Surname copy

700

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

Murphy
Ellis
Mittendorf

OCT - 3 1956

Mr. Elbert E. Lewis, General Partner
E. E. Lewis and Associates
P. O. Box 1481
Grand Junction, Colorado

Re: Docket No. DMEA-4300 (Uranium)
Early Morn Mine
San Miguel County, Colorado

Dear Mr. Lewis:

In accordance with your letter of September 24, 1945, and Mr. Traver's response of September 26, we are returning one complete copy of your above-docketed application.

Enclosed herewith are the following:

MF-103 form with your answers.
Exhibit 1 - Partnership Certificate
Exhibit 2 - Lease Agreement
Exhibit 3 - Abstract of Title
Exhibit 4 - Report Preliminary Examination
Plate 1 - Early Morn claims
Plate 2 - Area Geology
Plate 3 - X sec. A-A'
Plate 4 - X sec. B-B'
Plate 5 - X sec. Proposed drill holes
Map - Gypsum Gap Quadrangle.

Sincerely yours,

SIGNED

Ernest Wm. Ellis, Chief
Rare and Miscellaneous
Metals Division

FMMurphy/gla
10-3-56
Enclosures
cc to: Admr.'s Reading File
Docket
Code 700, Mr. Murphy
DMEA Field Team, Region III (2)

R.C.S.

cw

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

RECEIVED
OCT - 1 1956

224 New Customhouse
Denver 2, Colorado

September 26, 1956

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region III

Subject: (Elbert E. Lewis) E. E. Lewis & Associates, DMEA Docket 4300
(Uranium) Early Morn Mine, San Miguel County, Colorado

Enclosed are two copies of a letter from the subject Applicant in which he requests that one copy of the subject application be returned to him. Also enclosed are two copies of our reply to the Applicant.

Will you please send this office a copy of your reply to the Applicant.

W. M. Traver

W. M. Traver

HMC:ytl

Enclosures

cc: Sec. Op. Comm. (2)
Harshman
Docket 4300
Chron.

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

RECEIVED
OCT - 1 1956

224 New Customhouse
Denver 2, Colorado

September 26, 1956

Mr. Elbert E. Lewis
General Partner
E. E. Lewis and Associates
P.O. Box 1481
Grand Junction, Colorado

Re: DMEA-4300 (Uranium)
Early Morn Mine
San Miguel County, Colorado

Dear Mr. Lewis:

This will acknowledge receipt of your letter dated September 24, 1956, requesting that one copy of the captioned application be returned to you.

We are forwarding this request to the Washington Office DMEA for their appropriate action, since we are not authorized to return the copy of your application which we have in our files.

Yours very truly,

W. M. TRAVER

W. M. Traver
Executive Officer DMEA
Field Team, Region III

HMC:ytl

cc: Sec. Op. Comm. (2)
Harshman
Docket
Chron.

General Manager

E. E. LEWIS and ASSOCIATES
GENERAL MINING
P. O. Box 1481
GRAND JUNCTION, COLORADO

September 24, 1956

Mr. W. M. Traver, Executive Officer
D.M.E.A. Field Team, Region 3
224 New Customs House
Denver 2, Colorado

RECEIVED
OCT - 1 1956

Re: Docket No. DMEA-4300 (Uranium)

Dear Mr. Traver:

We received from the D.M.E.A. Offices, Washington, D. C., letter of September 20, 1956, which denied exploration assistance on Early Morn Mine Docket No. DMEA-4300 (Uranium).

We are in need of a copy of the application we prepared for the DMEA and request that one copy of the application and supporting papers be returned to us if possible.

Thanking you in advance, we are

Very truly yours,

E. E. LEWIS AND ASSOCIATES

Elbert E. Lewis
General Partner

EEL/gr

10/1/56 gle

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

RECEIVED
OCT - 1 1956

224 New Customhouse
Denver 2, Colorado

September 26, 1956

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region III

Subject: (Elbert E. Lewis) E. E. Lewis & Associates, DMEA Docket 4300
(Uranium) Early Morn Mine, San Miguel County, Colorado

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Will you please send this office a copy of your reply to the Applicant.

W. M. TRAVER

W. M. Traver

HMC:ytl

Enclosures

cc: Sec. Op. Comm. (2)
Harshman
Docket 4300
Chron.

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

224 New Customhouse
Denver 2, Colorado

September 26, 1956

RECEIVED
OCT - 1 1956

Mr. Elbert E. Lewis
General Partner
E. E. Lewis and Associates
P.O. Box 1481
Grand Junction, Colorado

Re: DMEA-4300 (Uranium)
Early Morn Mine
San Miguel County, Colorado

Dear Mr. Lewis:

This will acknowledge receipt of your letter dated September 24, 1956, requesting that one copy of the captioned application be returned to you.

We are forwarding this request to the Washington Office DMEA for their appropriate action, since we are not authorized to return the copy of your application which we have in our files.

Yours very truly,

W. M. TRAVER

W. M. Traver
Executive Officer DMEA
Field Team, Region III

HMC:ytl

cc: Sec. Op. Comm. (2)
Harshman
Docket
Chron.

E. E. LEWIS and ASSOCIATES
GENERAL MINING
P. O. Box 1481
GRAND JUNCTION, COLORADO

September 24, 1956

RECEIVED
OCT 1 1956

Mr. W. M. Traver, Executive Officer
D.M.E.A. Field Team, Region 3
224 New Customs House
Denver 2, Colorado

Re: Docket No. DMEA-4300 (Uranium)

Dear Mr. Traver:

We received from the D.M.E.A. Offices, Washington, D. C., letter of September 24, 1956, which denied exploration assistance on Early Born Mine Docket No. DMEA-4300 (Uranium).

We are in need of a copy of the application we prepared for the DMEA and request that one copy of the application and supporting papers be returned to us if possible.

Thanking you in advance, we are

Very truly yours,

E. E. LEWIS AND ASSOCIATES

Elbert E. Lewis
General Partner

EEL/gr

Surname copy

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

SEP 20 1956

700
Murphy
Ellis
Yager
Kilgaard
Selfridge
Johnson

Mr. Elbert E. Lewis, General Partner
E. E. Lewis and Associates
P. O. Box 1481
Grand Junction, Colorado

Re: Docket No. DMEA-4300 (Uranium)
Early Morn Mine
San Miguel County, Colorado

Dear Mr. Lewis:

Your application for aid in an exploration project and other information available to us in Washington concerning your above-named property have been reviewed.

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

Careful study of all our information, although noting some uranium mineralization on your property, indicates that the probability of disclosing significant ore reserves is not sufficiently promising to justify Government participation. We regret to advise you that, under these circumstances, your application for exploration assistance is denied.

We wish to thank you for your interest in the Defense Minerals Exploration Program and for bringing your property to our attention.

Sincerely yours,

C. O. Mittendorf

Administrator

FMMurphy/gla
9-17-56
cc to: Admr.'s Reading File
Operating Committee
Docket
Messrs. JECrawford, Rm.3643
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA
Code 700
Mr. Murphy
DMEA Field Team, Region III (2)

Murphy
Ellis
Yoder

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

September 17, 1956

Summary of Proposed Project

Object: Denial of application for exploration aid.

Docket No.: DMEA-4300

Commodity: Uranium

Applicant: E. E. Lewis and Associates
P. O. Box 1481
Grand Junction, Colorado

Property: Applicant has a lease on the Early Morn Mine, consisting of 5 claims with the same name. The claims are situated in secs. 23 and 24, T. 44 N., R. 17 W., N.M.P.N., San Miguel County, Colorado

Date of Application: May 16, 1956

Amount of Applicant: $73,458.75

Referred to Field Team: June 21, 1956

Date of field examination: July 12, 1956

Date Field Team report received: August 27, 1956

Work Proposed: Explore three separate areas on the Early Morn, Early Morn No. 2, and Early Morn No. 3 claims by drilling inclined holes on 100-foot centers; two holes to be drilled from each drill site, one at an angle of 45 degrees, the other 65 degrees. The Applicant requested a total of 74 holes aggregating 14,345 feet of plug drilling and 2,855 feet of core drilling to be performed in two stages.

Estimates Costs:

Bulldozing access roads and drill sites, 90 hours @ $18.00/hr.	$ 1,620.00
14,314 feet plug drilling @ $3.25/ft.	46,523.75
2,855 " core " @ $5.50/ft.	15,702.50
Supervision, Consultants, Labor	4,875.00
Materials and Supplies	378.50
Equipment rental	777.50
Analyses for U_3O_8, V_2O_5, and $CaCO_3$, 222 samples @ $7.00/sample	1,554.00
Miscellaneous	2,027.50
Total	$73,458.75

Excerpts from Field Team report:

The claims lie on the flank of an anticline on the northeast side of Big Gypsum Valley. A complex system of faults cut the sides of Gypsum Valley and, in general, the blocks formed by these faults are downthrown toward the valley.

The rock formations are upturned sharply as a result of the anticline and the Morrison formation (the potential source of uranium in the area) was structurally deformed and faulted. Thus, dipping toward the core of the ancestral anticline, the Morrison was literally draped over older, faulted formations. This deformation and faulting placed the Salt Wash member of the Morrison formation in contact with the upper shaly limestone member of the Pennsylvanian Hermosa formation and paved the way for possible leaching of uranium from the upper Salt Wash downward into the bedding planes, faults, and fractures of the northeasterly dipping limestone of the Hermosa and lower part of the southwesterly dipping Salt Wash.

A major northwesterly trending normal fault that dips 82 degrees to the southwest crosses the property. Small tabular bodies of ore and mineralized material have been mined and prospected by adits in the limestone along the fault and in the Salt Wash near the fault. Estimated ore reserves (USGS data) indicate 400 tons of ore containing 0.12% U_3O_8 and 1.00% V_2O_5.

It seems probable that uranium now found in the limestone member of the Hermosa and in shear zones in the lower part of the Salt Wash was transported downward

by ground water from ore bodies that existed in the upper part of the Salt Wash which at one time overlay the region, but has been eroded in the subject claim area. If this theory of downward migration of uranium-bearing solutions is correct, there is little reason to expect that minable ore bodies will be found much deeper than the present workings on the property. However, the Applicant bases his drilling proposal on the premise that higher grade and larger ore bodies will be found at depth.

The Long Ridge mine, about a thousand feet west of the subject property has produced about 7,000 tons of ore. The production has come from several ore bodies in the top sandstone member of the Salt Wash. Ore bodies similar to these probably at one time overlay the present surface of the Early Morn group, but such bodies would not now be expected on the property.

The Bald Eagle mineabout 2 miles distant from the Early Morn has produced 3,600 tons of ore. However, the ore on the Bald Eagle occurred as larger pods and shows no enrichment at greater depth.

The field examiners, judging from available information regarding the area, conclude that the possibility of finding ore bodies of significant size on the property is too remote to justify DMEA participation in the proposed exploration program and recommend the request for aid be denied.

The Field Team also recommends the application be denied.

Commodity Members' comments (excerpts):

U. S. Bureau of Mines, J. E. Crawford, August 29, 1956.

Mr. Crawford concurs with the Field Team that the application for assistance be denied because of lack of evidence that the exploration would result in a significant discovery of uranium.

U. S. Geological Survey, W. P. Williams, September 12, 1956.

Mr. Williams reviews the Field Team report and concurs in the Field Team's recommendation to deny the application.

Rare and Miscellaneous Metals Division, F. M. Murphy, September 13, 1956.

Judging from the information available relating to the subject claim area, the field examiners' theory of ore deposition is more tenable than the Applicant's. Therefore, we agree with the examiners' conclusion that the proposed drilling to explore the steep-dipping, ore-bearing rock formations at depth would not result in finding higher-grade and larger ore bodies than have already been exposed in the present higher level openings.

Conclusions and Recommendation:

This Division agrees with the conclusions reached by the Field examiners, and concurs in the Field Team's recommendation to deny the subject application.

Ernest Wm. Ellis

Ernest Wm. Ellis

9/12/56
gla

IN REPLY REFER TO:

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

RECEIVED
SEP 12 1956

September 12, 1956

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

From: W. P. Williams, U. S. Geological Survey

Subject: Review of field examination report, DMEA 4300, E. E. Lewis and associates, Early Morn Mine, Gypsum Valley, San Miguel County, Colorado (uranium).

The examining team concludes that an exploration project's chances for success are poor on the subject property. This conclusion is based, in large part, on the geologic condition that uranium ore deposits on the property have been derived from previously overlying Salt Wash deposits. Past production from the Hermosa formation of Pennsylvanian age has been poor.

Because large ore bodies are not expected to exist in the older formations on the claim the field examiners recommend denial of the application, and I concur.

W. P. Williams

W. P. Williams

IN REPLY REFER TO:

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

RECEIVED
SEP 12 1956

September 12, 1956

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

From: W. P. Williams, U. S. Geological Survey

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Because large ore bodies are not expected to exist in the older formations on the claim the field examiners recommend denial of the application, and I concur.

WPWilliams:iml
G-9/12/56

W. P. Williams

cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. E. Crawford, 3641
J. O. Hosted, 3210

IN REPLY REFER TO:

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

RECEIVED
SEP 12 1956

September 12, 1956

Memorandum

To: K. W. Ellis, Defense Minerals Exploration Administration

From: W. P. Williams, U. S. Geological Survey

Subject: Review of field examination report, DMEA 4300, E. R. Lewis and associates, Early Moon Mine, Gypsum Valley, San Miguel County, Colorado (uranium).

The examining team concludes that an exploration project's chances for success are poor on the subject property. This conclusion is based, in large part, on the geologic condition that uranium ore deposits on the property have been derived from previously overlying Salt Wash deposits. Past production from the Hermosa formation of Pennsylvanian age has been poor.

Because large ore bodies are not expected to exist in the older formations on the claim the field examiners recommend denial of the application, and I concur.

WPWilliams:iml
G-9/12/56

W. P. Williams

cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. E. Crawford, 3641
J. O. Hosted, 3210

IN REPLY REFER TO:

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

RECEIVED
SEP 12 1956

September 12, 1956

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

From: W. P. Williams, U. S. Geological Survey

Subject: Review of field examination report, DMEA 4300, E. K. Lewis and associates, Early Morn Mine, Gypsum Valley, San Miguel County, Colorado (uranium).

The examining team concludes that an exploration project's chances for success are poor on the subject property. This conclusion is based, in large part, on the geologic condition that uranium ore deposits on the property have been derived from previously overlying Salt Wash deposits. Past production from the Entrada formation of Pennsylvanian age has been poor.

Because large ore bodies are not expected to exist in the older formations on the claim the field examiners recommend denial of the application, and I concur.

W. P. Williams

WPWilliams:iml
G-9/12/56

cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. E. Crawford, 3641
J. O. Hosted, 3210

8/30/56

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

August 29, 1956

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

From: John E. Crawford, Bureau of Mines Member
Uranium Commodity Committee

Subject: Joint Report of Examination, Docket DMEA 4300 (Uranium), E. E. Lewis and Associates, (Early Morn Mine) San Miguel County, Colorado

I have examined the report of examination, DMEA Docket 4300, E. E. Lewis and Associates, (Early Morn Mine) San Miguel County, Colorado, dated August 1956 and received in this office August 29, 1956. I have also discussed it with Jack Kratchman, Atomic Energy Commission.

We concur with the Field Team that the application for assistance be denied because of lack of evidence that the exploration project would result in a significant discovery of uranium.

The report is being forwarded to the Chief, Division of Minerals, in accordance with the routing slip attached thereto.

John E. Crawford
John E. Crawford

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

August 29, 1956

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

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Uranium Commodity Committee

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John E. Crawford

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

August 29, 1956

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Uranium Commodity Committee

From: John E. Crawford, Bureau of Mines Member
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John E. Crawford

8/30/56

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

August 24, 1956

224 New Customhouse
Denver 2, Colorado

RECEIVED
AUG 27 1956

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Joint Report of Examination, Docket DMEA 4300 (Uranium), E. E. Lewis and Associates, (Early Morn Mine) San Miguel County, Colorado

Enclosed are four copies of a joint engineering and geologic report on the subject property.

The field examiners are of the opinion from available information that there is little possibility that significant ore discoveries would result from the proposed exploration, at least not sufficient to justify DMEA participation. Experience in the area has proved that production has been unimportant, and from small, spotty, tabular ore bodies. There is nothing to support the Applicant's theory that there will be larger or more high-grade bodies below the present mine workings.

Denial of the application is recommended, and the Field Team concurs.

DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
8-29-56
(date)

IN REPLY REFER TO:
MINERAL DEPOSITS

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

P. O. Box 360
Grand Junction, Colorado

DMEA
Date Rec'd.
AUG 23 1956

MINERAL DEPOSITS
RECEIVED
AUG 22 1956
GEOLOGICAL SURVEY
DENVER, COLORADO

BUREAU OF MINES
Denver, Colorado

TRANSMITTED
AUG 24 1956

August 17, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: E. N. Harshman EMH
John F. Shaw JFS

From: Frank M. Byers, Jr.,

Subject: Transmittal of joint geological and engineering report of examination, DMEA docket 4300 (Uranium), E. E. Lewis and Associates, Early Morn group, Gypsum Valley district, San Miguel County, Colorado

Enclosed are 12 copies of a joint report of examination of the subject property by H. F. Albee, USGS, and N. F. Robertson, USBM. They recommend denial on the basis that the uranium ore was emplaced by downward migration along faults from the overlying Salt Wash. There is therefore little reason to expect ore bodies at depth below the present workings. Moreover, ore bodies that have been mined to date were small, and production has been insignificant. I have reviewed the report and concur with the recommendations of the examining team.

Also enclosed are 12 copies of the illustrations, which are included with the report, and the applicant's brochure.

F. M. Byers, Jr.
For J. William Hasler,
Geologist

FMB/mlr

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
8-29-56
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
FRED A. SEATON, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION OF EXAMINING TEAM
REGION III

TRANSMITTED
AUG 24 1956

CONFIDENTIAL
NOT FOR PUBLIC INSPECTION OR QUOTATION

DMEA 4300

E. E. Lewis and Associates

Gypsum Valley District

San Miguel County, Colorado

Uranium

Joint Engineering and Geologic Report

by

Howard F. Albee
Geological Survey

H. F. Robertson
Bureau of Mines

August 1956

Reviewed by
DTSL OPERATING CONTROL
8-29-56
(date)

DMEA 4300

INTRODUCTION

E. E. Lewis and Associates, P. O. Box 1481, Grand Junction, Colorado, a partnership, has applied for DMEA assistance in a plug and core-drilling program on claims leased by them in the Gypsum Valley district, San Miguel County, Colorado (fig. 1). The project calls for approximately 14,345 feet of plug-drilling and 2,855 feet of core-drilling, or 74 holes in two stages at an estimated cost of $73,458.75. Government participation at 75 percent would be $55,094.00.

The property was visited on July 12, 1956 by H. F. Albee, USGS, and H. F. Robertson, USBM. The examining team was accompanied by D. P. Elston, USGS, and E. E. Lewis, general partner of E. E. Lewis and associates.

The applicant proposes to explore steeply-dipping strata of the Hermosa and Morrison formations that are uranium-bearing and have had some production at or near the surface.

The rocks exposed on the Early Morn group of claims consist of the limestone member of the Pennsylvanian Hermosa formation, the Permian Rico-Cutler formation, and the Salt Wash member of the Jurassic Morrison formation. The limestone member consists of northeast-dipping beds of limestone and limy shale. The Rico-Cutler formation consists of northeast-dipping beds of arkose and red mudstone, and the Salt Wash member consists of southwest dipping beds of light brown sandstone and red and gray-green

mudstones. Northwest trending faults downthrown to the southwest cut these formations. Small tabular bodies of ore and mineralized material have been mined and prospected by small adits in the limestone along the fault and in the Salt Wash near the fault.

Studies of the area have led to the conclusion that the uranium-vanadium was emplaced by downward migration along the faults from ore bodies in previously overlying Salt Wash. If so, then there is little reason to expect larger ore bodies below the present workings.

The property has been mined intermittently for several years but total production has not reached a significant amount. Apparently the mining operations have proved uneconomical.

Considering the available information, ore bodies of significant size are not expected on the property. The examining team, therefore, recommends denial of the request for DMEA participation.

ACKNOWLEDGMENTS

Data on the property was furnished by the applicant, including a good map of the claims involved. E. E. Lewis, representing the partnership, accompanied the examining team on the property. Data on U. S. Geological Survey drilling on the Early Morn nos. 3 and 4 were used in evaluating the property. The AEC was consulted for production figures and other pertinent data on the subject claims.

LOCATION, TOPOGRAPHY, AND CLIMATE

The Early Morn group of claims is located along the northeast wall of Big Gypsum Valley in sections 23 and 24, T. 44 N., R. 17 W., NMPM, Big Gypsum Valley Mining District, San Miguel County, Colorado. They may be reached by traveling about 34 miles south from Naturita, Colorado, on State Highway 80; thence 6 miles west on an improved county road along the northeast side of Gypsum Valley.

The claims lie on the northeast side of Big Gypsum Valley, a large dry basin located in the northwestern part of San Miguel County. In the immediate area of the claims the terrain rises abruptly from the valley floor, which is at an altitude of about 6,000 feet, to a maximum altitude of about 6,500 feet. The surface of the claims is sparsely covered with pinion and cedar and is characterized by numerous washes, small hills, and sharp breaks due to faulting.

Very little precipitation occurs in the area during the year and is usually in the form of local showers during the summer and snow flurries during the winter. Operations are feasible in the area throughout the year.

HISTORY AND PRODUCTION

Operations have been carried on in Big Gypsum Valley since 1939 on the vanadium-uranium occurrences of the area, and the history of exploration dates back to the 1920's. Production from the subject claims has been from short adits and prospect entries at various locations along

the fault strike on the claim group. Three short tunnels on the east end of Early Morn no. 3 has accounted for most of the known production. These tunnels were driven along the strike of a very steeply dipping fault with the mineralized material occurring in limy shale beds of the Pennsylvanian Hermosa formation. Work has been suspended on these drifts since March 1956.

Production records of the Gypsum Valley area are incomplete prior to October, 1953. Table I is a tabulation of production from the Early Morn Mines on the subject property and three other nearby producing mines (fig. 2). As evident from the tabulation, mines in this area have been operated sporadically with no large operations being attempted. The uranium-vanadium content of ores shipped from the Early Morn property has been consistently low and the calcium content high enough to incur a considerable lime penalty.

The Long Ridge and Bald Eagle mines were operating a number of years before 1953, but data is uncertain as to production prior to that date. The Long Ridge has produced about 7,000 tons and the Bald Eagle about 3,600 tons of ore.

OWNERSHIP AND EXTENT

The Early Morn claims no. 1, 2, and 3 were originally located by Roy W. Smith on March 12, 1940, and recorded on June 10, 1940 in Book 174, pp 95 and 96, at the San Miguel County courthouse, Telluride,

Table 1.--Production from the Bald Eagle, Early Morn, Long Ridge, and Long Ridge No. 2 Mines from October 1953 through March 1956.

Mine	Period	Tons	Assay Percent		
			U_3O_8	V_2O_5	$CaCO_3$
Bald Eagle	Oct.-Dec. 1953	91.2	0.24	2.08	--
	Jan.-June 1954	None	--	--	--
	July-Sept. 1954	19.6	0.10	0.87	27.0
	Oct.'54-Dec.'55	None	--	--	--
	Jan.-March 1956	87.0	0.19	2.16	30.0
Total	Oct.'53-March'56	197.8	0.20	2.00	--
Early Morn	Oct.'53-March'54	None	--	--	--
	Apr.-June 1954	22.9	0.06	0.92	--
	July-Sept. 1954	31.1	0.12	1.34	24.0
	Oct.'54-Sept.'55	None	--	--	--
	Oct.-Dec. 1955	70.7	0.16	1.77	17.0
	Jan.-March 1956	42.9	0.16	1.53	21.0
Total	Oct.'53-March '56	168.6	0.14	1.50	--
Long Ridge	Oct.-Dec. 1953	47.2	0.28	2.00	--
	Jan.-March 1954	149.8	0.27	1.81	--
	Apr.-June 1954	46.8	0.32	1.92	--
	July-Sept. 1954	16.1	0.25	2.00	--
	Oct.'54-June'55	None	--	--	--
	July-Sept. 1955	16.1	0.35	1.74	--
	Oct.-Dec. 1955	None	--	--	--
	Jan.-March 1956	31.0	0.30	1.60	--
Total	Oct.'53-March'56	307.0	0.28	1.84	--
Long Ridge No. 2	Oct.'53-June'54	None	--	--	--
	July-Sept. 1954	9.8	0.28	1.56	--
	Oct.'54-Dec.'55	None	--	--	--
	Jan.-March 1956	13.6	0.25	1.61	--
Total	Oct.'53-March'56	23.4	0.26	1.59	--

Colorado. These three claims were transferred to James Wuergler by means of a quit-claim deed dated April 19, 1943. Early Morn claims nos. 4 and 5 were recorded on November 18, 1950 by E. Short, P. Kennedy, and James Wuergler in book 175, p. 10, at the San Miguel County Courthouse. On April 24, 1951 Short and Kennedy quit-claim deeded their shares to Wuergler. Between 1951 and 1953, the Dulaney Mining Company acquired the five Early Morn claims. No record of this transaction is available. On the 24th of October, 1955, Dulaney Mining Company leased the property to E. E. Lewis and Associates for a period of two years.

Data on recording of location certificates for the claims concerned in the application are shown below.

	Original Recording		Amended Notice	
Name of claim	Book	Page	Book	Page
Early Morn	174	95	122	463
Early Morn no. 2	174	96	122	464
Early Morn no. 3	174	96	122	465
Early Morn no. 4	175	10	122	466
Early Morn no. 4	--	--	225	835
Early Morn no. 5	175	10	122	467
Early Morn no. 5	--	--	225	836

The five subject claims are unpatented, standard, lode mining claims and encompass an area of about 103 acres.

PRESENT STATUS

Exploration and Development

No exploration by private interests has been done on the subject claims other than the short exploratory tunnels and prospect openings along the strike of the fault which is traceable over most of the length of the claim group. The work was done in a haphazard way and could hardly be classed as exploratory work. No records are available as to the results of the work.

Between June 25 and July 15, 1953 the U. S. Geological Survey completed two inclined, diamond-drill holes about 75 feet north of the mines on the Early Morn no. 3 claim. Both holes cut mineralized material above the cutoff for ore - by USGS definition - 0.10 percent or more U_3O_8, or 1.0 percent or more V_2O_5 and 1 foot or more in thickness, as determined by chemical assay and gamma-ray data. However, the material qualifies as ore grade only with regard to gamma-ray data; chemical assay data does not show enough thickness of the material for it to be called ore by definition. The report on USGS Early Morn drilling (TEMR 623, by E. M. Barge, September 1953) states that the reliability of the gamma-ray data is doubtful. Core recovery averaged less than 60 percent in the ore zone. The results from these two holes are as follows:

Hole No.	Total Depth	Angle	Assay data: Depth in feet From	Assay data: Depth in feet To	Assay data: Thickness (feet)	Assay data: Percent U_3O_8	Assay data: Percent V_2O_5	Assay data: Percent $CaCO_3$	Assay data: Core Recovery (percent)	Gamma-ray data: Percent eU_3O_8	Gamma-ray data: Depth in feet From	Gamma-ray data: Depth in feet To	Gamma-ray data: Thickness (feet)
GV-387	178.5	21°	71.9	72.7	0.8	0.24	0.33	33.3	62	0.020	68.1	69.5	1.4
										0.10	70.7	72.6	1.9
										0.020	78.3	80.2	1.9
GV-398	114.7	45°	35.0	35.2	0.2	0.032	1.77	27.0	70	0.024	28.6	30.2	1.6
			35.2	35.5	0.3	0.12	1.85	30.9	50	0.14	34.9	35.9	1.0
			38.3	42.0	3.7	0.020	0.59	34.5	50	0.060	36.3	37.7	1.4
										0.026	37.7	38.6	0.9
										0.031	38.6	40.4	1.8
										0.14	40.4	42.1	1.7
										0.15	42.1	42.9	0.8

The mineralized material occurred in fractures along the bedding-planes in the limy shale beds of the limestone member of the Hermosa formation.

MINING EQUIPMENT AND OTHER FACILITIES

No mining equipment, other than wooden chutes and platforms, is on the property at the present time. The equipment used for previous mining operations was apparently portable and has been put in service on other property controlled by the applicant.

Access roads have been constructed to the small prospect entries on the property.

The supply of labor for mining or exploration in the region is adequate. Mining and exploration personnel would probably live in house trailers on the property or commute from a small community known as Basin, Colorado, 23 miles northeast of the claim group on State Highway 80.

Uranium-vanadium mills are located at Naturita, Colorado; Uravan, Colorado; and Monticello, Utah, respective distances of 40, 46 and 62 miles from the subject property. Mining timber is available locally. Some items may be obtained in Naturita or Uravan, Colorado, but most supplies must be shipped via truck from Grand Junction, Colorado, about 150 miles distant. Drill water can be obtained from the Dolores River

approximately 8 miles west of the claims, and domestic water from local wells and springs within 10 miles. Electric power must be generated by diesel or gasoline-driven units.

GEOLOGY

The Early Morn group of claims lies on the northeastern side of Gypsum Valley in the western part of San Miguel County, Colorado. The valley was formed by the subsidence of an anticlinal crest during partial solution of underlying salt beds. Complex systems of faults cut the sides of Gypsum Valley and, in general, the blocks formed by these faults are downthrown toward the valley.

The rocks exposed in the vicinity of the claims are those of the Pennsylvanian Hermosa formation; the Permian Rico and Cutler formations undifferentiated; the Triassic Chinle formation and Wingate sandstone; the Jurassic Carmel formation and Entrada sandstone, undifferentiated, and the Summerville and Morrison formations; and the Cretaceous Burro Canyon formation and Dakota sandstone. Certain of these rocks would not be exposed were it not for the faults that cut the area and the exposures are not important insofar as the uranium geology is concerned. Only the ore-bearing rocks on the property, therefore, are described.

The Hermosa formation is divided into two members, the lower of which consists predominantly of gypsum interbedded with shale and thin

beds of limestone and sandstone. The upper or limestone member consits largely of fossiliferous thick-bedded gray limestone with interbedded thin shale strata.

The upper or Brushy Basin member of the Morrison formation is not present on the claims. Strata of the Salt Wash member are present and consist of lenticular beds of sandstone and beds of red and gray-green mudstone. The sandstone and mudstone are in about equal proportions. Most of the sandstone is fine- to medium-grained, cross-bedded and massive and is composed of subangular to subrounded clear quartz grains.

The Salt Wash member ranges in thickness from 320 to 400 feet, however, on the Early Morn nos. 1, 2, and 3 claims, where all the work is proposed, much of the upper Salt Wash has been eroded away and at the proposed drill sites is probably less than 100 feet thick. The rocks strike about N. 55 W. and dip to the southwest at about 45° in the Early Morn no. 1 to about 65° on the Early Morn no. 3.

ORE DEPOSITS

The rocks are upturned sharply along the flanks of the anticline, and it is apparent that, in places, as the salt core of the anticline was breached by solution the Morrison formation was structurally deformed and faulted. Thus, dipping toward the core of the ancestral anticline, the Morrison was literally draped over older, faulted formations. This

deformation and faulting placed the Salt Wash member of the Morrison formation in contact with the upper shaly limestone member of the Pennsylvanian Hermosa formation and paved the way for possible leaching of uranium from the upper Salt Wash downward into the bedding planes, faults, and fractures of the northeasterly dipping limestone of the Hermosa and lower part of the southwesterly dipping Salt Wash.

A major northwesterly trending normal fault that dips about 82° to the southwest crosses the property. Small tabular bodies of ore and mineralized material have been mined and prospected by adits in the limestone along the fault and in the Salt Wash near the fault. All of the mineralization appears to be spatially related to the fault or fault zone. It seems probable that uranium now found in the limestone member of the Hermosa and in shear zones in the lower part of the Salt Wash was transported downward by ground water from ore bodies in the upper part of the Salt Wash which at one time overlay the area. This method of emplacement has been suggested by C. A. Rasor (Evaluation of ore reserves at the Bald Eagle Mine, San Miguel County, Colorado, Grand Junction Extension, NYRMO, AEC, May 12, unpublished file report, 1949), J. D. Ryan (Carnotite deposits in the limestone member of the Hermosa formation, Gypsum Valley, San Miguel County, Colorado, unpublished file report, 1949), and R. K. Kirkpatrick, (UMDC Report on Gypsum Valley District, Dolores Plateau area, Colorado, 1946). Kirkpatrick mapped the cuts and adits on the Early Morn group in 1946. The workings are essentially the same now as in 1946. Some sporadic

operations have been attempted but each operation has apparently proved uneconomical.

If emplacement of the uranium and vanadium has been by downward migration along the fault and fractures from ore bodies in the previously overlying Salt Wash member as is believed by earlier workers, there is little reason to expect that minable ore bodies will be found much deeper than the present workings. Rather than better ore bodies, as is supposed by the applicant, one would expect thinner and more sporadic concentrations of mineralized material.

The Long Ridge mine, which is only a few thousand feet west of the Early Morn claims, has produced about 7,000 tons of ore, a large amount of which was mined for vanadium. The production has come from several ore bodies in the top sandstone of the Salt Wash member on the Long Ridge claims, (TEMR 682, Development Drilling on the Long Ridge group of claims, Gypsum Valley District, San Miguel County, Colorado, by H. B. Dutro and N. W. Bivens). Ore bodies similar to these probably at one time overlay the present surface of the Early Morn group, but such ore bodies would not now be expected on the property.

ORE RESERVES

The applicant states that no reserves have been blocked out on the property. The U. S. Geological Survey completed two holes on the Early Morn group of claims and estimated a reserve of about 400 short tons of

of indicated and inferred ore containing 0.12 percent U_3O_8 and 1.00 percent V_2O_5. This ore deposit is located in steeply dipping fractures and bedding planes in limy shale beds of the Pennsylvanian Hermosa formation.

The above reserve calculation is not substantiated by the thickness of ore indicated by cores which were analyzed chemically. The ore thicknesses are less than the one foot or more required by the USGS definition of uranium-vanadium ore. Apparently, gamma-ray data was accepted for indication of thickness. However, the report containing the reserve computation states that the reliability of the gamma-ray data is doubtful.

PROPOSED EXPLORATION

The applicant proposes to explore three separate areas on the Early Morn, Early Morn no. 2, and Early Morn no. 3 claims by utilizing inclined drill holes on 100-foot centers, drilling two holes from each location. One hole would be drilled at an angle of 45 degrees and the other at an inclination of 65 degrees. The drill sites would be established on the ground in a line approximately 100 feet distant from the surface outcrop of the fault. It is proposed to do this work in areas adjacent to and at the locations of the surface exploratory work that has been accomplished to date.

The program is designed to explore at depth for mineralization in the fault zone and in the limestone member of the Pennsylvanian Hermosa formation adjacent to the fault zone.

The project would be performed in two phases as summarized below:

Phase I

Drill roads would be constructed 100 feet southwest of the fault trace and parallel to the strike of the fault. The holes would be located on 100-foot centers, and two inclined holes drilled at each location. Angles of inclination would be 45 degrees and 65 degrees. Average depth of the holes would be 145 feet and 240 feet respectively. Six of the holes would be cored from the surface and the rest cored through the potential ore-bearing formations only. Chemical assays would be made of all mineralized core and all holes would be radiometrically probed.

The estimated total cost of phase I is $40,396.25.

Phase II

The second phase would consist of offsetting 50 feet northwest and 50 feet southeast of all mineralized or ore holes drilled during phase I. The drill sites would be located on the access roads constructed for phase I drilling. The holes would be drilled at an angle of 70 degrees and would average 290 feet in depth. The applicant estimates that 30

holes would be necessary for this part of the program. The holes are planned to test the potential ore-bearing formations at greater depth than the phase I holes. An estimated 25 feet of coring per hole is sufficient to sample the target rocks. Chemical analyses would be made on all mineralized core and all holes would be probed for anomalous radioactivity.

The applicant estimates the overall cost of phase II at $33,062.50. The estimated overall cost of the project would be $73,458.75 with Government participation at 75 percent or $55,094.00.

Since DMEA participation in the exploration program is not recommended, no revision of the applicant's proposal and cost estimate has been made.

CONCLUSIONS AND RECOMMENDATIONS

The applicant proposes to explore steeply dipping strata of the Hermosa formation and the Morrison formation that are uranium-bearing and have had some production at or near the surface. Northwest trending faults, downthrown to the southwest, cut these formations. Small, tabular bodies of ore and mineralized material have been mined and prospected by small drifts and stopes in the limestone along the fault and in the Salt Wash near the fault. The concentrations of ore-grade material were found to be very spotty and total production from the subject property has not been significant.

Studies of the area, as noted in the geologic section of this report, have led to the conclusion that the uranium-vanadium minerals were emplaced by downward migration along the fault from ore bodies in previously overlying Salt Wash. If so, then there is little reason to expect larger, higher-grade ore bodies below the present workings.

The Long Ridge mine, located about three thousand feet west of the Early Morn claims, has produced about 7,000 tons of ore, a large amount of which was mined for vanadium. Studies of the mine have shown that this ore is in the top sandstone of the Salt Wash member on the Long Ridge claims and entirely different from the potential deposits on the Early Morn claims. Ore bodies of the Long Ridge type probably at one time overlaid the present surface of the subject claims but such ore bodies would not now be expected on the property.

The Bald Eagle mine about two miles distant from the Early Morn group has produced about 3,600 tons of ore and is structurally similar to the mines on the subject claims. However, the ore on the Bald Eagle property has occurred as larger pods and shows no indication of enrichment at greater depth in contrast to the applicant's hypothesis on the Early Morn group.

Considering the available information, the possibility of finding ore bodies of significant size on the property is too remote to justify DMEA participation in the proposed exploration program.

The examining team recommends that the request for assistance be denied.

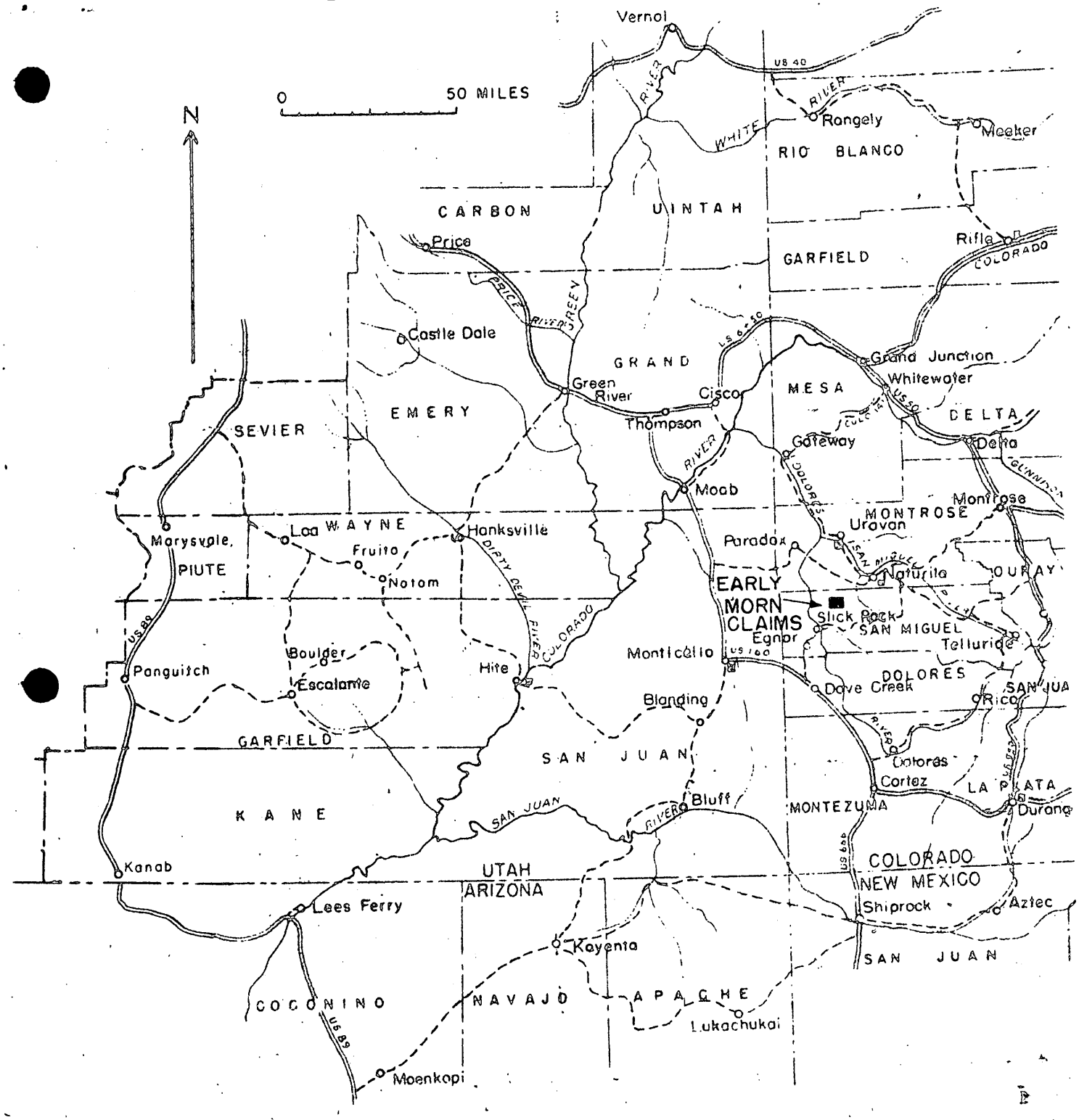
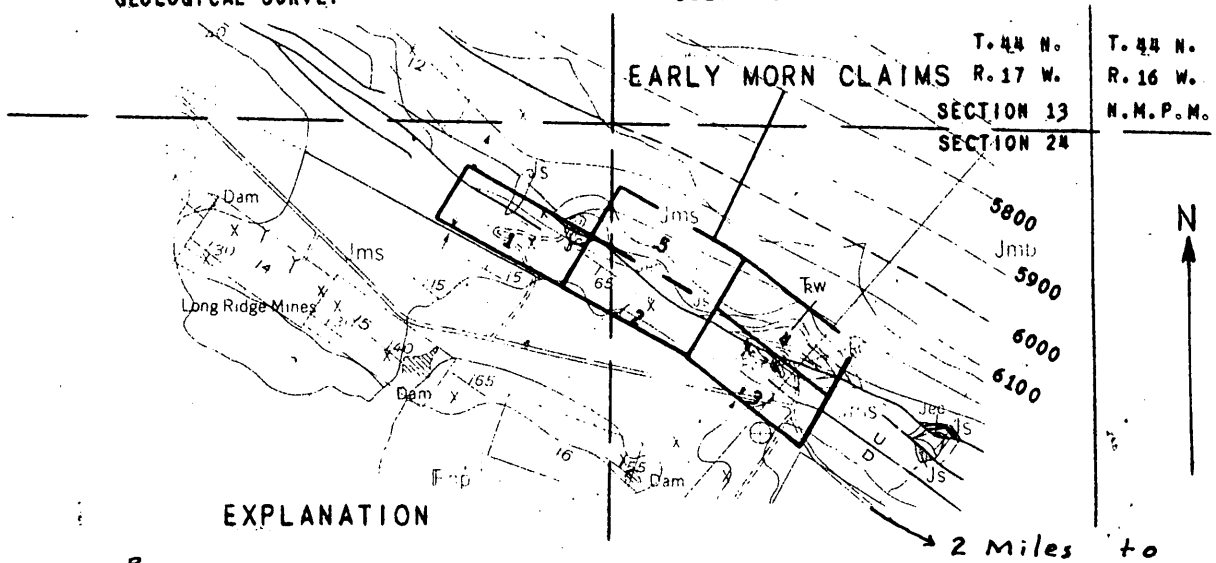


FIGURE 1.--INDEX MAP OF PART OF COLORADO PLATEAU SHOWING LOCATION OF EARLY MORN CLAIMS, E.E. LEWIS AND ASSOCIATES, GYPSUM VALLEY, SAN MIGUEL COUNTY, COLORADO.

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
JULY 1956
DOCKET 4300



EXPLANATION

Qal	QUATERNARY ALLUVIUM
Kbc	CRETACEOUS BURRO CANYON
Jmb / Jms	JURASSIC MORRISON FORMATION: Jmb BRUSHY BASIN MEMBER; Jms SALT WASH MEMBER
JS	JURASSIC SUMMERVILLE FORMATION
Jec	JURASSIC ENTRADA SANDSTONE AND CARMEL FORMATION, UNDIFFERENTIATED
Trw	TRIASSIC WINGATE SANDSTONE
Trc	TRIASSIC CHINLE FORMATION
Pcr	PERMIAN CUTLER AND RICO FORMATIONS, UNDIFFERENTIATED
IPhl / IPhp	PENNSYLVANIAN HERMOSA FORMATION: IPhl LIMESTONE MEMBER; IPhp PARADOX MEMBER
—6000—	STRUCTURE CONTOUR - DASHED WHERE APPROXIMATELY LOCATED. CONTOUR INTERVAL 100 FEET
U/D	FAULT SHOWING RELATIVE DISPLACEMENT
30°	STRIKE AND DIP OF BEDS
	ANTICLINE
	SYNCLINE
⊕	HORIZONTAL BEDS
	ADIT
X	PROSPECT

0 2000 4000 FEET
DATUM IS MEAN SEA LEVEL

Note: CLAIM BOUNDARIES FROM APPLICANTS MAP, BASE MODIFIED FROM PRELIMINARY GEOLOGIC MAP OF THE GYPSUM GAP QUADRANGLE, COLORADO, MF19.

FIGURE 2.--GEOLOGIC MAP SHOWING THE EARLY MORN GROUP OF CLAIMS, E.E. LEWIS AND ASSOCIATES, SAN MIGUEL COUNTY, COLORADO.

RECEIVED
AUG 27 1980

8/27/56

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

August 24, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Joint Report of Examination, Docket DMEA 4300 (Uranium), E. E. Lewis and Associates, (Early Morn Mine) San Miguel County, Colorado

Enclosed are four copies of a joint engineering and geologic report on the subject property.

The field examiners are of the opinion from available information that there is little possibility that significant ore discoveries would result from the proposed exploration, at least not sufficient to justify DMEA participation. Experience in the area has proved that production has been unimportant, and from small, spotty, tabular ore bodies, there is nothing to support the Applicant's theory that there will be larger or more high-grade bodies below the present mine workings.

Denial of the application is recommended, and the Field Team concurs.

DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE

8-29-55
(date)

MINERAL ... IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA
Date Rec'd.
AUG 23 1956

P. O. Box 360
Grand Junction, Colorado

AUG 22 1956

GEOLOGICAL SURVEY RECEIVED DENVER, COLORADO AUG 27 1956

BUREAU OF MINES
Denver, Colorado

TRANSMITTED
AUG 24 1956

August 17, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: E. N. Harshman
John F. Shaw

From: Frank M. Byers, Jr.,

Subject: Transmittal of joint geological and engineering report of examination, DMEA docket 4300 (Uranium), E. E. Lewis and Associates, Early Morn group, Gypsum Valley district, San Miguel County, Colorado

Enclosed are 12 copies of a joint report of examination of the subject property by H. F. Albee, USGS, and H. F. Robertson, USBM. They recommend denial on the basis that the uranium ore was emplaced by downward migration along faults from the overlying Salt Wash. There is therefore little reason to expect ore bodies at depth below the present workings. Moreover, ore bodies that have been mined to date were small, and production has been insignificant. I have reviewed the report and concur with the recommendations of the examining team.

Also enclosed are 12 copies of the illustrations, which are included with the report, and the applicant's brochure.

F. M. Byers, Jr.
For J. William Basler,
Geologist

FMB/mlr

Enclosures

REVIEWED BY
DMEA OPERATING COMMITTEE
8-29-55
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
FRED A. SEATON, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

TRANSMITTED

AUG 24 1956

REPORT OF EXAMINATION OF EXAMINING TEAM
REGION III

CONFIDENTIAL
NOT FOR PUBLIC INSPECTION OR QUOTATION

DMEA 4300

E. E. Lewis and Associates

Gypsum Valley District

San Miguel County, Colorado

Uranium

Joint Engineering and Geologic Report

by

Howard F. Albee
Geological Survey

H. F. Robertson
Bureau of Mines

August 1956

8-29-55
(date)

DMEA 4300

INTRODUCTION

E. E. Lewis and Associates, P. O. Box 1481, Grand Junction, Colorado, a partnership, has applied for DMEA assistance in a plug and core-drilling program on claims leased by them in the Gypsum Valley district, San Miguel County, Colorado (fig. 1). The project calls for approximately 14,345 feet of plug-drilling and 2,855 feet of core-drilling, or 74 holes in two stages at an estimated cost of $73,458.75. Government participation at 75 percent would be $55,094.00.

The property was visited on July 12, 1956 by H. F. Albee, USGS, and H. F. Robertson, USBM. The examining team was accompanied by D. P. Elston, USGS, and E. E. Lewis, general partner of E. E. Lewis and associates.

The applicant proposes to explore steeply-dipping strata of the Hermosa and Morrison formations that are uranium-bearing and have had some production at or near the surface.

The rocks exposed on the Early Morn group of claims consist of the limestone member of the Pennsylvanian Hermosa formation, the Permian Rico-Cutler formation, and the Salt Wash member of the Jurassic Morrison formation. The limestone member consists of northeast-dipping beds of limestone and limy shale. The Rico-Cutler formation consists of northeast-dipping beds of arkose and red mudstone, and the Salt Wash member consists of southwest dipping beds of light brown sandstone and red and gray-green

mudstones. Northwest trending faults downthrown to the southwest cut these formations. Small tabular bodies of ore and mineralized material have been mined and prospected by small adits in the limestone along the fault and in the Salt Wash near the fault.

Studies of the area have led to the conclusion that the uranium-vanadium was emplaced by downward migration along the faults from ore bodies in previously overlying Salt Wash. If so, then there is little reason to expect larger ore bodies below the present workings.

The property has been mined intermittently for several years but total production has not reached a significant amount. Apparently the mining operations have proved uneconomical.

Considering the available information, ore bodies of significant size are not expected on the property. The examining team, therefore, recommends denial of the request for DMEA participation.

ACKNOWLEDGMENTS

Data on the property was furnished by the applicant, including a good map of the claims involved. E. E. Lewis, representing the partnership, accompanied the examining team on the property. Data on U. S. Geological Survey drilling on the Early Morn nos. 3 and 4 were used in evaluating the property. The AEC was consulted for production figures and other pertinent data on the subject claims.

LOCATION, TOPOGRAPHY, AND CLIMATE

The Early Morn group of claims is located along the northeast wall of Big Gypsum Valley in sections 23 and 24, T. 44 N., R. 17 W., NMPM, Big Gypsum Valley Mining District, San Miguel County, Colorado. They may be reached by traveling about 34 miles south from Naturita, Colorado, on State Highway 80; thence 6 miles west on an improved county road along the northeast side of Gypsum Valley.

The claims lie on the northeast side of Big Gypsum Valley, a large dry basin located in the northwestern part of San Miguel County. In the immediate area of the claims the terrain rises abruptly from the valley floor, which is at an altitude of about 6,000 feet, to a maximum altitude of about 6,500 feet. The surface of the claims is sparsely covered with pinion and cedar and is characterized by numerous washes, small hills, and sharp breaks due to faulting.

Very little precipitation occurs in the area during the year and is usually in the form of local showers during the summer and snow flurries during the winter. Operations are feasible in the area throughout the year.

HISTORY AND PRODUCTION

Operations have been carried on in Big Gypsum Valley since 1939 on the vanadium-uranium occurrences of the area, and the history of exploration dates back to the 1920's. Production from the subject claims has been from short adits and prospect entries at various locations along

the fault strike on the claim group. Three short tunnels on the east end of Early Morn no. 3 has accounted for most of the known production. These tunnels were driven along the strike of a very steeply dipping fault with the mineralized material occurring in limy shale beds of the Pennsylvanian Hermosa formation. Work has been suspended on these drifts since March 1956.

Production records of the Gypsum Valley area are incomplete prior to October, 1953. Table I is a tabulation of production from the Early Morn Mines on the subject property and three other nearby producing mines (fig. 2). As evident from the tabulation, mines in this area have been operated sporadically with no large operations being attempted. The uranium-vanadium content of ores shipped from the Early Morn property has been consistently low and the calcium content high enough to incur a considerable lime penalty.

The Long Ridge and Bald Eagle mines were operating a number of years before 1953, but data is uncertain as to production prior to that date. The Long Ridge has produced about 7,000 tons and the Bald Eagle about 3,600 tons of ore.

OWNERSHIP AND EXTENT

The Early Morn claims no. 1, 2, and 3 were originally located by Roy W. Smith on March 12, 1940, and recorded on June 10, 1940 in Book 174, pp 95 and 96, at the San Miguel County courthouse, Telluride,

Table 1.--Production from the Bald Eagle, Early Morn, Long Ridge, and Long Ridge No. 2 Mines from October 1953 through March 1956.

Mine	Period	Tons	Assay Percent U_3O_8	V_2O_5	$CaCO_3$
Bald Eagle	Oct.-Dec. 1953	91.2	0.24	2.08	--
	Jan.-June 1954	None	--	--	--
	July-Sept. 1954	19.6	0.10	0.87	27.0
	Oct.'54-Dec.'55	None	--	--	--
	Jan.-March 1956	87.0	0.19	2.16	30.0
Total	Oct.'53-March'56	197.8	0.20	2.00	--
Early Morn	Oct.'53-March'54	None	--	--	--
	Apr.-June 1954	22.9	0.06	0.92	--
	July-Sept. 1954	31.1	0.12	1.34	24.0
	Oct.'54-Sept.'55	None	--	--	--
	Oct.-Dec. 1955	70.7	0.16	1.77	17.0
	Jan.-March 1956	42.9	0.16	1.53	21.0
Total	Oct.'53-March '56	168.6	0.14	1.50	--
Long Ridge	Oct.-Dec. 1953	47.2	0.28	2.00	--
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Total	Oct.'53-March'56	23.4	0.26	1.59	--

Colorado. These three claims were transferred to James Wuergler by means of a quit-claim deed dated April 19, 1943. Early Morn claims nos. 4 and 5 were recorded on November 18, 1950 by E. Short, P. Kennedy, and James Wuergler in book 175, p. 10, at the San Miguel County Courthouse. On April 24, 1951 Short and Kennedy quit-claim deeded their shares to Wuergler. Between 1951 and 1953, the Dulaney Mining Company acquired the five Early Morn claims. No record of this transaction is available. On the 24th of October, 1955, Dulaney Mining Company leased the property to E. E. Lewis and Associates for a period of two years.

Data on recording of location certificates for the claims concerned in the application are shown below.

	Original Recording		Amended Notice	
Name of claim	Book	Page	Book	Page
Early Morn	174	95	122	463
Early Morn no. 2	174	96	122	464
Early Morn no. 3	174	96	122	465
Early Morn no. 4	175	10	122	466
Early Morn no. 4	--	--	225	835
Early Morn no. 5	175	10	122	467
Early Morn no. 5	--	--	225	836

The five subject claims are unpatented, standard, lode mining claims and encompass an area of about 103 acres.

PRESENT STATUS

Exploration and Development

No exploration by private interests has been done on the subject claims other than the short exploratory tunnels and prospect openings along the strike of the fault which is traceable over most of the length of the claim group. The work was done in a haphazard way and could hardly be classed as exploratory work. No records are available as to the results of the work.

Between June 25 and July 15, 1953 the U. S. Geological Survey completed two inclined, diamond-drill holes about 75 feet north of the mines on the Early Morn no. 3 claim. Both holes cut mineralized material above the cutoff for ore - by USGS definition - 0.10 percent or more U_3O_8, or 1.0 percent or more V_2O_5 and 1 foot or more in thickness, as determined by chemical assay and gamma-ray data. However, the material qualifies as ore grade only with regard to gamma-ray data; chemical assay data does not show enough thickness of the material for it to be called ore by definition. The report on USGS Early Morn drilling (TEMR 623, by E. M. Barge, September 1953) states that the reliability of the gamma-ray data is doubtful. Core recovery averaged less than 60 percent in the ore zone. The results from these two holes are as follows:

Hole No.	Total Depth	Angle	Assay data: Depth in feet From	Assay data: Depth in feet To	Assay data: Thickness (feet)	Assay data: Percent U_3O_8	Assay data: Percent V_2O_5	Assay data: Percent $CaCO_3$	Assay data: Core Recovery (percent)	Gamma-ray data: Percent eU_3O_8	Gamma-ray data: Depth in feet From	Gamma-ray data: Depth in feet To	Gamma-ray data: Thickness (feet)
GV-387	178.5	21°	71.9	72.7	0.8	0.24	0.33	33.3	62	0.020	68.1	69.5	1.4
										0.10	70.7	72.6	1.9
										0.020	78.3	80.2	1.9
GV-398	114.7	45°	35.0	35.2	0.2	0.032	1.77	27.0	70	0.024	28.6	30.2	1.6
			35.2	35.5	0.3	0.12	1.85	30.9	50	0.14	34.9	35.9	1.0
			38.3	42.0	3.7	0.020	0.59	34.5	50	0.060	36.3	37.7	1.4
										0.026	37.7	38.6	0.9
										0.031	38.6	40.4	1.8
										0.14	40.4	42.1	1.7
										0.15	42.1	42.9	0.8

The mineralized material occurred in fractures along the bedding-planes in the limy shale beds of the limestone member of the Hermosa formation.

MINING EQUIPMENT AND OTHER FACILITIES

No mining equipment, other than wooden chutes and platforms, is on the property at the present time. The equipment used for previous mining operations was apparently portable and has been put in service on other property controlled by the applicant.

Access roads have been constructed to the small prospect entries on the property.

The supply of labor for mining or exploration in the region is adequate. Mining and exploration personnel would probably live in house trailers on the property or commute from a small community known as Basin, Colorado, 23 miles northeast of the claim group on State Highway 80.

Uranium-vanadium mills are located at Naturita, Colorado; Uravan, Colorado; and Monticello, Utah, respective distances of 40, 46 and 62 miles from the subject property. Mining timber is available locally. Some items may be obtained in Naturita or Uravan, Colorado, but most supplies must be shipped via truck from Grand Junction, Colorado, about 150 miles distant. Drill water can be obtained from the Dolores River

approximately 8 miles west of the claims, and domestic water from local wells and springs within 10 miles. Electric power must be generated by diesel or gasoline-driven units.

GEOLOGY

The Early Morn group of claims lies on the northeastern side of Gypsum Valley in the western part of San Miguel County, Colorado. The valley was formed by the subsidence of an anticlinal crest during partial solution of underlying salt beds. Complex systems of faults cut the sides of Gypsum Valley and, in general, the blocks formed by these faults are downthrown toward the valley.

The rocks exposed in the vicinity of the claims are those of the Pennsylvanian Hermosa formation; the Permian Rico and Cutler formations undifferentiated; the Triassic Chinle formation and Wingate sandstone; the Jurassic Carmel formation and Entrada sandstone, undifferentiated, and the Summerville and Morrison formations; and the Cretaceous Burro Canyon formation and Dakota sandstone. Certain of these rocks would not be exposed were it not for the faults that cut the area and the exposures are not important insofar as the uranium geology is concerned. Only the ore-bearing rocks on the property, therefore, are described.

The Hermosa formation is divided into two members, the lower of which consists predominantly of gypsum interbedded with shale and thin

beds of limestone and sandstone. The upper or limestone member consits largely of fossiliferous thick-bedded gray limestone with interbedded thin shale strata.

The upper or Brushy Basin member of the Morrison formation is not present on the claims. Strata of the Salt Wash member are present and consist of lenticular beds of sandstone and beds of red and gray-green mudstone. The sandstone and mudstone are in about equal proportions. Most of the sandstone is fine- to medium-grained, cross-bedded and massive and is composed of subangular to subrounded clear quartz grains.

The Salt Wash member ranges in thickness from 320 to 400 feet, however, on the Early Morn nos. 1, 2, and 3 claims, where all the work is proposed, much of the upper Salt Wash has been eroded away and at the proposed drill sites is probably less than 100 feet thick. The rocks strike about N. 55 W. and dip to the southwest at about 45° in the Early Morn no. 1 to about 65° on the Early Morn no. 3.

ORE DEPOSITS

The rocks are upturned sharply along the flanks of the anticline, and it is apparent that, in places, as the salt core of the anticline was breached by solution the Morrison formation was structurally deformed and faulted. Thus, dipping toward the core of the ancestral anticline, the Morrison was literally draped over older, faulted formations. This

deformation and faulting placed the Salt Wash member of the Morrison formation in contact with the upper shaly limestone member of the Pennsylvanian Hermosa formation and paved the way for possible leaching of uranium from the upper Salt Wash downward into the bedding planes, faults, and fractures of the northeasterly dipping limestone of the Hermosa and lower part of the southwesterly dipping Salt Wash.

A major northwesterly trending normal fault that dips about 82° to the southwest crosses the property. Small tabular bodies of ore and mineralized material have been mined and prospected by adits in the limestone along the fault and in the Salt Wash near the fault. All of the mineralization appears to be spatially related to the fault or fault zone. It seems probable that uranium now found in the limestone member of the Hermosa and in shear zones in the lower part of the Salt Wash was transported downward by ground water from ore bodies in the upper part of the Salt Wash which at one time overlay the area. This method of emplacement has been suggested by C. A. Rasor (Evaluation of ore reserves at the Bald Eagle Mine, San Miguel County, Colorado, Grand Junction Extension, NYRMO, AEC, May 12, unpublished file report, 1949), J. D. Ryan (Carnotite deposits in the limestone member of the Hermosa formation, Gypsum Valley, San Miguel County, Colorado, unpublished file report, 1949), and R. K. Kirkpatrick, (UMDC Report on Gypsum Valley District, Dolores Plateau area, Colorado, 1946). Kirkpatrick mapped the cuts and adits on the Early Morn group in 1946. The workings are essentially the same now as in 1946. Some sporadic

operations have been attempted but each operation has apparently proved uneconomical.

If emplacement of the uranium and vanadium has been by downward migration along the fault and fractures from ore bodies in the previously overlying Salt Wash member as is believed by earlier workers, there is little reason to expect that minable ore bodies will be found much deeper than the present workings. Rather than better ore bodies, as is supposed by the applicant, one would expect thinner and more sporadic concentrations of mineralized material.

The Long Ridge mine, which is only a few thousand feet west of the Early Morn claims, has produced about 7,000 tons of ore, a large amount of which was mined for vanadium. The production has come from several ore bodies in the top sandstone of the Salt Wash member on the Long Ridge claims, (TEMR 682, Development Drilling on the Long Ridge group of claims, Gypsum Valley District, San Miguel County, Colorado, by H. B. Dutro and N. W. Bivens). Ore bodies similar to these probably at one time overlay the present surface of the Early Morn group, but such ore bodies would not now be expected on the property.

ORE RESERVES

The applicant states that no reserves have been blocked out on the property. The U. S. Geological Survey completed two holes on the Early Morn group of claims and estimated a reserve of about 400 short tons of

of indicated and inferred ore containing 0.12 percent U_3O_8 and 1.00 percent V_2O_5. This ore deposit is located in steeply dipping fractures and bedding planes in limy shale beds of the Pennsylvanian Hermosa formation.

The above reserve calculation is not substantiated by the thickness of ore indicated by cores which were analyzed chemically. The ore thicknesses are less than the one foot or more required by the USGS definition of uranium-vanadium ore. Apparently, gamma-ray data was accepted for indication of thickness. However, the report containing the reserve computation states that the reliability of the gamma-ray data is doubtful.

PROPOSED EXPLORATION

The applicant proposes to explore three separate areas on the Early Morn, Early Morn no. 2, and Early Morn no. 3 claims by utilizing inclined drill holes on 100-foot centers, drilling two holes from each location. One hole would be drilled at an angle of 45 degrees and the other at an inclination of 65 degrees. The drill sites would be established on the ground in a line approximately 100 feet distant from the surface outcrop of the fault. It is proposed to do this work in areas adjacent to and at the locations of the surface exploratory work that has been accomplished to date.

The program is designed to explore at depth for mineralization in the fault zone and in the limestone member of the Pennsylvanian Hermosa formation adjacent to the fault zone.

The project would be performed in two phases as summarized below:

Phase I

Drill roads would be constructed 100 feet southwest of the fault trace and parallel to the strike of the fault. The holes would be located on 100-foot centers, and two inclined holes drilled at each location. Angles of inclination would be 45 degrees and 65 degrees. Average depth of the holes would be 145 feet and 240 feet respectively. Six of the holes would be cored from the surface and the rest cored through the potential ore-bearing formations only. Chemical assays would be made of all mineralized core and all holes would be radiometrically probed.

The estimated total cost of phase I is $40,396.25.

Phase II

The second phase would consist of offsetting 50 feet northwest and 50 feet southeast of all mineralized or ore holes drilled during phase I. The drill sites would be located on the access roads constructed for phase I drilling. The holes would be drilled at an angle of 70 degrees and would average 290 feet in depth. The applicant estimates that 30

holes would be necessary for this part of the program. The holes are planned to test the potential ore-bearing formations at greater depth than the phase I holes. An estimated 25 feet of coring per hole is sufficient to sample the target rocks. Chemical analyses would be made on all mineralized core and all holes would be probed for anomalous radioactivity.

The applicant estimates the overall cost of phase II at $33,062.50. The estimated overall cost of the project would be $73,458.75 with Government participation at 75 percent or $55,094.00.

Since DMEA participation in the exploration program is not recommended, no revision of the applicant's proposal and cost estimate has been made.

CONCLUSIONS AND RECOMMENDATIONS

The applicant proposes to explore steeply dipping strata of the Hermosa formation and the Morrison formation that are uranium-bearing and have had some production at or near the surface. Northwest trending faults, downthrown to the southwest, cut these formations. Small, tabular bodies of ore and mineralized material have been mined and prospected by small drifts and stopes in the limestone along the fault and in the Salt Wash near the fault. The concentrations of ore-grade material were found to be very spotty and total production from the subject property has not been significant.

Studies of the area, as noted in the geologic section of this report, have led to the conclusion that the uranium-vanadium minerals were emplaced by downward migration along the fault from ore bodies in previously overlying Salt Wash. If so, then there is little reason to expect larger, higher-grade ore bodies below the present workings.

The Long Ridge mine, located about three thousand feet west of the Early Morn claims, has produced about 7,000 tons of ore, a large amount of which was mined for vanadium. Studies of the mine have shown that this ore is in the top sandstone of the Salt Wash member on the Long Ridge claims and entirely different from the potential deposits on the Early Morn claims. Ore bodies of the Long Ridge type probably at one time overlaid the present surface of the subject claims but such ore bodies would not now be expected on the property.

The Bald Eagle mine about two miles distant from the Early Morn group has produced about 3,600 tons of ore and is structurally similar to the mines on the subject claims. However, the ore on the Bald Eagle property has occurred as larger pods and shows no indication of enrichment at greater depth in contrast to the applicant's hypothesis on the Early Morn group.

Considering the available information, the possibility of finding ore bodies of significant size on the property is too remote to justify DMEA participation in the proposed exploration program.

The examining team recommends that the request for assistance be denied.

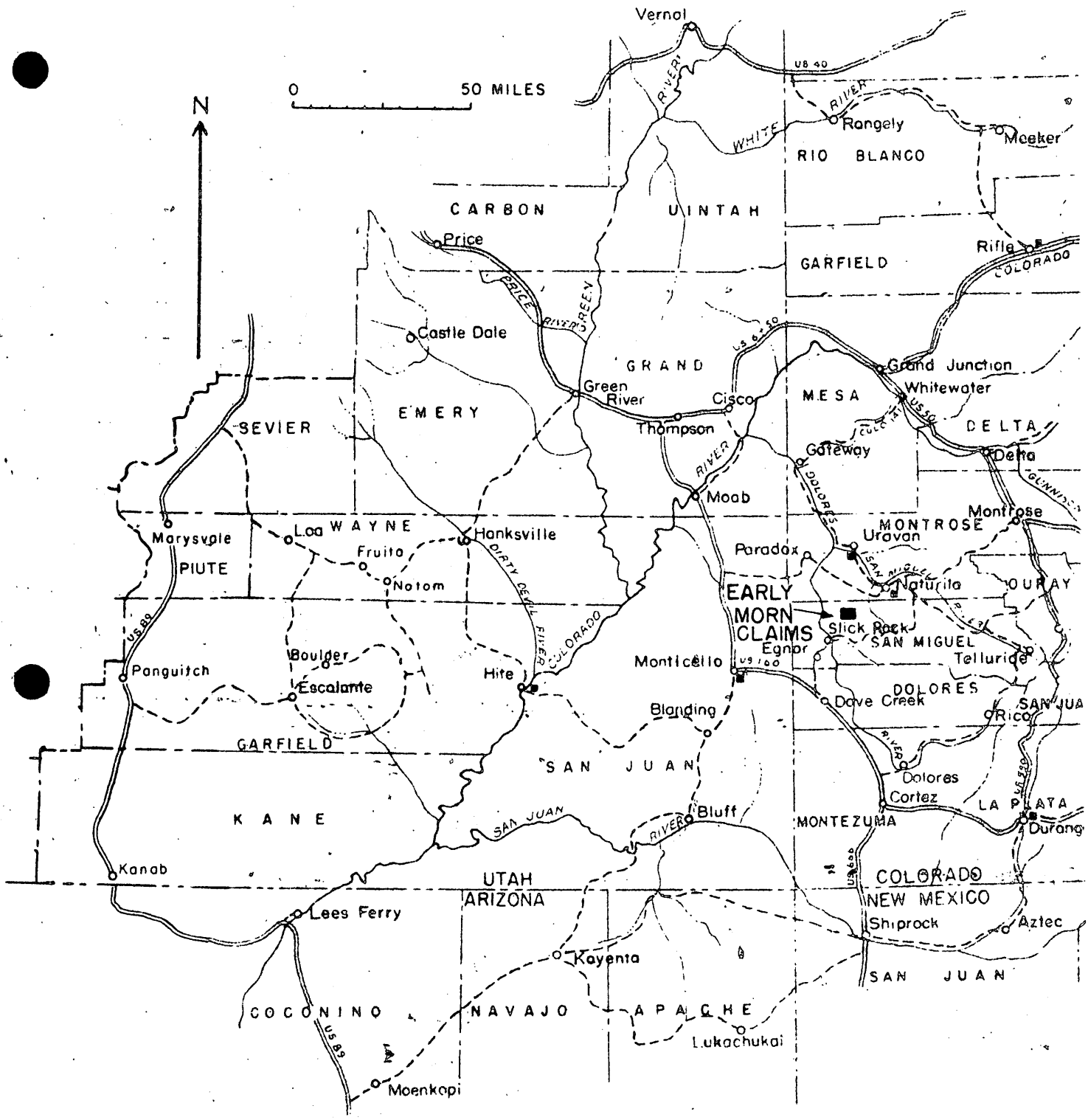
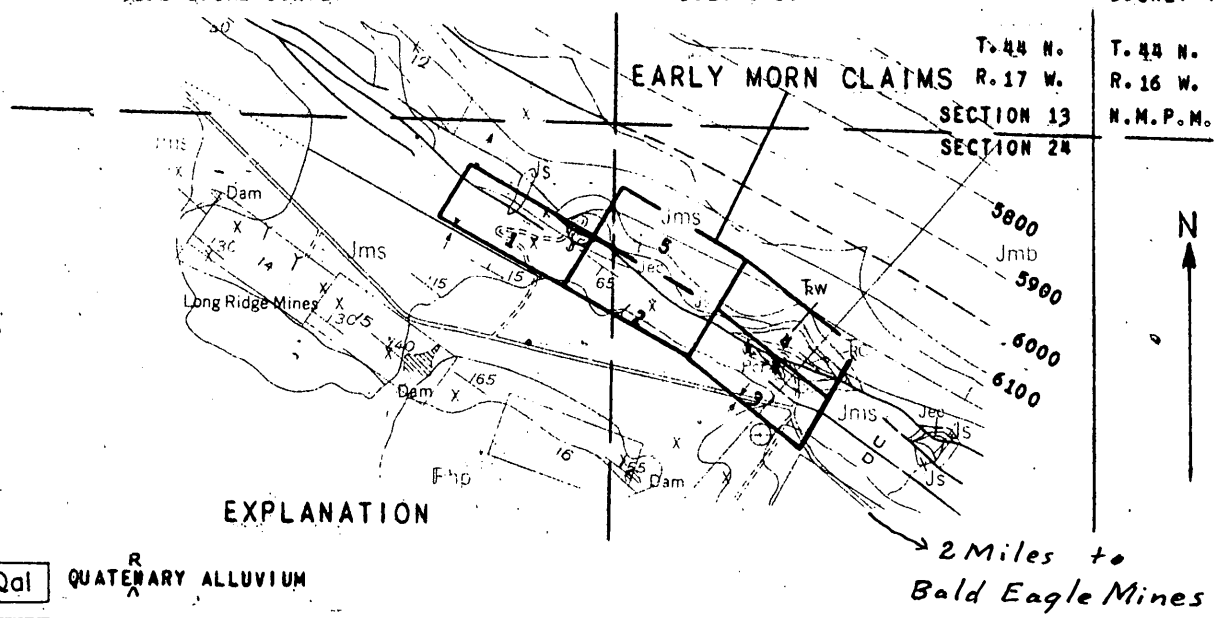


FIGURE 1.--INDEX MAP OF PART OF COLORADO PLATEAU SHOWING LOCATION OF EARLY MORN CLAIMS, E.E. LEWIS AND ASSOCIATES, GYPSUM VALLEY, SAN MIGUEL COUNTY, COLORADO.

U.S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
JULY 1956
DOCKET 4300



EXPLANATION

Qal	QUATERNARY ALLUVIUM
Kbc	CRETACEOUS BURRO CANYON
Jmb / Jms	JURASSIC MORRISON FORMATION: Jmb BRUSHY BASIN MEMBER Jms SALT WASH MEMBER
Js	JURASSIC SUMMERVILLE FORMATION
Jec	JURASSIC ENTRADA SANDSTONE AND CARMEL FORMATION, UNDIFFERENTIATED
Trw	TRIASSIC WINGATE SANDSTONE
Trc	TRIASSIC CHINLE FORMATION
Pcr	PERMIAN CUTLER AND RICO FORMATIONS, UNDIFFERENTIATED
Pnl / Pnp	PENNSYLVANIAN HERMOSA FORMATION: Pnl LIMESTONE MEMBER Pnp PARADOX MEMBER
6000	STRUCTURE CONTOUR – DASHED WHERE APPROXIMATELY LOCATED. CONTOUR INTERVAL 100 FEET
U / D	FAULT SHOWING RELATIVE DISPLACEMENT
130°	STRIKE AND DIP OF BEDS
	ANTICLINE
	SYNCLINE
⊕	HORIZONTAL BEDS
	ADIT
X	PROSPECT

0 2000 4000 FEET
DATUM IS MEAN SEA LEVEL

Note: CLAIM BOUNDARIES FROM APPLICANTS MAP, BASE MODIFIED FROM PRELIMINARY GEOLOGIC MAP OF THE GYPSUM GAP QUADRANGLE, COLORADO, MF19.

FIGURE 2.--GEOLOGIC MAP SHOWING THE EARLY MORN GROUP OF CLAIMS, E.E. LEWIS AND ASSOCIATES, SAN MIGUEL COUNTY, COLORADO.

RECEIVED
AUG 2 1 1994

7/2/56

RECEIVED
JUL 2 - 1956

June 27, 1956

DMEA
Date Rec'd
JUN 28 1956
BUREAU OF MINES
Denver, Colorado

Memorandum

To: W. M. Traver, Executive Officer, DMEA Field Team, Reg. III

From: Superintendent, Denver Experiment Station, Reg. III

Subject: Docket DMEA 4300 (Uranium), E. E. Lewis and Associates, (Early Morn Mine), San Miguel County, Colorado

The application for E. E. Lewis and Associates, Docket DMEA 4300, in the amount of $73,458.75 was received in this office on June 27, 1956.

A field examination will be made and suitable report prepared by an engineer from the Denver or Grand Junction Office.

JOHN F. SHAW

John F. Shaw

cc: W. M. Traver (2)
R. N. Marshman
J. W. Easler
M. E. Salsbury
J. F. Shaw
Sec. Op. Com (2)

RECEIVED
JUL 2 - 1956

June 27, 1956

Memorandum

To: W. M. Traver, Executive Officer, DMEA Field Team, Reg. III

From: Superintendent, Denver Experiment Station, Reg. III

Subject: Docket DMEA 4300 (Uranium), E. E. Lewis and Associates, (Early Morn Mine), San Miguel County, Colorado

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A field examination will be made and suitable report prepared by an engineer from the Denver or Grand Junction Office.

JOHN F. SHAW

John F. Shaw

cc: W. M. Traver (2)
E. H. Harshman
J. W. Ensler
M. E. Salsbury
J. F. Shaw
Sec. Op. Com. (2)

6/28/56

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

RECEIVED
JUN 28 1956

June 26, 1956

[illegible] New Customhouse
Denver 2, Colorado

Memorandum

To: J. F. Shaw (2) (With brochure)
J. W. Ensler

From: Field Team, Region III

Subject: Docket DMEA 4300 (Uranium) E. E. Lewis and Associates, (Early Morn Mine), San Miguel County, Colorado

Enclosed is the subject application in the amount of $73,458.75. A field examination and suitable report are requested.

Please note in the letter from the Chairman, Operating Committee dated June 21, 1956, copy attached, that if the proposed project appears favorable, the field examiners should request the Applicant to submit proof of Delaney Mining Company's ownership of the subject claims. This matter should be clarified before we request Owner's Consent to Lien, and possibly Subordination Agreements.

Also enclosed are memoranda of review of the application by James Paone and W. E. Nelson.

Please return the brochure with the Report of Examination.

DMEA Field Team, Region III

W. M. TRAVER,

By W. M. Traver
Executive Officer

Enclosures

WMT:ab

cc: Chair. Op. Comm. (2)
Hardman
Docket 4300
Chron.

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

RECEIVED
JUN 28 1956

June 26, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: J. F. Shaw (2) (With brochure)
J. W. Kaeler

From: Field Team, Region III

Subject: Docket DMEA 4300 (Uranium) R. E. Levis and Associates, (Early Morn Mine), San Miguel County, Colorado

Enclosed is the subject application in the amount of $73,458.75. A field examination and suitable report are requested.

Please note in the letter from the Chairman, Operating Committee dated June 21, 1956, copy attached, that if the proposed project appears favorable, the field examiners should request the Applicant to submit proof of Bulsney Mining Company's ownership of the subject claims. This matter should be clarified before we request Owner's Consent to Lien, and possibly Subordination Agreements.

Also enclosed are memoranda of review of the application by James Pusma and N. R. Nelson.

Please return the brochure with the Report of Examination.

DMEA Field Team, Region III

W. M. TRAVER,

By W. M. Traver
Executive Officer

Enclosures

MMC:ab

cc: Chmn. Op. Comm. (2)
Herbman
Docket 4300
Chron.

Surname copy
Murphy
Ellis
Kilgard
Yoder
Martin
Rejmanek

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

JUN 21 1956

E. E. Lewis and Associates
P. O. Box 1481
Grand Junction, Colorado

Re: Docket No. DMEA-4300 (Uranium)
Early Morn mine
San Miguel County, Colorado

Gentlemen:

The application for assistance in exploring your property, under the captioned docket number, has been reviewed by the Rare and Miscellaneous Metals Division of the Defense Minerals Exploration Administration. It has been referred for a field examination to:

Mr. W. M. Traver
Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado.

The Regional Office will contact you at the earliest opportunity in regard to your project.

Sincerely yours,

C. O. Mittendorf

Administrator

FMMurphy/ai
6/19/56
cc to: Admr.'s Reading File
Docket
Code 700
Mr. Murphy
DMEA Field Team, Region III (2)

P.C.K.

700

FILE COPY
Surname:

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

JUN 21 1956

Mr. W. M. Traver
Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-4300 (Uranium)
E. E. Lewis and Associates
Early Morn Mine
San Miguel County, Colorado

Dear Mr. Traver:

In accordance with your memorandum of June 1, 1956, the captioned application is referred to Region III Field Team for a field examination and recommendation.

Enclosed are copies of memoranda, dated June 8 and 14, 1956, by James Paone, USBM, and N. E. Nelson, USGS, respectively, relating to the application.

The Applicant has submitted copies of a Lease Agreement, dated October 24, 1955, and a Supplemental Agreement, dated April 20, 1956, wherein the Dulaney Mining Company leases the Early Morn group of claims to E. E. Lewis and Associates, also, an Abstract of Title up to April 25, 1951, wherein James H. Wuergler appears to be the owner of the Early Morn claims Nos. 1 through 5. However, no evidence of Dulaney Mining Company's right to the claims was submitted.

During the field examination, if the proposed project appears favorable, the examiners should request the Applicant to submit proof of Dulaney Mining Company's ownership of the subject claims. This matter should be clarified before requesting the Owner's Consent to Lien, and possibly subordination agreements, in the event the Field Team recommends a contract.

Sincerely yours,

W. S. Martin
ACTING Chairman, Operating Committee

Enclosures

APPROVED:

P. F. Yopes
Member, Bureau of Mines

Thor H. Kiilsgaard
Member, Geological Survey

Messrs. JECrawford, Rm. 3643
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA

FMMurphy/izm 6-19-56
cc to: Docket
Code 700
Mr. Murphy
Admr.'s Reading File
Operating Committee

6/19/56

IN REPLY REFER TO:

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

RECEIVED
JUN 18 1956

June 14, 1956

Re: DMEA 4300
E. E. Lewis and associates
Early Morn mine
San Miguel Co., Colo.
$73,458.75 - Uranium

Memorandum

To: E. W. Ellis, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of application.

The application has been reviewed by the field office in Grand Junction and a field examination recommended.

The applicants request assistance in exploring a steep strike-dip fault which cuts rocks of the Morrison formation. From small exploratory openings in the fault 210 tons of 0.175% U_3O_8 and 1.63% V_2O_5 material has been shipped.

The work proposed consists of drilling 14,065 feet of angle, core and non core holes. The holes spaced 100 feet apart would explore about 1,850 feet of the fault-vein structure at depths of from 100 to 200 feet.

I too, consider the property warrants a field examination and so recommend.

N. E. Nelson

N. E. Nelson

IN REPLY REFER TO:

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

RECEIVED
JUN 18 1956

June 14, 1956

Re: DMEA 4300
. R. Lewis and associates
Early Horn mine
San Miguel Co., Colo.
$73,458.75 - Uranium

Memorandum

To: E. O. Ellis, Defense Minerals Exploration Administration

From: N. E. Nelson, U. S. Geological Survey

Subject: Review of application.

The application has been reviewed by the field office in Grand Junction and a field examination recommended.

The applicants request assistance in exploring a steep strike-dip fault which cuts rocks of the Morrison formation. From small exploratory openings in the fault 210 tons of 0.175% U_3O_8 and 1.63% V_2O_5 material has been shipped.

The work proposed consists of drilling 14,065 feet of angle, core and non core holes. The holes spaced 100 feet apart would explore about 1,850 feet of the fault-vein structure at depths of from 100 to 200 feet.

I too, consider the property warrants a field examination and so recommend.

N. E. Nelson

N. E. Nelson

NENelson:btr
G 6/14/56

cc: Director's reading file (4212)
Branch reading (4212)
DMEA (3)
Chron. file
Docket file
J. E. Crawford, 3641
J. O. Hosted, 3210

6-8-56

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

RECEIVED
JUN 8 1956

June 8, 1956

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

From: James Paone, Bureau of Mines Alternate Member
Uranium Commodity Committee

Subject: Application for assistance, DMEA Docket 4300, E. E. Lewis and Associates, Early Morn mine (Gypsum Valley district), San Miguel County, Colorado

I have reviewed the attached application, E. E. Lewis and Associates, Early Morn mine, San Miguel County, Colorado, DMEA Docket 4300, dated May 28, 1956, and received in this office June 4, 1956. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

The applicant is desirous of exploring for uranium with DMEA participation by 14,315 feet of non-core and 2855 feet of core drilling at a unit cost of $3.25 and $5.50 respectively. The total estimated cost of the project is $73,458.75.

It is indicated that over 400 tons of ore have been shipped from the property since 1952 and the mine workings are accessible for examination purposes.

We recommend that a field examination be made.

James Paone

James Paone

Attachment

6-4-56

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

RECEIVED
JUN - 4 1956

June 1, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Chairman, Operating Committee, DMEA

From: Field Team, Region III

Subject: DMEA Docket 4300 (Uranium) E. E. Lewis and Associates, (Early Morn Mine), San Miguel County, Colorado

Enclosed are the original and three copies of a joint memorandum of review of the subject application by members of the Grand Junction office, DMEA.

Because the area has had some production and the claims lie in a generally favorable belt of mineralization, they recommend that a field examination be made on this property. We concur in this recommendation.

DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures

Hme

IN REPLY REFER TO:
MINERAL DEPOSITS

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. Box 360
Grand Junction, Colorado

DMEA
Date Rec'd.
MAY 31 1956

RECEIVED
JUN - 4 1956

MAY 28 1956
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

BUREAU OF MINES
Denver, Colorado

May 28, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: E. N. Harshman JRW for ENH

From: J. William Hasler
M. H. Salsbury

Subject: DMEA docket 4300 (Uranium), Application of E. E. Lewis and Associates, Early Morn mine (Gypsum Valley district), San Miguel County, Colo.

E. E. Lewis and Associates have applied for aid to explore for uranium on the Early Morn claims in the Gypsum Valley District, San Miguel County, Colo. They propose to explore steeply-dipping strata of the Morrison formation that are uranium-bearing and that have had some production at or near the surface. However, the mineralized material on the Early Morn claim is in the limestone member of the Hermosa formation. The Early Morn mine has produced approximately 500 tons of ore averaging 0.17 percent U_3O_8 and 1.62 V_2O_5. The U. S. Geological Survey completed some development drilling on the Early Morn group of claims during June and July 1953 and established a reserve of about 400 short tons of indicated and inferred material of ore grade.

The rocks exposed on the Early Morn group of claims consist of the limestone member of the Pennsylvania-Hermosa formation, the Permian Rico-Cutler formation and the Salt Wash member of the Jurassic Morrison formation. The limestone member consists of northeast-dipping beds of limestone and limy shale. The Rico-Cutler formation consists of northeast dipping beds of Arkose and red mudstone, and the Salt Wash member consists of southwest dipping beds of light brown sandstone and red and gray-green mudstones. Northwest trending faults downthrown to the southwest cut these formations. The mineralized material occurs in fractures along the bedding planes in limy shale beds of the Pennsylvania Hermosa formation. The deposits of mineralized material are northwest trending tabular masses about 100 feet long, 50 feet wide, and range from a few inches to more than 3 feet in thickness.

In view of the fact that the area has had some production and that it lies in a generally favorable belt of mineralization, it is recommended that a field examination be made.

We will retain one copy of the application in this office until having received advice from Washington.

J. William Hasler
M. H. Salsbury

JWH/mlr

J. William Hasler, USGS
M. H. Salsbury, USBM

6/4/56

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DMEA
Date Rec'd.
MAY 31 1956

P. O. Box 360
Grand Junction, Colorado

BUREAU OF MINES
Denver, Colorado

MINERAL DEPOSITS
DMEA
RECEIVED
MAY 28 1956

RECEIVED
JUN - 4
GEOLOGICAL SURVEY
DENVER, COLORADO

May 28, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: E. N. Harshman ORM for ENH

From: J. William Hasler
M. H. Salsbury

Subject: DMEA docket 4300 (Uranium), Application of E. E. Lewis and Associates, Early Morn mine (Gypsum Valley district), San Miguel County, Colo.

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M. H. Salsbury, USBM

JWH/mlr

IN REPLY REFER TO:

UNITED STATES
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DMEA
Date Rec'd.
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P. O. Box 360
Grand Junction, Colorado

BUREAU OF MINES
Denver, Colorado

MAY 28 1956

RECEIVED
JUN - 4 1956

May 28, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: E. N. Harshman

From: J. William Hasler
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J. William Hasler, USGS
M. H. Salsbury, USBM

JWH/mlr

May 21, 1956

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number

There is listed below the assigned docket number to an application recently received from Region III.

DMEA -4300 E. E. Lewis and Associates

Robert E. Adams
Chief, Operation's Control
and Statistics Division

May 21, 1956

Mr. E. E. Lewis
P. O. Box 1481
Grand Junction, Colorado

Subject: DMEA-4300
Re: Exploration Assistance
Early Morn Mine

Dear Mr. Lewis

The receipt of your application dated May 16, 1956 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-4300 and referred to the Rare and Misc. Metals Division.

Kindly identify all future correspondence relating to your application by this docket number.

Sincerely yours,

Robert E. Adams, Chief
Operations Control and
Statistics Division

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

RECEIVED
MAY 21 1956

May 17, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Application for DMEA Aid (Uranium) E. E. Lewis and Associates (Early Morn Mine) San Miguel County, Colorado

Enclosed are two copies of the subject application in the amount of $73,458.75.

One copy of the application is being forwarded to the Grand Junction office, DMEA, for their review and comments concerning the advisability of making a field examination and one copy is being retained in our files.

DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures

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

RECEIVED
MAY 21 1956

May 17, 1956

224 New Customhouse
Denver 2, Colorado

Mr. Elbert E. Lewis
E. E. Lewis and Associates
P. O. Box 1481
Grand Junction, Colorado

Re: Application for DMEA Aid,
(Uranium) Early Morn Mine,
San Miguel County, Colorado

Dear Mr. Lewis:

This will acknowledge receipt of your letter dated May 15, 1956 and four copies of the captioned application. This application has been plased in line for further processing.

Very truly yours,

W. M. TRAVER,

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

HMC:ab

cc: Sec. Op. Comm. (2)
Harshman
Subject
Chron.

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

RECEIVED
MAY 31 1956

May 17, 1956

224 New Customhouse
Denver 2, Colorado

Mr. Elbert E. Lewis
E. E. Lewis and Associates
P. O. Box 1481
Grand Junction, Colorado

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W. M. TRAVER,

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

HMC:ab

cc: Sec. Op. Comm. (2)
Harshman
Subject
Chron.

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

RECEIVED
MAY 21 1956

May 17, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: J. W. Hasler

From: Field Team, Region III

Subject: Application for DMEA Aid (Uranium) E. E. Lewis and Associates (Early Morn Mine) San Miguel County, Colorado

Enclosed is the subject application in the amount of $73,458.75.

Please discuss this application with the Bureau of Mines representative in the Grand Junction office and the AEC and forward this office nine copies of your recommendations concerning the advisability of making a field examination.

DMEA Field Team, Region III

W. M. TRAVER,

By W. M. Traver
Executive Officer

Enclosures

DMC:ab

cc: Sec. Op. Comm. (2)
Docket
Harshman
Shaw (2)
Chron.

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

RECEIVED
MAY 21 1956

May 17, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: J. W. Hasler

From: Field Team, Region III

Subject: Application for DMEA Aid (Uranium) E. E. Lewis and Associates (Early Worm Mine) San Miguel County, Colorado

Enclosed is the subject application in the amount of $73,458.75.

Please discuss this application with the Bureau of Mines representative in the Grand Junction office and the AEC and forward this office nine copies of your recommendations concerning the advisability of making a field examination.

DMEA Field Team, Region III

W. M. TRAVER

By W. M. Traver
Executive Officer

Enclosures

WMT:ab

cc: Sec. Op. Comm. (2)
Docket
Harshman
Shaw (2)
Caron.

Management
Contracting
Leasing

Elbert E. Lewis, E. M.; E. Met.,
General Partner

E. E. LEWIS and ASSOCIATES
GENERAL MINING
P. O. Box 1481
GRAND JUNCTION, COLORADO

May 15, 1956

DMEA
Date Rec'd.
MAY 17 1956
BUREAU OF MINES
Denver, Colorado

Defense Minerals Exploration Administration
Field Executive Officer
Region 3
U. S. Bureau of Mines
224 New Customs House Building
Denver 2, Colorado

Gentlemen:

Herewith is application in quadruplicate for aid in an exploration project. Contained with the original are copies of drilling bids from three contractors. All other papers are contained in quadruplicate.

Very truly yours,

E. E. LEWIS AND ASSOCIATES

Elbert E. Lewis

Elbert E. Lewis
General Partner

EEL/gr

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

RECEIVED
MAY 21 1956

May 17, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Application for DMEA Aid (Uranium) E. K. Lewis and Associates (Early Morn Mine) San Miguel County, Colorado

Enclosed are two copies of the subject application in the amount of $73,458.75.

One copy of the application is being forwarded to the Grand Junction office, DMEA, for their review and comments concerning the advisability of making a field examination and one copy is being retained in our files.

DMEA Field Team, Region III

W. M. TRAVER,

By W. M. Traver
Executive Officer

Enclosures

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

RECEIVED
MAY 21 1956

DMEA
Date Rec'd.
MAY 17 1956

Form Approved.
Budget Bureau No. 42-R035.2.

BUREAU OF MINES
Denver, Colorado

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

Not to be filled in by applicant

Docket No. DMEA-4300
Metal or Mineral URANIUM
Date Received 5/21/56
Estimated Cost $73,458.75
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: E. E. Lewis and Associates, a Limited Partnership
P. O. Box 1481
Grand Junction, Colorado

(*b*) If other than an individual, add to your name above whether a corporation, partnership, etc., and the name of the State in which incorporated or otherwise organized. See attached certificate (Exhibit 1)

(*c*) If a corporation, add to above statement, titles, names and addresses of officers. Not applicable.

(*d*) If a partnership, add to the above statement the names and addresses of all partners. See attached certificate (Exhibit 1)

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

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract Early Morn Mining Claims #1-5, located in Gypsum Valley, San Miguel County, Colorado. Claims #6, #7 and #8 are not to be included within this project and would not be benefited by this project. See Location Map

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

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

(*d*) If you are not the owner, submit with this application a copy of the lease, contract, or other document under which you control the property. See attached Lease Agreement. (Exhibit 2)

(*e*) If you own the land, describe any liens or encumbrances on it None

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. See page 1 of Lease Agreement (Exhibit 2 and Abstract Exhibit 3)

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

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

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

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

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

16—66551-1

See attached pages.

Note - 1 copy of application and exhibits to applicant per request [illegible]

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

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

(*c*) The work will start within 60 days and be completed within 6 months from the date of an exploration project contract.

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

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

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

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

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

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

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

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

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

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

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

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

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

[X] Money [ ] Use of equipment owned by you [ ] Other

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated May 16, 1956

E. E. LEWIS AND ASSOCIATES
(Applicant)

By Elbert E. Lewis

Elbert E. Lewis, General Partner

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

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

4. (a) At the east end of Claim #3, 184 feet S 86 W of the northeast corner, three short exploratory tunnels have been driven on the strike of the fault. These tunnels total 210 feet in length. The wall rock is Morrison calcereous sandstone, the fissure material mudstone, limestone, and sandstone impregnated with carnotite. The fault dip varies from 90° to 75° locally but appears generally to dip about 85° south. These drifts are open and can be examined. Work was suspended on these drifts March 1956.

Six other small prospect or exploratory openings have been made on the west end of Claim #3, on Claim #2 and Claim #1. (See Plate 1) These openings are all open for examination.

4. (b) All production has been from the prospect entries described above. A part of this work was accomplished prior to 1940 and no record of the production is available, but estimates based on volume extractions indicate about 300 tons of vanadium ores were mined and shipped.

Recent production:

1952 to 1955	90.06 wet tons	0.192% U_3O_8	1.57% V_2O_5
Jan. to March 1956	120.27 " "	0.168% U_3O_8	1.68% V_2O_5
Total	210.33 " "	0.175% U_3O_8	1.631% V_2O_5

No reserves have been blocked.

4. (c) The Early Morn Claims are located on a slump block or slump blocks from the north rim of the Gypsum Valley collapsed anticline. The Morrison formation, Summerville, Entrada, and

EE LEWIS & ASSOC.
PO BOX 1681
GRAND JUNCTION, COLO.

4. (c) (Continued)

Carmel are in evidence. North of the fault unconformably the Cutler Rico formations appear. The major fault trending approximately north 60° west cuts claims Early Morn #1, #2 and #3. Branches of this fault, or secondary faults, appear on Claims #2 and #3. The beds are oriented parallel to the dip and strike of the major fault. The dip varies from vertical to 70° south.

Vanadium and uranium mineralization is in evidence throughout the length of this major fault. Mining operations have in the past been carried out on the Early Morns #1, #2 and #3 for vanadium. Farther to the south on property owned by Union Carbide Nuclear Company this fault is currently being mined on what is known as the Tiny Claim, approximately 3,500 feet south of the Early Morn #3. Another 2,500 feet south of the Tiny Mine are the Bald Eagle Mines, located along this same fault, which are also currently in production. Surface mineralization and surface ore mined from the Tiny and the Bald Eagle Mines was similar in character to that on the Early Morn Claims but added development in depth has disclosed higher grade ores and a widening of the fissure on the Tiny and Bald Eagle claims. Exploratory work on the Early Morn in the lower tunnel (see Plate 3) disclosed higher grade pods and larger pods of uranium ore than in the 2 adits above. Mineralization also appears in the Morrison sandstone immediately adjacent to the fissure.

EE LEWIS & ASSOC.
PO BOX 1481
GRAND JUNCTION, COLO.

4. (c) (Continued)

To the west of the Early Morn claims are located the Long Ridge Mines in a similar fault block, which have been producing vanadium ores for many years and have had continuous production for the past 6 years of approximately 150 tons per month of uranium ores, and are still reported to have reserves in excess of 3,000 tons.

It is our opinion in view of the ore that has been encountered in surface exploratory work on the Early Morn Claims that the potential is excellent to encounter economic quantities of uranium and vanadium minerals adjacent to the fault and within the fault of the Early Morn Claims with the proposed exploration program.

See Plate 1 for locations of surface exploratory work accomplished to date; Plate 2, local geology adjacent to the Early Morn Claims; Plates 3 and 4, interpolated sub-surface geology based on outcrop exposures of Early Morn Claims.

Included as a part of this application is Preliminary Report prepared by the applicants prior to acquiring mining rights of the Early Morn Claims. See Exhibit 4.

4. (d) These claims are accessible by Colorado State highway #80, an all-weather improved road, approximately 40 miles from either the town of Naturita or the town of Dove Creek, Colorado, thence 3 miles west on county unimproved road. Shipping distance to mills will be 40, 46, or 62 miles to mills located at Naturita, Colorado; Uravan, Colorado; or Monticello, Utah; respectively.

EE LEWIS & ASSOC.
PO BOX 1481
GRAND JUNCTION, COLO.

4. (d) (Continued)

Good mining supplies sources are located at Naturita and Uravan, Colorado. Residence area would best be established at the campsite, but an established community of trailers and semi-permanent cabins is located at what is known as Basin, Colorado, 23 miles northeast of the property on Colorado State highway #80.

4. (e) Adequate skilled mining labor is available in the immediate area, which includes the Slick Rock mining district, the Bull and Monogram mining districts, as well as Uravan, Naturita, Nucla, Telluride, and Dove Creek mining areas. Materials and supplies can be secured at Naturita or Uravan, Colorado.

Satisfactory drill water is available at the Dolores River, approximately 8 miles west of these claims. Drinking water is available at local springs and wells within 10 miles of these claims. Electric power must be generated locally. Butane, Diesel or gasoline for fuel can be secured from deliveries made periodically by tank trucks from Naturita, Colorado.

5. (b) It is proposed to explore 3 separated sections on the Early Morn #1, #2 and #3 Claims (see Plate 1) by utilizing angle drill holes on 100 foot centers; drilling 2 holes from each location, 1 at approximately 45° angle (referred to as "A") and 1 at 65° angle (referred to as "B"). The line of these holes will be established on the ground in a line approximately

EE LEWIS & ASSOC.
PO BOX 1481
GRAND JUNCTION, COLO.

5. (b) (Continued)

100 feet horizontally projected to the ground surface from the surface outcrop of the fault strike. It is believed angle holes will more economically explore the probable ore-bearing beds, and give more information of the beds than vertical holes would. (See idealized hole section Plate 5 and drill intercepts Plates 3 and 4.) It is proposed to do this work in areas adjacent to and at the locations of the surface exploratory work that has been accomplished to date. It is proposed to accomplish this work in the following manner.

Phase 1: Construct from the county access road, drill roads parallel to the fault outcrop 100 feet horizontally from said outcrop. (See Plate 1.) Put drill locations on 100 foot centers, at these locations drill holes at 45° and 65° angles. (See Plate 1.) Core (if coring is possible) every sixth hole to secure maximum geological information. On all other holes core only through the ore-bearing formations. Referring to 45° holes as "A" and 65° holes as "B", core entirely holes 1A, 5B, 9A, 13B, 17A, 21B. Make chemical analysis of all ore-bearing sections of the holes. Make radiometric examinations of all holes drilled. In the event it is not possible to secure cores, then retain dust samples of all drilling in 5 foot intervals and retain dust samples through the ore-bearing sections in 1 foot intervals. Have chemically assayed those sections showing radiometric indications of the presence of uranium ore.

EE LEWIS & ASSOC.
PO BOX 1481
GRAND JUNCTION, COLO.

5. (b) (Continued)

Phase 2: Drill 50 feet either side of all mineralized or ore holes encountered in Phase 1. Drill holes at 70° dip, utilizing the same drill access roads constructed in Phase 1.

The work during each phase will necessarily have to be coordinated on the ground by an experienced geologist as the dip of the beds varies and it is impossible to accurately ascertain the exact depth at which the sandstone beds will be encountered. It will be necessary during drilling to determine the point at which drilling should be discontinued in any individual hole as the character of the beds immediately beneath or behind the fault at depth cannot be determined from the surface.

5. (d)

EE LEWIS & ASSOC.
PO BOX 1481
GRAND JUNCTION, COLO.

5. (d) SUMMARY OF QUALIFICATIONS OF E. E. LEWIS

Elbert E. Lewis, 589 North 23rd, Grand Junction, Colorado.

Education: Colorado School of Mines, Golden, Colorado, Engineer of Mining, Engineer of Metallurgy. Post-graduate work in geology and business relations, St. Louis University, Missouri.

Professional Experience:

Mine operator, Colorado Plateau.

General Superintendent, Manganese Co. of Arizona.

General Superintendent and Assistant Manager, Yucca Mining and Milling Company, Arizona.

General Milling Superintendent, International Mining Company.

Engineer, St. Joseph Lead Company.

Major, Corps of Engineers, United States Army.

Professional Memberships:

American Institute of Mining & Met. Engineers,

Arizona Small Mine Operators Association,

Colorado Mining Association,

Uranium Ore Producers Association.

Registered Professional Engineer, State of Missouri.

Registered Professional Engineer, State of Colorado.

E E LEWIS & ASSOC.
PO BOX 1481
GRAND JUNCTION, COLO

KREY - SCHUH
GEOLOGICAL CONSULTANTS

MAX KREY
E. J. SCHUH

Post Office Box 381
Telephone 4577

COMMERCE BUILDING
GRAND JUNCTION, COLORADO

QUALIFICATIONS OF THE MANAGING PARTNERS AS GEOLOGICAL CONSULTANTS

Max Krey

Education:
- Bachelor of Science Degree in Geology from Kansas State College
- Graduate work at University of Colorado

Professional Experience:
- Aerial Geologic Surveys; Denver, Colorado
- Sinclair Oil and Gas Co.
- Geological Consultant

Professional Memberships:
- American Institute of Mining and Metallurgical Engineers
- American Association of Petroleum Geologists
- Rocky Mountain Association of Geologists

E. J. Schuh

Education:
- Bachelor of Science Degree in Professional Geology from University of Wyoming
- Graduate work at University of Colorado

Professional Experience:
- Aerial Geologic Surveys; Denver, Colorado
- Geological Consultant

Professional Memberships:
- American Association of Petroleum Geologists
- Rocky Mountain Association of Geologists
- Four Corners Geological Society

E. J. Schuh

Max Krey

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6. Estimate of Costs

(a) Independent Contractors

(1) Dozer and Compressor for Access

Roads 90 hours @ $18.00/hour $1620.00

(2) Drilling angle holes

PHASE 1:

22 locations, 2 holes each location

22 - 45° holes estimated 145 feet each ("A" series)

22 - 65° holes estimated 240 feet each ("B" series)

Core holes 1A, 5B, 9A, 13B, 17A,

21B -- approximately 1155 feet

Core 25 feet of all other holes

38 x 25 = 950 feet

Total Coring 2105 feet

Plugging "A" series 45° dip 2280 feet

Plugging "B" series 65° dip 4085 feet

Total Plugging 6365 feet

PHASE 2: (Assume 15 mineralized and ore holes to be offset)

30 holes 70° dip estimated 290 feet each

Core 25 feet each hole 750 feet

Non-core 265 feet each hole 7950 feet

8700 feet

PHASE I:

Coring @ $5.50/foot, 2105 ft. $11577.50

Plugging @ $3.25/foot, 6365 ft. 20686.25

$ 32263.75

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6. (a) (Continued)

PHASE 2:

Coring @ $5.50/foot, 750 ft.	$ 4125.00	
Non-Core @ $3.25/foot, 7950 ft.	25837.50	
		$ 29962.50

6. (b) 1 - Engineer and supervisor,

3 months full time @ $600/mo.

PHASE 1:	$ 1200.00	
PHASE 2:	600.00	

1 - Geologist consultant on

drills, 25 days @ $75.00/day

PHASE 1:	$ 1125.00	
PHASE 2:	750.00	

1 - Sampler and surveyor helper,

3 months @ $400.00/month

	PHASE 1:	$ 800.00	
	PHASE 2:	400.00	
Total	PHASE 1:		$ 3125.00
Total	PHASE 2:		$ 1750.00
	TOTAL		$ 4875.00

6. (c) Core boxes for samples, 250 @ $1.25,

PHASE 1:	$ 225.00	
PHASE 2:	87.50	
Core racks for samples, 6 @ $4.00	24.00	
Drafting paper, 12 @ $.75	9.00	
Log sheets for drill records, 600 sheets @ $.05	30.00	

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6. (c) (Continued)

Stakes and flagging		$ 3.00		
Total	PHASE 1:		$ 291.00	
Total	PHASE 2:		87.50	
	TOTAL			$ 378.50

6. (d) To be rented:

Field transit, 25 days @ $4.50/day

PHASE 1:	$ 72.00
PHASE 2:	40.50

Water trailer, 3 months @ $30.00/month

PHASE 1:	$ 60.00
PHASE 2:	30.00

Owned:

Deep hole probing equipment, 25 days @ $8.00

PHASE 1:	$ 128.00
PHASE 2:	72.00

Pickup truck rental @ $50.00/month

PHASE 1:	$ 100.00
PHASE 2:	50.00

Operations @ $75.00/month

PHASE 1:	$ 150.00
PHASE 2:	75.00

Total	PHASE 1:	$ 510.00	
Total	PHASE 2:	267.50	
	TOTAL		$ 777.50

6. (e) None

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6. (f) None

6. (g) (1) Chemical analysis for U_3O_8, V_2O_5, and $CaCO_3$

PHASE 1 - 44 holes x 3 = 132 analyses

@ $7.00 PHASE 1: $ 924.00

PHASE 2 - 30 holes x 3 = 90 analyses

@ $7.00 PHASE 2: 630.00

(2) Accounting charges $100.00/month

2 months PHASE 1: $ 200.00

1 month PHASE 2: 100.00

Payroll taxes 10% of payroll

PHASE 1: 312.50

PHASE 2: 175.00

(3) Transporting samples to Grand Junction, one each week (6 trips @ $45.00)

PHASE 1: $ 180.00

PHASE 2: 90.00

Total PHASE 1: $1616.50

Total PHASE 2: 995.00

TOTAL $ 2611.50

6. (h) Copies completion maps and reports at close of project PHASE 1: $ 250.00

Reaming caved holes, $3.00/ft.

200 feet 600.00

Possible delays @ $12.00/hour x 10 120.00

Total PHASE 1: $ 970.00

TOTAL PHASE 1: $40396.25

TOTAL PHASE II: 33062.50

TOTAL PROJECT: $73458.75

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Management
Contracting
Leasing

Elbert E. Lewis, E. M.; E. Met.
General Partner

E. E. LEWIS and ASSOCIATES
GENERAL MINING
P. O. Box 1481
GRAND JUNCTION, COLORADO

May 15, 1956

RECEIVED
MAY 21 1956
DMEA
Date Rec'd.

MAY 17 1956
BUREAU OF MINES
Denver, Colorado

Defense Minerals Exploration Administration
Field Executive Officer
Region 3
U. S. Bureau of Mines
Building 20, Denver Federal Building
Denver 2, Colorado

Gentlemen:

Enclosed is application in quadruplicate for aid in an exploration project. Included with the original are copies of drilling bids from three contractors. All other papers are contained in quadruplicate.

Very truly yours,

E. E. LEWIS AND ASSOCIATES

Elbert E. Lewis

Elbert E. Lewis
General Partner

eel/gr

ENVELOPE CONTENTS:

Exhibit 1 - Partnership Certificate
Exhibit 2 - Lease Agreement
Exhibit 3 - Abstract of Title
Exhibit 4 - Preliminary Exam. Early Morn Claims

Plate 1 - - Early Morn Claims
Plate 2 - - Area Geology

Location Map.

WILSON JONES
ANCHOR CLASP
H 97 10 x 13
MADE IN U.S.A.

EE LEWIS & ASSOC.
PO BOX 1481
GRAND JUNCTION, CO

Exhibit #4

Preliminary Report

For Office Use Only

C O N F I D E N T I A L

Preliminary Report

MARLY MORN CLAIMS

San Miguel County, Colorado

September 15, 1955

Elbert E. Lewis, E. M., E. Met.

C O N F I D E N T I A L

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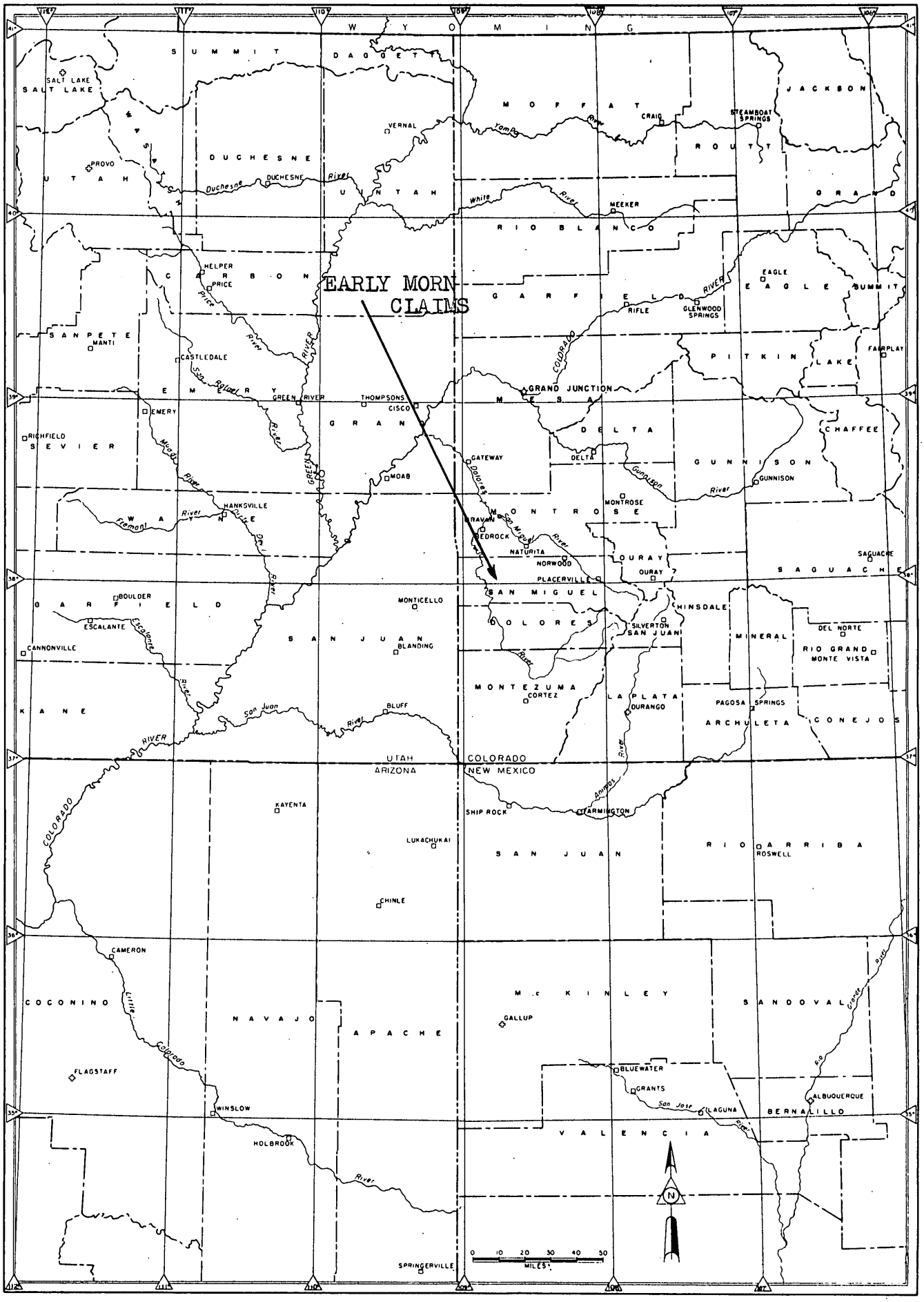
PO BOX 1481
GRAND JUNCTION, COLO.



LOCATION MAP
EARLY MORN CLAIMS

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LOCATION

These eight claims are located in T 44 N, R 17 W, Sections 23 and 24, NMPM, Big Gypsum Valley Mining District, San Miguel County, Colorado. They are approximately 34 miles south on highway 80 from Naturita, Colorado, thence 6 miles west on an unimproved county road along the north side of Gypsum Valley.

Mills and ore buying stations are located at Naturita, Colorado; Uravan, Colorado; and Monticello, Utah; respective distances of 40, 46, and 62 miles.

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PO BOX 181
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ACCESSIBILITY AND FACILITIES

These claims are readily accessible from Colorado State Highway 90, an all-weather improved road used throughout the year for ore haulage. The towns of Naturita and Dove Creek, Colorado, are each approximately 40 miles from these claims.

Drill water can be secured from the Dolores River approximately 8 miles west of these claims, and drinking water from local wells and springs within 10 miles. Electric power must be generated locally. Butane or propane, diesel and gasoline for fuel can be secured at either Naturita or Dove Creek.

Timber located on the claims is not satisfactory for mine timbers but timber can be secured within a 25 mile radius.

Adequate skilled mining labor is available in the area for all types of mining and exploratory work.

Good mining supplies sources are located in Naturita and Uravan, Colorado.

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OWNERSHIP AND TITLE

Legality of ownership and title is not a matter of this report, but cursory examination of location certificates, amended location certificates, and abstract of title makes it appear that good title is held by the Dulaney Mining Company of Grand Junction, Colorado.

Claims Early Morn #6, 7, and 8 are in conflict with the patented Camp claim owned by United States Vanadium Company and only small fractions of these 3 three claims are valid. The conflict is recognized by the Dulaney Mining Company and United States Vanadium Company.

SE LEWIS & ASSOC.
PO BOX 1601
GRAND JUNCTION, COLO.

GENERAL TOPOGRAPHY

These claims are located on the north side of Big Gypsum Valley, a large dry farming basin located in the south-central portion of San Miguel County. The immediate terrain of the claims rises abruptly from the valley floor, which is at an elevation of approximately 6,000 feet, to a maximum of approximately 6,600 feet.

The area of the claims is broken by numerous washes, small hills and sharp breaks due to faulting.

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GENERAL GEOLOGY

Gypsum Valley is generally considered a "slump basin", having been in Early Tertiary times a large anticline. Subsequently, the sub-basement support was removed and the surface subsidance gave rise to this large trough that bears generally northwesterly, paralleling Paradox Valley, Dry Creek Basin and Disappointment Valley. Numerous local faults have further broken the area.

Uranium mineralization appears to be confined in the Gypsum Valley region in the Salt Wash member of the Morrison formation. Mining operations are conducted within Gypsum Valley in the Salt Wash that is undisturbed on the flanks of the anticline and also within various "slump" blocks within the subsidance area.

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SPECIFIC GEOLOGY

The Early Morn #1-5 claims lie on the edge of one of the numerous "slump" blocks within the area. The Salt Wash formation strikes generally northwest and dips from a minimum of 60° to the vertical within the area of these claims. It is impossible to determine subsurface geology as related to the continuity of the Salt Wash beds without considerable drilling exploration.

Mineralization found on the surface and examination of shipments made in the past 3 years from exploratory digging on these claims verifies the presence of commercial uranium. Since 1952 to April, 1955, 90.06 tons of ore containing .192 per cent U_3O_8 and 1.75 per cent V_2O_5 have been shipped from surface diggings. Prior to these dates vanadium ore was shipped from these claims. No records could be located as to the amount of vanadium that was shipped, but based on volume estimates approximately 500 tons appears to have been shipped.

None of the workings are extensive and it is obvious that the workings were not corelated with any planned exploration program.

EE LEWIS & ASSOC.
PO BOX 1138
GRANDVIEW, MO 64030

PROPOSED EXPLORATION AND RECOMMENDATIONS

Scintillator and nucliometer surveys conducted on the property are inconclusive and not considered satisfactory because of radiation counts received from the old workings. Utilizing as much of the information secured from the nucliometer survey as is considered by the writer as being reliable and corelating these results with outcrop exposures of Salt Wash beds, the evidence of alteration, and exposures made by the former workings referred to, it is recommended that these claims be explored as follows:

The southeast portion of Claim #3 (see map) be drilled with angular holes by wagon drill. The workings that exist on the fault be further extended to the northwest, and any ore encountered be saved and shipped. The west end of the Early Morn #3 and east end of Early Morn #2 be drilled to a depth approximately 75 feet below the old vanadium workings by either vertical or inclined holes.

In the event these two phases of exploration are satisfactory; that is, commercial ore in quantity is encountered, exploration be continued along the fault line to the west end of the Early Morn #2 and the east end of the Early Morn #1.

The extreme end of the Early Morn #1 is not considered as good a prospect as the Early Morn #2 and 3. The Early Morn #4 and 5 are not readily accessible and in a majority lay on

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Proposed exploration and recommendations (Continued)

Permian beds that appear unconformably adjacent to the Upper Jurassic Morrison beds. No work on these claims #4 and 5 would be recommended at this time.

Claims #6, 7 and 8 are only fractional claims and no work would recommended on these claims at this time.

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CONCLUSIONS

The Early Morn claims lie on the north flank of the Big Gypsum anticline, within the "slump" or subsidance area and cover "slump" blocks that contain the Salt Wash member of the Morrison formation.

The claims are mineralized and commercial ores containing uranium and vanadium have been shipped from the claims. Substantial tonnage is being shipped currently and has been for the past 5 years from the Long Ridge mines which are located 1,000 feet southeast of the Early Morn. The Long Ridge mines are located on a similar "slump" block that is slightly less tilted than the block covered by the Early Morn claims.

The Tiny mine, owned by United States Vanadium, located 4,000 feet south east of the Early Morn claims, has been drilled and is in production.

The Bald Eagle mines, located approximately 8,000 feet southeast, are currently in production. The Bald Eagle and Tiny mines are located on the same fault that passes through the Early Morn claims. Bedding is similar and the ore being currently produced from these properties is similar in characteristic to that which has been shipped from the Early Morn claims. Grade and thickness of ore has increased with depth on these two properties.

It is recommended that the Early Morn claims be further explored.

EE LEWIS & ASSOC.
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GRAND JUNCTION, COLO.

Exhibit #3

Abstract

ABSTRACT OF TITLE

EARLY MORN, EARLY MORN NO. 2, EARLY MORN NO. 3, EARLY MORN No. 4 and

EARLY MORN No. 5 LODE MINING CLAIMS

in

Lower San Miguel Mining District

COUNTY OF SAN MIGUEL, STATE OF COLORADO

Book 174 Page 95 June 10, 1940 (1)	Early Morn Lode.	Location Certificate. Claim 1500x 600 feet, 50 feet Easterly and 1450 feet Westerly from center of discovery cut 1	
	North West Part Mining District (recites bounds). The Early Morn is located on north rim of Gipsom Valley. No. #1 Corner is about 3000 feet west of Wilmart patented corner 2. Discovered January 3, 1940. Located March 12, 1940. Roy W. Smith.		
Book 174 Page 96 June 10, 1940 (2)	Early Morn No. 2 Lode.	Location Certificate. Claim 1500 x 600 feet, 100 feet Esterly and 1400 feet Westerly from center of discovery tunel,	
	in North West part Mining District (recites bounds). Early Morn No. 2 is located on north rim of Gipusom Valey, The No. 1 corner is about 1500 West of Mr. Wilmart Patent Stake No. 2. Discovered December 27, 1939. Located March 12, 1940. Roy W. Smith.		
Book 174 Page 96 June 10, 1940 (3)	Early Morn No. 3 Lode.	Location Certificate. April 18, 1940. Claim 1500 x 600 feet, 100 feet Easterly & 1400 feet Westerly from center of discovery	
	cut in North West Mining District (recites bounds). The Early Morn No. 3 is located on the North rim of Gipsom Valley. No. 1 Corner is about 150 feet north of No. 2 corner Patented Stake of Wilmarth Claim. Discovered November 27, 1939. Located March 12, 1940. Roy W. Smith.		
Book 176 Page 483 April 27, 1943 (4)	Roy W. Smith to Lowell Staats	Power of Attorney. April 13, 1943. Appoint Lowell Stoats true and lawful attorney for purpose of handling all transactions in connection with mining operation of any claims under my jurisdiction with full	
	power of substitution and revocation, hereby ratifying and confirming all that said attorney or his substitute shall lawfully do or cause to be done by virtue hereof. Acknowledged April 13, 1943 before W. C. Huntley, Notary Public, Montrose County, Colorado.		
Book 200 Page 108 May 17, 1943 (5)	Roy W. Smith, By Lowell W. Staats, With Power of Attorney. to James Wuergler	Quit Claim Deed. April 19, 1943. $1200.00 Conveys Early Morning Group of vanadium claims Nos. 1, 2 and 3 in Big Gypsum Valley in San Miguel County, Colorado. Acknowledged April 19, 1943 for Roy W. Smith by Lowell Staats, as agent with Power of Attorney before W. C. Huntley,	
	Notary Public, Montrose County, Colorado.		

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Book 200 Roy Dillon
Page 313 to
October 22, James Wuergler
1945
(6)

Quit Claim Deed. August 2, one thousand nine hundred and fourty-five. $1. and other considerations, Conveys Early Morning Group of vanadium claims Nos. 1, 2 and 3 in Big Gypsum Valley, located as Early Morning one (1), Early Morning two (2) and Early Morning three (3); also known as Early Morn one, Early Morn two, Early Morn three. Consideration is such that no I. R. stamps are required. Acknowledged August 24, 1945 before Millard Fairlamb, Notary Public, Delta County, Colorado.

Book 120 Early Morning Group of
Page 434 Vanadium Claims Nos. 1, 2
May 8, and 3 in Big Gypsum Valley
1948 (174-95 & 96)
(7)

Affidavit of James Wuergler that at least $100. work made upon each of said claims at expense of James Wuergler, owner for year 1947-1948. Such expenditure made between July 1, 1947 and May 5, 1948. James H. Wuergler. Subscribed and sworn to May 5, 1948 before Iva Youngblood, Notary Public, Delta County, Colorado.

Book 120 Early Morn No. 1, Early
Page 462 Morn No. 2, Early Morn
June 22, No. 3 Claims, Big Gyp
1949 Mining District.
(8)

Affidavit of Floyd M. Blair that at least $100. work made upon each said claims between May 1, 1949 and June 15, 1949 at expense of _____, owner. Floyd M. Blair for J. H. Wuergler. Subscribed and sworn to June 20, 1949 before W. C. Huntley, Notary Public, Montrose County, Colorado.

Book 204 Early Morn No. 1, Early
Page 449 Morn No. 2 & Early Morn
June 28, No. 3 Mining Claims in
1949 Big Gypsum Mining District
(9)

Notice of Intention to Hold. June 28, 1949. Notice of desire of J. H. Wuergler to hold following mining claims for assessment year 1948-1949. Notice hereby given by undersigned that he is claimant of said claims and he desires to hold said mining claims during assessment year 1948-1949 under provisions of Act of Congress titled An Act Providing for suspension of annual assessment work on mining claims held by location in United States, including Territory of Alaska. Approved May 3, 1943. J. H. Wuergler, Claimant.

Book 175 Early Morn #4 Lode.
Page 10
November 18,
1950
(10)

Location Certificate. November 18, 1950. Claim 1500 x 600 feet, 1000 feet Westerly and 500 feet Easterly from center of discovery cut, Lower San Miguel Mining District (recites bounds). The southern boundry of this claim joining the Northerly Boundry of Early Morn #3, also the Westerly boundry joins the patented claim survey #8608. Discovered and located September 4, 1950.
Elbert Short, Paul Kennedy. James H. Wuergler.

Book 175 Early Morn #5 Lode.
Page 10
November 18,
1950
(11)

Location Certificate. November 18, 1950. Claim 1500 x 600 feet, 1500 feet Easterly from center discovery cut and ___ feet _____ from _____ discovery ___ Lower San Miguel Mining District. (Recites bounds). Southerly boundry joining joining the Northerly boundry of the Early Morn #2 and the Westerly Boundry joining the Easterly boundry of Early Morn #4. Discovered and located September 4, 1950.
Elbert Short, Paul Kennedy, James H. Wuergler.

Book 212 Elbert Short
Page 212 Paul Kennedy
April 24, to
1951 James Wuergler
(12)

Quit Claim Deed. April 24, 1951. $1.00 & other valuable considerations, Conveys Early Morn No. 4 and Early Morn No. 5 Lode Mining Claims, LSMMD. Acknowledged April 24, 1951 before Nan S. Leino, Notary Public, San Miguel County, Colorado.

Book 120 Early Morn No. 1, No. 2
Page 483 and No. 3 Lodes, LSMMD.
June 19,
1950
(13)

Affidavit of James H. Wuergler that at least $100. work made upon said lodes between June 15, 1949 and June 19, 1950 at expense of James H. Wuergler, owner. James H. Wuergler. Subscribed and sworn to June 19, 1950 before Sally A. Clark, County Clerk, San Miguel County, Colorado.

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SAN MIGUEL COUNTY ABSTRACT COMPANY

NAN S. LEINO, Owner & Manager

Complete Abstracts of Title to all Lands, Lots and Mining Claims
in San Miguel County, Colorado

STATE OF COLORADO,
COUNTY OF SAN MIGUEL } ss.

SAN MIGUEL COUNTY ABSTRACT COMPANY *hereby certifies that the above and foregoing* Thirteen (13) ... *certificates constitute a full, true and correct*

ABSTRACT OF TITLE to EARLY MORN, EARLY MORN NO. 2, EARLY MORN No. 3, EARLY MORN NO. 4 and EARLY MORN No. 5 LODE MINING CLAIMS in Lower San Miguel Mining District.

as appears of record in the office of the County Clerk and Recorder of San Miguel County, Colorado.

In Witness Whereof the SAN MIGUEL COUNTY ABSTRACT COMPANY *has caused this certificate to be signed by its proper officer, at Telluride, Colorado, this* 25th *day of* April *A. D. 19* 51 *at* 2:00 *o'clock* p. *m.*

SAN MIGUEL COUNTY ABSTRACT COMPANY

By Nan S. Leino
Bonded and Licensed Abstracter

RECEIVED
MAY 2 1 1956

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GRAND JUNCTION, COLO.

Exhibit #2

Lease Agreement

RECEIVED
MAY 21 1956

LEASE AGREEMENT

THIS AGREEMENT, made and entered into this 21st day of October, 1955, by and between DULANEY MINING COMPANY, a Colorado Corporation, having its principal place of business in Grand Junction, Colorado, hereinafter referred to as "Lessor" and E. E. LEWIS AND ASSOCIATES, a Limited Partnership, the general partner being E. E. LEWIS, of Grand Junction, Colorado, hereinafter referred to as "Lessee",

W I T N E S S E T H:

1. For and in consideration of the covenants and agreements hereinafter contained, Lessor hereby leases and lets unto Lessee all of Lessor's interest in and to the following described mining claims situated in San Miguel County, Colorado, to wit:

Name of Claim	Location Certificate Recorded in San Miguel County Records in Book	Page	Amended Location Certificates Recorded in San Miguel County Records in Book	Page
Early Morn	174	95	122	463
Early Morn #2	174	96	122	464
Early Morn #3	174	96	122	465
Early Morn #4	175	10	122	466
			225 (Second Amendment)	835
Early Morn #5	175	10	122	467
			225 (Second Amendment)	836
Early Morn #6 (Fraction)	175	122	225	837
Early Morn #7 (Fraction)	175	122	122	446
			225 (Second Amendment)	838
Early Morn #8 (Fraction)	216	112	225	839

2. TO HAVE AND TO HOLD the same for the purposes of exploration and mining for a period of one year commencing on the date hereof. If Lessee has discovered commercial ore that can be profitably mined and has commenced mining operations on said claims during the initial one-year term, then

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the term of this Lease shall continue and be extended so long thereafter as Lessee conducts continuous operations upon said property. For the purposes of this Agreement, Lessee shall be deemed to be conducting continuous operations so long as active exploration by drilling or excavating or active mining or development operations are proceeding during each month.

3. The Lessor hereby grants to the Lessee during the term of this Lease possession of all of the above described premises and the right to explore and mine thereon, to extract ore therefrom, and to construct ore bins and buildings thereon, and to perform any and all work connected therewith.

4. The Lessee agrees to enter into immediate possession of the demised premises, move equipment thereon and commence active operations and Lessee shall perform at least 20 shifts of exploration, development, mining or other work beneficial to said claims upon the demised premises during each calendar month. The word "shift", as used herein, shall mean the labor of one man for one day of at least an 8-hour period. Lessee may be relieved of the obligation to perform work hereunder by executing and delivering to Lessor a quit claim deed of all of Lessee's interest in and to this Lease and the mining claims above described.

5. Lessee agrees to pay to Lessor with respect to ores removed by Lessee from the leased premises a royalty of fifteen per cent (15%) of the gross sales price of such ore. "Gross sales price" shall not be less than the value of the metallic content of the ore based upon the minimum price

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established by the Atomic Energy Commission and in effect at the time of removal of the ore. Lessor shall be entitled to the same royalty upon all bonuses, premiums and allowances, to which the Lessee shall be entitled from its operation of the leased premises; provided, however, that Lessor shall not be entitled to any royalty upon transportation or development allowances.

6. All royalties shall be the property of the Lessor, free and clear of all claims, liens or attempted assignments, and shall be paid directly to the Lessor by the purchasers of ore, and such purchasers are hereby authorized to make such payments to the Lessor. The Lessee promptly shall notify the Lessor of the name and address of any ore buyer to whom Lessee sells ore.

7. Lessor shall be entitled to duplicate settlement sheets with respect to all ores sold from the demised premises. Lessee shall make and retain maps of its operations on the demised premises and shall make the same available to Lessor for inspection and copying. Lessee shall make and retain logs of all exploratory drilling operations conducted by or under the authority of Lessee, and will furnish Lessor with copies of the same, showing the location of drill holes involved, upon request of Lessor. Lessee shall permit Lessor to take samples of any ores mined upon the demised premises. Lessor shall at all times have free access to the demised premises for the purpose of inspecting the same. Lessee agrees to maintain and leave the demised premises in safe operating condition.

8. The Lessee agrees to comply with all applicable statutes with respect to labor employed on the work, including

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PO BOX 1481
GRAND JUNCTION, CO

but not limited to, the Fair Labor Standards Act, and to protect and indemnify the Lessor against any payroll taxes or contributions imposed with respect to any employees of the Lessee by any applicable law dealing with old-age benefits, unemployment compensation, accident compensation, health insurance, and related subjects, and Lessee agrees to furnish the Lessor with a certificate of its insurance coverage under the Colorado State Workmen's Compensation Act; and will procure and maintain at Lessee's own cost and expense public liability insurance in a reputable and financially responsible company properly safeguarding Lessor against liability for injury to persons, including injuries resulting in death, to the extent of $25,000.00 to one person, or $50,000.00 to all persons involved in any one accident and loss or damage to property to the extent of $25,000.00 upon the demised premises; and that Lessee will, from time to time, upon request furnish the Lessor with satisfactory proof of employee's and public liability and property damage insurance having been procured and maintained properly and that the premiums therefor are paid. The Lessee further agrees to protect and hold harmless the Lessor of and from any legal liability and will assume at Lessee's own expense the cost of any suit arising from or in any way connected with the Lessee's operations hereunder.

9. The Lessee agrees that the property will not be held liable for any debts whatsoever incurred by the Lessee and that the Lessee will post notice of nonliability of the demised premises under liens for labor, materials and contractors at conspicuous places upon the demised premises, and, in the event that it fails so to do, the Lessor may post such notices.

EE LEWIS & ASSOC.
PO BOX 1481
GRAND JUNCTION, C

10. Lessee shall pay eighty-five per cent (85%) of all taxes assessed against the demised premises and improvements and other property placed thereon, and shall also pay eighty-five per cent (85%) of all taxes and fees, including production taxes levied by any government or agency thereof by reason of Lessee's operations hereunder.

11. Before the same become delinquent, the Lessee shall pay all taxes assessed against machinery, improvements, and other property placed on the demised premises by the Lessee, and in the event that taxes upon improvements placed on the demised premises are not paid by Lessee before they become delinquent and such taxes upon improvements become a lien upon the demised premises, such improvements shall become the property of the Lessor, and the Lessee shall not be entitled to remove such improvements at the termination of the Lease as otherwise is provided in Paragraph 16 hereof.

12. Lessee shall perform all necessary assessment work upon the demised claims at least sixty (60) days prior to the end of each assessment year and shall file proper affidavits so showing. Lessor further warrants the title to said claims against any parties claiming by, through or under Lessor.

13. This Lease may not be assigned in whole or in part without the express written consent thereto in writing of the Lessor first had been obtained except to a company or organization in which E. E. Lewis and Associates have a majority or controlling interest.

14. Upon the violation by the Lessee of any covenant or condition herein contained, the Lessor may at its option notify the Lessee in writing thereof mailed to the Lessee at P.O. Box 1481, Grand Junction, Colorado, by United States

EE LEWIS & ASSOC.
PO BOX 1481
GRAND JUNCTION, COLO.

Registered Mail and, unless the Lessee's defaults specified in such notice have been remedied within a period of thirty (30) days from the giving of such notice, the term of this Lease shall thereupon expire and terminate, the said premises shall revert to the Lessor, subject to the right of the Lessee to remove certain property as hereinafter provided, and the Lessor may thereupon enter upon such premises and dispossess all persons occupying the same with or without force, and with or without process of law, and the Lessee and all persons found occupying the demised premises or any part thereof thereafter shall be deemed guilty of unlawful detainer.

15. Upon termination of this Lease by expiration of term or otherwise, the Lessee may, at any time within thirty (30) days after such termination, remove the broken ore reserves and ore in bins from the demised premises, and the Lessor shall be entitled to royalties thereon as hereinabove provided. If such ores are not removed from the demised premises within said 30-day period, they shall become the property of the Lessor.

16. Upon termination of this Lease by expiration of term or otherwise, the Lessee shall have the right, except as otherwise provided in Paragraph 11 hereof, within a period of sixty (60) days from the date of termination of this Lease, to remove as Lessee's own property all tram lines, buildings, improvements, bins, machinery, equipment and other personal property, with the exception of timbering placed by it upon the demised premises. Timbering placed upon the demised premises by the Lessee shall be and become the property of the Lessor. Lessee shall have the option to purchase mine rails in place upon the termination of this Lease at cost less reasonable depreciation.

17. Option to purchase: At any time during the term of this Lease Lessee may purchase all of Lessor's right, title and interest in and to said claims for a sales and purchase price of $35,000.00, not including royalties paid to date of exercise of this option. Such option may be exercised by Lessee by making payment of the purchase price to Lessor at the First National Bank in Grand Junction at any time during the option period. In the event that such option shall be exercised, Lessor shall execute and deliver to Lessee a quit claim deed conveying all of Lessor's interest in and to said claims to Lessee.

18. Subject to the provisions contained in Paragraph 13 hereof, this Lease shall be binding upon, and inure to the benefit of, the respective heirs, legal representatives, successors and assigns of the parties hereto.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the day and year first above written.

ATTEST:

Secretary

DULANEY MINING COMPANY

By _____
President

LESSOR

E. E. LEWIS AND ASSOCIATES

By _____
General Partner

LESSEE

EE LEWIS & ASSOC.
PO BOX 1481
GRAND JUNCTION, COLO.

SUPPLEMENTAL AGREEMENT

THIS AGREEMENT, made and entered into this 20 day of April, 1956, by and between DULANEY MINING COMPANY, a Colorado Corporation, having its principal place of business in Grand Junction, Colorado, hereinafter referred to as "Lessor" and E. E. LEWIS AND ASSOCIATES, a Limited Partnership, the general partner being E. E. LEWIS of Grand Junction, Colorado, hereinafter referred to as "Lessee",

W I T N E S S E T H:

WHEREAS, by Lease Agreement dated October 24, 1955, Lessor did lease unto Lessee the following described mining claims situate in San Miguel County, Colorado, to wit:

NAME OF CLAIM	LOCATION CERTIFICATE RECORDED IN SAN MIGUEL COUNTY RECORDS IN BOOK	PAGE	AMENDED LOCATION CERTIFICATES RECORDED IN SAN MIGUEL COUNTY RECORDS IN BOOK	PAGE
Early Morn	174	95	122	463
Early Morn #2	174	96	122	464
Early Morn #3	174	96	122	465
Early Morn #4	175	10	122	466
			225(Second Amendment)	835
Early Morn #5	175	10	122	467
			225(Second Amendment)	836
Early Morn #6(Fraction)	175	122	225	837
Early Morn #7 "	175	122	122	446
			225(Second Amendment)	838
Early Morn #8 "	216	112	225	839

AND, WHEREAS, the parties desire to amend said Lease Agreement as hereinafter set forth;

NOW, THEREFORE, in consideration of the premises, it is agreed as follows:

1. The initial term provided for in Paragraph 2 of said Lease Agreement dated October 24, 1955 is hereby extended until midnight October 24, 1957.

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2. The work requirements provided for in Paragraph 4 of said Lease Agreement are hereby suspended until October 24, 1956; provided, however, that Lessee shall keep up the assessment work upon said claims as provided in Paragraph 12 of said Lease Agreement.

3. Lessee has made an application to the Defense Minerals Exploration Administration for a loan to continue exploration work upon the demised claims. Lessor does hereby agree to assist Lessee whenever possible in securing such loan and Lessor does further agree that it will execute such subordination agreements as may be required by Defense Minerals Exploration Administration if and when such loan is consummated.

4. Except as herein specifically amended, all the terms and provisions of said Lease Agreement dated October 24, 1955 shall remain in full force and effect.

This Agreement shall be binding upon and inure to the benefit of the heirs, personal representatives, successors and assigns of the parties.

IN WITNESS WHEREOF, the parties have executed this Agreement as of the day and year first above written.

ATTEST:

Thomas E. Potter
Secretary

DULANEY MINING COMPANY

By P. O. Dulaney
President

LESSOR

E. E. LEWIS AND ASSOCIATES

By E. Mert E. Lewis
General Partner

LESSEE

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GRAND JUNCTION, COLO.

Exhibit #1

Partnership Certificate

RECEIVED
MAY 21 1956

CERTIFICATE OF LIMITED PARTNERSHIP

We the undersigned, being desirous of forming a limited partnership pursuant to Chapter 104 of the Colorado Revised Statutes of 1953 and the Laws of the State of Colorado and being severally duly sworn, do hereby certify as follows:

NAME

(a) The name of this parnership shall be E. E. LEWIS and ASSOCIATES.

CHARACTER OF BUSINESS

(b) The business of the partnership shall be to acquire, explore, drill, lease, develop, mine, to beneficiate ores, sell or otherwise dispose of mining properties of all kinds, including but not by way of limitation, oil and gas. To manufacture, purchase or otherwise acquire, own, lease, mortgage, pledge, assign and transfer or otherwise dispose of, to invest, trade, deal in and deal with goods, wares and merchandise and real and personal property of every class and description. And generally to transact any and all business and to do any and all things necessary, expedient or pertinent to the power, purposes and objects of said limited partnership, and to carry on any one or more objects, powers, or purposes without regard to the others.

PRINCIPAL PLACE OF BUSINESS

(c) The principal place of business of the partnership shall be at such location in the City of Grand Junction, Colorado as the general partner may designate. The business of the partnership may also be conducted at such other place or places within or without the State of Colorado as may from time to time be selected by the general partner.

NAME AND ADDRESS OF PARTNERS

(d) The name of each partner, designated as to whether a general or limited partner, and the place of residence of each is as follows:

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NAME	RESIDENCE
E. E. Lewis (General & Limited Partner)	636 North 4th St. Grand Junction, Colo.
W. L. Coleman, Jr. (Limited)	6270 Kenwood Avenue Dallas, Texas
E. Milton Horton (Limited Partner)	5630 E. Mockingbird Lane Dallas, Texas
R. M. Watson (Limited Partner)	5119 Belmont Dallas, Texas
Joe E. Hilton (Limited Partner)	5300 Martel Dallas, Texas
W. L. Ehney, Jr. (Limited Partner)	1305 Pennsylvania Dallas, Texas
C. A. Brewer (Limited Partner)	5111 Cedar Springs Dallas, Texas
J. D. Elmo Jennings (Limited Partner)	945 Peavy Dallas, Texas
H. H. Girdley	6303 Kenwood Dallas, Texas
John D. Stufflebene	1418 W. Main St. Grand Prairie, Texas

* *

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GRAND JUNCTION, COLO.

TERM

(e) This partnership shall commence as of the 14th day of April, 1955, and shall continue unless sooner terminated by law or as hereinafter provided, until the 14th day of April, 1958. Said term shall automatically be renewed for successive three-year periods unless six months prior to the expiration of any such term the general partner shall demand dissolution thereof.

CAPITAL CONTRIBUTIONS

(f) The amount of cash and a description of and the agreed value of the other property contributed by each limited partner is as follows, to-wit:

NAME	CASH CONTRIBUTION	DESCRIPTION AND AGREED VALUE OF PROPERTY
E. E. Lewis, Gen.	$ 1,000.00	$9,000.00 value in property as follows:1-210 cfm Davey Air Compressor #2-42650; 1-Thor 38 Rock Drill w/sinker leg #78620; 1-Drill tower w/air motor feet. Drill steel, bits, hoses, air receiver and miscellaneous mining equipment; 1-Babbel counter serial #1044, 1-Detection counter model DG-2 1-100 foot cable and probe. 1-1955 Willys station wagon serial #54168-10256 Value of above items $7771.85 $1228.15 personal 60 day inter est note bearing interest at 6% per annum
W. L. Coleman, Jr.	$ 3,500.00	$6,500.00 personal 90 day installment note
E. Milton Horton	$ 2,000.00	$3,000.00 personal 90 day installment note.
R. M. Watson	$ 5,000.00	* * * * * * * * * * * * * *
Joe E. Hilton	$ 2,833.35	$2,166.65 personal 90 day installment note.
W. L. Ehney, Jr.	$ 2,333.34	$4,666.66 personal 90 day installment note.
C. A. Brewer	$ 1,666.68	$3,333.32 personal 90 day installment note.
J. D. Elmo Jennings	$ 1,666.68	$3,333.32 personal 90 day installment note.
H. H. Girdley	$ 5,000.00	$2,500.00 personal 90 day installment note.
John D. Stufflebene	$ 1,666.66	$3,333.34 personal 90 day installment note.
Total	$26,666.71	$37,833.29

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Receipt of the capital contributions of each of the limited partners as above indicated is acknowledged by the partnership. No limited partner has agreed to contribute as capital any additional cash or property.

* All of said property has been appraised and the value as above shown is taken from a written appraisal thereof.

ADDITIONAL CONTRIBUTIONS

(g) No limited partner has agreed to make any additional contribution in the future.

RETURN OF CONTRIBUTION

(h) Any limited partner shall have the right to withdraw and demand a return of his interest as it exists as of April 10th of any year provided that at least 120 days prior to said April 10th said withdrawing partner shall give notice to the general partner and each of the limited partners herein. Upon withdrawal and return of the limited partner's share, his interest herein shall cease and the share of each of the remaining partners shall increase in the proportion in which they have heretofore shared in the profit of the partnership. Should more than Fifty (50%) per cent of the total interest herein demand a dissolution of this partnership, by giving notice to the general and limited partners at least 120 days prior to April 10 of any year, then and in that event this partnership shall be dissolved as of April 10 and the affairs of the partnership shall be settled in accordance with applicable Colorado Statutes.

SHARE OF PROFIT

(i) The share of the profits which each partner shall receive by reason of his contribution is as follows:

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E. E. Lewis (General	13.42
E. E. Lewis (Limited)	13.43
W. L. Coleman, Jr.	13.42
E. Milton Horton	6.71
R. M. Watson	6.71
Joe Hilton	6.71
W. L. Ehney, Jr.	9.40
C. A. Brewer	6.71
J. D. Elmo Jennings	6.71
H. H. Girdley	10.07
John D. Stufflebene	6.71

* *

LOSSES

(j) The limited partners shall each bear a share of the losses of the partnership equal to the share of profits to which such limited partner is entitled. The share of losses of each limited partner shall be charged against such limited partner's capital contribution.

The limited partners shall at no time become liable for any obligations or losses of the partnership beyond the amounts of their respective capital contributions.

RIGHT TO SUBSTITUTE ASSIGNEE

(k) Any limited partner herein shall have the right to substitute an assignee as contributor in his place provided the assignee is acceptable to the general partner.

RIGHT TO ADMIT ADDITIONAL LIMITED PARTNERS

(l) Limited partners may be admitted into the partnership provided consent is first obtained from the general partner. Upon the admission of any additional limited partners, the participating percentage of all partners as set forth in paragraph (i) above shall be adjusted to reflect their revised percentage interest and these articles shall be amended to correctly reflect such change.

PRIORITY

(m) No limited partner shall have any priority over the

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other limited partner as to contributions or as to compensation by way of income.

RETIREMENT, INSANITY OR DEATH OF GENERAL PARTNER

(n) Since there is but one general partner herein, upon his retirement, death or insanity the partnership shall be dissolved.

RIGHT TO RECEIVE PROPERTY

(o) No limited partner shall have the right to demand or receive any property other than cash in return for his contribution.

MANAGEMENT

(p) E. E. Lewis shall be the sole general partner and the management and control of the partnership business shall rest exclusively with him subject to the limitations imposed by law. The powers of the general partner shall include but shall not be limited to the following:

1. The power to borrow funds for the conduct of the partnership business and mortgage, deed in trust, pledge, assign or otherwise hypothecate any properties or assets of the partnership to secure such loans.

2. The power to acquire by lease, purchase or otherwise mining claims, royalties, or interest in and to any mining claims, on such terms and provisions as the general partner may deem advisable whether for cash, exchange, services, or for any other consideration whatsoever and subject to such royalties or payments from ore proceeds as the general manager may approve.

3. To sell, lease, sub-let, assign or exchange or otherwise dispose of any property or interest of the partnership either for cash, exchange, for services received, or for any other consideration whatsoever subject to such royalties, conditions or payment from ore proceeds as the general manager may approve.

4. The right to enter into any joint venture agreement with any other person, partnership, association or corporation for the exploration, development or mining of any of the property owned by the partnership.

5. The authority to apply for any DMEA or other government loans, and to sign any and all instruments necessary to effectuate same.

6. No limited partner shall have any voice or any part in the management of the partnership business, nor shall any limited partner have any power or authority to act for or on behalf of the partnership whatsoever except when performing acts under the direction of the general partner.

BOOKS AND RECORDS

(q) The general partner shall keep proper and usual books and records pertaining to the partnership business showing all

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of its assets and liabilities, receipts and disbursements, profits and losses, partners' capital contributions and disbursements, and all transactions entered into by the partnership. The books and records and all files of the partnership shall be available at all reasonable times for inspection by any partner or his designated representative. The books of the partnership shall be audited annually by a qualified public accountant selected by the general partner, and a copy of such audit shall be furnished to each of the partners. In addition, the general partner shall furnish the partners duplicate vouchers, duplicate deposit slips, lists of accounts payable, copies of the bank statements, and other data each month for the limited partners to keep and maintain accurate and adequate records reflecting income or losses of the partnership. Only one such set of records will be furnished to the limited partners. These may be examined by all of the other limited partners. All income of the partnership in excess of that required in the opinion of the general partner for acquisition and development of properties, operating expenses, and normal cash reserves, shall be distributed to the partners in proportion to their respective interests not later than 60 days after the close of the partnership's fiscal year.

SALARY AND EXPENSE

(r) The general partner shall devote a majority of his time and effort to the promotion of the best interest of this partnership, however, it is understood that the general partner shall retain certain other interest in the mining business. Salary, automotive expense, meals, lodging and all other expenses incurred by the general partner in the operation of said business shall be considered as an expense of operation.

WINDING UP AND LIQUIDATION OF THE PARTNERSHIP

(s) In the event of dissolution or winding up of the partnership, its liabilities shall be paid in the order provided by statute. All partners shall look solely to the assets of the

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GRAND JUNCTION, COLO.

partnership for the return of their respective capital contributions, and if its assets remaining after the payment or discharge of the debts and liabilities are insufficient to return the capital contributions to the partners, none of them shall have any recourse against the general partner or other partners for that purpose. The winding up of the partnership affairs and liquidation and distribution of its assets shall be conducted and managed exclusively by the general partner, who is hereby authorized to do any and all acts and things authorized by law for these purposes. in the performance of said duties and until liquidation is complete, the general partner shall continue to be paid the same salary and expense money as existed before liquidation began. Whether any assets of the partnership shall be liquidated through sale or shall be distributed to the interested partners in kind shall be determined by the general partner. If any of the properties are thus distributed in kind, undivided fractional interest in any such property, leases or rights of the partnership shall be assigned to the partners entitled thereto in proportion to their respective percentage interest therein. The firm name and good will of the partnership shall for bookkeeping purposes and upon liquidation carry no value.

OTHER DOCUMENTS

(t) Each of the partners shall sign and swear to any certificate of limited partnership required by the laws of any state in which the partnership desires to do business, and shall sign and acknowledge a so called "affidavit of trade name" and any other documents which may be required to accomplish the formation of this limited partnership and to assure its continued existence during the term hereof. Each of the partners shall also sign any and all other documents and do any and all other acts and things required to enable the partnership to comply with the laws of any state or governmental agency which may have jurisdiction over its affairs.

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GRAND JUNCTION, COLO.

SUCCESSORS AND ASSIGNS

(u) This agreement shall be binding upon and shall inure to the benefit of the legal representatives, successors and assigns of all the parties hereto.

NOTICES

(v) Any notice, request or demand which is to be given or may be given or which is contemplated by this agreement, shall be given by registered mail, addressed to the party or parties at their address herein set out, and shall be deemed to have been given and received on the date of the sender's registered receipt. In the event that any of the parties change their address as herein set out they shall notify the other parties of such change, and all subsequent notices shall be sent to such change of address.

Witness Their Signatures.

/s/ Elbert E. Lewis
General Partner

/s/ W. L. Ehney, Jr.

/s/ E. Milton Horton

/s/ W. L. Coleman, Jr.

/s/ C. A. Brewer

/s/ Joe E. Hilton

/s/ R. M. Watson

/s/ H. H. Girdley

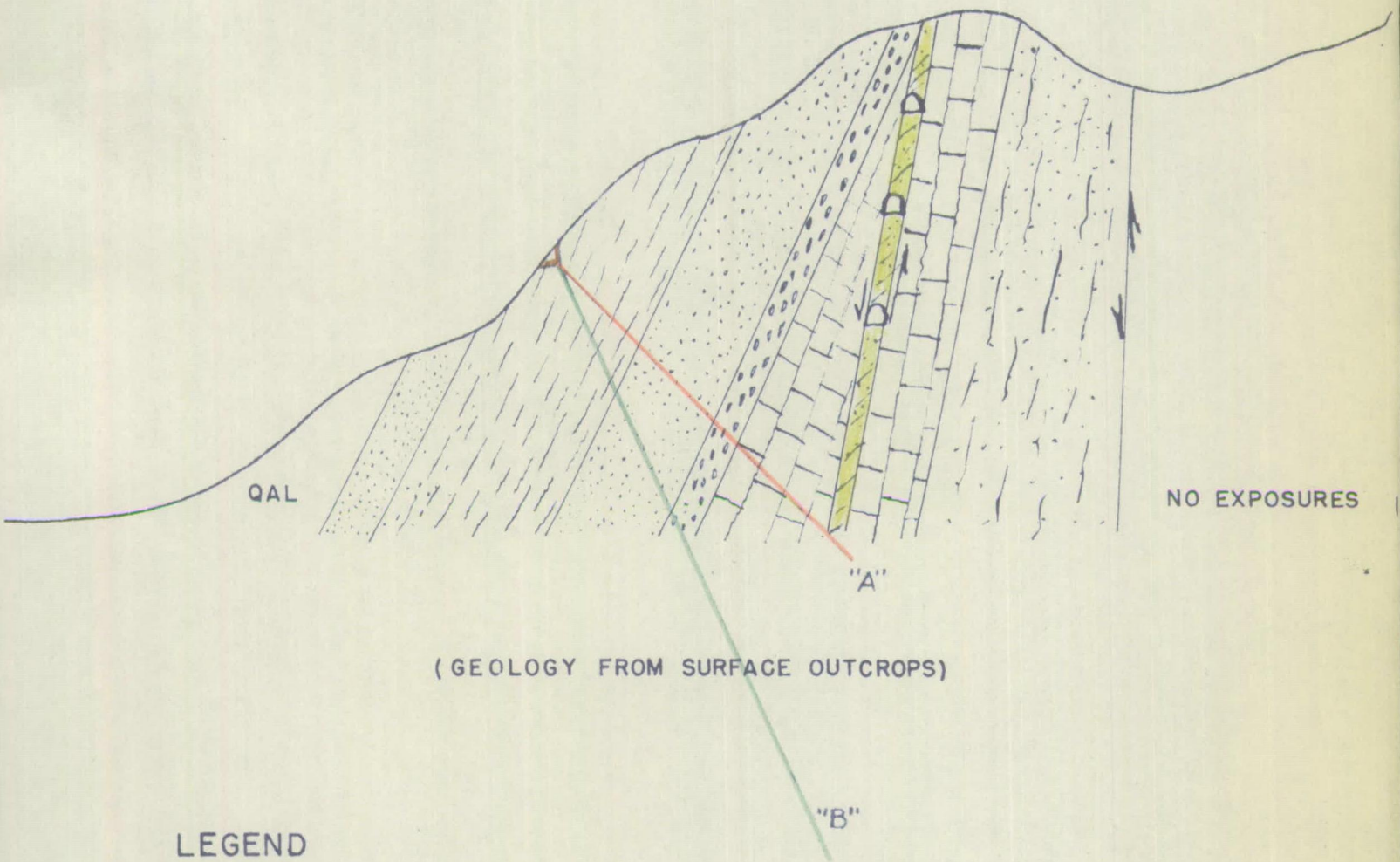
/s/ John D. Stufflebene

/s/ J. D. Elmo Jennings

Subscribed to before me, the undersigned authority, on this 14th day of April, A.D. 1955.

/s/ Dorothy Siebert
Notary Public, Dallas County, Texas

EE LEWIS & ASSOC.
PO BOX 1193
GRAND JUNCTION, COLO.



(GEOLOGY FROM SURFACE OUTCROPS)

LEGEND

- SS
- SS & SH
- SH
- LS
- SS URANIUM BEARING
- PROPOSED DRILLING

PLATE NO. 3

EARLY MORN CLAIMS

SECTION A-A'

EEL

SCALE 1"=50'

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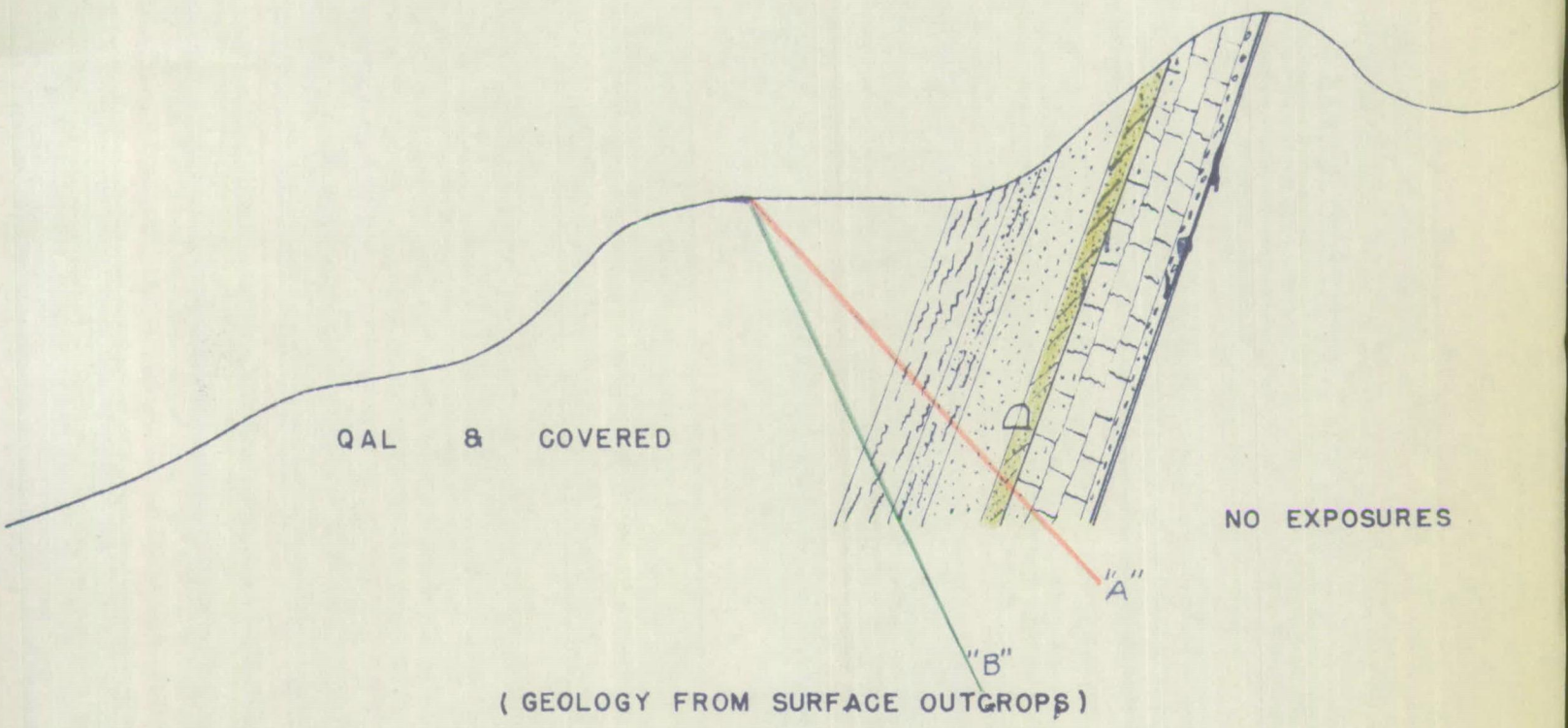
GRAND JUNCTION, COLO.



(GEOLOGY FROM SURFACE OUTCROPS)

LEGEND

- SS
- SS & SH
- SH
- LS
- SS URANIUM BEARING
- PROPOSED DRILLING

PLATE NO. 4

EARLY MORN CLAIMS

SECTION B-B'

EEL

SCALE 1"=50'

EE LEWIS & ASSOC.
PO BOX 1481
GRAND JUNCTION, COLO.

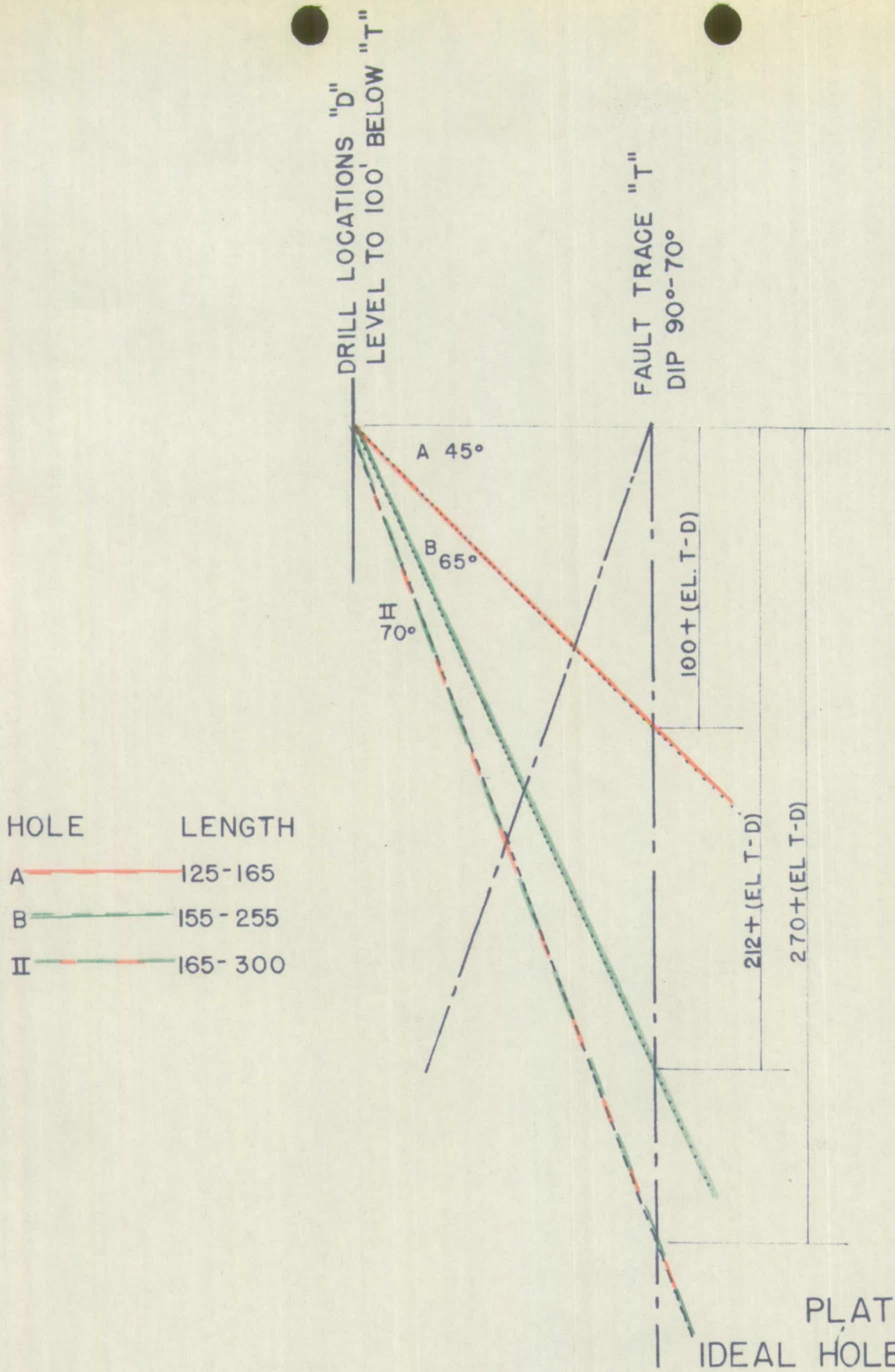


PLATE 5
IDEAL HOLE SECTIONS

SCALE 1"=50'

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GRAND JUNCTION, COLO.

RECEIVED
MAY 21 1956

PLATE NO. I

EARLY MORN CLAIMS

GYPSUM VALLEY, SAN MIGUEL COUNTY, COLORADO

EEL- JHK

SCALE 1"=300'

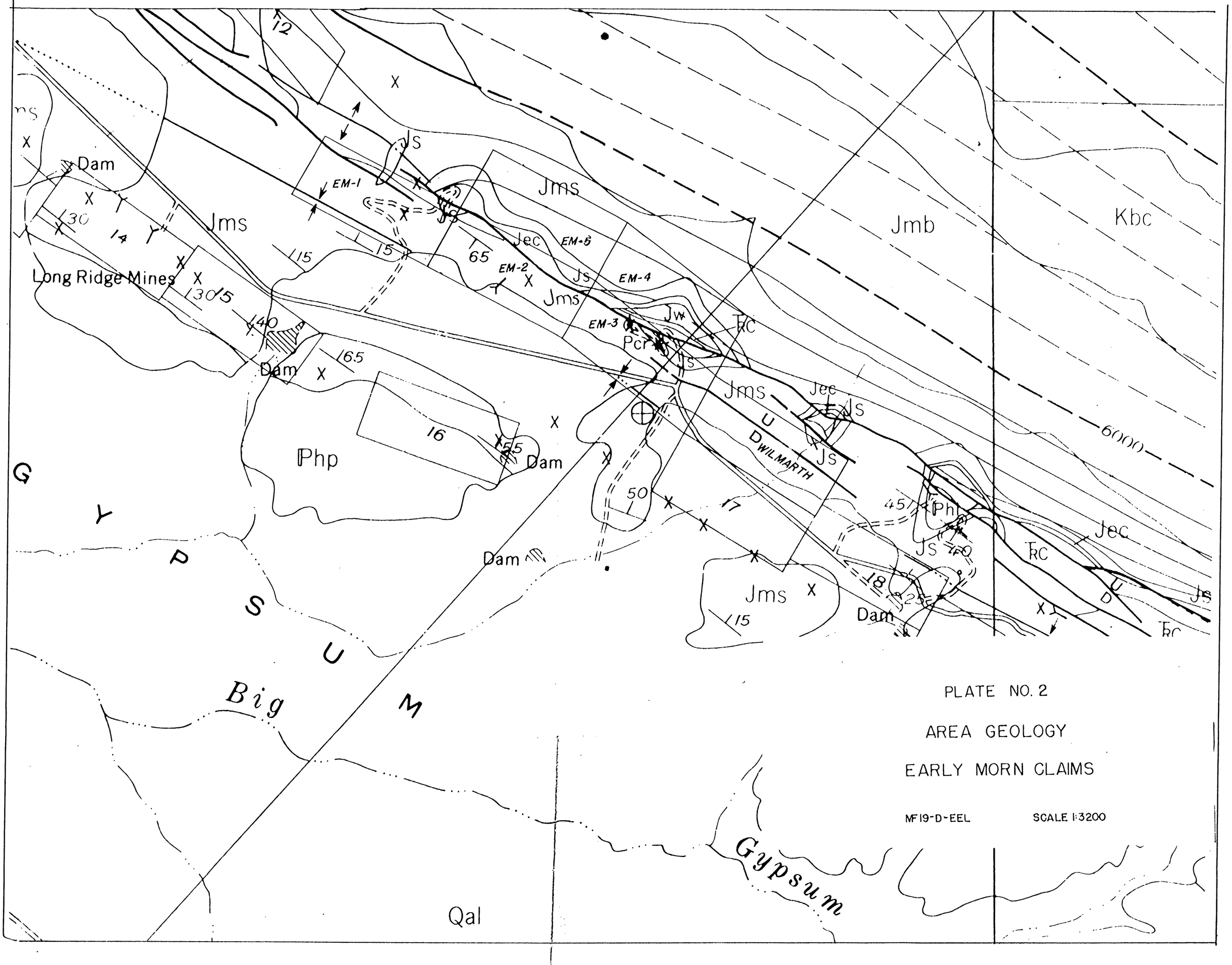


PLATE NO. 2

AREA GEOLOGY

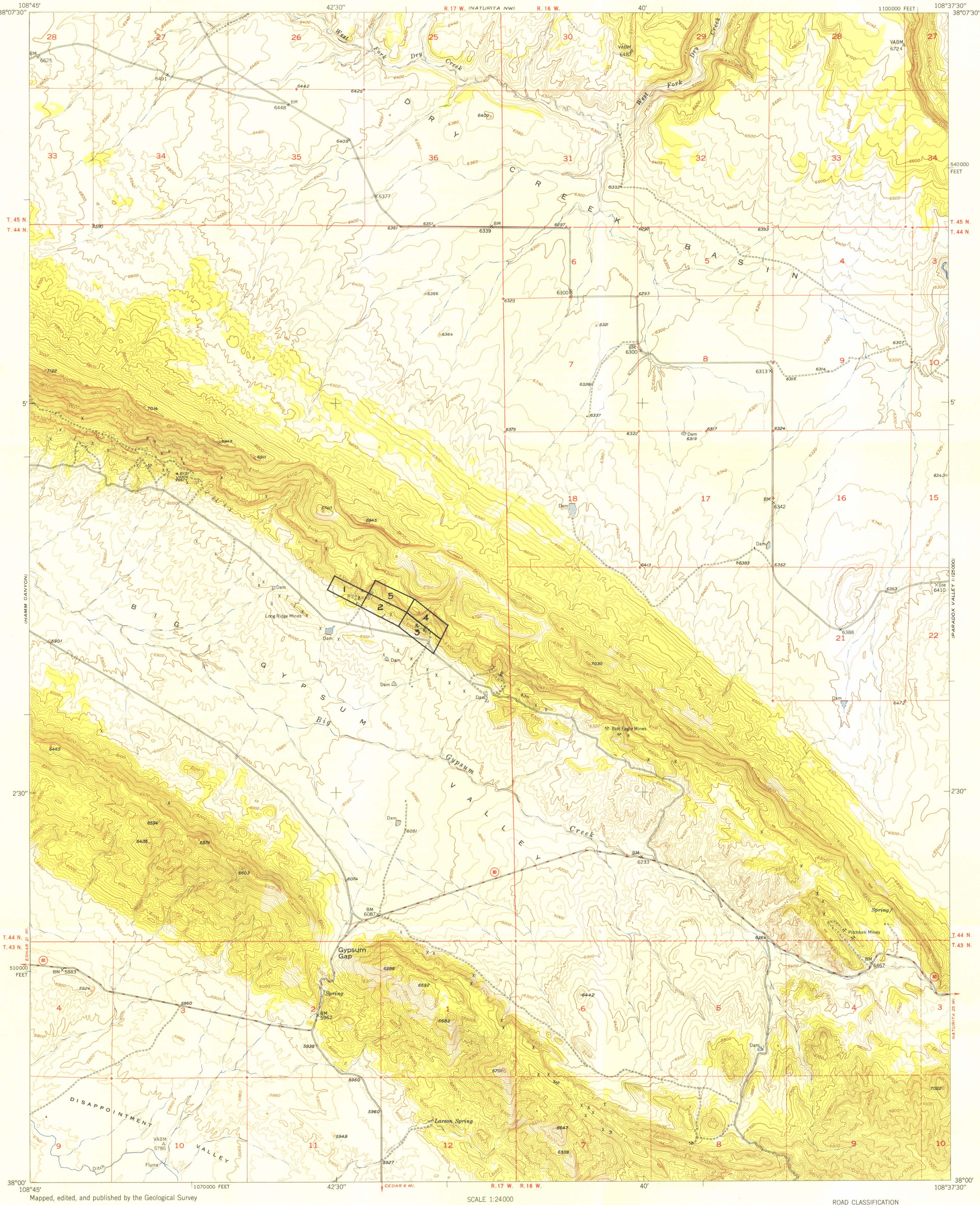
EARLY MORN CLAIMS

MF19-D-EEL SCALE 1:3200

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

ATOMIC ENERGY COMMISSION

GYPSUM GAP QUADRANGLE
COLORADO-SAN MIGUEL CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography from aerial photographs by multiplex methods
Aerial photographs taken September 1947. Field check, 1948

Polyconic projection. 1927 North American datum
10,000-foot grid based on Colorado coordinate system, south zone

Dashed land lines indicate approximate location
Land lines omitted in T.44 N.–R.17 W., and in part of T.44 N.–R.16 W. because of insufficient data.

TRUE NORTH
MAGNETIC NORTH
15°
APPROXIMATE MEAN DECLINATION, 1948

SCALE 1:24000

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO OR WASHINGTON 25

LOCATION MAP

Early Morn Claims

EE Lewis & Assoc.

ROAD CLASSIFICATION

HARD-SURFACE ALL WEATHER ROADS		DRY WEATHER ROADS
Heavy-duty	4 LANE / 2 LANE	Improved dirt
Medium-duty	4 LANE / 2 LANE	Unimproved dirt
Loose-surface, graded, or narrow hard-surface		

U. S. Route State Route

GYPSUM GAP, COLO.
N3800—W10837.5/7.5

EDITION OF 1949

THE TOPOGRAPHIC MAPS OF THE UNITED STATES

The United States Geological Survey is making a series of standard topographic maps to cover the United States. This work has been in progress since 1882, and the published maps cover more than 47 percent of the country, exclusive of outlying possessions.

The maps are published on sheets that measure about 16½ by 20 inches. Under the general plan adopted the country is divided into quadrangles bounded by parallels of latitude and meridians of longitude. These quadrangles are mapped on different scales, the scale selected for each map being that which is best adapted to general use in the development of the country, and consequently, though the standard maps are of nearly uniform size, the areas that they represent are of different sizes. On the lower margin of each map are printed graphic scales showing distances in feet, meters, miles, and kilometers. In addition, the scale of the map is shown by a fraction expressing a fixed ratio between linear measurements on the map and corresponding distances on the ground. For example, the scale $\frac{1}{62,500}$ means that 1 unit on the map (such as 1 inch, 1 foot, or 1 meter) represents 62,500 of the same units on the earth's surface.

Although some areas are surveyed and some maps are compiled and published on special scales for special purposes, the standard topographic surveys and the resulting maps have for many years been of three types, differentiated as follows:

1. Surveys of areas in which there are problems of great public importance—relating, for example, to mineral development, irrigation, or reclamation of swamp areas—are made with sufficient detail to be used in the publication of maps on a scale of $\frac{1}{31,680}$ (1 inch = one-half mile) or $\frac{1}{24,000}$ (1 inch = 2,000 feet), with a contour interval of 1 to 100 feet, according to the relief of the particular area mapped.

2. Surveys of areas in which there are problems of average public importance, such as most of the basin of the Mississippi and its tributaries, are made with sufficient detail to be used in the publication of maps on a scale of $\frac{1}{62,500}$ (1 inch = nearly 1 mile), with a contour interval of 10 to 100 feet.

3. Surveys of areas in which the problems are of minor public importance, such as much of the mountain or desert region of Arizona or New Mexico, and the high mountain area of the northwest, are made with sufficient detail to be used in the publication of maps on a scale of $\frac{1}{125,000}$ (1 inch = nearly 2 miles) or $\frac{1}{250,000}$ (1 inch = nearly 4 miles), with a contour interval of 20 to 250 feet.

The aerial camera is now being used in mapping. From the information recorded on the photographs, planimetric maps, which show only drainage and culture, have been made for some areas in the United States. By the use of stereoscopic plotting apparatus, aerial photographs are utilized also in the making of the regular topographic maps, which show relief as well as drainage and culture.

A topographic survey of Alaska has been in progress since 1898, and nearly 44 percent of its area has now been mapped. About 15 percent of the Territory has been covered by maps on a scale of $\frac{1}{500,000}$ (1 inch = nearly 8 miles). For most of the remainder of the area surveyed the maps published are on a scale of $\frac{1}{250,000}$ (1 inch = nearly 4 miles). For some areas of particular economic importance, covering about 4,300 square miles, the maps published are on a scale of $\frac{1}{62,500}$ (1 inch = nearly 1 mile) or larger. In addition to the area covered by topographic maps, about 11,300 square miles of southeastern Alaska has been covered by planimetric maps on scales of $\frac{1}{125,000}$ and $\frac{1}{250,000}$.

The Hawaiian Islands have been surveyed, and the resulting maps are published on a scale of $\frac{1}{62,500}$.

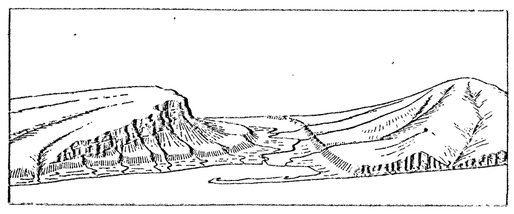
A survey of Puerto Rico is now in progress. The scale of the published maps is $\frac{1}{30,000}$.

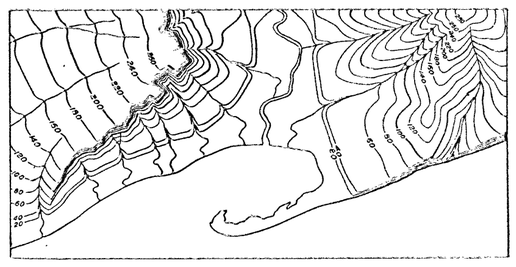
The features shown on topographic maps may be arranged in three groups—(1) water, including seas, lakes, rivers, canals, swamps, and other bodies of water; (2) relief, including mountains, hills, valleys, and other features of the land surface; (3) culture (works of man), such as towns, cities, roads, railroads, and boundaries. The symbols used to represent these features are shown and explained below. Variations appear on some earlier maps, and additional features are represented on some special maps.

All the water features are represented in blue, the smaller streams and canals by single blue lines and the larger streams by double lines. The larger streams, lakes, and the sea are accentuated by blue water lining or blue tint. Intermittent streams—those whose beds are dry for a large part of the year—are shown by lines of blue dots and dashes.

Relief is shown by contour lines in brown, which on a few maps are supplemented by shading showing the effect of light thrown from the northwest across the area represented, for the purpose of giving the appearance of relief and thus aiding in the interpretation of the contour lines. A contour line represents an imaginary line on the ground (a contour) every part of which is at the same altitude above sea level. Such a line could be drawn at any altitude, but in practice only the contours at certain regular intervals of altitude are shown. The datum or zero of altitude of the Geological Survey maps is mean sea level. The 20-foot contour would be the shore line if the sea should rise 20 feet above mean sea level. Contour lines show the shape of the hills, mountains, and valleys, as well as their altitude. Successive contour lines that are far apart on the map indicate a gentle slope, lines that are close together indicate a steep slope, and lines that run together indicate a cliff.

The manner in which contour lines express altitude, form, and grade is shown in the figure below.





The sketch represents a river valley that lies between two hills. In the foreground is the sea, with a bay that is partly enclosed by a hooked sand bar. On each side of the valley is a terrace into which small streams have cut narrow gullies. The hill on the right has a rounded summit and gently sloping spurs separated by ravines. The spurs are truncated at their lower ends by a sea cliff. The hill at the left terminates abruptly at the valley in a steep scarp, from which it slopes gradually away and forms an inclined tableland that is traversed by a few shallow gullies. On the map each of these features is represented, directly beneath its position in the sketch, by contour lines.

The contour interval, or the vertical distance in feet between one contour and the next, is stated at the bottom of each map. This interval differs according to the topography of the area mapped: in a flat country it may be as small as 1 foot; in a mountainous region it may be as great as 250 feet. In order that the contours may be read more easily certain contour lines, every fourth or fifth, are made heavier than the others and are accompanied by figures showing altitude. The heights of many points—such as road intersections, summits, surfaces of lakes, and benchmarks—are also given on the map in figures, which show altitudes to the nearest foot only. More precise figures for the altitudes of benchmarks are given in the Geological Survey's bulletins on spirit leveling. The geodetic coordinates of triangulation and transit-traverse stations are also published in bulletins.

Lettering and the works of man are shown in black. Boundaries, such as those of a State, county, city, land grant, township, or reservation, are shown by continuous or broken lines of different kinds and weights. Public roads suitable for motor travel the greater part of the year are shown by solid double lines; poor public roads and private roads by dashed double lines; trails by dashed single lines. Additional public road classification if available is shown by red overprint.

Each quadrangle is designated by the name of a city, town, or prominent natural feature within it, and on the margins of the map are printed the names of adjoining quadrangles of which maps have been published. More than 4,100 quadrangles in the United States have been surveyed, and maps of them similar to the one on the other side of this sheet have been published.

Geologic maps of some of the areas shown on the topographic maps have been published in the form of folios. Each folio includes maps showing the topography, geology, underground structure, and mineral deposits of the area mapped, and several pages of descriptive text. The text explains the maps and describes the topographic and geologic features of the country and its mineral products. Two hundred twenty-five folios have been published.

Index maps of each State and of Alaska and Hawaii showing the areas covered by topographic maps and geologic folios published by the United States Geological Survey may be obtained free. Copies of the standard topographic maps may be obtained for 10 cents each; some special maps are sold at different prices. A discount of 40 percent is allowed on an order amounting to $5 or more at the retail price. The discount is allowed on an order for maps alone, either of one kind or in any assortment, or for maps together with geologic folios. The geologic folios are sold for 25 cents or more each, the price depending on the size of the folio. A circular describing the folios will be sent on request.

Applications for maps or folios should be accompanied by cash, draft, or money order (not postage stamps) and should be addressed to

THE DIRECTOR,
United States Geological Survey,
Washington, D. C.

November 1937.

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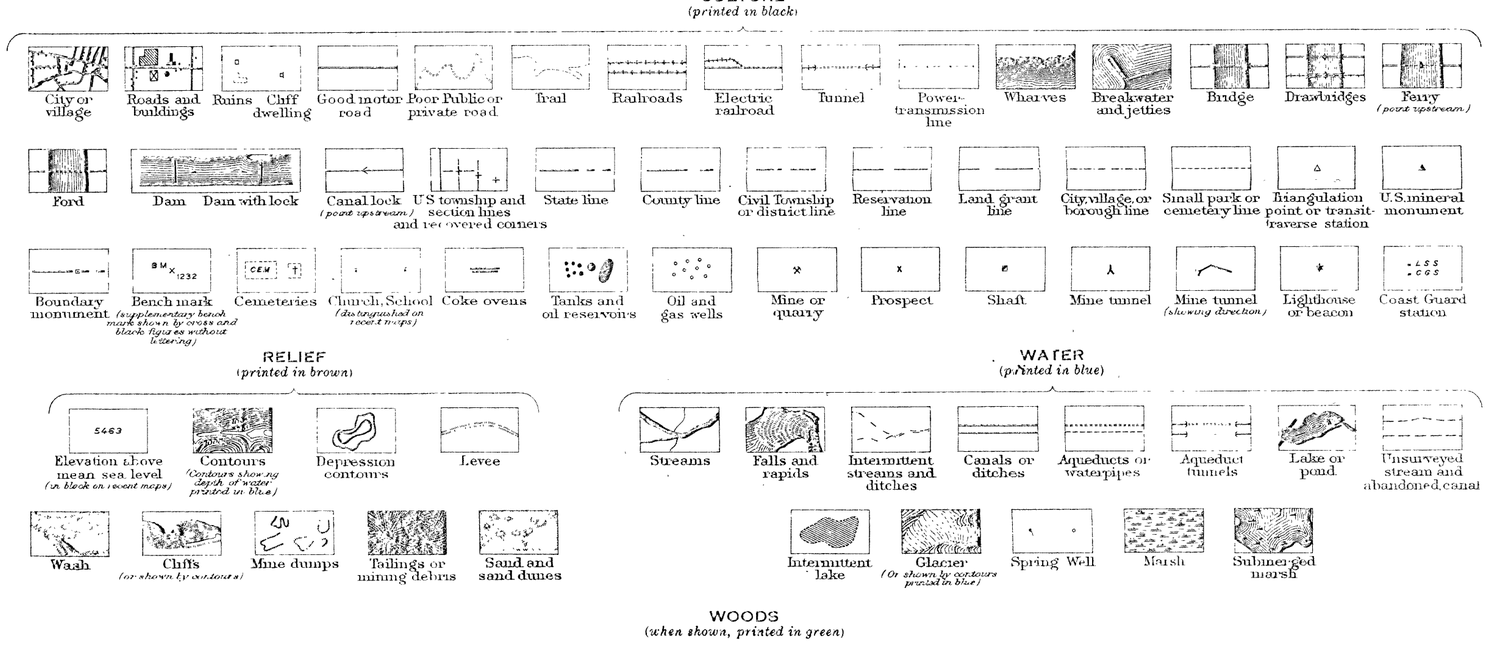
NOTE:—Effective on and after October 1, 1946, the price of standard topographic quadrangle maps will be 20 cents each, with a discount of 20 percent on orders amounting to $10 or more at the retail rate.