Mining Division
Region IV

224 New Customhouse
Denver 2, Colorado

February 15, 1952

Memorandum

To: W. R. Storms

From: Acting Chief, Mining Division, Region IV

Subject: DMA Dockets concerning uranium

We are in need of 11 copies of reports on uranium dockets as two and sometimes three copies must be supplied to the Atomic Energy Commission.

Enclosed herewith are two reports on Black Rose Uranium Prospect, Cuba Mining District, Sandoval County, New Mexico, DMA Docket 1221X. These folders contain only the Geological Survey reports.

W. H. King
W. H. King

Enclosures
cc: Koschmann (2)
Sub
Chron

WHK:bh

K21- Completed File

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

MAR 10 1952

AIR MAIL

Mr. Nick Luciani
234 North Walter
Albuquerque, N. M.

Re: Docket No. DMA-1221X (Uranium)
Black Rose Uranium Prospect
Sandoval County, New Mexico

Dear Mr. Luciani:

Reference is made to your application for aid for an exploration project in the amount of $40,000.00.

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

A careful study of your application and examination of the property concerned, reveals that the probability of disclosing mineable reserves by your proposed exploration program is not considered sufficiently promising to justify Government participation. Under these circumstances, I regret to advise, that your application for exploration aid is denied.

Should additional information become available, we will welcome the resubmission of your proposal for consideration.

Sincerely yours,

C. O. Mittenderf

Acting Administrator
Defense Minerals Exploration
Administration

J.F.S.

FLKnouse/FEJohnson/jem/bih
3/6/52

cc to: Docket
Admr's. Reading
Messrs. AJKauffman R-1347
APButler R-3206
GSA Bldg.
Ellis
Knouse
FEJohnson
Field Team, Region IV (2)

Extra (Mining Div.)

Mining Division
Region IV

February 13, 1958

Memorandum

To: Field Team, Region IV

From: Acting Chief, Mining Division, Region IV

Subject: Final Report, VAA Contract 1101L, Black Rock Uranium Prospect, Sabe Mining District, Humboldt County, Nev Nevada

Enclosed are the original and seven copies of the section on Summary, Conclusions and Recommendations by the Bureau of Mines and Geological Survey. Also enclosed are the original and 7 copies of the Engineering Report by the Bureau of Mines. These pertain to the application by Black Rock for Government assistance in exploration work on the Black Rock Uranium Prospect submitted to work Sept.,1956.

The brochure is also enclosed.

We concur with the consulting engineer that the application be denied.

W. R. King

Enclosures

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

200 New Customhouse
Denver 2, Colorado

February 4, 1952

Memorandum

To: DMA Field Team, Region IV

From: A. H. Koschmann

Subject: DMA Docket 1221A, Black Rose Uranium Prospect, Alex Luciani, Applicant, Sandoval County, New Mexico

Enclosed are the original and 10 copies of the geologic report by Elliot Gilkerman of the U. S. Geological Survey covering the above docket. One copy is for L. A. Page and 2 copies are for the ASC.

It has been recommended that the loan be denied.

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

Enclosures (11)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P.O. Box 4124, University Station
Tucson, Arizona

January 30, 1952

Memorandum

To: A. H. Koschmann

From: A. F. Shride

Subject: Geologic Report, Black Mesa Uranium Prospect, Nick Luciani, Applicant, Sandoval County, New Mexico

Enclosed are the original and 10 copies of the above report by Elliot Gilbertson of the Geological Survey. One copy is for L. D. Page as per Procedural Instruction #5, and 2 copies are for the AEC as per the Field Team's memorandum of October 5.

This report and the recommendation that an exploration loan be denied because the property is not likely to contain uranium in commercial quantities have my approval.

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

Enclosures 11

THE BLACK ROSE URANIUM PROSPECT
NICK LUCIANI, APPLICANT
SANDOVAL COUNTY, NEW MEXICO

DMA 1221X

URANIUM

Geology

By
Elliot Gillerman
Geologist, U. S. Geological Survey

THE BLACK TOWER URANIUM PROSPECT
WEEK BRIANI, APPLICANT
SANDOVAL COUNTY, NEW MEXICO

TMA 12RIX

URANIUM

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SUMMARY

The Black Rose deposit is in the W½, NW¼, Sec. 4, T. 19 N., R.1 W., about 8 miles south of Cuba, in Sandoval County, New Mexico. The property is under lease from the Federal Government to Mr. Mick Luciani, of Albuquerque, New Mexico.

The Black Rose coal mine is in the lower part of the Mesaverde formation of Upper Cretaceous age. About 50 feet below the coal bed is a 35-foot thick bed of grayish brown carbonaceous shale containing abundant carbonaceous plant remains and blebs of resin. This bed was reported to contain uranium minerals, but a geiger counter traverse failed to show any appreciable radioactive material. Samples taken in old trenches and tested with a Berkeley Scaler in the office substantiated the field results.

GEOLOGY

The Black Rose uranium deposit is in the lower part of the Mesaverde formation, of Upper Cretaceous age. In this general area, the Mesaverde formation consists of about 1,200 feet of alternating beds of massive brown or buff-colored sandstone, grayish-brown shales, and coal. The coal beds in the upper and lower parts of the formation are of considerable thickness, but those in the middle part are thinner.

At the Black Rose deposit, the beds dip about 13 degrees S. 75° W. A 12 foot coal bed, which is currently being mined, is overlain by a bed of massive buff-colored sandstone. Below the coal are a series of alternating sandstones, clays, shales, and carbonaceous shales. About 50 feet below the base of the coal is a bed of carbonaceous shale 30-35 feet thick. A thin bed of buff sandstone, 3-10 feet thick splits the bed at a point 12 feet below the top of the bed. The shale is dark brownish grey, gritty, and contains abundant carbonaceous plant remains and numerous associated blebs of resin which burn upon ignition. The carbonaceous plant remains and the blebs of resin are particularly abundant at the very top of the shale. Below the carbonaceous shale is a bed of gray shale, and below this another bed of carbonaceous shale similar to that above.

Uranium minerals were reported to be present in the carbonaceous shale. Three trenches had been excavated across the uppermost bed and sampled for uranium. During the examination of the property a gieger counter traverse was run across the north and center trenches. The traverse was made with a Victoreen Model 263-B Beta-Gamma Geiger Counter, equipped with a 2 x 20 copper probe. Background count

was about 8-10 divisions on the 0.2 scale. At no time during the traverse did the counter register more than 15 divisions on the 0.2 scale, and usually the needle hovered between 6 and 12 divisions on the 0.2 scale. The largest geiger readings were measured in the following portions of the stratigraphic section: (a) at the very top of the bed, (b) just above the parting sandstone, and (c) about 15 feet above the base of the bed.

SAMPLES

Samples were taken at three points in the north and center trenches where maximum readings on the geiger counter were obtained. These samples were crushed and ground to size and the eU, or equivalent uranium measured by means of a Berkeley Scaler. The results obtained were as follows:

Sample No.	Locality	% eU
1	Top of north trench	.001 plus
2	5 feet above parting sandstone, center trench	.0014
3	About 15 feet above base of bed, center trench	.0017

CONCLUSIONS

The geiger counter traverses in the field failed to indicate any appreciable quantity of uranium in the shale. This was substantiated by the results obtained from checking the samples with the Berkeley Scaler, and also by the assay reports of samples sent by the Bureau of Mines to Hurley and Hurley, commercial assayers, of Douglas, Arizona (results of the assays are reported in the Bureau of Mines report on the Black Rose property). The lowest grade of uranium ore purchased today is 0.3% U. Since all tests showed the U content of the shale to be considerably below this figure, the deposit is not considered commercial.

RECOMMENDATIONS

Based on the above conclusions, it is recommended that the application for Government assistance in exploring the Black Rose uranium prospect, DMA 122IX, be denied.

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

The brochure is also enclosed.

cc: WRStorms w/copy of final report
CAAnderson w/copy of final report
L.E.Page w/copy of final report
TWOster w/copy of final report
Chas. Towle w/copy of final report
AHKoschmann w/copy of final report
DMA Final Report

[redacted]

[redacted]

WLD:oc
cc: DMA Subject, Chron,
Koschmann

[redacted]

February 15, [redacted]

[redacted]

To: Field Team, Region IV

From: Acting Chief, Mining Division, Region IV

Subject: Final Report, DMA Project [redacted], Black Hawk Uranium Prospect, Cibola Mining District, McKinley County, New Mexico

Enclosed are the original and seven copies of the captioned report. Conclusions and recommendations by the Bureau of Mines and Geological Survey. Also enclosed are the original and 7 copies of the accompanying report by the Bureau of Mines. These portions of the report, by Mr. [redacted] for Geological conclusions in exploration work on the Black Hawk Uranium Prospect, submitted to [redacted].

The inventory is also enclosed.

We concur with the consulting engineer that the application be denied.

W. H. King

W. H. King

[redacted]

WHD:oc

cc: DMA Subject, Chron.
Koschmann (2)

W.H.K.

Mining Division
Date Rec'd.
DEC 17 1951
BUREAU OF MINES
Denver, Colorado

Mining Division
Date Rec'd.
1951
BUREAU OF MINES
Denver, Colorado

New Mexico Field Office
Box 1060, Silver City, New Mexico
December 12, 1951

17214

Hawley and Hawley
P. O. Box 1060
537 Twelfth Street
Douglas, Arizona

Attention: Mr. H. Hollweg

Gentlemen:

We are enclosing three samples, Nos. 3432, 3433, and 3434. Please analyze the three samples for their U_3O_8 content. Also please return any unused portion of pulps.

A purchase order will be issued you to cover this cost when your analyses and charges are received.

Sincerely yours,

John H. Soule'
Acting Supervising Engineer

cc Storms, Tucson
King, Denver
reader
file (DMA-1221X)
P. O.

W. R. King

Mining Division
Date Rec'd.
JAN 1 1952
BUREAU OF MINES
Denver, Colorado

Memorandum: January 16, 1952

To: W. R. Storms, Chief, Arizona-New Mexico Branch

From: J. H. Soule', New Mexico Field Office

Subject: Report on the Black Rose Uranium Prospect, Cuba Mining District, Sandoval County, New Mexico, Docket DMA 1221X.

Attached herewith is the subject report. In place in the report is the tracing of Figure 1, Location Map, and we would like to have two prints of the tracing returned to us. The brochure was returned to Gillerman to whom it was sent in the first place.

John H. Soule'
Acting Supervising Engineer

cc- King, Denver
Reader
Files

New Mexico Field Office
Box 1060, Silver City, New Mexico
November 26, 1951

Mining Division
Date Rec'd
NOV 28 1951
BUREAU OF MINES
Denver, Colorado

Mr. Nick Luciani
234 North Walter
Albuquerque, New Mexico

Dear Mr. Luciani:

We have received your application, Docket DMA-1221X, for Government assistance in exploring for uranium on your Black Rose property.

A field examination is necessary and the DMA field team will meet you or your representative at the property about 10:00 a.m. on Wednesday morning, December 5, 1951.

We trust the above arrangement is satisfactory to you.

Sincerely yours,

John H. Soule'
Acting Supervising Engineer

cc Storms, Tucson
Allsman, Denver
reader
file

224 New Customhouse
Denver 2, Colorado

October 15, 1951

Memorandum

To: W. R. Storms (with brochure)

(Through Chief, Mining Division, Region IV)

G. A. Anderson

From: DMA Field Team, Region IV

Subject: DMA Docket 1221-X, Nick Luciani, Applicant, Black Rose Uranium Mine, Sandoval County, New Mexico

Enclosed herewith is the application of the subject docket with a review by the Coordinating Committee for an exploration loan of $40,000 on a low grade uranium deposit.

A definite plan of the project is not submitted and the geological probability of discovery requires field examination.

J. H. East, Jr.

for A. M. Kesselmann

Enclosure

MMK:ld

cc: DMA docket, chron.
Kesselmann

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

SEP 6 1951

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Weston Bourret

[illegible]

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Bourret
Belser
Lusted - [illegible]
[illegible] - 1
[illegible] File

REGIONAL DIRECTOR'S
OFFICE
REGION IV
MAY 28 1951
BUREAU OF MINES
DENVER, COLORADO

May 25, 1951

Mr. Nick Luciani
734 North Walter
Albuquerque, New Mexico

Re: Uranium - Sandoval County, New Mexico - DMA docket 12Xlx

Dear Mr. Luciani:

Your application dated May 9, 1951 for exploration assistance in the amount of $40,000 has been directed to this office for consideration.

The application form MF-103 has not been completed in sufficient detail for us to act on your request. I wish particularly to direct your attention to questions No. 21 and 22 under the heading "Exploration." Please answer these questions as fully as possible, including supporting maps showing the location of your proposed development openings, such as trenches, diamond drill holes, tunnels, etc. The MF-103 is intended merely to serve as an outline to assist you in preparing a detailed statement of your proposal.

We must of necessity hold your application in abeyance until the completed file is available for review.

I am enclosing press release of May 14, which provides additional information on the DMA Exploration Program.

Yours very truly,

Weston Bourret, Acting Chief
Minor and Rare Metals Branch

Enclosure

WBourret/ad
cc: Adm.Read.File
Dep. Adm.
Exec. Secy.
Field Team, Region IV
Mr. Hosted, USGS
Mr. Kaiser, USGS
Mr. Kline, Bluemont, Va.
Mr. Bourret
Files

Route

JMA

11-FLL

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

[redacted]
Denver 2, Colorado

February 13, 1952

Memorandum

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

From: Field Team, Region IV

Subject: Final Report, DMA Docket 1221X, Black Mesa Uranium Prospect, Cuba Mining District, Sandoval County, New Mexico

Enclosed are the original and two copies of the final report on DMEA Docket 1221X, Nick Lupiani's Black Mesa Uranium Prospect.

The applicant suspected the presence of uranium minerals underlying a coal seam. He submitted an application for Government assistance in exploration work estimated to cost $40,000. The preliminary phase of the exploration program consisted of driving three adits, each 100 feet long, costing $17,500. The second phase was to drive additional adits to cost $22,500.

Based on the results of a Geiger Counter field traverse and the results obtained from analyses of samples taken, the uranium content was found to be extremely low.

We concur with the conclusions and recommendations of the examining team that the exploration application of $40,000 be denied.

The brochure is also enclosed.

J. H. Ernst Jr.
J. H. Ernst, Jr.

Ogden Tweto
for A. E. [redacted]

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

February 13, 1952

Memorandum

To: Field Team, Region IV

From: Acting Chief, Mining Division, Region IV

Subject: Final Report, DMA Docket 1221X, Black Rose Uranium Prospect, Cuba Mining District, Sandoval County, New Mexico

Enclosed are the original and seven copies of the section on Summary, Conclusions and Recommendations by the Bureau of Mines and Geological Survey. Also enclosed are the original and 7 copies of the Engineering Report by the Bureau of Mines. These pertain to the application by Nick Luciani for Government assistance in exploration work on his Black Rose Uranium Prospect estimated to cost $40,000.

The brochure is also enclosed.

We concur with the examining engineer that the application be denied.

W. H. King
W. H. King

Enclosures

Mining Division
Date Rec'd.
JAN 28 1952
BUREAU OF MINES
Denver, Colorado

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Arizona-New Mexico Branch
SOUTHWEST EXPERIMENT STATION
Box 4097
UNIVERSITY STATION
TUCSON, ARIZONA

MINING DIVISION
REGION IV

January 25,1952

Memorandum

To : Wm. H. King, Denver, Colorado

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

Subject : Final Report, DMA Docket 1221X, Black Rose Uranium Prospect, Cuba Mining District, Sandoval County, N. Mex.

Enclosed are original and 7 copies of the section on Summary, Conclusions and Recommendations by Elliot Gillerman of the Geological Survey and J. H. Soule' of the Bureau of Mines, and the section on Engineering by Soule'. I assume that the Geological Survey will submit a section on Geology by Gillerman, although I do not know as A. F. Shride is out of town.

This report has my approval.

The Geological Survey has the brochure.

Walter R. Storms

Walter R. Storms

CC W. H. King (7)
C. A. Anderson
DMA-1221X
DF

FOR VICTORY
BUY
UNITED STATES SAVINGS BONDS AND STAMPS

OFFICE OF THE ADMINISTRATOR

UNITED STATES
DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS ADMINISTRATION

WASHINGTON 25, D. C.

200 New Customhouse
Denver 2, Colorado

February 4, 1952

Memorandum

To: DMA Field Team, Region IV

From: A. H. Koschmann

Subject: DMA Docket 1221X, Black Rose Uranium Prospect, Nick Luciani, Applicant, Sandoval County, New Mexico

Enclosed are the original and 10 copies of the geologic report by Elliot Gillerman of the U. S. Geological Survey covering the above docket. One copy is for L. R. Page and 2 copies are for the AEC.

It has been recommended that the loan be denied.

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

Enclosures (11)

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

January 30, 1952

Memorandum

To: A. H. Koschmann

From: A. F. Shride

Subject: Geologic Report, Black Rose Uranium Prospect, Nick Luciani, Applicant, Sandoval County, New Mexico

Enclosed are the original and 10 copies of the above report by Elliot Gillerman of the Geological Survey. One copy is for L. R. Page as per Procedural Instruction #5, and 2 copies are for the AEC as per the Field Team's memorandum of October 5.

This report and the recommendation that an exploration loan be denied because the property is not likely to contain uranium in commercial quantities have my approval.

A. F. Shride

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

Enclosures 11

UNITED STATES
DEPARTMENT OF THE INTERIOR
OSCAR L. CHAPMAN, SECRETARY

DEFENSE MINERALS ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMA-1221K, Black Rose Uranium Prospect

Cuba Mining District

Sandoval County, N. Mex.

Elliot Gillerman, Geologist
U. S. Geological Survey

John H. Soule', Mining Engineer
U. S. Bureau of Mines

January 1952

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By Elliot Gillerman[1] and John H. Soule[2]

Nick Luciani of Albuquerque, N. Mex. recently suspected the presence of uranium minerals in rock formations underlying a coal seam that he is working. This property is located in the Cuba Mining District in Sandoval County, N. Mex. and is about 7 miles south of the town of Cuba.

To explore for uranium, Luciani applied to the Defense Minerals Administration for Government assistance in a project to cost $40,000. The application, Docket DMA 1221X, was sent to the field for an examination of the property. The cost of the project was to be 10 percent by the applicant and 90 percent by the Government.

The coal seam is in the lower beds of the Mesa Verde formation of Upper Cretaceous age. The underlying, alternating beds of shale and sandstone were supposed to contain the uranium minerals.

The area of the proposed project was traversed with a very sensitive Geiger Counter and samples were taken in old trenches where uranium minerals were reported. The samples were tested independently by both members of the examining team. Two of the samples were sent to a commercial assayer for analysis.

The results obtained were all negative, showing that no uranium minerals are present in the areas sampled. Because there are no uranium minerals present, it is recommended that the application for Government assistance be denied.

1/ Geologist, U. S. Geological Survey
2/ Mining engineer, U. S. Bureau of Mines

THE BLACK ROSE URANIUM PROSPECT
NICK LUCIANI, APPLICANT
SANDOVAL COUNTY, NEW MEXICO

IMA 1221X

URANIUM

Geology

By
Elliot Gillerman
Geologist, U. S. Geological Survey

THE BLACK ROSE URANIUM PROSPECT
NICK LUCIANI, APPLICANT
SANDOVAL COUNTY, NEW MEXICO

DMA 1221X

URANIUM

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SUMMARY

The Black Rose deposit is in the W½, NE¼, Sec. 4, T. 19 N., R.1 W., about 8 miles south of Cuba, in Sandoval County, New Mexico. The property is under lease from the Federal Government to Mr. Nick Luciani, of Albuquerque, New Mexico.

The Black Rose coal mine is in the lower part of the Mesaverde formation of Upper Cretaceous age. About 50 feet below the coal bed is a 35-foot thick bed of grayish brown carbonaceous shale containing abundant carbonaceous plant remains and blebs of resin. This bed was reported to contain uranium minerals, but a geiger counter traverse failed to show any appreciable radioactive material. Samples taken in old trenches and tested with a Berkeley Scaler in the office substantiated the field results.

GEOLOGY

The Black Rose uranium deposit is in the lower part of the Mesaverde formation, of Upper Cretaceous age. In this general area, the Mesaverde formation consists of about 1,200 feet of alternating beds of massive brown or buff-colored sandstone, grayish-brown shales, and coal. The coal beds in the upper and lower parts of the formation are of considerable thickness, but those in the middle part are thinner.

At the Black Rose deposit, the beds dip about 13 degrees S. 75° W. A 12 foot coal bed, which is currently being mined, is overlain by a bed of massive buff-colored sandstone. Below the coal are a series of alternating sandstones, clays, shales, and carbonaceous shales. About 50 feet below the base of the coal is a bed of carbonaceous shale 30-35 feet thick. A thin bed of buff sandstone, 3-10 feet thick splits the bed at a point 12 feet below the top of the bed. The shale is dark brownish gray, gritty, and contains abundant carbonaceous plant remains and numerous associated blebs of resin which burn upon ignition. The carbonaceous plant remains and the blebs of resin are particularly abundant at the very top of the shale. Below the carbonaceous shale is a bed of gray shale, and below this another bed of carbonaceous shale similar to that above.

Uranium minerals were reported to be present in the carbonaceous shale. Three trenches had been excavated across the uppermost bed and sampled for uranium. During the examination of the property a gieger counter traverse was run across the north and center trenches. The traverse was made with a Victoreen Model 263-B Beta-Gamma Geiger Counter, equipped with a 2 x 20 copper probe. Background count

was about 8-10 divisions on the 0.2 scale. At no time during the traverse did the counter register more than 15 divisions on the 0.2 scale, and usually the needle hovered between 8 and 12 divisions on the 0.2 scale. The largest geiger readings were measured in the following portions of the stratigraphic section: (a) at the very top of the bed, (b) just above the parting sandstone, and (c) about 15 feet above the base of the bed.

SAMPLING

Samples were taken at three points in the north and center trenches where maximum readings on the geiger counter were obtained. These samples were crushed and ground to size and the eU, or equivalent uranium measured by means of a Berkeley Scaler. The results obtained were as follows:

Sample No.	Locality	% eU
1	Top of north trench	.001 plus
2	5 feet above parting sandstone, center trench	.0014
3	About 15 feet above base of bed, center trench	.0017

CONCLUSIONS

The geiger counter traverse in the field failed to indicate any appreciable quantity of uranium in the shale. This was substantiated by the results obtained from checking the samples with the Berkeley Scaler, and also by the assay reports of samples sent by the Bureau of Mines to Hawley and Hawley, commercial assayers, of Douglas, Arizona (results of the assays are reported in the Bureau of Mines report on the Black Rose property). The lowest grade of uranium ore purchased today is 0.1% U. Since all tests showed the U content of the shale to be considerably below this figure, the deposit is not considered commercial.

RECOMMENDATIONS

Based on the above conclusions, it is recommended that the application for Government assistance in exploring the Black Rose uranium prospect, DMA 1221X, be denied.

DMA-1221A, BLACK ROSE URANIUM PROSPECT
CUBA MINING DISTRICT
SANDOVAL COUNTY, N. MEX.

Engineering Report

By John H. Soule'
Mining Engineer
U. S. Bureau of Mines

January 1952

DMA-1221X, BLACK ROSE URANIUM PROSPECT
CUBA MINING DISTRICT
SANDOVAL COUNTY, N. MEX.

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INTRODUCTION

Nick Luciani of 234 North Walter Street, Albuquerque, N. Mex., and of Cuba, N. Mex., has operated the Black Rose coal mine for a number of years. Recently he suspected the presence of uranium minerals in certain sedimentary beds underlying the coal seam that he is mining. An investigation of the uranium-bearing material was made for Luciani by A. B. Woodward, Jr., a professional engineer. Upon the strength of this engineer's report, Luciani applied to the Defense Minerals Administration for Government assistance in exploring for uranium. The application, Docket DMA 1221X, suggested a project to cost $40,000, of which the Government was to furnish 90 percent of the funds.

The brochure was sent to the field and an examination of the property was requested. This examination was made on December 5, 1951. The results are reported herewith.

ACKNOWLEDGMENTS

Acknowledgment is made to Nick Luciani for his courtesy in showing the Black Rose property to the examining team. Acknowledgment also is made of the use of the material contained in the examination report by A. B. Woodward, Jr., Registered Professional Engineer, who was retained by Luciani to examine the property.

LOCATION, TOPOGRAPHY AND CLIMATE

The Black Rose property is located about 7 miles south of Cuba, Sandoval County, N. Mex., or about 75 miles northwest of Albuquerque, N. Mex. The property is reached by traveling north from Albuquerque

to Bernalillo, and thence nearly 60 miles northwest from Bernalillo on paved State Highway 44 as shown in figure 1. The Black Rose mine lies just west of the highway and is the first coal mine encountered adjacent to the highway, the tipple being less than 100 yards from the road. A more exact location of the mine would be in the W½, NE¼, Sec. 4, T. 19 N., R. 1 W., very near the eastern limits of the Luciani lease.

The terrain is semi-rugged, consisting of low rocky hills typical of areas of sloping sedimentary formations where erosion is more pronounced in softer shale beds and less marked in the more resistant sandstone beds. To the east in the Nacimiento Mountains the terrain becomes more rugged while it eases to the west toward the Rio Puerco. The mean altitude of the property is approximately 6,750 feet above sea level.

Juniper, Pinon pine, and cedar comprise the bulk of the vegetation, augmented by cactus, range grasses and shrubs. Timber suitable for mining purposes exists in the Nacimiento Mountains a few miles to the east, and a small saw mill operates at Cuba, a few miles to the north.

The mean annual precipitation is estimated to be about 16 inches, largely as summer thunder showers with some winter snow. Freezing winter temperatures may be severe, but usually are not prolonged. Summer temperatures may exceed 100 degrees for short periods of time.

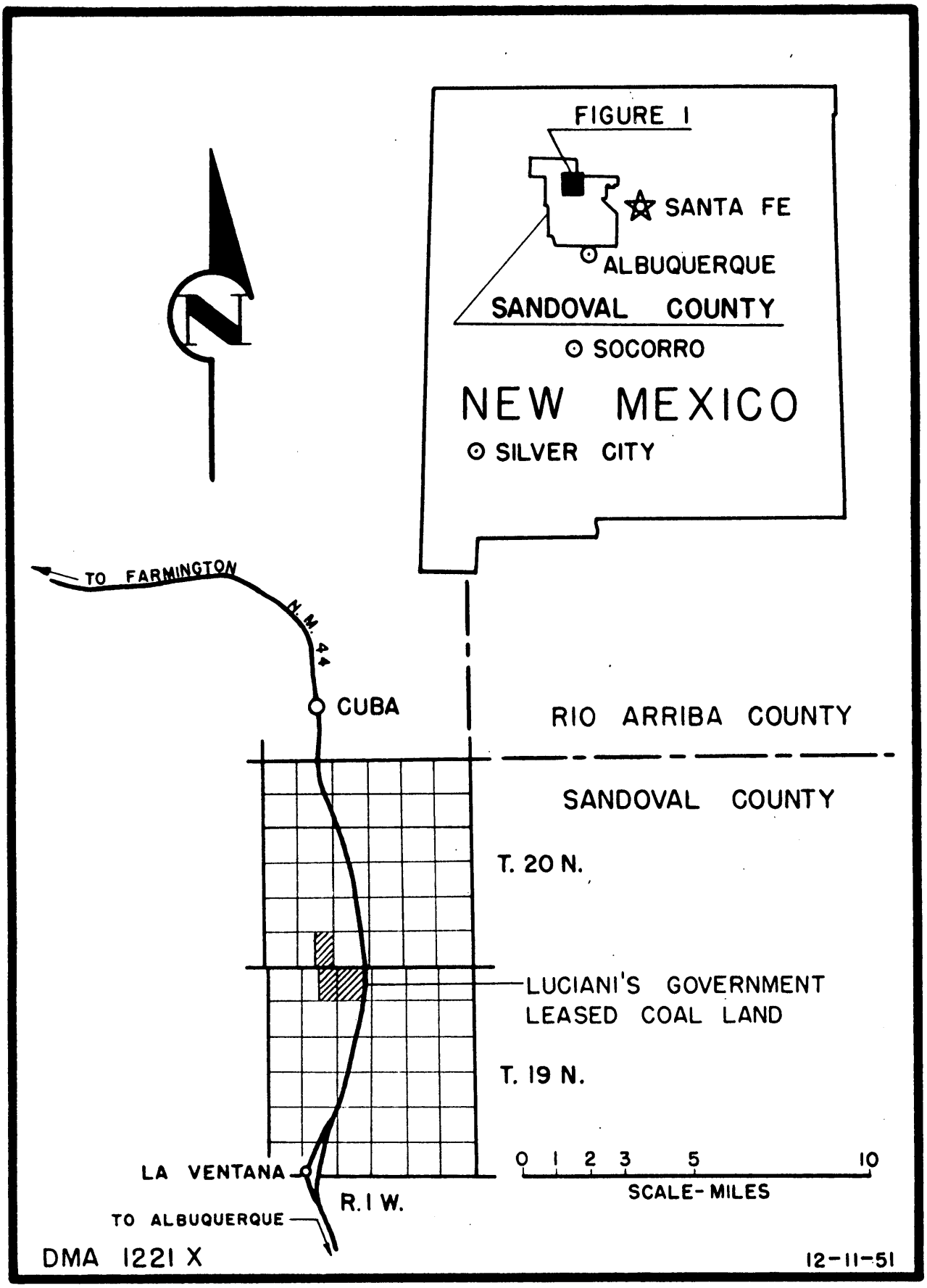

FIGURE 1.- LOCATION MAP, BLACK ROSE URANIUM PROSPECT, SANDOVAL COUNTY, NEW MEXICO

There are no permanent streams in the immediate area although the Rio Puerco, about 3 miles to the west, flows throughout most of the year. There are a few springs in the Nacimiento Mountains to the east. There is no information on the depth of the water table but it is expected to lie fairly close to the surface at a depth probably not over 200 feet.

Only limited living accommodations exist at the mine, consisting of small, portable, one-room shacks. Limited minor supplies may be obtained at Cuba to the north, but major mining equipment is available no closer than Albuquerque, 75 miles to the southeast. The nearest railhead is at Bernalillo, where rail freight and express service is available.

HISTORY AND PRODUCTION

Coal has been mined in the Cuba district for many years. Nick Luciani has operated the Black Rose mine for a few years, having acquired his lease in 1944. Outside of some desultory attempts to mine copper to the north and east, and the recent interest in uranium, there has been no mining activity other than coal. No production of uranium minerals has been made from the Black Rose mine.

OWNERSHIP AND EXTENT

Nick Luciani has leased from the Federal Government, 1,091 acres of coal-bearing land. The lease, Coal Lease Serial No. 052740, was approved by the Assistant Secretary of the Interior in 1944 and embraces the following lands: E½, Sec. 32, T. 20 N., R. 1 W., W3/4, Sec. 4 and E½ Sec. 5, T. 19 N., R. 1 W. This is shown in figure 1.

GEOLOGY[1]

The Black Rose coal mine is in the lower part of the Mesa Verde formation of Upper Cretaceous age. Beneath the 12-foot coal bed is a series of alternating buff-colored massive sandstones and gray shales. About 50 feet below the base of the coal bed is a 35-foot bed of grayish-brown gritty carbonaceous shale containing abundant carbonaceous plant remains and blobs of resin, particularly near the top. This bed was reported to contain uranium. A Geiger counter traverse with a Victoreen Model 263-B Beta-Gamma counter equipped with a 2 by 20 copper probe failed to show any appreciable quantities of radioactive material. Samples taken in the old trenches and tested with a Berkeley scaler substantiated the field results.

ORE RESERVES

Three samples were taken of supposedly uranium-bearing ground. These samples were taken from trenches where previous sampling had been done by a consulting engineer. The two most northerly trenches, as well as much intervening ground, were traversed with a Victoreen Model 263-B Geiger counter with a 2 by 20 copper probe. The samples were taken at points that may have shown a slight bit of radioactivity. The samples were reduced and portions were cut for the Geological Survey member of the examining team and cuts were retained by the Bureau of Mines. Portions of these latter cuts were further split and two samples submitted to a commercial assayer who analyzed the samples submitted by the private engineer. The assay results are shown in the following table.

1/ Gillerman, Elliot, Geologist, U. S. Geological Survey.

TABLE 1
ASSAY RESULTS, BLACK ROSE URANIUM PROSPECT

Sample location	Sample length		Sample results (assays)				
			Chemical by Hawley & Hawley		Spectrograph John Herman	Radioactivity	
	Woodward	DMA	Woodward	DMA	Woodward	Berkeley Scaler, U.S.G.S.	Geiger Counter, U.S.B.M.
Trench 1 (south)	49.5 ft.	N.S.	0.09% U_3O_8	---	None	---	---
Trench 2 (center)	57.0 "	5 ft. above middle ss.	0.08 "	None	---	.0014 EU	*0.005
		8 ft. below middle ss.		None	---	.0017 EU	*0.005
Trench 3 (north)	25.5	3 ft. at top	0.10	---	---	.001 EU	*0.005
Standard-.005 U_3O_8	---	---	---	None	---	---	0.005

N.S. - Not Sampled
EU - Equivalent Uranium
* - Less than

Based upon the results shown in the foregoing table, if any uranium minerals exist in the area studied, they exist only in minute quantities. There are no reserves of uranium minerals beneath the Black Rose coal mine.

No attempt is made to explain the discrepancies noted between the sample results obtained by the consulting engineer and the DMA examining team other than that the DMA field team check was made with a very sensitive counter capable of more precise work than the usual commercial counters. No information is available on the type of counter used by the consulting engineer.

CONCLUSIONS

The following conclusions were reached after an examination of the Black Rose uranium prospect, followed by an analysis of the samples taken:

1. If any uranium is present, it exists in minute quantites;

2. Because of the above, there are no ore reserves on that portion of the property previously reported to contain uranium.

RECOMMENDATIONS

Based upon the foregoing conclusions, it is recommended that the application, Docket DMA 1221X, for Government assistance in exploring the Black Rose uranium prospect be denied.