UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE

Terminated ~~(or cancelled)~~ without certification. DMEA No. 1613

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.

✓ Closing Letter
Termination Notice or Agreement.

Recision Notice.

Assignment of Contract.

✓ 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 _____

CW
Reviewer's Initials

7973

Approved
ABC
Belly

DEFENSE MINERALS EXPLORATION ADMINISTRATION
CONTRACT ADMINISTRATION AND AUDIT DIVISION

REPORT OF REVIEW

I have reviewed the Monthly Reports of:

Clark & Mathis
A partnership composed of John W. Clark and R. W. Mathis
821 Pine Street
Deming, New Mexico

pertaining to Exploration Project Contract No. Idm-E193, DMA Docket No. 1613X and including Amendments Nos. 1 and 2, covering a project for exploration of Lead & Zinc, for the months of January to November, 1952.

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 Government representative who visited and examined 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 reasons:

(1) The administrative costs to the Government of an audit would be excessive in relation to the estimated amount of the possible disallowances thereunder.

(2) The contract or voucher files include evidence that the Government representative who visited the project, examined the records of the Operator and determined the validity and propriety of the costs claimed.

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

Total cost as billed by Contractor		$11,907.14
Exceptions:		
By DMEA Finance Officer-None		
Herewith	None	None
		$11,907.14

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 Five thousand nine hundred fifty-three and 57/100 Dollars

-$5,953.57-

is considered valid and proper.

Dated: May 21, 1953

Donald T. Finch

Donald T. Finch, Auditor

U. S. [illegible]
[illegible]
NOV 2[illegible] 1952
[illegible]

No. 2

AMENDMENT OF CONTRACT: No. Idm-E193

Contract Docket No. DMA 1613X, dated November 23, 1951, between the United States of America and Clark and Mathis is hereby amended as follows, effective as of the date of said contract:

> Referring to article "3. Exploration Project", of Exploration Project Contract Form MF-200, following the words "all properly designed to bring the project to completion within a period of", delete "eight (8) months" and in lieu thereof substitute "thirteen (13) months".

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the Government may pay or the percentage of the costs which the Government may pay under the provisions of Article 13 of the contract form.

Dated December 8 1952.

CLARK AND MATHIS

By R. W. Mathis
R. W. Mathis

By John W Clark
John W. Clark

UNITED STATES OF AMERICA

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

FILE COPY
SURNAME:

J. W. Alt.
Brinsmead
Butrin
Alt
Talbert

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

NOV 3 1953

Mr. John H. Clark
821 Pine Street
Deming, New Mexico

Re: Docket No. NM-1613X (Lead-Zinc)
John H. Clark and
R. W. Mathis (Partners)
Mahoney Mine
Luna County, New Mexico
Contract No. Idm-E193

Dear Mr. Clark:

This is with reference to the subject Exploration Contract between you and the Government.

The final audit of the contract expenditures and the final reports of the Operator and Field Team have been received and accepted by this Administration. Of the total amount of $12,654.00 approved under the contract, $11,907.14 was expended, 50 per cent of which, or $5,953.57, represents the Government's share. There was no equipment used on the project in which the Government had an interest or equity. The exploration work was completed in a satisfactory manner.

Because the results of the exploration were unfavorable, it is not our intention to make a certification of discovery or development which would create a lien against the subject property. We are, therefore, closing our books and records with respect to this project. Your attention is called, however, to Article 11 of the contract which requires the Operator to "keep and preserve said records and accounts for at least three years after completion of the project or the termination of this contract."

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

Sincerely yours,

G. O. Wittendorf (fw)
Administrator

JWAlt/hmj
(10-30-53)
CC to: Docket
Adm. R. File
Op. Committee
Mr. Rinkel
Mr. Bishop
Chron.

R. C. G.
11-3-53

No. 1

AMENDMENT OF CONTRACT: No. Idm-E193

Contract Docket No. DMA 1613X, dated November 23, 1951, between the United States of America and Clark and Mathis is hereby amended as follows:

> Referring to EXHIBIT "A" attached to Exploration Project Contract Form MF-200, under caption: "The estimated cost of the project is as follows:", funds allocated under item "(3) Supplies" and item "(4) Use Allowance for operator's equipment" may be augmented by use of funds allocated under item "(6) Contingency", after the funds so allocated in said EXHIBIT have been expended.

This amendment shall not be construed to increase the estimated total cost of the project, the aggregate total amount which the Government may pay or the percentage of the costs which the Government may pay under the provisions of Article 13 of the contract form.

Dated May 26, 1952.

CLARK AND MATHIS

By P. W. Mathis
John W. Clark

UNITED STATES OF AMERICA

By W. J. Young
Executive Officer - DMEA

jwo

MF-200
(June 1951)

Docket No. DMA 1613X
Commodity Lead-Zinc
Idm-E193

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Contracts & Audits

EXPLORATION PROJECT CONTRACT [1]

It is agreed this 23rd day of November, 1951, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and [2] Clark & Mathis, a partnership composed of John W. Clark and R. W. Mathis 821 Pine Street Deming, New Mexico 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 New Mexico, County of Luna described as follows: [3] that certain group of unpatented lode mining claims located in Sections 21 and 28 T.27S., R.9W. Tres Hermanas Mining District and described in attached lease dated January 17, 1951 to R. W. Mathis and John W. Clark.

with respect to which the Operator represents and undertakes: [4]

(*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, to each of which the subordination agreement of the holder 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 Sixty (60) days from the date of this contract shall commence work on a project of exploration for [5] lead and zinc ores; 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] eight (8) 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 $6,327.00, which is 50 percent of the agreed estimated total cost of this project, $12,654.00.

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.

Clark & Mathis
(Operator)

By John W. Clark
John W. Clark

By R. W. Mathis
R. W. Mathis

THE UNITED STATES OF AMERICA

By C. Mitteendorf
Acting Administrator
Defense Minerals Exploration
Administration

U. S. GOVERNMENT PRINTING OFFICE 16—

EXHIBIT "A"

Exploration Project

The proposed exploration program consists of testing the formations underlying the Mahoney mine for continuation of upper productive sulfide ore bodies. The work is to consist of diamond drilling 4 or 5 holes totaling not over 1800 feet. Hole No. 1 is to be drilled inclined from the underground location shown on map (Fig. 3) and the other holes to be drilled vertically from the approximate surface locations shown on map (Fig. 2). However, the results derived from Hole No. 1 may indicate the advisability of a second or third hole drilled from the same underground station but of different strike or inclination than Hole No. 1, in which case the surface drilling footage would be decreased. In the event the results of the first three holes, Nos. 1-3 (Figs. 2 and 3) inclusive, are unfavorable, the alternate Hole, No. 4a, is to be drilled near the location shown instead of Hole No. 4.

The holes are estimated to average 300 feet for those drilled from location No. 1 and 500 feet for the surface locations. The drilling plan, however, is flexible for the depth of each hole, dependent upon data derived, within the maximum of 1800 feet.

The estimated cost of the project is as follows:

(1) Supervision, Engineering and Sampling	$ 1,200.00
(2) Labor	6,660.00
(3) Supplies	2,470.00
(4) Use Allowance for operator's equipment	1,044.00
(5) Freight on equipment to and from project	400.00
(6) Contingency	880.00
Total	$12,654.00

(1) Supervision, Engineering and sampling connected with the project is allowable at $200.00 per month to a maximum of $1,200 for the project.

(2) Labor for the project is estimated and allowable as follows:

1 driller @ $15.00 per shift for 180 shifts	$2,700
1 drill helper @ $12.00 per shift for 180 shifts	2,160
1 utility @ $12.00 per shift for 150 shifts	1,800
Total labor	$6,660

(3) Supplies and materials estimated for the project are allowable as follows:

Core barrels and diamond losses, 1800 feet @ $1.00	$1,800
Cementing, 180 feet @ $1.50	270
Fuel, grease, and miscellaneous	400
Total	$2,470

(4) The following equipment is to be furnished by the Operator for use on the project:

	Value	Monthly Use allowance
1 U. G. diamond drill outfit C. P. 5	$ 1400	$23.00 3 mos
1 Sullivan #22 diamond drill outfit including drill, gasoline power, pump and rods	5300	88.00 5 mos
1 G. D. compressor, 365 cfm	9200	153.00 3 mos
1 F. M. Water pump	168	3.00 8 mos ✓
1 Single-drum, gasoline power hoist	835	14.00 3 mos ✓
1 Dodge power wagon with water tank	3765	63.00 3 mos
1 Chevrolet pickup for men and supplies	1700	28.00 8 mos

The maximum monthly cost allowance for use on the project is determined on the basis of 60 month depreciation of value for each unit with the allowable monthly amount chargeable only for the months actually used for the benefit of the project and to the estimated amount of $1,044 for the project.

(5) The transportation item is for the freight on the equipment from Silver City, New Mexico to the project site and the removal and return of the equipment to Silver City at the completion of the project. It is estimated that the costs will be $200 per trip or a total of $400.

(6) A contingency fund of $880 is to be used for unseen difficulties in drilling and the fund allowed only on approval of the Government when necessary for completion of the project to the mutual satisfaction of the Operator and the Government.

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.

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 Luna, State of New Mexico JWC, described in a certain Exploration Project Contract dated ~~May 17~~ ~~October~~ November 23rd, 1951, between Clark & Mathis, the Lessee of said property, and the United States of America;

NOW, THEREFORE, the undersigned, as Lessor of said property under lease dated January 17, 1951, does by these presents subordinate all of his right, title, and interest under the provisions of said 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 lease; and

The undersigned further agrees that if said leasehold interest should be surrendered or if said 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 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 1st day of October, 1951

J. A. Mahoney Inc.
By James T. Lundy Treas Secy
Mary Mahoney Carney
The Clark Realty & Inv. Co.
By Rhesa Clark - Secy & Pres.

U. S. GOVERNMENT PRINTING OFFICE 16-61882-1

LEASE AGREEMENT

THIS AGREEMENT, made the 17 day of January 1951, by and between Clark Realty & Investment Co. Inc., J. A. Mahoney, Inc., and Mary Mahoney Carney, of Deming, New Mexico, hereinafter referred to as the first parties, and R. W. Mathis and John W. Clark, hereinafter referred to as the second parties.

WITNESSETH:

WHEREAS, the first parties do hold title to a group of unpatented lode mining claims in the Tres Hermanas mining district, Luna County, New Mexico, more particularly described as follows:

Watch Dog, New Year's Gift, Comfort, Flat Foot, Homestead, Minnie Helene, Mildred, Dona Susan, and Contention.

WHEREAS, such title is held under rights granted by the mining laws of the United States government and is in full force and effect;

WHEREAS, the second parties desire to secure from parties of the first part the right to mine on certain portions of said premises, subject to the following terms and conditions;

NOW, THEREFORE, in consideration of the premises, and of the sum of ONE DOLLAR ($1.00) in hand paid to parties of the first part by parties of the second part, the receipt whereof is hereby acknowledged, and of the royalties hereinafter reserved to be paid by parties of the second part, and of the mutual agreements hereinafter contained, parties of the first part do hereby demise and let unto parties of the second part the mineral rights and mining rights in and to the above described group of mining claims, with the right to use the surface of the same.

TO HAVE AND TO HOLD the above described rights and premises and all thereof unto parties of the second part for the term of six years, commencing on the date hereof and ending on the 17 day of January, [illegible] unless sooner terminated as hereinafter provided, upon the [illegible]d conditions:

1. Upon all ores produced from the premises by parties of the second part and shipped to mill or smelter, parties of the second part shall pay to parties of the first part royalties on the following sliding scale:

Royalty - %	On Ores having a net return per ton of		
10	$ 0.00	to	$ 60.00
12½	60.00	to	100.00
15	100.00	to	150.00
20	150.00	to	200.00
25	200.00	and over	

Net returns within the meaning of this agreement are hereby defined to be the correct returns as shown by the liquidation sheets, settlement sheets, purchase sheets, or other evidence of receipt of payment, as furnished by the smelter, ore buyer, or purchaser treating and paying for said ores, after allowing a deduction for treatment and transportation costs. Royalty payments shall be made within 10 days after receipt of settlement from the ore buyer. Parties of the second part will instruct purchaser or ore buyer to send two liquidation sheets to parties of the first part; one sheet to Clark Realty & Investment Co. Inc, 2323 S. Grand Avenue, Los Angeles, California, and one to Mary Mahoney Carney, Deming, New Mexico. Royalty checks to be made payable to Clark Realty & Investment Co. and sent to 2323 S. Grand Ave., Los Angeles 7, California.

2. Parties of the second part shall, commencing on the ____ day of _____, 195___, perform, a minimum of 50 shifts of work of 8 hours each during each calendar month, or 600 man-shifts per year, during the life of this agreement.

3. All exploration, development, and mining work done on said promises by parties of the second part will be done in a good and workmanlike manner, but all work shall at all times be under the sole control of and done in accordance with the exercise of the direction and judgment of the parties of the second part, as to time, place, method and manner of operation. All directions of the State Mining Inspector, or his deputy, shall be promptly complied with, and the laws of the United States Government and of the State of New Mexico pertaining to the regulation of mining operations will always be followed.

4. Parties of the second part agrees to post, as provided by law, and keep posted, notices to the effect that said premises are being operated by parties of the second part by virtue of this lease, and that parties of the first part and the mining claims are not liable for any claim or claims, or liens resulting from said operations, or any claims for injuries, deaths, or materials, and the said parties of the second part are solely responsible for all such claims and demands.

5. Parties of the second part will furnish and pay for all labor, power, tools, equipment, powder, timber and other materials and supplies that may be used by them in the operation of said premises and will not allow any claim or lien for any such thing to be effectually made or asserted against the premises or parties of the first part.

6. Parties of the second part will hold parties of the first part harmless and fully indemnify them against all claims and demands of any kind or nature which may be made upon them or against the leased premises for or on account of any debt or expense contracted or incurred by parties of the second part, as well as from and against any and all acts, transactions or omissions of the parties of the second part or their agents; and parties of the second part will defend and save parties of the first part harmless and fully indemnify them as to any liabilities or asserted liabilities for or on account of injury to any person or property sustained during the continuance of this agreement alleged to have resulted from the unsafe condition of the leased premises.

7. Parties of the second part will comply with the provisions of the Workmen's Compensation Act and the Occupational Disease Disablement Law of the State of New Mexico, the Unemployment Compensation Act of the State of New Mexico, the Federal Unemployment Tax Act, the Federal Insurance Contributions Act, and other legislation, Federal and State, applicable to the workings and operation of said premises, and will make all payments, returns, and reports required by such Acts.

8. Parties of the second part shall, during the term hereof, pay, before the same shall become delinquent, all taxes which may be levied and assessed during such period against said premises, the products thereof, and against all improvements, property, machinery and equipment placed thereon by parties of the second part.

9. Parties of the first part or their agents authorized in writing, shall at their own risk have the right at all times when accompanied by a representative of the parties of the second part to enter into and upon said premises and the workings therein for the purpose of examining and inspecting the same and ascertaining whether the terms and conditions hereof are being carried out and performed by parties of the second part, and parties of the first part, or their agents authorized in writing, shall at all times have access to maps, the record of production from said premises and drill cores from holes within the limits of said property.

10. If parties of the second part shall be in default in the performance of any of the conditions, covenants, and agreements hereof upon them made incumbent, parties of the first part shall notify parties of the second part in writing of such default and the nature thereof, which notice shall be sent by registered mail addressed to R. W. Mathis, Box 452, Silver City, New Mexico, and J. W. Clark, 821 W Pine St. Deming, New Mexico, and parties of the second part shall have thirty (30) days from date of receipt of said notice at the above addresses in which to remove or cure such default, and such, if not removed or cured within said period of thirty (30) days after the receipt of said notice of the same, all rights of parties of the second part hereunder shall at once cease and determine and parties of the second part agree, in such event, to at once without demand, yield up all of said premises and property unto parties of the first part.

11. This agreement is optional with parties of the second part, and no penalty shall accrue or be asserted against said parties of the second part for failure to perform any of the conditions, terms and agreements hereof. Parties of the second part may terminate this

lease at any time by written notice sent by registered mail to _____and thereupon all obligations of parties of the second part hereunto shall immediately cease and terminate, except for payment of royalty due on ore previously shipped or for liability on account of any obligation arising out of their mining operation on the above described premises incurred and owing at the time of such termination.

12. If parties of the second part are delayed or interrupted in or prevented from performance of their obligations as herein provided by acts of God, fires, floods, strikes, or labor trouble, inability to obtain necessary material, supplies or mill strikes, insurrection or mob violence, injunction, regulations or order or requirements of Government or other disabling cause beyond their reasonabl control, then and in all such cases parties of the second part shall, for the time being, and without liability, be excused from performance of their obligations as herein provided, including the payment of royalties, for the period of such prevention, delay or disability, and this lease and all provisions thereof shall again come into full force and effect immediately upon the termination of the period of prevention, delay or disability resulting from any of the causes aforesaid, and the term of this lease shall be extended for a period equal to the number of days in any such period of prevention, delay or disability.

13. It is mutually agreed and understood between the parties hereto that any machinery, implements, apparatus, tools, and supplies placed upon said premises during the life hereof by parties of the second part, shall be and remain the property of parties of the second part and that in case of the termination of this agreement for any cause, parties of the second part may, within sixty (60) days thereafter, remove the same. It being specifically understood and agreed however that all mine timbers, ore chutes, headframes and buildings together with rail underground shall upon the cancellation, abandonment or termination of this lease be and remain a permanent part of the property and shall not be removed. Any equipment on the premises which is the property of the parties of the first part may be used

by the parties of the second part during the tenure of this agreement but shall remain the property of the parties of the first part and shall be left on the premises.

14. The parties of the second part shall deliver to said parties of the first part the said premises with the appurtenances, and all improvements in good order and condition, with all drifts, shafts, tunnels and other passages thoroughly clear of loose rock and rubbish, and drained, and the mine ready for immediate continued working (accident not arising from negligence alone excusing) without demand or further notice upon the termination of this lease, or at any time previous, upon demand for forfeiture or at any time previous upon this lease becoming automatically null and void as herein provided.

15. The parties of the second part shall before May 15 of each year do and perform upon said premises at least eight hundred dollars worth of labor and improvements in such manner as to constitute the annual labor and assessment work upon said premises, and shall furnish to parties of the first part affidavits as to amount and character of work not later than June 1st of each year.

16. This agreement shall bind and inure to the benefit of the respective heirs, executors, administrators, legal representatives and assigns of each of the parties hereto.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands upon the day and year in this agreement first above written.

Teresa Clark
Secretary

CLARK REALTY & INVESTMENT CO.
By Irma Clark Vice-Pres.

J. A. MAHONEY INC.
By James T. Lundy

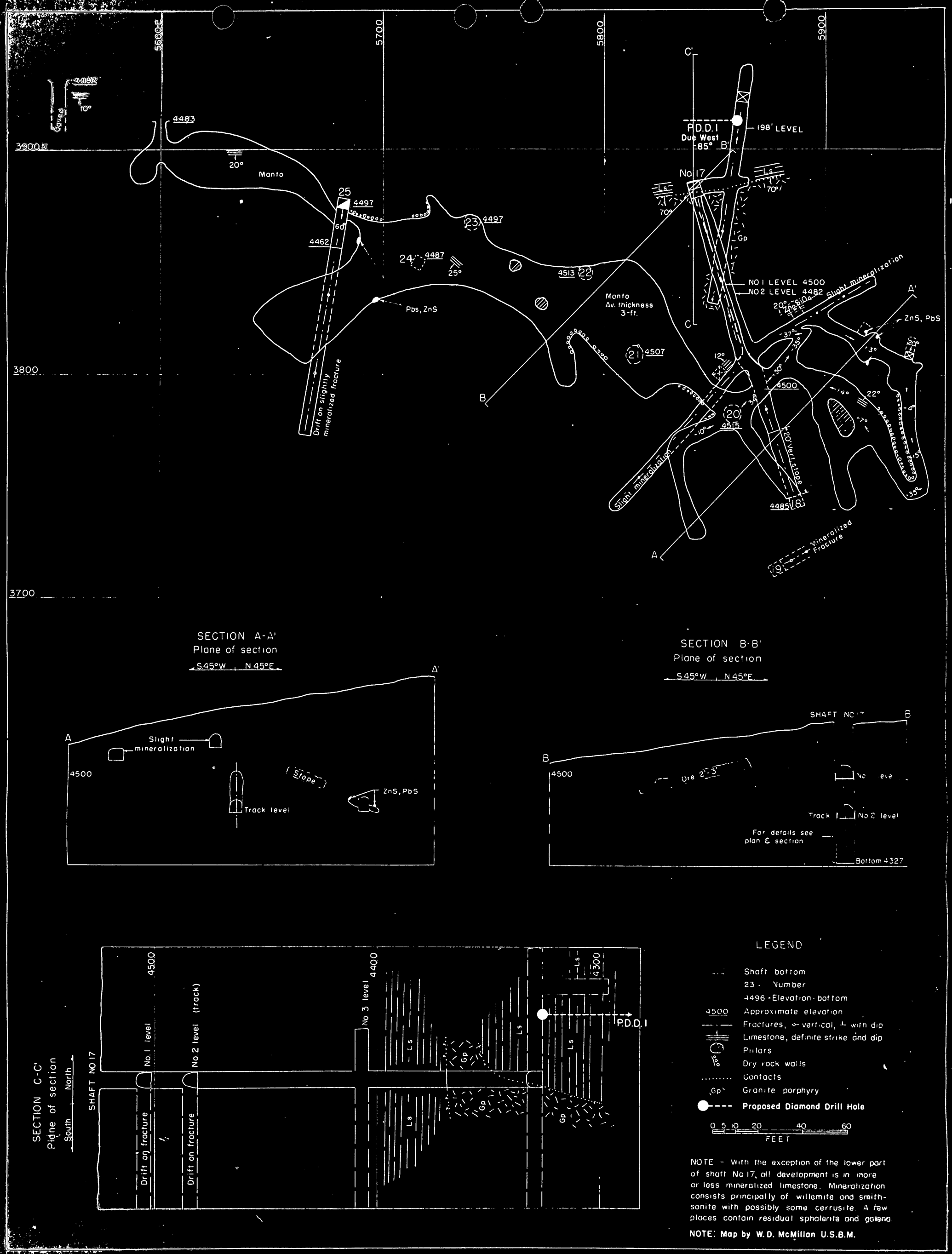
Secretary

Mary Mahoney Carney

B. W. Mathis

John W. Clark

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 5 - 1951
LANDON F. STROBEL
Executive Secretary



LEGEND

- Shaft bottom
- 23 - Number
- 4496 = Elevation - bottom
- 4500 Approximate elevation
- Fractures, ⊶ vertical, ⊥ with dip
- Limestone, definite strike and dip
- Pillars
- Dry rock walls
- Contacts
- Gp Granite porphyry
- **Proposed Diamond Drill Hole**

0 5 10 20 40 60
FEET

NOTE - With the exception of the lower part of shaft No 17, all development is in more or less mineralized limestone. Mineralization consists principally of willemite and smithsonite with possibly some cerrusite. A few places contain residual sphalerite and galena.

NOTE: Map by W.D. McMillan U.S.B.M.

Figure 3. - Plan and sections, West Monument Hill, Mahoney mine, Tres Hermanos dist., Luna County, New Mexico.
DMA 1613 X July 1951

MF-200
(June 1951)

Docket No. DMA 1613X
Commodity Lead-Zinc
Idm-E 193

UNITED STATES OF AMERICA
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Revised N.G.

EXPLORATION PROJECT CONTRACT [1]

November

It is agreed this 23rd day of October, 1951, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and [2] Clark & Mathis, a partnership composed of John W. Clark and R. W. Mathis, 821 Pine Street, Deming, New Mexico 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 New Mexico, County of Luna described as follows: [3] that certain group of unpatented lode mining claims located in Sections 21 and 28 T.27S., R.9W. Tres Hermanas Mining District and described in attached lease dated January 17, 1951 to R. W. Mathis and John W. Clark.

with respect to which the Operator represents and undertakes: [4]

(*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:~~

(*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 Sixty (60) days from the date of this contract shall commence work on a project of exploration for [5] lead and zinc ores; 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] eight (8) 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 $5,137.00, which is 50 percent of the agreed estimated total cost of this project, $10,274.00 $12654.00 6327.00

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.

THE UNITED STATES OF AMERICA

Clark & Mathis
(Operator)

By Frank E. Johnson
Director, Production Expansion Division
ACTING Defense Minerals Administration

By
John W. Clark

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

By
R. W. Mathis

EXHIBIT "A"

Exploration Project

The proposed exploration program consists of testing the formations underlying the Mahoney mine for continuation of upper productive sulfide ore bodies. The work to consist of four diamond drill holes. Hole No. 1 is to be drilled inclined from the underground location shown on map (Fig. 3) and the other three holes to be drilled vertically from the surface locations shown on map (Fig. 2). In event the results of the first three holes, Nos. 1-3 inclusive, are unfavorable; alternate hole No. 4a is to be drilled at location shown instead of hole No. 4.

The holes are estimated to average 300 feet deep for No. 1 and 500 feet for the other three. The drilling plan, however, is to be flexible for depth of each hole dependent upon data derived within the maximum of 1800 feet.

The estimated cost of the project is as follows:

(1)	Supervision, engineering and sampling	$1,200.00
(2)	Labor	4,680.00 + 1650.00 + 330.
(3)	Supplies	2,470.00
(4)	Use allowance for operators equipment	1,044.00
(5)	Contingency	880.00
	Total	$10,274.00

(1) Supervision, engineering and sampling connected with the project is allowable at $200 per month to a maximum of $1,200 for the project.

(2) Labor for the project is estimated and allowable as follows:

Underground: 1 driller @ $15 per shift
1 helper @ $11 per shift
$26 per shift

30 shifts @ $26 = $780.00

Surface: 1 driller @ $15 per shift
1 helper @ $11 per shift
1 utility @ $11 per shift
$37 per shift

150 shifts @ $37 = $5,550.00
Total labor $6,330.00

(3) Supplies and materials estimated for the project are allowable as follows:

Core barrels and diamond losses.	
1800 feet @ $1.00 =	$1,800
Cementing, 150 feet @ $1.50 =	270
Fuel, grease & misc. =	400
Total	$2,470

(4) The following equipment is to be furnished by the Operator for use on the project:

	Value	Monthly Use Allowance
1 U. G. diamond drill outfit C.P.5	$1400	$24.00
1 Sullivan #22 diamond drill outfit including drill, gasoline power, pump and drill rods	5300	88.00
1 G. D. Compressor, 365 cfm	9200	154.00
1 F.M. water pump	168	3.00
1 Single drum gasoline power hoist	835	14.00
1 Dodge power wagon with water tank	3765	63.00

The maximum monthly cost allowance for use on the project is determined on the basis of 60 month depreciation of value for each unit with the allowable monthly amount chargeable only for the months actually used for the benefit of the project and to the estimated amount of $1,044 for the project.

(5) A contingency fund of $880 is to be used for unforeseen difficulties in drilling and the fund allowed only on approval of the Government when necessary for completion of the project to the mutual satisfaction of the Operator and the Government.

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.

Applicant's suggested

EXHIBIT "A"

Exploration Project

The proposed exploration program consists of testing the formations underlying the Mahoney mine for continuation of upper productive sulfide ore bodies. The work is to consist of not over 1800 feet of diamond drilling in 4 or 5 holes. Hole No. 1 is to be drilled inclined from the underground location shown on map (Fig. 3) and the other holes to be drilled vertically from the approximate surface locations shown on map (Fig.2). However, the results derived from Hole No. 1 may indicate a second or third hole drilled from the same underground station but of different strike or inclination than Hole No. 1, in which case the surface drilling would be decreased. In the event the results of the first three holes, Nos. 1-3 (Figs. 2 and 3) inclusive, are unfavorable, the alternate Hole No. 4a is to be drilled near the location shown instead of Hole No. 4.

The holes are estimated to average 300 feet for those drilled from location No. 1 and 500 feet for the surface locations. The drilling plan, however, is flexible for the depth of each hole dependent upon data derived within the maximum of 1800 feet.

The estimated cost of the project is as follows:

(1) Supervision, Engineering and Sampling	$ 1,200.00
(2) Labor	6,660.00
(3) Supplies	2,470.00
(4) Use Allowance for operator's equipment	1,044.00
(5) Freight on equipment to and from project	400.00
(6) Contingency	880.00
Total	$12,654.00

(1) Supervision, Engineering and sampling connected with the project is allowable at $200.00 per month to a maximum of $1,200 for the project.

(2) Labor for the project is estimated and allowable as follows:

1 driller @ $15.00 per shift for 180 shifts	$2,700
1 drill helper @ $12.00 per shift for 180 shifts	2,160
1 utility @ $12.00 per shift for 150 shifts	1,800
Total Labor	$6,660

(3) Supplies and materials estimated for the project are allowable as follows:

Core barrels and diamond losses, 1800 feet @ $1.00	$1,800
Cementing, 180 feet @ $1.50	270
Fuel, grease, and miscellaneous	400
Total	$2,470

(4) The following equipment is to be furnished be the Operator for use on the project:

	Value	Monthly Use allowance
1 U. G. diamond drill outfit C. P. 5	$ 1400	$23.00
1 Sullivan #22 diamond drill outfit including drill, gasoline power, pump and rods	5300	88.00
1 G. D. compressor, 365 cfm	9200	153.00
1 F. M. Water pump	168	3.00
1 Single-drum, gasoline power hoist	835	14.00
1 Dodge power wagon with water tank	3765	63.00
1 Chevrolet pickup for men and supplies	1700	28.00

The maximum monthly cost allowance for use on the project is determined on the basis of 60 month depreciation of value for each unit with the allowable monthly amount chargeable only for the months actually used for the benefit of the project and to the estimated amount of $1,044 for the project.

(5) The transportation item is for the freight on the equipment from Silver City, New Mexico to the project site and the removal and return of the equipment to Silver City at the completion of the project. It is estimated that the costs will be $200 per trip or a total of $400.

(6) A contingency fund of $880 is to be used for unseen difficulties in drilling and the fund allowed only on approval of the Government when necessary for completion of the project to the mutual satisfaction of the Operator and the Government.

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.

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. DMA-1613X

Date received 6/5/51

Participation

Clark and Mathis
821 Pine Street
Deming, New Mexico

Name and address of applicant

Date May 29, 1951

FILL IN THIS BLOCK

Date of application May 29, 1951

Estimated cost $15,000.00

Mineral or metal Zinc and lead sulphides

Percentage of Government participation 50%

Location of mine Tres Hermanas Mining District

miles south of Deming, Luna County, New Mexico

Date of filing MF-100 May 29, 1951 (Letter)

DMA Docket Number, if available

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation?
*2. If a partnership, state names and addresses of partners.
*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders.
*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project.
*5. Are you the owner or the lessee of the property?
6. If owner, state what claims, liens, or encumbrances, if any, are against the property.
7. If lessee, attach a copy of the lease and state if it is in good standing.

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.
9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)?

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

B

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.
    (*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted.

    NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any.

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads.

*13. State source and quantity of water available for operations and its sufficiency at all seasons.
State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work.

15. State in detail how the ore could be shipped and how and where milled.

*16. History:
    (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.
    (*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.

*17. Production:
    (*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.)
    (*a*) Describe the ore or mineral deposits briefly.
    (*b*) Submit available maps and assay data.
    (*c*) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted?

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it.

    NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data.

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:
    (*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.
    (*b*) Supervisors, by numbers and positions, with salaries of each.
    (*c*) Cost of necessary repairs to existing facilities, structures, and buildings.
    (*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.
    (*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.
    (*f*) Cost of rental for equipment which the operator proposes to rent.
    (*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.
    (*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.
    (*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent.

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.

Clark and Mathis
(Name of company)

By G. W. Mathis
(Signature of authorized official)

May 29, 1951
(Date)

Partner
(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.

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

Clark and Mathis
821 Pine Street
Deming, New Mexico

May 29, 1951

FORM MF-103 for Tres Hermanas

THE APPLICANT

1. Applicant is a partnership.

2. Partners are:

Walter Clark
821 W. Pine Street
Deming, New Mexico
and
R. W. Mathis
P. O. Box 452
Silver City, New Mexico

3. Not Applicable

4. Walter Clark has been custodian of the property for the owners since 1913, and has been directing operations conducted by applicant since February, 1951.

5. Applicant is lessee of property.

6. Not applicable.

7. See copy of lease attached to First copy of this application. Lease is in good standing.

8. Applicant has been operating on the property only since February 1951, and no financial statement is available at present.

9. Applicant is ready to invest $7,500.00 in this project, which will match the amount requested of the government.

10. The area to be explored and the real property are identical, to wit:

Eight unpatented mining claims in the Tres Hermanas district of Luna County, New Mexico;

Watch Dog
New Year's Gift
Comfort
Flat Foot
Homestead
Minnie Helene
Mildred
Dona Susan

and one contiguous patented claim;

The Contention

11. The present and former name of the property is "the Mahoney Mine".

12. The Mahoney Mine is 24 miles due south of Deming. Thirteen miles are paved highway. Eleven miles are graded dirt road. The Southern Pacific and AT&SF Railroads have loading facilities in Deming.

FORM MF-103 for Tres Hermanas

THE PROPERTY

Continued-

13. A churn-drilled well located on the Mildred claim can furnish at least 2000 gallons of water per day during all seasons. Water will have to be pumped by gasoline engine and will cost approximately $10.00 per day.

14. The existing facilities include headframe, hoist, hoist house, ten wooden shacks for housing, and the following mining equipment:

Sullivan air compressor of 210 cfm capacity
Cleveland Jackhammer, 54 lbs
Gardner Denver R91 Stoper
Gardner Denver D73 drifter
150 feet of 1-1/2 inch air line
150 feet of 3/4 inch water line

15. Sulphide ores can be hauled to Deming, New Mexico and milled by flotation at either the Peru Mill or the American Smelting and Refining Company Mill. The zinc carbonate ore being mined at present are hauled to Deming and shipped by rail to Cherryvale Zinc Company.

16. History
(a) The above listed claims were first worked for shallow lead deposits in 1905. During the period 1914 to 1916 approximately 5000 tons of zinc carbonate ores were shipped to paint companies in Kansas and Missouri. Operations were suspended after the end of World War I because the demand for zinc carbonates ended. Applicant began operations there in February 1951 and shipped 42 tons of zinc carbonates to Cherryvale, Kansas, in April.

(b) A few scattered prospects in the adjoining area have been worked sporadically, but no records are available of their productions.

(c) No formal reports are available of the area encompassed by these claims.

17. The mine is being worked as a prospect at present. Forty two tons of zinc carbonate ore have been shipped to date. This ore assayed 27.65% zinc, 2.35% lead, and 1.25 oz of silver per ton. Cost of production was approximately $20.00 per ton. Net value is $10.00 per ton. This ore is shipped to the Cherryvale Zinc Company at Cherryvale, Kansas. Present rate of production is 1/2 ton per day.

18. Ore reserves:
(a) The ore deposits of the Mahoney Mine are "mantos", or blanket deposits which replace beds of the Gem limestone (Permian) from near vertical discordant fissures. In many places the fissures contain vein deposits of ore ranging to as much as 5 feet in width.

(b) See maps attached to 1st copy of this application.

(c) It is estimated that there are approximately 500 tons of zinc carbonate

FORM MF-103 for Tres Hermanas

THE PROPERTY

Continued-

18.

(c)

ore can be mined from the upper levels of the old workings. This occurs in narrow veins and thin mantos and may not be commercial ore at present costs.

It is impossible to estimate the tonnage of sulphide ore as its occurrence is hypothetical.

19. This property is being worked as a prospect at present with the hope of finding sufficient zinc carbonate ore to pay for the core drilling program, outlined below, in search of sulphide ore bodies at greater depths. Any help which the government can furnish will speed up the beginning of the core drilling program.

THE EXPLORATION

20. Zinc and lead sulphide ores occurring as limestone replacement deposits in contact-metamorphism zones are being sought by this exploration.

21. Applicant proposes to test for large sulphide ore bodies at depth by core drilling. It is proposed that the first hole be located at the bottom of shaft #17 (Figure 5) beneath the granite porphyry sill to test the limestone near the contact with the granite intrusion. Six holes drilled from the surface to a depth of 500 hundred feet are proposed at locations shown on map (Figure 3). It is estimated that this project will require 5 months for completion.

22. The Mahoney Mine is located in outcroppings of the Gem limestone (Permian) near the contact of the limestone with a granite porphyryintrusion (Cretaceous). This igneous intrusion and alteration of limestone has been accompanyed by deposition of zinc and lead minerals. The mining of these minerals has been limited to the upper 50 feet of the limestone beds. The fissures which carried the mineralizing solutions to this horizon continued to cut the limestone beds as deep as any workings have gone. This fact is shown in shaft #17 wherein the mineralized fissures have cut the limestone, a granite porphyry sill, and continued to cut the limestone and to show mineralization at 198 feet. (See Cross Section Figure 5). Applicant believes that large deposits of zinc and lead sulphide ores may be encountered below the oxidized zone. The water level in the district at present stands at 350 feet.

FORM MF-103 for Tres Hermanas

Continued-

THE REQUIREMENTS AND COSTS

23. Applicant proposes to do the underground drilling of the 300 foot hole at bottom of shaft #17 with his own equipment. Holes drilled from the surface will be done by contract. Costs are estimated as follows:

(a) Labor on 300 ft hole:

1 core drill operator @ $1.70 per hour for three weeks, ...	$265.20	
1 core drill helper @ $1.25 per hour for three weeks, ...	195.00	
Insurance and taxes on wages, ...	46.00	
Total Labor, ...		$ 506.20

(b) One supervisor at $1.70 per hour for 22 weeks, plus 10% for insurance, social security tax $1,555.50... 1555.50

(c) None.

(d) None.

(e) Diamond bits for underground hole at estimated cost of $1.00 per foot, ... 300.00 .... 300.00

(f) Contract for drilling 3000 ft from surface at estimated price of $4.50 per foot, ... 13500.00

(g) Rental value of equipment owned by operator

Complete underground core drilling rig at $9.00 per day for 3 weeks, ...	162.00	
Sullivan 210 cfm compressor $4.00 per day for 3 weeks, ...	72.00	
Total, ...		234.00

(h) None.

(i) Water for drilling underground hole at

estimated cost of 5 cents per foot, ...	15.00	
Fuel and lubricants, ...	45.00	
Total, ...		60.00

TOTAL ESTIMATED COST.....$15,155.20

24. It is estimated that two surface core drill rigs operating one 8 hour shift per day can complete 200 feet each week, or 3000 feet in 15 weeks. The underground hole can be drilled in 3 weeks, during the 15 week period established for surface drilling.

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

224 New Customhouse
Denver 2, Colorado

July 1, 1953.

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region IV

Subject: Form MF-104, DMA Docket 1613X, Contract Idm-K193 (Lead-Zinc), Clark and Mathis, a partnership composed of John W. Clark and M. W. Mathis, Luna County, New Mexico.

Enclosed are two copies of the Operator's Final Progress Report MF-104 and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data for the month of November 1952, and supplemental final accounting for the same month.

The contract was prepared on short form MF-200A; therefore, there was no settlement of jointly-owned property involved in the final payment.

This report constitutes final payment under the contract which was made in conformance with the Final Report of Review by the Contract Administration and Audit Division dated May 21, 1953 and released to this office May 29, 1953. The Final Operator's, Engineer's and Geologist's Reports will be forwarded to Washington when they are available.

W. H. King
W. H. King

Enclosures

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION IV

DEPARTMENT OF THE INTERIOR
JUL - 3 1953

Administrative Audit Difference Statement

Date: June 25, 1953
Payee's
Reference: Progress Report - November and Supplemental for November, 1953

Clark & Mathis
621 Pine St.
Santa, New Mexico
I-IIA-I-193

Upon examination of the above Payee's Reference a difference was found which made it necessary to suspend your account accordingly:

Amount Claimed $ 542.94

Difference $ 97.40

Amount Approved $ 445.54

The reason for the difference was due to:

Insufficient documentation on to equipment	13.76
Credit allowance on November Supplemental Report	83.62
Ill adjustment	.02
	97.40

Any reclaim for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

N. E. Stokes
Audit Section

R-IV-B & F Form No. 4
4-15-52 D

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

224 New Customhouse
Denver 2, Colorado

June 22, 1953

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMA Docket 1615X, Contract Idm-2193 (Lead-Zinc), Clark & Mathis, a partnership composed of John W. Clark and R. W. Mathis, Luna County, New Mexico - Operator's Monthly Progress Report, for the month of November 1952 and Supplemental final accounting for the same month.

Enclosed are the original and four copies of Form MF-104 and Form MF-104A, Narrative Report, and Engineer's Report for the above period. These reports constitute the Operator's Final Claim for reimbursement under the terms of the contract. The Operator has complied with the terms of the contract and has rendered his final report and accounting. Final payment is recommended as follows which is in conformance with the final Report of Review by the Contract Administration and Audit Division, dated May 21, 1953, which was released to this office May 29, 1953.

Basis for Final Payment

Total Allowable cost of the project	$11,907.14
Government participation 50%	5,953.57
Total prior payments	5,730.80
Balance due Operator	$ 222.77

Reconciliation with Operator's Final Reports

Total November Report	$ 529.18
Total November Supplemental Report - Credit	83.62
Adjusted gross amount of Operator's Claim	445.56
Government Participation 50%	222.78
Balance due Operator	222.77

W. H. King
W. H. King

Enclosures
JWT:fwo cc: SecOperComm (2), Storms, Contract, Townsend, Chron

MINING DIVISION
REGION IV

May 18, 1953

Memorandum

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

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

Subject : Supplemental Report, Contract Idm-8193, Docket DMEA-1613X, Clark & Mathis, Mahoney Lead-Zinc Mine, Luna County, N. Mex.

On May 14, we sent you a Supplemental Report on the above contract, minus one credit memorandum from Christensen Diamond Products Co. for $211.05. We received this memorandum this morning so are sending it on to you.

Walter R. Storms

Walter R. Storms

CC W. H. King (6)
DMA-1613X
DF

WRStorms:frj

MINING DIVISION
REGION IV

May 14, 1953

Memorandum

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

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

Subject : Supplemental Report, Contract Idm-K193, Docket DMA-1613X, Clark & Mathis, Mahoney Lead-Zinc mine, Luna County, N. Mex.

Enclosed in quintuplicate are the following items, supplemental to the November 1952 Progress Report:

(1) Bureau of Mines engineer's report;
(2) Forms MF-104 and MF-104A with final documentation.

As you will remember, we have been trying to get Mathis to submit his final report and cost material ever since the project closed last year. However, Mathis always has an excuse for his tardiness. The enclosed material was received in this office on April 24 but Forms MF-104 and MF-104A had to be returned to the operator for corrections. They again were received today. One invoice is missing from the documentation and Mathis has promised to send it to us, but to date has not done so. Therefore, we are submitting this material without one invoice.

As all accounts now are in order, except the missing invoice, I recommend that final payment be made to the operator.

Walter R. Storms

Walter R. Storms

CC W. H. King (6)
DMA-1613X
BF

WRStorms:frj

MINING DIVISION
REGION IV

May 14, 1953

Memorandum

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

From : John H. Soule', Mining Engineer, Tucson, Ariz.

Subject : Supplemental Report for Docket DMA-1613X, Contract Idm-5193, Clark and Mathis, Mahoney Zinc-Lead Mine, Tres Hermanas Mining District, Luna County, New Mexico.

The final forms MF-104 and MF-104A have been received for the subject docket. Attendant documentation and distribution sheets were received, with the exception of one credit memo from Christensen Diamond Products Co. These forms are supplementary to those submitted for the month of November. The items on the forms are discussed as follows:

1. Diamond Bits. An invoice from Christensen Diamond Products is submitted that totals $203.20. In addition, there are 2 credit memoranda, one yet to be documented, from the same firm that total $346.82. This indicates a credit to the project of $143.62 which is so entered on Form MF-104. It will be noted that there is a statement sheet showing that some of the bits were used to replace bits loaned to the project by Mathis and Mathis.

2. Fuels and Lubricants. Reclamation is made for $66.67 that was disallowed in August 1952 because of lack of documentation. Now that the documentation is supplied, the amount is approved and is entered on Form MF-104.

3. Repairs. This item was submitted on the forms for the month of November. Documentation was faulty and was returned to the contractor for correction. As this was not received, it was recommended that the amount of $13.76 be disallowed. Assuming that the charge was disallowed and now that proper documentation is received, the amount is approved and entered on Form MF-104.

4. Transportation. This charge is for moving the equipment from the project site. Although the charge was made long after the contract limit of the drilling was reached, it is felt that the charge is legitimate and is so approved. The amount was $65.63 and is entered on Form MF-104.

CC W. R. King (Orig. 66)
DMMA-1613X
DF

JHSoule':frj

5. Excess Drilling. The contract specified a maximum of 1,800 feet of drilling. At the end of November 1,813 feet were drilled. The excess drilling amounted to $86.06, 13 feet at $6.62 as per Form MF-104A, and is entered as a credit on Form MF-104.

With the exception of the diamond bits, all other supplies were purchased as needed and there remained no portion for which a salvage value could be claimed.

Form MF-104 conforms to Form MF-104A and reflects the same charges and credits. The total spent on the project was $11,907.14. A unit cost of $6.62 is indicated for the 1,800 feet of drilling.

John H Soule'

John H. Soule', Mining Engineer
Mining Methods Branch
Mining Division, Region IV

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

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S MONTHLY REPORT AND VOUCHER

Supplemental

Month of November, 195 2 Docket No. DMEA 1613X Contract No. Idm-E193

Operator's Name Clark and Mathis Minerals Zinc-Lead

Address 821 W. Pine Street, Deming, N. Mex.

Contract Amount, $ 12,654.00 Government Participation: 50 % Amount, $ 6,327.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor	0	5,110.51	5,110.51			
Supervision	0	1,178.32	1,178.32			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
~~Pipe~~ Diamond Bits	(143.62)*	2,107.97	1,964.35			
~~Fuel~~ Fuel, lubricant	66.67	815.35	882.02			
Other	0	318.20	318.20			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation	0	1,971.28	1,971.28			
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment	13.76	51.69	65.45			
Sampling and Analysis **	0	21.68	21.68			
Payroll Taxes	0	182.27	182.27			
Liability Insurance W.C.	0	143.47	143.47			
Transportation	65.63	90.02	155.65			
(8) Contingencies (specify):						
Excess Drilling. 13 feet @ $6.62 as per MF-104A	(86.06)*	0	(86.06)*			
TOTALS	(83.62)*	11,990.76	11,907.14			

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

Date May 8, 1953 *Payee Clark and Mathis

Per J. A. Clark Title Partner

*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.

*Red

(Instructions on reverse)

**Part of allowable supervision and engineering

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

$

Signature
(Authorized Certifying Officer)

Date Vou. No.
(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. DMEA E193 in accordance with the terms of the contract.

Signature John H Soule WRF Title Mining Engineer Date May 14. 1953

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W. H. King Title Executive Officer Date JUN 22 1953

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

Supplemental

Month of November 195 2 Docket No. DMEA 1613X Contract No. Idm-5193

Operator's Name Clark and Mathis Minerals Zinc - Lead

Address 821 W. Pine Street, Deming, N. Mex.

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								
Raising								
Shafts								
Winzes								
Drilling: Core	Foot	(83.62)	0	11,907.14	1,800	6.62	1,800	7.03
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		(83.62)		11,907.14				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		(83.62)		11,907.14				11,907.14

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 May 8, 1953 Operator Clark and Mathis

Per R. W. Mathis Title Partner

REMARKS: This is the final form to be submitted to complete the project

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

MINING DIVISION
REGION IV

February 10, 1953

Air Mail

Memorandum

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

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

Subject : November 1952 Progress Report, Docket DMA-1613X, Contract Idm-E193, Clark & Mathis, Mahoney Zinc-Lead Mine, Luna County, N. Mex.

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

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

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

The operator's report originally was received on January 6, 1953 but as several carbon copies of invoices were not certified, they were returned to R. W. Mathis for his signature. After much delay, three of the four invoices were returned to this office on February 9.

As 1,800 feet of drilling were completed during the month of November, the total costs will have to be adjusted, as suggested by Soule'.

As all work was in accordance with the terms of the contract, I recommend that the Government's share of the costs be paid after proper adjustment, as already mentioned.

Walter R. Storms

Walter R. Storms

CC: W. H. King (6)
DMA-1613X
DF

WRStorms:als

MINING DIVISION
REGION IV

February 10, 1953

Memorandum

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

From : John H. Soule', Mining Engineer, Tucson, Ariz.

Subject : Progress Report for November 1952, Docket DMA-1613X, Contract Idm-E193, Clark and Mathis, Mahoney Zinc-Lead Mine, Tres Hermanas Mining District, Luna County, N. Mex.

The Mahoney mine was visited on December 2, 1952 to observe the progress made during the month of November. Hole No. 4 was 561 feet deep at the time of the visit thus giving approval to the 541 feet reported by the operators. However, the contract allows a maximum of 1,800 feet of drilling and this was reached when Hole No. 4 was 528 feet deep. This exceeds the allowable by 13 feet. Drilling was continued throughout December and part of January at the operator's expense. It is recommended that the 13 feet be disallowed at the rate of $6.61 per foot or a total of $85.93. The $6.61 rate is derived from the corrected Form MF-104A.

According to Form MF-104, the costs for November total $542.94. These costs are documented excepting for one item. This is an invoice from Gaylord Iron and Machine Co. which was returned to the operators for explanation. This invoice was not returned and therefore, it is recommended that the total of this invoice, $13.76 be disallowed. Costs totalling $529.18 are approved.

All costs are charged to diamond drilling and to date, a unit cost of $6.61 is indicated before the deduction of the excess footage drilled but including other deductions.

John H Soule'

John H. Soule', Mining Engineer
Mining Methods Branch
Mining Division, Region IV

CC: W. H. King (Orig. & 6)
DMA-1613X
DF

JHSoule':als

Clark and Mathis
821 W. Pines Street
Deming, N. Mex.

PROGRESS AND COST REPORT ON CONTRACT NO. Idm-E 193, DOCEXT NO. DMA 1613X, for period November 1 to December 1, 1952.

NARRATIVE

As a result of his work on October 31, W. W. Skinner recommended that the fishing tool be shortened so that only the thicker part of it would enter the shell and not reach as far as the hardened shoulder. The tool was cut off in such a manner and tried again. It took a hold on the shell and after considerable jarring and pulling extracted the broken shell and bit from the hole. Very little damage was evident on the bit, and it was put back into service. In view of the repeated misfortune, it was decided that the safest policy would be to use the thicker Christensen core-barrel. The barrel borrowed from Mathis and Mathis was cut off on each end and re-threaded, and a new shell was ordered for it.

Steady drilling got under way again on November 17 and proceeded without undue incident during the balance of the month. The hole was advanced to 541 feet. The core was principally limestone; no ore was encountered. (See log accompanying this report.)

R. W. Mathis
R. W. Mathis
Clark and Mathis

Note: All bills for the preceeding month have been paid.

Log of Core from Diamond Drill Hole #3 for Contract Idm-E193, Docket DMA 1613X, for November, 1952, (cont'd).

Footage	Nature of formation	Percentage recovery
446 - 450	Massive white limestone	10%
450 - 455	Same, with quartz-filled solution channels	60
455 - 461	White limestone with finely dessiminated particles of calcocite	30
461 - 469	Silicified limestone with dessiminated CUS	85
469 - 479	Limestone with silicified bands containing dessiminated CuS	95
479 - 487	Massive white limestone, partly silicified	70
487 - 494	Same	70
494 - 503	Mottled white limestone	90
503 - 513	Same, partly silicified	80
513 - 522	White limestone containing dessiminated CuS	95
522 - 532	White limestone containing garnet	95
532 - 541	Same	95

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

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

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

Month of November, 1952 Docket No. DMEA 1613X Contract No Idm-R193
Operator's Name Clark & Mathis Minerals zinc & lead
Address 821 W. Pine Street, Deming, New Mexico
Contract Amount, $12,654.00 Government Participation: 50 % Amount, $ 6,327.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor	319.30	4,791.21	5,110.51			
Supervision	0	1,178.32	1,178.32			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
~~XXX~~ Diamond Bits	0	2,107.97	2,107.97			
Trac Fuels & lubricants	79.51	803.78	883.29			
Other	5.89	311.04	316.93			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation 14/28 x 1.82	91.00	1,880.28	1,971.28			
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment	38.14	27.31	65.45			
Sampling and Analysis	0	21.68	21.68			
Payroll Taxes	0	182.27	182.27			
Liability Insurance W. C.	9.10	134.37	143.47			
Transportation	0	90.02	90.02			
(8) Contingencies (specify):						
				542.94	11,528.25	12,071.19
				*-13.76		*- 13.76
					**- 66.67	**- 66.67
TOTALS	542.94	11,528.25	12,071.19	***-83.62		***- 83.62
				445.56	11,461.58	11,907.14

I certify that the above bill is correct and just and that payment therefor has not been received.
Date 12-26-52 *Payee Clark & Mathis
Per [signature] Title partner

*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:

**** .02		**** .02
445.54	11,461.58	11,907.12

$222.77

Signature [signature] (Authorized Certifying Officer)
Date 6/29/53 Vou. No. 53-148
(See other side)

* Insufficient Documentation ** Previous deductions
*** Credit allowed on November Supplemental report

**** Mill adjustment

(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. dme E 193 in accordance with the terms of the contract.

Signature John H Soule WRK Title Mining Engineer Date Feb 10, 1953

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W. H. King Title Executive Officer Date MAR 22 1953

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 November 1952 Docket No. DMEA 1613X Contract No. Idm-2193
Operator's Name Clark & Mathis Minerals zinc & lead
Address 821 W. Pine Street Deming, N. Mex.

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	feet	542.94	95	12071.19	1809	$6.67	1800	$7.03
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		542.94		12,071.19				12,054.00

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.

Date 12-26-52 Operator Clark and Mathis

Per [signature] Title partner

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

~~Cee~~
Grunwald
Betty
6/5/53. Received [illegible]

MINING DIVISION
REGION IV

February 10, 1953

Air Mail

Memorandum

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

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

Subject : November 1952 Progress Report, Docket DMA-1613M, Contract Idm-8193, Clark & Mathis, Mahoney Zinc-Lead Mine, Luna County, N. Mex.

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

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

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

The operator's report originally was received on January 6, 1953 but as several carbon copies of invoices were not certified, they were returned to R. W. Mathis for his signature. After much delay, three of the four invoices were returned to this office on February 9.

As 1,800 feet of drilling were completed during the month of November, the total costs will have to be adjusted, as suggested by Soule'.

As all work was in accordance with the terms of the contract, I recommend that the Government's share of the costs be paid after proper adjustment, as already mentioned.

Walter R. Storms

Walter R. Storms

Cc: W. H. King (6)
DMA-1613M
WF

WRStorms:als

Form MF-104A
(April 1952)

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

Defense Minerals Administration
JAN 2 1953

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of November 1952 Docket No. DMEA 1613X Contract No. Idm-E193
Operator's Name Clark & Mathis Minerals zinc & lead
Address 821 W. Pine Street Deming, N. Mex.

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								
Raising								
Shafts								
Winzes								
Drilling: Core	feet	542.94	95	12071.19	1809	$6.67	1800	$7.03
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS								TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		542.94		12,071.19				12,654.00

✓ have to be adjusted - J.W.A. 6/8/53.

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 12-26-52 Operator Clark and Mathis

Per P. W. Mathis Title partner

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 EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.

Keating
Betty

224 New Customhouse
Denver 2, Colorado

January 7, 1953

Memorandum

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 14 1953

To: Secretary to the Operating Committee
Defense Minerals Exploration Administration

From: Executive Officer, Field Team, Region IV

Subject: Form MF-104, DMA Docket 1613X, Contract Idm-E193 (Lead Zinc) Clark & Mathis, Mahoney Zinc-Lead Mine, Tres Hermanas Mining District, Luna County, New Mexico

Enclosed are two copies of the Operator's Monthly Progress Report Form MF-104, and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data for the period of October, 1952, pertaining to DMA Docket 1613X, Contract Idm E193, Clark & Mathis, Mahoney Zinc-Lead Mine.

John F. Shaw for
W. H. King

Enclosures

53-75A

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

224 New Customhouse
Denver 2, Colorado

December 16, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 1 7 1953

Memorandum

To: T. A. Christensen

From: Executive Officer, Field Team, Region IV

Subject: DMA Docket 1613X, Contract Idm-X193 (Lead-Zinc) Clark & Mathis, Mahoney Zinc-Lead Mine, Tres Hermanas Mining District, Luna County, New Mexico - Operator's Monthly Progress Report for the period of October, 1952

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

Work has been accomplished as authorized in the contract and payment is recommended for 50 percent of the amount as reported on Form MF-104, contingent on your verification of the correctness of applicable rates and arithmetical accuracy of computations.

for John F. Shaw
W. H. King

Enclosures

HKT:oc

cc: Contract
Secretary to the Oper. Comm. (2)
WRStorms
Chron.
AHKoschmann (2)

MINING DIVISION
REGION IV

December 8, 1952

Memorandum

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

From : Chief, Arizona-New Mexico Branch, Mining Div., Region IV

Subject : October 1952 Progress Report, Docket DMA-1613X, Contract Idm-E193, Clark & Mathis, Mahoney Lead-Zinc Mine, Luna County, N. Mex.

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

(1) Bureau of Mines engineer's report;
(2) Operator's narrative report;
(3) Forms 104 and 104A with documentation.

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

As all work is in accordance to the terms of the contract, I recommend that the Government's share of the costs (50 percent) be paid.

Walter R. Storms

Walter R. Storms

CC: W. H. King (6)
DMA-1613X
DF

WRStorms:als

MINING DIVISION
REGION IV

December 8, 1952

Memorandum

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

From : John H. Soule', Mining Engineer, Tucson, Ariz.

Subject : Progress Report for October 1952, Docket DMA-1613X, Contract Idm-E193, Clark and Mathis, Mahoney Zinc-Lead Mine, Tres Hermanas Mining District, Luna County, New Mexico.

The Mahaney mine was visited on November 3, 1952 to see what progress had been made on the project for the month of October. At the time of the visit, Hole No. 4 (Site No. 3) was about 450 feet deep. The operators report a depth of hole of 442 feet at the end of October. This indicates a monthly advance of 34 feet to a total of 1,714 for the project. According to the operators, a great deal of trouble was encountered during the month with stuck bits and a great deal of fishing was done. Toward the end of the month, the lost bit and shell were recovered and drilling progress again was under way. Approval is given to the 34 feet of advance. There remains 86 feet to be drilled according to the terms of the contract. The operators expect to continue drilling beyond the 1,800 feet allowed by the contract if the objective (granite) is not reached before that time. They expect to do the excess drilling on their own adcount.

The costs for the month totalled $1,015.22. These costs are documented and the necessary distribution sheet is included. There is one small error on this sheet where one $1.27 entry for grease was entered under "other," and not under "Fuels and Lubricants". This entry is properly made on Form MF-104.

There is only one item that is an allowable maximum. This is the supervision item. No supervision was charged to the project for the month of October.

All of the costs are charged to core drilling which is proper. The total to date is $11,616.59. There remains unexpended $1,037.41 which may be increased by $66.66 when this amount has been disallowed on the September forms.

John H Soule'

John H. Soule', Mining Engineer
Arizona-New Mexico Branch
Mining Div., Region IV

CC: W. H. King (Orig. & 6)
DMA-1613X
DF

JHSoule':als

Clark and Mathis
821 W. Pine Street
Deming, N. Mex.

Docket DMA 1613X, Contract Idm-E193
Distribution of October costs;

Item 2,		
Certified labor payroll		$437.70
Item 3,		
Diamond bits and core-barrels		
Christensen Diamond Products,	Invoice 29571	215.12
Joy Manufacturing Company	" 92285 L	81.00
	MF 104 total	296.12
Fuels and lubricants		
Ruebush Shell Service		33.21
The Texas Company		37.26
	MF 10# total	70$47
Other		
Mimbres Valley Farmers Assoc.	10/21	1.26
" " " "	10/28	1.27
	MF 104 total	2.53
Item 4,		
Depreciation allowed by contract	(20/28 x 182)	130.00
Item 7,		
Repairs		
Watson's welding sh@p		1.00
J. C. Vega	10/3	1.25
" "	10/6	.75
	MF 104 total	3.00
Payroll taxes		
Social Security		20.32
Unemployment tax		36.59
Workmen's Compensation Insurance		13.06
Transportation		
Christensen Diamond Product,	Invoice 29571	.77
Silver Freight Lines	" 10138	1.03
Parcel post on bits	Receipt 610	.60
" " " "	" 714	.72
Bus freight on bits	10/5	.77
" " " "	Invoice 55810	.77
" " " "	" 55860	.77
	MF 104 toatl	5.43
Total of entries on MF 104 for October, 1952		1015.22

Clark & Mathis

PAYROLL WORKSHEET FOR OCTOBER, 1952

BOR	M T W T F S	TOTAL HRS	RATE	REG WAGES	OVERTIME	TOTAL WAGES
			Sept 29 - Oct 4, 1952			
Carl Wilder	8 0 8 8 4 4	32	1.60	51.20		51.20
John Clark	8 0 8 8 4 4	32	1.50	48.00		48.00
			Oct 6 - October 11, 1952			
Carl Wilder	0 8 8 8 0 4	28	1.60	44.80		44.80
John W. Clark	0 8 8 8 0 4	28	1.50	42.00		42.00
			Oct 13 - Oct 18, 1952			
Carl Wilder	4 8 0 0 0 8	20	1.60	32.00		32.00
John W. Clark	4 8 0 0 0 8	20	1.50	30.00		30.00
Carlos Sanchez	7	7	1.00	7.00		7.00
			Oct 19 - Oct 24, 1952			
Carl Wilder	8 4 0 8 4 6	30	1.60	48.00		48.00
John W. Clark	8 4 0 8 4 6	30	1.50	45.00		45.00
			Oct 27 - Oct 31, 1952			
Carl Wilder	0 8 4 4 8 0	24	1.60	38.40		38.40
John W. Clark	0 8 4 4 8 0	24	1.50	36.00		36.00
W. W. Skinner	9	9	1.70	15.30		15.30
					TOTAL	$437.70

THIS IS A CERTIFIED COPY OF THE PAYROLL.

R. W. Mathis

R. W. Mathis, partner
Clark and Mathis

Clark and Mathis
821 W. Pine Street
Deming, N. Mex.

PROGRESS AND COST REPORT ON CONTRACT NO. Idm-E 193, DOCKET NO. DMA 1613X, for period October 1 to November 1, 1952.

Diamond drilling was continued during October on proposed Hole No. 3 for this project. Upon pulling the tools from the hole after drilling to 418 feet, however, it was found that the lower end of the core-barrel had belled, leaving the bit and shell in the hole. A similar barrel loaned by Mathis and Mathis was lowered into the hole and screwed onto the threads on the shell. After considerable jarring and tugging, the bit turned loose and came out with the tools. The bit had been burned and the shell ruined. A new shell and bit were put on this substitute barrel, but the new shell would not pass through the old hole, and it was necessary to ream the new shell in.

On October 9 this core-barrel bulged, or collared, just beneath the back-head. This collar was ground off, the outer tube was built up with hard suffacing, and dressed down to the original thickness. However, it collared again on the next run, and the driller declined to use it any more for fear of losing barrel, bit, and shell. These barrels had been Christensen core-barrels, but it was decided to order a Sullivan core-barrel from the Joy Manufacturing Co. in El Paso, Texas, because of faster delivery. When this new barrel was put into service, though, the shell fitting it was too large, and it had to be reamed into the old hole. On October 19 the reaming was completed and the hole was advanced to 423 feet. It was then found that this new Sullivan core-barrel bulged and collared within the thread section of the outer tube just above the shell. A portion of the barrel was cut off and new threads were machined into the stock. The hole was advanced to 446 feet on October 24, at which depth the thread portion of the shell twisted off, leaving the balance of the shell and the bit in the hole.

A fishing tool with diamonds in the point was used in an effort to remove the core from the bit and to pick up the shell and bit. The core was reamed out easily enough, but the hard shoulder within the remainder of the shell stripped the threads off of the fishing tool. The stripped portion was cut off, and another effort was made to catch the shell, resulting again in stripping threads from the ~~shmix~~ fishing tool. The tool was retapered, rethreaded, and hardened. On October 31, W. W. Skinner, drill trouble-shooter from Silver City was sent down with the reconditioned fishing tool. His efforts resulted in stripping threads from the tool again, but he was able to make suggestions abut redesigning the tool which later made possible recovery of the bit and shell.

The hole was advanced from 408 feet to 446 feet during October, the total section penetrated being limestone. No ore was encountered.

R. W. Mathis, partner

Clark and Mathis

Note: All bills for the preceeding month have been paid.

CLARK & MATHIS
821 W. Pine Street
Deming, N. Mex.

Log of Proposed Diamond Drill Hole No1 3 (cont'd) for Docket No. DMA 1613X, Contradt Idm-E 193, for October, 1952

Depth in feet	Nature of formation	Percentage recovery
408 - 411	Fine grained limestone	90%
411 - 419	Mottled grey limestone and marble	80
419 - 422	Grey limestone	95
422 - 432	Silicified limestone grading to white, leached limestone	70
432 - 442	White massive limestone grading to heavily leached limestone showing limonite stains	70
442 - 446	White massive limestone	70

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

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 12 1953

U. S. BUREAU OF MINES
MINING DIVISION
DEC 1 0 1952
RECEIVED

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of October 1952, 195 52 Docket No. DMEA 1613X Contract No. Idm-E193
Operator's Name Clark and Mathis Minerals zinc & lead
Address 821 W Pine Street, Deming, N. M.
Contract Amount, $ 12,654.00 Government Participation: 50 % Amount, $ 6,327.00

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						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor	437.70	4,353.51	4,791.21			
Supervision	0	1,266.66	1,266.66			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
~~Rec~~ Diamond bits	296.12	1,811.85	2,107.97			
~~Truck~~ Fuels & lubric'ts	71.74	732.04	802.51			
Other	1.26	309.78	312.31			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation (21/28x162)	130.00	1,750.28	1,880.28			
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment	3.00	24.31	27.31			
Sampling and Analysis	0	21.68	21.68			
Payroll Taxes	56.91	125.36	182.27			
Liability Insurance	13.06	121.31	134.37			
Transportation	5.43	84.59	90.02			
(8) Contingencies (specify):						
				1,015.22	10,601.37	11,616.59
TOTALS	1,015.22	10,601.37	11,616.59		*-155.01	-155.01
				1,015.22	10,446.36	11,461.58

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

Date 12-6-52 *Payee Clark and Mathis

Per R W Mathis Title partner

*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:

$ 5-07-61

Signature [illegible] (Authorized Certifying Officer)

Date 12-30-52 Vou. No. 53-75 A

(See other side)

* Previous Disallowances

(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. dm E 193 in accordance with the terms of the contract.

Signature John H. Soule WAH Title Mining Engineer Date Dec. 10. 1952

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature Robt. F. Shaw for W. R. King Title Executive Officer Date 12-16-52

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.

U. S. GOVERNMENT PRINTING OFFICE 205675

Form MF-104A
(April 1952)

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

U. S. BUREAU OF MINES
MINING DIVISION
DEC 1 0 1952
TUCSON, ARIZONA

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 1 5 1953

Month of October 1952 Docket No. DMEA 1613X Contract No. Idm-E 193
Operator's Name Clark and Mathis Minerals zinc and lead
Address 821 W. Pine Street, Deming, N. M.

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								
Raising								
Shafts								
Winzes								
Drilling: Core	feet	1,015.22	34	11,616.59	1,714	$6.78	1,800	$7.03
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
Total Distributed Costs		1,015.22		11,616.59				Total Costs Authorized by Contract
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
Total Costs		1,015.22		11,616.59				12,654.00

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.

Date Dec 6 Operator Clark and Mathis

Per R W Mathis Title partner

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.

U. S. GOVERNMENT PRINTING OFFICE 205676

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

234 New Customhouse
Denver 2, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 12 1952

December 8, 1952

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, Field Team, Region IV

Subject: Form MF-104, DMA Docket 1613X, Contract Idm-N193 (Lead-Zinc) Clark & Mathis, Mahoney Lead-Zinc Mine, Luna County, New Mexico

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 1613X, Contract Idm-N193, Luna Co., Clark & Mathis.

W. H. King

W. H. King

Enclosures

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION IV

Administrative Audit Difference Statement

Date: December 1, 1952
Payee's Reference: Progress Report
~~September, 1952~~

Clark & Mathis
621 Pine Street
Deming, New Mexico

Upon examination of the above Payee's Reference a difference was Found which made it necessary to suspend your account accordingly:

Amount Claimed $ 1123.19

Difference $ 88.34

Amount Approved $ 1034.85

The reason for the difference was due to:

Amount claimed to date for Supervision	$1265.66	
" " " " " Sampling & Analysis	21.68	
	1287.34	
Amount allowed under Contract	1200.00	
Disallowed		$88.34

Any reclaim for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

N. E. Stokes
Audit Section

R-IV-B & F Form No. 4
4-15-52 D

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

224 New Customhouse
Denver 2, Colorado

November 26, 1952

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMA Docket 1613X, Contract Idm E193 (Lead-Zinc) Clark and Mathis, Mahoney Lead-Zinc Mine, Luna County, New Mexico-Operator's Monthly Progress Report, for the period September, 1952

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

Work has been accomplished as authorized in the contract and payment is recommended for 50 percent of the amount as reported on Form MF-104, contingent on your verification of the correctness of applicable rates and arithmetical accuracy of computations, except for the following deductions.

Supervision, Engineering, and Sampling is allowed by contract to a maximum of $1,200.00. Charges claimed on forms MF-104 including month of September, 1952, consist of Supervision $1,266.66 and Sampling and Analysis $21.68 or a total of $1288.34. Therefore, the charge of $200.00 to Supervision must be cut to $111.66 on the September MF-104 report to remain within the allowable limit for this item.

The September 1952 Progress Report was received in this office November 21, 1952.

W. H. King
W. H King

RDB:es

cc: Contract
Sec. to the Oper. Comm. (2)
Storms
Chron.
Koschmann (2)

MINING DIVISION
REGION IV

November 12, 1952

Memorandum

To : W. M. King, Acting Chief, Mining Division, Region IV

From : Chief, Arizona-New Mexico Dr., Mining Div., Region IV

Subject : September 1952 Progress Report, Docket DMA-1613X, Contract Idm-2193, Clark & Mathis, Mahoney Lead-Zinc Mine, Luna County, N. Mex.

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

(1) Bureau of Mines engineer's report;

(2) Operator's Narrative report;

(3) Forms MF-104 and 104A with documentation.

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

As all work is in accordance to the terms of the contract, I recommend that the Government's share of the costs be paid.

Walter R. Storms

Walter R. Storms

CC W. M. King (6)
DMA-1613X
DF

WRStorms:frj

MINING DIVISION
REGION IV

November 12, 1952

Memorandum

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

From : John H. Soule', Mining Engineer, Tucson, Arizona

Subject : Progress Report for September 1952, Docket DMA-1613X, Contract Idm-8193, Clark and Mathis, Mahoney Zinc-Lead Mine, Tres Hermanas Mining District, Luna County, New Mexico.

The Mahoney mine was visited on October 10, 1952 to see the progress made on the project for the month of September. At the time of the visit, Hole No. 4, (site 3) was about 413 feet deep, thus approval is given to the 408 feet reported by the operators on Form MF-104A. No progress was reported in this hole before September 1 so the 408 feet constitutes the project advance for the month. Most of the material penetrated was marbelized limestone with some silicified limestone and a little monzonite.

ANALYSIS OF ENTRIES ON FORM MF-104

Item 2. Labor. This item totals $505.60 and is documented by a certified copy of the payroll. This item is approved.

Item 2. Supervision. This item is allowed by the contract at $200.00 per month and is documented on the certified copy of the payroll. However, this item is an allowable maximum and it has been exceeded by this month's entry by $66.66. Approval is given to $133.34 of the $200.00 with the remainder subject to the outcome of an amendment requesting extension of the project time.

Item 3. Diamond Bits. A total of $121.42 was expended for diamond bits during the month. This is approved. It will be noted from the operator's distribution sheet that an item of transportation amounting to $1.68 was not removed from the Christensen invoices. It is properly placed on Form MF-104. The item is documented.

CC W. H. King (Orig. & 6)
DMA-1613X
DF

JHSoule':frj

Item 3. Fuels and Lubricants. Expenditures for this item totalled $91.36, which is approved and documented. It will be noted from the Texas Co. invoice that $61.69 was actually spent for fuels and lubricants instead of the $60.69 reported on the distribution sheet. The $1.00 difference is made in the credit column of the invoice when $67.67 was paid on the balance carried forward of $66.67.

Item 3. Other. According to the distribution sheet, $3.62 was charged to this item. However, $1.75 of this amount is placed properly under repairs to equipment and the remaining $1.87 entered here. This entry is documented and approved.

Item 4. Depreciation. This item is allowed by the contract at $182.00 and is approved. A breakdown of the constituent items follows:

Surface diamond drill outfit	$88.00
Water pump	3.00
Power wagon	63.00
Pickup truck	28.00
Total	$182.00

Item 7. Repairs to equipment. This item totals $1.75, is documented and approved. This item appears in the distribution sheet under "Other".

Item 7. Sampling and Analysis. This item is documented and approved. It totals $3.06.

Item 7. Workmen's Compensation. This item totals $14.45 and is approved. It will be noted that the documentation is for $14.47 although only $14.45 was entered on the form.

Item 7. Transportation. This item totals $1.68 and is approved. It is documented and appears on the operator's distribution sheet under "Diamond bits".

According to Form MP-104, the expenditures for the month of September total $1,123.19. This amount is approved, except the supervision item which is an allowable maximum. Approval of the exception is passed to Denver. Project expenditures to date now total $10,601.37, which indicates a remaining balance of $2,052.63 unexpended, neglecting the outcome of the supervision item.

DISCUSSION OF FORM MP-104A

All of the project expenditures to date have been charged to diamond drilling. The total of $10,601.37 was expended in

drilling 1,680 feet of hole. This shows a unit cost of $6.31.

John H Soule'

John H. Soule', Mining Engineer
Arizona-New Mexico Branch
Mining Division, Region IV

Clark and Mathis
821 W. Pine Street
Deming, N. Mex.

PROGRESS AND COST REPORT ON CONTRACT NO. Idm-E 193, DOCKET No. DMA 1613X, for period September 1 to October 1, 1952

NARRATIVE

The proposed diamond drill hole number 3 for this project was collared in on September 2, 1952. The co-ordinates for its location on the map accompanying this contract (fig. 3) are 3690 North and 5912 East.

Drilling proceeded rapidly and without undue indident for the entire month, and 403 units, or feet, were drilled. The unit drilling cost for this contract, as can be observed on forms 104A for August and September, was reduced from $7.45 to $6.31 by this period.

No commercial ore-bearing zone was encountered (See log of hole 3 accompanying this report.)

R. W. Mathis, partner
Clark and Mathis

Note: All bills for the preceeding month have been paid.

Clark and Mathis
821 W. Pine Street
Deming, N. Mex.

Log of Diamond Drill Hole No. 3, Contract No. Idm-E 193, Docket No. DMA 1613X

Footage	Nature of formation	Percentage recovery
0 - 15	Marble	90%
15-25	Marble, extensively replaced by manganese oxides	95
25-29	Silicified limestone	95
29-40	Marble	75
40-50	Silicified limestone	30
50-60	Silicified limestone, marble, and silicified limestone	60
60-70	Marble	95
70-75	Alternating thin beds of marble and silicified limestone	80
75-100	Marble	95
100-120	Marble, with thin beds of Silicified limestone at 110', 113', and 114', and 3" of $ZnCO_3$ at 115'	90
120-130	Marble, extensively leached and showing limonite stains	60
130-138	Marble, honeycombed with solution channels	90
138-150	Grano-diorite porphyry	20
150-160	Grano-diorite porphyry, showing hydro-thermal alteration	30
160-170	Same	35
170-190	Same	65
190-208	Grano-diorite porphyry	65
208-217	Grano-diorite porphyry, showing hydro-thermal alteration	30
217-231	Garnetized limestone	85
231-233	Marble	90
233-234	Silicified limestone	90
234-242	Marble, with thin bed of silicified limestone at 238'	95
242-252	" " " " " " " " 250'	95
252-272	Marble, showing solution channel and limonite at 259'	95
272 -283	Marble	95
283-293	Alternating beds of marble and silicified limestone	95
293-303	Marble, showing extensive leaching and limonite deposition	15
303-323	Marble, with thin beds of silicified limestone at 306', 309', 312', and 320'	80
323-333	Limonite, and brecciated silicified limestone showing limonite stains	12
333-338	Limonite stained marble	30
338-343	Silicified limestone, brecciated and showing limonite stains	35
343-353	Same	10
353-363	Same	3
363-370	Limonite stained marble	30
370-373	Limonite stained brecciated silicified limestone	30
373-383	Fine-grained marble, showing extensive leaching and limonite deposition	35
383-397	Same	45
397-403	Fine-grained marble	90

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration
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 1613X Contract No. Idm-193
Operator's Name Clark and Mathis Minerals Zinc and lead
Address 821 W. Pine Street, Deming, New Mexico
Contract Amount, $ 12,654.00 Government Participation: 50 % Amount, $ 6,327.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor	505.60	3,847.91	4,353.51			
Supervision	200.00	1,066.66	1,266.66	133.34	1,066.66	1200.00
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
~~Track~~ Diamond bits	121.42	1,690.43	1,811.85			
Fuels & lubricants	91.36	640.68	732.04			
Other	1.87	307.91	309.78			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation	182.00	1,568.28	1,750.28			
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment	1.75	22.56	24.31			
Sampling and Analysis	3.06	18.62	21.68	.00	18.62	18.62
Payroll Taxes		125.36	125.36			
Liability Insurance W.C.	14.45	106.86	121.31			
Transportation	1.68	82.91	84.59			
(8) Contingencies (specify):						
				1053.47	9478.18	10531.65
TOTALS	1,123.19	9,478.18	10,601.37 * **		-66.67	-66.67
				-18.62		-18.62

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

Date _____ *Payee Clark & Mathis

Per R. W. Mathis Title Partner

*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:

1034.85 9411.51 10446.36
$ 517.43

Signature _____
(Authorized Certifying Officer)

Date 12/1/52 Vou. No. 53 65
(See other side)

* Previous Disallowance
** Disallowed as excess of contract in connection with Supervision (1266.66 21.68 **$1288.34)

(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. dm E193 in accordance with the terms of the contract.

Signature John H. Soule Title Mining Engineer Date Nov. 19. 1952

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

Signature W. H. King Title Geologist Officer Date 11/26/52

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-104E
(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 2 195 Docket No. DMEA 1613X Contract No. Idm - E193
Operator's Name Clark and Mathis Minerals zinc and lead
Address 621 W. Pine Street Deming, New Mexico

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	feet	1,123.19	405	10,601.37	1680	6.31	1800	7.03
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		1,123.19		10,601.37			TOTAL COSTS AUTHORIZED BY CONTRACT	
Operating Equipment Purchased							12,654.00	
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		1,123.19		10,601.37			[illegible]	

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 10/4/52 Operator Clark & Mathis

Per R. W. Mathis Title Partner

→ 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.

REMARKS:

(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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
NOV 1952

November 20, 1952

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, Field Team, Region IV

Subject: Form MF-104, DMA Docket 1613X, Contract Idm-E193, (Lead-Zinc) Clark and Mathis, Mahoney Mine, Luna County, New Mexico

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 August, 1952, pertaining to DMA Docket 1613X, Contract Idm-E193, Clark and Mathis.

for John F. Shaw
W. H. King

Enclosures

[illegible]
[illegible]
[illegible]

[illegible]

[illegible] November 17, 1952

[illegible] Progress
Report - August 1952

Clark & Mathis
821 Pine St.
Deming, New Mexico

Upon certified audit of the above Progress Report a difference was found which must be accounted for before your account can be closed:

Actual Costs	$ 1,142.71
Difference	$ 66.67
Amount Approved	$ 1,076.04

The reason for the difference was due to:

Invoices to support Texas statement were not attached. Itemization of the amount should be shown.

Any reclaim for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

N. E. Stokes
Audit Section

R-IV-B & F Form No. 4

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

New Customhouse
Denver 2, Colorado

November 13, 1952

Memorandum

To: T. A. Christensen

From: Executive Officer, DMEA Field Team, Region IV

Subject: DMA Docket 1613X, Contract Idm-E193, (Lead-Zinc) Clark & Mathis, Mahoney Mine, Luna County, New Mexico - Operator's Monthly Progress Report for the period of August, 1952

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

Work has been accomplished as authorized in the contract and payment is recommended for 50 percent of the amount as reported on Form MF-104, contingent on your verification of the correctness of applicable rates and arithmetical accuracy of computations, except for the following deductions.

Statement from the Texaco Company - $66.67

The operator has included a monthly statement from the above company but has not included the invoices or copies of such so as to conform with requirements of documentation. If the operator had at least penciled in on the statement the supplies purchased we could have approved the charges.

The operator should be informed on the Audit Difference Statement that he may reclaim the amount disallowed by making a reclaim on a supplemental report.

W. H. King
W. H. King

Enclosures

WLD:oc
cc: Contract
Secretary to the Operating Committee (2)
WRStorms
Chron.
AMKoschmann (2)

MINING DIVISION
REGION IV

November 10, 1952

Memorandum

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

From : Chief, Arizona-New Mexico Br., Mining Div., Region IV

Subject : August 1952 Progress Report, Docket DMA-1613K, Contract Idm-L193, Clark & Mathis, Mahoney Lead-Zinc Mine, Luna County, N. Mex.

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

(1) Bureau of Mines engineer's report;

(2) Operator's narrative report;

(3) Forms MF-104 and 104A with documentation.

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

As all work is in accordance to the terms of the contract, I recommend that the Government's share of the costs be paid.

Walter R. Storms

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

CC W. H. King (6)
DMA-1613K
DF

WRStorms:frj

MINING DIVISION
REGION IV

October 27, 1952

Memorandum

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

From : John H. Soule', Mining Engineer, Tucson, Ariz.

Subject : Progress Report for August 1952, Docket DMA-1613X, Contract Idm-E193, Clark and Mathis, Mahoney Zinc-Lead Mine, Tres Hermanas Mining District, Luna County, New Mexico.

The Mahoney mine was visited on September 5, 1952 to inspect the progress made on the project for the month of August 1952. At the time of the visit, Hole No. 4 was at a depth of about 80 feet, thus indicating a recent move onto this drill site. The operators reported no advance in this hole for the month.

Hole No. 3, (No. 4A) was 360 feet deep on August 1, 1952 and was bottomed at 500 feet which shows an advance of 140 feet for the month. This 140 feet is the project total for the month and is approved. Nothing of interest was noted in the core.

ANALYSIS OF ENTRIES ON FORM MF-104

Item 2. Labor. The labor for the month of August totalled $492.90. This sum is approved and is documented by a copy of the payroll. Of this amount, $254.40 is the wage paid to the driller and $238.50 is the amount paid to the drill helper.

Item 2. Supervision. This item totals $200.00 is allowed by the contract. This sum is approved and is documented on the copy of the payroll. In the "Totals previously reported" and "Totals to date" columns, these items have been corrected to not show the $309.68 that was disallowed on the June and July forms. Because of the disallowances, this account, an allowable maximum, was not exceeded.

Item 3. Diamond bits. A total of $72.54 was spent on diamond bits during August. This item is approved and is documented by copies of the bit manufacturer's invoices.

CC W. H. King (Orig. & 6)
DMA-1613X
DF

JHSoule':frj

Item 3. Fuels and Lubricants. For the month, $95.61 was spent on this item. It is documented and therefore approved. There is no breakdown of the individual purchases made from The Texas Co.

Item 3. Other. A sum of $54.80 was spent for the items listed. Upon analysis, however, some of the items are repairs to equipment and have been removed from this category and properly placed. According to the operator's distribution sheet, only the first three and the last items properly belong in this column and they total $32.24. $0.27 was removed from the last item and placed under transportation. The purchases are documented and are approved. The second two columns of the form have been corrected to delete $1.00 that was not allowed as being general overhead.

Item 4. Depreciation. A total of $182.00 is allowed by the contract for this item. It is approved and a breakdown follows:

Surface diamond drill outfit	$88.00
Water pump	3.00
Power wagon	63.00
Pickup truck	28.00
Total	$182.00

The second two columns of Form MF-104 have been corrected to delete $0.18 that was disallowed in the past.

Item 7. Repairs to equipment. The following listed items were removed from the "other" section of item 3 and placed here.

J. C. Vega, Welding water shank	$0.75
J. C. Vega, Sharpening chopping bit	2.00
Dunnes Automotive Supply, Cap screw	.15
Kauffman Motors, Magneto repair	1.52
Western Battery and Magneto Co., Magneto rep.	16.14
Western Battery and Magneto Co., Condenser	2.00
Total	$22.56

Item 7. Social Security. This item is documented by a copy of "Employer's Quarterly Federal Tax Return" on which a total of $51.10 was shown as paid. As the employer contributes only half of this amount, $25.55 is the amount charged to the project and is shown on Form MF-104. This entry is approved. It covers the quarter ending June 30, 1952 and has not been entered previously on any of the forms submitted.

Item 7. Workmen's Compensation. This item totals $14.02 and is documented by a cash receipt. It is approved.

Item 7. Transportation. In addition to the $4.55 shown on the operator's distribution sheet, $0.27 was removed from the Joy Mfg. invoice and $0.47 from the Western Battery and Magneto Co. invoice and placed in this item, as it is transportation. This makes this item total $5.29 which is documented and approved. The second two columns of Form MF-104 have been corrected to delete $3.12 which was not allowed on the July forms.

According to Form MF-104, $1,142.71 was spent on the project for the month of August. This added to the corrected previously reported total of $8,335.47 makes the correct total to date $9,478.18.

DISCUSSION OF FORM MF-104A

All of the August charges are to core drilling. As 1,272 feet have been drilled to date, and the cost of the drilling was $9,478.18, a unit cost of $7.45 is indicated. The above figures are derived from totals which have been corrected to remove any amounts not allowed.

John H Soule

John H. Soule', Mining Engineer
Arizona-New Mexico Branch
Mining Division, Region IV

Clark and Mathis
821 W. Pine Street
Deming, N. Mex.

PROGRESS AND COST REPORT ON CONTRACT NO. Idm-E193, DOCKET No. DMA 1613X, for period August 1 to September 1, 1952.

NARRATIVE

The 1000 revolution per foot feed gear ordered from the factory was installed on August 2, and core-drilling was resumed in Diamond Drill Hole # 4A for this project at 360 feet depth. The slower rate of penetration afforded by the new feed gear made it possible to drill on the average of seven feet per shift and to get about 25 feet of drilling out of a bit rather than the 14 feet per bit we had been getting.

The hole was drilled down to a depth of 500 feet without any undue incident or any significant change in the formation. The grano-diorite porphyry was relatively small grained to a depth of 408 feet, showing alternate bands of light and dark rock, the lighter apparently having been bleached by hydro-thermal action. The core from the rest of the hole showed a coarsely chrystalline grano-diorite porphyry with some concentrations of ferro-magnesian minerals in the last 60 feet of hole. It is assumed that we were in the main stock of the grano-diorite intrusion comprising the Tres Hermanas mountains.

Upon completion of Diamond Drill Hole 4A the drilling rig was moved and set up over Proposed Diamond Drill Hole 3 for this project.

Clark and Mathis

Note: All bills for the month of July have been paid.

Clark and Mathis
821 W. Pine Street
Deming, N. Mex.

Log of Diamond Drill Hole 4A (concluded), Contract No. Idm-E 193, Docket No. DMA 1613X

Footage	Nature of formation	Percentage recovery
360 - 393	Fine grained grano-diorite, intermittent portions of core being bleached by hydro-thermal action	90%
393 - 408	Same	85
408 - 436	Coarse crystalline grano-diorite	85
436 - 500	Coarse crystalline grano-diorite, showing occasional concentration of ferro-magnesian minerals	80%

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.
Defense Minerals Administration
RECEIVED
NOV 24 1952

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of August, 1952 Docket No. DMEA 1613X Contract No. Idm-2193
Operator's Name Clark and Mathis Minerals Zinc & Lead
Address 821 W. Pine St., Deming, New Mexico
Contract Amount, $12,654.00 Government Participation: 50 % Amount, $ 6,327.00

ITEMS OF COSTS	FOR OPERATOR'S USE			FOR GOVERNMENT USE ONLY		
	Monthly Total	Totals Previously Reported	Totals To Date	Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(1) Independent Short Form Contracts:						
Drilling						
Bulldozing						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor	492.90	3,355.01	3,847.91			
Supervision	200.00	866.66	1,066.66			
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
~~Track~~ Diamond Bits	72.54	1,617.89	1,690.43			
Fuels & lubricants	95.61	545.07	640.68	28.94		574.01
Other	32.24	275.67	307.91			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation	182.00	1,386.28	1,568.28			
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment	22.56		22.56			
Sampling and Analysis		18.62	18.62			
Payroll Taxes Soc. Sec.	25.55	99.81	125.36			
Liability Insurance W.C.	14.02	92.84	106.86			
Transportation	5.29	77.62	82.91			
(8) Contingencies (specify):						
TOTALS	1,142.71	8,335.47	9,478.18	1,076.04	8,335.47	9,411.51

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

Date Oct. 1952 *Payee Clark and Mathis

Per R. W. Mathis Title Partner

*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:

$ 538.02

Signature [illegible]
(Authorized Certifying Officer)

Date 11/18/52 Vou. No. DMA 53-61

(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. dmE 193 in accordance with the terms of the contract.

Signature John H. Soule WHS Title Mining Engineer Date Nov. 10. 1952

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE:

Signature W. H. King Title Executive Officer Date 11/13/52

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.

U. S. GOVERNMENT PRINTING OFFICE 205675

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 24 1952

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of August 195 2 Docket No. DMEA 1613X Contract No. Idm-E193
Operator's Name Clark and Mathis Minerals Zinc & Lead
Address 821 West Pine Street, Deming, New Mexico

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core		1,142.71	140	9,478.18	1,272	7.45	1,800	7.03
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		1,142.71		9,478.16				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		1,142.71		9,478.16				12,654.00

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.

Date Oct. 1952 Operator Clark and Mathis

Per R W Mathis Title Partner

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.

U. S. GOVERNMENT PRINTING OFFICE 205676

1613

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

224 New Customhouse
Denver 2, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 29 1952

~~Hetter~~
Betty

October 22, 1952

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, Field Team, Region IV

Subject: Form MF-104, DMA Docket 1613X, Contract Idm-X193, (Lead-Zinc) Clark & Mathis, Mahoney Mine, Luna County, New Mexico

Enclosed are two copies of the Operator's Monthly Progress Report MF-104 and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report and other supporting data for the month of July, 1952, pertaining to DMA Docket 1613X, Contract Idm-X193, Clark & Mathis.

W. H. King
W. H. King

Enclosures

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION IV

Administrative Audit Difference Statement

Date: October 20, 1952
Payee's
Reference: Progress
Report - July 1952

Clark & Mathis
821 Pine St.
Deming, New Mexico

Upon examination of the above Payee's Reference a difference was found which made it necessary to suspend your account accordingly:

Amount Claimed $ 943.70

Difference $ 112.80

Amount Approved $ 830.90

The reason for the difference was due to:

Supervision not documented	$109.68
Overcharge on Post Office receipt # 80	3.12
	$112.80

Any reclaim for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

N. E. Stokes
Audit Section

R-IV-B & F Form No. 4
4-15-52 D

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

Memorandum

October 10, 1952

To: T. A. Christensen

From: Acting Chief, Mining Division, Region IV

Subject: DMA Docket 1613X, Contract Idm-E193 (Lead & Zinc), Clark & Mathis, Mahoney Mine, Luna County, New Mexico - Operator's Monthly Progress Report, for the period July, 1952

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

Work has been accomplished as authorized in the contract and payment is recommended as reported on Form MF-104, contingent on your verification of the correctness of applicable rates and mathematical accuracy of computations, except for the following deductions:

Supervision	$109.68

This question of the supervision charge unsupported by documentation was discussed with a DMA Auditor and resulted in the above disallowance.

The Operator has submitted a copy of his quarterly report for State Unemployment for the months April, May and June, 1952. He makes note that he would like to have this copy back.

It was seen that the insurance charge on the Post Office receipt #80 amounted to $1.41, whereas the Operator notes the amount paid as $4.53.

John F. Shaw
John F. Shaw
For W. H. King

Enclosures

WLD:es
cc: Sec. to the Oper. Comm. (2)
Contract
Storms
Chron. Koschmann (2)

MINING DIVISION
REGION IV

October 7, 1952

Memorandum

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

From : Chief, Arizona-New Mexico Br., Mining Div., Region IV

Subject : July 1952 Progress Report, DMA Docket 1613X, Contract Idm-K193, Clark & Mathis, Mahoney Lead-Zinc Mine, Luna County, N. Mex.

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

(1) Bureau of Mines engineer's report;

(2) Operator's narrative report;

(3) Forms MF-104 and 104A with documentation.

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

As all work conforms to the terms of the contract, I recommend that the Government's share of the costs be paid.

Walter R. Storms

Walter R. Storms

CC W. HL. King (6)
DMA-1613X
DF

WRStorms:frj

Arizona-New Mexico Branch
xxxxxxxxxxxxxxxxxxxx

MINING DIVISION
REGION IV

September 29, 1952

Memorandum

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

From : John H. Soule', Mining Engineer, Tucson, Arizona

Subject : Progress Report for July 1952, Docket DMA-1613X, Contract Idm-2193, Clark and Mathis, Mahoney Zinc-lead Mine, Tres Hermanas Mining District, Luna County, New Mexico.

The Mahoney mine was visited on August 1, 1952 to see the progress made on the project. At the time of the visit, no work was being done and it was later found that the drill operator had quit and a replacement was being sought and that a new set of feed gears was awaited.

Judging by the rod rack, Hole No. 3 was about 370 feet deep. Approval is given the 300 feet of advance reported for the month of July. No interesting economic mineralization was found in the hole to this depth.

DISCUSSION OF FORM MF-104

Item 2. Labor and Supervision.

A certified copy of the payroll shows that $370.10 was paid for labor during the month. This sum is approved. However, it will be noted that the payroll contains one classification as advisor. In actuality, this should have been entered as a driller. It is also noted that the "advisor" is credited with 11 hours time while the days pay amounts to $13.00 which is pay only for 8 hours at the $1.70 rate. The $1.70 rate is within the terms of the contract where the driller is allowed $15.00 per shift or equivalent to an hourly rate of $1.875.

Supervision is allowed by the contract at $200.00 per month. As only 17 days of the 31 were worked, this ratio is applied

CC: W. H. King (Orig. & 1)
DMA-1613X
DF

JHSoule':als

to the $200.00 and $109.63 is entered on the form. This entry is approved.

Item 3. Fuels and Lubricants.

This entry totals $63.83 and is supported by the necessary documentation. The analyses of these costs are shown in the accompanying distribution sheet.

Diamond bits cost $174.82 for the month. The necessary documents are attached and the analyses are shown on the distribution sheet. No transportation charges are included in the above.

Other cost items are so entered and are documented in excess of the $51.25 entry. The largest item was a set of slow feed gears necessary to drill the hard rock. These were billed at $52.00 and only $43.19 of this amount was charged to the project. The express charges are charged under transportation.

Item 4.

Depreciation amounted to $99.81 for the month. This figure was derived by applying the 17/31 factor to the monthly total of $182.00 allowed by the contract. This entry is approved.

Item 7.

Payroll taxes - Documentation shows that this item should total $45.99 and as this is the amount entered, it is approved.

Workmen's Compensation. - Documentation of this item consists of a cash receipt. The amount is $9.93 and it is approved.

Transportation. - This amount is derived from several invoices and receipts as shown on the distribution sheet. This entry totals $18.24 and is approved.

A total of $943.70 was expended on the project for the month of July. A distribution sheet shows the details on the various items making the above total. The total to date spent on the project is $8,649.45.

As noted above, approval is given to the various items and approval is given to the work done although it seems a little slow. The drilling problem is on the difficult side.

DISCUSSION OF FORM NF 104A

All of the $943.70 costs for July are chargeable to core drilling. A per-foot unit cost for the drilling to date is $7.64 as shown on the form.

John H. Soule

JOHN H. SOULE', Mining Engineer, Tucson, Ariz.

Clark and Mathis
821 W. Pine Street
Deming, N. Mex.

PROGRESS AND COST REPORT ON CONTRACT NO. Idm-E 193, DOCKET No. DMA 1613X, for period July 1 to August 1, 1952.

NARRATIVE

Diamond core drilling was continued in Diamond Drill Hole # 4A for this project at an average rate of 21 feet per day drilled for the first ten days of July, the 5th, 7th, and 8th days of July being spent in changing motors on the water pump. The formation penetrated consisted primarily of marble containing numerous solution channels. (See log of hole drilled this month.) At approximately 320 feet, however, silicified limestone and garnet were found, and at 340 feet the formation turned to granodiorite porphyry of extreme hardness.

Ed Shoemaker, the drill operator to this date, put the hole on down to 360 feet, but quit on July 16 because of the extreme hardness of the formation and the slowness of progress. No driller could be found in the Silver City area, from which this supervisor is accustomed to securing labor, who would move to Deming to take over the job. A driller named Carl Wilder was found in the Deming area, though, and drilling was resumed on July 26.

On the same date this supervisor sent W. W. Skinner, a veteran drill operator and trouble-shooter, from Silver City to the project site in an effort to find a solution to drilling the hard formation so that the hole could be extended to the recommended depth in this contract of 500 feet. His recommendation was that a 1000 revolution per foot gear be secured to permit slower penetration. Since none was available in this district, one had to be ordered from the factory, and no other work was done during the balance of July.

Clark and Mathis
R. W. Mathis

Note: All bills for the month of June have been paid.

Clark and Mathis
821 W. Pine Street
Deming, N. Mex.

Log of Diamond Drill Hole 4A (cont'd), Contract No. Idm-E 193, Docket No. DMA 1613X

Footage	Nature of Formation	Percentage recovery
201 - 229	Marble	80%
229 - 266	Marble	70
266 - 296	Marble (core broken along bedding planes)	16
296 - 305	Broken marble and silicified limestone	25
305 - 319	Marble	90
319 - 334	Garnetized limestone	65
334 - 336	Silicified limestone and garnet	95
336 - 360	Grano-diorite porphyry	95

Clark and Mathis
PAYROLL WORKSHEET
July 1952

LABOR	M T W T F S	TOTAL HRS	RATE	REG WAGES	OVERTIME	TOTAL WAGES
June 30 to July 6						
Driller	8 8 8 8 8 2	42	1.60	64.00	4.80	68.80
Helper	8 8 8 8 8 2	42	1.50	60.00	4.50	64.50
July 7 to July 11						
Driller	8 8 8 8 10	43	1.60	64.00	7.20	71.20
Helper	8 8 8 8 11	43	1.50	60.00	6.75	66.75
July 14 to July 16						
Driller	8 8 3½	19½	1.60	31.20		31.20
Helper	8 8 3½	19½	1.50	29.25		29.25
July 26						
Driller	8	8	1.60	12.80		12.80
Helper	8	8	1.50	12.00		12.00
Advisor	11	11	1.70	13.60		13.60
			Total			370.10

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

Budget Bureau No. 42-R1036.3.
Approval expires [illegible]

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 29 1952

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

Month of July, 1952 Docket No. DMEA [illegible] Contract No. [illegible]
Operator's Name [illegible] Minerals [illegible]
Address [illegible]
Contract Amount, $ [illegible] Government Participation: [illegible] % Amount, $ [illegible]

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						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor	[illegible]	[illegible]	[illegible]			
Supervision [illegible]	[illegible]	[illegible]	[illegible]	00		1,066.66
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber						
Explosives						
Pipe						
Track [illegible]	[illegible]	[illegible]	[illegible]			
Fuels and Lubricants	[illegible]	[illegible]	[illegible]			
Other	[illegible]	[illegible]	[illegible]			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation [illegible]	[illegible]	[illegible]	[illegible]			
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis		[illegible]	[illegible]			
Payroll Taxes	[illegible]	[illegible]	[illegible]			
Liability Insurance	[illegible]	[illegible]	[illegible]			
Transportation	[illegible]	[illegible]	[illegible]	15.12		77.62
(8) Contingencies (specify):						
TOTALS	[illegible]	[illegible]	[illegible]	830.90	7,705.75	8,536.65
					*-201.00	201.00
				830.90	7,504.75	8,335.65

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

Date [illegible] *Payee [illegible]

Per [illegible] Title [illegible]

*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:

$

Signature
(Authorized Certifying Officer)

Date Vou. No.
(See other side)

* Previously Deducted

(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. dmE 193 in accordance with the terms of the contract.

Signature John H. Soule WDB Title Mining Engineer Date Sept 30 1952

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE

Signature J. L. F. Shaw for W. H. King Title Executive Officer Date 10-14-52

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
OCT 29 1952

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

Month of July 1952 Docket No. DMEA 1613X Contract No. Ico-193
Operator's Name Clark and Mathis Minerals Zinc and Lead
Address 621 West Pine Street, Deming, New Mexico

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								
Raising								
Shafts								
Winzes								
Drilling: Core	foot	943.70	159	8,649.45	1,132	7.64	1,800	7.03
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		943.70		8,649.45				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		943.70		8,649.45				12,654.00

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.

Date Sept. 13, 1952 Operator Clark and Mathis
Per R. W. Mathis Title Partner

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.

224 New Customhouse
Denver 2, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 29 1952

October 22, 1952

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, Field Team, Region IV

Subject: Form MF-104, DMA Docket 1613X, Contract Idm-E193, (Lead & Zinc) Clark & Mathis, Mahoney Mine, Luna County, New Mexico

Enclosed are two copies of the Operator's Monthly Progress Report MF-104 and MF-104A, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data for the month of June, 1952, pertaining to DMA Docket 1613X, Contract Idm-E193, Clark & Mathis.

W. H. King
W. H. King

Enclosures

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION IV

Administrative Audit Difference Statement

Date: October 20, 1952
Payee's
Reference: Progress
Report - June 1952

Clark & Mathis
621 Pine St.
Deming, New Mexico

Upon examination of the above Payee's Reference a difference was found which made it necessary to suspend your account accordingly:

Amount Claimed $1,441.87

Difference $ 201.00

Amount Approved $1,240.87

The reason for the difference was due to:

Supervision not documented	$200.00
Postage Stamps - General overhead not allowable under Par 10. of contract.	1.00
	$201.00

Any reclaim for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

N. E. Stokes
Audit Section

R-IV-B & F Form No. 4
4-15-52 D

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

October 10, 1952

Memorandum

To: T. A. Christensen

From: Acting Chief, Mining Division, Region IV

Subject: DMA Docket 1613X, Contract Idm-E193 (Lead & Zinc), Clark & Mathis, Mahoney Mine, Luna County, New Mexico - Operator's Monthly Progress Report, for the period June, 1952

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

Work has been accomplished as authorized in the contract and payment is recommended as reported on Form MF-104, contingent on your verification of the correctness of applicable rates and mathematical accuracy of computations, except for the following deductions:

Supervision	$200.00
Postage Stamps	1.00
Total	$201.00

An auditor from the Contract Administration and Audit Division was consulted on the above two items and recommended their disallowance until fully documented.

As on past payrolls, the operator does not show the names of the driller or the helper. We have the July report in this office, and it also does not show the names of the above two men on the payroll nor of the advisor. The operator will be informed of these needed corrections so as his August report will meet the requirements of documentation.

John F. Shaw
For. W. H. King

Enclosures

WLD:es

Cc: Sec. to Oper. Comm(2)
Contract, Storms,
Chron., Koschmann (2)

MINING DIVISION
REGION IV

October 7, 1952

Memorandum

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

From : Chief, Arizona-New Mexico Br., Mining Div., Region IV

Subject : June 1952 Progress Report, DMA Docket 1613X, Contract Idm-E193, Clark & Mathis, Mahoney Lead-Zinc Mine, Luna County, N. Mex.

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

(1) Bureau of Mines engineer's report;

(2) Operator's narrative report and drill logs;

(3) Forms MF-104 and 104A with documentation.

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

As all work conforms to terms of the contract, I recommend that the Government's share of the costs be paid.

Walter R. Storms

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

CC W.H. King (6)
DMA-1613X
DF

WRStorms:frj

MINING DIVISION
REGION IV

September 29, 1952

Memorandum

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

From : John H. Soule', Mining Engineer, Tucson, Arizona

Subject : Progress Report for June 1952, Docket DMA 1013X, Contract Idm-2193, Clark and Mathis, Mahoney Lead-Zinc Mine, Tres Hermanas Mining District, Luna County, New Mexico.

The Mahoney mine was visited on July 7, 1952 to observe the progress made on the exploration project there. Hole No. 2 had been stopped during the month and the drill equipment moved to the site of Hole No. 3 which is in the vicinity of Hole 4A as shown in the contract.

Hole No. 2 was reportedly completed at a depth of 251 feet. This is reasonable as the hole was at a depth of approximately 213 feet during the visit of the previous month. The igneous rock was encountered at an approximate depth of 125 feet and from this point down, occasional beds of limestone were encountered but the main rock was the monzonite. The ore occurs in the sedimentary rocks.

Hole No. 3 was collared and drilled to a depth of 201 feet during the month. At the time of the visit, the hole was about 250 feet deep so the 201 feet reported seems in order.

As 46 feet was drilled in Hole No. 2 and 201 feet was drilled in Hole No. 3, the June footage was 247 feet. This brings the footage to date to 973 feet.

ANALYSIS OF ENTRIES ON FORM MF 104

This is the first submission of the new revised forms and the individual entries are analysed as follows.

CC: W. H. King (Orig. & 2)
DMA 1013X
DF
JHSoule':als

Item 2. Labor.

The accompanying certified copy of the payroll was checked and found arithmetically correct and within the terms of the contract. The sum of $542.50 is approved as entered on the form.

Item 2. Supervision.

Supervision and engineering is allowed by the contract at $200.00 per month. This amount is approved as entered on the form and it seems that no documentation is required.

Item 3. Operating Materials and Supplies. Diamond Bits.

A total of $435.29 was spent on diamond bits during the month. This amount is supported by the following documents.

J. K. Harper, Dallas, Texas	
Above express collect, Railway Express Agency ...	$296.79
Christensen Diamond Products	66.05
Christensen Diamond Products	14.99
Christensen Diamond Products	55.23
Postal Department, Insured mail	.41
Pacific Greyhound Lines, Express on bit	.77
J. W. Clark, Stamps for mailing bits and correspondence	1.00
Total	$435.29

The above sum is approved although the postal and express charges should be segregated and entered under transportation.

Item 3. Operating Materials and Supplies. Fuels and Lubricants.

The amount expended for fuels and lubricants during June totalled $52.07, is supported by documents and is detailed as follows:

Mimbres Valley Farmer Ass'n, Grease	1.27
The Texas Company, Grease	7.34
The Texas Company, Gasoline	13.43
The Texas Company, Gasoline	12.43
Roy Rushbush's Service, Automobile service	17.55 *
Total	52.07

* There seems to be an error in addition in the last of the above invoices. The invoice totals $20.70 but the supporting sales slips and the figures on the invoice total only $17.55. As is probable from the accompanying addition slip, the machine was not cleared before the addition and the $3.15 on the slip appears in the total.

The above $52.07 is approved and is supported by documentation.

Item 3. Operating Materials and Supplies. Other.

This category contains various items such as cement and small items which were used on the project. The purchase of these items is approved as is their total of $15.00 as entered on the form. The purchases are detailed as follows:

Dunnes Automotive Supply, nuts and bolts	$ .38
T. Foy Lumber Co., Lumnite cement	9.18
J. A. Mahoney, Inc., Hardware	1.20
Fenwerth Galbraith, Lumber and cement	4.24
Total	$ 15.00

Item 4. Depreciation.

This item is allowed by the contract and the $182.00 as entered on the form is approved. No documentation seems required and the details are as follows:

Surface Diamond Drill Outfit	$ 88.00
Water Pump	3.00
Power Wagon	63.00
Pickup Truck	28.00
Total	$182.00

Item 7. Miscellaneous. Workman's Compensation Insurance.

This item is entered as $15.01 and is so approved. However, the method of computing the item is not clear except that the $15.01 is below the normal charge. If the rate is accepted at 5.519 percent, then based on a payroll of $542.50 the entry should be $29.94. If based only on the driller's wages, it should not be, then the entry should be $15.45. Both of these amounts are in excess of the actual entry on the form, hence the approval of the form entry.

An approved total of $1,441.87 was spent during the month of June. This sum added to the $6,263.88 previously reported brings the total to date to $7,705.75.

DISCUSSION OF FORM MF 104A

This project consists only of diamond drilling, hence only this item need be considered on the form. It will be noted that the unit costs for the drilling at the project are $7.92, a slight bit higher than the original estimates.

John H. Soule

JOHN H. SOULE', Mining Engineer, Tucson, Ariz.

[illegible]

Clark and Mathis
821 W. Pine Street
Deming, N. Mex.

PROGRESS AND COST REPORT ON CONTRACT NO. Idm-E 193, DOCKET No. DMA 1613X, for period June 1, 1952, to July 1, 1952.

NARRATIVE

Diamond drilling from the surface in Diamond drill Hole #2 for this project was continued from a depth of 205 feet to 251 feet. The rock drilled was grano-diorite porphyry. Its extreme hardness made progress slow and difficult, and a new diamond coring bit had to be used each shift. In consideration of these difficulties it was decided to abandon this hole, June 6.

The drilling equipment was moved to the site of Diamond Drill Hole 4A for this project, and the hole was collared in on June 13. The coordinates for the location of this hole on the map accompanying Contract Idm*E 193 are 4787 N and 5006 E.

The core recovered as drilling progressed consisted essentially of limestone and marble showing considerable limonite stain and broken rock characteristic of the cavernous sediments previously encountered. (See log of Holes 2 and 4A accompanying this report.) Several efforts were made to obtain return of the drill water by cementing, but in each instance the bit penetrated only an inch or so beyond the former depth before hitting another solution channel. A small quantity of broken formation containing galena was recovered at a depth of 106 feet. On June 23 upon pulling the rod and core-barrell from the hole after completing a ten foot run, it was found that the bit and shell were missing from the end of the core-barrel. The drill rod was lowered into the hole with fishing tools several times during the balance of the day and part of the next. No portion of the bit and shell were encountered and the vertical extension of the hole appeared to be limestone. It is assumed that the drill hit a cavern of sufficient demensions to permit the bit and shell to vibrate off the core-barrel and to fall

NARRATIVE (continued)

to one side. Williams bit # X-2430 and a Christensen Reaming Shell were lost. The depth of the hole was 116 feet. The section below this depth continued to be essentially broken and cavern us and limonite stained limestone. The depth of the hole on June 30, 1952, was 201 feet.

R. W. Mathis

R. W. Mathis
CLARK AND MATHIS

Note: All bills for the month of May have been paid.

CLARK & MATHIS
821 W. Pine Street
Deming, N. Mex.

Log of Diamond Drill Hole #2 (cont'd), Contract No. Idm-E 193, Docket No. DMA 1613X

Footage	Nature of formation	Percentage recovery
201 - 206	Grano-diorite porphyry	98%
206 - 211	Same, containing stringers of quartz and gypsum	70
211 - 213	Grano-diorite porphyry	50
213 - 216	Gypsum	85
216 - 219	Grano-diorite popphyry	85
219 - 229	Same, with a concentration of ferro-magnesian minerals at 221 ft, and a small vein of iron oxide at 223	90
229 - 232	Grano-diorite porphyry, showing brecciation	35
232 - 234	Same	60
234 - 237	Same	45
237 - 244	Grano-diorite porphyry showing heavy ferro-magnesian concentration at 243	85
244 - 250	Grano-diorite porphyry (Bottom of hole)	88

Log of Diamond Drill Hole #4A

0 - 24	Massive white limestone, partly silicified	48%
24 - 31	Massive grey limestone	80
31 - 33	Silicified limestone	90
33 - 38	Massive grey limestone	80
38 - 50	Same	55
50 - 67	Marble, showing limonite stain at 66 ft	30
67 - 70	Marble, with much limonite stain	50
70 - 79	Cavernous, limonite stained limestone and marble	55
79 - 80	Silicified limstone	80
80 - 90	Cavernous limestone and marble	60
90 - 106	Marble, showing MnO stain at 104 ft and galena crystals at 106	34
106 - 116	Marble and silicified limestone	50
116 - 118	Cavernous limestone containing much limonite	55
118 - 122	Same, alternating with beds of massive limestone	55
122 - 130	Cavernous, limonite stained limestone	70
130 - 177	Marble, thinly bedded and broken	45
177 - 189	Same, containing bands of silicified limestone	50
189 - ~~229~~ 201	Marble	80
~~229 - 266~~		~~70~~
~~266 - 296~~		

CLARK & MATHIS

PAYROLL WORKSHEET

June, 1952

LABOR	M T W T F S	TOTAL HRS	RATE	REG WAGES	OVERTIME	TOTAL WAGES
June 2 to June 6, 1952						
Driller	8 8 8 8 8 2	42	1.60	64.00	4.80	68.80
Helper	8 8 8 8 8 2	42	1.50	60.00	4.50	64.50
June 9 to June 14, 1952						
Driller	4 8 8 8 8 8	44	1.60	64.00	9.60	73.60
Helper	4 8 8 8 8 8	44	1.50	60.00	9.00	69.00
June 16 to June 20, 1952						
Driller	8 8 8 8 8	40	1.60	64.00		64.00
Helper	8 8 8 8 8	40	1.50	60.00		60.00
June 23 to June 27, 1952						
Driller	8 10½ 8 8 9½	44	1.60	64.00	9.60	73.60
Helper	8 10½ 8 8 9½	44	1.50	60.00	9.00	69.00
						542.50

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1036.3.
Approval expires 6-30-53.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 29 1952

OPERATOR'S MONTHLY REPORT AND VOUCHER

Month of [illegible], 195[illegible] Docket No. DMEA [illegible] Contract No. [illegible]
Operator's Name [illegible] Minerals [illegible]
Address [illegible]
Contract Amount, $ [illegible] Government Participation: [illegible]% Amount, $ [illegible]

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						
Crosscutting						
Drifting						
(2) Labor and Supervision:						
Labor	[illegible]	[illegible]	[illegible]			
Supervision	[illegible]	[illegible]	[illegible]	00		866.66
Technical Services						
(3) Operating Mat'ls. and Supplies:						
Timber	[illegible]	[illegible]	[illegible]	434.29		1,442.07
Explosives						
Pipe						
Track						
[illegible]	[illegible]	[illegible]	[illegible]			
[illegible]	[illegible]	[illegible]	[illegible]			
(4) Operating Equipment:						
Rental						
Purchase						
Depreciation	[illegible]	[illegible]	[illegible]			
(5) Initial Rehabilitation and Repairs						
(6) New Bldgs., Improvements, etc.						
(7) Miscellaneous:						
Repairs to Equipment						
Sampling and Analysis		[illegible]	[illegible]			
Payroll Taxes		[illegible]	[illegible]			
Liability Insurance						
[illegible]	[illegible]	[illegible]	[illegible]			
[illegible]		[illegible]	[illegible]			
(8) Contingencies (specify):						
TOTALS	[illegible]	[illegible]	[illegible]	1,240.87	6,263.88	7,504.75

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

Date [illegible] *Payee [illegible]

Per [illegible] Title [illegible]

*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:

$ 620.44

Signature [illegible]
(Authorized Certifying Officer)

Date 10/20/52 Vou. No. [illegible]

(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 E193 in accordance with the terms of the contract.

Signature John H. Soule WRD Title Mining Engineer Date Sept 30, 1952

APPROVAL BY DMEA EXECUTIVE OFFICER OR ALTERNATE

Signature [illegible] Title Executive Officer Date 10-14-52

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 2 9 1952

OPERATOR'S UNIT COST AND PROGRESS REPORT

Month of June 195 2 Docket No. DMEA [illegible] Contract No. [illegible]
Operator's Name [illegible] Minerals [illegible]
Address [illegible]

OPERATION	UNIT	COSTS THIS MONTH	UNITS THIS MONTH	COSTS TO DATE	UNITS TO DATE	UNIT COSTS TO DATE	AUTHORIZED BY CONTRACT	
							Units	Unit Costs
Drifting								
Crosscutting								
Raising								
Shafts								
Winzes								
Drilling: Core	foot	1,441.07	217	7,703.75	973	7.92	1,000	7.69
Churn								
Auger								
Stripping								
Trenching								
Test Pits								
Roads and Trails								
TOTAL DISTRIBUTED COSTS		1,441.07		7,703.75				TOTAL COSTS AUTHORIZED BY CONTRACT
Operating Equipment Purchased								
Initial Rehabilitation and Repairs								
New Buildings, Improvements, etc.								
TOTAL COSTS		1,441.07		7,703.75				[illegible]

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 June 30, 1952 Operator [illegible]

Per [illegible] Title Partner

REMARKS: All bills for the month of May have been paid, and all expenditure included in charge-out to this project.

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

Keller

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

224 New Customhouse
Denver 2, Colorado

August 13, 1952

Memorandum

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

From: Executive Officer, Field Team, Region IV

Subject: Form MF-104, DMA Docket 1613X, Contract Idm-E193 (Lead-Zinc) Clark and Mathis, Mahoney Mine, Luna County, New Mexico-Operator's Monthly Progress Report, for the period of May, 1952.

Enclosed are two copies of the Operator's Monthly Progress Report, Form MF-104, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data for the month of May, 1952, pertaining to DMA Docket 1613X, Contract Idm-E193, Clark & Mathis, Mahoney Mine, Luna County, New Mexico.

W. H. King
W. H. King

Enclosures

File

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION IV

Administrative Audit Difference Statement

Date: August 11, 1952
Payroll
Reference: Progress
Report, May 1952

Clark & Mathis
821 Pine Street
Deming, New Mexico
I-DMA-E-193

Upon examination of the above Payroll Reference a difference was found which made it necessary to amend your account accordingly:

Amount claimed $ 1,701.89

Difference $ 122.99

Amount Approved $ 1,578.90

The reason for the difference was due to:

111.00 claimed for cementing 74 feet of diamond drill hole.	111.00
11.99 claimed for cementing on February report	11.99
Total	122.99

Not allowable under terms of contract "Cementing 180 feet at $1.50 per foot can only be interpreted as an estimate for cementing supplies and does not mean that cementing can be charged for at the rate of $1.50 per foot.

Any receipts for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

N. E. Stokes
Audit Section

R-PY - E&P Form No. 4
4-23-52 D

224 New Customhouse
Denver 2, Colorado

July 28, 1952

Memorandum

To: T. A. Christensen

From: Acting Chief, Mining Division, Region IV

Subject: DMA Docket 1613X, Contract Idm-E193 (Lead-Zinc)
Clark & Mathis, Mahoney Mine, Luna County, New Mexico,
Operator's Monthly Progress Report, for the period
of May 1952

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

Work accomplished is in accordance with the contract and payment is recommended as follows:

Total Reported		$1,701.89
Disallowances (explained below):		
February 1952 Report	11.99	
May 1952 Report	111.00	122.99
		$1,578.90
Government participation - 50 percent		$789.45

The operator has shown in this May Progress Report the amount of $111.00 as the charge for cementing 74 feet of diamond drill hole. This cost cannot be allowed. In Exhibit "A" of the contract, under item (3), a cost breakdown is shown for supplies and materials estimated to be needed during the project. Under this item, cementing is set up as 180 feet at $1.50 per foot. This can only be interpreted as an estimate for cementing supplies, if needed, and is included so that the total project costs will reflect an allowance for such supplies. It does not mean that the operator can charge this per foot breakdown estimate to the project in terms of feet cemented.

We are also disallowing the charge of $11.99 entered on the February report. When that report was approved for payment it was believed that this charge was for cement as entered, but a check back shows that 8 feet of hole was cemented during that period and it looks as if $11.99 was figured on the same basis as the above, excepting $0.01.

W. H. King

W. H. King

Enclosures

WLD:jp
Subj
Secretary to the Operating Committee (2)
WRStorms
AHKoschmann (2)
Chron

MINING DIVISION
REGION IV

July 17, 1952

Memorandum

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

From : Chief, Arizona-New Mexico Br., Mining Div., Region IV

Subject : May 1952 Progress Report, DMA Docket 1613X, Contract Idm-E193, Clark & Mathis, Mahoney Lead-Zinc Mine, Luna County, N. Mex.

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

(1) Bureau of Mines engineer's report;
(2) Operator's progress report;
(3) Form MF-104.

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

As all accounts conform to the contract, with the possible exception as noted in Soule's report, I recommend that the Government's share of the costs be paid.

Walter R. Storms

Walter R. Storms

CC W. H. King (6)
DMA-1613X
DF

WRStorms:frj

MINING DIVISION
REGION IV

July 16, 1952

Memorandum

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

From : J. H. Soule', Mining Engineer, Tucson, Ariz.

Subject : May 1952 Monthly Progress Report, Docket DMA-1613X, Contract Idm-E193 Clark and Mathis, Mahoney Lead-Zinc Mine, Tres Hermanas Mining District, Luna County, New Mexico.

The Mahoney mine was visited on June 3, 1952. Drilling had been started on hole No. 2 and the hole was about 218 feet deep at the time of the visit. A footage of 205 feet was reported for the month making the total drilled to date 726 feet. Drilling continued without water return as cementing failed to stop the water loss after drilling new hole. For the month, 74 feet of cementing was reported.

ANALYSIS OF ENTRIES ON FORM MF-104

Item 2C. Equipment furnished by operator. The following items and rentals allowed by the contract were used during the month:

Surface drill outfit	$88.00
FM water pump	3.00
Power wagon	63.00
Pickup truck	28.00
Total	$182.00

The sum of $182.00 is entered on Form MF-104 and is so approved.

Item 4. Labor. The payrolls were checked and the amount of $542.50 as entered on Form MF-104 is approved.

Item 5. Supervision. This item is allowed at $200.00 per month and is so approved as entered on Form MF-104.

CC W. H. King (Orig. & 6)
DMA-1613X
DF

JHSoule':frj

Item 6. Supplies, Other. Supplies obtained for project use during the month of May are detailed as follows:

J. A. Mahoney, Inc., Deming, N. Mex.		
Bolts	$0.10	
Washers	.14	
2 pump leathers	2.26	
Tax on preceding article	.05	
Total	$2.55	$2.55
Howard Connolly, Deming, N. Mex.		
2-inch tube for standpipe, 10 ft.		5.50
Joe Deckert, Deming, N. Mex.		
Iron plate for foot claim		1.33
Joe Deckert, Deming, N. Mex.		
Pipe bushing		0.65
Joe Deckert, Deming, N. Mex.		
1 2-in. x 12-in x 20-ft., 40 bd. ft. @ 8¢	$3.20	
3 2-in x 10-in x 16 ft., 80 bd. ft. @ 8¢	6.40	
Total	$9.60	9.60
J. C. Vega, Deming, N. Mex.		
Repair foot clamp, 1 job.		5.00
Mimbres Valley Farmers Association, Deming, N. Mex.		
4-in. pump leather		0.87
Parrish Bus Lines, Deming		
Two parcels of bits from Silver City to Deming		1.54
Total supplies for May		$27.24

The last item would be better charged to transportation or to bits rather than to supplies. However, receipted invoices or bills were noted for all items and the $27.23 as entered on Form MF-104 is approved, this amount being only a cent less than the sum of the bills.

Item 9. Insurance, Workemn's Compensation. This amount is based only on the drillers wages of $280.00. The amount of $15.01 is approved as entered on Form MF-104.

Item 10. Other, Fuels and Lubricants. The invoices covering the above items are detailed as follows:

Roy Ruebush's Service, Deming, New Mexico		
Tire repair, pickup	$0.51	
Tire repair, power wagon	2.50	
Tire repairs, pickup	1.02	
Gasoline, 10 gals.	3.05	
Lubrication	1.02	
Service brakes and air cleaner	1.27	
Gasoline, 10 gals.	3.05	
Total	$12.42	
Less	.40	
Paid	$12.02	$12.02
The Texas Company, Deming, N. Mex.		
Bill 197,368, Gear Lube, 35 lbs.	$ 6.53	
197,388, Gasoline, 55 gals.	13.48	
197,438, Gasoline, 300 gals.	74.49	
197,439, Marfak, 35 lbs.	7.34	
Ursa oil, 5 gals.	4.74	
197,369, Gasoline, 50 gals.	12.45	
Total, Receipt 280,316	$119.03	$119.03
Total fuels and lubricants for May		$131.05

The above total of $131.05 exceeds by one dollar the amount entered on Form MF-104. This is probably an error in addition. The sum of $130.05 as entered on Form MF-104 is approved.

Item 11. Other, Diamond Bits. Diamond bit costs are detailed as follows:

Christensen Diamond Products Co., Salt Lake City, Utah.		
Invoice 26015, 5-13-52	$45.48	
Invoice 25962, 5-13-52	141.35	
Invoice 26148, 5-15-52	77.73	
Invoice 26324, 5-20-52	33.80	
Invoice 26325, 5-21-52	156.84	
Invoice 26537, 5-31-52	37.58	
Invoice 26554, 5-31-52	76.72	
Invoice 26568, 5-31-52	86.10	
Credit Memo 3795, 5-24-52	rel84.35	
Total	$471.25	$471.25
Railway Express Agency		
Bits from Salt Lake City to Deming		4.89
Post Office Dept., Deming, Bits from Deming to Salt Lake City		
Postage and insurance.		
Receipt 4270	1.46	
Receipt 4215	.55	
Receipt 4343	.90	
Receipt 4326	1.95	
Total	$4.86	4.86
Western Union, Deming, N. Mex. From Deming to Salt Lake City re bits.		0.86
Total diamond bits for May		$481.86

This item is as entered on Form MF-104 and is so approved. However, it may have been preferable to enter the last items under transportation. In addition, in the Christensen invoice No. 26537, two core springs totalling $4.20 were purchased, which could have been entered under supplies.

Item 11, Other, Assaying. Approved assaying charges total $12.24 and are detailed as follows:

Smith Emery Co., Los Angeles, Calif.	
One spectrographic analysis	$7.14
Minerals Laboratories, Silver City, N. Mex.	
One assay for gold and silver	1.53
One assay for lead, zinc and manganese	3.57
Total assaying	$12.24

Item 11, Other, Cementing. By the contract, cementing may be allowable at $1.50 per foot. Seventy four feet of hole was cemented making a total of $111.00. This sum, as entered on Form MF-104, is tentatively approved pending Denver's interpretation of the cementing clause.

The project costs for May totalled $1,701.89 and this amount is approved pending the interpretation of cementing as noted above. This makes the total to date, $6,386.69. Some corrections were necessary on Form MF-104 and these were made only on the last copy. The other copies can be corrected if the corrections are acceptable.

It is noted that the funds allowed for the use of the operator's equipment and those allowed for fuels and lubricants have been depleted. However, Amendment No. 1 allows the use of the contingency fund to make up for any deficiency in these items.

John H. Soule'

John H. Soule', Mining Engineer
Arizona-New Mexico Branch
Mining Div., Region IV

Clark and Mathis
821 W. Pine Street
Deming, N. Mex.

PROGRESS AND COST REPORT ON CONTRACT NO. Idm-E 193, DOCKET No. DMA 1613X, for period May 1 to June 1, 1952

NARRATIVE

Diamond drill equipment for surface drilling was set up on the Mahoney property and Diamond Drill Hole #2 for this project was collared in on May 5, 1952. The coordinates for the location of this hole on the map accompanying Contract Idm-E 193 are 4035 North and 5286 East.

The hole was drilled vertically to a depth of 205 feet by May 31. Several efforts were made to obtain return of drill water by cementing. In each instance return of drill water was lost after drilling a few inches beyond the former depth of the hole. In consideration of the frequency and extent of solution channels, a decision was made to drill without water return.

Drilling proceeded without undue incident to a depth of 91 feet. The core obtained indicated that the recrystallized limestone, or marble, found at the surface extends to that depth. Garnetized and silicified limestone containing small stringers and sizeable intrusions of grano-diorite porphyry was encountered from this depth to 205 feet. (see log of hole accompanying this report).

Much of the limestone comprising this lower section appeared to have the crystal structure of marble, but its extreme hardness indicates that the calcite crystals of the marble have been completely replaced by silica. The hardness of this formation and that of the grano-diorite was such that the cutting capacity of an AX diamond coring bit was flattened, on an average, after drilling 15 feet.

R. W. Mathis

R. W. Mathis

Note: All bills for the month of Appil have been paid.

Clark and Mathis

Log of Diamond Drill Hole #2, Contract No. Idm-E 193, Docket No. DMA 1613X

Footage	Nature of Formation	P ercentage recovery
0 - 19	Recrystalized limestone	50%
19 - 27	Same	95
27 - 40	Same	60
40 - 43	Same	70
43 - 54	Recrystallized limestone showing many solution cavities	65
54 - 66	Recrystallized limestone with solution cavities, mineral stains, and mud	16
66 - 74	Very porous recrystallized limestone	4
74 - 83	Same	20
83 - 85	Same	30
85 - 91	White recrystallised limestone grading to gray garnetized limestone	40
91 - 93	Grey garnetized limestone	30
93 - 100	Silicified limestone containing stringers of grano-diorite porphyry	98
100 - 126	Same	95
126 - 131	Grano-diorite porphyry	100
131 - 138	Grand-diorite porphyry with abundant ferro-magnesian minerals	100
138 - 140	Wollastonite	100
140 - 145	Grano-diorite porphyry with stringers of Wollastonite	95
145 - 150	Dark, fine grained diorite (?) intruding grano-diorite	85
150 - 158	Silicified limestone with stringer of fine grained diorite (?)	98
158 - 160	Recrystallised and silicified limestone	98
160 - 163	Grano-diorite porphyry	90
163 - 170	Recrystallized and silicified limestone	95
170 - 174	Same	98
174 - 177	Grano-diorite porphyry	98
177- 205	Recrystallised and silicified limestone with stringers of grano-diorite porphyry	95

CLARK & MATHIS
PAYROLL WORKSHEET

LABOR	M T W T F S	TOTAL HRS	REG RATE	REG WAGES	OVERTIME	TOTAL WAGES
			May 5 to May 9, 1952			
Driller	8 8 8 8 8	40	1.60	64.00	0	64.00
Helper	8 8 8 8 8	40	1.50	60.00	0	60.00
			May 12 to May 17, 1952			
Driller	8 8 8 8 8 7	47	1.60	64.00	$16.80	80.80
Helper	8 8 8 8 8 7	47	1.50	60.00	15.75	75.75
			May 19 to May 24, 1952			
Driller	8 8 7 7 8 5	43	1.60	64.00	7.20	71.20
Helper	8 8 7 7 8 5	43	1.50	60.00	6.75	66.75
			May 26 to May 31, 1952			
Driller	8 8 8 0 8 8	40	1.60	64.00	0	64.00
Helper	8 8 8 0 8 8	40	1.50	60.00	0	60.00
				TOTAL		$542.50

MF-104
(August 1951)

Budget Bureau No. 42-R1036.2.
Approval Expires 6-30-52.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Contract No. Idm-E 193

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 18 1952

Name of Operator Clark & Mathis
Docket No. DMA 1613X
Total Contract Amount $ 12,654.00
Government Participation: 50 % Amount, $ 6,327.00
Distribution of Expenditures for Month of May, 1952

STRATEGIC AND CRITICAL MINERAL EXPLORATION PROGRAM
OPERATOR'S MONTHLY PROGRESS REPORT

Operators are to submit monthly reports to the designated field representative of the Defense Minerals Administration. Reports are to be submitted in quadruplicate prior to the 15th day of the month following the reporting period.

Narrative.—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered is to be furnished.

Maps.—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.

Cost Accounts.—All applicable parts of this form are to be filled in. This report will form the basis for payments of the Government's participating share of expenses. Audits of accounts may be made from time to time.

CERTIFICATION

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.

Clark & Mathis
(Name of Company)

By R. W. Mathis
(Signature of Authorized Official)

July 3, 1952
(Date)

Partner
(Title)

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.

16—64068-3

MONTHLY SUMMARY COST STATEMENT

List as Shown on Exhibits Attached to Contract

Item	Monthly Total	Totals Previously Reported	Totals to Date	For Government Use Only		
				Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
1. Fixtures and Improvements:						
(a) Facilities						
(b) Buildings						
(c) Fixtures						
2. Operating Equipment:						
(a) Purchased[1]						
(b) Rented[2]						
(c) Furnished by operator	$182.00	922.65	$1104.65			
3. Rehabilitation and Repairs:						
(a) Facilities						
(b) Buildings						
(c) Installations						

MONTHLY SUMMARY COST STATEMENT—Continued

Item	Monthly Total	Totals Previously Reported	Totals to Date	For Government Use Only: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(d) Fixtures						
4. Labor[3]	542.50	1899.91	2442.41			
5. Supervision	200.00	666.66	866.66			
6. Supplies						
(a) Timber						
(b) Explosives						
(c) Repair Parts						
(d) Other	27.23	183.19	210.42			
7. Power						
8. Transportation					62.50	62.50
9. Insurance						
(a) Fire						
(b) Public Liability						
(c) Workmen's Compensation	15.01	52.89	67.90			
Ssec & Unempl. tax	0	53.82	53.82			
10. Contract Work						
11. Other (specify)						
Fuels & lubricants	130.05	299.07	429.12			
Diamond Bits	481.86	525.92	1007.78			
Assaying	12.24	6.38	18.62			
Cement 74 ft	111.00	11.99	122.99	000	11.99	11.99
Total	1701.89	4622.48	6324.37	1,590.89	4,684.98	6,275.87
Deletions				—	-11.99	-11.99
Adjusted totals					4,672.99	6,263.88
Totals previously reported				4,672.99		
Totals to date				6,263.88		

[1] Enter amount paid during month toward total purchase price.
[2] Payments for rental of equipment or prorated depreciation on equipment owned by contractor.
[3] Submit copy of the Social Security form filed under the Old Age Insurance system showing complete wage and salary data or furnish copy of payroll sheet giving same data.

NOTE.—Indicate that portion of supervisory, office, and engineering salaries that is chargeable to this project.

FOR GOVERNMENT USE ONLY

Checked by
Entered by
Approved by John H. Soule W.A.H. Wm
Amount approved for payment
Remarks

All supervision indicated is chargeable to this project.

R. W. Mathis

Schedule DMA 53-20
Aug 11, 1952
789.45

16—64068-3

EXPLORATION UNIT COST AND PROGRESS REPORT FOR MONTH OF May, 1952

(Supply Data Below Applicable Only to Your Operations)

Item	Costs					Progress [4]				
	Wages [1] and salaries	Equipment [2]	Supplies	Other [3]	Total	Unit	Units this month	Units previously reported	Units to date	Units authorized by contract (Exhibit A)
Drifting										
Crosscutting										
Raising										
Shafts										
Winzes	742.50	182.00	639.14	138.25	1701.89	feet	205	521	726	
Drill holes										
Overburden										
Rehabilitation and preparation										
Geology and geophysics										
Trenching										
Sampling and assaying										
Roads and trails										
Test pits										
Other (specify)										
Totals	742.50	182.00	639.14	138.25	1701.89	feet	205	521	726	

[1] Prorate supervisory, engineering, and office salaries in proportion to man-shifts of direct labor.
[2] Prorate charges for equipment that is not exclusively for one type of job (such as compressors) against authorized units of work in each category.
[3] Where entries in the "Other" column (above) are more than 25 percent of the total expenditures, a breakdown of this item should be made.
[4] Specify whether feet, cubic feet, acres, miles, etc.

16—64068-3 U. S. GOVERNMENT PRINTING OFFICE

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

224 New Customhouse
Denver 2, Colorado

June 26, 1952

Memorandum

To: Secretary to the Operating Committee
Defense Minerals Exploration Administration

From: Executive Officer, Field Team, Region IV

Subject: Form MF-104, DMA Docket 1613X, Contract Idm-E193, Clark & Mathis, Mahoney Lead-Zinc Mine, Tres Hermanas Mining District, Luna County, New Mexico

Enclosed are two copies of the Operator's Monthly Progress Report Form MF-104, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data for the period of April, 1952, pertaining to DMA Docket 1613X, Contract Idm-E193, Clark & Mathis.

W. H. King
W. H. King

Enclosures

jp
cc: WRStorms
Contract
Chron
AHKoschmann (2)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 30 1951

File in corresponding docket

U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
REGION IV

Administrative Audit Difference Statement

Date: June 20, 1952
Payee's
Reference: Progress
Report - April 1952

Upon examination of the above Payee's Reference a difference was found which made it necessary to suspend your account accordingly:

Amount claimed $ 1,504.79

Difference $ .18

Amount Approved $ 1,504.61

The reason for the difference was due to:

Overcharge for equipment depreciation. .18

Any reclaim for deductions made above must be supported by the ORIGINAL of this form.

Very sincerely yours,

N. E. Stokes

R-IV - B&F Form No. 4
4-15-52 D

Mining Division
Region IV

June 16, 1952

Memorandum

To: T. A. Christensen

From: Acting Chief, Mining Division, Region IV

Subject: DMA Docket 1613X, Contract Idm-E193, Clark & Mathis, Mahoney Lead-Zinc Mine, Tres Hermanas Mining District, Luna County, New Mexico, Operator's Monthly Progress Report for the period of April, 1952

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

Work accomplished is in accordance with the contract and payment is recommended in the amount of $752.32, which is 50 percent of the total of $1,504.61, and which reflects a disallowance of $0.18 for overcharge of depreciated equipment. This is clearly explained in the inspecting engineer's report.

Exception is taken by the engineer to the charge of $58.53 for 25 E-rod couplings listed in Item 6d, Supplies. Rod couplings are a necessary drilling supply item and are expendable. We believe this charge to be allowable under the contract and are approving it.

W. H. King

W. H. King

Enc.

WLD:oc

cc: Secretary to the Oper. Comm. (2)
Contract
WRSterms
AHKoschmann (2)
Chron.

MINING DIVISION
REGION IV

June 2, 1952

Memorandum

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

From : Chief, Arizona-New Mexico Br., Mining Div., Region IV

Subject : April 1952 Progress Report, DMA Docket 1613X, Contract Idm-E193, Clark & Mathis, Mahoney Lead-Zinc Mine, Tres Hermanas Mining District, Luna County, N. Mex.

Enclosed in quintuplicate are the following for the above report:

(1) B ureau of Mines engineer's report;
(2) Operator's narrative report;
(3) Form MF-104

Also enclosed are 2 extra copies of our engineer's report.

J. H. Soule', who checked these accounts for April, has made several changes on Form MF-104 which I approve.

I recommend that 50 percent of the total of $1,446.08 be paid by the Government as its share of the April expenses at this project.

Walter R. Storms

Walter R. Storms

CC W. H. King (orig. & 6)
DMA-1613X
DF

WRStorms:frj

MINING DIVISION
REGION IV

May 26, 1952

Memorandum

To : W. R. Storms, Chief, Arizona-New Mexico Br., Mining Div., Region IV, Tucson, Arizona

From : J. H. Soule', Mining Engineer, Tucson, Ariz.

Subject : Monthly Progress report for April 1952, Clark and Mathis, Mahoney Lead-Zinc mine, Tres Hermanas Mining District, Luna County, New Mexico, Docket DMMA-1613X, Contract Idm-E193.

The Mahoney mine was visited on May 14, 1952 to check the project progress. Hole No. 1 was bottomed in granite at 521 feet on April 26th and work was started on Hole No. 2 on April 27th. This hole was spotted a little to the west of the location for the proposed H le No. 2 as shown in Figure 2 of the Docket. The area offered a good site for the drill setup and is on the ore trend shown in the old stopes.

ANALYSIS OF ENTRIES ON FORM MF-104

Item 2-C. The rental of equipment is allowed and is shown in the following tabulation:

Underground drill outfit	26/30 x	$23.00 =	$19.93
Surface drill outfit----	4/30 x	$88.00 =	11.73
Compressor----------	26/30 x	153.00 =	132.60
Hoist----------	26/30 x	14.00 =	12.13
Power wagon----------	30/30 x	63.00 =	63.00
Pickup----------	30/30 x	28.00 =	28.00
Total			$267.39

The total of $267.39 is approved and not the $267.57 as shown on Form MF-104.

Item 4, Labor. The payrolls were checked and the total $618.45 is approved.

Item 5, Supervision. Supervision is allowed at the rate of $200.00 per month. This entry on Form MF-104 is approved.

CC W. H. King (orig. & 6)
DMA-1613X
DF

JHSoule'sfrj

Item 6d Supplies. The following tabulation shows the supplies purchased for the month. These were taken from the invoices:

Cap screws	$0.25
Alemite fitting	.09
Alemite fitting	.20
Rivets	.20
Brake lining	2.10
Welding	8.00
Filters	3.40
Total	$14.24

An additional item of 25 K-red couplings, totalling $58.53, is entered on Form MF-104, It is felt that these pieces of equipment constitute part of the underground outfit to be furnished by the operator and as such could not be allowed under the contract. This item is, therefore, disapproved. Only the sum of $14.24 is approved.

Item 8c - Workmen's Compensation. The total of $17.34 is approved and is calculated from the drillers' wages. The drill helper is a partner in the project and his wages are not considered in payment of Workmen's Compensation.

Item 8d - Social Security and Unemployment Compensation. The sum of $53.82 is approved. This is derived from wages paid since the start of the project, such taxes being paid quarterly. The details of the calculations follow:

Social Security - 1.5% of $1,281.56	=	$19.22
Unemployment Comp. - 2.7% of $1,281.56	=	34.60
Approved total		$53.82

According to Forms MF-104, the wages paid to April 1 should total $1,281.46. However, the use of this sum gives the same results as those approved.

Item 11. Assaying. This item of assaying is approved at $5.10 and consists of one spectrographic analysis of a core sample taken at 435 feet from Hole No. 1.

Item 11. Diamond bits and barrels. The total of $184.66 is approved and consists of one core barrel, costing $60.75, 6 core springs, costing $4.62, one diamond bit replacement at $53.22, one diamond bit replacement at $49.21 and one diamond bit replacement at $16.86, the whole totalling $184.66. The invoices for the above items were checked.

Item 11. Fuels and Lubricants. The costs of these items are listed as follows: The invoices were noted:

Gasoline	$13.48
Diesel Fuel	39.78
Pickup gasoline and service	27.59
Oil	2.95
Tax	1.28
Total	$85.08

The above total is approved.

- - - - - - - - - - - - - - -

The approved total spent on the project for the month of April was $1,446.08, bringing the total spent to the first of May to $4,626.27.

Most of the invoices were paid when examined and according to the applicant's narrative report, were paid at the time of submission of the Forms MR-104. The accounts were checked and the Forms MF-104 are approvied to the extent of the red figures.

John H Soule

J. H. Soule',Mining Engineer
Arizona-New Mexico Branch

Clark and Mathis
821 W. Pine Street
Deming, N. Mex.

PROGRESS AND COST REPORT ON CONTRACT NO. Idm-E 193, DOCKET No. DMA 1613X, for peiord APril 1 to May 1, 1952.

Diamond core drilling was continued until April 26, 1952, in the proposed diamond drill hole #1 of this project. The hole was advanced from a depth of 373 feet to 521 feet, at which point it was abandoned or completed. The drilling proceeded without undue incident.

The core continued to show considerable silicification, some garnetization, and minute flecks or needles of an iron-manganese oxide. A sample of the core was taken at a depth of 435 feet. Quantitative assaying indicated 0.16% Manganese, a trace of zinc, and no lead. A spectrographic examination disclosed no other economic constituent of the core. (see attached copy). Grano-diorite porphyry was encountered at a depth of 479 feet. The hole was continued to a depth of 521 feet to check the possibility that the granodiorite might be a sill. No change in formation was found, and the conclusion was drawn that the grano-diorite in the core is likely part of the stock comprising the Tres Hermanas range of mountains.

The balance of the month was spent moving in surface drilling equipment.

R. W. Mathis

R. W. Mathis

Note: A ll bills for the month of March have been paid.

Log of Diamond Drill Hole #1 (continued), Contract No. Idm-E 193,
Docket No. DMA 1613X.

Footage	Nature of Formation	Percent recovery
373 -382	Banded blue limestone	95%
382 - 383	Silicified limestone	100
383 - 393	Banded blue limestone with flecks of manganese	100
393 - 395	Silicified limestone	100
395 - 397	Banded blue limestone with flecks of manganese	100
397 - 399	Silicified limestone	100
399 - 410	Blue and white silicied limestone	94
410 - 413	Silicified white limestone	100
413 - 416	Banded blue limestone with flecks of manganese	100
416 - 421	Silicified white limestone	98
421 - 438	Banded blue limestone with flecks of Manganese	100
438 - 472	Same, with considerable garnetization	100
472 - 479	Silicified white limestone	20
479 - 521	Grano-diorite porphyry (with breccia zone at 490)	94

C O P Y

REPORT OF QUALITATIVE SPECTROGRAPHIC EXAMINATION

(Core sample at 435 ft depth)

ELEMENT	APPROXIMATE QUANTITY
Silicon, Calcium	Major Constituents
Aluminum, Magnesium	Intermediate Constituents
	Minor Constituents
Iron	1%
Manganese	0.1%
Strontium	0.1%
Potassium	0.05%
Titanium	0.05%
Barium	0.01%
Copper	0.01%
Zirconium	0.01%
Lead	0.005%
Chromium	0.005%
Vanadium	0.005%
Nickel	0.001%
Boron	0.001%

Respectfully submitted,

Smith-Emery Company
Chemists and Engineers

CLARK & MATHIS

WORK REPORT

LABOR	HOURS OF WORK M T W Th F S	TOTAL HRS	REG RATE	REG WAGES	OVERTIME	TOTAL WAGES
			March 31 to April 5, 1952			
Driller	8 8 8 8	32	1.60	51.20	0	51.20
Helper	8 8 8 8	32	1.50	48.00	0	48.00
			April 7 to April 12, 1952			
Driller	8 8 8 8 8 5	45	1.60	64.00	12.00	76.00
Helper	8 8 8 8 8 5	45	1.50	60.00	11.25	71.25
			April 14, to April 19, 1952			
Driller	8 6½ 6½ 8 8 7	44	1.60	64.00	9.60	73.60
Helper	8 6½ 6½ 8 8 7	44	1.50	60.00	9.00	69.00
			April 21 to April 26, 1952			
Driller	8 8 4 6 0 8	34	1.60	54.40	0	54.40
Helper	8 8 4 6 0 8	34	1.50	51.00	0	51.00
			April 28 to May 2, 1952			
Driller	8 8 8 8 8	40	1.60	64.00	0	64.00
Helper	8 8 8 8 8	40	1.50	60.00	0	64.00
						$618.45

MF-104
(August 1951)

Budget Bureau No. 42-R1036.2.
Approval Expires 6-30-52.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Contract No.
Idm-E 193

Name of Operator Clark & Mathis
Docket No. DMA 1613X
Total Contract Amount $ 12,654.00
Government Participation: 50 % Amount, $ 6,327.00
Distribution of Expenditures for Month of April, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 30 1951

STRATEGIC AND CRITICAL MINERAL EXPLORATION PROGRAM
OPERATOR'S MONTHLY PROGRESS REPORT

Operators are to submit monthly reports to the designated field representative of the Defense Minerals Administration. Reports are to be submitted in quadruplicate prior to the 15th day of the month following the reporting period.

Narrative.—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered is to be furnished.

Maps.—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.

Cost Accounts.—All applicable parts of this form are to be filled in. This report will form the basis for payments of the Government's participating share of expenses. Audits of accounts may be made from time to time.

CERTIFICATION

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.

Clark & Mathis
(Name of Company)

By R. W. Mathis
(Signature of Authorized Official)

May 15, 1952
(Date)

Partner
(Title)

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.

16—64068-3

MONTHLY SUMMARY COST STATEMENT

List as Shown on Exhibits Attached to Contract

Item	Monthly Total	Totals Previously Reported	Totals to Date	For Government Use Only		
				Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
1. Fixtures and Improvements:						
(a) Facilities						
(b) Buildings						
(c) Fixtures						
2. Operating Equipment:						
(a) Purchased[1]						
(b) Rented[2]						
(c) Furnished by operator	267.57 267.39	655.08	922.65 922.47	267.39	655.08	922.47
3. Rehabilitation and Repairs:						
(a) Facilities						
(b) Buildings						
(c) Installations						

MONTHLY SUMMARY COST STATEMENT—Continued

Item	Monthly Total	Totals Previously Reported	Totals to Date	For Government Use Only: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(d) Fixtures						
4. Labor[3]	618.45	1281.46	1899.91	618.45	1281.46	1899.91
5. Supervision	200.00	466.66	666.66	200.00	466.66	666.66
6. Supplies						
(a) Timber						
(b) Explosives						
(c) Repair Parts						
(d) Other 14.24	72.77	110.42	183.19 (134.66)	72.77	110.42	183.19
7. Power						
8. Transportation		62.50	62.50		62.50	62.50
9. Insurance						
(a) Fire						
(b) Public Liability						
(c) Workmen's Compensation	17.34	35.55	52.89	17.34	35.55	52.89
ssec & Unemp. tax	53.82	0	53.82	53.82	0	53.82
10. Contract Work						
11. Other (specify)						
Assaying	5.10	1.28	6.38	5.10	1.28	6.38
Diamond bits & Barrels	184.66	341.26	525.92	184.66	341.26	525.92
Fuels & lubricants	85.08	213.99	299.07	85.08	213.99	299.07
Cement		11.99	11.99		11.99	11.99
Total 1,446.08	1504.79	3180.19	4684.98 (4626.27)	1504.61	3180.19	4684.80
Deletions						
Adjusted totals						
Totals previously reported	3180.19			3180.19		
Totals to date	4626.27			4684.80		

[1] Enter amount paid during month toward total purchase price.
[2] Payments for rental of equipment or prorated depreciation on equipment owned by contractor.
[3] Submit copy of the Social Security form filed under the Old Age Insurance system showing complete wage and salary data or furnish copy of payroll sheet giving same data.

NOTE.—Indicate that portion of supervisory, office, and engineering salaries that is chargeable to this project.

FOR GOVERNMENT USE ONLY

Checked by
Entered by John H Smile
Approved by W R S
Amount approved for payment $752.32
Remarks

All supervision is chargeable to this project.

16—64068-3

Schedule DMA 52-63
June 25, 1952
752.30

EXPLORATION UNIT COST AND PROGRESS REPORT FOR MONTH OF April, 1952

(Supply Data Below Applicable Only to Your Operations)

Item	Costs					Progress [4]				
	Wages [1] and salaries	Equipment [2]	Supplies	Other [3]	Total	Unit	Units this month	Units previously reported	Units to date	Units authorized by contract (Exhibit A)
Drifting										
Crosscutting										
Raising										
Shafts										
Winzes										
Drill holes	818.45	267.57	342.51	76.26	1504.79		148	373	521	
Overburden		267.39	333.98		1446.68					
Rehabilitation and preparation										
Geology and geophysics										
Trenching										
Sampling and assaying										
Roads and trails										
Test pits										
Other (specify)										
Totals										

[1] Prorate supervisory, engineering, and office salaries in proportion to man-shifts of direct labor.
[2] Prorate charges for equipment that is not exclusively for one type of job (such as compressors) against authorized units of work in each category.
[3] Where entries in the "Other" column (above) are more than 25 percent of the total expenditures, a breakdown of this item should be made.
[4] Specify whether feet, cubic feet, acres, miles, etc.

16—64068-3 U. S. GOVERNMENT PRINTING OFFICE

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

224 New Customhouse
Denver 2, Colorado

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 9 1952

May 5, 1952

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, Field Team, Region IV

Subject: Form MF-104, DMA Docket 1613X, Contract Idm-E193, Clark & Mathis, Mahoney Mine, Luna County, New Mexico.

Enclosed are the Operator's Monthly Progress Report Form MF-104, Operator's Narrative Report, Inspecting Engineer's Narrative Report and other supporting data for the month of March, 1952, pertaining to DMA Docket 1613X, Contract Idm-E193, Clark & Mathis, Mahoney Mine.

W. H. King

W. H. King for
J. H. East, Jr.

Enclosure

March Report '52
238 1 advance
no one

MF-104
(August 1951)

Budget Bureau No. 42-R1036.2.
Approval Expires 6-30-52.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Contract No. Idm-E 193

Name of Operator Clark and Mathis
Docket No. DMA 1613 X
Total Contract Amount $ 12,654.00
Government Participation: 50 % Amount, $ 6,327.00
Distribution of Expenditures for Month of March 1, 1952 to April 1[illegible], 1952

STRATEGIC AND CRITICAL MINERAL EXPLORATION PROGRAM
OPERATOR'S MONTHLY PROGRESS REPORT

Operators are to submit monthly reports to the designated field representative of the Defense Minerals Administration. Reports are to be submitted in quadruplicate prior to the 15th day of the month following the reporting period.

Narrative.—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered is to be furnished.

Maps.—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.

Cost Accounts.—All applicable parts of this form are to be filled in. This report will form the basis for payments of the Government's participating share of expenses. Audits of accounts may be made from time to time.

CERTIFICATION

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.

Clark and Mathis
(Name of Company)

By R W Mathis
(Signature of Authorized Official)

April 13, 1952
(Date)

Partner
(Title)

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.

16—64068-3

MONTHLY SUMMARY COST STATEMENT

List as Shown on Exhibits Attached to Contract

Item	Monthly Total	Totals Previously Reported	Totals to Date	For Government Use Only		
				Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
1. Fixtures and Improvements:						
(a) Facilities						
(b) Buildings						
(c) Fixtures						
2. Operating Equipment:						
(a) Purchased[1]						
(b) Rented[2]						
(c) Furnished by operator						
	280.75	374.33	655.08	280.75	374.33	655.08
3. Rehabilitation and Repairs:						
(a) Facilities						
(b) Buildings						
(c) Installations						

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

224 New Customhouse
Denver 2, Colorado

May 5, 1952

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, Field Team, Region IV

Subject: Form MF-104, DMA Docket 1613X, Contract Idm-E193, Clark & Mathis, Mahoney Mine, Luna County, New Mexico.

Enclosed are the Operator's Monthly Progress Report Form MF-104, Operator's Narrative Report, Inspecting Engineer's Narrative Report and other supporting data for the month of March, 1952, pertaining to DMA Docket 1613X, Contract Idm-E193, Clark & Mathis, Mahoney Mine.

W. H. King.

W. H. King for
J. H. East, Jr.

Enclosure

Mining Division
Region IV

April 21, 1952

Memorandum

To: T. A. Christensen

From: Acting Chief, Mining Division, Region IV

Subject: DMA Docket 1613X, Contract Idm-E193, Clark & Mathis, Mahoney Mine, Luna County, New Mexico - Operator's Monthly Progress Report for the period of March, 1952

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

Work accomplished is in accordance with the contract and payment is recommended for the amount of $558.17, which is 50 percent of the total of $1,116.34.

The item of $0.48 parcel post charges, listed in Item 6, Supplies, is taken to be a transportation cost and not an item of General Overhead. It is allowed although it should have been listed after Item 8, Transpo rtation.

W. H. KING

W. H. King

WLD:oc

cc: CONTRACT, CHRON.
SECRETARY TO THE OPER. COMM.
WRStorms
AHKOschmann (2)

Schedule DMA 52-46

May 1, 1952

$558.17

5-2-52

Mining Division
Date Rec'd.

APR 21 1952

BUREAU OF MINES
Denver, Colorado

MINING DIVISION
REGION IV

April 17, 1952

Memorandum

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

From : Chief, Arizona-New Mexico Br., Mining Div., Region IV

Subject : March 1952 Progress Report, DMA Docket 1613X, Contract Idm-E193, Clark & Mathis, Mahoney Lead-Zinc Mine, Luna County, N. Mex.

Enclosed in quadruplicate are the following for the above contract:

1. Bureau of Mines engineer's report;

2. Operator's progress report;

3. Form MF-104.

Also enclosed are 2 extra copies of our engineer's report.

As all accounts conform to the contract, I recommend that the Government's share be paid.

Walter R. Storms

Walter R. Storms

CC W. H. King (5)
DMA-1613X
DF

WRStorms:frj

MINING DIVISION
REGION IV

April 17, 1952

Memorandum

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

From : J. H. Soule', Mining Engineer, Tucson, Arizona.

Subject : Monthly Progress report for March 1952, Clark and Mathis, Mahoney Lead-Zinc Mine, Tres Hermanas Mining District, Luna County, New Mexico Docket DMEA-1613K, Contract Idm-M193.

The Mahoney mine was visited on April 14, 1952 to check the progress of the drilling under the above contract.

This is an exploration project consisting wholly of diamond drilling from underground and surface stations. Hole No. 1, from an underground station, is continuing and was advanced from 135 to 373 feet for a total of 238 feet.

The objective of this hole was to drill to the granite contact or approximately 300 feet. As it begins to appear that the contact may be much deeper than at first thought, the applicants are preparing a request for an amendment to allow drilling of this hole to the contact.

ANALYSIS OF ENTRIES ON FORM MF-104

Item 2-C.

The following equipment rentals are allowed by the contract:

Underground diamond drill outfit	$23.00
Compressor	153.00
Hoist	14.00
Power wagon for water haul	63.00
Pickup truck	28.00
Total allowed	$281.00
Amount submitted by applicants	280.75

This amount is approved as submitted.

CC W. H. King (5)
DMA-1613K
DF

WRStorms:frj

The final entry, assaying, is not listed in the contract but it seems that it should be an allowable expenditure on all exploration projects. This totals $1.28 and the paid invoice was noted.

The total project costs for the month of March were $1,116.34; this brings the total to date to $3,180.19. The accounts as submitted by the applicant have been checked and are approved as submitted.

Respectfully submitted,

John H. Soulé

J. H. Soulé, Mining Engineer
Arizona-New Mexico Branch

Clark and Mathis
821 W. Pine Street
Deming, New Mexico

PROGRESS AND COST REPORT ON CONTRACT NO. Idm-E 193,

Docket NO. DMA 1613X, For Period March 1 to April 1, 1952

NARRATIVE

Diamond core drilling has continued during the month of March, 1952, in the proposed diamond drill hole #1 of the above named project. The hole has been advanced from a depth of 135 feet to a depth of 373 feet without undue incident or difficulty. (See log of hole, Exhibit I.). Core recovery has improved from 37% to approximately 94%.

The black flecks of mineral which appeared in the core at 272 feet and which persistently occur in disseminated bands throughout the rest of the core have been qualitatively identified as a manganese mineral. Quantitative tests are presently being made on sections of the core for manganese, lead, and zinc.

R. W. Mathis

R. W. Mathis

Note: All bills have been paid to date.

EXHIBIT I

Log of Diamond Drill Hole #1, Contract No. Idm-E 193, Docket No. DMA 1613X

Footage	Nature of formation	Percent recovery
0 - 13	Marble (coarse recrystallized limestone)	82%
13 - 23	Marble	98
23 - 40	Marble containing siliceous stringer at 26' and 39'	30
40 - 47	Marble containing siliceous bands	14
47 - 49	Marble	90
49 - 52	Marble	50
52 - 57	Marble	20
57 - 69	Marble	20
69 - 74	Marble with bands of chert	18
74 - 83-	Marble	28
83 - 84	Marble	90
84 - 85	Cherty blue limestone	90
85 - 91	Cherty blue limestone	16
91 - 97	Marble grading to cherty blue limestone	80
97 - 100	Marble	90
100 - 107	Silicified limestone	20
107 - 123	Silicified limestone grading to marble	72
123 - 135	Marble containing irregualr streaks of sil. ls.	25
135 - 149	Silicified limestone containing marble	20
149 - 155	Marble grading to silicified limestone	50
155 - 164	Silicified limestone and marble containing streaks of small pyrite crystals	25
164 - 170	Marble containing small pyrite crystals	27
170 - 182	Silicified limestone and marble containing bands of dark stains showing some pyrite	20
182 - 189	Silicified limestone with bands of pyrite and iron oxide	16
189 - 193	Fine grained recrystalliezed limestone grading to silicified limeston and cherty limestone	85
193 - 195	Fineg grained marlbe with some pyrite	100
195 - 198	Chert and silicified limestone	70
198 - 203	Silicified limestone with spotty mineralization	35
203 - 204	Fine grained limestone	100
204 - 208	Silicified limestone	60
208 - 211	Fine grained and silicified limestone containing spotty mineralization	100
211 - 216	Fine grained limestone	62
216 - 224	Silicified limestone grading to white ls with slight mineralization	100
224 - 228	Blue gray silicified limestone	100
228 - 234	Fine grained gray limestone	100
234 - 241	Mottley blue and white limestone	100
241 - 246	Fine grained white limestone	100
246 - 250	Mottley blue and white limestone	100
250 - 253	Medium grained white marble	100
253 - 258	Marble grading to motley blue and white limestone	100
258 - 265	Marble, sil. ls, and blue ls	60
265 - 269	Silicified limestone and crystalline limestone	100
269 - 269½	Silicified ls containing minute green specks	90
269½ - 272	Crystalline limestone containing dense black flecks	100
272 - 275	White limestone	100
275 - 278	Blue ls, white ls, and blue ls with banded black flecks of mineralization	60
278 - 280	White ls, blue ls, and sil. ls	100

EXHIBIT I (cont'd)

Footage	Nature of formation	Percent recovery
280 - 283	White limestone	100%
283 - 285	Blue limestone containing black flecks and verticle stringer of gypsum at 284'	100
285 - 289	Banded blue limestone, the bands being formed by and deriving their color shading from the dessiminated black flecks	100
289 - 291	Silicified ls grading to crystalline ls	100
291 - 294	Banded blue and white limestone	100
294 - 295	White crystalline ls	100
295 - 303	Banded blue and white ls, the white ls being partly silicified and the blue limestone showing some pyrite with the black mineral	100
303 - 313	Banded blue limestone	100
313 - 320	Crystalline blue ls with diagonal streak of garnet at 317'	100
320 - 322	Silicified gray limestone	85
322 - 332	Banded blue ls and fine grained white ls	100
332 - 343	Same	90
343 - 353	Same	95
353 - 363	Same	95
363 - 373	Banded blue limestone	90

PAYROLL SUMMARY

LABOR	HOURS OF WORK M	T	W	TH	F	S	TOTAL HRS	RATE PER HR	REG WAGES	OVERTIME	TOTAL
	March 3 - March 8, 1952										
Driller	8	6	8	8½	5½		36	1.60	57.60		57.60
Helper	8	6	8	8½	5½		36	1.50	54.00		54.00
	March 10 - March 15, 1952										
Driller	8	8	7	8	10	6	47	1.60	64.00	16.80	80.80
Helper	8	8	7	8	10	6	47	1.50	60.00	15.75	75.75
	March 17 - March 21, 1952										
Driller	8	8	8	8	11		43	1.60	64.00	7.20	71.20
Helper	8	8	8	8	11		43	1.50	60.00	6.75	66.75
	March 24 - March 29, 1952										
Driller	8	8	8	8	9½		41½	1.60	64.00	3.60	67.60
Helper	8	8	8	8	9½		41½	1.50	60.00	3.37	63.37

TOTAL..... $537.07

CLARK & MATHIS

BY: R. W. Mathis

R. W. Mathis

MONTHLY SUMMARY COST STATEMENT—Continued

Item	Monthly Total	Totals Previously Reported	Totals to Date	For Government Use Only: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(d) Fixtures						
4. Labor[3]	537.07	744.39	1281.46	537.07	744.39	1281.46
5. Supervision	200.00	266.66	466.66	200.00	266.66	466.66
6. Supplies						
(a) Timber						
(b) Explosives						
(c) Repair Parts	12.85	97.57	110.42	12.85	97.57	110.42
(d) Other						
7. Power	0	62.50	62.50	—	62.50	62.50
8. Transportation						
9. Insurance						
(a) Fire						
(b) Public Liability						
(c) Workmen's Compensation	14.67	20.88	35.55	14.67	20.88	35.55
10. Contract Work						
11. Other (specify)						
Fuels & Lubricants	69.72	144.27	213.99	69.72	144.27	213.99
Assaying	1.28	0	1.28	1.28	—	1.28
Diamond Bits	0	341.26	341.26	—	341.26	341.26
Cement	0	11.99	11.99	—	11.99	11.99
Total	1116.34	2063.85	3180.19	1116.34	2063.85	3180.19
Deletions						
Adjusted totals						
Totals previously reported				2063.85		
Totals to date				3180.19		

[1] Enter amount paid during month toward total purchase price.
[2] Payments for rental of equipment or prorated depreciation on equipment owned by contractor.
[3] Submit copy of the Social Security form filed under the Old Age Insurance system showing complete wage and salary data or furnish copy of payroll sheet giving same data.

NOTE.—Indicate that portion of supervisory, office, and engineering salaries that is chargeable to this project.

FOR GOVERNMENT USE ONLY

Checked by
Entered by
Approved by John H Soule' WRS
Amount approved for payment #558.17
Remarks

All supervisory and engineering charges shown here are chargeable to this project.

R. W. Mathis

$558.17

16—64068-3

EXPLORATION UNIT COST AND PROGRESS REPORT FOR MONTH OF March 1, 1952 to April 13, 1952

(Supply Data Below Applicable Only to Your Operations)

Item	Costs					Progress [4]				
	Wages [1] and salaries	Equipment [2]	Supplies	Other [3]	Total	Unit	Units this month	Units previously reported	Units to date	Units authorized by contract (Exhibit A)
Drifting										
Crosscutting										
Raising										
Shafts										
Winzes										
Drill holes	737.07	280.75	82.57	15.95	1116.34	ft	238	135	373	
Overburden										
Rehabilitation and preparation										
Geology and geophysics										
Trenching										
Sampling and assaying										
Roads and trails										
Test pits										
Other (specify)										
Totals	737.07	280.75	82.57	15.95	1116.34	ft	238	135	373	

[1] Prorate supervisory, engineering, and office salaries in proportion to man-shifts of direct labor.
[2] Prorate charges for equipment that is not exclusively for one type of job (such as compressors) against authorized units of work in each category.
[3] Where entries in the "Other" column (above) are more than 25 percent of the total expenditures, a breakdown of this item should be made.
[4] Specify whether feet, cubic feet, acres, miles, etc.

16—64068-3 U. S. GOVERNMENT PRINTING OFFICE

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

224 New Customhouse
Denver 2, Colorado

March 24, 1952

Memorandum

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

From: Executive Officer, Field Team, Region IV

Subject: Form MF-104, DMA Docket 1613X, Contract Idm-E193, Clark & Mathis, Mahoney Zinc Mine, Luna County, New Mexico

Enclosed are the Operator's Monthly Progress Report Form MF-104, Operator's Narrative Report and Inspecting Engineer's Narrative Report and other supporting data for the month of January, 1952, pertaining to DMA Docket 1613X, Contract Idm-E193, Clark & Mathis.

J. H. East, Jr.

Enclosure

Department of the Interior
Defense Minerals Administration
MAR 2 1952

MF-104
(August 1951)

Budget Bureau No. 42-R1036.2.
Approval Expires 6-30-52.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Contract No. 193
Idm-E

Name of Operator: Clark and Mathis
Docket No. DMA: 1613 X
Total Contract Amount $: 12,654.00
Government Participation: 50 % Amount, $ 6,327.00
Distribution of Expenditures for Month of: January 22 to March 1, 1952

STRATEGIC AND CRITICAL MINERAL EXPLORATION PROGRAM
OPERATOR'S MONTHLY PROGRESS REPORT

Operators are to submit monthly reports to the designated field representative of the Defense Minerals Administration. Reports are to be submitted in quadruplicate prior to the 15th day of the month following the reporting period.

Narrative.—A concise narrative description of progress made, results accomplished, and any unusual difficulties encountered is to be furnished.

Maps.—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.

Cost Accounts.—All applicable parts of this form are to be filled in. This report will form the basis for payments of the Government's participating share of expenses. Audits of accounts may be made from time to time.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 2 1952

CERTIFICATION

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.

Clark and Mathis
(Name of Company)

By R. W. Mathis
(Signature of Authorized Official)

March 2, 1952
(Date)

Partner
(Title)

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.

16—64068-3

MONTHLY SUMMARY COST STATEMENT

List as Shown on Exhibits Attached to Contract

Item	Monthly Total	Totals Previously Reported	Totals to Date	For Government Use Only		
				Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
1. Fixtures and Improvements:						
(a) Facilities						
(b) Buildings						
(c) Fixtures						
2. Operating Equipment:						
(a) Purchased[1]						
(b) Rented[2]						
(c) Furnished by operator						
Total	374.33	0	374.33	374.33	0	374.33
3. Rehabilitation and Repairs:						
(a) Facilities						
(b) Buildings						
(c) Installations						

224 New Customhouse
Denver 2, Colorado

March 24, 1952

Memorandum

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

From: Executive Officer, Field Team, Region IV

Subject: Form MF-104, DMA Docket 1613X, Contract Idm-E193, Clark & Mathis, Mahoney Zinc Mine, Luna County, New Mexico

Enclosed are the Operator's Monthly Progress Report Form MF-104, Operator's Narrative Report and Inspecting Engineer's Narrative Report and other supporting data for the month of January, 1952, pertaining to DMA Docket 1613X, Contract Idm-E193, Clark & Mathis.

J. H. EAST, JR.

J. H. East, Jr.

Enclosure

ld

cc: Contract, chron.
Koschmann
Storms, w/1 copy of MF-104.

Mining Division
Region IV

March 17, 1952

Memorandum

To: T. A. Christensen

From: Acting Chief, Mining Division, Region IV

Subject: DMA Docket 1613K, Contract Idm-E-193, Clark & Mathis, Mahoney Zinc Mine, Luna County, New Mexico - Operator's Monthly Progress Report for the period of January, 1952

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

Work accomplished is in accordance with the contract and payment is recommended for the amount of $1031.93, which is 50 percent of the total of $2063.85.

W. H. KING

W. H. King

Enclosures

WLD:oc

cc: Secretary to the Operating Comm.
WRStorms
Contract, Chron.
AHKoschmann

Schedule DMA 52-35

Mar 24, 1952

$1031.93

WD 3/24/52

Mining Division
Date Rec'd.

MAR 13 1952

BUREAU OF MINES
Denver, Colorado

MINING DIVISION
REGION IV

March 11, 1952

MEMORANDUM

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

From : Chief, Arizona-New Mexico Br., Mining Div., Region IV

Subject : Progress Report, January 22 - March 1, 1952, DMA Docket 1613X, Contract Idm-E193, Clark & Mathis Mahoney Zinc Mine, Luna County, N. Mex.

Enclosed in quadruplicate are the following for the above contract:

(1) Bureau of Mines engineer's report;

(2) Operator's Narrative report;

(3) Form MF-104, with payroll.

Also enclosed are 2 extra copies of our engineers report.

As these costs are in accordance with the contract, I recommend that the Government pay the operators their share, or 50 percent of the total costs.

Walter R. Storms

CC (King (5)
DMA-1613X
DF

WRstorms:frj

MINING DIVISION
REGION IV

March 7, 1952

Memorandum

To : W. R. Storms, Chief, Arizona-New Mexico Br., Mining Div., Region IV

From : J. H. Soule', Mining Engineer, Arizona-New Mexico Br.

Subject : Progress Report, January 22-March 1, 1952, Docket DMA-1613X, Contract Idm-K193, Clark and Mathis, Mahoney Zinc Mine, Tres Hermanas Mining District, Luna County, N. Mex.

The Mahoney mine was visited on March 4 and the progress noted. Hole No. 1 as indicated in the contract was started and had progressed to 135 feet by March 1. Considerable difficulty was experienced with water return and after unsuccessful cementing, the hole was continued without water return. So far, the material penetrated has been marbelized limestone. Core recovery is quite unsatisfactory, averaging about 37 percent. Cementing totalled 8 feet.

Much of the period was spent in preparing for the drilling. This work included station prepration, installing water and air lines, and moving and setting up the necessary items of equipment.

All accounts were checked, most were paid when checked and were paid on March 5 as noted in the applicant's narrative report. Supplies were purchased in accordance with the contract specifications and consisted of diamond bits, fuel oil, cement, lubricants, small pipe fittings, and other small items.

The rental of equipment does not exceed the amount allowable under the contract and is tabulated as follows and considering the time used as 1-1/3 months allowing for the start on January 22:

Item	Monthly Allowable	Rental
Rental of Hoist	$14.00	$18.67
" " Underground drill outfit	23.00	30.67
" " Compressor	153.00	204.00
" " Power wagon	63.00	84.00
" " Pickup truck	28.00	37.33
	Total allowable	374.67
	Total submitted	374.33

CC W. H. King (Orig. & 5)
DMA-1613X
DF

JHSOULE':frj

Supervision and engineering are allowable under the contract and are tabulated as follows (Again, 1-1/3 months was used as a basis of time):

Item	Monthly Allowable	Submitted
Supervision, Engineering & Sampling	$200.00	$266.66

The contract total submitted for the first one and one third months operation totalled $2,063.85. Of this amount, one half or $1,031.92 is to be supplied by the government. The forms MF-104 are approved as submitted.

Respectfully submitted

John H. Soule'

John H. Soule', Mining Engineer
Arizona-New Mexico Branch
Mining Division, Region IV

DOCKET EMEA-1613K
Contract Idm-1193

Recapitulation and explanation of payroll sheet, period Jan. 22-March 1, 1952.

	Jan.	Feb.	Total
Diamond driller wages	$108.00	$270.40	$378.40
Utility wages	13.50	--	13.50
Drill helper Wages	99.00	253.49	352.49
			$744.39

Workmen's compensation rate is 5.333% and is not applied to the drill helper's wages because he is a partner in the enterprise. It also is not applied to the engineering and sampling item for the same reason.

WORKMEN'S COMPENSATION

Classification	Jan. Wages	Jan. Comp.	Feb. Wages	Feb. Comp.	Total Comp.
Driller	$108.00	$5.75	$270.40	$14.42	$20.17
Drill helper	99.00	--	253.49	--	--
Utility	13.50	.71	--	--	.71
			Total compensation		$20.88

John H Soule'

Clark and Mathis
821 W. Pine Street
Deming, N. Mex.

INITIAL PROGRESS AND COST REPORT ON CONTRACT NO. Idm-E 193, DOCKET NO. DMA 1613X, FOR PERIOD January 22 to March 1, 1952.

NARRATIVE

Clark and Mathis commenced moving equipment onto the premises on January 22, 1952. Installation of the equipment started on January 25, 1952.

An overhead round was drilled in the old drift at the desired drill site on February 1 to make room for pulling 10 ft lengths of drill rod from the proposed diamond drill hole. It was necessary to blast a second round and to remove all muck from the working area.

The proposed diamond drill hole #1 (see fig. 3 of DMA 1613X report) was collared in on February 11 and was drilled to a depth of 32 feet by February 13. Excessive drill water loss was encountered at a depth of 26 feet. Repeated dfforts were made to stop this loss by cementing with luminite cement and saw-dust, by blasting at the drevice depth followed by cementing, and by use of cartridges of dry cement. The initial leak at 26 feet was finally stopped, but a larger drevice was encountered at 35 feet, and none of the above methods were sufficient to stop the loss of water.

On February 18, a decision was made to drill without return of drill water, in consideration of the high cost in time and material for cementing. Drilling has proceeded without undue incident to a depth of 135 feet (see cross-section, Exhibit I, attached to the original copy of this report). The core has been recrystallized limestone (marble) through the total depth to date. Core recovery has been only 37% of the total depth drilled, but sufficient core has been recovered from each run to show that the formation consists essentially of marble.

R. W. Mathis

R. W. Mathis

Note: All bills to date have been paid.

PAYROLL SUMMARY

Title	Hours of Work M-T-W-Th-F-S	Total Hours	Reg Rate Per Hour	Reg Wages	Overtime	Total Wages
			January 24 - 26, 1952			
Driller	8 8 4	20	1.60	32.00	0	32.00
Helper	8 8 4	20	1.50	30.00	0	30.00
			January 28 - February 2, 1952			
Driller	8 8 8 9 8 4	45	1.60	64.00	12.00	76.00
Helper	8 8 8 8 8 4	44	1.50	60.00	9.00	69.00
Utility	9	9	1.50	13.50	0	13.50
						$220.50
			February 4 - 7, 1952			
Driller	8 8 8 4	28	1.60	44.80	0	44.80
Helper	8 8 8 4	28	1.50	42.00	0	42.00
			February 11 - 16, 1952			
					14.40	78.40
Driller	8 8 8 8 8 6	46	1.60	64.00	~~12x40~~	~~76x40~~
Helper	8 8 8 8 8 6	46	1.50	60.00	13.50	73.50
			February 18 - 23, 1952			
Driller	8 8 10 8½ 8 4	46½	1.60	64.00	15.60	79.60
Helper	8 8 10 8½ 8 4	46½	1.50	60.00	14.62	74.62
			February 25,- 29, 1952			
Driller	7 9½ 8 8 9	41½	1.60	64.00	3.60	67.60
Helper	7 9½ 8 8 9	41½	1.50	60.00	3.37	63.37
						$523.89

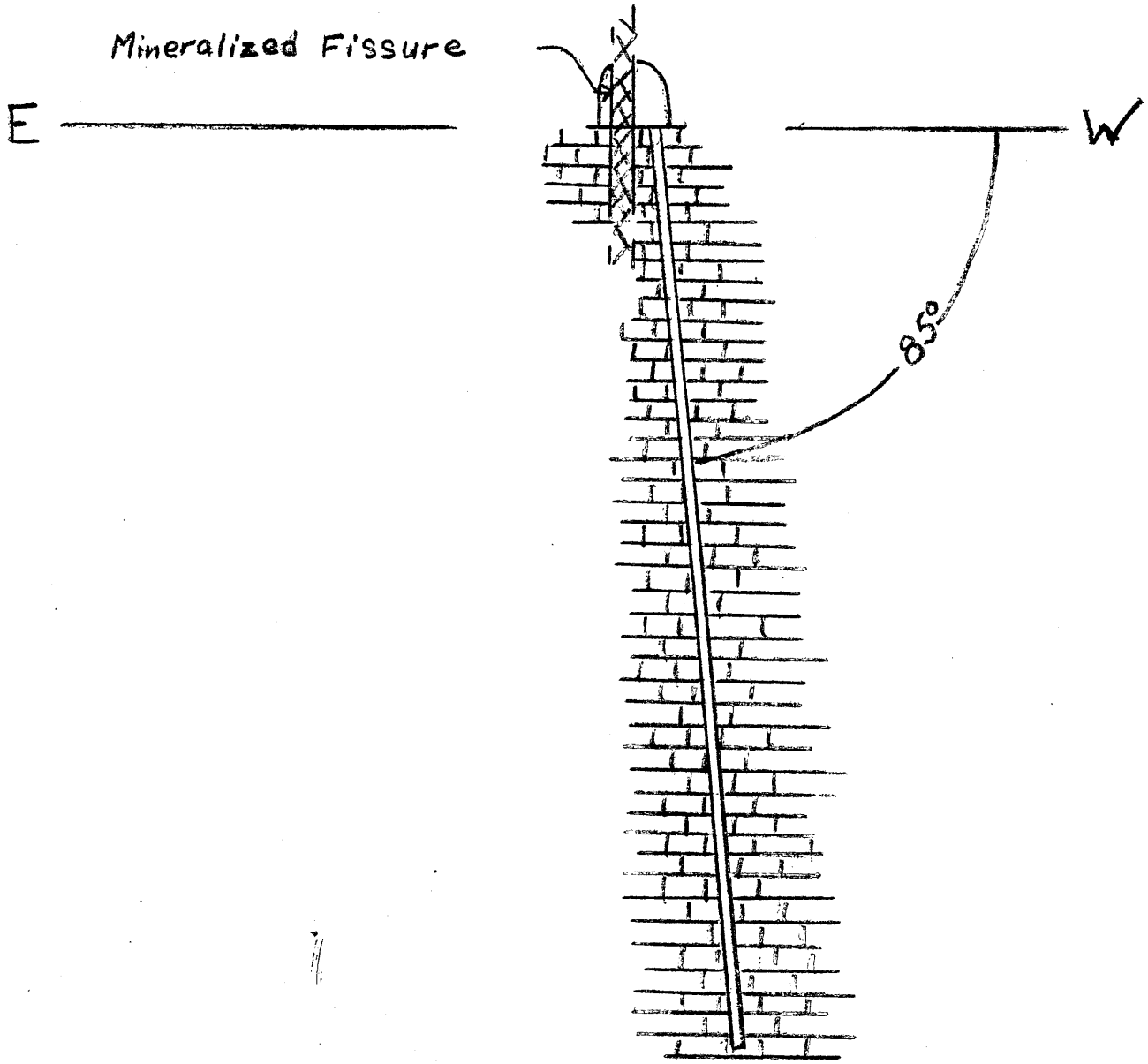
Total Wages Paid $744.39

R. W. Martin

EXHIBIT I

Cross-Section of Diamond Drill Hole #1 (See Map Fig. 3 DMA 1613 X) Feb. 29, 1952

Cross-Section (1" = 25')



MONTHLY SUMMARY COST STATEMENT—Continued

Item	Monthly Total	Totals Previously Reported	Totals to Date	For Government Use Only: Approved Monthly Total	Approved Totals Previously Reported	Approved Totals To Date
(d) Fixtures						
4. Labor[3] Exhibit II	744.39	0	744.39	744.39		744.39
5. Supervision	266.66	0	266.66	266.66		266.66
6. Supplies						
(a) Timber						
(b) Explosives						
(c) Repair Parts						
(d) Other	97.57	0	97.57	97.57		97.57
7. Power						
8. Transportation	62.50	0	62.50	62.50		62.50
9. Insurance						
(a) Fire						
(b) Public Liability						
(c) Workmen's Compensation	20.88	0	20.88	20.88		20.88
10. Contract Work						
11. Other (specify)						
Diamond bits	341.26	0	341.26	341.26		341.26
Fuel & lubricants	144.27	0	144.27	144.27		144.27
Cement	11.99	0	11.99	11.99		11.99
Total	2063.85		2063.85	2063.85		2063.85
Deletions						
Adjusted totals						
Totals previously reported		0				
Totals to date	2063.85		2063.85	2063.85		

[1] Enter amount paid during month toward total purchase price.
[2] Payments for rental of equipment or prorated depreciation on equipment owned by contractor.
[3] Submit copy of the Social Security form filed under the Old Age Insurance system showing complete wage and salary data or furnish copy of payroll sheet giving same data.

NOTE.—Indicate that portion of supervisory, office, and engineering salaries that is chargeable to this project.

FOR GOVERNMENT USE ONLY

Checked by
Entered by
Approved by John H. Soule W.R.S. W.R.S. W.K.K.
Amount approved for payment $1031.93
Remarks

All supervisory and engineering charges shown here are chargeable to this project.
R. W. M.

1031.93

16—64068-3

EXPLORATION UNIT COST AND PROGRESS REPORT FOR MONTH OF January 22 to March 1, 1952

(Supply Data Below Applicable Only to Your Operations)

Item	Costs					Progress [4]				
	Wages [1] and salaries	Equipment [2]	Supplies	Other [3]	Total	Unit	Units this month	Units previously reported	Units to date	Units authorized by contract (Exhibit A)
Drifting										
Crosscutting										
Raising										
Shafts										
Winzes										
Drill holes	1,031.93	374.33	595.09	62.50	2,063.85	Ft.	135	0	135	
Overburden										
Rehabilitation and preparation										
Geology and geophysics										
Trenching										
Sampling and assaying										
Roads and trails										
Test pits										
Other (specify)										
Totals	1,031.93	374.33	595.09	62.50	2,063.85	Ft.	135	0	135	

[1] Prorate supervisory, engineering, and office salaries in proportion to man-shifts of direct labor.
[2] Prorate charges for equipment that is not exclusively for one type of job (such as compressors) against authorized units of work in each category.
[3] Where entries in the "Other" column (above) are more than 25 percent of the total expenditures, a breakdown of this item should be made.
[4] Specify whether feet, cubic feet, acres, miles, etc.

16—64068-3 U. S. GOVERNMENT PRINTING OFFICE

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

March 29, 1954

PROJECT SUMMARY REPORT

By: J. W. Alt

1. Docket No. DMEA-1613 (Lead-Zinc)
   Contract No. Idm-E193
   Property: Mahoney Mine
   Location: Luna County, New Mexico

   Operator: Clark and Mathis (Partners)
   821 Pine Street
   Deming, New Mexico

   Operator's Property Rights: Lessee
   Lease Agreement - dated January 17, 1951
   Landlord's Subordination Agreement - dated October 1, 1951

2. Contract - dated November 23, 1951, To complete 8 months

Work Authorized

The work is to consist of diamond drilling 4 or 5 holes totaling not over 1800 feet.

The estimated cost of the project is as follows:

(1)	Supervision, Engineering and Sampling	$ 1,200.00	0.67
(2)	Labor	6,600.00	3.67
(3)	Supplies	2,470.00	1.37
(4)	Use allowance for Operator's equipment	1,044.00	0.58
(5)	Freight on equipment to and from project	400.00	0.22
(6)	Contingency	880.00	0.49
	Total estimated cost	$12,654.00	7.03
	Government Participation @ 50%	$ 6,327.00	

Amendments

No. 1, dated May 26, 1952
Funds under "Supplies" and "Use allowance for Operator's equipment" may be augmented by use of funds allocated under "Contingency," after the funds so allocated in Exhibit "A" have been expended.

No. 2, dated December 8, 1952
Change completion time from (8) months to (13) months.

Work Completed

Drilling was started January 22, 1952, and was terminated in November 1952, however, drilling was continued at the sole expense of the Operator until January 1953. Drilling in addition to that allowed by the contract amounted to 209 feet.

1800 feet of diamond drilling at a cost of $11,907.14 or $6,62 per foot.

3. Audit Certificate - Report of Review dated May 22, 1953

Total cost as billed by Contractor		$11,907.14
Exceptions		0
	Total cost	$11,907.14
	Government Participation	$ 5,953.57

4. Certification date - No certification as there has been no discovery of ore.

5. Three holes were drilled from the surface and one hole was drilled from mine workings about 175 feet below the surface. The contract provided a flexible plan with respect to depth and location of holes and advantage was taken of this provision during the drilling operation.

The 4 holes drilled under the program penetrated zones which are regarded as being favorable for ore deposition. All the holes penetrated contacts between limestone and intrusive rocks and also penetrated the white marble, however, only 2 of the holes penetrated the underlying interbedded limestone and hornstone.

The Field Team believes the holes were well located and satisfactorily accomplished the purpose for which they were intended. Formations and structures favorable to ore deposition were found by the drilling and several zones showing evidence of feeble mineralization were encountered. The fact that ore was not found by this drilling indicates that significant amounts of ore probably do not exist in the area and further exploration is not recommended. The project must be designated as unsuccessful.

J. W. Alt

J. W. Alt

☒ Audited

☐ Certified

WORK ANALYSIS SHEET - DMEA PROJECT

Analysis as of 12/8/54.
Incl. Voucher for November 1954.

☒ Actual Cost

☐ Agreed Unit Costs

Name Clark and Mathis

Docket No. DMEA-1613

State New Mexico.

Commodity Lead-Zinc

Idn-E No. 193

OPERATION	AUTHORIZED Units	AUTHORIZED Cost	COMPLETED Units	COMPLETED Cost	NET COST
Drifting & Crosscutting					
Raising					
Shafts					
Winzes					
Drilling (Specify) Diamond	1800'	$12,654.00	1800'	$11,907.14	$11,907.14
Surface Excavation					
Underground Excavation					
Roads and Trails					
Operating Equipment Purchased					
Surface Rehabilitation & Repairs					
Underground Rehabilitation					
New Building, Improvements, etc.					
Other (Specify)					
Totals		$12,654.00		$11,907.14	$11,907.14

Prepared by W. K. Klugescheid

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

224 New Customhouse
Denver 2, Colorado

September 22, 1953

Memorandum

To: Secretary to the Operating Committee, DMEA

From: DMEA Field Team, Region IV

Subject: Docket No. DMA-1613X (Lead-Zinc), Contract Idm-E193, Clark and Mathis, a partnership composed of John W. Clark and R. W. Mathis, Luna County, New Mexico

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

1. Original and one copy of the operator's report with attached maps.

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

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

The contract authorized performance of 1800 feet of core drilling at a total estimated cost of $12,654.00. The 1800 feet of drilling was performed at a total allowable cost of $11,907.14, in which the Government participated at 50% or the amount of $5,953.57.

The exploration work did not result in a discovery of commercial grade ore, therefore no certification of discovery is recommended.

Final payment to the operator was processed in this office June 22, 1953, which was in conformance with the final report of review by the Contract Administration and Audit Division, dated May 21, 1953.

W. H. King
W. H. King

A. H. Koschmann
A. H. Koschmann

Reviewed by
DMEA OPERATING COMMITTEE

10-2-53
(date)

osures

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

September 21, 1953

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMA Docket 1613X (zinc-lead), Mahoney Mine, Clark and Mathis, Luna County, New Mexico

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

No ore has been found as a result of exploration, and no further exploration is recommended.

A Certificate of Discovery, therefore, is not to be issued.

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

Enclosures (9)

Reviewed by
DMEA OPERATING COMMITTEE
10-2-53
(date)

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. Box 4126, University Station
Tucson 5, Arizona

DEPARTMENT OF THE INTERIOR
Geological Survey
SEP 30 1953

August 31, 1953

Memorandum

To: A. H. Koschmann, Denver, Colorado

From: R. F. Robinson, Tucson, Arizona

Subject: DMA Docket No. 1613X (Zinc-Lead), Mahoney Mine, Clark and Mathis, Luna County, New Mexico

Enclosed please find the original and 8 copies of the finalization report on the subject docket by John Faick of the U. S. Geological Survey.

Mr. Faick discloses that no ore has been found as a result of exploration. Therefore the project is classified as unsuccessful. Exploration has been exhausted enough to determine that no ore bodies exist in the project area.

No further exploration is recommended.

Raymond F. Robinson

Raymond F. Robinson
Acting District Supervisor
Arizona - New Mexico

Reviewed by
DMEA OPERATING COMMITTEE

10-2-53
(date)

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV
FINAL GEOLOGICAL REPORT

DMA DOCKET NO. 1613X (ZINC-LEAD)

CONTRACT NO. Idm E-193

CLARK AND MATHIS, OPERATORS
821 West Pine Street
Deming, New Mexico

MAHONEY MINE
(Zinc-Lead)
TRES HERMANAS MINING DISTRICT

LUNA COUNTY, NEW MEXICO

by John N. Faick
Geologist, U. S. Geological Survey

APRIL 1953

Reviewed by
DMEA OPERATING COMMITTEE
10-2-53
(date)

FT. FINAL RPT.

FINAL GEOLOGICAL REPORT

CLARK AND MATHIS, MAHONEY LEAD-ZINC MINE

TRES HERMANAS DISTRICT, LUNA COUNTY, NEW MEXICO

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ILLUSTRATIONS

Figure 1 GEOLOGIC SECTION THROUGH DIAMOND DRILL HOLES Following Page 5

TABLES

Table 1 Engineering Data of Diamond Drill Holes 6

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Four diamond drill holes totaling 1800 feet were drilled at a total allowed cost of $11,907.14, with Government aid (DMEA 1613X) at the Mahoney Mine, Luna County, New Mexico. This drilling revealed that white marble, which is exposed at the surface, is about 425 feet thick and is underlain by an impure limy hornstone having a thickness in excess of 300 feet, the maximum penetration. The formations have been intruded by an underlying granitic mass, and also by a sill (?) and by several dikes. Considerable amounts of wollastonite and small amounts of garnet have formed in the limestone as a result of metamorphism. Other minerals are supergene iron and manganese oxides, jasper, and traces of pyrite. Traces of zinc carbonate and galena were reported by the applicant. Oxidation extended to a depth of about 600 feet.

The white marble is regarded as a host rock favorable to ore deposition and has been adequately prepared by faulting, brecciation and by the intrusion of dikes and other igneous bodies. The drill holes were well placed and penetrated several zones that were metamorphosed and mineralized, however, no ore was found.

The small amount of ore previously produced and the failure to find appreciable mineralization by this drilling project

is interpreted by this writer to indicate that significant amounts of ore do not exist in this locality. Further expenditure of either Government or private funds cannot be recommended for exploration of this property. No production will result from this exploration venture, therefore it must be considered unsuccessful. There are no ore reserves.

INTRODUCTION

The Mahoney zinc-lead property, Tres Hermanas district, Luna County, New Mexico, was explored by Clark and Mathis, 821 Pine Street, Deming, New Mexico. The exploration consisted of 4 diamond drill holes drilled on a participating basis with Clark and Mathis providing labor, machinery, and capital to an extent of 50 percent of the cost, the other 50 percent being provided by the Government. Total allowed cost was $11,907.14. Government aid was provided by the Defense Minerals Administration as authorized by the Defense Production Act of 1950, as amended.

The Mahoney property, which was leased from the owners by Mathis and Clark, was examined July 11 and 12, 1951, for DMA by T. M. Romslo, Engineer, U. S. Bureau of Mines, and John N. Faick, Geologist, U. S. Geological Survey. Based on the data obtained during the examination, the application, DMA 1613X, was approved and a contract Idm-E193 was executed. This provided for drilling 4 holes, or a maximum of 1800 feet.

The completed project was examined and the cores logged by the writer on March 2-3, 1953, and the logs are included in this report.

GENERAL GEOLOGY

The Tres Hermanas mining district, in which the Mahoney mine is located, is about 30 miles south of Deming, New Mexico. The ridges and peaks known as the Tres Hermanas Mountains occupy an area of about 35 square miles. According to Darton[1] these mountains are composed of a central igneous mass of coarse granite porphyry flanked in part by andesite,, rhyolite, agglomerate and limestone. The granite porphyry is a deep seated intrusive characterized by coarse grain and brownish color on fresh break.

On the north flank of the Tres Hermanas Mountains is an area about one mile square in which limestone formations are exposed. These appear to be slightly arched around the north flank of the Tres Hermanas Mountains and are cut off on the south by the nearly east-west intrusive contact with the granite porphyry. Several dikes that cut the limestone north of the contact suggest that the limestone area may be underlain by an extension of the main mass of granite porphyry that is exposed in the Tres Hermanas Mountains. That the limestone area is underlain by granite porphyry is substantiated by the diamond drilling recently completed.

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[1] Geology and Underground Water of Luna County, New Mexico: U.S. Geol. Sur. Bull. 618, pp. 79-82, 1916.

Two formations, a white crystalline limestone and an interbedded shale and blue limestone are exposed in the mine area. Erosion has removed a large part of the interbedded shale and blue limestone formation and exposed the underlying crystalline limestone or marble.

Darton[1/] classified all of the limestone in this area as part of the Pennsylvania Gym formation on the basis of fossils which he collected and which Girty identified as being characteristic of the Manzano group. Because of the absence of field data to support correlation of those limestones with the Manzano, Darton included them with the Gym limestone. As defined by Darton the Gym formation lies between cherty limestone supposed to mark the top of the Lake Valley limestone and black shales near the base of the Magdalena formation.

In this same general area Lindgren[2/] found fossils which were identified as belonging to Lower Carboniferous, and therefore classified the limestones as Lake Valley.

Lithology and the apparent similarity of these formations to those in the Hanover District and in other areas of southwestern New Mexico indicate to this writer that the interbedded shale

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1/ Op. Cit. pp. 36-38

2/ Lindgren, Waldeman; The Tres Hermanas Mining District, New Mexico: U. S. Geol. Survey Bull. 380, p. 125, 1909.

and limestone is lower Pennsylvanian and that the white crystalline marble is Mississippian and probably is equivalent to the Hanover limestone in the Hanover District in Grant County.

DESCRIPTION OF THE WORK COMPLETED

Diamond Drilling

Drilling done under contract was started January 22, 1952, and was terminated in November 1952, when 1800 feet of drilling was completed, however drilling was continued at the sole expense of the operator until January 1953. Drilling in addition to that allowed by contract amounts to 209 feet.

Three holes were drilled from the surface and one (Hole No. 1) was drilled from mine workings about 175 feet below the surface. Holes were drilled in the order of 1, 2, 4A and 3 (See Fig. 1),and these numbers are used in this sequence in this report in order to correspond with the numbers used by the operator and to correspond with the numbers used in the report and map prepared at the time of the original examination. The contract provided a flexible plan with respect to depth and location of holes and advantage was taken of this provision during the drilling operations.

Engineering data pertaining to the holes is summarized in Table 1. The coordinates of the collar of the holes is scaled from the surface map included with the report of the original examination and the relative position of the holes is shown on the index map on Fig. 1.

TABLE 1

Project Hole No.	Date Started	Date Finished	Coordinates of collar North	East	Appx. Elev.	Bearing & Inclination	Length of Hole
1	2/11/52	4/26/52	3910	5860	4322	West @ 80°	521
2	5/5/52	6/6/52	4035	5286	4472	Vertical	251
4A	6/13/52	Aug.'52	4787	5006	4440	Vertical	500
3	9/2/52	Jan.'53*	3690	5912	4530	Vertical	737

*Contract terminated November 1952 at maximum allowable depth of 528 feet.

Logs of Diamond Drill Cores

Log of Diamond Drill Hole No. 1
Mahoney Mine; Luna County, New Mexico

Depth in Feet	Description
0-37	Coarse-grained white marble. Grains about $\frac{1}{4}$ inch across.
37-47	White marble; brecciated, metamorphosed and leached. Limonite and pyrolusite in vugs. This probably is a fault zone.
47-195	Coarsely crystalline white marble.
195-224	Gray and white silicated marble. Estimated 90 percent wollastonite.
224-250	Intermixed blue and white silicated limestone and hornstone. Reacts slightly to acid. Probably an impure metamorphosed limestone.
250-265	Gray and white silicated marble.
265-270	Gray and white silicated marble. This contains about 5 percent garnet and 75 percent wollastonite by estimate.
270-303	Gray and white silicated marble. About 90 percent wollastonite.
303-313	Silicated impure marble. 5 percent garnet, 10 percent hornblende (?), 75 percent wollastonite, and 10 percent limestone.
313-355	Silicated impure limestone and hornstone. Weak reaction to acid.
355-373	Silicated limestone. Less Metamorphosed than above. Estimated to be about 50 percent marble.

Depth in Feet	Description
373-382	No core.
382-422	Light gray hornstone. Possibly a limy argillite or shale bed which was bleached and silicated.
422-482	Medium gray hornstone. Many irregular augen-like structures resemble the top of the Devonian Percha, at Hanover, New Mexico. Crude bedding and banding about 70 degrees to side of core.
482-521	Granite porphyry. Feldspar phenocrysts as large as 3/8 inch across set in a crystalline ground mass with grains 1/16 inch or less across. About 10 percent biotite and chlorite.
521	Bottom of hole.

Log of Diamond Drill Hole No. 2
Mahoney Mine; Luna County, New Mexico

Depth in Feet	Description
0-9	No core.
9-54	White and gray marbleized limestone. Coarse grained. Abundant white chert in scattered bands up to 1 foot thick.
54-74	Only about 4 feet of core recovered. Probable fault zone. White marble slightly leached contains about 5 percent limonite in vugs.
74-108	Mottled gray and white silicated limestone. Estimated 95 percent of wollastonite. Trace of garnet.
108-113	Pinkish porphyritic dike, possibly latite porphyry.
113-123	Mixed igneous material and intensely metamorphosed limestone. Fine grained. Strongly brecciated. Character suggests igneous rock replaced limestone.
123-138	Pinkish porphyry. Probably latite.
138-145	Metamorphosed white limestone. Some wollastonite and trace of garnet. Includes about 8 inches igneous material.
145-158	Bluish gray hornstone.
158-161	White marble.
161-162	Gray granite porphyry.
163-173	Metamorphosed white limestone, 4 inches of granite porphyry at 170 feet.

Depth in Feet	Description
173-175	Intermixed white marble and granite porphyry.
175-191	White marble. Estimated to contain 5 percent garnet. Blotches of granite porphyry from 186-189.
191-216	White crystalline limestone, slightly silicated. A few inches of granitic material at 197, 204, and 214.
216-251	Slightly mottled pinkish and greenish feldspars, in medium grained, porphyritic granite.
251	Bottom of hole.

Log of Diamond Drill Hole No. 3
Mahoney Mine; Luna County, New Mexico

Depth in Feet	Description
0-10	No core.
10-18	Coarse grained white marble. Slightly leached at 15 feet.
18-26	White marble weakly metamorphosed. Minor amounts of wollastonite. About 4 inches of limonite at 24 feet.
26-139	White crystalline limestone. Slightly leached at depths of 121, 128, and 131.
139-215	Gray fine-grained granite. Fault gouge at 213 feet.
215-225	Altered basic dike (?). About 95 percent biotite or chlorite.
225-230	Metamorphosed crystalline limestone containing about 25 percent garnet.
230-231	Mixed basic dike and crushed limestone. Altered.
231-323	White marble. Grains about $\frac{1}{4}$ inch across. Abundant chert in bands one foot thick. About 6 inches of jasper at 294 feet.
323-363	Brown jasper cementing white marble and chert. About 50 percent jasper. Only about 10 feet of core recovered.
363-383	White marble slightly leached with small amounts of limonite in vugs.
383-403	White marble. Vuggy. About 20 percent removed by leaching. Vugs coated with limonite. Abundant white chert.
403-433	Intermixed white marble, chert and hornstone. A gradual decrease in lime content is apparent.

Depth in Feet	Description
433-442	White hornstone. Local limy zones.
442-452	Brecciated hornstone probably a fault.
452-550	Gray and white hornstone, banding at an angle of 70 degrees to side of core.
550-560	Fault zone. Limonite and hematite in vugs. 1 foot of core recovered.
560-567	Soft rotten limestone weakly iron-stained.
567-661	Light gray hornstone.
661-662	Dark gray granite dike.
662-667	Fault zone. Only 1 foot of core recovered. Fragments of metamorphosed sediments. Pyrite crystals at 662 feet.
667-674	Hornstone containing 20 percent garnet.
674-676	Dark gray granite dike.
676-686	Gray marble.
686-691	Dark gray granite dike. Abundant biotite.
691-737	Medium gray hornstone. Metamorphosed impure sediment. About 5 percent limestone and 2 percent garnet.
737	Bottom of hole.

Log of Diamond Drill Hole No. 4A
Mahoney Mine; Luna County, New Mexico

Depth in Feet	Description
0-30	Light gray fine-grained hornstone. Traces of epidote, garnet and calcite.
30-40	Medium gray slightly banded hornstone. Bending 52 degrees to side of core.
40-66	Coarse-grained white marble. It contains white chert in bands up to 16 inches thick.
66-67	Mineralized breccia, limonite in marble.
67-69	Marble.
69-72	Mineralized breccia, limonite and jasper in marble.
72-78	White coarse-grained marble.
78-79	Mineralized breccia.
79-116	White marble. Grains about $\frac{1}{4}$ inch long.
116-119	Brecciated and mineralized marble. About 65 percent jasper with minor amounts limonite.
119-122	White marble with abundant white chert.
122-123	Jasper

Depth in Feet	Description
123-130	Slightly brecciated and weakly mineralized white marble.
130-192	Coarse-grained white marble with abundant white chert.
192-193	Gray hornstone with augen-like structures.
193-320	Coarse-grained grayish white marble. Crystals up to $\frac{1}{2}$ inch across. Abundant white chert.
320-321	About 50 percent andredite, and white marble.
321-326	Grayish white marble with abundant white chert.
326-336	Grayish white limestone approximately 20 percent garnet.
336-360	Granite. Grains about 1/8 inch across or less. Fresh unaltered. Quartz, biotite, and feldspar. Trace of epidote in small striated crystals.
360-500	Granite.
500	Bottom of hole.

Results of Drilling

Hole No. 1 was started in coarse-grained white marble, at a depth of about 175 feet below the outcrop of this formation, and continued in the marble to a depth of 224 feet. The hole penetrated gray to white limy hornstone from 224 to 482 feet, below which granite was penetrated to a depth of 521 feet, the bottom of the hole.

Hole No. 1 revealed considerable data on stratigraphy and metamorphism of the area. The marble in the upper part of the hole is white, is uniform in character, and remarkably pure. It is coarse-grained, the grains range in size from about $\frac{1}{4}$ to $\frac{1}{2}$ inch in diameter. The basal 30 feet of the marble is thoroughly metamorphosed to rock estimated to contain about 90 percent wollastonite and about 10 percent limestone.

Beneath the white marble and extending to a depth of 482 feet, a distance of 258 feet, is a formation thought to be thoroughly metamorphosed impure limy shale. The dominant rock of this type penetrated by the hole is thoroughly bleached, indurated, dense, very hard rock which this writer classifies as hornstone. The hornstone is intimately associated with impure limestone which is metamorphosed by recrystallization or by the formation of wollastonite and garnet. Wollastonite is abundant in the core and in some places, for example in the interval from 270-310 feet the core is estimated to contain from 75-90 percent wollastonite. Garnet, where present, usually amounts to about 1 or 2 percent of the core, and is seldom in quantities greater than 5 percent of the core.

From 422 to 482 feet the hole penetrated hornstone having many peculiar augen-like structures. Because of these structures the hornstone greatly resembles the upper part of the Devonian Percha shale of Hanover, New Mexico; however the beds are not thought to be Percha shale. None of the rocks drilled at the Mahoney mine have the lithologic characteristics of the uniform, black, fissile Percha shale like that exposed in the Cooks Range or other parts of southwestern New Mexico.

Relatively small amounts of limonite and pyrolusite were recognized in a brecciated and leached part of the core

extending from 37 to 47 feet. Black flecks which one of the operators, R. W. Mathis, found in the core below 272 feet, were identified as a manganese mineral. Mathis had a qualitative spectographic analysis made on mineralized core taken at a depth of 435 feet and the core was found to contain about one percent of iron and a trace of manganese but nothing else of interest to this examination.

The granite, in which hole No. 2 was stopped at a depth of 521 feet, is a gray rock and is distinctly porphyritic. The ground mass is nearly equigranular and the grains are about one millimeter or less across in the largest dimension. Orthoclase and plagioclase type feldspars, biotite and quartz can be recognized in the ground mass with the aid of a hand lens. The phenocrysts in the granite porphyry by inspection with the hand lens appear to be potash feldspar and are poikilitic, that is, they contain inclusions of other minerals. The largest phenocrysts are about 5 millimeters long, have euhedral to subhedral forms and many of them are distinctly zoned with gray glassy centers and milky-white borders.

Hole No. 2 was drilled about 600 feet west-northwest of the Mahoney shaft. The hole was drilled in white marble to a depth of 216 feet, where granite was encountered. Granite was then drilled to 251 at which depth the hole was stopped.

The marble penetrated is similar to that drilled in hole No. 1 but shows the effect of considerably increased brecciation but slightly less metamorphism. White marble, containing thin bands of white chert, was drilled to a depth of 54 feet, at which depth a breccia zone was encountered. This breccia probably represents a fault zone. The breccia extended from 54 feet to 74 feet but only 4 feet of core was recovered. This core was leached, and limonite, representing about 5 percent of the core was deposited in the vugs and cavities formed by leaching.

Beneath the fault zone and extending to a depth of 108 feet the marble was thoroughly metamorphosed to an aggregate containing about 90 percent wollastonite and traces of garnet. From 108 feet to 138 feet the hole penetrated a fault-dike zone containing 2 pinkish porphyritic dikes, tentatively identified as latite by this writer. The dikes are separated by a narrow zone of brecciated and intensely metamorphosed limestone.

Beneath the dikes and extending from depths of 138 to 216 feet the marble is metamorphosed to about the same extent as that above the dikes. It contains appreciable amounts of wollastonite, and traces of garnet, and the marble is coarse-grained. Many narrow stringers of gray granite were penetrated by the hole, the largest being at depths of about 160, 170, 174, 188, 197, 204 and 214 feet.

At a depth of 216 feet the hole entered a granitic type igneous rock and this was drilled to a depth of 251 feet at which depth the hole was discontinued. This rock is slightly porphyritic with pale gray-green phenocrysts of plagioclase feldspar in a ground mass of quartz and pink orthoclase. The crystals are small; in the ground mass they range from 1 to 3 millimeters across and the phenocrysts are about 7 millimeters across.

This rock is tentatively classified as quartz monzonite. This writer believes it is a variety of the gray granite found in the other holes.

Hole No. 4A was drilled near the north end of the formerly productive area. The first 40 feet of this hole was in light-gray dense hornstone containing traces of epidote, garnet and calcite. White coarse-grained marble was penetrated from 40 to 360 feet. Within the interval from 40 to 130 feet several short units of this core, amounting to about 5 percent of the core, were moderately brecciated and mineralized with jasper and limonite, and these together constitute from 25 to 75 percent of the mineralized parts of the core. Wollastonite was not observed in the core of hole No. 4A but garnet is relatively abundant near the limestone-granite contact. This writer estimates that in the interval from 320 to 336 feet about 10 percent of the core is andradite.

The hole penetrated granite at a depth of 336 feet and remained in this formation to 500 feet at which depth the hole was discontinued. This granite is a gray fine-grained aggregate of feldspar, quartz, and biotite and contains traces of epidote. This granite is only slightly altered and striations are visible on the plagioclase feldspar. Only the core from 336 to 360 feet was available to this examiner, but the applicant logged the remaining core and reported the core below 408 feet to be coarse-grained granodiorite porphyry containing some concentrations of ferromagnesian minerals.

Hole No. 3 was drilled about 200 feet southeast of the Mahoney shaft near an old stope. The hole was drilled in white marble to a depth of 139 feet. Trace amounts of wollastonite are present in part of the core and locally the core is slightly vuggy and contains a small amount of limonite in the vugs.

From 139 to 215 feet the hole penetrated gray, fine-grained granite similar in appearance to most of the granite in the other holes. In this hole the granite is thought to be a sill. From 215 to 225 the hole penetrated an altered basic rock composed of ferromagnesian minerals, biotite and chlorite. This rock is probably a dike.

From 225 to 442 feet the hole penetrated coarse-grained white marble containing thin bands of chert. A fault was penetrated

at a depth of 231 feet and the 6-foot interval between this fault and the above mentioned altered dike the marble contains about 25 percent garnet. From 323 to 363 feet only about 10 feet of core was recovered. About 50 percent of this core is brown jasper, which cements brecciated white marble.

From 363 to 403 feet the core is slightly vuggy and the vugs are lined with limonite. These limonite coated vugs are estimated to account for about 10 percent of the volume of the core, but they are spotty and erratic in distribution.

Below 403 feet the quantity of limestone decreases and the amount of hornstone increases and this is considered to represent a gradational contact between the marble and the underlying hornstone. From 403 to 661 the hole penetrated hornstone with which occurs interbedded marbleized limestone. There is apparently a fault from 550 to 560 feet from which interval only one foot of core was recovered. This contained moderate amounts of limonite and hematite.

From 661 feet to the bottom of the hole at 737 feet the core consists of brecciated, faulted and metamorphosed limestone and hornstone separated into short intervals by 3 narrow dikes of dark gray fine-grained biotite granite. The narrow dikes occurred at intervals 661-662, 674-676, and 686-691.

The metamorphosed sediment in the interval from 667 to 674 contained about 20 percent garnet, and the interval from 691 to 737 contained about 2 percent garnet.

MINERALIZATION

The dominant minerals found by this drilling consist of wollastonite and garnet. These are pyrometasomatic type minerals that are undoubtedly genetically related to the metamorphism caused by the granite intrusions. The wollastonite is erratically distributed throughout much of the geologic section, however, the garnet shows a tendency to be concentrated near the granite intrusion and near faults and dikes.

No ore minerals were observed in the core by this writer, however disseminated pyrite was found in hole No. 3 at a depth of 662 feet. The applicant reported galena crystals at a depth of 106 feet in hole 4A and a small amount of disseminated chalcopyrite at a depth of 470 to 500 feet in hole No. 3, but these minerals were not detected by this writer.

Iron and manganese oxides were found in small cavaties and fractures in many short intervals of the core and in several places these oxide minerals are closely associated with jasper. In most places the jasper and limonite constitute only a small percentage of the core but in a few short intervals these minerals are relatively abundant. For example in hole No. 3,

at a depth of 323 to 363, 10 feet of core were recovered which contained about 50 percent jasper and which apparently cements brecciated limestone in a fault zone.

The applicants report that a small amount of zinc carbonate is associated with the limonite but zinc carbonate was not identified by the writer. If present at all it is not in significant amounts.

The different amounts of wollastonite, garnet, limonite and jasper in the different holes indicates that metamorphism was most intense near the south end of the area drilled and was least intense in the north end. This suggests that the intensity of the mineralization is controlled to a considerable extent by proximity to the main intrusive mass of Tres Hermanas mountains.

Oxidation has been relatively deep, probably to depths of about 600 feet. Considerable limonite was found in the upper part of the holes and in hole No. 3 was found at a depth of 560 feet and pyrite crystals were found at a depth of 662 feet. Traces of black manganese oxides were found extending to about the same depth as limonite. The operator reported traces of sulphides in the upper parts of the holes but these were not seen by this writer.

INTERPRETATION OF PROJECT RESULTS

Data obtained from drilling indicates that the Mahoney mine area is underlain by white crystalline limestone and marble, the thickness of which is indicated by the drill holes to be from 400 to 450 feet. The white marble is underlain by gray or grayish-white limy hornstone, the thickness of which was not revealed by the drilling, but which was found to be in excess of 300 feet by hole No. 3. These formations appear to be conformable and the contact between them is gradational.

These two formations are extensively metamorphosed, the marble having formed by recrystallization of a relatively pure limestone and the limy hornstone having been derived by baking and recrystallization of an impure sediment probably a limy shale.

The principal metamorphic type minerals in the rocks are wollastonite, which in a few places constitutes about 90 percent of the recovered core, and garnet, which is much less abundant than wollastonite. In many places garnet constitutes from about 2 to about 20 percent of the core recovered from short intervals of a few feet in length, and in a couple of intervals, one or two feet long, the garnet content ranged from 25 to 50 percent of the core.

Metamorphism was undoubtedly accomplished by the intrusion of granitic type igneous rocks which were found to intrude the sedimentary formations underlying the area. The granitic rocks are represented by a relatively large body thought to be a stock, and by a closely related sill-like body and several granitic dikes. Two latite dikes and a basic dike were also found by the drilling.

Inspection of the vertical projection through the drill holes and the Mahoney shaft (see Fig. 1) indicates that a sill-like body was penetrated by the shaft and by hole No. 3. This sill is about 70 feet thick where penetrated by hole No. 3 but in the shaft only an irregular section of the sill is exposed and its full thickness is not revealed. The contact exposed in the shaft is very irregular and poorly defined but gives this writer the impression that the sill has intruded against a fault and that the sill is greatly reduced in thickness or terminated against this fault.

It is possible that the sill persists through the Mahoney shaft and through holes 2, 3, and 4A and therefore may form a relatively persistent intrusive sheet. Against this possible interpretation is the rock type exposed in hole No. 2, and the excessive thickness of granite penetrated in hole 4A.

In hole No. 2 about 35 feet of medium-grained pink granite was penetrated which more nearly resembles a facies of a deep-seated intrusive than the fine-grained gray, porphyritic granite sill found at a depth of 139 to 215 feet in hole No. 3, or similar gray granite found in other holes. The 164 feet of granite penetrated by hole No. 4A appears to be too thick to correlate with the 76-foot thick sill penetrated by hole No. 3 and is thought to be a deep-seated intrusive.

Although hole No. 3 did not penetrate a deep-seated intrusive mass it appears likely that granite may be present a short distance below the bottom of the hole. Several narrow dikes and the intense metamorphism revealed by the core indicate the nearness of an underlying granite mass.

Two or three interpretations of the relationship of the granite intrusions to the sedimentary formations are readily possible and a choice of interpretations is difficult to make because of the inadequacy of the available data. This writer interprets the granite found in holes 1, 2 and 4A to be a stock or cupola and believes the dikes and strong metamorphism found near the bottom of hole No. 3 to indicate that the same intrusion lies within a very short distance below the bottom of this hole. The intrusion of this stock-like intrusion is believed by this

writer to have caused the gentle arching of the beds over the intrusion. The tongue-like mass exposed in the Mahoney shaft and found by hole No. 3 is probably a sill.

The 4 holes drilled under this program penetrated zones which are regarded as being favorable for ore deposition. All the holes penetrated contacts between limestone and intrusive rocks and also penetrated the white marble, however only 2 of the holes penetrated the underlying interbedded limestone and hornstone. The latter formation is not considered to be a favorable host rock for ore deposition because of the high silica content, estimated at about 75 percent. Evidence of metamorphism and mineralization was found in all the holes and was most intense in fault or fracture zones, some of which contain narrow dikes.

This writer believes the holes were well located and satisfactorily accomplished the purpose for which they were intended. Formations and structures favorable to ore deposition were found by the drilling and several zones showing evidence of feeble mineralization were encountered. The fact that ore was not found by this drilling or previous drilling indicates that significant amounts of ore probably do not exist in the area and further exploration is not recommended. The project must be designated as unsuccessful. There are no ore reserves.

Mining Division
Date Rec'd.
MAY 11 1953
BUREAU OF MINES
Denver, Colorado

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

SOUTHWEST EXPERIMENT STATION
BOX 4097
UNIVERSITY STATION

MINING DIVISION
REGION IV

TUCSON, ARIZONA

May 8, 1953

Memorandum

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

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

Subject : Final Report, Docket DMA-1613X, Contract Idm-E193, Clark & Mathis, Mahoney Lead-Zinc MIne, Tres Hermanas Mining District, Luna County, N. Mex.

Enclosed are original and 8 copies of the final report on contract Idm-E193 by John H. Soule' of the Bureau of Mines. This report has my approval.

This report was returned to us on March 12 for revision but we only recently received the requested information from Robert Mathis of Clark and Mathis regarding salvage value of diamond bits.

Walter R. Storms

Walter R. Storms

CC W. H. King (8)
DMA-1613X
DF

Reviewed by
DMEA OPERATING COMMITTEE
10-2-53
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMA-1613X, Contract Idm-E193,

Clark & Mathis, Mahoney Lead-Zinc Mine,

Tres Hermanas Mining District, Luna County, N. Mex.

John H. Soule', Mining Engineer
U. S. Bureau of Mines

January 1953

Reviewed by
DMEA OPERATING COMMITTEE
10-2-53
(date)

DMA-1613X, CONTRACT Idm-E193,
CLARK & MATHIS, MAHONEY LEAD-ZINC MINE,
TRES HERMANAS MINING DISTRICT, LUNA COUNTY, N. MEX.

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SUMMARY

The Mahoney mine in the Tres Hermanas Mining District, Luna County, N. Mex. was discovered during the early part of the present century and a small amount of zinc-lead ore was produced. From time to time various individuals and companies have been interested in the deposits. The area was proposed as a Bureau of Mines development project but no funds were available. The present lessees, Clark and Mathis, applied for and received Government assistance to explore the area under the Defense Production Act of 1950, as amended. The application was docketed as DMA-1613X and and the contract number was Idm-E193.

Work was started in January 1952 and the footage limit imposed by the contract was reached in November 1952. Four holes were drilled for a total of 1,800 feet. The costs were ~~approximately~~ $11,908.14. The operators are continuing the drilling on their own account to reach the granodiorite in Hole No. 4 which was nearly 700 feet deep on the first of the year. Work was still in progress early in 1953.

No ore was encountered in any of the holes to the limit allowed by the contract, so no ore reserves can be calculated.

INTRODUCTION

The Mahoney mine in southern Luna County, N. Mex. has been credited with a small production of zinc and lead ores, most of which were oxidized. The discovery of these ores took place shortly after the turn of the century, but periodic interest has been manifest in

the deposits in later years. Some small amount of exploratory work was done and in 1950 the property was proposed as a development project by the Bureau of Mines but no funds were available. Later John W. Clark and Robert W. Mathis leased the property and applied for Government assistance to explore the deposits under the Defense Production Act of 1950, as amended. The application, Docket DMA-1613X, was approved and a contract, Idm-E193, was executed. The work on the project was started in January 1952 and was completed as far as the contract was concerned, in November 1952. The operators decided to continue with the work until they reached their objective, the granodiorite, in Hole No. 4. Work was still in progress early in January 1953.

ACKNOWLEDGMENTS

Acknowledgment is due to R. W. Mathis and J. W. Clark, lessees of the Mahoney mine, for information given about various phases of the project. Acknowledgment also is made of the material taken from Bureau of Mines files, much of which is incorporated in this report.

LOCATION, TOPOGRAPHY AND PHYSICAL FEATURES

The Mahoney mine is situated about 25 miles south of Deming, N. Mex. in the southern half of Sec. 21 and the northern half of Sec, 28, T. 27 S., R. 9 W. as shown in figures 1 and 2. The mine is reached by travelling south from Deming for about 13 miles on paved State Highway 11 to the first gradual turn to the left or southeast. At this bend, take the dirt road, a continuation of the

pavement line, jog to the west for half a mile, and thence south, then southwesterly to the property which lies southeast of a windmill just west of the road (see figure 1). The workings can be seen from the windmill. It is about 12 miles from the pavement to the mine. The dirt road becomes slippery during wet weather.

The Mahoney claims are in a low, rolling group of hills on the northwestern slope of the Tres Hermanas Mountains. The mean altitude of the area covered by the claims is approximately 4,568 feet, with a maximum relief of only 160 feet. The highest point on the claims is Monument Hill with an altitude of 4,568 feet (see figure 3).

Vegetation is sparse, consisting of native grasses, greasewood, Ocotillo and cati. There is a small growth of cedar in the upper reaches of the Tres Hermanas Mountains, about one mile southeast of the mine.

The winters are mild, and though the summers are decidedly hot, they are not too uncomfortable due to the dryness of the atmosphere. Average precipitation is about 10 inches. There are no permanent streams in the area. The ground water level is reported to be about 350 feet below the surface at the northwest corner of the claim group.

HISTORY AND PRODUCTION

The zinc ores of the Mahoney mine were reportedly discovered in 1904. Work was done on the property from 1905 to 1907, and again from 1915 to 1917. Subsequent attempts to operate the property were made in 1926, 1942-1943, and in 1948. Recently the lessees, Clark and Mathis, mined a little oxidized ore.

Production records are incomplete. About 5,000 tons of ore reportedly were produced, about half of which is supported by records. About 500 tons of this ore contained 25 to 30 percent lead and the remainder was zinc ore containing plus 30 percent zinc. Operations in 1951 resulted in one shipment of 42 tons of nearly 28 percent zinc ore, and the stockpiling of about 35 tons of sulfide ore containing about 4 percent lead and a little silver.

OWNERSHIP AND EXTENT

The Mahoney group consists of 10 lode claims of which one, the Contention, is patented (see figure 2). The remaining 9 have been surveyed for patent and are now in process of being patented. The group is owned by the Clark Realty and Investment Co., J. A. Mahoney, Inc., and Mary Mahoney Carney, the last two being located in Deming. The group of claims covers an area nearly 200 acres in extent. R. W. Mathis and John W. Clark have leased the property under the partnership name of Clark and Mathis.

DESCRIPTION OF THE DEPOSITS

The oldest rock formation in the area of the Mahoney mine is a limestone of late Carboniferous age. This limestone, called the Gym, is in great part massively bedded and of light grey color. A brecciated structure is characteristic of many beds although some of the brecciation noted may have been due to much later structural deformation. At the Mahoney mine, much of the massive limestone has been recrystallized to marble and some of the more shaley beds near the top of the formation have been converted to hornfels.

The limestones dip generally to the northwest, gradually flattening in dip in that direction. This is due to the doming effect of the main intrusive mass of the Tres Hermanas Mountains southeast of the mine. Within the mine area, minor structural features are noted as generally northwest trending anticlines of gentle deformation. This is probably due to underlying sills or tongues from the main granitic intrusive mass. The sills or tongues are shown in the drill holes, the logs of which are shown in figure 4.

Faulting seems to be unimportant as a major structural feature, but minor fractures and faults are important to the ore bodies, which are of two types. The most important to date are the flat lying manto type deposits that seem associated with the anticlinal features. Most of the ore was mined from this type of deposit. Some ore occurs along steeply dipping fractures and as these are deeper than the known manto deposits, they contain most of the small amount of sulfide ore known in the area. It is indicated on Monument Hill that the steep fractures underlie manto deposits and may have been the feeders for them. The largest manto type of deposit in the area is on Monument Hill. It has dimensions of about 400 feet in length, 20 to 40 feet in width, and averages about 3 feet in thickness. This manto dips gently to the northwest, and like the other ore bodies of this type, lies generally within 50 feet of the ground surface. The fracture ore bodies are like small pods along the fault or fracture.

The ore minerals were mostly zinc carbonate and zinc silicates for the zinc ores, and cerrusite for the lead ores. Galena and Sphalerite are the sulfide minerals noted.

MINE WORKINGS

As the important ore bodies were close to the surface, most of the development at the Mahoney mine was done by shallow shafts. For the small amount of ore produced, there are nearly 50 shafts, most of which are less than 40 feet deep. Many of the shafts in the ore area are interconnected by stopes and other mine workings. Only three of the shafts reach any depth. Two are nearly 100 feet deep and one is nearly 200 feet deep. Many of the shafts are shown on figure 3; also shown in this figure are the important stoped areas.

PROJECT WORK AND COSTS

The project work as outlined under the terms of the contract was to consist of 4 or 5 diamond core drill holes drilled from various locations. Hole No. 1 was to be drilled from an underground location and a possible second and third hole from underground locations if the results obtained from Hole No. 1 so warranted. The remaining holes were to be drilled from surface locations. A maximum of 1,800 feet of drilling was allowed and costs were estimated to be $12,654.00.

Equipment was moved onto the propery on January 22, 1952 and actual drilling started on Hole No. 1 on February 11, 1952 after

the drill site had been prepared. Holes Nos. 2, 3 and 4 were drilled near the contract surface locations 2, 4A and 3 respectively although Hole No. 2 was somewhat west of location 2. The locations of the drill holes are shown in figure 3.

Considerable trouble was experienced in the drilling. Practically all of the drilling was done without water return. Cementing was tried but no sooner would the bit penetrate the cement and into virgin rock when the water would be lost again. Some of the rock was highly abrasive and caused considerable wear on the equipment and the rock in places was very hard. Mechanical difficulties were often the cause of much delay.

Hole No. 1 was drilled to a depth of 521 feet and bottomed in granodiorite. No ore was found in this hole. Hole No. 2 was drilled to a depth of 251 feet and bottomed in granodiorite. Continuation of this hole would probably have resulted in drilling more limestone as the granodiorite was probably a sill. No ore was found in this hole. Hole No. 3 was drilled to a depth of 500 feet with no ore encountered. It bottomed in granodiorite. Hole No. 4 was drilled to the contract limit of 528 feet in November 1952 without encountering any ore. The operators decided to continue this hole to the granodiorite at their own expense and the hole was nearly 700 feet deep early in January 1953. Drilling was still in limestone. Graphic logs of the holes are shown in figure 4.

Allowed project costs totalled $11,907.14 of which one half, or $5,953.57 was the Government's share of participation in the project. The above costs do not reflect the true costs of the project because of disallowances, most of which were due to the greater length of time needed to complete the project. Also, some supplies such as core boxes were supplied by the operator without cost to the project.

The following tabulation of the allowed costs shows the salvage value obtained from the used diamond bits. Other supplies were purchased as needed and no unexpended portion remained upon which a salvage value could be affixed. Also shown in the table is the distribution of a credit of $86.06 to the project. This amount was determined by disallowing 13 feet of excess drilling at a rate of $6.62, as indicated on Final Form MF-104A.

TABLE I. Costs and distribution.

Item	Allowed Costs MF-104	Allowed Costs Credit Absorbed	UNIT COSTS
Labor	$5,110.51	$5,073.84	$2.82
Engineering and sampling	1,178.32	1,169.87	0.65
Diamond bits	1,964.35	1,950.25	1.08
Fuel and lubricants	882.02	875.69	0.49
Other	318.20	315.92	0.18
Depreciation	1,971.28	1,957.14	1.09
Repairs	65.45	64.98	0.04
Assaying	21.68	21.52	0.01
Payroll taxes	182.27	180.96	0.10
Workmen's compensation	143.47	142.44	0.08
Transportation	155.65	154.53	0.08
Excess drilling	(86.06)		
Totals and average	$11,907.14	$11,907.14	$6.62

The unit cost of $6.62 as indicated above is somewhat under the $7.03 estimated in the contract. The efficiency of the operation was satisfactory.

ORE RESERVES

No ore was found in any of the holes within the 1,800-foot limitation of the contract, so no ore reserves can be calculated. A few tons of previously known low-grade oxidized ore remains in the mine.

CONCLUSIONS

It must be concluded from the results obtained from the drilling at the Mahoney mine that no discovery of ore was made within the 1,800 feet of drilling allowed by the contract. No further work on the property seems desirable.

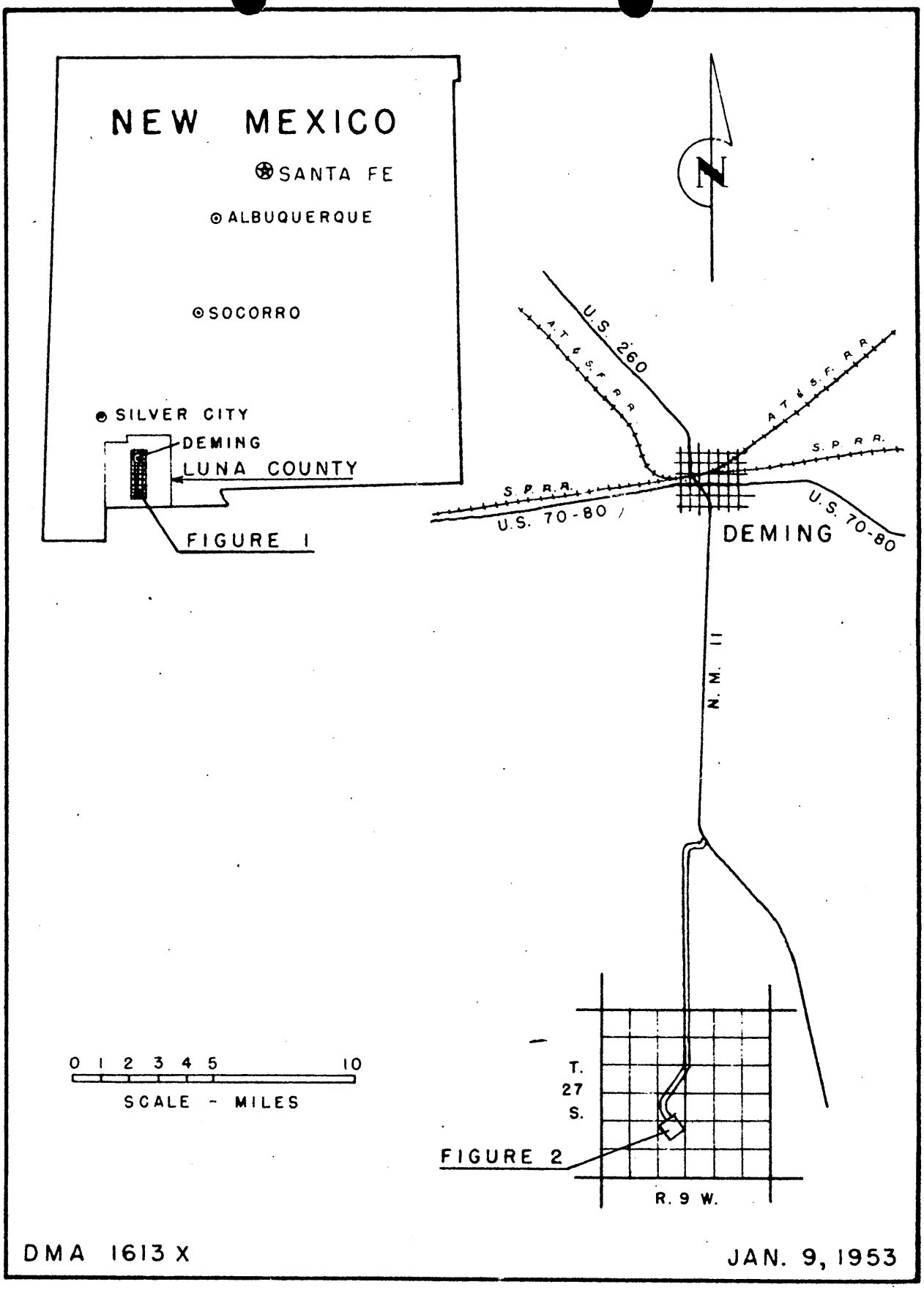

FIGURE 1,- LOCATION MAP, MAHONEY MINE, LUNA COUNTY, NEW MEXICO

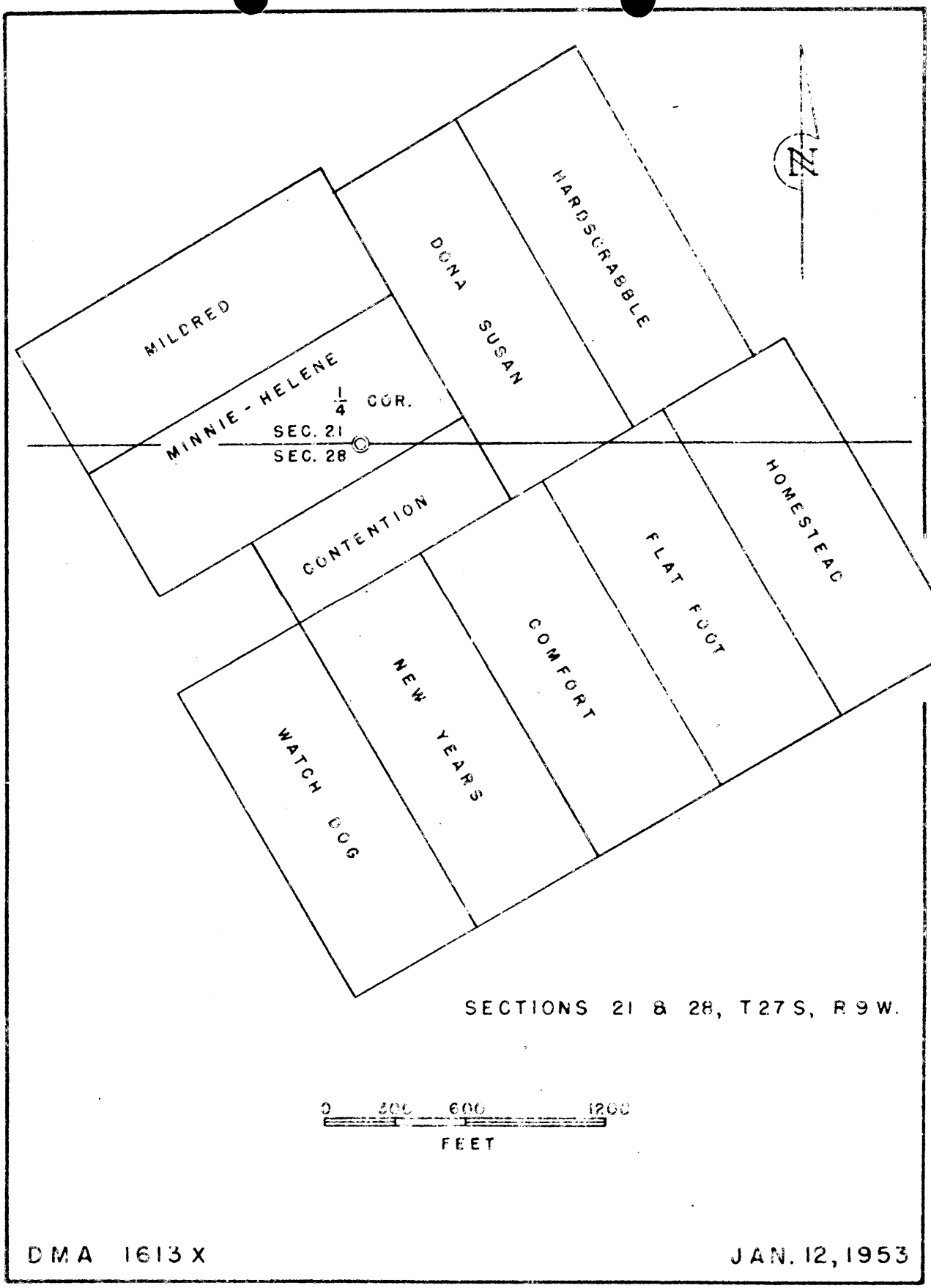

FIGURE 2.- CLAIM MAP, MAHONEY ZINC-LEAD MINE.

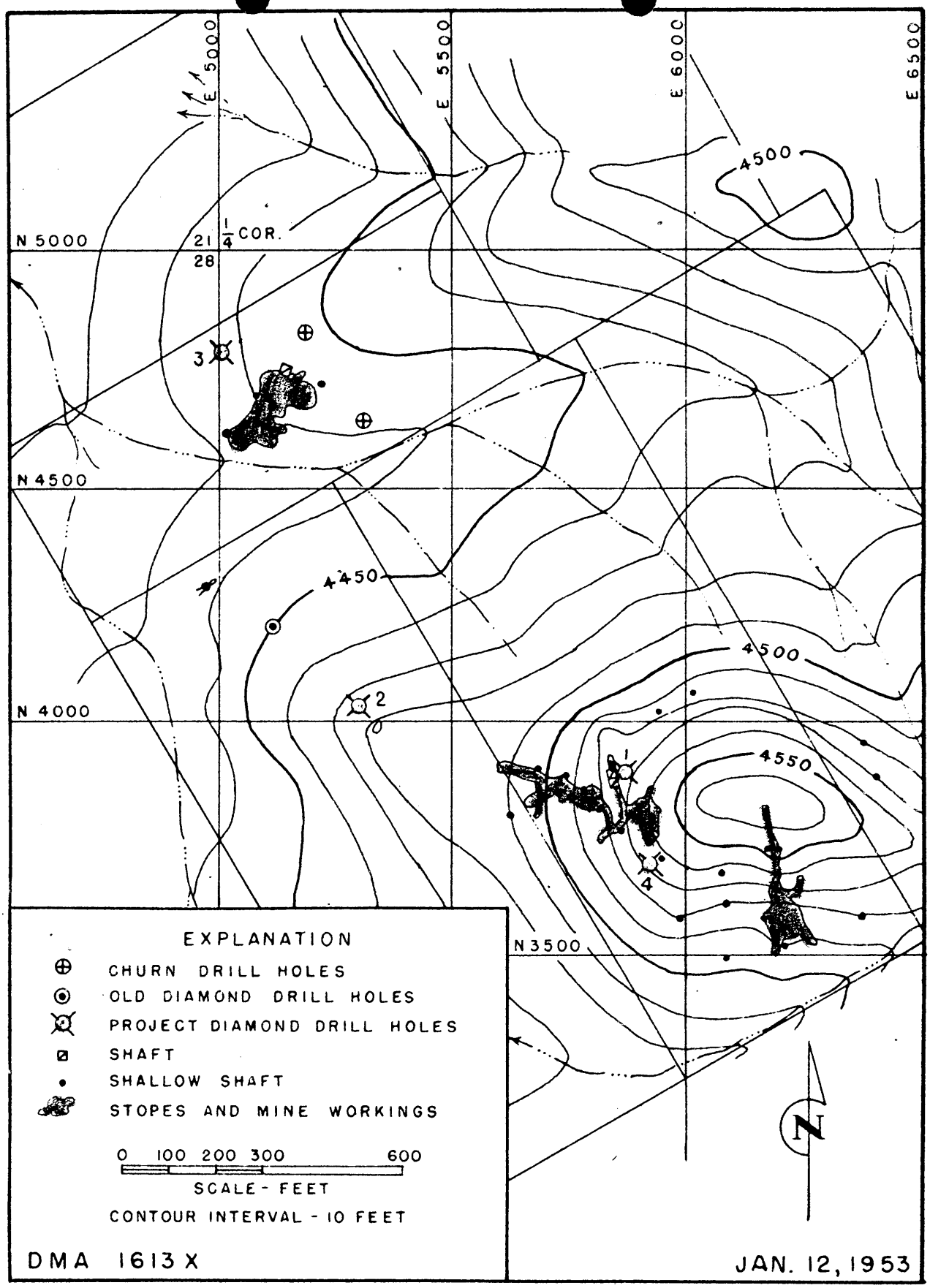

FIGURE 3. - SURFACE AND TOPOGRAPHIC MAP

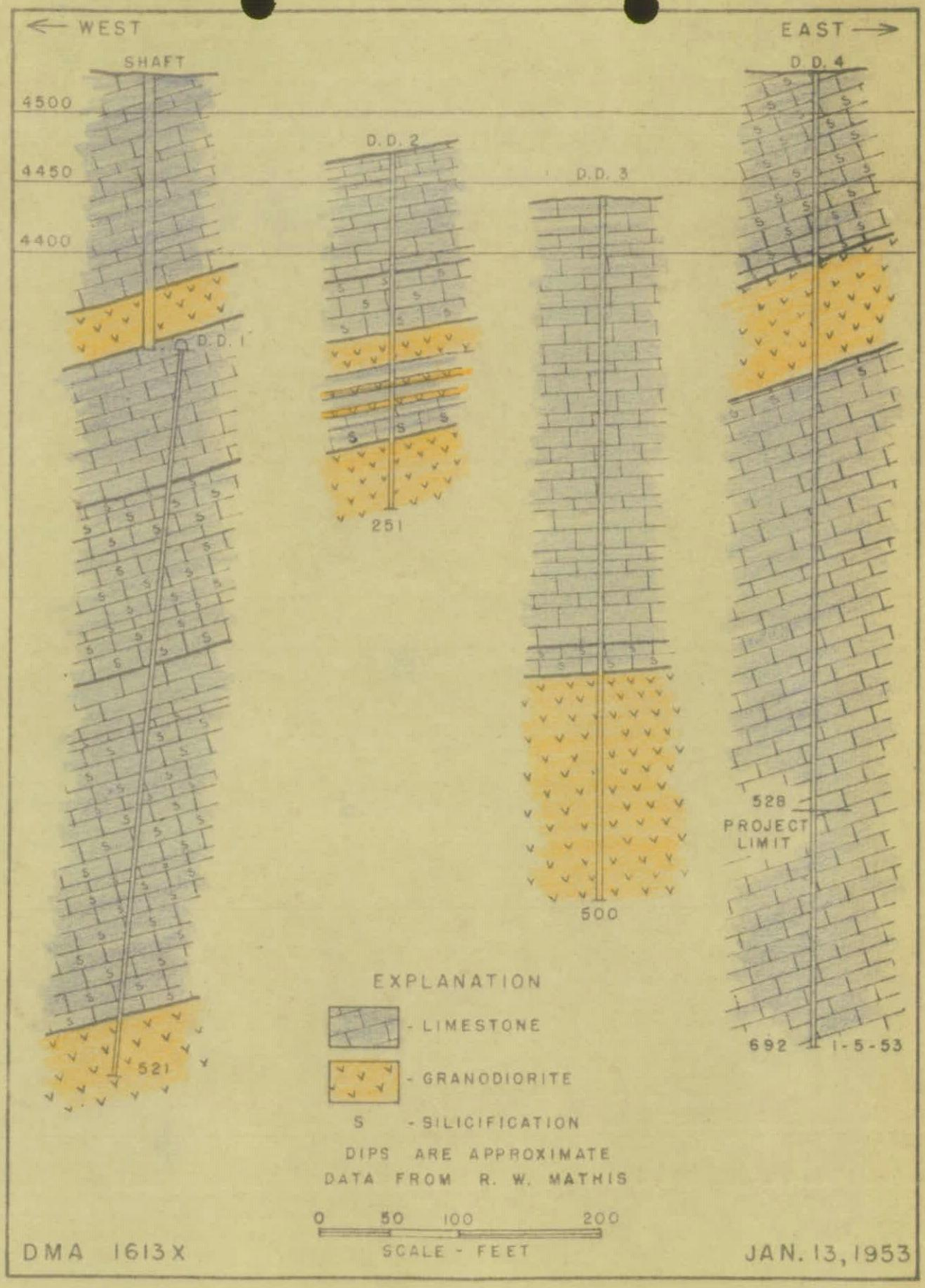

FIGURE 4. - LOGS OF DRILL HOLES.

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AUG 6 - 1953
BUREAU OF MINES
Denver, Colorado

UNITED STATES
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BUREAU OF MINES
MINING DIVISION
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Box 4097
UNIVERSITY STATION
TUCSON, ARIZONA

August 4, 1953

Memorandum

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

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

Subject : Operator's Final Report, Contract Idm-E193, Docket DMA-1613X, Clark & Mathis, Mahoney Lead-Zinc Mine, Luna County, N. Mex.

On June 17 we forwarded you the above report minus 3 prints of Exhibit I. Yesterday we finally received the missing 3 prints from Mathis, although we asked him for them on May 21.

Walter R. Storms
Walter R. Storms

CC W. H. King (6)
DMA-1613X - Final Report
DF

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
MINING DIVISION
REGION IV

SOUTHWEST EXPERIMENT STATION
Box 4097
UNIVERSITY STATION

Mining Division
Date Rec'd.
JUN 19 1953
BUREAU OF MINES
Denver, Colorado

TUCSON, ARIZONA

June 17, 1953

Registered

Memorandum

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

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

Subject : Operator's Final Report, Contract Idm-E193, Docket DMA-1613X, Clark & Mathis, Mahoney Lead-Zinc Mine, Luna County, N. Mex.

Enclosed are original and 4 copies of the operator's final report for Contract Idm-E193. We received this report on May 19 but as 3 prints of Exhibit I were lacking, we wrote to Mathis for the missing prints. We wrote to him on May 21, but to date we haven't heard from him.

We are submitting this report without the 3 maps. If and when we receive them, we will forward them to you.

Walter R. Storms

Walter R. Storms

CC W. H. King (4)
DMA 1613X
DF

CLARK AND MATHIS
821 W. Pine Street
Deming, New Mexico

U. S. BUREAU OF MINES
MINES DIVISION
MAY 19 1953
TUCSON, ARIZONA

FINAL REPORT FOR CONTRACT Idm-E193, DOCKET DMA 1613X

Four Diamond Drill holes were drilled on the group of claims held by John W. Clark and R. W. Mathis by lease dated January 17, 1951, as prescribed in Exploration Project Contract Idm-E193 dated November 23, 1951. Work was commenced January 22, 1952 and completed January 30, 1953. Holes were drilled at locations previously agreed upon by the operators and the Government (See Exhibit 1). Diamond Drill Hole No. 1 drilled at the bottom of the Mahoney Mine shaft to a depth of 521 feet. Diamond Drill Hole No. 2 was drilled to a depth of 250 feet, and was abandoned because of the extreme hardness of the granodiorite porphry, slowness of progress, and high diamond cost. Diamond Drill Hole No 4A drilled at a depth of 500 feet, terminating in granodiorite porphry. It is assumed that the granodiorite porphry encountered in bottom of Holes Nos. 1, 2, and 4A is part of the main stock of the Tres Hermanas granodiorite intrusion. Diamond Drill Hole No. 3 was drilled to a depth of 737 feet and was still in sedimentary rock when abandoned.

Contract completed in Nov. 1952

A graphic core log gence of these four holes has been prepared and it is submitted with this report (See Exhibit 2). No correlation seems apparent. It is assumed that the original similarity of sedimentary beds has been altered by eratic metamorphism.

When this project was commenced it was believed that the granodiorite comprising the peaks south east of the Mahoney Mine were part of the intrusive stock and that the sedimentary section would likely be thicker farther away from the surface outcrop. According to the information disclosed by these four drill holes a reverse is apparently true. While Diamond Drill Holes 2 and 4A penetrated a thick section of granodiorite at a relatively shallow depth, Diamond Drill Hole No. 1 penetrated 670 feet below the surface before encountering the granodiorite porphyry mass, and Hole No. 3, closest to the surface outcrop of granodiorite porphyry, was still in sedimentary formation at 737 feet. The belief now is that the surface outcrop of granodiorite porphyry south east of the Mahoney mine is sill-like in nature and that the thickest section of sediments favorable to zinc and lead sulphide replacement may occur between the sill and the granodiorite porphyry mass encountered in Diamond Drill Holes 4A, 2, and 1.

The primary purpose of this project of course, was to find a commercial deposit of zinc-lead sulphide ores, which were in short supply when this project was initiated. Surface indications of mineralization are wide-spread on these claims, and the chances of finding other ore deposits similar to the Manto deposits of zinc and lead carbonates found in the vicinity of the Mahoney shaft and of the Contention claim were considered highly favorable. Although occasional small occurences of zinc and lead carbonates and some lead sulphide

OPERATOR'S FINAL REPORT

Clark and Mathis
821 W. Pine Street
Deming, New Mexico

FINAL REPORT FOR CONTRACT Idm-E193, DOCKET DMA 1613X

were found, nothing indicating the occurrence of a commercial ore body was discovered.

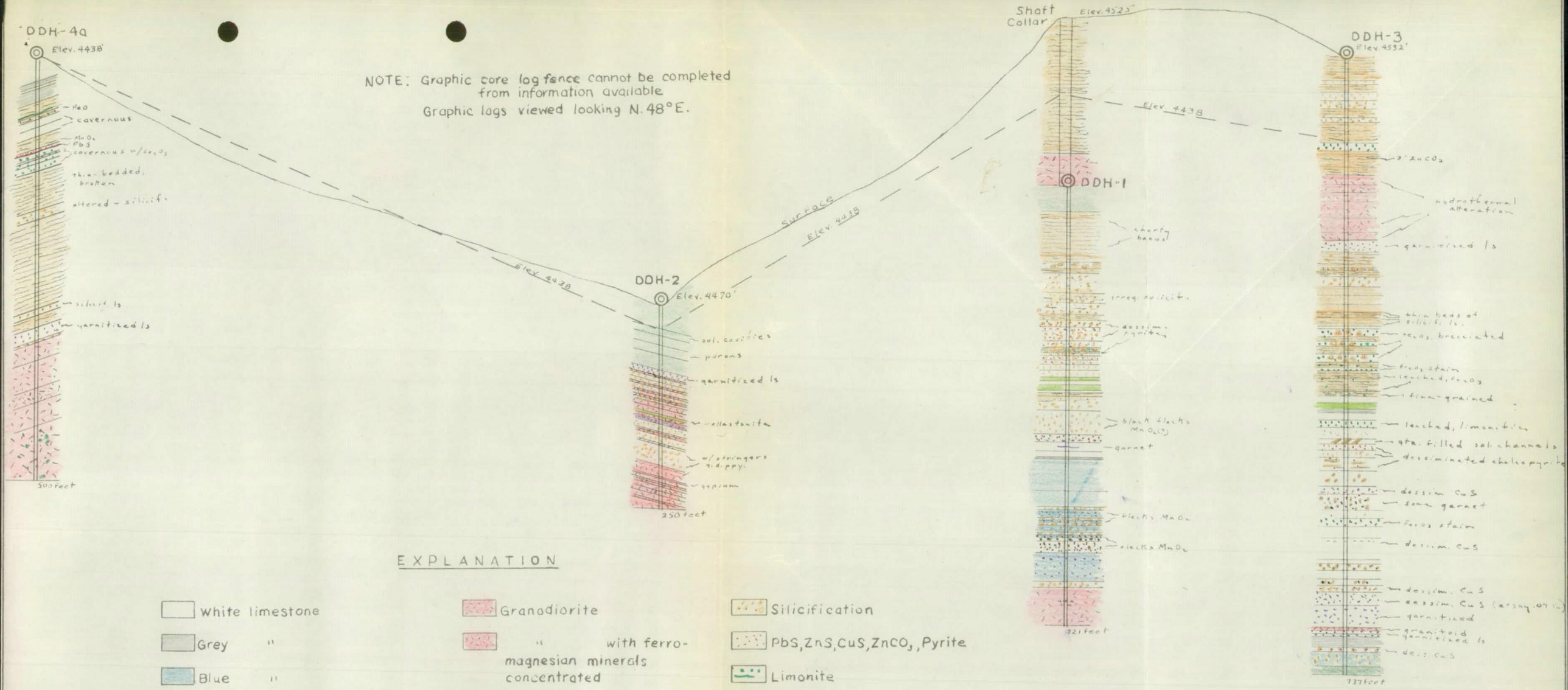
It is of the opinion of this writer that the work done by this project does not explore all of the favorable mineral indications within these claims. However, considering the decline in the demand for lead and zinc metals it is believed that the expenditure of additional funds by the operators at this time could not be considered a wise investment.

Respectfully submitted.

R. W. Mathis

R. W. Mathis
CLARK AND MATHIS

RWM:l



EXPLANATION

- White limestone
- Grey "
- Blue "
- Mottled "
- Cherty "
- Recrystallized limestone
- Marble
- Granodiorite
- " with ferro-magnesian minerals concentrated
- Diorite
- Silicification
- PbS, ZnS, CuS, $ZnCO_3$, Pyrite
- Limonite
- Garnet
- Manganese Oxides
- Gypsum
- Wollastonite

Exhibit II

CORE LOGS

Vicinity of

MAHONEY MINE

Tres Hermanas District
Luna County, N. Mex.
Scale 1" = 100'
Logged by R. Mathis
Drafted by J. W. Reinhart

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
ROOM 13, POST OFFICE BLDG.
WASHINGTON 25, D. C.
KNOXVILLE 2, TENN.

June 22, 1953

Memorandum

To: Helen Miller, Administrative Officer - Regional Office

From: Wm. A. Beck, (DMEA) Knoxville Field Office

Subject: DMEA-1198X, Idm-K193 (Talc) Hitchcock Corp. Murphy, N.C.

Transmitted herewith is a check in the amount of $59.11 from the subject contractor to cover the Government's share of the exceptions recently made by the auditors.

Wm. A. Beck , for R. A. Laurence
Executive Officer, DMEA -Reg. 7

cc:
Beck
Lynch
Chambers Jay L. Chambers
Files

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

224 New Customhouse
Denver 2, Colorado

June 15, 1953

Memorandum

To: Chairman, Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMA-1613X (Lead-Zinc), Contract Idm-E193, Clark & Mathis, Mahoney Zinc-Lead Mine, Luna County, New Mexico

Reference is made to your letter of June 8, 1953, which was in request of advice regarding the status of the subject contract.

The work authorized by the contract was completed during the month of November 1952, which did not result in a discovery.

Payment of the operator's final Form MF-104 Monthly Report and Voucher has been deferred pending receipt of the operator's final engineering and geologic report. Repeated efforts on the part of the field office have been unsuccessful in obtaining the report.

W. H. King

W. H. King

FILE COPY
SURNAME:

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

JUN 8 1953

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

Re: Docket No. Min-1613X (Lead-Zinc)
Clark & Mathis
Mahoney Zinc-Lead Mine
Luna County, New Mexico
Contract No. Idm-E193

Dear Mr. King:

Will you please advise us regarding the status of the above contract. Our files show that the last Mining Engineer's report is by Mr. John H. Soule' and is dated December 8, 1952. He stated that he had visited the property on November 3, 1952.

The contract is dated November 23, 1951. The completion time was extended by Amendment No. 2 from eight months to thirteen months, which would make the expiration date December 23, 1952.

We assume that the work of the contract was completed as we have received the Report of Review by Mr. Donald T. Finch, Auditor, dated May 21, 1953. To date we have not received your final report or the final report of the Operator.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee

APPROVED:

J. H. Hedges
Member, Bureau of Mines

A. R. Kinkel, Jr.
Member, Geological Survey

JWAlt/hmj (6/5/53)
CC to: Docket
Adm. R. File
Op. Committee
Base Metals Division
Mr. Kinkel
Mr. Bishop
Chron.

FILE COPY
SURNAME:
800

Chambers

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

MAY 26 1953

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

Dear Mr. Finch:

Reference is made to your letter of May 21, 1953, transmitting three copies of Report of Review for Clark & Mathis, Idm-E193, DMA-1613X. This review has been accepted and distribution may be made in the usual manner.

The corrected Report of Review covering Gateway Mining, Idm-E408, has also been accepted.

Sincerely yours,

(Signed) J. L. Chambers

Jay L. Chambers, Chief
Contract Administration
and Audit Division

MDL
5-26-53

WBorovies/wb
May 26, 1953

Copy to: Mails & Files
Admr. Reading File
Mr. Chambers

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

224 New Customhouse
Denver 2, Colorado

March 2, 1953

Memorandum

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 5 1953

To: W. H. King, Executive Officer, DMEA

From: Donald T. Finch, Auditor

Subject: Report of Review - Clark & Mathis - E193

The documentation submitted by the contractor supporting the costs incurred in connection with Exploration Contract E193 have been examined.

The operator's data submitted to date has been reconciled with the Engineer's preliminary report of completion.

On February 24, 1953, a conference was held at Silver City, New Mexico. Present at this conference were Mr. Mathis, Mr. Clark, Mr. Soule, Engineer and the Auditor.

As the matter now stands, the contractor will submit a final MF-104 and Engineering Report. This report will show an additional charge for diamond bits and credits for diamond bit salvage.

During the conference it was determined that there was no inventory of Other Supplies to be accounted for at the time of reaching the maximum allowable footage.

The issuance of a report of review can not be made until the operator's final reports are received and also the amended final report from the Engineer.

Donald T. Finch

Donald T. Finch

DTF:es

cc: JL Chambers
Chron.
Subject

Docket Copy

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

224 New Customhouse
Denver 2, Colorado

December 8, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
DEC 11 1952

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Amendment No. 2 to Contract Idm-E193, Docket DMA 1613X, Clark and Mathis

Enclosed are the original and two copies of Amendment No. 2 to Contract Idm-E193. Copies of this amendment have been given to the operator, the Fiscal Officer, Region IV, and a copy has been retained for our files.

Also enclosed are three copies of a letter from the operator requesting this amendment and three copies of a memorandum from a Bureau of Mines engineer approving this amendment.

W. H. King
W. H. King

RECEIVED
DEC 24 1952
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

Enclosures

Cee 12-12-52

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
NOV 24 1952

224 New Customhouse
Denver 2, Colorado

November 20, 1952

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, Field Team, Region IV

Subject: Form MF-104, DMA Docket 1613X, Contract Idm-E193, (Lead-Zinc) Clark and Mathis, Mahoney Mine, Luna County, New Mexico

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 August, 1952, pertaining to DMA Docket 1613X, Contract Idm-E193, Clark and Mathis.

for John F. Shaw
W. H. King

Enclosures

/C O P Y/

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Arizona-New Mexico Branch
Box 4097
University Station

MINING DIVISION
REGION IV

Tucson, Arizona

Memorandum

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

From : Chief, Arizona-New Mexico Br., Mining Div., Region IV

Subject : Proposed amendment, Docket DMA-1613X, Contract Idm-N193, Clark & Mathis, Mahoney Lead-Zinc mine, Luna County, N. Mex.

In regard to your memorandum of November 3, concerning the proposed amendment to contract Idm-N193 to extend completing time, we would recommend that the time be extended five months for a total of 13 months, or until December 23, 1952.

Mathis evidently has too many "irons in the fire". We think Clark and Mathis are taking too much time to complete this contract. If they can't complete it by December 23, it should be cancelled.

/s/ Walter R. Storms

Walter R. Storms

/C
O
P
Y/

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

224 New Customhouse
Denver 2, Colorado

November 3, 1952

Memorandum

To: W. R. Storms

From: Executive Officer, Field Team, Region IV

Subject: DMA-1613X, Contract Idm-E193, Clark and Mathis, Luna County, New Mexico

Reference is made to the Operator's request for an extension of completion time, which was transmitted by your memorandum of October 29, 1952. Please advise the amount of time extension that will be required to enable completion of the project work.

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

MINING DIVISION
REGION IV

October 29, 1952

Memorandum

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

From : Chief, Arizona-New Mexico Br., Mining Div., Region IV

Subject : Extension of time, Docket DMA-1613X, Contract Idm-E193, Clark and Mathis, Mahoney Lead-Zinc Mine, Luna County, N. Mex.

Enclosed are original and five copies of a request from Clark and Mathis to extend the time limit of their contract from eight months, until such a time as Hole No. 3 is finished.

I recommend that this request be granted, provided the funds remaining for this contract are sufficient to do the proposed work.

Walter R. Storms

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

CC W. H. King (5)
DMA-1613X
DF

WRStorms:frj

CLARK AND MATHIS
Mining and Exploration
P. O. Box 452
Silver City, New Mexico

October 22, 1952

Mr. Walter R. Storms
Box 4097 University Station
Tucson, Arizona

Dear Mr. Storms,

We have not been able to complete our project at Tres Hermanas, Contract Idm-E193, DMA Docket #1613X, within the eight months ending today because of difficulties encountered during October in finishing proposed Diamond Drill Hole No. 3.

We hereby make application for an extension of time to complete this last hole.

Yours very truly,

/s/ R. W. Mathis

R. W. MATHIS
CLARK & MATHIS

RWM:l

C O P Y

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

224 New Customhouse
Denver 2, Colorado

August 29, 1952

Memorandum

To: Acting Administrator, Defense Minerals Exploration Administration

From: Executive Officer, DMEA Field Team, Region IV

Subject: Amendment No. 1 - Contract Idm-E193 (Zinc-Lead), Docket No. DMA-1613X, Clark and Mathis

Amendment No. 1 to contract Idm-E193 provides for the use of contingency funds for additional supplies and for the monthly use allowances of contractors equipment. This is in accordance with article 6 of Exhibit A attached to the contract form.

A copy of a letter from the operator requesting this amendment is attached.

W. H. King

W. H. King

Enclosure

COPY

CLARK AND MATHIS
MINING AND EXPLORATION
P. O. BOX 452
SILVER CITY, NEW MEXICO

April 27, 1952

Re: DMA Docket 1613X
Contract Idm-F193
Mahoney Lead-Zinc Mine
Luna County, N. Mex.

Mr. J. H. East, Jr.
Regional Director
Region IV, DMEA
224 New Customhouse
Denver 2, Colorado

Dear Mr. East:

We have abandoned plans discussed with you over the telephone on Monday, April 21, to drill a second hole with the underground diamond drill from the bottom of the 200 ft shaft on the Mahoney property. If we had a more extensive program, I believe it would be wise to drill another hole from underground closer to the granite-limestone contact while we have the underground equipment set up. However, in consideration of the balance in some of our expense accounts, we have decided that it is best to get on with the suface drilling and are starting one of the surface holes described in our contract.

I have a letter from Mr. Storms, chief of the Arizona-New Mexico Branch, calling to our attention the fact that the balances in the "Supplies" and the "Use allowance for operator's equipment" accounts are getting low.

We, therefore, wish to request your office to consider an amendment to our contract transferring $400 to the "Supplies" account and $400 to the "Use allowance for operator's equipment" account from other accounts, preferably the "Contingency" account or possibly the "Core Barrel-Diamond Bits" account.

Yours very truly,

/s/ R. W. Mathis
Clark and Mathis

CC W. R. Storms

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

224 New Customhouse
Denver 2, Colorado

August 13, 1952

Memorandum

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

From: Executive Officer, Field Team, Region IV

Subject: Form MF-104, DMA Docket 1613X, Contract Idm-E193 (Lead-Zinc) Clark and Mathis, Mahoney Mine, Luna County, New Mexico-Operator's Monthly Progress Report, for the period of May, 1952.

Enclosed are two copies of the Operator's Monthly Progress Report, Form MF-104, Operator's Narrative Report, Inspecting Engineer's Narrative Report, and other supporting data for the month of May, 1952, pertaining to DMA Docket 1613X, Contract Idm-E193, Clark & Mathis, Mahoney Mine, Luna County, New Mexico.

W. H. King
W. H. King

Enclosures

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

224 New Customhouse
Denver 2, Colorado

June 13, 1952

Memorandum

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

From: Field Team, Region IV

Subject: Final Report, DMA Docket 1613X (Zinc-Lead), Clark and Mathis, Mahoney Mine, Luna County, New Mexico

Attached is one copy of the final report on DMA-1613X.

Three copies of this report were forwarded to you August 10, 1951.

W. H. King

W. H. King

A. H. Koschmann

A. H. Koschmann

Enclosure

DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration
JUN 16 1952

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

224 New Customhouse
Denver 2, Colorado

May 26, 1952

Memorandum

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

From: Executive Officer, Field Team, Region IV

Subject: Amendment to Contract Idm-E193, Docket DMA 1613X, Clark and Mathis

Enclosed are the original and two copies of Amendment No. 1 to Contract Idm-E193. Copies of this amendment 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

Enclosures

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
MAY 29 1952

OFFICE OF THE ADMINISTRATOR

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

224 New Customhouse
Denver 2, Colorado

January 28, 1952

REGISTERED MAIL

Memorandum

To: Secretary to the Operating Committee, D.M.E.A., Washington, D.C.

From: Executive Officer, D.M.E.A., Field Team, Region IV

Subject: DMA Docket 1613X, Contract Idm-E193, Clark and Mathis, Mahoney Zinc Mine, Tres Hermanas Mining District, Luna County, New Mexico

Enclosed are the original and three signed copies of the above contract. One copy of this contract has been given to the operator and one copy retained for our files.

J. H. East, Jr.

J. H. East, Jr.

Enclosures (4)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JAN 31 1952

FILE COPY
SURNAME: 400

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

Moulds
Mittendorf (for)

NOV 29 1951

Mr. J. H. East, Jr.
Executive Officer, Region IV
DMEA Field Team
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. 1613X
Contract Idm-E193
Clark and Mathis
Deming, New Mexico

Dear Mr. East:

Please find herewith the original and five copies of contract for subject exploration project.

We regret the error made in Exhibit A of the contract previously sent to you and which you returned for correction along with other suggestions for Exhibit A.

The attached contracts have been corrected to allow the suggested flexibility in drilling, the increased wage schedule, and addition of a pickup truck use allowance. These corrections increase the total amount of the project to $12,654 as shown on contract form and also the effective date has been revised to take care of this delay and yet require work to start without undue delay.

In reference to the use allowance of $1,044 for operator's equipment, it was recognized that while the project was estimated to require 6 months, the equipment required for underground drilling, i.e., diamond drill, hoist, compressor, would be in use for only part of the time. As discussed with you via telephone, the allowance appears to be reasonable.

If this contract meets with your approval, present it to the operator for approval and signature in the normal manner with the original and three copies returned to this office after signing.

Sincerely yours,

C. O. Mittendorf (for)

Acting Administrator
Defense Minerals Exploration
Administration

Enclosures-6

APPROVED:

(signed) FRANK E. JOHNSON (for)

Chairman, Operating Committee

Member, Bureau of Mines

Member, Geological Survey

DEMoulds/meh 11-28-51
cc to: Adm. Reading File
Mr. Mittendorf
Mr. Moon
Mr. Mote
Docket
Reports & Records
Mr. Moulds
Region IV
Mr. McKnight

OFFICE OF THE ADMINISTRATOR

224 New Customhouse
Denver 2, Colorado

DEFENSE MINERALS ADMINISTRATION
WASHINGTON, D.C.

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

NOV 26 1951

DEPARTMENT OF THE INTERIOR
RECEIVED
NOV 26 1951
Defense Minerals Administration,
Production Expansion Division.

Mr. Mouldes

November 19, 1951

Memorandum

To: C. O. Mittendorf, Director, Production Expansion Division

From: Executive Officer, DMA Field Team, Region IV

Subject: Exploration Project Contract Idm-E193, DMA Docket 1613X, Clark and Mathis, Luna County, New Mexico

Enclosed are six copies of the above contract which have been signed by Frank E. Johnson, Acting Director, Production Expansion Division, which the applicant refuses to sign because of errors in Exhibit "A".

Also enclosed is a letter of transmittal from John H. Soule', Acting Supervising Engineer, Silver City, New Mexico Field Office, discussing the errors, and three copies of the applicant's suggested Exhibit "A".

In addition to the errors mentioned by Soule', there appears to be an error in the total amount of depreciation allowed in Exhibit "A". The original contract and the applicant's suggested Exhibit "A" allow $1,044 for depreciation. According to the applicant's suggested Exhibit "A" the monthly depreciation would be $372.00. Over an eight month period which is the estimated time of the project given in Article 3, Form MF-200, the depreciation would be $2,976.00. If this figure is correct the depreciation should be increased by $1,932.00. This would bring the total amount of the contract to $14,586.00.

J. H. East, Jr.

J. H. East, Jr.

Enclosures

Mining Division
Date Rec'd.
NOV 13 1951
BUREAU OF MINES
Denver, Colorado

November 9, 1951

REGISTERED MAIL - RRR

Memorandum

To: Paul T. Allsman, Chief, Mining Division, Denver, Colorado

From: Silver City, New Mexico Field Office

Subject: Contract Idm E-193, DMA Docket 1613X, Clark and Mathis, Deming, New Mexico.

We are returning, direct to your office to save time, the copies of the contract and associated papers. The contract is unsigned for the following reasons.

1. Obvious errors are present in Exhibit "A". The labor item total does not check with the total shown in the breakdown (see both items (2) on page 1 of Exhibit A). On page 2 of the Exhibit, the cementing item total does not check with the total footage times the unit cost. Small errors were noted in the Monthly Use Allowance column on page 2 of the Exhibit. The figures have been corrected in a copy of the Applicants' suggested Exhibit A attached.

2. The applicants have suggested an increased rate for drill helper and utility man as in keeping with the present wage scale. This is also shown in the copy of suggested Exhibit A.

3. The applicants feel that the proposed work is too rigidly set forth and does not allow enough flexibility to take advantage of geological information gained by the first drilling. They have made changes as shown in the copy of suggested Exhibit A.

4. The applicants object to the date on the contract. They feel that the contract should be dated when they sign. Of course, that could lead to procrastination on the part of the applicants and 60 days seems more than enough time to start the project. However, with this unforseen delay, the date could be changed accordingly.

5. An objection was raised to the amount of Monthly use allowance. They argue that it would be impossible to rent comparable equipment for that price. However, they seemed to be inclined to accept the figures if the figures could not be changed.

6. An additional item was added to the list of equipment furnished. This is a pickup truck to haul men and supplies, as the larger truck will be used to haul water to the drill.

cc Storms, Tucson
reader
file

John H. Soule'
Acting Supervising Engineer

FILE COPY
SURNAME:

400
Moulds
Johnson

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

OCT 2 6 1951

Mr. J. H. East, Jr.
Executive Officer, Region IV
Defense Minerals Administration
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMA 1613X
Contract Idm-E193
Clark and Mathis
Deming, New Mexico

Dear Mr. East:

Please find herewith the original and five copies of the contract for the subject exploration project. The contract has been signed by this office for the Government and bears register number and effective date as shown.

The contract is to be signed by Mr. Clark and Mr. Mathis without any changes to its contents. If any provisions are unsatisfactory, the contracts are to be returned to this office along with the proposed changes for consideration.

After signing the contract, one copy is to be given to the operator and one copy retained by your office. The remaining copies, including the original, are to be sent to this office as soon as possible.

A copy required by the Regional Finance Office will be forwarded directly by the Washington Finance Section.

An additional copy of contract and maps marked "Field Team Work Copy" is also enclosed for your use.

Sincerely yours,

(signed) FRANK E. JOHNSON (for)

Frank E. Johnson, Acting Director
Production Expansion Division

Enclosures-7
APPROVED SIGNED

Chairman, Coordinating Committee

Member, Bureau of Mines

Member, Geological Survey

DHMoulds/meh 10/23/51
cc to: Adm. Reading File
Reports and Records
Messrs. Rittendorf, Olund
Mr. Moon
Mr. Moulds
Mr. Gunnard Johnson
Mr. McKnight
Mr. Note - Docket - Region IV

FILE COPY
SURNAME:

Guthrie - 27.H

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

October 22, 1951

Memorandum

To: Director, Production Expansion Division

From: General Counsel

Subject: Clark & Mathis, a partnership composed of Jown W. Clark and R. W. Mathis — exploration project contract DMA-1613X

The proposed exploration contract in this case, submitted to us on October 17, 1951, is approved as to legal form and sufficiency for signature on behalf of the Government, subject to:

1. Proper signature on behalf of the applicant.
2. Proper dating prior to delivery.

Your file is returned herewith.

J. L. Hofflund

J. L. Hofflund
General Counsel

Attachment

RRGuthrie/bjl

Copy to: Repts. & Records
R. R. Guthrie
J. L. Hofflund
Chron.

G.E.C.

MATHIS AND MATHIS
MINING AND EXPLORATION
P. O. BOX 452
SILVER CITY, NEW MEXICO

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D. C.
OCT 12 3 41 PM '51

October 8, 1951

DEPARTMENT OF THE INTERIOR
RECEIVED
OCT 1 1 1951
Defense Minerals Administration,
Production Expansion Division.

C. O. Mittendorf, Director
Production Expansion Division
Defense Minerals Administration
U. S. Department of the Interior
Washington, D. C.

Re: Docket No. DMA.1613X

Dear Sir:

In your letter of September 18, 1951 you asked for the following additional data and information regarding our application covered by DMA Docket #1613X:

1. Landlords subordination agreement signed by property owners, and five additional copies of the lease agreement. Both of these items are enclosed herein.

2. Clark and Mathis is a partnership.

3. Value of equipment listed in your letter is as follows:

1 U.G. diamond drill outfit CP.5, including drill, boiler feed pump, and drill rods	$1,400.00
1 Sullivan Model #22 diamond drill outfit, including drill, Gould pump with gasoline power, and drill rods	5,300.00
1 G.D. Compressor 365 CFM	9,200.00
1 F.M. water pump	168.00
1 Single drum gasoline powered hoist	835.00
1 Dodge Power Wagon equipped with water tank	3,765.00

20668.00

We hope this data will be satisfactory.

Yours very truly,

R. W. Mathis

R. W. Mathis
CLARK & MATHIS

RWM:1

100

FILE COPY
SURNAME:

Moulds
Mittendorf

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

SEP 1 0 1951

Q, E, C -

Clark and Mathis
821 Pine Street
Deming, New Mexico

Re: Docket No. DMA 1613A
Mahoney Property

Dear Sirs:

In reference to your application for exploration assistance for the subject project, the following material and information is required for properly drawing up a contract covering the approved underground drill hole and three surface drill holes:

(1) Landlord's Subordination Agreements from the various owners of the property covered by your lease. We understand the Clark Realty and Investment Company, Inc., J. A. Mahoney, Inc., and Mary Mahoney Carney are the owners. 15 copies of Form MF-202 are enclosed as six copies from each owner are required.

(2) Statement as to whether "Clark and Mathis" is a partnership or corporation.

(3) Statement of value of the following items of equipment to be furnished for use on the project:

1 U.G. diamond drill outfit UP.5
1 Sullivan Model 22 diamond drill outfit
1 G.D. Compressor 365 cfm
1 P.M. Water pump
1 Single Drum gasoline powered hoist
1 Dodge power wagon equipped with water tank

The maximum monthly cost allowance for use on the project will be determined on the basis of 60 month depreciation of value for each unit with the allowable monthly amount chargeable only for the months actually used for the benefit of the project.

Upon receipt of the above material and information a contract will be drawn up to cover the Government's participation in your project.

Sincerely yours,

C. O. Mittendorf (not) not stripped in P.+R.

C. O. Mittendorf, Director
Production Expansion Division

DEMoulds/jem
9-17-51

Messrs: Mittendorf, Olund
Mr. Moulds
Mr. Billings
Mr. McKnight
Mr. Mote
Docket

cc to: Reports & Records
Adm. Reading File
Enclosures

Region IV

FILE COPY
SURNAME:

350

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

SEP 7 1951

Lyons (E.T.M.)
McGuire
Billings
Bishop

Re: DMA-1613X

R.E.C.

Clark and Mathis
821 Pine Street
Deming, New Mexico

Gentlemen:

Before action can be completed on your application, it will be necessary for you to submit six (6) copies of Form MF-202, "Landlord's Subordination Agreement", seven (7) copies of which are enclosed. Also required will be five (5) more copies of the lease which you submitted.

Very truly yours,

T. P. Billings, Chief
Lead-Zinc Branch

J.F. 9/7

Enclosures

EJLyons:emp
G 9-5-51
Copies to: J. H. East, Jr. Region IV (2)
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
R. H. Mote
Reports & Records
Directors r. file 4214 GSA
Br. r. file 4214 GSA
Administrators r. file
DMA docket file

McKnight
6/5/51
Billings
Bishop
9-5-51

Defense Minerals Administration

Review of Application for Exploration Assistance

To: Production Expansion Division

From: Director, Supply Division

Docket No. 1613X

Commodity Lead-zinc

Total Amount $13,094

Govt. Participation 50% ($6,547)

1. Name and Address of Applicant Clark and Mathis, 821 Pine Street, Deming, New Mexico

2. Location of Property Mahoney property, secs. 21 and 28, T. 27 S., R. 9 W., Tres Hermanas Mining district, Luna County, New Mexico

3. Mineral or metal Lead-zinc Is it listed in Section 9 of MO-5? Yes

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 See attached field team report

b) Poor

c) None

d) Don't know—needs field examination has been examined

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? Yes

Does the lease have sufficient time to run to cover a future productive period? Yes

*question numbers are those of MF-103

7. Are subordination agreements necessary? Yes

a) MF-201? _____

b) MF-202 Applicant has been requested to submit

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? Has been checked

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? Has been checked

10. Exhibit A. (questions 21 and 22)*

a) Is the project adequately described? Yes, see Exhibit A attached

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, see map accompanying field report

c) Is the proposed work "exploration" under the definition of Section 8, MO-5? Yes

If not, what part of it is? _____

EXHIBIT "A"

Exploration project

The applicant proposed to diamond drill four holes to test for sulfide ore bodies at depth in an area from which there has been carbonate ore production. No. 1 hole will be drilled 300 feet deep from an underground station. Holes Nos. 2, 3, and 4 will be drilled from the surface to depths of about 500 feet each. In the event that the results obtained from the first three holes are unfavorable, hole No. 4 a will be drilled about 2,000 feet north of the original area as an alternative to hole No. 4. Total footage for all four holes will be about 1800 feet. The drilling will be done with equipment which is owned by the operator and which will be rented to the project. Estimated cost of the project is:

1800 ft. of drilling, including supervision, labor, and supplies at $6.67 per foot.....	$ 11,893
Contingencies, approximately 10%.....	1,201
	$ 13,094

Fixtures and Improvements - None

Operating equipment

Equipment to be purchased - none

Equipment owned by operator to be rented to project:

1 U. G. diamond drill rig, CP-5, 1½ months, at $180/month.....	$ 270
1 Sullivan (Joy) standard model 22 diamond drill rig, 150 days at $15/day.....	2,250
1 Compressor, Gardener-Denver, 365 c.f.m. for 1½ months at $450/month.....	675
1 water pump, F.M. 5 HP for estimated 6 months at $8/month.....	48
1 Dodge power-wagon, equipped with water tank for estimated 6 months at $150/month.....	900
	4,143

NOTE: Applicant requested rental on a hoist for 30 days at $4/day. This has been disallowed as an existing facility.

Labor and Supervision

Supervision, 6 months at $100/month.....	$ 600
Labor - 1 driller, underground for 30 days at $15/day.....	450
1 helper, underground for 30 days at $11/day.....	330
1 driller, surface, for 150 days at $15/day.....	2,250
1 helper, surface for 150 days at $11/day	1,650
	$ 5,280

Rehabilitation and Repairs - None

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. See Exhibit A attached

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? Has been checked

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? _____

12. Exhibit C (question 23-e, f and g)*

a) Is it applicable? Yes

b) Sufficient data? Yes If so, attach a draft. See Exhibit A attached

c) Are rents and charges reasonable? Yes

d) Is a field check needed? Has been checked

13. Exhibit D (question 23-a, b)*

a) Are there sufficient data? Yes, see Exhibit A attached

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? Has been checked

14. Exhibit E (question 23-c)*

a) Is it applicable? No

b) Sufficient data?

c) Reasonable?

d) Field check needed?

15. In your judgment, can the proposed work be done in the proposed time? Yes

(All exploration must be completed within two years)

16. If field examination is not needed, attach your recommendation.
Concur with field team recommendation for approval.

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing question?

Approved
Tom Lyon

Reviewed by: E. J. Lyons, GS

Date 9-5-51

INT.-DUP. SEC., WASH., D.C. 99009

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

OFFICE OF
REGIONAL DIRECTOR

REGION IV

224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

August 10, 1951

Memorandum

To: Executive Secretary, Defense Minerals Administration

From: DMA Field Team, Region IV

Subject: DMA Docket No. 1613X, Final Report, Clark & Mathis, Mahoney Zinc-Lead Mine, Tres Hermanas Mining District, Luna County, New Mexico.

Enclosed herewith are the original and two copies of the above report.

We concur with the findings of the examining team and recommend that the application for a development loan be approved.

We are also enclosing one copy of a confidential letter signed by John N. Faick of the U. S. G. S. concerning the above docket No. 1613X.

J. H. East, Jr.

J. H. East, Jr.

A. H. Koschmann

A. H. Koschmann

Enclosures

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

August 1, 1951

CONFIDENTIAL letter to accompany report on DMA 1613X, Mahoney Zinc-Lead Mine, Luna County, New Mexico.

To Whom It May Concern:

I am personally acquainted with Mr. R. W. Mathis and have known him for about 5 years. He is a graduate geologist who majored in petroleum geology and geophysics in college. Since leaving college he has devoted most of his energies to mining as an independent operator. Among other things, Mr. Mathis has successfully operated a lease on the Houston-Thomas zinc-lead mine near Silver City for several years. He is still operating on this property, and in the Fierro district is now completing another leasing operation from which he has shipped about 22,000 tons of iron ore. At intervals during the period of these two operations Mr. Mathis also operated diamond drills, both for his own account and on contract for others.

I consider Mr. Mathis quite able to conduct the exploration for which a Government loan is sought and to mine the type of ores likely to be found.

I have no personal knowledge of the other applicant, Mr. Clark.

John N. Faick

John N. Faick, Geologist
U. S. Geological Survey

Mining Division
Region IV

August 8, 1951

Memorandum

To: DMA Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: DMA Docket No. 1613K, Final Report, Clark & Mathis, Mahoney Zinc-Lead Mine, Tres Hermanas Mining District, Luna County, New Mexico

The attached report recommends approval of an exploration project by diamond core drilling for the purpose of discovering sulphide ore deposits in depth. The estimated cost of this project is $13,214.

The exploration will consist of 1800 feet of drilling in four holes, at a cost per foot of $7.35, which appears okay.

We agree with the recommendation approving the project.

Paul T. Allsman

Paul T. Allsman

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 14 1951

MINING DIVISION
REGION IV

August 2, 1951

Memorandum

To : Paul T. Allaman, Denver, Colorado

From : Chief, Arizona-New Mexico Branch, Mining Div., Region IV

Subject : Final Report, RMA Docket 1613X, Clark and Nathie Mahoney Zinc-Lead Mine, Tres Hermanas Mining District, Luna County, N. Mex.

Enclosed are original and 7 copies of the section on Summary, Conclusions and Recommendations by John M. Faick of the Geological Survey and T. M. Remsle of the Bureau of Mines, and the section on Engineering by Remsle for the above report.

This report has my approval.

Brochure is enclosed.

Walter R. Storms

CC P. T. Allaman (7)
G. A. Anderson
RMA 1613X
BM

WRStorms:frj

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Defense Minerals Administration
200 New Customhouse
Denver 2, Colorado

August 3, 1951

Memorandum

To: DMA Field Team, Region IV

From: A. H. Koschmann

Subject: DMA Docket 1613X, Mahoney Zinc-Lead Mine, Tres Hermanas District, Luna County, New Mexico

Enclosed are the original and 7 copies of the geologic report by J. N. Faick of the U. S. Geological Survey, covering the above docket.

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

Enclosures (8)

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

August 1, 1951

Memorandum

To: Mr. A. H. Koschmann, Denver, Colorado

From: Mr. A. F. Shride, Tucson, Arizona

Subject: Geologic Report, DMA 1613H, Mahoney Zinc-Lead Mine, Tres Hermanas District, Luna County, New Mexico

Enclosed are the original and 7 copies of the above report by J. N. Faick of the Geological Survey.

This project admittedly is a "long shot"; however, the examiners believe that there is sufficient geologic evidence on which to base a core drilling program, with the hope that sulfide lead-zinc ores will be discovered in another New Mexico district. This report and the recommendations by Ramale and Faick have my approval.

A confidential letter by Faick regarding competence of one of the applicants is also enclosed.

A. F. Shride
Acting District Supervisor
Arizona-New Mexico

Enclosures 9

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMA-1613X, Clark & Mathis, Mahoney Zinc-Lead Mine

Luna County, N. Mex.

John N. Faick, Geologist
U. S. Geological Survey

T. M. Romslo, Mining Engineer
U. S. Bureau of Mines

August 1951

ON-SITE EXAM

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By John N. Faick[1] and T. M. Romslo[2]

The Mahoney zinc-lead property, Tres Hermanas district, Luna County, N. Mex., was examined in connection with a request by Clark and Mathis, 821 Pine St., to the Defense Minerals Administration for an exploration loan. The applicants proposed an exploratory project designed to discover sulfide ore bodies at an estimated cost of $15,000 and requested that the work be financed by the Government and the applicants on a 50-50 basis. During the examination the program was revised to a project that could be completed at an estimated cost of $13,214. The examination was made by a field team of the Defense Minerals Administration, under docket DMA-1613X, as part of the program authorized by the Defense Production Act of 1950.

The property has been worked mainly during periods of high metal prices and has produced a few thousand tons of zinc-lead oxide ores. The applicants began operation in February 1951. They have shipped 42 tons of zinc oxide ore and have accumulated about 35 tons of low-grade lead ore that probably will be shipped to a local custom mill.

The zinc-lead ores occur near the surface in the upper portion of a crystalline limestone. The limestone is cut by small open fractures and also is broken by small low-angle fractures. The ore occurs as fillings of these fractures and also as thin mantos in

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1/ Geologist, U. S. Geological Survey
2/ Mining Engineer, Arizona-New Mexico Br., Mining Div., Region IV, Bureau of Mines

zones of maximum structural deformation. Primary ore minerals were sphalerite and a small amount of galena. The spahlerite has been converted to zinc carbonate and the galena has been partially oxidized.

The most favorable zones for exploration appear to be those of structural deformation that are localized at the mine workings of Monument Hill and at the Contention mine.

The property contains no measured or indicated ore reserves. However, Mathis believes pockets of shipping grade ore will continue to be developed and that 500 tons of oxide ore may be recovered from the old workings.

The property is developed by at least 47 shafts, ranging in depth from 6 to 198 feet, for a total of 1,504 feet. These shafts, plus 2,770 feet of surveyed drifts and crosscuts, probably represent 85 percent of all workings on the property. The property also has been explored by 4 churn-drill and 2 diamond-drill holes.

At the present time the mine employs 2 miners and is producing a few tons of lead ore weekly from workings on Monument Hill. It is equipped with a small gas driven hoist, a compressor, 3 pneumatic drills and the necessary hand tools. Water for the operations is obtained from a well on the property that is pumping against a head of about 350 feet.

The applicants propose to test for sulfide ore mineralization by drilling 4 diamond drill holes for an estimated total of 1,800 feet. The holes will be drilled to an estimated depth of 500 feet

vertically below the surface. One hole will be drilled from an underground location and the other holes will be put down from the surface. It is estimated that the proposed work can be completed in 6 months at a cost of $13,214.

The applicants propose to furnish all necessary equipment and request that depreciation (or rental) of the equipment, amounting to $4,263, be considered as an allowable cost of the project. On the basis of a 50-50 participation, the Government would be expected to grant a loan of $6,607. The applicant's share would be the above equipment allowance plus $2,344 in cash.

The following are the writers' conclusions and recommendations regarding the proposed exploratory program:

1. The program is designed to test for sulfide mineralization below known deposits of oxidized lead-zinc ores that are restricted to zones where a favorable limestone host rock has undergone structural deformation;
2. Limited geological evidence indicates there is a fair chance of discovering zinc-lead mineralization but there are no criteria for estimating the extent or degree of this mineralization;
3. The projected work, consisting of 4 diamond drill holes for a total of 1,800 feet, probably can be completed in 6 months at an estimated cost of $13,214;

4. The applicants can be expected to finance 50 percent of the project's cost, provided depreciation (or rental) on equipment amounting to $4,263. is an allowable cost item;

5. Mathis, one of the applicants, is capable of supervising the project in an efficient manner.

Approval of the proposed project by the Government is recommended.

CLARK & MATHIS, MAHONEY ZINC-LEAD MINE
LUNA COUNTY, N. MEX.
DMA-1613X

Engineering Report

By T. M. Romslo
Mining Engineer
U. S. Bureau of Mines

CLARK & MATHIS, MAHONEY ZINC-LEAD MINE
LUNA COUNTY, N. MEX.
DMA-1613X

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Estimated cost of project	7
Proposed financing	8
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ILLUSTRATIONS

Figure		Following page
1	Location map	2
2	Topography and geology (see geological report)	
3	Plan and sections (see geological report)	

INTRODUCTION

This report presents information obtained during the course of an examination of the Mahoney zinc-lead property, Luna County, N. Mex. The examination was made in connection with an application by Clark and Mathis, 821 Pine St., Deming, N. Mex., for Governmental aid under the Defense Production Act of 1950. It was carried out by a Defense Minerals Administration examining team under docket DMA-1613X.

The applicants proposed that the property, containing small deposits of oxide ore, be tested for large sulfide ore bodies at an estimated cost of $15,000. They requested that the work be financed by the Government and the applicant on a 50-50 basis. A revised program, designed for the same purpose but which could be completed at an estimated cost of $13,214, was submitted by the applicants during the examination. It involves the drilling of 4 diamond drill holes for a total of 1,800 feet, and can be completed in an estimated 6 months.

The examination was made July 11 and 12, 1951, by John N. Faick, Geological Survey and T. M. Romslo, Bureau of Mines.

During July and August 1950, this property was examined by W. D. McMillan, an engineer of the Bureau of Mines.[1] Much of this information has been abstracted from his report.

1/ McMillan, W. D., Proposed Development and Exploration of the Mahoney Zinc-Lead Mine, Tres Hermanas Mining District, Luna County, N. Mex. Supplemental Examination Report (W.D. McMillan No. 23), U. S. Bureau of Mines, 1950.

LOCATION, TOPOGRAPH AND CLIMATE

The Mahoney property is in secs. 21 and 28, T. 27 S., R. 9 W., Tres Hermanas Mining District, Luna County, N. Mex. (fig. 1), It may be reached from Deming, N. Mex., about 17 air miles to the north, by traveling south 13 miles on paved State Highway 11, thence west about one-half mile, and thence south again for 11.5 miles on graded dirt roads to the mine.

The property is in an area of low, rolling hills on the northwestern slope of the Tres Hermanas Mountains. It has a mean altitude of about 4,590 feet and a maximum relief of about 150 feet.

The winters are mild and the summers are hot. The annual precipitation is about 10 inches. There are no permanent streams in the area. The present ground water level, at the northwest end of the property, is at a depth of 350 feet beneath the surface.

Vegetation consists of native grasses and light growths of greasewood, ocotillo and cacti.

Two custom milling plants for lead-zinc-copper ores are located near Deming. That city is serviced by the Southern Pacific Railroad.

PROPERTY AND OWNERSHIP

The property comprises a group of 9 lode mining claims, one of which is patented (fig. 2). It is owned by the Clark Realty and Investment Co., Inc., J. A. Mahoney, Inc., and Mary Mahoney Carney, all of Deming, N. Mex. The owners have leased the property to

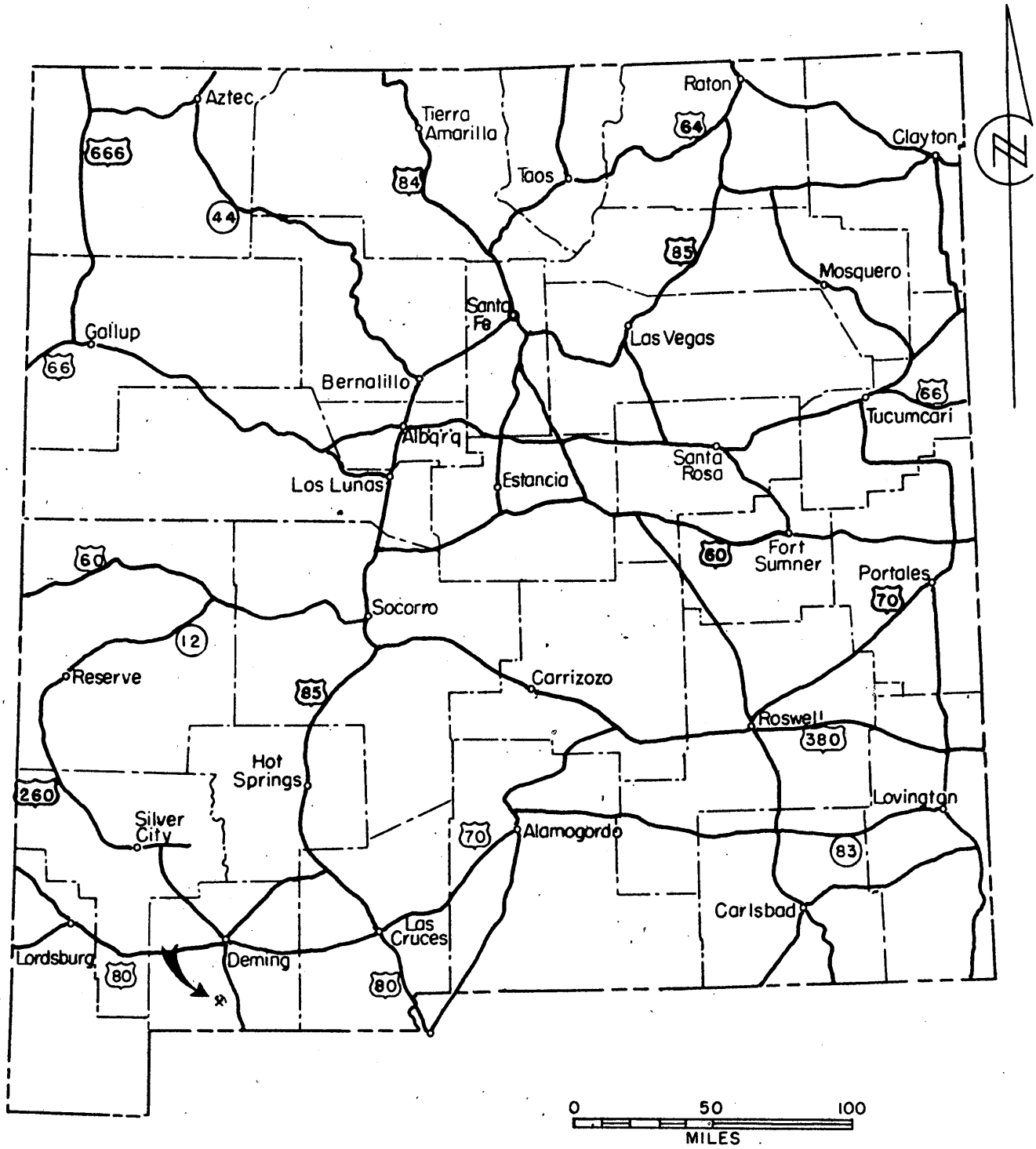

FIG. 1 - LOCATION MAP OF MAHONEY ZINC-LEAD MINE
LUNA COUNTY, NEW MEXICO

DMA 1613 X JULY 1951

Robert W. Mathis and John W. Clark for a period of 6 years, beginning January 17, 1951. The lease agreement provides for royalty payments ranging from 10 percent on ore with a smelter return up to $60.00 a ton, to a maximum of 25 percent on ores showing a smelter return of $200 or more a ton.

HISTORY AND PRODUCTION

There is little available information on the history and production of the Mahoney deposits.

Waldemar Lindgren visited the Tres Hermanas Mining District about 1907 and reported that the mines had been known for many years and had yielded possibly $200,000, principally from deposits near the zinc mines.[2] He also reported that the zinc ores were discovered in 1904. Shipments were made to smelters in the Mississippi Valley in 1905, but in 1906 and 1907 there was little activity.

The operations during 1905 to 1907 were presumably on the present Mahoney property and were conducted by Thurman and Lindauer of Deming, and by Doctor Swope and associates, also of Deming. There are no available production records for this period. Following this activity the mines were operated during the years of 1915 to 1917, 1926, 1942-43. and 1948. Production records for these years show the mines produced 2,671 tons of ore, containing 2.35 percent lead and 21.3 percent zinc.

Data supplied by John W. Clark, one of the present lessees of the property, indicate the above production records are incomplete.

2/ Lindgren, Waldemar, Graton, Louis C., and Gordon, Charles. The Ore Deposits of New Mexico, Prof. Paper 68, U.S.Geol. Survey, 1910.

Records in his possession show that about 2,500 tons of ore, containing 34.4 percent zinc, was shipped from the property. He stated that these records did not reflect the total production which he believed amounted to about 5,000 tons. Of this amount, 500 tons was high-grade lead ore (25 to 30 percent) and the remainder was plus 30 percent zinc ore.

The present operators began operating the mines in February 1951 and have shipped 42 tons of oxidized ore to the Cherryvale Zinc Co., Cherryvale, Kansas. This ore contained 27.65 percent zinc, 2.35 percent lead and 1.25 ounces of silver a ton. They also have produced about 35 tons of sulfide ore containing about 4 percent lead and 4 ounces of silver a ton. This ore is stockpiled for future shipment, probably to a local custom mill.

DESCRIPTION OF THE DEPOSITS

Oxidized zinc-lead ores of the Mahoney mine occur in the upper portion of a thick, coarse, crystalline, white limestone. The limestone appears to be arched around the north end of the Tres Hermanas Mountains and forms a plunging anticlinal structure dipping beneath the surrounding bolson plains to the east, north, and west. Local flexing and folding have modified this anticlinal structure. The limestone is cut by small open fractures trending nearly north-south and east-west, and also is broken by small low-angle fractures of diverse attitudes.

The ores occur as fillings along these fractures and also as thin manto-like bodies in areas of flexing. A manto about 400 feet long, 25 to 40 feet wide, and about 3 feet thick was the largest ore body mined. Primary ore minerals were sphalerite and galena, but the sphalerite largely was destroyed by oxidation. The ore remaining is dominantly zinc carbonate with small amounts of partially oxidized galena.

Considerable structural deformation appears to be localized in the areas of the mine workings of Monument Hill and the Contention mine. These areas of folding and fracturing appear to be the most favorable places to explore for deeper ore horizons.

ORE RESERVES

The mine contains no measured nor indicated ore reserves. However, Mathis believes pockets of shipping grade ore will continue to be developed under the present method of mining. He has estimated that 500 tons of zinc carbonate ores may be recoverable from the old workings.

PRESENT STATUS

Operations

The mine is being operated 5 days weekly. on a one-shift basis, by two miners and a foreman. Operations are confined to the workings west of Shaft No. 17 where "leads" are being followed in an effort to develop "pockets" of shipping ore. Present production amounts to 2 or 3 tons of low-grade lead ore weekly.

Mine and Exploratory Workings

The property is developed by at least 47 shafts, ranging in depth from 6 to 198 feet, for a total of 1,504 feet. The shafts, plus 2,770 feet of surveyed drifts and crosscuts, probably represent about 85 percent of all workings on the property (fig. 2).

In addition to the mine workings, the property has been explored by 4 churn-drill and 2 diamond-drill holes. The churn-drill holes were reportedly drilled to depths ranging from 250 to 400 feet. Diamond-drill holes 1 and 2 were drilled to depths of 102 and 112 feet, respectively.

Mine Plant

Structures on the property consist of a hoist house and 10 shacks for housing.

The principal equipment consists of the following:

1 Single-drum hoist, gas engine drive
1 Sullivan air compressor, 210 c.f.m.
1 Cleveland jackhammer, 54 lbs.
1 Gardner-Denver stoper, R-91
1 Gardner-Denver drifter, D-73

The hoist, equipped with cable and ore bucket, is installed at shaft 17.

Water Supply

Water is obtained from a well on the property, from a depth of 350 feet. It is raised by a windmill. The supply of water from this source will probably be adequate for the proposed drilling project.

PROPOSED EXPLORATION

The applicants propose to test the formations underlying the former productive zone for sulfide ore bodies. Their plan calls for the drilling of 4 core holes on Monument Hill. Hole No. 1 is to be drilled inclined from the underground location shown on figure 3, and the other holes are to be drilled vertically from surface locations shown on figure 2. In event the findings from the first three holes, Nos. 1 and 3, are unfavorable, alternate hole No. 4a will be drilled from a site north of the Contention mine.

It is planned to drill the holes to a vertical depth of about 500 feet below the surface. On this basis, hole No. 1 will be drilled for 300 feet, and each of the other holes will be 500 feet long, a total of 1,800 feet. However, the drilling plan is flexible and the findings will determine if holes should be stopped before reaching 500 feet or if they should be continued below this depth.

ESTIMATED COST OF PROJECT

The proposal calls for the work to be carried out with equipment owned by R. W. Mathis, one of the applicants, who will act as supervisor. It is planned to work 2 shifts daily while holes 1 and 2 are being drilled and to continue operations on a one-shift basis as soon as the underground drilling is completed. On the basis of 10 feet of advance daily, the applicants have estimated that the project can be completed in 6 months.

The following are the estimated costs ofthe project:

Supervision @ $100 monthly			$600.
Labor, daily			
Underground, 1 driller @ $15			
1 helper @ 11			
30 days @	$26	$780	
Surface, 1 driller @ $15			
1 Helper @ 11			
150 days @	$26	3,900	
		$4,680	4,680.
Depreciation (or rental value) of equipment			4,263.
Supplies and materials			
Core barrels, and diamond losses			
1,800 ft. @ $1.00		$1,800	
Cementing, 180 feet@ $1.50		270	
Fuel, grease, and Misc.		400	
		$2,470	2,470.
Contingency, approximately 10 percent			1,201.
Total			$13,214.

PROPOSED FINANCING

The proposal requests that the project be financed by the Government and the applicants on a 50-50 basis, and that depreciation (or rental) of the applicant's equipment be considered as part of his share of the costs. The equipment, with the requested allowance for depreciation, follows:

1	U. G. diamond drill rig, CP-5, 1½ months @ $180	$270
1	Sullivan (Joy) standard model 22 diamond drill rig, 150 days @ $15	2,250
1	Compressor, Gardner-Denver, 365 c.f.m.	675
1	Hoist	120
1	Water pump, F. M., 5 HP	48
1	Dodge power-wagon, equipped with water tank	900
	Total	$4,263

Note: The allowances requested for the diamond-drill rigs, including all accessory equipment except core barrels and bits, are prevailing rental values that are equal to about 5 percent monthly of their installed values. Depreciation on the other items has been calculated on the basis of 5 percent monthly of their installed values. The compressor and hoist, valued at $9,000 and $1,600, respectively, will each be used for an estimated 1½ months. The water pump and truck are valued at $160 and $3,000, respectively, and each will be utilized for an estimated 6 months.

Financing of the project, on the above basis, will require a Governmental loan of $6,607. The applicant's share will consist of equipment and $2,344 as cash.

CONCLUSIONS

The property has produced a few thousand tons of oxidized zinc-lead ore from small, near-surface deposits that have been essentially mined out. The ore occurs in a favorable limestone rock and is confined to zones of maximum structural deformation.

The proposed work is designed to test lower horizons of one or two of the favorable zones for sulfide ore bodies.

There are no criteria for estimating the extent or degree of mineralization that may be encountered. However, in event ore deposits are discovered by this limited program, additional exploration will have good chances of developing similar deposits in other parts of the property.

The projected work, consisting of 4 diamond drill holes for an estimated total of 1,800 feet, can probably be completed in 6 months at an estimated cost of $13,214.

Depreciation (or rental value) of equipment to be furnished by the applicant amounts to an estimated $4,263. With this amount as an acceptable cost item, the applicant will provide $2,344 as cash, and thus meet his 50 percent of the project's cost.

The applicant can be expected to supervise the work in an efficient manner.

RECOMMENDATIONS

It is recommended that the Government participate financially with the applicants on a 50-50 basis in the proposed exploratory project that can be completed in 6 months at an estimated cost of $13,214.

THE MAHONEY ZINC-LEAD MINE
TRES HERMANAS MINING DISTRICT
LUNA COUNTY, NEW MEXICO
DMA 1613X

Geology

By John N. Faick
Geologist, U. S. Geological Survey

THE MAHONEY ZINC-LEAD MINE
TRES HERMANAS MINING DISTRICT
LUNA COUNTY, NEW MEXICO

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GENERAL GEOLOGY

The Tres Hermanas mining district, in which the Mahoney mine is located, lies about 30 miles south of Deming, New Mexico. The ridges and peaks known as the Tres Hermanas Mountains occupy an area of about 35 square miles. According to Darton[1/] these mountains are composed of a central igneous mass of coarse granite porphyry flanked in part by andesite, rhyolite, agglomerate and limestones. The granite porphyry is a deep seated intrusive characterized by coarse grain and brownish color on fresh break.

On the north flank of the Tres Hermanas Mountains is an area about one mile square in which limestone formations are exposed. These appear to be arched around the north flank of the Tres Hermanas Mountains and are cut off on the south by the nearly east-west intrusive contact with the granite porphyry. Distinct sheeting in the granite along this contact appears to be nearly parallel to the contact and to the bedding of the adjacent limestones, suggesting that at least part of the porphyry has been intruded as a sill into the bedded formations. This is partly confirmed by the presence of isolated patches of granite porphyry exposed a short distance north of the contact and by similar porphyry cut in a mine shaft on the west side of Monument Hill. These features indicate that the mine area may be underlain with a tongue of porphyry extending northward from the granite porphyry intrusive.

SEDIMENTARY FORMATIONS

Two formations, a white crystalline limestone and an interbedded shale and blue limestone, are exposed in the mine area, but

1/ Darton, N. H., Geology and Underground Water of Luna County, New Mexico: U. S. Geol. Sur. Bull. 618, pp. 79-82, 1916.

a satisfactory section of neither of these could be seen. The extremely coarse crystalline white limestone is the lowermost formation and is exposed at the surface over a large area. It has also been penetrated by many mine workings, and a considerable thickness was penetrated by a 200 foot mine shaft and a 30 foot winze as shown on Figure 3, Section C-C prepared originally by W. D. McMillan, U. S. Bureau of Mines.

In the shaft the stratigraphic section has been complicated by an intrusion of granite porphyry which may be a sill or dike. The shaft penetrated the nearly horizontal upper contact of the porphyry at a depth of 155 feet, but the lower contact was found to strike nearly east-west and dip steeply to the south. North of this contact crystalline limestone was exposed in the bottom of the shaft and on the 200 foot level and in a 30 foot winze from this level. These exposures indicate the crystalline limestone section 250 feet thick, however some of this apparent thickness may be due to obscure faulting. A thin shale bed resting at the top of the porphyry may mark the base of the crystalline limestone in which case the formation may be only about 150 feet thick.

Overlying the crystalline limestone is an unknown thickness of interbedded shale and bluish limestone in which the shale has been metamorphosed to hornfels. The thickness of this formation could not be determined as it dips under the alluvium of the bolson plains to the east, north, and west and only the upturned and eroded edges are exposed.

Darton[2/] named these limestones the Gym formation and regarded them to be of Pennsylvanian age. Lindgren[3/] reported the limestone near the mine to be of Lower Carboniferous or Mississippian age. The writer considers the white crystalline limestone to be Mississippian, or the Lake Valley limestone of the older reports. The overlying interbedded shale and limestone is undoubtedly Pennsylvanian. It is thought the white crystalline limestone correlates with the highly productive Mississippian limestone in the Santa Rita-Bayard-Central lead-zinc districts about 80 miles to the north, and with unproductive Mississippian limestones in Cooks Peak, the Black Range and elsewhere in southwestern New Mexico.

If this correlation is correct, then it may be presumed that beneath the crystalline limestone will be found about 200 feet of dark bluish limestone of Mississippian (Lower Lake Valley) age and beneath this may be about 200-400 feet of Devonian shales resting on pre-Devonian dolomites. It is possible that this stratigraphic sequence may be interrupted by sills.

STRUCTURE

In the area surrounding the Mahoney mine the general structural features are relatively simple. Flanking the north end of the Tres Hermanas Mountains the limestone strata are gently arched to form an anticlinal structure pitching northward under the alluvium of the bolson plains. The beds generally dip to the east, north, and west at about 15 to 20 degrees but at the south end where pushed up by the intruded stock they steepen to about 30 or 40 degrees. This plunging

2/ Darton, N. H., Op. cit., pp. 36-37.

3/ Lindgren, Waldemar, The Tres Hermanas Mining District, New Mexico: U. S. Geol. Survey Bull. 380, p. 125, 1909. See also U. S. Geol. Survey Prof. Paper 68, p. 292, 1910.

anticlinal structure has been modified by considerable local deformation resulting in small open flexures and open fractures in north-south and east-west systems. The structure has been further complicated by several low angle fractures of diverse attitudes but usually dipping less than 30 degrees.

Areas of mineralization, such as at the Contention mine and at the mines on Monument Hill, are zones of maximum deformation where minor folding and faulting is superimposed on the general regional structure. At the Contention mine the beds appear to be locally folded to a small dome or anticline and on the west side of Monument Hill the beds appear to be folded into a small northwesterly trending anticline or monocline. Both of these structures are cut by small vertical fractures in a north-south and east-west systems and by low angle faults. These minor structures are relatively weak but may persist to moderate depths.

ORE DEPOSITS

According to the applicants, the mines of the subject area have produced about 5000 tons of ore, of which approximately 4500 tons were zinc carbonates containing about 30 percent zinc, and 500 tons were oxidized lead ores containing about 25 to 30 percent lead. The zinc ore minerals appear to be willemite, smithsonite, calamine and hydrozincite and the lead minerals are galena, anglesite and cerusite. These were formed by oxidation of primary galena and sphalerite, of which little could be seen in the stopes. The ores occur along open vertical fractures in two sets trending nearly north-south and east-west and some ore is found on low angle fractures and on bedding planes. The bulk of the mine production has come from

thin mantos that appear to have developed on bedding planes or along fractures near the top of the crystalline limestone. The principal mantos mined in the past are on the Contention claim and on the south and west flanks of Monument Hill. On the west side of Monument is the largest manto. This has been mined for a length of about 400 feet and a width of 25 to 40 feet and for an average thickness of about 5 feet. This manto appears to have been localized largely by minor flexing of the beds but low angle fractures may have been a contributing factor. On the south side of Monument Hill a long narrow manto-like deposit appears to have been localized near a high-angle fracture where it intersects flat-lying limestones.

ORE RESERVES AND EXPLORATION POSSIBILITIES

A satisfactory estimate of ore reserves cannot be given. Mr. Mathis estimates 500 tons of recoverable zinc carbonate ore may be available in the old workings. The estimate is reasonable but has little bearing on this exploration project as large sulfide ore bodies are being sought at greater depth, rather than the small, near-surface oxidized ore bodies.

It is possible that sulfide ore bodies may be found beneath the three areas of maximum structural deformation from which oxidized ores have been produced. If ore is present, it will most likely occur in small deposits similar to the mantos and fissure fillings previously mined near the surface. These are most likely to occur on bedding planes and in fracture zones of deformation where the beds are slightly folded and faulted as on the Contention claim and on the west side of Monument Hill. It appears that these structures may persist to

moderate depths. Mantos may be expected where bedding planes or contacts permitted ingress of ore bearing solutions from intersecting fractures. If favorable beds, in addition to the white crystalline limestone, are found at depth, the chance of finding additional ore is greatly increased.

PREVIOUS EXPLORATION

Little exploration other than that incidental to mining operations has been done on the Mahoney mine. About 1915 several churn drill holes (shown on Fig. 2) were drilled in vicinity of the mine but no records of these holes are available. It is reported that the holes all passed through the limestone into underlying granite without revealing any mineralization. These holes do not appear to have been well placed for exploring structurally favorable areas.

In 1949 two short diamond drill holes were drilled by J. W. Clark. A hole 102 feet deep, thought to be rather poorly placed, was drilled about 1000 feet southwest of Monument Hill and found only slightly vuggy and iron stained limestone. The other hole was 112 feet deep and was drilled about 1200 feet west northwest of Monument Hill. This hole, which was drilled on the strike of a favorable structure, penetrated coarse crystalline white limestone showing weak metamorphism with a little galena and pyrite mineralization. Neither of the diamond drill holes passed through the crystalline limestone.

PROPOSED EXPLORATION

The small, near-surface oxidized ore bodies mined in the past appear to be nearly exhausted and are of such size as to be of little interest. The applicants therefore are directing their efforts toward finding larger high-grade sulfide replacement deposits in limestone

below the former productive zone. The project is rather speculative as no ore bodies of the type sought have yet been found in the district. The chance for discovery, however, is reasonably good because of the presence of an extremely favorable host rock, adequate geologic structures, and the presence of known mineralization.

It is proposed to diamond drill 4 holes to test for mineralization in the limestones at depth. One of these will be drilled from near the bottom of a 200 foot shaft and the other three holes will be drilled from the surface. All holes will be concentrated in areas of maximum deformation. These will be drilled near the old stopes on Monument Hill as shown on Fig. 2; however, one alternate hole is proposed north of the Contention mine workings. The alternate hole will be drilled only if results from the first three holes indicate that further drilling on Monument Hill is inadvisable.

A discovery of ore by this limited diamond drilling program would probably suggest that future production from the district might be significant. However, if the program meets with failure, it will probably indicate the district will never produce any significant amount of sulfide ore.

CONCLUSIONS AND RECOMMENDATIONS

As a result of this examination it is concluded that the Mahoney mine presents an opportunity for a small, low cost, short term exploration project that might open a new source of sulfide zinc-lead ores in New Mexico. Exposed at the surface is an extremely favorable host rock adequately prepared for ore reception by structural deformation. Some ore has formed small oxidized bodies near the surface but these have been

largely exhausted. The object of the proposed program is to seek larger bodies of lead-zinc sulfide ore in underlying limestone horizons. There appears to be a fair chance that such ore bodies may be discovered, at a relatively small expenditure. It is therefore recommended that the Government participate in this venture.

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

224 New Customhouse
Denver, Colorado

June 28, 1951

Memorandum

To: W. R. Storms (with brochure)

(Through Chief, Mining Division)

Charles Anderson

From: DMA Field Team, Region IV

Subject: DMA 1613X, Clark and Mathis, 821 Pine Street, Deming, New Mexico

Herewith is the brochure and review by A. L. Brokaw on the above docket.

Please make the usual examination and report. It should be pointed out at this time that since the fiscal year 1951 has passed, you should go back to the practice of making full reports.

P. T. Allsman, Alternate

A. H. Koschmann

Attachments

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

REGIONAL DIRECTOR'S OFFICE
REGION IV
JUN 27 1951
BUREAU OF MINES
DENVER, COLORADO

JUN 25 1951

Mr. J. H. East, Jr.
Executive Officer, DMA Field Team
Region IV
224 New Customhouse
Denver 2, Colorado

Dear Sir:

We attach "Review of Application for Exploration Assistance" on:

Docket No. 1613X

Commodity Zinc, lead

Applicant Clark and Mathis, 821 Pine St. Deming, N. M.

Please expedite the consideration of this application with particular reference to the points raised in the attached "Review."

Very truly yours,

Tom Lyon

Tom Lyon, Chairman
Coordinating Committee

Lowell B. Moon
For Bureau of Mines

Edwin T. McKnight
For Geological Survey

Brought for McKnight
6/5/51 Mots Herrera

Defense Minerals Administration

Review of Application for Exploration Assistance

Docket No. 1613X

Commodity Zinc, lead

Total Amount $15,000

Govt. Participation 50%

1. Name and Address of Applicant Clark and Mathis, 821 Pine Street, Deming, New Mexico

2. Location of Property Tres Hermanas Mining District - 20 miles south of Deming Luna County, N. M.

3. Mineral or metal Zinc, lead 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 Geologic data inadequate

e) Is there an alternative and favorable project? (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? Yes

Does the lease have sufficient time to run to cover a future productive period? Yes

*question numbers are those of MF-103

7. Are subordination agreements necessary? Yes

a) MF-201? _____

b) MF-202 Yes

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)* _____

Is a field check needed on any of these points? _____

9. Does the experience of the applicant appear to be adequate to assure that he can properly conduct the proposed project? (question 4)* Not known

Is a field check needed on this point? Yes

10. Exhibit A. (questions 21 and 22)*

a) Is the project adequately described? Yes, but lacks good maps

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? No

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?_____

g) Is a field examination necessary to complete Exhibit A?_____

11. Exhibit B (question 23-d)*

a) Is it applicable?_____

b) If so, are sufficient data furnished?_____ If so, attach a draft.

c) Is a field check needed?_____

12. Exhibit C (question 23-e, f and g)*

a) Is it applicable?_____

b) Sufficient data?_____ If so, attach a draft.

c) Are rents and charges reasonable?_____

d) Is a field check needed?_____ _____

13. Exhibit D (question 23-a, b)*

a) Are there sufficient data?_____

b) Is the schedule adequate for the work proposed?_____

c) Is the schedule excessive for the work proposed?_____

d) Are the proposed wages and salaries reasonable?_____

e) Is a field check needed?_____

14. Exhibit E (question 23-c)*

a) Is it applicable? _____

b) Sufficient data? _____

c) Reasonable? _____

d) Field check needed? _____

15. In your judgment, can the proposed work be done in the proposed time? Yes

(All exploration must be completed within two years)

16. If field examination is not needed, attach your recommendation.

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing question? This may be a worthwhile project but a more detailed geologic appraisal is needed. The location of the proposed drill holes do not appear to be properly located but this cannot be positively determined from the maps and data submitted.

Reviewed by: A. L. Brokaw (GS)

Date 6/19/51

97692

FILE COPY
SURNAME:

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

Brokaw for McKnight
Mote
Hazen
McKnight for
Moon Love

Docket mailed 6/25/51

June 20, 1951

Re: Docket DMA-1613X

Clark and Mathis
821 Pine Street
Deming, New Mexico

Gentlemen:

Your application (Docket DMA-1613X) for a Government loan under the provisions of the Defense Production Act of 1950 has been reviewed by the Lead-Zinc Branch of the Defense Minerals Administration. Before final decision can be taken on your request, it will be necessary to obtain additional information on your property. Your application, therefore, has been referred to Mr. J. H. East, Jr., Executive Officer of the Field Team, 224 New Customhouse, Denver 2, Colorado, for further information and advice.

Very truly yours,

Tom Lyon, Director
Supply Division

ALBrokaw:emp
G 6/19/51
Copies to: J. H. East, Jr. Region IV (2)
Chief, Lead-Zinc Br.
E. T. McKnight 4204 GSA
R. H. Mote
L. F. Strobel
Directors r. file 4214 GSA
Br. r. file 4214 GSA
Files

DMA 1613

252

FILE COPY
SURNAME:

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

June 18, 1951

Mr. R. W. Mathis
~~Partner~~
Clark and Mathis
821 Pine Street
Deming, New Mexico

Subject: DMA-1613X
Re: Exploration Loan
Mahoney Mine

My dear Mr. Mathis:

Receipt is acknowledged of your application and attachments of May 29, 1951 for an exploration loan under the Defense Production Act of 1950.

The application was assigned Docket Number DMA-1613X and was referred to Mr. Otto Herres, Chief, Lead-Zinc Branch on June 11, 1951.

In any future correspondence relating to your application, kindly refer to DMA-1613X.

Sincerely yours,

LANDON F. STROBEL

Landon F. Strobel
Executive Secretary

LFSTROBEL:js
cc: Strobel-2
>Files
Herres
Lyon

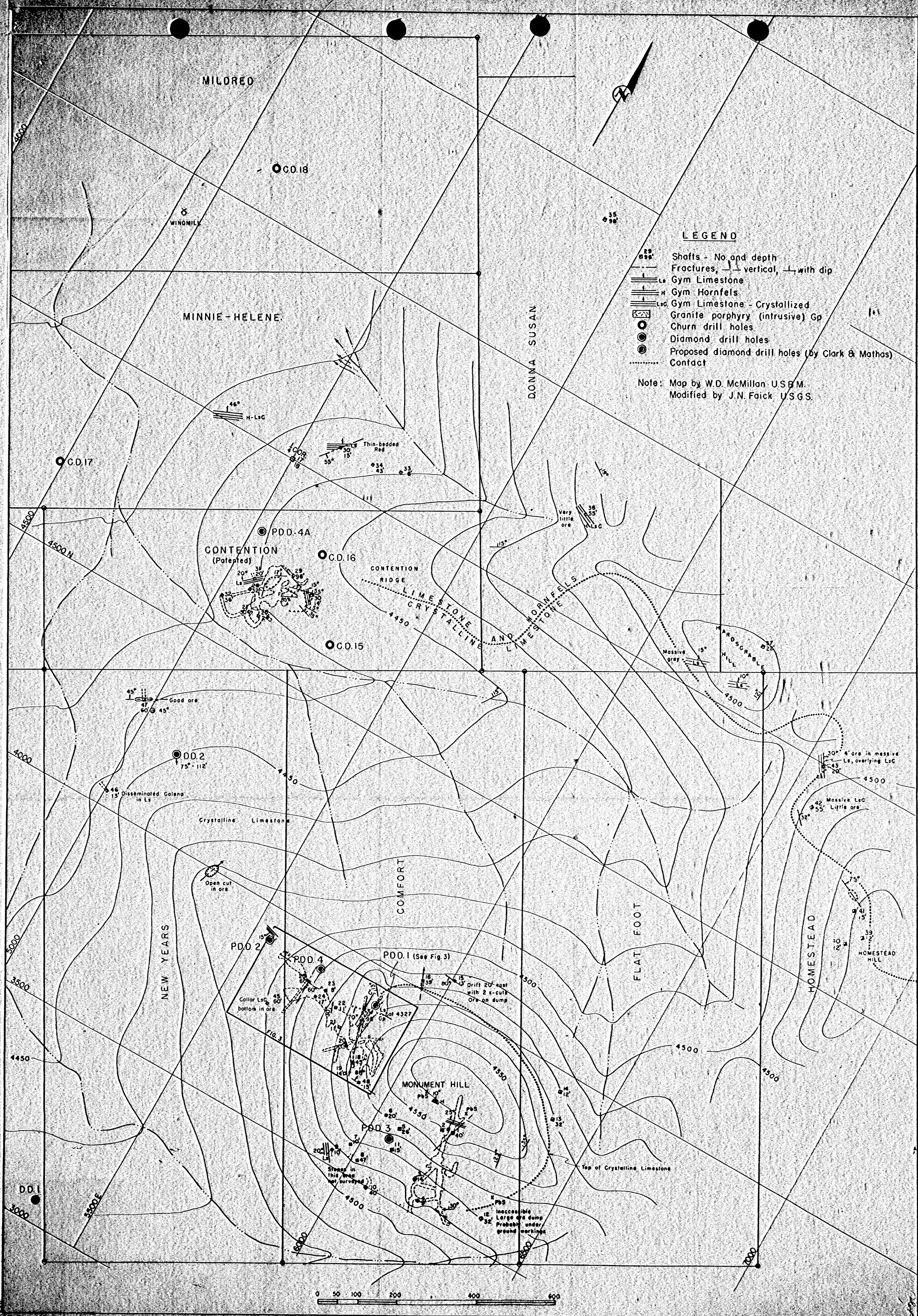
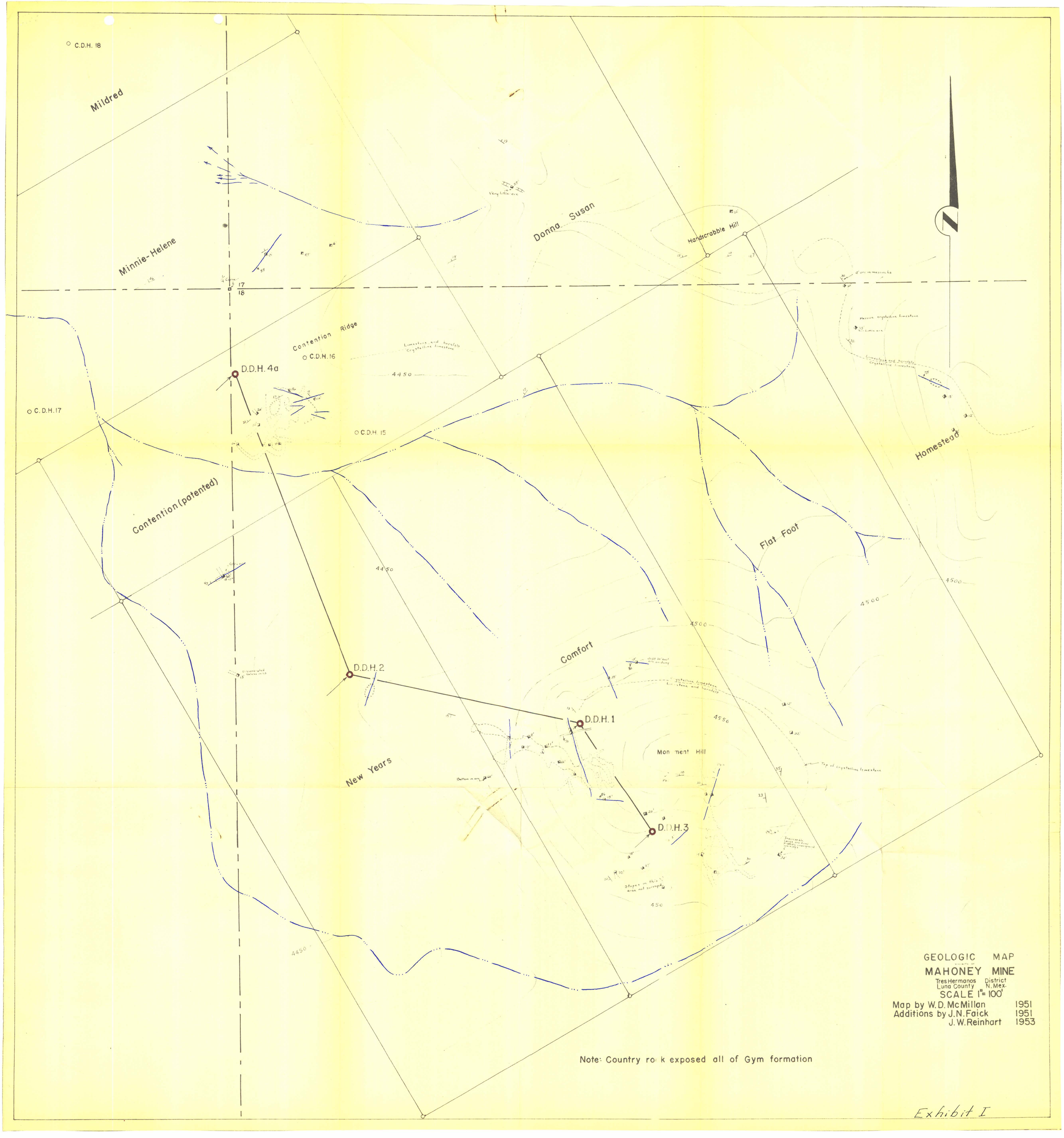
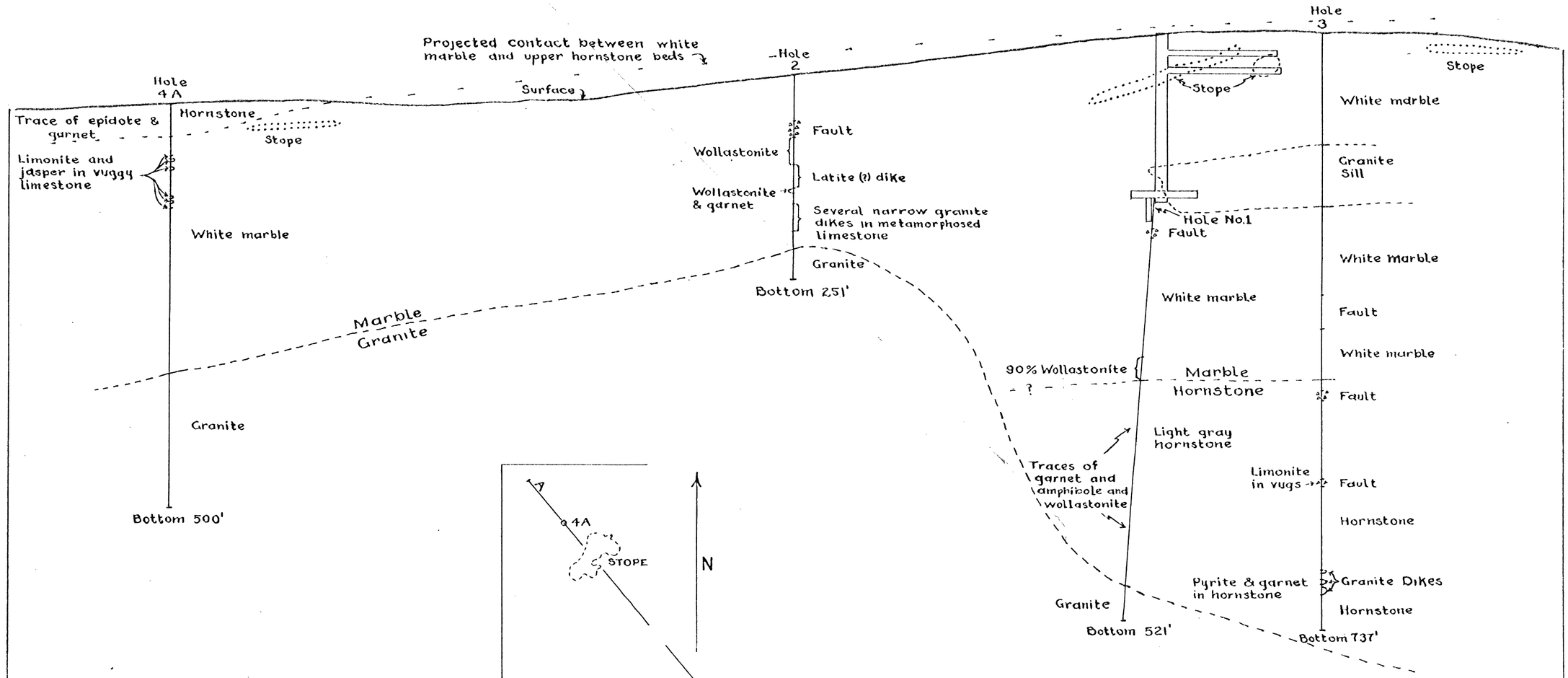
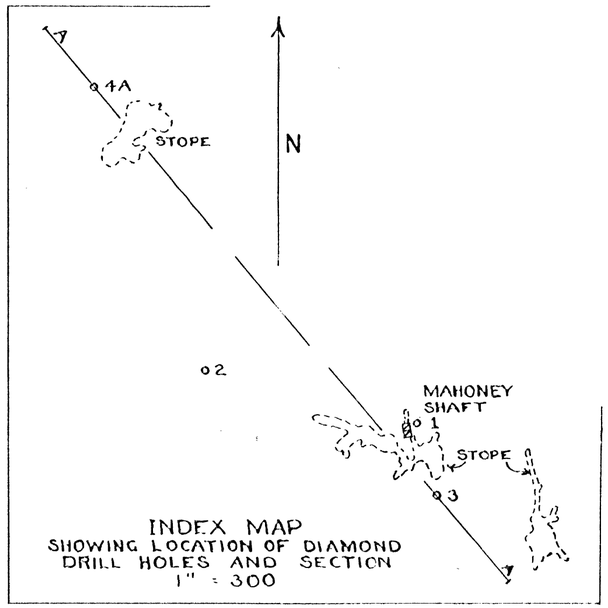


Figure 2.- Topography and geology, Mahoney zinc-lead mine, Tres Hermanos district, Luna County, New Mexico. DMA 1613 X July 1951


C.D.H. 18
Mildred
Minnie-Helene
Donna Susan
Hardscrabble Hill
Very little ore
17
18
Contention Ridge
C.D.H. 16
D.D.H. 4a
C.D.H. 17
C.D.H. 15
Limestone and hornfels
Crystalline limestone
4450
Contention (patented)
Homestead
Flat Foot
4500
Comfort
D.D.H. 2
D.D.H. 1
D.D.H. 3
Monument Hill
New Years
4550
Massive crystalline limestone
Limiteore
Top of crystalline limestone
Stopes in this area not surveyed
450
Note: Country rock exposed all of Gym formation
GEOLOGIC MAP
VICINITY OF
MAHONEY MINE
Tres Hermanos District
Luna County N. Mex.
SCALE 1" = 100'
Map by W. D. McMillan 1951
Additions by J. N. Faick 1951
J. W. Reinhart 1953
Exhibit I





INDEX MAP
SHOWING LOCATION OF DIAMOND DRILL HOLES AND SECTION
1" = 300

FIGURE 1
GEOLOGICAL SECTION
SHOWING POSSIBLE INTERPRETATION
OF RESULTS OF DIAMOND DRILLING
MAHONEY MINE, LUNA COUNTY, N.M.
SCALE 1" = 100' AUG. 1953
DMEA 1613X

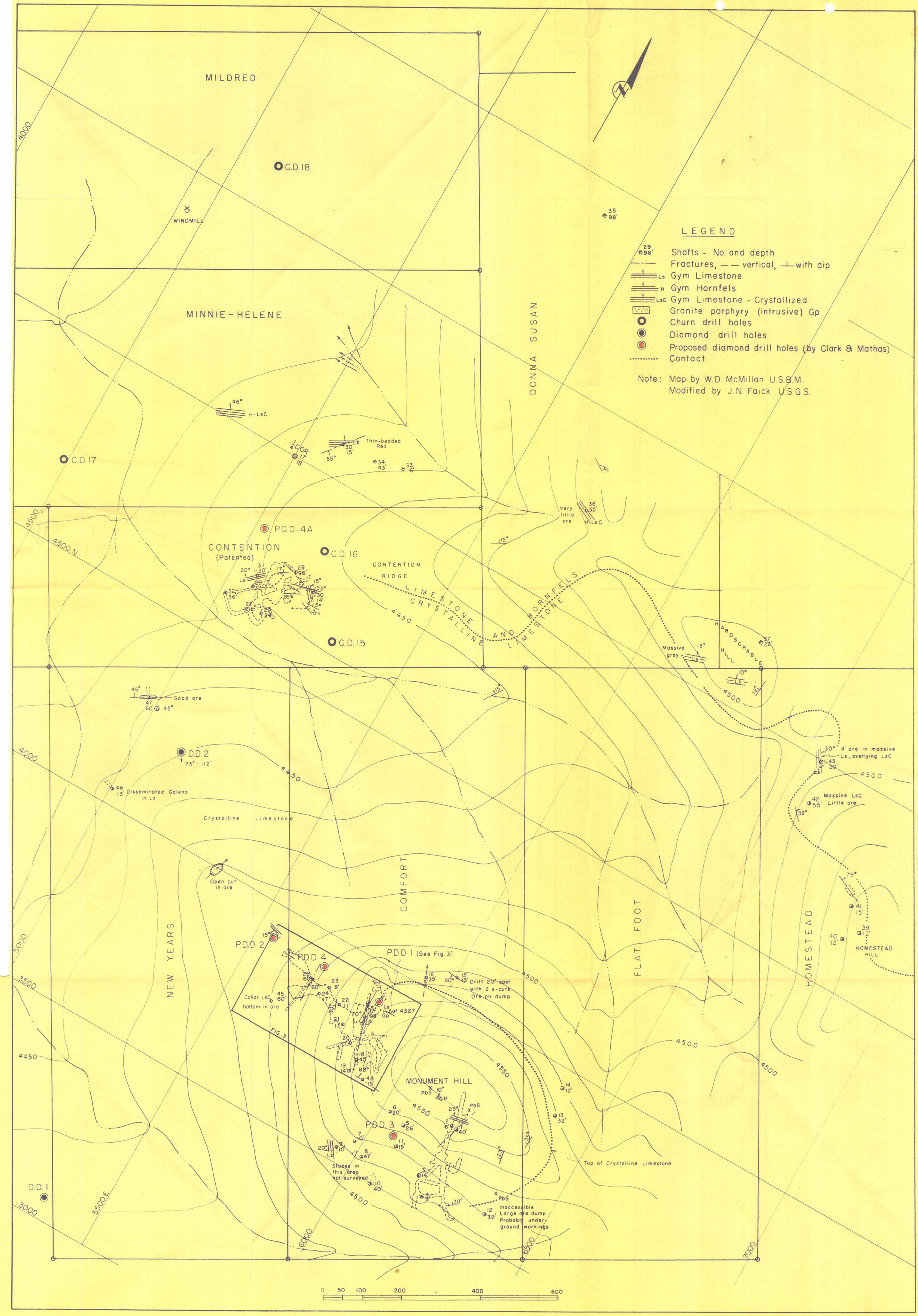


Figure 2.- Topography and geology, Mahoney zinc-lead mine, Tres Hermanos district, Luna County, New Mexico.
DMA 1613 X July 1951

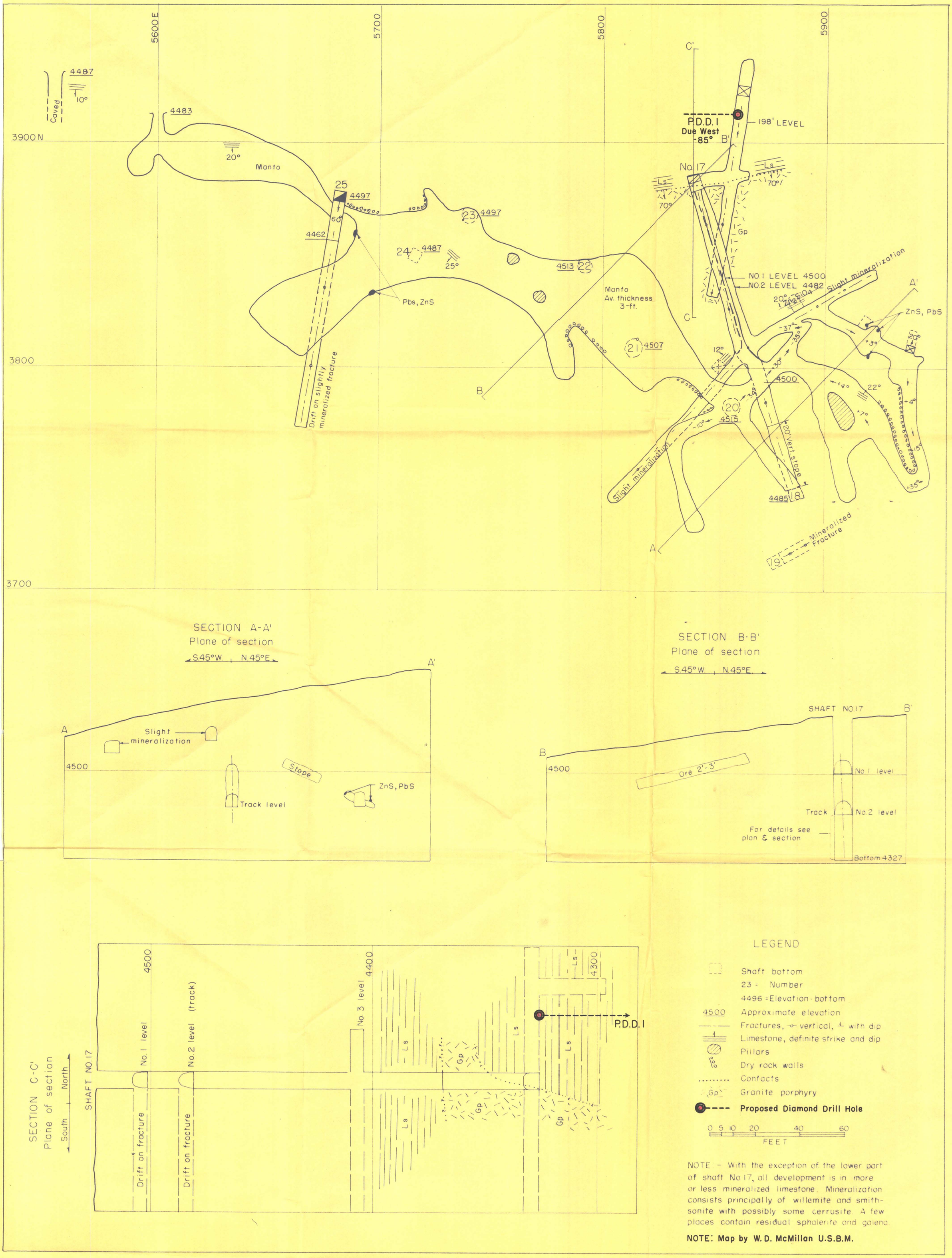


Figure 3. - Plan and sections, West Monument Hill, Mahoney mine, Tres Hermanos dist., Luna County, New Mexico.
DMA 1613 X July 1951

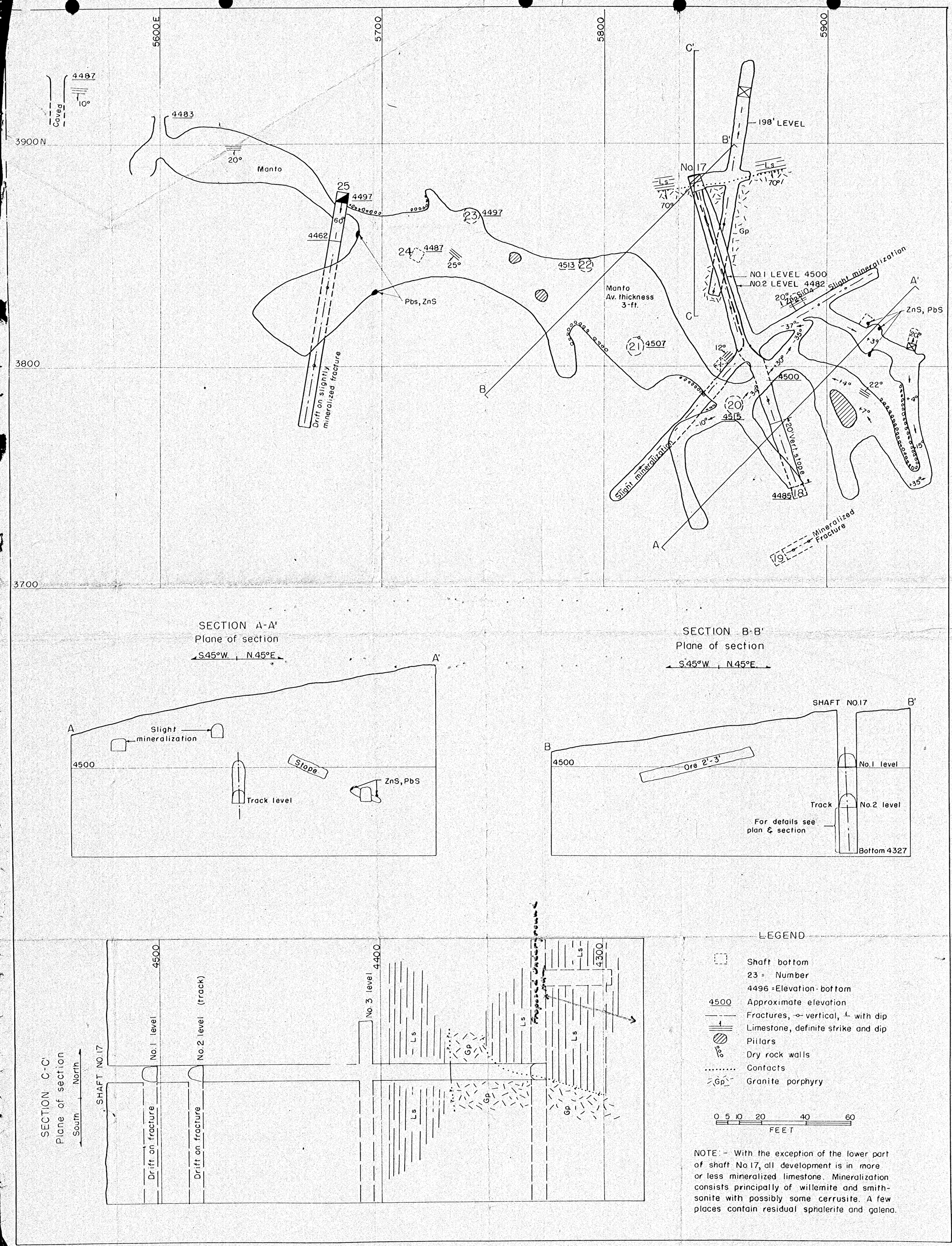


Figure 5. - Plan and sections, West Monument Hill, Mahoney mine, Tres Hermanos dist., Luna County, New Mexico.

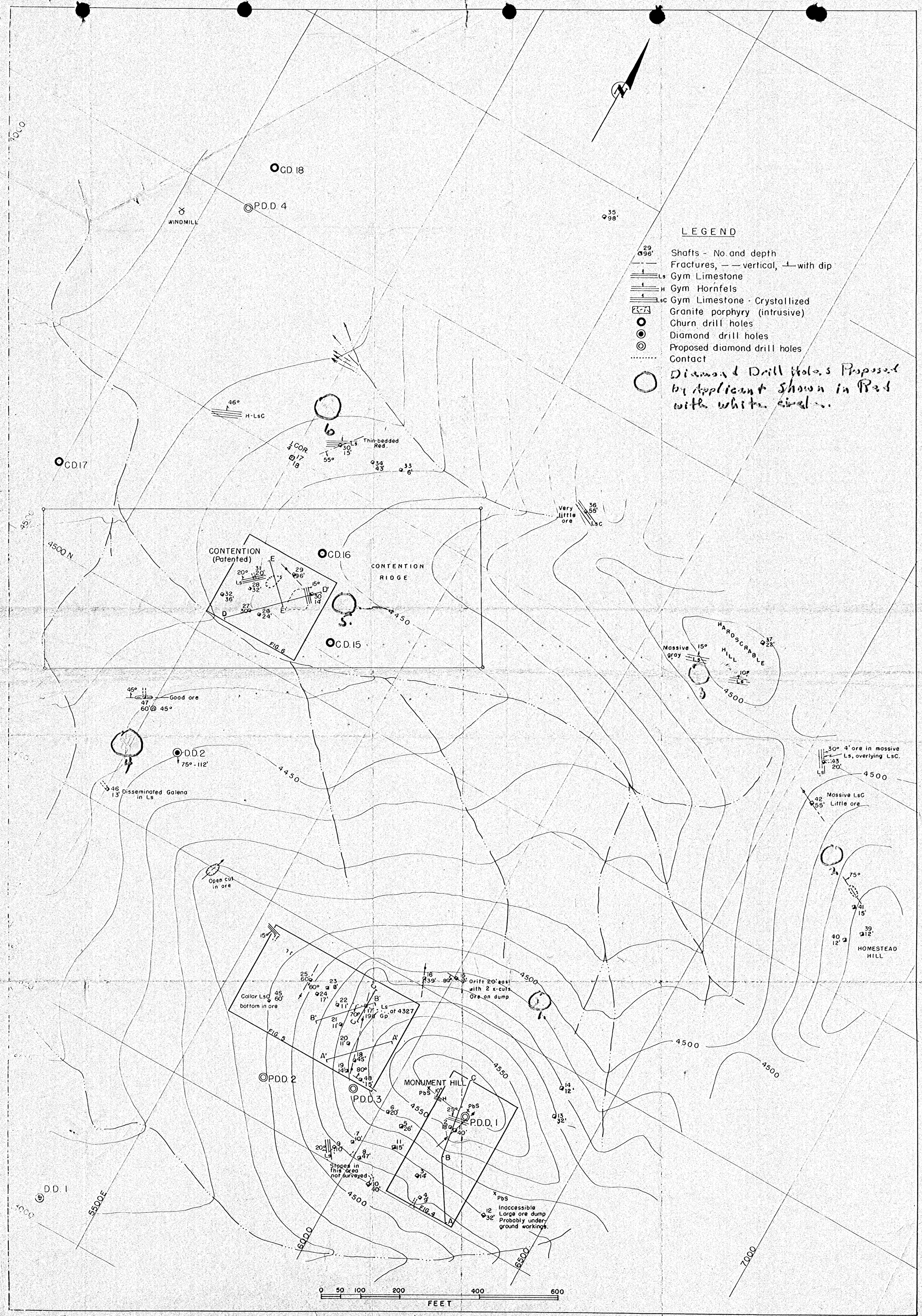


Figure 3.- Topography and geology, Mahoney zinc-lead mine, Tres Hermanos district, Luna County, New Mexico.