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

July 14, 1954

Memorandum

To: Administrator

From: Nonmetallic Minerals Division

Subject: Concurrence in denial - Docket No. DMEA-3299 - Asbestos
John V. Bustamente, Jr.
Rosa Claims
Gila County, Arizona

The Nonmetallic Minerals Division concurs with the denial sent the applicant by Region IV as the field examination (geological) shows all the necessary geologic criteria for localization of commercial asbestos mineralization are not pres- at this prospect.

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUL 9 - 1954

July 9, 1954

Memorandum

To: Mr. Lawrence Houk, Chief, Nonmetallic Minerals Division
D. M. E. A.

From: Commodity Specialist, Construction and Chemical Materials Branch

Subject: DMEA Docket 3299 (Asbestos), J. V. Bustamante, Jr., Rosa claims, Gila County, Arizona

In view of the field report on this proposed project, I concur in the recommendation that DMEA assistance be denied because there is too little prospect of significant discovery of asbestos of stock-pile grade.

Oliver Bowles

Oliver Bowles

IN REPLY REFER TO
G-MD-CNM

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

July 7, 1954

Department of the Interior
Defense Minerals Administration
RECEIVED
JUL 8 - 1954

Memorandum

REVIEW OF FIELD TEAM REPORT ON APPLICATION DMEA-3299 (asbestos)

To: L. G. Houk, Defense Minerals Exploration Administration
From: D. M. Larrabee, U. S. Geological Survey
Applicant: J. V. Bustamante, Jr.
Name of property: Rosa claims.
Location of property: Gila County, Arizona.
Date of Field Team Report: June 15, 1954
Authorship of Field Team Report: Leonid Bryner and F. N. Houser.
Field Team's recommendation: Denial.
Comments: Asbestos of inferior quality present in small amounts only.
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.

224 New Customhouse
Denver 2, Colorado

June 25, 1954.

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: Code 200

From: Field Team, Region IV

Subject: Report of Examination - DMEA Docket 3299 (Asbestos), J. V. Bustamante, Jr., Rosa claims, Gila County, Arizona.

Enclosed are four copies of the report of examination of the subject property by the U. S. Geological Survey, a copy of the letter of denial to the operator, and two copies of Form 3b.

The Bureau of Mines did not participate in the examination and does not intend to submit a report.

W. H. King

W. H. King

E. N. Hawkinson

for A. H. Koschmann

Enclosures

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

224 New Customhouse
Denver 2, Colorado

June 25, 1954.

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: Code 200

From: Field Team, Region IV

Subject: Report of Examination - DMEA Docket 3299 (Asbestos), J. V. Bustamante, Jr., Rosa claims, Gila County, Arizona.

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The Bureau of Mines did not participate in the examination and does not intend to submit a report.

W H King
W. H. King

E. N. Koschmann
for A. N. Koschmann

Enclosures

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

224 New Customhouse
Denver 2, Colorado

June 25, 1954.

Mr. John V. Bustamante, Jr.
Box 1724
Globe, Arizona

Re: Docket No. DMEA-3299 (Asbestos), John V. Bustamante, Jr., Rosa claims, Gila County, Arizona.

Dear Mr. Bustamante:

Reference is made to your application for Government assistance to explore your Rosa claims for asbestos.

Projects approved by the Defense Minerals Exploration Administration must, in its judgment, show definite promise of yielding material of acceptable grade, and in quantities that will significantly improve the mineral supply position for the National Defense Program.

A careful study of your property and data available to this agency reveals that the probability of disclosing mineable reserves of asbestos is not considered sufficiently promising to justify Government participation. Under these circumstances, we regret to advise that your application for exploration aid is denied.

Very truly yours,

W. H. King
W. H. King
Field Team, Region IV

E. N. Hardman
for A. H. Koschmann
Field Team, Region IV

RDB:cwm

cc: Docket No. 3299
Administrator, DMEA
WRStorms
AFShride
AHKoschmann
Chron.

IN REPLY REFER TO:

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

June 18, 1954

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 3299, Rosa Claims (asbestos), J. V. Bustamante, Jr., Gila County, Arizona

Enclosed are the original and 8 copies of the geologic report by Leonid Bryner and F. N. Houser of the U. S. Geological Survey on the subject property.

Messrs. Bryner and Houser believe that geologic conditions are not favorable to the discovery of significant amounts of asbestos ore and recommend that the application for exploration assistance be denied. I concur in their conclusions and recommendations.

E. N. Hausbman
for A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (9)

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Box 4126 University Station
Tucson, Arizona

June 15, 1954

Memorandum

TO: A. H. Koschmann

From: A. F. Shride

Subject: Examination report, DMEA-329, Rosa Claims (Asbestos)
J. V. Bustamante, Jr., Gila County, Arizona

Enclosed are the original and 8 copies of the above report by Leonid Bryner and F. H. Houser of the Geological Survey.

This report recommends denial of the loan application because only a part of the geologic factors known to be necessary to the localization of significant deposits are present.

Local Bureau of Mines personnel are in agreement with this recommendation, and will not examine the property or submit a separate report.

Two copies of the brochure, the one forwarded to me and the one forwarded to Mr. Storms, are enclosed.

A. F. Shride

A. F. Shride

AFS:ms

cc. Koschmann (8)
Storms

J. V. BUSTAMANTE, JR.
ROSA CLAIMS
GILA COUNTY, ARIZONA
(ASBESTOS)

DMEA 3299

EXAMINATION REPORT
GEOLOGY

By
Leonid Bryner and F. N. Houser
Geologists, U. S. Geological Survey

J. V. BUSTAMENTE, JR.
ROSA CLAIMS
GILA COUNTY, ARIZONA
(ASBESTOS)

DMEA 3299

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Figure 1 Location Map, Rosa Asbestos Deposits	Follows page 1
Figure 2 Plan of the No. 2 Workings - Rosa No. 2 Claim	Follows page 1

INTRODUCTION

In an application to the Defense Minerals Exploration Administration dated March 24, 1954, J. V. Bustamante Jr. of the Rosa Asbestos Co. requested a loan of $23,978.50 for exploration work on the Rosa asbestos claims. The proposed exploration was to consist of building a road to the main workings, uncovering the outcrop by bulldozer, and drifting and raising beneath the deposit.

The claims are on the north wall of the canyon of Reynolds Creek, in an area of rugged topography. The properties are accessible from Globe by 50 miles of gravel and dirt road and by half a mile of trail. Asbestos crops out sporadically along a northwest-trending outcrop approximately along the 6200-foot contour. Standard mining claims, designated from southeast to northwest as the Rosa No. 1, Rosa No. 2, etc., are located along this outcrop. Mine workings are termed the No. 1 workings on the Rosa No. 1 claim, the No. 2 workings on the Rosa No. 2 claims, etc. The location monuments of the Rosa No. 2 and Rosa No. 4 claims were found, and the approximate location of these claims and the principal workings is shown on figure 1.

The claims are leased by John V. Bustamante Jr. from Elias Sandoval and Adelfino Gonzales. Gonzales stated that during the 1930's 2 tons of fiber were shipped from the No. 4 working. From the size of the No. 2 workings it appears that a like amount of fiber was mined there. Probably the total amount of fiber produced from the Rosa group is on the order of 5 tons. Though Gonzales stated that the fiber recovered from the No. 4 working was No. 2 grade, very little of the fiber seen in the present workings is long enough to be classified as No. 2.

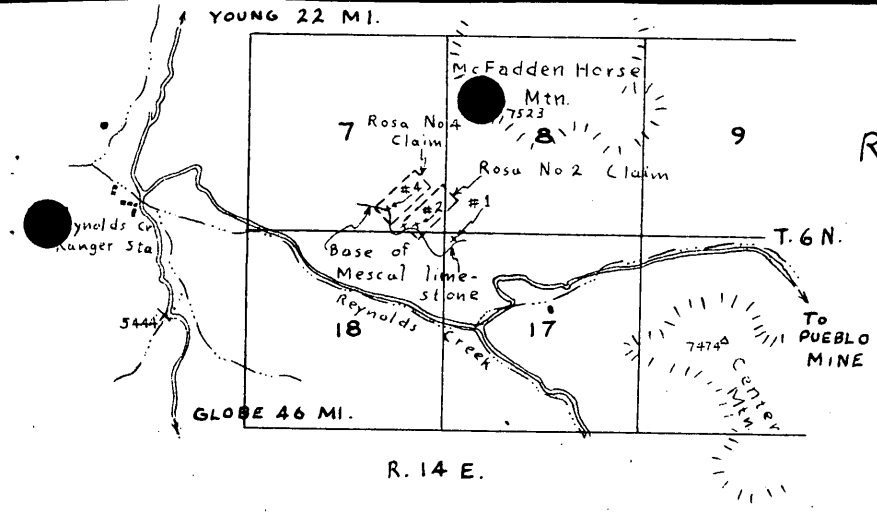
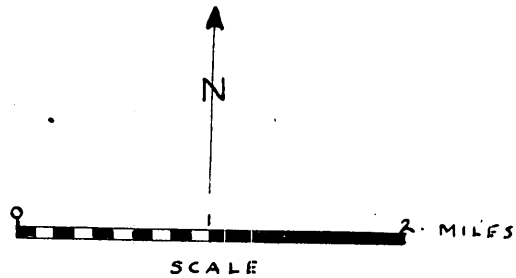


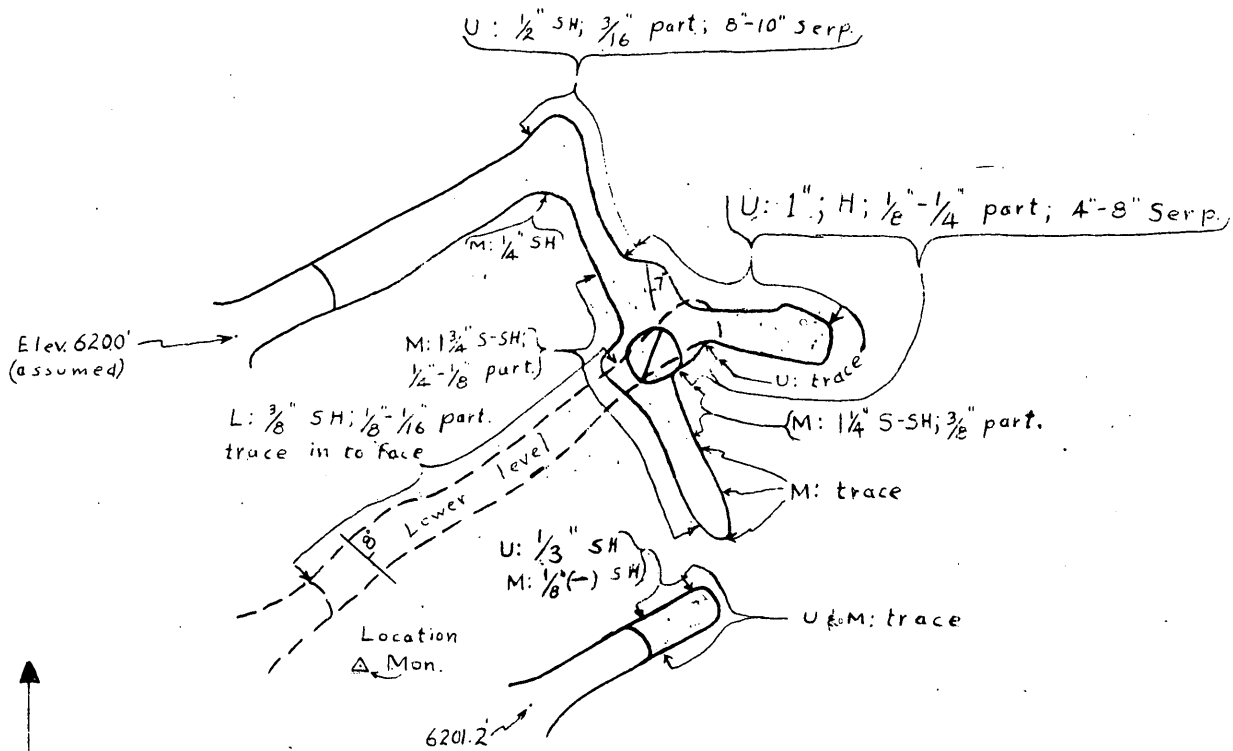
Figure 1

Location Map

Rosa Asbestos Deposits

Gila County, Arizona





SCALE 1" = 20'

EXPLANATION

U -Upper fiber zone
M -Middle fiber zone
L -Lower fiber zone
S -Soft fiber
SH -Semi-harsh fiber
Serp.-Serpentine
part.-Partings (length of fiber)
Numbers immediately after U, M, or L are estimates of average total fiber.

FIGURE 2 - PLAN OF THE NO. 2 WORKINGS - ROSA NO. 2 CLAIM, GILA COUNTY, ARIZONA

DMEA 3299

The present report summarizes the results of a field examination of the Rosa property. The examination was made on May 10 and 11, 1954 by Leonid Bryner and F. N. Houser of the U.S.Geological Survey. On May 10 Bustamante and Adelfino Gonzales accompanied the examiners over the property. The examination included the main deposits, that is, Nos. 1, 2 and 4 workings and the area adjacent to these workings. Bustamante stated that he wanted to concentrate exploration on the No. 2 workings, though ten claims (Rosa Nos. 1 to 10) are included in the loan application for tentative subordination. Asbestos reputedly occurs in much smaller quantities on claims No. 5-10 than on those examined; therefore exploration aid was not requested for these claims.

GEOLOGY

The asbestos deposits of the Rosa group are in the lower member of the late pre-Cambrian Mescal limestone. Asbestos-serpentine zones parallel the bedding of the limestones. The Mescal is overlain by the late pre-Cambrian Apache basalt and the Cambrian Troy quartzite. Underlying the Mescal is the late pre-Cambrian Dripping Spring quartzite. In the vicinity of the deposits the strata dip 5° to 10° in a northerly to an easterly direction.

The Dripping Spring and Mescal have been intruded by diabase sills. In the vicinity of the deposits the diabase appears to be approximately concordant with the Dripping Spring. This same diabase sill floors most of Reynolds Creek valley south of the deposits. About 200 feet east of the No. 1 workings the diabase truncates the Dripping

Spring beds and extends into the overlying Mescal. Diabase also intrudes the Mescal a few hundred feet west of the No. 2 workings. Here an outcrop of a few square feet shows through the talus and approximately 40 feet higher up on the same slope a diabase sill, which is several feet thick, is exposed in the Mescal limestone. These are the only exposures of diabase on Rosa claims No. 1-4.

The most extensive showings of chrysotile asbestos are in the No. 2 workings (figure 2). The fiber here occurs at three horizons that are about 66, 80, and 86 feet above the base of the Mescal. A 60-foot adit exposes the lower zone. A 20-foot adit, and a 40-foot adit and connecting 45-foot crosscut expose the middle and upper zones. Of the three horizons, the intermediate one contains, in the crosscut, the greatest total thickness of fiber, that is, an average of about 1½ inches; fiber lengths are about one-eighth to three-eighths of an inch. Most of this fiber is soft to semi-harsh. The fiber occupies a zone of moderately serpentinized limestone 6 to 8 inches thick. The quantity of fiber decreases in all directions laterally from about the mid-point of the west wall of the crosscut. This west wall corresponds to a steeply dipping fault that drops the beds on the east side about 4 inches.

The upper zone of slightly, to moderately serpentinized limestone 6 to 9 inches thick, is 6½ to 7 feet above the middle zone. In this zone the fiber has an average total thickness of about three-quarters of an inch, and fiber lengths of about one-eighth to one-quarter of an inch. On the west the fiber decreases abruptly where a small thrust (?) fault, which dips about 12° west, crosses the northwest adit about 5 feet from the face. The displacement of this fault is not known but probably is on the order of inches rather than feet. In the east and south parts of the workings there is only a trace of fiber in the upper zone.

The lower asbestos zone is $14\frac{1}{2}$ feet below the middle one. Here the fiber has an average total thickness of about three-eighths of an inch, and a fiber length of about one-sixteenth to one-eighth of an inch. At the face of the adit in this zone there is only a trace of fiber. In both the upper and lower zones the fiber is semi-harsh.

Several hundred feet west of the No. 2 workings, across a gulch, three 10- to 30-foot adits penetrate the Mescal limestone at horizons which probably correspond to the upper and lower zones in the No. 2 workings. The uppermost adit is beneath the thin diabase sill mentioned above, and the lowest adit is about 100 feet north of the diabase that crops out through the talus near this sill. These three adits expose only traces of fiber. Fiber is absent in the outcrop adjacent to these three adits.

The No. 4 workings are about the same size as the No. 2, but expose only one fiber zone, which seems to represent the only asbestos on the Rosa No. 4 claim. This zone probably corresponds stratigraphically to the middle zone of the No. 2 workings. Fiber exposed in the face of the No. 4 workings has an average thickness of about 1 inch and lengths of about one-eighth to one-quarter of an inch. A maximum total fiber thickness of about $2\frac{1}{2}$ inches was noted in one place. From surface and underground exposures small quantities of asbestos are judged to occur through an area of 40 by 60 feet. Small scale thrust faults apparent in the limestones of this deposit very likely prepared the limestone for the localization of asbestos in this locality.

The No. 1 workings consist of a 35-foot adit trending west and an 18-foot adit trending north; the adits have a common portal. The ore horizon here probably corresponds stratigraphically to the upper or middle horizon at the No. 2 workings. The fiber has a total thickness of about 3/4 of an inch and decreases toward the faces of both adits where only traces of fiber are exposed. Asbestos veins occur at the surface only at the portal of the adits and do not persist along the outcrop. Bedding-plane faulting is apparent in beds adjacent to the ore zone.

Between the No. 1 and No. 2 workings, a distance of about 1200 feet, no fiber was detected in the outcrops or in the float. The exposures here are good except throughout an interval of about 300 feet immediately east of the No. 2 workings. Between the No. 2 and No. 4 workings the exposures are only fair but are adequate to indicate that fiber probably does not exist between the No. 2 and No. 4 workings.

CONCLUSIONS AND RECOMMENDATIONS

The outcrops and underground workings show that the fiber on the Rosa property is distributed erratically and in rather small bodies. Four asbestos occurrences, the largest underlying an area of 60 by 60 feet, are adequately exposed by exploratory workings. These are the only occurrences along a 2500-foot outcrop of limestones favorable to the deposition of asbestos. It also appears that the ratio of fiber to waste rock is low; in most places, too low for a profitable mining operation under present conditions.

The overall geologic setting of these deposits is not favorable to large concentrations of asbestos. Premineral thrust and bedding-plane faulting are favorable geologic criteria to suggest that considerable concentrations of asbestos can exist. However, along the 2500-foot outcrop such faulting was observed only through three small areas in the vicinity of the known deposits. The lack of diabase near the deposits, except for the diabase near a sparse asbestos occurrence a few hundred feet west of the No. 2 workings, is a strong deterrent for expecting asbestos deposits of significant size. It can be speculated, but not proven, that diabase was discordant across the Mescal limestone south of the present asbestos outcrops. Thus a considerable concentration of asbestos that may have been centered south of the workings could have been eroded away and the present exposures may represent only the northern fringes of such deposits.

The limestones are little metamorphosed compared with those of known asbestos-producing areas. This suggests that the sparse asbestos exposed is not likely to persist. With the exception of the 300-foot interval immediately east of the No. 2 workings the host limestones are adequately exposed in both strike and dip directions to suggest that the four asbestos deposits are typical of asbestos deposits that might be found by exploration. These deposits do not include appreciable amounts of asbestos.

For the above reasons the application for exploration of the Rosa claims should be denied.

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

224 New Customhouse
Denver 2, Colorado

April 2, 1954.

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: Code 200

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docketing for Exploration Assistance

Enclosed herewith in duplicate is DMEA Form 3a and MF-103 and supporting data pertaining to the following application for Government assistance in exploration work:

John V. Bustamante, Jr. (Asbestos)
Box 1724
Globe, Arizona

John F. Shaw
For W. H. King

Enclosures

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

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

Not to be filled in by applicant

Docket No. 3299
Metal or Mineral Asbestos
Date Received
Estimated Cost $26,025
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: John V. Bustamante, Jr.
Box 1724, 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 Unpatented Mining Claims situated in the Florine Mining District of Gila County, State of Arizona. Claims Nos. 1,2,3,4,5,6,7,8,9 & 10

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

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

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

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

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. Book 49, Page No. 358, 359, 360 and 361

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. There are plenty of drifts & ore body for examination.

(*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. Approximately 45 miles from Globe, Arizona on Reynolds Falls Mountain.

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

16—66551-1

Water available one-half mile from claims. Power will be gas. Man power and materials available from Globe, Arizona

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

(*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. Attached

(*c*) The work will start within 60 days and be completed within 18 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. Lead, silver & asbestos for self.

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: Attached

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

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

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

(*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. Attached

(*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. Attached

(*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. None

(*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. Attached

(*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)? Yes

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

[X] Money [X] 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 3/24/1954, 195__

ROSA ASBESTOS COMPANY
(Applicant)

By John V. Bustamante Jr.
JOHN V. BUSTAMANTE, Jr.

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

[illegible]

[illegible]
[illegible]
[illegible]
[illegible]

Dear [illegible]:

Enclosed you will find [illegible] estimate for the Rosa Asbestos Company.

This work consists of [illegible] days [illegible] work to build a road from the mobile [illegible] bulldozer along the face of the [illegible] the strike and pitch of the outcrop.

After [illegible] work is completed it is then proposed to run 750 feet of [illegible] at the extreme [illegible] the ore body. also [illegible]

Due to weather conditions in [illegible] ber, maximum time has been set at 18 months from the starting [illegible].

Cost of bulldozer work is estimated at $2650.00 with $2565.00 to be paid by R.F.C.A. and $85.00 by the Rosa Asbestos Company.

Cost of the underground work is estimated at $22,847.00, with $20,587.00 to be paid by the R.F.C.A. and $2,257.00 by the Rosa Asbestos Company.

Total to be paid by R.F.C.A. $23,772.50 and $2,97.50 by the Rosa Asbestos Company; a grand total of $26,470.00.

Respectfully submitted,

JVB-m

ROSA ASBESTOS COMPANY

By [signature]

J. V. BUSTAMANTE, Jr.

Pueblo:

1½ miles access road from Pueblo Mine road to mine.
12 days' work by bulldozer to expose face
750 ft. of drifting and crosscutting to show extent
of underground ore body.

Time estimate:

Due to weather conditions during winter minimum time set at 12 months and maximum time set at 18 months.

Bulldozer work:

12 days on road at $150.00 per day	$1800.00	
7 days at stripping at $150.00 per day	1050.00	
12 days at $25.00 per day, compressor & operator	250.00	
Total Bulldozer work		$3100.00

MINE DEVELOPMENT

Rental of equipment:

105 cu.ft. compressor	$150.00	3600.00	
Jack Hammer	42.25	1014.00	
Air Hose	7.05	169.20	
			$4783.20
Rental basis per ft. advance			6.37

Labor

1 Foreman, mechanic	$ 15.00
1 Miner	15.00
1 Mucker	13.00
	$ 43.00

This includes Social Security, Industrial Insurance, etc.

Labor on advance of 3' per day $ 14.33

Supplies:

16 gals. gasoline per shift @ 35¢ per gallon	5.60	
2 qts. oil per shift @ 40¢ per quart	.80	
	6.40	

This includes delivery to mine

Fuel per foot advance $ 2.13

Explosives

Dynamite, 30 lb. @ 23 centa a pound	6.90	
Caps 14 @ 2½ cents each	.35	
Fuse 90' @ .013 per ft.	1.17	
	8.32	
Cost per ft. @ 4 ft. rounds		$2.08

Pipe and track:

Rails, ties, spikes and fishplates	$1.60	
2 inch air line	.59	
1 inch water line	.34	
Sleeves, valves, etc.	.25	
	$2.78	

Above to remain on property with 40% to be charged to project.

Cost to project at 40% $ 1.11

Drill Steel and Bits

Steel breakage estimated 1-4 ft/steel per 3 rounds, or 9 ft. advance

Steel $\frac{\$6.00}{9 \text{ ft.}}$ .66

4 Timken bits per round, this includes sharpening

$\frac{4 \times .60}{3 \text{ ft.}}$ .80

1.46

Total per ft. $ 1.46

Miscellaneous

Machine oil	$ .12	
Carbide	.15	
Resharpening of picks and moils	.10	
Bars, loading, sticks, Jim crow, wrenches, etc.	.40	
	.77	
Cost per ft.		.77

Repairs

Normal repairs on machinery, including breakage and replacement. Cost per ft. .80

Timber

25 sets estimated at a cost of $6.00 per set

$\frac{\$6.00 \times 25}{750 \text{ ft.}}$ Cost per ft. .20

Supervising and engineering Cost per ft. $ 1.25

Total cost per foot. 30.50

SUMMARY:

Bulldozer work		$2850.00	
Compressor operator		250.00	
			$3100.00
Rental of equipment	per ft.	6.37	
Labor	" "	14.33	
Supplies	" "	2.13	
Explosives	" "	2.08	
Pipe and track	" "	1.11	
Drill Steel & bits	" "	1.46	
Miscellaneous	" "	.77	
Repairs	" "	.80	
Timber	" "	.20	
Supervision & engineering	" "	1.25	
		30.50	

Total cost for drifting		$22,875.00
Rosa Asbestos Co.	$2,287.50	
D M P A	20,588.50	
Total for dozer work		$ 2,850.00
Rosa Asbestos Co.	285.00	
D M P A	2565.00	
Total for project		$26,025.00
Rosa Asbestos Co.	2602.50	
D M P A	23,422.50	
TOTAL FOR PROJECT		$26,025.00