UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE

Terminated (or cancelled) without certification. DMEA No. 527

This is the official contract file containing all official records of the project. Duplicate material has been removed. The records contained in the files are checked and are arranged in this manner:

Left Side

Certificate of Audit (Final).

Interim Audit(s).

✓ Report of Review.

✓ Termination Notice or Agreement.

Recision Notice.

Assignment of Contract.

Amended Contract ~~Amendments~~ (~~latest on top~~).

✓ Contract with all exhibits and annexes.

Owner's Consent to Lien.

✓ Subordination Agreement.

Leases and assignments of leases.

✓ Application and attachments.

Schedule of Collections.

✓ Operator's monthly reports and all attachments (latest on top).

Right Side

✓ Project summary.

✓ Work completed analysis.

All other material is filed in chronological order with correspondence including the following reports as checked:

✓ Final Field Team Report. (Tab)

? ✓ Operator's Final Report.

Interim Reports.

✓ On-site Exam Report(s). (Tab)

Settlement Sheets.

If additional folders are required because of volume of records, show folder numbers and contents below:

Maps in folder number _____

Operator's Monthly Reports in folder number _____

7973

Reviewer's Initials ame

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF REVIEW

I have reviewed the Monthly Reports of:

The Yucca Mining and Milling Company
Yucca, Arizona

pertaining to Exploration Project Contract No. I&m-8232, Docket No. DMA 527, covering a project for exploration of Copper, for the period of September 3, 1952 to May 25, 1953.

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

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

The contract provides for payment by the Government on the basis of agreed estimated costs of units of work actually performed.

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

Total cost as billed by Contractor		$3680.00
Exceptions:		
By DMEA Finance Officer	None	
Herewith	None	None
Total Accepted Cost		$3680.00

The contract calls for a 50 percent participation of exploration expenses by the United States Government. Therefore, payment to the Contractor by the Government in the amount of One Thousand Eight Hundred Forty and no/100 Dollars

-$1,840.00-

is considered valid and proper.

September 3, 1953

Donald T. Finch

Donald T. Finch, Auditor

Docket Copy

NOTICE OF TERMINATION OF EXPLORATION PROJECT CONTRACT, UNDER THE TERMS OF THE CONTRACT, BEFORE THE COMPLETION OF THE WORK

To: Yucca Mining and Milling Company
Attention Robert J. Dalton, President
307 - 18th Street
San Bernardino, California

Operator under Exploration Project
Contract DMn-1232, Docket No. DMA-527
executed August 6, 1952 (being an amendment
and revision of contract dated December 19, 1951).

The United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, under the terms of the above-mentioned contract, hereby terminates the contract on the following grounds:

In the opinion of the Government, you have failed to prosecute operations pursuant to the terms of the contract.

Upon the receipt of this notice, as provided in said contract, you are required to render to the Government a full and final accounting of your operations under the contract and of your expenditures of money on account thereof.

Dated this 25th day of May, 1953.

UNITED STATES OF AMERICA

A E Kane Fallert By C O Mitchelson
Administrator, Defense Minerals
Exploration Administration

MF-200 (A)
(February 1952)

DOCKET NO. DMEA 527

COMMODITY Copper

Idm-E232

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

Government's Copy

EXPLORATION PROJECT CONTRACT[1]

(Short Form)

IT IS AGREED this 19th day of December, 1951, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] The Yucca Mining and Milling Company, a corporation duly organized and existing under and by virtue of the laws of the State of Arizona, hereinafter called the Operator, that Contract Idm-E232, dated December 19, 1951, between the same parties is amended and superseded as set forth in Annex I, and as follows:

~~hereinafter called the "Operator," as follows:~~

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

ARTICLE 2. *Operator's property rights.*—With respect to that certain land situated in the State of Arizona, County of Mohave, described as follows:[3] Set forth in Annex II

the Operator represents and undertakes:[4]

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

There are no encumbrances on the claims owned, as set forth in Annex II

(b) As set forth in Annex II Subordination Agreement

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

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

ARTICLE 3. *Exploration project.*—The Operator, ~~within~~ prior to October 1, 1952 ~~days from the date of this contract~~ shall commence work on a project of exploration for[5] Copper in or upon the described land; and shall bring the project to completion ~~within a period of~~ prior to Aug. 1, 1953 ~~date of this contract~~. The work to be performed is more fully described in Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, are made a part of this contract. The Government will contribute to the cost of this work as hereafter provided. The work shall be performed by the Operator or by independent contractor or contractors efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for workmen's compensation and employers' liability insurance, with suitable and adequate equipment, materials, and labor, to bring the project to completion within the time fixed. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

ARTICLE 4. *Costs of the project.*—The agreed, estimated costs of performing the work, expressed in terms of units of work to be performed (per foot of drifting, per foot of drilling, per cubic yard of material to be moved, etc.) are set forth in Exhibit "A," attached hereto. The Government will pay 50 percent of these agreed, estimated costs, as they accrue, for units of work actually performed that conform with the description or specifications for the work set forth in this contract, in an aggregate total amount not in excess of $29,735.00 which is 50 percent of $59,470.00, the agreed, estimated total cost of the project in which the Government will participate: *Provided,* That until the Operator's final report and final accounting have been rendered to the Government and any final check or auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last voucher or vouchers such sums as it sees fit not in excess of ten (10) percent of the maximum total which the Government might have been called upon to pay under the terms of the contract. The Government may, as it sees fit, make payments direct to the Operator's independent contractors, if any, for the account of the Operator, rather than to the Operator.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ARTICLE 9. *Changes and added provisions* _____

Executed in sextuplicate the day and year first above written.

The Yucca Mining and Milling Company
(Operator)

By Robert J. Dalton President
ROBERT J. DALTON, President

THE UNITED STATES OF AMERICA

By C. Mittendorf
Acting Administrator
Defense Minerals Exploration
Administration

I, W. SHELLEY RICHEY, certify that I am the assistant secretary of the corporation named as Operator herein; that ROBERT J. DALTON, who signed this contract on behalf of the Operator, was then president 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.

W. Shelley Richey
W. SHELLEY RICHEY, Ass't Sec'y

[CORPORATE SEAL]

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

ANNEX I

YUCCA MINING AND MILLING COMPANY

DMEA-527

WHEREAS, the parties to this agreement are also the parties to Contract Idm-E232, Docket No. DMA-527, dated December 19, 1951, executed on contract form MF-200 (June 1951); and

WHEREAS, no work has been done under the said contract; and

WHEREAS, the parties desire to restate their agreement in a new contract form, and to change the basis of the Government's participation in the costs of the project from actual costs, as specified in the contract first above-described, to agreed, estimated costs of the work as set forth in Exhibit "A" of this contract;

NOW THEREFORE, it is mutually agreed that, effective December 19, 1951, Contract Idm-E232, dated December 19, 1951, executed on contract form MF-200 (June 1951), is amended and superseded by this contract executed on form MF-200A (February 1952);

The Operator hereby releases and agrees to save harmless the Government from all claims and demands under or arising out of Contract Idm-E232, dated December 19, 1951, executed on contract form MF-200 (June 1951).

ANNEX II

YUCCA MINING AND MILLING COMPANY

DMEA-527

The land referred to in Article 2 consists of The Antler Mine comprised of the leased patented claims, the Antler and the Spytem Duyvil; and the owned unpatented claims, the White Chip, Black Chip, Green Chip, Yellow Chip, Red Chip, Pink Chip, and Blue Chip; and the recorded, unpatented mill sites, Mary Lee, Ruth and Dorothy; and the unrecorded, unpatented mill sites, the Gladys, Kathrine, Nettie, Ann and Mary Lee No. 2. The mine is in Sections 3, 4, 9 and 10, T. 17 N., R. 16 W., in the Cedar Valley Mining District, 11.0 miles east of Yucca.

EXPLORATION PROJECT CONTRACT
YUCCA MINING AND MILLING COMPANY
DOCKET NO. DMEA-527

EXHIBIT "A"

Description of the Work

Job

1. On the fifth level south, drift 360 feet southwesterly from a footwall crosscut shown on the map entitled Exhibit "B", annexed hereto and made a part hereof, at "J-1" to explore the footwall vein as shown on the said map.

2. On the fifth level, drift and crosscut 225 feet northerly or northeasterly, shown on the map as "J-2", to explore a faulted section of the lode as shown on the said map.

3. On the fifth level, drive a maximum of four crosscuts, northwesterly, three being tentatively shown on the map as "J-3", aggregating not to exceed 280 feet from the old south drift and the new south drift ("J-1") to explore the mineralized zone. This work is to be undertaken only after completion of all or part of the drifting is completed and is to be dependent upon the results thereof, and to be undertaken only upon the expressed approval of Government Engineers.

4. Raise from the face of the new north or northeast drift ("J-2") 135 feet, shown on the map as "J-4", to explore the mineralized zone. This work is to be undertaken only after the completion of Job-2, and is to be dependent upon the results thereof, and to be undertaken only upon the expressed approval of the Government Engineers.

5. From the new south drift ("J-1") and the crosscuts ("J-3") drive not more than four raises, three being tentatively shown on the map as "J-5", aggregating a maximum of 800 feet to explore the mineralized zone. This work is to be undertaken only after completion of all or part of the crosscutting in Job-3 is completed and is to be dependent upon the results thereof, and to be undertaken only upon the expressed approval of the Government Engineers.

The drifts and crosscuts are to be timbered where necessary, and be of sufficient size for shovel operation, but not to exceed 6.0 feet by 7.5 feet in the clear.

The raises are to be timbered, and not to exceed 4.0 feet by 7.0 feet in the clear.

AGREED UNIT COSTS

The Government will contribute to the costs of the above work on the basis of the below agreed, estimated, unit costs, as they accrue, for units of work actually performed in lieu of actual costs. These unit costs include all costs of the work, including supervision, consultants, accounting, sampling, assaying, surveying, and all other necessary, technical work involved.

865 feet of drifting or crosscutting @ $32.00/ft.	$27,680.00
935 feet of raising at $34.00/ft.	31,790.00
Total Cost of Project	$59,470.00
Government Participation @ 50%	$29,735.00

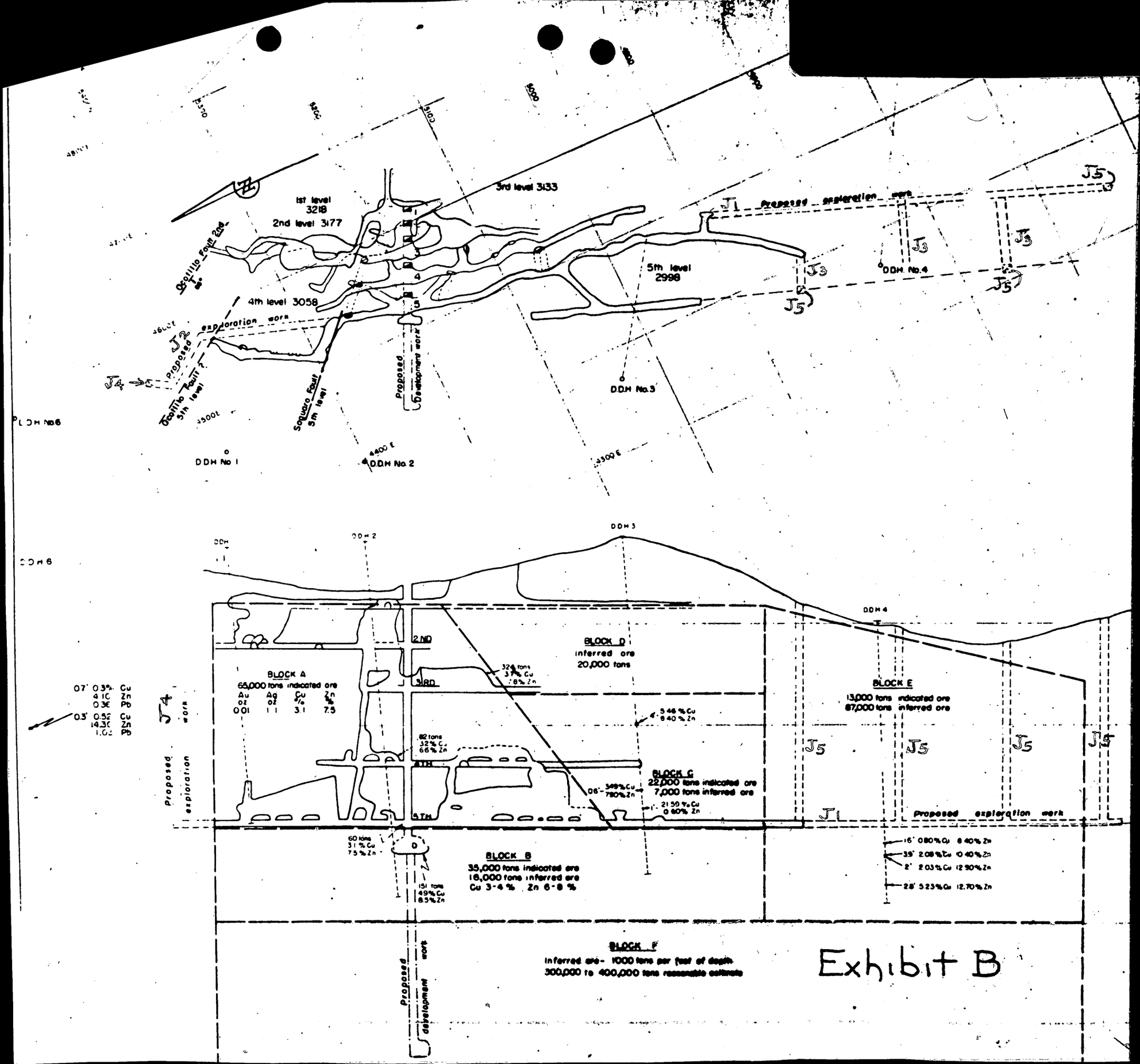

1st level
3218
2nd level 3177
3rd level 3133
4th level 3058
5th level
2998
Ocotillo Fault Zone
Proposed exploration work
Proposed development work
Ocotillo Fault 5th level
Saguaro Fault 5th level
DDH No 1
DDH No 2
DDH No 3
DDH No 4
DDH No 6
J1
J2
J3
J4
J5
DDH 2
DDH 3
DDH 4
2ND
3RD
4TH
5TH
BLOCK A
65,000 tons indicated ore
Au oz
Ag oz
Cu %
Zn %
0.01
1.1
3.1
7.5
BLOCK B
35,000 tons indicated ore
18,000 tons inferred ore
Cu 3-4 % Zn 6-8 %
BLOCK C
22,000 tons indicated ore
7,000 tons inferred ore
BLOCK D
inferred ore
20,000 tons
BLOCK E
13,000 tons indicated ore
87,000 tons inferred ore
BLOCK F
Inferred ore- 1000 tons per foot of depth
300,000 to 400,000 tons reasonable estimate
Proposed exploration work
Proposed development work

Exhibit B

MP-202

~~LANDLORD'S~~ SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the owner in fee simple of that certain parcel of ground in the county of Mohave, State of Arizona, described in a certain Exploration Project Contract dated December 19, 1951, between The Yucca Mining and Milling Company, a corporation organized and existing under the laws of Arizona, Assignee of Contract Purchaser the ~~Lessee~~ of said property, and the United States of America;

NOW, THEREFORE, the undersigned, as ~~Lessor~~ Vendor of said property under ~~lease~~ option agreement dated March 30, 1949, does by these presents subordinate all of his right, title, and interest under the provisions of said ~~lease~~ option agreement to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said ~~lease~~ option agreement; and

The undersigned further agrees that if said ~~leasehold~~ option interest should be surrendered or if said ~~lease~~ option agreement should terminate at any time prior to the expiration of the rights of the United States of America under said Exploration Project Contract, the undersigned shall assume and does hereby assume all of the obligations of the ~~lessee~~ assignee of contract purchaser under said Exploration Project Contract to make repayment to the United States of America according to the terms of said contract; and

The undersigned agrees to commit no act, nor assert any claim under judicial process or otherwise that may contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract.

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

Dated this fourteenth day of December, 1951.

ARIZONA ANTIMONY MINING COMPANY

By [signature]
President.

U. S. GOVERNMENT PRINTING OFFICE 16—64582-1

MF-200
(June 1951)

Docket No. DMA 527
Commodity Copper
Idm-E232

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

EXPLORATION PROJECT CONTRACT[1]

It is agreed this 19 day of December, 1951, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and[2] The Yucca Mining and Milling Company, a Corporation organized and existing under the laws of the State of Arizona, Robert J. Dalton, President Yucca, Arizona

hereinafter called the "Operator," as follows:

1. *Authority for contract.* This agreement is entered into under the authority of the Defense Production Act of 1950, pursuant to Mineral Order 5, entitled "Regulations Governing Government Aid in Defense Exploration Projects."

2. *Operator's property rights.* The exploration project shall be conducted on that certain property situated in the State of Arizona, County of Mohave described as follows:[3] The Antler Mine comprised of the leased patented claims, the Antler and the Spyten Duyvil; and the owned unpatented claims, the White Chip, Black Chip, Green Chip, Yellow Chip, Red Chip, Pink Chip, and Blue Chip; and the recorded, unpatented mill sites, Mary Lee, Ruth and Dorothy; and the unrecorded, unpatented mill sites, the Gladys, Kathrine, Nettie, Ann and Mary Lee No. 2. The mine is in Sections 3, 4, 9 and 10, T.17N., R.16W., in the Cedar Valley Mining District, 11.0 miles east of Yucca.
with respect to which the Operator represents and undertakes:

(*a*) That he is the sole owner, in possession and entitled to possession, and that the property is subject only to the following claims, liens, or encumbrances as to each of which the subordination agreement of the holder is attached: There are no encumbrances on the claims owned. A subordination agreement covering the claims held under Option Agreement is attached.

(*b*) That he is a lessee, in possession and entitled to possession, and the subordination agreement of the lessor is attached.

3. *Exploration project.* The Operator, within thirty days from the date of this contract shall commence work on a project of exploration for[5] Copper; shall prosecute the work efficiently, expertly, in a workmanlike manner, in accordance with good mining standards, with suitable and adequate equipment, materials, and labor, all properly designed to bring the project to completion within a period of[6] ten (10) months from the date of this contract. The exploration project and the work to be performed are more fully described on Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, is made a part of this contract.

4. *Performance of the work.* The work shall be performed by the Operator, under his sole direction and control: *Provided,* That with the consent of the Government and its written approval of the contract or contracts, all or any part of the work may be performed by the Operator through contract or contracts with independent contractors. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

5. *Fixtures and improvements.* The Operator shall devote the land and all existing improvements, facilities, buildings, installations, and appurtenances to the purposes of the exploration project without any allowance for the use, rental value, depreciation, depletion, or other cost of acquiring, owning, or holding possession thereof. Any additional facilities, buildings, and fixtures, to be purchased, installed, or erected by the Operator, with the estimated cost of each, to which the Government will contribute currently its agreed pro rata share, are listed in Exhibit "A" attached hereto. The difference between the cost of such additional facilities, buildings, or fixtures, and the salvage value thereof at the conclusion of the work, shall be charged as a cost of the project to which the Government has contributed its pro rata share.

6. *Operating equipment.* Any operating equipment to be rented, purchased, or furnished by the Operator, with the allowable rental, purchase price, or depreciation, as the case may be, is listed under appropriate headings in Exhibit "A" attached hereto. As to equipment purchased for the project, the Government will contribute its agreed pro rata share of the cost thereof, and the difference between the cost and the salvage value at the conclusion of the work shall be charged as a cost of the project to which the Government has contributed its pro rata share.

[1] If sufficient space is not provided in any blank, use an extra sheet of paper and refer to it in the blank.
[2] State name, address, and nature of organization if any.
[3] Give legal description or enough to identify the property.
[4] Strike out the provision not applicable.
[5] Name of mineral.
[6] Not in excess of 2 years.

7. *Title to and disposition of property.* All facilities, buildings, fixtures, equipment, or other items costing more than $50 each, paid for or purchased with funds contributed jointly by the Operator and the Government, shall belong to the Operator and the Government jointly, in proportion to their respective contributions, and upon the termination of the contract, if they have any salvage value, shall be disposed of for their joint account unless the Government, in writing, waives its interest in any such items. The Government may require the dismantling, severance from land, and removal of any such items in order to realize its interest in the salvage value thereof, and the cost of any such removal and of the disposal of the items shall be for the joint account of the parties in proportion to their respective interests.

8. *Labor and supervision.* An itemized schedule of labor, by numbers and classes (miners, muckers, millmen, etc.), and of supervisors, by numbers and positions, with the maximum wages or salaries that may be paid to each as an allowable cost of the project is set forth in Exhibit "A" attached hereto.

9. *Rehabilitation and repairs.* A statement of the cost of any necessary rehabilitation or repairs to put existing facilities, buildings, installations, and fixtures into useful and operable condition and which are to be allowed as costs of the project is included in Exhibit "A."

10. *Allowable costs of the project.* The costs of the project in which the Government will participate are limited to the necessary, reasonable, direct costs of performing the exploration work, including the costs of materials, supplies, engineering, power, water, analytical work, accounting, and utilities, including items of equipment costing less than $50 each; and the costs referred to in Articles 5, 6, 8, and 9, and the exhibits annexed to and referred to in this contract. Although the Government may pay part of the cost of new or additional facilities, structures, buildings, and equipment, only the depreciation on such items, computed as indicated in Articles 5 and 6, will be charged as a cost of the project. No items of general overhead, corporate management, interest, taxes, or any other indirect costs not expressly allowed by these provisions, or work performed or costs incurred before the date of this contract, shall be allowed as costs of the project in which the Government will participate.

11. *Accounts and audits.* The Operator shall keep suitable records and accounts of operations, which the Government may inspect and audit at any time. The Government may at any time require an audit of the Operator's records and accounts by a certified public accountant, the cost thereof to be treated as a cost of the project. The Operator shall keep and preserve said records and accounts for at least 3 years after the completion of the project or the termination of this contract.

12. *Progress reports.* The Operator shall provide the Government with monthly reports of work performed under the contract upon forms to be provided by the Government. Each monthly progress report shall bear the certification of the Operator and shall constitute the Operator's invoice of costs incurred on the project during the period covered by the report.

13. *Payment to the Operator.* The monthly progress report (invoice), to the extent approved by the Government, shall be processed for payment by the Government. Payment shall be made in the amount of 50 percent of the approved costs incurred; *Provided,* That the aggregate total of all sums paid by the Government under this agreement shall not exceed $34,948.00, which is 50 percent of the agreed estimated total cost of this project, $69,896.00.

14. *Final reports by Operator.* Upon completion of the project or termination of this contract, the Operator shall provide the Government with a comprehensive geologic and engineering report, including an estimate of ore reserves, to the best of his ability. Four copies of all reports shall be furnished to the Government.

15. *Repayment by Operator.* If, upon the completion of the exploration project or termination of the contract, the Government considers that a discovery or development has resulted from the work from which commercial production of ore may be made, the Government, within 6 months thereafter, shall so certify to the Operator, particularly describing and delimiting its estimate of the discovery or the development. Thereafter, if and as ore is produced as a result of such discovery or development, the Operator and his successor in interest shall be and become obligated to pay to the Government a percentage royalty on the net smelter returns or other net proceeds realized from such ore, concentrates, or metal produced within ten (10) years from the date of this contract, until the total amount contributed by the Government, without interest, is fully repaid or said 10 years have elapsed, whichever occurs first, as follows:

Of net smelter returns or other net proceeds not in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent.

Of net smelter returns or other net proceeds in excess of eight dollars ($8.00) per ton of ore: One and one-half (1½) percent, plus one-half (½) percent for each additional full fifty cents ($0.50) in excess of eight dollars ($8.00) per ton of ore, but not in excess of a maximum of five (5) percent.

This obligation to repay from net returns or proceeds shall be and remain a claim and lien upon the mineral deposit which is the subject of the exploration project and upon any production resulting from such discovery or development, in favor of the Government, until fully paid, or until said 10-year period has elapsed; and this claim and lien and the Government's right to repayment shall survive any termination of the contract, whether by completion of the exploration project or otherwise. This article is not to be construed as imposing any obligation on the Operator or his successor in interest to produce ore from any such discovery or development.

16. *No assignment of contract.* Without the written consent of the Government, the Operator shall not assign or otherwise transfer or hypothecate this contract or any rights thereunder.

17. *Termination and completion.* The Government may, at any time, by written notice to the Operator, terminate this contract: (*a*) If the Operator fails to provide his share of the money necessary to prosecute operations pursuant to the terms of the contract; (*b*) if the Operator, in the opinion of the Government, fails to prosecute operations pursuant to the terms of the contract; or (*c*) if in the opinion of the Government, operations up to the time of the notice have not indicated the probability of making any worthwhile discovery and in the opinion of the Government further operations are not justified. Upon the completion of the project or any termination of the contract the Operator shall render to the Government a full and final accounting of his operations under the contract and his expenditures of money; shall dispose of any unused materials, supplies, and equipment for the joint account of the Operator and the Government in the proportion of their respective interests; and shall pay to the Government its pro-rata share of any money remaining.

Executed in sextuplicate the day and year first above written.

Yucca Mining and Milling Co.
(Operator)

By Robert J. Dalton
Robert J. Dalton, President

THE UNITED STATES OF AMERICA

By C. Whittendorf
ACTING Administrator,
Defense Minerals Exploration
Administration.

U. S. GOVERNMENT PRINTING OFFICE 16—64066-2

The Yucca Mining and Milling Company

Exploration Project Contract

The Antler Mine

Exhibit "A"

Exploration Project

Time Schedule - Month

0 - 6

Stage I*

1. On the fifth level south drive 360 feet of drift southwesterly from a footwall crosscut to explore the footwall vein as shown on the attached map.

2. On the fifth level north drive 225 feet of drift and crosscut northeasterly to explore a faulted section of the lode as shown on the attached map.

Stage II*

1. Drive westerly a maximum of four crosscuts, aggregating not more than 280 feet, from the old and the new south drifts to explore the mineralized zone as shown on the attached map. The exact location of the crosscuts will be determined by the Operator upon the basis of results of Stage I, subject to approval by the Government.

2. Raise from the face of the new northdrift 135 feet to explore the mineralized zone. The work is to be undertaken only after completion of Stage II-2 to the satisfaction of the Government and approval thereby.

Stage III*

1. From the new south drift and the crosscuts drive not more than four raises, aggregating a maximum of 800 ft., to explore the mineralized zone to the surface. The exact locations of the raises are to be determined by the Operator upon the basis of results of Stages I-1 and II-1, subject to approval by the Government.

* As indicated in Section 4 of the Contract, all subcontracts are subject to approval by the Government in writing.

The proposed work and the estimated cost thereof is as follows:

Stage I

1. Drive 360 feet of drift @ $3.304/ft. for powder, caps, and fuse. Additional costs appear elsewhere. The drift is to be of sufficient size for shovel operation but is not to exceed 6.0' x 7.5' in the clear — $ 1,189.35

2. Drive 225 feet of drift and crosscut @ $3.304/ft. for powder, caps and fuse. Additional costs appear elsewhere. The drift and crosscut are to be of sufficient size for shovel operation but are not to exceed 6.0' x 7.5' in the clear — 743.34

Total — $ 1,932.69

Stage II

1. Drive 280 feet of crosscut @ $3.304/ft. for powder, fuse and caps. Additional costs appear elsewhere. The crosscuts are to be of sufficient size for shovel operation but are not to exceed 6.0'x 7.5' in the clear — 925.05

2. Raise 135 feet @ $2.66/ft. for powder, caps and fuse. Additional costs appear elsewhere. The raise is not to exceed 4.0' x 7.0' in the clear. — 359.13

Total — $1,284.18

Stage III

1. Raise 800 feet @ $2.66/ft for powder, caps and fuse. Additional costs appear elsewhere. The raises are not to exceed 4.0' x 7.0' in the clear. — 2,128.20

Total — 2,128.20

Summary of Estimated Costs

Stage I (costs are segregated in items below)	- - - - -
Stage II " " " " " "	- - - - -
Stage III " " " " " "	- - - - -
Fixtures and improvements	$ 3,409.85
Operating Equipment and Supplies	25,775.98
Labor and Supervision	40,710.17
Rehabilitation and repairs	- - - - -
Total	$69,896.00
Government participation one half of the above	$ 34,948.00

Fixtures and Improvements

1,520'	- Pipe, 2 inch @ $0.355 per foot	$ 539.60
1,520'	- Pipe, 1 inch @ $0.1584 per foot	240.77
	Valves and fittings 30% of pipe cost	234.11
1,730'	- Rail 16# @ $11.91 cwt, 9,200#	1,095.72
500#	- Track spikes @ $11.91 cwt.	59.55
750	- Ties, 4" x 6" x 3' @ $115/M, 4.5 M	517.50
5	- Switches @ $35.00 each	175.00
150	- Pairs of splice bars and bolts @ $0.60 each	90.00
	Sales tax and freight 5%	147.61
	Contingency 10%	309.99
	Total	$ 3,409.85

Operating Equipment

Equipment to be rented

1 - Transformer @ $35/month, 6 months		$ 210.00
	Sub-Total	210.00

Equipment to be purchased

Not applicable

Equipment to be furnished by the operator on a depreciation basis*

	Value	Monthly Allowance
1 - Hoist, skip, cable etc.	$7,500.00	$ 125.00
Compressors	7,500.00	125.00
2 - Mucking machines @ $3,750. each	7,500.00	125.00
6 - Drills and accessories @$1,000.00 ea.	6,000.00	100.00
12 - Ore cars @ $250 each	3,000.00	50.00
Truck and misc. equipment	6,000.00	100.00
		$ 625.00
	Six months	$3,750.00
	Sub-total	$3,750.00

* Depreciation is to be allowed only in the months in which the Operator's equipment is of direct benefit to the exploration project.

Supplies to be purchased

Powder - @ $0.20/lb, 24,195 pounds	$ 4,839.00
Fuse @ $0.65/100, 54,000 feet	351.00
Caps @ $2.175/100, 7,130	155.08

Supplies to be purchased (continued)

Timber for raises, 30 bd. ft/foot of raise 935 feet, 28.05M @ $115/M	$ 3,225.75
Timber for drifts, 30 sets @ 150 bd. ft. each 4.5M @ $115/M	517.50
Bits	3,379.75
Drill steel 1,800 feet @ $1.00/ft.	1,800.00
Sales tax and freight 5%	713.40
Contingency 10%	1,498.15
Oil and grease	450.00
Hand tools as shovels, picks, wrenches, saws, hammers, etc.	499.91
Assays @ $5.00 each, 100	500.00
Power @ $647.74 per month, 6 months	3,886.44
Sub-total	$21,815.98
Total	$25,775.98

Labor and Supervision

1. The following maximum labor will be employed at the rates shown:*

1 - Shift boss	@ $14.08/day,	150 days	$ 2,112.00
1 - Hoistman	@ $13.39/day,	" "	2,008.50
1 - Toplander	@ $13.39/day,	" "	2,008.50
1 - Skiptender	@ $12.09/day,	" "	1,813.50
4 - Miners	@ $13.39/day,	" "	8,034.00
4 - Helpers	@ $12.09/day,	" "	7,254.00
3 - Trammers	@ $11.355/day,	" "	5,109.00
1 - Mechanic	@ $13.39/day,	" "	2,008.50
1 - Truck Driver	@ $12.09/day,	" "	1,813.50
O.A.B.			482.13
Compensation Insurance			3,254.46
Unemployment Insurance			868.08
			$ 36,766.17

* Includes overtime for sixth day.

2. The following supervision will be employed at the rates shown:

1 - Superintendant @ $500/month, 6 months at ½ time	$ 1,500.00
1 - Junior engineer @ $325/month, 6 months	1,950.00
O.A.B. Unemployment Insurance, etc. ($214.80 + $279.20)	494.00
Sub-total	$ 3,944.00
total	$40,710.17

Rehabilitation and Repairs

Not applicable.

No additional buildings, installations, fixtures, equipment or improvements to be purchased, rented, repaired or rehabilitated, except as listed above, are to be allowed as costs under this contract.

The exploration work shall be carried on, as far as practicable with equipment, materials, crews, supervision and engineering separate and distinct from any other operations of the Operator, to avoid confusion of costs under the contract with any other costs. To the extent economically advisable, equipment, labor, supervision, engineering, power, air, materials and supplies used in other operations may be used for exploration, and the direct costs arising out of such use prorated, but the basis of such proration shall be at all times subject to the approval of the Government, and the cost involved in such proration will be dissallowed by the Government to the extent that it is dissatisfied therewith.

Underground maps showing the monthly progress of the exploration with assays of samples taken concurrently with the advance are to be included in the progress report required under section 12 of the project contract. In case such maps are not submitted, the Government, at its discretion, may have the necessary work performed and charge the same to the contract.

MF-202

~~LANDLORD'S~~ SUBORDINATION AGREEMENT

KNOW ALL MEN BY THESE PRESENTS:

WHEREAS, the undersigned is the owner in fee simple of that certain parcel of ground in the county of Mohave, State of Arizona, described in a certain Exploration Project Contract dated December 19, 1951, between The Yucca Mining and Milling Company, a corporation organized and existing under the laws of Arizona, Assignee of Contract Purchaser the ~~lessee~~ of said property, and the United States of America;

NOW, THEREFORE, the undersigned, as Vendor ~~lessor~~ of said property under option agreement ~~lease~~ dated March 30, 1949, does by these presents subordinate all of his right, title, and interest under the provisions of said option agreement ~~lease~~ to the right, title, and interest of the United States of America under the provisions of said Exploration Project Contract, and agrees that the lien and claim of the United States of America under the provisions of said contract shall be prior to the undersigned's rights to rentals or royalties under the terms of said option agreement ~~lease~~; and

The undersigned further agrees that if said option ~~leasehold~~ interest should be surrendered or if said option agreement ~~lease~~ should terminate at any time prior to the expiration of the rights of the United States of America under said Exploration Project Contract, the undersigned shall assume and does hereby assume all of the obligations of the assignee of contract purchaser ~~lessee~~ under said Exploration Project Contract to make repayment to the United States of America according to the terms of said contract; and

The undersigned agrees to commit no act, nor assert any claim under judicial process or otherwise that may contravene or conflict with the prior lien and claim of the United States of America under the provisions of said Exploration Project Contract.

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

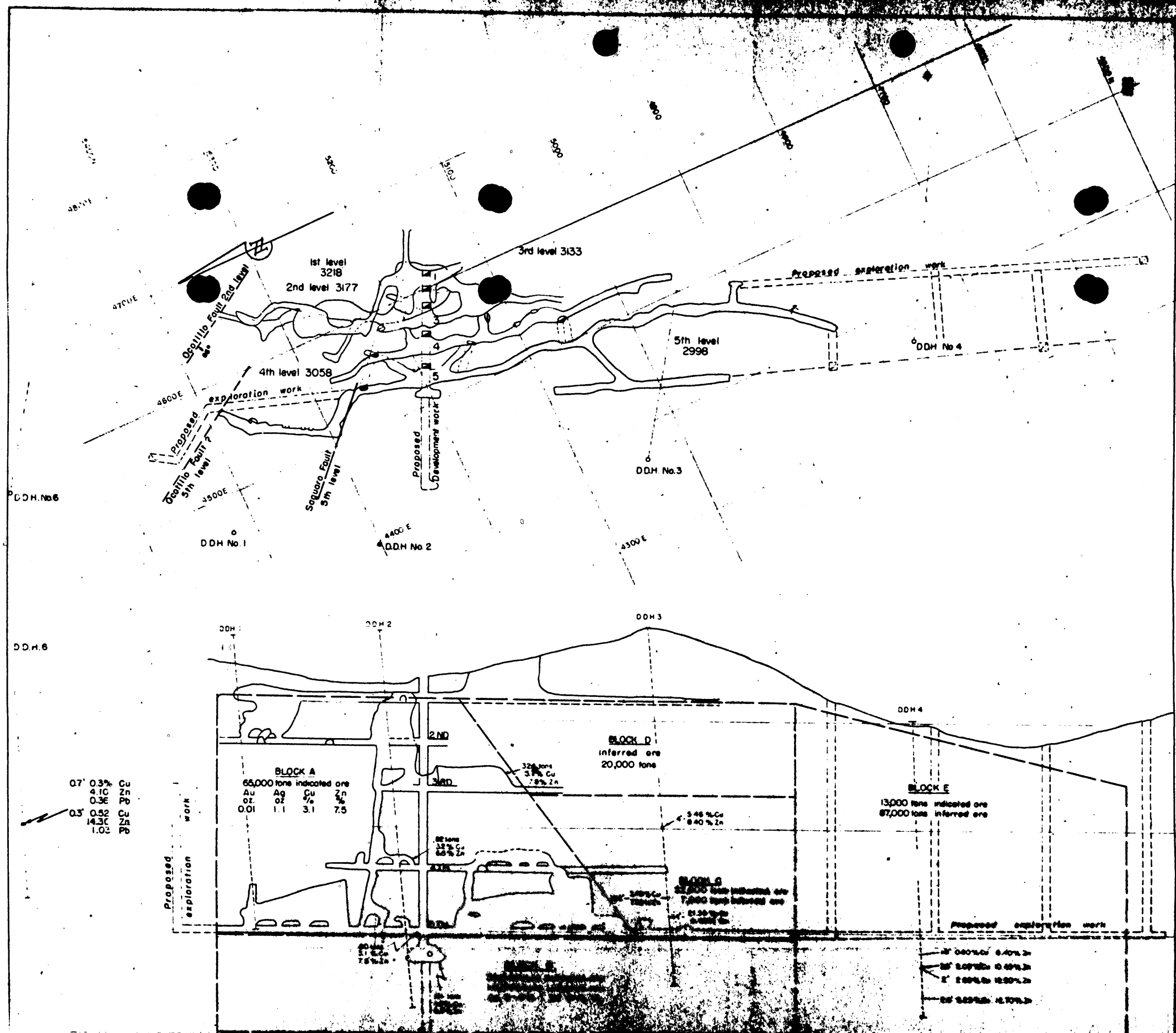
Dated this fourteenth day of December, 1951

ARIZONA ANDES MINING COMPANY

By [signature]

President

U. S. GOVERNMENT PRINTING OFFICE 16—64582-1


1st level
3218
2nd level 3177
3rd level 3133
4th level 3058
5th level
2998
Ocotillo Fault 2nd level
Proposed exploration work
Proposed exploration work
Ocotillo Fault 5th level
Saguaro Fault 5th level
Proposed Development work
DDH No 4
DDH No.3
DDH No.6
DDH No. 1
DDH No 2
4600E
4500E
4400 E
4300 E
DDH 1
DDH 2
DDH 3
DDH 4
DDH.6
2ND
3RD
BLOCK A
65,000 tons indicated ore
Au oz. Ag oz Cu % Zn %
0.01 1.1 3.1 7.5
BLOCK D
inferred ore
20,000 tons
BLOCK E
13,000 tons indicated ore
67,000 tons inferred ore
0.7' 0.3% Cu
4.10 Zn
0.3€ Pb
0.3' 0.52 Cu
14.3C Zn
1.0C Pb
Proposed exploration work
Proposed exploration work

ANDON F. STROBEL

YUCCA MINING AND MILLING CO., INC.

Antler Mine

YUCCA, ARIZONA

ROBERT J. DALTON, PRES-TREAS.
FERD WOLF, V-PRES.
BEN F. WILLIAMS, SECY.

January 20,1951

REGIONAL DIRECTOR'S
OFFICE
REGION IV
JAN 24 1951
BUREAU OF MINES
DENVER, COLORADO

Mr. J. H. East, Jr.
Regional Director, Region IV
U. S. Bureau of Mines
224 Custom House
Denver, Colorado

Dear Sir:

In accordance with your letter of October 17, 1950, enclosed herewith in quadruplicate is the information requested by you in support of our application for a loan of $833,250.00 required to increase the production of copper, lead and zinc from our property.

Sincerely yours,

Robert J. Dalton

Robert J. Dalton, President
Yucca Mining and Milling Co., Inc.

RJD:c

FOUNDED 1902 BY L. C. SHATTUCK

S. S. SHATTUCK, PRESIDENT
I. F. BURGESS, VICE PRES.
J. H. WATSON, VICE PRES.
DR. N. C. BLEDSOE, VICE PRES.

MINERS AND MERCHANTS BANK
BISBEE, ARIZ.

ERNEST BEYER, CASHIER
R. T. EDWARDS, ASST, CASHIER
FRED H. CORRIN, ASST. CASHIER
RALPH BRANDT, ASST. CASHIER

January 17, 1951

Mr. Robert J. Dalton, President and General Manager
Yucca Mining and Milling Company, Inc.
Box 67
Yucca, Arizona

Dear Mr. Dalton:

Your application relative to a loan of $750,000.00 for the development and expansion of your production facilities has received the attention of our loan committee.

We regret that our loan committee has rejected the same and we can do nothing for you. Your proposition is based upon potential possibilities of your property but is not acceptable as collateral for a banking institution.

Yours very truly,

I. F. Burgess
Vice President

IFB:ec

YUCCA MINING AND MILLING CO., INC.

Antler Mine

YUCCA, ARIZONA

ROBERT J. DALTON, PRES-TREAS.
FERD WOLF, V-PRES.
BEN F. WILLIAMS, SECY.

INDEX

	Page
Letter Of Transmittal	
Ownership and History	1
Production	3
Proposed Program	4
Ore Reserves	13
Management	14
Remarks	15
Finances from other Sources	Last Page
Map, Yucca Mining and Milling Co. Property	Exhibit A
Map, Antler Mine - 1" - 50'	Enclosed

January 1, 1951

ANTLER MINE

YUCCA MINING AND MILLING CO.

OWNERSHIP AND HISTORY:-

The history of the mine up to March 1948 is contained in "R I 4214 U. S. B. M. Report of Investigations Antler Copper-Zinc Deposit. Mohave County, Arizona: by T. M. Romslo. In March of 1948 the Faire Mining Corp. of Golden, Colorado obtained the property under an operating agreement from the Arizona Antlers Mining Co. In March of 1949 the Fiare Mining Corp. was taken over by the Yucca Mining and Milling Co., at which time the operating agreement with Arizona Antlers Mining Corp. was re-negotiated to a purchase agreement and all major outstanding obligations against the property have been paid off.

The Faire Mining Corp. sank the then operating shaft an additional 165 ft. and developed the mine to the point where a mill was indicated. Since acquisition of the property by Yucca Mining and Milling Co., 4 mill sites and 7 claims have been acquired as shown on map marked Exhibit "A" and a mill with a capacity of 100 tons per day has been installed.

In March of 1949 work on the construction of the mill was started with a scheduled completion date of July 1, 1949. In May of 1949 the prices of copper and zinc dropped to the point where operation of the property at a profit was not possible and construction of the mill was not finished until September of 1949. At that time the company was faced with the problem of closing the property down or operating on a development

program with the hope that the cost of operating would not be much greater than closing the property down and maintaining it in a condition to resume operations when economic conditions indicated the advisability of such a course.

After careful consideration the decision was made to operate on a "one shift mill operations basis", concentrating on the development of the mine and a study of the metallurgy on a mill operating scale.

From September 1949 through May 1950 this plan was followed with excellent informational and development results but poor financial results. Additional copper roughing equipment was installed in the mill. Considerable information was obtained on the nature and occurence of the ore body and tentative plans made for the mining method to be employed in the exploitation of the mine and definite establishment of an ore body that would warrant a larger exploitation program.

In May of 1950, at which time metal prices indicated an "operation for profit" program, additional money was appropriated for necessary facilities to operate on a "three shift mill operation basis". This included an additional 325 cu. ft. of compressed air for the mine, mucking machines, electric cap lamps, a complete machine shop on our own property, drill steel fabricating equipment, an additional water supply.

Up to May of 1948 our water supply had been adequate for the milling of 100 tons of ore per day without reusing any water. At the same time the "three shift mill operation" was initiated, the water supply began falling off at an alarming rate, due to local and regional lack of precipitation since January of 1949, a situation that is still with us as of the date of this report.

At this time we did additional development on our source of water

with temporary success, and it became increasingly apparent that water was becoming a scarce article. We then installed a water recovery tailing thickener and also acquired the well that had supplied the Boriana Mine with 26 gpm of water for 2½ years. At the present writing the well is now producing 5 gpm.

At the present time we are operating on a reduced capacity basis of 60 tons per day, at a recovery considerably below normal due to the excessive use of reclaimed water.

PRODUCTION:-

Following is a resume' of the available data of the production of the mine since acquisition by the Faire Mining Corp. Data prior to that time is contained in RI 4214, U. S. B. M. Publication referred to in the first page of this report.

Production by Faire Mining Corp. shipped direct to A. S. & R. Co. Smelter at Hayden, Arizona:

Tons	Au Oz/Ton	Ag Oz/Ton	Cu%	Zn%	Pb%
945	.009	1.11	4.11	7.6	0.45

Production by Yucca Mining and Milling Co.:

11,942	.01	1.2	3.08	7.47
12,887	.01	1.1	3.1	7.5

During the past year, Nov. 30, 1949 to Nov. 30, 1950, we have produced and milled 10,139 tons of ore from the Antler Mine from which we recovered:

Oz Au	Oz Ag	Lbs Copper	Lbs Zinc	Lbs Lead
69.96	7,152.8	516,275	937,041	125,697

In addition we milled 1,229 Tons of ore from the Copper World Mine from which we recovered:

Lbs Copper	Lbs Zinc
94,192	243,716

PROPOSED PROGRAM:-

In order to increase our production we must go into an expanded program immediately in the form of: (1) An accelerated mine exploration and development program; (2) A stable and adequate water supply; (3) Additions to the mill to increase the recovery and capacity; (4) A development program that will insure continuity of an ore supply to the mill; (5) A housing program that will provide adequate living facilities for our present organization.

The following program is submitted as our basic requirements, in the order of their importance, to increase our production approximately six times within a two year period after initiation of the program with an immediate increased production as soon as the necessary water becomes available:

1. Water Supply.
2. Mill Revisions and Additions.
3. Housing.
4. Development (Mine).

All based on a two part program that will eventually have the property producing at the rate of 300 tons per day.

PART I:

To develop the mill and mine capacity to 140 tons of ore per day. This will involve:

1. Developing water supply.
2. Mine exploration and development.
3. Adequate housing for personnel.
4. Mill additions and revisions.
5. New vertical shaft.
6. Increase of inventories and operating capital.

DEVELOPMENT PROGRAM - FIRST PHASE:

1. Water Supply:

a. Exploration for water in the vicinity of the mine.

Geology, wells and pumps		$10,000.00

b. Alternate or Second Choice:

If water must be developed in the vicinity of Yucca:

1 - 700 ft. well	$7,000.00	
1 - Deep well pump for 700 ft. well	3,000.00	
2 - 50,000 gal storage tanks	3,000.00	
50,000 ft. 3" pipe	35,000.00	
2 - 50 HP diesel engines	3,000.00	
2 - Duplex, positive displacement pumps to deliver 100 gpm against 1244 ft. head	3,000.00	
Installation of pipe line	6,000.00	60,000.00

2. Mine Exploration and Development:

Extension of 5th level south drift to vicinity of new shaft: 450 ft. @ $30 per ft.	13,500.00
Cross cut in to hanging wall for diamond drill stations to put down 2-250 ft. holes, 200 ft. cross cut @ $30 per ft.	6,000.00
Diamond Drill Stations, 10x10x15 - 1500 cu ft. @ $1 cu. ft.	1,500.00
Diamond drilling 500 ft. @ $7	3,500.00
Total	23,500.00

Hoist, headframes, and bins for same, installed	25.000.00
Station locket and cross cuts from shaft to vein	30,000.00
Contingencies for shaft sinking	50,000.00
Total	167,500.00
6. Increase of Inventories and Operating Capital:	
Increase in Inventory	25,000.00
Concentrates in transit	50,000.00
Current Pay Roll and supplies	50,000.00
Total	125,000.00
SUMMARY OF REQUIREMENTS - FIRST PHASE:	
1. Water Supply	70,000.00
2. Mine Development Program	23,500.00
3. Housing Facilities	26,000.00
4. Mill Additions and Revisions	28,500.00
5, New Vertical Shaft	167,500.00
6. Increase of Inventories and Operating Capital	125,000.00
Total	440,500.00
DEVELOPMENT PROGRAM- SECOND PHASE:-	
1. Sinking Antler Shaft 200 additional ft. @ $175 ft.	35,000.00
2. Drifting and crosscutting on new bottom level to vertical shaft (No. 2 Shaft) 900 ft. @ $30 per ft.	27,000.00
3. Increasing the depth of No. 2 Shaft by raising from new bottom level, 250 ft. @ $250 per ft.	50,000.00
Stations, pockets, and provisions for the continued sinking of No. 2 Shaft	30,000.00
4. Additional 150 ton per day mill capacity	125,000.00
Contingencies for shaft sinking	50,000.00
Total	317,000.00

TOTAL - Development Program FIRST PHASE	440,500.00
TOTAL - Development Program SECOND PHASE	317,000.00
Administrative, Overhead and Engineering	75,750.00
TOTAL OF ALL COSTS	833,250.00

PRESENT FACILITIES:

ELECTRICAL -

The property is completely electrified with transformer capacity already installed to carry out the First Phase of the Program. At the present time we have one bank of transformers serving the mine of 105 kva and one bank serving the mill and compressor of 225 kva. One of the transformers of the mill bank is out of order and The Citizens Utilities has a new bank of 400kva to serve both mine and mill ready to install. Our combined demand now is 242 kw.

MINE EQUIPMENT;

Mine:

1 - 25 HP Ingersoll Rand Monoblock 2 stage centrifugal pump.

1 - Gardner Denver Duplex High Head Pump, air powered.

2 - Eimco 12B Mucking Machines.

12 - 16 cu. ft. roller bearing, end dump ore cars.

1 - 35 HP Fairbanks Morse hoist with 1 ton capacity skip, hoisting speed 200 ft/min.

6 - Jack Hammers.

7 - Stopers

7 - Drifters.

Mine Accessory Equipment:

1 - Saw Mill and framing shed.

1 - Gardner Denver V Type Compressor 240 cu. ft/min.

1 - Ingersoll Rand Imperial Type Compressor 325 cu. ft/min.

1 - Chicago Pneumatic N.S.N. Compressor 160 cu.ft/min.

1 - Ingersoll Rand Steel Shanking Machine.

1 - Ingersoll Rand Drill Steel Punch.

1 - 100 Lamp Edison cap lamp charger and lamps.

1 - Blacksmith Shop.

MACHINE SHOP EQUIPMENT:

1 - Portable 400 Amp G. E. Welder.

2 - Oxygen Acetylene outfits complete.

1 - 14" Swing, back geared, quick change lathe.

1 - Armstrong power hacksaw, 8" capacity.

1 - Multiple speed drill press, 1" drill capacity.

1 - Electric grinder.

VEHICLES:

1 - 1948 F6 Ford dump truck.

1 - 1936 1½ Ton Ford dump truck.

1 - 1948 2 Ton heavy duty Reo flatrack truck.

1 - 1948 ¾ Ton heavy duty F3 Ford pickup.

1 - 1949 ½ Yd Hough Pay Loader.

Mill Equipment

Mine Bin 100 Tons
↓
Coarse Ore Bin 50 Tons
↓
Reciprocating Feeder
↓
10"x21" Telsmith Crusher
↓
16" Belt Conveyor
↓
2 ft. Symons Cone Crusher
↓
16" Belt Conveyor
↓
Fine Ore Bin 100 Tons
↓
20" Belt Feeder
↓
4'x8' Marcy Rod Mill
↓
30" Wemco Classifier (Sands → Rod Mill)
↓
2-5'6" Fagergren, 4 No 18 Denver Cu. Roughers Flot. Cells

Cu. Tailing
↓
2" Sand Pump
↓
2-5'x5' Zn. Conditioners
↓
4-No21 Denver Zn. Rougher Flot. Cells
Zn Rougher Conc
↓
2-No21 Denver Cleaner Cells (Cleaner Tail → Rougher Cells)
Zn Conc.
↓
2" Sand Pump
↓
4'x3 Disc. Eimco Filter
Zn Conc.
↓
Concrete Slab ½ yd. Loader
↓
Truck To R.R.

Tailings
↓
2" Sand Pump
↓
26' Dorr Thickner
↓
Tailing 50% Solids To Tail Pond

Surge Tank
↓
2" Pump
Clear Water To Mill

Cu. Rougher Conc.
↓
2-No18 Denver Cleaner Cells (Cleaner Tail → Rougher Cells)
Cu Conc
↓
2" Sand Pump
↓
6'x2 Disc American Filter
Cu. Conc.
↓
Concrete Slab ½ yd. Loader
↓
Truck To R.R.

Water Supply

Wells near mine
~~Bertrand Well Gas. Eng. Pump~~
~~½ Miles 1½" x 1" Pipe~~
↓
Herridge Well Gas. Eng. Pump
↓
2 Miles 3" Pipe
1 Mile 2" "

Antler Well Elec. Pump
1100' 2½" Pipe
↓
Camp Supply Tank
↓
To Camp
18000 Gal. Mill Supply Tank
↓
To Mill

Flow Sheet
MILL ~~AND~~ WATER SUPPLY
YUCCA MINING AND MILLING Co
YUCCA, ARIZ JAN. 2, 1951

R.T.D

SURFACE EQUIPMENT:

1 - Change room, 10 man capacity.

1 - Mess Hall and cook's quarters, capacity 25 men.

2 - Warehouse buildings.

1 - Analytical Laboratory wet work, not equiped for fire assaying.

1 - Flotation Laboratory for testing, complete.

1 - 5 Room Office Building; provides office facilities and bunks for Manager, Mine Supt., Mill Supt., Bookkeeper and Shift Boss.

5 - Improvised buildings as bunk houses for single men - capacity 15 men.

MISCELANEOUS EQUIPMENT:

1 - 2 Sack, gas engine driven concrete mixer.

1 - 24 Ton truck scale.

1 - 160 cu. ft. Chicago Pneumatic Portable gas engine driven air compressor.

PRESENT EMPLOYEES:

1 - President and general manager.

1 - Mine superintendent.

1 - Mill superintendent.

1 - Assayer

1 - Bookkeeper supplemented by retained auditor.

1 - Master mechanic.

1 - Mechanic.

1 - Mine foreman.

2 - Hoistmen

1 - Top Lander, blacksmith and drill mechanic.

2 - Skiptenders.

8 - Miners.

8 - Muckers.

2 - Truckdrivers.

3 - Flotation operators.

3 - Rod mill operators.

1 - Crusherman.

1 - Laborer, Mill tailings.

---

41 Total Present Employees.

ESTIMATED ADDITIONAL EMPLOYEES REQUIRED:

2 - Mining engineers (Junior).

2 - Millwrights.

4 - Miners.

4 - Muckers.

4 - Unskilled labor.

Drilling of well and housing will be contracted. Arrangements have been made with a well driller in the vicinity and a local contractor for the housing. The balance of the labor is now available locally.

COMPLETION DATA AND ESTIMATED CAPACITY:

As soon as 40 gpm of water becomes available the mill will be able to handle 120 tons of ore per day. This could happen any day with the normal winter precipitation. However, the recovery of the metals from the ore would not be as satisfactory as it would be when the mill revisions and additions are installed. When these are installed the capacity of the mill will be very close to 150 tons per day and the recovery considerably better than at present. This could be accomplished in approximately six months, and would also include the drifting and shaft raising from the present lower level of the mine.

The second phase of the program would take between a year and 18 months.

At the end of the First Phase Period, which would be approximately

six months from the initiation of the program, our yearly rate of production would be approximately:

Oz Au	Oz Ag	Lbs Copper	Lbs Zinc	Lbs Lead
170	17,000	1,300,000	2,500,000	300,000

At the end of the two year period our production would be double the above or five times our present production.

ACCESSIBILITY OF MINE:

The mine is situated about 11 miles east of Yucca, Arizona over a county maintained, all weather, high gear, gravel road. At the end of 1951 the new section of Highway 66 between Kingman and Topock, Arizona will be finished and then Yucca will be on the direct truck transportation route from Los Angeles, 270 miles away. Yucca is also on the Santa Fe Ry. which is our shipping point for concentrates which are hauled by truck from the mill which is located at the mine.

ORE RESERVES:

As of the end of our Fiscal Year (November 30, 1950), we have accomplished the following:

1. Developed the mine to where we have 100,000 tons of positive ore; 150,000 tons of probable ore, to the diamond drill horizon, and established a definite probability that the ore occurrence is deep and that the mine has a potential tonnage somewhere between 250,000 and 2,000,000 tons.

The ore produced by Yucca Mining and Milling Co. was principally development ore and anything that had to be moved in the normal development of the mine that had to be hoisted and would pay its way through the mill, was milled and is scheduled in the tons of ore extracted from the mine. Since the major portion of the development was on the bottom level, of necessity all accrued waste and marginal

ore had to be hoisted. All development work has been predicated upon a cut and fill method of mining and it is expected that the average head assay of 250,000 tons of ore will be very close to an extimated head assay from the diamond drill cores of:

Au Oz/Ton	Ag Oz/Ton	Cu%	Zn%	Pb%
.008	1.5	3.4	8.5	0.8

There has been no assay map kept of the mine principally because we feel, due to the nature and occurrence of the ore that mill heads are much more indicative of probable grade than cut samples projected through a hypothetical mining method. However, we have noted a very definite trend in an increased copper tenor of the ore with depth in our recent operations.

OTHER REPORTS:

The property has been examined by various engineers, among whom were: J. A. Wilcox and H. F. Mills for Shattuck Denn Mining Corp., L. Kenneth Wilson for the American Smelting and Refining Co., R. B. Mulchay for Anaconda Copper Co. All of these examinations were for purchase by the respective companies. However their reports are not available to us for inclusion in this application. I also understand that a more embracing confidential report is contained in the U. S. Bureau of Mines file on the Antler property.

MINE MANAGEMENT:

The mine has been under the continous management of the writer of this report since October od 1947. He has personally directed the development work, design, construction and operation of the property to the present state. He is a graduate mining engineer of the Colorado School of Mines and has been actively engaged in the mining industry for twenty years.

REMARKS:

To sumarize our situation, we feel that we have established the fact that the property is a large potential producer, and all of our development and design has been pointed toward and predicated upon enlargement of all facilities. To be specific: all drifts, cross cuts, curves and track allows for mechanical mucking and motorized transportation. The smallest rail in the mine is 16 pound. The mill was located in such a position that the crushing plant when situated at the collar of the proposed new shaft can deliver its product direct to the mill by conveyor belt. The machine shop is so located that underground equipment can be transported by rail from the collar to the shop. Tailings disposal facilities will handle a million tons. In the mill the primary grinding mill is a rod mill which is now grinding coarser than we would like. However by installing a small secondary ball mill in closed circuit with the classifier and changing the rod mill to open circuit the capacity of the mill can be expanded very readily to 150 tons per day. Provision has been made for the addition of more flotation machines and we have just recently installed filter equipment and concentrate storage facilities to handle the increased tonnage.

All of our equipment is in first class condition. However our inventory of replacement parts should be materially increased for continued efficient operation.

FINANCES FROM OTHER SOURCES:

We have attempted to secure finances through various banks based upon substantially the same information contained in this report and attached hereto is the primary correspondence and the refusal relative to such financing.

YUCCA MINING AND MILLING CO., INC.

Antler Mine

YUCCA, ARIZONA

ROBERT J. DALTON, PRES-TREAS.
FERD WOLF, V-PRES.
BEN F. WILLIAMS, SECY.

December 19, 1950

Miners and Merchants Bank
Bisbee, Arizona.

Gentlemen:

Enclosed herewith are the data and report requested by you in our recent conversation relative to a loan of ($50,000.00) for the development and expansion of our production facilities.

Notwithstanding the fact that you gave us very little encouragement of any bank entertaining such a loan, we feel that the resources available will justify further consideration.

Sincerely yours,

Robert J. Dalton
President and Gen. Mgr.

RJD:c

Form MF-100.
(March 1951)

U. [redacted] PARTMENT OF THE INTERI[redacted]

DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA

FOR USE UNDER THE

DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. DMA-527

Date received MS - 0420

Yucca Mining and Milling Co.
P O Box 67
Yucca, Arizona

Name and address of applicant

Date January 20, 1951

INSTRUCTIONS

This form is to be filed with Defense Minerals Administration, Department of the Interior, Washington 25, D. C. It should be accompanied by appropriate application form when a specific type of Government assistance is requested, in the form of (1) loan, (2) purchase contract, (3) Government guarantee of a private loan, (4) ~~Necessity Certificate pursuant to the provisions of Sec. 124 A (Amortization Deduction) of Internal Revenue Code, 1950~~ priorities or allocation of mining equipment, and maintenance, repair and operating supplies, and (5) other forms of Government assistance that might arise under the Act. Submit four (4) signed copies of the form and accompanying papers. Name and address should be stamped or typed on each sheet of this form and all accompanying papers. *When a question is inapplicable it should be so stated on the form.* Additional sheets may be attached in answering any questions or in supplying additional information. (IF YOU CANNOT ANSWER A QUESTION, SO STATE.) If a question is answered elsewhere indicate where answered. It is not necessary to answer it again.

5 GENERAL TECHNICAL DATA

Supply the following information on separate sheets, arranged, numbered, and lettered as indicated:

1. Materials produced:
   (*a*) What are the chief mine, mill, or smelter products?
   (*b*) What are the byproducts, if any?
2. Name(s) and type(s) of mine(s), mill(s), smelter(s), refinery(ies), pit(s), quarry (ies), drilling operation(s). Include old names of property, if any. Show extent of workings, including the following:
   (*a*) Linear feet of shafts.
   (*b*) Linear feet of drifts and crosscuts.
   (*c*) Linear feet of tunnels or adits.
   (*d*) Linear feet of other mine openings (explain briefly).

   Indicate whether mine is flooded or not. Describe any pumping problems. Give size or productive capacity.
3. For each operation listed above supply the following:
   (*a*) Distance and direction from nearest town and shipping point.
   (*b*) Mining district.
   (*c*) Township, Section, Range.
   (*d*) County, State.
4. (*a*) State whether or not property is now in operation, and if in operation, by whom operated.
   (*b*) Are you operating this property as:
   - ☐ Owner.
   - ☐ Lessee.
   - ☐ Contractor.
5. Number of years in production _____

   If not in production or operation, estimated date when production will begin _____
6. Experience of operators:

   Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who manage the project.
7. History:
   (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for suspension of operation.
   (*b*) State briefly the known history and production of adjoining and neighboring properties.
   (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

JUN 25 1951

16—63792-1

8. Names and addresses of Officers, Directors, or Partners, and in addition thereto, the five largest stockholders if applicant is a corporation.

Robert J. Dalton Name and Address (a)	Official Title (If officer is also director indicate by "D") (b)	Total of Annual Salary, Commissions, Bonuses, Etc., Received From Applicant and Affiliates During Last Fiscal Year (c)	Estimated Net Worth Outside of Interest in Applicant (d)	Number of Shares Held in Applicant Corporation: Common (e)	Number of Shares Held in Applicant Corporation: Preferred (f)	Life Insurance Carried for Benefit of Applicant: Amount (g)	Life Insurance Carried for Benefit of Applicant: Net Cash Surrender Value After Loans (h)
Robert J. Dalton San Bernardino, Cal	Pres. Treas. Manager D	$6000.00					
Ferd Wolf Golden, Colo.	V. Pres D	None					
Ben F. Williams Douglas, Arizona	Sec. D	None					
John Penny Douglas, Arizona	D	None					
Ed. M. Whittaker Douglas, Arizona	D	None					
Armando Varella Douglas, Arizona	D	None					
	Total	$6000.00	x x x x x			x x x x x	x x x x x

If more lines are needed continue on separate sheet.

9. Capital Stock Issues:

For Corporate Applicants

Item	Authorized (a)	Outstanding (b)	Par Value (c)	Number of Shares Outstanding (d)	Dividend Rate Last Paid* (e)
Common stock	$	$	$		
Preferred stock	$	$	$		

*Indicate period covered.

10. Production:

Item	Kind of Product (a)	1948 Total (b)	1949 Total (c)	1950 Total (d)	Present Average Monthly (e)
1. Quantity of product mined or quarried (Short, long, metric tons; barrels; pounds; etc.)					
2. Quantity of product processed (specify unit of measure and type of process)					
3. Quantity and grade of product sold or shipped (specify units of measure)					

11. Do you contemplate a change in the present average monthly rate of production? If so, state estimated maximum monthly production and basis of change.

12. Ore or Mineral Reserves:

(a) Describe the ore or minera[illegible]t briefly. Accompany the application by [illegible]ailable report on the geology and ore reserves.

YUCCA MINING AND MILLING CO., INC.

Antler Mine

YUCCA, ARIZONA

ROBERT J. DALTON, PRES-TREAS.
FERD WOLF, V-PRES.
BEN F. WILLIAMS, SECY.

FORM MF-100

1.(a) Copper-Lead Concentrate and Zinc Concentrate
(b) Amphibole Asbestos and can make an Iron Sulphide Concentrate from mill tailing.

2. Antler Mine - Copper, Lead and Zinc Sulphides.
(a) Linear feet of shafts - 550 feet
(b) Linear feet of drifts and crosscuts - 1600 feet
(c) Linear feet of tunnels and adits - 2040 feet
(d) None
Mine is not flooded. Has no pumping problems. Can produce 120 tons of ore per day.

3. (a) 12 miles east of Yucca, Arizona which is on Santa Fe Ry.
(b) Cedar Valley Mining District
(c) Township 17 N Sections 3 and 4 Range 16 W
(d) Mohave County, Arizona

4. (a) Property now in operation by Yucca Mining & Milling Co.
(b) Owner

5. Intermittently since 1917. Currently for last three years.

6. The mine has been under the continous management of the writer of this report since October of 1947. He has personally directed the development work, design, construction and operation of the property to the present state. He is a graduate mining engineer of the Colorado School of Mines and has been activly engaged in the mining industry for twenty years.

7.(a) The history of the mine up to March 1948 is contained in "R I 4214 U. S. B. M. Report of Investigations Antler Copper-Zinc Deposit. Mohave County, Arizona: by T. M. Romslo." For detailed report of current history refer to Loan Application of January 20, 1951 and sbsequent letters to DMA.

9. Financial Reports Fiscal Year 1949-50 and 1950-51 in hands of DMA Officials at Tucson, Arizona.

10. Production submitted in Application of January 20, 1951.

11. Increased production based upon outcome of Loan Application of January 20, 1951 and political and economic conditions.

12 to 17 Inc. Contained completely in Loan Application of January 20, 1951 and subsequent letters to DMA.

18. Price of metals.

(*b*) If deposit is other than pla[redacted]

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
Measured (proved)					
Indicated (probable)					

(*c*) If placer:

(1) Give estimated total yardage and average marketable mineral content of each deposit.

(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

Yucca Mining & Milling Co.
(Name of company)

By Robert J. Dalton
(Signature of authorized official)

January 20, 1951
(Date)

President
(Title)

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—63792-1

Form MF-100
(March 1951)

U. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Form approved.
Budget Bureau No. 42-R1026.

GENERAL TECHNICAL DATA
FOR USE UNDER THE
DEFENSE PRODUCTION ACT OF 1950

NOT TO BE FILLED IN BY APPLICANT

Docket No. DMA 527

Date received MS - 0420

995

Yucca Mining and Milling Co.
P O Box 67
Yucca, Arizona

Name and address of applicant

Date January 20, 1951

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   - ☐ Owner.
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San Bernardino, Cal	Manager D	$6000.00					
Lord Wolf	V. Pres						
Golden, Colo.	D	None					
Ben F. Williams	Sec.						
Douglas, Arizona	D	None					
John Perry							
Douglas, Arizona	D	None					
A. L. Whittaker							
Douglas, Arizona	D	None					
Armando Varella							
Douglas, Arizona	D	None					
	Total	$6000.00	x x x x x			x x x x x	x x x x x

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Antler Mine

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(b) Owner

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12 to 17 Inc. Contained completely in Loan Application of January 20, 1951 and subsequent letters to RMA.

18. Price of metals.

(*b*) If deposit is other than placer:

(1) Submit assay plans and/or sections showing location and size of proved (measured) and probable (indicated) ore or mineral reserve.

(2) State the tonnage (indicate type of ton) and grade of each class of ore reserve, as above, and show how computed. Tabulated total ore reserve as follows:

TOTAL ORE OR MINERAL RESERVES

Ore or Mineral Reserve	Estimated Tons (a)	Metal or Mineral Content Per Ton (Grade) (b)	Gross Value Per Ton (c)	Recoverable Unit Value Per Ton (d)	Estimated Cost of Production Per Ton (e)
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(2) Submit map showing location of placer deposit and surrounding area, with all test holes or pits. Submit logs of each hole and test pit with depth and average value of each.

(3) Describe gravel, stating whether fine, medium or coarse; loose, tight, cemented, or frozen, and whether it contains stumps or boulders more than 1 foot in diameter; if so, how large, and in what proportion.

(4) Describe bedrock, giving type (granite, sandstone, shale, etc.) and state whether it is hard or soft, smooth, uneven or rough.

(5) Describe overburden, stating whether loose, tight, or cemented; fine or coarse textured; furnish estimate of average thickness and total amount.

(6) Tabulate the reserves using the form outlined above for ore or mineral reserves.

13. Access Roads:

Give road distances to shipping, supply and residence points, stating kind and condition of roads.

14. Water Supply:

State source and quantity of water available for operations and whether sufficient for all seasons of year.

15. Power:

State amount of power used, rate per hour, and source thereof.

16. Labor:

State number and classes (miners, muckers, millmen, etc.) of men employed during a recent representative payroll period.

17. Equipment and Facilities:

Describe present equipment on the property, including buildings. (State condition.) List major pieces of equipment now owned or controlled and in serviceable condition available for this operation.

18. Are there any particular conditions or circumstances affecting your operations that are not described above? If so, explain.

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

Yucca Mining & Milling Co.
(Name of company)

By Robert J. Dalton
(Signature of authorized official)

January 20, 1951
(Date)

President
(Title)

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—63792-1

SAMPLING DATA OF D. D. H. NO. 4

SAMPLE NUMBER	LENGTH* FEET	PERCENT CU.	ZN.	PB.
10330	3.9	2.08	10.4	1.78
10331	2.0	2.03	12.9	0.47
10333	0.7	0.64	12.0	5.40
10334	0.9	0.48	0.2	38.10
10336	2.8	5.23	12.7	0.23

* FOR ACTUAL THICKNESS OF VEIN REDUCE BY 23 PERCENT

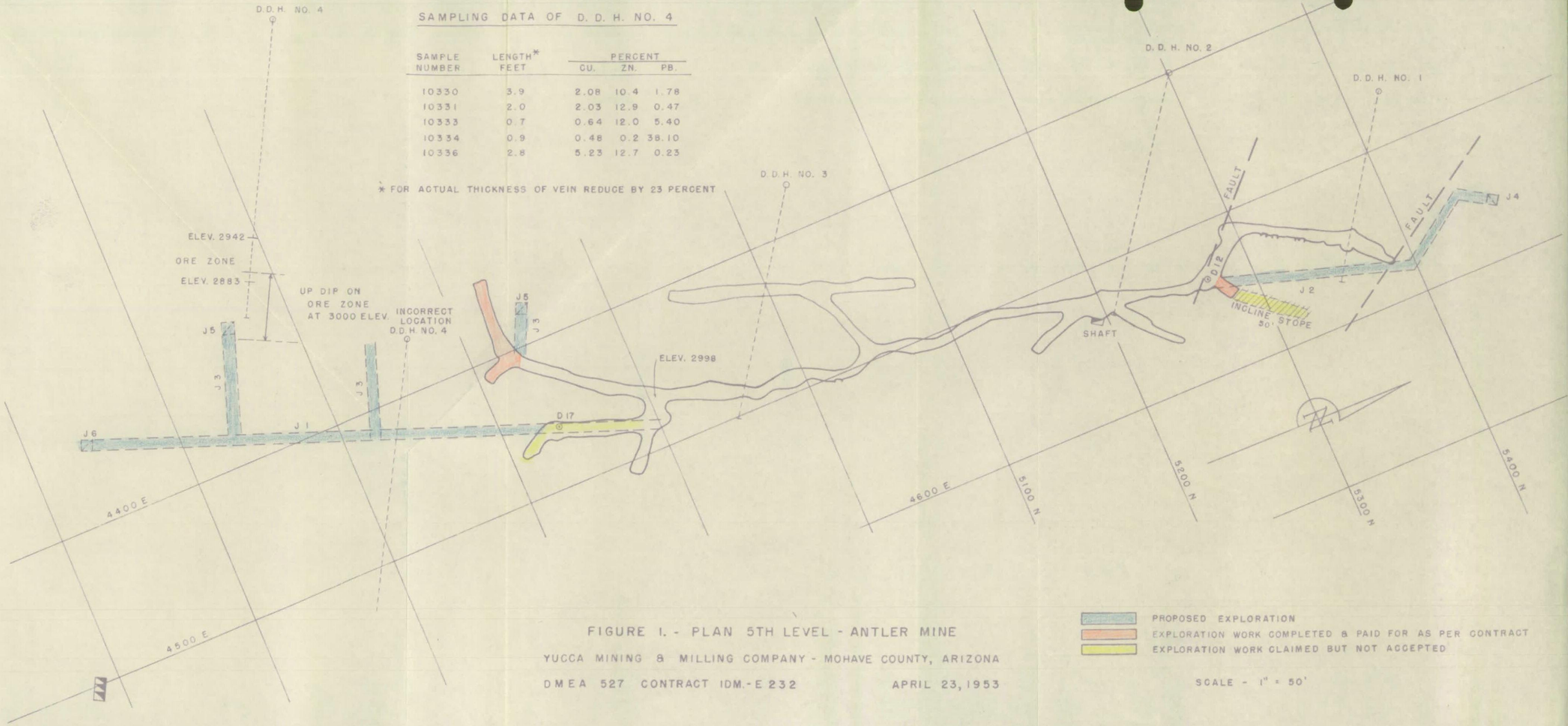


FIGURE 1. - PLAN 5TH LEVEL - ANTLER MINE

YUCCA MINING & MILLING COMPANY - MOHAVE COUNTY, ARIZONA

DMEA 527 CONTRACT IDM.-E 232 APRIL 23, 1953

PROPOSED EXPLORATION

EXPLORATION WORK COMPLETED & PAID FOR AS PER CONTRACT

EXPLORATION WORK CLAIMED BUT NOT ACCEPTED

SCALE - 1" = 50'

C
O
P
Y

ASSIGNMENT OF CORPORATE ASSETS ON LIQUIDATION

KNOW ALL MEN BY THESE PRESENTS:

That the FAIRE MINING CORPORATION of Golden, Colorado, a corporation organized under the laws of the State of Colorado, and having a principal office at Golden, Jefferson County, Colorado, in pursuance of a resolution of the Directors of said corporation, passed on the 30th day of November, 1950, in consideration of the return and cancellation of all of its outstanding stock to it in hand paid and receipt of which is hereby acknowledged, does hereby sell, transfer, assign and set over to the YUCCA MINING & MILLING COMPANY, Inc., an Arizona Corporation, its successors and assigns, all right, title and interest of the FAIRE MINING CORPORATION of Golden, Colorado, in and to the following:

> That certain "Option Agreement" dated March 30th, 1949, by and between Arizona Antlers Mining Company, a corporation of the State of Utah, as grantors and first party, and Faire Mining Corporation, a corporation of the State of Colorado, as grantee and second party, a copy of which said "Option Agreement" is attached hereto and made a part hereof and which was on the 10th day of April, 1950, recorded in the Office of the County Recorder of Mojave County, Arizona, in Book 36 of Miscellaneous Records at pages 352-355 thereof.

IN WITNESS WHEREOF, the FAIRE MINING CORPORATION has caused these presents to be executed in its corporate name and on its behalf by its president, and its corporate seal to be hereto affixed, and attested by its secretary; and the YUCCA MINING & MILLING COMPANY, Inc., has caused these presents to be executed in its corporate name and on its behalf by its president and its corporate seal to be hereto affixed and attested by its secretary, all on this 1st day of December, 1950.

FAIRE MINING CORPORATION

BY Robert J. Dalton (s)
President

ATTEST:

James J. Patterson (s)
Secretary

YUCCA MINING & MILLING COMPANY, INC.,

BY
Robert J. Dalton (s)
President

ATTEST:

Ben F. Williams (s)
Secretary

STATE OF ARIZONA)
: SS
COUNTY OF COCHISE)

The foregoing instrument was acknowledged before me this 1st day of December, 1950, by ROBERT J. DALTON, the president of the FAIRE MINING CORPORATION, one of the corporations described in the foregoing instrument, who stated that he executed such instrument on behalf of such corporation, for the purpose and consideration therein expressed.

Frances D. Castro (s)
Notary Public

My Commission Expires
May 31, 1952

STATE OF ARIZONA)
: SS
COUNTY OF COCHISE)

This instrument was acknowledged before me this 1st day of December, 1950, by ROBERT J. DALTON, the president of YUCCA MINING & MILLING COMPANY, INC., one of the corporations described in the foregoing instrument, who stated that he executed such instrument on behalf of such corporation, for the purpose and consideration therein expressed.

Frances D. Castro
Notary Public

My Commission Expires
May 31, 1952.

JOINT MEETING OF THE STOCKHOLDERS AND THE BOARD OF DIRECTORS OF FAIRE MINING CORPORATION HELD NOVEMBER 30th, 1950, AT THE OFFICES OF THE COMPANY, IN GOLDEN, COLORADO.

Directors present:

Robert J. Dalton
Ferd Wolf
Al Akulin
Ben Pitler
James J. Patterson

Stockholders present:
Yucca Mining & Milling Company, Inc., represented by its duly authorized President, Robert J. Dalton.

It was noted that the above directors and stockholder were all of the directors of the company and the only stockholder of the company.

It was then moved by Robert J. Dalton and seconded by Ferd Wolf that the following resolution be approved and adopted, both on behalf of the directors and on behalf of the sole stockholder:

"RESOLVED that the corporation distribute to its sole stockholder all of its assets in exchange for the relinquishment to the corporation of all outstanding stock, being 100,000 shares held by the sold stockholder, Yucca Mining & Milling Company, Inc., an Arizona corporation; that the said Yucca Mining & Milling Company, Inc., be required in addition to the relinquishment of all stock to assume any and all outstanding obligations of the Faire Mining Corporation and to secure the consent of the Shattuck-Denn Mining Company for the assumption by the Yucca Mining & Milling Company, Inc., of obligations due the said Shattuck-Denn Mining Company by the Faire Mining Corporation; That upon the fulfilling of the conditions above set forth the president and secretary of this corporation be authorized, empowered and directed to execute any and all instruments and papers necessary to properly effect a distribution of assets in accordance herewith and that the said president and secretary be authorized, directed and empowered to receive in consideration of

the distribution of assets as herein set forth all of the outstanding stock of this corporation."

The resolution being submitted to vote was unanimously carried by both directors and the sole stockholder. Whereupon it was directed by Robert J. Dalton that the resolution be impressed on the Minutes of this meeting.

Whereupon, Robert J. Dalton, as the duly authorized representative of the Yucca Mining & Milling Company, Inc., the sole stockholder, submitted to the meeting a "Consent of Stockholders to Voluntary Dissolution" and it was directed that the said "Consent of Stockholders to Voluntary Dissolution" be attached to a copy of the Minutes of this meeting and made a part thereof.

There being no further business to come before the Board of Directors and the sole stockholder, the meeting was adjourned.

James J. Patterson (s)
Secretary

STATE OF COLORADO)
: SS
COUNTY OF JEFFERSON)

I, JAMES J. PATTERSON, Secretary of Faire Mining Corporation do hereby certify that the above and foregoing is a full, true and correct copy of the Minutes of the Board of Directors meeting and stockholders meeting of the Faire Mining Corporation, held at the offices of the company, Golden, Colorado, on November 30, 1950.

James J. Patterson (s)
JAMES J. PATTERSON

Subscribed and sworn to before me this 30th day of November, 1950, by JAMES J. PATTERSON.

Dennis H. Pike (s)
Notary Public

My Commission expires
Sept. 29, 1954.

CONSENT OF STOCKHOLDERS TO VOLUNTARY DISSOLUTION

The YUCCA MINING & MILLING COMPANY, INC., a corporation, being the sole stockholder of the FAIRE MINING CORPORATION, a corporation created and existing under and by virtue of the laws of the State of Colorado, deeming it advisable and most beneficial for the interests of said corporation that the same should forthwith be dissolved and its assets distributed, hereby consents to the dissolution of said corporation and the distribution of its assets, as provided for by the General Corporation Laws of the State of Colorado, and has caused this consent to be executed in its corporate name and on its behalf by its President to the end that it may be filed in the office of the proper authority of the State of Colorado, as provided by law.

YUCCA MINING & MILLING COMPANY, INC.,

BY

Robert J. Dalton (s)
President

STATE OF COLORADO)
: SS
COUNTY OF JEFFERSON)

ROBERT J. DALTON, the President, and JAMES J. PATTERSON, the Secretary of the above named FAIRE MINING CORPORATION, being duly sworn, each on his oath says that the foregoing consent to the dissolution and distribution of assets of said corporation has been signed by the sole stockholder of said company.

Robert J. Dalton (s)
ROBERT J. DALTON

James J. Patterson (s)
JAMES J. PATTERSON

Subscribed and sworn to before me this 30th day of November, 1950.

Dennis H. Pike (s)
Notary Public

My Commission Expires;
Sept. 29, 1954

OPTION AGREEMENT

This Agreement, made in duplicate, this 30th day of March, 1949, by and between ARIZONA ANTLERS MINING COMPANY, a corporation of Utah, hereinafter called first party, and FAIRE MINING CORPORATION, a corporation of Colorado, hereinafter called second party, Witnesseth:

WHEREAS, first party, as the owner of certain contracts and options covering the mine and property known as the ANTLER MINE, consisting of the ANTLER and SPUYTEN DUYVIL patented lode mining claims, together with mining equipment and machinery, situate in the Cedar Valley Mining District, Mohave County, Arizona, did on or about the 6th day of March, 1948, enter into an agreement in writing, bearing said date, with R. J. DALTON, of Golden, Colorado, for the operation of said property and the acquisition by said R. J. DALTON of a certain interest therein, which agreement was thereafter on the 24th day of March, 1948, duly assigned by him to second party, and which agreement is now in full force and effect; and

WHEREAS, second party desires to enter into a new contract with first party whereby second party is granted the exclusive right and option to purchase from first party the whole of its right, title and interest in said mine and property, and all of said contracts and excrows relating thereto;

Now, therefore, in consideration of the premises and the sum of $1.00 paid by second party to first party, the receipt of which is hereby acknowledged, it is agreed as follows:

1. First party does hereby grant to second party the exclusive right, option and privilege to purchase and acquire all the right, title and interest of first party in and to said mine and property and appurtenances, and in and to said contracts, options and escrows in anywise appertaining thereto.

2. Said Option shall begin from the date of final execution of said agreement by both parties hereto, and shall continue during the life of this agreement.

3. The purchase price for said mine, property and appurtenances, and all contracts and escrows relating thereto, shall be the sum of $150,000.00, payable from royalty on the sale of ores from said ANTLER or from concentrates produced from the ores of said ANTLER mine.

4. Second party shall pay on behalf of first party all of the unpaid balances for said ANTLER mine and appurtenances still owing by first party, as follows:

TO: R. B. STRASSBURGER, on or before 5/11/49- - - - - - - - - - - - - - - - - -	$ 6,875.00
R. B. STRASSBURGER, on or before 11/11/49- - - - - - - - - - - - - - -	6,875.00
R. B. STRASSBURGER, on or before 5/11/50- - - - - - - - - - - - - - - -	6,875.00
ORVA NELSON, on or before 11/22/49	3,257.50
PETE VUKOYE, on or before 11/22/49	625.00
ARIZONA ANTLERS MINING COMPANY, R. F. C. balance- - - - - - - - - - -	380.34

5. The foregoing payments shall be considered as advance royalty payments as herein provided, to apply on the above mentioned purchase price of $150,000.00, and second party shall deduct from royalties as they accrue all of the said above amounts in the total sum of $24,887.84, and thereafter all accruing royalties shall be paid to first party as herein provided until the total of such royalties shall accumulate and add up to the balance of $125,112.16.

6. Second party shall pay to first party as royalty 5% of the net Smelter returns on all ores and concentrates produced from said ANTLER mine, and by "net Smelter returns" is meant the proceeds remaining after deducting Smelter charges, railroad freight and trucking charges. All payments of royalties shall be accompanies by duplicate Smelter Settlement Sheets. Second party shall also furnish first party a copy of its Smelter Contract.

7. Second party shall carry on all mining operations in a good and workmanlike manner, and maintain said mine in a good working condition, at its sole cost and expense, and in accordance with all rules and regulations of Arizona and of the United States.

8. Second party shall record and post, and keep posted, Notice of Non-Liability in accordance with the laws of Arizona, to save first party harmless from all labor and material liens, accident liability, lawsuits or other encumbrances that may arise from second party's operations of said mine or mill; and to keep all property insured against fire; to maintain all equipment and machinery in good condition, adequate to the operation of said mine; to pay all taxes on the property as they are assessed from time to time furing the life of this agreement, and to pay workmen's compensation, Social Security and Unemployment levies as required by Arizona and the United States.

9. Second party shall commence operations for the construction of a mill of proper design and kind for the milling of ores from said ANTLER mine forthwith upon the signing of this agreement, and to prosecute the same to completion of said

mill with a daily estimated capacity of 100 tons, diligently to the end that the said mill will be started at as early a date as practicable, all at its own cost, risk and expense; provided, however, that title to said mill and its accessories and appurtenances shall at all times be and remain vested in second party, and first party shall have no int rest therein. The said mill shall be operated by second party to mill the ores from the ANTLER mine at the full capacity of the mill when ANTLER ores are available, or at such rate as may be practical to produce the best salable grade of concentrates at the best rate, to the best of second party's ability.

10. At present there is ANTLER mine ore stockpiled at the ANTLER mine, and broken ore in the ANTLER mine, aggregating some 1500 tons, all of which has heretofore been purchased by second party, and the premium paid thereon, which 1500 tons of stockpile and broken ore is expressly excluded from any provision of this Option Agreement, and first party shall not share in any of the proceeds therefrom.

11. In case unfavorable metal prices or markets, or strikes, or lockouts, or acts of God, or other causes beyond the control of second party, shall make its impractical to operate said mine and mill at a profit, then second party may discontinue its operations until conditions are again favorable for operating at a profit; but in such case second party shall fully inform first party in writing of all causes of shutdowns and delays.

12. Prior to payment of said sum of $150,000.00 by second party to first party, second party is granted the right and privilege to cease his mining operations whenever he wishes to do so, provided, however, notice in writing shall be given to the first party at least sixty (60) days prior to the date on which the next payment set forth in paragraph 4 falls due, to allow first party the said period of sixty days to meet the said payment. Upon giving such notice of abandonment of its operations, second party shall surrender to first party its possession of said mine, equipment and supplies, or replacement thereof, save and except such equipment, supplies, accessories and appurtenances furnished by second party, which movable items second party shall promptly remove from said premises.

13. The inventory of equipment and supplies contained in said Contract of March 6, 1948, shall be deemed a part of and included in this contract, and shall govern the items of equipment, supplies, etc. which are not subject to removal by second party on default or abandonment of this contract.

14. This agreement, together with Deed, assignment of present escrows, assignment of contracts, etc., and all papers required to be executed and delivered under this contract, together with escrow instructions, shall be placed in escrow by first party with the Valley National Bank, at Kingman, Arizona, at the time of, or within a reasonable time thereafter, the final execution of this agreement.

15. Both parties shall, by resolution, cause this agreement to be authorized, approved, ratified and confirmed, by their respective Boards of Directors at a Directors' meeting duly called and held for that purpose, and a certified coy of such Resolution shall be exchanged between the parties.

16. This agreement supersedes, n llifies and rescinds the above mentioned agreement of March 6, 1948, except as herein provided.

17. This Option and Agreement shall not be terminated or cancelled by first party except for violation of its terms or conditions, and the failure or refusal of second party to carry out the reasonable intentio n and understanding of the terms hereof. The failure or refusal of second party to commence and diligently prosecute the construction of said 100 ton mill, and operate the same on ore from said ANTLER mine, as herein provided, or to make the payments above mentioned under paragraph 4 hereof, or to pay royalties on all ores and concentrates produced from said mine, except the above mentioned stockpile and broken ore of 1500 tons, shall, at the option of first party, be cause for cancellation and forfeiture of this agreement and the return of said mine and property to first party, time being of the essence of this agreement.

18. Upon final payment by second party to first party of said $150,000.00, in the manner herein provided, first party shall cause to be assigned and conveyed to second party all its right, title and interest in and to said ANTLER mine, and all contracts and escrows whatsoever in anywise relating thereto, by a good and sufficient Mining Deed, including all property described in said Contract of March 6, 1948.

IN WITNESS WHEREOF, the parties hereto have executed this agreement in duplicate the day and year first above written.

ARIZONA ANTLERS MINING COMPANY

By F. F. Hintze (s)
Its President

E. G. Kidder
Secretary

FAIRE MINING CORPORATION

By Robert J. Dalton
Its President

STATE OF UTAH)
) ss
COUNTY OF SALT LAKE)

This instrument was acknowledged before me this 30th day of March, 1949, by F. F. HINTZE, President, Attest E. G. KIDDER,

Secretary, of Arizona Antlers Mining Company, First Party therein.

T H. J. Hintze (s)
Notary Public, residing at
Salt Lake City, Utah.

My commission expires:
December 17, 1951.

STATE OF ARIZONA)
) ss
COUNTY OF MOHAVE)

This instrument was acknowledged before me this 12th day of March, 1949, by R. J. DALTON, President of Faire Mining Corporation, Second Party herein.

W. L. R. (s)
Notary Public residing at
Kingman, Arizona

My commission expires:

August 21, 1950.

Form MF-104 (Rev. April 1952)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
Budget Bureau No. 42-R1036.2
Approval expires 6-30-53.

RECEIVED
DEC 12 1952

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of October, 1952 Docket No. DMEA 527 Contract No. DMA 232
Operator's Name Yucca Mining and Milling Co. Inc. Minerals Copper
Address Yucca, Arizona.
Contract Amount, $ 59,470.00 Government Participation: 50 % Amount, $ 29,735.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Prospect-cutting Building 9.0' @ 32.00	288.00	—				
Crosscutting 47.0' @ 32.00	1504.00	1248.00	2752.00			
Drifting 20.0' @ 32.00	640.00	—	640.00			
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	2432.00	1248.00	3680.00	2,432.00	1,248.00	3,680.00

I certify that the above bill is correct and just and that payment therefor has not been received.

Date Nov. 30, 1952 Payee Yucca Mining & Milling Co. Inc.

Per Robert J. Walton Title President.

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

→ NOTE.—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.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 1216.00

Signature (Authorized Certifying Officer)

Date 12/4/52 Vou. No. DMA 53-67

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E232 in accordance with the terms of the contract.

Signature J. W. Hardham Lt Col WRS Title Mining Engineer Date Nov. 25, 1952

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: R.D.B.

Signature W. H. King Title Executive Officer Date 12/2/52

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(*a*) *Form MF–104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(*b*) *Form MF–104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(*c*) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF–104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF–104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF–200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF–200; and delete word "Independent" if the contract reported is on Form MF–200 (A). Also, report work paid for on a unit basis under contract Form MF–200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF–104 when submitted for reimbursable expenses incurred under contract Form MF–200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF–200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF–104 is required to be documented. The four copies of Form MF–104 are not to be thus supported.

Form MF–104 submitted for reimbursement under fixed price contracts on Form MF–200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF–104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of October 2 527 Contract No. 1232
Operator's Name Yucca Mining and Milling Co. DMEA Minerals Copper.
Address Yucca, Arizona.

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
	~~Ft.~~	~~640.00~~	~~20~~	~~640.00~~	~~20~~	~~32.00~~		
Drifting	~~Ft.~~	~~1792.00~~	~~56~~	~~2040.00~~	~~65~~	~~32.00~~		
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
		2432.00	76	3680.00				
TOTAL DISTRIBUTED COSTS							TOTAL COSTS AUTHORIZED BY CONTRACT	
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
		2432.00	76	3680.00				59,470.00
TOTAL COSTS								

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

Date Nov. 20, 1952 Operator Yucca Mining & Milling Co. Inc.
Per Robert J. Dalton Title President.

REMARKS:

→ NOTE.—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.

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 2 1952

224 New Customhouse
Denver 2, Colorado

December 2, 1952

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMA Docket 527, Contract Idm-E232 (Copper) Yucca Mining & Milling Co., Antlers Mine, Mohave County, Arizona - Operator's Monthly Progress Report for the period of October, 1952

Enclosed are the original and four copies of Form MF-104, Narrative Report, and Engineer's Report for the above period.

Work has been completed as authorized by the contract. No Documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 50 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

W. H. King
W. H. King

Enclosures

X
RDB:oc
cc: Contract
Secretary to the Operating Comm. (2)
WRStorms
Chron.
AHKoschmann (2)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 12 1952

MINING DIVISION
REGION IV

November 26, 1952

Memorandum

To : W. H. King, Acting Chief, Mining Div., Region IV

From : L. A. Stewart for Chief, Arizona-New Mexico Branch Mining Div., Region IV, Tucson, Ariz.

Subject : October 1952 Progress Report, Yucca Mining & Milling Co., Antlers Mine, Mohave County, Ariz. Docket DMA-527 Contract Idm-E232

Enclosed in quintuplicate are the following items for the above report:

(1) Bureau of Mines engineer's report and map;
(2) Operator's narrative report;
(3) Forms MF-104 and 104A

Also enclosed are two extra copies of our engineer's report.

We are holding the letter requesting an amendment and the supporting map "J-2 on Exhibit D" (mentioned in paragraph 2 of the narrative report) as there is insufficient information given to justify a recommendation. The examining engineer who will visit the property during the first week of December will discuss this item with the applicant and will make a recommendation in his next report.

As the operator's account conforms to the contract, I recommend that the Government's share of 50 percent of the costs be paid.

Lincoln A. Stewart

Lincoln A. Stewart, Mining Engineer
Arizona-New Mexico Branch
Mining Division, Region IV

CC W. H. King (6)
DMA-527
DF

LAStewart:frj

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 12 1952

MINING DIVISION
REGION IV

November 25, 1952

Memorandum

To : Walter R. Storms, Chief, Arizona-New Mexico Branch Mining Division, Region IV, Tucson, Arizona

From : L. L. Farnham, Mining Engineer, Tucson, Arizona

Subject : Monthly Progress Report for October 1952, Yucca Mining and Milling Co., Antlers Mine, Mohave County, Ariz., Docket DMA-527; Contract Idm-E232.

The writer visited the subject property on November 13, 1952 to check the progress of the exploration work under the above contract.

During the month of October the westerly crosscut at the southern end of the 5th level drift was advanced from 22 feet to 69 feet west of the starting point "B" and the easterly crosscut was advanced from 17 to 26 feet beyond starting point "B". Thus the two crosscuts were advanced 47 and 9 feet, respectively, for a total of 56 feet of crosscutting during October. The only mineralization disclosed by this work consisted of a narrow zone of disseminated pyrite and sphalerite which crossed the westerly crosscut above 23 feet west of point "B".

At the northern end of the 5th level the proposed drift was started and during the month was advanced 20 feet beyond the starting point "F". This drift was stopped after encountering a flat dipping (20°) strike fault against which the mineralization terminated. Further drifting at this point does not appear advisable, for the work would remain in unmineralized schist which underlies the fault.

The total progress for the month of October consisted of 56 feet of crosscutting and 20 feet of drifting, making a total of 76 feet of work accomplished under the contract.

Forms MF-104 and MF-104A, submitted by the Operator for October are in order and it is recommended that they be approved for payment.

L. L. Farnham, Mining Engineer
Arizona-New Mexico Branch
Mining Division, Region IV

CC W. H. King (orig. & 6)
DMA-527
DF

LLFarnham:frj

YUCCA MINING AND MILLING CO., INC.

Antler Mine

YUCCA, ARIZONA

ROBERT J. DALTON, PRES.-TREAS.
FERD WOLF, V-PRES.
BEN F. WILLIAMS, SECY.

November 20, 1952.

PROGRESSIVE REPORT for Month of October, 1952
Exploration contract DMA 527

1. In the month of October on the 5th level south both cross-cuts were extended as shown on the attached map. A small stringer of mineralized schist about 12 inches thick was encountered about 20 ft. from Prog No. 2, no other mineral was encountered in October work in this area.

2. The drifting on the north footwall vein was started, J-2 on Exhibit 3, we immediately encountered a thrust fault which is dipping to the south as shown on the attached map. The fault has evidently displaced the ore and after 20 ft. of drifting the drift is virtually in barren schist. It is quite obvious that a major structual change has taken place and an amendment to our present program is in order.

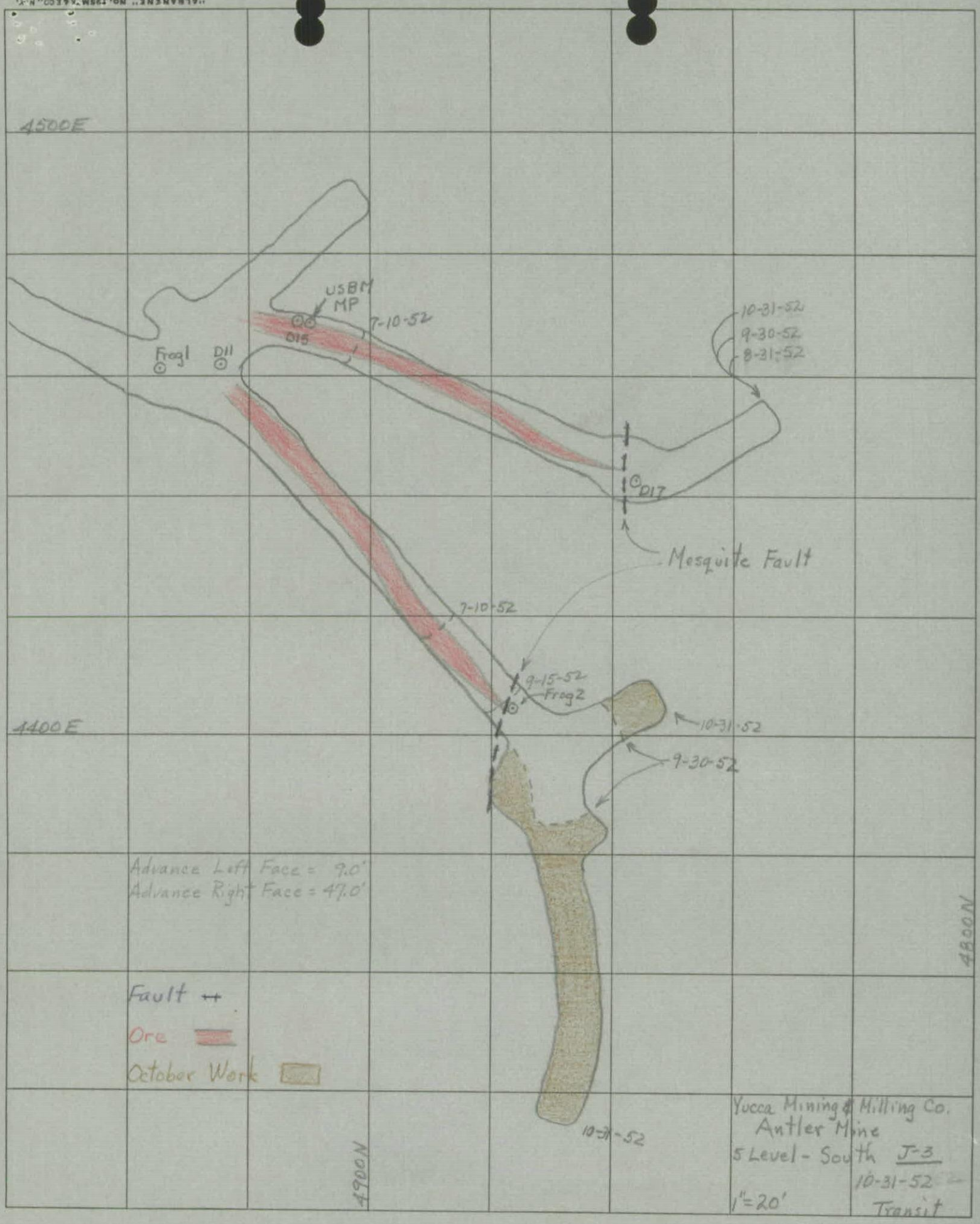
YUCCA MINING and MILLING CO. INC.

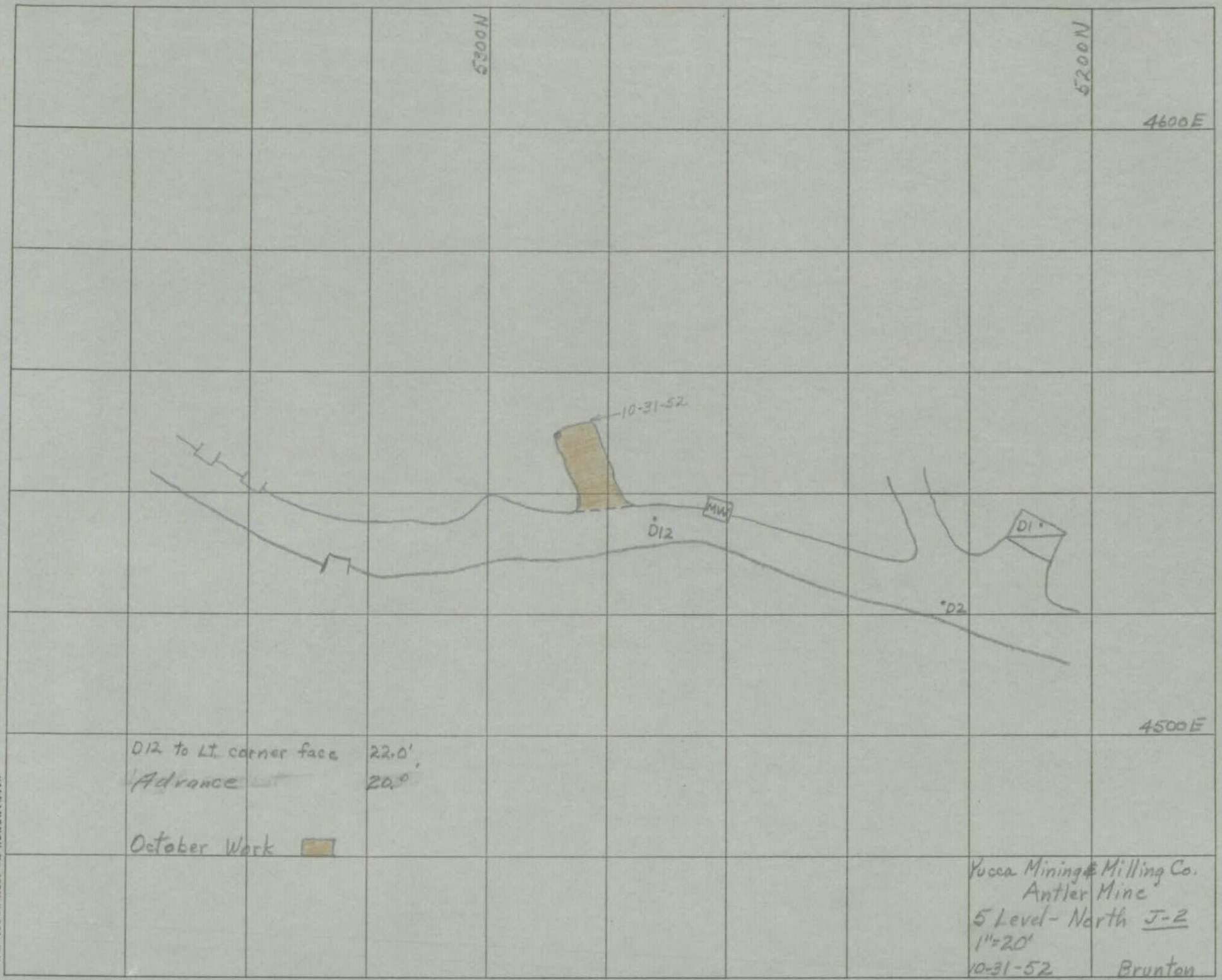
Robert J. Dalton

Robert J. Dalton - President.

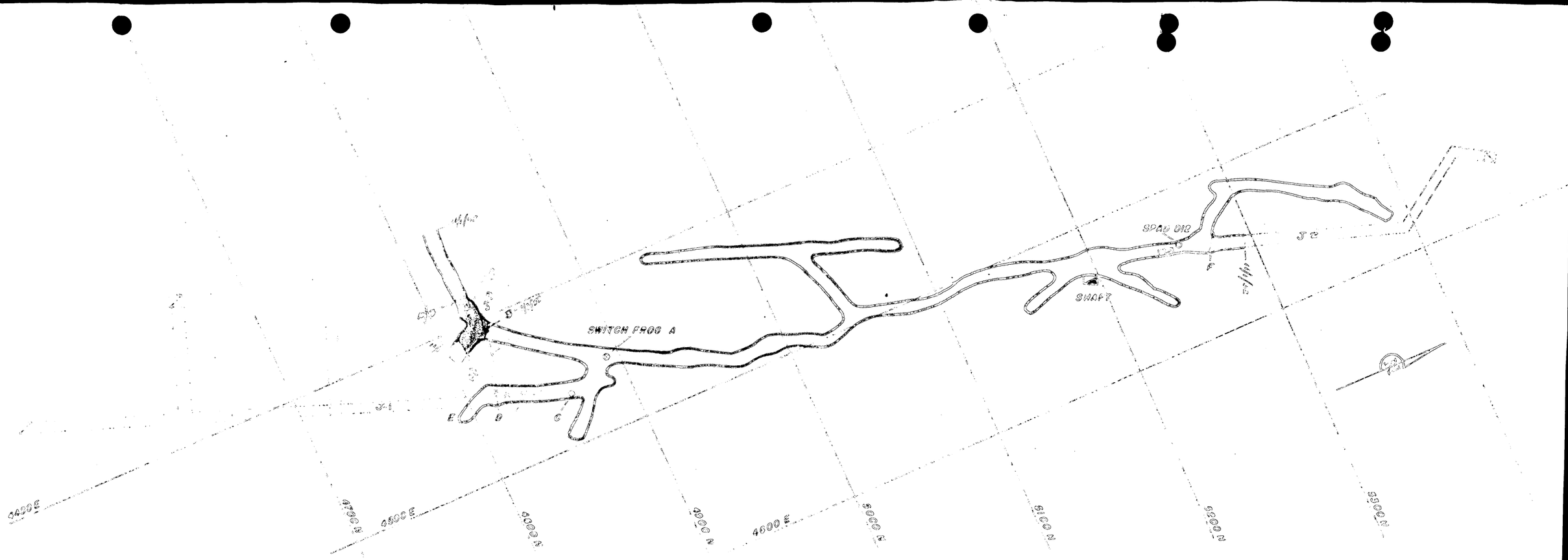
RJD-q.

COPY


4500E
USBM
MP
7-10-52
D15
Frog1
D11
10-31-52
9-30-52
8-31-52
D17
Mesquite Fault
7-10-52
9-15-52
Frog2
4400E
10-31-52
9-30-52
Advance Left Face = 9.0'
Advance Right Face = 47.0'
4800N
Fault
Ore
October Work
10-31-52
4900N
Yucca Mining & Milling Co.
Antler Mine
5 Level - South
J-3
10-31-52
1"=20'
Transit



"ALBANENE" NO. 199M K&E CO., N.Y.
REG. U.S. PAT. OFF.



PLAN 5th LEVEL

ANTLER MINE

DMEA-527 CONTRACT Idm-E232

SCALE: 1" = 50 ft.

From	To	Dist	Bearing	
A	B	81'	S 42° W	B = Starting Point
C	D	50'		
C	E	27'		
C	E	77'	S 22° W	E = Starting Point
D-12	F	13.3'	N 10° E	F = Starting Point

Form MF-104 (Rev.)
(April 1952)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

RECEIVED
DEC 12 1952

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of September, 1952 Docket No. DMEA 327 Contract No. IDE 232
Operator's Name Yucca Mining and Milling Co., Inc., Minerals Copper
Address Yucca, Arizona.
Contract Amount, $ 59,470.00 Government Participation: 50 % Amount, $ 29,735.00

ITEMS OF COSTS	FOR OPERATOR'S USE: Monthly Total	Totals Previously Reported	Totals To Date	FOR GOVERNMENT USE ONLY: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing 39 ft. @ 32.00	1248.00	None	1248.00			
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor						
Supervision						
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track						
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation						
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis						
Payroll Taxes						
Liability Insurance						
(8) Contingencies (specify):						
TOTALS	1248.00	None	1248.00	1,248.00	None	1,248.00

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 11-20-52 Payee Yucca Mining & Milling Co., Inc.
Per Robert J. Dalton Title President

*When a voucher is signed or receipted in the name of a company or corporation, the name of the person writing the company or corporate name, as well as the capacity in which he signs, must appear. For example: "John Doe Company, per John Smith, Secretary," or "Treasurer," as the case may be.

NOTE.—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.

(Instructions on reverse)

Pursuant to authority vested in me, I certify that this account is correct and proper for payment in the amount of:

$ 624.00

Signature
(Authorized Certifying Officer)

Date 12/4/52 Vou. No. DMA-52-67

(See other side)

(For Government use only)

CERTIFICATION BY GOVERNMENT REPRESENTATIVE:

I certify that to the best of my knowledge and belief the contractor submitting this voucher is operating a Defense Minerals Exploration Administration project under Contract No. Idm-E232 in accordance with the terms of the contract.

Signature [illegible] for WRS Title Mining Engineer Date Nov. 25, 1952

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE: R.D.B.

Signature W. H. King Title Executive Officer Date 12/2/52

MONTHLY REPORT OF OPERATOR

The Operator (Contractor) of an exploration project is required to make a monthly report to the Government through the Regional Executive Officer. This report consists of three parts as follows:

(a) *Form MF-104—Operator's Monthly Report and Voucher.*—This form details expenditures and constitutes a voucher for reimbursing the Operator for the Government's share of costs;

(b) *Form MF-104A—Operator's Unit Cost and Progress Report.*—This is a statistical report of expenditures which shows costs for the various types of operation; and

(c) *Narrative.*—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered must be furnished as an attachment to this Report and Voucher. Wherever possible, the narrative is to be illustrated with maps or sketches showing formations penetrated and location and assays of samples taken as well as advances in workings. In the case of diamond drilling or churn drilling, the location and inclination of holes is to be shown on a map; logs and assays also are to be submitted.

The Monthly Report of Operator should be prepared in an original and four copies all of which must be sent to the Executive Officer of the Region not later than the 15th of the month following.

Preparation of Form MF-104—Operator's Monthly Report and Voucher.—All the applicable spaces in Form MF-104 should be filled in by the Operator, and the Operator or his agent should sign the certification in the lower left corner of the form.

The items of costs are arranged in the order they appear in Article 6 (a) of Form MF-200 (Revised February 1952), however, this form is readily adaptable for use in reporting activities under other contract forms.

Under Item (1) delete words "Short Form" if the contract is a sub-contract under Form MF-200; and delete word "Independent" if the contract reported is on Form MF-200 (A). Also, report work paid for on a unit basis under contract Form MF-200 as though it were performed under an independent contract.

Under Item (2) include labor, supervision and technical services incurred for the exploratory operations. Do not include labor, supervision and technical services used for work performed under items (5) and (6).

Under Item (3) include the costs of material and supplies used in the project other than that used under items (5) and (6).

Under Item (4) appear the three types of operating equipment expenditures, that is, rental, purchase and depreciation. The expenditures made for renting equipment belonging to a third party will be reported under "Rental". The amount paid or duly obligated for payment for the purchase of equipment will be reported under "Purchase". The amount of expenditures due the Operator to reimburse him for depreciation of equipment owned will be reported under "Depreciation".

Item (5) comprises costs of labor, supervision, technical services, materials, etc., which are used in the initial rehabilitation and repair of existing buildings, installations, fixtures, and equipment. These costs, therefore, should not be reported under items (2) and (3).

Item (6) includes the labor, supervision, technical services, materials, etc., used in the installation or construction of new buildings, fixed improvements, etc., necessary for the project. These costs, therefore, should not be reported under items (2) and (3).

Item (7) covers miscellaneous types of expenditure such as payroll taxes, liability insurance, workmen's compensation insurance, repairs to equipment and sampling and analysis. Only that part of payroll taxes, liability insurance and workmen's compensation which are paid by the operator should be reported under item (7). The share paid by the employee as a payroll deduction is to be included under item (2) as labor costs.

Item (8) includes any unforeseen costs not included in the other seven categories.

The original of Form MF-104 when submitted for reimbursable expenses incurred under contract Form MF-200 must be supported by original documentation or by certified copies of purchase orders, payrolls or transcripts of payrolls, unless such documentation has been waived by the Regional Executive Officer. This certification may be stated thus, "Certified True Copy (or Transcript)", followed by appropriate signature. If the Executive Officer of the Region determines that a contract under Form MF-200 should have an "on-site" audit, that is, a Government auditor should make an audit of the Operator's books and records of account, the Operator need not support his monthly voucher with original or certified documents except in cases of equipment purchases whose individual costs exceed $50.00. In these cases the original or a certified copy of the purchase order or invoice should be attached to the Monthly Voucher. N. B.—Only the *original* of Form MF-104 is required to be documented. The four copies of Form MF-104 are not to be thus supported.

Form MF-104 submitted for reimbursement under fixed price contracts on Form MF-200 (A), however, are not required to be supported by documentation of any kind. The Operator will submit his claim under item (1) of Form MF-104 by deleting as stated above the word "Independent" and by showing the number of feet or other units immediately after the appropriate descriptive word, such as, drilling, bulldozing, crosscutting, drifting, etc., and giving the "Monthly Total" amount due. "Totals Previously Reported", and "Totals to Date" columns should also be filled in.

GPO 83-38476

Form MF-104A
(April 1952)

Budget Bureau No. 42-R1151
Approval expires 6-30-53.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 12 1952

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of September 1952 Docket No. DMEA 527 Contract No. IDM E 232
Operator's Name Yucca Mining and Milling Co., Inc. Minerals Copper
Address Yucca, Arizona.

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT Units	AUTHORIZED BY CONTRACT Unit Costs
Drifting								
Crosscutting	Ft.	1248.00	39	1248.00	39	32.00	865 280	32.00
Raising								
Shafts								
Winzes								
Drilling: Core								
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		1248.00	39	1248.00				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		1248.00	39	1248.00				

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this report is correct and complete to the best of their knowledge and belief.

REMARKS:

Date Nov. 20, 1952 Operator Yucca Mining & Milling Co. Inc.,

Per Robert J. Dalton Title President

Robert J. Dalton

NOTE.—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.

(Instructions on reverse)

(For Government use only)

INSTRUCTIONS

Preparation of Form MF–104A—Operator's Unit Cost and Progress Report.—Applicable places on Form 104A should be filled in by the Operator. The purpose of this form is twofold as follows: (1) to furnish the supervising engineers and other administrators with statistical information necessary to better determine the progress of the project; and (2) to furnish more permanent information on mining costs for future use. The more important phases of operation on which permanent information is desired have been outlined in the form. There are blank lines, however, for those unusual phases which may need to be reported for a particular project. It will be necessary for the Operator to distribute his costs among the applicable phases reported with the exception of three items the costs of which are not to be distributed by the Operator. These three items are: "Operating Equipment Purchased", "Initial Rehabilitation and Repairs", and "New Buildings, Improvements, etc." The reason for not distributing these items on a monthly basis is doubtless clear to the Operator, since such distribution might well overstate the cost for any one month or period short of the entire contract period.

Form MF–104A has been designed to tie in with Form MF–104 for both monthly and cumulative costs. The "Total Costs" on Form MF–104A for each month should equal the monthly "Total Costs" as reported on Form MF–104. This is also true of the "Total Costs To Date".

In preparing Form MF–104A, it will be necessary frequently to distribute certain costs over a number of items. For instance, supervisory and engineering costs may have to be distributed over several phases, such as, drifting, crosscutting, raising, etc., provided that these items were reported active for the month. Such distributions should be made on the basis of time spent on the various phases, on man days of labor charged to such phases, or on some other equitable basis. "Operating Equipment", "Initial Rehabilitation and Repairs", and "New Buildings Improvements, etc.", will be distributed to the several phases of the project by the Washington Office of DMEA at the close of the project if determined necessary. The last two columns headed "Authorized by Contract" will be filled in by the Operator if such information is found in the contract. This information is usually a part of Exhibit "A" of the contract. A space for remarks has been provided for the use of the Operator to call attention to any unusual circumstances causing excessive or disproportionate unit costs.

GPO 83-38475

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

224 New Customhouse
Denver 2, Colorado

December 2, 1952

Memorandum

To: T. A. Christensen

From: Executive Officer, DMA Field Team, Region IV

Subject: DMA Docket 527, Contract Idm-R232 (Copper) Yucca Mining & Milling Co., Antlers Mine, Mohave County, Arizona - Operator's Monthly Progress Report for the period of September, 1952

Enclosed are the original and four copies of Form MF-104, Narrative Report, and Engineer's Report for the above period.

Work has been completed as authorized by the contract. No documentation is required for work performed under contracts prepared on Form MF-200A, therefore we recommend that payment be made for 50 percent of the amount reported by the Operator on Form MF-104, contingent on your verification of arithmetical accuracy within the report.

W. H. King
W. H. King

Enclosures

RDB:oc

cc: Contract
Secretary to the Operating Committee (2)
WRStorms
Chron.
AHKoschmann (2)

MINING DIVISION
REGION IV

November 26, 1952

Memorandum

To : W. H. King, Acting Chief, Mining Div., Region IV

From : Lincoln A. Stewart for Chief, Arizona-New Mexico Branch, Mining Div., Region IV

Subject : September 1952 Progress Report, Yucca Mining & Milling Co., Antlers Mine, Mohave County, Ariz. Docket DMA-527 X, Contract Idm-D232

Enclosed in quintuplicate are the following items for the above report:

(1) Bureau of Mines engineer's report

(2) Operators narrative report

(3) Forms MF-104 and 104A

Also enclosed are two extra copies of our engineer's report.

As work chargeable to this project is the advance since the official starting date of September 3, I recommend that the Government's share of 50 percent of the costs be paid.

Lincoln A Stewart

Lincoln A. Stewart, Mining Engineer
for Walter R. Storms, Chief
Arizona-New Mexico Branch
Mining Division, Region IV

CC W. H. King (6)
DMA-527X
DF

LAStewart:frj

MINING DIVISION
REGION IV

November 25, 1952

Memorandum

To : Walter R. Storms, Chief, Arizona-New Mexico Branch Mining Div., Region IV., Tucson, Ariz.

From : L. L. Farnham, Mining Engineer, Tucson, Ariz.

Subject : Monthly Progress Report for September 1952, Yucca Mining & Milling Co., Antlers Mine, Mohave County, Ariz., Docket DMA-527, Contract Idm-E232

The subject property was visited by the writer on October 2, 1952 to check the progress of the exploration work under the above contract.

The initial phases of the proposed exploration consists of drifting and crosscutting at both the northern and southern ends of the 5th level.

The project was started officially on September 3, 1952. During September all the work under the contract was confined to crosscutting from the westerly most drift at the southern end of the 5th level, as shown on the attached map.

The first round blasted in this proposed crosscut encountered a fault which apparently offset the mineralization. The direction and amount if displacement along this fault is not known. After crossing the fault zone the crosscut was advanced in a westerly direction for 22 feet beyond starting point "B". At the same time another crosscut was started from point "B" and advanced 17 feet in a southeasterly direction. The purpose of this latter work was to determine whether or not the mineralization had been offset in that direction by the fault. Although this 17-foot crosscut is not in strict accordance with the description of the work as outlined in the contract, it appears necessary and feasible for the faulted segment of the footwall mineralization must be located before it can be followed by the proposed drifting.

The total work accomplished during the month of September amounted to 39 feet of crosscutting.

Forms MF-104 and 104A submitted by the operator for September are in order and it is recommended that they be approved for payment.

L. L. Farnham, Mining Engineer
Arizona-New Mexico Branch
Mining Div., Region IV

CC W. H. King (orig. & 6)
DMA-527
DF
LLFarnham:frj

YUCCA MINING AND MILLING CO., INC.

Antler Mine

YUCCA, ARIZONA

ROBERT J. DALTON, PRES.-TREAS.
FERD WOLF, V-PRES.
BEN F. WILLIAMS, SECY.

November 20, 1952.

NARRATIVE REPORT for month of September, 1952
Exploration Contract DMA 527

After encountering the Sequite fault as shown on the map. Drifts were started to the right to crosscut to the hanging wall vein and to the left to determine the displacement of the vein shown.

Very truly yours,

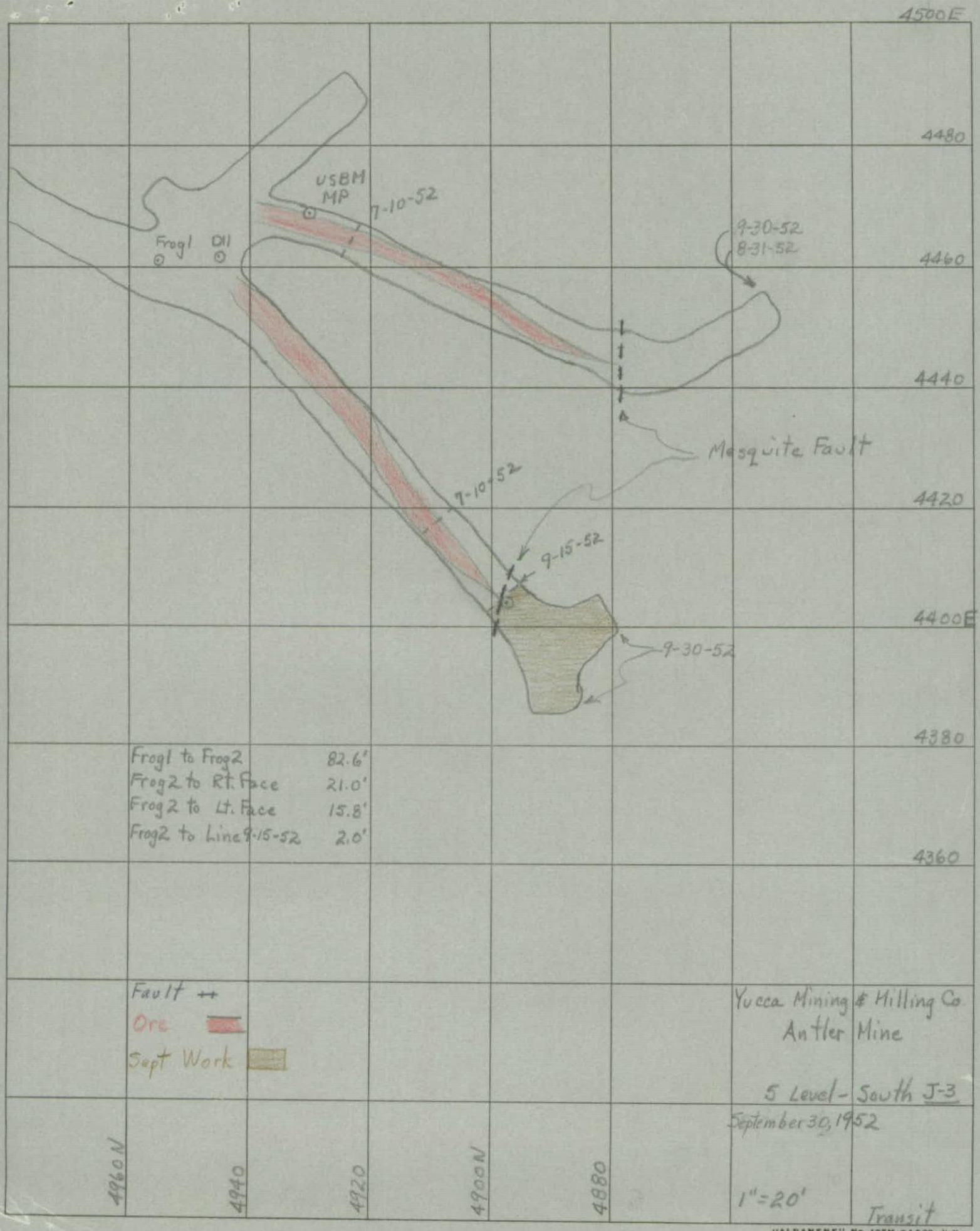
YUCCA MINING & MILLING CO., INC.,

Robert J. Dalton

Robert J. Dalton - President

RJD-q.

COPY



"ALBANENE" No. 195M K&E CO., N.Y.
REG. U.S. PAT. OFF.

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

DOCKET COPY

Project Summary Report

By: Ernest Wm. Ellis May 26, 1954

1. Docket No. DMEA-527 (Copper)
   Contract No. Idm-E232
   Property - Antler Copper-Zinc Mine
   Cedar Valley Mining District
   Mohave County, Arizona

   Operator - The Yucca Mining and Milling Company
   Yucca, Arizona
   Robert J. Dalton, President - address:
   307 18th Street
   San Bernadino, Calif.

   Operator's property rights - Owner. No encumbrances.
   Subordination Agreement, dated December 14, 1951, signed by F. F. Hintze, President, Arizona Antlers Mining Company, covering the claims held under Option Agreement

2. Original contract - dated December 19, 1951

   Work authorized -
   1800 feet of drifting, crosscutting, and raising $69,896.00
   Government participation @ 50% $34,948.00

   Amended contract - dated August 6, 1952

   Work authorized -

865 feet of drifting and crosscutting @ $32.00/ft	$27,680.00
935 feet of raising at $34.00/ft.	$31,790.00
Total of project	$59,470.00
Government participation	$29,735.00

   Amendments - None

   Work completed -

115 feet of drifting and crosscutting at $32.00/ft.	$3,680.00
Government participation @ 50%	$1,840.00

Work was started on September 3, 1952, and was discontinued in October, 1952, when the Operator became discouraged with the early stages of the project. The contract was officially terminated on May 25, 1953.

3. Audit Report of Review - September 3, 1953

Total cost as billed by Contractor	$3,680.00
No exceptions	- -
Total accepted cost	$3,680.00
Government participation at 50%	$1,840.00

No equipment was purchased in which the Government shares the cost.

4. Certification - None.

5. Comments -

As the work progressed the results became increasingly disappointing, the Operator apparently lost interest, and soon discontinued the exploration. The last work reported under the contract was performed in October 1952. In the narrative report for that month, dated November 20, 1952, the Operator suggested the need of an amendment changing the work program. On December 3, 1952, a DMEA examiner visited the property and discussed certain changes in the proposed work with the Operator. A mutually satisfactory plan was worked out which was to be formally submitted by the Operator as an amendment to the existing contract. No such application for an amendment was received, no request for a recess was made, and letters requesting the Operator's intentions were not answered. When the mine again was visited by the DMEA examiners on April 23, 1953, it was found that no work authorized by the contract had been done since November 1, 1952, and all the evidence showed that the Operator did not intend to complete the project. Consequently, the examiners recommended that the contract be terminated. The Administrator terminated the contract by notice to the Operator on May 25, 1953.

Although requested to do so on two occasions, the Operator has failed to submit the final narrative report. On April 26, 1954, the Operator's representative wrote the Bureau of Mines, Region IV, that all of the work done under the exploration contract was shown in the Operator's monthly progress reports; therefore, he suggested that the progress reports serve in lieu of a final report. The Field Team, on May 3, 1954, recommended that the Operator's statement relative to the work performed, attached to the Form MF-104 reports, be accepted as the Operator's final report. All operations on the property ceased in May, 1953, at which time the mine was closed because it could not be operated profitably on the metal prices prevailing at that time. However, as noted heretofore, no work authorized by the contract had been done since November 1, 1952, and final payment by DMEA to the Operator was made on December 4, 1952.

The examining team reported that the amount of work accomplished under the exploration contract was far too limited in extent to discredit the over-all objective of the exploratory

program; and that the failure of this project rests entirely with the Operator and probably is not due to the lack of merit of the property or of the exploration project as originally contracted. Additional exploration appears justified, either with Government or private capital. However, the mine cannot be profitably operated under present economic conditions, but at some future date may be a source of significant amounts of copper and zinc.

Ernest Wm. Ellis

Ernest Wm. Ellis

Copies to: Docket (original)
Admr.'s Reading file
Contract file, Code 700

☑ Audited

☐ Certified

W[illegible] ANALYSIS SHEET - DMEA PROJECT[illegible]

Analysis as of Nov. 29 '54
Incl. Voucher for Oct. 1952

☐ Actual Cost

☑ Agreed Unit Costs

Name The Yucca Mining and Milling Company

Docket No. DMA-527

State Arizona

Commodity Copper

Idm-E No. 232

OPERATION	AUTHORIZED Units	AUTHORIZED Cost	COMPLETED Units	COMPLETED Cost	NET COST
Drifting & Crosscutting	865	$27,680	115	$3,680	$3,680
Raising	925	21,790			
Shafts					
Winzes					
Drilling (Specify)					
Surface Excavation					
Underground Excavation					
Roads and Trails					
Operating Equipment Purchased					
Surface Rehabilitation & Repairs					
Underground Rehabilitation					
New Building, Improvements, etc.					
Other (Specify)					
Totals		$59,470.00		$3,680	$3,680

Prepared by Ellis

February 11, 1955

Memorandum

To: Jay L. Chambers, Chief
Contract Adm. & Audit Division

From: Ernest Wm. Ellis, Chief
Rare & Miscellaneous Metals Division

Subject: Completed contracts - no discovery made

We have checked the attached list of contracts prepared by Mrs. Alley of your Division. It is not our intention to write "completion" letters to the Operators on these particular contracts, although in each instance the exploration work was unsuccessful, for the reason that the work was completed sometime prior to the adoption of the procedure to prepare final letters to the Operators.

/s/ Ernest Wm. Ellis

1-26-55

Rare and Miscellaneous Metals
Completed contracts on which certification or a closing letter of no discovery has not been issued.

Docket No.	Contract No.	Operator
1131	104	Sierra Copper Company
1324	108	Ansley J. Gold and Joe Gold
1514	112	Maravillas Minerals Company
1348	123	Elkmora Mining Company
979	132	G. C. F. Antimony
1215	142	Compton I. White
1660	143	Oscar Svensson
1535	169	Columbia Mining Company
2013	215	Amador Mining Company
527	232	Yucca Mining & Milling Co.
1429	269	J. Walter Duncan, Jr.
1232	276	Alaska Copper Corporation

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

Bolanos Cabrera
MAY 18 1954

May 17, 1954

Memorandum

To: E. W. Ellis, DMEA

From: C. H. Johnson, Bureau of Mines

Subject: DMEA-527 (Copper) Yucca M. and M. Company, Antler Mine, Mohave County, Arizona

I have reviewed the final reports by Faick and Farnham on this project, and find them as complete as could be under the circumstances, and certainly adequate to support the conclusions reached.

C. H. Johnson

C. H. Johnson

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

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

FINAL
F.Y. RPT.

224 New Customhouse
Denver 2, Colorado

May 3, 1954

Memorandum

To: Secretary to the Operating Committee, DMEA

From: DMEA Field Team, Region IV

Subject: Docket DMEA-527 (Copper), Contract Idm-E232, Amended, Yucca Mining and Milling Co., Mohave County, Arizona

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

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

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

We have been unable to obtain a final narrative report from the operator, therefore in order to close our accounts on the project we recommend that the operator's statement relative to the work performed, attached to his Form MF-104 reports, be accepted as his final report. In conjunction with the matter we are enclosing the original and one copy of a letter from the operator dated April 26, 1954 and transmittal thereof from the Chief, Mining Methods Branch, Mining Division, Region IV, dated April 28, 1954.

Final payment to Operator Dec. of 1952 per Cancellation Contract Recs.

The contract was terminated May 25, 1953 by the Government under the provisions of the contract because the operator failed to prosecute operations pursuant to the terms of the contract. Reimbursement to the operator for the amount of Government participation in the costs of the work performed during the month of September and October 1952 in fact constitutes final payment under the terms of the contract, which is verified as allowable by the report of review by the Contract Administration and Audit Division dated September 3, 1953.

The exploration work completed consisted of 115 feet of drifting and crosscutting at a total accepted cost of $3680.00, in which the Government participated to the extent of 50% or an amount of $1840.00. No ore was discovered or developed as a result of the small amount of exploration work completed, therefore a certification of discovery or development is not recommended.

Reviewed by
DMEA OPERATING COMMITTEE
5-14-54
(date)

W. H. King
W. H. King

E. N. Hauschman
for A. H. Koschmann

Encls.

Mining Division
Date Rec'd
APR 30 1954
BUREAU OF MINES
Denver, Colorado

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

SOUTHWEST EXPERIMENT STATION
Box 4097
UNIVERSITY STATION

TUCSON, ARIZONA

April 28, 1954

Memorandum

To : W. H. King, Chief, Mining Division, Region IV

From : Chief, Mining Methods Br., Mining Div., Region IV

Subject : Operator's Final Engineering and Geological Report, Contract Idm-E232, Docket DMA-527X, Yucca Mining & Milling Co.'s Antler Copper Mine, Mohave County, Ariz.

Enclosed are original and 4 copies of a letter from Robert J. Dalton, president of the Yucca Mining & Milling Co., regarding the final engineering and geological report for work done under DMEA Exploration Project Contract No. Idm-E232. We wrote to Mr. Dalton on April 1, via registered mail, about his final report.

We have advised Dalton that we believe a final report is expected although he seems to think that his monthly progress reports should have been sufficient.

Please note that Dalton should be addressed at 307 - 18th St., San Bernardino, Calif.

Walter R. Storms

Walter R. Storms

CC W. H. King (4)
DMA-527X
DF

WRStorms:frj

Reviewed by
DMEA OPERATING COMMITTEE
5-14-54
(date)

YUCCA MINING AND MILLING CO., INC.

Antler Mine

YUCCA, ARIZONA

ROBERT J. DALTON, PRES.-TREAS.
FERD WOLF, V-PRES.
BEN F. WILLIAMS, SECY.

April 26, 1954

Mr. W. R. Storms, Chief
Mining Methods Branch
Mining Division, Region IV
U. S. Bureau Of Mines
Box 4097 University Sta.
Tucson, Ariz.

Re: DMEA Contract Idm-E232
Docket DMA-527

Dear Mr. Storms:

We have received your registered letter of April 1, 1954 relative to the final engineering & geological report as required by article 5-b of the contract.

As you know, the portion of the work in which the government participated was virtually all in country rock (schist) and no mineral developed or exposed. Our progress reports show this and I am wondering if these will suffice for our final report.

For your information the mine has been completely shut down for approximately a year and all of the personnel dismissed.

Very truly yours,

Robert J. Dalton

Robert J. Dalton

U. S. BUREAU OF MINES
MINING DIVISION
APR 23 1954
TUCSON, ARIZONA

Reviewed by
DMEA OPERATING COMMITTEE
5-14-54
(date)

mailed from San Bernardino, Calif.

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Defense Minerals Exploration Administration
Denver Federal Center
Denver 2, Colorado

April 29, 1954

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 527, Contract Idm-E232, Antler Copper-Zinc Mine, Yucca Mining and Milling Company, Mohave County, Arizona

Enclosed are 9 copies of the final geological report by John N. Faick of the U. S. Geological Survey covering the above docket.

E. V. Koschman
for A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (9)

Reviewed by
DMEA OPERATING COMMITTEE
5-14-54
(date)

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Box 4126 University Station
Tucson, Arizona

MAY 10 1954

April 26, 1954

Memorandum

To: A. H. Koschmann, Denver, Colorado

From: J. N. Faick, Tucson, Arizona

Subject: Final Geologic Report, Contract Idm-E 232,
Docket DMA 527
Antler Copper-zinc Mine
Yucca Mining and Milling Company
Mohave County, Arizona

This memorandum is being submitted as a final report on the above subject because at this time the Survey has no one available who has first-hand geological knowledge of the property or the exploration project, and the part of the mine explored with Defense Minerals Administration assistance is reported to be flooded and inaccessible. Additional geological work is not justified because of the small amount of work completed on the project and because of the inconclusive results obtained.

The original contract on this project provided for 1600 feet of drifting, crosscutting, and raising at a cost of $59,470, with the Government participating to the extent of 50 percent. The proposed work was designed to explore the extensions of the Antler ore zone both north and south of the developed portion of the mine. The work was started in September 1952 and discontinued in October 1952, when the operator became discouraged with the early stages of the project. As the operator failed to do the work allowed for the project, the contract officially was terminated on May 25, 1953. The exploration completed under the contract amounted to 115 feet of drifting and crosscutting at a total cost of $3680, of which the Government paid $1840. The mine was closed in May 1953 because it could not be operated profitably on the metal prices prevailing at that time.

The proposed exploration project and the amount of work completed under the contract is illustrated by a map, Figure 1, which accompanies the final engineering report prepared by L. L. Farnham, U.S. Bureau of Mines. The geology was described in the original report on the examination by C. A. Anderson, U.S. Geological Survey. There is no reason to modify the original description of the geology, nor to modify the original ore reserve estimates.

Reviewed by
DMEA OPERATING COMMITTEE
5-14-54
(date)

This project failed in its purpose to discover additional ore reserves primarily because the amount of work completed was too limited in extent to obtain conclusive results. Failure of this project rests entirely with the operator and probably is not due to the lack of merit of the property or of the exploration project as originally contracted.

The Antler mine is believed to have substantial indicated and inferred ore reserves which contain about 3 percent copper, 7 percent zinc, and recoverable amounts of lead, silver and gold. If the DMEA exploration project had been completed it probably would have proved the presence of substantial ore reserves. The Antler mine is believed to be a property having considerable merit and, under competent management and favorable economic conditions eventually may be successfully operated.

As the project was terminated before completion, and as no ore was discovered by the work completed, the project must be classified as unsuccessful. Certification of a discovery cannot be made, and the Government is not entitled to royalties from future production. Additional exploration appears justified, either with Government or private capital. The mine cannot be profitably operated under present economic conditions, but at some future date may be a source of significant amounts of copper and zinc.

John N. Faick

John N. Faick
Geologist

JNF:ms

c.c. - 8 to Koschmann

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

SOUTHWEST EXPERIMENT STATION
Box 4097
UNIVERSITY STATION

MINING DIVISION
REGION IV

TUCSON, ARIZONA

November 4, 1953

Memorandum

To : W. H. King, Chief, Mining Division, Region IV

From : Chief, Mining Methods Br., Mining Div., Region IV

Subject : Final Engineering Report, Contract Idm-E232, Docket DMA-527X, Yucca Mining & Milling Co.'s Antler Copper-Zinc Mine, Mohave County, Ariz.

Enclosed are original and 8 copies of a final engineering report on the above property by L. L. Farnham of the Bureau of Mines. This report has my approval.

Walter R. Storms

Walter R. Storms

CC W. H. King (8)
DMA-527X
DF

WRStorms:frj

Reviewed by
DMEA OPERATING COMMITTEE
5-14-54
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

GCS
4/7/54

DMA-527X, Contract Idm-E232

Yucca Mining and Milling Company, Inc.

Antler Copper-Zinc Mine

Cedar Valley Mining District

Mohave County, Arizona

Final Engineering Report

L. L. Farnham, Mining Engineer
U. S. Bureau of Mines

November 1953

Reviewed by
DMEA OPERATING COMMITTEE
5-14-54
(date)

DMA-527X, CONTRACT Idm-E232
YUCCA MINING AND MILLING COMPANY, INC.
ANTLER COPPER-ZINC MINE
CEDAR VALLEY MINING DISTRICT
MOHAVE COUNTY, ARIZONA

CONTENTS

Engineering report	Page
Summary, conclusions and recommendations	1
Introduction	2
Description of work completed	4
Description of the deposit	6
Ore reserves	6
Expenditures	7
Efficiency of operations	7

ILLUSTRATIONS

Figure		Following page
1	Plan of 5th level	4
2	Composite level map and longitudinal projection	6

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Early in 1951, the Yucca Mining and Milling Co., Inc., applied to the Defense Minerals Administration under the Defense Production Act of 1950, for a loan amounting to $833,250. The application was docketed as DMA-527X. The funds originally requested were for the purpose of expanding the production and further development of the Antler copper-zinc deposit in Mohave County, Ariz. Following the investigation of the property and numerous revisions of differing proposals requested by the applicant, a short form exploration contract (Idm-E232) finally was authorized. The total amount approved for the project was $59,470, of which the Government would participate to the extent of 50 percent. The proposed work was designed to explore the lateral extension of the Antler ore zone both north and south of the developed portion of the mine.

The joint exploration program, involving a total of 1,600 feet of drifting, crosscutting, and raising, was started early in September 1952. As the work progressed, the results became increasingly disappointing, and after completing 115 feet of drifting and crosscutting, the operator became discouraged and discontinued the exploration late in October 1952. Subsequent investigations indicated that the operator had no intention of resuming the exploratory work. On April 30, 1953 the Yucca Mining and Milling Co., Inc. was notified by letter from the Administrator of the DMEA that unless the company had definite plans to resume operations in the near future the contract would be terminated. As no reply to this letter was received, the contract officially was terminated on May 25, 1953.

The exploration completed under the contract amounted to 95 feet of crosscutting and 20 feet of drifting. The unit price for this work was $32 a foot, so the total cost of the project was $3,680, of which the Government paid $1,840. No ore was found by the exploration in which the Government shared the cost.

The small amount of work accomplished did little to discredit the overall program and under more favorable economic conditions the project would appear to still have as much merit as it had at the time it originally was conceived.

INTRODUCTION

This report describes the results of an exploratory project authorized by the Defense Minerals Exploration Administration under the Defense Production Act of 1950.

Early in 1951, the Yucca Mining and Milling Co., Inc. applied for Governmental assistance amounting to $833,250 for the purpose of further exploring, developing, and expanding the production of the Antler copper-zinc mine. This original application, docketed as DMA-527X, was reduced later to a request for $270,696 of which $183,350 constituted a production loan and the balance of $87,346 was for exploration on a participation basis. The property was examined during the week of April 9, 1951 by C. A. Anderson of the Geological Survey and T. M. Romslo of the Bureau of Mines.

On October 10, 1951 the application for the production loan was withdrawn, and a long form exploration contract, amounting to $69,896, was executed on December 19, 1951. Soon thereafter the applicant requested a revision of the contract. Finally a short form

exploratory contract, that satisfied the applicant, was executed on August 6, 1952. The project, as authorized in this revised contract, Idm-E232, provided for 1,600 feet of underground exploration costing $59,470, of which the Government would provide 50 percent.

The joint project was officially started on September 3, 1952. As the work progressed the results became increasingly disappointing, the operator apparently lost interest, and soon discontinued the exploration. The last work reported under the contract was performed in October 1952. In the narrative report for that month, dated November 20, 1952, the operator suggested the need of an amendment changing the work program. On December 3, 1952/[a] DMEA examiner from the Tucson office visited the property and discussed certain changes in the proposed work with the operator. A mutually satisfactory plan was worked out which was to be formally submitted by the operator as an amendment to the existing contract. No such an application for an amendment was received, no request for a recess was made, and letters requesting the applicant's intentions were not answered. When the mine again was visited by the DMEA examiners on April 23, 1953, it was found that no work authorized by the contract had been done since November 1, 1952 and all the evidence showed that the operator did not intend to complete the project. Consequently the examiners recommended that the contract be terminated.

On April 30, 1953 the operator was informed by a letter from the Administrator of the Defense Minerals Exploration Administration which read in part as follows:

"This course of action by the Yucca Mining and Milling Co., Inc., is in breach of its obligations under the contract, unless the Company has plans definitely to resume operations in the near future. Please either inform the Government at once of any such plans or sign and return the original and five copies of the enclosed form entitled Termination of Exploration Project Contract by Agreement after Commencement but before Completion of the Work. If no reply is received from you in the near future, the Government will unilaterally terminate this contract". No reply was received and on May 25, 1953, the Yucca Mining and Milling Co., Inc. formally was notified by the Administrator that contract Idm-E232 had been terminated.

Although requested to do so on 2 occasions the operator has failed to submit the final narrative report. All operations on the property ceased in May 1953.

DESCRIPTION OF THE WORK COMPLETED

The project was designed to explore the lateral extension of the Antler ore zone both north and south of the known productive area. Diamond drilling performed in 1947 by the Bureau of Mines 1/ indicated that copper-zinc mineralization extended into the areas of the proposed exploration. The authorized DMEA contract work, consisting of 1,600 feet of drifting, crosscutting, and raising, was confined to the 5th, or bottom level of the mine (figure 1). At the southern end of the level about 72 feet of the proposed drifting (J-1) was completed by the operator prior to the effective date of the contract. This drift followed a narrow strand of mineralization for about 50 feet where it terminated against a transverse fault. A limited amount of crosscutting

1/ Antler Copper-Zinc Deposit, Mohave County, Ariz., R.I. 4214, Bur. of Mines, 1948.

beyond the fault failed to find any continuous mineralization. The operator requested reimbursement for this 72 feet of work but, as it was completed before any work was authorized, the claim was not allowed.

The project officially was started on September 3, 1952 when the starting points were established. Crosscutting at J-3 then was commenced and 94 feet of work in this area was completed without finding ore. Drifting at the northerly end of the level (J-2) was started in October and advanced for 20 feet where the mineralization ended against a flat-dipping strike fault. This work then was discontinued. Later, the operator at his own expense drove an inclined raise along this fault. What this work disclosed was not learned.

Because of the discouraging outcome of the exploration at both the north and south ends of the level, the operator lost interest in the venture and no further work as authorized by the contract was undertaken. The work accomplished is shown on figure 1 and summarized as follows:

Month	Location	Feet
September	J-3	39
	J-3	56
October	J-2	20
	Total	115

Although this small amount of work was disappointing, it is obvious that it was far too limited in extent to discredit the overall objective of the exploratory program. Hence it would seem that the project as a whole still has practically as much merit as it had before the work was started.

The mine was closed in May 1953 because it could not be operated profitably at prevailing metal prices. Further exploration of the property hardly would appear warranted until such time as the demand for zinc becomes more urgent.

DESCRIPTION OF THE DEPOSIT

The ore bodies comprising the Antler deposit are irregular, disconnected lenses of massive sulphides occurring in a zone of pre-Cambrian schist. The mineralized zone is approximately 100 feet wide and 1,200 feet long. However, the major portion of the mineralization appears to have been localized in the northern half of the zone. The ore bodies are distributed more or less at random and range from those with a length of 100 feet and a maximum width of 60 feet, to others with a length of 200 feet and a width of 3 feet. All pinch and swell abruptly along both the strike and dip.

The sulphide minerals are sphalerite, pyrite, chalcopyrite, and minor amounts of galena. The gangue consists chiefly of quartz, amphibole minerals, and feldspar.

ORE RESERVES

No ore was discovered by the exploration in which the Government participated. In April 1951, when the mine was examined in connection with the loan application, the examiners[2/] estimated the reserves were of the order of 135,000 tons of indicated ore, and 330,000 tons of inferred ore (figure 2). These estimates were based on the assumption

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1/ Anderson, C. A. of the Geological Survey
Romslo, T. M., of the Bureau of Mines

that ore would be found for an additional 300 feet along the strike and that the entire ore zone would extend 300 feet below the bottom level. The grade of the ore as mined was expected to average 3 percent copper and 7 percent zinc with minor amounts of lead, silver, and gold. Since these estimates were made, from 20,000 to 30,000 tons of ore have been produced from the upper levels of the mine.

EXPENDITURES

The total amount approved for the project was $59,470. The total cost of work done was $3,680, comprised of 115 feet of drifting and crosscutting at $32 a foot. The Government's share of the cost was $1,840. No ore was produced from the work in which the Government shared the expense.

EFFICIENCY OF OPERATIONS

It did not appear to the examiners who visited the property during the progress of the exploration that the work was being done as efficiently as it should have been. Robert J. Dalton, the president and general manager of the Yucca Mining and Milling Co., Inc. is a graduate mining engineer and is generally considered a competent operator. However, due to ill health, Dalton spent very little time at the mine during the progress of the exploration. As the property is rather isolated, and had limited housing and other facilities, it was difficult at the time to secure and keep competent miners. Under these conditions a part of the apparent inefficiency was probably unavoidable.

No equipment was purchased in which the Government shares the cost.

FILE COPY
SURNAME:
800

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

SEP 1 0 1953

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

Dear Mr. Finch:

The Report of Review issued by you on the Yucca Mining and Milling Company, Contract No. Idm-E232, Docket No. DMA-527, has been accepted and distribution of other copies may be effected.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Chief
Contract Administration
and Audit Division

AMAlley/ama
September 10, 1953

Copy to: Docket
Admr. Reading File
Mr. Chambers

9-10-53

FILE COPY
SURNAME EB

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

AUG 20 1953

Mr. W. H. King
Executive Officer
DMEA Field Team, Region IV
22h New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMA-527 (Copper)
Contract No. Ida-5232 (Amended)
The Yucca Mining and Milling Company
Mohave County, Arizona

Dear Mr. King:

Reference is made to your memorandum dated July 28, to the Administrator and the memorandum dated July 27, 1953, by Mr. Donald T. Finch, DMEA Auditor, wherein it is suggested that the files show specific evidence of the Administrative decision regarding repayment of the Government's contributions to the project. Said contributions amounted to the sum of $1,8h0.00 on a short form contract totaling $59,h70.00.

The Engineers' report dated May h, 1953 states: "The examiners recommend that this contract be terminated immediately, but they believe it would be unwise to attempt to recover the $1,8h0.00 already advanced the Applicant." Subsequently a notice of termination dated May 25, 1953, was signed by the Administrator.

We are enclosing a copy of the Chief Counsel's memorandum of August 13, 1953. You will note therein a decision to the effect that "The Government may not now ask for repayment of its contributions." This statement we believe answers your inquiry with respects to repayment in this case.

Sincerely yours,

W. S. Martin
ACTING Chairman, Operating Committee

Enclosures

APPROVED:

C. H. Johnson
Member, Bureau of Mines

Dwi Larrabee
Member, Geological Survey

EWEllis/db
8-17-53
cc to: Adm. Reading File
Operating Committee
Docket
Messrs: C.H.Johnson, Rm. 3621
A.R.Kinkel, Rm. B-2h2A, GSA
Ellis

8-20-53

8/13/53 gla

140

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

August ~~June~~ 13, 1953

Memorandum

To: The Administrator
Through: Mr. E. W. Ellis

From: Chief Counsel

Subject: The Yucca Mining and Milling Company - Copper - Docket No. DMA-527

Reference is made to Mr. Ellis' memorandum to me dated August 10, 1953, in the above-entitled case.

In a memorandum to you dated March 19, I wrote that the Operator, after working approximately one month, had suspended operations for approximately five months, which was one-half of the total time allowed under the contract for completion of the work. I therefore concluded that the Operator had no intention of completing the work within the time fixed and that the Government was justified in terminating the contract and requesting the Operator to repay all contributions previously made by the Government. However, I stated that the decisions as to termination of the contract and demanding repayment of the Government's contributions were administrative ones.

On May 25, 1953, you signed a termination notice which stated that the Operator had failed, in the opinion of the Government, to prosecute operations pursuant to the terms of the contract. Not only was repayment not then demanded but on June 3, 1953, in a letter to the Operator, Mr. King wrote: "Payment of your claim for the months of September and October 1952 constitutes final payment under the terms of the contract."

Mr. King, in his memorandum to you dated July 28, 1953, asks your advice regarding the demand for repayment in this case, and Mr. Ellis in his memorandum of August 10, 1953, asks for the same information.

In my opinion, the administrative decision not to ask for repayment was taken by yourself when you signed the termination notice which did not ask for repayment and when Mr. King, after the termination notice was sent, by means of his June 3, 1953, letter, stated "Payment of your claim for the months of September and October 1952 constitutes final payment under the terms of the contract." These actions were consistent with my memorandum of July 6, 1953, to Mr. Chambers, referred to in Mr. Finch's memorandum of July 27, 1953, to Mr. King.

The Government may not now ask for repayment of its contributions.

for J. L. Hofflund
Chief Counsel

FILE COPY
SURNAME:

Ellis

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

August 10, 1953

Memorandum

To: Chief Counsel

From: Ernest Wm. Ellis, Chief
Rare and Misc. Metals Division

Subject: Docket No. DMA-527 (Copper)
Contract No. Idm-E232, as amended
The Yucca Mining and Milling Company
Mohave County, Arizona

We are forwarding subject contract file to you for your recommendation. The reason for this is brought out in the final paragraph of the memorandum to Mr. King, Executive Officer, Region IV, dated July 27, 1953, from Mr. Donald T. Finch, DMEA Auditor, wherein it is stated: "...it is suggested the files should show specific evidence of the Administrative decision regarding repayment in this case." Mr. King, in his letter of transmittal, dated July 28, states: "...we will appreciate your advice regarding demand for repayment in this case."

We draw your attention to the following:

1. The aforementioned correspondence in the file.

2. Operator's letter to the Administrator dated May 25, 1953.

3. Termination notice dated May 25, 1953, accompanied by the Administrator's letter to the Operator under date of May 26, 1953.

4. The last paragraph of the Field Team's memorandum dated May 4, 1953.

5. Chief Counsel's memorandum dated March 19, 1953, a copy of which was forwarded to Mr. King under date of March 25, 1953.

It appears that work commenced in September, 1952, and stopped in October, 1952. The sum of $3,600.00 was expended and the Government's share of $1,840.00 was paid. Since this is a short-form contract, there is no equipment to be disposed of. The total amount to be expended under the contract was $59,470.00.

Apparently the amount of work that was done revealed sufficient geological information to discourage the Operator from continuing with the exploration work. However, it does appear that the Operator has received financial aid from the R.F.C. and a local bank, together with a floor price contract for copper and zinc from DMPA.

In light of the above references, kindly give us your recommendation as to what further steps should be taken, if any, with regard to Mr. King's request for advice "regarding demand for repayment in this case."

I have discussed this matter somewhat briefly with Mr. Kane.

Ernest Wm. Ellis

EWEllis/gla

cc to: Docket file
Ellis
Chron

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

224 New Customhouse
Denver 2, Colorado

July 28, 1953

Memorandum

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

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMA 527 (Copper), Contract Idm-E232, Yucca Mining and Milling Company, Mohave County, Arizona

Enclosed are three copies each of the following material relevant to closing the subject account:

1. Letter to Mr. R. J. Dalton, President, Yucca Mining and Milling Company, from this office dated June 3, 1953.

2. Memorandum from Donald T. Finch, DMEA Auditor, to the Executive Officer, DMEA Field Team, Region IV, dated July 27, 1953.

With reference to the matter discussed in our letter of June 3, to the operator, we have not received a reply, nor have we received the final report requested and as stipulated in the Notice of Termination executed by you on May 25, 1953.

With reference to the matter discussed in Mr. Finch's memorandum, Item 2, last page, we will appreciate your advice regarding demand for repayment in this case.

W. H. King
W. H. King

Enclosures

224 New Customhouse
Denver 2, Colorado

July 27, 1953

Memorandum

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

From: Donald T. Finch, DMEA Auditor

Subject: Report of Review, Exploration Contract Idm-8232, Docket DMA 527 (Copper) Yucca Mining and Milling Company

A review of the available files discloses that on May 25, 1953, the Administrator signed a termination notice:

** "In the opinion of the Government, you have failed to prosecute operations pursuant to the terms of the contract."
** "You are required to render to the Government a full and final accounting of your operations under the contract and of your expenditure of money on account thereof."

Your letter to the Operator dated June 3, 1953, states among other things:

*** "Payment of your claim for the months of September and October, 1952, constitutes final payment under the terms of the contract."
"Please advise when we can expect receipt of your final narrative report as stipulated under article 5(b)."

Apparently no reply to your letter has been received.

Reference is also made to excerpt from copy of letter to Administrator from Chief Counsel dated March 19, 1953.

"***and the Government, in my opinion, is justified in terminating the contract and in requesting the Operator to repay all contributions previously made by the Government. However, the decisions as to termination of the contract and demanding repayment of the Government's contributions are administrative ones."***

The Chief Counsel in a letter to Chief, Contract Administration and Audit Division, dated July 6, 1953, has however, stated in part:

> "**the Government may terminate '<u>if the Operator, in the opinion of the Government</u>' fails to prosecute operations pursuant to the terms of the contract."
> "It was not intended that a termination under this provision would give the Government the right to recover money previously contributed, but only to relieve the Government of the obligation to contribute any more."***

Before a report of review is released, it is suggested that the files should contain the following:

(1) A final report from the Operator or in lieu thereof:
   (a) Final Report from Field Team (See Memorandum No. 14, February 4, 1953) or
   (b) Waiver of Operator's Final Report (See Memorandum No. 20, dated June 22, 1953).

(2) Because of the statement by the Chief Counsel in his letter dated March 19, 1953, concerning repayment and which dealt specifically with the subject contract, it is suggested the files should show specific evidence of the Administrative decision regarding repayment in this case.

Donald T. Finch

DTF:es

cc: Chron.
Subject
Shaw
Contract (DMEA FILES)
Chron. (DMEA FILES)

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

C O P Y

224 New Customhouse
Denver 2, Colorado

June 3, 1953

Mr. R. J. Dalton, President
Yucca Mining and Milling Company
Yucca, Arizona

Re: Docket No. DMEA-527X
Contract Idm-E232

Dear Mr. Dalton:

Reference is made to the letter from the Administrator, DMEA, dated May 26 transmitting termination notice of Contract Idm-E232 by mutual agreement.

In reference to the termination of a DMEA contract and the requirement of a final report you are referred to article 5(b) of Exploration Project Contract Form MF-200(A). Payment of your claim for the months of September and October 1952 constitutes final payment under the terms of the contract.

Please advise when we can expect receipt of your final narrative report as stipulated under article 5(b).

Very truly yours,

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

FILE COPY
SURNAME:

Docker
Schmidt
Ellis
DeLange
Talbert
Martin
Kimball
Johnson

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

MAY 2 3 1953

Yucca Mining and Milling Company
Attention: Mr. Robert J. Walton
30[illegible]-1[illegible]th St.,
San Bernardino, California

Re: Docket No. [illegible] (Copper)
Contract Form 232
Yucca Mining and Milling Company
Pima County, Arizona

Dear Mr. Walton:

We have received no reply to our letter dated April 30, 1953, addressed to you as President of the Yucca Mining and Milling Co., nor the notice of Termination of Exploration Project Contract, agreement later announcement but before completion of the Form 1232-1) which we requested you to sign.

We stated in that letter that "If no reply is received from you in the near future, the Government will unilaterally terminate this contract".

This is now being done as per the enclosed "Notice of Termination of Exploration Project Contract, under the terms of the contract, before the completion of the work (Form 1232-2).

We would appreciate your acknowledgment of this correspondence.

Sincerely yours,

C. O. Mittendorf
Administrator

RSSchmidt
5-20-53

MDL
5-26-53

cc to: Chr. Reading File
Operating Committee
Docket
Messrs: A. F. Pinkel, Jr. Rm.[illegible]-2[illegible], [illegible]
[illegible] Johnson, Rm.3621
Mr. Chambers
Mr. Ellis
Mr. Schmidt
Legal Division
DMA Field Team, Region IV (2)

FILE COPY
SURNAME:

Docket
Schmidt
Ellis
Cokal
Martin
Martin
Kolman

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

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

MAY 26

Re: Docket No. DMA-527 (Copper)
Contract IDm-1232
Yucca Mining and Milling Company
Mohave County, Arizona

Dear Mr. King:

The excellent report on the status of the subject property by H. J. Heinz and R. W. Ageton of the Bureau of Mines, dated May 4th, has been received.

It will be noted from our letter of April 30, 1953, to R. J. Dalton, President of the Yucca Mining and Milling Company, with enclosures of termination of contract (form 18262-1), that we are in accord with your recommendations.

Since there has been no reply to this letter of April 30th, we are writing Mr. Dalton as per the enclosed copy of letter of this date together with two copies of the notice of termination of contract (form 18262-2). One copy is for your files and the other for the Region IV Finance Officer.

Sincerely yours,

W. S. Martin
ACTING Chairman, Operating Committee (JVB)

Enclosures 2

Concurred:

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

A. R. Kinkel, Jr. (JVB)
Member, Geological Survey

MDS 5-26-53

FEschmidt/db
5-20-53
cc to: Adm. Reading File
Operating Committee
Docket
Messrs. A.R.Kinkel, Jr., Rm.B-242A, GSA
C.H.Johnson, Rm.2631
Mr. Chambers
Legal Division
Mr. Ellis
Mr. Schmidt
DMEA Field Team, Region IV (2)

6/5/53 - db.

No reply necessary. See note at end of letter.

YUCCA MINING AND MILLING CO., INC.

Antler Mine

YUCCA, ARIZONA

ROBERT J. DALTON, PRES.-TREAS.
FERD WOLF, V-PRES.
BEN F. WILLIAMS, SECY.

May 25, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 1 1953

Mr. C. O. Mittendorf, Adm.
Defense Minerals Exploration Adm.
Washington 25, D. C.

Re: Docket DMA-527(Copper)
Contract No. Idm-E232

Dear Mr. Mittendorf:

In reply to your letter of April 30, 1953.
In the first paragraph of your letter you state that $3860.00 was expended on exploration. That is the amount that the government participated in to the extent of fifty percent. It is not all of the work we have performed. During July and August of 1952 we also performed $2960.00 worth of work which has been disallowed on the basis of Mr. King's letter of Sept 10, 1952. Additional work has been done in the J-2 area. Payment for this work was disallowed before presentation by Mr. Elsing on the ground that we inclined the drift to stay with the ore and we should have kept on drifting in the country rock on the drift level. We requested an amendment to the contract for this phase of the work but it was returned to us with no comment. Mr. Farnum was present at the mine when we encountered the condition but had no solution or recommendation to offer.

Re par. 2 your letter
The letter was written,as you say, on Nov.18, 1952 with six copies of an amendment changing the original date of the contract, yet we had and still have an amended contract which was valid for the payment of what money we did receive from the government and we saw no reason why we should invalidate a contract in effect for the new one presented to us. Further ; On July 5, 1952 I was in the office of the regional director in Denver and made the arrangements which were contained in the amended contract of August 6, 1952. At that time no work had been done on the contract and the amendment only contained the terms of payment and not the scope of the work in any particular. Our contract of Dec. 19, 1951 contained a complete description of the scope of the work as then planned with maps and coordinates of all pertinent points . There was no provision , that the property had to be inspected again by the government, before work was started on that contract nor in the amended contract.

Re par. 3 your letter
We take distinct exception to your statement that the Yucca Mining & Milling Co.'s action constituted a breach of contract and lay the blame entirely upon the government for any lack of progress in the persecution of the contract. As a specific example I invite

YUCCA MINING AND MILLING CO., INC.

Antler Mine

ROBERT J. DALTON, PRES.-TREAS.
FERD WOLF, V-PRES.
BEN F. WILLIAMS, SECY.

YUCCA, ARIZONA

your attention to Mr Storms letter to me of October 7, 1952 in which it is implied that we would have to get the disbursing officer to approve before we would be assured that we were following the correct course of action. This sort of evasion of responsibility has been constant as each new geological feature was encountered and a continual source of interruption of normarl progress. We still do not have an answer to our letter of April 15 th 1953.

In view of the facts of the case we do not feel that we should sign any termination agreement based upon our lack of performance on this contract. We do feel that we do not wish to even try to continue under the conditions that have prevailed in the past and you may consider this letter as notice of our intent to terminate the contract, because of breach of contract on the part of the government.

Very truly yours

Robert J. Dalton

Robert J. Dalton, Pres.

6-5-1953

Note:

I see no reason to enter into a discussion by correspondence especially since by now the Operator has undoubtedly received the Termination notice dated May 25 1953 which crossed the Operator's letter (5-25-53) in the mail.

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

224 New Customhouse
Denver 2, Colorado

May 8, 1953.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 11 1953

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Contract Termination. Contract Idm-E232, Docket DMEA-527
Yucca Mining & Milling Co.'s Antler Copper-Zinc Mine,
Mohave County, Arizona

Enclosed are two copies of the report prepared by Messrs. Elsing and Ageton, Bureau of Mines engineers, concerning the status of Contract Idm-E232, Docket DMEA-527.

W. H. King

W. H. King

Enclosures

MINING DIVISION
REGION IV

Letter to Dalton sent 4/30 had not been recd by this date

May 4, 1953

Memorandum

To : W. H. King, Chief, Mining Division, Region IV

From : Chief, Mining Methods Br., Mining Div., Region IV

Subject : Contract Termination, Contract Idm-E232, Docket DMEA-527, Yucca Mining & Milling Co.'s Antler Copper-Zinc Mine, Mohave County, Ariz.

As requested in your memorandum of March 31, we had M. J. Alsing and R. W. Ageton visit the Antler mine on April 21 to try to determine what work, if any, had been done since October 1952 and to obtain information regarding the operator's future plans for exploration work under Contract Idm-E232. A copy of our engineer's report is attached, with a map showing proposed work and work actually done.

Our engineers recommend that this contract be terminated, as explained in their report. I concur with their recommendations and strongly urge that this be done.

On April 30, at the meeting of the Select Committee on Small Business of the House of Representatives in the Hotel Westward Ho in Phoenix, Arizona, R. J. Dalton, president of the Yucca Mining & Milling Co., testified before the committee and I understood him to say that the Antler mine was being closed and would remain closed for some time. Evidently the company has no intention of doing any more work under Contract Idm-E232.

Walter R. Storms

Walter R. Storms

CC W. H. King (6)
DMEA-527
DF

WRStorms:frj

MINING DIVISION
REGION IV

May 4, 1953

Memorandum

To : Walter R. Storms, Chief, Mining Methods Br., Mining Division, Region IV

From : M. J. Elsing, Consulting Mining Engineer, and R. W. Ageton, Mining Engineer, Tucson, Ariz.

Subject : Advisability of Terminating Contract, Docket No. DMEA-527, Contract No. Idm-E232, Yucca Mining and Milling Co.'s Antlers Copper-Zinc Mine, Cedar Valley Mining District, Mohave County, Ariz.

On March 31, 1953, the Executive Officer of the Defense Minerals Exploration Administration, Region IV, Field Team, requested that an investigation of the status of the Antlers exploration project be made, Contract Idm-E232, Docket DMEA-527.

On April 13, 1953, W. R. Storms wrote Robert J. Dalton, president of the Yucca Mining and Milling Co., to the effect that M. J. Elsing would come to Kingman on April 20 to discuss past and future work under Contract Idm-E232. Dalton was requested to advise if this date was convenient. This letter was sent air mail to Yucca, Arizona and a copy was sent by air mail to Dalton at his San Bernardino, California address. Dalton did not reply to this letter, although he evidently received it.

Elsing and R. W. Ageton went to Kingman on Monday, April 20, and to the mine on Tuesday morning, April 21. At the mine the examiners met E. E. Lewis, mining engineer in charge of the property. Lewis stated that Dalton had received the above mentioned letter and had come to Kingman, but left Kingman for Prescott on

CC W. H. King (Orig. & 6)
DMEA-527
DF MJElsing:frj

Monday afternoon, April 20, a few hours before the examiners arrived. Lewis stated that Dalton planned to return to the mine by Tuesday noon to meet the examiners.

Tuesday morning the examiners went underground, inspected and measured the various headings on the 5th level which were included in the contract. After lunch the examiners inspected the concentrator and while waiting for the arrival of Dalton, various possible amendments to the contract were brought up by Lewis who stated Dalton was interested in the following:

1. Work on the 4th level instead of the 5th level;
2. Sinking the shaft below the 5th level;
3. Geophysical prospecting as a guide to further exploration.

These revisions were discussed and Lewis was advised that the examiners thought that work on the 4th level and shaft sinking were development rather than exploration. As to geophysical exploration, Lewis was told that the past records of the discovery of copper, lead and zinc deposits by geophysical methods did not make prospecting by this method very attractive.

At 5 p.m. on April 21, the examiners returned to Kingman with the understanding that Lewis would contact Dalton. At 8.30 p.m., Lewis phoned that Dalton was in Douglas, Arizona, that he was sick and would be unable to meet the examiners.

The exploration proposed for the southern end of the mine is based on sound reasoning but it seems that Dalton is not interested in the program which he once sponsored. The work is based on diamond drilling done by the Bureau of Mines in 1947. Hole No. 4 cut through a mineralized zone nearly 100 feet in thickness. The better streaks of ore show the following:

Sample No.	Length Feet*	Percent Cu	Zn	Pb
10,330	3.9	2.08	10.4	1.78
10,331	2.0	2.03	12.9	0.47
10,333	0.7	.64	12.0	5.40
10,334	0.9	.48	0.2	38.10
10,336	2.8	5.23	12.7	0.23

*For actual thickness of vein, reduce by 23 percent.

The main purpose of the contract signed on August 6, 1952, was to explore these showings or their extension by strike drift J-1 and crosscuts J-3 (see figure 1). Ore was exposed in the face of J-1 but when the drift was advanced a few feet the vein was cutoff by a cross fault. J-1 was stopped and the most northerly of the J-3 crosscuts was started, and work was done to the east and west without finding ore. J-2 at the north end of the mine was advanced on ore for a few feet and a stope was started from it. The opening was big enough to have produced some 300 to 400 tons of ore.

Work under the contract officially started on September 3, 1952. The following work was done and paid for at $32.00 per foot:

Month	Work completed			
	Working	Feet	Rate	Total Cost
September	J-3	39	$32.00	$1,248
October	J-3	56	32.00	1,792
	J-2	20	32.00	640
	Total	115	$32.00	$3,680
	Government's share			$1,840

Two rounds are claimed to have been driven during November 1952 in J-3, southeast of transit station D-17 (see figure 1). The drift is stated to have caved. It is completely filled with muck and could not be measured, so the advance claimed was disallowed for payment.

It is quite obvious that Dalton does not intend to follow any long range plan of systematic exploration. Every face that was started had some ore in it, but as soon as the ore pinched out or was cut-off by a fault, the work was stopped. It is believed that it is impossible to lay out a drift on the strike of the ore zone and drive it in ore to the point where the ore in drill hole No. 4 should be crosscut. To properly explore the known ore in this drill hole necessitates doing some drifting in waste. Any plans that Dalton has for operating, do not include hoisting waste. A considerable part of the drifts on the 5th level is presently used as storage for waste. Waste is dumped on the track, starting from the faces farthest from the shaft, working back toward the shaft. This is not a serious matter in itself as this waste can be mucked at some later date and hoisted. This condition warrants the assumption that there is not an efficient operating plan and indicates poor management.

Two men presently are employed underground. Part of the time they are employed in repair work, and part of the time they stope ore. After several hundred tons of ore are mined, the mill is operated. In view of the fact that reserve stocks of supplies are being used, present operations show sufficient returns to meet the payroll. If the applicant had any intention of doing the exploratory work that he originally proposed, the past few months would have been an excellent time to have done it.

The work already performed, particularly in the south end of the mine, has been of value in that it has demonstrated that the main mineralized area does not continue to the south, even as smaller, narrower veins. The work has not explored the mineralized zone cut in diamond drill hole No. 4. The crosscutting done under the contract shows that whatever vein system which might be developed in the drill hole No. 4 zone, has the same strike and dip of the main oreshoots. It also indicates that continuous ore cannot be developed, extending from one area to the other.

Two conclusions are drawn as follows:

(1) The information obtained has been of value, although of a negative character;

(2) The project has lost much of its appeal because it has been definitely proven that there is no continuous ore in the zone which might connect the mineralization in hole No. 4 with the main ore body.

There still are possibilities of developing ore to the south of the main oreshoot but the possibilities are less attractive since the recent work has almost completely crosscut the ore zone. In addition, practically every north-south ore showing has been followed to the south until it either pinched out or was cut-off by a fault.

The examiners have studied the history of this project from its beginning and have come to the conclusion that the contract should be terminated for the following reasons:

(1) Because of the impossibility of completing the contract on or before the completion date of August 1, 1953;

(2) Because all evidence indicates that the applicant does not intend to complete the contract as proven by the fact that

(a) No work has been done on the contract since November 1, 1952;

(b) No request has been made for a recess;

(c) Waste has been placed on the tracks leading to the drifts to be driven;

(d) An entirely different contract has been requested;

(3) Because the work done, particularly at the south end of the mine, has proven that the mineralization is not continuous, and therefore the project has lost much of its value.

One of the most important reasons for terminating the contract is the unwillingness of the applicant to be governed by the basic rules set up for the operation of the Defense Minerals Exploration Administration. At the very start of negotiations for a contract, Dalton had several different plans of exploration. He was not satisfied with negotiations through the Tucson office and went to Washington where he obtained a contract dated December 19, 1951. Some 17 days later, or on January 5, 1952, he requested a revision of that contract because of an error in the Bureau of Mines Report of Investigations 4214, Antlers Copper Zinc Deposit, Mohave County, Arizona. This error was made in typing the coordinates of diamond drill hole No. 4. The position of the hole is correctly shown in the plan map in that report, but the applicant was negligent in not discovering the typographical error before he made his application.

From the very start of the project the applicant has been exceedingly difficult to handle and this same situation has existed to the present time. Difficulty arose over what work he should be paid for. He started work under the short form contract before the examiners had an opportunity to measure the starting points. For a time he threatened to sue the Government for payment for this work but apparently has dropped this issue. It was ruled that no work done prior to September 3, 1952 would be paid for.

The Executive Officer of the Defense Minerals Exploration Administration, Region IV, Field Team, on November 18, 1952 wrote Dalton, sending him 6 copies of an amendment changing the date of the contract and 6 copies of Owner's Consent to Lien Form MF-203. These latter were to be signed by the owner of the property and returned to Denver. Dalton has not even answered this letter.

According to a letter dated March 25, 1953 from the Chairman of the Operating Committee to the Executive Officer of the Region IV, Field Team, the Defense Materials Procurement Agency gave the Yucca Mining and Milling Company a floor price for copper of 34.355 cents per pound, starting December 1, 1951, and a floor price for zinc of 19.5 cents per pound, starting August 6, 1952. Both of these subsidies lasted until February 25, 1953. The company also received a loan from the Reconstruction Finance Corporation for $50,000 for working capital and because of the Government contracts, it was able to borrow $10,000 from a local bank. The company had the right to spend part of its loan on exploration if it saw fit. With 34.355-cent copper, 19.5-cent zinc, and $50,000 it would seem that the Yucca Mining and Milling Company would not need an exploration loan.

The exploration project is not as good as at the time it was applied for. There is ample geelogical evidence to warrant the belief that whatever ore is found will be of less importance than in the main ore area. The basis for this deduction is that the area

diamond drilled to the south shows less intense rock alteration, and that hole No. 4 actually shows only narrow stringers of ore, with recent work indicating that there is no continuity of ore in the zone.

In a letter dated April 10, 1953, Dalton stated "we have also driven north on the "Exhibit B-J2" project above the fault for a distance of approximately sixty feet. We have not reported this work as yet". This work is entirely above the roof of the 5th level drift and is an inclined stope from which 300 to 400 tons of material has been mined. It is fantastic to call it a part of the J-2 exploration. Openings of this type are made only for the extraction of ore and it might be that Dalton owes the Government royalty on the material mined. It appears that Dalton will attempt to collect payment for this work but it should not be allowed as exploration.

The examiners recommend that this contract be terminated immediately, but they believe it would be unwise to attempt to recover the $1,840 already advanced the applicant

(1) Because the work done has been of some value, although of a negative character;

(2) Because previous examiners have approved the work done;

(3) Because Dalton will resist any attempt of the Government to collect this money and will use every possible means to discredit the whole exploration program which he already has openly criticized.

It is believed that this contract should be terminated as quickly and quietly as possible.

M. J. Elsing

M. J. Elsing, Consulting Mining Engineer
Mining Methods Branch
Mining Division, Region IV

R. W. Ageton

R. W. Ageton, Mining Engineer
Mining Methods Branch
Mining Division, Region IV

SAMPLING DATA OF D. D. H. NO. 4

SAMPLE NUMBER	LENGTH* FEET	PERCENT CU.	ZN.	PB.
10330	3.9	2.08	10.4	1.78
10331	2.0	2.03	12.9	0.47
10333	0.7	0.64	12.0	5.40
10334	0.9	0.48	0.2	38.10
10336	2.8	5.23	12.7	0.23

* FOR ACTUAL THICKNESS OF VEIN REDUCE BY 23 PERCENT

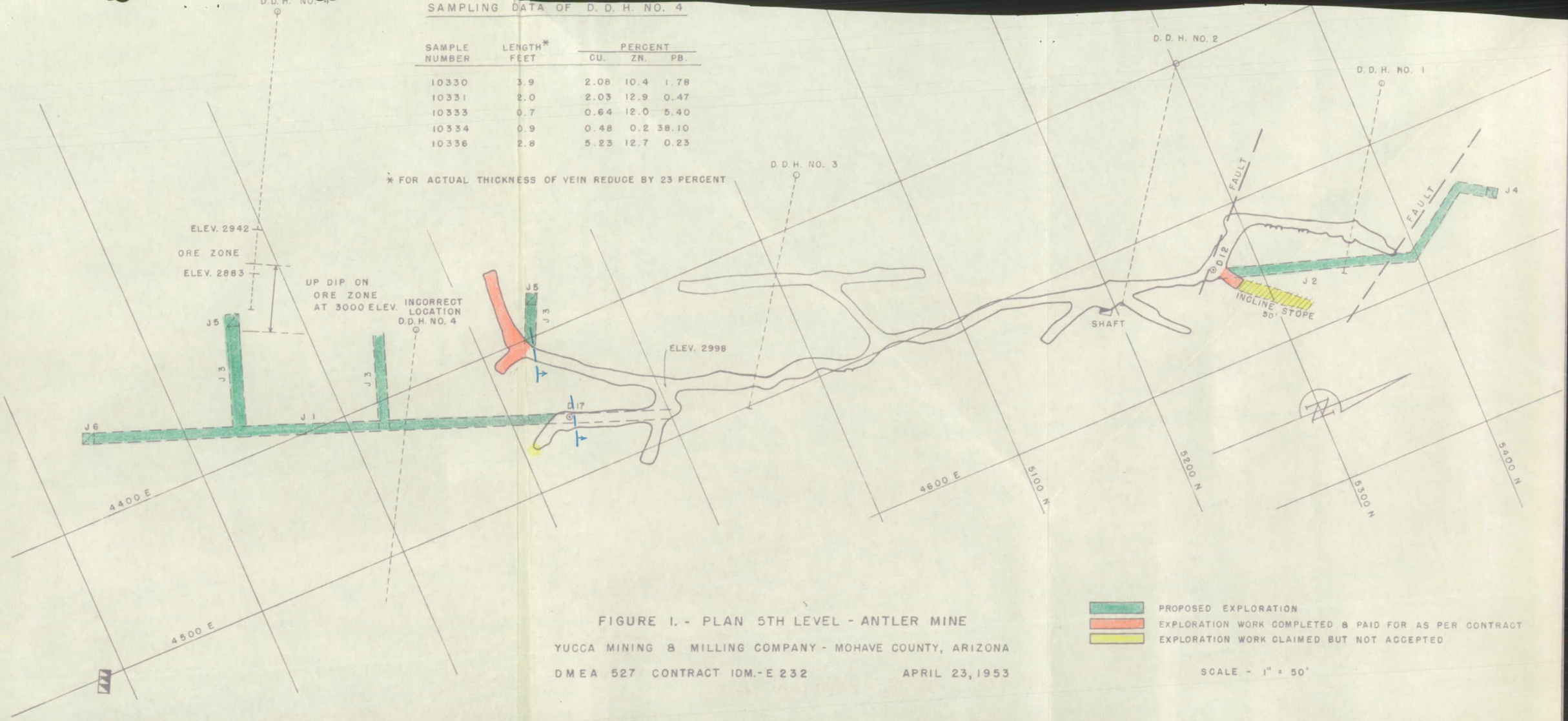


FIGURE 1. - PLAN 5TH LEVEL - ANTLER MINE

YUCCA MINING & MILLING COMPANY - MOHAVE COUNTY, ARIZONA

DMEA 527 CONTRACT IDM.-E 232 APRIL 23, 1953

PROPOSED EXPLORATION

EXPLORATION WORK COMPLETED & PAID FOR AS PER CONTRACT

EXPLORATION WORK CLAIMED BUT NOT ACCEPTED

SCALE - 1" = 50'

FILE COPY
SURNAME:

UNITED STATES 140
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

Schmidt
Allone
Ruby
Ellis
Chandler
Kimball
Hedges
Lethridge
Kimball
Johnson

APR 30 1953

Mr. Robert J. Dalton, President
Yucca Mining and Milling Company
307 - 18th Street
San Bernardino, California

Re: Docket No. DMA-527 (Copper)
Contract No. Idm-E232
Yucca Mining and Milling Company
Mohave County, Arizona

Dear Mr. Dalton:

This contract was dated August 6, 1952,[1] and signed by yourself as President of the Yucca Mining and Milling Company. The project was to be completed by August 1, 1953. During September and October, 1952, a total of $3,680.00 was expended on exploration of which the Government participated in the amount of $1,840.00, but operations then ceased and no further work has been done since that time.

A letter was also written to you by the DMEA Regional office in Denver dated November 18, 1952, enclosing six copies of an amendment changing the original date of the contract and also enclosing six copies of the form "Owner's Consent to Lien" to be signed by the owner of the property. No reply or acknowledgment of this letter has been received. We are therefore led to conclude that the Yucca Company does not plan to complete this contract.

This course of action by the Yucca Mining and Milling Company is in breach of its obligations under the contract, unless the Company has plans definitely to resume operations in the near future. Please either inform the Government at once of any such plans or sign and return the original and five copies of the enclosed form entitled "Termination of Exploration Project Contract by Agreement after Commencement but before Completion of the Work." If no reply is received from you in the near future, the Government will unilaterally terminate this contract.

1/ The contract was originally dated December 19, 1951, and the amended contract was dated August 6, 1952.

The termination agreement herewith enclosed is based on the understanding that there were no expenditures other than the $3,680.00 of September and October 1952, of which the Government paid its 50% participation amounting to $1,840.00.

Yours sincerely,

SIGNED

Administrator

S.H.
4-30-53

Enclosures

AEKane/ema/4-20-53
cc: Mails & Files
C. O. Mittendorf
Field Team, Region IV
E. W. Ellis
J. L. Hofflund
A. E. Kane
Chron.
Pending

4/8/53 gla

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

224 New Customhouse
Denver 2, Colorado

March 31, 1953.

Memorandum

To: Chairman, Operating Committee

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA-527, Contract No. Idm-E232 (Copper), Yucca Mining and Milling Company, Antlers Mine, Mohave County, Arizona.

We are enclosing copy of our letter dated November 18, 1952 to the Operator and copy of the Amendment proposing a change in the date of the amended contract, as requested in your letter dated March 25, 1953.

We do not have any copies of the Owner's Consent to Lien. Six copies were prepared with the description of the property and the name of the applicant and forwarded to Mr. Dalton. We did not retain a copy of this form. This office believes that this contract should be terminated.

The address of Robert J. Dalton is 307 - 18th Street, San Bernadino, California, and we doubt if he can be contacted by a field engineer as requested in your letter.

W. H. King

W. H. King

Enclosures

C
O
P
Y

No. 1

AMENDMENT OF CONTRACT: No. Idm-E232

Contract Docket No. DMEA 527, dated December 19, 1951, between the United States of America and Yucca Mining and Milling Company is hereby amended as follows, effective August 6, 1952:

> Referring to the first paragraph of Exploration Project Contract form MF-200(A), after the words "It is agreed this", delete the following: "19th day of December 1951" and insert in lieu thereof the following: "6th day of August 1952".

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

Dated_____1952

YUCCA MINING & MILLING CO.

By_____

UNITED STATES OF AMERICA

By_____

FILE COPY
SURNAME:

Schmidt
Ellis

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

Y.S. in R.V.R.

DMEA

5295 4640

14X3923.970 Working Fund, Interior, DMEA
March 26, 1953

W. H. King, Executive Director, DMEA Field Team, Region IV
224 New Customhouse Building, Denver 2, Colorado
Docket No. DMFA-527, Yucca Mining & Milling Company
Contract No. Idm-E232

REURTEL YUCCA MINING AND MILLING COMPANY CONTRACT IDM-E232,

REPLY TO URLET FEBRUARY 27 MAILED MARCH 25.

C. O. Mittendorf (for)
C. O. MITTENDORF, ADMINISTRATOR

FSSchmidt/gla 3-26-53
cc to: Adm. Reading File
Docket
Mr. Ellis
Mr. Schmidt

SENT
MAR 27 1953
Clerical Service Section

1-1027
(April 1946)

UNITED STATES
DEPARTMENT OF THE INTERIOR

AGENCY Bureau of Mines

Originator:

TELETYPE Ext.: Room:

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration

Appro.:
Date: March 26, 1953
Time:
No.:
To: C. O. Mittendorf DMEA Washington 25, D. C.

Subject:

Please expedite ruling on termination of Contract Idm-E232, DMEA 527, Yucca Mining and Milling Company, as requested in our letter dated February 27, 1953.

W. H. King
W. H. King

JFS:ld
Authorized:

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

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

700
FILE COPY
SURNAME:

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

Schmidt
Ellis
Selbridge
Fitzmaurice
Matthews

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

MAR 25 1953

Re: Docket No. DMEA-527 (Copper)
Contract No. Idm-E232
Yucca Mining and Milling Co.
Antlers Mine, Mohave County, Arizona

Dear Mr. King:

This acknowledges receipt of your letter of February 27, 1953, concerning the proposed termination of the subject amended contract.

Enclosed is a copy of a memorandum from our Legal Division which takes the position that this contract may be terminated. While we are legally justified in terminating this contract, it is suggested that the Operator be contacted by a representative of the Field Team and reminded of the fact that he is delinquent in the performance of the contract, and that this is a more serious matter than the sending of a form notice of termination. An obligation was entered into by the Operator to complete the contract, and while it can be terminated without being completed, this cannot be done without the Government either waiving its right to a refund of the money expended by the Government, or else accepting such refund in lieu of completion. To date the Government has not agreed to this waiver.

We hesitate to terminate this contract at this time if there is any probability of the Operator desiring to continue the work in the near future under a modified or amended program in which you would be willing to concur.

However, since so little work has been done on this contract the project is obviously as good now as when the contract was first written. Nothing has been encountered in the little work done that is not a common occurrence in this mine or many others. The geological structure encountered will certainly not justify the Operator in claiming immunity against the Government's claim for refund of the $1,840.00 spent so far.

We have not received a copy of your letter of November 18, 1952, to this operator, nor a copy of the amendment proposing a change in the date of the amended contract, together with the proposed Owner's Consent to Lien which we requested in lieu of the Landlord's Subordination Agreement.

In order to give such background to the status of this company's operations as is available to us here, the following quotation from our notes is provided for your confidential files:

"DMPA gave the Yucca Company a floor price for copper of 34.355 cents per pound starting December 1, 1951, and a floor price for zinc of 19.5 cents per pound starting August 6, 1952. Both of these subsidies lasted until February 25, 1953. The Yucca Company also obtained a loan from R.F.C. for $50,000 for working capital which could be used for any purpose, including work on this exploration project. Incidentally, they also obtained a loan of $10,000 from a local bank to which they assigned their government subsidies for copper and zinc. These monthly payments to the bank started December 25, 1952. Now that these subsidies are removed, the operator's situation has changed."

It might be of interest to know whether they advanced any of the exploration workings provided for in this contract since October 1952.

Upon receiving your advice concerning the attitude of the operator as to the points mentioned we will be in a better position to determine where the best interests of the Government lie.

Sincerely yours,

P.H. 3/25/53

George C. Selfridge

(GHB)

Chairman, Operating Committee

Enclosure

APPROVED:

W. H. Hedges (GHB)

Member, Bureau of Mines

A. R. Kinkel, Jr. (GHB)

Member, Geological Survey

FSSchmidt/gla 3-24-53

cc to: Adm. Reading File
Operating Committee
Docket
Messrs. CHJohnson, Rm. 3621
ARKinkel, Jr. 4234 GSA
Ellis
Schmidt
DMPA Field Team, Region IV

140

FILE COPY
SURNAME:

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

Pending action

March 19, 1953

Memorandum

To: The Administrator

n.s. in R. v R.

Through: E. W. Ellis

From: Chief Counsel

Subject: Termination of Contract No. Idm-E232, Docket No. DMEA-527, Yucca Mining and Milling Co. (Copper)

In a memorandum dated February 27, the Executive Officer, Region IV, requested that you terminate the above-described contract for reasons stated in his memorandum, and enclosed a notice of termination for your signature. In a memorandum dated March 3 from Mr. Schmidt to Mr. Ellis, the status of the contract is reviewed and certain questions raised. Mr. Ellis has asked that we review these memoranda.

The contract is on the short form, and provides for 50 percent Government participation in a total estimated cost of $59,470. The work was started on September 3, 1952, and stopped sometime in October. The contract requires completion of the work by August 1, 1953. The Government has reimbursed the Operator in the amount of $1,840 towards the Operator's expenditures of $3,680.

Mr. King's memorandum states as follows:

"* * * We believe that we are justified in terminating this contract because the operator has not performed any work * * * since October 1952. * * * We understand that the Yucca Mining and Milling Company has received an above the market price from DMPA and the company is mining all the ore that it can in order to receive this bonus and neglecting the exploration. The Operator has not replied to our letter dated November 18, 1952 in which we enclosed six copies of an amendment changing the date of the contract and six copies of Owner's Consent to Lien Form MF-203 which were to be signed by the owner of the property involved. * * *"

In this regard, DMEA Memorandum No. 18 provides that while exploration project contracts do not expressly require the Operator to prosecute the work continuously, when operations are suspended for whatever cause with no intention of resuming

them within a fixed time and in a manner to enable the Operator to complete the work within the time fixed by the contract, the contract is breached. Such a default on the part of the Operator justifies the Government in withholding contribution to the costs of work performed and, in a proper case, in demanding repayment of all contributions previously made.

In the case before us, the Operator, after working approximately one month, suspended operations for approximately five months, which is one half of the total time allowed under the contract for the completion of the work. Moreover, the Operator, for a period of approximately four months, has ignored a communication from the Executive Officer concerning the contract business. In these circumstances, it is reasonable to conclude that the Operator has no intention of completing the work within the time fixed by the contract and the Government, in my opinion, is justified in terminating the contract and in requesting the Operator to repay all contributions previously made by the Government. However, the decisions as to termination of the contract and demanding repayment of the Government's contributions are administrative ones. When these decisions are made we shall prepare the appropriate papers.

J. L. Hofflund

J. L. Hofflund
Chief Counsel

Attachment

HCRubin/mef
cc to: Mails and Files
Admr. R. File
Mr. Hofflund
Mr. Rubin
Chron.

Notes on termination of Contract Idm-E 232 3/13/53
Schmidt

To answer letter of King 2/27/53

Date of Contract Aug 6, 1952

The contract calls for 865 ft drifting or crosscutting
935 ft raising

The work started Sep 3, 1952

			Total spent	Govt share
Work done in September	crosscutting	39 ft	$1248.00	$624.00
October	"	56	1792.00	1216.00
	drifting	20	640.00	
			$ 3680.00	$ 1840.00

No work has been done since Oct 1952.
There is no copy in our files of the letter from King to Applicant changing the date of contract, letter dated Nov. 18, 1952 There has been no answer to that letter.

Regional office IV wishes to terminate the contract because there has been no work done since Oct. 1952.

Our contracts do not require that the operator keep working continuously in good faith unless there is a reason acceptible to DMEA. Hence he cannot be in default until the time is up. If this is the case the question arises as to whether a contract can be terminated on the grounds that the regional office wishes to use. ?

It may be to our best interests to have this contract continued. ?

DMPA gave him a floor price for copper of $34.355 cents per lb starting 12/1/51 which lasted until controls were lifted about two weeks ago.* He also obtained a floor price for zinc of 19.5 cents per lb starting Aug 6, 1952 until two weeks ago. The Applicant also obtained a loan from RFC of $50,000 for working capital. Incidentally he also obtained loan from some local Bank for $10,000 to which he assigned his subsidies. These subsidy payments to the Bank started 12/23/52. Now that these subsidies are removed the Applicant must be working under a handicap. It is reputed (DMPA) that Applicant is pressed for funds .

This probably explains why Applicant could not afford to continue his exploration contract for which he obligated himself to the amount of $29,735.00

It is for Legal to decide whether Applicant can ~~or should~~ be required to complete this contract or to return the Governments expenditre of $1840.00 ?

It would seem that the Field Team could contact this Applicant and get at the bottom of the matter and decide whether he simply wants more time for financial reasons, or whether he is definitely through or whether he wants an amendment. The mere fact that they ran into a fault is a lame excuse. That mine like others has many of them and these displacements should be expected. Applicant says in his narrative Nov, 20,1952 " It is quite obvious that a major structural change has taken place and an amendment to our present program is in order"
That seems to be the last we have heard from him.

* 2/25/53

3/11/53 gla

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 3 1953

224 New Customhouse
Denver 2, Colorado

February 27, 1953

Memorandum

To: C. O. Mittendorf

From: Executive Officer, Field Team, Region IV

Subject: Termination of Exploration Project Contract Idm-E232, DMEA Docket 527, The Yucca Mining and Milling Company

Enclosed for your signature are six copies of Notice of Termination of Exploration Project Contract, Under the Terms of the Contract, Before the Completion of the Work. We believe that we are justified in terminating this contract because the operator has not performed any work under Contract Idm-E232 since October, 1952. We have reimbursed the operator in the amount of $1,840. We understand that the Yucca Mining and Milling Company has received an above the market price from DMPA and the company is mining all the ore that it can in order to receive this bonus and neglecting the exploration. The Operator has not replied to our letter dated November 18, 1952 in which we enclosed six copies of an amendment changing the date of the contract and six copies of Owner's Consent to Lien Form MF-203 which were to be signed by the owner of the property involved. This was done at the request of the Chairman of the Operating Committee in his letter dated October 7, 1952. The enclosed forms are being sent to you for your signature because the contract was signed by you.

W. H. King
W. H. King

Enclosures

a copy of this memorandum & one copy of proposed form. notice relaeived by Rare & Misc. Metals Div. for contract file. Mrs. Ewell

3/4/53

NOTICE OF TERMINATION OF EXPLORATION PROJECT CONTRACT, UNDER THE TERMS OF THE CONTRACT, BEFORE THE COMPLETION OF THE WORK

To: The Yucca Mining and Milling Company
Yucca, Arizona

Operator under Exploration Project
Contract Idm-E232, Docket No.
DMEA-527, dated December 19, 1951

The United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, under the terms of the above-mentioned contract, hereby terminates the contract on the following grounds:

> In the opinion of the Government, you have failed to prosecute operations pursuant to the terms of the contract.

Upon receipt of this notice, as provided in said contract, you are required to dispose of any remaining materials, supplies, facilities, buildings, fixtures, equipment, or other items, in which the Government has an interest, for the joint account of yourself and the Government; and to render to the Government a full and final accounting of your operations under the contract and of your expenditures of money on account thereof.

Any work prosecuted or costs incurred by you after the receipt of this notice shall be for your sole account, except for (a) such necessary and reasonable costs and expenses as may be incurred in preserving and disposing of any facilities, buildings, fixtures, equipment, or other items, to the cost of which the Government has contributed and in which the Government has an equity, and (b) the costs of any reports, accounts, and winding-up and settlement actions provided for in the contract.

Dated this _____ day of _____, 1953.

UNITED STATES OF AMERICA

By _____

* Not approved. Short form contract
Schmidt

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 3 1953

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

124 New Customhouse
Denver 2, Colorado

December 9, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 12 1952

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, Field Team, Region IV

Subject: Form MF-104, DMA Docket 527, Contract Idm-M232 (Copper)
Yucca Mining & Milling Co., Antlers Mine, Mohave County, Arizona

Enclosed are two copies of the Operator's Monthly Progress Report MF-104 and 104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data for the month of September, 1952 pertaining to DMA Docket 527, Contract Idm-M232, Yucca Mining & Milling Co.

W. H. King
W. H. King

Enclosures

C
O
P
Y

224 New Customhouse
Denver 2, Colorado

November 18, 1952.

Mr. Robert J. Dalton, President
The Yucca Mining & Milling Company
Yucca, Arizona

Dear Mr. Dalton:

Referring to your Exploration Project Contract Idm-E232, as amended, you will note that the sentence above the operator's signature on the contract form reads: "The date shown in the first sentence of the first paragraph of the contract should conform with the date of execution", which in this case could not have been December 19, 1951, the date of the original contract. Our Washington Office has ruled that the effective date on the amended contract must be changed to August 6, 1952. Accordingly we are enclosing six copies of an amendment which changes the date of the contract. This amendment should be signed by you, by the assistant secretary of the Yucca Mining & Milling Company, the corporate seal affixed, and all copies returned to this office.

It will be necessary to substitute Owner's Consent to Lien Form MF-203 for the Landlord's Subordination Agreement attached to the contract. Six copies of this form are enclosed. All copies should be signed by an authorized official of the Arizona Antlers Mining Company, the corporate seal affixed, and returned to this office.

This date change will not in any way alter the date after which you may claim reimbursement which is September 3, 1952.

Yours very truly,

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

FILE COPY
SURNAME:

Schmidt
Gelson
Hofflund
Kane
F. Johnson

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

n.s. in R. & R.

140

DMEA

AEKane

2919 4627

14X3923.970 Working Fund, Interior, DMEA

Mr. W. H. King, Bureau of Mines, Denver, Colorado

Contract IDM-E232, Docket DMEA-527, Yucca Mining and Milling Co.

Reurtel request Owner's Consent to Lien to replace Landlord's Subordination Agreement.

FRANK E. JOHNSON

Frank E. Johnson
Chairman, Operating Committee
Defense Minerals Exploration
Administration

AEKane/em
11/7/52
Copy to: Mails and Files
Op. Comm.
E. W. Ellis
J. L. Hofflund
A. E. Kane
chron.
pending

SENT
NOV 7 1952
Mail Service Section

Mr. Frank E Johnson
11-5-52
12:05 PM.
Kelly

ans. 11/7/52 ACKane/em

SPECIAL

DN 235 BUREAU MINES 11-5-52 9-02 AM

FRANK E JOHNSON

AMENDMENT CHANGING DATE OF CONTRACT IDM-EAXXXXX IDM-E232, DOCKET DMEA 527, YUCCA MINING AND MILLING COMPANY HAS BEEN PREPARED FOR SIGNATURE OF OPERATOR AS REQUESTED IN YOUR LETTER DATED OCTOBER 30,1952. SHOULD WE REQUEST OWNER,S CONSENT TO LIEN TO REPLACE LANDLORD,S SUBORDINATION AGREEMENT ATTACHED TO OLD CONTRACT IDM-E232. PLEASE TELETYPE REPLY.

W H KING

Denver, Colo.

FILE COPY
SURNAME:

AEKane

140

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

OCT 30 1952

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

Re: Yucca Mining & Milling Co.
Docket No. DMEA-527 (Copper)

Dear Mr. King:

As you suggest in your memorandum to me of October 15, the first line of the subject contract may be corrected by amendment so that it reads: "It is agreed this 6th day of August 1952." This date apparently was the day the contract was signed by the Administrator, and our file indicates that this contract was mailed to you on that date.

Sincerely yours,

(signed) FRANK E. JOHNSON

Chairman, Operating Committee

AEKane/ema - 10-27-52
cc: Mails & Files
Adm. R. File
C. O. Mittendorf
Op. Comm.
Mr. Hedges
Mr. Thayer
Mr. Ellis
J. L. Hofflund
A. E. Kane
Chron.
Pending

Approved:

J. H. Hedges

Member, Bureau of Mines

A. R. Kinkel, Jr.

Member, Geological Survey

P. S. We agree with the opinion expressed in the last paragraph of your letter.

10/21/52 gla

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

Jas

224 New Customhouse
Denver 2, Colorado

October 15, 1952

Memorandum

To: Frank E. Johnson, Acting Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Yucca Mining and Milling Company, Contract Idm-E232, Docket DMA 527

Referring to your letter dated October 7, 1952, regarding changing the date of Contract Idm-E232.

It is our understanding that the effective date of the contract should be changed and that you desire the operator to initial the change on all three copies of the contract in our possession.

Should the contract be initialed by the President or by the Secretary? If the President is living in San Bernardino, California, should we mail the contracts to him or request him to come to Tucson so that all our copies of the contract will remain in the possession of one of our engineers? Would not an amendment serve the same purpose? Why was the date of August 6, 1952 chosen when the contract was sent to the operator on August 12, 1952?

amend

We do not believe we should reimburse the operator for any work prior to September 3, 1952, the date the Bureau engineer measured the drift.

John F. Shaw
For W. H. King

Defense Minerals Exploration Administration
OCT 2 . 1952

FILE COPY
SURNAME:

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

Schmidt
Eff
Hoffhand
Mutt

OCT 7 1952

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

Re: DMEA - 527 (Copper
Yucca Mining and Milling Company
Contract No. Idm-E232

Dear Mr. King:

This is with reference to our conversation over the telephone on October 2, 1952 concerning the subject contract.

As I advised you in reference to our letter of September 26, 1952, the date on the amended contract should be changed to agree with the date of execution (August 6, 1952) and the change initialed by you and the Operator on the three copies of the contract sent to you. Please advise when this is done.

In this connection you will note that the sentence above the Operator's signature on the contract reads: "Executed in sextuplicate the day and year first above written", hence the date in the first sentence of the first paragraph of the contract should conform with the date of execution, which in this case obviously could not have been December 19, 1951, the date of the original contract.

With respect to the Owner's Consent to Lien, if a new one can readily be obtained to replace the present Subordination Agreement, this should be done. You have expressed your doubts as to the willingness of the owner to give a new Owner's Consent to Lien. We believe that the Operator should be requested to obtain this document. If he can show an attempt to obtain it, and evidence of the owner's refusal, we will then rely on the Operator's guaranty of royalty payments, in case it is found that the present Subordination Agreement does not sufficiently protect the Government.

You have advised that the Field Team has established a measuring point for the start of the proposed work and have so notified the Operator. We are fully in accord with this action. It must be fully understood by the Operator that the Government will not share in the cost of any work not in conformance with the established measuring point nor in any cost incurred prior to August 6, 1952, the correct date of the amending contract.

Sincerely yours,

(signed) FRANK E. JOHNSON

(2/B)

Chairman, Operating Committee

10-7-52

APPROVED:

J. E. Hedges (2/B)

Member, Bureau of Mines

E. P. Thayer (2/B)

Member, Geological Survey

FEJohnson:pa 10-6-52

cc: Admin. Reading File
Mails & Files
Operating Committee
Mr. Thayer, Rm. 5216, GSA Bldg.
Mr. Hedges, Rm. 4604
Mr. Hofflund
Mr. Ellis
Mr. Schmidt

140

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

SEP 26 1952

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

BE

My dear Mr. King:

We have discovered that in two amended contracts below mentioned, which we sent to you for signature by the operator, on the first line thereof, there was inserted the date of the original old-form contract instead of the date when the new amended contract on the new form was signed by the parties thereto. Please see to it that this date is changed as indicated in the operator's copy, your copy, and the regional finance office copy, and advise us when the changes have been made:

American Asbestos Cement Corporation, Docket No. DMEA-1095, Contract No. Idm-E110--the date should be changed from August 14, 1951, to August 19, 1952.

Yucca Mining and Milling Company, Docket No. DMEA-527, Contract No. Idm-E232--the date should be changed from December 19, 1951, to August 6, 1952.

Sincerely yours,

(signed) FRANK E. JOHNSON

ACTING Administrator

S.N.
9-29-52

AEKane/em
9/24/52
Copy to: Mails & Files (2)
E. W. Ellis
L. Houk
J. L. Hofflund
A. E. Kane
chron.
pending

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

224 New Customhouse
Denver 2, Colorado

September 19, 1952

Mr. R. J. Dalton
Yucca Mining & Milling Co.
307-18th St.
San Bernardino, Calif.

Re: DMA Docket 527X
Contract Idm-E232
Antler Copper Mine
Mohave County, Ariz.

Dear Mr. Dalton:

We have just received Monthly Progress Report forms submitted by the Yucca Mining and Milling Company for the months of July and August, 1952.

The Government can not authorize reimbursement for any work performed, under the terms of the contract, prior to September 3, 1952. Contract Idm-E232 covering Docket No. DMA 527X was sent to you by Mr. Storms on August 12, 1952 to be executed by the officials of the Yucca Mining and Milling Company.

This contract replaced Contract Idm-E232 which was executed on Contract form MF-200 dated December 19, 1951. Annex No. 1, which is a part of the present contract Idm-E232 executed on Contract form MF-200A states in part; "WHEREAS, NO WORK HAS BEEN DONE UNDER THE SAID CONTRACT....;" you are now claiming reimbursement for work done during July and August in spite of the fact that you stated when you signed this contract in August that no work had been done under the contract.

Mr. Storms' transmittal letter of August 12, 1952 stated; "When we receive the signed copies, we will send an engineer to the mine to determine the starting points for all drifts." A letter to you dated August 8 signed by the Executive Officer, Field Team, Region IV, stated; "If you have not already done so, this office must be advised in writing the date work actually starts under the contract." We have not received any notification from you that you have started work under this contract.

When the short form contract was discussed with you in this office prior to the cancellation of the original contract Idm-E232 which was prepared on Form MF-200, you were instructed not to start work under the proposed contract until the location of the faces of the drifts had been determined by an engineer from our Tucson office. You agreed to this.

Mr. Storms wrote Mr. W. Shelly Richey, attorney at Law, 431 10th Street, Douglas, Arizona on August 25, 1952, in which he stated; "An engineer from this office will visit the Antler Mine in Mohave County, probably later this week. After he has measured to the starting points of the proposed underground workings, the exploration work may start." Mr. Storms wrote you Air Mail on August 29, 1952, stating that; "In regard to your new short form contract Idm-E232, one of our mining engineers, Mr. L. L. Farnham, will be at the Antler mine next Wednesday forenoon, September 3, to measure drift faces so your exploratory work can be started."

We believe that we made ourselves clear as to the proper procedure in the case of the short form contract, and have repeatedly informed you that we could not authorize reimbursement for work prior to the determination of the starting points of the drifts by an engineer from our office.

Very truly yours,

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

JFS:es

cc: Secretary to the Operating Committee (2)
Contract
Storms
Chron.
Koschmann (2)

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

224 New Customhouse
Denver 2, Colorado

August 28, 1952

REGISTERED

Memorandum

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

From: Executive Officer, DMEA Field Team, Region IV

Subject: Contract Idm-E232 (Copper), DMEA Docket No. 527, The Yucca Mining and Milling Company, Antler Copper Mine, Mohave County, Arizona

Enclosed are the original and two copies of Contract Idm-E232. Copies of this contract have been given to the operator, the Fiscal Officer, Region IV, and a copy has been retained for our files.

W. H. King

W. H. King

Enclosure

9-5-52

DOCKET COPY

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

224 New Customhouse
Denver 2, Colorado

August 8, 1952

Registered Mail

Memorandum

To: W. R. Storms

From: Executive Officer, Field Team, Region IV

Subject: Docket DMA-527 (Copper), Contract No. Idm-E232, Yucca Mining and Milling Company

Enclosed are six copies of Contract No. Idm-E232 between the Government and the Yucca Mining and Milling Company. All six copies have been signed by the Acting Administrator. Also enclosed is a form letter to the operator to which are attached six copies of Form MF-104 and MF-104A.

If this contract is satisfactory, kindly have all copies signed by an authorized official of the company, the signature certified by the Secretary of the company, and the corporate seal affixed.

The operator's copy should be delivered to the operator and the original and remaining four copies returned to this office. Since this contract has been signed by the Acting Administrator, it should remain in the possession of you or one of your staff until it is properly executed by the operator. When this contract is delivered to the operator, an engineer should visit the mine and determine the starting points of the drifts.

It is agreeable for the operator to start work immediately upon the determination of the starting points. This contract is on the short form and reimbursement is based on units of work performed, therefore we cannot reimburse the operator for any work done prior to delivery of the contract and determination of the starting points in the drifts.

W. N. King

W. N. King

Enclosures

JFS:jp
cc Secretary to the Operating Committee
AHKoschmann (2)
Contract
Chron

FILE COPY
SURNAME:

Schmidt
Ellis

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

AUG 6 1952

Mr. [illegible] King
Executive Officer, Region IV
DMEA Field Team
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. [illegible]-527 (Copper)
Contract No. [illegible]
[illegible] Mining and Milling Company
Mojave County, Arizona

Dear Mr. King:

Enclosed are the original and five copies of the above captioned contract which have been signed by the Government. When the original and six copies have been signed by the operator the copies marked "Operator's Copy" and "Field Team's Copy" and "Finance Officer's Copy" are to be given to the proper parties. The original and two copies are to be returned to Washington.

This contract amends the original contract dated (December 19, 1951) and has been written in accordance with your letter of July 7, 1952, requesting the elimination of copper, using the short form based on unit costs, and reducing the total amount of the contract from [illegible],896.00 to [illegible]59,470.00, a reduction of [illegible],120.00. The work to be done under the contract has not been changed.

Sincerely yours,

(signed) FRANK E. JOHNSON

Chairman, Operating Committee

FSSchmidt/jem 8/1/52

cc to: Adm. Reading File
Docket
Messrs. CnJohnson-3621
Ned Nelson-4216 GSA
Ellis Schmidt
Field Team, Region IV
Opr. Com.

Enclosures
[illegible] J. H. Hedges

Member, Bureau of Mines

D. M. Lemmon
Member, Geological Survey

F.N. 8-6-52

UNITED STATES 140
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

August 4, 1952

Memorandum

To: Acting Administrator

Through: E. W. Ellis

From: Chief Counsel

Subject: Amended Contract Docket No. 527, Yucca Mining and Milling Co.

There is attached, in satisfactory legal form for execution, a contract which amends the contract dated December 19, 1951, covering the same project.

I am advised that we may not be able to obtain a new Owner's Consent to Lien. Since this contract is an amendment of the old contract, it may have the effect of releasing the existing Subordination Agreement. Under these circumstances we will be relying on the Operator's guaranty of royalty payments rather than on a lien on production.

J. L. Hoffluud
J. L. Hoffluud
Chief Counsel

Attachment

Re: Yucca Mining Co - DMEA 527

Note: I have not gone into the question of title because I assume that that was done when the contract was originally signed. From the documents in the file, I find myself unable to pass on the question.

AEKane AEKane

FILE COPY
SURNAME:

140

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

July 30, 1952

Memorandum

To: Acting Administrator N.S. in R. v R.

Through: E. W. Ellis

From: Acting Chief Counsel

Subject: Amended Contract Docket No. 527, Yucca Mining and Milling Co.

There is attached, in satisfactory legal form for execution, a contract which amends the contract dated December 19, 1951, covering the same project.

Since this contract is in effect only an amendment of the old contract, I do not think it essential to attach a new Owner's Consent to Lien to replace the Subordination Agreement. However, if one could be easily obtained, it should be and its attachment noted in Article 2(b) of the contract.

/s/ A.E. Kane

A. E. Kane
Acting Chief Counsel

Attachment

AEKane/ema
cc: Mails & Files
A. E. Kane
E. W. Ellis
J. L. Hofflund
Chron.

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

July 16, 1952

Memorandum

To: Docket file

From: F. Sommer Schmidt, Mining Engineer
Rare and Misc. Metals Division

Subject: Docket No. DMA-527, Yucca Mining and Milling Co.

See letter of W. H. King dated July 7, 1952. It is desired by Field Team to change contract Idm-E232, amounting to $69,890.00, in three stages on old form MF-200 dated December 19, 1951, to a short form contract on unit costs amounting to $59,470.00, a reduction of $10,426.00 in one stage and involving the same described work.

It is important to ascertain whether there were proposed expenditures for equipment or installations in which the Government would have an interest in the original contract, which would be wiped out by dividing the total cost by the footage and thus arriving at a cost per foot for the short form contract. This figure might be high enough to include amounts used for purchase of equipment, etc., in which the Government in this way would be deprived of its interest.

This contract (Idm-E232) shows no items of installations or equipment in which the Government would lose equity by making this change. There are listed certain "fixtures and improvements", but they consist of pipe and rail and spikes and ties and switches, etc. amounting to $3,409.85 and these can be considered as being consumed in the execution of this project as supplies (discussed with Rubin) and added to the list of supplies to be purchased, amounting to $21,815.98. The only items of equipment are rented per month, and those which are owned by the operator to be depreciated for 6 months on a 60-month basis. There are no items in which the Government would lose any equity by thus charging the costs of all items to the job on a unit basis.

The proposal is to make the unit basis cost do the same work amounting to $59,470.00, thus saving $10,426.00. Since there are no details of costs, it is not possible to show how this saving is effected. The same amount of work is to be done for the money, namely 865 ft. of drifting and 935 ft. of raising.

Contract Idm-E232, while listing three stages, does not give the cost for each stage, so that in the event that only

only one stage were completed the cost for same would not be known.

The original contract was signed by the Government and the Operator. One should ordinarily have the breakdown of the detailed costs in the new contract by which the figure of $32 per ft. for drifting and $34 per ft. for raising were arrived at. The costs in contract Idm-E232 will be used for guidance without detailing the economies accounting for the saving of $10,426.00. (See note on telephone talk with King July 14, 1952.)

- - -

From DMPA-Waugh:

I find that this company has a subsidy of 1.94 cents per lb. of copper for development work. The expenditure of this money is reported every month without showing where the development was done, nor how much. There is no check on it whatever. This money could be spent on doing work on the proposed exploration contract or in some way connected with it. There is not much money involved in this, about $330 a month. In addition, there is an application for $50,000 with DMPA which has been approved and recommended to RFC which is to be for working capital, and Waugh reports to me that this money could easily be used for paying the half share of the costs of the exploration contract.

This matter has been discussed with Frank Johnson and Hofflund, and it appears that if some of this DMPA development subsidy or the $50,000 working capital finds its way into our exploration contract, it is not up to us to police this matter. So far as this proposed contract is concerned, it is not for us to decide where the money is coming from. We pay by the foot of progress and that ends our responsibility so far as this contract is concerned. However, Mr. Johnson thinks that some steps should be taken to see that money required by one agency is not borrowed from another because it is fundamental in our exploration set-up that the Operator is to put up his own money and not simply borrow it from another agency.

Therefore, the contract will be written.

At Mr. Frank Johnson's request, I will write a report of this matter to be taken up with DMPA or Howard Young, to see that there is no overlapping use of such funds as this $50,000 working fund.

Sch

7/15/52 DMPA Waugh

Yucca mining and milling Co CDMA 527

subsidy Zn 19.50 ¢ /lb
Cu 34.35 " includes 2.0¢ depletion
depreciation
1.94 development
3.94

Application for $50,000 working capital approved by DMPA now up to RFC Funds can be used for paying expenses on connection with this Exploration contradt.

Rp Production copper April 16,150 lb
May 15,494

Dec to Mch 60,913 probably thru March

Telephone Conversation 7/14/52

with WnH. King Denver

Yucca mining and milling Co DMA 527
Idm E 232

He was very anxious to get this contract revised into the simple form was not able to show just where the saving of $10,426.00 would be made except that the operators guaranteed to do this work at that price and figured that the short form contract unit cost would save so much reporting that it was worth a lot of money to them and that their offer of reducing the costs was attractive to him.

It is also to me. See my memo

Schmidt

July 10, 1952

DMA-527
Contract Idm-E232
Yucca Mining and Milling Company

7/10/52

Mr.Knouse:

In connection with Mr.King's memo of July 7 and attachments, I would like to point out the following:

(1) All of this material came directly to us from the Mails & Files, without clearing through the Operating Committee. Consequently, I notified Hazel Berry of this action, and she reviewed the material to make a record for the Operating Committee. She said it would be necessary for her to take all copies of the Recission (and she took a carbon of Mr. King's memo, as well). This will be passed through the regular channels back to us.

(2) I should think the new short form contract would not be dated December 19, 1951 (the same date as the old contract), but be given a more current date; also, if the same contract number is carried, that the new contract would be marked "Supplemental" or "amended." These are only suggestions for your consideration. (Incidentally, this was Mrs. Berry's opinion, too.)

(3) Our Division contract file is attached for your information. Please note remarks on route slip in the file dated June 26, 1952, to Mr. Ellis. No contact has been made by me with Miss Lee regarding the further action being taken on this contract.

Mrs. Ault

MF-500

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

REFERENCE SLIP

DATE 7/10/52

REFERRED TO:

1. Mr. Ellis Rm. 4640
2. Mr. Hofflund Rm. 4627
3. Mr. Ellis Rm. 4640
4. Hazel Berry Rm. 4624

FOR:

---------- Action	---------- Recommendation
---------- Approval	---------- Record of ----------
---------- Comment	---------- Referring to ----------
---------- Conference	---------- Reply for signature of ----------
---------- Consideration	---------- Rewriting
---------- Filing	---------- Signature
---------- Instructions	---------- Suggestions
---------- Investigation	---------- Your information
---------- Initials	
---------- Mailing	
---------- Previous correspondence	

REMARKS: MR. ELLIS: When this has been reviewed, if cleared or approved, prepare letter for Committee to return Operator's cy & Field cy. At the time it goes thru Committee, Mr. Mittendorf will signed and distribution made of other copies.

Check (X) before the items needing attention.

FRANK E. JOHNSON
(FEJ) *Initials of sender.*

GPO 16—63815-1

7/9/52 gla

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

224 New Customhouse
Denver 2, Colorado

July 7, 1952

AIR MAIL-SPECIAL DELIVERY

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 9 1952

Memorandum

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

From: Executive Officer, Field Team, Region IV

Subject: Contract Idm-E232, Docket DMEA 527, Yucca Mining and Milling Company

Referring to our telephone conversation of July 7 regarding substitution of short form contract, Form MF-200A, for exploration project contract Form MF-200, signed by the Government and by the Yucca Mining and Milling Company, enclosed are the operator's copy, the Field Team's copy, and the Region IV Finance Office copy of Contract Idm-E232. Also enclosed are six copies of a proposed contract between the Government and the Yucca Mining and Milling Company prepared on Form MF-200A, and six copies of Rescission of Exploration Project Contract by Agreement Before Work is Begun, signed by Robert J. Dalton, President, Yucca Mining and Milling Company.

The description of the work is the same as in the original contract except that the Stages are eliminated so that the operator may work in two or three headings at one time and thus, carry on the operation more efficiently.

The Landlord's Subordination Agreements and the maps should be obtained from the copies of the original contract prepared on Form MF-200. The operator did not submit a copy of the Landlord's Subordination Agreement or map with his copy of the contract, so it may be necessary to photostat these papers in order to obtain six copies of each.

You will note that the contract as prepared on the short form is in the amount of $59,470. The original contract was for $69,896. This new form will result in a saving of $10,426.00 to the project.

Your early action on this contract will be appreciated because the operator is prepared to commence work.

W. H. King SDS 7-9-52

Enclosures

W. H. King

RESCISSION OF EXPLORATION PROJECT CONTRACT
BY AGREEMENT BEFORE WORK IS BEGUN

It is agreed this 7th day of July, 1952, between the United States of America, acting through the Department of the Interior, Defense Minerals exploration Administration, hereinafter called the "Government", and The Yucca Mining and Milling Company, hereinafter called the "Operator", parties to that certain Exploration Project Contract Idm-E232, Docket No. DMEA 527, dated December 19, 1951, that said contract shall be and is hereby rescinded, revoked, and cancelled as of the date of the contract, before any actions have been taken or costs incurred thereunder, without any obligation whatever, one party to the other, the same as if said contract had never been entered into.

Witness the following signatures as of the day and year first above written.

UNITED STATES OF AMERICA

By_____

YUCCA MINING AND MILLING COMPANY

By Robert J. Dalton Pres.

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

224 New Customhouse
Denver 2, Colorado

June 18, 1952

DMA-527

Mr. Robert J. Dalton, President
Yucca Mining and Milling Company
Yucca, Arizona

Dear Mr. Dalton:

We have not received a reply to our letter dated February 12, 1952, in which we discussed your requested revision of Contract Ida-E232. You have not started work under the terms of this contract which is dated December 19, 1951. The contract stated that you should start work within 30 days after the effective date of the contract.

Please notify this office if you are still interested in doing work under the terms of this contract.

Yours very truly,

W. H. King

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

JR:ld

cc: Contract, chron.
Koechmann
Storms
Secretary to the Operating Committee

Department of the Interior
Defense Minerals Administration
JUN 26 1952

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : Mr Waugh - DMPA DATE: 6-10-52

FROM :

SUBJECT: Copy field Team report

DMA 527

one copy of ownership & history

[illegible]

FILE COPY
SURNAME:

100

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

DEC 29 1951

DN

Mr. J. H. East, Jr.
Executive Officer, Region IV
Defense Minerals Exploration Administration
224 New Customhouse Building
Denver 2, Colorado

Re: Docket DMA-527X - Copper
Yucca Mining and Milling Co.
Antler Mine
Mohave County, Arizona
Exploration Contract Idm-E232

Dear Mr. East:

We had prepared a letter to you on December 20 for transmittal of the original and five copies of the above referenced exploration contract for your review, signature finalization, and distribution of copies, as has been our customary practice.

The Operating Committee approved the contract on December 21, on which date Mr. Dalton called at my office to determine the status of his application. Mr. Dalton was very anxious to receive his finalized copy, since he planned to fly back to California the following day and wished to make immediate plans for the resumption of operations. He stated that he had laid off his crew before coming to Washington and wished to rehire the men before Christmas. In the circumstances, I decided that we would furnish him with a signed copy of the contract, realizing fully that such an act was a departure from our established procedure. You will recall that I sent you a teletype informing you of this action.

Transmitted at this time you will please find your copy of the contract, signed by both the Government and the applicant. Copy for your Regional Finance Officer will be forwarded under separate cover in due course.

You will note that the following major changes have been made in the contract as originally outlined: (1) the item for ties was increased from $86.25 to $517.50; (2) the item for picks, shovels, etc. was reduced from $1,000 to $500. The above changes, after correcting arithmetical errors in the original contract, have reduced the estimated costs of the project from $70,145 to $69,896.

We suggest that occasionally the actual consumption of powder per foot of advance be checked. The applicant lists 15 pounds per foot of drift which appears high. Sampling, where warranted, should follow closely the development advance. Recently the mine has been operated without the benefit of underground sampling which may have contributed partly to the Company's difficulties.

Sincerely yours,

C. O. Mittendorf (fw)

Chairman, Operating Committee
Defense Minerals Exploration
Administration

Enclosures

Approved:

_____
Member, Bureau of Mines

_____
Member, Geological Survey

GCSelfridge'lm
12/19/51

ccL Admn. Reading File
Mails and Files Br.
C. O. Mittendorf
C. H. Johnson, USBM
E. T. McKnight, USGS
Field Team, Reg. IV
Docket
G. C. Selfridge

12-29
J.D.

400
FILE COPY
SURNAME:

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

Selbridge
McCurdy
Thurston (for Bishop)
Emerick
Mayer

Mr. J. H. East, Jr.
Executive Officer, Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMA 527X - Copper
The Tucson Mining and Milling Co.
Antler Mine
Mohave County, Arizona
Exploration Contract Idm-1232

Dear Mr. East:

We are enclosing the original and five copies of the above referenced exploration contract signed by this office for the Government, together with Exhibit "A" (5 pages), a subordination agreement and one map.

If the terms and conditions of this contract are satisfactory to you and the Operator, all six copies should be signed by a duly authorized official of the Company. One copy is to be given to the Operator, one copy retained by your office and the original and three copies returned to this office.

If any part of this contract does not have either your approval or that of the Operator and cannot be amended within your delegated authority, then the original and all copies of the contract are to be returned to this office together with the proposed changes for consideration.

Please note that the following major changes have been made in the contract as originally outlined:

1. The item for ties was increased from $86.25 to $517.50.

2. The item for picks, shovels, saws, etc. was reduced from $1,000 to $499.91.

The above changes, with arithmetical errors in the original contract, have reduced the estimated cost of the project from $70,145.73 to $69,896.00.

FILE COPY
SURNAME:

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Defense Minerals Exploration Administration
C. O. Mittendorf
~~1640~~ 5371 4640
Salaries & Expenses, Defense Production Activities, Interior, 1952, 1270137
December 26, 1951 100.0000(100)
Mittendorf (meh)

Mr. J. H. East, Jr., Executive Officer, Reg. IV, 224 New Customhouse Bldg., Denver 2, Colorado
Docket No. DMA-527X

For your info contract Idm-E232 favor Yucca Mining and Milling Company, Arizona, approved December 19th. Total sum $69,896. Operator furnished his copy contract here. Distribution other copies being made today.

not stripped in R. & R.

C. O. Mittendorf (meh)

C. O. Mittendorf
Acting Administrator

COMittendorf/meh
cc to: Adm. Reading File
Mails and Files
Mr. Mittendorf
Mr. Selfridge
Docket

2061

SENT
DEC 26 1951

Clerical Service Section

BU

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

December 21, 1951

Memorandum

To: Acting Administrator

From: Chief Counsel

Subject: The Yucca Mining and Milling Company, Docket No. DMA-527

The draft of the exploration contract in this case, as resubmitted to us on December 21, meets the objections of our memorandum of November 30 and is approved as to legal form and sufficiency for signature on behalf of the Government, subject to:

1. Proper signature by the applicant.

2. Proper dating prior to delivery.

3. Government approval of all subcontracts.

Your file in this case is returned.

J. L. Hoffland
J. L. Hoffland
Chief Counsel

Attachment

12/17/51

YUCCA MINING AND MILLING CO., INC.

Antler Mine

YUCCA, ARIZONA

ROBERT J. DALTON, PRES-TREAS.
FERD WOLF, V-PRES.
BEN F. WILLIAMS, SECY.

Dec. 10, 1951

Mr. Frank E. Johnson
Defense Minerals Administration
Washington, D. C.

Dear Mr. Johnson:

In accordance with your letter of Dec. 5, 1951 enclosed are the six copies of the alternative Subordination Agreement neccessary for the final processing of our application.

Sincerely yours,

Robert J. Dalton

Robert J. Dalton, President

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 1 1 1951

UNITED STATES
DEPARTMENT OF THE INTERIOR 140
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.

DEPARTMENT OF THE INTERIOR
RECEIVED
NOV 30 1951
Defense Minerals Administration,
Production Expansion Division,

DEPARTMENT OF THE INTERIOR
RECEIVED
DEC 18 1951
Defense Minerals Administration,
Production Expansion Division,

November 30, 1951

Memorandum

To: Director, Production Expansion Division

From: General Counsel

Subject: The Yucca Mining and Milling Company exploration project contract--DMA-527

I am unable to approve the draft of an Exploration Project Contract, submitted to this office on November 23, because of several matters set forth hereafter. The first one was discussed in advance with Mr. Mittendorf.

1. On page 5 of Exhibit "A" is the following paragraph:

> "In case a dual operation, i.e., development, preparation for mining and/or mining in conjunction with the exploration, is carried on during the life of the contract all costs including labor, supervision, equipment, supplies, rentals, etc., are to be prorated equitably between the exploration and the additional phases of the operation."

changed

As a matter of policy, a provision relating to dual operations in such broad terms should not be accepted. Inasmuch as the work consists of drifting, crosscutting, and raising, no doubt the only "dual operations" which could reasonably apply to this contract would be such matters as the use of the hoist and skip, and air from the compressors. It would be preferable to specify that the reasonable use value or depreciation on such items will be prorated on the basis of man hours, or whatever better basis may be adopted.

2. The comma between the words "Spuyten" and "Duyvil" in the matter filled in in Article 2 should be removed. The Option Agreement indicates that these two words are the name of one claim rather than two.

removed

3. The notations inserted under Article 2(a) should be changed to read: "There are no encumbrances on the claims owned. A subordination agreement, covering the claims leased with option to purchase, is attached."

4. The inconsistency in the use of the heading "Operating Equipment" in Exhibit "A" should be eliminated. On page 2 the term as used in the "Summary of Estimated Costs" includes not only what is listed under that heading on page 3 in the succeeding breakdown, but also what is listed under the heading "Supplies to be purchased" on pages 3 and 4 of the breakdown. This latter heading should be shown in the summary at its proper figure and the amount shown for "Operating Equipment" should be reduced to $3,750.00, its actual total in the breakdown.

5. The subordination of the Arizona Antlers Mining Company should be obtained upon the Landlord Form rather than the Mortgagee Form which has been used. Since this Company still has title to the property the use of the other form is necessary to fix the Government's lien. For use by a contract vendor rather than a lessor the form should be changed in the following particulars:

Strike out "Landlord's" in the title.

Line 5, paragraph 1: Substitute the words "Contract Purchaser" for "Lessee."

Line 1, paragraph 2: Substitute "Vendor" for "Lessor", and "Option Agreement" for "lease."

Line 3, paragraph 2: Substitute "Option Agreement" for "lease."

Line 6, paragraph 2" Substitute "Option Agreement" for "lease."

Line 1, paragraph 3: Substitute "option" for "leasehold."

Line 2, paragraph 3: Substitute "Option Agreement" for "lease."

Line 4, paragraph 3: Substitute "Contract Purchaser" for "Lessee."

6. Proper signature on behalf of the applicant.

7. Proper dating prior to delivery.

Your file is returned herewith.

J. L. Hofflund
General Counsel

Attachment

DEFENSE MATERIALS PROCUREMENT AGENCY
Washington 25, D. C.

NOV 30 1951

MEMORANDUM:

To: Docket Control Center

From: Chief, Copper Branch

Subject: Application for Production Loan of ~~Yuma~~ Yucca Mining and Milling Company, DMA-527, Commodity-Copper

This application has been withdrawn October 10, 1951 in form of an exploration loan DMA-527.

Transmitted herewith is the complete file consisting of:

1 DMA Referral of Application for Government Aid
1 Set of Notes
1 DMA Status Change Notice
1 Report of Yuma Mine and Mining Company
4 Letters from T. Lyon to
R.J. Dalton, Feb. 20, 1951 (2 copies)
Executive Officer, Region IV, Feb. 20, 1951 (2 copies)
R. V. Dalton, March 12, 1951
Director, P.E.D., October 15, 1951
1 Letter to J. H. Boyd from R. J. Dalton, Feb. 21, 1951
1 Confidential letter from T. M. Romslo, June 7, 1951 (2 copies)
1 Memo to W. R. Storms from P. T. Allsman, March 9, 1951
1 Memo to P. T. Allsman from J. H. East, March 5, 1951
1 Memo to Reports and Records from J. B. Gowen, Oct. 10, 1951

J. B. Gowen

J. B. Gowen, Chief
Copper Branch

Attachments

527

Mr. Robert J. Dalton, President
Yucca Mining & Milling Company, Inc.
Yucca Arizona

Dear Mr. Dalton:

We are returning herewith the six copies of the Subordination Agreement executed by the Arizona Antlers Mining Company as it is not the type of agreement used in keeping with your particular case.

We are enclosing seven copies of an alternative agreement which lack only the date of execution and signature by the Antlers Company. Please return six of the signed copies to us.

As soon as we receive the copies of the new agreement we can finish processing your application.

Sincerely yours,

C. O. Mittendorf

Acting Administrator,
Defense Minerals Exploration
Administration.

Enclosures-13
11-30-51
GCSelfridge/hmj
cc to: Reports and Records
Adm. Reading File
Mr. Mittendorf
Mr. Selfridge
Docket

BEN F. WILLIAMS
DOUGLAS, ARIZONA

Defense Minerals Administration
NOV 1 3 1951

November 9, 1951.

DEPARTMENT OF THE INTERIOR
RECEIVED
NOV 1 4 1951
Defense Minerals Administration,
Production Expansion Division.

Mr. Frank E. Johnson, Acting Director,
Production Expansion Division,
Defense Minerals Administration,
Washington 25, D. C.

Re: Docket No. DMA-527, Copper

Dear Mr. Johnson:

In accordance with your request in your letter of October 25, 1951, to Mr. Dalton enclosed is a copy of our purchase agreement.

Enclosed are six executed copies of the "Landlords Subordination Agreement." For your information all payments and obligations of the Faire Mining Corp. have been met with the exception of the completion of the royalty payments out of production have been met.

Status of mill sites and claims shown on the map.

The Spuyten Duyvel and Antler Patented claims were conveyed to Yucca Mining and Milling Company from Arizona Antler Mining Company through the Faire Mining Corporation. All taxes are fully paid up and there are no other encumbrances.

The White Chip, Black Chip, Green Chip, Yellow Chip, Red Chip, Pink Chip and Blue Chip claims have been located and recorded in Mohave County. All requirements for legal ownership have been met.

The Mary Lee, Ruth and Dorothy mill sites have been legally located and recorded.

The Gladys Katherine, Nettie Ann and Mary Lee No. 2 mill sites have not been recorded as yet and will not be until such a course is deemed advisable.

Very truly yours,

YUCCA MINING & MILLING CORP.

Ben F. Williams

Ben F. Williams
Secretary

BFW:HG
Encls.
cc-R.J.Dalton

OFFICIAL FILE COPY

400

FILE COPY
SURNAME:

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

Selfridge
Johnson

AIR MAIL

OCT 25 1951

G.E.C.

Mr. Robert J. Dalton, President
Yucca Mining and Milling Company, Inc.
Yucca, Arizona

Re: Docket No. DMA-527, Copper

Dear Mr. Dalton:

Will you kindly send us a copy of each lease, purchase agreement or assignment by which your company obtained operating control of the Antler mine.

In addition, we lack the "Landlord's Subordination Agreement" which is to accompany the Exploration Contract before its final approval. We are enclosing seven blank copies of the agreement which will serve to obtain the owner's subordination. Please return six of the signed copies to us and retain one for your files.

If you are unable to obtain subordination by the landlord, a guarantee securing the repayment to the Government may be considered in lieu thereof. Such guarantee must be supported by acceptable evidence of financial responsibility and ability to repay the Government.

What is the status of the various mill site claims and the fraction shown on the claim map?

Further action on this project is deferred pending the receipt of either the "Landlords Subordination Agreement" or an acceptable guarantee to repay the Government's loan, and copies of the leases, purchase agreements and/or assignments.

Please advise us in respect to this matter at your earliest convenience.

Sincerely yours,

10/25

(signed) FRANK E. JOHNSON (fw)

Acting Director,
Production Expansion Division

Enclosures

GCSelfridge/jem 10-22-51

cc to: Adm. Reading File
Reports & Records
Messrs. Mittendorf, Olund
Docket
Field Team, Region IV (2)

Mr. Gowen
Mr. C. Johnson
Mr. Selfridge
Mr. McKnight

FILE COPY
SURNAME:

Wilkins
Gower
Nelson
Johnson - Hen

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

OCT 15 1951

Memorandum:

To: Director, Production Expansion Division

From: Director, Supply Division

Subject: Application for Exploration Aid of Yucca Mining and Milling Company, DMA-527, Commodity-Copper, Government Participation-$35,172.86.

Transmitted herewith are six copies of a contract and exhibits attached, one field team report on the Antler Mine, and one folder of the Yucca Mining and Milling Company.

This project is recommended for approval by the DMA Field Team, Region IV. The Supply Division concurs in the recommendation.

Tom Lyon N.S. R+R

Tom Lyon, Director
Supply Division

Attachments

RVWaugh:ez
10/9/51
Copy to: Administrator's Reading File
Field Team-Region IV
Copper Branch
Files - DMA Docket

A.E.C.

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

OCT 1 0 1951

a.e.c.

MEMORANDUM

To: Reports and Records Branch

From: Chief, Copper Branch

Subject: Application for production loan of Yucca Mining & Milling Co., DMA-527, Commodity-Copper

The above application has been withdrawn in favor of an exploration loan DMA-527.

J. B. Gowen

J. B. Gowen, Chief
Copper Branch

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

224 New Customhouse
Denver, Colorado

June 14, 1951

Memorandum

To: Landon Strobel, Executive Secretary, Defense Minerals Administration

From: DMA Field Team, Region IV

Subject: DMA Docket 527, Yucca Mining and Milling Co., Antler Mine, Mohave County, Arizona

Herewith is the field examiners reports and a confidential letter on the competence of the operator. It appears that all the information required for the exploration and loan contracts are included.

We concur in the conclusions and recommendations of the examiners.

The original brochure is also enclosed.

Paul T. Allsman
P. T. Allsman, Alternate

A. H. Koschmann
A. H. Koschmann

Attachments
One copy by air mail
Two copies by regular mail
Original brochure

JUN 19 1951

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

ON-SITE RPT.

DMA-527, YUCCA MINING & MILLING CO.,
ANTLER MINE
MOHAVE COUNTY, ARIZ.

FOR GOVERNMENT USE ONLY

C. A. ANDERSON, GEOLOGIST
U. S. GEOLOGICAL SURVEY

T. M. ROMSLO, MINING ENGINEER
U. S. BUREAU OF MINES

JUNE 1951

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

June 14, 1951

Memorandum

To: DMA Field Team, Region IV

From: Chief, Mining Division

Subject: DMA Docket 527, Yucca Mining and Milling Co., Antler Mine, Mohave county, Arizona

In the original docket a loan of $833,250 was requested for the purpose of executing an exploration and development program with the objective of increasing the production of copper-zinc ore from 70 to 300 tons. During the investigation, the company reduced the proposed tonnage to 140 and materially reduced the exploration and development program.

The total estimated cost of the revised program as submitted by the application is $270,696, of which $87,346 is for exploration on a participating basis. Some of the items in the exploration are unduly high and Romslo in his report estimates the cost of the exploration program at $73,722. This is exclusive of the sinking of the Antler Shaft for 200 feet and a station and ore pocket at an estimated cost of $43,000. This may well be included in the exploration phase, increasing the cost of this to $116,722.

The indicated and inferred reserves are ample and the proposed project is economically feasible with operating profits sufficient to return both the Government participation in the exploration phase and a loan of $140,000 for increased exploitation.

I concur with the conclusions that both forms of assistance be approved.

The report contains the essential information for Exhibits A to E, inclusive, of the exploration project contract.

Paul T. Allsman

P. T. Allsman

Attachments

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

200 New Customhouse
Denver 2, Colorado

June 13, 1951

Memorandum

To: DMA Field Team, Region IV

From: A. H. Koschmann

Subject: DMA Docket 527 - Antler Copper-Zinc Project, Mohave County, Arizona

I herewith transmit the geologic report by Charles A. Anderson covering the above listed project.

A. H. Koschmann

A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Attachment

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P.O.Box 4126, University Station
Tucson, Arizona

June 7, 1951

Memorandum

To: Mr. A. H. Koschmann, Denver, Colorado

From: Mr. A. F. Shride, Tucson, Arizona

Subject: Antler Copper-Zinc Project, Mohave County, Arizona - DMA Docket 527

Enclosed are the original and 7 copies of the above report by C. A. Anderson.

This report and the recommendations that loans be granted for both exploration and development have our approval.

A. F. Shride

A. F. Shride
Acting District Supervisor
Arizona-New Mexico

Enclosures 8

JUN 1951
RECEIVED
U.S. Geological Survey
Mineral Deposits Branch
Denver

Arizona-New Mexico Branch
SOUTHWEST EXPERIMENT STATION
Box 4097
UNIVERSITY STATION

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
MINING DIVISION
REGION IV

TUCSON, ARIZONA

June 7, 1951

Memorandum

To : Paul T. Allsman, Denver, Colorado

From : Chief, Arizona-New Mexico Br., Mining Div., Region IV

Subject : Final Report on DMA Docket 527, Yucca Mining & Milling Co., Antler Mine, Mohave County, Ariz.

Enclosed are original and 7 copies of the above report:

Summary, Conclusions and Recommendations by C. A. Anderson of the Geological Survey and T. M. Romslo of the Bureau of Mines; and Engineering Report by Romslo.

The brochure for this docket also is enclosed.

The report has my approval.

Walter R. Storms

Walter R. Storms

CC P. T. Allsman (7)
C. A. Anderson
DMA 527
DF

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMA-527, Antler Copper-Zinc Project

Mohave County, Arizona

T. M. Romslo, Mining Engineer
U. S. Bureau of Mines

C. A. Anderson, Geologist
U. S. Geological Survey

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

An examination was made by the writers, under DMA Docket 527, of the Antler mine of the Yucca Mining and Milling Co., Inc., Mohave County, Ariz., in connection with a request by the corporation for a Governmental loan of $833,250. This loan was to be used in carrying out an exploration and development program designed to increase production of copper-zinc ore from 70 to 300 tons daily. During the investigation the corporation revised its proposal to a request for an exploratory loan of $87,346,09, and a development and exploitation loan of $183,350. The object of the overall program is to increase ore reserves and expand production from 70 to 140 tons of ore daily.

The Antler mine has produced an estimated total of 31,700 tons of ore. Of this production 2,100 tons of 5 to 14 percent copper ore was shipped from operations conducted during three periods; World War I, 1929, and 1944. About 10,000 tons, of which 6,026 tons averaged 8.38 percent zinc, 2.43 percent copper, 0.69 percent lead, was produced during 1945 to 1947. This ore was milled, mainly at Bisbee, Ariz. The present operators constructed a mill on the property in 1949, deepened the mine, and have mined and milled to April 1951 approximately 17,500 tons of ore that averaged about 3 percent copper and 7 percent zinc, and contained minor amounts of lead, gold, and silver.

The ore consists of lenses and veins of nearly solid sulfide (sphalerite, chalcopyrite, galena, pyrrhotite, and pyrite) that have replaced schist. Ore control appears to be faults parallel to and transecting the schist, forming an ore zone about 100 feet wide. The strong vein structures on the lower level suggest persistence both laterally and in depth.

Ore reserves are estimated to include 135,000 tons of indicated and 330,000 tons of inferred ore. Available data indicates the mined ore will average about 3 percent copper, 7 percent zinc, with minor amounts of lead, silver, and gold.

The mine is developed by five levels from the inclined 270-foot Antler shaft. Stoping has been by the shrinkage method until recently when a cut-and-fill stope was started. Other stopes of the latter type will be mined in zones where shrinkage stopes are likely to produce a diluted ore. The ore is treated by selective flotation to yield two concentrates, copper and zinc.

Operations in 1950 were conducted at a net loss of $4.00 a ton. During January and February 1951 costs were $11.00 a ton and the operating profit was 37 cents a ton. Ore treated during this period averaged about 2.7 percent copper and 5.45 percent zinc. This abnormally low grade was due mainly to the milling of much low-grade development ore. Cleaner mining in the future is expected to yield an ore averaging 3 percent copper and 7 percent zinc. For the proposed 140-ton

operation the operating costs a ton have been estimated at $12.32. Mill recoveries are expected to yield concentrates that will show a smelter return of $18.62 a ton, before royalty payment of 93 cents. On this basis the operations should show a profit of$5.32 a ton before providing for repayment of the requested loan.

The proposed exploratory program is designed to explore two potential ore zones, one of which contains 94,000 tons of inferred reserves, from the fifth level of the mine. The work consists of 865 feet of drifts and crosscuts and 935 feet of raises, for a total of 1,800 feet. The applicant will furnish all necessary equipment and has estimated that the work can be completed in 6 months at an estimated cost of $87,346.09.

The development and exploitation program is designed to increase production from 70 to 140 tons of ore daily and to more than double present output of recoverable copper and zinc. It involves: (1) sinking the present shaft an additional 200 feet, excavating a station and installing an ore pocket; (2) development of an adequate water supply; (3) improvement of housing facilities; (4) additions and revisions to the mill: and (5) operating capital. The applicant has estimated that the project can be completed in 4 months at an estimated cost of $183,350. New equipment to be acquired is restricted to mill additions having an installed value of $24,500.

Both projects are feasible and the applicant can be expected to carry out the proposed work in a competent manner. The exploratory project has a good chance of developing a substantial amount of ore and can be completed in 6 months at the writers' estimated cost of $73,722. Completion of the development and exploitation program at an estimated cost of $183,350 can be expected to result in a 140-ton a day operation that will yield, as recoverable metal, about 7,770 pounds of copper, 12,000 pounds of zinc, and 900 pounds of lead. The operations can be expected to be conducted at a profit of about $5.32 a ton, an amount sufficient to repay the requested loan and leave the corporation a reasonable profit.

It is recommended the Government participate with the corporation in the financing of the exploratory program at an estimated cost of $73,722, the Government's share to be 50 percent of this amount.

It is further recommended that the development and exploitation project be approved and that the Government grant the corporation a loan of $183,350 for the carrying out of the proposed program.

ANTLER COPPER-ZINC PROJECT - DMA DOCKET 527
MOHAVE COUNTY, ARIZONA

Geology

By Charles A. Anderson
Geologist, U. S. Geological Survey

Geology

ANTLER COPPER-ZINC PROJECT - DMA DOCKET 527
MOHAVE COUNTY, ARIZONA

CONTENTS

	Page
Geology and ore reserves	1
Geological setting	1
Occurrence of ore	1
Ore reserves	4

ILLUSTRATIONS

Fig. 1 Index map (see Engineering Report)

Fig. 2 Three lower levels, Antler Mine (follows page 2)

Fig. 3 Composite level map and longitudinal projection (see Engineering Report)

GEOLOGY AND ORE RESERVES

GEOLOGICAL SETTING

The Antler mine occurs in a roof pendant of schist about a quarter of a mile in width and trending northeastward. The schist pendant is intruded by pre-Cambrian granite on both sides. The schist has a pronounced foliation that strikes northeast and dips northwest 60-70 degrees. Pegmatite dikes and lenses are common in the schist, in part following foliation and in part branching out along transverse northwesterly fractures.

Two sets of faults are present; one set is essentially parallel to the northeast foliation in strike and dip. The other set of faults strike northwest and the dips range from 50 degrees southwest to vertical. The Saguaro and Ocotillo faults of northwest trend offset the ore bodies to the west on the north side of the fault.

OCCURRENCE OF ORE

The ore deposit is of the schist-replacement type forming in part nearly solid sulfide bodies and in part forming disseminated and closely spaced sulfide veins in schist. Pegmatite dikes in places are veined by sulfide minerals and replacement is not as important as fracture-filling. Locally, the schist is brecciated and the matrix is replaced by sulfide minerals and the fragments are unreplaced. Horses of unreplaced schist occur in the solid ore. The boundary between schist and ore is commonly sharp and irregular. In other places the solid ore grades into schist; and a transition zone contains disseminated sulfide minerals. Locally, the ore boundary is straight and sharp, indicating that pre-mineral faults controlled ore deposition.

The principal ore minerals in order of abundance are dark sphalerite (marmatite), chalcopyrite, and galena. Covellite occurs as a coating on pyrrhotite. Pyrite is present also. Radiating fibrous aggregates of amphibole minerals are associated with some of the ore, and north of the shaft, large masses of gray anthophyllite and brown cummingtonite occur between two sulfide veins (fig. 2). Biotite, quartz, feldspar, and fibrous amphiboles are present as gangue minerals in the ore.

The nearly solid and disseminated ore forms irregular lenses and veins of variable widths. On the upper levels near the main shaft, the widest lenses have been found, and on the 3rd level (fig. 2) north of the shaft, solid ore is 60 feet wide, and northward, this lens breaks into three vein-like bodies terminated by the Saguaro fault. South of the shaft on the 3rd level, the lens feathers out into schist, although two unexplored veins indicate southerly continuity. This major lens around the main shaft plunges southward and above the 4th level south of the shaft, the lens is 20 to 26 feet wide. A horse of schist is present in the 4th level cross-cut beneath this ore lens (fig. 2). On the 5th level, the lens has narrowed to 3 - 5 feet in width on the level but locally is 10 to 15 feet wide in the stope above.

On the 4th and 5th levels, the lens of ore grades southward into a vein of nearly solid sulfide ore that pinches and swells from 1 foot to 10 feet in width, and averages about 3 feet in width. The strike of the vein changes from northwest to northeast (fig. 2) but in the over-all length, the strike is N. 20° E. and dip is northwest, essentially parallel to the foliation in the schist and northeast-trending faults.

A second vein has been explored for 160 feet on the 5th level on the hanging wall side (west) of the ore zone, south of the shaft. This hanging wall vein is more regular in strike than the vein to the east on the footwall side of the zone.

A cross-cut into the footwall has exposed another vein of solid sulfide ore, 4 to 5 feet wide, on the 5th level 290 feet south of the shaft (fig. 2). The evidence supports the view that south of the shaft at least three veins of solid sulfide ore are present.

North of the Saguaro fault, only one vein ranging from 3 to 5 feet in width, has been discovered below the 3rd level. On the first and second levels stopes are present on the footwall side (east) of the hanging wall vein. These footwall lenses may be present north of the Saguaro fault, and exploration for these lenses on the 5th level, proposed by the applicant, should be done.

From the information available, the ore deposit is limited to a zone about 100 feet wide and trending N. 20° E. In this zone are veins and lenses of solid and disseminated sulfide ore in schist. The ore control is apparently two sets of faults, the stronger set is N. 20° E. and dips 55 to 65 degrees northwest. Intersections of northwest trending faults probably account for the wider lenses of ore near the main shaft. There has been some post-mineral movement on some of the faults.

The mineralized zone has not been thoroughly explored and additional veins and lenses of ore should be found by future exploration.

The ore is almost completely oxidized above the first level and has provided some oxidized copper ore in the past. Very little oxidation has occurred below the first level.

ORE RESERVES [1]

Estimation of some of the ore reserves at the Antler mine is difficult owing to the irregular shape of the ore bodies and lack of sufficient underground workings to limit accurately the ore boundaries. Very little measured ore is developed, and all measured ore is lumped with indicated ore for this report.

The grade of the ore cannot be given accurately as most of the data are mill head assays of development rock plus some ore from stopes. Some schist waste is included in the mill feed, but no data are available to determine the ratio of waste to ore. The grade of 12,887 tons of ore milled is 0.01 oz. Au/ton; 1.1 oz. Ag/ton; 3.1% Cu, and 7.5% Zn. The grade of 18,405 tons of another lot of ore milled is 3.01% Cu and 7.0% Zn. The lead content ranges from 0.5 to 0.95%. Because of the waste included in the mill feed, ore grade estimates are conservative.

Ore from four localities in the mine have been shipped directly to the smelter and the location, tonnage, and grade of this ore is given on fig. 3. Diamond drill holes penetrate the ore zone and the core length and grade of sulfide ore for three of these holes are plotted on figure 3.[2]

The data available indicate that the copper content ranges in general from 3 to 5 percent and the zinc content ranges from 7 to 10 percent.

The Antler mine has been divided into several blocks for the purposes of estimating ore reserves (shown on fig. 3). Block A including the main shaft contains most of the underground workings. The ore in this

1/ Prepared jointly by C. A. Anderson and T. M. Romslo

2/ Data obtained from T. M. Romslo, Antler Copper-Zinc deposit, Mohave County, Arizona, U. S. Bureau of Mines Report of Investigations 4214, March 1948.

block is irregular in shape and difficult to treat in a conventional manner for ore reserve estimates. Most of the ore that has been milled came from Block A. Calculations were made of the tonnage of milled ore that came from outside Block A, and this amount was subtracted from the total tonnage mined to date. The difference, 30,600 tons is assumed to have come from Block A. It is assumed also that all of the openings in ore at this date will continue upward in ore to the 1st level in the same ratio of ore and waste. By measuring the ratio of these openings to the total block, the total tonnage of the block can be determined, and by subtracting the past production, the remaining ore is determined. Some of the ore in Block A can be termed measured ore, but the ratio of measured to indicated ore is difficult to state.

Block A, by this method of calculation, contains 65,000 tons of measured and indicated ore, of the average grade of past production, that is: 3.1% Cu and 7.5% Zn. It is believed that this estimate of tonnage is of the right order of magnitude and that any deficiencies will be compensated by discoveries of additional ore in Block A.

The ore reserve estimates for the remainder of the mine were determined by conventional methods for tabular ore bodies, because outside of Block A, the exposed ore is in veins of variable width. The tonnage estimates of these blocks was based on average width of sulfide ore and no schist waste was included. The estimates therefore are conservative as regards grade of copper and zinc. Exposures of ore in drifts or diamond drill cores were used to delimit indicated ore. Inferred ore is based on the assumption that the strong vein structures observed on the 4th and 5th levels will persist laterally and in depth.

Estimates of indicated and inferred ore for the remaining blocks are shown on figure 3 and summarized below:

	Indicated Ore	Inferred Ore	
Block A	65,000*		tons
Block B	35,000	16,000	
Block C	22,000	7,000	
Block D		20,000	
Block E	13,000	87,000	
Block F		200,000	
Total	135,000	330,000	

* Includes some measured ore.

No inferred ore is given for the mine south of the proposed shaft (see fig. 3). This southern area should be explored if minable ore persists southward to the location of the proposed shaft, and it is possible that an appreciable tonnage of ore exists southward.

The applicant proposes to explore on the 5th level north of the shaft (fig. 3) to prospect for footwall lenses of ore between the Saguaro and Ocotillo faults and to locate the position of ore north of the Ocotillo fault. Diamond drill hole 6 (fig. 3) revealed one foot of ore, and alteration of the schist indicates that this northern area is potentially ore-bearing. An estimate of tonnage of inferred ore is difficult to give, but it is recommended that the proposed exploration on the north-end of the 5th level be approved.

YUCCA MINING & MILLING CO.

ANTLER MINE

MOHAVE COUNTY, ARIZ.

DMA-527

ENGINEERING REPORT

BY T. M. ROMSLO
Mining Engineer
U. S. Bureau of Mines

Engineering

YUCCA MINING & MILLING CO., ANTLER MINE

MOHAVE COUNTY, ARIZ.

CONTENTS

	Page
Engineering report:	
Introduction	1
Acknowledgments	1
Location and accessibility	2
Physical features and climate	2
History and production	3
Ownership and extent	5
Description of the deposits	6
Ore reserves	6
Present status	7
Exploration project proposal with costs	14
Development and exploitation with costs	15
Production plan	17
Summary: Costs of projects	21
Proposed financing	22
Conclusions	22
Recommendations	24
Appendix	25

ILLUSTRATIONS

Figure		Following Page
1	Location map	2
2	Three lower levels (see geologic report)	
3	Composite level map and longitudinal projection	7
4	Mill flow sheet	9

INTRODUCTION

This report covers an examination of the Antler mine of the Yucca Mining and Milling Co., Inc., Mohave County, Ariz. The examination was made by the Defense Minerals Administration in connection with an application, docketed as DMA 527, by the corporation for financial assistance under the Defense Production Act of 1950.

The applicant requested a Governmental loan of $833,250 for use in carrying out a two-stage exploration and development program designed to increase daily production of copper-zinc ore from 70 to 300 tons. During the course of the investigations the applicant submitted a revised request that included: (1) financial assistance in carrying out an exploratory program at an estimated cost of $87,346.09; and (2) a loan of $183,350 for a project involving development and exploitation of the property. The object of the revised overall program is to increase ore reserves and to expand production from 70 to 140 tons of ore daily.

The investigations were made by C. A. Anderson, Geological Survey, and T. M. Romslo, Bureau of Mines, during the week ofApril 9 to 13, 1951.

ACKNOWLEDGMENTS

The writer wishes to acknowledge the assistance of J. Bruce Clemmer, Bureau of Mines, on the metallurgical phases of the investigations. The proposed mill improvements, together with data on metallurgical tests, were submitted for his consideration by the president of the corporation.

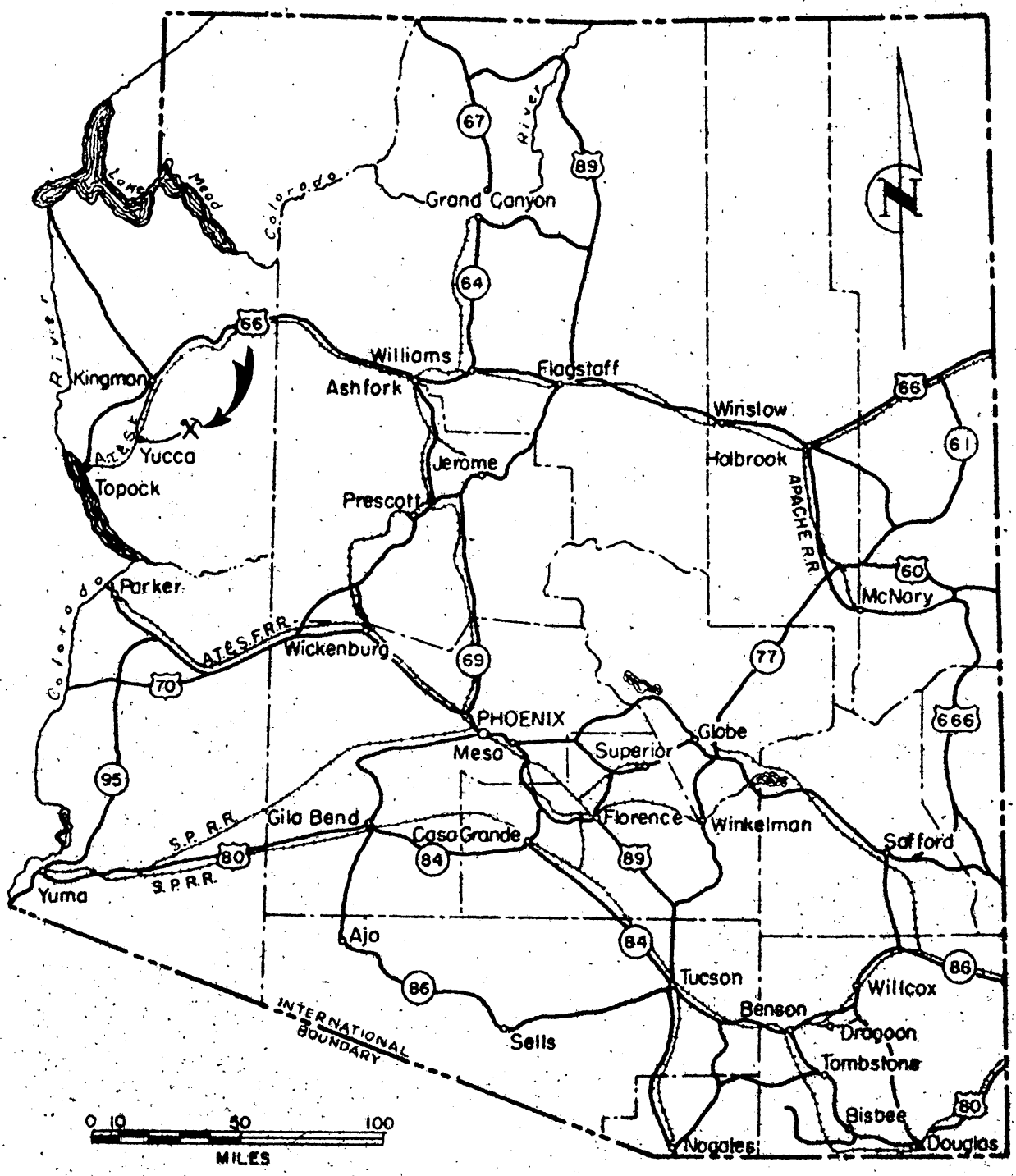
LOCATION AND ACCESSIBILITY

The Antler mine is in the Cedar Valley mining district, secs. 3, 4, and 9, T. 17 N., R. 16 W., Mohave County, Ariz. (fig. 1). It is 12 miles east of Yucca, the nearest shipping point, and about 21 airline miles southwest of Kingman, county seat of Mohave County. Both these towns are stations on the Atchison, Topeka & Santa Fe Railroad. The mine is accessible by highway from Kingman by traveling west 4½ miles on U. S. Highway 66, thence south 19 miles to Yucca and then east 12 miles to the property. The road from U. S. Highway 66 is graded and has no excessive grades. At present a new section of U. S. Highway 66 from Kingman to Topock, Ariz., via Yucca, is under construction. When this work is completed at the end of 1951, Yucca will be on a direct route to Los Angeles, Calif., a distance of 270 miles.

PHYSICAL FEATURES AND CLIMATE

The Antler mine is on the southwest flank of the north-trending Hualpai Mountains at an altitude of approximately 3,200 feet. The mountain range, about 35 miles long, has an average crestline altitude of about 7,000 feet, with a maximum of 8,200 feet on Hualpai Peak. One of the several canyons that cut deeply into the range emerges near the mine onto an alluvial plain.

Vegetation at the lower altitudes is of the typical desert variety. Scrub oak and groves of yellow pine grow near the top of the mountain range.



D.M.A. 527 APRIL 1951

Figure 1. - Location map, Antler Mine, Mohave County, Ariz.

The climate is characteristic of the intermediate altitudes of northern Arizona. At Kingman, the average annual temperature is 61° F., with an annual range of 8° F. to 117° F. The winters are mild and the summers are hot. Annual precipitation averages about 11 inches. Snow seldom falls at the mine.

HISTORY AND PRODUCTION 1/

The Antler and Spuyten Duyvil claims were located in 1879 and 1888, respectively. Later the claims were patented, and the Phelps-Dodge Corp. obtained possession of them. Although some work had been done on the property, little or no ore was produced before World War I. During the period, 1916 to 1918, when high copper prices prevailed, lessees shipped 27 cars of 5- to 12-percent copper ore, mostly oxidized. Most of this ore came from trenches and shafts south of the Antler shaft.

In 1929 the property was leased by Pete Vukoys of Kingman, Ariz., who shipped 7 cars of 5- to 14-percent copper ore. In 1943 Pete and Mike Vukoys obtained a lease with an option to purchase and later bought the property. The Vukoys sold the mine to R. B. Strassburger of Philadelphia, who leased it in October 1943 to the Silver Shield Mining & Milling Co. of Salt Lake City, Utah. That company started production in December 1943 but suspended operations in February 1944. Production by the Silver Shield company amounted to about 400 tons of ore averaging 12 percent copper and 2.5 percent zinc.

1/ Wadsworth, A. H., Jr., and Griggs, R. L., The Antler Mine: Unpublished report, Geol. Survey, 1945.

The Arizona Antlers Mining Co. acquired the lease and reopened the mine in July 1944. Labor shortages forced them to close in July 1945, but shortly thereafter the mine was again activated and was operated to about August 1947. During this period approximately 10,000 tons of ore was mined and shipped to Bisbee, Ariz. where it was beneficiated in the Shattuck-Denn custom mill. Available records show 6,026 tons of this ore averaged 8.38 percent zinc, 2.43 percent copper, 0.69 percent lead, 0.95 ounce silver and 0.009 ounce gold a ton.

The mine lay idle to March 1948 when the Faire Mine Corp., Golden, Colo., obtained the property under an operating agreement from the Arizona Antlers Mining Co. They sank the shaft an additional 165 feet and produced 945 tons of ore containing 4.11 percent copper, 7.6 percent zinc, 0.45 percent lead, 0.009 ounce gold a ton and 1.11 ounces silver a ton. In March 1949 the corporation was taken over by the present operators. Since then the property has been a steady producer. All ore has been beneficiated on the property since September 1949 when the company completed construction of a mill of 100 tons a day capacity. Production by the present operations to April 1951 has totaled about 17,500 tons containing approximately 3.0 percent copper and 7.0 percent zinc. Incomplete assay records indicate other values to be 0.01 ounce gold a ton, 1.1 ounces silver a ton, and about 0.6 percent lead.

Total production from the mine has been about 31,700 tons.

OWNERSHIP AND EXTENT

The property of the Yucca Mining & Milling Co. consists of nine lode mining claims and three mill-site claims. Two of the lode mining claims, the Antler and the Spuyten Duyvil, are held by the company under a purchase agreement with the Arizona Antlers Mining Co., a corporation of Utah. The remaining claims were located by the company and recorded in Mohave County, Ariz.

The agreement for acquiring the property and its appurtenances called for a purchase price of $150,000 to be paid from production on the basis of 5 percent of net smelter returns. The agreement also required the purchaser to pay outstanding debts of $24,887.84, this amount to be credited to the purchase price and to be considered as advance royalty payments. The Yucca Mining & Milling Co. retired the outstanding debts and at present owes $125,112.16 to the Arizona Antlers Mining Co.

The Yucca Mining & Milling Co. was incorporated under the laws of Arizona, March 29, 1949. The authorized capital is 250,000 shares of 6 percent preferred stock of $1.00 par value, and 250,000 shares of no-par value common stock. It is understood that all of the stock is held by the following officers and directors of the company:

Robert J. Dalton, President, Treasurer and Director
Fred Wolf, Secretary and Director
Armando Vavela, Director
John K. Penny, Director
Ed M. Whittaker, Director

DESCRIPTION OF THE DEPOSITS

The ore consists of lenses and veins of nearly solid sulfide that have replaced schist in a mineralized zone about 100 feet wide. The ore minerals are dark sphalerite (marmatite), chalcopyrite, and galena. Pyrrhotite and pyrite are gangue minerals associated with amphibole minerals, biotite, quartz, and feldspar.

On the upper levels, one lens of nearly solid sulfide ore has a width of 60 feet. On the lower levels, the ore forms strong persistent veins averaging from 3 to 5 feet in width, locally pinching and swelling.

The ore has been completely oxidized above the first level but shows little oxidation below that level.

ORE RESERVES

Ore reserves are estimated to include 135,000 tons of indicated ore and 330,000 tons of inferred ore. The grade of the ore in general ranges from 3 to 5 percent copper, and 7 to 10 percent zinc, but the mined ore will probably average about 3 percent copper and 7 percent zinc, with minor amounts of lead, silver, and gold.

Of the 135,000 tons of indicated ore, 87,000 tons has been essentially developed by underground workings.

PRESENT STATUS

Exploration and Development

The Antler mine has been developed from a 270-foot inclined shaft, partially timbered, containing manway and hoisting compartments. Five levels, containing a total of about 1,900 lineal feet of accessible workings, have been opened at depths from the surface of 25, 65, 110, 185, and 245 feet (fig. 3). Other development consists of several raises and six diamond drill holes that were put down by the Bureau of Mines in the early part of 1947.

Mining and Milling Equipment and Other Facilities

Mine. Hoisting is done with a 1-ton skip powered by a 35- h.p. Fairbanks-Morse hoist. A Gardner-Denver Duplex High-Head air-powered pump is used for removing mine water. The mine makes only a few tens of gallons of water daily. Mucking is done by 2 model 12B Eimco machines. Haulage equipment consists of 12 16-cu. ft. roller bearing, end-dump cars. Drilling equipment includes 6 Jackhammers, 7 stopers, and 7 drifters. Detachable bits are used for drilling. The shaft and level stations are equipped with electric lights and the miners use electric cap lamps.

Surface plant, other than mill. - Compressed air is furnished by a Gardner-Denver 240-c.f.m. compressor, an Ingersoll-Rand 325-c.f.m. compressor, and a Chicago Pneumatic 160-c.f.m. compressor. In addition to the compressors, a saw mill and framing equipment, a blacksmith

shop, a 100-Edison cap-lamp charger, and mine supply items are housed in corrugated metal buildings located near the hoist house. A machine shop, also housed in a corrugated metal building, is equipped with a portable 400 amp. welding machine, 2 complete oxygen acetylene outfits, a 14-inch lathe, a power hacksaw, a drill press, and an electric grinding machine. Transportation equipment consists of 2 Ford dump trucks, a 2-ton Reo flatrack truck, a 3/4-ton Ford pickup, and a $\frac{1}{2}$-cu. yd. Hough Pay-Loader. All transportation equipment is of 1948 or newer construction except one of the dump trucks which is a 1936 model. Other equipment consists of a 2-sack concrete mixer, a 24-ton truck scale, a portable 160-c.f.m. compressor and a 25-h.p. Ingersoll-Rand Monoblock 2-stage centrifugal pump.

The general office consists of a 5-room frame building that also provides living quarters for the mine manager, mine and mill superintendents, a bookkeeper and a shift boss. Housing for workmen consists of 4 small shacks, without sanitary facilities, and a few trailers owned by the occupants. Other workmen commute to Yucca or Kingman because of inadequate housing facilities. A building of frame or metal-sheeted construction houses a 10-man change room, a mess hall with quarters for cook, and 2 warehouses.

Mill. Ore is transported by truck from a 100-ton bin at the shaft to a 50-ton bin at the primary crushing plant, a distance of several hundred feet. The feed to the mill, also a corrugated metal

building, is as shown in the flow sheet that lists equipment items (Fig. 4). The mill also includes a well-equipped laboratory for wet analytical and flotation test work.

Plant value. - An audited report of November 30, 1950 showed a replacement value of $135,875 for equipment, buildings, and unconsumed supplies. Since then the unconsumed supply item has been increased by about $11,000.

Transportation

The facilities for both loading and unloading of rail shipments at Yucca are adequate. The road to the mine is maintained by the county.

Manpower

At present the mine employs a total of 41 men, including supervisory personnel. Sufficient labor to meet anticipated requirements is reported to be available locally.

Power

The property is completely electrified and transformer capacity will meet future requirements. Power is furnished from Hoover dam by The Citizens Utility Co. of Kingman, Ariz.

Water

The mill was operated one shift daily from the date it was completed until May 1950, when operation was placed on a three-shift basis. During this period the water supply was adequate for the milling of 100 tons daily without re-using water. At the same time full time

MILL EQUIPMENT

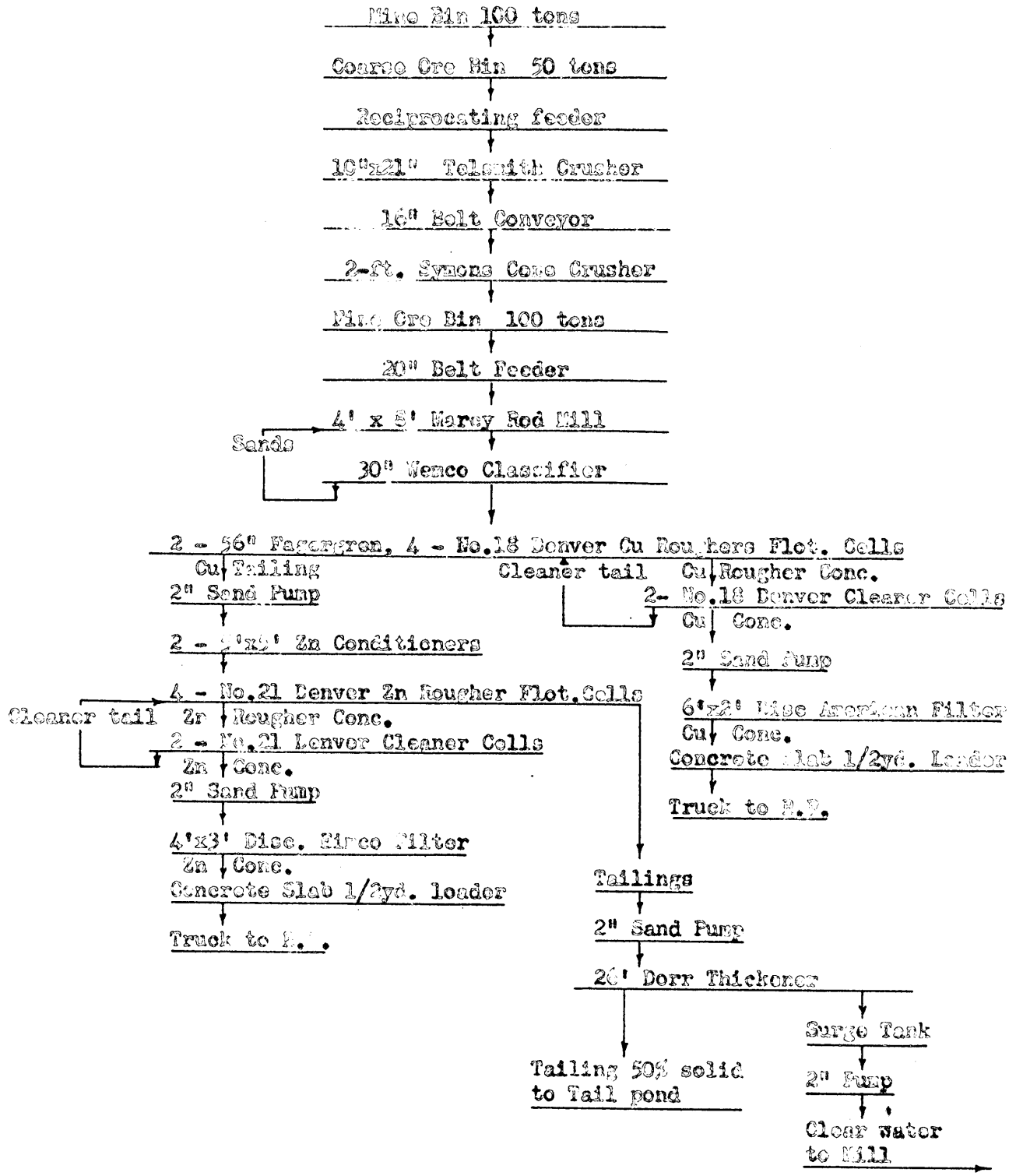


Fig. 4 - MILL FLOW SHEET, YUCCA MINING AND MILLING CO., YUCCA, ARIZONA.

operations were started the water supply began failing. This was due to a marked decline in local and regional precipitation, a condition that still exists. A well that supplied the nearby Boriana mill with 26 gallons of water per minute for $2\frac{1}{2}$ years was acquired and a water-recovery tailing-thickner was installed. By January 1951 the supply of water from the well had dropped to 5 gallons per minute and the mill was forced to operate mainly on re-used water.

A water development program, initiated in January 1950, succeeded in locating a nearby source of water within several hundred feet of the mine camp. After drilling a few "dry" holes in this area, water was encountered in one hole at a depth of less than 100 feet. This well is now producing sufficient water for present needs. Information acquired during the drilling program indicates additional water can be developed in the area of the producing well at slight expense.

Operating Data

Mine. - At present mining is confined to a shrinkage stope and a cut-and-fill stope, both on the fifth level. Until recently all mining was done by the shrinkage method. Due to scaling of hanging wall rock and horses of waste, this method of mining, in certain zones, resulted in the production of a highly diluted ore. In order to reduce dilution to a minimum it is probable that much of the future production will come from cut-and-fill stopes. These stopes will be floored and the broken ore will be moved by scraper to a chute located at one end of the workings. Until a waste-fill system is developed the stopes will be filled with waste derived from development headings and from wallrock.

The latest available data shows that 3,963 tons of ore were mined during January and February at a direct cost of $5.44 a ton. This includes development costs but does not include other costs normally attributed to mining. Much of the ore produced during this period came from drifts on the fifth level that were carried 6 feet wide on a vein of ore that averaged about 3½ feet wide. This resulted in the production of lower-than-average grade ore.

Mill. - The mill of 100-ton capacity is treating 60 to 70 tons of ore daily by selective flotation to produce two concentrates, copper and zinc. The concentrates are trucked to Yucca and shipped by railroad to Texas plants of the American Smelting & Refining Co., the zinc to Amarilla and the copper to El Paso. Direct milling costs average $3.33 a ton, of which $1.82 is for labor. Mill personnel is sufficient for the proposed 140-ton plant.

During January and February 1951 the mill treated 3,963 tons of ore averaging 2.69 percent copper and 5.45 percent zinc. Recoveries were about 90.2 percent of the copper and 81.6 percent of the zinc. Of the available metal, the copper concentrate contained 80.7 percent of the copper and 24.3 percent of the zinc, and the zinc concentrate contained 57.3 percent of the zinc and 9.5 percent of the copper. Rober J. Dalton of the corporation in a letter fo the writer stated the following data is for "current mill operation and does not reflect any

improvement we expect to make in mill recovery from the installation of the regrind equipment". The regrind equipment refers to mill improvements proposed in the development and exploitation project.

Other costs. - For the period under consideration, January and February 1951, all other operating costs averaged $2.22 a ton.

Economics of Operations

Operations to January 1951 were conducted at a loss. During January and February 1951 an average profit of 37 cents a ton was made on ore that yielded a smelter return of $11.36 a ton. The $10.99 operating cost was divided into mining - $5.44, milling - $3.33, and other expenses - $2.22. Production during part of March and May has been spasmodic. During this period a chute of the shrinkage stope was destroyed. Several days work was required to stop the flow of ore from the stope and to replace the chute. Mining was progressing when these investigations were made but the stope had not been refilled to the point where ore could be drawn off. The cut-and-fill stope also was being prepared during this period with the result that production was limited to a small amount of development ore. During the latter part of April the mine was on normal operations with ore being produced from both stopes.

The operating data for May 4 to 7, showed ore of average grade was being produced and that mill recoveries had been improved. These data show an average smelter return of $16.85 a ton , before royalty. There are no data available on mining costs since part of the ore has been mined by the cut-and-fill system, but it is reasonable to

TABLE I. - Mill operation, average mine production, May 4, 5, & 7, 1951, from North and South stopes, based upon 24.2-cent copper, 17.5-cent zinc, 17.0-cent lead.

	Mill heads			Copper Con.				Zinc Con.			Tails assay	
	Dry	Assay		Dry	Assay			Dry	Assay			
Date	tons	Cu	Zn	tons	Cu	Zn	Pb	tons	Zn	Cu	Cu	Zn
4	24.68	3.3	6.6	2.95	21.6	10.2	5.2	2.22	46.0	3.5	.5	1.55
5	12.88	3.35	7.05	2.00	17.8	11.4	6.1	1.17	47.0	3.1	.4	1.3
7	12.88	3.0	6.85	1.70	18.7	10.9	4.3	1.45	41.6	2.7	.3	.95
7	26.93	2.9	7.2	3.33	20.0	11.3	4.0	2.65	46.6	2.1	.28	1.55

Percent Recovery:

	Copper Recovery %		Zinc Recovery %		Tails Loss %	
	Cu. Con.	Zn Con.	Zn Con.	Cu Con.	Cu	Zn
4	74.85	9.57	62.92	18.52	11.96	18.54
5	82.53	8.46	60.98	25.11	8.99	13.88
7	82.29	10.15	68.51	21.00	7.55	10.47
7	85.34	7.14	63.83	19.42	7.50	16.74

Total recovery value at Yucca after freight and treatment:

	Copper Con.		Zinc Con.		Au & Ag	
	Cu	Pb	Cu	Zn	(Est)	Total
4	$214.87	14.57	18.22	152.80	12.34	412.80
5	113.68	11.59	8.50	83.91	6.44	224.12
7	103.07	6.94	9.17	81.30	6.44	206.92
7	220.11	12.65	13.03	187.01	13.46	446.26

Per ton recovery value at Yucca after freight and treatment:

	Copper Con.		Zinc Con.		Au & Ag	
	Cu	Pb*	Cu	Zn	(Est)	Total
4	$8.70	.59	.73	6.19	.50	16.71
5	8.82	.89	.65	6.51	.50	17.37
7	9.17	.53	.71	6.31	.50	17.22
7	8.17	.46	.48	6.94	.50	16.55

* No credit was received for lead prior to May 1, 1951. Smelter is now paying for 50 percent of lead in copper concentrate at New York quotation less 7.78 cents a pound.

expect that these costs have been increased by $1.50 a ton. On this basis, costs would be $12.50 and the indicated operating profit a ton would be about $3.50.

EXPLORATION PROJECT PROPOSAL WITH COSTS

The proposed project is confined to the fifth level and consists of drifts, crosscuts, and raises, totalling 1,800 lineal feet of advance (fig. 3). To the south of the shaft, it is proposed to explore the footwall vein by a 360-foot drift and to prospect the vein zone with 4 crosscuts, totalling an estimated 280 feet. Exploration above the level is provided for by an estimated 800 feet of raises that will be located to prospect favorable zones indicated by the lateral workings. To the north of the shaft the proposed work consists of a 225-foot drift and a 135-foot raise. The drift is designed to explore the footwall portion of the block between the Saguaro and Ocotillo faults, and the faulted block north of the Ocotillo fault. The raise provides for additional exploration of the latter block.

The proposed method of exploration is preferable to diamond drilling in a deposit of this type. The latter method could not be expected to yield data, at a reasonable cost, that would be adequate for designing a development program. In event the project is carried out and the findings are favorable the corporation will probably locate and sink a new vertical shaft on the basis of data developed by the exploratory work.

The applicant has estimated the work will progress at the rate of 12 feet daily and will be completed in 150 working days. On the basis of one shift daily and a 6-day week the elapsed time will be about 6 months. It is the applicant's intention to operate the mine, and carry out the proposed exploration program during the second shift.

The applicant has estimated the work can be completed at a cost of $87,346.09. These cost estimates are high and have been revised to an estimated total of$73,722.18 by the writer. The cost estimates are appended to this report.

DEVELOPMENT AND EXPLOITATION PROJECT WITH COSTS

General

This project involves a program designed to expand production to 140 tons daily and includes deepening of the shaft, development of an additional supply of water, improvement of housing conditions, and mill additions and revisions. The applicant's estimated cost of these work projects that follow are believed to be reasonably accurate. Operating capital also has been requested.

Mine

The proposed mine development work consists of sinking the Antler shaft an additional 200 feet, the excavation of a shaft station, and installation of an ore pocket (fig. 3). The applicant has estimated the shaft can be sunk for $175 a foot or a total of $35,000, and that the station and ore pocket can be completed at an estimated cost of $8,000.

Water

The applicant has estimated it will require the expenditure of $5,000 to develop an adequate and assured supply of water.

Housing

Present housing facilities are inadequate and the corporation proposes to construct 6 houses for supervisory personnel, a bunk house, and a change room for the accommodation of 30 workmen. Preliminary negotiations with a contractor indicate this portion of the project can be completed at a cost of $26,000.

Mill

The estimated cost of mill additions and revisions is as follows:

1	50,000-gallon water tank	$2,000.00
	Accessory piping	500.00
1	4-x 4-foot ball mill and drive	6,000.00
1	36-inch classifier, motor and drive	4,000.00
2	2-inch sand pumps, motor and drive	1,500.00
1	14-foot concentrate thickner, complete	3,000.00
	Electrical wiring, starters, etc.	1,500.00
1	Dump truck, 15-ton pay load	6,000.00
	Total	$24,500.00

Operating Capital

The total of $75,000 requested under this item is divided into $15,000 for an increase in inventory, $25,000 for concentrates in transit, and $35,000 for current payroll and supplies.

Summary of Project Costs

Mine development	$43,000
Water supply	5,000
Housing	26,000
Mill	24,500
Contingencies, 10 percent	9,850
Operating capital	75,000
Total	$183,350

New Equipment

The only equipment required for the project is that listed for mill additions.

PRODUCTION PLAN

Time Schedule

The development and exploitation project can be completed in 4 months and if this project is integrated with the exploratory work, the overall program can be completed in six months.

Rate of Production

Daily production at the rate of 140 tons of ore containing 3 percent copper and 7 percent zinc, will yield about 7,776 pounds of copper, and 12,014 pounds of zinc, as recoverable metal. This production is based on expected mill recoveries and present smelter deductions. No payment was received on lead contained in the copper concentrate until May 1951 when the smelter began to pay for one-half of the lead contained in the copper concentrate. Mill recoveries for a short period in May showed the copper concentrates contained 12.6 percent lead. On this basis daily production of recoverable lead should be about 880 pounds.

Justification for using ore of the indicated grade in the above production estimates is given in the following section of this report.

Mining Methods and Costs

The applicant has estimated that direct mining costs under the cut-and-fill method will be about $6.60 a ton, an increase of $1.20 over present costs. These costs include development work and are predicated on the basis of a 140-ton operation. In the writer's opinion the estimated increase in cost is too low and will probably be about $2.50 a ton. On this basis future mining costs are estimated at $7.90 a ton. In the zone south of the shaft, ore bodies probably will be confined to veins much narrower than those near the shaft. There, mining costs will probably be higher than the above estimate because of higher development and stoping costs.

The following quotation concerning the expected grade of ore was taken from a letter by the applicant to the writer:

"Dilution of the ore by scaling of walls and the practice of driving all drifts to allow use of a mucking machine has seriously reduced the grade of the ore and perhaps the quality of the ore delivered to the mill. Both by observation and calculation it was found that dilution reached as much as 50% in certain places. After careful study both by ourselves and retained consultants, we believe that by changing the method of extraction and development that dilution can be reduced to at least one-half of the current amount. The following table indicates what dilution has done to the ore produced.

	Copper	Zinc
"Average grade of ore between walls	4.5	10.5
"Average grade of ore from all sources	3.0	7.0
Difference	1.5	3.5
"Percentage dilution	33.4	33.3
"Grade when dilution is cut in half	3.75	8.75
"Past average	3.00	7.00
"Increased grade	0.75	1.75"

In the writer's opinion, future production of an ore averaging 3.75 percent copper and 8.75 percent zinc is an optimum grade. It is more reasonable to predicate future production on an ore containing a minimum of 3 percent copper and 7 percent zinc. By using this lower grade, allowance has been made for a possible error in the calculation of past dilution, and it also provides for production from deposits of lower grade ore that may be developed. With this grade as a factor in determining the economics of future operations, estimated profits should be conservative.

Milling Methods and Costs

Metallurgical test work by both the applicant and the American Smelting & Refining Co., have indicated that the proposed mill additions and revisions should result in increased recoveries and higher grade concentrates. These tests indicate that about 94 percent of the copper and zinc is recoverable. Of the available metal, the copper concentrate can be expected to contain 89 percent of the copper and about 33 percent of the zinc, and the zinc concentrate should contain 61.3 percent of the zinc and 5.5 percent of the copper. These findings were considered by Clemmer[2/] and found to be acceptable.

2/ Clemmer, J. Bruce, Chief, Metallurgical Division, Region IV Bureau of Mines, Tucson, Arizona

Changes in the present flow sheet will involve installation of the ball mill as a secondary grinding unit working in closed circuit with the additional classifier. The sand pumps will be installed to provide for the increased load and the thickner will provide for more efficient filtering and recovery of mill water. Adequate storage of mill water is provided by the proposed 50,000-gallon tank.

The purchase of a dump truck included in proposed mill additions is for haulage of concentrates.

At present the mill is treating about 70 tons of ore daily at a cost a ton of $3.33, of which $1.82 is for labor. No additional labor will be required for a 140-ton operation. On this basis labor costs for the larger plant would be decreased by 91 cents a ton, and with no change in the per ton cost of other items direct milling costs should be about $2.42 a ton of ore.

Other Costs

During the fiscal year other operating costs amounted to $3.39 a ton. These costs have been lowered until they averaged $2.22 a ton for the months of January and February 1951. On a 140-ton a day basis, operating costs other than direct mining and milling costs are expected to be about $2.00 a ton of ore.

Value of Ore

Ore containing 3 percent copper and 7 percent zinc will yield a smelter return of about $18.62 a ton after all deductions other than royalty. This includes an estimated 50 cents a ton for lead included in the copper concentrate.

Royalty

The corporation received a credit of $24,882.84 toward future royalty payments when the property was acquired. Royalty accrued from concentrate production has decreased this credit to a total of about $20,000. On the basis of 5 percent royalty and ore having a net smelter return value of $18.62, the credit of $20,000 would be depleted after the production of about 10,740 tons of ore. Thereafter, royalty payments would be at the rate of $0.93 a ton.

SUMMARY: COST OF PROJECTS

Exploratory Program

The exploration project can be completed at an estimated cost of $73,722.18.

Development and Exploitation Program

Capital requirements: Capital required for this program has been estimated at $183,350.

Operating costs: The estimated operating costs a ton of ore for the proposed 140-ton plant are as follows:

Mining	$7.90
Milling	2.42
Other	2.00
Total	$12.32

Estimated profit: The estimated profit for the proposed 140-ton operation would be $5.37 a ton on the basis of smelter returns of $18.62 a ton before a royalty payment of 93 cents.

PROPOSED FINANCING

Exploration Program

The applicant proposes that the exploration program be financed in accordance with regulations governing Governmental aid in defense exploration projects.

Development and Exploitation Program

The corporation made application to the Miners and Merchants Bank, Bisbee, Ariz. for a loan of $750,000 to carry out development and expansion of its production facilities. In rejecting the application the bank found the corporation's proposition was based upon potential possibilities of the property and as such was not acceptable as collateral for a banking institution. No effort has been made to obtain a loan from private sources for a sum sufficient to carry out the project, as revised, but it is reasonable to assume a smaller loan also would be denied for the same reason.

The applicant did not submit a written proposal covering payment of the loan. However, the president of the corporation told the writer that payments would be made by the smelter from the net return on concentrates and that a rate of payment up to $4.00 a ton of ore would be made, if necessary.

CONCLUSIONS

Exploratory Program

The proposed work is designed to explore two zones, one of which contains 94,000 tons of inferred reserves. The other zone is geologically favorable for ore mineralization but there is insufficient data for estimating its reserves of inferred ore.

The project can be completed at an estimated cost of $73,722.18.

The corporation can be expected to participate with the Government in the financing of the project, on a fifty-fifty basis.

The project is technically feasible and the corporation can be expected to carry out the work in a competent manner.

Development and Exploitation Program

The following can be expected upon completion of this program.

Mine production should be increased from 70 to 140 tons of ore daily.

Recoverable metal should amount to about 7,770 pounds of copper, 12,000 pounds of zinc and 900 pounds of lead daily. This is more than double present production.

Operating costs should be about $12.32 a ton, and concentrates should yield a return of $18.62 a ton of ore before royalty payment of 93 cents. This indicates a net operating profit of $5.37 a ton of ore.

On the basis of estimated profit and indicated ore reserves of 100,000 tons the corporation can be expected to operate at a reasonable profit after providing for repayment of the requested loan.

RECOMMENDATIONS

Exploratory Program

It is recommended that the project be approved and that the Government grant a loan to carry out the proposed work in accordance with regulations set forth in directive MO-5 of the Defense Minerals Administration.

Development and Exploitation Program

It is recommended the project be approved and that the corporation be granted a loan of $183,350 for the purpose of completing the proposed expansion program.

APPENDIX

YUCCA MINING & MILLING CO.

ANTLER MINE

MOHAVE COUNTY, ARIZ.

DMA DOCKET 527

The following cost estimates and statements on the proposed exploratory program were submitted in a letter, by the president of the corporation:

"Supervision:	1 superintendent @ $500	$3,000.00	
	OAB, Comp., Unemp. Ins.	429.60	$3,429.60
Eng. and assaying;	1 engineer @ $400	2,400.00	
	1 assayer @ 375	2,250.00	
	OAB, Comp., Unemp. Ins.	665.88	5,315.88

Labor	Average Daily Wage Inc O T for 6th Day
1 shift boss	$14.083
1 hoistman	13,39
1 toplander	13.39
1 skiptender	12.09
1 truckdriver	12,09
4 miners	53.56
4 helpers	48.36
2 trammers	22.707
1 mechanic	13,39
Total	203.06

Total for 150 days	30,459.00	
OAB	456.89	
Comp. Ins.	3,082.45	
Unemp. Ins.	822.39	
Total	34,820.73	
Contingencies 10%	3,482.07	
Total Labor		$38,302.80

Raises: 935 feet x 4 x 8:
Materials:

Pipe - 935 ft. 2" @ 35.5¢	331.93	
935 ft. 1" @ 15.84¢	148.10	
Valves and fittings 30% of cost of pipe	~~14.40~~	144.00*

*Corrected amount, by writer.

Timber:		
30 Bd. Ft. per ft. of raise @ 115.00M	3,398.25	
Powder: 12 lbs. per ft. @ 20¢	2,244.00	
Fuse: 30 ft. per ft. : .65@	182.33	
Caps: 3 per ft. : 2.175¢	64.27	61.00*
Drill steel: 1.00 per ft. of advance	985.00	935.00*
Bits: 15 ft. of hole per ft. of advance @ 2' per bit @.22¢	1,625.14	
	8,943.42	
Materials 5%- sales tax plus freight	449.67	
	9,443.09	
10% excess over exact estimate	944.30	
	10,387.39	
Less timber	3,907.98	
TOTAL	6,479.41	6,555.74*

Drifts and crosscuts: 865 feet 5 x 7 in clear:

Materials:

Rail: 1730 ft/16# rail 9200# @ 11.91 cwt	1,095.72	
5 switches @ 35.00	175.00	
Splice bars and bolts: 150 prs @ .60	90.00	
Ties: 750 4"x6"x3' @ 115.00M	86.25	
Track spikes: 500# @ 11.91 cwt	59.55	
Pipe:		
585 ft. 2" (air) @ 35.5¢	207.67	
585 ft. 1" (water) @ 15.84¢	92.66	
Valves & fittings 30% pipe cost	90.00	
Powder @ 15# per ft. drift @ 20¢	2,595.00	
Fuse @ 30 ft. per ft. drift @ .65¢	168.68	
Caps @ 5 per ft. drift @ 2.175¢	94.06	
Timber: @ 150 Bd.ft. per drift set estimated sets 30 @ 115.00M	517.50	
Bits: @ 20 ft. drilled hole per ft. advance @ 2' per bit @ 22¢ ea.	1,903.00	
Drill steel @ 1.00 per ft. advance	865.00	
	8,040.39	
Materials 5% sales tax plus freight	402.02	
	8,442.41	
10% excess over exact estimate	844.24	
	9,286.65	
Less Timber	595.13	
	8,691.52	8,691.52

*Corrected amount , by writer.

Equipment:

We have on hand as listed in our original application adequate hoists, compressed air, drifters, stopers, jackhammers, mucking machines, ore cars, hoses, lubricators, slushers, cable, and an inventory of spare parts for the above as well as necessary vehicles for the surface operation.

We believe a fair rental value for this equipment, maintained, to be $100. per day.

150 days @ $100	15,000.00	$15,000.00
Power:		
Mine power consumption per month		
41,126 kwh @ 16 mills	658.02	
Less quantity discount	10.28	
Net bill for month	647.74	
Transformer rental	35.00	
Total	682.74	
6 months @ 682.74		4,096.44
Oil and grease		450.00
Hand tools, shovels, picks, gads, wrenches, saws, hammers etc.		1,000.00
Total		$87,267.76

We also have the track and accessories, pipe, fittings, drill steel, bits, and tie timber on hand and it is our thought that in order to integrate the exploration with an operating program, that the work be carried on on a contract basis, based upon the foregoing estimates, on a per foot basis. The division of costs is roughly Supervision, Engineering, and Assaying, Labor and Timber for the Government account and all other for our account, any adjustment necessary being made on a pro-rata basis of the various items."

The applicant's estimated costs have been revised by the writer as follows:

Supervision: The superintendent will supervise both the exploratory work and operations on the second shift. Fifty percent of his salary of $500 monthly, or a total of $1,714.80, is allowed as a project cost.

Engineering: A junior engineer at $325 monthly should be capable of handling the project work. If the development program is integrated with this project it would be necessary to employ a more experienced engineer at a higher salary and to pro-rate his salary to the two jobs. In either event engineering salary, chargeable to the project would not exceed $325 monthly or a total of $2,400.72.

Assaying: The applicant has allowed for full time employment of an assayer. Probably not over 100 samples will be taken and these could be assayed either by the present mine assayer or by a private company. At prevailing rates assay charges would be 100 samples @ $5.00 or $500.

Labor: The applicant's estimated cost of labor is revised to provide for an additional trammer and by the elimination of the contingency item. As revised the estimated cost of labor would be $36,766.17.

Materials: All items except drill steel, pipe, valves and fittings, rails, splice bars and switches, with an estimated cost of $4,812.64, are considered as expendable. The non-expendable items should have a salvage value of 50 percent or $2,406.32. Thus the allowable cost for materials would be $15,247.26 less $2,406.32 or $12,840.94.

Timber: The applicant's estimated cost is acceptable.

Rental of equipment: Following is a list of necessary equipment with their values as estimated by the writer:

	Hoist, skip, cable, etc.	$7,500
	Compressors	7,500
2	mucking machines @ $3,750	7,500
6	pneumatic drills with accessories @ $1,000	6,000
12	ore cars @ $250	3,000
	Total	$31,500

The rental value of this equipment, estimated at 5 percent per month, amounts to $9,450.

Power, oil and grease, hand tools: The estimated costs for these items are acceptable.

Summary of Estimated Costs

		Applicant	Writer	
Supervision		$3,429.60	$1,714.80	
Engineering and assaying		5,315,88	2,900.72	
Labor		38,302.80	36,766.17	
Materials	15,162.95	~~15,247~~.26	~~12,840.94~~	12,762.34
Timber	4,304.74	~~4,503.11~~	~~4,503.11~~	4,304.74
Rental of equipment		15,000.00	9,450.00	
Power		4,096.44	4,096.44	
Hand tools		1,000.00	1,000.00	
Oils and grease		450.00	450,00	
Totals:		$87,346.09	$73,722.18	
		87,062.41	73,345.21	

Mr. Herres 8

DMA 527

Arizona-New Mexico Branch
Box 4097
University Station

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
MINING DIVISION
REGION IV

Tucson, Arizona

June 7, 1951

CONFIDENTIAL LETTER: Supervision of operations of the Yucca Mining & Milling Co., Inc. (Antler Mine) DMA-527

Robert J. Dalton, president and treasurer of the corporation, is a graduate mining engineer of the Colorado School of Mines. According to his statements, he has been actively engaged in the mining industry for 20 years. The Antler mine has been under his continuous management since October 1947, and he has peraonally directed the development work, design, construction and operation of the property.

My association with Dalton, other than during these investigations, has been limited to a few days during the early part of 1947. At that time I was in charge of the Bureau's diamond drilling project at the Antler mine and Dalton was consulting engineer for the Arizona Antlers Mining Co. In these contacts I have been favorably impressed by his character and ability. I believe he has done a creditable job, under adverse circumstances, of developing the Antler property and can be expected to supervise future operations in a competent manner.

T. M. Romslo

T. M. ROMSLO, Mining Engineer
U. S. Bureau of Mines.

6/5/51

Defense Minerals Administration

Review of Application for Exploration Assistance

Docket No. 527

Commodity Copper

Total Amount $73,445.21

Govt. Participation 50%

1. Name and Address of Applicant Robert J. Dalton, President, Yucca Mining and Milling Company, Antler Mine, Yucca, Arizona

2. Location of Property Cedar Valley Mining District, sections 3, 4, and 9 T 17 N, R 16 W (Antler Mine) Mojave County Arizona

3. Mineral or metal Copper Is it listed in Section 9 of MO-5?

If not, application will be rejected.

4. Geologic probability of discovery—based on data in application (question #16, 17, 18, 20 and 22)*

Mines or Survey reports, etc., do you rate chances:

a) Good ✓

b) Poor

c) None

d) Don't know—needs field examination

e) Is there an alternative and favorable project? No
(If so, attach an explanation)

5. Is the applicant's right to the property clearly stated? Yes
(question 5, 6, 7)*

6. If applicant is a lessee, is a copy of the lease attached?

Does the lease have sufficient time to run to cover a future

productive period?

*question numbers are those of MF-103

7. Are subordination agreements necessary? yes

a) MF-201? _____

b) MF-202 _____

8. From the data presented, does the proposed project appear feasible from the point of view of:

a) Available manpower yes

b) Equipment and supplies yes
(Question 14 plus general knowledge of availability)*

c) Accessibility (question 12)* yes

d) Water (question 13)* yes

e) Power (question 13)* yes

Is a field check needed on any of these points? no

9. Does the experience of the applicant appear to be adequate to assure that he can properly conduct the proposed project? (question 4)* yes

_____

Is a field check needed on this point? no

10. Exhibit A. (questions 21 and 22)*

a) Is the project adequately described? yes

If not, are there sufficient data given so that you can describe the project? — If so, attach a draft.

b) Is there an adequate map or sketch of the proposed work? yes

_____

c) Is the proposed work "exploration" under the definition of Section 8, MO-5? yes

If not, what part of it is? _____

_____

_____

_____

Is this part a worthwhile exploration project?_____

d) Are the cost estimates detailed? yes

Can they be summarized, as on page 2 of Procedural Instruction 5-A, from the available data? yes If so, attach a draft.

e) Are the cost estimates reasonable? yes

f) Should more information be requested from applicant? no

g) Is a field examination necessary to complete Exhibit A? no

11. Exhibit B (question 23-d)*

a) Is it applicable? no

b) If so, are sufficient data furnished? — If so, attach a draft.

c) Is a field check needed? no

12. Exhibit C (question 23-e, f and g)*

a) Is it applicable? yes

b) Sufficient data? yes If so, attach a draft.

c) Are rents and charges reasonable? yes

d) Is a field check needed? no

13. Exhibit D (question 23-a, b)*

a) Are there sufficient data? yes

b) Is the schedule adequate for the work proposed? yes

c) Is the schedule excessive for the work proposed? no

d) Are the proposed wages and salaries reasonable? yes

e) Is a field check needed? no

YUCCA MINING AND MILLING CO., INC.

Antler Mine

YUCCA, ARIZONA

May 19, 1951

ROBERT J. DALTON, PRES-TREAS.
FERD WOLF, V-PRES.
BEN F. WILLIAMS, SECY.

Mr. Tom Lyons, Director
Supply Division
Defense Minerals Administration
Washington 25, D. C.

Dear Mr. Lyon:

In accordance with your wishes as expressed to Mr. Ben F. Williams while he was in Washington, I wish to advise you that with Mr. T. M. Romslo of the U. S. B. M. in Tucson we have worked out a program that is being submitted and to the best of our knowledge will conform to the policies and directives of the Defense Minerals Administration.

Very truly yours,

Robert J. Dalton

ROBERT J. DALTON

cc: W. H. Storms
Ben F. Williams

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 28 1951
LARSON F. STROBEL
Executive Secretary

YUCCA MINING AND MILLING CO., INC.

DMA-527

Antler Mine

YUCCA, ARIZONA

ROBERT J. DALTON, PRES-TREAS.
FERD WOLF, V-PRES.
BEN F. WILLIAMS, SECY.

May 19, 1951

Mr. W. H. Storms, Director
Arizona, New Mexico Branch
Defense Minerals Administration
Box 4097 University Station
Tucson, Arizona

Dear Mr. Storms:

Attention: Mr. T. M. Romslo

In accordance with our conversation of May 11, 1951, attached hereto are current mill operation data and net returns based upon our current smelter agreements. You will note that the lead is now being paid for in the copper concentrate and we do not plan on a separation of the copper and the lead. The basis for pay by the smelter is 50% of the lead contained in the copper concentrate at the N. Y. quotation less 7.78¢ per pound.

The data attached is current mill operation and does not reflect any improvements we expect to make in mill recovery from the installation of the regrind equipment.

Sincerely yours,

ROBERT J. DALTON

YUMA MINING & MILLING CO.
P O BOX 67
YUMA, ARIZONA

Mill Operation Average Mine Production May 4, 5, 6 & 7, 1951, from North and South Stopes, based upon ~~21.2%~~ 24% Copper, 17.5% Zinc, 17.0% Lead.

Date May	Mill Ratio Dry Tons	Copper Con Assay Cu	Zn	Zinc Con Dry Tons	Assay Cu	Zn	Pb	Mine Con Dry Tons	Assay Zn	Cu	Pb Assay Cu	Pb
4	20.03	3.3	6.0	2.03	21.0	10.3	5.2	2.22	66.0	3.3	.5	1.55
5	12.33	2.33	7.03	2.09	17.0	11.6	0.1	1.17	67.0	3.1	.4	1.3
6	12.03	3.0	6.23	1.70	19.7	10.9	0.3	1.40	63.0	2.7	.3	.03
7	20.05	2.0	7.2	3.30	20.0	11.3	6.0	2.03	65.0	2.1	.20	1.53

Per Cent Recovery

Date	Copper Recovery % Cu Con	Zn Con	Zinc Recovery % Zn Con	Cu Con	Pb Recov % Pb	Zn
4	74.03	0.57	83.91	10.12	12.00	18.50
5	81.33	0.43	80.00	23.11	6.99	15.53
6	82.59	10.15	83.51	12.40	7.53	10.07
7	83.50	7.10	83.03	19.02	7.50	10.76

Total Recover Value of Ruca after Freight and Treatment

Date	Copper Con Cu	Pb	Zinc Con Cu	Zn	Au & Ag (Ind)	Total
4	$214.57	14.57	13.22	152.00	12.30	410.00
5	119.63	11.50	0.05	83.91	6.44	220.12
6	105.67	6.20	0.17	81.50	6.06	203.02
7	220.11	13.03	13.03	157.91	13.06	419.25

Per Ton Recovery Value of Ruca after Freight and Treatment

Date	Copper Con Cu	Pb	Zinc Con Cu	Zn	Au & Ag (Ind)	Total
4	$8.70	.59	.73	6.19	.53	16.71
5	9.33	.36	.05	6.81	.50	17.57
6	8.17	.53	.71	6.31	.50	17.22
7	6.17	.66	.69	6.24	.57	16.53

21

FILE COPY
SURNAME:

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

Johnson

March 12, 1951

Re: Docket No. DMA-527

Mr. Robert V. Dalton
President, Yucca Mining
and Milling Co., Inc.
Yucca, Arizona

Dear Mr. Dalton:

This is in reply to your letter of February 21, 1951 a copy of which also has been forwarded to Mr. J. H. East, Jr., Executive Officer of the Defense Minerals Administration Field Team of Region IV.

On February 20, 1951 we had written to you regarding the investigation that the Field Team would make of your property. When we have the report of the Field Team we will have the desired information and be able to proceed with your application for a loan.

It is noted in your letter that with an additional five cents per pound of metal produced you could and would provide the capital necessary for any logical expansion program. At the present time and in accordance with the directions of the Defense Production Act, principal attention is being given to expanding copper production at mines where production is economical under existing conditions. We hope that in talking with our field men you may see your way to continuing and perhaps increasing production without the necessity of a premium price.

Very truly yours,

Tom Lyon

Tom Lyon, Chief
Copper Branch

CHJohnson:bal

Copy to: Executive Officer, DMAFT, Region IV - WCI
Executive Secretary - WCI
Copper Commodity Committee - WCI
Files

DMA 527

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

March 9, 1951

Memorandum

To: W. R. Storms, Tucson

From: Chief, Mining Division, Region IV

Subject: DMA Docket 527, Antler Mine, Yucca Mining and Milling Company, Mohave County, Arizona

Attached is the brochure referred to in a memorandum from the DMA Field Team on the above property, dated March 5, 1951.

Please cooperate with the Geological Survey and Metallurgical Division in making the appraisal required.

P. T. Allsman

Attachments
Field Team memo, 3/5/51
Copper Commodity Committee memo, 2/20/51
Yucca Mining and Milling letter to Dr. Boyd, 2/21/51
Yucca Mining brochure

U. S. BUREAU OF MINES
MAR 15 1951
TUCSON ENG. STATION

March 5, 1951

Memorandum

To: P. T. Allsman
Charles Anderson, USGS — copy of brochure sent, with USGS report
J. Bruce Clemmer

From: Field Team, DMA, Region IV

Subject: DMA Docket 527, Antler Mine, Yucca Mining and Milling Company, Mohave, County, Arizona

We are attaching a brochure for the Antler Mine, DMA 527, and a copy of a letter from the Copper Commodity Committee, which has been approved by the Operating Committee. You will note that the Operating Committee suggests that the present investigation be limited to the five items shown in the attached letter.

You will note also that this application requires a geological, engineering, and metallurgical report. Please make the necessary investigation and formal report as soon as possible.

The brochure is being sent to Mr. Storms, through Mr. Allsman.

J. H. East, Jr.

J. H. East, Jr.

Copy to:
Allsman (Orig & 1)
Koschmann
DMA files
Storms
Zimmerley

A. H. Koschmann

A. H. Koschmann

Attachment
Report application from Yucca
Copy of USGS report on The Antler Mine, June 1945
Yucca letter, February 21, 1951 to Dr. Boyd

~~LANDON F. STRONG~~

Mr. Hayes dma 527 + Copper

answered 3/12/61 CWJ: bal

YUCCA MINING AND MILLING CO., INC.

Antler Mine

ROBERT J. DALTON, PRES-TREAS.
FERD WOLF, V-PRES.
BEN F. WILLIAMS, SECY.

YUCCA, ARIZONA
February 21, 1951

Dr. James H. Boyd
Director Defense Minerals Administration
Washington 25, D. C.

Dear Jim:

Since presenting our application for a loan through the Denver Regional Office on January 20, 1951, a number of events have transpired that indicate a new estimate of the situation is in order.

I. In the application we indicated a need of $70,000.00 to insure an adequate water supply for expansion to 300 tons of ore per day operation. At the time of the application we had initiated a water exploration program which has just borne fruit. As of now we have developed additional water sufficient for our present needs and have acquired information that indicates additional water available at slight expense in the event we enlarge our present facilities.

II. When we filed our application we intentionally deleted any estimate of the price of metals required to make the program possible from a financial standpoint, principally, because the metal price necessary, is dependent upon taxes, labor and cost of material, all of which have been increasing at a phenominal rate since the middle of 1950, in the face of a more or less static metal market. We do not have the kind of crystal ball that will tell us what relations metal prices are going to be to the three above items in the future, especially when voluntary metal price control (now legal) is being administered jointly by the nation's low cost producers and the government.

In view of these conditions we are in a quandry as to what kind of help we should request or what category a property such as ours has been put in. If economic conditions are to reamin static as of the date of this letter, it is our intention to shut the property down as soon as we can ascertain such is the case, because, while we are not losing any money, neither are we making any; <u>but we are depleting our resources</u>. We have weathered the 1949-1950 metal depression principally by tight management and the use of additional capital which was spent primarily on development work which we considered necessary at the time. Now we do not consider further development essential in establishing the ore reserves in the mine and unless a profit can be made there is no justifiable reason for continued operation.

If we are to continue, we are in need of an over-the-market contract for a term, long enough, to amortize our investment and to make a reasonable profit.

I have been assured that there is already enough data on record in the Bureau of Mines file about the Antler Mine with respect

YUCCA MINING AND MILLING CO., INC.

Antler Mine

YUCCA, ARIZONA

ROBERT J. DALTON, PRES-TREAS.
FERD WOLF, V-PRES.
BEN F. WILLIAMS, SECY.

to both ore reserves and management to assure delivery of concentrates under a firm contract to warrant immediate action on our case.

Our financial condition is such that with an additional five cents per pound of metal produced we could and would provide the capital necessary for any logical expansion program.

In our particular case, time is of the essence. At the present time we are the only producing operation in Mohave County and to me it seems rediculous that the government would allow a property such as ours to shut down in the face of the explicit intention of Congress to keep it going. It would work a distinct hardship on the locality and ourselves. If there is any hope for the immediate future, we would welcome the opportunity to come to Washington to discuss our condition before making any drastic move without all the facts obtainable.

Sincerely yours,

Robert J. Dalton

ROBERT J. DALTON

cc: John East, Jr.

FILE COPY
SURNAME:

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

Johnson
Williams
Ron

February 20, 1951

Air Mail

Re: Docket Number DMA-527

Mr. Robert J. Dalton
President, Yucca Mining
and Milling Company, Inc.
Yucca, Arizona

Dear Mr. Dalton:

Your application for a loan of $833,250 for expansion of operations at the Antler mine near Yucca, Arizona, has been received and assigned the above docket number (DMA-527). All future correspondence should bear this number.

This application has been studied in the Copper Branch and request has been made for a field investigation. You may expect to hear shortly from Mr. J. H. East, Jr., Executive Officer of the Defense Minerals Administration Field Team of Region IV.

Very truly yours,

Tom Lyon

Tom Lyon, Director
Supply Division

WSBurlank:ba

Copy to J. H. East, 224 New Customhouse, Denver 2, Colorado
Executive Secretary
Copper Commodity Committee
Files

Docket to field team

Docket 527

FILE COPY
SURNAME:

Johnson
Blackmarr

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

February 20, 1951

J. H. East

Air Mail

Memorandum

To: Executive Officer, DMA Field Team, Region IV

Through: Operating Committee

From: Chairman, Copper Commodity Committee

Subject: DMA-527, Antler Mine, Mohave County, Arizona.

We are transmitting herewith the file on the Antler Mine, 11 miles east of Tusca, Arizona. The operators are the Tusca Mining and Milling Company, Inc., which acquired the property in March, 1949, and have paid off all major outstanding obligations. Mr. Robert J. Dalton, President of the company has requested a loan of $833,250,000 in two phases to increase the production of copper, lead, and zinc from 3 to 5 times the 1950 output of about 260 tons copper and 470 tons of zinc.

In our opinion the application should be narrowed down to certain parts of the first phase, of which the development of an adequate source of water is paramount.

The proposed program deserves investigation by the field team of Region IV to determine:

(1). The adequacy of ore reserves and their position.

(2). The possibility and cost of obtaining a water supply adequate for at least a daily mill capacity of 140 tons (1st phase).

(3). Cost data on mining, milling, and transportation, and recovery data and classes of concentrates on Mill improvements proposed (1st phase).

(4). Desirability of including the sinking of present shaft an additional 250 feet as part of phase 1.

(5). The desirability of excluding from phase 1, all lateral and vertical development work south of the present proven limits of the vein zone, and the possibility of including this proposed work under a separate exploration proposal as soon as details of these are announced.

The only copy of the original proposal, and a Geological Survey memorandum report are attached herewith for use of the field team. Copies of the illustrations accompanying this report can be supplied if needed for field use. Kindly return the enclosed file with your report.

/s Tom Lyon

Tom Lyon, Chairman
Copper Commodity Committee

Enclosures 2

Approved:

/s G. O. Mitendorf
Chairman, Operating Committee

/s Lowell B. Mann
Member, Bureau of Mines

/s Olaf N. Rove
Member, Geological Survey

WSBurbank

Copy to: Executive Secretary
Copper Commodity Committee
Files

DEFENSE MINERALS ADMINISTRATION

Mr. Herres

Referral of Applications for Government Aid

Docket No. DMA-527

Commodity: zinc lead and copper

Name of Applicant: Yucca Mining & Milling Company (Robert J. Dalton, president)

Address of Applicant: Yucca, Arizona

Name of Property: Antler Mine

Location of Property: Eleven miles east of Yucca, Arizona

Nature of Application: Loan of $833,250

Action Dates

Application: 1/20/51

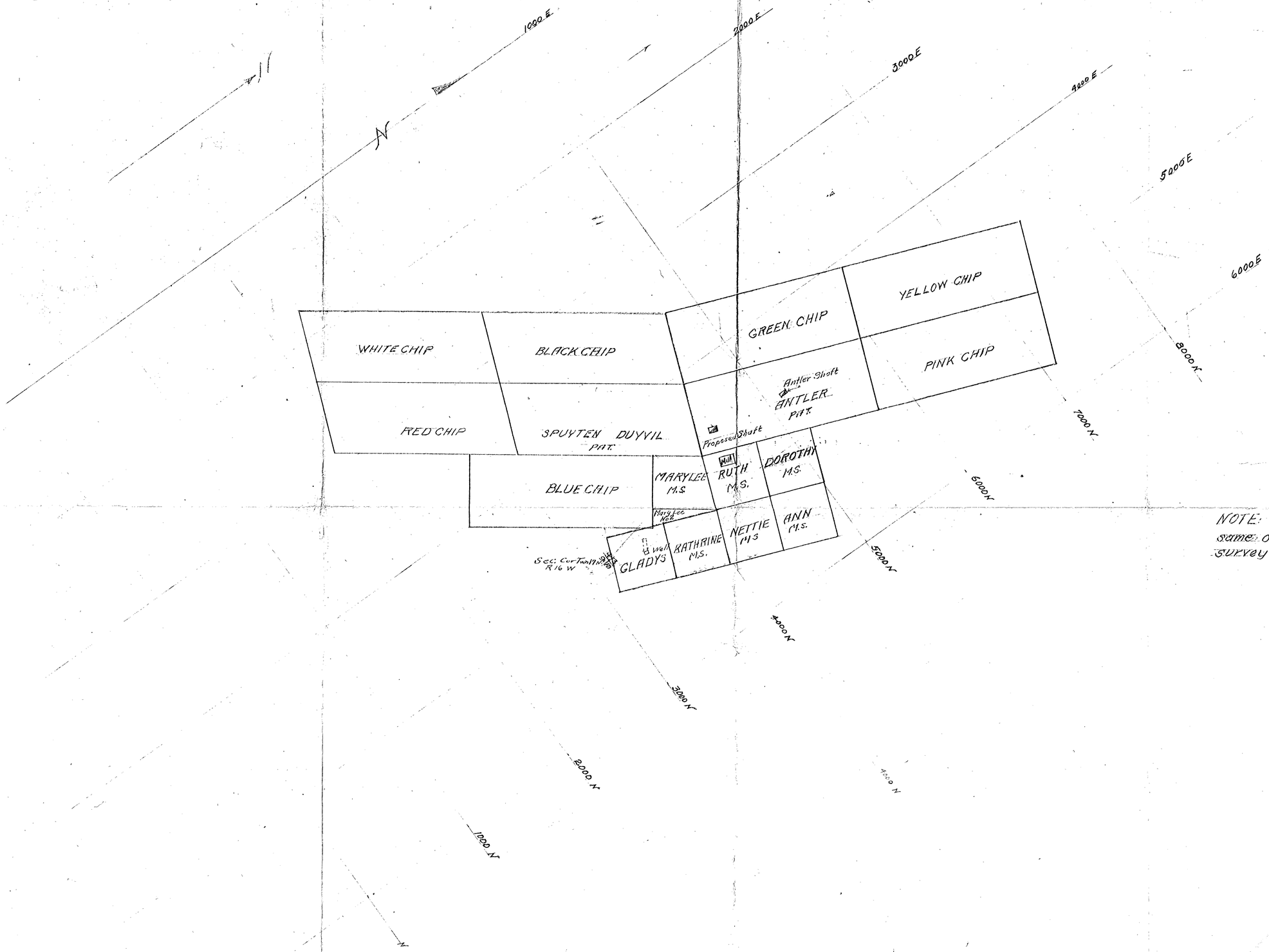
Received: 1/31/51

Acknowledged:

Referred to NONFERROUS METALS Committee: 2/1/51

Phone Mr W for copy of rept on ore reserves

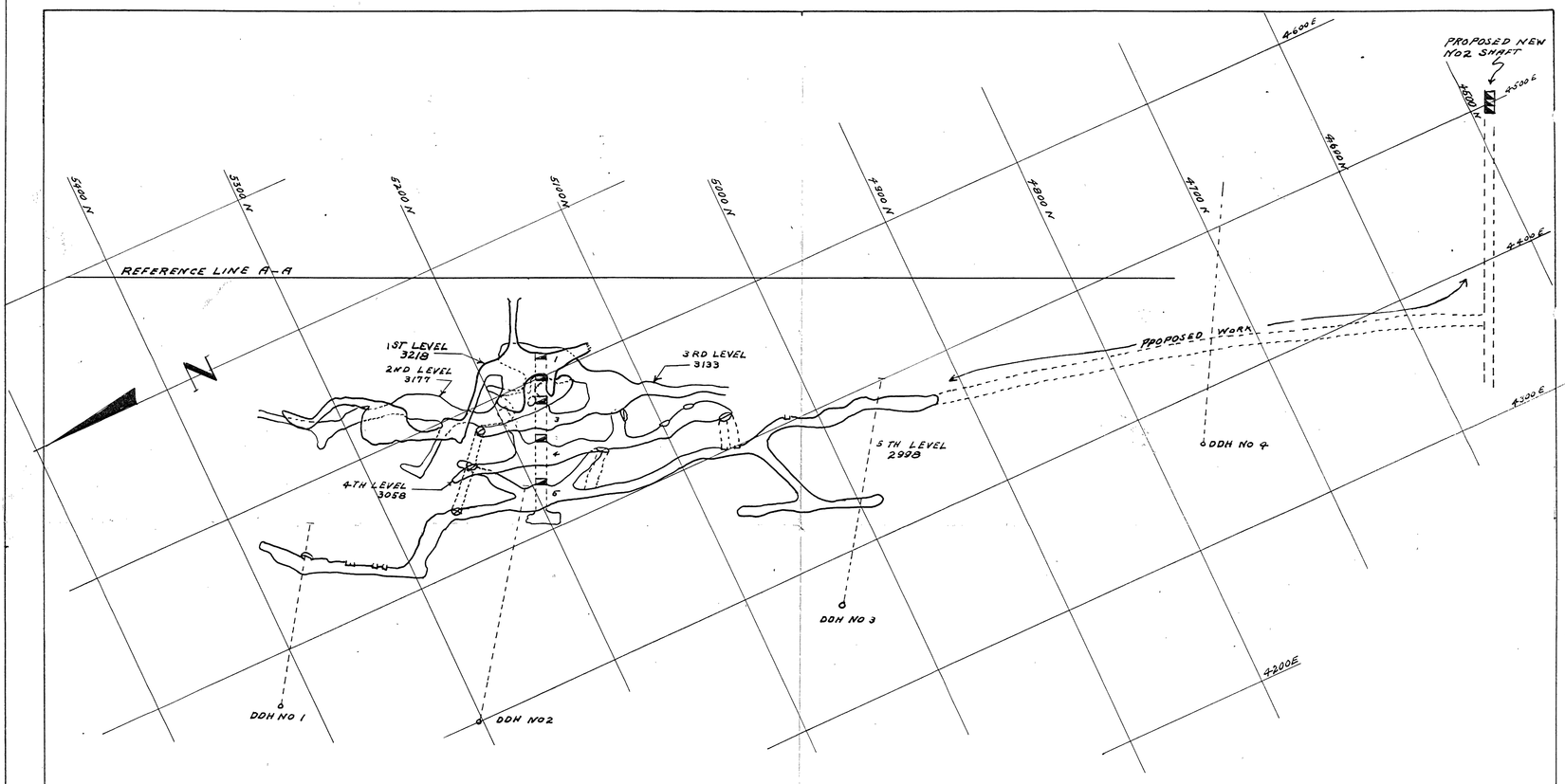
Ltr + memo to FT drafted 2/19

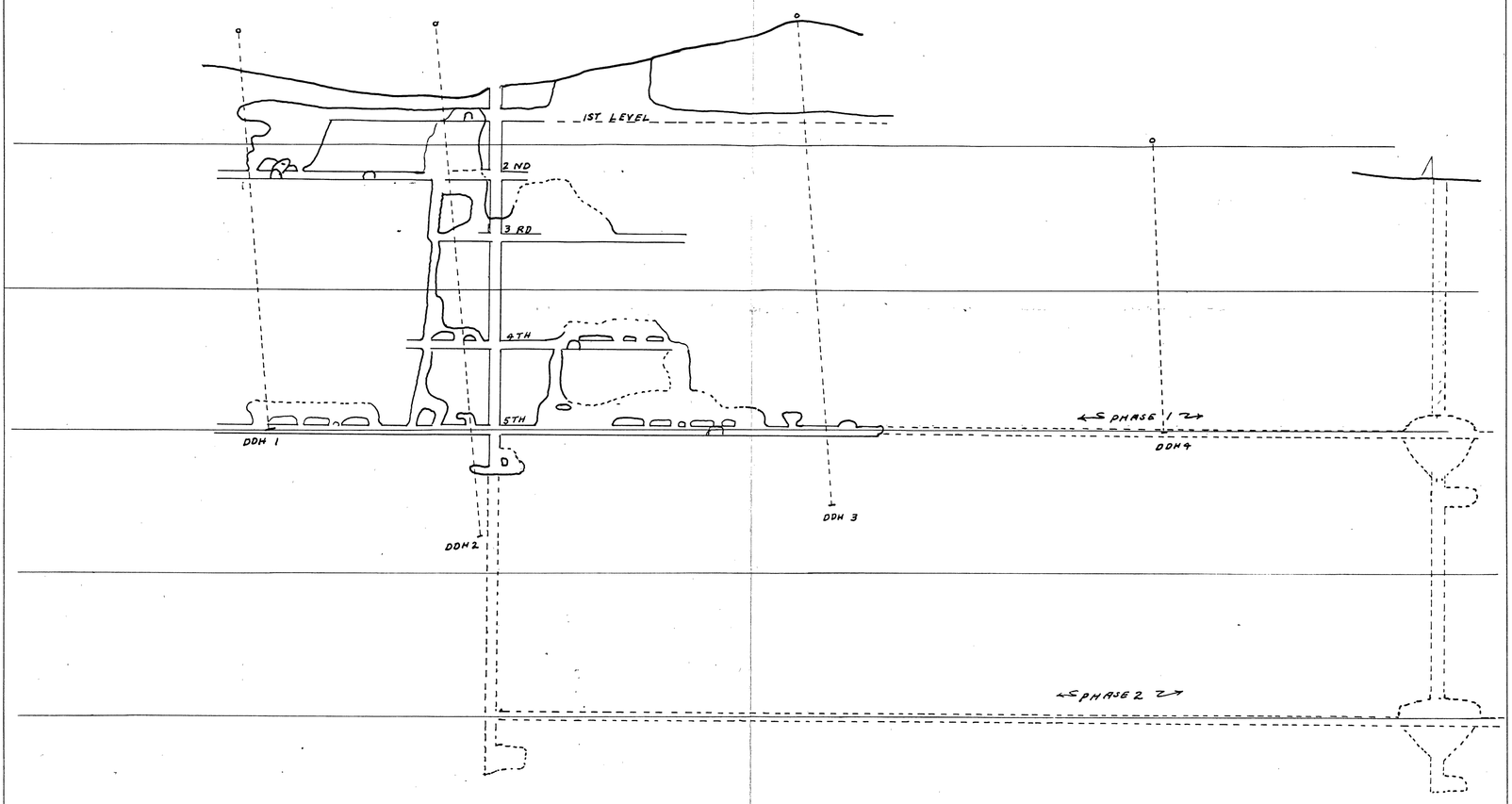


NOTE: Coordinates system has same 0-0 as Bureau Of Mines survey

Exhibit A.

YUCCA MINING AND MILLING Co.				
CLAIMS AND MILLSITES				
Scale 1" = 200	Date 1-2-51			RED





YUCCA MINING AND MILLING CO.	
ANTLER MINE	
Scale 1"=50'	Date 1-1-51
	RED

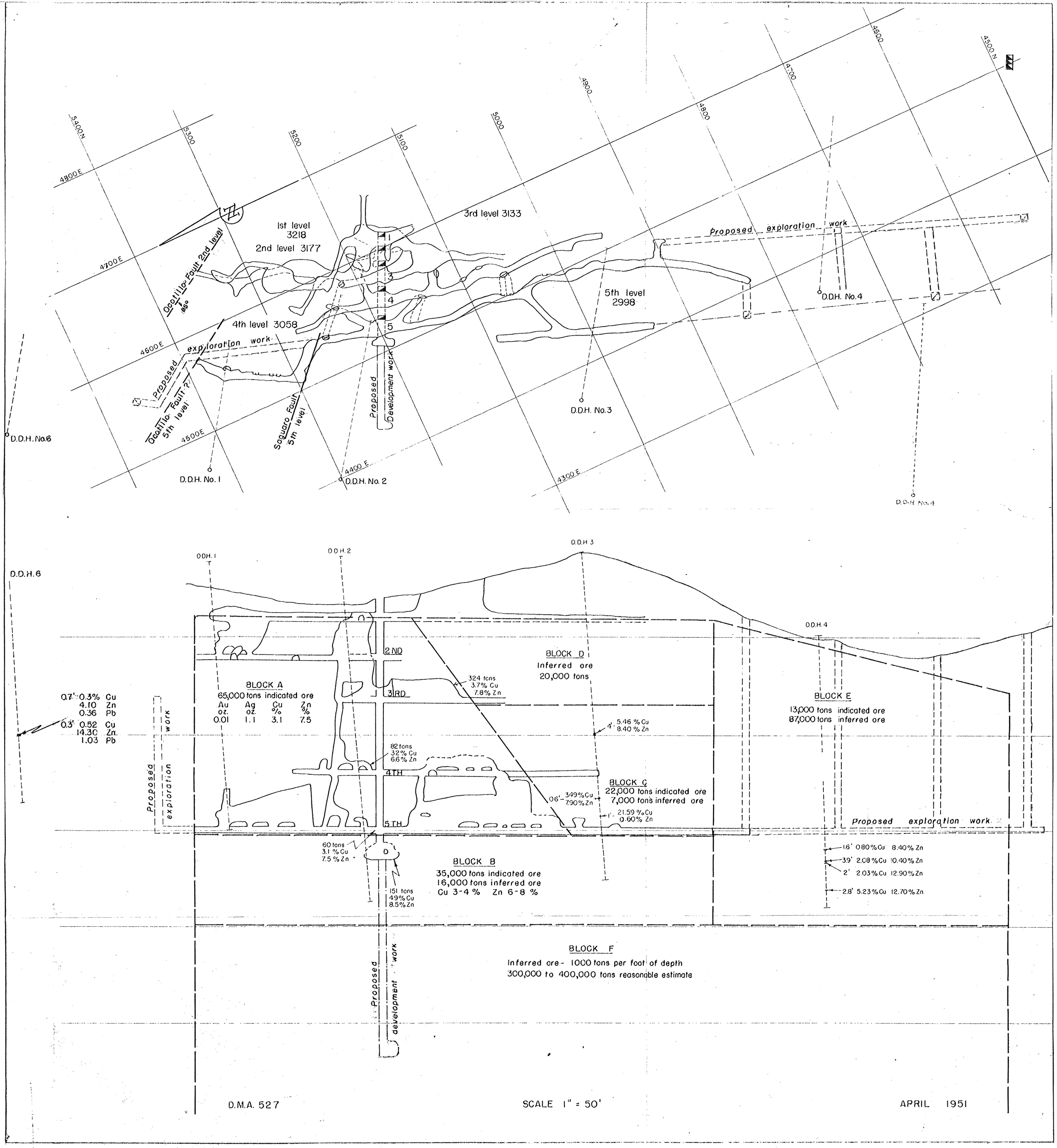


Figure 2. - Composite level map and longitudinal projection, Antler Mine, Mohave County, Arizona.

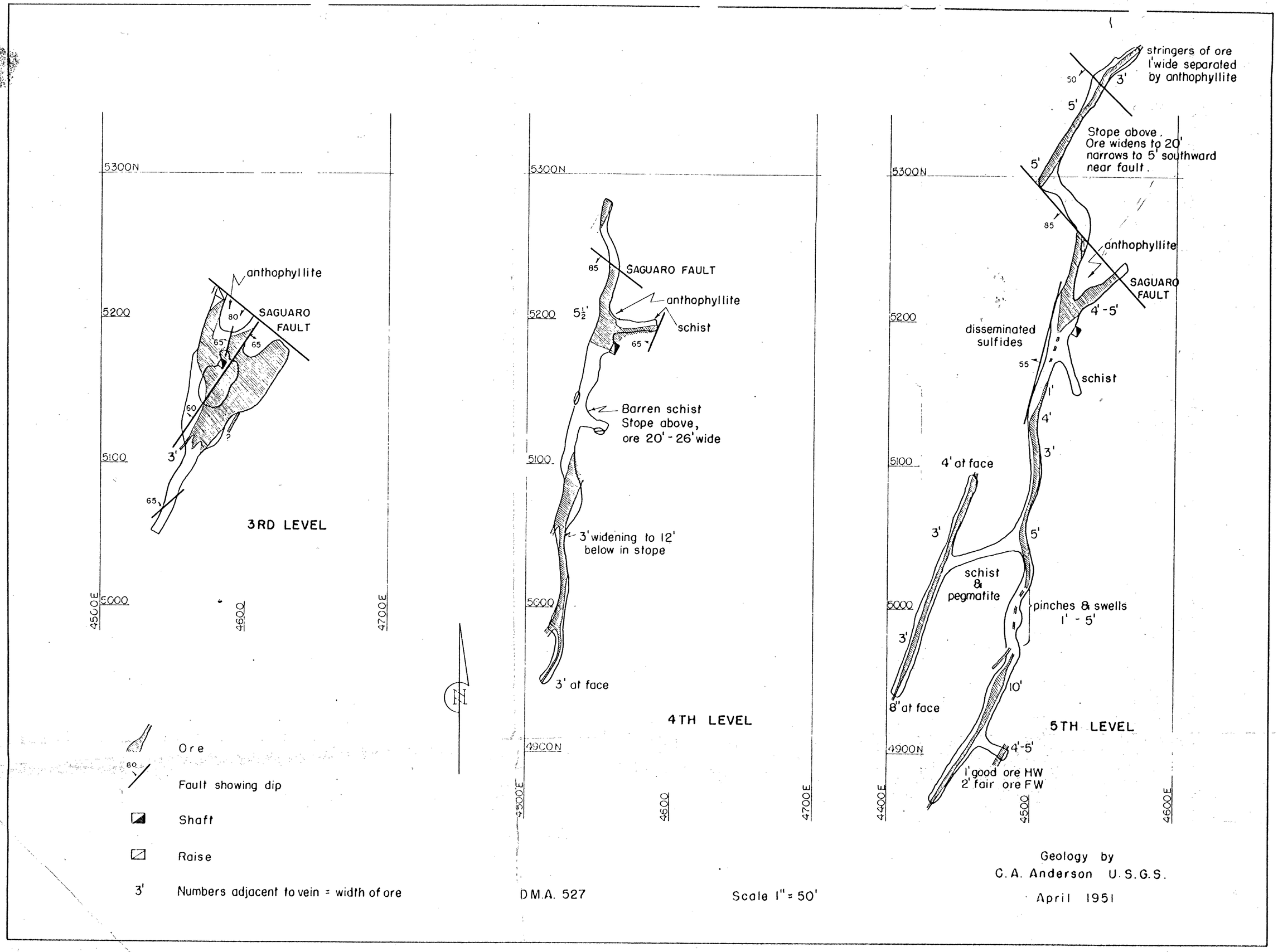


Figure 2.- Three lower levels, Antler Mine, Mohave County, Arizona.

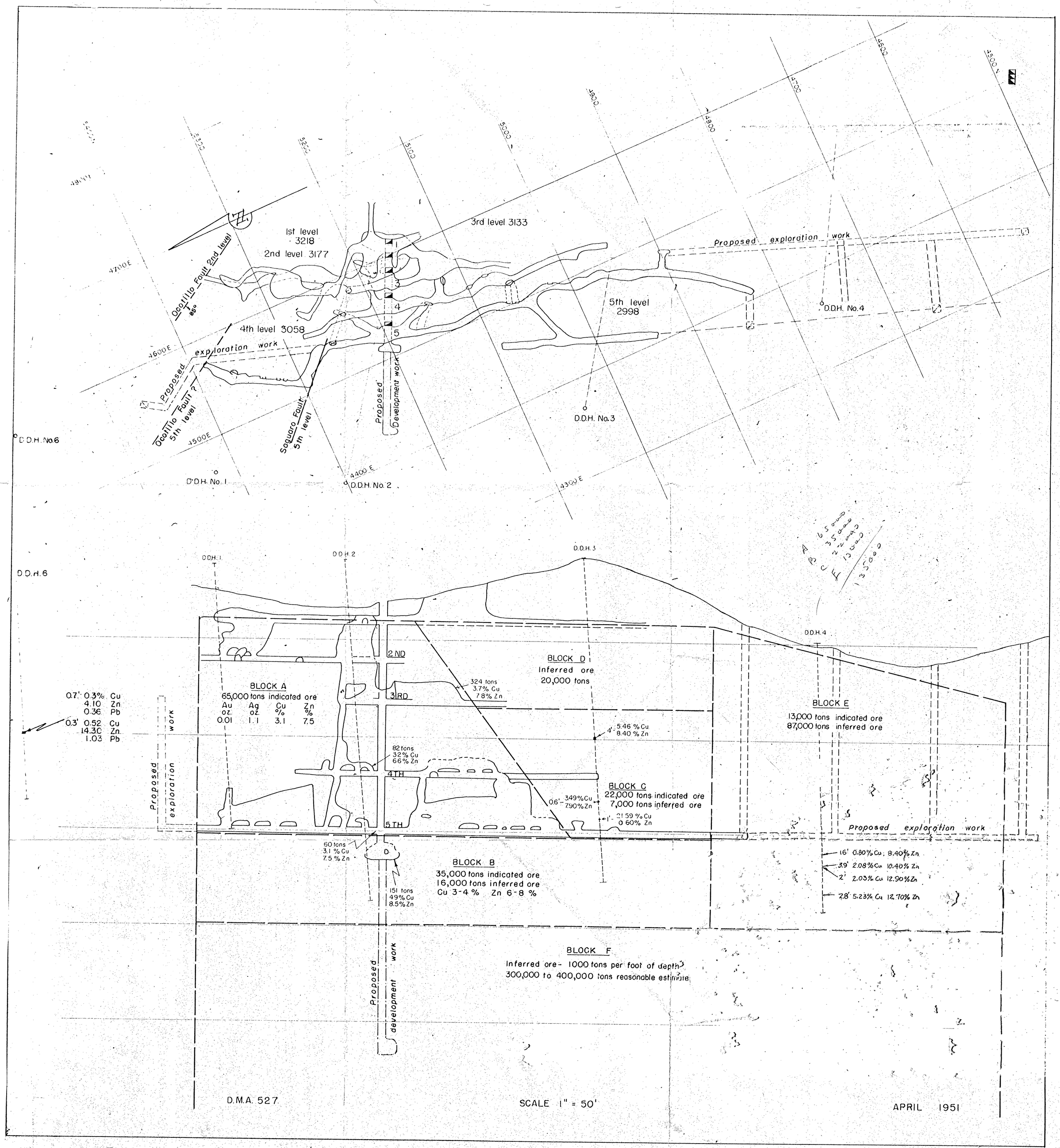


Figure 3. - Composite level map and longitudinal projection, Antler Mine, Mohave County, Arizona.