1968.

6. The Lessors agree that the Lessee may make additional payments on the Seventy-five Thousand Dollar ($75,000.00) purchase price in addition to the royalty payments, at any time, if he so desires, all of such additional payments being applied to reduce the amount of the said paurchase price.

7. The Lessee herein agrees to do the annual assessment work for the year of 1949, and to complete the same on or before April 1, 1949, and to do [illegible] assessment work [illegible] year thereafter, and to complete the same on or before December 1st in each year until patent shall be issued, or until this Lease shall be surrendered or terminated.

The Lessors shall give Lessee in each year thirty (30) days' notice in writing, addressed to the Lessee at Overton, Nevada, requiring such assessment work to be done, If such assessment work shall not be completed and recorded on or before the date hereinafter specified, and such written notice shall have been given to the Lessee, then and in any such case this Lease and all rights of the Lessee hereunder shall immediately and automatically cease and terminate, and the Lessors shall have no other recourse whatsoever against the Lessee for his failure to do such assessment work or for any loss sustained by Lessors as a result thereof.

8. In the event at any time after January 31, 1949 the Lessee shall remain in default for three months in the payment of any installment of royalties or minimum rentals or any part thereof, or shall fail and cease, except when prevented by causes beyond his control, as herein provided, to prosecute mining operations for a period of six months consecutively without having paid the minimum rental or royalties, the Lessors may, at their option, give sixty (60) days' notice in writing to the Lessee, requiring performance of those covenants wherein the default has been made, and if such default shall not have been cured on or before the expiration of said sixty (60) days period, then this Lease shall cease and terminate at the end of such sixty day period, and the Lessors, their respective heirs, executors or assigns shall be entitled thereupon to re-enter and take possession of the premises leased hereunder, and all further rights and obligations on the part of the Lessee hereunder shall thereupon terminate. All payments theretofore made by the Lessee to or for the account of the Lessors shall be retained by them as liquidated damages and not as a penalty.

Notwithstanding the exercise by him of the option to purchase herein contained, the Lessee may at any time surrender and cancel this Lease by giving to the Lessors thirty days' notice of his intention to do so, and upon the expiration of said thirty (30) days period this Lease and any contract arising from the exercise of the option herein contained shall cease and terminate without further liability on the part of the Lessee to the Lessors, and the Lessors, their respective heirs, executors or assigns shall be entitled thereupon to re-enter and take possession of the premises leased hereunder. All payments theretofore made by the Lessee to or for the account of the Lessors shall be retained by the Lessors as liquidated damages, and not as a penalty.

9. The Lessee agrees to keep accurate books of account of the business, and of the net smelter or refinery returns and/or returns from the purchasers of products of said Copper Mountain Mining property, which books shall be open to the inspection of the Lessors, or their duly authorized representative, at the office the Lessee in the town of Overton, Nevada, at all reasonable times, and the Lessee shall deliver to the Lessors, by mail, addressed to them at Saint George, Utah, or to any other point designated in writing by the Lessors, quarterly statements or reports on the 15th days of July, October, January and April of each year, setting out the net smelter or refineray returns, or returns from the pruchasers of the products, for the three calendar months preceding each report and shall authroize and direct the smelter or refinery or purchasers of the products to pay the seven and one-half (7½) percent royalty at the time payments for such products are made to the Lessee, such payments to be made to the Lessors by mail at St. George, Utah or to any other point which they may designate in writing.

10. This agreement inures to the benefit of and shall be binding upon the heirs, executors, administrators and assigns of the respective parties hereto.

SIGNED BY ALL THE PARTIES AND sealed by a Notary Public.

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

OFFICIAL BUSINESS

S. 157 HOWARD ST.
Spokane 8, Wash.

PENALTY FOR PRIVATE USE TO AVOID
PAYMENT OF POSTAGE, $300
(PMGC)

SPOKANE MY 7 1 PM 1953

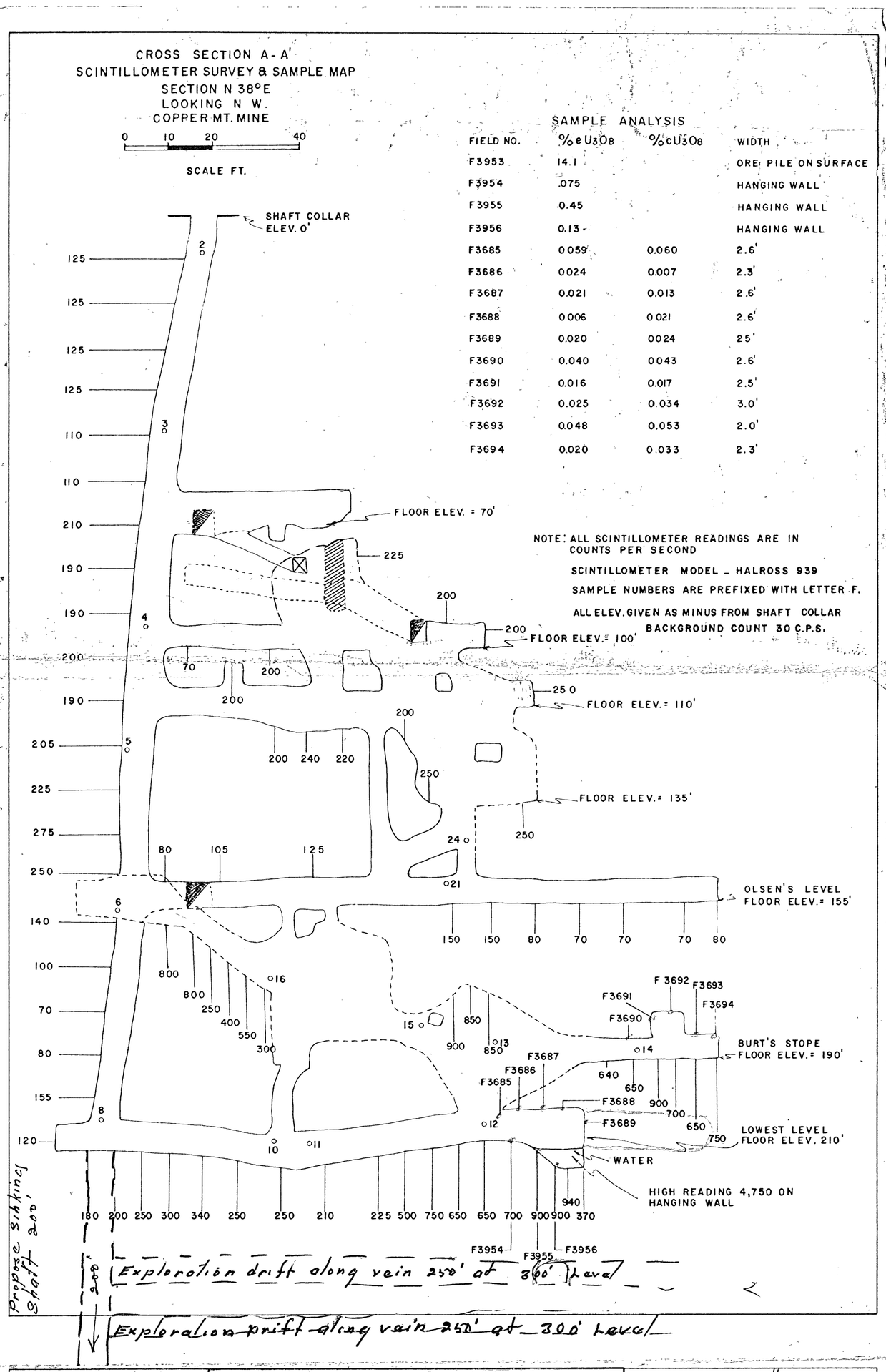
Mr. George C. Selfridge

Chairman, Operating Committee

Defense Minerals Exploration Administration

Department of the Interior

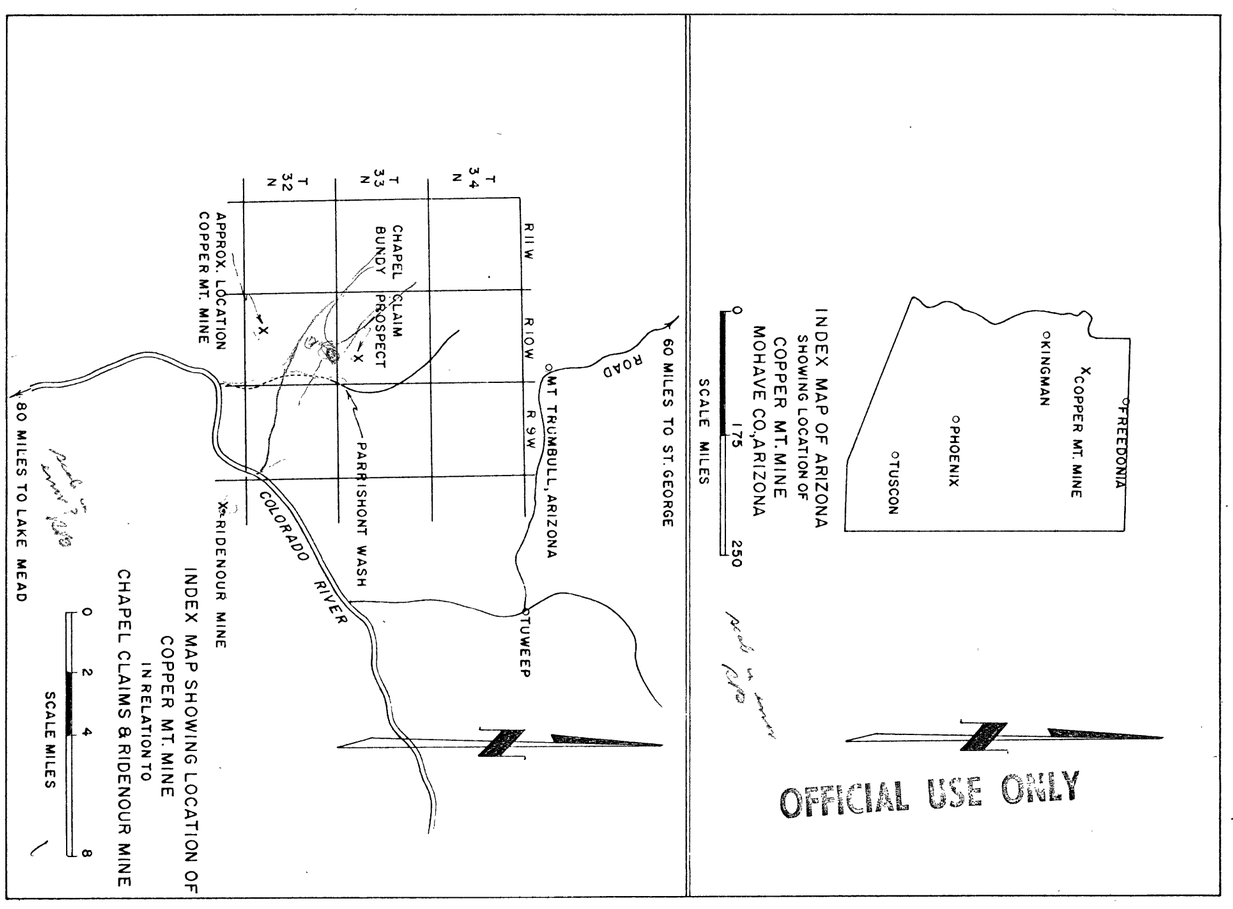
Washington 25, D. C.

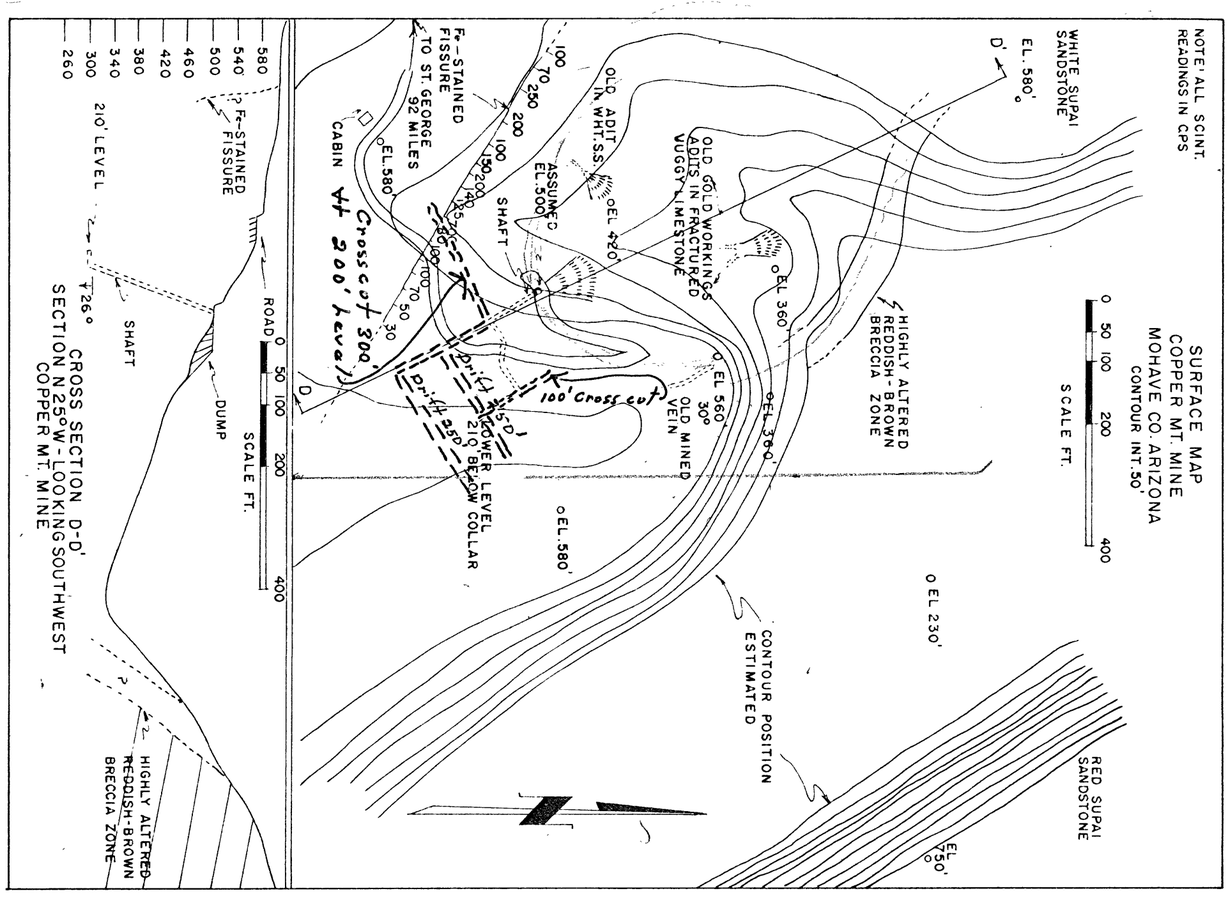


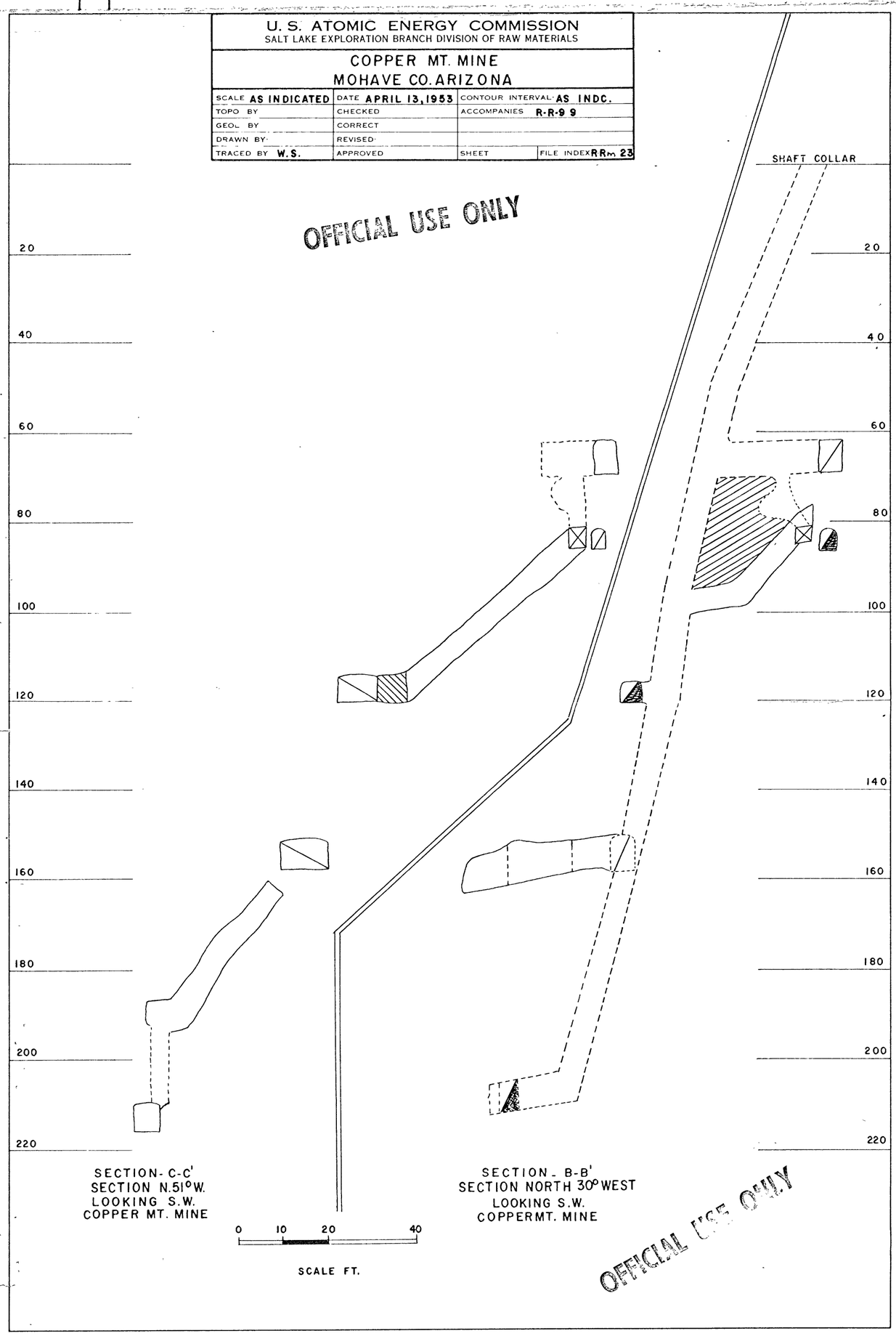
SAMPLE ANALYSIS

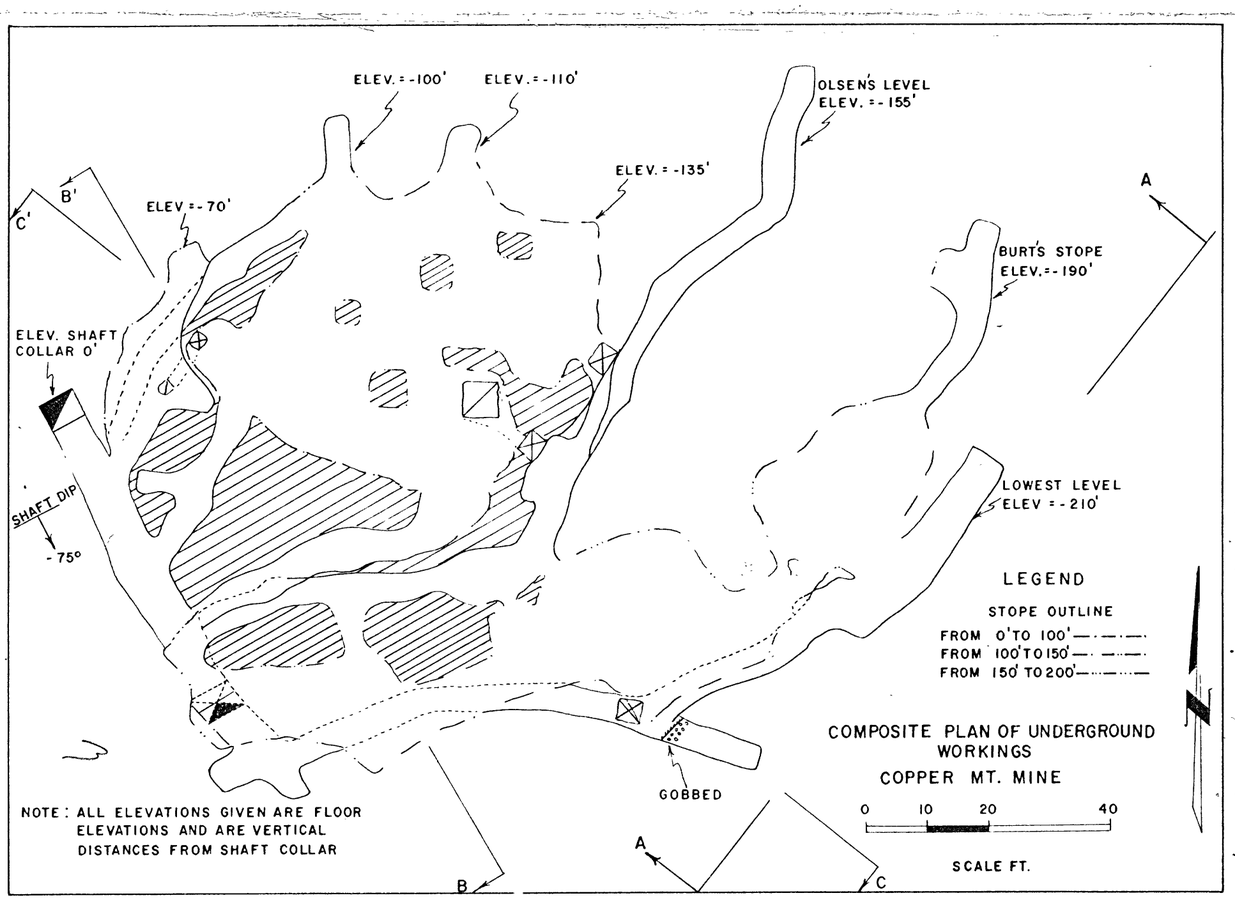
FIELD NO.	%eU3O8	%cU3O8	WIDTH
F3953	14.1		ORE PILE ON SURFACE
F3954	.075		HANGING WALL
F3955	0.45		HANGING WALL
F3956	0.13		HANGING WALL
F3685	0.059	0.060	2.6'
F3686	0.024	0.007	2.3'
F3687	0.021	0.013	2.6'
F3688	0.006	0.021	2.6'
F3689	0.020	0.024	2.5'
F3690	0.040	0.043	2.6'
F3691	0.016	0.017	2.5'
F3692	0.025	0.034	3.0'
F3693	0.048	0.053	2.0'
F3694	0.020	0.033	2.3'

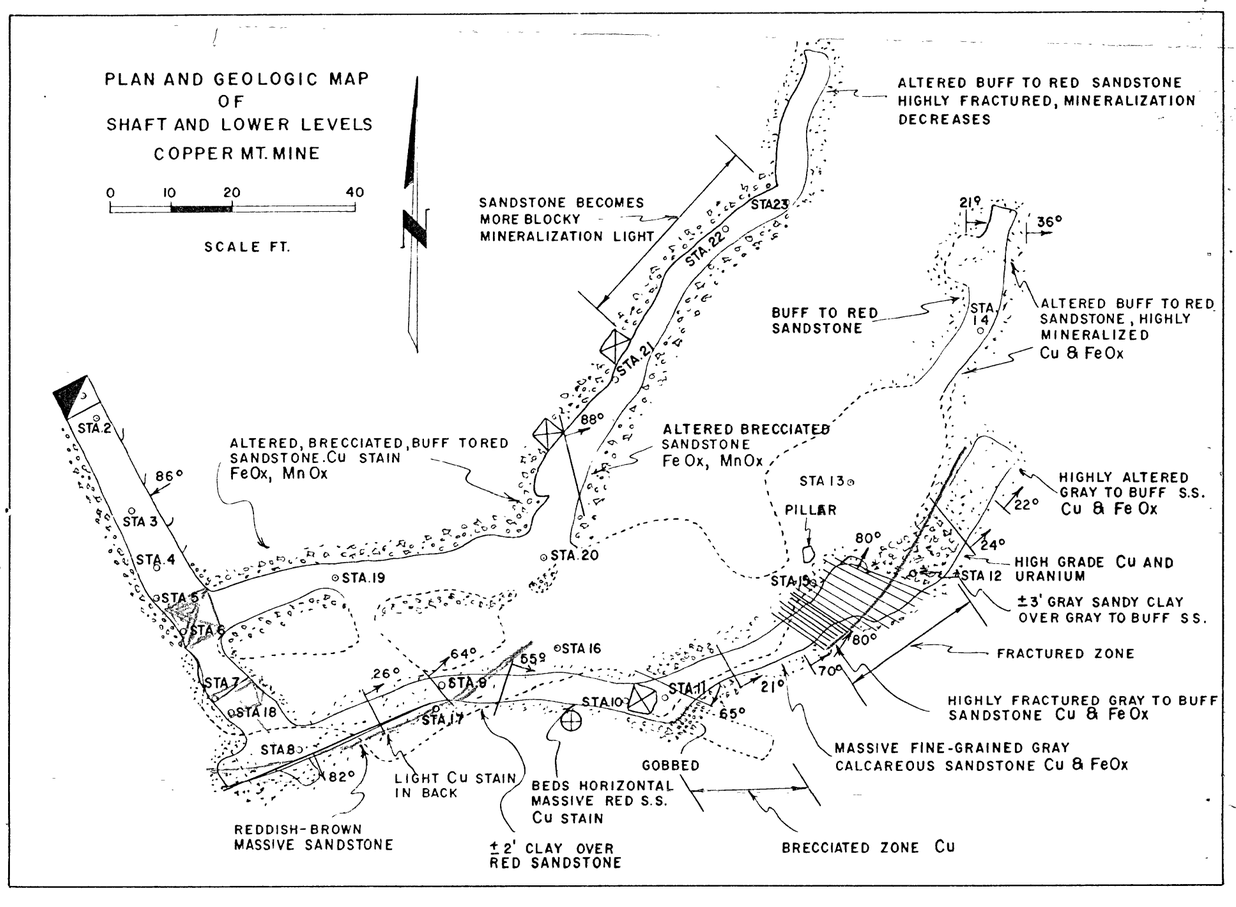
NOTE: ALL SCINTILLOMETER READINGS ARE IN COUNTS PER SECOND
SCINTILLOMETER MODEL - HALROSS 939
SAMPLE NUMBERS ARE PREFIXED WITH LETTER F.
ALL ELEV. GIVEN AS MINUS FROM SHAFT COLLAR
BACKGROUND COUNT 30 C.P.S.

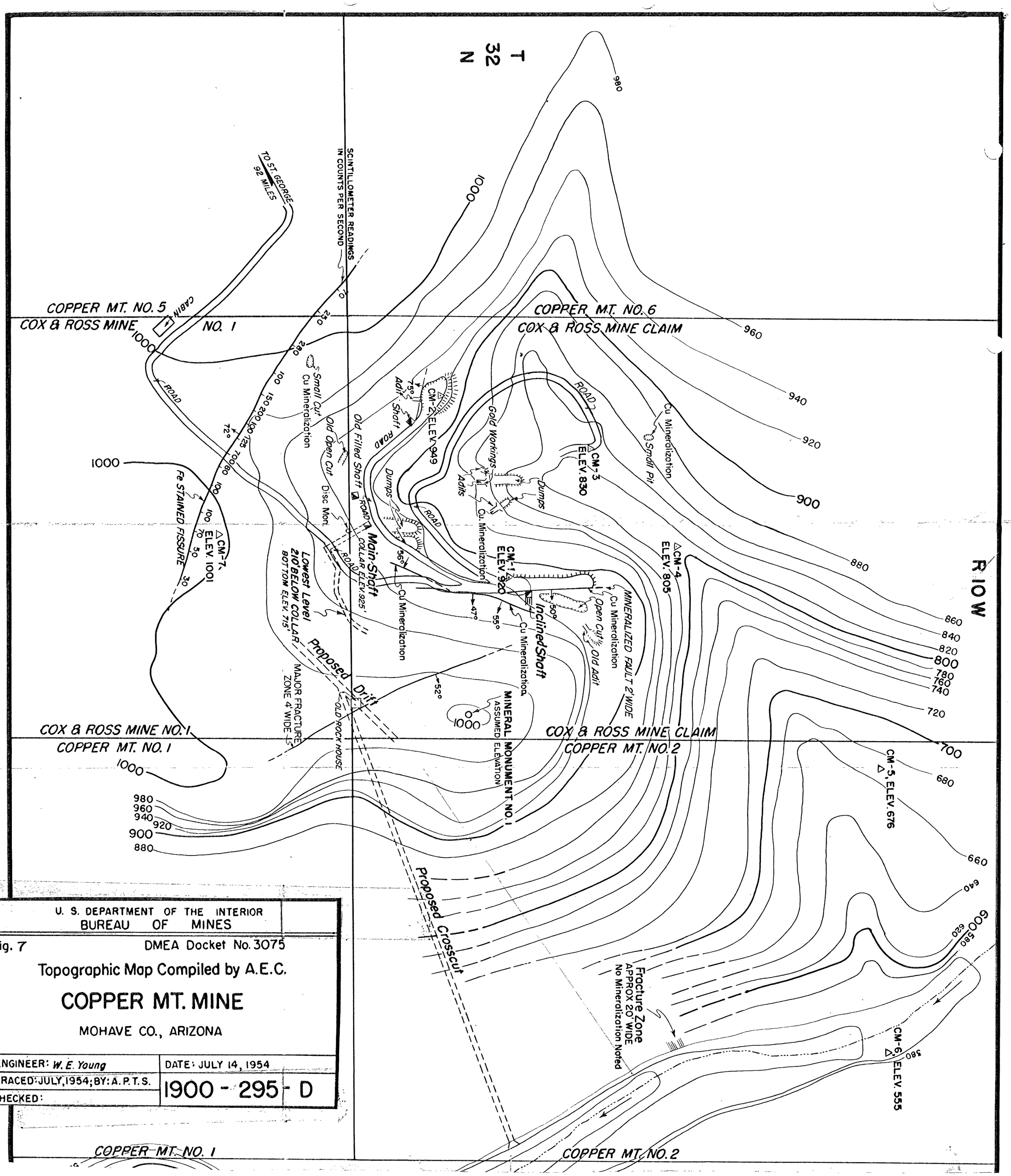












U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Fig. 7 DMEA Docket No. 3075

Topographic Map Compiled by A.E.C.

COPPER MT. MINE

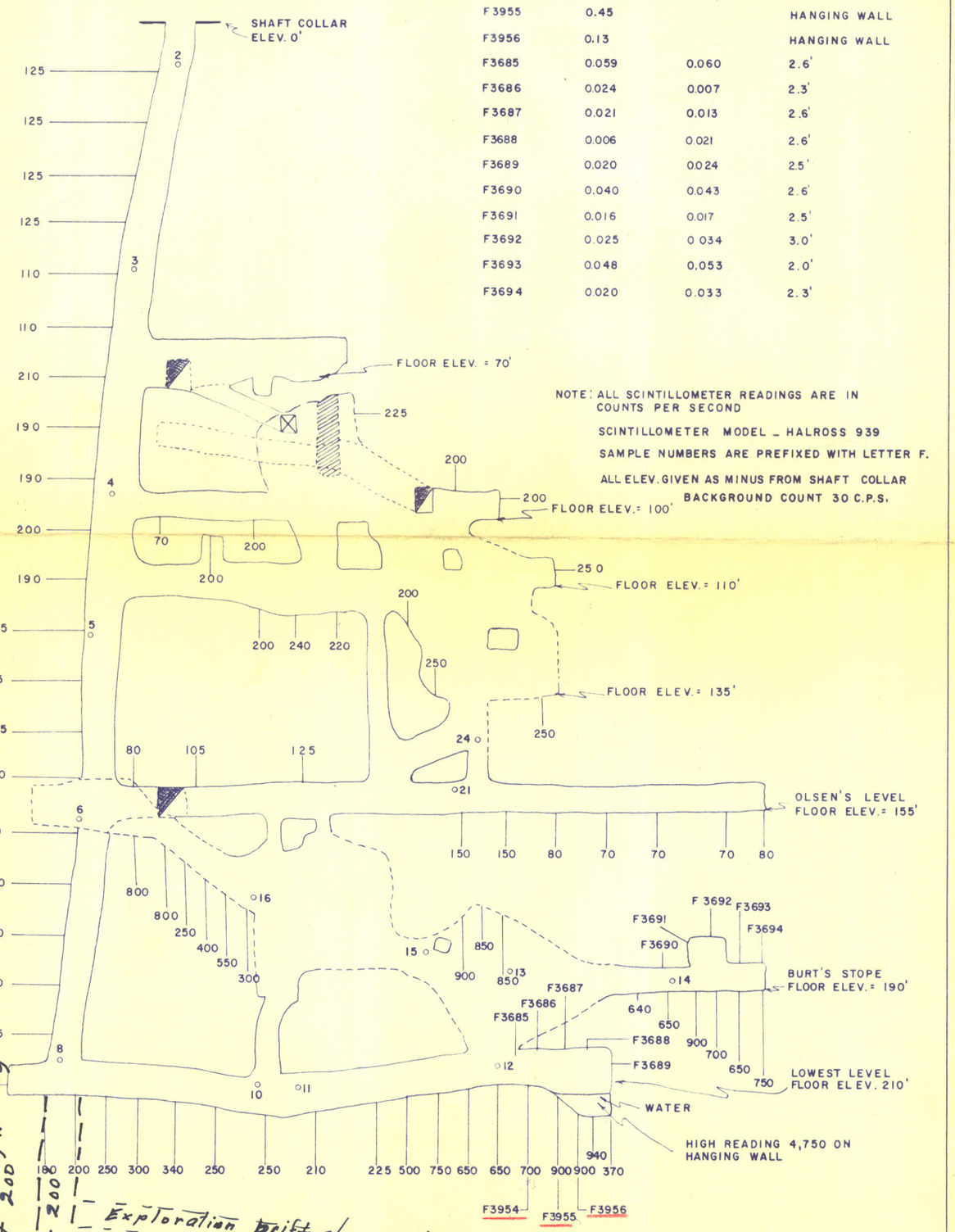
MOHAVE CO., ARIZONA

ENGINEER: W. E. Young	DATE: JULY 14, 1954
TRACED: JULY, 1954; BY: A. P. T. S.	1900 - 295 - D
CHECKED:	

DMEA-3075

CROSS SECTION A-A'
SCINTILLOMETER SURVEY & SAMPLE MAP
SECTION N 38°E
LOOKING N. W.
COPPER MT. MINE

0 10 20 40
SCALE FT.



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F3686	0.024	0.007	2.3'
F3687	0.021	0.013	2.6'
F3688	0.006	0.021	2.6'
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F3690	0.040	0.043	2.6'
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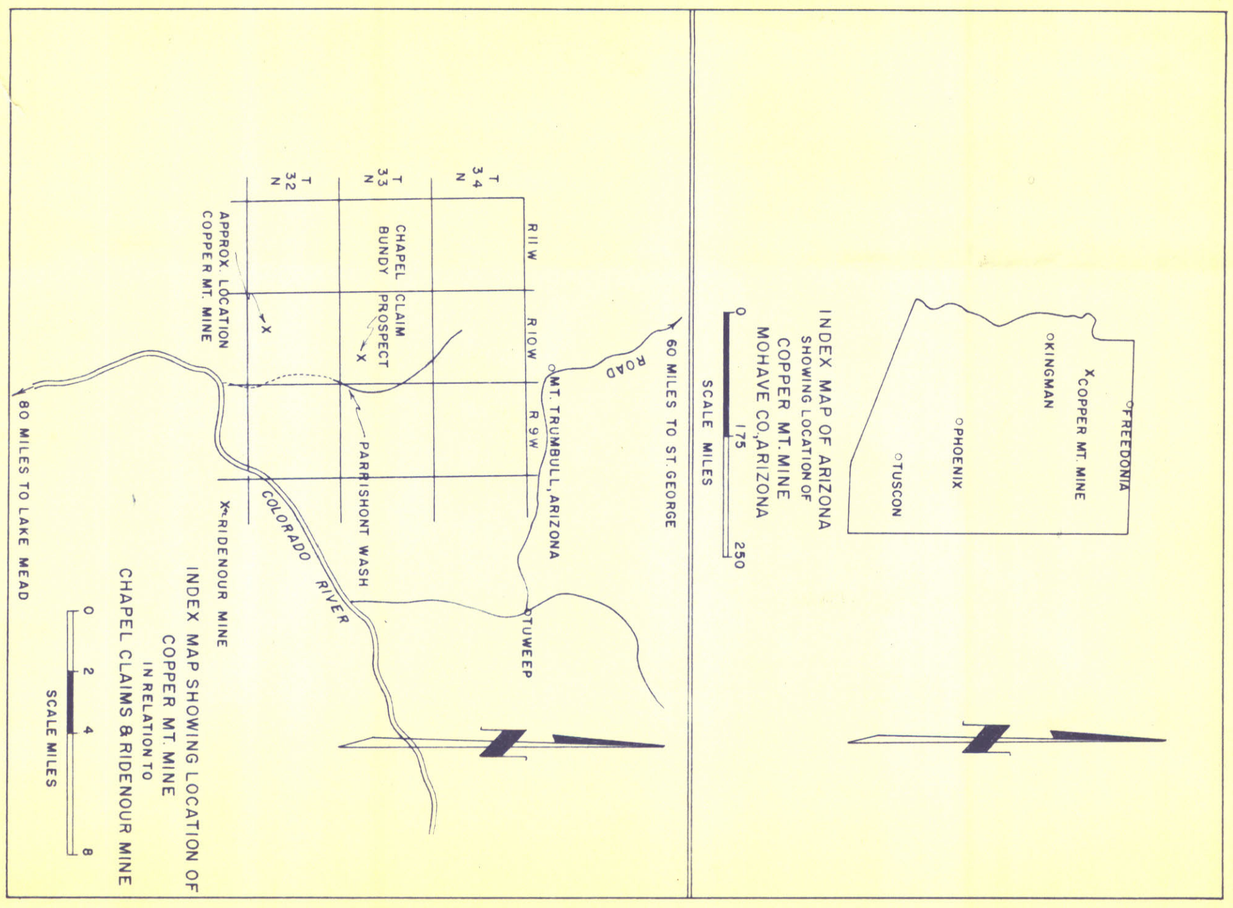
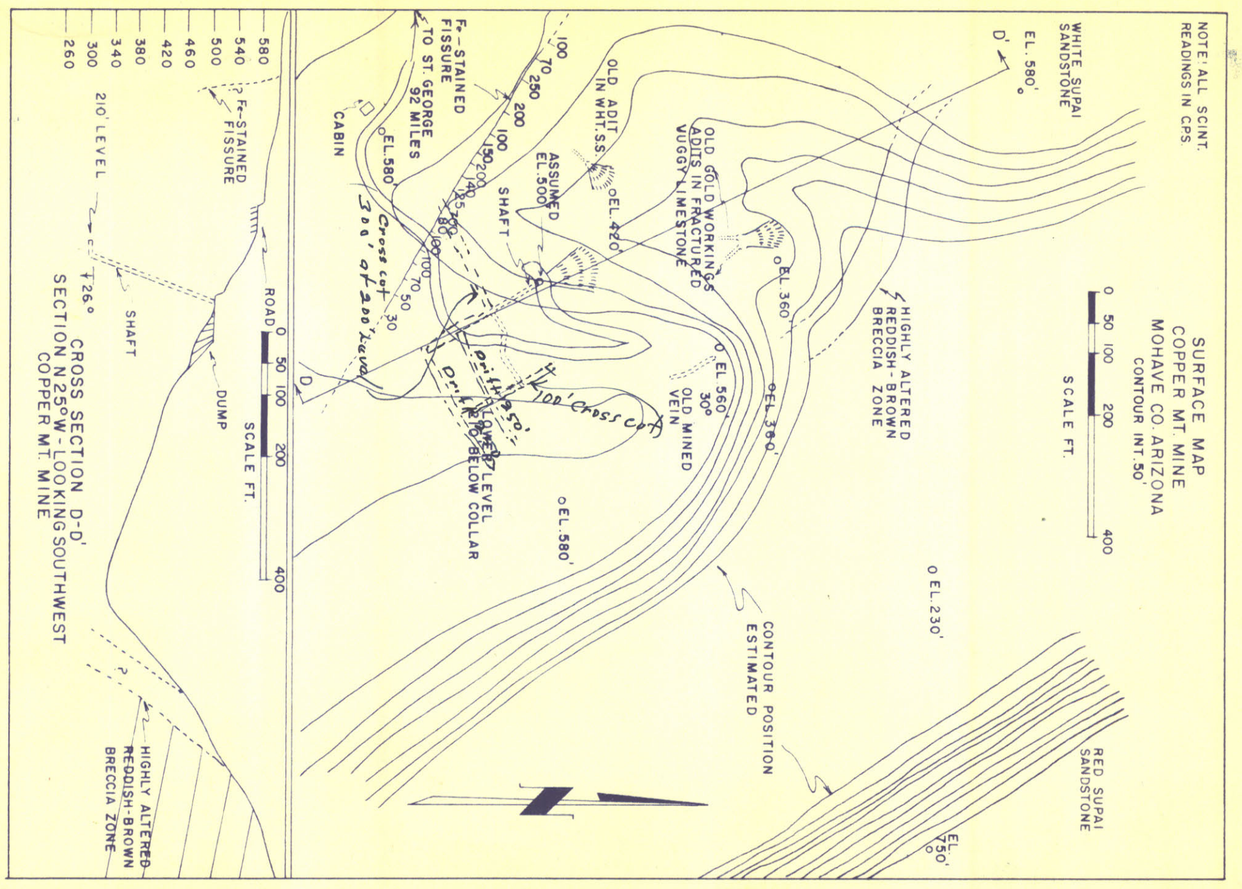
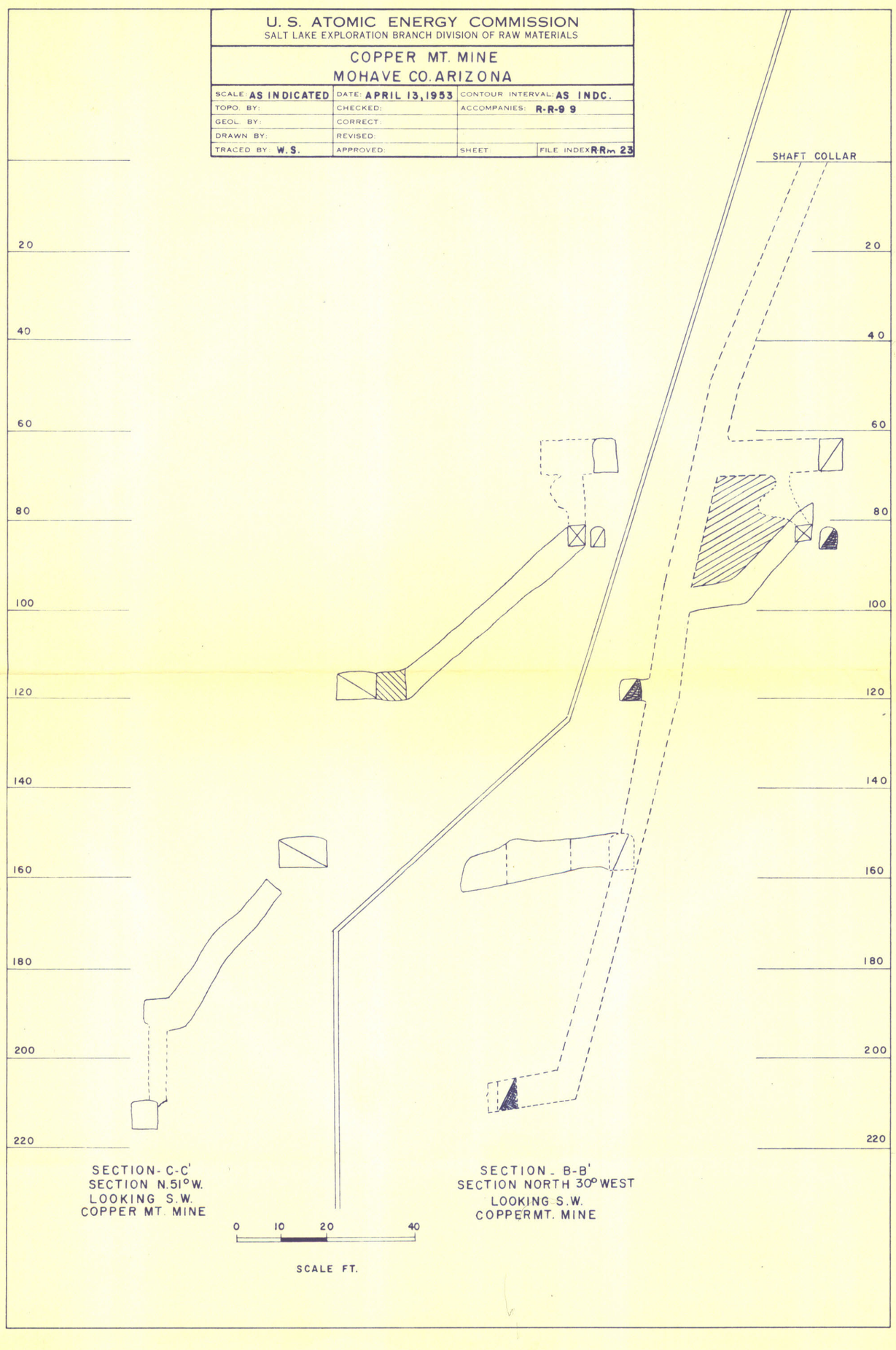


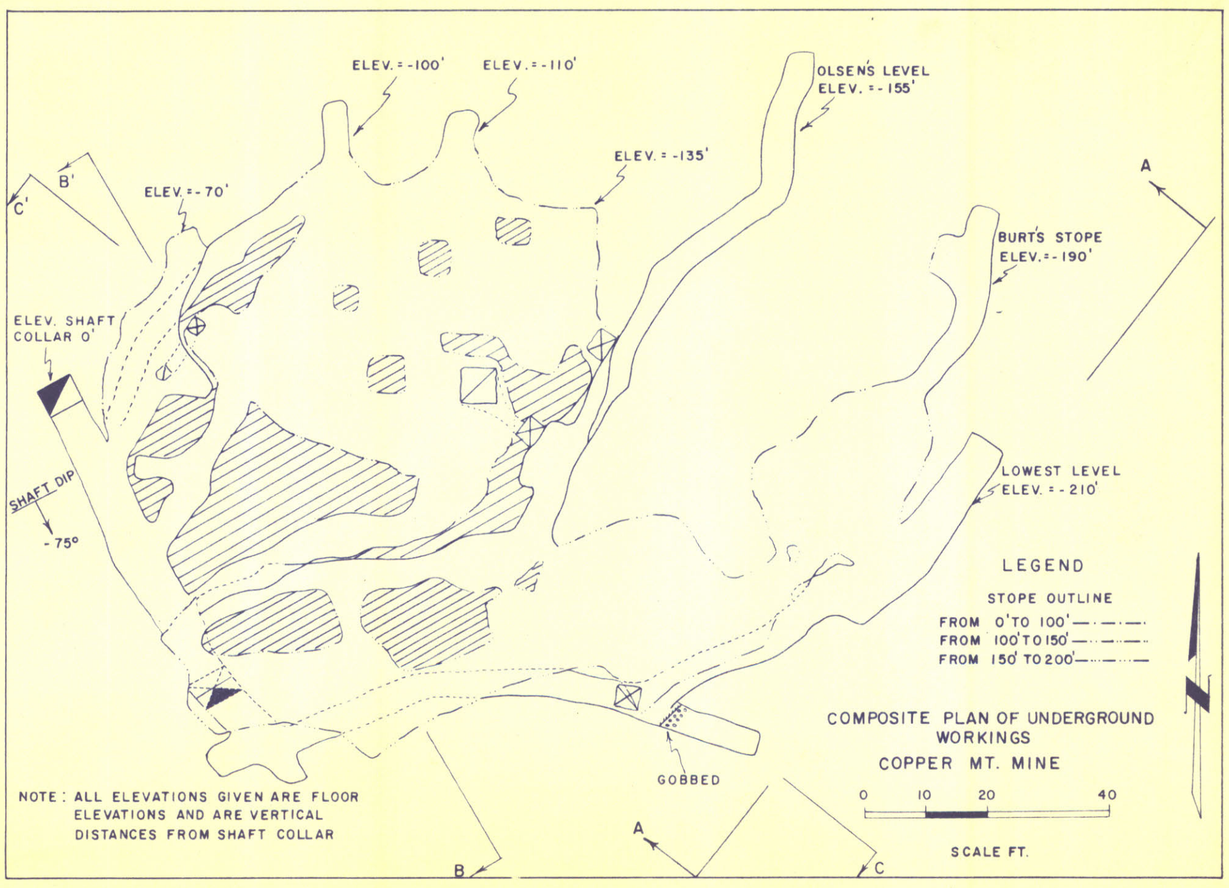


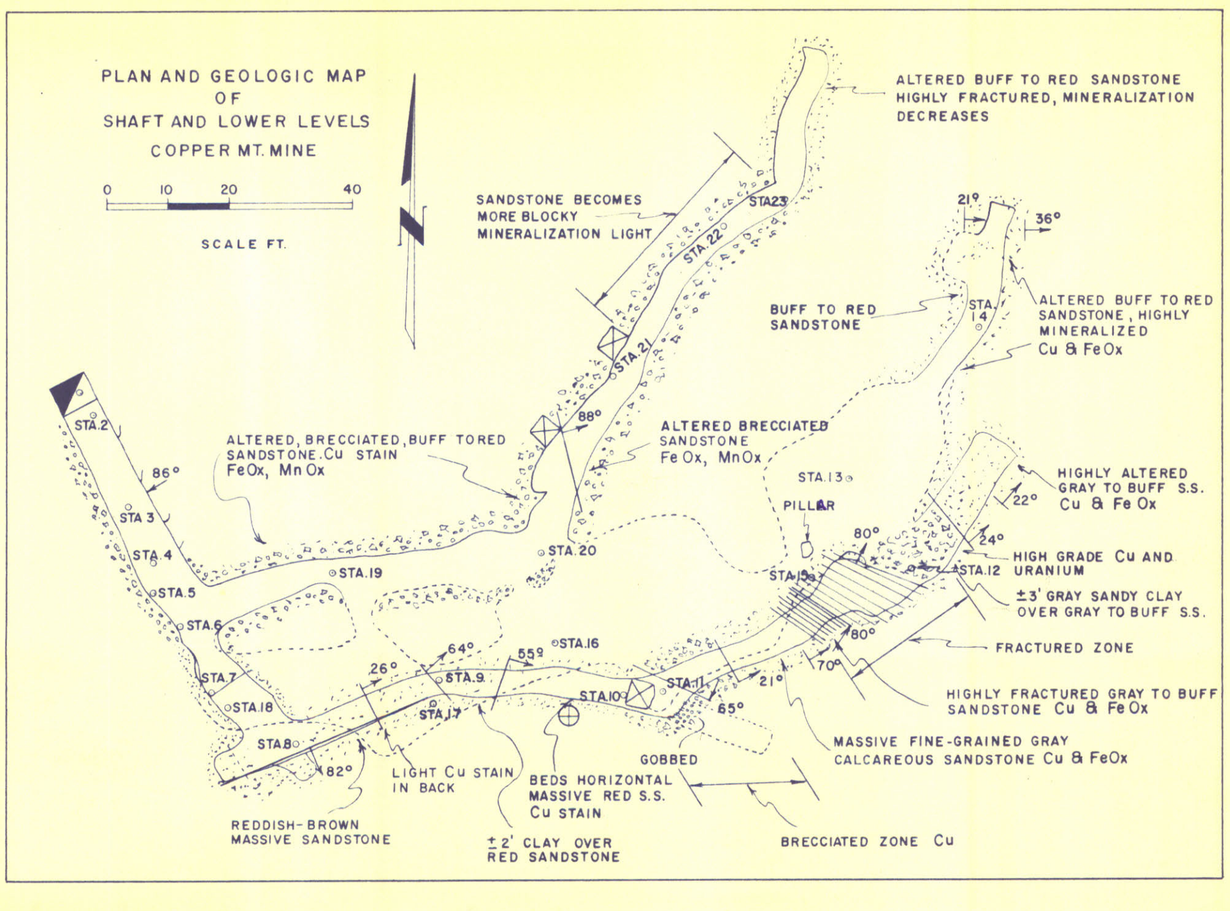
U. S. ATOMIC ENERGY COMMISSION
SALT LAKE EXPLORATION BRANCH DIVISION OF RAW MATERIALS

COPPER MT. MINE
MOHAVE CO. ARIZONA

SCALE: AS INDICATED	DATE: APRIL 13, 1953	CONTOUR INTERVAL: AS INDC.	
TOPO. BY:	CHECKED:	ACCOMPANIES: R-R-9 9	
GEOL. BY:	CORRECT:		
DRAWN BY:	REVISED:		
TRACED BY: W.S.	APPROVED:	SHEET	FILE INDEX RRm 23

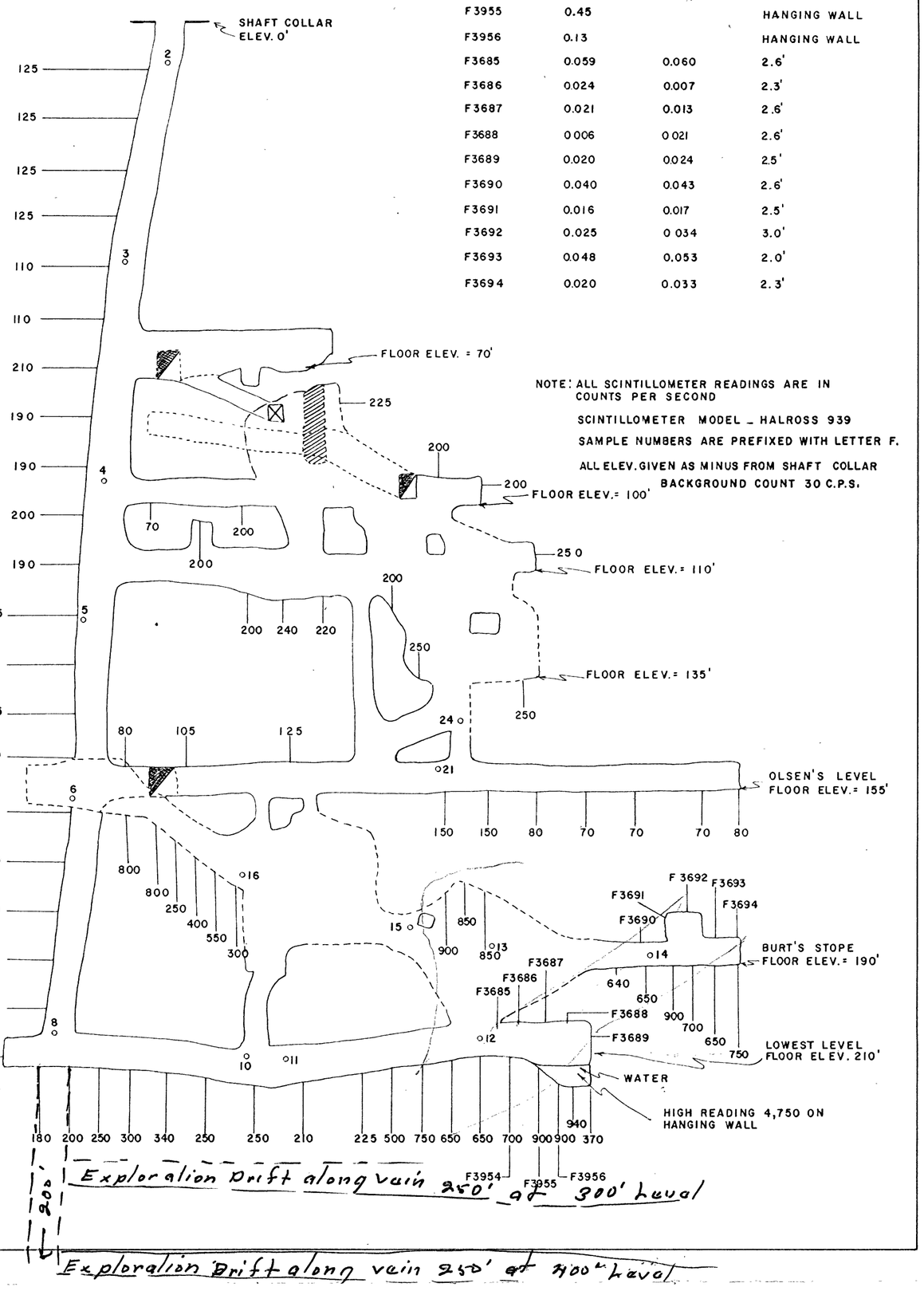






CROSS SECTION A-A'
SCINTILLOMETER SURVEY & SAMPLE MAP
SECTION N 38°E
LOOKING N. W.
COPPER MT. MINE

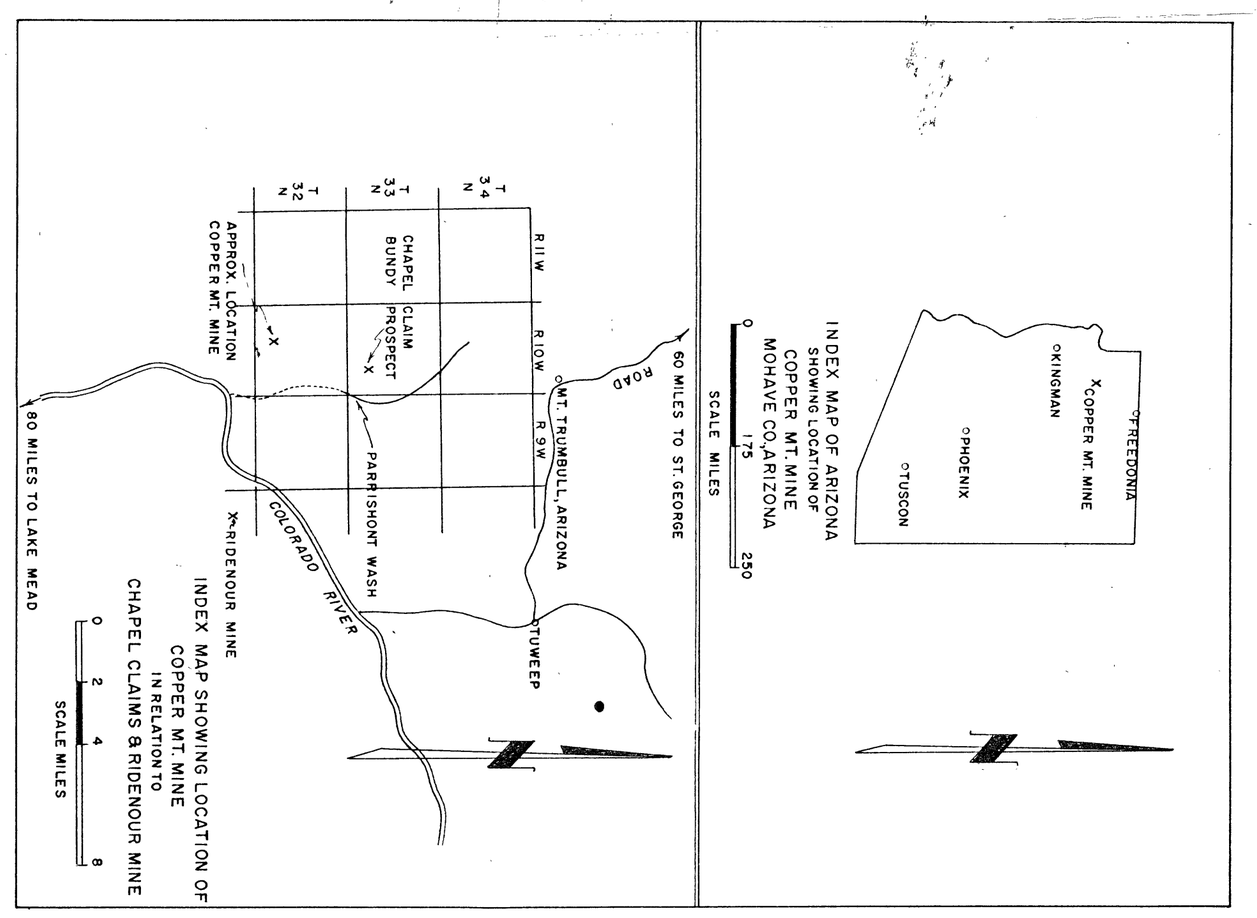
0 10 20 40
SCALE FT.

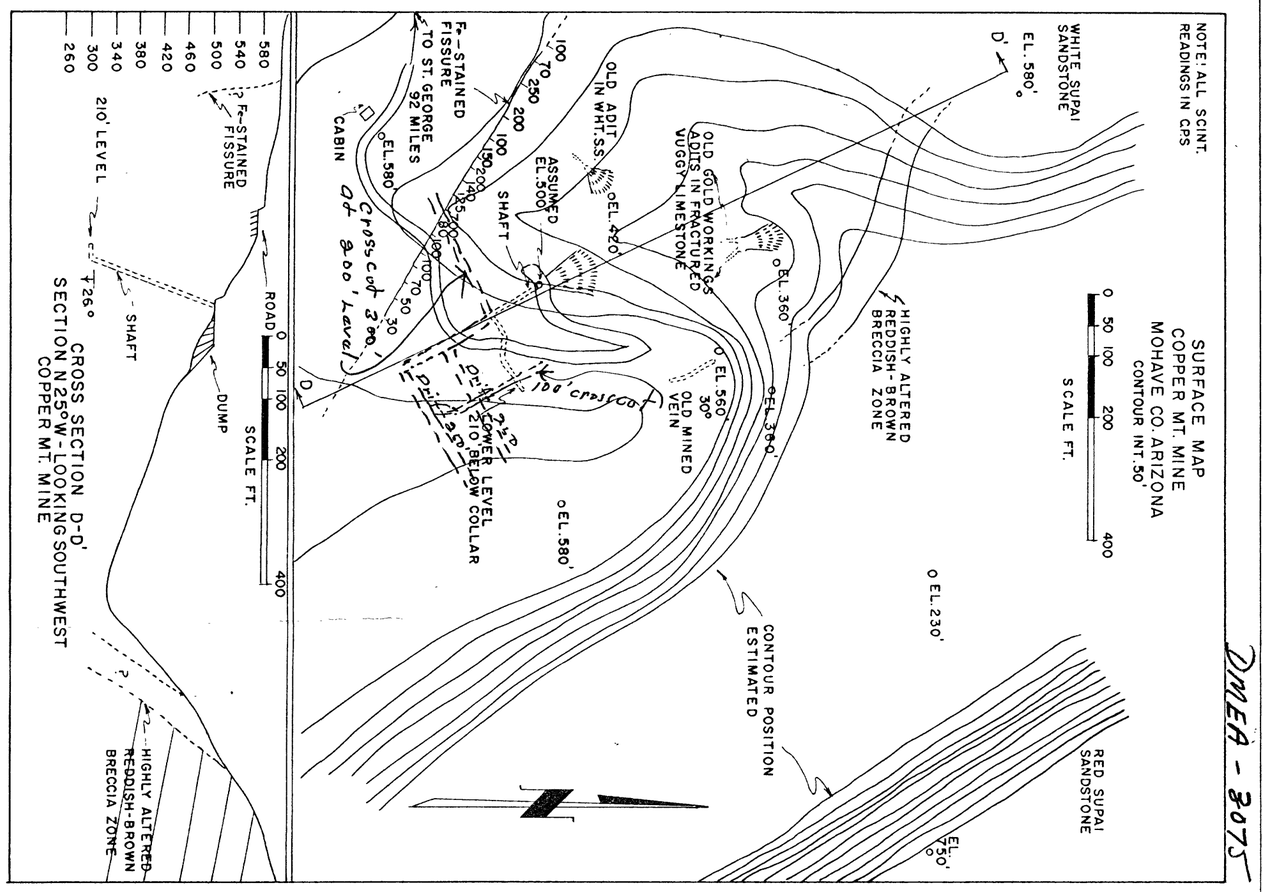


SAMPLE ANALYSIS

FIELD NO.	%eU3O8	%cU3O8	WIDTH
F3953	14.1		ORE PILE ON SURFACE
F3954	.075		HANGING WALL
F3955	0.45		HANGING WALL
F3956	0.13		HANGING WALL
F3685	0.059	0.060	2.6'
F3686	0.024	0.007	2.3'
F3687	0.021	0.013	2.6'
F3688	0.006	0.021	2.6'
F3689	0.020	0.024	2.5'
F3690	0.040	0.043	2.6'
F3691	0.016	0.017	2.5'
F3692	0.025	0.034	3.0'
F3693	0.048	0.053	2.0'
F3694	0.020	0.033	2.3'

NOTE: ALL SCINTILLOMETER READINGS ARE IN COUNTS PER SECOND
SCINTILLOMETER MODEL - HALROSS 939
SAMPLE NUMBERS ARE PREFIXED WITH LETTER F.
ALL ELEV. GIVEN AS MINUS FROM SHAFT COLLAR
BACKGROUND COUNT 30 C.P.S.



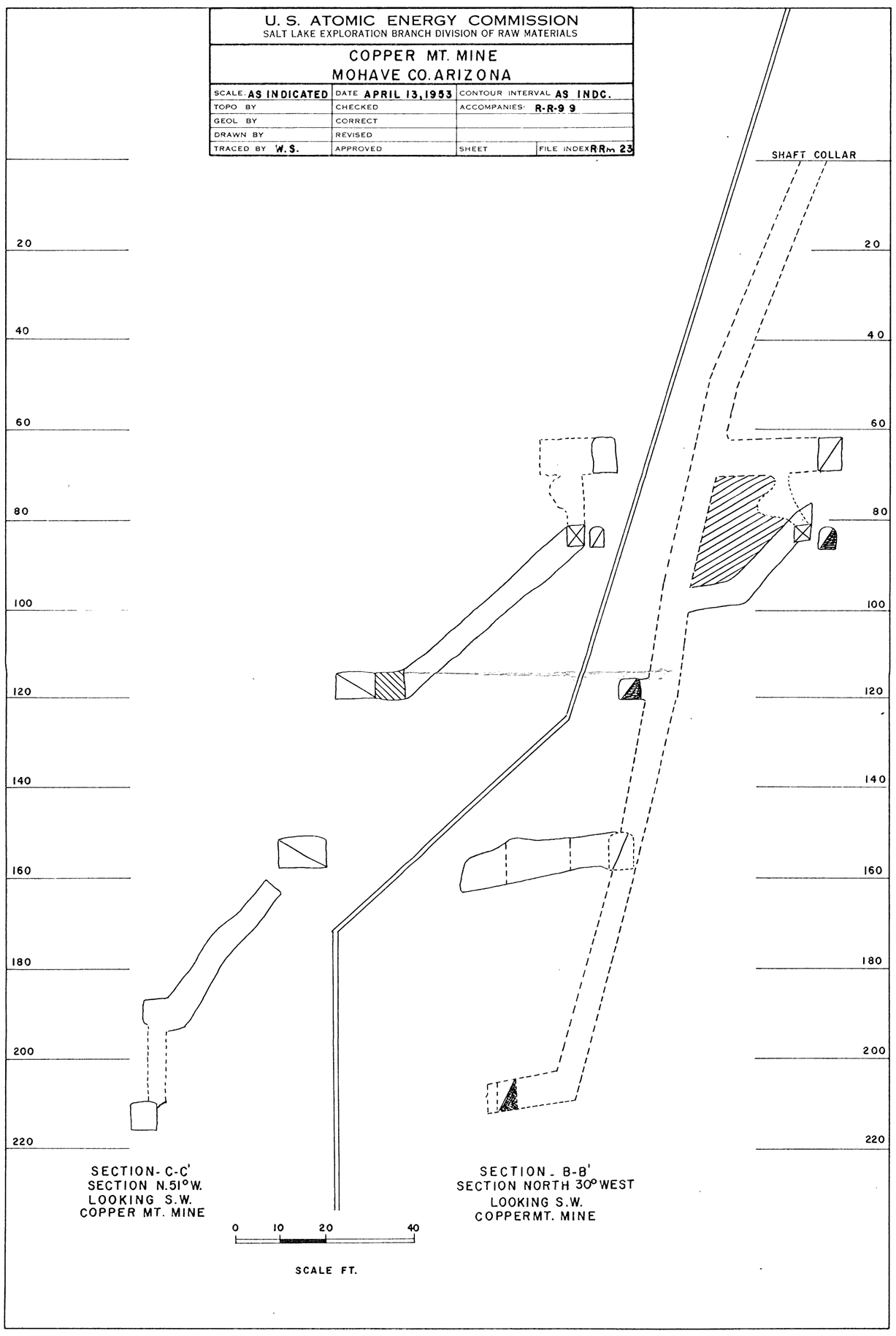


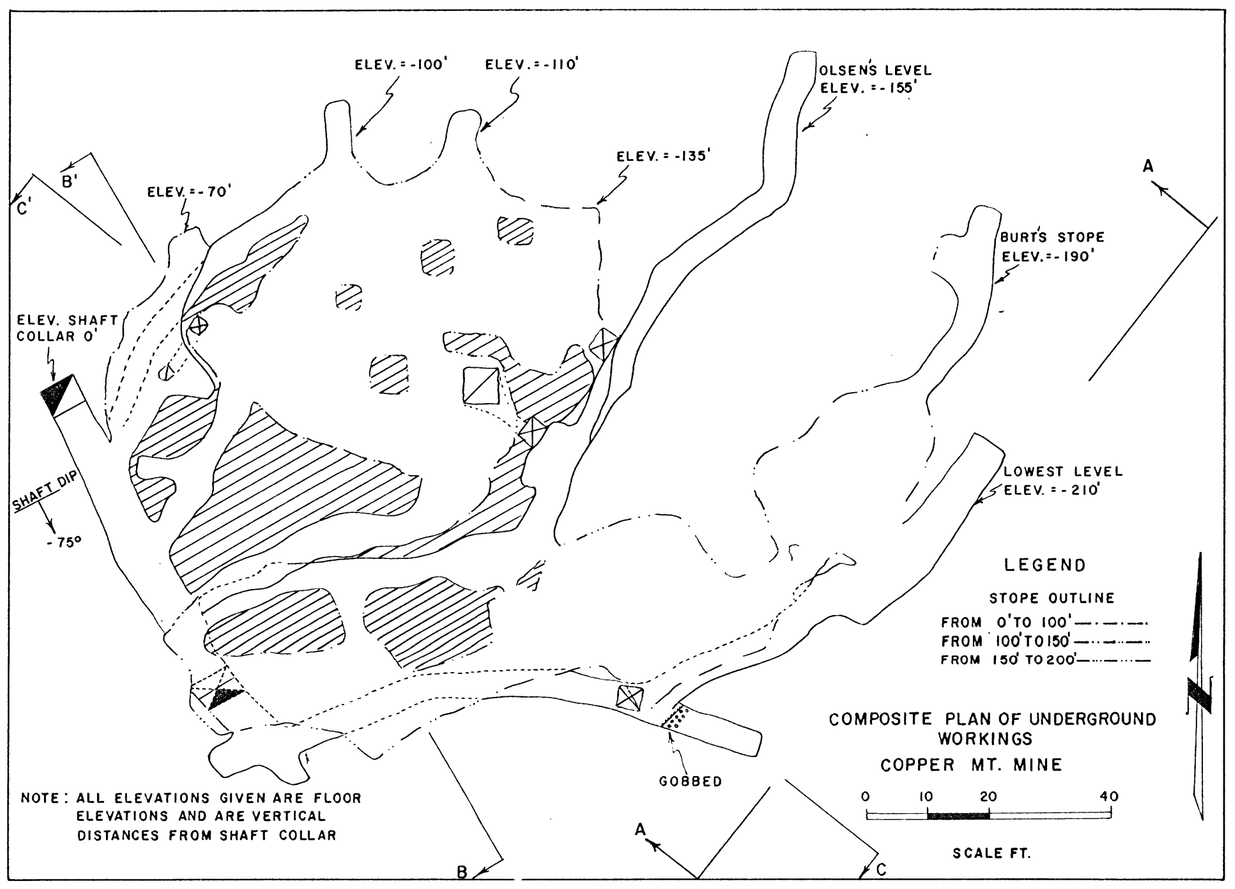
DMEA - 2075

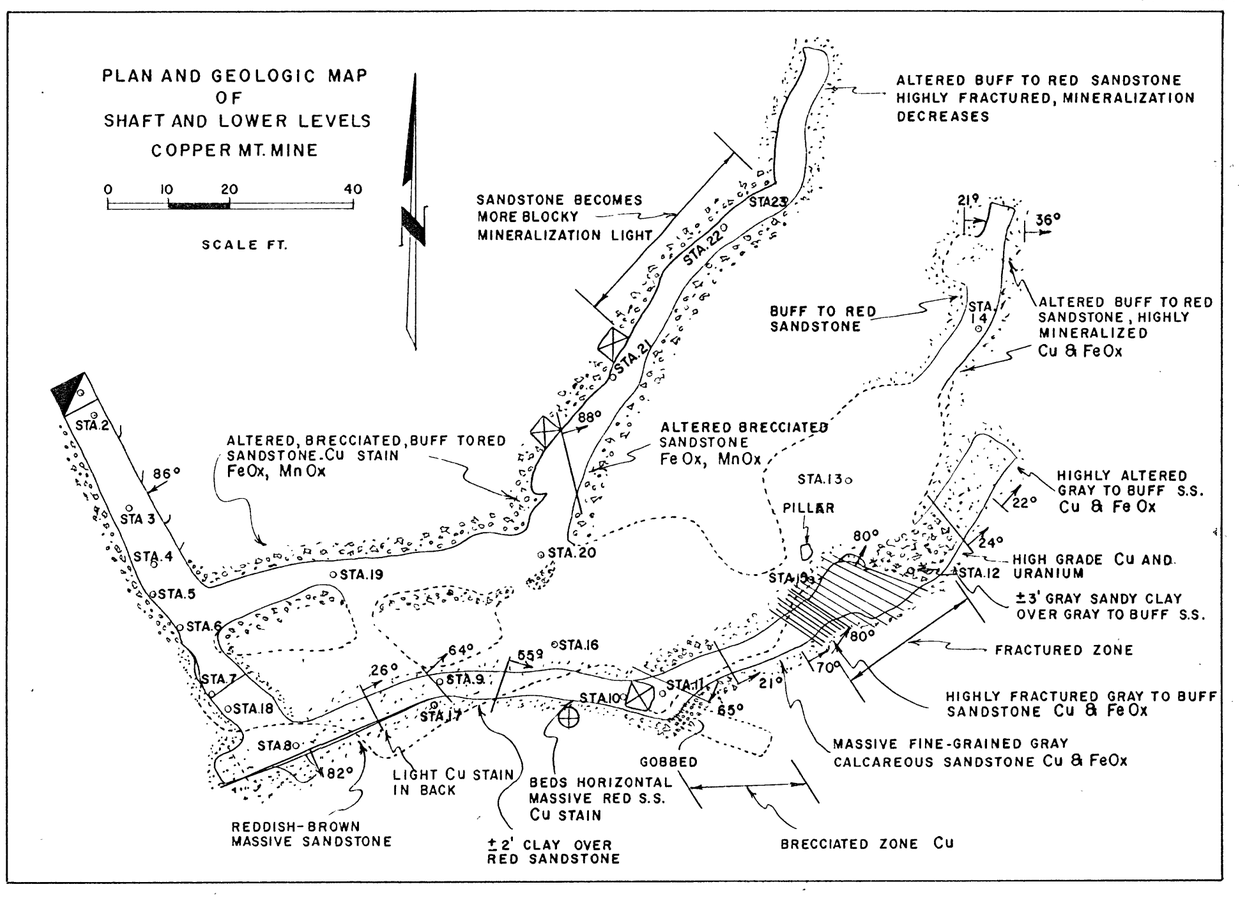
U. S. ATOMIC ENERGY COMMISSION
SALT LAKE EXPLORATION BRANCH DIVISION OF RAW MATERIALS

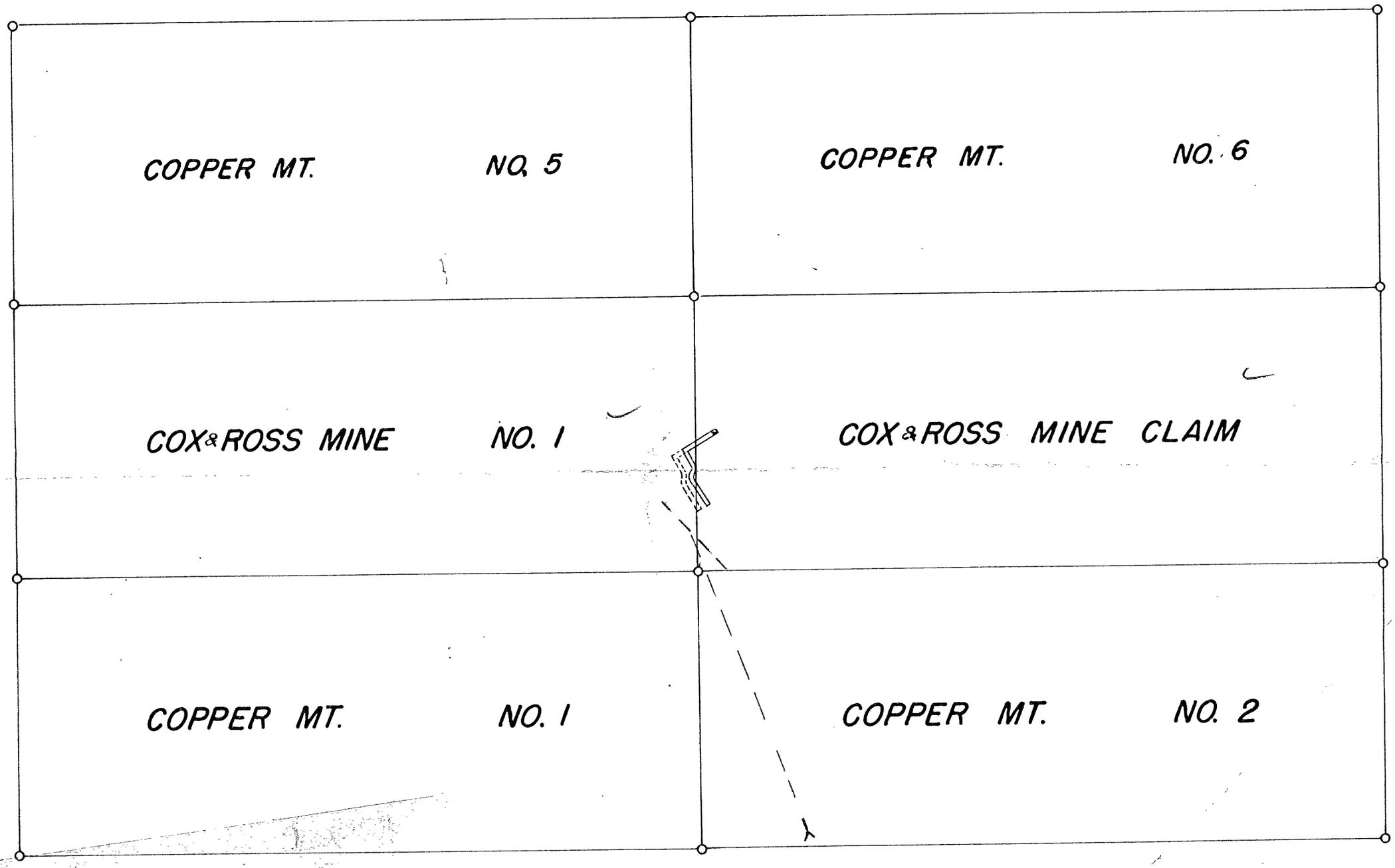
COPPER MT. MINE
MOHAVE CO. ARIZONA

SCALE AS INDICATED	DATE APRIL 13, 1953	CONTOUR INTERVAL AS INDC.	
TOPO BY	CHECKED	ACCOMPANIES R-R-9 9	
GEOL BY	CORRECT		
DRAWN BY	REVISED		
TRACED BY W.S.	APPROVED	SHEET	FILE INDEX RRm 23









U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

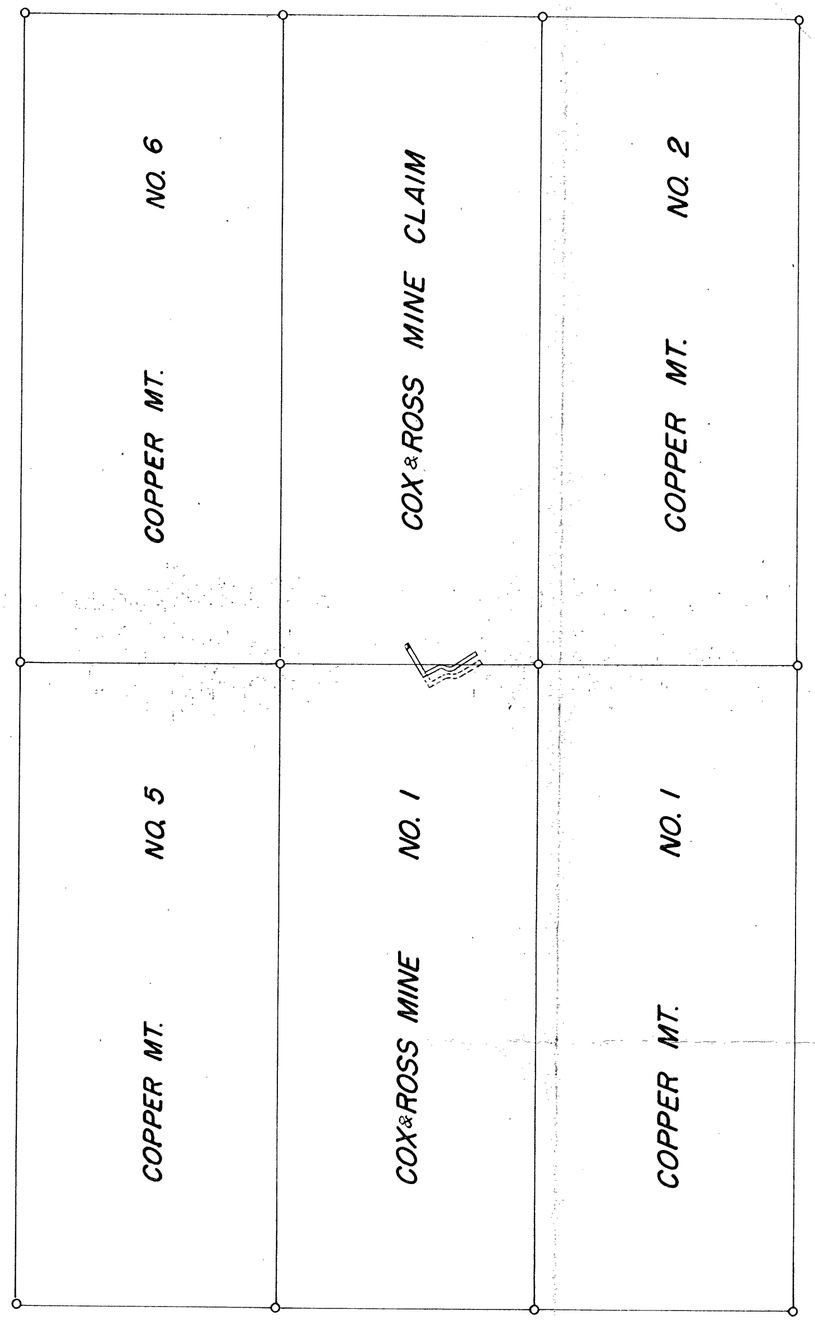
Fig. [redacted] DMEA Docket No. 3075

Claim Map

COPPER MT. MINE

MOHAVE CO., ARIZONA

ENGINEER: *W. E. Young*	DATE: JAN. 31, 1954
DRAWN: JAN., 1954; BY: A. P. T. S.	1900 - 277 - D
CHECKED:	



LEGEND

EXISTING UNDERGROUND WORKING.

PROPOSED UNDERGROUND WORKING.

SHAFT.

0 250 500 750 1000

SCALE OF FEET

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

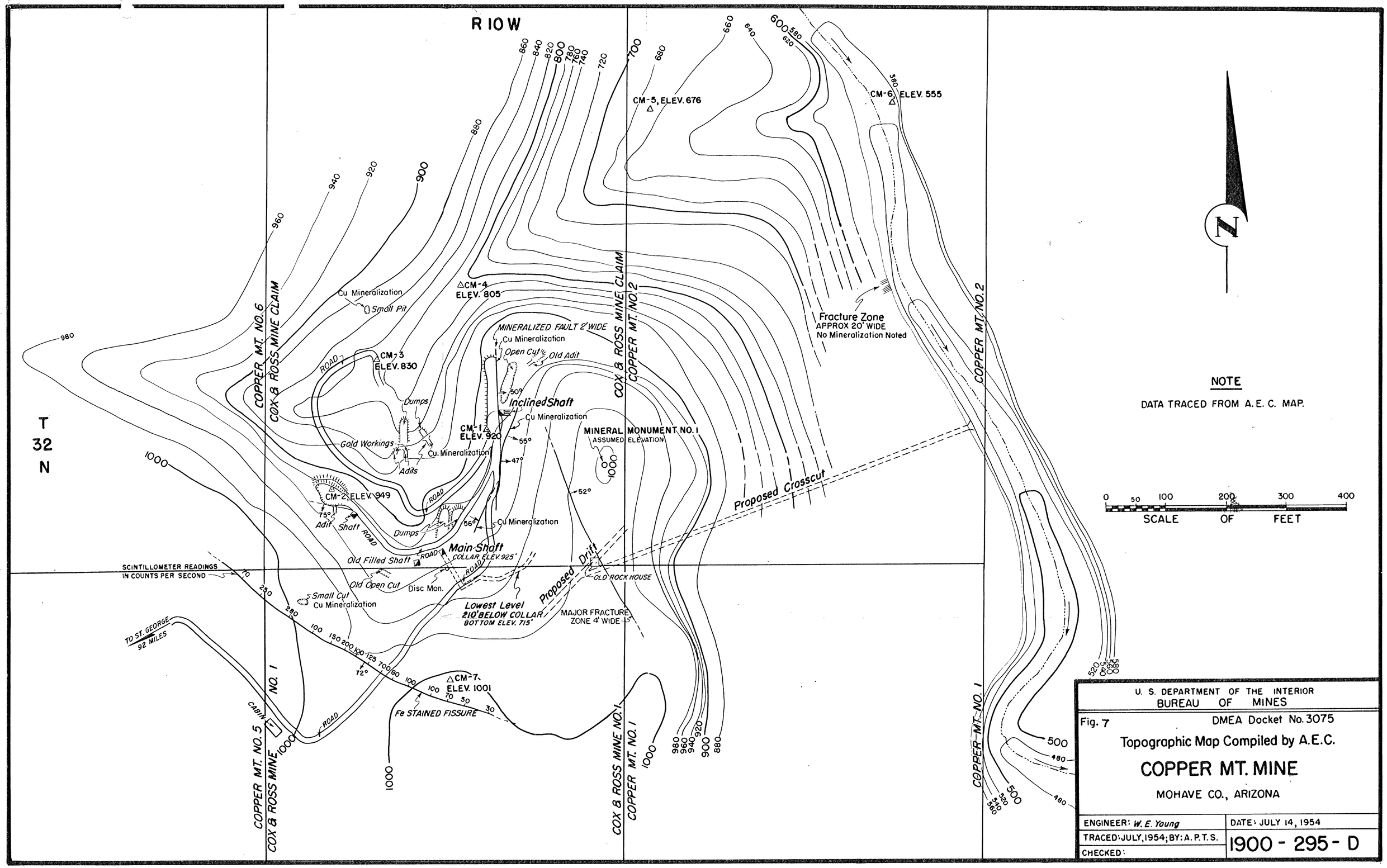
Fig. 6 DMEA Docket No. 3075

Claim Map

COPPER MT. MINE

MOHAVE CO., ARIZONA

ENGINEER: *W. E. Young*	DATE: JAN. 31, 1954
DRAWN: JAN., 1954; BY: A. P. T. S.	1900 - 277 - D
CHECKED:	


R 10 W
T 32 N
COPPER MT. NO. 6
COX & ROSS MINE CLAIM
COPPER MT. NO. 2
COPPER MT. NO. 1
COPPER MT. NO. 5
COX & ROSS MINE NO. 1
CM-5, ELEV. 676
CM-6 ELEV. 555
CM-4 ELEV. 805
CM-3 ELEV. 830
CM-1 ELEV. 920
CM-2 ELEV. 949
CM-7 ELEV. 1001
Cu Mineralization
Small Pit
ROAD
Dumps
Gold Workings
Adits
MINERALIZED FAULT 2' WIDE
Open Cut
Old Adit
Inclined Shaft
MINERAL MONUMENT NO. 1
ASSUMED ELEVATION
Adit
Shaft
Main Shaft
COLLAR ELEV. 925'
Old Filled Shaft
Old Open Cut
Disc Mon.
Small Cut
Lowest Level
210' BELOW COLLAR
BOTTOM ELEV. 715'
Proposed Drift
OLD ROCK HOUSE
MAJOR FRACTURE ZONE 4' WIDE
Proposed Crosscut
Fracture Zone
APPROX 20' WIDE
No Mineralization Noted
SCINTILLOMETER READINGS IN COUNTS PER SECOND
TO ST. GEORGE 92 MILES
CABIN
Fe STAINED FISSURE
N
NOTE
DATA TRACED FROM A. E. C. MAP.
0 50 100 200 300 400
SCALE OF FEET
U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Fig. 7
DMEA Docket No. 3075
Topographic Map Compiled by A.E.C.
COPPER MT. MINE
MOHAVE CO., ARIZONA
ENGINEER: W. E. Young
DATE: JULY 14, 1954
TRACED: JULY, 1954; BY: A. P. T. S.
CHECKED:
1900 - 295 - D