Termination of Exploration
Project Contract by Agreement
after Commencement but
before Completion of the Work
on July 31, 1953
executed by King & Operators

MF-200 (A)
(February 1952)

DOCKET NO. DMEA 270

COMMODITY Asbestos

Idm-E527

9/22/53

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

Department of the Interior
Defense Minerals Administration
RECEIVED
MAY 26 1953

EXPLORATION PROJECT CONTRACT[1]

(Short Form)

IT IS AGREED this 22nd day of May, 1953, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government," and[2] a partnership consisting of Jack L. Heal and Dennis E. Green
P. O. Box 1730
Globe, Arizona

hereinafter called the "Operator," as follows:

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

ARTICLE 2. *Operator's property rights.*—With respect to that certain land situated in the State of Arizona County of Gila, described as follows:[3] Six unpatented lode mining claims known as the Mystery Lines Nos. 1, 2, 3, 4, 5, 6, and described in a lease dated October 17, 1952, between the San Carlos Apache Tribal Council, lessor, and D.E. Green and Jack L. Heal, lessees.

the Operator represents and undertakes:[4]

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

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

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

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

in or upon the described land; and shall bring the project to completion within a period of 17 months from the date of this contract. The work to be performed is more fully described in Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, are made a part of this contract. The Government will contribute to the cost of this work as hereafter provided. The work shall be performed by the Operator or by independent contractor or contractors efficiently, expertly, in a workmanlike manner, in accordance with good mining standards and State regulations for health and safety and for workmen's compensation and employers' liability insurance, with suitable and adequate equipment, materials, and labor, to bring the project to completion within the time fixed. The Government shall have the right to enter and observe and inspect the work at all reasonable times, and the Operator shall provide the Government with all available means for doing so. The Government may consult with and advise the Operator on all phases of the work.

ARTICLE 4. *Costs of the project.*—The agreed, estimated costs of performing the work, expressed in terms of units of work to be performed (per foot of drifting, per foot of drilling, per cubic yard of material to be moved, etc.) are set forth in Exhibit "A," attached hereto. The Government will pay ninety (90) percent of these agreed, estimated costs, as they accrue, for units of work actually performed that conform with the description or specifications for the work set forth in this contract, in an aggregate total amount not in excess of $24,241.50, which is 90 percent of $26,935.00, the agreed, estimated total cost of the project in which the Government will participate: *Provided,* That until the Operator's final report and final accounting have been rendered to the Government and any final check or auditing required by the Government has been made, and a final settlement of the contract has been made, the Government may withhold from the last voucher or vouchers such sums as it sees fit not in excess of ten (10) percent of the maximum total which the Government might have been called upon to pay under the terms of the contract. The Government may, as it sees fit, make payments direct to the Operator's independent contractors, if any, for the account of the Operator, rather than to the Operator.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

ARTICLE 9. *Changes and added provisions* _____

Executed in sextuplicate the day and year first above written.

THE UNITED STATES OF AMERICA

Dennis E. Green
Jack R. Neal
(Operator)

By By Dennis E. Green

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

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

[CORPORATE SEAL]

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

EXHIBIT "A"

Description of the Work

Stage I.

This work consists of bulldozing a truck trail from Coyote Hole tank to the property approximately 2½ miles so as to be passable by 4-wheel drive vehicles. The outcrop is to be stripped and benched with a bulldozer to the serpentine zone immediately below the base of the Algal member. The direction and inclination of 150 feet of exploration drift will be determined after the stripping and benching has been completed. The direction and inclination of the drifts must be acceptable to the DMEA representatives. If at the completion of Stage I the Government believes the deposit justifies additional work, Stage II will be authorized. Prior written approval must be obtained from the DMEA representatives before work is commenced on Stage II. The location of the proposed exploration is shown on Figure 2 which is attached and made a part of Exhibit "A".

Stage II.

This work consists of improving the access road to permit the passage of passenger cars and trucks and 420 feet of drifting and crosscutting at locations acceptable to the DMEA representatives.

Estimated Costs of the Work

Stage I.

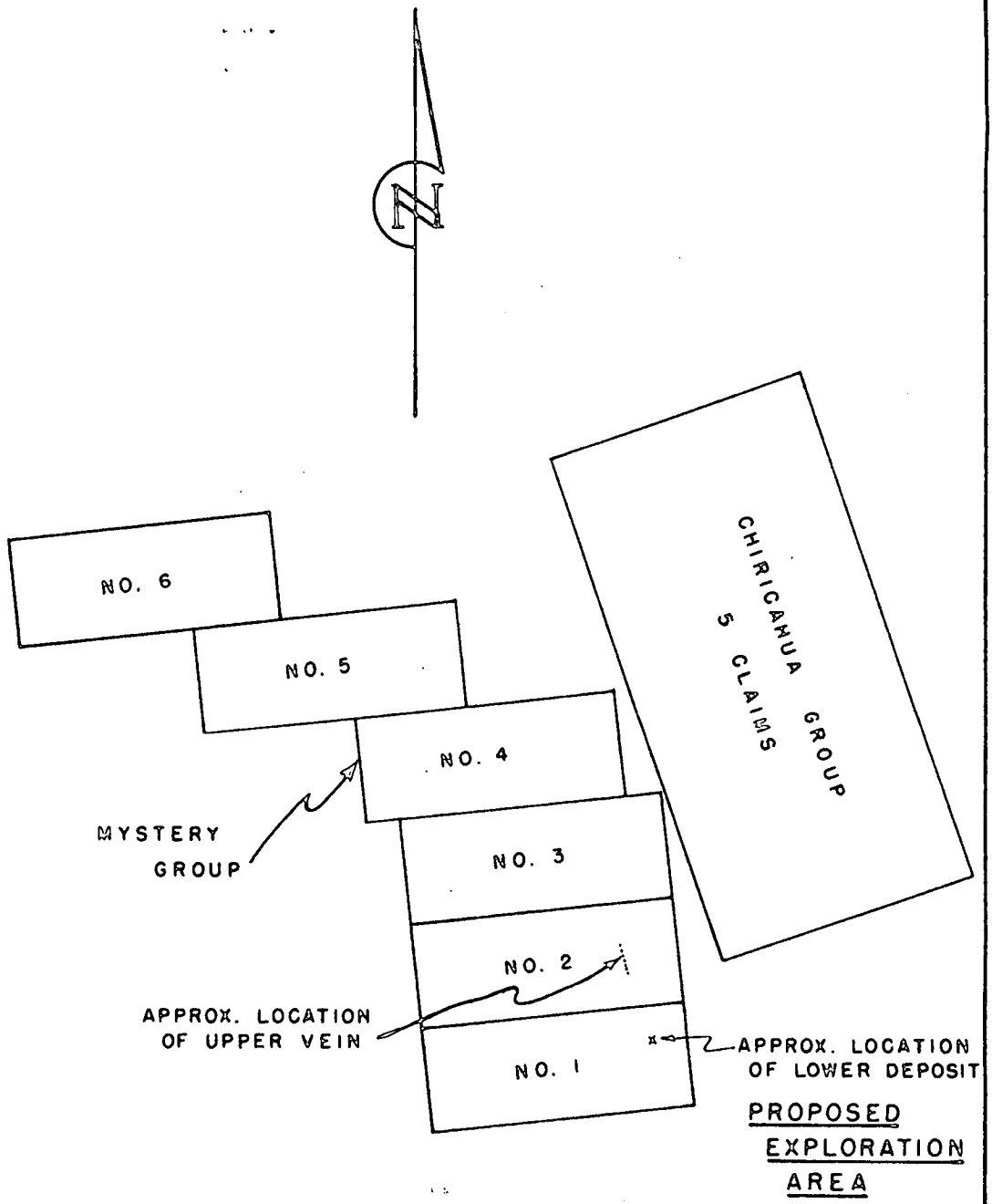
1/	Construct a truck trail from Coyote Hole tank to the property passable by 4-wheel drive vehicles.....	$ 2,507.00
1/	Strip and bench the outcrop to the serpentine zone immediately below the base of the Algal member.....	408.00
	Drifting 150 feet @ $36.00 per foot.....	5,400.00
	Total Stage I.....	$ 8,315.00
	Government participation Stage I, 90%....	$ 7,483.50

Stage II.

1/	Improvement of access road to permit passage of conventionally geared cars and trucks.....	$ 3,500.00
	420 feet of drifting and/or crosscutting @ $36.00 per foot.....	15,120.00
	Total Stage II.....	$18,620.00
	Government participation Stage II, 90%	$16,758.00
	Total Stage I and Stage II.....	$26,935.00
	Government participation Stage I and Stage II, 90%.....	$24,241.50

The above estimated costs include any and all costs accrued in the completion of the work.

1/ The entire work constitutes the unit of work.



SCALE - 1 INCH = 1000 FEET

DMEA 2760

JAN. 28, 1953

FIGURE 2 - CLAIM MAP, MYSTERY ASBESTOS GROUP, GILA COUNTY, ARIZ.

FILE COPY
Surname:
Robertson
Hously
Ryan
Chambers

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C. 600

JAN - 6 1954

Mr. Dennis E. Green
Jack L. Neal and D. E. Green
Mining Company
P. O. Box 1730
Globe, Arizona

Subject: Docket No. DMEA-2760 - Asbestos
Jack L. Neal and D. E. Green
Mining Company
Mystery Mine
Gila County, Arizona
Contract No. Idm-E527

Dear Mr. Green:

This is with reference to the subject Exploration Contract between Jack L. Neal and Dennis E. Green, a partnership, and the Government.

The final audit of the contract expenditures have been received and accepted by this Administration. Of the total amount of $26,935.00 approved under the contract, the sum of $8,315.00 was expended, 90 percent of which, or $7,483.50, represented the Government's share. There were no unused materials, supplies or equipment to be disposed of for the joint account of the Operator and the Government.

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

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

Sincerely yours,

C. O. Mittendorf (fw)

Administrator

JTRobertson:ag 12/29/53
Copy to: Admr. R. File
Docket File
Field Team, Region IV
Dr. Bowles, 3516
Mr. Larrabee, G-232 GSA Bldg.
Mr. Houk

1-6-54

IN REPLY REFER TO:

G-MD-CNM

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

RECEIVED
JAN 6 1954

January 5, 1954

Memorandum

REVIEW OF FIELD TEAM REPORT ON APPLICATION DMEA-2760 (asbestos)

To: L. G. Houk, Defense Minerals Exploration Administration
From: D. M. Larrabee, U. S. Geological Survey
Applicant: Jack L. Neal and D. E. Green
Name of property: Mystery Asbestos Prospect.
Location of property: Gila County, Arizona.
Date of field team report: October 7, 1953.
Authorship of field team report: A. F. Shride.
Field team's recommendation: Termination of contract without certification.
Comments: No further work justified.
ACTION RECOMMENDED: Follow field team's recommendation.

D. M. Larrabee

D. M. Larrabee

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C. 600

Project Summary Report

By: Jasper T. Robertson December 29, 1953

1. DMEA Docket No. 2760 - Asbestos
Contract No. Idm-E527
Mystery Mine
Gila County, Arizona

Operators: Jack L. Neal and Dennis E. Green (a partnership)
P. O. Box 1730
Globe, Arizona

Operator's Property Rights:
Held by mining lease dated October 17, 1952. San Carlos Apache Tribal Council, Lessor, D. E. Green and Jack L. Neal, Lessee. Property consists of 6 unpatented lode claims, Mystery Mines No. 1, No. 2, No. 3, No. 4, No. 5, and No. 6. Claims lie about 16 air miles southeast from Globe, Arizona.

Subordination Agreement - None

2. Contract - dated 5/22/53 - Terminated 7/31/53
Work authorized - two stages

Stage I	
Truck trail ($2\frac{1}{2}$ miles)	$2,507.00
Strip and bench outcrop to serpentine	408.00
Drifting - 150 feet @ $36/ft.	5,400.00
Total Stage I	$8,315.00
Government's participation @ 90%	$7,483.50
Stage II	
Improve access road	$3,500.00
420 feet of drifting and/or crosscutting @ $36/ft.	15,120.00
Total Stage II	$18,620.00
Government's participation @ 90%	$16,758.00
Total authorized cost Stage I & II	$26,935.00
Total authorized Government's participation @ 90%	$24,241.50

Only work on Stage I was completed. Contract terminated July 31, 1953.

Completed work:	
Truck trail	$2,507.00
Stripping and benching	408.00
150 feet of drifting @ $36/ft	5,400.00
Total cost	$8,315.00
Government's share 90%	$7,483.50

3. Audit - Certified November 13, 1953 (no exceptions)

4. Certification of Discovery - None
   No worthwhile discovery of asbestos was made.

5. Comments:
   After the completion of the work the mine was examined by R. W. Ageton, Mining Engineer, USBM, and A. F. Shride, Geologist, USGS. In a short report dated August 27, 1953, Mr. Ageton reported as follows:

"The project was cautiously recommended for exploration based upon limited exposures of strategic quality asbestos in a serpentine zone immediately below the base of the Algal member of the Mescal formation. The plan map of the workings (figure 1) indicates the fiber zone as delimited by the project work.

"At the right wall of the portal a 16-inch serpentine zone, containing several discontinuous bands of short fiber, is exposed. The most persistent band of fiber is 1/4-inch in length. The serpentine zone as exposed at the left wall of the portal is 28-inches thick with no apparent fiber. However, fiber was noted in a bedding plane fault that is especially well exposed along the left wall near the portal.

"The serpentine zone exposed at the portal did not persist down dip and lasted but a few feet. Nevertheless the operator continued sinking down dip for a total of 40 feet, but without intersecting better serpentine zones. The beds down dip were relatively thin, only slightly serpentinized, and contained a discontinuous stringer of very short fiber.

"The operator at this point was not certain what to do but felt that by drifting northerly along the strike of the beds he would intersect the better serpentine zone as exposed by the surface cut. The strike drift exposes the thin beds below the Algal formation but nowhere along the drift or at the face is there a good exposure of serpentine or fiber. The serpentine that is exposed continues to be slightly weathered. A very thin (less than 1/8-inch in thickness) discontinuous band of amber or golden fiber is exposed

at the face in a poor serpentine that is slightly weathered. After completing the units of combined sinking and drifting allowed under Stage I of the contract the operator awaited the arrival of the field examiners in order that they determine the feasibility of further work.

"As the 150 feet of combined sinking and drifting are according to the terms of the contract, it is recommended that the Government's share of the cost be paid."

FILE COPY
Surname:
Robertson
Hinch

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C. 600

Project Summary Report

By: Jasper T. Robertson December 29, 1953

1. DMEA Docket No. 2760 - Asbestos
Contract No. Idm-E527
Mystery Mine
Gila County, Arizona

Operators: Jack L. Neal and Dennis E. Green (a partnership)
P. O. Box 1730
Globe, Arizona

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Subordination Agreement - None

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Total authorized cost Stage I & II	$26,935.00
Total authorized Government's participation @ 90%	$24,241.50

Only work on Stage I was completed. Contract terminated July 31, 1953.

R.C.G. 1-7-54

Completed work:

Truck trail	$2,507.00
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at the face in a poor serpentine that is slightly weathered. After completing the units of combined sinking and drifting allowed under Stage I of the contract the operator awaited the arrival of the field examiners in order that they determine the feasibility of further work.

"As the 150 feet of combined sinking and drifting are according to the terms of the contract, it is recommended that the Government's share of the cost be paid."

JTRobertson:gad 1/4/54
Copy to: Admr. R. File
Docket File
Mr. Houk

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 28 1953

224 New Customhouse
Denver 2, Colorado

December 17, 1953

Memorandum

To: Secretary, Operating Committee, DMEA

From: DMEA Field Team, Region IV

Subject: Docket No. DMEA 2760 (Asbestos), Contract Idm-E527, Jack L. Neal and Dennis E. Green, Mystery Asbestos Prospect, Gila County, Arizona

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

1. Original and one copy of the Operator's final report

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

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

Final payment to the operator was processed by this office December 17, 1953 in conformance with the final Report of Review by the Contract Administration and Audit Division dated November 13, 1953, which was released to this office December 15, 1953.

The exploration work consisted of road repair and construction, rim stripping, and 150 feet of drifting at a total accepted cost of $8,315.00 in which the Government participated to an extent of 90 percent or the amount of $7,483.50.

The project was terminated at the completion of Stage 1 by mutual agreement effective July 31, 1953.

The exploration work did not result in a significant discovery of asbestos ore; therefore no certification of discovery or development is recommended.

W. H. King
W. H. King

for E. M. Hausman
A. H. Koschmann

Enclosures

Mining Division
Date Rec'd.
DEC 28 1953
RECEIVED
BUREAU OF MINES
Denver, Colorado

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
MINING DIVISION
REGION IV

SOUTHWEST EXPERIMENT STATION
Box 4097
UNIVERSITY STATION
TUCSON, ARIZONA

August 20, 1953

Memorandum

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

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

Subject : Final Report, Contract Idm-E527, Docket DMEA-2760, Neal & Green, Mystery Asbestos Prospect, Gila County, Ariz.

Enclosed are original and 4 copies of a report which the operators submitted with their July progress report. Whether or not it was intended as a final report, I do not know, although it does seem to be one.

Until I hear otherwise from the operators, I will consider this their final report and so am submitting it to you as one.

Walter R. Storms

Walter R. Storms

CC W. H. King (4)
DMEA-2760
DF

FOR VICTORY
BUY UNITED STATES SAVINGS BONDS AND STAMPS

U. S. BUREAU OF MINES
MINING DIVISION
AUG 14 1953
TUCSON, ARIZONA

P. O. Box 1730
Globe, Arizona
July 31, 1953

Mr. W. R. Storm
United States Bureau of Mines
P. O. Box 4097, University Station
Tucson, Arizona

Dear Mr. Storm:

Reporting work completed on Stage One of Jack L. Neal and Lennis L. Green, exploration project Docket Number DMEA 2760, Commodity Asbestos, Contract Number IMM-E 527.

On June 1st, 1953 we began the construction of a truck trail to the property covered in the above mentioned contract. This work was pushed through to completion during the month of June and the stripping work called for in this contract was begun immediately. The ore zone was faced out from the outcrop of the original discovery, it's entire width to the surface. We then did considerable bulldozer work on beyond the originally discovered outcrop in an effort to determine whether or not the line beds extended on beyond the point of discovery. When this work was completed the field team was called in for an inspection and it was mutually agreed that the starting point of the drift work would be commenced at a point where the most ore was exposed and continued in, in the direction that seemed to be most favorable for the continuation of the ore zone. It was mutually agreed that this drift work would be commenced down the strike and the direction of said drift would be alternated in an attempt to follow the indicated ore body.

During the month of July 1953 we completed the 150 feet of drift work set-up on the first stage of this contract. This drift was carried down the strike some 40 feet and the indications were that the serpentine zone, if it continued into the mountain would be to the right of the direction down the strike. We gradually carried out drift in a circular direction to the right in an effort to pick up the continuation of the ore zone until our 150 feet of drift work was completed.

The field team has made an inspection of this work and it has been mutually agreed that the indications of a commercial ore body in this area is not promising. After turning our drift to the right we encountered two faults that indicated considerable movement in the ground, however, this movement was in a horizontal direction and no indication that the vein shifted up or down.

During the process of this work we did some very intensive prospecting on the upper zone indicated on the map in an effort to determine the possibilities of a commercial ore body in that area. This ore zone can be traced for several hundred feet, however, we were unable to discover a point that indicated enough quantity to be worked commercially.

We discussed at length with the field team the possibilities of an ore body being developed in the area explored at the lower deposit and also the possibilities of an ore body on the upper vein. We have mutually agreed that in further work it is very unlikely that an ore body of sufficient quantity to be mined at a profit would be developed.

In consideration of these findings we are agreed that this contract should be terminated.

Yours very truly,

Dennis L. Green.

DLG:a

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

COPY

224 New Customhouse
Denver 2, Colorado

December 17, 1953

Memorandum

To: Secretary, Operating Committee, DMEA

From: DMEA Field Team, Region IV

Subject: Docket No. DMEA 2760 (Asbestos), Contract Idm-E527, Jack L. Neal and Dennis E. Green, Mystery Asbestos Prospect, Gila County, Arizona

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

1. Original and one copy of the Operator's final report.

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

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

Final payment to the operator was processed by this office December 17, 1953 in conformance with the final Report of Review by the Contract Administration and Audit Division dated November 13, 1953, which was released to this office December 15, 1953.

The exploration work consisted of road repair and construction, rim stripping, and 150 feet of drifting at a total accepted cost of $8,315.00 in which the Government participated to an extent of 90 percent or the amount of $7,483.50.

The project was terminated at the completion of Stage 1 by mutual agreement effective July 31, 1953.

The exploration work did not result in a significant discovery of asbestos ore; therefore no certification of discovery or development is recommended.

/s/ W. H. King

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

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE

1-6-54
(date)

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

October 13, 1953

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: Final geologic report, DMEA Docket 2760, Contract Idm-E527, Mystery Prospect (Asbestos), J. L. Neal and D. E. Green, Gila County, Arizona

Enclosed are 9 copies of the final geologic report by A. F. Shride of the U. S. Geological Survey covering the above docket.

Since no asbestos ore was found during this exploration program, it has been recommended that no certification should be made.

A. H. Koschmann

A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (9)

Reviewed by
DMEA OPERATING COMMITTEE
1-6-54
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. Box 4186, University Station
Tucson 5, Arizona

October 7, 1953

Memorandum

TO: A. H. Koschmann

From: A. F. Shride

Subject: Completion geologic report, Contract Idm-2527 (DMEA-2760), Mystery prospect (Asbestos), J. L. Neal and D. E. Green, Gila County, Arizona

Enclosed are the original and 8 copies of the above report by A. F. Shride of the Geological Survey.

No asbestos ore was found during this exploration program and no certification should be made.

A. F. Shride
Acting District Supervisor
Arizona - New Mexico

Reviewed by
DMEA OPERATING COMMITTEE
1-6-54
(date)

FINAL GEOLOGIC REPORT

Contract I6m-E527
(DMEA-2760)

MYSTERY PROSPECT
(Asbestos)

J. L. Neal and D. E. Green
Gila County, Arizona

by
A. F. Shride, Geologist
U. S. Geological Survey

Reviewed by
DMEA OPERATING COMMITTEE

1-6-54
(date)

Final Geologic Report, Contract Idm-2527 (DMEA-2760), Mystery Prospect (Asbestos), J. L. Neal and D. M. Green, Gila County, Arizona

Under DMEA contract Idm-2527 a small exposure of chrysotile asbestos was further exposed by bulldozer stripping and was penetrated by a 135-foot adit (Fig. 1). No ore was found and no certification of discovery should be made.

GEOLOGY AND EXPLORATION

The asbestos-bearing serpentine zone of the Mystery prospect parallels the bedding of the pre-Cambrian Mescal limestone, which strikes N. 25°-30° W. and dips 22°-24° SW. The asbestos-serpentine zone is in the limestone of the lower member, immediately below the contact of this member and the overlying algal member of the Mescal limestone. A thick concordant diabase sill is approximately 15 feet stratigraphically below the deposit.

At the time of the original examination a serpentine zone 24-30 inches thick that included asbestos veins totaling 3½ to 4 inches was exposed for an outcrop length of 20 feet. Late in June 1953, when an inspection of the DMEA project was made, stripping of the outcrop had been completed and exposed asbestos for an outcrop length of 50 feet. The asbestos in this stripped exposure was obviously in lesser amounts (a maximum 1¼ -2½ inches for a part of the exposure) than in the original outcrop. The asbestos pinched out 30 feet

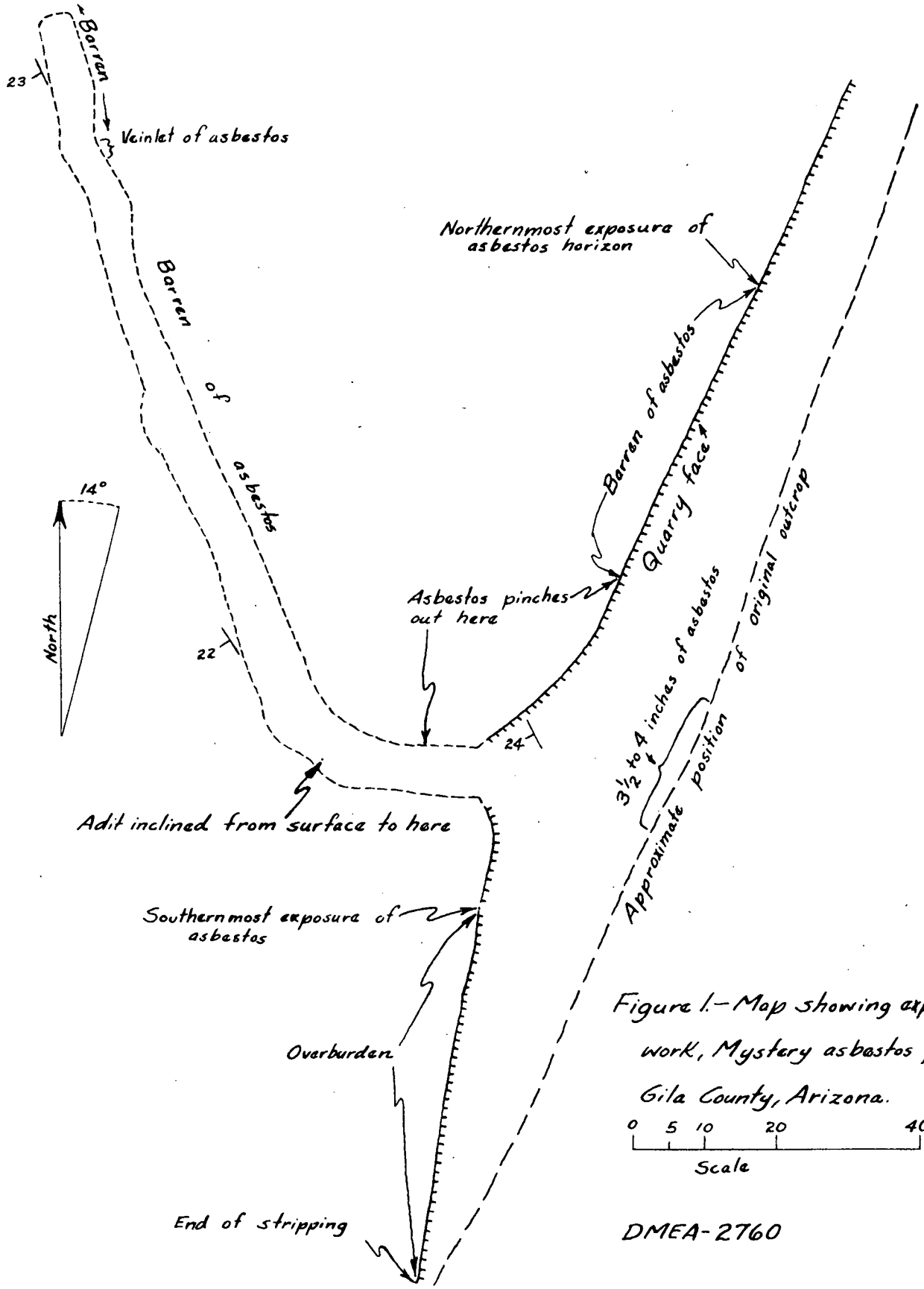


Figure 1.—Map showing exploration work, Mystery asbestos prospect, Gila County, Arizona.

DMEA-2760

north of the present portal site, but was continuous for 20 feet to the south of the portal site where the zone is covered by thick debris. Stripping of the horizon further to the south was not feasible because of the thick overburden. Although the stripping suggested that the asbestos was decreasing in amount to the west, further cautious exploration seemed justified to determine whether the deposit thinned out completely or whether the stripped exposure represented a local thinning of the deposit. On this basis the operator drove an adit as stipulated in the contract under Stage I.

During July, between monthly inspections, the operator completed the drifting allowed under Stage I. This work consisted of inclined and horizontal drifting as shown on figure 1. Approximately 20 feet from the stripped outcrop observed by the examiners in June, the deposit pinched out completely. Approximately at the point where the fiber pinched out (fig. 1) bedding-plane and thrust faulting, which is important in localizing the Arizona asbestos deposits and was very apparent in the original outcrop, becomes insignificant. The limestones of the remainder of the adit were little prepared structurally for mineralization and very little metamorphism of the limestones is observed. Twenty feet from the face of the adit a minute veinlet of asbestos was exposed intermittently for 3 feet along the north wall of the adit.

The adit was inclined for 32 feet from the portal, then turned abruptly to the northwest along the strike of the limestone beds. There was positively no justification for drifting beyond the end of the incline. The operator, at the minimum, should have informed the Tucson office that drifting had progressed beyond the mineralized zone. Preferably the operator should have requested termination of the contract. All unnecessary drifting was done between monthly inspections, and there was no reason to suspect that unwarranted work was being done. Previous work had progressed at such a slow rate that it was not expected that the drifting that has been done would be completed between monthly inspections. The excess work by the operator is not explainable.

CONCLUSIONS

As presently exposed a maximum of 1½ inches of asbestos vein is exposed along the quarry face prepared under this exploration contract. To the northeast along the quarry face and to the west into the adit the fiber-bearing serpentine zone pinches out; south of the adit portal the zone is covered by thick overburden (fig. 1). The operator has done considerably more work than was warranted. No asbestos ore was exposed; therefore a certification should not be made.

DEPARTMENT OF THE INTERIOR
Bureau of Mines Administration
RECEIVED
DEC 28 1953

MINING DIVISION
REGION IV

October 27, 1953

Memorandum

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

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

Subject : Completion Engineering Report, Contract Idm-2527, Docket DMEA-2760, Neal & Green, Mystery Asbestos Prospect, San Carlos Indian Reservation, Gila County, Ariz.

Enclosed are original and 2 copies of a final engineering report on Contract Idm-2527 by R. W. Agetan of the Bureau of Mines. This report has my approval.

Walter R. Storms

Walter R. Storms

CC W. H. King (2)
DMEA-2760
MF

WRStorms:fr

Reviewed by
DMEA OPERATING COMMITTEE
1-6-54
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA-2760, Contract Idm-3487, Neal & Green

Mystery Asbestos Prospect

Gila County, Arizona

Completion Report

Robert W. Agnew, Mining Engineer
U. S. Bureau of Mines

October 1953

Reviewed by
DMEA OPERATING COMMITTEE
1-6-54
(date)

DMA-2760, Contract Idm-a527, Seal & Greer
Mystery Asbestos Prospect
Gila County, Arizona

CONTENTS

Mine engineering report — Page

Summary, conclusions, and recommendations — 1
Introduction — 2
Description of work completed — 2
Description of geology — 3
Expenditures — 4
Efficiency of operations — 5
Equipment and supplies — 5

ILLUSTRATIONS

Figure — Following page

1 Location map — 2
2 Plan of mine workings — 4

SUMMARY, RECOMMENDATIONS, AND CONCLUSIONS

The Mystery Asbestos Prospect, a partnership, applied for Government assistance to explore for asbestos on claims near the crest of the Hayes Mountains, 15 miles southeast of Globe, Gila County, Ariz. The United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, entered into Exploration Project Contract No. DMA-2414, Docket DMA-2760, dated May 22, 1951, with the partnership, consisting of Jack L. Neal and Dennis L. Green.

Exploration for asbestos at the Mystery Asbestos Prospect was recommended as a 2-stage program. Work performed under Stage 1 of the contract consisted of bulldozing a 3.2-mile access road, stripping the overburden (drilling and blasting where necessary), sinking an inclined shaft 40 feet, and drifting 110 feet along the strike of the limestone beds. The strike drift was driven along weakly serpentinized, thin limestone beds that contained only one discontinuous band of fiber less than 1/8-inch thick.

The exploration disclosed that the spectacular surface showing did not persist down the dip of the limestone beds. Based upon this information, the project was terminated by mutual agreement with the operator on July 31, 1953, and Stage 2 was not started. No asbestos deposit could be expected in the exploration area and no additional work is justified in this zone.

INTRODUCTION

The property is known as the Mystery Asbestos Prospect and is located near the crest of the Hayes Mountains at an altitude of approximately 4,500 feet above sea level (figure 1). The claims are in unsurveyed secs. 9 and 16, T. 2 S., R. 17 E., on the San Carlos Indian Reservation. As a result of the exploration work the property is now accessible from paved U. S. Highway 70 by a dirt road 6 miles long, 3.2 miles of which are passable only by 4-wheel drive or compound geared vehicles.

The exploration application was docketed as BMEA-2760 (Asbestos) and the work was performed under contract Idm-8527 dated May 22, 1953. The operators of the property were Jack L. Neal and Dennis E. Green, P. O. Box 1730, Globe, Ariz. The project was recommended for exploration by Lincoln A. Stewart, mining engineer, Bureau of Mines, and A. F. Shride, geologist, Geological Survey.

DESCRIPTION OF WORK COMPLETED

The exploration project was contracted as a 2-stage program. Work under Stage I was started on June 1, 1953, the operator bulldozing a 3.2-mile access road and stripping the outcrop (drilling and blasting where necessary). These 2 job units of work were completed on June 20, 1953. Sinking an inclined shaft 20 feet and drifting 110 feet northerly along the strike of the limestone beds (also work under Stage I) was completed on July 31, 1953 (figure 2). The information disclosed by the exploration under Stage I indicated that further work was not justified. Therefore, Stage II was not started, and Contract Idm-8527 was terminated by mutual agreement before completion.

DESCRIPTION OF GEOLOGY

The Mystery deposit occurs in pre-Cambrian Mescal limestone which is a part of a succession of strata known as the Apache group. In the general area of this prospect, these sediments have been intruded by diabase, block-faulted, tilted, and eroded into an intricate pattern. Block-faulting has produced a unique condition with the relationship between the 2 outcrop exposures of fiber. The upper outcrop of fiber is stratigraphically approximately 60 feet lower than the outcrop of the lower deposit.

The serpentine zones of the upper deposit lie about 60 feet below the base of the Algal member of the Mescal limestone. The upper serpentine zone is 2- to 4-inches thick and contains discontinuous fiber veinlets of short semi-harsh fiber. Approximately 1 feet below the upper zone, narrow serpentine bands contain only traces of semi-harsh fiber. The upper deposit was not recommended for exploration work.

Prospect work on the lower deposit exposed a 2-foot thick serpentine zone immediately below the Algal formation that contained a total of more than 4 inches of soft, high-strength fiber. Some of the fiber was No. 1 grade, and a considerable amount was No. 2 grade. The deposit parallels the bedding of the Mescal formation, which strikes N. 30° W. and dips approximately 24° southwest. Based upon this exposure, the lower deposit was cautiously recommended for exploration by a 2-stage program.

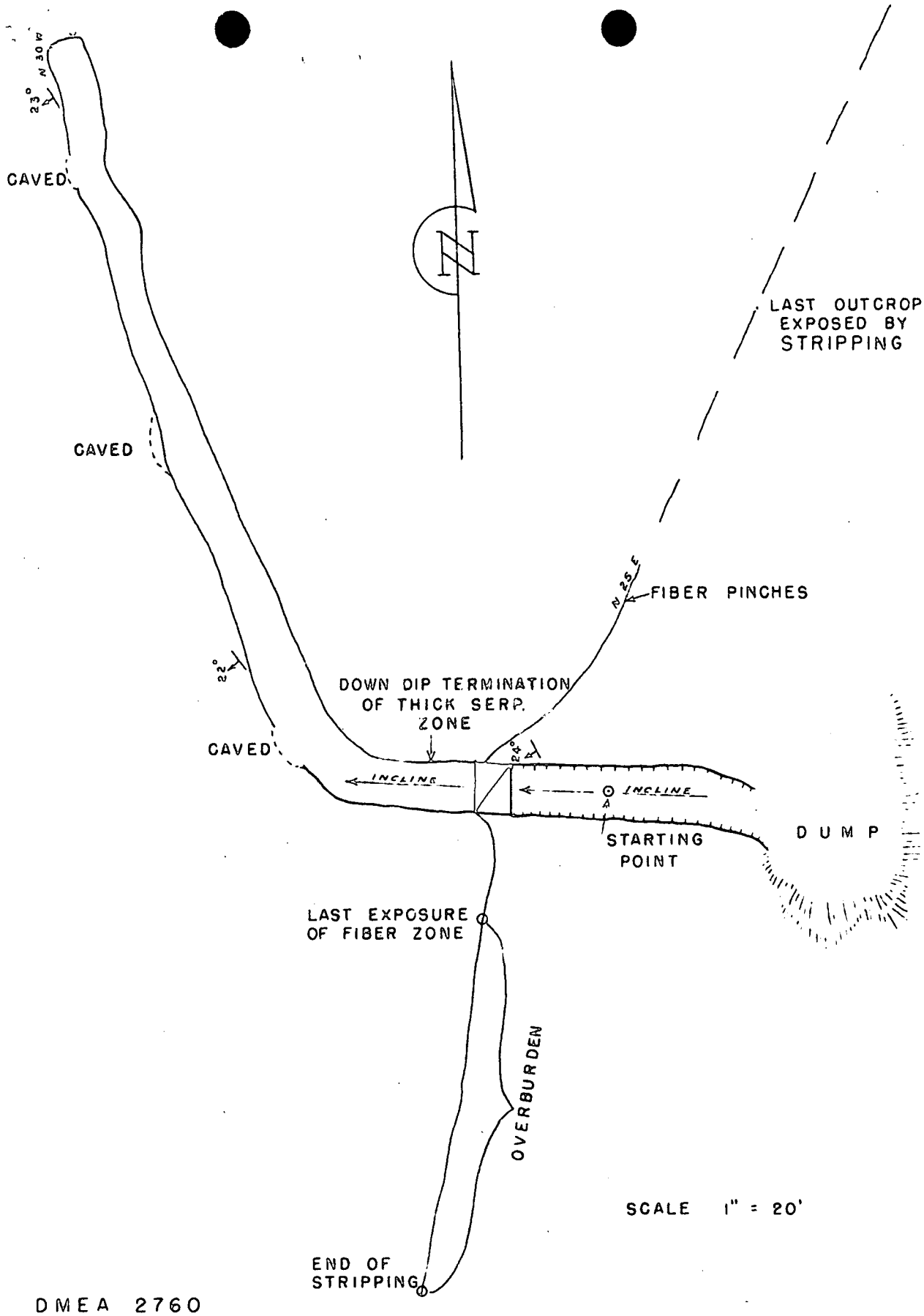
The project work consisted of sinking an inclined shaft and driving a drift along the strike of the beds. At the right wall of the collar of the shaft, a 16-inch serpentine zone, containing several

discontinuous bands of short fiber, was exposed. The serpentine zone as exposed at the left wall was 28-inches thick with no apparent fiber. however, fiber was noted in a bedding plane fault that was especially well exposed along the left wall near the shaft collar.

The spectacular serpentine zone, exposed at the surface cut near the collar of the shaft, did not persist down-dip for more than about 5 feet (figure 2). The beds down-dip were relatively thin (the thickest being about 9 inches in width), only slightly serpentinized, and contained a discontinuous stringer of very short fiber, 1/16 inch (more-or-less) in thickness. The strike drift (110 feet long) exposed the thin beds below the Algal formation, but nowhere along the drift or at the face was there a good exposure of serpentine or fiber. The serpentine that was exposed continued to be slightly weathered. A very thin (less than 1/8 inch in thickness) discontinuous band of amber or golden fiber was exposed at the face in a poor serpentine that was slightly weathered. The deposit, as exposed by the project exploration work, has a length of about 100 feet, a width of about 6 feet, and a depth of approximately 20 feet.

EXPENDITURES

Total approved	$26,935.00
Total cost of project	8,315.00
Government's share of cost	7,483.50
Government's share, unexpended	16,758.00



DMEA 2760

FIGURE 2. - PLAN OF MINE WORKINGS

MYSTERY MINE GILA COUNTY, ARIZONA

EFFICIENCY OF OPERATIONS

The exploration was conducted in a workman-like manner and according to contract specifications.

EQUIPMENT AND SUPPLIES

This contract was on a unit cost basis, consequently there was no Government participation in cost of equipment or supplies.

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

224 New Customhouse
Denver 2, Colorado

October 7, 1953

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA-2760 (Asbestos), Contract Idm-E527, Jack L. Neal and Dennis E. Green, Gila County, Arizona

Enclosed are the original and two copies of "Termination of Exploration Project Contract by Agreement After Commencement but Before Completion of the Work" relative to the subject contract which we have had executed in accordance with authority contained in your teletype of August 25, 1953. Also enclosed are three sets of data relevant to the termination.

Copies of the termination agreement 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

E-528

Enclosures

doe
10-12

Defense Minerals Exploration Administration
RECEIVED
OCT 14 1953
DOCKET COPY

Hon. Chambers

Note: I have signed this after protesting that the 2nd paragraph may establish an obligation against the Government. Protest made to Gen Counsel

WHKing 10/20/53 short form issued

Rubin

TERMINATION OF EXPLORATION PROJECT CONTRACT BY AGREEMENT AFTER COMMENCEMENT BUT BEFORE COMPLETION OF THE WORK

It is agreed this 31st day of July, 1953, between the United States of America, acting through the Department of the Interior, Defense Minerals Exploration Administration, hereinafter called the "Government", and a partnership consisting of Jack L. Neal and Dennis E. Green, hereinafter called the "Operator", parties to that certain Exploration Project Contract Idm-E527, Docket No. DMEA-2760, dated May 22, 1953, that the said contract shall be and is hereby terminated at the completion of Stage I on or about July 31, 1953.

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

The undersigned Operator hereby releases and agrees to save harmless the Government from all claims and demands under or arising out of said Exploration Project Contract, except as herein expressly otherwise provided.

Witness the following signatures as of the day and year first above written.

UNITED STATES OF AMERICA

By Jack L. Neal
Jack L. Neal, Partner

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

By Dennis E. Green
Dennis E. Green, Partner

COPY

8/25/53 4-05 PM

W. H. King

Docket No. DMEA-2760 - Asbestos Jack L. Neal and D. H. Green Mining Company Mystery Mine, Gila County, Arizona, Contract No. Idm-2527

Authorization is granted to terminate contract Idm-2527, DMEA 2760, by mutual agreement.

C. O. MITTENDORF, ADMINISTRATOR DMEA

MINING DIVISION
REGION IV

August 27, 1953

Memorandum

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

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

Subject : Termination of Contract Idm-E527, Docket DMEA-2760, Neal & Green, Mystery Asbestos Mine, Gila County, Ariz.

Enclosed are original and 5 copies of a memorandum by R. W. Ageton of the Bureau of Mines, recommending termination of contract Idm-E527 by mutual agreement between the operators and the Government. Stage I of the contract has been completed with unfavorable results, so it is recommended that no further work be done and the contract be terminated by mutual agreement.

Walter R. Storms

Walter R. Storms

CC W. H. King (5)
DMEA-2760
DF

WRStorms:frj

COPY

8/25/53 4-05 PM

W. N. King

Docket No. DMEA-2760 - Asbestos Jack L. Neal and D. E. Green Mining Company Mystery Mine, Gila County, Arizona, Contract No. Idm-2527

Authorization is granted to terminate contract Idm-2527, DMEA 2760, by mutual agreement.

C. O. MITTENDORF, ADMINISTRATOR DMEA

MINING DIVISION
REGION IV

August 27, 1953

Memorandum

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

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

Subject : Termination of Contract Idm-E527, Docket DMEA-2760, Neal & Green, Mystery Asbestos Mine, Gila County, Ariz.

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Walter R. Storms

Walter R. Storms

CC W. H. King (5)
DMEA-2760
DF

WRStorms:frj

COPY

8/25/53 4-05 PM

W. H. King

Docket No. DMEA-2760 - Asbestos Jack L. Neal and D. E. Green Mining Company Mystery Mine, Gila County, Arizona, Contract No. Idm-2527

Authorization is granted to terminate contract Idm-2527, DMEA 2760, by mutual agreement.

C. G. MITTENDORF, ADMINISTRATOR DMEA

MINING DIVISION
REGION IV

August 27, 1953

Memorandum

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

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

Subject : Termination of Contract Idm-E527, Docket DMEA-2760, Neal & Green, Mystery Asbestos Mine, Gila County, Ariz.

Enclosed are original and 5 copies of a memorandum by R. W. Ageton of the Bureau of Mines, recommending termination of contract Idm-E527 by mutual agreement between the operators and the Government. Stage I of the contract has been completed with unfavorable results, so it is recommended that no further work be done and the contract be terminated by mutual agreement.

Walter R. Storms

Walter R. Storms

CC W. H. King (5)
DMEA-2760
DF

WRStorms:frj

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
OCT 12 1953

MINING DIVISION
REGION IV

August 27, 1953

To : Walter R. Storms, Chief, Mining Methods Br., Mining Div., Region IV, Tucson, Arizona

From : Robert W. Ageton, Mining Engineer, Tucson, Arizona.

Subject : Termination of Contract Idm-E527, Docket DMEA-2760, Neal & Green, Mystery Asbestos Mine, Gila County, Ariz.

In accordance with your request this property was visited on August 18, 1953, the writer accompanying A. F. Shride, geologist, U. S. Geological Survey.

During the month of July the operator sank the inclined shaft down the dip of the beds at the horizon where the fiber was exposed by the surface cuts. After proceeding but a few feet down the dip of the beds, the thick serpentine zone abruptly terminated. A. F. Shride was in the Globe area at that time and D. E. Green, one of the operators contacted him. It was orally agreed between them that drifting along the strike of the beds might disclose further information, since the operator believed that the area to the north was better serpentinized.

The strike drift was driven in thin limestone beds(the thickest being about 9 inches in width) that were weakly serpentinized and contained only one discontinuous band of fiber less than 1/8 inch in thickness. This work, performed during the month of July, completes the 150 feet of combined sinking and drifting allowed under Stage I of the contract.

A. F. Shride and the writer are in agreement that further work under Stage II of the contract is not justified. Therefore it is recommended that the Government terminate Contract Idm-E527 by mutual agreement.

Robert W. Ageton

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

CC W. H. King (Orig. & 5)
DMEA-2760 & DF

RWAgeton:frj

FILE COPY
SURNAME:

Houk

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

DMEA

2971 4637

1413923.970 Working Fund, Interior, Defense Minerals Exploration Administration
September 15, 1953
12:00 M.

Mr. W. H. King, Executive Officer, DMEA, Bureau of Mines, 224 New Customhouse Bldg., Denver 2, Colorado
Docket No. DMEA-2760 - Asbestos, Jack L. Neal and D. E. Green Mining Company, Mystery Mine, Gila County, Arizona, Contract No. Idm-E527.

Authorization was granted to terminate Contract Idm-E527 DMEA-2760, by mutual agreement by a teletype of August 25, 1953.

FRANK E. JOHNSON (B.S.H.)

Frank E. Johnson, Acting Administrator
Defense Minerals Exploration Administration

LGHouk:gad 9/15/53

Copy to: Admr. R. File
Docket File
Field Team, Region IV
Dr. Bowles, 3520
Mr. Larrabee, G-232 GSA Bldg.
Mr. Houk

SENT
SEP 15 1953
Clerical Service Section

9-15-53

1-1027
(April 1946)

UNITED STATES
DEPARTMENT OF THE INTERIOR

AGENCY DMEA

TELETYPE

Originator:
Ext.: 2971 Room: 4637

Appro.: 14X3923.970 Working Fund, Interior, Defense Minerals Exploration Administration
Date: September 15, 1953
Time: 12:00 M.
No.:
To: Mr. W. H. King, Executive Officer, DMEA, Bureau of Mines, 224 New Customhouse Bldg., Denver 2, Colorado
Subject: Docket No. DMEA-2760 - Asbestos, Jack L. Neal and D. E. Green Mining Company, Mystery Mine, Gila County, Arizona, Contract No. Idm-E527.

Authorization was granted to terminate Contract Idm-E527 DMEA-2760, by mutual agreement by a teletype of August 25, 1953.

FRANK E. JOHNSON

Frank E. Johnson, Acting Administrator
Defense Minerals Exploration Administration

Authorized:

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

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

Mr. C. O. Mittendorf
Sept. 15, 1953 AB
(Unattended service after 4:15)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
SEP 15 1953

DN 235 BUREAU MINES 9-14-53 3-3-XXX 3-31 PM

C O MITTENDORF

REFERENCE DOCKET 2760, CONTRACT IDM-E527, NEAL AND GREEN. STAGE I HAS BEEN COMPLETED WITH UNFORABLE RESULTS. PLEASE TELETYPE AUTHORITY TO TERMINATE CONTRACT BY MUTUAL AGREEMENT.

W H KING

Denver, Colo.

SEP 15 8 06 AM '53

BUREAU OF MINES
MAIL ROOM
WASHINGTON D. C.

1-1027
(April 1946)

UNITED STATES
DEPARTMENT OF THE INTERIOR

AGENCY DMEA REG IV

TELETYPE

Originator:
Ext.: Room:

Appro.:
Date: 9/14/53
Time:
No.:
To: C. O. MITTENDORF DMEA WASH

Subject:

REFERENCE DOCKET 2760, CONTRACT IDM-E527, NEAL AND GREEN. STAGE I HAS BEEN COMPLETED WITH UNFAVORABLE RESULTS. PLEASE TELETYPE AUTHORITY TO TERMINATE CONTRACT BY MUTUAL AGREEMENT.

W. H. King
W. H. KING

CONFIRMATION

Authorized:

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

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

1-1027
(April 1946)

UNITED STATES
DEPARTMENT OF THE INTERIOR

AGENCY dmea REG IV

Originator:

TELETYPE

Ext.: Room:

Appro.:
Date: 8/24/53
Time:
No.:
To: C. O. Mittendorf DMEA Wash

Subject:

REFERENCE DMEA-2760, CONTRACT IDM-E527, JACK L. NEAL AND DENNIS E. GREEN. STAGE I OF THE CONTRACT HAS BEEN COMPLETED. OPERATOR AND INSPECTING ENGINEER MUTUALLY AGREE THAT EXPOSURES DO NOT WARRANT THE PERFORMANCE OF WORK UNDER STAGE II AND AGREE THAT THE CONTRACT SHOULD BE TERMINATED. PLEASE TELETYPE YOUR APPROVAL.

W. H. King
W. H. KING

JVE

Authorized:
CONFIRMATION

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

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

FILE COPY
SURNAME:

Houk

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

DMEA

2971 4637

1413943.770 Working Fund, Interior, Defense Minerals Exploration Administration
August 25, 1953
1:00 P.M.

Mr. W. R. King, Executive Officer, DMEA, Bureau of Mines, 224 New Customhouse Bldg., Denver 2, Colorado
Docket No. DMEA-2760 - Asbestos, Jack L. Neal and D. F. Green Mining Company Mystery Mine, Gila County, Arizona, Contract No. Idm-3527.

Authorization is granted to terminate Contract Idm-3527, DMEA-2760, by mutual agreement.

C. O. Mittendorf (for)

C. O. Mittendorf, Administrator
Defense Minerals Exploration Administration

LGHouk:gad 8/25/53
Copy to: Admr. R. File
Docket File
Field Team, Region IV
Dr. Bowles, 3520
Mr. Larrabee, G-232 GSA Bldg.
Mr. Houk

SENT
AUG 25 1953
Clerical Service Section

HHK 8-27-53

Mr. C. O. Mittendorf
8-24-53
3:45 P.M.

BUR MINES DN 235 8-24-53 12-37 PM

C O MITTENDORF

REFERENCE DMEA 2760, CONTRACT IDM-E53 XXX 527, JACK L. MEAL AND DENNIS E. GREEN. STAGE I OF THE CONTRACT HAS BEEN COMPLETED. OPERATOR AND INSPECTING ENGINEER MUTUALLY AGREE THAT EXPOSURES DO NOT WARRANT THE PERFORMANCE OF WORK UNDER STAGE II AND ABXXXX AGREE THAT THE CONTRACT SHOULD BE TERMINATED. PLEASE TELETYPE YOUR APPROVAL.

W H KING

Denver, Colo.

AUG 25 8 35 AM '53

BUREAU OF MINES
MAIL ROOM
WASHINGTON, D. C.

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

224 New Customhouse
Denver 2, Colorado

July 6, 1953

Memorandum

To: George C. Selfridge, Chairman, Operating Committee
Defense Minerals Exploration Administration

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket DMEA 2760 (Asbestos), Jack L. Neal and D. E. Green Mining Company, Mystery Mine, Gila County, Arizona

Reference is made to your letter of June 30 regarding the subject docket.

The reports by Geological Survey and Bureau of Mines engineers were in this office and we had knowledge of their recommendations. Therefore, when Mr. Green informed us that he would be in this office with a lease on the property we prepared the contract in accordance with the engineers' recommendations and delivered it to him. This was done in order to accommodate the contractor.

The geologic and engineering reports were assembled, bound and sent to Washington as soon as it was possible thereafter.

In the very early stages of this program we were instructed to assist in the development of any deposit that, in the opinion of the examining engineers, had geologic possibilities of making a discovery of asbestos, provided the applicant's proposals were within reason. If the rules have been changed, we should be so informed.

W. H. King

W. H. King

FILE COPY
SURNAME:

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C. 600

JUN 30 1953

Selfridge
Edmond
Gutteridge

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

Subject: Docket No. DMEA-2760 - Asbestos
Jack L. Neal & D. E. Green
Mining Company
Mystery Mine
Gila County, Arizona

Dear Mr. King:

The Final Report pertaining to the subject mine has been received and reviewed, in conjunction with the exploration contract prepared and executed in Region IV. Incidentally, the contract was received more than two weeks before the report.

On page 3 of his report, the geologist states:

> "How far down the dip of the beds this termination occurs cannot be predicted; however, the type and degree of fracturing apparent in the asbestos-serpentine outcrop strongly suggest that diabase may cut across the limestone within a few feet of the observed outcrop."

In view of this statement and the small size of the outcrop, it seems to us that, at least, a small amount of hand work should have been done before contracting for the more expensive exploration and access road building recommended by the engineer. Now several thousand dollars will be spent before any knowledge is gained concerning the asbestos occurrence. In this particular case, Defense Minerals Exploration Administration would have been justified to request a limited amount of hand work at the applicant's expense before granting a contract. According to the report the applicant has done no work on the claims, not even the equivalent of the usual location work. We have denied applications in the past which, in part, included work that was primarily location work. As another alternative, possibly the host limestone block could have been diamond drilled for extent by means of a light drill.

If it is not too late, we suggest that the program be discussed with the Operator for a possible change in the preliminary work, especially if there is a possibility that the road work can be more expensive than estimated.

The value of this report would have been enhanced had a rough sketch of the topography and the asbestos occurrences been included. In reading the description of the "Lower Asbestos Deposit" on page 2 of the report, one becomes confused as it is described 250 feet northeast of the "Upper Asbestos Deposit." The map in the engineering section shows it to the southeast.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Approved:

Noted J. H. Hedges
Member, Bureau of Mines

J.H. 6-30-53

(s/E. J. McKnight
actg. Member, Geological Survey

LGHouk/GCSelfridge/dec/esf 6/22/53
Copy to: Admr. R. File
Docket File
Operating Committee
Dr. Bowles, 3516
Mr. Larrabee, G-232 GSA Bldg.
Mr. Houk

FILE COPY
SURNAME:

Houk

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C. 600

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

Subject: Docket No. DMEA-2760 - Asbestos
Jack L. Neal & D. N. Green
Mining Company
Mystery Mine
Gila County, Arizona

Dear Mr. King:

Reference is made to the subject contract, executed in Region IV, and to the lack of justification for proceeding with Stage I until more information is obtained as to the size of the geologic target.

In drawing up this contract, apparently the views of the geologist as stated on page 3 have been ignored. His statement follows:

> "How far down the dip of the beds this termination occurs cannot be predicted; however, the type and degree of fracturing apparent in the asbestos-serpentine outcrop strongly suggest that diabase may cut across the limestone within a few feet of the observed outcrop."

It would appear from the data presented that the initial exploration phase should be exposing the outcrop up and down dip by hand methods or a small diamond drilling program to determine the extent of the host limestone block.

Review the work outline and discuss the suggested changes with the operator and amend the contract to first determine the lateral extent of the limestone block before initiating the road building and drifting proposed in Stage I.

Sincerely yours,

Chairman, Operating Committee

Approved:

Member, Bureau of Mines

Member, Geological Survey

Enclosures 2
LGHouk:dec 6/22/53
Copy to: Admr. R. File
Docket File
Operating Committee
Dr. Bowles, 3516
Mr. Larrabee, G-232 GSA Bldg
Mr. Houk

~~P. S. Two copies of a memorandum from the Geological Survey are enclosed for your information.~~

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

224 New Customhouse
Denver 2, Colorado

June 23, 1953

Memorandum

To: Chairman, Operating Committee
Defense Minerals Exploration Administration

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket 2760 (Asbestos), Contract Idm-E527, Jack L. Neal and Dennis E. Green, Gila County, Arizona

In reply to your letter dated June 2, 1953, regarding the cost of drifting and crosscutting under Contract Idm-E527, we are enclosing two copies of a memorandum from L. A. Stewart, Bureau of Mines engineer.

W. H. King

W. H. King

Enclosures

MINING DIVISION
REGION IV

June 16, 1953

Memorandum

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

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

Subject : Contract Idm-8527, Docket DMEA-2760, Mystery Asbestos Prospect, Gila County, Ariz.

In answer to your memorandum of June 8, attaching one from the Operating Committee, dated June 2, in which that committee asked about costs under Contract Idm-8527, I am enclosing a memorandum from L. A. Stewart who wrote the original report. It seems to us that this matter was explained in Stewart's original report on page 7 where he said that part of the drifting would be inclined and part on the level and that $36 seemed to be a fair estimate for inclined and level drifting combined.

Walter R. Storms

Walter R. Storms

CC W. R. King (6)
DMA-2760
BF

WRStorms:frj

MINING DIVISION
REGION IV

June 18, 1953

Memorandum

To : Walter R. Storms, Chief, Mining Methods Br., Mining Div., Region IV, Tucson, Ariz.

From : Lincoln A. Stewart, Mining Engineer, Tucson, Ariz.

Subject : Docket No. DMEA-2760, Mystery Asbestos Prospect, Jack L. Neal and Dennis R. Green Mining Co., Gila County, Ariz., W. H. King's memo of June 8, 1953.

Attached to Mr. King's memo was a letter from Mr. Selfridge, Chairman of the DMEA Operating Committee, which states in part "It is noted that the cost of drifting and crosscutting is $36 per foot. In other contracts in the area the per foot unit costs vary between $20 and $28. Inasmuch as the drifts are all in the Mescal Limestone and the same size, and we wish to maintain impartiality in the treatment of all applicants, we will be pleased to know what special conditions justify the increased cost".

These special conditions were explained in the writer's engineering report on DMEA 2760, page 7 which states:

"The cost of drifting and crosscutting was discussed with the applicants. The surface exposure of the vein to be explored indicates a dip of 30°. As only 20 feet of this vein is exposed, stripping of the formation is necessary to determine where it will be most advantageous to place the exploratory drift. Until this is done, the attitude of the proposed drift cannot be determined. A strike drift may not be feasible for the reason that it might not sufficiently explore the depth of the deposit.

"Green stated that, in the current exploratory work at Bear Canyon, DMEA-2550, 200 feet of 8-degree inclined drifting has cost more than $30 per foot. The cost of the inclined drifting necessarily increases as the gradient becomes greater. As the inclination of the proposed work is not known at present, the applicant has suggested a flat $36 per foot. This is based on the average of $31 per feet for an incline of 15° or less, and $41 per feet for inclination greater than 15°. The applicants stated that the above sliding scale could be used if the Government preferred to consider these costs rather than an average cost of $36 per foot."

cc W. H. King (Orig. & 6)
DMEA-2760
DF

LAStewart:frj

It would be virtually impossible to write a clean-cut short form contract using a sliding-scale cost for various gradients of exploration drifts, the lengths of which are not known and will not be known until the exploration is accomplished. For this reason the writer concurred with the applicant in an average price, and so recommended in the report.

This had been done previously on the Bear Canyon project, recommending $28.50 per foot as an average cost for 8° inclined drifting and level drifting. As mentioned above, Mr. Green stated that it actually has cost him more than $30 per foot for sinking an 6° incline.

At the El Capitan claims, DMEA-2798, inclined shaft sinking at 30° was contracted (short form) at $42.80 per foot, and this is considered a reasonable price.

At the Mystery prospect, the contracted average unit price of $36 per foot also is considered reasonable, as an undetermined amount of inclined shaft sinking is included with drifting and/or crosscutting.

Lincoln A Stewart

Lincoln A. Stewart, Mining Engineer
Mining Methods Branch
Mining Division, Region IV

IN REPLY REFER TO:

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

June 19, 1953

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration

Memorandum

REVIEW OF APPLICATION DMEA-2760 (asbestos)

To: L. G. Houk, Defense Minerals Exploration Administration

From: D. M. Larrabee, U. S. Geological Survey

Applicant's name and adress: Jack Neal and Dennis Green

Name of property: Mystery Mine, Gila Co., Arizona

Location of property: San Carlos Indian Reservation

Comments:

The final engineering and geologic reports of March 12 are in hand.

It is noted that the geologic report recommended that several hand-dug holes be used to explore the deposit first, before expensive exploration and access road building be attempted. This at a cost of a few hundred dollars.

The engineering report, on the other hand recommended a more elaborate program, including an access road, the total cost, in stages, to be $26,935, without the cheaper, "first" exploration.

The contract was let on the basis of the engineering report figures.

Any successful company operating on its own funds would first try to determine what might be expected of a deposit by the least expensive means, before entering into a more costly exploration plan. Wouldn't it be wise to apply some of the principles of sound mining and exploration, even with Uncle's money?

It would appear that this contract was prepared with no regard for economy in the use of Public funds, and a review is recommended.

agreed
LGH

D M Larrabee
D. M. Larrabee

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

224 New Customhouse
Denver 2, Colorado

June 9, 1953.

Memorandum

To: Secretary to the Operating Committee

From: Field Team, Region IV

Subject: Final Report - Docket No. DMEA 2760 (Asbestos), Jack Neal and Dennis Green, Mystery Mine, Gila County, Arizona.

Enclosed are the original and three copies of the final report on Docket No. DMEA 2760.

A contract has been prepared and is in force.

John F. Shaw
For W. H. King

A. H. Koschmann

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
6-19-53
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

March 12, 1953.

Memorandum

To: DMA Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Final Report, DMEA Docket 2760 (Asbestos), Jack Neal and Dennis Green, Mystery Mine, Gila County, Arizona.

Enclosed are nine copies of the final engineering report on the subject docket.

The examining engineer believes that the exposed mineralized zone warrants exploration and he recommends this be done in two stages at a total cost of $26,935.00, Government participation - $24,241.50.

We concur in this recommendation.

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

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
6-19-53
(date)

MINING DIVISION
REGION IV

January 30, 1953

Memorandum

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

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

Subject : Report on Docket DMEA-2760, Jack L. Neal and Dennis E. Green, Mystery Asbestos Prospect, San Carlos Indian Reservation, Gila County, Ariz.

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

As A. F. Shride of the Geological Survey may not be able to submit his geological report for sometime because of other work, we are submitting the Bureau of Mines report for your information.

Brochure will be submitted at a later date by Shride.

Walter R. Storms

Walter R. Storms

CC: W.H.King (8)
A.F.Shride
DMEA-2760
DF

WRStorms:als

Reviewed by
DMEA OPERATING COMMITTEE
6-19-53
(date)

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

March 9, 1953

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 2760, Mystery Claims, Gila County, Arizona. Jack L. Neal and D. E. Green Mining Company. Asbestos.

Enclosed are the original and 8 copies of the geologic report by A. F. Shride of the U. S. Geological Survey covering the above docket.

It has been recommended that the loan be approved, although reservations are stated as to the potential of the deposit and the program of exploration.

The brochure is enclosed.

A. H. Koschmann

A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (10)

Reviewed by
DMEA OPERATING COMMITTEE
6-15-53
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P.O.Box 4126, University Station
Tucson 5, Arizona

March 4, 1953

Memorandum

To: A. N. Koschmann, Denver, Colorado

From: A. F. Shride, Tucson, Arizona

Subject: Geologic Report, DMEA 2760, Mystery Claims, Jack L.Neal and D. E. Green Mining Company, Gila County, Arizona (Asbestos)

Enclosed are the original and 8 copies of the above report by A. F. Shride of the Geological Survey.

Although the applicants' revised exploration program is recommended for a DMEA contract, it should be noted that reservations are stated as to the potential of the deposit and the program of exploration.

The brochure is enclosed.

A. F. Shride
Acting District Supervisor
Arizona-New Mexico

Enclosures 9

Reviewed by
DMEA OPERATING COMMITTEE
6-19-53
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA-2760, Mystery Asbestos Prospect,

Jack L. Neal and Dennis E. Green

San Carlos Indian Reservation

Gila County, Arizona

Lincoln A. Stewart, Mining Engineer
U. S. Bureau of Mines

January 1953

Reviewed by
DMEA OPERATING COMMITTEE
6-15-53
(date)

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By Lincoln A. Stewart[1]

An application was made to the Defense Minerals Exploration Administration by Jack L. Neal and Dennis E. Green for a $26,975 loan to explore an asbestos zone that outcrops on one of the claims of the Mystery group. This application, docketed as DMEA-2760, proposed 775 feet of drifting, plus construction of one-half mile of access road from the adjacent Chiricahua group. This road was predicated upon the assumption that project work would be approved for the latter group (DMEA-2763).

The Mystery group of 6 unpatented claims, held under a lease from the San Carlos Indian Reservation, is 16 air miles southeast of Globe, Gila County, Ariz.

An investigation was made by the DMEA examining team[2] on Dec. 2, 1952. The upper deposit was found to contain only small amounts of semi-harsh asbestos and was considered structurally and geologically unfeasible for exploration. The lower deposit, only 20 feet of which is exposed, shows a 2-foot serpentine zone that contains a total of more than 4 inches of soft, high-strength fiber, some of which is No. 1, and much is No. 2 grade. The limestone segment in which the vein occurs is a down-faulted or slumped block, the bedding of which dips 30° westward into the hill.

The exposure of asbestos is so limited that only a stage project is justified. As this project had to stand on its own merits,

---

1/ Mining Engineer, U. S. Bureau of Mines

2/ A. F. Shride, Geologist, U. S. Geological Survey and L. A. Stewart, Bureau of Mines.

the applicants submitted a revised proposal on January 19 that included a much longer access road, and exploration by stages. Stage I is to consist of dozing a very low standard, $2\frac{1}{2}$ mile truck trail to the property, stripping the outcrop, and drifting 150 feet into the deposit. If this work indicates sufficient potential, Stage II is to consist of improvement of the access road and an additional 420 feet of drifting and crosscutting. Stage I is estimated at $8,315, and Stage II at $18,620, or a total project cost of $26,935.

The exposed, limited extent of the mineralized zone shows asbestos of strategic quality and grade. There is insufficient evidence available to even speculate on the extent of the deposit. It may be relatively small, but there is a possibility that a fair sized asbestos body may be developed. The showing is too good not to justify some exploratory work.

It is recommended that an exploratory loan be granted to Neal and Green for the proposed work of Stage I in the amount of $8,315, and that Stage II, in the amount of $18,620, be dependent upon the findings of Stage I.

MYSTERY CLAIMS
JACK L. NEAL AND D. E. GREEN MINING COMPANY
GILA COUNTY, ARIZONA
(ASBESTOS)

DMEA 2760

Geology

By
A. F. Shride
Geologist, U. S. Geological Survey

MYSTERY CLAIMS
JACK L. NEAL AND D. E. GREEN MINING COMPANY
GILA COUNTY, ARIZONA
(ASBESTOS)

DMEA 2760

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INTRODUCTION

The Mystery asbestos prospect is near the crest of the Hayes Mountains, on the unsurveyed San Carlos Indian Reservation, and approximately $12\frac{1}{2}$ miles southeast of Globe, Arizona. The deposits are near the foot of a northeast-facing escarpment in an area of rugged, and in places precipitous, topography at an altitude of approximately 5,000 feet. At present 4-wheel-drive vehicles must stop approximately $2\frac{1}{2}$ miles from the claims.

UPPER ASBESTOS DEPOSIT

The most obvious asbestos-serpentine zones on the Mystery property crop out almost continuously for 300-350 feet in a direction mainly along the strike of the enclosing Mescal limestone. The zones parallel the bedding of the enclosing limestones. In this area the limestone beds strike N. 10° - 20° W. and dip 25° - 30° SW. Two and in some places, three, asbestos-serpentine zones are very well exposed in this outcrop. The topography is such that the deposit is well exposed in the strike dimension and fairly well exposed in the dip dimension. Therefore the observed exposures are probably typical of the deposit.

The uppermost, and most persistent of the three mineralized zones is approximately 60 feet below the top of the lower member of the Mescal limestone. This uppermost serpentine zone, which is 3 to 6 inches thick (estimated average 4 inches), includes asbestos veins ranging from $\frac{1}{4}$ to 1 3/4 inches in cumulative thickness. The average total thickness of the veins in this zone is estimated, from several careful measurements, to be slightly less than 1 inch. The fiber is semi-harsh and lacking in tensile strength.

The veins of the second zone, which is one foot below the top zone, total $\frac{1}{2}$ inch in thickness (as an average) in the best mineralized

portions of the area. In places this zone contains no asbestos; in other places the veins total as much as 3/4 of an inch. The fiber, which is semi-harsh, occurs in a 4-5 inch thick bed of incompletely serpentinized limestone.

Minute veinlets of asbestos, rarely totaling 3/4 of an inch in thickness occur sporadically along a 6 inch thick bottom zone of poorly serpentinized limestone that is 12 to 18 inches below the second zone. Throughout much of the length of this zone only traces of asbestos can be observed. The widest observed veinlet was 1/16 inch in thickness.

At the northern end of the outcrop the diabase sill is 3 inches below the top zone. Thirty feet south of the northernmost exposure of asbestos the diabase sill locally cuts down through the limestone and beneath most of the exposed asbestos is 6 to 8 feet below the top asbestos zone. Even at the point of discordancy no folding of the limestones was caused by diabase intrusion.

Bedding-plane faulting caused little shattering of the limestones and therefore serpentine and asbestos were not localized in significant quantities. No folds, that might aid in localization of asbestos, were observed. Elsewhere in the district asbestos was deposited in quantity only in competent limestone beds. In this stratigraphic section none of the observed purer, more brittle limestone beds exceeded 8 inches in thickness and most beds range from 1 to 3 inches in thickness, and calcareous shales are interbedded with the limestones. Had competent limestones existed in this section the mineralization might have been significant.

LOWER ASBESTOS DEPOSIT

Approximately 250 feet northeast of the southernmost outcrop of the deposit described above, and 150 feet lower in altitude another asbestos deposit is exposed in the bottom of a narrow, steep-sided, southeast-trending

gully. This lower asbestos-serpentine zone is on the contact between the massive upper member and the lower member of the Mescal limestone (i.e. at a horizon stratigraphically approximately 60 feet higher than the upper asbestos deposit). The deposit parallels the bedding of the formation, which strikes N. 10° W. and dips 25° - 30° SW. A thick concordant diabase sill underlies the exposed part of the asbestos deposit at a stratigraphic distance of approximately 15 feet.

The horizon of the lower asbestos deposit crops out for a distance of only 20 feet along a dip slope. Up dip from this exposure a thin veneer (possibly 3-5 feet thick) of soil covers the horizon; down-dip, into the hill, a thick talus which will be difficult to remove covers the favorable horizon. The 20-foot long outcrop exposes a serpentine-asbestos zone 24-30 inches thick that includes veins of asbestos totaling $3\frac{1}{2}$ to 4 inches in thickness. This fiber is soft and of good tensile strength.

Much pre-fiber fracturing of the limestone is apparent in the asbestos-serpentine outcrop. Such fracturing is most common near a discordant diabase intrusion. Because of the stratigraphic position of this ore zone and the geometric relation of this zone to that of the upper deposit the limestone "block" which contains the asbestos is certainly terminated against diabase in a down-dip direction from the one asbestos exposure. How far down the dip of the beds this termination occurs cannot be predicted; however, the type and degree of fracturing apparent in the asbestos-serpentine outcrop strongly suggest that diabase may cut across the limestone within a few feet of the observed outcrop. No structural trend that might suggest the bearing of a discordant diabase limestone contact was observed. Outcrops of the limestone beds adjacent to the ore horizon are adequate in an up-dip direction to show that diabase does not cut off the horizon in that direction.

These adjacent limestone beds are exposed in an up-dip direction (to the northeast) for approximately 30 feet beyond the asbestos outcrop, then are exposed in strike direction (to the north-northwest) for approximately 150 feet, where the limestone is terminated against a cross-cutting diabase sill. Approximately 60 feet downstream (to the southeast) from the asbestos-bearing outcrop a gully exposes a diabase sill in such a way as to show that the asbestos-bearing beds also are truncated in that direction. Therefore the block of limestone available for exploration is outlined by a minimum area approximately 200 feet long and 50-60 feet wide. The extent of the limestone down-dip (southwest) cannot be predicted. Though the extent of the limestone down-dip cannot be predicted, it must be recognized that (1) if this discordant contact is close, and (2) if the discordant contact has a northwesterly bearing the maximum area available for exploration may be also on the order of 50 by 200 feet. The exploration proposed below is predicated on the hope that the discordant contact is of westerly or southwesterly strike.

POSSIBLE EXPLORATION PROGRAM

The upper asbestos deposit was to have been the main subject of the applicant's exploration program. In view of the lack of geological features favorable to asbestos localization and the lack of significant amounts of asbestos in the well exposed zones of this deposit exploration is not warranted for the upper deposit.

The one small outcrop of the lower deposit allows insufficient basis for exact planning of an exploration program. Any plan of exploration for this deposit must be approached with reservations because this asbestos-serpentine outcrop may represent a small "pocket" containing a few tens of tons of ore at

most and/or the area for exploration may be small. Such occurrences are common in the Arizona asbestos district; therefore any contemplated exploration of the lower deposit must be started with the understanding that such work may be unsuccessful. Nevertheless, the favorable stratigraphic position, degree of mineralization and fault structures apparent in the one outcrop suggest that at least a small amount of work is worthwhile to determine whether this is a small pod of ore or, alternatively, may be the only outcrop of a deposit of significant size.

The logical first step in exposing the lower deposit would be (1) to expose the up-dip part of the favorable horizon by 4 to 6 small hand-dug pits and (2) to expose the asbestos horizon as far down-dip as possible by hand methods. Such work would not require an access road and could be done for a few hundred dollars at most. Hand work, if favorable indications were uncovered, could show definitely whether or not an access road to bring in equipment is justified. If the up-dip pits resulted in unfavorable exposure further exploration might still be worthwhile if the down-dip exposure were favorable. However, because of the difficulty of moving large amounts of the coarse covering talus, hand methods of exposure down-dip very likely would not satisfactorily uncover very many linear feet of additional asbestos zone; therefore, such work might not be conclusive. Therefor, the applicant in revising his program does not wish to consider the above preliminary work, but after building a minimum access road wishes: (1) To cut by bulldozer a portal site that would be out of the stream bottom in which the asbestos outcrop exists. (2) After a portal site is opened the applicant would drift for 150 feet on, as best he could judge, the best showing of asbestos. Perhaps as much as 50 feet of this drifting would be used to

determine whether or not the deposit is as much as 50 feet wide along a line at right angles to the initial adit. The above work, plus construction of a rude truck trail, would comprise Stage 1 of the applicants' program. Stage 1 is technically satisfactory except that the writer doubts, on the basis of having watched the separate mining operations of these partners for the past 2 years, the applicant's ability to know how to locate and cut a portal site and determine a direction to be followed by the adit. The applicant believes that the drifting may be on a steep incline. This is not likely unless the deposit plunges almost due west.

The applicants' Stage 2, dependent on satisfactory indications of an ore body by Stage 1, would consist of improvement of the access road and 420 feet of additional drifting to determine the extent of the ore body. It is somewhat hazardous to guess the possible maximum dimensions of the asbestos-bearing limestone block from the available information. The possibilities are several and need not be discussed here, but the writer feels safe in stating that only if the limestone block extends approximately 250 feet down-dip, to a line roughly beneath the outcrop of the upper ore zone, will the 570 feet (1st Stage: 150 feet; 2d Stage: 420 feet) of drifting requested by the applicant be necessary. From the available data this is an unlikely possibility. More likely, in view of the probable limited extent of the host limestone, 150 to 200 feet of drifting will be the maximum footage required for exploration. Therefore, the writer can see little reason for setting up the drifting program in two stages. If circumstances warrant, the drifting can be stopped at any time without reference to the amount of drifting allowable by stages. If much more drifting than 150-200 feet is to be done, thus making a long period of supply necessary, a second stage for road improvement might be warranted.

The writer wishes to point out that, though the applicants claim to have cost estimates from an experienced contractor for the Stage 1 road building, the 14 days allowed for bulldozing may be underestimated. Not less than $\frac{1}{2}$ mile and possibly as much as a mile of the proposed road is over steep slopes on which are exposed quartzite, basalt and diabase that will be difficult to blast and bulldoze. In order to insure completion of Stage 1 it might be well to allow liberally for road construction, at the expense of the 570 feet of drifting which probably is excessive.

CONCLUSIONS

No exploration should be done on the upper asbestos deposit.

The one exposure of the lower deposit suggests a narrow, small deposit localized against a discordant contact between limestone and diabase. Furthermore, the area available for exploration may be small. However, the exposures available are inadequate to prove these possibilities and in view of the good asbestos zone and fracturing and lithology favorable to asbestos localization as observed in the one small outcrop of the asbestos zone a minimum exploration program is worthwhile.

The project is not to be regarded with optimism. The contract should be so prepared that the exploration can be readily terminated at the Government's discretion.

DMEA-2760, MYSTERY ASBESTOS PROSPECT, JACK L. NEAL AND DENNIS E. GREEN SAN CARLOS INDIAN RESERVATION GILA COUNTY, ARIZ.

Engineering Report

By L. A. Stewart
Mining Engineer
U. S. Bureau of Mines

January 1953

DMEA-2760, MYSTERY ASBESTOS PROSPECT
JACK L. NEAL AND DENNIS E. GREEN
SAN CARLOS INDIAN RESERVATION
GILA COUNTY, ARIZONA

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2	Claim map showing proposed exploration area	2

INTRODUCTION

Early in November 1952, an application was submitted to the Defense Minerals Exploration Administration for a $26,975 exploratory loan by Jack L. Neal and Dennis E. Green for their Mystery property. This application, docketed as DMEA-2760, was received by the Tucson office of the Defense Minerals Exploration Administration on November 8, 1952. The purpose of the exploration was to build an access road and prospect an outcropping zone of asbestos well up on the mountain slope of the next valley south of the Chiricahua prospect (DMEA-2763).

As the Mystery and Chiricahua applications were so closely related to the same access road, it was necessary to await receipt of the letter docket which contained the application for the primary access road. The proposed work on the Mystery group consisted of an access road from the end of the proposed Chiricahua road to the exploration area of the Mystery, $2,500; benching and facing the outcrop, $450; and 775 feet of drifting and crosscutting, $24,025.

The field investigation was made by the DMEA examining team[1/] on December 2, in company with the applicants. On this trip, the Chiricahua deposit also was investigated. As it was evident that the Chiricahua application was to be denied, any consideration of the Mystery involved a new proposal on account of the longer access road. The applicants did not offer a concrete proposal until they came to the Tucson office on January 19, 1953.

1/ Lincoln A. Stewart, Mining Engineer, U. S. Bureau of Mines and A. F. Shride, Geologist, U. S. Geological Survey.

LOCATION AND ACCESSIBILITY

The Mystery group of claims is located in the Hayes Mountains, about 16 air miles southeast of Globe, Gila County, Ariz., at an altitude of approximately 4,500 feet. The claims are in unsurveyed secs. 9 and 16, T. 2 S., R. 17 E., on the San Carlos Indian Reservation (figure 1).

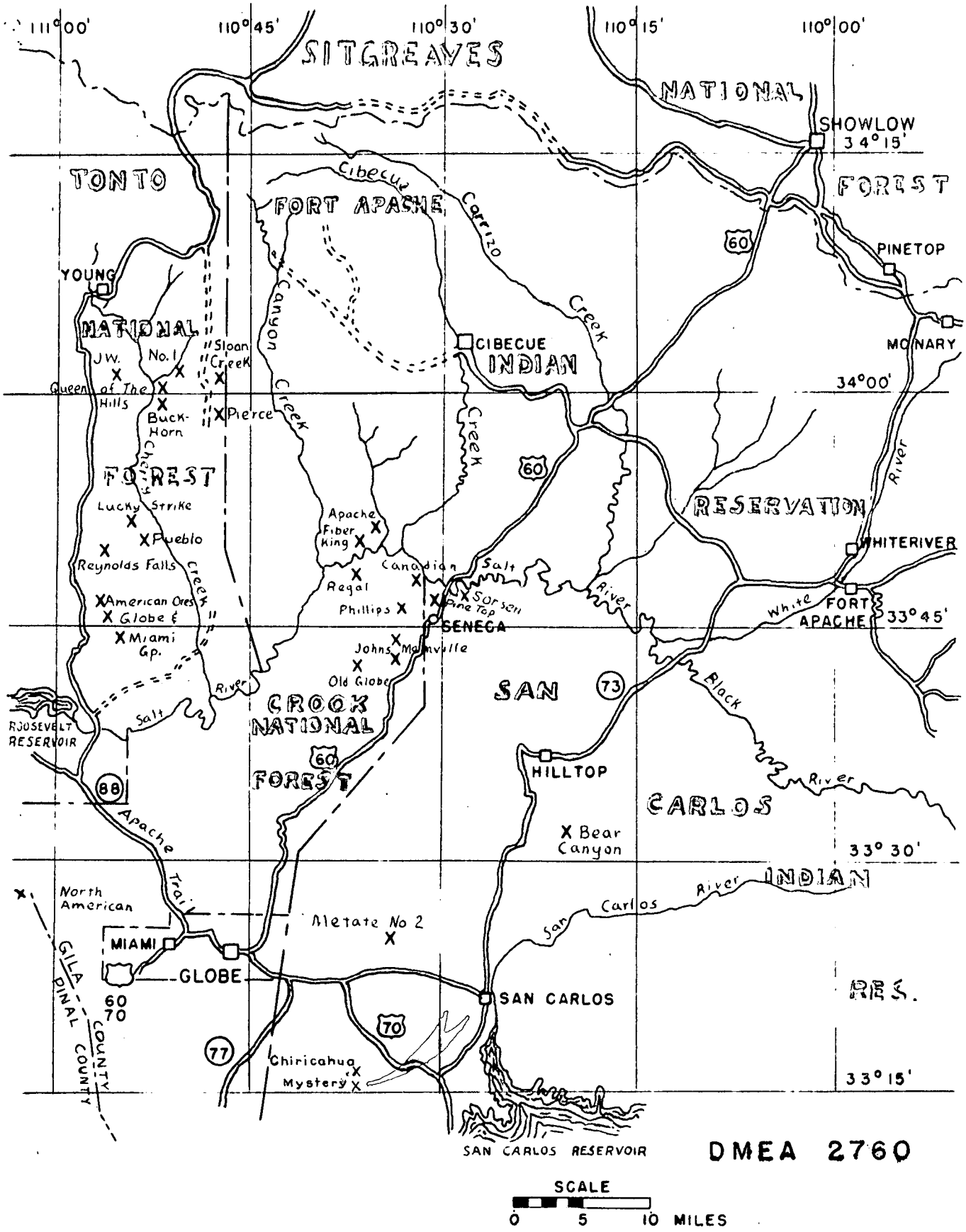
The property is reached by following paved U. S. Highway 70 eastward from Globe for 13 miles, then turning right on a dim truck trail for 2.7 miles to Coyote Hole tank at the end of the road. From this point there is a 2½ mile hike over rough terrain to the outcrops. There is no well defined trail.

None of the operators or prospectors of recent times was aware of the existance of asbestos in this rugged region, consequently no prospecting has been done. It seems to be public knowledge that the Reservation will not favor prospecting by others until Neal and Green have established the right to all the property they wish.

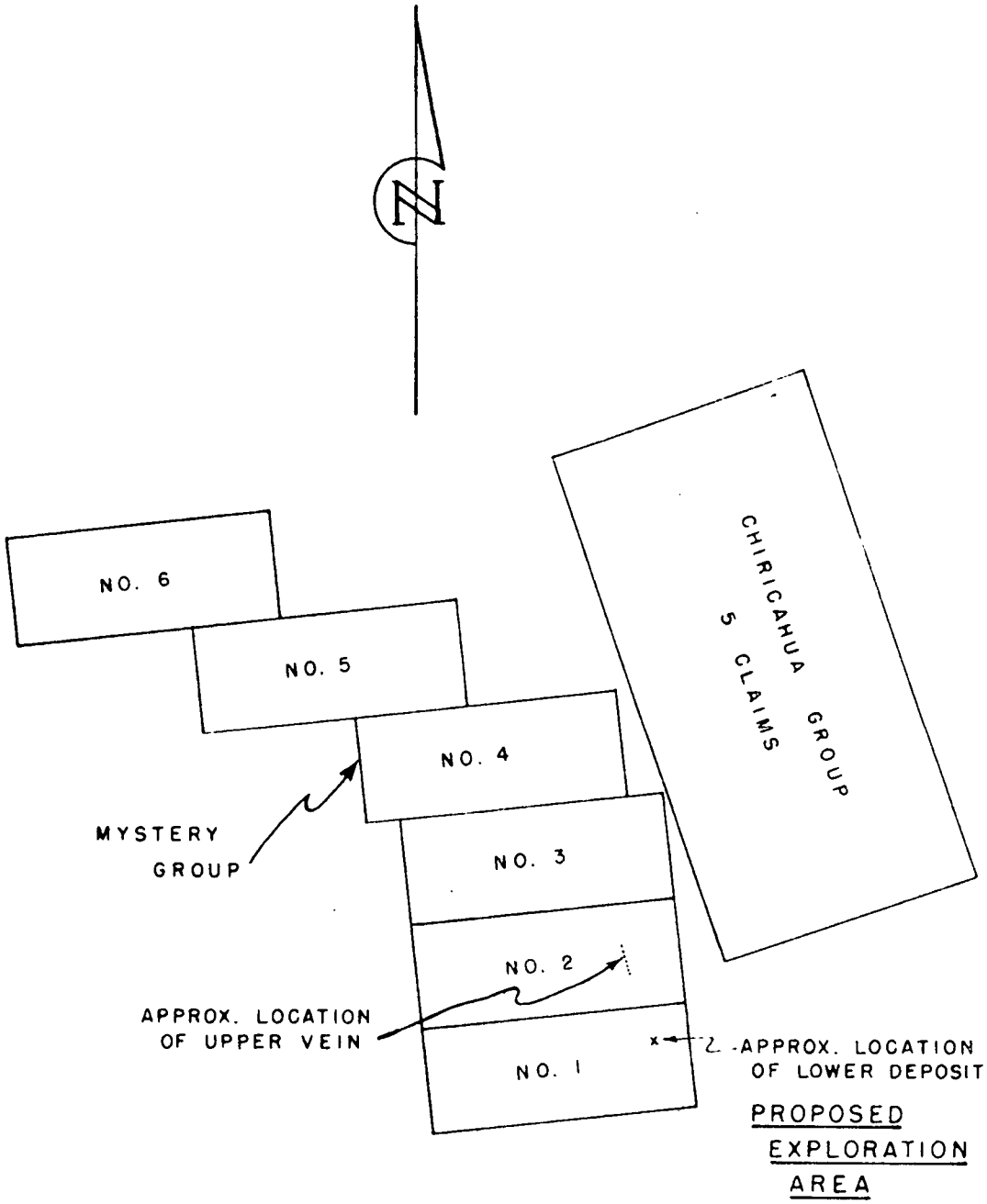
OWNERSHIP AND EXTENT

Jack L. Neal and Dennis E. Green have a 5-year lease on the Mystery group of 6 unpatented claims that was approved by the San Carlos Indian Reservation Tribal Council October 17, 1952 (figure 2). The lease papers are in process of final approval by the Department of Interior.

According to the Legal Staff (memo Frank Johnson to W. H. King, Dec. 19, 1952) it is not necessary to record mining claims on Indian lands at the County Courthouse.



Location Map, Asbestos Deposits, Gila County, Arizona



SCALE - 1 INCH = 1000 FEET

DMEA 2760

JAN. 28, 1953

FIGURE 2 - CLAIM MAP, MYSTERY ASBESTOS GROUP, GILA COUNTY, ARIZ.

DESCRIPTION OF THE DEPOSIT

In this general area, the members of the Apache group, intruded by diabase, have been block-faulted, tilted, and eroded into an intricate pattern.

The applicants have done no trenching, pitting, or other work on the property to expose continuations of either of the veins, consequently the descriptions that follow are based on the features that have been exposed by erosion only.

The upper outcrop is well up on the hillside slope. The asbestos zones are well exposed over a distance of approximately 300 feet, and lie about 60 feet below the base of the algal member of the Mescal limestone formation. The upper serpentine zone is 2 to 4 inches thick and contains fiber veinlets containing up to 2 inches of total fiber that is mostly short. The occurrence of fiber is erratic in this vein and probably averages less than 1 inch of total fiber. At 1 foot and 2 feet below the upper zone, narrow serpentine bands contain only traces of fiber. The diabase sill, for 200 feet of the exposure, is 4 feet below the lowest zone. To the northward the diabase steps us to within 3 inches of the upper zone, thus cutting out the 2 lower zones. The upper zone continues for about 100 feet north of this discordancy, showing about 1 inch total fiber. This crosscutting feature did not warp the limestone. Northward the vein is covered with overburden. At the south end of the 300-foot exposure the veins likewise pass under overburden. The fiber in each of the veins is semi-harsh.

The general strike of the formations is N. 10° to 15° W. and the dip is 25° westerly into the hill.

The lower outcrop is of more interest, in fact the 20 feet of visible outcrop is spectacular. A serpentine zone immediately below the base of the algal member is 2 feet in thickness and contains more than 4 inches of total fiber, some of which is No. 1, and much of it No. 2 grade of soft high-strength fiber. The portion of the vein that can be seen has been cleared of overburden by a little gully. Here the strike of the vein is North with a dip of 30° westward into the hill. There is diabase about 20 feet below the ore zone and also at some distance above on the top of the knoll. The block of limestone in which this exposure occurs is not more than 200 feet long, as diabase appears in washes to the north and south. This block is about 200 feet lower than its original position with respect to the formations exposed on the cliff faces above. It could have been either faulted down, or represent a slump block detached from the cliffs above. In either case the dimension into the hill must necessarily be limited, at most to a few hundred feet.

PROPOSED EXPLORATION

The location of the proposed exploration was not specified in the original application. It is the opinion of the examiners that exploration is not justified on the upper zone. However, by mutual consent of the applicants and the examiners, any exploration that is done will be located on the lower exposure.

So little is known of the size of this deposit that only a stage proposal is considered justifiable. In the original Mystery

proposal, the access road was to connect with the proposed Chiricahua road (DMEA-2763). As it became apparent that the Mystery project had to stand on its own merits, the applicants submitted the following revised proposal to the Tucson office:

Stage I

Construct a low standard truck trail passable by 4-wheel-drive vehicles, and strip and bench the outcrop	$2,915
Drift 150 feet into the deposit, @ $36/ft	5,400
Total Stage I	$8,315

If at the completion of Stage I, the potential of the deposit appears sufficient to justify completion of the project;

Stage II

Access road to be improved to permit passage of conventionally geared cars and trucks	$ 3,500
420 feet additional drifting and cross-cutting	15,120
Total Stage II	$18,620
Total Project cost	$26,935

In the docket, the statement was made "claims Nos. 4, 5, and 6 excluded from the project". When the applicants were asked why they excluded half of the property from the production lien, they stated it was simply because they had not seen the claims and did not know what was on them. However, they agreed that all 6 claims could be subject to the usual Government lien on production.

DISCUSSTION OF ESTIMATED COSTS

The applicants presented justification of the estimated cost of road work and outcrop stripping by the following breakdown:

Construction of truck trail

Rental of D-8 bulldozer and ripper at $17 per hour, fully operated and maintained. Estimated 14 days, 8 hours per day		$ 1,904

Stripping and benching of outcrop

Dozer rental, 3 days		408

Rock drilling and blasting, road and outcrop benching.

Jackhammer operator, plus rental of drilling equipment.		
Estimated, 8 days at $16 per day		128
Helper, 8 days at $10 per day		80

Compressor rental, 110 cfm.

10 days at $7 per day		70

Supplies

Dynamite	$ 200	
Caps, fuse, drill bits, etc....	75	
Gas and oil	50	325
Total		$2,915

The applicants secured prices from two contractors for the operation of a D-8 dozer and ripper. One asked $18.75 per hour plus moving time in and out. The second made a bid of $17.00 per hour with no moving in or out time.

The road to be built is over rough terrain in which some rock work will be necessary. This road for the first stage will be merely a trail that can be negotiated by 4-wheel-drive equipment. It is likely that grades up to 30 percent will be necessary.

The outcrop of the deposit is in a gully, one side of which will require considerable drilling and blasting. The writer is of the opinion that the estimated cost of $2,915 for the road work and outcrop benching is reasonable, and is to be considered as a lump sum bid for the work.

The cost of drifting and crosscutting was discussed with the applicants. The surface exposure of the vein to be explored indicates a dip of 30°. As only 20 feet of this vein is exposed, stripping of the formation is necessary to determine where it will be most advantageous to place the exploratory drift. Until this is done the attitude of the proposed drift cannot be determined. A strike drift may not be feasible for the reason that it might not sufficiently explore the depth of the deposit.

Green stated that, in the current exploratory work at Bear Canyon (DMEA-2550), 200 feet of 8-degree inclined drifting has cost more than $30 per foot. The cost of the inclined drifting necessarily increases as the gradient becomes greater. At the inclination of the proposed work is not known at present, the applicant has suggested a flat $36 per foot. This is based on the average of $31 per foot for an incline of 15° or less, and $41 per foot for inclination greater than 15°. The applicants stated that the above sliding scale could be used if the Government preferred to consider these costs rather than an average cost of $36 per foot.

If Stage II is justified, improvement of the access road is to be considered. The excessive grades of the Stage I road are to be reduced by switch-backs, and the general course of the road improved so that conventionally geared cars and trucks can operate. The dozer contractor has estimated that a maximum of 20 days work will be required.

Basing costs on the dozing and rock work of Stage I, it is estimated that the additional road work will cost $171.50 per day. Thus 20 days of road work will cost approximately $3,500.

The remainder of the project cost will be devoted to drifting and crosscutting, total length of which will depend upon the unit price that is accepted.

CONCLUSIONS

In the estimation of the examiners, exploration of the upper ore zone is not justified. At no place is there sufficient concentration of fiber to be considered commercial, nor is it thought there is any structural or geologic reason to expect more abundant fiber at depth. There are no visible diabase structures that could distort the limestone beds and make a target for an exploratory drift.

The lower outcrop could have a possibility of considerable production. The 20 feet of exposed outcrop shows a 2-foot zone of serpentine that contains more than 4 inches of total fiber, some of which is of No. 1 length, and much of it is No. 2. The fiber is soft and of high-tensile strength. A vein having 4 inches of fiber theoretically will produce 26 tons of asbestos of all grades per 1,000 square feet. However, because of the small visible extent, this deposit can be considered only as a prospect. The extent of the vein may be limited to relatively small dimensions, but there is a long chance that a fair-sized asbestos body may be present.

The showing is too good not to justify some exploratory work. A stage project is the logical approach; if the deposit proves large enough, the proposed second stage is sufficient to thoroughly explore it.

This is a new and unprospected region and the proposed ex-exploration undoubtedly will stimulate further prospecting. The road will make parts of this area more accessible.

The direction and inclination of the exploratory drift will have to be established after the outcrop is benched. It is probable that a greater part of the work will be on a relatively steep dip. For this reason the writer believes that the average price of $36 per foot is a fair, overall figure and if used, will certainly simplify the contract.

If at the completion of Stage I, the potential of the deposit appears to justify Stage II, then certainly the road should be improved to permit access of ordinary cars and trucks.

RECOMMENDATIONS

It is recommended that the Defense Minerals Exploration Administration enter into a stage contract with Neal and Green for the exploration of the lower deposit of their Mystery group.

It is suggested that the following items be considered if a contract is prepared:

(1) Stage I to consist of a lump sum price of $2,915 for road and outcrop benching, and 150 feet of drifting @ $36 per foot, the unit bid of $36 per foot for drifting (and crosscutting) to be accepted for work on any gradient to reach the objective.

(2) Stage II to be dependent upon findings of Stage I. That the work of Stage II may be stopped at any time by the field team, when in their judgement the geologic target has been reached. Stage II to consist of improvement of the access road to a maximum of 20 days work @ $171.50 per day, and 420 feet of drifting and crosscutting @ $36 per foot.

The following pertinent data were furnished by the applicants: the contract dan be made to Jack L. Neal and Dennis E. Green, a partnership; work can start within 30 days after notification to proceed; allow 5 months for completion of Stage I and 10 months additional for Stage II.

FILE COPY
SURNAME:

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

JUN 2 1953

Houk
Selfridge
Attorney

Mr. W. R. King
Executive Officer, DMEA
Field Team, Region IV
Bureau of Mines
224 New Customhouse Bldg.
Denver 2, Colorado

Subject: Docket No. DMEA-2760 - Asbestos
Jack L. Neal & D. E. Green
Mining Company
Mystery Mine
Gila County, Arizona

Dear Mr. King:

Reference is made to the subject contract executed in Region IV.

This office will be pleased to receive the Field Team Report on the subject application. It is noted that the cost of drifting and crosscutting is $36 per foot. In other contracts in the area the per foot unit costs vary between $20 and $28. Inasmuch as the drifts are all in the Mescal Limestone and the same size, and we wish to maintain impartiality in the treatment of all applicants, we will be pleased to know what special conditions justify the increased cost.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee

Approved:

J. H. Hedges

Member, Bureau of Mines

A. R. Kinkel, Jr.

Member, Geological Survey

J.H.
6-8-53

LGHouk:gad 6/1/53
Copy to: Admr. R. File
Docket File
Operating Committee
Dr. Bowles, 3516
Mr. Larrabee, G-232 GSA Bldg.
Mr. Houk

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

224 New Customhouse
Denver 2, Colorado

May 28, 1953.

Memorandum

To: C. O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Power of Attorney - Docket No. DMEA-2760, Contract No. Idm-E527 (Asbestos), Jack L. Neal and D. E. Green Mining Company.

Enclosed are three photostats of Power of Attorney authorizing Dennis E. Green to execute Contract No. Idm-E527 for Jack L. Neal.

W. H. King

W. H. King

Enclosures

To Fre
Cont

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAY 26 1953

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

Cor
5/26

224 New Customhouse
Denver 2, Colorado

May 22, 1953

REGISTERED

Memorandum

To: C.O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Contract Idm-E527, Docket No. DMEA 2760, Jack L. Neal and Dennis E. Green (Asbestos)

Enclosed are the original and two copies of Contract Idm-E527. Copies of this contract have been given to the operator, the Fiscal Officer, Region IV, and a copy has been retained for our files.

We have a power of attorney authorizing Dennis E. Green to sign for Jack L. Neal. Photostats of this power of attorney will be sent to you as soon as they have been prepared.

W. H. King
W. H. King

Enclosures

RECEIVED
SEP 22 1953
GENERAL COUNSEL
DEFENSE MINERALS
ADMINISTRATION

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

224 New Customhouse
Denver 2, Colorado

May 22, 1953

REGISTERED

Memorandum

To: C.O. Mittendorf, Administrator, DMEA

From: Executive Officer, DMEA Field Team, Region IV

Subject: Contract Idm-E527, Docket No. DMEA 2760, Jack L. Neal and Dennis E. Green (Asbestos)

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W. H. King

W. H. King

Enclosures

FILE COPY
SURNAME:

Houk

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

N.S. in C.v.R.

D,EA - INTERIOR

Mr. H. G. Houk
2974 4637

14X3923.970 Working Fund, Interior, Defense Minerals Exploration Administration
May 21, 1953

Mr. W. H. KING, EXECUTIVE OFFICER, BUREAU OF MINES, 224 NEW CUSTOMHOUSE BLDG.
DENVER 2, COLORADO

RE DMEA 2760 AUTHORIZATION TO WAIVE OWNER'S CONSENT TO LIEN GRANTED -

DELETE "AND THE OWNER'S CONSENT TO LIEN IS ATTACHED" IN ARTICLE 2(b).

USE CONTRACT NUMBER IDM-E527.

C. O. Mittendorf

C. O. MITTENDORF,
ADMINISTRATOR

LGHouk:fls 5/21/53

Copy to: Admr. R. File
Docket File
Dr. Bowles, 3526
Mr. Norton, G-232, GSA Bldg.
Mr. Houk

SENT
MAY 22 1953
Clerical Service Section

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

224 New Customhouse
Denver 2, Colorado

March 12, 1953.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 23 1953

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: 200

From: Field Team, Region IV

Subject: Final Report, DMEA Docket 2760, (Asbestos) Jack Neal and Dennis Green, Mystery Mine, Gila County, Arizona.

The application for Government assistance in exploration work estimated to cost $26,935.00, has been approved by us and a contract is being prepared.

Government participation will be 90 percent, or $24,241.50.

Four copies of the Final Report will be forwarded when the contract is executed.

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

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

A. H. Koschmann
A. H. Koschmann

Enclosures

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MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

APPLICATION FOR AID IN AN EXPLORATION PROJECT, PURSUANT TO DMEA ORDER 1, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

Not to be filled in by applicant

Docket No. dmea 2760
Metal or Mineral
Date Received 11-3-52
Estimated Cost
Participation (Government %)

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 3 1952

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: JACK L. NEAL & D. E. GREEN Mining Company
P.O.Box 1730,
Globe, Arizona

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

(*d*) If a partnership, add to the above statement the names and addresses of all partners.

2. *General.*—Read DMEA Order 1, "Government Aid in Defense Exploration Projects," before completing this application. Submit this application and all accompanying papers in quadruplicate (four copies), with your name and address on each sheet of the application and on all accompanying papers. Where sufficient space is not provided on the form for all required information, state it on an accompanying paper, with a reference in each case to the instruction to which it refers by number. Comply with all applicable instructions; or, if not applicable, so state. File the application with Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest field executive officer thereof.

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract

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

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

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

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

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

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

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

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

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

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

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

.....

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

☐ Money ☐ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper.

CERTIFICATION

The undersigned, whether as an individual, corporate officer, partner, or otherwise, both in his own behalf and acting for the applicant, certifies that the information set forth in this form and accompanying papers is correct and complete, to the best of his knowledge and belief.

Dated Oct 23, 195[illegible]

.....
(Applicant)

By Jack L Neal

D. L. Green

.....

Title 18, U. S. Code (Crimes), Section 1001, makes it a criminal offense to make a willfully false statement or representation to any department or agency of the United States as to any matter within its jurisdiction.

U. S. GOVERNMENT PRINTING OFFICE 16—66551-1

Defense Mineral Exploration Administration
Mystery Mine
Jack L. Neal & D. E. Green

Name of Applicant

1. a. Jack L. Neal and D. E. Green
   b. Partnership - Arizona
   c. Does not apply
   d. Jack L. Neal, 651 East Kline Street, Globe, Arizona
      D. E. Green, 437 East Maple Street, Globe, Arizona

2. General

Applicants property right

3. a. Mystery Mine, Sections 9 and 16 of Township 2 South, Range 17 East, GRS Meridian, Gila County, Arizona, San Carlos Apache Indian Reservation Lease 5 years, Claims Nos. 1, 2 and 3, included in the exploration project; Claims Nos. 4, 5 and 6 excluded from the project.

   b. Mystery Mine
   c. Lease from San Carlos Apache Indian Tribe
   d. Lease approved by San Carlos Apache Tribal Council October 17,1952. Lease papers in process of final approval by Department of the Interior.
   e. None
   f. Does not apply.

4. Physical Description
   a. None
   b. None
   c. This bedded vein of fibre lies in the muscal lime formation below the alga lime formation and is intruded by diabase sills or what is known as "rolls" in this district, and we believe it has possibilities of being an extended ore body.
   d. The overall accessibility of the mine is very good, being only 18 miles from the City of Globe, Arizona. 14 miles of this is paved U.S.Highway 70 and 4 miles mine road. Shipping point 7 miles to Southern Pacific Railroad siding at Cutter. Supply and residence point is Globe, Arizona, 18 miles distant.
   e. Manpower is readily available at San Carlos, the Apache Indian Tribe. Supplies and equipment available at Globe, Arizona, 18 miles distant. Water - spring on mine road to be hauled 2 miles by water truck. Power - supplied by truck from Globe, Arizona. (Gasoline).

5. Exploration Project

   a. Asbestos (Chrysotile)
   b. Approximately 2500' of road building and approximately 3 days work with bulldozer facing outcrop and leveling for compressor house. No present mine workings. Proposed work is 475' of drift, 5x7, into the deposit and 300' of cross cut to explore the width of the vein. Location of tunnel to be decided by field team and owners of lease mutually.
   c. 60 days - 24 months.
   d. Jack L. Neal, present operator of Metate Asbestos Corporation
      D. E. Green, present operator of Bear Canyon Mining (Asbestos)

Defense Mineral Exploration Administration
Mystery Mine
Jack L. Neal & D. E. Green

6. Estimate of Costs

Road - Approximate 2500' @ $1.00 per foot	$ 2,500.00
Benching and facing -3 days bulldozer @ $18.75 per hr.	450.00
Drift -775' @ $31.00 per foot	24,025.00
Total	$26,975.00

a. Road will be built on contract @ $1.00 per lineal foot.
Drift work @ $31.00 per lineal foot, 5x7

b. Attached
c. Attached
d. Operating Equipment attached
e. Attached
f. None
g. Attanhed
h. Attached

7.

a. Yes
b. Money

Defense Mineral Exploration Administration
Mystery Mine
Jack L. Neal & D. E. Green

CALCULATION OF COSTS
(Furnished by Neal & Green)

6. Rental of Equipment
6.

	Present Value
210 Cu.Ft. Compressor	$6,500.00
7½ H.P.Slusher	1,800.00
Jackhammer	500.00
Jackleg	200.00
Line oiler	20.00
3/4" Air line (rubber) 100'	50.00
1/2" Water hose " 50'	15.00
Water Gooseneck	10.00
2 Mine cars	500.00
	$9,295.00

Rental Basis per month

$\frac{\$9,295.00}{60}$ = $154.91

Rental Basis per foot advance

3 Ft./day x 25 days /month = 75'

$\frac{154.91}{75}$ = $2.07 per foot

Labor

1 Miner @ $15.00 per shift	$15.00
3 Muckers @ $11.50 per shift	34.50
1 Trammer (1/2 shift) @ $11.50	5.75
	$55.25

Includes overtime, industrial insurance of 9.92% and Social Security Tax of 4.5%

On advance of 3' per day

$\frac{\$55.25}{3.0}$ = 18.40 per foot

Supplies

Explosives (14 hole per round)

Dynamite, 28 pounds @ $0.21 / lb.	5.88
Caps, 14 @ $0.02 each	.28
Fuse, 112' @ $0.12 / ft.	1.34
Total	$7.50

$\frac{\$7.50}{3.0}$ = $2.50 / ft.

Fuel for Compressor

Compressor to be in operation 16 hours per day. 8 hours drilling and 8 hours furnishing air for tugger to pull cars up incline.

30 gal.gas at $0.305/gal. 2 qts.oil @ $0.30 = 9.75

$\frac{\$9.75}{3.0}$ = $3.25 per foot

Pipe and Track

Pipe and track to be purchased by Neal & Green and to remain in the Company's possession upon the termination of the project. The project to be charged 40% of the estimated purchase price for these items.

	Per Foot
Rails, spikes, ties, fishplates, switches	1.25
2" air line, with valves and fittings	.50
1" water line, with valves and fittings	.25
Total	$2.00

$2.00 x 40% = $0.80 per foot

Drill Steel and Bits

Steel breakage estimated to be 1-4 foot piece per 3 rounds, or 9 feet advance
4 Timken detachable bits per round; this also includes sharpening.

Steel - $\frac{\$6.00}{9.0}$ = $0.67 per foot

Bits - $\frac{4 \times \$0.56}{3.0}$ = .74 per foot

Total $1.41 per foot

Other Supplies

	Per foot
Machine oil for drill and tugger	$0.15
Carbide	.10
Picks, shovels, flatsheet, wrenches, jimcrow bars moils, loading sticks and other small tools (This covers replacement and breakage)	.30
Total per foot.	$0.55

Repairs

Normal repairs on machinery to be rented from company, including breakage and obsolesence
$0.75 per foot

Supervision and Engineering

Estimated at $1.25 per foot.

Water haulage

Tank truck two trips per week	$ 20.00 per trip
$40.00 per week / 18 feet advance =	2.22 per foot

The above included rental on tank truck, labor two pumps, one at spring and one at mine, and two tanks and operating expense of truck)

Summary		Cost per foot
Rental of eauipment		$ 2.07
Labor		18.40
Supplies:		
Explosives	$2.50	
Fuel	3.25	
Pipe and track	.80	
Steel and bits	1.41	
		8.51
Repairs		.75
Supervision and Engineering		1.25
Water Haulage		2.22
	Total Cost	$ 33.20

Estimated Cost of Project

775' of drifting	@ $31.00 per foot =	$24,025.00
2500' of road work	@ 1.00 per foot =	2,500.00
24 hrs.dozer work benching	@ 18.75 per hour =	450.00
		$26,975.00

Neal Green Mining Co.	10% =	$ 2,697.50
IMEA	90% =	24,277.50
	Total	$26,975.00

DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
S. 157 HOWARD ST.
Spokane 8, Wash.

OFFICIAL BUSINESS

PAYMENT OF POSTAGE, $300
(PMGC)

SPOKANE
MAR 18
8 PM
1952
WASH.

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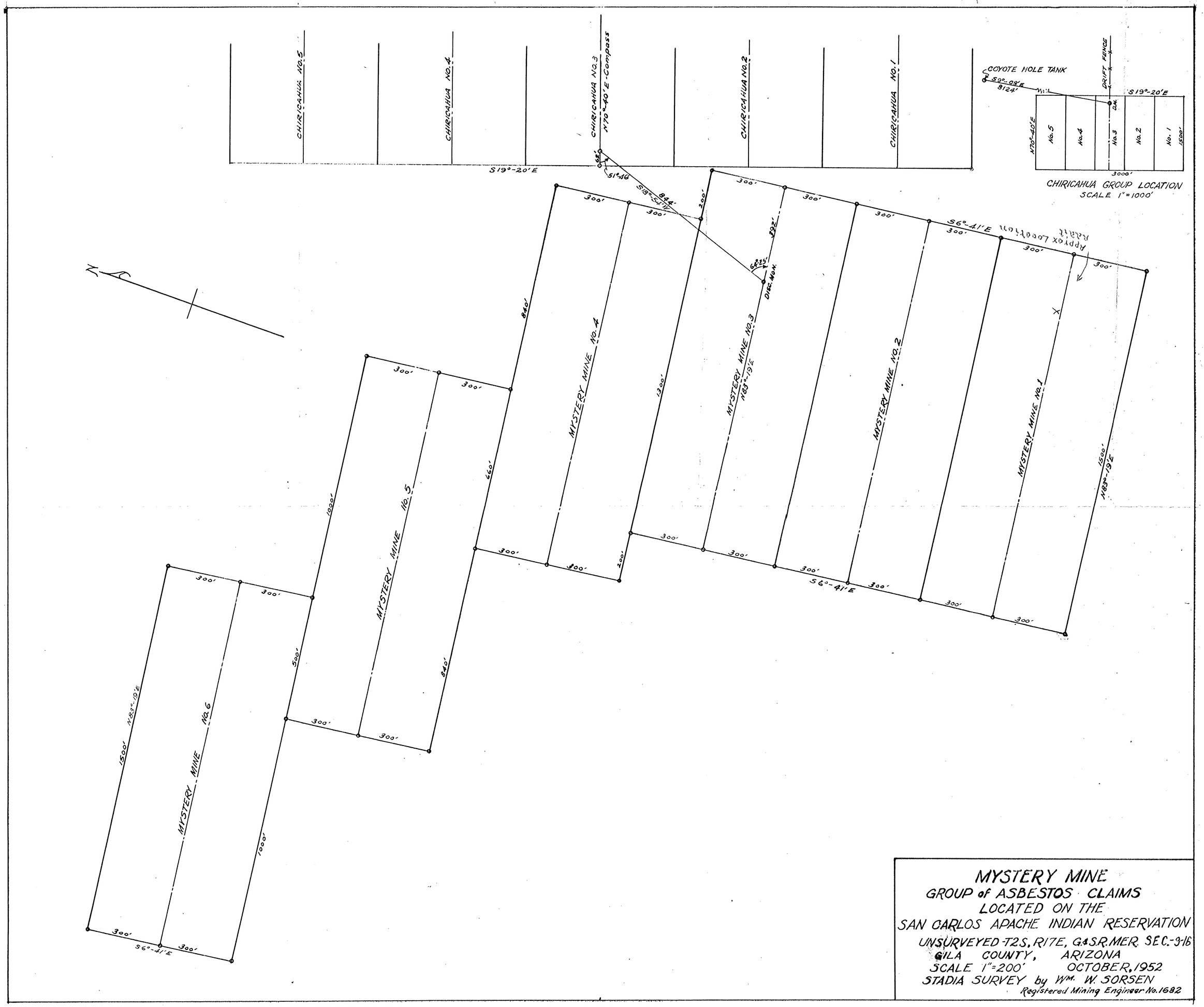
Chairman, Operating Committee

Defense Minerals Exploration Administration

Department of the Interior

Washington 25, D. C.



MYSTERY MINE
GROUP of ASBESTOS CLAIMS
LOCATED ON THE
SAN CARLOS APACHE INDIAN RESERVATION
UNSURVEYED-T2S, R17E, G&S.R.MER. SEC.-9-16
GILA COUNTY, ARIZONA
SCALE 1"=200' OCTOBER, 1952
STADIA SURVEY by WM. W. SORSEN
Registered Mining Engineer No. 1682

dmea 2760