DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

**CONTROLLED DOCUMENT**

DMA Docket No. 1749X

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Manganese

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Routing Slip

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| To: | Mr Lyon | Date | July 20, 1951 |
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DUP. SEC., WASH., D.C.

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FILE COPY
SURNAME:

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

OCT 25 1951

Holderer
Jacoby

Armagosa Manganese Co.
520 West 7th Street
Los Angeles 14, California

In reply please refer to
DMA-1749X

Gentlemen:

The Defense Minerals Administration has studied your application for an exploration loan. Due to the low manganese content of your ore, the great distance to the nearest point of consumption, and the difficulties involved in up-grading this type of material, we are forced to deny your application.

Very truly yours,

SIGNED

A. B. Parsons
Acting Director, Supply Division

JT 10/25

CHJacoby:ll 10/23/51
CC: DMA Docket File
Adm. Reading File
Mr. Holderer
Field Team, Region III

MF-200
(April 1951)

Docket No. DMA 1749X

Commodity _____

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

## EXPLORATION PROJECT CONTRACT [1]

It is agreed this _____ day of _____, 195__, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and [2] Armagosa Manganese Company, a Co-Partnership; 520 West Seventh Street, Los Angeles, 14, California

hereinafter called the "Operator," as follows:

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

2. *Operator's property rights.* The exploration project shall be conducted on that certain property situated in the State of California, County of Inyo described as follows: [3] That certain mining location recorded in Vol 61 page 489 of the mining locations records of Inyo County, California.

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

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

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

3. *Exploration project.* The Operator, within 30 days from the date of this contract shall commence work on a project of exploration for [5] Manganese; shall prosecute the work efficiently, expertly, in a workmanlike manner, in accordance with good mining standards, with suitable and adequate equipment, materials, and labor, all properly designed to bring the project to completion within a period of [6] 180 Days from the date of this contract. The exploration project and the work to be performed are more fully described on Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, is made a part of this contract.

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

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

6. *Operating equipment.* Attached hereto, marked "Exhibit 'C'," is a detailed list of operating equipment divided into categories of items to be rented, purchased, or furnished by the Operator, with the allowable rental, purchase price, or rental value, as the case may be, annexed to each. As to equipment purchased for the project, the Government will contribute its agreed pro-rata share of the cost thereof, and the difference between the cost and the salvage value at the conclusion of the work shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

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

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

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

9. *Rehabilitation and repairs.* Attached hereto, marked "Exhibit 'E'," is a detailed schedule of existing facilities, buildings, installations, and fixtures, with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition, which cost shall be allowed as a cost of the project.

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

11. *Participation by the Government.* At the end of the first full calendar month after the Operator has commenced work under the project, and at the end of each succeeding calendar month, the Operator shall submit to the Government a voucher for payment with a detailed statement of work done and allowable costs (as defined in Article 10 of this agreement) incurred, in a form and with supporting data acceptable to the Government. After approving the voucher, the Government shall pay to the Operator 75 percent of the sum of such costs incurred; *Provided,* That the aggregate total of all sums paid by the Government under this agreement shall not exceed $5400.00, which is 75 percent of the agreed estimated total cost of this project, $7200.00.

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

13. *Progress reports.* The Operator shall provide the Government with monthly reports of progress in form and content satisfactory to the Government, and upon the completion of the project or termination of the contract shall provide the Government with a comprehensive geologic and engineering report, including an estimate of ore reserves, to the best of his ability. Four copies of all reports shall be furnished to the Government.

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

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

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

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

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

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

Executed in triplicate the day and year first above written.

Armagosa Manganese Co.
(Operator)

By Kenneth J. Rhoads

THE UNITED STATES OF AMERICA

By

U. S. GOVERNMENT PRINTING OFFICE 16—64066-1

ARMAGOSA MANGANESE COMPANY
520 West Seventh Street
Los Angeles 14, California

# EXHIBITS FOR MF-200

## EXHIBIT A

The exploration project is as follows:

(1) Trenching with a bulldozer to the southeast of the location monument, starting on the bank near the monument and working toward the south. This trenching will be normal to the vein or in a NE-SW direction. Purpose here is to extend the known length of the ore vein which presently is exposed to a length of over 80 feet.

(2) Trenching with a bulldozer and ripper to the northwest of the last exposure of the vein. This trench will be within 20 feet of the exposure as trenching here is in the uphill direction from the exposed ore.

(3) Sink a 50 foot exploratory shaft on the vein. This will stay with the high grade ore but also should be usable as a work shaft.

(4) See geologist's report attached hereto as Exhibit F under section entitled "Recommendations".

## EXHIBIT B

No purchases of buildings, installations, facilities or fixtures are contemplated.

## EXHIBIT C

Operating equipment to be used is as follows:

| | | |
|---|---|---|
| (1) | Jeep to haul supplies, equipment, and light bulldozing and scraping, and power uses during development stage | $700 |
| (2) | Hand tools, powder, etc. | 194 |
| (3) | Bulldozer (rented) | 1,200 |
| (4) | Air compresser and hammers (rented) | 450 |
| (5) | Air hoist (rented) | 250 |
| (6) | Rental value of Dodge truck | 200 |
| (7) | Cost of timber for shaft | 600 |
| (8) | Cost of power and utilities | 150 |

ARMAGOSA MANGANESE COMPANY
520 West Seventh Street
Los Angeles 14, California

EXHIBIT D

Labor to be used is as follows:

| | | |
|---|---|---|
| (1) | 2 miners @ $17.50 per day for two months | $1,540 |
| (2) | 1 mucker @ $14.00 per day for two months | 616 |
| (3) | Supervisor @ $400 per month for two months | 800 |

EXHIBIT E

There are no repairs necessary to existing facilities, equipment, installations or fixtures.

MF-200
(April 1951)

Docket No. DMA 1749X

Commodity _____

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

## EXPLORATION PROJECT CONTRACT [1]

It is agreed this _____ day of _____, 195__, between the United States of America, acting through the Department of the Interior, Defense Minerals Administration, hereinafter called the "Government," and [2] Armagosa Manganese Company, a Co-Partnership; 520 West Seventh Street, Los Angeles, 14, California

hereinafter called the "Operator," as follows:

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2. *Operator's property rights.* The exploration project shall be conducted on that certain property situated in the State of California, County of Inyo described as follows: [3] That certain mining location recorded in Vol 61 page 489 of the mining locations records of Inyo County, California.

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

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

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

3. *Exploration project.* The Operator, within 30 days from the date of this contract shall commence work on a project of exploration for [5] Manganese; shall prosecute the work efficiently, expertly, in a workmanlike manner, in accordance with good mining standards, with suitable and adequate equipment, materials, and labor, all properly designed to bring the project to completion within a period of [6] 180 Days from the date of this contract. The exploration project and the work to be performed are more fully described on Exhibit "A" attached hereto, which, with any maps or drawings thereto attached, is made a part of this contract.

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

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

6. *Operating equipment.* Attached hereto, marked "Exhibit 'C'," is a detailed list of operating equipment divided into categories of items to be rented, purchased, or furnished by the Operator, with the allowable rental, purchase price, or rental value, as the case may be, annexed to each. As to equipment purchased for the project, the Government will contribute its agreed pro-rata share of the cost thereof, and the difference between the cost and the salvage value at the conclusion of the work shall be charged as a cost of the project to which the Government has contributed its pro-rata share.

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

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

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

9. *Rehabilitation and repairs.* Attached hereto, marked "Exhibit 'E'," is a detailed schedule of existing facilities, buildings, installations, and fixtures, with a statement of the cost of any necessary rehabilitation or repairs to put into useful and operable condition, which cost shall be allowed as a cost of the project.

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

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

13. *Progress reports.* The Operator shall provide the Government with monthly reports of progress in form and content satisfactory to the Government, and upon the completion of the project or termination of the contract shall provide the Government with a comprehensive geologic and engineering report, including an estimate of ore reserves, to the best of his ability. Four copies of all reports shall be furnished to the Government.

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

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

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

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

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

Executed in triplicate the day and year first above written.

Armagosa Manganese Co.
(Operator)

By Kenneth J. Rhoads

THE UNITED STATES OF AMERICA

By _____

U. S. GOVERNMENT PRINTING OFFICE 16—64066-1

ARMAGOSA MANGANESE COMPANY
520 West Seventh Street
Los Angeles 14, California

# EXHIBITS FOR MF-200

## EXHIBIT A

The exploration project is as follows:

(1) Trenching with a bulldozer to the southeast of the location monument, starting on the bank near the monument and working toward the south. This trenching will be normal to the vein or in a NE-SW direction. Purpose here is to extend the known length of the ore vein which presently is exposed to a length of over 80 feet.

(2) Trenching with a bulldozer and ripper to the northwest of the last exposure of the vein. This trench will be within 20 feet of the exposure as trenching here is in the uphill direction from the exposed ore.

(3) Sink a 50 foot exploratory shaft on the vein. This will stay with the high grade ore but also should be usable as a work shaft.

(4) See geologist's report attached hereto as Exhibit F under section entitled "Recommendations".

## EXHIBIT B

No purchases of buildings, installations, facilities or fixtures are contemplated.

## EXHIBIT C

Operating equipment to be used is as follows:

| | | |
|---|---|---|
| (1) | Jeep to haul supplies, equipment, and light bulldozing and scraping, and power uses during development stage | $700 |
| (2) | Hand tools, powder, etc. | 194 |
| (3) | Bulldozer (rented) | 1,200 |
| (4) | Air compresser and hammers (rented) | 450 |
| (5) | Air hoist (rented) | 250 |
| (6) | Rental value of Dodge truck | 200 |
| (7) | Cost of timber for shaft | 600 |
| (8) | Cost of power and utilities | 150 |

ARMAGOSA MANGANESE COMPANY
520 West Seventh Street
Los Angeles 14, California

## EXHIBIT D

Labor to be used is as follows:

| | | |
|---|---|---|
| (1) | 2 miners @ $17.50 per day for two months | $1,540 |
| (2) | 1 mucker @ $14.00 per day for two months | 616 |
| (3) | Supervisor @ $400 per month for two months | 800 |

## EXHIBIT E

There are no repairs necessary to existing facilities, equipment, installations or fixtures.

ARMAGOSA MANGANESE COMPANY
520 West Seventh Street
Los Angeles 14, California

# EXHIBITS FOR MF-200

## EXHIBIT A

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ARMAGOSA MANGANESE COMPANY
520 West Seventh Street
Los Angeles 14, California

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|---|---|---|
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| (3) | Supervisor @ $400 per month for two months | 800 |

## EXHIBIT E

There are no repairs necessary to existing facilities, equipment, installations or fixtures.

FILE COPY
SURNAME:

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

June 29, 1951

Mr. Kenneth J. Rhoads, Partner
1200 Oakwood Drive
Arcadia, California

Subject: DMA-1749X
Re: Exploration Loan -
Evelyn's Delight

My dear Mr. Rhoads:

Receipt is acknowledged of your application and attachments of June 26, 1951 for an exploration loan under the Defense Production Act of 1950.

The application was assigned Docket Number DMA-1749X and referred to Mr. George Holderer, Chief, Manganese Branch on June 28, 1951.

In any future correspondence relating to your application, kindly refer to DMA-1749X.

Sincerely yours,

LANDON F. STROBEL

Landon F. Strobel jc
Executive Secretary

L. F. Strobel:jc
cc: Strobel
File
Holderer
Lyon

Dmc 1749

256

340

FILE COPY
SURNAME:

Holderer
Crilson
Reading
Nicholson
Moore

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

JUL 27 1951

Armagosa Manganese Co.
c/o Mr. Kenneth J. Rhoads
520 W. 7th Street
Los Angeles, California

In reply please refer to
DMA 1749X

Dear Mr. Rhoads:

In reply to your letter of June 26, 1951 we have your application under consideration. We have referred the matter to our field team: Mr. H. C. Miller, 1012 Flood Building, 870 Market Street, San Francisco, California. I suggest you contact Mr. Miller and offer him your aid and cooperation so that he can more readily help you.

Very truly yours,

Tom Lyon
Director, Supply Division

CHJacoby:bl

CC: Adm. Reading File
Reports & Records Unit
Mr. Holderer
Field Team - Region III
Files

Dma - 1749 X

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 28 1951
LANDON F. STROBEL
Executive Secretary

# REPORT

on

# EVELYN'S DELIGHT MANGANESE PROPERTY

## SUMMARY and CONCLUSIONS:

This manganese property is en interesting prospect with excellent possibilities of developing into a producer of high grade manganese. It is unusual in that the vein occurs in an alluvium area cut by washes, and no rock in place has been found in the vicinity. Three feet of 46% to 48% Mn ore - principally psilomelane and pyrolusite - is exposed for a length of over eighty feet and a like amount of concentrateable ore appears on the footwall. No wall rock has been found to a depth of ten feet.

Further trenching by mechanical means could easily double ore reserves at a cost that may be recovered from ore now exposed. Additional development work can be carried on in such a way that the ore developed will cover the investment.

Present exposures do not indicate a large orebody because the alluvium cover hinders prognostication. Manganese is known to occur in several places in this part of Death Valley.

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## HISTORY

The claim was located in December of 1950 and the location and other work was done during the spring of 1951.

## GEOLOGY

The outcrop occurs in one of the washes cutting the alluvium in an area of low relief. The drainage in the immediate area is to the north and the ridge to the west of the outcrop rises about 100 ft. above the wash. Approximately a quarter of a mile to the north the wash spreads out into the valley.

As shown in the sketch attached the vein outcrops in a small side wash adjacent to one of the main washes in the area. There is no rock in place in the area and the thickness of the alluvium is unknown. One cut exposes the vein more than 10 ft. below the surface but there is no wall rock. On the 'up-wash' side of the vein in this cut there is some evidence of a damming effect by the outcrop. Sands and gravels are distinctly bedded on narrow layers of three to six inches in thinkness. This is apparent on the side of the cut away from the wash.

The vein strikes N 65° and dips 60° to the NE. The original outcrop in the wash was approximately 5 ft. in width, and where it has been uncovered to the northwest and 5 ft. below the ground surface, there is 3 ft. of highgrade material on the hanging wall side plus 2 ft. to 3 ft. of mixed ore on the footwall. Trenches and cuts have exposed the vein for a distance of 84 ft. along the strike and indicate a thickness of at least 3 ft. of high grade ore (46% to 48% Mn).

## TRANSPORTATION

As this subject is, and will be, one of the major items affecting costs, the following details are given.

By the present roads the property is twelve miles from a paved highway and one-half mile from the Wingate Pass road. It would be relatively easy to make a road from the property to the Warm Springs Canyon road which is now being used by trucks hauling talc from the Warm Springs Mine. The distance to Baker, located on Highway 91, via Shoshone is 91 miles. By using the dirt road that goes out through the southern end of Death Valley the distance is 72 miles but the 31 miles of dirt road is quite rough. However, the climb through Salsbury Pass is eliminated. Fuel, water and minor supplies can be obtained in Shoshone or Baker but major supplies and equipment would have to come from Las Vegas (92 miles from Baker) or Los Angeles (195 miles from Baker).

## SAMPLING

No channel samples have been taken from the vein. Picked samples have been taken by the owners as indicators while doing the work. The high grade is easily distinguished from the mixed ore megascopically and 2 samples give an average value of 48.40 for the high grade material which is essentially a mixture of psilomelane and pyrolusite. Samples of the mixed ore gave an average value of 36.72. Some of this ore consists of nodules of psilomelane cemented in a gangue of porphyritic pebbles which appear to be in the 1/4" size range. This ore should concentrate readily.

ORE RESERVES

While the vein has been actually exposed for a distance of only 84 feet it is entirely reasonable to assume that it extends out under the wash and into the hill of alluvium. However, disregarding this possibility and using the exposed length, with one-half the length for depth and three feet of width, there is shipping ore amounting to 1,125 long tons (using a factor of 8 cu.ft. per ton). There would also probably be at least 1,000 tons of mixed ore which would be mined at the same time.

PROSPECTS

The possibilities of developing additional ore are excellent. To the southeast the vein disappears under the wash and may also veer slightly south. At this end trenching with a bulldozer would delineate as well as prove or disprove the extention in this direction. Similar tenching may also be done to the northwest. However, the alluvium is well consolidated and the amount of material covering the vein is unknown. Nevertheless, if another r0 feet were added to the length of the vein the assumed ore reserves could be doubled.

Until more is known about the deposit(vein structure, wall rock, etc.) it would be venturesome to attempt to predict to what depth high grade ore would persist. However, in view of the fact that the vein has been much more resistant to erosion than the surrounding country rock and that it is well defined for a known length of 84 ft. it would be reasonable to assume good values would extend to a depth of at least 50 feet.

The trenching that has been done has only nicked the surface except in one place where the vein has been cut to a depth of 5 ft. In this cut the high grade streak tends to widen with depth. Consequently, as the other cuts indicate a width of 3 ft. of high grade, it is reasonable to assume an average width of 3 ft. of this material The mixed ore varies from two to three feet in the trenches.

RECOMMENDATIONS

1. Trenching with a bulldozer to the southeast of the location monument starting on the bank near the monument and working toward the south. This trenching should be normal to the vein or in a NE - SW direction.

2. Trenching with a bulldozer and ripper to the northwest of the last exposure of the vein. This trench should be within 20 ft. of the exposure as the depth of the alluvium over the vein may increase rapidly in the uphill direction. Should this not be the case further trenching could be done at a low cost.

3. Sink a 50 ft. exploratory shaft on the vein. This should stay with the high grade ore but also should be usable as a work shaft. It should be located out of the wash to allow dump room and avoid trouble in case of a cloudburst.

These recommendations are made with the intention of developing the ore body and at the same time keeping expenditures within limits that are recoverable from the ore exposed. Should Step #1 and #2 fail to expose additional ore it might be well to consider making an open cut on the vein.

The shaft sinking operation should be watched carefully to insure that the contractor stays with the ore. An understanding with the contractor must be made on this matter.

Provided the ore is as expected at the 50 ft. level drifts could be run in both directions and some revenue obtained therefrom. Stoping from this level could begin as soon as a second exit was raised to the surface. Further work would have to be planned as the development took place.

The above underground development should be done by two men with perhaps the addition of a third after drifting begins.

Respectfully submitted,

Frank A. Keith, Jr.
Consulting Mining Engineer

June 23, 1951

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# REPORT

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Armagosa Manganese Company
520 West Seventh Street
Los Angeles 14, California

Location of Mine:

Located in T 12 N, R2E. (Projected) San Bernardino Base and Meridian. Approximately 3½ miles southwest of Ashford Mill and approximately 4 miles south of intersection of Warm Springs Canyon Road and Wingate Wash Road. Location notice was recorded at City of Independence, Inyo County, State of California on January 22, 1951 in Volume 61, Page 489 of Mining Locations, official records of said county.

Question numbered:

1. Applicant is a partnership

2. Partners:

| Name | Address |
|---|---|
| Kenneth J. Rhoads | 1220 Oakwood Drive<br>Arcadia, California |
| David S. Robertson | 3535 Holboro<br>Los Angeles 27, California |
| O. G. Spencer | Death Valley Junction<br>California |
| Edison L. Conser | 3838 Fernwood<br>Lynnwood, California |

3. Not a corporation

4. Mining and general business experience of applicant:

(a) Applicant is newly-formed partnership for purpose of developing manganese properties. All partners are also original locators. Experience of individual partners is as follows:

| Name | Experience |
|---|---|
| Kenneth J. Rhoads | Assistant Professor School of Finance, University of Southern California; practicing accountant; tax attorney and business consultant; Lt. (j.g.) U.S.N.R. |
| David S. Robertson | Attorney, partner firm of Chenoweth and Robertson, Los Angeles; director, Los Angeles Heart Association; Lieut. Comdr. U.S.N.R. |

4. (continued)

| Name | Experience |
|---|---|
| O. G. Spencer | Retired mining engineer and consultant now resident and Justice of Peace of Death Valley area. |
| Edison L. Conser | Mechanic, welder and foreman; U. S. Army, Prisoner of War. |

(b) The person who will manage the project is Mr. Frank A. Keith, Jr., graduate of Mackay School of Mines, University of Nevada; consulting mining engineer, 20 years experience; 2 years' experience with a manganese property a Sicoro, New Mexico; member of A.I.M.E.

5. Applicant is owner of the property.

6. The property is free and clear of all claims, liens or encumbrances.

7. Not lessee.

8. Partnership assets consist of mining claim, the subject of this application, and one four-wheel drive Dodge truck. There has been no production. There are no liabilities. Partners have contributed a total of $2,050 to the project to date which does not include the cost for services of mining engineer in re preparation of report which is attached hereto as Appendix A.

9. Applicant is prepared to invest $1,800 in the project. It is sufficient to pay applicants' part of the cost of the project as detailed in Question 23 of this application and in accordance with the regulations on Government participation.

10. (a) Mineral Lode Location named "Evelyn's Delight", located in Inyo County. Recorded in Volume 61, Page 489 of Mining Locations Records, City of Independence, County of Inyo official records. Said claim is rectangular in shape, being 1500 feet long and 600 feet wide and extending in a southeasterly - northwesterly direction. It lies to the north of the foothills of the Owlshead Mountains at the southern end of Death Valley. It lies approximately 3½ miles southwest from Ashford Mill and 4 miles south from the intersection of the Warm Springs Canyon Road and the Wingate Wash Road.

10. (b) Legal description of exact parcel upon which exploration is to be conducted is same as that given above.

11. "Evelyn's Delight" is name of location.

12. This question is answered in engineer's report attached hereto as Appendix A, at bottom of page 2 thereof under heading, "Transportation".

13. (a) Water in commercial quantities will not be needed in the mining or production of manganese ore from these properties. Water in commercial quantity is unavailable at this time at the property. Domestic water is readily obtainable in sufficient quantity and will have to be transported to the mine site.

(b) Power to be used will be derived from gasoline or diesel engines.

14. There are no buildings or facilities available except one four-wheel drive Dodge truck because the claim is new and recently discovered.

15. Mojave Trucking Company services mines in the area. In fact they are continuously hauling talc from Warm Springs mines only 3 or 4 miles from applicant's mine site. The Wingate Wash road passes within one-half mile of applicant's site and this latter road intersects the Warm Springs road. Truck road to mine presents no difficulty and can be made in one or two days at minimum of cost. Trucks haul to Dunn on Union Pacific Railroad from whence the ore can be shipped to any point.

Reference is made to mining engineer's report attached hereto as Appendix A, pages 2 and 3 under heading of "Transportation" for more particular details pertinent to this question.

16. (a) Property has not been previously explored to knowledge of applicant. There has been no commercial development or operation of the property. Exploration work to date has been done by hand. Report of mining engineer attached hereto as Appendix A, together with map contained therein, accurately show present status of property development.

(b) California State Division of Mines has made a thorough study of manganese deposits in this area. Their reports indicate considerable number of known manganese deposits in the area. Only a few of these

16. (b) (continued)

have commercially produced ore, mainly due to low quality. Applicant's ore assays show much higher quality of ore than any other known deposit in area. For specific description of adjoining properties, see California Division of Mines Bulletin 152, "Geologic Description of Manganese Deposits of California" section on Inyo County, California, pages 80-83.

(c) Report of Frank A. Keith attached hereto as Appendix A.

17. Mine has never been in production. It is a new discovery.

18. Property has not been operating, but see report of Frank A. Keith attached hereto as Appendix A.

19. None known.

20. Manganese ore: Psilomelane and pyrolusite.

21. Work to be done is outlined on page 3 of engineer's report attached hereto as Appendix A. Work can be started in month of October 1951 and can be completed in early part of 1952 at the latest.

22. Reference is here made to mining engineer's report attached hereto as Appendix A wherein the geological basis of the project with emphasis on factors leading the operators to expect the finding of commercial ore bodies is set forth. Attached to said report is engineer's drawing of deposit as known and discovery work now accomplished. Also is shown work proposed to be done herein by applicant.

Sample lists and assays are attached hereto as Appendix A.

23. Itemized statement of costs of project:

(a) Labor

| | |
|---|---|
| 2 miners @ $17.50 per day for 2 months | $1,540 |
| 1 mucker @ $14.00 per day for 2 months | 616 |

(b) Supervisor at $400 per month for 2 months 800

(c) No needed repairs.

23. (d) Construction of dump site, hoist, etc. for shaft $ 500

(e) Needed equipment (minimum)

(1) Jeep to haul supplies, equipment and light bulldozing and power uses during development stage 700

(2) Hand tools, powder, etc. 194

(f) Cost of renting equipment

(1) Bulldozer 1,200

(2) Air compresser and hammers 450

(3) Air hoist 250

(g) Rental value of Dodge truck (2 months) 200

(h) Cost of materials and supplies

(1) Timber for shaft 600

(2) Cost of power and utilities 150

T o t a l $7,200

24. Due to the summer heat in Death Valley it will not be possible to start the project described herein until on or about October 1, 1951. However, applicant will be able to have the project organized, i.e. employees located and hired to start work October 1, 1951; equipment leased, etc. The project will be completed by January 1, 1952. By that date it should be possible to have commercial production started.

Dma-1749X

R. M. CHENOWETH (1894-1950)
DAVID S. ROBERTSON
KENNETH J. RHOADS

CHENOWETH AND ROBERTSON
ATTORNEYS AT LAW
520 WEST SEVENTH STREET
LOS ANGELES 14, CALIFORNIA

TELEPHONE
TRINITY 6871

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 28 1951
LAMBERT F. STRABEL
Executive Secretary

June 26, 1951

Defense Minerals Administration
Department of the Interior
Washington 25, D. C.

Gentlemen: Re: Armagosa Manganese Company filing of information required by Form MF-100

The undersigned is a partner and the attorney for the Armagosa Manganese Company whose principal office is Room 520, 520 West Seventh Street, Los Angeles 14, California.

The Armagosa Manganese Company owns manganese mining claims in the southern end of Death Valley in the State of California. The claims are new discoveries and no ore has been commercially produced as yet. Additional exploration work and commencement of production is planned to commence in October 1951. For these reasons, it is felt that the following information may be required by your office and is therefore respectfully submitted:

(1) The company will mine and produce for sale, manganese ore containing from 44% to 49% manganese. All crucial impurities will be less than specifications of General Services Administration Strategic and Critical Materials Branch of the United States Government. There will be no by-products.

(2) The mining operation will be located in Inyo County, State ofCalifornia, to the north of the foothills of the Owlshead Mountains at the southern end of Death Valley. It is in T. 12 N., R. 2 E., (projected) San Bernardino Base and Meridian. It is located approximately 35 miles west of Shoshone and 80 miles north of Baker. The nearest railroad shipping point is Dunn, which is approximately 115 miles from the site and which lies on the main east-west line of the Union Pacific Railroad.

(3) Two miners and one mucker will be employed.

(4) No ore has previously been produced. Engineer's report indicates a minimum of 1,000 tons of 46% to 48% man-

ganese ore outlined at present time by hand exploration methods. It is not possible at present to give an accurate monthly average production.

CERTIFICATION

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

ARMAGOSA MANGANESE COMPANY By Kenneth J. Rhoads

June 26, 1951 Kenneth J. Rhoads, Partner

Very truly yours,

Kenneth J. Rhoads

Kenneth J. Rhoads

jb

Dma - 1749 X

R. M. CHENOWETH (1894-1950)
DAVID S. ROBERTSON
KENNETH J. RHOADS

CHENOWETH AND ROBERTSON
ATTORNEYS AT LAW
520 WEST SEVENTH STREET
LOS ANGELES 14, CALIFORNIA

TELEPHONE
TRINITY 6871

June 26, 1951

COPY

Defense Minerals Administration
Department of the Interior
Washington 25, D. C.

Gentlemen: Re: Armagosa Manganese Company
filing of information required by
Form MF-100

The undersigned is a partner and the attorney for the Armagosa Manganese Company whose principal office is Room 520, 520 West Seventh Street, Los Angeles 14, California.

The Armagosa Manganese Company owns manganese mining claims in the southern end of Death Valley in the State of California. The claims are new discoveries and no ore has been commercially produced as yet. Additional exploration work and commencement of production is planned to commence in October 1951. For these reasons, it is felt that the following information may be required by your office and is therefore respectfully submitted:

(1) The company will mine and produce for sale, manganese ore containing from 44% to 49% manganese. All crucial impurities will be less than specifications of General Services Administration Strategic and Critical Materials Branch of the United States Government. There will be no by-products.

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

ARMAGOSA MANGANESE COMPANY By Kenneth J. Rhoads

June 26, 1951 Kenneth J. Rhoads, Partner

Very truly yours,

Kenneth J. Rhoads

Kenneth J. Rhoads

jb

FILE COPY
SURNAME:

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

Holderer
Jacoby

OCT 25 1951

Not stripped in R.R.

Memorandum

To: Reports and Records Unit

Through: Director, Supply Division

From: Chief, Manganese Branch

Subject: Armagosa Manganese Co.
520 West 7th Street
Los Angeles 14, California
DMA-1749X, Manganese
Exploration Loan-$7,200

Property: Evelyn's Delight Manganese Prospect
T12N, R2E
Inyo County, California

Conclusion:

The deposit is a fissure filled vein that crosscuts the bedding of terrace gravels. The Geological Survey reports the ore as nodules of psilomelane and pyrolusite cemented with a gangue of porphyritic pebbles. The Survey refers to Bulletin RI 4117 stating that the applicant's ore is similar and that previous results of beneficiation tests were very unsatisfactory.

The field team estimated that there were 600 tons of indicated and 700 tons of inferred ore with an average analysis of 20.5% manganese. This is in sharp contrast to the two assays submitted by the applicant which average over 48% manganese.

Recommendation:

In view of the low grade of material and the probable difficulties in beneficiating, the application is denied.

George B. Holderer

George B. Holderer
Chief, Manganese Branch

SIGNED

Attachments

Approved:

Acting Director, Supply Division

CHJacoby:ll 10/22/5
CC: DMA Docket File
Adm.Reading File
Mr. Holderer
Field Team,Reg.III

Index of File to Reports and Records Unit

1 copy memo to Lyon from Field Team dated 10/10/51
1 copy Report by Field Team dated 10/8/51
2 copies Assays dated 9/17/51
1 copy letter to Miller from Robertson dated 8/20/51
1 copy letter to Miller with attached assays
1 copy letter to Miller from Rhoads dated 8/7/51
1 copy letter to Rhoads from Lyon dated (no date)
1 copy Field Referral
1 copy letter to Miller from Lyon dated 7/25/51
1 copy letter to Rhoads from Strobel dated 6/29/51
1 copy letter to DMA from Rhoads dated 6/26/51
2 copies MF-103 with attached sheets
2 copies letter to DMA from Rhoads dated 6/26/51
2 copies MF-200 with attached sheets.
1 copy exhibit formMF-200
1 copy report on Evelyn's Delight by Keith

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

OCT 25 1951

a.E.C.

Memorandum

To: Reports and Records Unit

Through: Director, Supply Division

From: Chief, Manganese Branch

Subject: Armagosa Manganese Co.
520 West 7th Street
Los Angeles 14, California
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George B. Holderer
Chief, Manganese Branch

Attachments

Approved:

Acting Director, Supply Division

OFFICE OF THE ADMINISTRATOR

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

Office of
Executive Officer
DMA Field Team
Region III

1012 Flood Bldg.
870 Market Street
San Francisco 2, Calif.

October 24, 1951

Memorandum

To: Tom Lyon, Chairman, Coordinating Committee,
Defense Minerals Administration, Washington 25, D. C.

From: Executive Officer, DMA Field Team, Region III

Subject: DMA-1749X, Manganese
Armagosa Manganese Co., 520 W. 7th St., Los Angeles, Calif.

Kindly refer to our memorandum of October 10, transmitting the Geological Survey report on subject docket, together with the docket file. The attached "Report, Evelyn's Delight, Manganese," was originally a part of the docket file and evidently became separated from it while in the office of the Geological Survey. Will you, therefore, kindly have the attached report again made a part of your docket file.

H. C. Miller
Executive Officer, DMA Field Team
Region III

Attachment

Copy to: E. H. Bailey, U.S.G.S.

Oct 29 3 03 PM '51
DEFENSE MINERALS
ADMINISTRATION
WASHINGTON, D.C.

Index of File to Reports and Records Unit

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DEFENSE MINERALS
ADMINISTRATION
WASHINGTON, D. C.

OCT 15 9 06 AM '51

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

# DMA-1749, Evelyn's Delight Manganese Prospect

## Inyo County, California

William P. Irwin, Geologist
Charles D. Rinehart, Geologist
U. S. Geological Survey

October 8, 1951

## Introduction

The Defense Minerals Administration requested an examination of the Evelyn's Delight manganese prospect to determine the feasibility of Government partcipation in a $7,200 program to explore the property. The examination was made September 3, 1951 by W. P. Irwin and C. D. Rinehart of the Geological Survey in the company of K. J. Rhoads and D. S. Robertson of the Armagosa Mining Company, applicants for the loan. The loan is not recommended, owing to the indicated low grade and small tonnage of ore.

The manganese prospect is in a dissected pediment at the north end of the Owlshead Mountains, and is in T. 21 N., R. 2 E. (projected), SBBM, in the southern part of Death Valley National Monument, Inyo County, California. Access to the property from Shoshone, California, is as follows: Go north 2 miles on the road to Death Valley Junction to the junction of the Salsberry Pass road; turn left and go west about 28 miles over Salsbury Pass and Jubilee Pass to the junction of the east and west Death Valley roads about 1 mile south of Ashford Mill; turn left and go northwest 5.5 miles to the junction of the Wingate Pass road; turn left and go southwest 0.6 miles on the Wingate Pass road; turn left and go south 3.8 miles along a dry wash; walk southeast approximately 0.5 miles. The roads to the property are all good macadam and gravel roads except that in the dry wash. The road in the dry wash could be improved with little expense.

The property consists of one unpatented claim that is owned by the Armagosa Mining Company. The property was located in the fall of 1950, and until then had not been prospected. The workings consist of four open cuts, the largest of which is about 7 feet deep and 5 feet wide (see fig. 1).

## Geology

The manganese prospect is underlain by poorly consolidated terrace gravels of Pleistocene age. The manganese ore is localized in a fissure vein that crosscuts the bedding of the terrace gravels. A thin veneer of Recent stream gravels and slope wash conceals most of the Pleistocene strata.

The terrace gravels are essentially horizontal, but locally dip gently northwesterly or southwesterly. The beds range from pebbly sandstone to cobble conglomerate, and from a fraction of an inch to 10 inches in thickness. The thinner beds consist of the finer-grained sediments, whereas the thicker beds contain sub-angular to well-rounded cobbles as much as 6 inches in diameter.

The manganese-bearing vein strikes N. 65° W. and dips from 50 to 60 degrees to the northeast. It is exposed for 86 feet along its strike, and is an average of more than 4 feet thick. (See fig. 1 and pl. 1) Because it is considerably more resistant to erosion than

the terrace gravels, it crops out boldly along its exposed length. The vein extends across a small dry wash. At the northwest end it is exposed for a few feet in the lower slope of a hill, the top of which is about 100 feet higher than the dry wash. No topographic expression of the vein was recognized on the hillside, nor was the vein found on the other side of the hill several hundred feet farther northwest. To the southeast the last exposure of the vein is about 5 feet lower than the crest of a small hill, and does not crop out in the main dry wash about 40 feet farther to the southeast.

The contact between the vein and sediments along the hanging wall is well defined by 1/2 inch of gouge. The footwall contact is gradational. The vein material appears to consist mostly of pyrolusite and psilomelane which on the hanging-wall side is fairly pure. Toward the footwall side, the vein contains increasingly abundant sedimentary material, and at the footwall contact grades into normal uncemented bedded sediment over about 1/2 foot. In the footwall, some of the thin beds are cemented by manganese-bearing mineral for as much as 10 feet from the vein. No manganese-bearing minerals were observed in either the gouge or beds adjacent to the hanging-wall contact.

## Sampling

Three samples were cut to determine the grade of the ore (see fig. 1). They were cut normal to the plane of the vein, and average about 10 pounds per sample. Sample No. 1 was cut across the entire width of the vein. Samples Nos. 2 and 3, taken together, form a continuous cut across the entire vein. Sample No. 2 is of the high grade, hanging-wall part of the vein. Sample No. 3 is of the cemented breccia, footwall part of the vein. The following assay results were determined by the Hydrometallurgical and Ore-testing Branch, Bureau of Mines, Reno, Nevada:

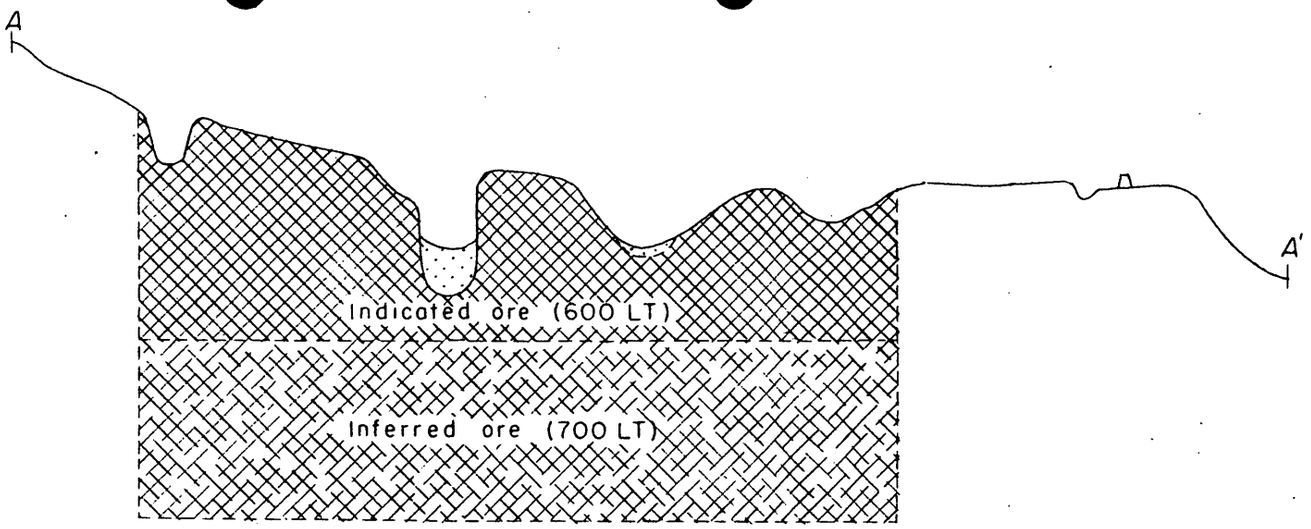
| Sample No. | Width (Feet) | % Mn. |
|---|---|---|
| 1 | 4.0 | 12.7 |
| 2 | 3.0 | 31.7 |
| 3 | 3.0 | 19.7 |

## Ore Reserves

The ore reserve is estimated to include 600 long tons of indicated ore and 700 long tons of inferred ore, with an average grade of 20.5 percent manganese (see fig. 1). In calculating the reserve, the following assumptions are used: the vein averages 4 feet in thickness for the exposed length of 86 feet; the average dip of the vein is 60 degrees; 11.2 cubic feet of ore equals 1 long ton. Indicated ore is calculated to extend from the lowest exposure of the vein to a depth of 10 feet. Inferred ore is calculated to extend 20 feet below the indicated ore.

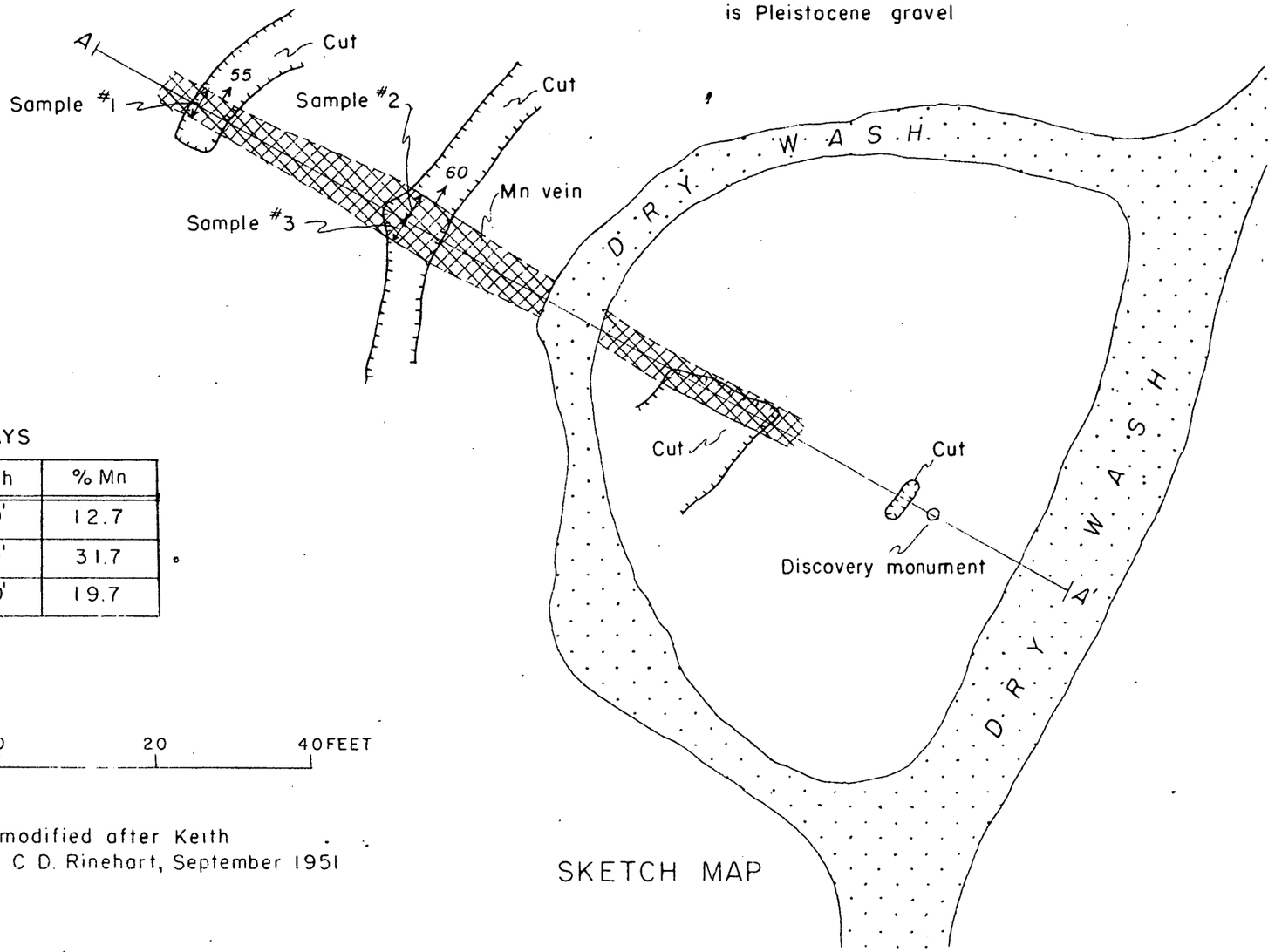
## Conclusions

It is recommended that the loan not be granted, as the vein material is of too low grade. The assay result of sample no. 2, 31.7 percent manganese, indicates that even the richest part of the vein is of too low a grade to constitute marketable material. Milling tests conducted by the Bureau of Mines (See Bureau of Mines, R.I. 4117) show that benefication of similar ore is very unsatisfactory.




SECTION A–A'

Note: Country rock (no pattern) is Pleistocene gravel




ASSAYS

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20 0 20 40 FEET

Map and section modified after Keith by W. P. Irwin and C. D. Rinehart, September 1951

SKETCH MAP

Fig. 1. EVELYN'S DELIGHT MANGANESE PROSPECT, INYO COUNTY, CALIFORNIA

Pl. 1 Looking NW along strike of vein. Vein dips to right. Nearly horizontal bedding of terrace gravels shown at level of lower figure.

DEFENSE MINERALS
ADMINISTRATION
WASHINGTON, D. C.

OCT 15 9 06 AM '51

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

# DMA-1749, Evelyn's Delight Manganese Prospect

## Inyo County, California

William P. Irwin, Geologist
Charles D. Rinehart, Geologist
U. S. Geological Survey

October 8, 1951

## Introduction

The Defense Minerals Administration requested an examination of the Evelyn's Delight manganese prospect to determine the feasibility of Government participation in a $7,200 program to explore the property. The examination was made September 3, 1951 by W. P. Irwin and C. D. Rinehart of the Geological Survey in the company of K. J. Rhoads and D. S. Robertson of the Armagosa Mining Company, applicants for the loan. The loan is not recommended, owing to the indicated low grade and small tonnage of ore.

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The property consists of one unpatented claim that is owned by the Armagosa Mining Company. The property was located in the fall of 1950, and until then had not been prospected. The workings consist of four open cuts, the largest of which is about 7 feet deep and 5 feet wide (see fig. 1).

## Geology

The manganese prospect is underlain by poorly consolidated terrace gravels of Pleistocene age. The manganese ore is localized in a fissure vein that crosscuts the bedding of the terrace gravels. A thin veneer of Recent stream gravels and slope wash conceals most of the Pleistocene strata.

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The manganese-bearing vein strikes N. 65° W. and dips from 50 to 60 degrees to the northeast. It is exposed for 86 feet along its strike, and is an average of more than 4 feet thick. (See fig. 1 and pl. 1) Because it is considerably more resistant to erosion than

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Three samples were cut to determine the grade of the ore (see fig. 1). They were cut normal to the plane of the vein, and average about 10 pounds per sample. Sample No. 1 was cut across the entire width of the vein. Samples Nos. 2 and 3, taken together, form a continuous cut across the entire vein. Sample No. 2 is of the high grade, hanging-wall part of the vein. Sample No. 3 is of the cemented breccia, footwall part of the vein. The following assay results were determined by the Hydrometallurgical and Ore-testing Branch, Bureau of Mines, Reno, Nevada:

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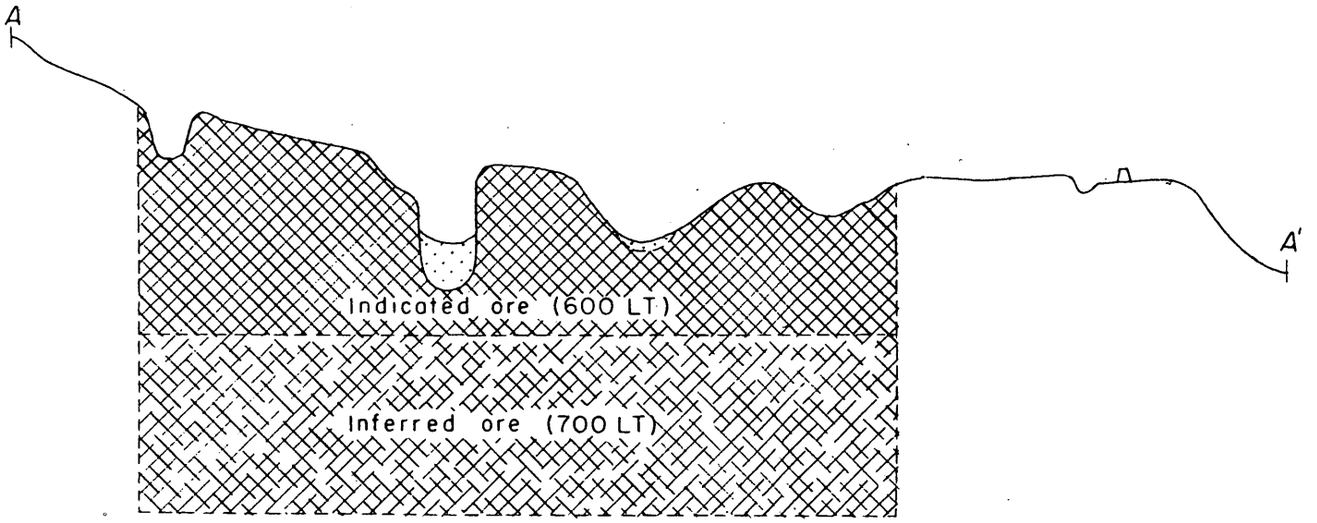
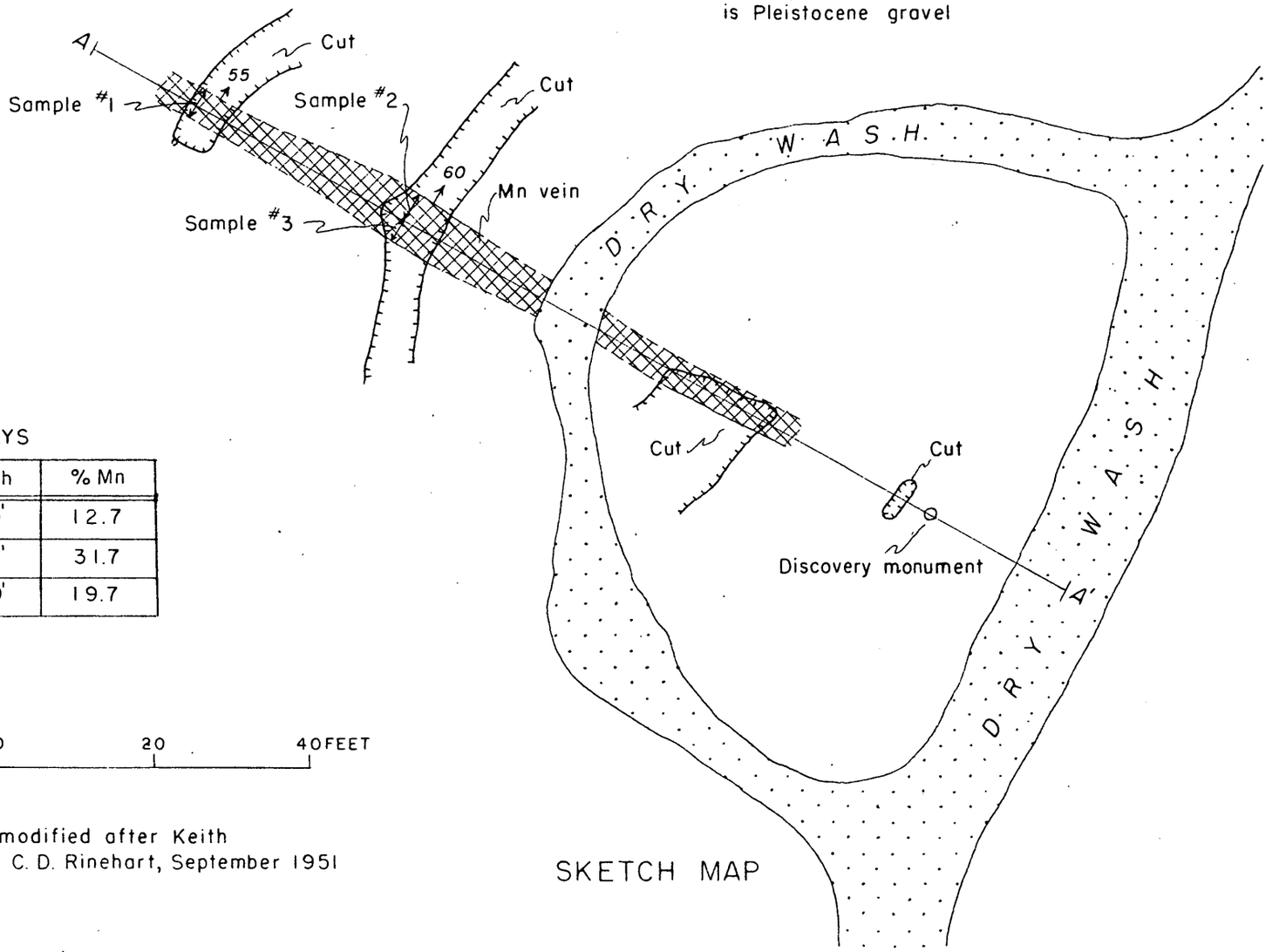
## Conclusions

It is recommended that the loan not be granted, as the vein material is of too low grade. The assay result of sample no. 2, 31.7 percent manganese, indicates that even the richest part of the vein is of too low a grade to constitute marketable material. Milling tests conducted by the Bureau of Mines (See Bureau of Mines, R.I. 4117) show that beneficiation of similar ore is very unsatisfactory.




SECTION A–A'

Note: Country rock (no pattern) is Pleistocene gravel

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Map and section modified after Keith
by W. P. Irwin and C. D. Rinehart, September 1951

SKETCH MAP

Fig. 1. EVELYN'S DELIGHT MANGANESE PROSPECT, INYO COUNTY, CALIFORNIA

Pl. 1 Looking NW along strike of vein. Vein dips to right. Nearly horizontal bedding of terrace gravels shown at level of lower figure.

DEFENSE MINERALS ADMINISTRATION
WASHINGTON 25, D. C.

UNITED STATES
DEPARTMENT OF THE INTERIOR

OCT 15 9 06 AM '51

~~BUREAU OF MINES~~
~~REGION~~

DEFENSE MINERALS ADMINISTRATION


OFFICE OF
~~REGIONAL DIRECTOR~~
Executive Officer
DMA FIELD TEAM
Region III

1012 FLOOD BUILDING
870 MARKET STREET
SAN FRANCISCO 2, CALIFORNIA


October 10, 1951

Memorandum

To: Tom Lyon, Chairman, Coordinating Committee, DMA, Washington, D. C.

From: Executive Officer, DMA Field Team, Region III

Subject: DMA-1749X, Manganese
Armagosa Manganese Co., 520 W. 7th St., Los Angeles, Calif.

Subject property has been examined by geologists of the Geological Survey and there are attached four copies of report entitled "DMA-1749, Evelyn's Delight Manganese Prospect, Inyo County, California," by William P. Irwin and Charles D. Rinehart, Geologists, U. S. Geological Survey, dated October 8, 1951.

The examining geologists recommend that the application for a loan be denied, as the vein material even in the richest part is too low grade to constitute marketable material.

Docket file DMA-1749X is also returned herewith.

H. C. Miller
Executive Officer, DMA Field Team
Region III

Attachments

Copy to: E. H. Bailey, U.S.G.S.

# REPORT OF ASSAY

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D. C.
OCT 15 9 06 AM '51

## ABBOT A. HANKS, INC.

ASSAYERS, CHEMISTS, ENGINEERS
624 SACRAMENTO STREET
SAN FRANCISCO.

September 27, 1951

DEPOSITED BY U. S. Dept. of the Interior
Mineral Deposits Branch
Geological Survey, 102 Old Mint Bldg.
S.F.

SAMPLE OF O R E

| Labty. No. | Mark | GOLD, per ton of 2,000 lbs. Troy Ounces | GOLD, per ton of 2,000 lbs. Value @ $35.00 oz. | SILVER, per ton of 2,000 lbs. Troy Ounces | SILVER, per ton of 2,000 lbs. Value @ | Percentages | |
|---|---|---|---|---|---|---|---|
| | | | | | $ | | |
| | DMA-1749-X | | | | | | |
| 34996 | M # 1 | | | | | Manganese | 12.17 |
| 97 | M # 2 | | | | | " | 18.64 |
| 98 | M # 2 B | | | | | " | 29.93 |

ABBOT A. HANKS, INC.

P. T. Bee

pf

# REPORT OF ASSAY

## ABBOT A. HANKS, INC.

ASSAYERS, CHEMISTS, ENGINEERS
624 SACRAMENTO STREET
SAN FRANCISCO. September 27, 1951

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ABBOT A. HANKS, INC.
*Original Signed by*
*P. T. BEE*

pf

# REPORT OF ASSAY

## ABBOT A. HANKS, INC.

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*Original Signed by*
*P. T. BEE*

pf

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|---|---|---|---|---|---|---|---|
| | | | | | $ | | |
| | IMA-1749-X | | | | | | |
| 34996 | M # 1 | | | | | Manganese | 12.17 |
| 97 | M # 2 | | | | | " | 18.64 |
| 98 | M # 2 B | | | | | " | 29.93 |

ABBOT A. HANKS, INC.
*Original Signed by*
*P. T. BEE*

pf

| Refer to | Noted | Date |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| Answered | | |

ARMAGOSA MINING COMPANY
520 West Seventh Street
Los Angeles 14, California

DEPARTMENT OF INTERIOR
BUREAU OF MINES
REGION III
RECEIVED
AUG 22 1951
SAN FRANCISCO, CALIFORNIA

August 20, 1951

Mr. H. C. Miller
1012 Flood Building
870 Market Street
San Francisco, California

Dear Mr. Miller: Re: DMA 1749X

Enclosed are two copies of reports of Smith-Emery Company, chemists, covering two additional manganese samples from the Evelyn's Delight deposit, the deposit for which our application (DMA 1749X) was made.

Please notice that these reports were made in strict compliance with your agency's specifications and show clearly the very high quality of the deposit.

These reports are sent to give you a more thorough knowledge of the deposit and for inclusion in our file.

Very truly yours,

David Robertson

David Robertson
jb
enclosures (2)

TRINITY 4791

FORM 1

LABORATORY REPORT

COPY

# SMITH-EMERY COMPANY

CHEMICAL ENGINEERS AND CHEMISTS
METALLURGICAL AND TESTING ENGINEERS
920 SANTEE STREET
LOS ANGELES 15

*LABORATORY No.* 331358-Additional

*Date* August 18, 1951

*Sample* Ore

*Received* 7-30-51

*Marked*

*Submitted by* David Robertson
520 West 7th Street,
Los Angeles, 14, California.

REPORT OF DETERMINATIONS
According to Manganese Regulation. Originally issued July 19,1951. 32A CFR Chapter XIV, 16 F.R. 7155

| | Found | Specified By Weight Dry Basis |
|---|---|---|
| Manganese (Mn) ---------- | 49.59% | 40.0% Min. |
| Iron (Fe) ---------- | 0.90% | 16.0% Max. |
| Silica, plus alumina ($SiO_2$ plus $Al_2O_3$) ------- | 3.02% | 15.0% Max. |
| Silica ($SiO_2$) -- 1.82% | | |
| Aluminum Oxide ($Al_2O_3$) - 1.20% | | |
| Phosphorus (P) ---------- | 0.043% | 0.30% Max. |
| Copper, plus lead, plus zinc (Cu plus Pb plus Zn) ------- | Trace* | *1.00% Max. |
| Copper (Cu) ----- Trace | | |
| Lead (Pb) ------- Trace | | |
| Zinc (Zn) -------- Trace | | |

*Of which not more than 0.25% may be copper.

Respectfully submitted,

Smith-Emery Co.
CHEMISTS AND ENGINEERS

ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AUTHORIZATION FOR PUBLICATION OF OUR REPORTS, CONCLUSIONS, OR, EXTRACTS FROM OR REGARDING THEM IS RESERVED PENDING OUR WRITTEN APPROVAL AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES.

TRINITY 4791

FORM 1

LABORATORY REPORT

COPY

# SMITH-EMERY COMPANY

CHEMICAL ENGINEERS AND CHEMISTS
METALLURGICAL AND TESTING ENGINEERS
920 SANTEE STREET
LOS ANGELES 15

*LABORATORY No.* 341307 *Date* August 18, 1951

*Sample* Ore

*Received* 7-30-51 *Marked* "Sample No. 3"

*Submitted by* David Robertson,
520 West 7th Street,
Los Angeles, 14, California.

REPORT OF DETERMINATIONS
According to Manganese Regulations Originally
issued July 19,1951. 32A CFR
Chapter XiV, 16 F.R. 7155

| | Found | Specified By weight Dry Basis |
|---|---|---|
| Manganese (Mn) ---------- | 48.93% | 40.0% Min. |
| Iron (Fe) ---------- | 0.78% | 16.0% Max. |
| Silica plus Alumina ($SiO_2$ plus $Al_2O_3$) ------- | 3.54% | 15.0% Max. |
| Silica ($SiO_2$) -- 2.04% | | |
| Aluminum Oxide ($Al_2O_3$)- 1.50% | | |
| Phosphorus (P) ---------- | 0.033% | 0.30% Max. |
| Copper, plus lead, plus zinc (Cu plus Pb plus Zn) ----- | Trace* | *1.00% Max. |
| Copper (Cu) ---- Trace | | |
| Lead (Pb) ------ Trace | | |
| Zinc (Zn) ------ Trace | | |

*Of which not more than 0.25% may be copper.

Respectfully submitted,

SMITH-EMERY CO.
CHEMISTS AND ENGINEERS

ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AUTHORIZATION FOR PUBLICATION OF OUR REPORTS, CONCLUSIONS, OR, EXTRACTS FROM OR REGARDING THEM IS RESERVED PENDING OUR WRITTEN APPROVAL AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES.

| Refer to | Noted | Date |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| Answered | | |

ARMAGOSA MANGANESE COMPANY
520 West Seventh Street
Los Angeles 14, California

August 7, 1951

Mr. H. C. Miller
1012 Flood Building
870 Market Street
San Francisco, California

Dear Mr. Miller: Re: DMA 1749X

I am in receipt of a letter dated July 27 by Mr. Tom Lyon, Director Supply Division Defense Minerals Administration, Washington, D. C., in which he states that our application has been referred to your field team.

The Armagosa Manganese Company is a partnership. One of the partners is Mr. O. G. Spencer who resides at Death Valley Junction, California. He is the Justice of Peace for that entire area and is quite well-known there. He is on the scene at all times and would welcome the opportunity of being of service to you and your representatives in processing this application. Please do not hesitate to call on him for any help or information you may desire.

Since the issuance of the new regulation for the purchase of manganese ores at Deming, New Mexico, we find ourselves in somewhat changed circumstances in that we are positive there is sufficient ore already exposed to enable us to participate in that program.

Due to the summer heat in Death Valley, we do not believe it is feasible to commence operations until October 1, 1951. We feel the funds for which we have applied in our DMA 1749 X are vitally important so that we may outline the ore body in order that, when mining operations are commenced, they will be done in the most efficient and scientific manner to insure recovery of the maximum amount of ore.

As a result of the above facts, we would like to expedite the processing of our application and to assist you in every possible manner. If you could give us some estimate as to the time when we may learn of its approval or rejection, it would help us considerably in our planning.

Very truly yours,

Kenneth J. Rhoads

Kenneth J. Rhoads
jb

We have doubt of from DMA

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

Q. E. C.

Armagosa Manganese Co.
c/o Mr. Kenneth J. Rhoads
520 W. 7th Street
Los Angeles, California

JUL 27 1951

In reply please refer to
DMA 1749X

Dear Mr. Rhoads:

In reply to your letter of June 26, 1951 we have your application under consideration. We have referred the matter to our field team: Mr. H. C. Miller, 1012 Flood Building, 870 Market Street, San Francisco, California. I suggest you contact Mr. Miller and offer him your aid and cooperation so that he can more readily help you.

Very truly yours,

Tom Lyon
Director, Supply Division

CHJacoby:bl

CC: Adm. Reading File
Reports & Records Unit
Mr. Holderer
Field Team - Region III
Files

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

JUL 25 1951

Mr. H. C. Miller, Executive Officer
DMA Field Team, Region III
1012 Flood Building
870 Market Street
San Francisco, California

Dear Sir:

We attach "Review of Application for Exploration Assistance" on:

Docket No. 1749X

Commodity Manganese

Applicant Armagose Manganese Co.
520 W. 7th Street, Los Angeles, California

Please expedite the consideration of this application with particular reference to the points raised in the attached "Review."

Very truly yours,

Tom Lyon, Chairman
Coordinating Committee

For Bureau of Mines

For Geological Survey

| Refer to | Noted | Date |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | | |
| Answered | | |

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

JUL 2 1951

Mr. H. C. Miller, Executive Officer
DMA Field Team, Region III
1012 Flood Building
870 Market Street
San Francisco, California

Dear Sir:

We attach "Review of Application for Exploration Assistance" on:

Docket No. 1749 X

Commodity Manganese

Applicant Armagose Manganese Co.
520 W. 7th Street, Los Angeles, California

Please expedite the consideration of this application with particular reference to the points raised in the attached "Review."

Very truly yours,

for Tom Lyon
Chairman
Coordinating Committee

Lowell B. Moon
For Bureau of Mines

Olaf T. Rose
For Geological Survey

DEFENSE MINERALS ADMINISTRATION WASHINGTON, D.C.
OCT 15 9 06 AM '51

Armagosa Manganese Co.
c/o Mr. Kenneth J. Rhoads
520 W. 7th Street
Los Angeles, California

In reply please refer to
DMA 1749X

Dear Mr. Rhoads:

In reply to your letter of June 26, 1951 we have your application under consideration. We have referred the matter to our field team: Mr. H. C. Miller, 1012 Flood Building, 870 Market Street, San Francisco, California. I suggest you contact Mr. Miller and offer him your aid and cooperation so that he can more readily help you.

Very truly yours,

Tom Lyon
Director, Supply Division

CHJacoby:bl

CC: Adm. Reading File
Reports & Records Unit
Mr. Holderer
Field Team - Region III
Files

DMA Form 2

DEFENSE MINERALS ADMINISTRATION
Status Change Notice

DMA Docket No. ~~1749X~~ Armagosa Manganese Co

To: Reports and Records Branch

From: Manganese Branch--DMA

Date: July 20, 1951

The following action has been taken this date on the above Controlled Document.

Forwarded to Field Team, Region III ~~then~~ Coordinating Committee

Type of request changed to:

Denied ☐ Withdrawn ☐

Approved in amount of $

Other action, specify:

Files for Field Team

July 20,1951

1. 2 Bound reports, "Report Evelyn's Delight Manganese"
2. 1 Copy MR 103 with 4 pages of answers
3. Letter to DMA from Kenneth Rhoads dated 6/26/51

Armagosa Manganese Co.
c/o Mr. Kenneth J. Rhoads
520 W. 7th Street
Los Angeles, California

In reply please refer to
DMA 1749X

Dear Mr. Rhoads:

In reply to your letter of June 26, 1951 we have your application under consideration. We have referred the matter to our field team: Mr. H. C. Miller, 1012 Flood Building, 870 Market Street, San Francisco, California. I suggest you contact Mr. Miller and offer him your aid and cooperation so that he can more readily help you.

Very truly yours,

Tom Lyon
Chairman, Coordinating Committee

Approved:

Bureau of Mines

Geological Survey

CHJacoby:hl

CC: Adm. Reading File
Reports & Records Unit
Mr. Holderer
Coordinating Committee
Field Team - Region III
Files

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

Mr. H. C. Miller, Executive Officer
DMA Field Team, Region III
1012 Flood Building
870 Market Street
San Francisco, California

Dear Sir:

We attach "Review of Application for Exploration Assistance" on:

Docket No. 1749 X

Commodity Manganese

Applicant Armagose Manganese Co.

520 W. 7th Street, Los Angeles, California

Please expedite the consideration of this application with particular reference to the points raised in the attached "Review."

Very truly yours,

Tom Lyon, Chairman
Coordinating Committee

For Bureau of Mines

For Geological Survey

Files for Field Team

July 20,1951

1. 2 Bound reports, "Report Evelyn's Delight Manganese"
2. 1 Copy MR 103 with 4 pages of answers
3. Letter to DMA from Kenneth Rhoads dated 6/26/51

6/5/51

Defense Minerals Administration

Review of Application for Exploration Assistance

Docket No. 1749 X

Commodity Manganese

Total Amount $7,000

Govt. Participation 75% ($5400)

1. Name and Address of Applicant Armagose Manganese Co
520 W 7th St. Los Angeles, Calif.

2. Location of Property T12N R2E San Bernardino Base & Meridian. Approx. 3½ Miles SW of Ashford Mills; 4 Miles S intersection of Warm Springs Canyon Rd. & Wingate Rd Inyo County Calif.

3. Mineral or metal Manganese Is it listed in Section 9 of MO-5?

If not, application will be rejected.

4. Geologic probability of discovery—based on data in application (question #16, 17, 18, 20 and 22)*

Mines or Survey reports, etc., do you rate chances:

a) Good ____

b) Poor ____

c) None ____

d) Don't know—needs field examination ✓

e) Is there an alternative and favorable project? ____
(If so, attach an explanation)

5. Is the applicant's right to the property clearly stated? Yes
(question 5, 6, 7)*

6. If applicant is a lessee, is a copy of the lease attached? —

Does the lease have sufficient time to run to cover a future productive period? —

*question numbers are those of MF-103

7. Are subordination agreements necessary? No

a) MF-201? _____

b) MF-202 _____

8. From the data presented, does the proposed project appear feasible from the point of view of:

a) Available manpower Yes

b) Equipment and supplies Yes
(Question 14 plus general knowledge of availability)*

c) Accessibility (question 12)* Yes

d) Water (question 13)* Yes ?

e) Power (question 13)* Yes

Is a field check needed on any of these points? Water for mining is questionable

9. Does the experience of the applicant appear to be adequate to assure that he can properly conduct the proposed project? (question 4)* Yes

Is a field check needed on this point? No

10. Exhibit A. (questions 21 and 22)*

a) Is the project adequately described? Yes

If not, are there sufficient data given so that you can describe the project? _____ If so, attach a draft.

b) Is there an adequate map or sketch of the proposed work? Yes

c) Is the proposed work "exploration" under the definition of Section 8, MO-5? Yes

If not, what part of it is? _____

Is this part a worthwhile exploration project?_____

d) Are the cost estimates detailed? Yes but they seem low

Can they be summarized, as on page 2 of Procedural Instruction 5-A, from the available data?_____ If so, attach a draft.

e) Are the cost estimates reasonable? They may need additional funds

f) Should more information be requested from applicant?_____

g) Is a field examination necessary to complete Exhibit A? No

11. Exhibit B (question 23-d)*

a) Is it applicable? Yes

b) If so, are sufficient data furnished? Yes If so, attach a draft.

c) Is a field check needed? Yes

12. Exhibit C (question 23-e, f and g)*

a) Is it applicable? Yes

b) Sufficient data? No If so, attach a draft.

c) Are rents and charges reasonable?_____

d) Is a field check needed? Yes

13. Exhibit D (question 23-a, b)*

a) Are there sufficient data? Yes

b) Is the schedule adequate for the work proposed? Yes

c) Is the schedule excessive for the work proposed? No

d) Are the proposed wages and salaries reasonable? Yes

e) Is a field check needed? Yes

14. Exhibit E (question 23-c)*

a) Is it applicable? No

b) Sufficient data? —

c) Reasonable? —

d) Field check needed? —

15. In your judgment, can the proposed work be done in the proposed time? Yes

(All exploration must be completed within two years)

16. If field examination is not needed, attach your recommendation.

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing question? Investigate as to whether or not proposed plan of exploration is the best one possible and whether or not funds requested are adequate.

Reviewed by: [illegible]

[illegible]

Date 7/20/51



INT.-DUP. SEC., WASH., D.C. 99009

June 29, 1951

Mr. Kenneth J. Rhoads, Partner
1[illegible] Oakwood Drive
Arcadia, California

Subject: DMA-1749X
Re: Exploration Loan -
Evelyn's Delight

My dear Mr. Rhoads:

Receipt is acknowledged of your application and attachments of June 26, 1951 for an exploration loan under the Defense Production Act of 1950.

The application was assigned Docket Number DMA-1749X and referred to Mr. George Holderer, Chief, Manganese Branch on June 28, 1951.

In any future correspondence relating to your application, kindly refer to DMA-1749X.

Sincerely yours,

LANDON F. STROBEL
Landon F. Strobel
Executive Secretary

L. F. Strobel:jc
cc: Strobel
File
Holderer
Lyon

June 29, 1951

Mr. Kenneth J. Rhoads, Partner
1220 Oakwood Drive
Arcadia, California

Subject: DMA-1749X
Re: Exploration Loan -
Evelyn's Delight

My dear Mr. Rhoads:

Receipt is acknowledged of your application and attachments of June 26, 1951 for an exploration loan under the Defense Production Act of 1950.

The application was assigned Docket Number DMA-1749X and referred to Mr. George Holderer, Chief, Manganese Branch on June 28, 1951.

In any future correspondence relating to your application, kindly refer to DMA-1749X.

Sincerely yours,

LANDON F. STROBEL

Landon F. Strobel
Executive Secretary

L. F. Strobel:jc
cc: Strobel
File
Holderer
Lyon

Field Form

6/5/51

Defense Minerals Administration

Review of Application for Exploration Assistance

Docket No. 1749X

Commodity Manganese

Total Amount $7,200

Govt. Participation 75%

1. Name and Address of Applicant Armagose Manganese Co
520 W 7th St. Los Angeles, Calif.

2. Location of Property T12N R2E San Bernardino Base & Meridian. Approx. 3½ Miles SW of Ashford Mills; 4 Miles S intersection of Warm Springs Canyon Rd. & Wingate Rd Inyo County Calif.

3. Mineral or metal Manganese Is it listed in Section 9 of MO-5?

If not, application will be rejected.

4. Geologic probability of discovery—based on data in application (question #16, 17, 18, 20 and 22)*

Mines or Survey reports, etc., do you rate chances:

a) Good Yes

b) Poor

c) None

d) Don't know—needs field examination ✓

e) Is there an alternative and favorable project?
(If so, attach an explanation)

5. Is the applicant's right to the property clearly stated? Yes
(question 5, 6, 7)*

6. If applicant is a lessee, is a copy of the lease attached? —

Does the lease have sufficient time to run to cover a future

productive period? —

*question numbers are those of MF-103

7. Are subordination agreements necessary? No

a) MF-201? _____

b) MF-202 _____

8. From the data presented, does the proposed project appear feasible from the point of view of:

a) Available manpower Yes

b) Equipment and supplies Yes
(Question 14 plus general knowledge of availability)*

c) Accessibility (question 12)* Yes

d) Water (question 13)* Yes?

e) Power (question 13)* Yes

Is a field check needed on any of these points? Water for mining is questionable

9. Does the experience of the applicant appear to be adequate to assure that he can properly conduct the proposed project? (question 4)* Yes

Is a field check needed on this point? No

10. Exhibit A. (questions 21 and 22)*

a) Is the project adequately described? Yes

If not, are there sufficient data given so that you can describe the project? _____ If so, attach a draft.

b) Is there an adequate map or sketch of the proposed work? Yes

c) Is the proposed work "exploration" under the definition of Section 8, MO-5? Yes

If not, what part of it is? _____

Is this part a worthwhile exploration project?_____

d) Are the cost estimates detailed? Yes but they seem low

Can they be summarized, as on page 2 of Procedural Instruction 5-A, from the available data?_____ If so, attach a draft.

e) Are the cost estimates reasonable? They may need additional funds

f) Should more information be requested from applicant?_____

g) Is a field examination necessary to complete Exhibit A? No

11. Exhibit B (question 23-d)*

a) Is it applicable? Yes

b) If so, are sufficient data furnished? Yes? If so, attach a draft.

c) Is a field check needed? Yes

12. Exhibit C (question 23-e, f and g)*

a) Is it applicable? Yes

b) Sufficient data? No If so, attach a draft.

c) Are rents and charges reasonable?_____

d) Is a field check needed? Yes

13. Exhibit D (question 23-a, b)*

a) Are there sufficient data? Yes

b) Is the schedule adequate for the work proposed? Yes

c) Is the schedule excessive for the work proposed? No

d) Are the proposed wages and salaries reasonable? Yes

e) Is a field check needed? Yes

14. Exhibit E (question 23-c)*

a) Is it applicable? No

b) Sufficient data? —

c) Reasonable? —

d) Field check needed? —

15. In your judgment, can the proposed work be done in the proposed time? Yes

(All exploration must be completed within two years)

16. If field examination is not needed, attach your recommendation.

17. If field examination is needed, do you have any special instructions for the field team not indicated by your answers to the foregoing question? Investigate as to whether or not proposed plan of exploration is the best one possible and whether or not funds requested are adequate.

Reviewed by: [illegible]

Date 7/18/51



INT.-DUP. SEC., WASH., D.C. 99009

Dma- 1749X

R. M. CHENOWETH (1894-1950)
DAVID S. ROBERTSON
KENNETH J. RHOADS
DAVID M. HARNEY

CHENOWETH AND ROBERTSON
ATTORNEYS AT LAW
520 WEST SEVENTH STREET
LOS ANGELES 14, CALIFORNIA

TELEPHONE
TRINITY 6871

June 26, 1951

Defense Materials Administration
Department of Interior
Washington, 25, D.C.

Gentlemen;

Inclosed are reports, exhibits, and Defense Materials Administration forms MF-200, MF-103, and MF-100 submitted in application for government participation in exploration for manganese on our location in Inyo County, California to the extent of $5400.00

We have been unable to obtain more than two copies of form MF-200, but have inclosed exhibits required in triplicate, and would appreciate your considering this letter the third endorsement and certification.

Please consider me personally ready to supply any additional information which I may give.

Very truly yours,

Kenneth J. Rhoads

Kenneth J. Rhoads
Armagose Manganese Co.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 28 1951
LANDON F. STROBEL
Executive Secretary

STANDARD FORM NO. 64

# *Office Memorandum* • UNITED STATES GOVERNMENT

TO : George B. Holderer DATE: July 17, 1951

FROM : M. D. Crittenden

SUBJECT: DMA 1749 X

The manganese deposit known as the Evelyn's Delight, on which the applicants propose to do $7,200 worth of exploration work, is located at the south end of Death Valley, Inyo County, California. Although several other properties are known in this vicinity, the Geological Survey has no information concerning possible value of this one.

It is suggested, therefore, that the Field Team be requested to examine the property to determine whether or not the proposed exploration is warranted. The following is a suggested draft to the Field Team:

"The Armagose Manganese Company, represented by Kenneth J. Rhoads of Chenoweth & Robertson, Attorneys, 520 W. 7th St., Los Angeles 14, California, has requested assistance in the exploration of a manganese property known as Evelyn's Delight in Inyo County, California. The report attached to the application indicates that the property is located in T. 12 N., R. 2 E. However, the preliminary description indicates that this location is erroneous, and should be T. 21 N., R. 2 E., San Bernardino BL. & M.

This property was located in December 1950 and does not coincide with any of those already known to the Geological Survey.

It is requested, therefore, that the Field Team conduct a preliminary geological appraisal to determine whether ~~an~~ exploration costing $7200 is warranted by the geologic prospects for additional discoveries. It should also be determined whether the proposed method of exploration is the most feasible from both the geological and engineering point of view."

George B. Holderer July 17, 1951

M. D. Crittenden

DMA 1749 X

The manganese deposit known as the Evelyn's Delight, on which the applicants propose to do $7,200 worth of exploration work, is located at the south end of Death Valley, Inyo County, California. Although several other properties are known in this vicinity, the Geological Survey has no information concerning possible value of this one.

It is suggested, therefore, that the Field Team be requested to examine the property to determine whether or not the proposed exploration is warranted. The following is a suggested draft to the Field Team:

"The Armagose Manganese Company, represented by Kenneth J. Rhoads of Chenoweth & Robertson, Attorneys, 520 W. 7th St., Los Angeles 14, California, has requested assistance in the exploration of a manganese property known as Evelyn's Delight in Inyo County, California. The report attached to the application indicates that the property is located in T. 12 N., R. 2 E. However, the preliminary description indicates that this location is erroneous, and should be T. 21 N., R. 2 E., San Bernardino BL. & M.

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It is requested, therefore, that the Field Team conduct a preliminary geological appraisal to determine whether an exploration costing $7200 is warranted by the geologic prospects for additional discoveries. It should also be determined whether the proposed method exploration is the most feasible from both the geological and engineering point of view."

MDCrittenden:gt

R. M. CHENOWETH (1894-1950)
DAVID S. ROBERTSON
KENNETH J. RHOADS
DAVID M. HARNEY

CHENOWETH AND ROBERTSON
ATTORNEYS AT LAW
520 WEST SEVENTH STREET
LOS ANGELES 14, CALIFORNIA

TELEPHONE
TRINITY 6871

June 26, 1951

Defense Materials Administration
Department of Interior
Washington, 25, D.C.

Gentlemen;

Inclosed are reports, exhibits, and Defense Materials Administration forms MF-200, MF-103, and MF-100 submitted in application for government participation in exploration for manganese on our location in Inyo County, California to the extent of $5400.00

We have been unable to obtain more than two copies of form MF-200, but have inclosed exhibits required in triplicate, and would appreciate your considering this letter the third endorsement and certification.

Please consider me personally ready to supply any additional information which I may give.

Very truly yours,

Kenneth J. Rhoads

Kenneth J. Rhoads
Armagose Manganese Co.

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

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

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

DO NOT FILL IN THIS BLOCK

Docket No. Dma-1749X

Date received 6/28/51

Participation

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 28 1951
LANDON F. STROBEL
Executive Secretary

Name and address of applicant

Date

FILL IN THIS BLOCK

Date of application June 26, 1951

Estimated cost $7,200

Mineral or metal Manganese

Percentage of Government participation 75%

Location of mine (See attached exhibit)

Date of filing MF-100 June 26, 1951

DMA Docket Number, if available Unknown

## INSTRUCTIONS

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

## THE APPLICANT

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

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

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

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

16—64067-1

## THE PROPERTY

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

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

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

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

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

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

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

*16. History:
    (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.
    (*b*) State briefly the known history and production of adjoining and neighboring properties.
    (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

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

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

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

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

## THE EXPLORATION

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

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

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

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

## THE REQUIREMENTS AND COSTS

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

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

## CERTIFICATION

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

Armagosa Manganese Co. By [signature]
(Name of company) (Signature of authorized official)

June 26, 1951 Partner
(Date) (Title)

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

*Same as footnote on page 1.

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

Armagosa Manganese Company
520 West Seventh Street
Los Angeles 14, California

Location of Mine:

Located in T 12 N, R2E. (Projected) San Bernardino Base and Meridian. Approximately 3½ miles southwest of Ashford Mill and approximately 4 miles south of intersection of Warm Springs Canyon Road and Wingate Wash Road. Location notice was recorded at City of Independence, Inyo County, State of California on January 22, 1951 in Volume 61, Page 489 of Mining Locations, official records of said county.

Question numbered:

1. Applicant is a partnership

2. Partners:

| Name | Address |
|---|---|
| Kenneth J. Rhoads | 1220 Oakwood Drive<br>Arcadia, California |
| David S. Robertson | 3535 Holboro<br>Los Angeles 27, California |
| O. G. Spencer | Death Valley Junction<br>California |
| Edison L. Conser | 3838 Fernwood<br>Lynnwood, California |

3. Not a corporation

4. Mining and general business experience of applicant:

(a) Applicant is newly-formed partnership for purpose of developing manganese properties. All partners are also original locators. Experience of individual partners is as follows:

| Name | Experience |
|---|---|
| Kenneth J. Rhoads | Assistant Professor School of Finance, University of Southern California; practicing accountant; tax attorney and business consultant; Lt. (j.g.) U.S.N.R. |
| David S. Robertson | Attorney, partner firm of Chenoweth and Robertson, Los Angeles; director, Los Angeles Heart Association; Lieut. Comdr. U.S.N.R. |

4. (continued)

| Name | Experience |
|---|---|
| O. G. Spencer | Retired mining engineer and consultant now resident and Justice of Peace of Death Valley area. |
| Edison L. Conser | Mechanic, welder and foreman; U. S. Army, Prisoner of War. |

(b) The person who will manage the project is Mr. Frank A. Keith, Jr., graduate of Mackay School of Mines, University of Nevada; consulting mining engineer, 20 years experience; 2 years' experience with a manganese property a Sicoro, New Mexico; member of A.I.M.E.

5. Applicant is owner of the property.

6. The property is free and clear of all claims, liens or encumbrances.

7. Not lessee.

8. Partnership assets consist of mining claim, the subject of this application, and one four-wheel drive Dodge truck. There has been no production. There are no liabilities. Partners have contributed a total of $2,050 to the project to date which does not include the cost for services of mining engineer in re preparation of report which is attached hereto as Appendix A.

9. Applicant is prepared to invest $1,800 in the project. It is sufficient to pay applicants' part of the cost of the project as detailed in Question 23 of this application and in accordance with the regulations on Government participation.

10. (a) Mineral Lode Location named "Evelyn's Delight", located in Inyo County. Recorded in Volume 61, Page 489 of Mining Locations Records, City of Independence, County of Inyo official records. Said claim is rectangular in shape, being 1500 feet long and 600 feet wide and extending in a southeasterly - northwesterly direction. It lies to the north of the foothills of the Owlshead Mountains at the southern end of Death Valley. It lies approximately 3½ miles southwest from Ashford Mill and 4 miles south from the intersection of the Warm Springs Canyon Road and the Wingate Wash Road.

10. (b) Legal description of exact parcel upon which exploration is to be conducted is same as that given above.

11. "Evelyn's Delight" is name of location.

12. This question is answered in engineer's report attached hereto as Appendix A, at bottom of page 2 thereof under heading, "Transportation".

13. (a) Water in commercial quantities will not be needed in the mining or production of manganese ore from these properties. Water in commercial quantity is unavailable at this time at the property. Domestic water is readily obtainable in sufficient quantity and will have to be transported to the mine site.

(b) Power to be used will be derived from gasoline or diesel engines.

14. There are no buildings or facilities available except one four-wheel drive Dodge truck because the claim is new and recently discovered.

15. Mojave Trucking Company services mines in the area. In fact they are continuously hauling talc from Warm Springs mines only 3 or 4 miles from applicant's mine site. The Wingate Wash road passes within one-half mile of applicant's site and this latter road intersects the Warm Springs road. Truck road to mine presents no difficulty and can be made in one or two days at minimum of cost. Trucks haul to Dunn on Union Pacific Railroad from whence the ore can be shipped to any point.

Reference is made to mining engineer's report attached hereto as Appendix A, pages 2 and 3 under heading of "Transportation" for more particular details pertinent to this question.

16. (a) Property has not been previously explored to knowledge of applicant. There has been no commercial development or operation of the property. Exploration work to date has been done by hand. Report of mining engineer attached hereto as Appendix A, together with map contained therein, accurately show present status of property development.

(b) California State Division of Mines has made a thorough study of manganese deposits in this area. Their reports indicate considerable number of known manganese deposits in the area. Only a few of these

16. (b) (continued)

have commercially produced ore, mainly due to low quality. Applicant's ore assays show much higher quality of ore than any other known deposit in area. For specific description of adjoining properties, see California Division of Mines Bulletin 152, "Geologic Description of Manganese Deposits of California" section on Inyo County, California, pages 80-83.

(c) Report of Frank A. Keith attached hereto as Appendix A.

17. Mine has never been in production. It is a new discovery.

18. Property has not been operating, but see report of Frank A. Keith attached hereto as Appendix A.

19. None known.

20. Manganese ore: Psilomelane and pyrolusite.

21. Work to be done is outlined on page 3 of engineer's report attached hereto as Appendix A. Work can be started in month of October 1951 and can be completed in early part of 1952 at the latest.

22. Reference is here made to mining engineer's report attached hereto as Appendix A wherein the geological basis of the project with emphasis on factors leading the operators to expect the finding of commercial ore bodies is set forth. Attached to said report is engineer's drawing of deposit as known and discovery work now accomplished. Also is shown work proposed to be done herein by applicant.

Sample lists and assays are attached hereto as Appendix A.

23. Itemized statement of costs of project:

(a) Labor

| | |
|---|---|
| 2 miners @ $17.50 per day for 2 months | $1,540 |
| 1 mucker @ $14.00 per day for 2 months | 616 |

(b) Supervisor at $400 per month for 2 months 800

(c) No needed repairs.

| | | | |
|---|---|---|---|
| 23. | (d) | Construction of dump site, hoist, etc. for shaft | $ 500 |
| | (e) | Needed equipment (minimum) | |
| | | (1) Jeep to haul supplies, equipment and light bulldozing and power uses during development stage | 700 |
| | | (2) Hand tools, powder, etc. | 194 |
| | (f) | Cost of renting equipment | |
| | | (1) Bulldozer | 1,200 |
| | | (2) Air compressor and hammers | 450 |
| | | (3) Air hoist | 250 |
| | (g) | Rental value of Dodge truck (2 months) | 200 |
| | (h) | Cost of materials and supplies | |
| | | (1) Timber for shaft | 600 |
| | | (2) Cost of power and utilities | 150 |
| | | T o t a l | $7,200 |

24. Due to the summer heat in Death Valley it will not be possible to start the project described herein until on or about October 1, 1951. However, applicant will be able to have the project organized, i.e. employees located and hired to start work October 1, 1951; equipment leased, etc. The project will be completed by January 1, 1952. By that date it should be possible to have commercial production started.

Dma - 1749X

R. M. CHENOWETH (1894-1950)
DAVID S. ROBERTSON
KENNETH J. RHOADS
DAVID M. HARNEY

CHENOWETH AND ROBERTSON
ATTORNEYS AT LAW
520 WEST SEVENTH STREET
LOS ANGELES 14, CALIFORNIA

TELEPHONE
TRINITY 6871

June 26, 1951

Defense Materials Administration
Department of Interior
Washington, 25, D.C.

Gentlemen;

Inclosed are reports, exhibits, and Defense Materials Administration forms MF-200, MF-103, and MF-100 submitted in application for government participation in exploration for manganese on our location in Inyo County, California to the extent of $5400.00

We have been unable to obtain more than two copies of form MF-200, but have inclosed exhibits required in triplicate, and would appreciate your considering this letter the third endorsement and certification.

Please consider me personally ready to supply any additional information which I may give.

Very truly yours,

Kenneth J. Rhoads

Kenneth J. Rhoads
Armagose Manganese Co.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 28 1951
LANDON F. STROBEL
Executive Secretary

Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

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

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

DO NOT FILL IN THIS BLOCK

Docket No. Dma-1749X

Date received 6/28/51

Participation

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 28 1951
LANDON F. STROBEL
Executive Secretary

Name and address of applicant

Date

FILL IN THIS BLOCK

Date of application June 26, 1951

Estimated cost $7,200

Mineral or metal Manganese

Percentage of Government participation 75%

Location of mine (See attached exhibit)

Date of filing MF-100 June 26, 1951

DMA Docket Number, if available Unknown

## INSTRUCTIONS

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

## THE APPLICANT

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

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

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement.
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16—64067-1

## THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property.
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State amount of power to be used, rate per hour or other cost, and source.

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

## CERTIFICATION

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Ermagosa Manganese Co. By Kenneth J. Rhoads
(Name of company) (Signature of authorized official)

June 26, 1951 Partner
(Date) (Title)

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| David S. Robertson | 3535 Holboro<br>Los Angeles 27, California |
| O. G. Spencer | Death Valley Junction<br>California |
| Edison L. Conser | 3838 Fernwood<br>Lynnwood, California |

3. Not a corporation

4. Mining and general business experience of applicant:

(a) Applicant is newly-formed partnership for purpose of developing manganese properties. All partners are also original locators. Experience of individual partners is as follows:

| Name | Experience |
|---|---|
| Kenneth J. Rhoads | Assistant Professor School of Finance, University of Southern California; practicing accountant; tax attorney and business consultant; Lt. (j.g.) U.S.N.R. |
| David S. Robertson | Attorney, partner firm of Chenoweth and Robertson, Los Angeles; director, Los Angeles Heart Association; Lieut. Comdr. U.S.N.R. |

4. (continued)

| Name | Experience |
|---|---|
| O. G. Spencer | Retired mining engineer and consultant now resident and Justice of Peace of Death Valley area. |
| Edison L. Conser | Mechanic, welder and foreman; U. S. Army, Prisoner of War. |

(b) The person who will manage the project is Mr. Frank A. Keith, Jr., graduate of Mackay School of Mines, University of Nevada; consulting mining engineer, 20 years experience; 2 years' experience with a manganese property a Sicoro, New Mexico; member of A.I.M.E.

5. Applicant is owner of the property.

6. The property is free and clear of all claims, liens or encumbrances.

7. Not lessee.

8. Partnership assets consist of mining claim, the subject of this application, and one four-wheel drive Dodge truck. There has been no production. There are no liabilities. Partners have contributed a total of $2,050 to the project to date which does not include the cost for services of mining engineer in re preparation of report which is attached hereto as Appendix A.

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16. (a) Property has not been previously explored to knowledge of applicant. There has been no commercial development or operation of the property. Exploration work to date has been done by hand. Report of mining engineer attached hereto as Appendix A, together with map contained therein, accurately show present status of property development.

(b) California State Division of Mines has made a thorough study of manganese deposits in this area. Their reports indicate considerable number of known manganese deposits in the area. Only a few of these

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have commercially produced ore, mainly due to low quality. Applicant's ore assays show much higher quality of ore than any other known deposit in area. For specific description of adjoining properties, see California Division of Mines Bulletin 152, "Geologic Description of Manganese Deposits of California" section on Inyo County, California, pages 80-83.

(c) Report of Frank A. Keith attached hereto as Appendix A.

17. Mine has never been in production. It is a new discovery.

18. Property has not been operating, but see report of Frank A. Keith attached hereto as Appendix A.

19. None known.

20. Manganese ore: Psilomelane and pyrolusite.

21. Work to be done is outlined on page 3 of engineer's report attached hereto as Appendix A. Work can be started in month of October 1951 and can be completed in early part of 1952 at the latest.

22. Reference is here made to mining engineer's report attached hereto as Appendix A wherein the geological basis of the project with emphasis on factors leading the operators to expect the finding of commercial ore bodies is set forth. Attached to said report is engineer's drawing of deposit as known and discovery work now accomplished. Also is shown work proposed to be done herein by applicant.

Sample lists and assays are attached hereto as Appendix A.

23. Itemized statement of costs of project:

(a) Labor

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(b) Supervisor at $400 per month for 2 months 800

(c) No needed repairs.

| | | | |
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| 23. | (d) | Construction of dump site, hoist, etc. for shaft | $ 500 |
| | (e) | Needed equipment (minimum) | |
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dma-1749x

# REPORT

# on

# EVELYN'S DELIGHT MANGANESE PROPERTY

## SUMMARY and CONCLUSIONS:

This manganese property is an interesting prospect with excellent possibilities of developing into a producer of high grade manganese. It is unusual in that the vein occurs in an alluvium area cut by washes, and no rock in place has been found in the vicinity. Three feet of 46% to 48% Mn ore - principally psilomelane and pyrolusite - is exposed for a length of over eighty feet and a like amount of concentrateable ore appears on the footwall. No wall rock has been found to a depth of ten feet.

Further trenching by mechanical means could easily double ore reserves at a cost that may be recovered from ore now exposed. Additional development work can be carried on in such a way that the ore developed will cover the investment.

Present exposures do not indicate a large orebody because the alluvium cover hinders prognostication. Manganese is known to occur in several places in this part of Death Valley.

## LOCATION

The claim "Evelyn's Delight" lies to the north of the foothills of the Owlshead Mountains at the southern end of Death Valley in Inyo County. It is in T12N, $R^2E$, (projected) San Bernardino Base and Meridian, and is south of the Wingate Pass road. The claim is of standard size - 1,500 ft. by 600 ft.

## HISTORY

The claim was located in December of 1950 and the location and other work was done during the spring of 1951.

## GEOLOGY

The outcrop occurs in one of the washes cutting the alluvium in an area of low relief. The drainage in the immediate area is to the north and the ridge to the west of the outcrop rises about 100 ft. above the wash. Approximately a quarter of a mile to the north the wash spreads out into the valley.

As shown in the sketch attached the vein outcrops in a small side wash adjacent to one of the main washes in the area. There is no rock in place in the area and the thickness of the alluvium is unknown. One cut exposes the vein more than 10 ft. below the surface but there is no wall rock. On the 'up-wash' side of the vein in this cut there is some evidence of a damming effect by the outcrop. Sands and gravels are distinctly bedded on narrow layers of three to six inches in thinkness. This is apparent on the side of the cut away from the wash.

The vein strikes N 65° and dips 60° to the NE. The original outcrop in the wash was approximately 5 ft. in width, and where it has been uncovered to the northwest and 5 ft. below the ground surface, there is 3 ft. of highgrade material on the hanging wall side plus 2 ft. to 3 ft. of mixed ore on the footwall. Trenches and cuts have exposed the vein for a distance of 84 ft. along the strike and indicate a thickness of at least 3 ft. of high grade ore (46% to 48% Mn).

## TRANSPORTATION

As this subject is, and will be, one of the major items affecting costs, the following details are given.

By the present roads the property is twelve miles from a paved highway and one-half mile from the Wingate Pass road. It would be relatively easy to make a road from the property to the Warm Springs Canyon road which is now being used by trucks hauling talc from the Warm Springs Mine. The distance to Baker, located on Highway 91, via Shoshone is 91 miles. By using the dirt road that goes out through the southern end of Death Valley the distance is 72 miles but the 31 miles of dirt road is quite rough. However, the climb through Salsbury Pass is eliminated. Fuel, water and minor supplies can be obtained in Shoshone or Baker but major supplies and equipment would have to come from Las Vegas (92 miles from Baker) or Los Angeles (195 miles from Baker).

## SAMPLING

No channel samples have been taken from the vein. Picked samples have been taken by the owners as indicators while doing the work. The high grade is easily distinguished from the mixed ore megascopically and 2 samples give an average value of 48.40 for the high grade material which is essentially a mixture of psilomelane and pyrolusite. Samples of the mixed ore gave an average value of 36.72. Some of this ore consists of nodules of psilomelane cemented in a gangue of porphyritic pebbles which appear to be in the 1/4" size range. This ore should concentrate readily.

ORE RESERVES

While the vein has been actually exposed for a distance of only 84 feet it is entirely reasonable to assume that it extends out under the wash and into the hill of alluvium. However, disregarding this possibility and using the exposed length, with one-half the length for depth and three feet of width, there is shipping ore amounting to 1,125 long tons (using a factor of 8 cu.ft. per ton). There would also probably be at least 1,000 tons of mixed ore which would be mined at the same time.

PROSPECTS

The possibilities of developing additional ore are excellent. To the southeast the vein disappears under the wash and may also veer slightly south. At this end trenching with a bulldozer would delineate as well as prove or disprove the extention in this direction. Similar tenching may also be done to the northwest. However, the alluvium is well consolidated and the amount of material covering the vein is unknown. Nevertheless, if another 50 feet were added to the length of the vein the assumed ore reserves could be doubled.

Until more is known about the deposit(vein structure, wall rock, etc.) it would be venturesome to attempt to predict to what depth high grade ore would persist. However, in view of the fact that the vein has been much more resistant to erosion than the surrounding country rock and that it is well defined for a known length of 84 ft. it would be reasonable to assume good values would extend to a depth of at least 50 feet.

The trenching that has been done has only nicked the surface except in one place where the vein has been cut to a depth of 5 ft. In this cut the high grade streak tends to widen with depth. Consequently, as the other cuts indicate a width of 3 ft. of high grade, it is reasonable to assume an average width of 3 ft. of this material The mixed ore varies from two to three feet in the trenches.

RECOMMENDATIONS

1. Trenching with a bulldozer to the southeast of the location monument starting on the bank near the monument and working toward the south. This trenching should be normal to the vein or in a NE - SW direction.

2. Trenching with a bulldozer and ripper to the northwest of the last exposure of the vein. This trench should be within 20 ft. of the exposure as the depth of the alluvium over the vein may increase rapidly in the uphill direction. Should this not be the case further trenching could be done at a low cost.

3. Sink a 50 ft. exploratory shaft on the vein. This should stay with the high grade ore but also should be usable as a work shaft. It should be located out of the wash to allow dump room and avoid trouble in case of a cloudburst.

These recommendations are made with the intention of developing the ore body and at the same time keeping expenditures within limits that are recoverable from the ore exposed. Should Step #1 and #2 fail to expose additional ore it might be well to consider making an open cut on the vein.

The shaft sinking operation should be watched carefully to insure that the contractor stays with the ore. An understanding with the contractor must be made on this matter.

Provided the ore is as expected at the 50 ft. level drifts could be run in both directions and some revenue obtained therefrom. Stoping from this level could begin as soon as a second exit was raised to the surface. Further work would have to be planned as the development took place.

The above underground development should be done by two men with perhaps the addition of a third after drifting begins.

Respectfully submitted,

Frank A. Keith, Jr.
Consulting Mining Engineer

June 23, 1951

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dma-1749X

R. M. CHENOWETH (1894-1950)
DAVID S. ROBERTSON
KENNETH J. RHOADS

CHENOWETH AND ROBERTSON
ATTORNEYS AT LAW
520 WEST SEVENTH STREET
LOS ANGELES 14, CALIFORNIA

TELEPHONE
TRINITY 6871

June 26, 1951

COPY

Defense Minerals Administration
Department of the Interior
Washington 25, D. C.

Gentlemen: Re: Armagosa Manganese Company
filing of information required by
Form MP-100

The undersigned is a partner and the attorney for the Armagosa Manganese Company whose principal office is Room 520, 520 West Seventh Street, Los Angeles 14, California.

The Armagosa Manganese Company owns manganese mining claims in the southern end of Death Valley in the State of California. The claims are new discoveries and no ore has been commercially produced as yet. Additional exploration work and commencement of production is planned to commence in October 1951. For these reasons, it is felt that the following information may be required by your office and is therefore respectfully submitted:

(1) The company will mine and produce for sale, manganese ore containing from 44% to 49% manganese. All crucial impurities will be less than specifications of General Services Administration Strategic and Critical Materials Branch of the United States Government. There will be no by-products.

(2) The mining operation will be located in Inyo County, State of California, to the north of the foothills of the Owlshead Mountains at the southern end of Death Valley. It is in T. 12 N., R. 2 E., (projected) San Bernardino Base and Meridian. It is located approximately 35 miles west of Shoshone and 80 miles north of Baker. The nearest railroad shipping point is Dunn, which is approximately 115 miles from the site and which lies on the main east-west line of the Union Pacific Railroad.

(3) Two miners and one mucker will be employed.

(4) No ore has previously been produced. Engineer's report indicates a minimum of 1,000 tons of 46% to 48% man-

ganese ore outlined at present time by hand exploration methods. It is not possible at present to give an accurate monthly average production.

CERTIFICATION

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

ARMAGOSA MANGANESE COMPANY By Kenneth J. Rhoads
Kenneth J. Rhoads, Partner

June 26, 1951

Very truly yours,

Kenneth J. Rhoads
Kenneth J. Rhoads

jb

Dma-1749X

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# REPORT

on

# EVELYN'S DELIGHT MANGANESE PROPERTY

## SUMMARY and CONCLUSIONS:

This manganese property is an interesting prospect with excellent possibilities of developing into a producer of high grade manganese. It is unusual in that the vein occurs in an alluvium area cut by washes, and no rock in place has been found in the vicinity. Three feet of 46% to 48% Mn ore - principally psilomelane and pyrolusite - is exposed for a length of over eighty feet and a like amount of concentrateable ore appears on the footwall. No wall rock has been found to a depth of ten feet.

Further trenching by mechanical means could easily double ore reserves at a cost that may be recovered from ore now exposed. Additional development work can be carried on in such a way that the ore developed will cover the investment.

Present exposures do not indicate a large orebody because the alluvium cover hinders prognostication. Manganese is known to occur in several places in this part of Death Valley.

## LOCATION

The claim "Evelyn's Delight" lies to the north of the foothills of the Owlshead Mountains at the southern end of Death Valley in Inyo County. It is in T12N, R2E, (projected) San Bernadino Base and Meridian, and is south of the Wingate Pass road. The claim is of standard size - 1,500 ft. by 600 ft.

## HISTORY

The claim was located in December of 1950 and the location and other work was done during the spring of 1951.

## GEOLOGY

The outcrop occurs in one of the washes cutting the alluvium in an area of low relief. The drainage in the immediate area is to the north and the ridge to the west of the outcrop rises about 100 ft. above the wash. Approximately a quarter of a mile to the north the wash spreads out into the valley.

As shown in the sketch attached the vein outcrops in a small side wash adjacent to one of the main washes in the area. There is no rock in place in the area and the thickness of the alluvium is unknown. One cut exposes the vein more than 10 ft. below the surface but there is no wall rock. On the 'up-wash' side of the vein in this cut there is some evidence of a damming effect by the outcrop. Sands and gravels are distinctly bedded on narrow layers of three to six inches in thickness. This is apparent on the side of the cut away from the wash.

The vein strikes N 65°W and dips 60° to the NE. The original outcrop in the wash was approximately 5 ft. in width, and where it has been uncovered to the northwest and 5 ft. below the ground surface, there is 3 ft. of highgrade material on the hanging wall side plus 2 ft. to 3 ft. of mixed ore on the footwall. Trenches and cuts have exposed the vein for a distance of 84 ft. along the strike and indicate a thickness of at least 3 ft. of high grade ore (46% to 48% Mn).

## TRANSPORTATION

As this subject is, and will be, one of the major items affecting costs, the following details are given.

By the present roads the property is twelve miles from a paved highway and one-half mile from the Wingate Pass road. It would be relatively easy to make a road from the property to the Warm Springs Canyon road which is now being used by trucks hauling talc from the Warm Springs Mine. The distance to Baker, located on Highway 91, via Shoshone, is 91 miles. By using the dirt road that goes out through the southern end of Death Valley the distance is 72 miles but the 31 miles of dirt road is quite rough. However, the climb through Salsbury Pass is eliminated. Fuel, water and minor supplies can be obtained in Shoshone or Baker but major supplies and equipment would have to come from Las Vegas (92 miles from Baker) or Los Angeles (195 miles from Baker).

## SAMPLING

No channel samples have been taken from the vein. Picked samples have been taken by the owners as indicators while doing the work. The high grade is easily distinguished from the mixed ore megascopically and 2 samples give an average value of 48.40 for the high grade material which is essentially a mixture of psilomelane and pyrolusite. Samples of the mixed ore gave an average value of 36.72. Some of this ore consists of nodules of psilomelane cemented in a gangue of porphyritic pebbles which appear to be in the 1/4" size range. This ore should concentrate readily.

## ORE RESERVES

While the vein has been actually exposed for a distance of only 84 feet it is entirely reasonable to assume that it extends out under the wash and into the hill of alluvium. However, disregarding this possibility and using the exposed length, with one-half the length for depth and three feet of width, there is shipping ore amounting to 1,125 long tons (using a factor of 8 cu. ft. per ton). There would also probably be at least 1,000 tons of mixed ore which would be mined at the same time.

## PROSPECTS

The possibilities of developing additional ore are excellent. To the southeast the vein disappears under the wash and may also veer slightly south. At this end trenching with a bulldozer would delineate as well as prove or disprove the extention in this direction. Similar tenching may also be done to the northwest. However, the alluvium is well consolidated and the amount of material covering the vein is unknown. Nevertheless, if another 40 feet were added to the length of the vein the assumed ore reserves could be doubled.

Until more is known about the deposit (vein structure, wall rock, etc.) it would be venturesome to attempt to predict to what depth high grade ore would persist. However, in view of the fact that the vein has been much more resistant to erosion than the surrounding country rock and that it is well defined for a known length of 84 ft. it would be reasonable to assume good values would extend to a depth of at least 50 feet.

The trenching that has been done has only nicked the surface except in one place where the vein has been cut to a depth of 5 ft. In this cut the high grade streak tends to widen with depth. Consequently, as the other cuts indicate a width of 3 ft. of high grade, it is reasonable to assume an average width of 3 ft. of this material. The mixed ore varies from two to three feet in the trenches.

## RECOMMENDATIONS

1. Trenching with a bulldozer to the southeast of the location monument starting on the bank near the monument and working toward the south. This trenching should be normal to the vein or in a NE - SW direction.

2. Trenching with a bulldozer and ripper to the northwest of the last exposure of the vein. This trench should be within 20 ft. of the exposure as the depth of the alluvium over the vein may increase rapidly in the uphill direction. Should this not be the case further trenching could be done at a low cost.

3. Sink a 50 ft. exploratory shaft on the vein. This should stay with the high grade ore but also should be usable as a work shaft. It should be located out of the wash to allow dump room and avoid trouble in case of a cloudburst.

4

These recommendations are made with the intention of developing the ore body and at the same time keeping expenditures within limits that are recoverable from the ore exposed. Should Step #1 and #2 fail to expose additional ore it might be well to consider making an open cut on the vein.

The shaft sinking operation should be watched carefully to insure that the contractor stays with the ore. An understanding with the contractor must be made on this matter.

Provided the ore is as expected at the 50 ft. level drifts could be run in both directions and some revenue obtained therefrom. Stoping from this level could begin as soon as a second exit was raised to the surface. Further work would have to be planned as the development took place.

The above underground development should be done by two men with perhaps the addition of a third after drifting begins.

Respectfully submitted,

Frank A. Keith Jr.

Frank A. Keith, Jr.

June 23, 1951

View to SE - along strike of vein.

Monument

Vein exposed is between the two figures.

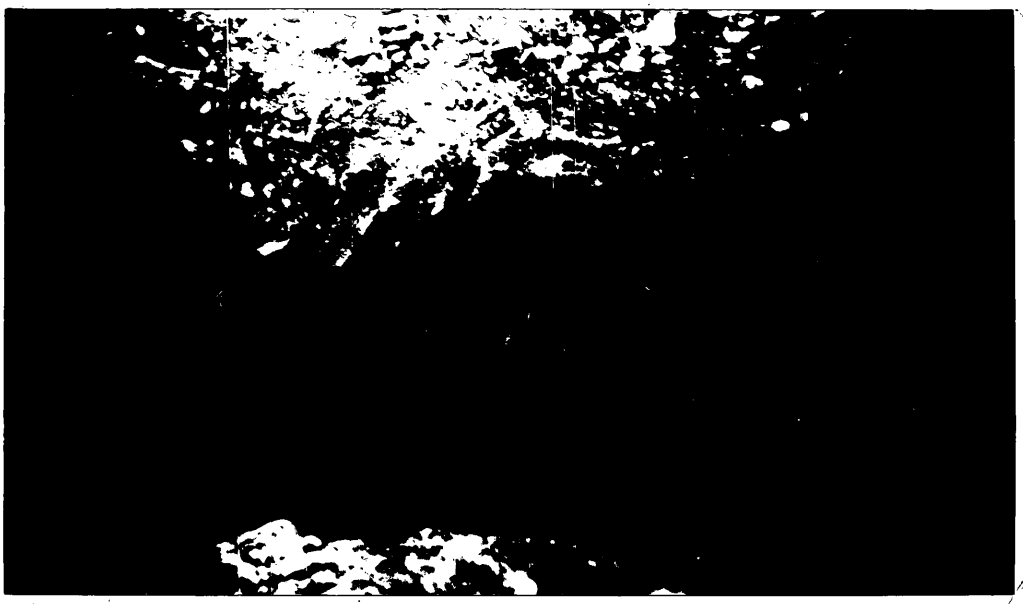
Cut #1 Looking to SE

H.W. / Highgrade ore \ Mixed ore

Pick handle

Note "A" structure of highgrade ore.

Cut #2 Looking to SE

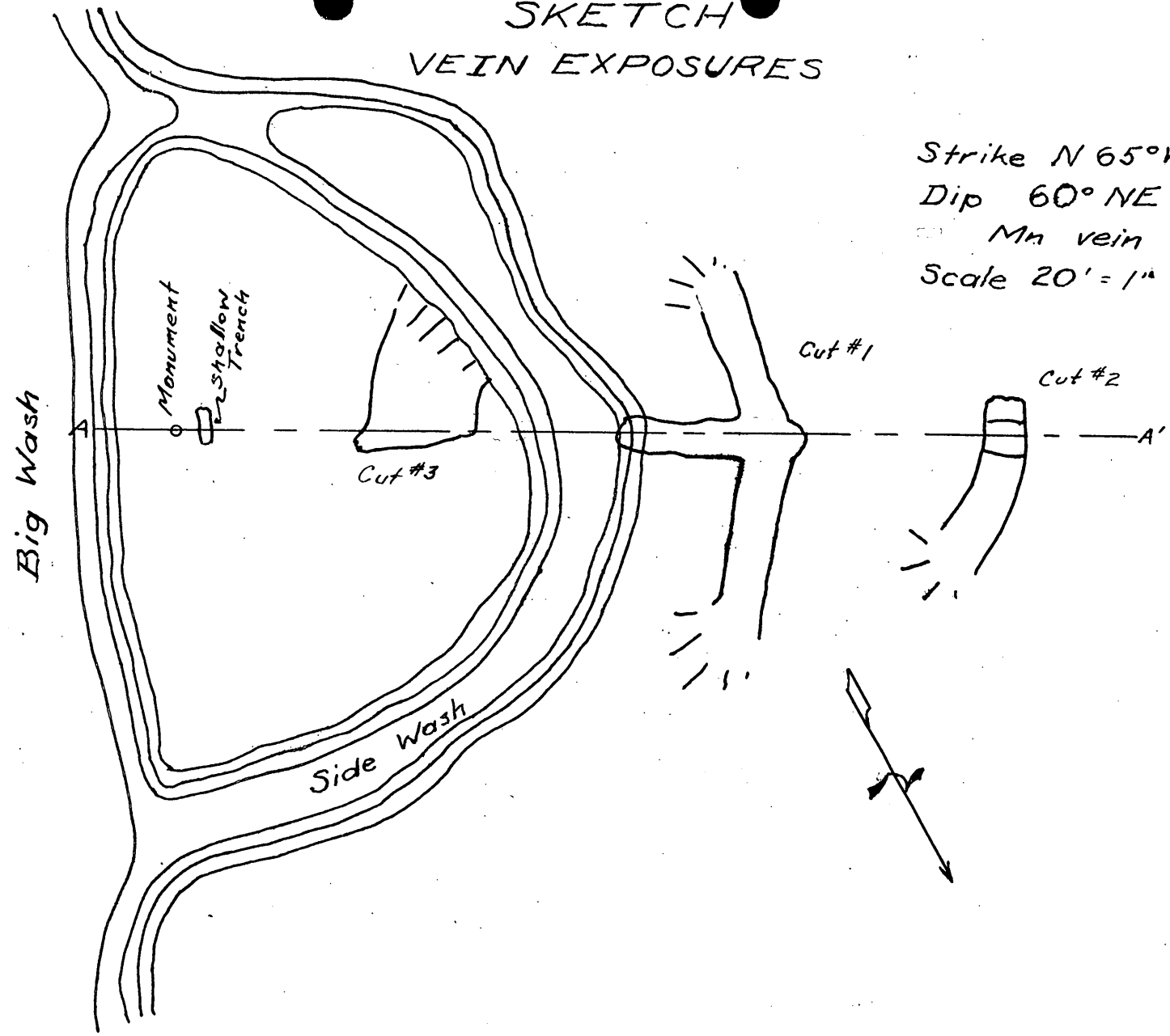


Wheel-barrow

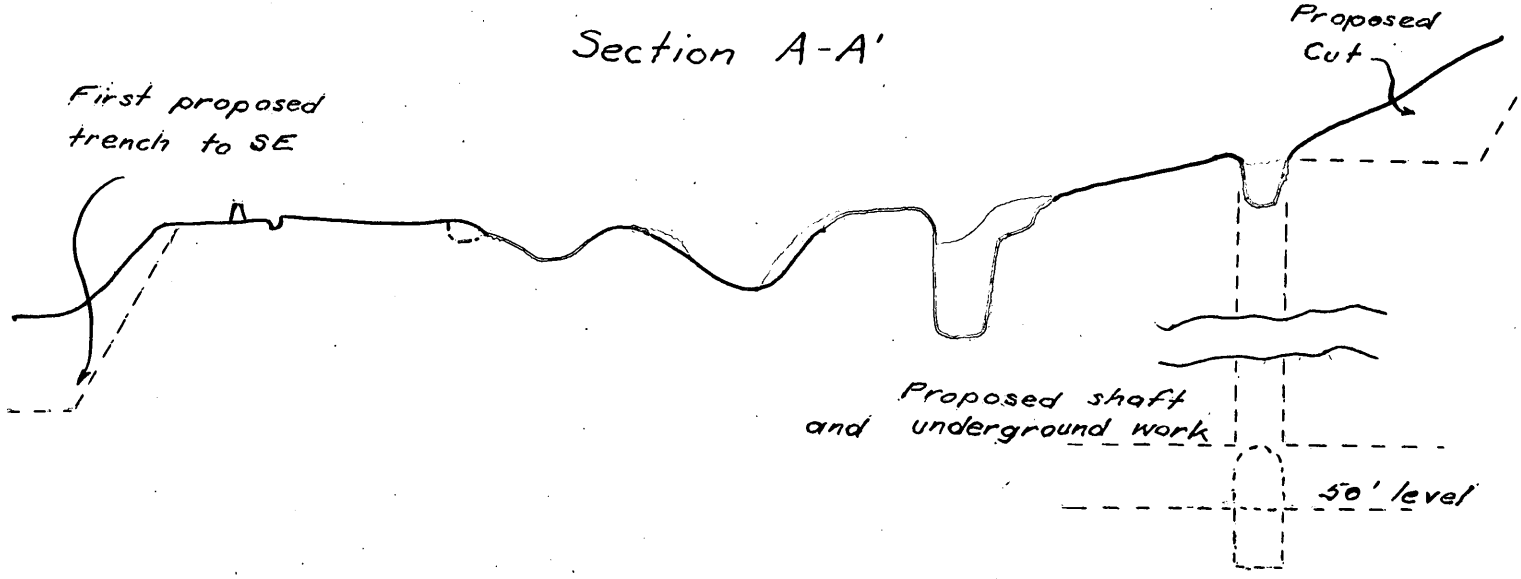
Highgrade on hanging wall.

# SKETCH
## VEIN EXPOSURES

Strike N 65° W
Dip 60° NE
Mn vein
Scale 20' = 1"




## Section A-A'



Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

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

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

DO NOT FILL IN THIS BLOCK

Docket No. Dma-1749X

Date received 6/28/51

Participation

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
JUN 28 1951
LANDON F. STROBEL
Executive Secretary
Date

Name and address of applicant

FILL IN THIS BLOCK

Date of application June 26, 1951

Estimated cost $7,200

Mineral or metal Manganese

Percentage of Government participation 75%

Location of mine (See attached exhibit)

Date of filing MF-100 June 26, 1951

DMA Docket Number, if available Unknown

## INSTRUCTIONS

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

## THE APPLICANT

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

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

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

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

16—64067-1

## THE PROPERTY

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

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

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

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

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

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

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

*16. History:
    (*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations.
    (*b*) State briefly the known history and production of adjoining and neighboring properties.
    (*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations.

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

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

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

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

## THE EXPLORATION

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

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

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

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

## THE REQUIREMENTS AND COSTS

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

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

## CERTIFICATION

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

Armagosa Manganese Co
(Name of company)

By Kenneth J. Rhoads
(Signature of authorized official)

June 26, 1951
(Date)

Partner
(Title)

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

*Same as footnote on page 1.

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

TRINITY 4791

FORM 1

LABORATORY REPORT

# SMITH-EMERY COMPANY

CHEMICAL ENGINEERS AND CHEMISTS
METALLURGICAL AND TESTING ENGINEERS
920 SANTEE STREET
LOS ANGELES 15

C O P Y

*LABORATORY No.* 331358

*Date* January 10, 1951

*Sample* Ore

*Received* 1-8-51

*Marked*

*Submitted by* David Robertson,
520 West 7th Street,
Los Angeles, 14, California.

## REPORT OF DETERMINATION

| | |
|---|---|
| Manganese (Mn) ---------- | 47.95% |
| Silica ($SiO_2$) ---------- | 1.60% |
| Iron (Fe) ---------- | 0.75% |

Respectfully submitted,

Smith-Emery
CHEMISTS AND ENGINEERS
EOS

ALL REPORTS ARE SUBMITTED AS THE CONFIDENTIAL PROPERTY OF CLIENTS, AUTHORIZATION FOR PUBLICATION OF OUR REPORTS, CONCLUSIONS, OR, EXTRACTS FROM OR REGARDING THEM IS RESERVED PENDING OUR WRITTEN APPROVAL AS A MUTUAL PROTECTION TO CLIENTS, THE PUBLIC AND OURSELVES.

TRINITY 4791 FORM 1

LABORATORY REPORT

# SMITH-EMERY COMPANY

CHEMICAL ENGINEERS AND CHEMISTS
METALLURGICAL AND TESTING ENGINEERS
920 SANTEE STREET
LOS ANGELES 15

*LABORATORY No.* 334440 *Date* March 19, 1951

*Sample* Ore

*Received* 3-16-51 *Marked* "Sample A"

*Submitted by* David Robertson
520 West 7th Street,
Los Angeles, California.

REPORT OF DETERMINATIONS

| | |
|---|---|
| Manganese (Mn) | 48.85% |
| Silica ($SiO_2$) | 6.78% |
| Iron (Fe) | 0.56% |
| Phosphorus (P) | 0.020% |
| Sulphur (S) | 0.033% |

Respectfully submitted,

CHEMISTS AND ENGINEERS

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TRINITY 4791

FORM 1

LABORATORY REPORT

# SMITH-EMERY COMPANY

CHEMICAL ENGINEERS AND CHEMISTS
METALLURGICAL AND TESTING ENGINEERS
920 SANTEE STREET
LOS ANGELES 15

*LABORATORY No.* 331767-72

*Date* January 22, 1951

*Sample* Ore

*Received* 1-17-51 *Marked*

*Submitted by* David S. Robertson,
520 West 7th Street,
Los Angeles, 14, California.

## REPORT OF DETERMINATIONS

| | | |
|---|---|---|
| "E.D. #1" | | |
| | Manganese (Mn) | 39.60% |
| "E.D. #2" | | |
| | Manganese (Mn) | 41.76% |
| | Silica ($SiO_2$) | 2.80% |
| | Iron (Fe) | 0.25% |
| "E.D. #5" | | |
| | Manganese (Mn) | 28.80% |
| "X-Wash" | (Taken from another location) | |
| | Manganese (Mn) | 4.17% |
| "Mtn #3" | (Taken from another location) | |
| | Manganese (Mn) | 2.88% |
| "Mtn #2" | (Taken from another location) | |
| | Manganese (Mn) | 5.32% |

Respectfully submitted,

Smith Emery Co

CHEMISTS AND ENGINEERS

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