Mr. G. C. Selfridge, Chief
Iron and Ferro-Alloy Division

December 17, 1952

T. L. Chapman

2651

Docket No. DMEA 2651 - Manganese
J. E. Miera and Valentine Burrola
Buena Vista Claims
Socorro County, New Mexico

Location

Eastern foothills of Magdalena Mountains, about 10 miles west of San Antonio, Socorro County, New Mexico, Sec. 2, T. 5 S., R. 3 W.

History

First discovered and located in 1914 by Valentine Burrola. Allowed to lapse and five claims relocated in 1940. Explored deposit over a 75-foot length with a 15-foot shaft, a short adit, and an open cut. First located as public domain, but was found to be on public school land and is now controlled by leasing from the State of New Mexico.

Geology

Manganese occurs in a fault zone in flows of volcanic rocks. The fault zone is 2 to 6 feet wide with irregular walls. Traced over a length of about 400 feet. Psilomelane and pyrolusite are foundin the fault zone and probably continues to considerable depth as the outcrops are several hundred feet above water level.

One hundred tons of rock mined produced about 5 tons of ore assaying 14 to 45 percent manganese. Amount of ore that can be sorted out to a 45 percent grade very small. Estimated by geologist that 15 percent of vein is mineral bearing; 1 percent of ore will run 45 percent manganese; 5 percent, 13 to 14 percent manganese; and the remaining 9 percent of fault filling shows very little value.

Conclusions

The amount of ore that could be produced from the property would be too small to warrant exploration.

Recommendation

It is recommended that the application for Government assistance be denied. The Field Team of Region IV denied Government aid in a letter to the applicant, dated December 8, 1952.

The Iron and Ferro-Alloy Division, DMEA, concurs in the denial.

TLChapman:ls 12/17/52

T. L. Chapman

cc: Docket
Admn. Read. File
N. B. Melcher, USBM
M. D. Crittenden
G. C. Selfridge

Mr. G. G. Selfridge, Chief
Iron and Ferro-Alloy Division

December 17, 1952

T. I. Chapman

Docket No. DMEA 2651 - Manganese
J. M. Mera and Valentine Barrola
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Socorro County, New Mexico

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Geology

Manganese occurs in a fault zone in flows of volcanic rocks. The fault zone is 2 to 6 feet wide with irregular walls. Traced over a length of about 400 feet. Pellomelane and pyrolusite are found in the fault zone and probably continues to considerable depth as the outcrops are several hundred feet above water level.

One hundred tons of rock mined produced about 5 tons of ore assaying 16 to 45 percent manganese. Amount of ore that can be sorted out to a 45 percent grade very small. Estimated by geologist that 15 percent of vein is mineral bearing; 1 percent of ore will run 45 percent manganese; 5 percent, 15 to 16 percent manganese; and the remaining 9 percent of fault filling show very little value.

Conclusions

The amount of ore that could be produced from the property would be too small to warrant exploration.

Recommendation

It is recommended that the application for Government assistance be denied. The Field Team of Region IV denied Government aid in a letter to the applicant, dated December 8, 1952.

The Iron and Ferro-Alloy Division, DMEA, concurs in the denial.

TIChapman:le 12/17/52

cc: Docket
Admin. Read. File
M. S. Meigner, USFM
H. D. Crittenden
G. G. Selfridge

T. I. Chapman

STANDARD FORM NO. 64

400 file

Office Memorandum • UNITED STATES GOVERNMENT

TO : Mr. G. C. Selfridge, Chief
Iron and Ferro-Alloy Division

DATE: December 17, 1952

FROM : T. L. Chapman

SUBJECT: Docket No. DMEA 2651 - Manganese
J. E. Miera and Valentine Burrola
Buena Vista Claims
Socorro County, New Mexico

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Eastern foothills of Magdalena Mountains, about 10 miles west of San Antonio, Socorro County, New Mexico, Sec. 2, T. 5 S., R. 3 W.

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Geology

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One hundred tons of rock mined produced about 5 tons of ore assaying 14 to 45 percent manganese. Amount of ore that can be sorted out to a 45 percent grade very small. Estimated by geologist that 15 percent of vein is mineral bearing; 1 percent of ore will run 45 percent manganese; 5 percent, 13 to 14 percent manganese; and the remaining 9 percent of fault filling shows very little value.

Conclusions

The amount of ore that could be produced from the property would be too small to warrant exploration.

Recommendation

It is recommended that the application for Government assistance be denied. The Field Team of Region IV denied Government aid in a letter to the applicant, dated December 8, 1952.

The Iron and Ferro-Alloy Division, DMEA, concurs in the denial.

cc - Docket
- admn Rd file
- Melcher - B/M
- Cutterden B.S.

T. L. Chapman

STANDARD FORM NO. 64

Office Memorandum • UNITED STATES GOVERNMENT

TO : Geo. C. Selfridge

DATE: 12-11-52

12/12/52

FROM : Max D. Crittenden

SUBJECT: DMEa-2651 (manganese

J. E. Mira + Valentine Burrola

Box 215, San Antonio, New Mexico

Rejection sustained

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

224 New Customhouse
Denver 2, Colorado

December 2, 1952

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: 210

From: Field Team, Region IV

Subject: Final Report, DMEA Docket 2651, (Manganese) J. E. Miera and V. Burrola, Buena Vista Claims, Socorro County, New Mexico

Enclosed are four copies of the final report on DMEA 2651, two copies of Form 3b, and a copy of the letter of denial to the applicant.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 8 1952

W. H. King
W. H. King

A. H. Koschmann
A. H. Koschmann

Enclosures

Forms 3b retained in Docket & Control - 12/8/52 - BS

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

New Customhouse
Denver 2, Colorado

December 2, 1952

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 8 1952

Mr. Joe E. Miera
Mr. Valentine Burrola
Box 215
San Antonio, New Mexico

Re: DMEA Docket 2651

Gentlemen:

Reference is made to your application for Government aid in exploration work on the Buena Vista Claims.

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

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

Very truly yours,

W. H. King

W. H. King
Field Team, Region IV

A. H. Koschmann

A. H. Koschmann
Field Team, Region IV

HMC:oc
cc: Administrator (DMEA)
WRStorms
Subject
Chron.
AHKoschmann (2)

Reviewed by
DMEA OPERATING COMMITTEE
12-12-52
(Date)

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
DEC 8 1952

November 28, 1952

GB
12/22/52

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 2651, Buena Vista Claims, Socorro County, New Mexico.
J. E. Miera and V. Burrola. Manganese.

Enclosed are the original and 8 copies of the geological report by J. N. Faick of the U. S. Geological Survey, covering the above docket. It has been recommended that the loan be denied.

The U. S. Bureau of Mines will not submit a report.

The brochure is enclosed.

A. H. Koschmann
A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (10)

Reviewed by
DMEA OPERATING COMMITTEE
12-12-52
(date)

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

November 25, 1952

Memorandum

To: Field Team, Region IV, Denver, Colorado
Through: Mr. A. N. Koschmann

From: A. F. Shride, Tucson, Arizona

Subject: Final Report, DMEA 2651, Buena Vista Claims (Manganese), J. E. Miera and V. Burrola, Socorro County, New Mexico

Enclosed are the original and 8 copies of the above report by J. N. Faick of the Geological Survey.

It is recommended that an exploration loan be denied for lack of potential of significant amounts of manganese. The report and this recommendation have my approval.

The Bureau of Mines will not submit a report on this application. In Mr. Storms'absence I am taking the liberty of forwarding this as the final report.

The brochure is enclosed.

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

Enclosures 10

BUENA VISTA CLAIMS
JOE E. MIERA AND VALENTIN BURROLA
SOCORRO COUNTY, NEW MEXICO
DMEA 2651

MANGANESE

Geology

By
John N. Faick
Geologist, U. S. Geological Survey

BUENA VISTA CLAIMS
JOE E. MIERA AND VALENTIN BURROLA
SOCORRO COUNTY, NEW MEXICO
DMEA 2651

MANGANESE

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INTRODUCTION

The Buena Vista manganese claims, Socorro County, New Mexico, were examined in connection with a request for Government exploration assistance. The application was submitted by Messrs. Joe E. Miera and Valentine Burrola, residents of Socorro and Gallup, New Mexico respectively. The application requested assistance for exploration estimated to cost $25,000, of which the applicants propose to use $2,000 for building an access road, the remainder to be used for purchase of equipment and supplies. No definite methods for exploration of the manganese deposit were proposed. The application to the Defense Minerals Exploration was docketed as DMEA 2651.

The property was examined by John N. Faick of the U. S. Geological Survey on October 27, 1952, with the object of determining if the requested assistance is justified. The examiner was guided to the prospect by the applicants.

LOCATION, TOPOGRAPHY, AND CLIMATE

The Buena Vista claims are situated in the eastern foothills of the Magdalena Mountains, and are about 10 miles west of San Antonio, Socorro County, New Mexico. The claims are reported by the applicants to be in section 2, T. 5 S., R. 3 W. The property may be reached by driving south from San Antonio along U. S. Highway 85, a distance of 18 miles to the San Marcial road. At this crossroad an improved ranch road leads northwesterly about 11.5 miles to the headquarters of the Diamond A ranch. Only a very poor abandoned road extends beyond the ranch headquarters, but it is possible to drive a truck an additional 2 miles and to go another mile by jeep, to within $\frac{1}{4}$ mile of the prospect. The prospect is situated several hundred feet above the valley floor and can be reached by climbing the steep hillside, a 37 degree slope.

The prospect is in an area of rough topography and the hills are partly covered with scrubby juniper, pine, live oak, and several varieties of grasses. Annual rainfall averages about 15 inches in the area. The nearest available water is a permanent spring at the headquarters of the Diamond A ranch, about $3\frac{1}{4}$ miles from the prospect, but it is probable that water could be obtained by drilling wells in nearby canyons.

HISTORY AND OWNERSHIP

The Buena Vista manganese deposit was first discovered by Mr. Valentin Burrola about 1914. At that time he was unable to develop the deposit and permitted the claim to lapse until about 1940 when he relocated the prospect with 5 unpatented claims. Between 1940 and 1952 Mr. Burrola sank a 15-foot shaft, continued an open cut and adit for a few feet, thereby bringing the prospect to its present state of development. It is explored for a strike length of about 75 feet and maximum depth of about 15 feet. The prospect was originally thought to be on Public Domain and was claimed by lode locations, but subsequently the property was surveyed and found to be on Public School lands and is now controlled by leasing from the State of New Mexico.

MANGANESE DEPOSIT

The Buena Vista manganese deposit occupies a fault zone or fissure in a very thick series of volcanic rocks, probably rhyolite flows, of probable Tertiary age. The fault strikes N. 5° W. and dips 78° southwest. It has clearly discernable walls that are quite irregular, angular, and blocky, giving the impression that the fault developed under tension with only nominal movement along it. The walls are from 2 to 6 feet apart in the explored area of the fault zone, but extensions along the fault zone are concealed with residual debris and little could be learned of its character.

The presence of manganese stain and small pieces of psilomelane in the debris along the projected course of the fissure attest to its probable continuity for about 300 or 400 feet. The depth to which the manganese oxides persist is unknown but as the deposit is situated several hundred feet above the water table it is not unlikely that oxidation has taken place to considerable depth, and that manganese oxides probably occur throughout the zone of oxidation.

The fault zone is partly filled with blocks and fragments of country rock around which are deposited manganese and iron oxide minerals, thus forming a vein-like deposit. The manganese ore consists of pyrolusite, and psilomelane with which limonite is associated. Limonite and fragments of wall rock are the principal gangue materials present, and these are estimated to constitute about 5 percent and about 80 percent respectively of the fissure filling, the remainder being manganese ore.

The pyrolusite occurs as friable loose granular or dust-like material and the psilomelane forms veinlets, lumps, or rounded masses. The ore minerals fill or partly fill interstices in the shattered wall rock, from which the ore minerals may be readily segregated by hand methods. The vein has been explored by an open cut, short adit, and a shallow shaft for a total strike length of about 75 feet, and a maximum depth of about 15 feet below the surface. Of this explored zone about 2/3 has been mined out to yield the small amount of ore now piled on the dumps; very little has been shipped. It is estimated that approximately 100 tons of the ore zone was mined out to yield about 5 tons of soft pyrolusite ore and about 1 ton of hard psilomelane ore. Four samples of the ore and vein material were assayed as follows:

Number	Description of Sample	Percent Manganese
12801	Sample of sorted hard lump ore	43.5
12802	Sample of largest pile of sorted soft, fine ore	13.8
12803	18 inch vein on north side of shaft	18.6
12804	22 inch vein on south side of shaft	19.0

From the above analysis it is apparent that ore of a good grade could be obtained from the deposit. The amount that may be present, however, is highly speculative and in this writer's opinion is probably very small.

This writer estimates that about 15 percent of the fissure filling is manganiferous material of which one percent contains from 40 to 45 percent manganese, and about 5 percent contains about 13 to 14 percent manganese. The remaining 9 percent of the vein filling is a mixture of manganese oxide, iron oxide, and waste rock of very low manganese content. Some of the best ore observed in the vein by this writer is near the bottom of the 15 foot shaft. This is about 20 inches wide and contains 19 percent manganese where sampled.

According to the September 22, 1952, purchase program for domestic manganese ore at Deming, New Mexico, any ore containing less than 15 percent manganese is not acceptable, and as there is no other market available for this grade of ore it is concluded that most of the Buena Vista ore is not marketable. Ore containing 19 percent manganese is quoted at $15.48, F.O.B. Deming, which this writer estimates is less than the cost of production and delivery to the stockpile. Ore containing 43 percent manganese is valued at about $94,00 per long ton; a very good price that would yield a profit to many mines. On the Buena Vista prospect, however, only trivial amounts of this grade of ore could be produced by hand sorting.

Although we do not know the length of depth of the Buena Vista ore shoot, the above data offer a fair measure of its potential. An assumed block of ore having a strike length of about 100 feet long and an

assumed depth of 100 feet would contain about 3,000 tons of manganiferous material, of which only about 30 tons would be high grade ore and about 150 tons would be low grade ore. The latter may be too low grade to be marketable. The ratio of ore to waste is so small and the grade of most of the ore is so low that it is doubtful if the deposit could be profitably worked under foreseeable conditions.

ORE RESERVES

The deposit is not sufficiently explored to justify estimation of reserves. Undoubtedly a small amount of ore remains, but the deposit appears to be too small to yield quantities of ore that would be significant from the standpoint of national emergency supplies.

POSSIBLE EXPLORATION

The applicants did not propose a specific exploration program and seemed to have little knowledge of what might be done. In the opinion of the writer the deposit does not deserve exploration but if it is explored, then two methods appear feasible. The first method would be to trench and test pit the ore zone along the vein extension north of the present workings. The other method would be to try to follow the vein down the hill south of the present workings and then to drive an adit along the vein.

The applicants propose to build an access road to the prospect and have obtained a contractor's estimate that it could be done for about $2,000. This estimate appears too low to this writer because about 3 miles of old road and trail would have to be reconditioned and at least a mile of new road would be required to traverse the very steep hill upon which the prospect is situated.

In considering the desirability of exploration it is necessary to take into consideration the problems of marketing the ore that might be produced as well as other practical problems brought about by isolation of the deposit. From the prospect it is about 33 miles by road to San Antonio, the nearest railroad shipping point, or 126 miles by road to the Deming stockpile.

CONCLUSIONS

The Buena Vista manganese deposit consists of pyrolusite and psilomelane filling openings in a fissure zone in a volcanic flow rock. The deposit contains a small amount of ore containing from about 13 to about 45 percent manganese . A fairly good grade of ore may be obtained by sorting and screening, but the deposit is so small that further exploration is not justified. Other important deterrents to possible operation of the property are the relative isolation of the deposit, the distance to market, and lack of water and living accommodations.

RECOMMENDATION

Because of the very small size of the Buena Vista ore deposit it is unlikely that significant amounts of manganese ore will be produced from it; therefore, it is recommended that the application for Government assistance be denied.