DMEA Form 1

DEFENSE MINERALS EXPLORATION ADMINISTRATION
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DMEA Docket No. 4481

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To:	M+T	Date	10-12-56
To:	Code 130	Date	1-7-57
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DMEA Form 7
(12-56)

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1-2-57	Anderson	600
1-7	Houk	600
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1/9	Frank E. Johnson	110
		~~100~~
		225

JAN 10 1957 600

Chesapeake and Colorado Corporation
133 South Fourth Street
P. O. Box 1298
Grand Junction, Colorado

Re: Docket No. DMEA-4481-Fluorspar
Chesapeake and Colorado Corporation
Cash Deal, et al. claims
Mesa County, Colorado

Bishop
Kilsgaard

Gentlemen:

Your application for aid for an exploration project and other reports available to us in Washington relating to the subject 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 quantities that will significantly improve the mineral supply position for the National Defense Program.

Careful study of all our information indicates to us that the probability of disclosing significant reserves of fluorspar is not sufficiently promising to justify Government participation. We regret to advise you, under these circumstances, that your application for exploration assistance is denied.

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

Sincerely yours,

Frank E. Johnson

ACTING Administrator

WCAnderson:gad 1/7/57
Copy to: Admr. R. File
Operating Committee
Field Team, Region III
Mr. Kiilsgaard, 5222
Mr. McDougal, 3522
Mr. Houk

P.S.

8623

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

Memorandum January 7, 1957

To: Mr. C. O. Mittendorf, Administrator

From: L. G. Houk, Chief, Nonmetallic Minerals Division

Subject: Evaluation of application and field examination report.
Docket No. DMEA-4481-Fluorspar
Chesapeake and Colorado Corporation
Cash Deal, et al. claims
Mesa County, Colorado

Denial of application is recommended.

Property: Located on the Uncompahgre Plateau, Mesa County, Colorado, just south of Unaweep Canyon, described as follows:

Sections 20,26,27,28,29,30) 31,32,33,34 & 35)	T. 14 S., R. 100 W.
Section 36	T. 14 S., R. 101 W.
Section 1	T. 15 S., R. 101 W.
Sections 3,4,5 & 6	T. 15 S., R. 100 W.

consists of 66 claims, not contiguous, covering apexes of portions of 14 outcropping veins.

Date of application: August 20, 1956.

Work proposed: The applicant has proposed a program of underground exploration consisting of 400 feet of shaft, 500 feet of crosscut and 1200 feet of drifts.

Amount requested: $133,140.

Government participation @ 50%: $66,570.

Field Team Report: November 30, 1956, E. N. Harshman, USGS
M. H. Salsbury, USBM.

Geological Formation: The basal formation is a medium- to coarse-grained granite, directly overlain by 150 feet of red sandstone and shale, then 300 feet of tan-to gray-sandstones. The fluorite bearing veins occupy a number of northeasterly striking shear zones in the upper 300 feet of sandstone (Wingate formation) and probably extend through the lower sandstone (Chinle formation) and into the underlying granite. The veins are similar in structure, texture, and mineral composition. They consist of a 4- to 7-foot wide, well silicified, brecciated zone containing calcite, fluorite, quartz, and traces of base metal sulphides.

Fluorite: Most is green, some white, and easily distinguishable from the calcite. Occurs in relatively minor amounts, dispersed through the vein material as isolated crystals. In 5 samples taken, the content of CaF_2 ranged from 0.8% to 15.8%.

Applicant's justification for exploration program:

Based on the assumption that the fluorite content of the veins will be greater and that the amount of brecciated sandstone will decrease at greater depths. This was disproved by the Field Team in their report, since vein outcrops covering a vertical interval of at least 400 feet were examined and the width, character, and mineral content throughout the interval appeared to be identical.

Past production:

About 10 tons of unmarketable material in stockpile around the collar of a shallow shaft.

Recommendations:

By the Field Team: Recommend denial of the application for the following reasons:

1. Further exploration is not necessary, since outcrop exposures of fluorspar veins covering a large area and a vertical range of 400 feet amply show the character of veins.
2. The occurrences do not constitute significant deposits.
3. The fluorite content of the veins is too low to make a shipping product as mined.
4. A concentration product would not meet specifications for ceramic or acid grade, although a metallurgical grade could be produced. However, transportation costs to the nearest market would be prohibitive.
5. Concentration costs would be high, since fine grinding might be required to unlock the fluorite which is intimately associated with calcite and silicified sandstone fragments.

By the commodity members:

1. Geological Survey: The low assay values and the scarce and disseminated occurrence of fluorspar suggest that Government participation in the proposed work is not justifiable.
2. Bureau of Mines: Denial. No comments.

By the Nonmetallic Minerals Division: Concur with the Field Team in denying the application.

Walter C. Anderson

W. C. Anderson
Nonmetallic Minerals Division

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

RECEIVED
DEC 20 1956
D.M.E.A.

Date December 20, 1956

DMEA Docket No. 4481
DMEA Contract No.
Commodity Fluorspar
Name of applicant Chesapeake & Colorado Corp.
Name of property Cash Deal, Pay Dirt et al
Location of property Mesa Co., Colorado
Estimated cost of project $133,140.00

Memorandum

To: Lawrence G. Houk, Chief, Non-Metallic Division, Defense Minerals Exploration Administration

From: Robert B. McDougal, Commodity Specialist, Branch of Construction and Chemical Materials

Subject: Review of Field Team Report
(Application, Field Team Report, etc.)

1. Date of subject document: 11/30/56. 2. Date received by reviewer: 12/11/56.

3. Prior reports on this property known to reviewer: Yes [ ], No [x].

4. Prior reports on nearby properties known to reviewer: Yes [ ], No [x].

5. Information available on past production: Yes [ ], No [x].

6. Other pertinent factors known to reviewer: Yes [ ], No [x].

7. Explain items marked yes above:

8. Factors needing special consideration:
a. Location [ ]
b. Ownership [ ]
c. Evidence of mineralization [ ]
d. Geology [ ]
e. Proposed exploration method [ ]
f. Alternate exploration method [ ]
g. Costs [ ]
h. _____ [ ]

9. Action advised:
a. Obtain information from applicant [ ]
b. Refer to Field Team [ ]
c. Denial [x]
d. Agree with Field Team [x]
i. Consult with Mr. _____ at _____ MEC office.
e. Disagree with Field Team [ ]
f. Suggest alternate plan [ ]
g. Request another examination [ ]
h. Approval [ ]

10. Remarks: (Use back of page if necessary)

Robert B. McDougal
Robert B. McDougal

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

IN REPLY REFER TO:

RECEIVED
DEC 19 1956
D.M.E.A.

December 18, 1956
Re: DMEA Docket 4481 (Fluorspar)
Chesapeake and Colorado Corporation
Mesa County, Colorado

Memorandum

To: L. G. Houk, Defense Minerals Exploration Administration

From: T. H. Kiilsgaard, U. S. Geological Survey

Subject: Review of Field Team report

The applicant proposes to explore its fluorspar property with a somewhat elaborate exploration program, the estimated cost of which totals $133,140.00. Field examiners have visited the property and formed the opinion that further exploration is not warranted. Therefore, they recommend denial of the application.

The proposed exploration is reportedly based on the belief that physical characteristics of the fluorspar veins will improve with depth, hence the need for deeper exploration. Field examiners, however, call attention to the fact that the veins may be examined over a vertical interval of 400 feet at the outcrop, over which there is no improvement in the grade of fluorspar. They also direct attention to a previous geologic report by B. S. Butler, which describes "a little fluorite" in nearby copper veins in the underlying granite. These observations plus the low assay values obtained from samples taken at the outcrop, plus the scarce and disseminated occurrence of fluorspar where observed in the veins, all suggest that Government participation in the proposed work is not justifiable.

I concur with the field examiners and recommend denial of the application.

T. H. Kiilsgaard

T. H. Kiilsgaard

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

A

224 New Customhouse
Denver 2, Colorado

December 5, 1956

RECEIVED
DEC 10 1956
D.M.E.A.

Memorandum

To: Secretary to the Operating Committee

From: DMEA Field Team, Region III

Subject: Joint Report of Examination Docket DMEA 4481 (Fluorspar) Chesapeake and Colorado Corporation (Cash Deal, Pay Dirt, Tom Boy, and Tompkins and Farris Claims) Mesa County, Colorado.

Enclosed are the original and three copies of the joint engineering and geologic Report of Examination covering the subject property.

The examiners conclude that the proposed exploration will not result in the discovery of a significant amount of fluorspar, and they recommend that the application be denied. We concur in this recommendation.

DMEA Field Team, Region III

By W. M. Traver
Executive Officer

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
12-14-56
(date)

RECEIVED

OCT 2 2 1956

October 17, 1956

Memorandum

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

From: Superintendent, Denver Experiment Station, Reg. III

Subject: Docket DMEA 4481 (Fluorspar) Chesapeake and Colorado Corporation (Cash Deal, et al Claims) Mesa County, Colo.

The application for Chesapeake and Colorado Corporation, Docket DMEA 4481, in the amount of $133,143.00 was received in this office on October 17, 1956.

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

W. H. King

W. H. King

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

RECEIVED
OCT 19 1956

224 New Customhouse
Denver 2, Colorado

October 16, 1956

Memorandum

To: W. H. King (2) (w/brochure)
E. N. Harshman

From: DMEA Field Team, Region III

Subject: Docket DMEA 4461 (Fluorspar) Chesapeake and Colorado Corporation (Cash Deal, et al Claims) Mesa County, Colorado

Enclosed is the subject application in the amount of $133,140.00. A field examination and suitable report of examination are requested.

Also enclosed for your information is a copy of a letter from the Chairman of the Operating Committee dated October 12, 1956, and memoranda of review of the application by W. P. Williams and Robert B. McDougal.

Will you please return the brochure with the report of examination.

DMEA Field Team, Region III

J. W. Townsend

J. W. Townsend
Acting Executive Officer

Enclosures
HMC:ytl
cc: Sec. Op. Comm. (2)
Docket 4461
Chron.

IN REPLY REFER TO:

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

RECEIVED
DEC 10 1956
D.M.E.A.

November 30, 1956

TRANSMITTED
DEC 5 1956

DMEA
DEPARTMENT OF THE INTERIOR
DEC 3 1956
REGION III
DENVER, COLORADO

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: John F. Shaw
E. N. Harshman

Subject: DMEA Docket 4481 (Fluorspar), Chesapeake and Colorado Corporation (Cash Deal, Pay Dirt, Tom Boy, and Tompkins and Farris claims), Mesa County, Colorado

Enclosed are the original and eight copies of a joint report of examination in which denial of the subject application is recommended.

The applicant proposes to explore for fluorspar on the property by crosscutting, drifting, and shaft sinking at an estimated total cost of $133,140.

The examiners conclude that the proposed exploration will not result in the discovery of a significant amount of ore-grade fluorspar and recommend denial of the application for exploration assistance.

We concur with the conclusions and recommendations in the examination report.

John F. Shaw
Supervising Mining Engineer

E. N. Harshman
Member, Field Team

Enclosures (9)
ENHarshman:mp

Reviewed by
DMEA OPERATING COMMITTEE
12-14-56
(date)

FOR UNITED STATES GOVERNMENT USE ONLY

TRANSMITTED

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

DEC 5 1956

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

RECEIVED
DEC 10 1956
D.M.E.A.

DMEA 4481

Chesapeake and Colorado Corporation

Cash Deal, Pay Dirt, Tom Boy,

and Tompkins and Farris claims

Mesa County, Colorado

Fluorspar

Joint Engineering and Geological Report

by

E. N. Harshman, Geologist
Geological Survey

M. H. Salsbury, Mining Engineer
Bureau of Mines

November 30, 1956

Reviewed by
DMEA OPERATING COMMITTEE
12-14-56
(Date)

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ILLUSTRATIONS

Figure — Follows page

1. Location map, Cash Deal, Pay Dirt, Tom Boy, and Tompkins and Farris claims, Chesapeake and Colorado Corporation, Mesa County, Colorado. DMEA 4481..... 5

2. Claim map, Chesapeake and Colorado Corporation, Fluorspar group, Mesa County, Colorado. DMEA 4481..... 18

DMEA 4481

RECEIVED DEC 10 1956

CHESAPEAKE AND COLORADO CORPORATION
CASH DEAL, PAY DIRT, TOM BOY,
AND TOMPKINS AND FARRIS CLAIMS
MESA COUNTY, COLORADO

SUMMARY AND INTRODUCTION

On October 17, 1956, the Chesapeake and Colorado Corporation applied for Government assistance to explore for fluorspar on a group of 66 claims on the Uncompahgre Plateau, Mesa County, Colorado, 31 miles southwest of Grand Junction, Colorado.

A program of underground exploration requiring two vertical shafts, totaling 400 feet, and 1,700 feet of drifting and cross-cutting from the shafts and from three adit portals has been proposed at an estimated cost of $133,140. Government participation at 50 percent would be $66,570.

A field examination was made on November 2, 1956, by a DMEA examining team, accompanied by J. W. Hasler of the Geological Survey and Tom Adams, owner of 30 of the claims, who represented the applicant.

The claims are underlain by Wingate and Chinle sediments capping the Uncompahgre Plateau and the steep slopes bounding it. The plateau is broached by canyons in the drainage of Unaweep Canyon. The fluorspar veins are exposed in the slopes above these

canyons as well as on top of the plateau. They are easily reached over a Forest Service road connecting with hard-surfaced Colorado State Highway 141 in Unaweep Canyon which bisects the plateau.

The area has been known to contain mineral deposits since 1900 or earlier, and unsuccessful copper mining operations were carried on over fifty years ago. At a later date exploration of vein outcrops with a visible content of fluorspar was carried on in the area where the applicant's claims have been located.

Evidence of claim conflicts, not mentioned in the application, were noted during the examination.

The applicant's claims have been explored by means of shallow pits, trenches on the hillsides, bulldozer cuts stripping vein outcrops, one adit crosscut which did not cut a vein, and at least three shallow shafts. Most of this work was done by earlier operators. The applicant made an unsuccessful attempt to explore one vein at depth by drilling.

The fluorite deposits occur along persistent shear zones in sandstones and sandy shales of the Wingate and Chinle formations. The veins consist of silicified wall rock (predominantly sandstone), considerable calcite and quartz, and minor amounts of fluorite. Silicification of the wall rocks was noted in all vein exposures examined. The fluorite is generally green and occurs as thin coatings around fragments of brecciated wall rock and as isolated

crystals and botryoidal masses in the gangue of quartz and calcite.

The applicant has proposed an elaborate program of underground exploration, completion of which would constitute a development project as well. The objective of the proposed work is to investigate the character of the veins at depth. The applicant has assumed that the fluorite content and physical characteristics of the veins are likely to be more favorable with depth. All of the veins are similar so far as the outcrop exposures show. Assuming that exploration is necessary to determine possible changes in the character of the veins with increasing depth, completion of one of the several items of exploration proposed would accomplish this. An alternate method would be by means of angle core-drill holes crosscutting the veins. This is the method recommended in a report by one of the applicant's consultants. It has not been proposed in the subject application because of the unsatisfactory results in a brief, inconclusive trial of this method. In the opinion of the examining team, there is no reason why exploration could not be carried on successfully by diamond drilling with the proper equipment and techniques.

It is concluded by the examining team that exploration at depth is not required to evaluate the significance of the fluorite deposits. The veins were examined in various outcrops over a vertical range of about 400 feet and there is no indication that vein character changes appreciably with increasing depth, or that there

is an increase of fluorite content or decrease in the amount of brecciated wall rock in the vein material. Thus there is no basis for the assumption by the applicant that the veins will improve with depth. The applicant has related mineralization to the present surface, and it is not believed that depth below this surface has any bearing on vein characteristics in this instance.

The examining team obtained five samples from four different vein outcrops for determination of the fluorite content. These samples were cut the full width of the vein and were taken to represent as well as possible the amount of fluorite which would be contained in the ore as it would be mined. A commercial grade of ore was not indicated either as mined or after concentration. Denial of the application under Docket DMEA 4481 is recommended.

ACKNOWLEDGEMENTS

The applicant furnished a brochure with cost estimate, maps, and two geologic and engineering reports. Personnel of the Geological Survey who have been engaged in mapping the area were consulted, as was a Geological Survey publication.1/.

1/ Butler, B. S. Notes on the Unaweep copper district, Colorado: U. S. Geological Survey Bulletin 580, pp. 19-23, 1915.

LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES

The property is located on the Uncompahgre Plateau, Mesa County, Colorado, just south of Unaweep Canyon (fig. 1). The land descriptions are as follows:

Sections 20, 26, 27, 28, 29, 30, 31, 32, 33, 34, & 35,	T. 14 S., R. 100 W.
Section 36,	T. 14 S., R. 101 W.
Section 1,	T. 15 S., R. 101 W.
Sections 3, 4, 5, & 6	T. 15 S., R. 100 W.

New Mexico Principal Meridian

The claims are not contiguous but are laid out to cover the apexes of portions of 14 outcropping veins.

The property is traversed by access roads and is easily reached over the Forest Service road which joins Colorado State Highway 141 at Taylor's ranch in Unaweep Canyon 5 miles to the north. Grand Junction, the nearest source of mining supplies, is 26 miles farther northeast over hard-surfaced Colorado State Highway 141 and U. S. Highway 50. The claims are at an altitude of about 8,500 feet on the top of the Uncompahgre Plateau and the steep slopes forming the boundaries. A number of canyons broach the plateau rim and the veins outcrop on the slopes above these canyons as well as on top of the plateau.

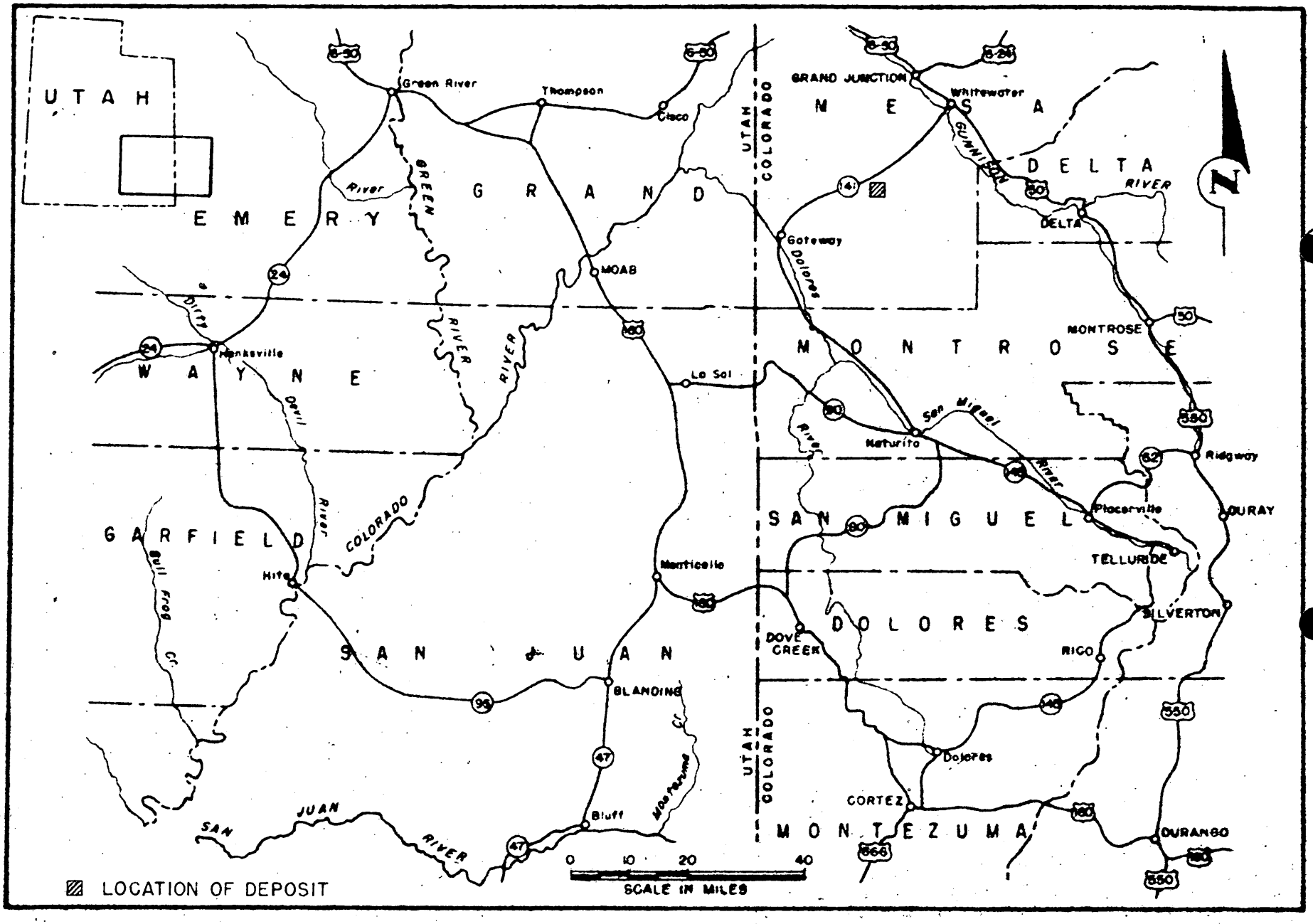

FIGURE 1 - LOCATION MAP, CASH DEAL, PAY DIRT, TOM BOY AND TOMKINS-FARRIS CLAIMS, CHESAPEAKE AND COLORADO CORPORATION, MESA COUNTY, COLORADO. DMEA 4481 (FLUORSPAR)

The region is subject to violent storms at any season, and to low temperatures and heavy snowfall five months of the year. Surface operations are feasible during most of the year with adequate preparation.

There are no unusual problems of access, supply, labor, or power. Personnel housing might have to be provided probably in the form of house trailers. Most of the time it is feasible to commute daily from Grand Junction, Colorado.

Ore marketing would present somewhat of a problem. The nearest markets for metallurgical-grade fluorspar concentrate, which is believed to be the only marketable product which could be produced, would be at steel plants at Pueblo, Colorado, and Provo, Utah, each about 260 miles from Whitewater, Colorado, the nearest railpoint on the Denver and Rio Grande Western Railroad. Whitewater is 16 to 20 miles from the proposed exploration sites. Freight rates and hauling costs would have a considerable bearing on the economics of a fluorspar operation in the Uncompahgre Plateau area.

HISTORY, PRODUCTION, AND OWNERSHIP

The occurrence of copper-gold veins cutting the Precambrian granite and overlying Triassic sediments in the walls of Unaweep

Canyon was known before 1900. There was an early attempt at mining and a concentrating mill was operated briefly, but there was little or no production. At a later date, exploration was carried on in veins cropping out in the sedimentary formations on the slopes of canyons tributary to Unaweep Canyon and on top of the Uncompahgre Plateau. The mineral sought in this work was fluorspar.

The earlier prospectors located claims in the area, but apparently none of them were ever patented. So far as known to the examining team, the earlier claims located on the applicant's ground have been allowed to lapse. Tom Adams located his first claims in 1947 and has since added others as he traced out different vein outcrops. The applicant company located additional ground after leasing Adams' claims. There are claims of different ownership adjoining those in the subject application and, at least one case of conflicting claims.

There are no records of any production from the area either of copper, gold, or fluorspar. A small production of copper is reported but not verified. A report in the applicant's brochure mentions reported production of fluorspar from a neighboring claim, but Mr. Adams, whose knowledge of the area covers many years association, does not recall any fluorspar having been shipped.

The property included in the proposed DMEA project consists of 66 located claims of which 30 were located and leased to the applicant and the remaining 36 were located by the applicant.

Recording data furnished by the applicant is as follows:

Claims	Locator	Mesa County Courthouse Recording date	Book	Page
Cash Deal Nos. 1-7	Tom Adams	11/1/54	623	253 to 259
Cash Deal Nos. 9-13	" "	"	"	261 to 265
Cash Deal Nos. 16-20	" "	"	"	269 to 273
Cash Deal Extension Nos. 4-5	" "	"	"	277 to 278
Pay Dirt Nos. 1-8	Tompkins & Farris	"	"	290 to 297
Tompkins & Farris Nos. 1-15	Tompkins & Farris	10/29/54	623	137 to 151
Tompkins & Farris Nos. 17-24	" "	"	"	153 to 160
Tompkins & Farris Extension Nos. 12, 13, & 14	" "	"	"	130 to 132
Tom Boy Nos. 1-11	Tom Adams	11/1/54	"	240 to 250
Tom Boy Extension No. 2	Tompkins & Farris	5/4/55	643	129
Tom Boy Extension No. 6	Chesapeake & Colo. Corp.	9/24/56		

The above data covers only part of the record on the various claims. Location certificates found on discovery monuments in the field refer to amended locations not listed by the applicant. For instance there are amended locations on the Tompkins & Farris claims Nos. 4 and 11 dated August 15, 1956. On the Cash Deal No. 7 there was a location notice dated July 28, 1947, and recorded August 15, 1947, signed by William Post, Tom Rogers, and Tom Adams. Mr. Adams states that he later bought out his partners' interest. Other claims owned by Adams

were located at various times between 1947 and 1954. The Pay Dirt locations were made on a vein apex which had been located earlier and allowed to lapse according to Mr. Adams. The locations filed in 1954 on Adams' claims were made on the advice of the applicant's attorney who apparently noticed a defect in earlier location procedures.

No conflicting claims were mentioned in the applicant's brochure. During the field examination, a discovery monument for the Margy Lee No. 1 claim, located on September 19, 1954, and recorded on October 16, 1954, by W. T. Bryant and R. D. Hickman, was found. This claim overlies Mr. Adams' Tom Boy No. 10 claim, and the Margy Lee No. 1 discovery monument is within a few feet of the Tom Boy discovery monument. The Margy Lee No. 1 claim antedates the November 1, 1954, filing on the Tom Boy No. 10 claim, the latter, however, was filed originally at a much earlier date, according to Mr. Adams. Mr. Adams stated that a number of Margy Lee claims overlie some of his Tom Boy claims but he has been advised that the former are not valid.

The applicant furnished a map showing the claims included in the proposed DMEA project, but not his other owned or leased claims in the same area, claims of different ownership on intervening or adjoining ground, or conflicting claims. There is a distinct possibility of the existence of other claims conflicting with the

applicant's in addition to the Margy Lee because there are a number of branching and intersecting vein outcrops in the area. Considerable checking in the field and courthouse records might be required to arrive at a conclusion about the validity of the applicant's claims.

The applicant furnished copies of an assignment from Francis M. Tompkins and Joe D. Farris to the Chesapeake and Colorado Corporation covering part of the claims included in the proposed DMEA project. A lease agreement from Tom Adams direct to the applicant on three other claims was also furnished. The original lease from Adams to Tompkins and Farris was not included. Lease terms are not specified in the documents furnished.

Because of the probable decision on the project, ownership was not investigated further, and the applicant was not requested to submit additional information.

PRESENT STATUS

Exploration and development

The veins on the applicant's claims have been explored to shallow depths by pits, shafts, and bulldozer cuts. Most of the work, other than the bulldozing and a few pits, was done prior to the applicant's or Tom Adams' connection with the property.

The workings visited by the examining team were opencuts and a crosscut tunnel on the Pay Dirt No. 6 claim, bulldozer cuts on the Cash Deal No. 6 and Cash Deal No. 11 claims and the 20-foot shaft on the Tom Boy No. 10 claim. The sites of the proposed DMEA work are on these claims. There are other exposures on the property including shafts 25 feet and 14 feet deep on the Pay Dirt No. 3 and Cash Deal No. 1 claims, but Mr. Adams stated that the exposures visited were typical.

There is an 83-foot crosscut tunnel on the Pay Dirt No. 6 claim, still accessible, which was driven prior to Mr. Adams' ownership of the claim. The apparent objective was a fluorspar vein which was opened up in a cut and was visited and sampled by the examining team. The tunnel was driven nearly parallel to the vein and did not cut it. The face is in unmineralized country rock (sandstone).

Mining equipment and other facilities

There is no equipment on the property. The applicant, however, owns mounted drilling equipment and excavation and underground mining equipment now located on a uranium property. Necessary equipment would be transferred to the fluorspar claims as required.

GEOLOGY AND ORE DEPOSITS

Fissure vein deposits in the Unaweep Canyon area have been known and prospected for over 50 years. Attempts to mine copper-bearing veins which outcrop in the area have been made on several occasions but have proven unsuccessful.

Both igneous and sedimentary rocks crop out in the area. The basal formation is a medium- to coarse-grained granite composed of microcline and plagioclase feldspar, quartz, muscovite, biotite, and various accessory minerals. The granite is Precambrian in age. It is cut by a number of small pegmatite dikes and by diabasic dikes, the latter reported to be as much as 200 feet thick.

Overlying the granite, and in depositional contact with it, is the Chinle formation of Triassic age. It consists of about 150 feet of red sandstone and shale with shale predominant in the lower part of the formation.

The Wingate formation, of Triassic age, conformably overlies the Chinle formation and consists of about 300 feet of tan to grey sandstones in beds ranging a few inches to several feet in thickness.

The granite forms the steep slopes of the lower part of Unaweep Canyon and the granite surface, from which the sedimentary rocks have been removed by erosion, forms a pronounced bench several hundred feet in width. The shales in the Chinle formation form

moderately steep slopes, somewhat covered by talus and slope wash, and the Wingate formation forms precipitous slopes at the top of the canyon walls. In the claim area, the Uncompahgre Plateau surface is Wingate sandstone.

The sedimentary rocks on the property are essentially horizontal although in the northeast part of the claim group the dip is 2° to 5° northeasterly. The sedimentary and igneous rocks are jointed and cut by a number of prominent shear zones. Faults with displacements of as much as 100 feet are reported in the area but were not observed during the examination.

The fluorite-bearing veins on the property occupy a number of northeasterly-striking shear zones in the Wingate sandstone; they probably extend through the Chinle formation and into the underlying granite. The average strike of the veins is about N. 50° E. although strikes range from almost due east to N. 25° E. (fig. 2). Dips are steep, ranging from 70° N. to 85° S.

In the exposures observed by the examining team the veins are similar in structure, texture, and mineral composition. They consist of a 4- to 7-foot wide, well silicified, brecciated zone containing calcite, fluorite, quartz, and traces of base metal sulfides. Silicified fragments of sandstone comprises at least 75 percent of the material included in the shear zones. Calcite is present as narrow

veinlets, small pods, and isolated crystals dispersed throughout the brecciated sandstone. Fluorite, in relatively minor amounts, occurs dispersed through the vein material in isolated crystals, narrow veinlets, small masses, and as thin coatings around sand grains and sandstone fragments.

Most of the fluorite is green and easily distinguished from the calcite although some of it is white and may be confused with calcite in hand samples.

Base metal sulfides are present in trace amounts as isolated grains associated with the fluorite.

The applicant justifies his proposed exploration program on an assumption that the fluorite content of the veins will be greater and that the amount of brecciated sandstone in the veins will decrease at greater depths. The inference in the application that the present shallow workings (10 to 25 feet below the ground surface) show improvement in grade of the vein material with increasing depth was not confirmed by the field examination. Vein outcrops covering a vertical interval of at least 400 feet were examined and the width, character, and mineral content of the vein outcrops appeared to be identical.

In B. S. Butler's 1/ description of the copper-bearing veins in Unaweep Canyon, some of which are in granite, he mentions, among

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1/ Butler, B. S., op. cit.

other gangue minerals, "a little fluorite." The copper-bearing veins are believed to be the lateral and downward extensions of the fluorite-bearing veins on the applicant's property, and thus it appears improbable that significant fluorite deposits will occur where the vein walls are granite.

SAMPLES AND ORE RESERVES

Five samples were taken by the examining team as follows:

Sample No. (MHS prefix)	Claim	Description	$\%CaF_2$	$\%CaCO_3$
7574	Pay Dirt No. 6	3.0 foot cut across vertical face on upper bench of open-cut on hillside; visible fluorite, calcite, and abundance of sandstone fragments.	5.3	42.1
7575	Pay Dirt No. 6	4.1 foot cut across vertical face below bench and 8 feet below sample MHS 7574. Character of vein matter similar.	5.8	37.5
7576	Cash Deal No. 6	6.6 foot cut across face of bulldozer cut on vein striking N. 53° E.	0.8	6.4
7577	Cash Deal No. 11	7.0 foot cut across stripped outcrop of vein striking N. 50° E. Full width of vein not exposed.	13.9	25.7
7578	Tom Boy No. 10	3.75 foot cut across vein in shaft 16 feet below surface.	15.8	11.4

Sample locations are shown on figure 2.

There are no known ore reserves on the property. Several thousand tons of material containing about 10 percent CaF_2 may be inferred from the many vein outcrops.

At the Fanny C mine 3 miles northwest of the applicant's property, a shaft has been sunk on a fluorspar vein, and the dump from this operation contains considerable fluorite. This is reported by the applicant's geologist as a stockpile of high grade fluorspar. There is an estimated 10 tons of material around the shaft collar which does contain fluorspar but is certainly not marketable in its present state. The fluorspar shipments reported by the applicant's geologist supposedly came from this property, but there is no authentic evidence of such shipments.

PROPOSED EXPLORATION

The applicant has proposed a program of underground exploration consisting of the following:

	Cross-cuts feet	Drifts feet	Shaft feet
Shaft on vein, Tom Boy No. 10 claim			200
Drifts on vein, from Tom Boy shaft		200	
Shaft on vein, Tompkins & Farris No. 15 claim			200
Drifts on vein, from Tompkins & Farris shaft		200	
Adit tunnel on vein, Pay Dirt No. 6 claim		200	
Adit tunnel on vein, Cash Deal No. 6 & 7 claims		400	
Crosscut adit tunnel on Cash Deal No. 20 claim	500		
Drift on vein, from Cash Deal crosscut		200	
Totals	500	1,200	400

Completion of the work outlined above would constitute a rather complete development program for a small operation. The applicant's estimated cost for the work is $133,140. Government participation at 50 percent would be $66,570.

Assuming that underground exploration is necessary in order to determine if the fluorspar content of the veins increases with depth, completion of one of the several items of work proposed should suffice because all of the veins are similar in character.

It is the opinion of the examining team that diamond drilling would be just as effective as underground work and certainly less expensive. It is believed that the applicant did not make an adequate trial of drilling in the previous attempt. Angle drill holes to crosscut veins at depth have been used successfully elsewhere on the Colorado Plateau and, with proper techniques and equipment, they should be just as effective on this property.

Because of the recommendations to be made on the proposed project, modification of the applicant's program was not discussed with him and no alternate program is suggested.

CONCLUSIONS AND RECOMMENDATIONS

The outcrop exposures of fluorspar veins on the applicant's claims cover a considerable area and a vertical range of 400 feet. They are believed to be ample to show the character of the veins and further exploration is not required for this purpose. In the judgement of the examining team the occurrences do not constitute significant deposits. The fluorite content of the veins is not high enough to make a shipping product as mined. A product concentrated by sink-float and/or flotation processes at a reasonable cost probably would not meet specifications for ceramic or acid grade fluorspar, although a metallurgical grade might be produced. Investigation of the metallurgical problems involved would be required. The fluorite is intimately associated with calcite and silicified sandstone fragments; fine grinding might be required to unlock the fluorite. Concentration costs would be high if fine grinding is required. In view of the observed tenor of ore, further exploration of these deposits with Government assistance does not appear justified.

Denial of the application under Docket DMEA 4481 is recommended.

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

DOCKET COPY
Surname: Anderson, Houk, Selfridge

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

Re: Docket No. DMEA-4481-fluorspar
Chesapeake and Colorado Corporation
Cash Deal, et al. claims
Mesa County, Colorado

Dear Mr. Traver:

Please review the subject application and arrange for a field examination if you deem it necessary.

Copies of memoranda dated October 5 and 10, 1956, by Mr. W. P. Williams, USGS, and Mr. R. B. McDougal, USBM, respectively, relating to the project are enclosed. We are also enclosing a copy of the application which was returned by the Commodity Division of the United States Bureau of Mines.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

Approved:

Frank D. Lamb (GCS)
Member, Bureau of Mines

Thor H. Kiilsgaard (GCS)
Member, Geological Survey

Enclosures: 4

WCAnderson:ms 10/10/56
copy to: Docket
Operating Committee
Mr. Kiilsgaard, 5222
Mr. McDougal, 3522
Mr. Houk
Admr. R. File

R.S.B.

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

DOCKET COPY
Surname:
Anderson Houk
Lamb
Kilsgaard
Selfridge

OCT 2 1956

Chesapeake and Colorado Corporation
133 South Fourth Street
P. O. Box 1298
Grand Junction, Colorado

Re: Docket No. DMEA-4481-fluorspar
Chesapeake and Colorado Corporation
Cash Beal, et al. claims
Mesa County, Colorado

Gentlemen:

Your application for assistance in exploring the subject property has been reviewed by the Nonmetallic Minerals Division of the Defense Minerals Exploration Administration and has been referred to Mr. W. M. Traver, Executive Officer, DMEA Field Team, Region III, U. S. Bureau of Mines, 224 New Customhouse Building, Denver, 2, Colorado, for further consideration and possibly a field examination.

The Regional Office will contact you at an early date if an examination is to be made. Any assistance you may give the members of the Field Team during the examination will be appreciated.

Sincerely yours,

C. O. Mittendorf
(by cof)
Administrator

WCAnderson:ms 10/10/56
Copy to: Docket
Operating Committee
Mr. Kiilsgaard, 5222
Mr. McDougal, 3522
Mr. Houk
Admr. R. File
Field Team, Region III

R.C.K.

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

RECEIVED
OCT 11 1956

Date October 10, 1956

DMEA Docket No. 4481
DMEA Contract No.
Commodity Fluorspar
Name of applicant Chesapeake & Colorado Corp.
Name of property Cash Deal, Tom Boy and others
Location of property Mesa County, Colorado
Estimated cost of project $133,140

Memorandum

To: Lawrence G. Houk, Chief, Non-Metallic Minerals Division, Defense Minerals Exploration Administration

From: Robert B. McDougal, Commodity Specialist, Branch of Construction and Chemical Materials

Subject: Review of Application
(Application, Field Team Report, etc.)

1. Date of subject document: 9/28/56. 2. Date received by reviewer: 10/1/56.

3. Prior reports on this property known to reviewer: Yes [ ], No [x].

4. Prior reports on nearby properties known to reviewer: Yes [ ], No [x].

5. Information available on past production: Yes [ ], No [x].

6. Other pertinent factors known to reviewer: Yes [ ], No [x].

7. Explain items marked yes above:

8. Factors needing special consideration:
   a. Location [ ]
   b. Ownership [ ]
   c. Evidence of mineralization [ ]
   d. Geology [ ]
   e. Proposed exploration method [ ]
   f. Alternate exploration method [x]
   g. Costs [ ]
   h. _____ [ ]

9. Action advised:
   a. Obtain information from applicant [ ]
   b. Refer to Field Team [x]
   c. Denial [ ]
   d. Agree with Field Team [ ]
   e. Disagree with Field Team [ ]
   f. Suggest alternate plan [ ]
   g. Request another examination [ ]
   h. Approval [ ]
   i. Consult with Mr. _____ at _____ AEC office.

10. Remarks: (Use back of page if necessary) When no longer needed by the Field Team, return of the attached application would be appreciated.

Robert B. McDougal

Attachment

Lemon - 4481

Amount Requested

Peg Leg 6 - 200 foot shaft

Cash Deal 667 - 400 foot shaft

Cash Deal 20 - 500 feet X-cut

200 feet shaft

Iron Boy 16 - 200 foot shaft

200 feet drifts

Iron Lion & Jewel 15 - 200 foot shaft

200 feet drifts

Total	400 feet of shaft -	@ $68	$27,200.00 *
	500 feet of X-cut	@ $16/ft -	$27,200.00 *
	1200 feet of drifts		* Labor & supervision
	Drifting - Material costs	@ $6.66/ft	11,322.00
	Shaft - " "	@ 13.32/ft.	5,328.00
	Drift & X-cut installation	@ 5.37/ft	9,129.00
	Shaft installation	@ 21.37/ft	8,548.00
	Misc. @ 20% - Drifts	@ 6.30	11,050.00
	" " " Shaft	@ $23.58/ft	9,432.00
	Contingency @ 10% Drifts	@ 3.25	5,525.00
	" " Shaft	@ 11.79	4,716.00
	Totals - 1700 ft. drifts & X-cut -	@ $37.77/ft.	64,226.00
	400 ft. shaft	@ $138.06/ft.	55,224.00
	Plus for Operating equipment		13,690.00
		Total —	$133,140.00

IN REPLY REFER TO:

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

RECEIVED
OCT - 8 1956

October 5, 1956

Memorandum

To: L. G. Houk, Defense Minerals Exploration Administration

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

Subject: Review of application, DMEA 4481, Chesapeake & Colorado Corporation, Cash Deal, et al. claims, Unaweep Canyon, Mesa County, Colorado, (fluorspar).

The applicant proposes to explore for fluorspar deposits on 66 unpatented mining claims located on the northeast edge of the Colorado Plateau.

The proposed project would consist of 1,700 feet of drifting and crosscutting, and 400 feet of shaft sinking. Total cost of the project is estimated by the applicant at $133,140.

Fluorite is known on the property in fissure veins, associated with calcite and quartz. The veins are found in the Wingate sandstone of Triassic age. No ore has been produced from the property, and from all available information little ore has been mined in the whole district.

This deposit is of considerable interest and may warrant further exploration, although it seems doubtful that the applicant's extensive, ambitious, and expensive proposed project could be justified. The deposits have been looked at by many individuals, some of them, like U. S. Steel, undoubtedly competent in judging fluorspar deposits. Shallow shafts, prospect pits, adits, and drill holes on the property have failed to lead to commercial exploitation.

On the other hand, past exploration efforts may be described as superficial, and many questions remain unanswered. The applicant says that associated calcite in the veins becomes less with depth and that, therefore, the fluorspar will become better with depth. This is the converse of other fluorspar-calcite deposits where calcite has been leached, causing the fluorspar to be richest at surface. If it is assumed that the fluorspar veins pass upward through Precambrian granite and thence through Triassic Chinle and Wingate sediments there would seem to be a good chance for ore deposits at the contact between the granite and the relatively impervious Chinle shales.

The best evaluation of the property will be arrived at through field examination. In the field a good appraisal could very likely be made of the strength and continuity of the mineralized shear zones. The applicant cites several samples and assays from the property but no detailed description of the samples and how they were taken is given. It might be well for the examining team to take some check samples from the claims.

It appears that the feasibility of diamond drilling on the property should be investigated in spite of the applicant's objections. A primary stage consisting of a few core holes might afford enough information about the veins at depth to render unnecessary costly underground drifting and shaft sinking.

W. P. Williams

W. P. Williams

BUREAU OF MINES
WASHINGTON, D. C.

OCT 5 3 46 PM '56

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration
Washington 25, D. C.

September 28, 1956

Chesapeake & Colorado Corp.
133 S. 4th St.
P. O. Box 1398
Grand Junction, Colorado

Subject: DMEA-4481
Re: Exploration Assistance

Gentlemen

Your application for exploration assistance, dated August 20, 1956 submitted to our office at Denver, has been assigned Docket Number DMEA-4481 and referred to the Nonmetallic Minerals Division in the Washington office. Kindly identify all future correspondence relating to your application by this Docket Number.

Sincerely yours,

Allen S. Dakan, Chief
Operations Control and
Statistics Division

Copy to:

Region III. Denver 2, Colorado

Code 600

3571

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

RECEIVED
SEP 28 1956

224 New Customhouse
Denver 2, Colorado

September 27, 1956

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region III

Subject: Application for DMEA Aid (Fluorspar) The Chesapeake & Colorado Corporation (Cash Deal, Pay Dirt, Tom Boy, and Tompkins group of claims) Mesa County, Colorado

Enclosed are three copies of the subject application in the amount of $133,140. One copy of the application is being retained in our files.

W. M. Traver

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

RECEIVED
SEP 27 1956

224 New Customhouse
Denver 2, Colorado

September 25, 1956

Mr. Lytle Brown, Manager
Chesapeake & Colorado Corporation
Box 1298
Grand Junction, Colorado

Re: Application for DMEA Aid (Fluorspar)
(66 Mining Claims in the Unaweep
Mining District) Mesa County, Colorado

Dear Mr. Brown:

Enclosed are 4 copies of the DMEA application form, MF-103. Will you please date and sign the certification on the back of each form and return all copies to this office so that we may continue to process this application.

Yours very truly,

W. M. TRAVER

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

Enclosures

HMC:ytl

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

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

DMEA
DEPARTMENT OF THE INTERIOR
SEP 27 1956
REGION III
DENVER, COLORADO

RECEIVED
SEP 28 1956

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. 4481
Metal or Mineral Fluorspar
Date Received 9-28-56
Estimated Cost $133,190
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: Chesapeake & Colorado Corporation
133 South Fourth Street
P.O. Box 1298
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.

(*c*) If a corporation, add to above statement, titles, names and addresses of officers.

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

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

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract

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

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

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

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

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice.

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.

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

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

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

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

16—66551-1

See attached booklet for answers to the above and following questions.

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

(*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.

(*c*) The work will start within ..... days and be completed within ..... 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.

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.).

(*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.

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

(*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.

(*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.

(*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.

(*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.

(*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)?

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

☐ 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 20, 1956

Chesapeake & Colorado Corporation
(Applicant)

By [illegible signature]

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

DMEA
DEPARTMENT OF THE INTERIOR
SEP 25 1956
REGION III
DENVER, COLORADO

RECEIVED
SEP 28 1956

1. Name of Applicant

a. State here your full legal name, in the form in which you wish to contract, and your mailing address:

Chesapeake & Colorado Corporation
133 South Fourth St., P. O. Box 1258
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:

A Delaware Corporation

c. If a corporation, add to the above statement, titles, names and addresses of officers:

President	F. M. Tompkins 909 Sixteenth St., N.W. Washington 6, D. C.
Vice President	Joe D. Furris 133 South Fourth St. Grand Junction, Colorado
Secretary	Gillis Long 1134 Hyatt Building Washington 5, D.C.
Treasurer	Howard Ritter 909 Sixteenth St., N.W. Washington 6, D. C.

2. General.

3. Applicants 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.

RECEIVED
SEP 2 8 1956

APPENDIX A

RECEIVED
SEP 28 1966

The property consists of 66 unpatented lode mining claims in sections 20, 26, 27, 28, 29, 33, 34, 35, 32, 31, T. 14 S., R. 100 W; in section 36, T. 14 S., R. 101 W; in sections 1, T. 15 S., R. 101W.; and in sections 3, 4, 5, 6, T. 15 S., R. 100 W.; New Mexico Principal Meridian, Unaweep mining district, Mesa County, Colorado. (See index map - Plate 1 and claim map - Plate 3 in folder). The 66 claims included in the proposed exploration project are the following:

17 Cash Deal Claims
8 Pay Dirt Claims
2 Cash Deal Extension Claims
11 Tom Boy Claims
2 Tom Boy Extension Claims
26 Tempkins & Ferris Claims
2 Tempkins and Ferris Extension Claims
66 Claims Total

b. State any mine name by which the property is known.

None

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

Group I.

The 30 claims in this group are recorded under the name of Tom Adams and are leased to Chesapeake & Colorado Corporation:

1.	Cash Deal Nos. 1 through 7 inclusive	7
2.	Cash Deal Nos. 9 through 13 inclusive	5
3.	Cash Deal Nos. 16 through 20 inclusive	5
4.	Cash Deal Extension Nos. 4 and 5	2
5.	Tom Boy Nos. 1 through 11 inclusive	11
	Total	30

Group II.

The 36 claims in this group are recorded under the name of Tempkins-Ferris Mining Company but are now owned by Chesapeake & Colorado Corporation.

1.	Pay Dirt 1 through 8 inclusive	8
2.	Tomphins & Ferris 1 through 15 inclusive	15
3.	Tomphins & Ferris 17 through 24 inclusive	8
4.	Tomphins & Ferris Extension Nos. 13 through 14 inclusive	2
5.	Tom Boy Extension Nos. 2 and 6	2
	Total	35

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 Appendix A.

e. If you own the land, describe any liens or encumbrances on it.

No liens or encumbrances on any of property.

f. If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice.

The property consists of unpatented mining claims. The following documents are on record in the recorder's office at the Mesa County Court House, Grand Junction, Colorado

Name of Claim	Locator	Recording Date	Book	Page
Cash Deal 1 to 7	Tom Adams	Nov. 1, '54	[illegible]	[illegible] to [illegible]
Cash Deal 9 to 18	Tom Adams	Nov. 1, '54	[illegible]	[illegible] to [illegible]
Cash Deal 16 to 30	Tom Adams	Nov. 1, '54	[illegible]	[illegible] to [illegible]
Cash Deal Ext.4,6,8	Tom Adams	Nov. 1, '54	[illegible]	[illegible] to [illegible]
Pay Dirt 1 to 8	Tomphins-Ferris	Nov. 1, '54	[illegible]	[illegible] to [illegible]
T.F. 1 to 15	Tomphins-Ferris	Oct.20, '54	[illegible]	137 to 151
T.F. 17 to 24	Tomphins-Ferris	Oct.20, '54	[illegible]	152 to 160
T.F.Ext. 13 to 14	Tomphins-Ferris	Oct.20, '54	[illegible]	152 to 153
Tom Boy 1 to 11	Tom Adams	Nov. 1, '54	[illegible]	[illegible] to 250
Tom Boy Ext. 2 ~~6~~	Tomphins-Ferris	MAY 9, '55	643	129
TAMBOY EXT. 6	CHES. & COLO. CORP.	SEPT. 24, '56	~~[illegible]~~	

4. Physical Description

a. Describe in detail any mining or exploration operations which have been or are now 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.

1. The veins have been mapped on the surface by company geologists. These traces and outcrops are shown on Plate 2.

2. Numerous open cuts, some shallow shafts, and a short cross-cut have been made on the property. These are shown on Plate 2 in the folder.

3. Drilling was attempted on some of the claims, but the results of this drilling were inconclusive as to ore possibilities and such as to discourage further attempts to explore the claims by a drilling program. The approximate locations of these attempted drill holes are shown on Plate 2 and this program is more fully described as follows:

   (a) Diamond Drilling. The first planned exploration program was to drill holes at intervals of 2000 feet on the veins at angles of 45° and 60°. The second stage was planned to drill holes at shorter intervals. Drilling was started on claim Cash Deal 11 near a surface cut which showed a considerable amount of fluorite mixed with calcite. The hole was angled at 45° to cut the vein at a depth of 65 feet. However, due to the fractured, blocky nature of the hard sandstone country rock, this hole had to be abandoned at 38 feet. The drill pipe became stuck and attempts to recover the bit and core barrel in order to continue drilling were unsuccessful. No further diamond drilling was attempted because of the probable expense and the doubtful results that could be expected.

   (b) Rotary Drilling: Efforts were made to drill several vertical dry holes on the veins. On claim Tompkins and Ferris

Extension 12 a vertical hole was drilled on the outcrop of the vein and the bottom of the vein was reached at 34 feet. As the vein was cut only near the surface, the samples showed mostly calcite. In order to explore this vein at depth another vertical hole was started so as to cut the vein at about 150 feet. This hole had to be abandoned due to the broken up and blocky nature of the country rock. On Tom Bay 10 one drill hole cut the vein at 80 feet showing a fluorite to calcite ratio of 1 : 2. Another hole intended to cut the same vein at depth had to be abandoned. Since no useful information was gained from this drilling, the drilling program was stopped.

4. In addition to the work described above, camp facilities are established and numerous minor access roads have been constructed. The locations of some of these access roads are shown on Plate 2.

5. Most of the openings on the veins were made by prior operators. The mapping and drilling programs were carried out by Chesapeake & Colorado Corporation personnel under the supervision of Mr. Joe D. Farris, Vice President and Mr. Lyle Brown, Chief Engineer of the company.

6. The property is readily accessible throughout the year although heavy snow make travel difficult for short periods during the winter. The veins are readily traceable throughout most of their lengths, and surface exposures are, for the most part, completely satisfactory for geological work.

b. State past and current production, and ore reserves, if any, giving quantities and grades.

There has been no production, past or current, from the property. All

Work has been of exploratory nature, and little actual ore has been mined. There is no nearby market for small shipments of fluorspar and none has been sold. Extensive sampling has been done on the surface and in all available openings; the results of some of this sampling are listed here:

Place	% CaF_2	% SiO_2	% $CaCO_3$
Cash Deal #2	30.22	45.30	24.00
Cash Deal #7	19.34	24.24	54.24
Cash Deal #4	54.20	39.36	3.36
Cash Deal #9	20.02	10.02	60.00
Cash Deal #3	34.22	61.62	2.00
Cash Deal #2	35.50	15.40	47.50
Cash Deal #11	64.52	25.00	6.48
Tom Bay #3	14.24	32.32	50.70
Tom Bay #4	30.00	19.20	50.12
Tom Bay #8	14.72	15.76	69.44
Tom Bay #7	11.76	13.52	73.64
Tom Bay #10	62.20	20.00	18.44
Tom Bay #5	30.22	40.36	22.02
Tompkins & Farris #4	36.82	17.22	45.16
Tompkins & Farris #8	22.22	22.00	55.56
Tompkins & Farris #12	11.44	28.20	60.40
Tompkins & Farris #22	36.72	41.04	22.42
Pay Dirt #2	60.26	24.24	4.42
Pay Dirt #1	67.40	5.40	25.16
Pay Dirt #6	44.10	22.30	32.60
Tom Bay Extension #2	15.20	8.12	72.72

The existence of ore at depth has been inferred because in all of the openings examined on the property, the fluorspar content of the veins increased with depth. It is assumed that the fluorite to calcite ratio will continue to increase as additional depth is explored. Of course, no ore reserves can be calculated at this time.

e. 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 technological information

you may have, indicating on each whether you require its return to you.

See Appendix "B".

Igneous Rocks - Pre-Cambrian granite is exposed over the lower part of the Hassayampa Canyon to the Northeast of this area. It forms the steep walls of the canyon.

Sedimentary Rocks

Triassic: The Chinle formation is about 0 to 100 feet thick in this area. It rests on top of the granite and forms slopes, and is composed of red shale and sandstone. It is exposed over a very small part of the property in the Beam Gulch.

Jurassic: The Wingate formation is about 800 feet thick and forms cliffs on top of the Chinle. It outcrops over most of the property and is composed of massive, medium-grained, red sandstones, highly silicified and quartzitic near the veins.

Structure - The beds dip slightly and the direction of dip varies locally with a general regional dip towards the northeast. The veins have a general strike of N. 50° E. with a steep dip near the surface. The veins occur in the shear zones.

No major faults were observed in the area. However, some minor faults do occur. In Beam Gulch, at the contact of the Wingate and the Chinle, a fault occurs with a displacement of about 100 feet. A vein occurs along the fault plane.

Ore Controls - The major structure control of the veins appears to be the shear zones which trend approximately N. 50° E., with a steeply

dipping or nearly vertical attitude near the surface.

No stratigraphic control has been found. Whether the veins extend into the underlying Pre-Cambrian granite is not known.

Description of Deposits - Calcite and fluorite are the principal minerals occurring in the fissure veins. Quartz also occurs commonly, and traces of galena occur in the calcite in some part of the veins.

The fluorspar is commonly green but some white and yellow varieties also occur. Excellent green cubes are common in the veins.

Calcite is abundant in the veins and occurs as white coarsely crystalline rhombs. Galena occurs as small dark gray colored cubes disbursed through the calcite. The average width of the veins is about 4 feet. A zone of brecciated material occurs a few feet on either side of the veins. Some sandstone and quartzite fragments broken up from the wall rock occur in the veins. A typical vein near the surface is composed of thin stringers of fluorite with calcite on each side and sandstone fragments imbedded in it.

It has not been possible yet to study the veins at depths; however, from some of the cuts and shafts on veins, it appears that the proportion of fluorite grows higher and calcite becomes less abundant at depth.

4. State the facts with respect to the accessibility of the project. Access roads, distances to shipping, supply and residence points.

The property lies within 30 miles of Grand Junction, Colorado. It is reached by travelling 10 miles west on U. S. Highway 50 to Whitewater, then by travelling on State Highway 141 a distance of 14 miles to the end of the black top, and then by taking the forest service

road the remaining distance. The nearest railroad shipping point would be at Whitewater, a distance of about 80 miles from the property. Main supply and residence point in the area is Grand Junction, Colorado.

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

Manpower, materials, supplies, and equipment are available either on the property or can be procured in Grand Junction.

Water is available on or near the property from natural springs.

No electric power is present on the property but R.E.A. power lines run through Dominguez Canyon from Whitewater to Gateway, Colorado. This power would be within one mile of the property.

3. The Exploration Project

a. State the mineral or minerals for which you wish to explore.

Fluorspar

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.

The objectives of the applicant in exploring the property are:

1. To determine the extent and grade of fluorspar mineralization at a minimum depth beneath the outcrops.
2. To determine the possibilities of discovering sufficient ore reserves to justify and extensive mine-development and mill building program.
3. To obtain, at depth, samples of vein material with which to run extensive milling tests.
4. To determine the structural relationships which possibly control

the deposition of the fluorspar mineralization and to use this information in further exploration and mine planning.

To accomplish these objectives the applicant proposes to drive two exploratory drifts and one cross-cut with subsequent drifting and to sink two exploratory shafts with subsequent drifting. The locations for these openings are shown on Plate 2. In addition, a cross-section has been prepared for each location. The following are the locations, directions, length, elevations, and amount of bank to be explored by these openings.

1. Exploratory Drifts:

   a. A drift to be driven on Pay Dirt No. 6 claim for a distance of 200 feet. This portal location is immediately adjacent to the forest service road at an elevation of 645'. The drift will be driven in a southwesterly direction and will provide 220 feet of bank. See Plate 3.

   b. A drift is to be driven on Cash Deal Nos. 6 and 7 claims for a distance of 400 feet. This portal location is near the bottom of Bear Gulch and readily accessible by private road at an elevation of 665'. The drift will be driven in a northeasterly direction and will provide 205 feet of bank. See Plate 3.

2. Cross-cut:

   The cross-cut is to be driven on Cash Deal No. 20 claim for a distance of 500 feet to intersect the vein at a depth of 300 feet. The bearing of this cross-cut is due south. After the vein is reached, drifts will be driven along the vein

for a distance of 100 feet in each direction. Some road building will be necessary to reach the portal location from the Hassayampa Canyon road. See Plate 2.

3. Exploratory Shafts:

a. A shaft is to be sunk on the Tom Bay No. 10 claim to a depth of 200 feet from a collar elevation of 1000'. After the shaft is bottomed at 200 feet, drifts will be driven for a distance of 100 feet in each direction along the vein. See Plate 2.

b. A shaft is to be sunk on Tompkins & Farris No. 15 claim to a depth of 200 feet from a collar elevation of 1040'. After the shaft is bottomed at 200 feet, drifts will be driven for a distance of 100 feet in each direction along the vein. See Plate 2.

All drifts and the cross-cut will be driven with a 8 by 7-foot cross-section to allow for tracked mechanical loading. All shafts will be of timbered two-compartment design with compartment dimensions of 4 by 4 feet inside of timber. Rock cross-section will be approximately 6 x 11 feet.

From above it may be seen that approximately 1700 feet of drifting and cross-cutting and 400 feet of shaft sinking will be necessary to explore these most favorable locations on the vein structures. This exploration has been laid out to give a minimum 200 feet of back in any location. It is felt that this is a minimum minable depth and also that within 200 feet of the surface the veins should exhibit their true character at depth.

These exploratory openings have been planned in the most favorable and most easily accessible locations. No exploration is planned

except where surface exposures indicate the presence of fluorspar mineralization in the structures. All work will be under the supervision of an experienced mining engineer assisted by the company geologists. All openings will be regularly sampled on close centers and assay data will be carefully preserved and utilized to outline any possible ore bodies. In this way sufficient data should be obtained to enable the company to lay out a logical and workable mine-development program, if the results of the exploration work are favorable.

b. The work will start within 30 days and be completed 12 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 Appendix C.

1. General Manager - Lytle Brown. Mr. Brown attended Phillips Exeter Academy (Preparatory School), Exeter, New Hampshire, and Vanderbilt University, Nashville, Tennessee. From 1930 to 1940 he was engaged in the building of flood control projects on the Ohio and Mississippi Rivers, as well as Construction Superintendent of Construction of air fields in Alabama, Louisiana and Tennessee and water and sewer installations at Camp Campbell, Kentucky, also Assistant Project Manager of the Huntsville Ordnance project. In 1942-1943 he was Manager of three strip coal mining operations in Kentucky, as well as prospecting and analyzing ventures for the production of phosphate, manganese and iron. He served with the United States Navy from 1944-1945. Since 1946 he has been engaged as Construction Superintendent of mechanical installations,

building construction and rock excavation for the prime contractor on the Arnold Engineering Development Center, Tullahoma, Tennessee. His experience covers approximately twenty-four years in all types of heavy construction equipment and its applications.

2. Consulting Mining Engineer - Robert N. Hurst is a Registered Professional Engineer of the State of Colorado. Mr. Hurst is a graduate of the Colorado School of Mines with the degree of Engineer of Mines and has 7 years varied mining experience in base metals and uranium. This experience includes work in mine examination, mine exploration, mine development, mine production, and general mine engineering. Mr. Hurst is presently the President and General Manager of Tech-Ser Mining Company engaged in mining lead-zinc ores near Silverton, Colorado.

4. 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:

See Appendix D for calculations.

a. Independent contracts.

None

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

Drifting (and cross-cut) costs:

Labor	$12.00 per foot	
Supervision	2.00 per foot	
Engineering	2.00 per foot	
Total	$16.00 per foot x 1700 feet - - -	$ 27,200.00

Sinking costs:

Labor	$60.00 per foot	
Supervision	4.00 per foot	
Engineering	4.00 per foot	
Total	68.00 per foot x 400 feet	$ 27,200.00

Total labor, supervision, consultants costs . . . . . $ 54,400.00

e. Operating materials and supplies. Furnish an itemized list, including items of equipment costing less than $50.00 each, and power, water and fuel.

Drifting (and cross-cut) costs:

Powder, caps and fuse	$2.06 per foot	
Steel and bits	2.84 per foot	
Fuel	0.86 per foot	
Total	$5.66 per foot x 1700 feet =	$ 11,323.00

Sinking Costs:

Powder, caps and fuse	$5.92 per foot	
Steel and bits	5.68 per foot	
Fuel	1.72 per foot	
Total	$13.32 per foot x 400 feet =	$ 5,328.00

Total Operating Materials and Supplies $ 16,650.00

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.

Drifting (and cross-cut) costs:	$4.47/ft x 1700 ft =	7,599.00
Sinking Costs	15.21/ft x 400 ft =	6,084.00
Total Operating Equipment		$ 13,683.00

e. Rehabilitation and Repairs

None

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 base-

fit of the exploration project.

Drift (and cross-cut) installations:

Portal preparation & construction	0.35/ft.
Track	3.30/ft.
Pipe	0.72/ft.
Vent-tube	1.00/ft.
	5.37/ft x 1700 ft = $ 9,129.00

Shaft Installations:

Head frame	7.50/ft.
Hoist House	3.75/ft.
Timber	8.40/ft.
Pipe	0.72/ft.
Vent-tube	1.00/ft.
	$ 21.37/ft. x 400 ft = $ 8,548.00

Total Installations $17,677.00

g. Miscellaneous - Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of Operator's equipment), analytical work, accounting, Workmens Compensation and Employer's Liability insurance, and payroll taxes.

The applicant requests that 20% of the footage price be allowed for miscellaneous costs. This figure is based on experience the applicant has had in construction business.

Drifting Costs: $32.50 x 20% = $6.50/ft x 1700 ft. =	$11,050.00
Sinking Costs: $117.90 x 20% = 23.58/ft x 400 ft =	9,432.00
Total Miscellaneous	$20,482.00

h. Contingencies - Give an estimate of any necessary allowances for contingencies not included in the costs stated above.

The applicant requests that an allowance be made to cover contingencies arising during the course of the exploration project such as excessive timber requirements or unforseen water problems. Ten per cent (10%) of the costs set forth should cover any excess of those computed under the proposed proposal, or $10,245.00.

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Recapitulation of Costs:

The total contemplated expenditure for the completion of the program by the applicant is:

Drifting costs (6b, 6e, 6f)	$26.88 x 1790 ft	$ 47,651.00
Sinking Costs (6b, 6c, 6f)	102.69 x 400 ft	41,076.00
Operating Equipment (6d)		13,689.00
Total		$102,416.00
Miscellaneous (6g) 20%		20,482.00
Contingencies (6n) 10%		10,242.00
Total Project Costs		$133,140.00

7. a. Are you prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation? Yes.

b. How do you propose to furnish your share of the costs?

Equipment valued at	$ 13,689.40
Cash in the amount of	52,881.60
Total Contribution	$ 66,570.00

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 September 18, 1956.

CHESAPEAKE & COLORADO CORPORATION
Applicant

By Frances M. Pumpelly

Attest:

Hallie W. Perry
Secretary

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APPENDIX B

A

REPORT OF EXAMINATION
FLUORSPAR PROPERTY
CHESAPEAKE & COLORADO URANIUM CORPORATION

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JUNE 12TH TO 30TH 1955.

by: John R. Brown, Moxie, Kentucky

In accordance with instructions received by telephone from Mr. R.R. Lotill, and also written instruction from Mr. Francis M. Tompkins in his letter of May 31, 1955, the writer made an examination of the fluorspar property of the Chesapeake & Colorado Uranium Corporation, located in the Ewreep Mining District, Mesa County, Colorado. Mr. J.B. Farris, in charge of operations for the corporation in the District was a great help. Furnishing all the maps available, transportation in the field, and the invaluable assistance of Mr. Tom Adams and Mr. Lee Hammonds, when he assigned to assist us in the field. During the initial conference with Mr. Farris the impression was received, that the main object of this examination was to lay out a practical program of exploration and development of this property, rather than to make a geological report. With this in mind, the report and recommendations are based along those lines and the geological features have been ignored, except where they enter the practical picture.

The examination was somewhat handicaped for two reasons: 1st, the lack of an accurate survey from which the veins could be located, thus making the actual location of veins and claims on the property map used questionable. (Note: This inaccuracy does not affect the claims as located. All claims examined were legally located with regard to the veins they covered. However for mapping and report purposes compass bearings had to be used). 2nd, because the vein or veins had been opened in so few places, proper sampling was impossible.

During the time spent in the field, the entire vein structure was covered, on foot, and by jeep. In most places the outcrop could be followed very easily because the overburden is thin; in fact for hundreds of yards at a stretch, there is no overburden and the outcropping vein and wall rock is plainly visable. We visited all open cuts and shafts on the veins and samples were taken wherever feasable. We took individual samples from six openings, and also a composite sample made up of vein matter from these six openings for a sink-float test to determine the proper benefiation method necessary, should future exploration and development justify the building of a mill.

It is the writers opinion that there are two, and possibly three separate veins in the system covered by these claims. These veins seem to have a parallel strike of North 50 degrees East, (compass), and the dip seems to vary between 51 degrees and 60 degrees to the Southeast. In the only shaft of depth examined, the vein dipped at about 51 degrees to a depth of 25 feet, then flattened to 58 degrees from that point as far as the lights would permit vision.

Note: (This examination was made in the Fanny C Shaft, not on Corporation property, but certainly a continuation of the vein covered by the Pay Dirt Claims, No. 1-2-3-4 etc.). While on the Fanny C property evidence was observed that a considerable quantity of high-grade green fluorspar had been mined, both from the shaft and from an open cut. The vein where observed, was four feet wide, made up of green colored fluorspar and a small amount of calcite. At a depth of about 20 feet it was noted, that the sandstone particles which were found in the spar closer to the surface, had disappeared. A stockpile of several tons, mined from the open trench was at hand on this property. No sample was taken.

At, and near the surface, the veins on Corporation property seem to consist of calcite between two red sandstone walls. In some places the sandstone had turned to quartzite. Particles of sandstone and quartzite are found disbursed through the vein matter. However, in the few open cuts and shallow shafts it was observed, that within a few feet of depth gained, the calcite was replaced by fluorspar and the particles of sandstone and quartzite were not present. Also in places, where at the surface the vein matter is scattered and banded with calcite, spar and sandstone, it was noted that as depth was gained, the vein was found to "come together" between two true walls and the bands of sandstone were not present.

It is the writer's opinion that the property as a whole has possibilities of becoming a large fluorspar producer. All of the necessary indications are present and observable. However, due to the vast extent of this property it was decided to concentrate the study on the more favorable portions and to confine the report and recommendations to these particular points. These will be taken up in the order, in the writer's opinion, of their importance.

(1) Cash Deal Extention No. 18 Claim: Open cuts on both the East and West end of this claim enabled us to make observations and take samples. Sample No. 2 in the attached sample sheet, was cut from the East end of this claim. Sample No. 3 was cut from the West end of the claim. The vein at these points is about 5 feet wide, and as noted above was almost entirely calcite on the surface but turning to fluorspar in the bottom of the open cuts. This claim is located along the North side of Bean Gulch, thus being in a position to enable a short cross-cutdriven to the vein from the bottom of Bean Gulch to gain between 600 feet and 700 feet of cover for mining purposes should exploration drill holes disclose a commercial body of ore.

(2) Pay Dirt No. 2 and 3 Claims: The vein on these claims gives evidence of being strong, with a good possibility of opening in width at a greater depth. On Pay Dirt No. 3 Claim, a shaft was sunk about 30 feet in depth, however, a bearing

taken on this vein, at this point, (No 30 degrees E), would suggest that this shaft was sunk on a "stringer" or cross-vein. Two or three diamond drill holes would probably clarify this point.

(3) Tom Boy No. 10 Claim: Here a shaft 16 feet in depth was sunk on a vein about six feet wide. As in all other openings the vein is badly mixed near the surface and forming between true walls as depth is gained. Sample No. 6. was taken from the vein in this shaft.

(4) Cash Deal No. 1 Claim: A shaft 14 feet in depth had been sunk on this claim. This vein has a very "live" look and Sample No. 4 was taken from the dump of this shaft. (It was impossible to cut sample in the shaft). The hillside at this point drops off very fast and the diamond drill could cut the vein at a good depth with short holes.

(5) Pay Dirt No. 6 Claim: An open cut with a shaft, (full of debris), was found on this claim. This cut is near the bottom of the gulch and offers a good opportunity to drift on this vein. A drift at this point would prospect and develop the vein several hundred feet below the surface. Also on this claim, but lower on the formation, a cross-cut drift has been started toward the vein. It is estimated that the face of this cross-cut is, at present, approximately 50 feet from the vein. By continuing this cross-cut the vein could be crossed and prospected 150 feet deeper on the formation than mentioned in the above drift from the open cut.

(6) Two other claims examined: The T. & F. No. 13 and 14 have good possibilities and should be kept in mind for future exploration.

(7) T. & F. No. 4 and 10 Claims: Sample No. 7 was cut from these claims. The vein exposure was not too well opened and the sample represents vein matter cut from near the surface.

Below is listed the description and results of samples taken from the property. It should be noted, that from observation under a glass, all of the samples taken contained some lead, (Pb.). However, no lead determinations were made in our tests.

Sample No.	Description	Ca F2	Si O2	Ca Co3
#1	From an open cut on Cash Deal # 9	0.0	9.10	89.20
#2	From an open cut East end of Cash Deal Ext. # 18	31.00	33.24	[illegible].10
#3	From open cut West end of Cash Deal # 18.....	22.10	33.20	42.63
#4	Picked from dump Cash Deal # 1	66.42	11.36	18.72
#6	From Shaft on Tom Boy #10.....	47.15	13.30	35.90
#7	Cut from vein near surface, T & F #4 and #10.....	32.00	30.14	34.18

Sample No.	Description	Ca F2	Si O2	Fe O3
#5	Composite sample made up from all samples above to be used for sink-float test	44.20	20.10	12.90

#5 Sink-float test. Sample crushed to minus one inch. Test was made with two different gravities: 2.80 and 2.85.

Product	Gravity	% of whole	Ca F2	Si O2
Float	2.85	57.6	18.30	39.11
Sink	2.85	42.4	81.60	5.10
Float	2.80	26.0	12.19	14.11
Sink	2.80	74.0	54.24	11.60

(No screen tests were made at this time).

In considering the results of the above sink-float tests, it will be noted: The test made, using a gravity of 2.85 did a fairly good job of separating the SiO2 by heavy-media treatment. As stated above in this paper, these samples were all taken at, or near the surface. Wherever we were able to observe, the particles of sandstone and quartzite seemed to disappear from the vein at depth. Therefore, it can be assumed that the deeper ores on the property if found in commercial quantities will lend themselves very nicely to the heavy-media milling for metallurgical spar.

While no screen tests were made at this time, it was observed, under a glass that in the process of crushing to minus one inch, approximately 20% of the whole sample was crushed to minus 10 mesh. However, it should also be noted that in crushing this sample the only available crusher was the roll type. It is possible that a jaw crusher may have made less fines. Nevertheless it is certain that in the process of mining, handling and crushing the crude ore in future operations, there is bound to be a certain percentage of these fines, 15% to 20%. Therefore some thought should be given as to the beneficiation and processing of these fines, such as froth-flotation, to make acid grade spar, or ceramic grade.

Owing to the vast extent of the property, the few opportunities for actual examination and sampling the vein at depth, and to the limited time spent on this examination; it would be impossible to give an estimate of tonnages or value of the minable ore in the property. However, after a careful study of the notes taken in the field and the results gathered from the samples the writer feels that the corporation is amply justified to go ahead with an exploratory program, by core drill, and with some actual openings on the vein. In this way only, can a true outlook be gained.

This examination was confined entirely to the top of the Mesa where the veins are contained between two sandstone or quartzite walls. As is known, this sandstone formation is above the granite. A rough estimate of the thickness of the sandstone would be between 400 feet and 700 feet. After an accurate survey of the vein structure has been made, it may be found that the vein or veins do, at some point parallel the "break" of the mesa close enough to allow holes to be drilled which would cut the vein between granite walls. This information would be valuable, and it is the writer's opinion that under those conditions the vein would be found more stable, and possibly of more value.

GENERAL RECOMMENDATIONS

(1) Begin diamond drill program as quickly as possible.
(2) Start new openings on veins.
(3) Have an accurate survey and working map made.
(4) Resident geologist to make a thorough geological survey for mapping purposes, and for future exploration.

(1) DIAMOND DRILL PROGRAM

This program should primarily be confined to the areas mentioned in the foregoing report. Then as results are obtained the program may be expanded to fit the circumstances. If only one drill is available, it is recommended that it start drilling in the vicinity of the open cut on the East end of the Cash Deal Ext. # 18. Note: (There is some confusion about this claim upon the map used during this examination. Would suggest that the exact location of this claim, C.D. Ext. # 18 be checked with Mr. Tom Adams). Mr. Farris suggested the possibility of having two drills available for this work. If this is the case, it is recommended the second drill begin operations in the vicinity of the small shaft on the Tom Boy #10 Claim.

The recommended manner of drilling this claims is as follows: Set up the drill about 125 feet from the vein, on the hanging wall side of the vein, in this case the Southeast side. Drill the first hole at a 45 degree angle. Taking into consideration the dip of the vein, this hole should cut the vein about 100 feet below the surface, and the hole would be approximately 131 feet long when it cuts the vein. Then from this same set-up, moving drill just enough to collar a new hole, drill a hole at a 60 degree angle. This hole should cut the vein between 140 and 150 feet below the surface, and the hole should be about 1[illegible]5 feet deep when it crosses the vein. All holes should be drilled as close to right angles to the vein as possible.

The drill should then be moved, parallel to the vein, and set up at 200 feet intervals, and the same proceedure as above followed. In case a drastic change is noticed in the cores obtained at any 200 foot interval, it is suggested that the set-up be backed up to 100 foot or even 50 foot intervals until the cause of the

change is determined.

It is also recommended that the first hole in each new locality, (where drill is moved more than the 200 feet, or to a complete new locality, or where the location of the vein is questionable), be drilled with a core bit all the way. This proceedure will enable the driller and the geologist to become familiar with the formation and it will be known when thedrill is approaching the vein. After this first hole a blank bit may be used until the drill reaches a point ajacent to the vein. However, in the few places we were enabled to observe the vein a depth there were drastic changes in the dip of the vein. Therefore, the core bit and barrell should be put into use in plenty of time to avoid grinding up the vein material. At this point it is also suggested that close supervision by the resid ent geologist be exercised to see that near 100% recovery be made in all core holes. Fluorspar, and particularly the fluorspar observed in this district is very brittle and grinds easily. When coreing the vein, almost all presure should be taken from the machine and the water presure cut to a minimum for good drilling.

After drilling the Cash Deal Extention # 18 from East to West at 200 foot intervals it is recommended that this drill be moved to a favorable location approximately 500 feet west. If favorable results are gained in these two holes, continue west at 500 foot intervals to the extreme west end line of this string of claims. Later in the program after the exact location and dip of the vein has been established by these short holes, it is suggested that two deep holes be drilled on each claim underneath the short holes which have shown the most favorable results. In connection with the deeper holes, it should be kept in mind that a 60 degree angle should be the steepest hole recommended for cutting veins of this type. Therefore, the drill should be set up far enough from the vein in order that a steeper hole may not be necessary.

With the drill set up on the Tom Boy # 10 claim the same proceedure as above should be used. From observations the better proceedure on this claim would be to lay off the 200 foot intervals to the west and continue on to the Tom Boy # 11, which looks very favorable on the surface.

The next most favorable claims recommended for diamond drilling are the Pay Dirt # 1, # 2, and #3. It is suggested a start be made in the vicinity of the small shaft on Pay Dirt #2 Claim. (This is marked Pay Dirt #4 on the property map in the writer's possession). Move at 200 foot intervals to the Southwest, onto, and thru Pay Dirt #3, (Marked P.D. #1 on property Map).

Three other claims are recommended for diamond drilling: Cash Deal # 11, Cash Deal #1 and Cash Deal #14. Note: (The hillside on Cash Deal #1 drops off very fast and offers an opportunity to cut the vein at more depth with short holes.

The above listed drill locations were suggested by observation of surface conditions and contours. Possibly in the process of initial drilling, results might tend to change this program radically. As mentioned above, due to the extent of the property, it is recommended that each drill concentrate and explore an area found favorable, rather than spread the drilling program over a wider area. If and when an area of one or two claims has been proved by drilling, development may begin and the drilling program expanded.

(2) DRIFTS AND CROSS CUTS:

Owing to the contour of the district, many opportunities for drifting on the vein are offered. One of the better places is on the Pay Dirt #6 Claim, at a point where it crosses the gulch, by the spring.

It is recommended that a drift be started in either one of two places: 1st choice, start drifting into the hill on the vein, from the present open cut. 2nd choice, continue the cross-cut tunnel already started, at a point approximately 150 feet lower on the hillside, until it corsses the vein. Then turn and drift on the vein from the point of interception.

In case the first choice above is followed, and an underground diamond drill is available; a series of holes from the breast of the lower crosscut will give valuable information.

This is the only actual mining operation recommended at this time. As the diamond drill program progresses, many drifts and cross-cuts will be justified and in order.

SURVEY AND MAPS:

This recommendation is of the greatest importance in order to correlate the information and results of the above listed programs.

An individual survey of each claim is not necessary. However, the accurate location of the veins, outcrops, cuts, tunnels, shafts, etc. on a large scale working map, preferably 100 ft. to 1 inch, is exceedingly necessary. The contour of this property lends itself favorably to a trianglation system. Therefore, it is recommended that a base line be laid out in any of the favorable spots offered, on the mesa. It is suggested that this base line be located well away from any future mining projects to protect it from caves, or buildings which migh t obstruct the engineer's view. From this base line a trianglation system should be build up establishing points on higher ground, from which good shots at the outcroppings

etc, may be made. From this a coordinate system should be made and the grid placed on the working map.

From these triangulation points the veins, cuts, openings, etc. should be located at as close intervals as feasible, and these locations transferred to the map. Also some of the more important claim corners could be located and their location noted on the map. It is suggested that the resident geologist supervise this work and correlate the notes made by the surveyor. There is no doubt that there are several veins on the property and only by accurate mapping and geology can they be properly evaluated.

GEOLOGY:

The resident geologist has ample opportunities under present conditions to do preliminary work. However, after the survey and map are made his work will begin in earnest.

1- Accurately locate all main faults; strike, dip and extent and transfer this information to the working map.

2- There is evidence of cross faults. These should be located if possible. If not visible on surface a close check on the drill holes will show their location.

3- Investigate possibilities to diamond drill the veins below the workings, in the granite formation.

4- A close supervision and accurate log of all drill holes.

It is suggested that a core splitter be secured for the geologist in charge of the diamond drilling program. This will enable him to have half of the core analysed and retain the other half for his own information, or for future check analysis.

CONCLUSIONS:

Considering the area to be covered and the limited time spent in examining the property, it would be premptuous to try and make a definite conclusion at this time. However, after examining and sampling all available openings and outcroppings of the vein; after establishing the extent of these veins, and taking note of the favorable location of the property with regard to cheap and easy mining and transportation; it is the opinion of the writer that all the potentials are present to develop the property into a producing fluorspar plant. The location tentatively selected for the mill site is ideal.

The composite sample used for the sink-float test, while not conclusive, at least indicates that no complicated milling problems would be involved.

Finally it is concluded that the Corporation would be highly justified in alloting an appropriation covering the large scale exploration program as out-lined above.

Should favorable results be obtained by this exploration, a developement program would be in order.

Respectfully submitted,

John H. Dreman

John H. Dreman
Monico, Kentucky

APPENDIX C

REPORT ON FLUORSPAR DEPOSITS OF CHESAPEAKE & COLORADO CORP.

June 26, 1956

RECEIVED
SEP 28 1956

Location

The property is located in the southwest part of Mesa County, Colorado in T14S, R100W - T15S, R100W and T14S, R101W -T15S, R101W, on top of the Uncompahgre Plateau. It is about 17 miles south of Grand Junction and about 28 miles by road.

Previous Work

Mr. J. R. Drenan, General Supertindent, U. S. Steel Fluorspar Operations, of Mexico, Kentucky, studied the property in the summer of 1955. In his report Mr. Drenan states that the property possesses potentials of developing into a major fluorspar producer.

Geology

Igneous Rocks - Pre-Cambrian granite is exposed over the lower part of the Unaweep Canyon to the northwest of this area. It forms the steep walls of the canyon.

Sedimentary Rocks - Triassic - The Chinle formation is about 0 to 100 feet thick in this area. It rests on top of the granite and forms stopes, and is composed of red shale and sandstone. It is exposed over a very small part of the property in the Bean Gulch.

Jurassic - The wingate formation is about 350 feet thick and forms cliffs on top of the Chinle. It outcrops over most of the property and is composed of massive, medium grained, red sandstones, highly silicified and quarzitic near the veins.

Structure - The beds dip slightly and the direction of dip varies locally with a general regional dip towards the northeast. The veins have a general strike of N50E with a steep dip near the surface. The veins occur in the shear zones.

No major faults were observed in the area. However, some minor faults do occur. In Bean Gulch at the contact of the Wingate and the Chinle a fault occurs with a displacement of about 100 feet. A vein occurs along the fault plane.

Ore Controlls - The major structure control of the veins appears to be the shear zones which trend approximately N50E.

No stratigraphic control has been found. Whether the veins extend into the underlying Pre-Cambrian granite is not known.

Description of Deposits - Calcite and fluorite are the principal minerals occurring in the fissure veins. Quartz also occurs commonly, and traces of galena occur in the calcite in some part of the veins.

The fluorspar is commonly green but some white and yellow varieties also occur. Excellent green cubes are common in the veins.

Calcite is abundant in the veins and occurs as white coarsely crystalline rhombs. Galena occurs as small dark gray colored cubes disbursed through the calcite. The average width of the veins is about 4 feet. A zone of brecciated material occurs a few feet on either side of the veins. Some sandstone and quartzite fragments broken up from the wall rock occur in the veins. A typical vein near the surface is composed of thin stringers of fluorite with calcite on each side and sandstone fragments imbursed in it.

It has not been possible yet to study the veins at depths, however, from some of the cuts and shafts on veins it appears that the proportion of fluorspar grows higher and calcite becomes less abundant at depth.

Origin

Fluorspar with calcite occurs in sheared and brecciated zones. Fluorspar bearing solutions must be part of late stage of igneous activity in this area. Its association with the brecciated zone suggests that the breccia acted as channels for the fluorspar bearing solutions. The extensive silicification in the wallrock must have been simultaneous with the deposition of fluorspar.

Claims

Originally about 150 claims were staked. However, 69 of these showed mineralization or brecciated material or both, and only these were surveyed. They consist of the following:

1. Cash Deal - 17 claims
2. Cash Deal Ext. - 2 claims
3. Pay Dirt - 8 claims

wide with abundant calcite in the vein and some quartz lining the vein. On this vein another cut near the top of the hill does not show fluorspar.

The shaft on Tom Boy #10 shows good high grade green fluorspar with the vein 4 feet wide. It dips about 85° to the south, and abundant clacite and sandstone is included in the vein material. Mr. Drenan's sample from here assayed 47% fluorspar.

On Pay Dirt #8 two shafts are sunk, 35' and 15' deep. The 35' deep shaft shows good grade fluorspar with abundant calcite. The vein here is 3-½ feet wide.

The drill hole samples were examined by the author under a binocular microscope and percentages of CaF_2, SiO_2 and $CaCO_3$ were determined. The results showed a small amount of fluorspar because of two reasons: (1) the shallow depth of drill holes, (2) the air drill samples will have a tendency to show a lesser proportion of fluorspar than the actual proportion due to the higher specific gravity of fluorspar.

With a jeep it is possible to drive near the site of most of the workings. Many access roads have been built on the property.

There has been no production in the past from this property. However, the Fanny C shaft which is about 3 miles to the northwest of this property has a stockpile of high-grade fluorspar at the site of the shaft. During the last war they shipped a large number of tons of ore.

An extensive sampling program has been outlined and 39 samples from the 69 claims have been taken and sent for assay. It should be noted that, as stated before, these samples will show a very poor result as far as the proportion of fluorspar is concerned, as these samples will be taken on the surface.

The reasons for wishing to explore this property is the vast extent of these veins. All the claims show mineralized veins or brecciated material exposed on the surface. At this time the potentials of this property appear great enough to warrant an extensive exploration program. After proving these potentials, development work could be directed to the other 75 claims on the same property to which attention has not been given at this time; because the veins here show poor exposures on the surface.

Vijay Shirke, Geologist

4. Tom Boy - 11 claims
5. Tom Boy Ext. - 3 claims
6. Green Spar - 2 claims
7. Tompkins & Farris - 23 claims
8. Tompkins & Farris Ext. - 3 claims

Total - - - - - 69 claims

The corporation holds legal ownership on these claims. They are surveyed properly. All location notices are posted in place and end centers and claim corners are in place.

Past Operations

The mining and exploration operations which have been conducted upon this property is comprised of 4 shafts, one tunnel, 6 drill holes and a large number of prospect pits 3 to 6 feet deep.

		Depths
Drill holes	2 at east end of T.P.Ext.13	24'
	2 near shaft on T.B.10	24' & 30'
	2 on C.D. 11	35'
Shafts	On P.D. 2	35'
	On P.D. 2	15'
	On T.B. 10	25'
	On P.D. 8	18'

The drift is on claim P.D. 6, about 200 feet west of the main road.

The shafts and the drill holes showed considerable amount of calcite associated with the fluorspar. This was probably owing to the shallow depths of these workings. The grade of fluorspar was better at the bottom of the workings than near the surface.

Five prospect pits have been dug on Cash Deal #18 and the average width of vein here is about 5 feet. The pit near the top of the hill does not show much fluorspar, however, the lower ones do. The one at the bottom of the hill does not show much mineralization probably because it was not dug deep enough. A sample from this vein taken by Mr. Drenan assayed 31% fluorspar.

On Pay Dirt #6, the open cuts show good mineralization. The vein is 4 feet

FORM U606

JOHN R. D[illegible]AN [illegible]NING ENGINEER.

[redacted]

LABORATORY REPORT

Date JUNE 24, & 25, 1953

SAMPLE NO.	SAMPLE DATE	DESCRIPTION	CaF_2	SiO_2	$CaCO_3$	ZnS	S	Zn	Pb	
1		FL-18 CD #2	20.22	45.80	34.00	-			-	
2		FL-11 CD #7	19.34	24.34	54.84	-			Trace	
3		FL-26 TB #6	14.64	32.32	50.70	-			-	
4		FL-13 CD #6	0.20	6.56	93.28	-			0.93	
5		FL-14 CD #4	35.28	59.36	3.[illegible]	-			Trace	
6		FL-16 CD #5	8.12	0.68	90.20	-			0.91	
7		FL-19 CD #9	20.02	18.02	60.80	Trace			0.16	
8		FL-22 TB #3	2.60	7.00	88.20	-			-	
9		FL-51 T & F #4	35.92	17.28	46.16	-			-	
10		FL-32 TB #11	0.68	2.04	96.28	-			-	
11		FL-42 GS #2	17.08	23.04	58.68	Trace			Trace	
12		FL-20 TB #2 Ext.	10.60	8.16	79.72	-			-	
13		FL-24 TB #4	20.50	19.28	59.12	-			-	
14		FL-62 T & F #5	25.32	22.00	53.56	-			-	
15		FL-33 T & F #13 Ext.	0.72	15.00	83.36	-			-	
16		FL-23 TB #3	14.72	15.76	68.44	-			-	
17		FL-28 TB #7	11.76	13.52	73.66	-			-	
18		FL-31 TB #10	62.30	20.08	16.48	-			Trace	
19		FL-15 CD #8	34.36	61.88	2.68	-			Trace	

Remarks:

Chemist S/ C. V. Yandell

JOHN R. DRENAN, MINING ENGINEER.

UNITED STATES [illegible] COMPANY

LABORATORY REPORT

Date JUNE 24. & 25. 1956.

SAMPLE NO.	SAMPLE DATE	DESCRIPTION	CaF_2	SiO_2	$CaCO_3$	ZnS	S	Zn	Pb
20		FL-15 CD #3	1.16	31.16	66.48	-			-
21		FL-40 PD #2	60.28	34.24	4.48	-			-
22		FL-27 TB #6	1.84	29.72	68.44	-			-
23		FL-36 PD #7	5.30	7.36	86.16	-			-
24		FL-41 PD #1	67.40	5.60	25.16	-			-
25		FL-21 ~~[illegible]~~ TB #2	3.32	6.22	89.56	-			-
26		FL-25 TB #5	30.28	40.36	28.08	-			-
27		FL-35 T & F #12	11.48	26.88	60.40	-			-
28		FL-1 PD #6	44.10	32.28	22.80	-			-
29		FL-45 T & F #23	33.72	41.84	23.48	-			-
30		FL-6 CD #7	2.48	9.08	87.44	-			Trace
31		FL-37 PD #5	6.12	10.16	82.56	-			-
32		FL-9 CD #11	64.52	25.80	8.48	-			Trace
33		FL-43 GS #1	3.70	8.48	86.80	-			-
34		FL-17 CD #2	35.80	15.40	47.56	-			Trace

Remarks:

Chemist S/ C. V. Yandell

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APPENDIX D

APPENDIX B

I Drift Costs

A. Equipment

2 Machines (hammer and jackleg) @ $650.	$ 1,300.00
1 Mucking Machine (Rimco 120)	3,170.00
1 Compressor (210 c.f.m.)	7,275.00
1 Blower (ventilation)	557.76
2 Mine Cars @ $375.46	750.92
100' Air Hose (1 inch)	72.80
100' Water Hose (1/2 inch)	46.40
1 Jack Tank	89.50
1 Pickup Truck	1,700.00
Small Tools	500.00
	$ 15,202.38

Assume 2-year write-off on Mining Equipment -

$\frac{\$15,202.38}{2}$ = $7,604.69 / 1 year.

$\frac{\$7,604.69}{1700 \text{ ft}}$ = $4.47/Foot of Drift.

B. Supplies

1. Bits and Steel

20 Bits/round @ $0.21 =	$ 4.20
1 Steel	10.00
	$ 14.20

$\frac{\$14.20}{5 \text{ Feet}}$ = $2.84/Foot of Drift.

2. Powder, Caps and Fuse

1 Case Powder/Round =	$ 11.00
20 Caps @ .06 =	1.20
200' Fuse @ 0.12/foot =	2.40
	$ 14.60

$\frac{\$14.60}{5 \text{ Feet}}$ = $2.96/Foot of Drift.

3. Track

Rail (30.16) $14.20/100'

.1428 x 30' x $\frac{2'}{3'}$ = $ 2.86/Foot of Drift.

Ties	0.25/Foot of Drift
Spikes, etc.	0.20/Foot of Drift
	$ 3.30/Foot of Drift.

4. Pipe
   Air (2-inch) $ 0.50/foot
   Water (1-inch) 0.22/feet
   $ 0.72/foot of Drift

5. Vent-tube $ 1.00/feet of Drift

6. Portal Preparation and Construction
   1 Day Hoser work = 96.00
   2 Days sollar, set timber tracks, etc. = 80.00
   $ 176.00/Portal

$\frac{3 \times 176}{1700}$ = $0.31/feet of Drift

II Shaft Costs

A. Equipment

2 Sinker Machines @ $380.00	$ 760.00
1 Sinking Bucket	160.00
1 Hoist (2-ton)	700.00
1 Compressor (210 CFM)	7,225.00
1 Blower (Ventilation)	387.76
1 Mine Car	275.45
100' Air Hose (1-inch)	79.80
100' Water Hose 1/2-inch)	46.40
1 Sump Pump	275.00
1 Pickup Truck	1,700.00
Small Tools	500.00
	$12,169.42

Assume 2-year write off

$\frac{\$12,169.42}{2}$ = $6,084.71/ 1-year

$\frac{\$ 6,084.71}{4}$ = $ 15.21/foot of shaft.

B. Supplies

1. Bits and Steel
   40 Bits/Round @ 0.21 = $ 8.40
   2 Steels 20.00
   $28.40

$\frac{\$28.40}{5 \text{ feet}}$ = $ 5.68/foot of shaft.

2. Powder, Caps and Fuse
   2 Cases Powder/round @ $11.00 = $ 22.00
   40 Caps @ 0.06 = 2.40
   400' Fuse @ 0.012/feet = 4.80
   $ 29.40

$\frac{\$29.40}{5 \text{ feet}}$ = $ 5.92/foot of shaft.

3. Timber

6 x 6 Timber - Sets on 5' centers

2 wall plates	20'
2 end plates	10'
1 Spreader	5'
6 Posts	30'
2 Guides	10'
	75' (6x6)/set

$\frac{75}{5 \text{ feet}}$ x 4 Board ft = 60 Board feet/foot

$\frac{40 \text{ lagging } (2")}{5 \text{ feet}}$ x 3 Bd. ft. = 24 Board feet/foot.

(60 + 24) x 0.10 = $8.40/foot of shaft.

4. Pipe

Air (2-inch)	$0.50/foot
Water (1-inch)	0.22/foot
	$0.72/foot of shaft.

5. Vent-tube $1.05/foot of shaft.

6. Collar Installation

2 Headframes @ $1500. = $3,000.00

$\frac{\$3,000}{400}$ = $7.50/foot of shaft.

2 Hoist Houses @ $750 = $1,500.00

$\frac{\$1,500}{400}$ = $3.75/foot of shaft.

AGREEMENT

THIS AGREEMENT OF LEASE, Made this 30th day of July, 1956, by and between TOM ADAMS of Grand Junction, Colorado, hereinafter referred to as Lessor and CHESAPEAKE & COLORADO URANIUM CORPORATION, hereinafter referred to as Lessee, WITNESSETH:

WHEREAS the parties have entered into a mining lease, dated March 5, 1955, which lease is recorded in Book 643 at page 100 of the Mesa County record, and whereas it is the desire of the parties to include in said mining lease the following described unpatented mining claims,

IT IS HEREBY AGREED that the following described unpatented mining claims, situate in Mesa County, Colorado, to-wit: G&S #1, also known as G.S. #1, G&S #2, and Tom Boy #2 extension, the location notices thereof being recorded in the Mesa County, Colorado, records, in Book 643 at pages 125, 127 and 129, respectively, be included in said mining lease and be leased by Lessor to Lessee on the same terms and conditions of the said mining lease recorded in Book 643 at page 100 of the Mesa County, Colorado, records, to the same effect as if the herein described mining claims were mentioned in said mining lease.

It is agreed that the lease shall terminate as to the herein described mining claims on the same date as the mining lease terminates as to the mining claims originally described therein.

It is further agreed that any amendment, alteration or extension of said mining lease shall also apply to the mining claims herein described.

IN WITNESS WHEREOF, the parties have hereunto set their hands on the day and year first above written.

Tom Adams, Lessor

CHESAPEAKE & COLORADO URANIUM CORPORATION

By _____

STATE OF COLORADO)
) ss.
COUNTY OF MESA)

The foregoing instrument was acknowledged before me this 1st day of December, 1956 by Tom Adams.
Witness my hand and notarial seal.

Notary Public

My Commission expires

My Commission expires JAN. 17, 1959

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SEP 28 1956

Book 625 Page 149

Recorded at 4:45 o'clock P. M., Nov. 17, 1954

Reception No. 618475 Annie M. Dunston Recorder.

THIS INDENTURE, Made this 17th day of November, in the year of our Lord one thousand nine hundred fifty four, between

Francis M. Tompkins and Joe D. Farris

of the County of Mesa and State of Colorado, parties of the first part, and

Chesapeake and Colorado Uranium Corporation

of the County of Mesa and State of Colorado, part of the second part;

WITNESSETH, That the said parties of the first part, for and in consideration of the sum of Ten Dollars and other good and valuable consideration Dollars, 100 to them in hand paid by the said party of the second part, the receipt whereof is hereby acknowledged, have granted, bargained, sold, remised, released and forever quit-claimed, and by these presents do grant, bargain, sell, remise, release and forever quit-claim, unto the said party of the second part, its heirs and assigns, the following described property, situate, lying and being in Unaweep Mining District, in the County of Mesa, and State of Colorado, to-wit:

Tompkins and Farris Nos. 1 through 29, inclusive.
Cash Deal Extension Nos. 6, 8, 12, 13, 14, 15, 17 and 18.
Jay Boy Nos. 3 and 6
Pay Dirt Nos. 1 through 8, inclusive.
Tompkins and Farris Extension Nos. 12 through 18, inclusive.
Tom Boy Extenstion No. 12

Also the following on the Nash Mesa District;
Big Joe Nos. 1 to 6, inclusive.
Low Boy Nos. 1 through 6, inclusive.
Low Boy Nos. 9 and 10.
Texas Joe Nos. 1 and 2.
Wasatch Nos. 1 through 6, inclusive.

Consideration less than $100.00

TOGETHER with all the dips, spurs, and angles, and all the metals, ores, gold and silver-bearing quartz, rock and earth therein, and all the rights, privileges and franchises thereto incident, appendant and appurtenant, or therewith usually had and enjoyed; and all and singular the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining, and the rents, issues and profits thereof; and all the estate, right, title, interest, claim and demand whatsoever, as well in law as in equity, of the said parties of the first part, of, in or to the said premises, and every part and parcel thereof, with the appurtenances.

TO HAVE AND TO HOLD, all and singular, the said premises, together with the appurtenances and privileges thereto incident, unto the said parties of the second part its heirs and assigns forever.

IN WITNESS WHEREOF, The said parties of the first part have hereunto set their hands and seals the day and year first above written.

Signed, sealed and delivered in the presence of

Francis M. Tompkins [SEAL]

Joe D. Farris [SEAL]

[SEAL]

STATE OF COLORADO,
County of Mesa } ss.

The foregoing instrument was acknowledged before me this 17th day of November
Francis M. Tompkins and Joe D. Farris.

My commission expires , 19 . Witness my hand and official seal.

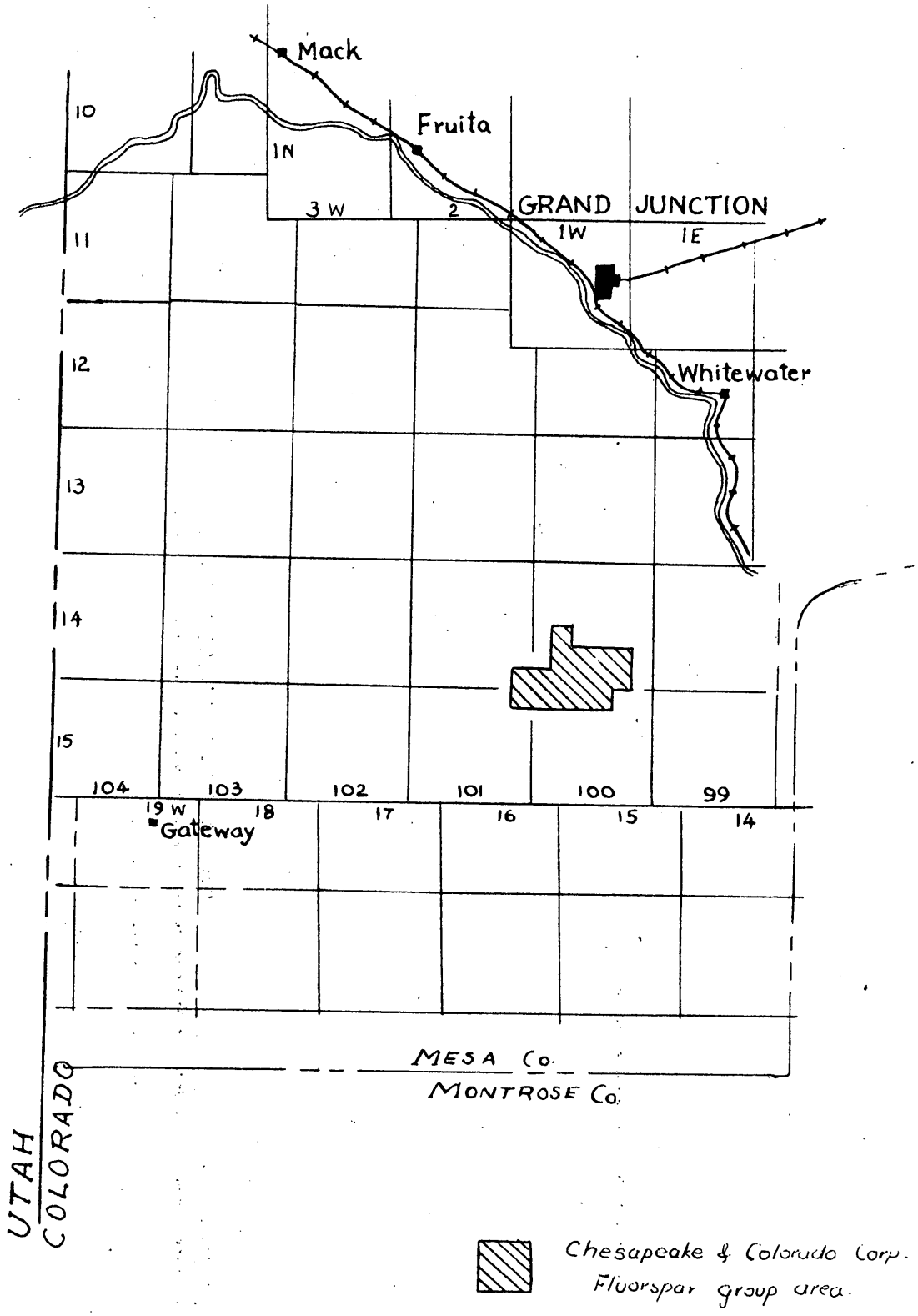
John L. Rice
Notary Public.

My Commission expires Jan 19, 1955

JOHN L. RICE NOTARY PUBLIC MESA COUNTY, COLORADO

No. 37. MINING DEED.—Bradford-Robinson Ptg. Co., Mfrs. Robinson's Legal Blanks, 1024-26 Stout St., Denver, Colorado

RECEIVED
SEP 28 1956



Index map showing fluorspar group, Mesa County, Colorado.

PLATE NO. 1

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IN CONNECTION WITH THIS OFFERING, THE UNDERWRITERS MAY EFFECT TRANSACTIONS WHICH STABILIZE OR MAINTAIN THE MARKET PRICE OF THE COMMON STOCK AT A LEVEL ABOVE THAT WHICH MIGHT OTHERWISE PREVAIL IN THE OPEN MARKET. SUCH STABILIZING, IF COMMENCED, WILL BE IN THE FORM OF OPEN MARKET PURCHASES AND SALES BY THE UNDERWRITERS AND MAY BE DISCONTINUED AT ANY TIME. THIS BEING A NEWLY FORMED COMPANY, THERE IS NO MARKET IN THE SECURITIES AT THE PRESENT TIME.

IF STABILIZATION IS ENGAGED IN, THE UNDERWRITERS MAY INITIALLY BE A DOMINATING INFLUENCE AND THEREAFTER A FACTOR OF DECREASING IMPORTANCE IN THE MARKET. UNDER SUCH CIRCUMSTANCES, THE MARKET, OR BID OR ASKED PRICES OF THE SECURITIES MAY NOT BE PRICES DETERMINED SOLELY BY SUPPLY AND DEMAND, BUT MAY BE PRICES IN EXCESS THEREOF, AND AT THE EXPIRATION OF ANY STABILIZATION PERIOD SUCH MARKET MAY CEASE TO HAVE THE SUPPORT, IF ANY, THERETOFORE FURNISHED BY THE UNDERWRITERS.

REGISTRATION STATEMENT

Chesapeake and Colorado Uranium Corporation has filed a Registration Statement in respect of the Common Stock offered hereby with the Securities and Exchange Commission, Washington 25, D. C., under the Securities Act of 1933. This Prospectus does not contain all the information set forth in the Registration Statement, certain portions of which have been omitted pursuant to the rules and regulations of the Commission. The information so omitted may be obtained from the Commission's principal office in Washington, D. C., upon payment of the fees prescribed by the Commission. Except where otherwise indicated, this Prospectus speaks as of the date of its issuance. Neither the delivery hereof nor any sale made hereunder shall be taken to imply that the affairs of the Company have continued without change since such date.

No person is authorized to give any information or to make any representations not contained in this Prospectus or the Registration Statement; and any information, data or representation not contained herein or therein must not be relied upon as having been authorized by the Company or by any Underwriter. This Prospectus is not an offering of the securities to which it relates in any state in which the offering is unauthorized.

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LITIGATION

To the best of the knowledge of the Officers, Directors, and Counsel of the Company no litigation is pending against it nor is any contemplated. In connection with some of its claims certain persons have asserted adverse interests (see caption "Titles"). All such conflicts are in process of negotiation and settlement at this time and the Company believes they will be resolved without litigation.

It should be noted, however, that the Company has not yet paid for these claims and will not do so until the titles thereto are cleared.

LEGAL OPINIONS

The legality of the capital stock offered by this Prospectus will be passed upon for the Company by Messrs. Martin, Ansberry & Long, Wyatt Building, Washington 5, D. C., and for the Underwriters by Marc A. White, Esq., 1010 Vermont Avenue, Washington 5, D. C., Counsel for Peter Morgan & Co., and Messrs. Heywood, Benedict & Hurry, 49 Wall Street, New York, N. Y., Counsel for S. D. Fuller & Co.

Title opinions on the Company's Blue Creek, Queen Bee and Blue Bird claims (Groups I, II, and III), Mesa County, Colorado, have been prepared by Messrs. Adams, Heckman & Traylor and Wm. M. Ela, Attorneys-at-Law, 201 Electric Building, Grand Junction, Colorado. The title opinions on the Wasatch-Lowboy Group (Group V), Mesa County, Colorado, the Joannie Group (Group VI), Montrose County, Colorado, the Calamity Group (Group VII), Mesa County, and the Tepee Pole Group (Group VIII), Mesa County, Colorado, were prepared by Mr. John L. Rice, Attorney-at-Law, 122 North Sixth Street, Grand Junction, Colorado. The title opinion on the Lazy Tom and Atbo Group of claims (Group IV), Grand County, Utah, was prepared by Messrs. Reynolds, Dixon and Gibson, Attorneys-at-Law, Moab, Utah.

EXPERTS

The financial statements contained in this prospectus have been examined by the firm of Councilor, Buchanan, Mitchell & Hayes, independent Certified Public Accountants, Wire Building, Washington, D. C., and are included in this prospectus in reliance upon their opinion as experts.

The geological reports, excerpts from which have been included in this prospectus, and which have been filed in their entirety as exhibits to the Registration Statement, were prepared by Dorsey Hager of Salt Lake City, Utah, and Mr. Charles Gill Morgan of Dallas, Texas, both of whom are independent Consulting Geologists.

CHESAPEAKE & COLORADO
URANIUM CORPORATION

FRANCIS M. TOMPKINS
President

Chesapeake and Colorado Uranium Corporation

(A Delaware Corporation)

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1,000,000 Shares Common Stock

Five Cents Par Value

THESE SECURITIES ARE OFFERED AS A SPECULATION

(See "Introductory Statement")

THESE SECURITIES HAVE NOT BEEN APPROVED OR DISAPPROVED BY THE SECURITIES AND EXCHANGE COMMISSION NOR HAS THE COMMISSION PASSED UPON THE ACCURACY OR ADEQUACY OF THIS PROSPECTUS. ANY REPRESENTATION TO THE CONTRARY IS A CRIMINAL OFFENSE.

	Price to Public	Underwriting Commissions (1)	Proceeds to Company (2)
Per Unit	$1.00	$.12½	$.87½
Total	$1,000,000.00	$125,000.00	$875,000.00 (3)

(1) The Underwriting Agreement permits the Underwriters to purchase pro rata 200,000 warrants at 1¢ per warrant. Each such warrant permits the purchase of one (1) share of the Common Stock of the Company at the price of one dollar ($1.00) per share for a period of five years after the effective date of the Registration Statement. These warrants may provide additional compensation to the Underwriters. An additional 40,000 warrants are authorized for issuance to the officers, directors and employees of the Company (see "Underwriting Agreement" for details as to warrants).

In addition to 25,000 shares sold to Peter Morgan & Co., one of the Underwriters, at the price of 11½¢ per share, the Company has agreed to sell 40,000 shares to the Underwriters at the price of 50¢ per share and the four principal stockholders have agreed to sell the Underwriters 85,000 shares at 11½¢ per share, which may represent additional compensation to the Underwriters. Certain restrictions are placed on transfers of these shares (see pages 30-31 for details).

The Company has agreed to indemnify the Underwriters against certain civil liabilities, including liabilities under the Securities Act of 1933. The Underwriters have certain rights to future financing of the Company and to designate a nominee for election as a Director (see "Underwriting Agreement").

(2) The Company has agreed to pay audited expenses of the Underwriters in an amount not to exceed $35,000 which will reduce the net proceeds to the Company set forth above. In addition, expenses of the issue, which are not expected to exceed $35,000, including legal fees, will further reduce the net proceeds to the Company.

(3) Proceeds of the sale of warrants are not included in these figures.

S. D. Fuller & Co.
39 Broadway
New York 6, N. Y.

Peter Morgan & Co.
31 Nassau Street
New York 5, N. Y.

Vermilye Brothers
30 Broad Street
New York 4, N. Y.

The Date of this Prospectus is April 14, 1955.

See Page 17

However, the Company hopes that research now being conducted by the Government and others will prove successful at an early date in resolving this problem.

The program of the Company is to explore its claims, and if commercially productive uranium or fluorspar ore bodies are discovered, to develop and mine such ore bodies. The Company may also acquire additional claims or producing mines if the management believes that such acquisitions are in the best interests of the Company, from a producing or profit standpoint. Approximately $53,000 has already been invested by the Company in required equipment including diamond core drills, wagon drills, compressors, a tractor, trucks, trailers, two jeeps and radiation detection equipment. Owing to Mr. Tompkins' experience and connections in the field of heavy construction, equipment purchases have been possible at prices substantially lower than those available to the average uranium operator.

If all of the stock offered hereby is sold, the net proceeds after deduction of expenses of the offering will provide the Company with approximately $819,000.00 cash. Of this amount the Company plans to allocate approximately $400,000.00 for exploration purposes, including wagon, percussion and core drilling of its claims, and the building of access roads (many of which have already been built). Approximately $200,000.00 will be allocated for excavation and mining purposes, in the event the exploration program should uncover a commercial ore body on the Company's property. Approximately $50,000.00 will be allocated for the purchase of additional equipment. The remainder will be used for management and overhead, payment of balances due on claims (less than $20,000.00), working capital and other general corporate purposes. (See "Purpose of the Issue" for a breakdown of the proposed application of the proceeds). Should the exploration program on the present properties fail to uncover commercial ore bodies, any funds remaining may be devoted to the purchase, exploration and development of additional prospects, or the purchase and development of producing mines.

Most of the Company's claims are located in areas with an extremely irregular topography (see maps pp. 6, 10-12). As a result, the geological formations believed to be favorable for the occurrence of uranium bearing ores in many instances appear at or reasonably close to the surface at some points. Naturally, the Company plans to explore these formations at their shallowest depths consistent with practical or geological requirements. It is presently estimated that the major portion of the exploratory drilling will be at depths varying between 20 and 100 feet, with deeper drilling to depths up to 700 feet or more on a limited scale. Of course, any favorable trends which may be discovered in the course of exploratory drilling will be followed to their ultimate depths.

Some of the geological formations known to be the carrier of uranium bearing ores in the general area occur at the surface on some of the Company's claims. These surface occurrences are commonly referred to as "outcrops."

Rock samples were obtained at several of these outcrops and were chemically assayed. While they were not systematically obtained over a representative area, and therefore do not represent an adequate sampling of any of the Company's properties, they do indicate the presence of uranium at the points at which they were obtained, and are believed to warrant further exploration and development. They should not, however, be regarded as a representation of the existence of a commercial ore body on the Company's properties.

The Company estimates that if all of the shares being offered are sold the proceeds of this current financing will be sufficient for an adequate exploration and development program. It should be noted, however, that this estimation is based on several factors which cannot be predicted with certainty at this time. Chief among these factors is the length of time required to discover and develop commercial ore bodies, if any, their size and depth, and the mining method used. Therefore, it may be that additional financing, though not contemplated at this time, may be sought in the future. At the present time an avenue of favorable financing of uranium exploration is provided by Defense Minerals Exploration Administration contracts. This Government agency, after suitable investigation, lends 75% of the cost of approved uranium exploratory programs, the loan being repayable by a 5% royalty on any ore discovered on the property explored in the course of the financed drilling program. Exploration funds thus obtained enable a proportionate reduction in the applicant's direct outlays in this connection, enabling larger expenditures for other purposes. In addition, should the existence of commercial ore bod-

CHESAPEAKE AND COLORADO URANIUM CORPORATION
(A Delaware Corporation)

CLAIMS AND OPTIONS

March 8, 1955

		Total Cost	Paid to March 8, 1955	Balance Due in Cash	Balance Due in Shares of Common Stock
Blue Creek (Group I)	Note 1	$29,000.00	$16,000.00	$ 6,500.00	10,000 Shares
Raven Claims (Group I)	Note 1	9,000.00	2,700.00	6,300.00	—
Queen Bee and Blue Bird Group (Groups II and III) ..	Note 2	18,000.00	15,000.00	3,000.00	—
Lazy Tom and ATBO Group (Group IV)	Note 3	10,000.00	10,000.00	—	—
Wasatch and Low Boy Group (Group V)		7,000.00	7,000.00	—	—
Joannie Group (Group VI)		—	—	—	—
Calamity (Group VII)	Note 4	2,525.00	2,525.00	—	—
Tepee Pole Group (Group VIII)		3,000.00	3,000.00	—	—
TOTAL		$78,525.00	$56,225.00	$15,800.00	10,000 Shares

NOTE 1:

The Blue Creek Group includes 30 claims consisting of 17 claims described as Starvation Numbers 1 through 17 and 13 claims described as F.W.D. Numbers 1 through 8, Kenney Numbers 1 through 3, and Bimbo Numbers 1 and 2. The original purchase price for the 30 claims was $30,000.00 ($1,000.00 per claim) but this price was later reduced to $29,000.00. The reduction in price of $1,000.00 was applicable to the 17 Starvation claims and the total cost of these 17 claims was thereby reduced to $16,000.00. Of the total purchase price of $16,000.00, $8,000.00 has been paid in cash, as shown above, and 12,308 shares of capital stock of the Registrant have been issued for the balance of $8,000.00 at an agreed value of sixty-five cents per share.

As to the remaining 13 claims, the Company is to pay $6,500.00 in cash and 10,000 shares of its capital stock computed at sixty-five cents per share if and as title to these claims is cleared.

Of the $6,300.00 due on the Raven Claims, $2000.00 is not due unless and until certain title defects are cleared.

NOTE 2:

The total purchase price for these groups is $18,000.00 and the Company has paid $15,000.00 thereon as of March 8, 1955, leaving a balance due of $3,000.00. The Company's promissory note for $3,000.00 covering the balance of the $18,000.00 purchase price has been issued to the Sellers subject, however, to an Agreement in writing that the obligation shall be extinguished if defects in the title to certain of the claims are not removed. This note is secured by the Registrant's deed of trust on the claims.

NOTE 3:

There are 5 claims styled Lazy Tom and 5 claims known as ATBO. Royalties of 6¼% of proceeds of ore sales, including bonuses, were reserved by the grantor on the Lazy Tom claims. In addition, $10,000.00 cash was paid for all 10 claims.

NOTE 4:

The amount of $2,525.00 represents the payment upon exercise of an option to lease these claims for 25 years with an option to renew for an additional 25 years with a 5% royalty payable to the lessor.

CHESAPEAKE AND COLORADO URANIUM CORPORATION

(A Delaware Corporation)

SCHEDULE OF SUBSCRIPTIONS TO CAPITAL STOCK

March 8, 1955

Name	Number of Shares	Cost per Share	Subscription	Amount Paid
Edwin L. Jones	10,000	$.50	$ 5,000.00	$ 5,000.00
A. L. Pauls	10,000	.50	5,000.00	5,000.00
T. F. Smith	10,000	.50	5,000.00	5,000.00
L. C. LeBron	2,000	.50	1,000.00	1,000.00
Francis M. Tompkins	828,000 (3), (4)	.115	95,220.00	95,220.00
Francis M. Tompkins	29,132 (6)	.50	14,566.00	14,566.00
H Street Building Corporation	415,000 (3)	.115	47,725.00	47,725.00
H Street Building Corporation	14,601 (6)	.50	7,300.50	7,300.50
Joe D. Farris	200,000 (3), (5)	.0617	12,345.77	12,345.77
Joe D. Farris	7,036 (6)	.50	3,518.00	—
Martin, Ansberry & Long	120,000 (3)	.115	13,800.00	13,800.00
Martin, Ansberry & Long	4,223 (6)	.50	2,111.50	—
Peter Morgan & Company	25,000	.115	2,875.00	2,875.00
Peter Morgan & Company S. D. Fuller & Company Vermilye Bros.	40,000 (6)	.50	20,000.00	—
Robert A. Moyer	1,000	.50	500.00	500.00
Howard Ritter	800	.50	400.00	400.00
Joseph R. Greenwood	6,000	.50	3,000.00	3,000.00
William H. Singleton	5,000	.50	2,500.00	2,500.00
Vaughan B. Connelly	2,500	.50	1,250.00	1,250.00
William J. McManus	2,000	.50	1,000.00	1,000.00
Lytle Brown, Jr.	400	.50	200.00	200.00
	1,732,692		$244,311.77	$218,682.27(1)
Wise, Devenney & Foster	12,308	$.65	8,000.00	8,000.00(2)
TOTAL	1,745,000		$252,311.77	$226,682.27

NOTES:

(1) The amount of $218,682.27 represents the total amount of cash paid into the Company for capital stock.

(2) The amount of $8,000.00 represents 12,308 shares of stock issued to Wise, Foster and Devenney for certain claims obtained from them. An additional 10,000 shares are reserved for issuance to Wise, Foster and Devenney when and as titles are cleared on certain claims obtained from them. (See Schedule 1 for details.)

(3) We have been advised that Francis M. Tompkins, H Street Building Corporation, Joe D. Farris and Martin, Ansberry and Long have agreed to sell 85,000 shares of their stock at the price of $.115 per share to the Underwriters, Peter Morgan and Co., S. D. Fuller and Vermilye Bros. In return for the above stockholders' agreement to sell 85,000 shares of their stock to the Underwriters at the price of $.115 per share, the Company has agreed to sell 54,992 shares at the price of $.50 per share to these stockholders. (See Underwriting Agreement.)

(4) Mr. Tompkins received 430,969 of these shares for his contribution of $49,561.43 to the Company's predecessor, the Tompkins-Farris Mining Company. He contributed $45,658.57 cash to the Company for the remaining 397,031 shares received by him.

(5) Mr. Farris received these shares for his cash contribution of $12,345.77 to the Company's predecessor, the Tompkins-Farris Mining Company, for whom Mr. Farris worked full-time from December, 1953 through August, 1954, without pay.

(6) We are advised by the Corporation Trust Company that these shares have not been issued as of the date of this statement and that all other shares shown have been issued.

THE CHESAPEAKE AND COLORADO URANIUM CORPORATION

INTRODUCTORY STATEMENT

The Chesapeake and Colorado Uranium Corporation was organized under the laws of the State of Delaware on September 9, 1954. The Company has no operating history, the purpose of its formation being to explore and develop properties acquired from its predecessor partnership, the Tompkins-Farris Mining Company and properties acquired since its incorporation (see caption "History and Business"). Its properties are in the exploratory stage of development with no known or proven bodies of commercial ore.

Uranium ore bodies are comparatively small when considered by usual mining standards for iron ore, copper and lead, among others, and are usually widely separated by barren rock.

One million shares of the Common Stock of the Company are being offered at this time. The 7 principal holders of the Company's outstanding stock have agreed with the Company not to offer any of their stock for a period of 6 months after the effective date of the Registration Statement. No assurance is given as to when, or if, such an offering will be made upon expiration of the 6 months period provided. The Company has undertaken, if and when requested to do so by such stockholders, to file a Registration Statement and Prospectus, or such other documents and forms as may be required in connection with a public offering by such stockholders (see caption "Transactions with Promoters and Others" for the details of this agreement).

If all of the shares offered hereby are sold, the officers, directors, underwriters, promoters and their associates will have contributed $252,311.77[1] and received 1,745,000[1] shares representing 63.57% of the outstanding stock, whereas the investing public will have contributed $1,000,000.00 for 1,000,000 shares representing 36.43% of the outstanding stock. These figures do not include the 240,000 warrants which have been authorized for the purchase of a like number of shares at $1.00 per share. (See "Underwriting Agreement" for details.)

The terms of the Underwriting Agreement are not such as to constitute a firm commitment on the part of the Underwriters to purchase any of the securities being offered, and the Company therefore has no assurance that all or any of the securities being offered will be sold or that all or any of the proceeds indicated on the first page of the Prospectus will be realized.

HISTORY AND BUSINESS

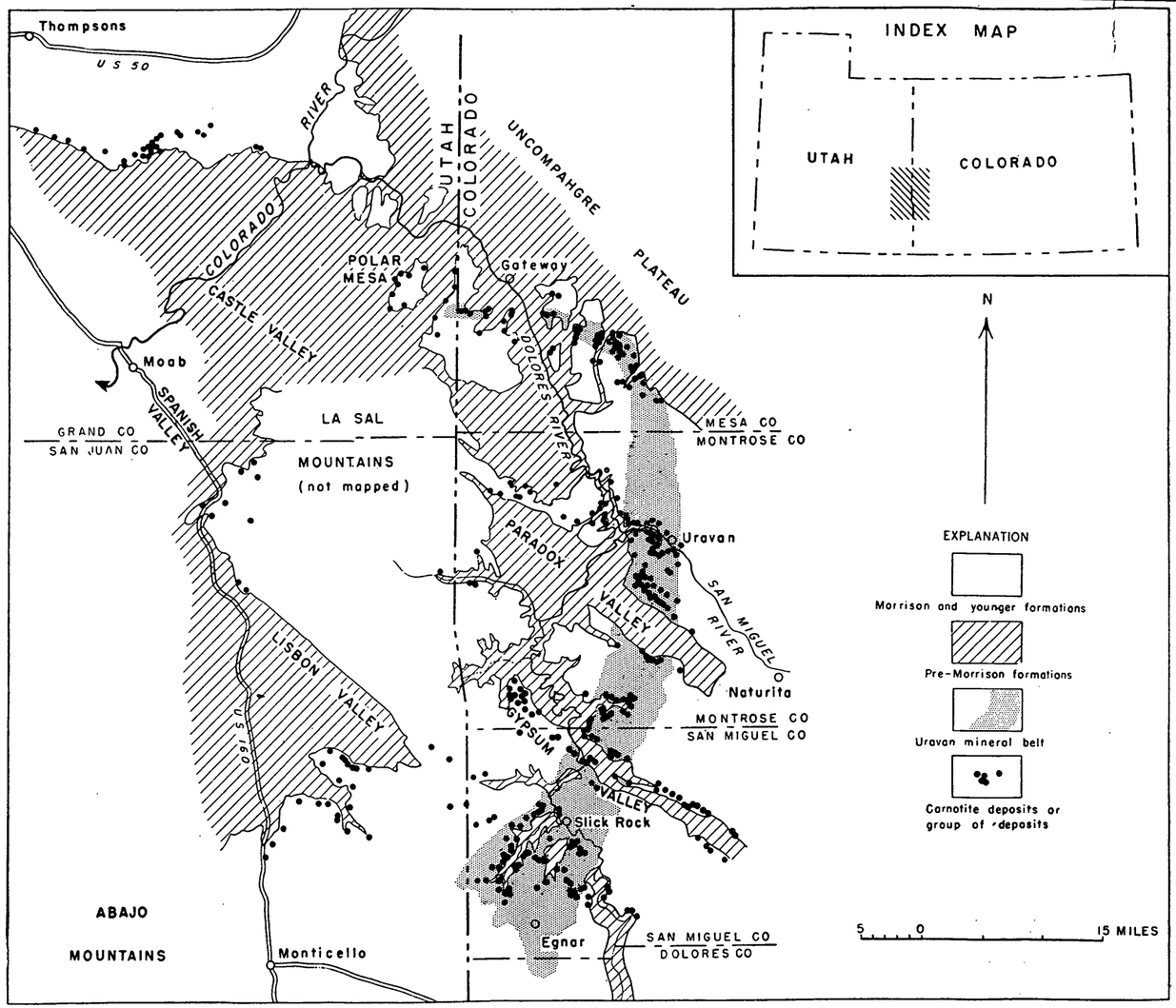
The Chesapeake and Colorado Uranium Corporation was organized to carry on the activities of a partnership formed in late 1953 by Francis M. Tompkins and Joe D. Farris for the purpose of assembling a desirable land spread in the Moab and Uravan Belt areas of the Colorado Plateau, to clear the titles, obtain adequate surveys, explore and drill for uranium and fluorspar, and to engage in production, if warranted.

During the nine-month period from December 1953 through August 1954, Mr. Joe D. Farris and Mr. Francis M. Tompkins financed the operations of the predecessor partnership from private resources, and expended approximately $62,000.00 cash, together with all of Mr. Farris' time and a large part of Mr. Tompkins' time. Through vigorous and continuing efforts, they made considerable strides toward the purposes outlined above. By August 1954, they had personally selected, prospected and assembled about 200 claims in a number of groups. Some of these claims were obtained by location and some by option and purchase. In addition to the uranium claims, they acquired a group of claims in the Unaweep Mining District for their potential fluorspar content as well as their potential uranium content. Fluorspar is an important raw material for the metallurgical, chemical, glass and ceramic industries. Problems exist in the separation of contained uranium from contained fluorspar.

[1] These figures include 12,308 shares delivered to Messrs. Wise, Devenney and Foster in lieu of $8,000.00 (one-half the agreed consideration for claims purchased from them). (See "Transactions with Promoters and Others," p. 30, for details.) Wise, Devenney and Foster have no relation to the Company other than as grantors of these claims.

MAP OF PART OF COLORADO AND UTAH. SHOWING THE PRINCIPAL DEPOSITS

The locations shown for bedded uranium deposits are not intended to infer that such locations are sites of large known ore deposits or as individually important sources of uranium production.



THE URAVAN BELT

As pictured in U. S. Geological Survey Bulletin 988-A "Geology of the Uravan Mineral Belt".

Exhibit B

CHESAPEAKE AND COLORADO URANIUM CORPORATION
(A Delaware Corporation)
STATEMENT OF LIABILITIES
March 8, 1955

Balance Due on Options (Also 10,000 shares of stock due on Blue Creek Claims) (Schedule 1)		$15,800.00
~~Accounts Payable:~~		
Martin, Ansberry and Long	$14,000.00	
The Corporation Trust Company	400.00	
Adams, Heckman and Traylor	400.00	14,800.00
Employees' Taxes Withheld		591.40
Accrued Insurance		1,000.00
Accrued Payroll and Miscellaneous Expenses		1,000.00
TOTAL CURRENT LIABILITIES		$33,191.40

Exhibit C

CHESAPEAKE AND COLORADO URANIUM CORPORATION
(A Delaware Corporation)
STATEMENT OF CAPITAL SHARES
March 8, 1955

			Shares
Capital Stock—Common			
Par Value $.05 per Share:			
Authorized			2,995,000
Issued and Outstanding			
Issued for Cash or Equivalent:			
Promoters (For Items Shown on Exhibit A)	630,969		
Promoters (For Cash)	397,031	1,028,000	
Others (For Cash)		609,700	
Issued for Mining Claims		12,308	1,650,008
Subscribed for But Not Yet Issued:			
Promoters (For Cash)		36,168	
Others (For Cash)		58,824	94,992
TOTAL ISSUED AND SUBSCRIBED			1,745,000

NOTE:

As shown above, there are 2,995,000 authorized shares of which 1,745,000 shares have been issued or subscribed for leaving a balance of 1,250,000 shares. These 1,250,000 shares are reserved for the following:

Wise, Foster and Devenny	10,000
Underwriters	200,000
The Company	40,000
Public Offering	1,000,000
Total	1,250,000

The above 10,000 shares are to be issued to Wise, Foster and Devenny for certain claims obtained from them when and as titles are cleared on these claims.

There are 200,000 shares reserved for the Underwriters who may purchase Warrants at a price of $.01 per Warrant which gives the holder thereof the right to purchase a share of stock at $1.00 per share anytime during a five-year period beginning with the effective date of the registration statement.

There are 40,000 shares reserved for the Company which has the right to issue Warrants to its officers, directors and employees similar to those issuable to the Underwriters but not to exceed 40,000 Warrants.

Exhibit D

CHESAPEAKE AND COLORADO URANIUM CORPORATION

(A Delaware Corporation)

STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS

For The Period
September 9, 1954 to March 8, 1955

RECEIPTS:			
Subscription to Capital Stock (Schedule 2):			
Promoters		$122,131.77	
Others		96,550.50	$218,682.27
DISBURSEMENTS:			
Spent by Promoters for Which Shares Were Allotted:			
Legal and Accounting	$ 6,324.87		
Geologists' Fees	3,424.15		
Payments on Options and Claims (Schedule 1)	21,125.00		
Purchase of Equipment	2,567.76		
Salaries and Wages	722.81		
Road Building and Assessment Work	8,300.00		
Surveying	5,687.50		
Mining and Camp Expense	1,402.13		
Auto Expense and Equipment Rental	2,196.89		
Incorporation Expense	629.55		
Travel, Hotels and Meals	8,195.48		
Telephone, Office Supplies, Licenses, Taxes and Other Miscellaneous Expenses and Supplies.	1,331.06	$ 61,907.20	
Spent by the Corporation:			
Legal and Accounting	$ 3,842.62		
Geologists' Fees	4,137.12		
Payments on Options and Claims (Schedule 1)	27,100.00		
Purchase of Equipment	58,355.77		
Salary of Director and Officer	6,500.00		
Other Salaries and Wages	17,501.10		
Surveying	3,789.86		
Mining and Camp Expense	3,987.90		
Auto Expense and Equipment Rental	5,261.19		
Incorporation Expense	2,902.33		
Travel, Hotels and Meals	2,747.09		
Telephone, Office Supplies, Licenses, Taxes and Other Miscellaneous Expenses and Supplies.	4,326.99	140,451.97	202,359.17
CASH IN BANKS, MARCH 8, 1955			$ 16,323.10

ies be proved, the Company believes that such discoveries would readily support debt financing of any further working capital requirements.

This discussion is not intended to represent or infer that commercial ore bodies will result, necessarily or probably, from the Company's exploratory drilling program or that Defense Minerals Exploration Administration contracts will necessarily be sought from or approved by that agency, or that additional financing will necessarily be sought or required.

THE URAVAN BELT

Recent nationwide publicity has focused attention on uranium discoveries in the Moab-Lisbon Valley area of Utah and certain areas in New Mexico and Wyoming and has established the importance of these areas in the mind of the public.

On the other hand, though little recent publicity has been given the Uravan Belt area in the Colorado Plateau, the Uravan Belt area was a major domestic source of uranium long before the recently publicized discoveries in other areas. Further, the Uravan Belt area continues as a major domestic source of uranium production.

The Uravan Belt is described by the U. S. Geological Survey in its Bulletin #988A on the "Geology of the Uravan Mineral Belt" (R. P. Fischer and L. S. Hilpert—1952) as follows (see also U. S. G. S. Map p. 6):

> The name "Uravan mineral belt" is applied to a narrow, elongate area in southwestern Colorado in which carnotite deposits in the Morrison formation have a closer spacing, larger size, and higher grade than those in adjoining areas. The belt extends from Gateway through Uravan to Slick Rock.
>
> The deposits within the belt tend to be clustered in patches of favorable ground 1,000 ft. or more in width and usually a mile or more in length. These patches of favorable ground, and the deposits within them, generally are elongate normal to the trend of the mineral belt. Similarly the fossil logs and the ore rolls within the deposits have a dominant orientation normal to the belt. The mineral belt probably was localized by geologic conditions extant during the time the ore-bearing Morrison formation was deposited. These geologic relations allow the projection of the belt under deep cover between points of exposure and offer the chance of discovering moderately large reserves of carnotite ore in the unexplored parts of the belt . . .
>
> The idea of the Uravan mineral belt was first conceived by the Geological Survey in 1943. Its recognition is based largely on evidence resulting from local and regional geologic study. The belt was first considered to be rather vaguely defined, but evidence accumulated since shows the belt to be fairly well defined.
>
> The mineral belt appears to be a narrow, elongate area in which the carnotite deposits generally have closer spacing, larger size, and higher grade than those in the adjoining areas and the region as a whole. Not only does the area of the mineral belt include some of the most productive mines in the region, but recent exploration within it has yielded important discoveries and has shown a high proportion of ground that can be classified as favorable for carnotite deposits.

Climax Uranium Company (a subsidiary of Climax Molybdenum Company), the U. S. Vanadium Corporation (a subsidiary of Union Carbide and Carbon Corporation), and the Vanadium Corporation of America, are active in the exploration for and production of uranium from mines located in the Uravan Belt. The uranium production figures of these three major companies are closely guarded and not publicly available. All three companies have uranium processing mills in or near the Uravan Belt; Climax, at Grand Junction, Colorado, U. S. Vanadium at Uravan, Colorado, and Vanadium Corporation of America at Durango and Naturita, Colorado.

Among the 8 groups of mining claims held by the Chesapeake and Colorado Uranium Corporation, 4 groups lie within 3 miles of the Uravan Belt as it is defined in U.S.G.S. Bulletin 988-A and the map on page 6. Whereas precise limits are shown on this map, it is based on ore discoveries at the time

for the generation of electric power. In fact, an atomic powered electric generating plant is now being built by the Westinghouse Electric Company for the Duquesne Light Company to serve the Pittsburgh, Pennsylvania, area.

As the use of atomic energy grows it follows that the demand for its raw materials, uranium-bearing ores, will increase also. Of course other sources of atomic power may be developed in the future, such as lithium or thorium, but uranium continues as the only known, developed, and practical source of this new energy.

It must also be remembered that uranium-bearing ores must be highly refined, concentrated and treated by numerous technical and scientific applications before uranium-235, the ultimate source of atomic energy, is achieved.

LANDSPREAD AND GEOLOGY

As of the date of filing the Registration Statement with the Securities and Exchange Commission, the Company held 251 claims divided into 8 groups. Some of the claims were obtained by purchase. Others were staked by its employees or by its predecessor, the Tompkins-Farris Mining Company. Others are held under purchase-options. Title to the claims is discussed separately under the caption "Titles".

Two hundred and forty-one of the claims are located in Southwestern Colorado. Ten claims are located northeast of Moab, Utah, (see Maps pp. 10-12). The Tepee Pole group is not included on the general map, as this group of 7 claims was purchased after the maps were prepared.

All of the claims are accessible by primary or secondary roads, except during extremely bad weather. The most distant of the claims is located 66 miles from the Government ore-buying station at Grand Junction, Colorado. However, the U. S. Vanadium Corporation operates an ore-buying station at Uravan, Colorado, which is only 20 miles from the Company's Blue Creek Group. The haulage allowances granted by the Government are believed to be adequate to cover the costs which the Company may incur in this regard, in the event commercial ore is discovered on any of the Company's claims.

Water for mining purposes is available on some of the claims and on others will have to be hauled for several miles.

Except for the Blue Creek Group, little timber is grown in the region. In underground mining, the Company believes, this can be overcome by the extensive use of roof bolts.

Mr. William Murphy, now employed as the Company's mine foreman, assisted Messrs. Tompkins and Farris in selecting and staking or purchasing the Company's claims. Mr. Murphy was employed for almost eight years by the Climax Uranium Company and before that served for many years with various mining companies.

Mr. Dorsey Hager, Consulting Geologist, of Salt Lake City, Utah, examined all of the Company's claims except the recently purchased Tepee Pole Group. A Geologist for over 30 years, Mr. Hager is the author of a number of technical and scientific articles and books on oil and gas, and a lecturer at numerous universities. He has devoted considerable time to the study and observation of uranium occurrences in The Colorado Plateau in recent years.

Mr. Hager examined the Company's Queen Bee, Blue Bird (formerly Blue Boy) and Calamity Groups before their purchase was finally consummated.

Mr. Charles Gill Morgan, Consulting Geologist, of Dallas, Texas, examined the Company's Lazy Tom-Atbo and Wasatch-Low Boy Groups of claims. Mr. Gill Morgan has authored a number of articles on geophysical exploration, Antarctic geology and geophysics. He was Chief Geologist and Geophysicist for the Byrd Antarctic Expedition II, from 1933-35. In the recent past he has devoted an increasing amount of time to the geological study and observation of the occurrence of uranium.

COUNCILOR, BUCHANAN, MITCHELL & HAYES
Certified Public Accountants

Wire Building
Washington 5, D. C.

March 12, 1955

Chesapeake and Colorado Uranium Corporation,
909 Sixteenth Street, N. W.,
Washington 6, D. C.

Gentlemen:

We have examined the following financial statements of Chesapeake and Colorado Uranium Corporation, Washington, D. C., Statement of Assets and Capitalized Expenses, Statement of Liabilities, Statement of Capital Shares as of March 8, 1955, Statement of Cash Receipts and Disbursements for the period September 9, 1954 to March 8, 1955 and the related schedules referred to therein.

Our examination was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

As the mining activities of the Corporation are still in the development and exploratory stage, all expenses incurred by the Corporation have been capitalized and are included as a separate item in the Statement of Assets and Capitalized Expenses (Exhibit A).

In our opinion, the financial statements enumerated above present fairly the financial position of Chesapeake and Colorado Uranium Corporation as of March 8, 1955 in conformity with general accounting principles properly applied.

We hereby consent to the use of this opinion by you in your registration statement filed with the Securities & Exchange Commission, and the use of our name under "Experts" in the prospectus.

COUNCILOR, BUCHANAN, MITCHELL & HAYES
Certified Public Accountants

[SEAL]

Exhibit A

CHESAPEAKE AND COLORADO URANIUM CORPORATION

(A Delaware Corporation)

STATEMENT OF ASSETS AND CAPITALIZED EXPENSES

March 8, 1955

	Common Shares to Be Issued to Promoters Therefor		
CURRENT ASSETS:			
Cash in Banks		$16,323.10	
Subscriptions Receivable		25,629.50	$41,952.60
FIXED ASSETS:			
Acquired from Promoters:			
Automobiles and Trucks	16,633	$ 1,913.30	
Scientific Equipment	5,691	654.46	
		$ 2,567.76	
Acquired from Others:			
Drilling Equipment		$24,229.44	
Caterpillar Tractor		14,651.28	
Automobiles and Trucks		10,885.73.	
House Trailer		3.494.89	
Scientific Equipment		917.43	
Camp Equipment		3,636.55	
Office Equipment		540.45	
		$58,355.77	60,923.53
CLAIMS AND OPTIONS (Schedule 1):			
Acquired from Promoters	183,696	$21,125.00	
Acquired from Others		57,400.00	78,525.00
CAPITALIZED EXPENSES:			
Incurred in Transactions with Promoters:			
Travel, Hotels and Meals	83,389	$ 8,195.48	
Road Building and Assessment Work	134,460	8,300.00	
Salaries and Wages	7,518	722.81	
Surveying	65,216	5,687.50	
Geologists' Fees	29,775	3,424.15	
Legal and Accounting	55,121	6,324.87	
Mining and Camp Expense	12,306	1,402.13	
Automobile Expense and Equipment Rental	19,596	2,196.89	
Incorporation Expense	5,474	629.55	
Maps and Prints, Recording Fees and Assay Reports	5,289	559.07	
Telephone, Office Supplies and Other Miscellaneous Expense	6,805	771.99	
		$38,214.44	
Incurred in Transactions with Others:			
Travel, Hotels and Meals		$ 2,747.09	
Salaries and Wages		24,464.76	
Surveying		3,789.86	
Geologists' Fees		4,137.12	
Legal and Accounting		18,242.62	
Mining and Camp Expense		3,965.51	
Automobile Expense and Equipment Rental		5,267.58	
Incorporation Expense		3,302.33	
Insurance		1,650.61	
Maps and Prints, Recording Fees and Assay Reports		849.06	
Telephone, Office Supplies and Other Miscellaneous Expense		3,971.06	
		$72,387.60	110,602.04
TOTAL	630,969(1)		$292,003.17

(1) Additional shares of 397,031 were issued to promoters for cash paid into the Corporation. See Exhibit C.

of its preparation. Since that time additional discoveries have been made. Accordingly, the possibility exists that some of these claims may lie within the geological ore producing conditions found in the Belt.

No representation is intended or made that the U. S. Government, or any department or agency thereof or the geologists mentioned above have explored or discovered any uranium or other valuable minerals on the claims or leases of Chesapeake and Colorado Uranium Company. No representation is intended or made that ore bodies which exist on other properties in the Uravan Belt and Moab areas extend to or underlie the Company's properties, or that ore-bearing strata reported to be the host rock of uranium ores on other properties in the area, if underlying the Company's properties, will necessarily or probably be productive of such ores on the Company's properties.

MARKET FOR URANIUM

At the present time, by law, the only purchaser of uranium-bearing ores is the Atomic Energy Commission. Because of the strategic importance of uranium and in an effort to stimulate the search for and production of domestic uranium, the United States Government, through the Atomic Energy Commission, has guaranteed the market for domestically produced uranium ores through March 31, 1962.

Briefly, the basic prices range from $1.50 per pound of uranium oxide (U_3O_8) for ores assaying 0.10% of uranium oxide (2 pounds per short ton) to $3.50 per pound of uranium oxide for ores assaying 0.20% (4 pounds per ton) or more. Ores assaying 1.0% uranium oxide yield 20 pounds of uranium oxide per ton.

In addition, a bonus equal to the above basic price per pound is paid on the first 10,000 pounds of contained uranium oxide. Also, premium payments are made at the rate of 75¢ per pound for each pound of uranium oxide in excess of 4 pounds per short ton with an additional premium of 25¢ per pound for each pound in excess of 10 pounds.

In addition to the premium payments a development allowance of 50¢ per pound of uranium oxide is granted in recognition of the expenditures necessary for maintaining and increasing developed reserves of uranium ores. Also, a haulage allowance of 6¢ per ton mile up to 100 miles for transportation from the mine to the A.E.C. purchase depot. All of the Company's claims are less than 100 miles from the ore buying station at Grand Junction, Colorado, the Blue Creek Group of claims being 20 miles from the U. S. Vanadium Corporation buying station at Uravan, Colorado.

Further, in most uranium ores found in the Colorado Plateau region some vanadium (V_2O_5) is also found and is purchased for 31¢ per pound of vanadium up to 10 pounds for each pound of uranium oxide contained in the ores.

There are certain restrictions on the uranium-bearing ores which will be purchased, including that it must contain at least 0.10% (2 pounds per short ton) uranium oxide and must not contain excessive lime ($CaCO_3$) (over 3 parts lime to 1 part vanadium, or a total of more than 6% lime). Where the lime content exceeds 6%, a penalty is imposed of $1.00 per ton base charge plus 30¢ for each 1% (20 pounds) or fraction thereof of lime. These penalty payments are deducted by the A.E.C. from the purchase price of the uranium ores bought.

Although no assurance can be given with respect to future A.E.C. policy on uranium, it seems reasonable to assume that its present policy will be continued for the foreseeable future.

The recent revision of the Atomic Energy Act ending the Government monopoly of this vital industry points to a greater and more rapid development of civilian applications of this new source of energy. A lot of scientific spadework has already been done and continues to be done.

Many civilian applications, such as the growing use of radioactive isotopes, have received wide recognition. Possibly the most important recent development is the proposed use of atomic energy

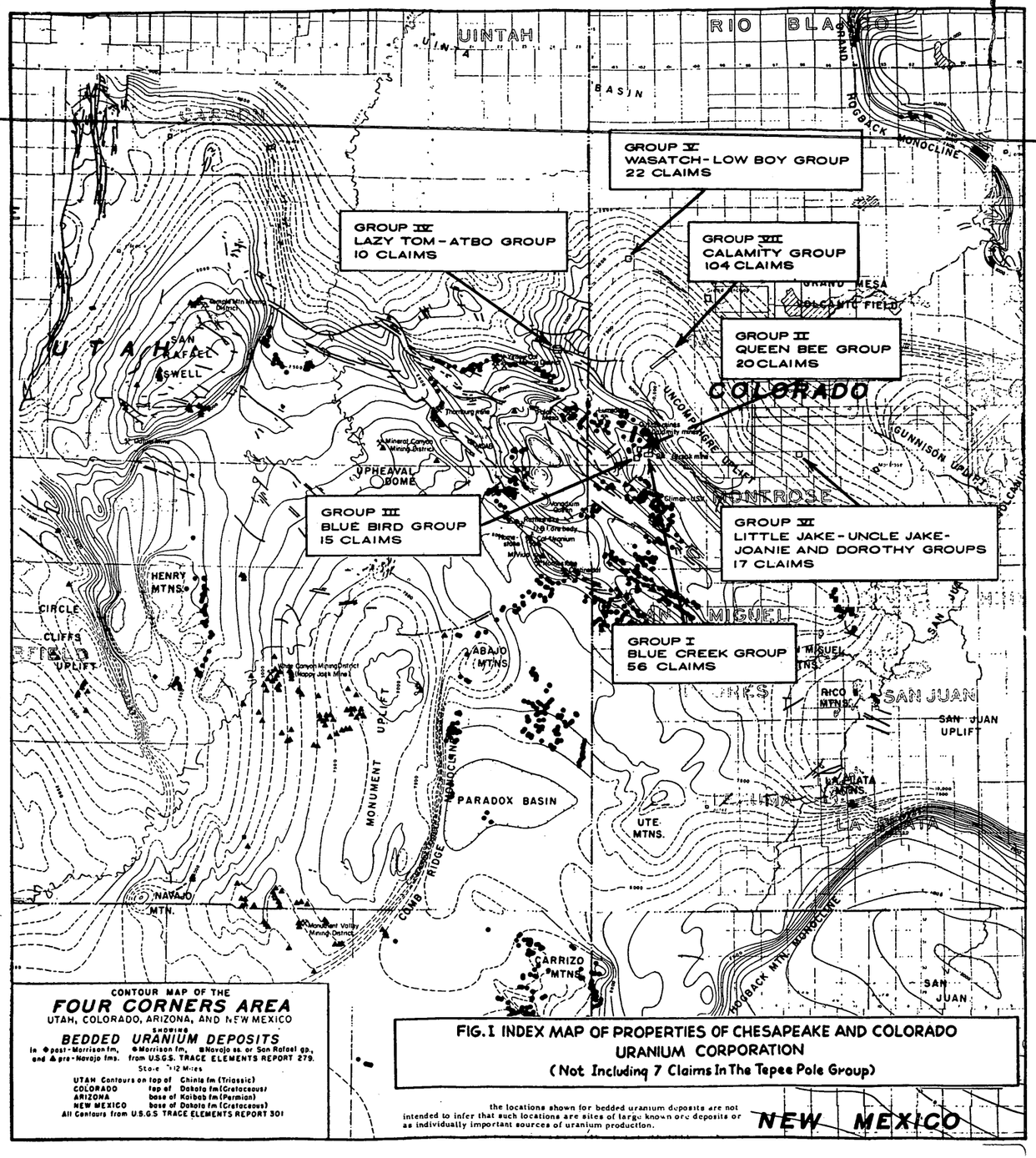


FIG. I INDEX MAP OF PROPERTIES OF CHESAPEAKE AND COLORADO URANIUM CORPORATION
(Not Including 7 Claims In The Tepee Pole Group)

In connection with the underwriting arrangements the Company agreed to sell 40,000 shares of its Common Stock to the Underwriters at the price of 50¢ per share. In addition, four of the principal stockholders agreed to sell the Underwriters 85,000 shares of their stock at a price of 11½¢ per share. In return for this sale by these principal stockholders the Company agreed to sell an additional 54,992 shares to them at a price of 50¢ per share and 25,000 of its 40,000 remaining authorized Warrants at a price of 1¢ per Warrant. The details of these transactions are set forth in the "Underwriting Agreement" on page 30.

In connection with the purchase of the claims in the Blue Creek Group from Messrs. Wise, Devenney and Foster, the Agreement provides that $8,000 of the $16,000 purchase price for the 17 claims on which the title is acceptable to the Company shall be paid in cash, which has been paid, and the remaining $8,000 in stock of the Company at the agreed price of 65¢ per share. Accordingly, 12,308 shares of the Company's stock were issued to Messrs. Wise, Devenney and Foster. In addition, the Company has contracted with these persons to purchase 13 additional claims included in the Blue Creek group, when and as the titles thereto are cleared of defects (see caption "Titles"). The Company will pay Messrs. Wise, Devenney and Foster $500 in cash and $500 in Common Stock of the Company at the agreed price of 65¢ cents per share for each claim.

Certain equipment purchases were made from companies with which some of the principals of the Chesapeake and Colorado Uranium Corporation are connected, as follows: On the balance sheet an item of equipment in the amount of $60,923.53 is shown. Of this total, Francis M. Tompkins had the Chas. H. Tompkins Co. purchase equipment for the account of the Chesapeake and Colorado Uranium Corporation in the amount of $30,334.70, and these items have been turned over to the Chesapeake and Colorado Uranium Corporation at the Chas. H. Tompkins Co.'s actual cost (without commission). A used compressor, wagon drills, and minor parts were purchased from Palisades Constructors, Idaho Falls, Idaho, and a core drill, wagon drills, and minor parts were purchased from Jones-Tompkins at Old Hickory (Tennessee) Lock and Dam. The total of these purchases is $18,148.58, and the charge therefor to Chesapeake and Colorado Uranium Corporation was the same as the depreciated or book value of Palisades Constructors and Jones-Tompkins. Of the balance of the equipment purchased, amounting to $12,440.25, $9,692.39 was purchased by the Tompkins-Farris Mining Company and Messrs. Tompkins and Farris as individuals, and $2,747.86 by the Chesapeake and Colorado Uranium Corporation. Items purchased by the Mining Company or by Messrs. Tompkins and Farris as individuals, have been transferred to the Uranium Corporation at their actual cost. These equipment purchases were made at prices considered favorable to Chesapeake and Colorado Uranium Corporation. None of the interested parties from whom it obtained the equipment received a profit or commission on the transaction.

Palisades Constructors and Jones-Tompkins are joint ventures, consisting of J. A. Jones Construction Company, Charlotte, North Carolina, and the Chas H. Tompkins Co., which have built various dams and buildings together. Mr. Edwin L. Jones, a Director, is the President of J. A. Jones Construction Company, and Mr. Francis M. Tompkins, President of this Corporation, is a Vice-President of Chas. H. Tompkins Co.

The 7 principal holders of the Company's stock have agreed with the Company not to publicly offer any of their presently owned stock in the Company, or to seek to dispose of any of such stock pursuant to an exemption under Regulation A of the Rules and Regulations of the Securities and Exchange Commission or a Registration Statement and Prospectus pursuant to the Securities Act of 1933, as amended, for a period of 6 months after the effective date of the Registration Statement covering the shares being offered.

This agreement also provides that, upon expiration of the 6 months period, upon written request of such principal stockholders, jointly or severally, the Company will, at its own expense, prepare and file a Registration Statement and Prospectus, or such other forms or documents, as shall be required by the Securities Act of 1933, as amended, or the Rules and Regulations of the Securities and Exchange Commission, for a public offering of such stock. The Company does not undertake to bear any of the

other costs of such a public offering, including underwriting commissions or expenses, printing or advertising of prospectuses, or fees or expenses of counsel for the persons or groups making such public offering. The agreement does not contain any provision or assurance when, or if, these stockholders will make such a public offering.

The agreement provides for the stamping of an appropriate legend on any certificates issued for certificates surrendered by the signers of the agreement.

The stockholders who signed this agreement with the Company are, Messrs. Francis M. Tompkins and Joe D. Farris, the promoters; Martin, Ansberry & Long, General Counsel to the Company; Peter Morgan & Co., S. D. Fuller & Co, and Vermilye Bros., the Underwriters, and the H Street Building Corporation, a principal stockholder.

No representation is intended or made that these principal stockholders, or any of them, will necessarily or probably, 6 months after the effective date of the Registration Statement covering the shares presently being offered, or thereafter, make a public offering of any of their said shares.

Portions of the reports of these two geologists, who assisted in the selection of, or prepared reports on, these claims or groups, are quoted herein in connection with the discussion of the claim groups. Their full reports and their consent to use of their reports in this Prospectus are on file with the Securities and Exchange Commission and are available for inspection at the office of the Commission. It should be noted, however, that their reports are based on and discuss the number of claims which the Company held at the time the claims were examined and the reports prepared. In the meantime, the Company's employees have surveyed the claims and staked additional claims. Accordingly, the Company now holds more claims than are discussed in these reports. Also, new names have been assigned to some of the claims and groups. For this reason, Roman Numbers I through VIII have been assigned to the various claim groups for clarity.

In the discussion of the separate claim groups and excerpts from the reports of the geologists, reference is made to the proximity of known uranium producing mines on other properties in the area to various of the Company's claims, and to the fact that geological formations known to be the host of uranium-bearing ores in other properties in the area underlie some of the Company's properties.

No representation is intended or made that ore bodies which may exist on other properties in the area extend into the Company's property or that geological formations known to carry uranium bearing ores in the area will necessarily or probably be productive of such ores on the Company's properties.

Group I Claims

This group now consists of 56 claims designated as the Blue Creek Group and located in Mesa County, Colorado, approximately 20 miles northeast of Uravan, Colorado, and the same distance southeast of Gateway. They are located in Townships 49 and 50 North, Ranges 17 and 18 West. The U. S. Vanadium Corporation has an ore buying station at Uravan, about 20 miles away. There are county and Atomic Energy Commission roads between these claims and the ore buying station.

These claims are located on the northwest flank of Blue Mesa and extend down to Blue Creek. The presence of fault zones lying transverse to the claims and the erosion by Blue Creek of the face of the mesa has exposed from the floor of the creekbed up to the top of the mesa all of the principal rims in the Morrison formation known to be capable of bearing uranium contained ores. Blue Mesa is the third of a row of mesas on the southwest flank of the Uncompahgre Uplift, each being a well-known mining district. The other mesas are known as Calamity and Outlaw; Climax, U. S. Vanadium and Vandium Corporation of America all have important claims and mines over a large part of these mining districts.

The Blue Creek Group also surrounds, to a large extent, the "Black Streak Mine", which was originally operated about 30 years ago to mine carnotite ore for its vanadium content. When the uranium rush came to Colorado, it was reopened and has been a producer of uranium bearing ores, though intermittently operated, since that time. The Company's Raven claims abut this producing mine on the northeast, the Kenney, F.W.D. and Murphy claims on the northwest and west, and the Bimbo claims on the southeast.

The Company purchased 39 of these 56 claims for a total consideration of $38,000. (See Schedule I of the "Financial Statements" for purchase details, and "Titles" for details of certain title questions on 15 of these claims). The 17 additional claims were staked by employees of the Company or its predecessor.

Additional claims are currently being located as unstaked areas are disclosed by surveys being conducted on existing properties. Although these claims will also become the property of the Company, only those as to which location certificates have been formally filed are included herein. There are no royalties payable on any of the Blue Creek claims.

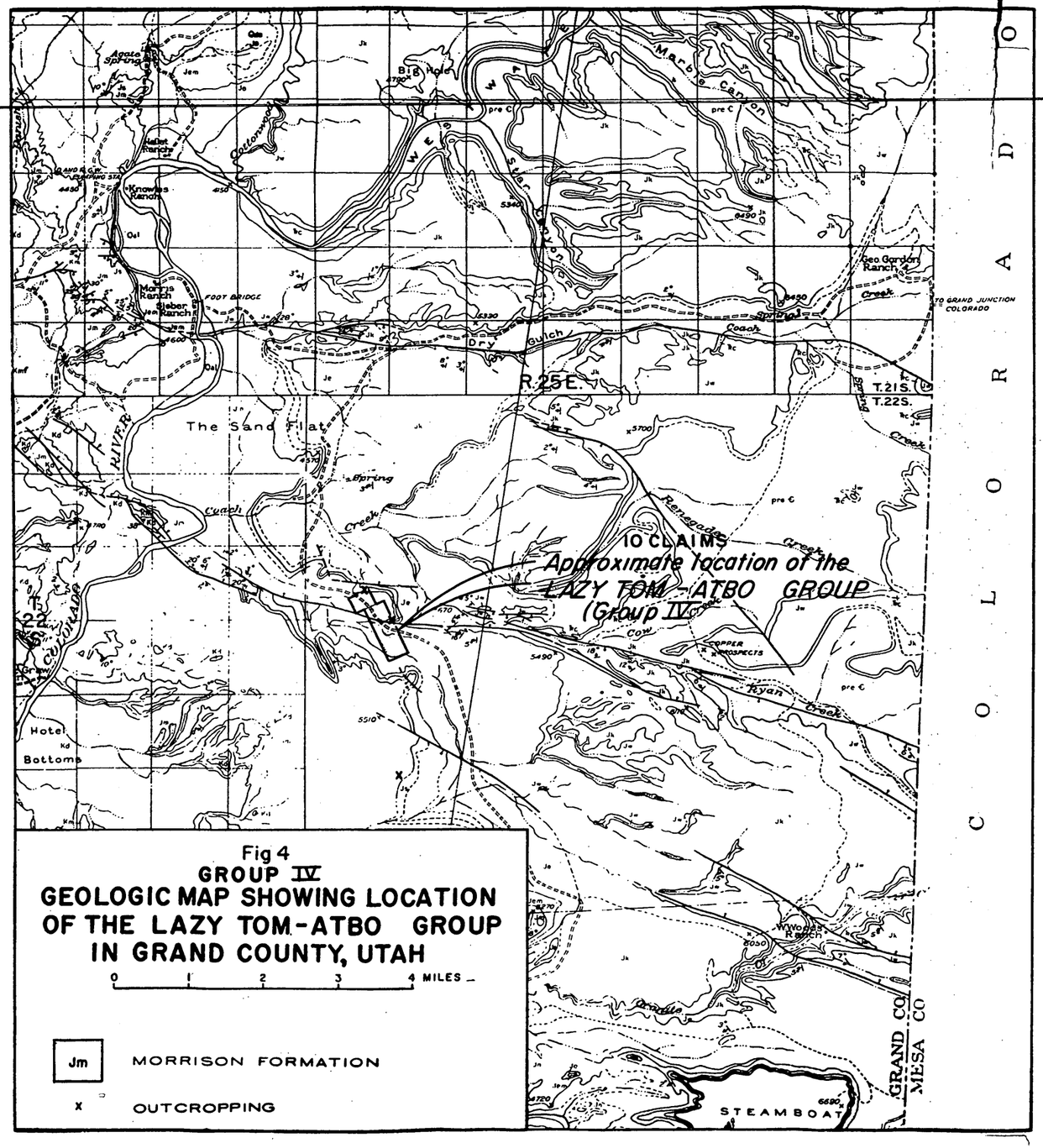


Fig 4
GROUP IV
GEOLOGIC MAP SHOWING LOCATION OF THE LAZY TOM-ATBO GROUP IN GRAND COUNTY, UTAH

0 1 2 3 4 MILES

Jm MORRISON FORMATION

x OUTCROPPING

The Underwriters have also agreed to use their best efforts to find purchasers for the remaining 500,000 shares being offered.

The Underwriters have a period of 37 days from the effective date of the Registration Statement in which to purchase or find purchasers for said stock, unless the Agreement is terminated by them for specified market or world conditions, or if, within thirty days after the effective date, any material factor affecting the marketability of the stock being offered would, in the sole and unrestricted judgment of any underwriter, adversely affect the offering, sale, or delivery of the stock or render the offering, sale or delivery at the proposed public offering price impracticable or inadvisable.

The terms of the Underwriting Agreement are not such as to constitute a firm commitment on the part of the Underwriters to purchase any of the securities being offered, and the Company therefore has no assurance that all or any of the securities being offered will be sold.

The Underwriting Agreement provides that the Underwriters shall receive a commission of 12½¢ per share for each share sold and may sell shares to another dealer or dealers, members of the National Association of Securities Dealers, and in such event shall allow such dealer or dealers a concession of 10¢ per share out of the commission allowed the Underwriters.

In addition, the Underwriters have the right to purchase pro rata 200,000 Warrants at a price of 1¢ per Warrant. It is further agreed, however, that the Underwriters will allow each dealer assisting them in the distribution of these shares the right to purchase 1 Warrant at the price of 1¢ per Warrant for each 10 shares sold by such dealer out of the 200,000 Warrants allotted to the Underwriters. These Warrants permit the holder thereof to purchase 1 share of the Common Stock of the Company at the public offering price of $1.00 for a period of 5 years from the effective date of the Registration Statement. These Warrants may permit the Underwriters or their designees, to share in the success, if any, of the enterprise without bearing a proportionate share of the risks thereof and to that extent may be considered as an additional sales cost.

It is further provided in the Underwriting Agreement that the Company has the right to issue Warrants to its officers, directors and employees similar to those issuable to the Underwriters not to exceed an additional 40,000 Warrants.

The Company has no way of knowing at this time when the Warrants may be exercised. For the life of the Warrants the Company may be restricted in its favorable opportunities to obtain additional equity capital, if it should be needed, on more favorable terms for the shares covered by Warrants, since, at any time when the holders of such Warrants might be expected to exercise them, the Company would in all likelihood be able to obtain additional equity capital by a public offering on terms more favorable than those provided by the Warrants.

The Company agrees to bear the costs of printing the Prospectus, registering the issue with the Securities and Exchange Commission, advertising expenses, fees of the Transfer Agent, costs of printing the stock certificates, and the cost of qualifying the issue for sale in such states as the Underwriters and the Company may mutually agree upon, known as "Blue Sky" applications. In addition, the Company agrees to reimburse the Underwriters for their audited expenses in connection with the issue not to exceed $35,000 including fees of the Underwriters' counsel.

The Company has also agreed to indemnify the Underwriters in certain instances against any costs or liabilities incurred by reason of misstatements or omissions in the Registration Statement or Prospectus, and the Underwriters have agreed to indemnify the Company against any costs or liabilities incurred by reason of misstatements or omissions in material furnished by the Underwriters to the Company for use in the Registration Statement or Prospectus.

The obligations of the Underwriters are subject to certain conditions, including certain approvals by their counsel, the performance by the Company of its obligations under the Underwriting Agreement and the truth of certain representations made by the Company in the Underwriting Agreement, as well as unusual market conditions.

In the event the Company determines to offer or sell to the public any securities (as defined by the Securities Act) within 5 years from the date of the Underwriting Agreement, the Underwriters are granted an exclusive option to negotiate with the Company for the purchase or right to distribute as a public offering the securities which are proposed to be offered.

The Underwriters are entitled to designate a nominee for election as a director. Mr. Lathrop Vermilye, the Underwriters' nominee, has been elected as a director of the Corporation.

Peter Morgan & Co., one of the Underwriters, has purchased 25,000 shares of the Common Stock of the Company at a price of 11½¢ per share, a total consideration of $2,875.00. In addition, the Company has agreed to sell to the Underwriters 40,000 shares of its authorized but unissued Common Stock at a price of 50¢ per share. Four of the principal stockholders of the Company, Francis M. Tompkins, the H Street Building Corporation, Joe D. Farris and Martin, Ansberry & Long, have agreed to sell 85,000 shares of the stock held by them to the Underwriters at a price of 11½¢ per share; each such stockholder to sell the number of shares which his individual holdings bears to the total number of shares held by the said four principal stockholders as a group. In return for this agreement of the four principal stockholders to sell 85,000 shares of their stock to the Underwriters at a price of 11½¢ per share, the Company has agreed to sell 54,992 shares of its authorized but unissued Common Stock to the said principal stockholders at a price of 50¢ per share, in the proportion which they sold to the Underwriters. The Company has also agreed to sell such principal stockholders 25,000 of the 40,000 remaining Warrants authorized, at a price of 1¢ per warrant.

TRANSACTIONS WITH PROMOTORS AND OTHERS

The founders and promoters of the Company, Messrs. Tompkins and Farris, received stock of the Company on the basis of their cash contributions to the predecessor venture, Tompkins-Farris Mining Company, and to the Company. Mr. Tompkins contributed $49,561.43 to the Mining Company, for which he received 430,969 shares of Chesapeake and Colorado Uranium Corporation stock. He also contributed $45,658.57 directly to the Corporation, for which he received 397,031 shares of its stock. Mr. Farris, who worked full-time for the Mining Company from December 1953 through August 1954 without pay, contributed $12,345.77 in cash to the Mining Company, for which he received 200,000 shares of the Uranium Corporation's stock. The per-share cost to Mr. Tompkins was 11½¢ and to Mr. Farris 6.17¢.

In consideration of the issuance of such shares to the partners, the Tompkins-Farris Mining Company, and Messrs. Tompkins and Farris as individuals, made a general assignment to the Company of all their right, title and interest in and to the claims, options, equipment and other property held by the partnership.

The H Street Building Corporation, of which Mr. Tompkins is a minority stockholder and which put up some of the early risk capital, has purchased 415,000 shares of the Company's stock at the price of 11½¢ per share. The full consideration of $47,725.00 has been paid to and credited on the books of the Company.

In addition, since the Company was organized, and prior to this offering, a few private investors closely associated with Mr. Francis M. Tompkins, some of whom are serving as officers or directors, have purchased 49,700 shares of the Company's stock at the agreed price of 50¢ per share, a total consideration of $24,850.00, which has been paid to and entered on the books of the Company.

The fact that the H Street Building Corporation, certain members of Mr. Tompkins' family, or persons or interests associated with them, have invested in, or become officers or directors of Chesapeake and Colorado Uranium Corporation is not intended as, nor should it be taken as, an assurance by such persons or corporations, as the case may be, jointly, or severally, of the success of this speculative venture.

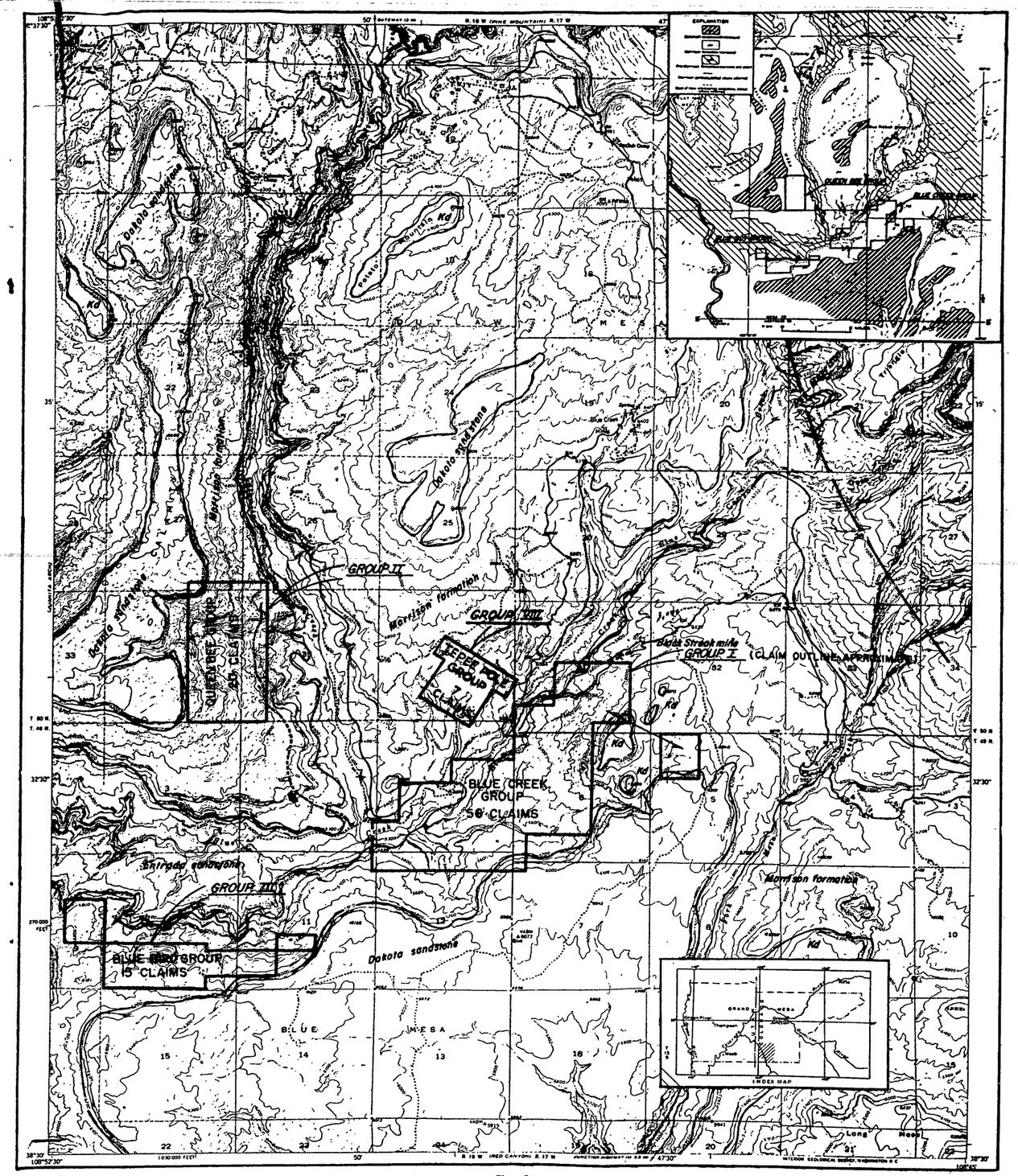


Fig. 3

GENERALIZED GEOLOGIC AND TOPOGRAPHICAL MAP OF THE BLUE CREEK, TEPEE POLE, QUEEN BEE, AND BLUE BIRD GROUPS, MESA COUNTY, COLORADO

Continuing his report, Dorsey Hager made the following statements regarding the Queen Bee claims:

"GROUP II—Queen Bee. 19 claims.

(Figs. 1 and 3)

The Queen Bee claims lie on the east flank of Calamity Mesa and west of Calamity Creek and lie in Section 34, Township 50 North, Range 18 West, Mesa County, Colorado. The Calamity mines and numerous other workings occur in Sections 1, 10, and 11, on the north end of Calamity Mesa, a distance of three to three and one-half miles north and northwest of the Queen Bee claims. I visited several of these small mines and they were shipping from 20 to 25 tons of ore daily. These mines are producing uranium ore which also runs high in vanadium. The principal ore occurrences there are found near the upper part of the Salt Wash sandstone (See Fig. 2) which also occurs under the Group I claims near the surface to depths of 300 feet. Checking along the outcrops with the scintillometer shows definite signs of radioactivity at a number of places. However, only test drilling will prove or disprove the occurrence of commercial ore bodies.

Two and one-half miles south, in the southwest portion of Section 2, Township 49 North, Range 18 West, there is an old prospect from which some uranium ore was taken. This ore lies in the basal sand of the Salt Wash member. Also, one mile due east of the Queen Bee claims across Calamity Creek ore was found in the basal sandstone of the Salt Wash. In the southeast of Section 25, Township 50 North, Range 18 West, two and one-half miles east of the Group II claims, uranium ore occurs in a middle sandstone of the Salt Wash member. The basal Wingate-Chinle contact lies at a depth of 1000 feet. Ore may occur at this contact but so far it has not been tested in this area."

GROUP III CLAIMS

This group consists of 15 claims known as the Blue Bird Group, Nos. 1 through 15, which are located in Sections 9, 10 and 11, Township 49 North and Range 18 West, Mesa County, Colorado. This group, like the Blue Creek Group, is located on the northwest flank of Blue Mesa and all the known potential uranium producing rims of the Morrison Formation are exposed from the top of the Mesa down to Blue Creek. This group is approximately one mile southwest of the Blue Creek Group, very close to a recent strike by the Utida Uranium Company. There are no royalties on the Blue Bird claims, which were purchased along with the Group II claims for a total consideration of $18,000.00.

Continuing his report, Dorsey Hager made the following statements regarding the Blue Bird claims:

"GROUP III—Blue Boy (Blue Bird). 15 claims.

(Figs. 1 and 3)

This group of fifteen (15) claims lies in Sections 9, 10, and 11, Township 49 North, Range 18 West, Mesa County, Colorado, just south of Blue Creek and one and one-half miles south of the Queen Bee group of claims. They are contiguous to the Blue Creek claims to the east.

The Summerville shale and Entrada sandstone outcrop at the base of these claims. The Salt Wash sandstone member of the Morrison overlies the Summerville formation. The Blue Boy claims which extend nearly to the top of the Blue Mesa, cover the full section of outcropping and buried Salt Wash beds which can be tested at the outcrops, and by drilling to depths of 700 feet.

The sandstone members of the Salt Wash are thick and highly lenticular, and are similar in type to those found ore-bearing in the productive Calamity Mesa area farther north and also northeast where the old Blue Ribbon mining reserve occurs.

beneficially more than 10% of the outstanding Common Stock of the Company, as well as the holdings of all promoters, directors, officers, and underwriters, as of March 8, 1955:

Name and Address	Type of Ownership	Amount Owned	Per cent of Class
Francis M. Tompkins 909 - 16th Street, N. W. Washington 6, D. C.	Record and Beneficial	828,000	50.2
H Street Building Corp.(1) 907 - 16th Street, N. W. Washington 6, D. C.	Record and Beneficial	415,000	25.2
Joe D. Farris(2) 133 South Fourth Street Grand Junction, Colorado	Record and Beneficial	200,000	12.1
Martin, Ansberry & Long(3) 1324 Wyatt Building Washington 5, D. C.	Record and Beneficial	120,000	7.3
Peter Morgan & Co.(4) 31 Nassau Street New York, New York	Record and Beneficial	25,000	1.5
T. F. Smith American General Ins. Co. Houston, Texas	Record and Beneficial	10,000	.6
Mr. and Mrs. Edwin L. Jones P. O. Box 966 Charlotte, North Carolina	Record and Beneficial	10,000	.6
Howard Ritter 909 - 16th Street, N. W. Washington 6, D. C.	Record and Beneficial	800	.05
Lamar C. LeBron 1209 Delaware Trust Bldg. Wilmington, Delaware	Record and Beneficial	2,000	.1
Joseph R. Greenwood 930 Tower Building Washington, D. C.	Record and Beneficial	6,000	.4
Vaughan B. Connelly Hunting Towers Alexandria, Virginia	Record and Beneficial	2,500	.2
William H. Singleton 1240 Jefferson Davis Highway Arlington, Virginia	Record and Beneficial	5,000	.3

Name and Address	Type of Ownership	Amount Owned	Per cent of Class
William J. McManus Chesapeake & Potomac Tel. Co. Washington, D. C.	Record and Beneficial	2,000	.1
Lytle Brown, Jr. 133 South Fourth Street Grand Junction, Colorado	Record and Beneficial	400	.02

(1) H Street Building Corporation is a closely held corporation of the Tompkins family, owning real estate and other investments.

(2) Joe D. Farris devoted his full-time efforts, without salary or other compensation, to the affairs of Chesapeake and Colorado Uranium Corporation and the predecessor partnership (Tompkins-Farris Mining Co.) from December 1953 through September 1, 1954.

(3) General Counsel; T. Peter Ansberrry, a partner, is a director; Gillis W. Long, a partner, is Secretary.

(4) Peter Morgan & Co. is one of the Underwriters of these securities. The other Underwriters are S. D. Fuller & Co. and Vermilye Brothers. Certain of the principal stockholders have agreed to sell the Underwriters 85,000 shares of the stock held by them and the Company has agreed to sell the Underwriters 40,000 shares (See "Underwriting Agreement" and "Schedule 2" of the Financial Statements.)

CAPITALIZATION

The capitalization of the Company (a) authorized, (b) outstanding at March 8, 1955, and (c) to be outstanding upon consummation of the financing contemplated by this Prospectus is as follows:

Title of Class	Amount Authorized	Amount Outstanding as of Mar. 8, 1955	Amount to be Outstanding Upon Completion of Present Financing
Common Stock par value 5¢ per share	2,995,000 shs.	1,650,008	2,745,000 (1)

(1) In addition to one million shares offered hereby, includes 94,992 shares subscribed but not issued. Does not include 240,000 shares reserved for warrants and 10,000 shares reserved for issuance upon clearing of titles to certain claims. (See "Underwriting Agreement" and "Schedules 1 and 2" for details.)

DESCRIPTION OF THE COMMON STOCK

The authorized capital stock of the Company consists solely of Common Stock, each share of which has equal voting rights and participates equally in such dividends as may be declared by the Board of Directors of the Company out of funds legally available for the payment thereof. Upon liquidation, holders of Common Stock are entitled to share ratably in the assets available for distribution. Holders of Common Stock have no preemptive, conversion or subscription rights, nor any liability for further calls or assessments. There are no redemption or sinking fund provisions with respect to the Common Stock.

UNDERWRITING AGREEMENT

The Company has employed Peter Morgan & Co., S. D. Fuller & Co., and Vermilye Bros., herein referred to as the Underwriters (and such other underwriters as may become parties to the Underwriting Agreement) as exclusive agents to sell 1,000,000 shares of its authorized but unissued Common Stock at an initial public offering price of $1.00 per share. The Underwriters have agreed to purchase or find purchasers for 500,000 shares of said stock in the following respective amounts:

Name	Address	Number of Shares
Peter Morgan & Co.	31 Nassau Street, New York, N. Y.	225,000
S. D. Fuller & Co.	39 Broadway, New York, N. Y.	225,000
Vermilye Brothers	30 Broad Street, New York, N. Y.	50,000

In his report of October 8, 1954, Dorsey Hager made the following statements regarding the Blue Creek claims:

"GROUP I—Blue Creek. 50 claims.

(Figs. 1 and 3)

This Group consisting of fifty (50) claims called the Blue Creek claims are located on the east side of Blue Creek, some 66 miles from Grand Junction. A good road leads to the claims which are all relatively accessible.

Operating Mines—the Outlaw including the Climax Mines and the Calamity groups of mines—occur 4½ to 5 miles northwest of these claims. The old Blue Ribbon, a rich ore reserve, lies only two miles north of the Blue Creek claims. The north part of these claims is contiguous to old prospects that were mined for vanadium during World War I and for vanadium and uranium during World War II. These prospects are all shallow or near surface operations in one of the upper Salt Wash sandstones associated with organic shales. This sandstone lies 350 feet, more or less, above the base of the Salt Wash member or 100 to 150 feet below the Brushy Basin Shales.

One prospect 35 feet deep called the Black Streak mine in the northeast quarter of Section 31, Township 51 North, Range 17 West, Mesa County, Colorado, is at present mining good commercial ore from an ore body 2½ to 5 feet thick and only 25 feet deep. The owners at the time of the writer's visit were shipping 30 tons of ore weekly from their two claims which lie immediately contiguous to the claims in Group I.

The occurrence of this ore averaging 0.4% to 0.6% uranium or 8 to 12 lbs. of ore per ton, and 4% to 6% vanadium consisting of carnotite and black ore uraninite leads to a reasonable belief that careful testing by tunneling and drilling may open ore bodies in the thick sandstones and associated shales in the adjoining properties of Group I.

Some of the shallow prospects found north of Group I occur in sandstone and gray shales 350 feet above the Entrada sandstone (see Fig. 2) and about 100 feet below the top of the Salt Wash member. These beds dip southwest 4° to 5° or 370 to 450 feet per mile under the Group I claims, but the surface also slopes rapidly so that while the sandstones dip faster than the surface even at the deepest parts, the Salt Wash sandstones can all be penetrated around 600 feet, the top ones much shallower on the Group I claims.

The Group I claims lie southwest of a fault with a 500-foot down-throw to the southwest. What effect it had on the source of uranium is unknown.

The claims of Group I farthest southwest, lie just north of the syncline between the Uncompaghre Uplift and the La Sal Mountains which might well cause richer accumulations of ore there."

GROUP II CLAIMS

This group now consists of 20 claims designated as the Queen Bee Group and is located in Mesa County, Colorado. The claims lie on the east flank of Calamity Mesa, West of Calamity Creek, and almost directly west of the Blue Creek Group. They are located in Section 34, Township 50 North, Range 18 West. They were purchased from the original staker, along with the Bluebird Group hereinafter described, for a total consideration of $18,000.00 (See Schedule I of the "Financial Statements" for purchase details, and "Titles" for details of certain title questions on 4 of these claims). There are no royalties payable on this group.

GROUP V CLAIMS

This group consists of 22 claims designated as the Wasatch-Low Boy Group, and is located in Township 10 South, Range 102 West, Mesa County, Colorado. The claims are located 25 miles from Grand Junction, Colorado, and only 1½ miles from the Denver and Rio Grande Railroad.

The area of these claims is contained generally under a mesa surrounded by an "S" bend of the Colorado River, the upper part of the "S" being the most northwesterly bend of the river. The canyon of the river is approximately 800 feet deep at this point (i. e., from the top of the mesa to the normal river level). On these claims there is a road down to a projecting lower mesa. This lower bench is at about the middle of the Morrison formation; thus, at this point, the top half of the Morrison is absent. Below the roads on this lower bench on the face of the canyon, there are two, and in some places three, rims exposed. The uppermost of these is approximately forty (40) feet below the lower bench. There are outcroppings of the Morrison formation on all three sides of this lower bench, exposed by erosion of the River creating the canyon. There are also several flexures exposing mineralization at the base of the Morrison in the Draw between the Wasatch and the Lowboy claims. There are no royalties on these claims, which were purchased for a total consideration of $7,000.00.

Continuing his report, Dorsey Hager made the following statements regarding the Wasatch-Lowboy claims:

"GROUP V—Wasatch-Low Boy. 22 claims.

(Fig. 1)

This group of claims lies 25 miles from Grand Junction and only one and one-half miles from the main line of the Denver and Rio Grande Western Railroad. U. S. Highway 40 parallels the railroad on the south. A short dirt road 1½ miles long takes one into the heart of the claims.

These claims are unsurveyed[1] and could best be described as located on the north flank of the Uncompahgre Uplift (to the east of the northern-most bend of the Colorado River before it flows into Utah), Township 10 South, Range 102 West, Mesa County, Colorado. Immediately across the Colorado River to the south and west is the Colorado National Monument, which land has been withdrawn by the Atomic Energy Commission.

These claims cover beds ranging from the Brushy Basin shale above the Salt Wash member to the Entrada sandstone, a range of 800 feet or more in elevation in this locality. The total thickness of the Morrison beds is, however, thinner here than on the southwest flank of the Uncompahgre Uplift.

These claims lie on a terracing or nose which dips northwest with a drop of 2½° per mile. The nose flattens to the southwest for nearly a mile but dips very rapidly to the northeast with dips from 8° to 45° just outside the group of claims.

Some mineralization was found at three places at the base of a 20-foot sandstone lying 200 feet above the Entrada sandstone and 200 feet below the Brushy Basin shale.

Assays of 0.15% to 0.2% uranium show at three outcrops. The geiger counter showed good activity. This group of claims deserves to be carefully prospected in the Salt Wash beds and in the Entrada beneath them as the Entrada outcrops near the center of the claims."

Mr. Charles Gill Morgan reported the following with regard to the Wasatch-Low Boy claims:

"This prospect is located on the northwest nose of the Uncompahgre Uplift and, as described, all claims are north of the Colorado River in Township 10 South, Range 102 West, Mesa County, Colorado.

[1] These claims have been surveyed, and amended location certificates have been filed, since the date of Mr. Hager's report.

munition Plants. He is presently manager of the contractor's division, explosives department, Hercules Powder Company, in addition to being a member of the staff of the general manager of the explosives department, Hercules Powder Company.

T. PETER ANSBERRY: Director. Mr. Ansberry is a graduate of Georgetown University (where he served as editor-in-chief of the Georgetown Law Journal in 1941-42), a member of the Bar of the District of Columbia and the Supreme Court of the United States, and a partner in the law firm of Martin, Ansberry, & Long, Washington, D. C. A former Assistant United States Attorney, he has been in private corporate, financial and administrative law practice since 1945, except for a period of public service as deputy general counsel to the Economic Stabilization Agency in 1951-52. He is a former director and member of the Executive Committee of the Norfolk and Southern Railway Company (1947-48), chief counsel of Colonial Airlines, Inc., (1949-50). He is vice president and a director of the Professional Building Corporation and chairman of the Board and a director of Amuranium Corporation, Moab, Utah.

JOSEPH R. GREENWOOD: Director. Mr. Greenwood is a native of Washington, Indiana. He is a graduate of Indiana University, where he majored in Business Administration, the George Washington Law School and Georgetown Law School. Prior to his entry into the Service he served as an Attorney for the Federal Power Commission (1933-1936) and from 1936 to 1942 as Senior Attorney, Regional Administrator and Assistant to the Chairman of the Securities and Exchange Commission for the states of Ohio, Michigan, Indiana and Kentucky. Since 1946 he has been in private law practice in Washington, D. C.

VAUGHAN B. CONNELLY: Director. Mr. Connelly, a native of Atlanta, Georgia, was graduated from Stanton Military Academy in 1921 and Georgia Tech in 1927. He has engaged in oil explorations in Oklahoma, Wyoming, Illinois, Indiana and Michigan, and formerly owned twenty-five percent of the Old Dutch Refining Company of Muskegon, Michigan, and served as a Director and Chairman of the Executive Committee. He has also served as a Director of Michigan Tankers and McClure Oil Company. He has successful real estate properties in Virginia, Maryland and Florida. Developer and owner of Hunting Tower Apartments, sections 1, 2 and 3, in Alexandria, Virginia, he owns and heads the Los Olas Inn Corporation which is presently planning construction of a luxury hotel and shopping area on the beach of Fort Lauderdale, Florida. He also is interested with others in development of the Emerald Beach properties in Nassau, Bahamas Islands.

WILLIAM H. SINGLETON: Director. Mr. Singleton is President of the Wm. H. Singleton Company, Inc. of Arlington, Virginia. The Company specializes in the most technical and complex mechanical construction work such as the installation of all types of mechanical equipment and/or systems. The Company has performed mechanical work in connection with the construction of airfields, army and navy bases, Atomic Energy Commission facilities, hospitals, hotels, office buildings and industrial plants such as the Reynolds Aluminum Plant, Corpus Christi, Texas, and the Armstrong Cork Company, Macon, Georgia. Projects successfully completed under the general supervision of Mr. Singleton total in excess of $150,000,000.00.

WILLIAM J. MCMANUS: Director. Mr. McManus attended Emerson Institute and Georgetown University. In 1921 he entered the employment of the Chesapeake and Potomac Telephone Company, where he has served in various capacities of considerable responsibility. In 1947 he was appointed Vice President-Public Relations for the Company and is serving in this position at the present time. He is a member of the Washington Board of Trade, a Director of the Potomac Savings and Loan Association, the D. C. Chapter of the American Red Cross and the Advisory Board of Riggs National Bank, among others, a Trustee of the Boys' Club of Washington, and President of United Community Services.

LATHROP VERMILYE: Director. Mr. Vermilye is a graduate of Cornell University, and has been a partner and later sole proprietor of Vermilye Brothers, Investment Bankers, since 1933.

LYTLE BROWN: Chief Engineer. Mr. Brown attended Phillips Exeter Academy (Preparatory School), Exeter, New Hampshire, and Vanderbilt University, Nashville, Tennessee. From 1930 to

1940 he was engaged in the building of flood control projects on the Ohio and Mississippi Rivers, as well as Construction Superintendent on roads and bridges in Arkansas, Kentucky, Mississippi and Tennessee. During World War II, he was Superintendent of Construction of air fields in Alabama, Louisiana and Tennessee and water and sewer installations at Camp Campbell, Kentucky, also Assistant Project Manager of the Huntsville Ordnance project. In 1942-1943 he was Manager of three strip coal mining operations in Kentucky, as well as prospecting and analyzing ventures for the production of phosphate, manganese and iron. He served with the United States Navy from 1944-1945. Since 1946 he has been engaged as Construction Superintendent of mechanical installations, building construction and rock excavation for the prime contractor on the Arnold Engineering Development Center, Tullahoma, Tennessee. His experience covers approximately twenty-four years in all types of heavy construction equipment and its applications.

Except as noted in the footnote to the table next below, no officer, director or employee of the Company during the calendar year 1954 received remuneration in excess of $4,800.00. Some salaries are now being paid at a rate in excess of $4,800.00 per annum; but none of these salaries was started early enough in the year for total salary paid in 1954 to reach $4,800.00 Mr. Joe D. Farris, a promoter, Vice President and Field Manager of the Company, was placed on a salary of $12,000 per year beginning September 9, 1954, the date the Company was organized. Mr. Lytle Brown, Chief Engineer, is acting as part-time Consultant on a per diem basis and will continue in that capacity until his full-time services are justified. Mr. William Murphy, Mine Foreman, receives a salary of $7,800 per year since the date of incorporation, and Mr. Maxwell Sartain, hired October 24, 1954, as Field Geologist, receives a salary of $7,200.00 per year. It is not contemplated that any of the other officers or directors of the Company will receive any remuneration unless the Company is on a profitable operating basis.

The following table shows the aggregate remuneration received or to be received from the Company by each Director, Officer, and person whose salary exceeds the rate of $4,800.00 per annum.

Name	Capacities in which remuneration was or is to be received.	Remuneration: 1954	1955 Est.
Martin, Ansberry & Long	General Counsel(1)	$6,000.00(1)	$9,000.00(1)
Peter Morgan & Co., S. D. Fuller & Co., Vermilye Bros.	Underwriters	(See cover)(2)	(See cover)(2)
Joe D. Farris	Vice President & Director	$4,000.00	$12,000.00
Gillis W. Long	Secretary	(See below)(1)	(See below)(1)
T. Peter Ansberry	Director	(See below)(1)	(See below)(1)
Lytle Brown, Jr.	Chief Engineer	$1,000.00	$7,500.00
William Murphy	Mine Foreman	$2,800.00	$7,800.00
Maxwell Sartain	Field Geologist	$1,340.00	$7,200.00

(1) The total remuneration to be paid Martin, Ansberry & Long for legal services performed in connection with the organization of the Company and registration of securities with the Securities and Exchange Commission is $20,000.00 of which $6,000.00 was paid during the calendar year of 1954. The remainder of $14,000 is to be paid out of the proceeds of the offering. In addition, Martin, Ansberry & Long have a contract with the Company for the payment of $9,000.00 per year for serving as General Counsel of the Company. This contract is for a period of 18 months and becomes effective after the financing has been completed. Gillis W. Long and T. Peter Ansberry, partners in Martin, Ansberry & Long, are Secretary and a Director of the Company, respectively.

(2) Arrangements with the Underwriters are set out on the cover of this Prospectus, and in the section headed "Underwriting Agreement", on pages 28-30.

PRINCIPAL STOCKHOLDERS

The following table sets forth the holdings of Common Stock of each person owning of record or

Structurally, the Group III (Blue Boy) claims lie near the syncline between the La Sal Mountain Uplift and the Uncompaghre Uplift, and are well situated for possible ore carriers."

Group IV Claims

This group consists of 10 claims designated as the Lazy Tom-Atbo Group, located in Sections 17, 18, 19 and 20, Township 22 South, Range 25 East, Grand County, Utah. These claims lie in a north-northwest south-southeast direction normal to and across a highly faulted zone.

There are surface outcroppings of carnotite ore at both the upper and lower rims of the base of the Morrison on these claims. These rims occur on the Lazy Tom claims approximately 60 feet and 120 feet respectively below the top of the Mesa; the upper part of the Morrison having weathered or eroded off. There is a canyon running through these claims which shows two faults, one on each side of the canyon. These expose two rims of the base of the Morrison.

These claims are located 58 miles from Grand Junction, over roads which should be passable year round. They were purchased for $10,000 cash and carry a 6¼% royalty on any ore mined, payable to Charles Obermeyer. In addition, Tompkins and Farris have expended approximately $6,300 for construction of roads onto these claims.

Continuing his report, Dorsey Hager made the following statements regarding the Lazy Tom claims:

"Group IV—Lazy Tom. 10 claims.

(Figs. 1 and 4)

These claims occur in Sections 17, 18, 19, and 20, Township 22 South, Range 25 East, Grand County, Utah, just across the Colorado-Utah state line. They are reached by a 58 mile road from Grand Junction, and all the claims are readily accessible.

This group of claims largely lies north of a downthrown fault trending N 80° with a hade of 60°. There is approximately a 300-foot displacement to the northeast on the south fault where the Salt Wash beds abut against Wingate beds. Farther northwest the throw of the fault is greater. The lower 75 to 100 feet of the Salt Wash beds remain between the two faults. The faulted beds dip northwest 2° to 3°.

Two occurrences of uranium mineralization were found near the base of the Salt Wash beds on these claims, and just above the Summerville siltstone. These occurrences are found in organic shales just below the base of a Salt Wash sandstone 20 to 30 feet thick. Some two to three feet of organic shale with thin sandstone stringers are impregnated with carnotite ore. Assays show 0.12% to 0.22% uranium oxide (U_3O_8) and 0.13% vanadium oxide (V_2O_5) at the outcrop. Further tunneling and drilling may uncover richer ore as two miles south in the northwest part of Section 32, Township 22 South, Range 25 East, the same type of material, some four to five feet of shale and thin sandstone, was stripped and an assay showed 0.38% to 0.5% uranium ore. However, this ore was on property owned by the Obermeyer Drilling Company which is stripping and wagon drilling its claims to outline possible bodies of workable ore. The wet (chemical) assays given above are not representative of any substantial body of ore, so the prospect must be thoroughly tested to determine whether or not there are bodies of workable ore.

Two miles farther southeast along the fault from the Group IV claims, the Wingate-Chinle contact occurs. This contact should be studied to determine whether or not uranium ores occur there.

The Entrada sandstone is found on the surface and buried at depths of 100 to 200 feet on the Group IV claims. It should be prospected for uranium ores."

claims lie generally end-to-end in a sweeping "S" curve, the general longitudinal axis of which is southwest to northeast. They begin in the Northeast corner of Township 15 South, Range 101 West, and extend diagonally into Township 14 South, Range 100 West.

The claims are approximately 26 miles from Grand Junction, Colorado, over paved roads for about half the distance, and County (gravel) roads the balance of the distance, on the route down to the Blue Creek Group described above. Roads have been built into most of these claims, discovery of mineralization has been completed on each of them and assessment work completed.

There is a large fault lying NW-SE immediately above Calamity and Outlaw Mesas. The U. S. Geological Survey Contour Map shows a vertical displacement of 1800 feet between the Uncompahgre Plateau and Calamity Mesa. These claims lie in a "T" direction above this fault—in other words, normal to, and extending out from approximately the center of this fault.

These claims were staked by following fluorspar dikes, which extrude on the surface for a distance of about 20 miles. Not all the dikes give evidence of radioactivity, although the intrusion of the fluorspar appears to be fairly uniform. At some points there are somewhat parallel dikes about 300 to 450 feet apart. At several points, separate dikes run off in an easterly direction about 50 degrees from the main trend.

The dikes appear to be intrusions of igneous material including some pure fluorspar, as well as spar-containing pyrites, and various other minerals such as torbernite, reddish-yellow clays, calcite, and a conglomerate resembling autonite, some of which give a positive geiger count reaction. (It should be noted that any radioactive mineral will give a positive geiger count reaction, the intensity of the reaction depending upon the amount of radioactivity present in the mineral and its proximity to the geiger counter.) The dikes of fluorspar vary from twenty-seven inches to twenty feet in width at some points, and in many instances contain acid-grade spar.

These claims were originally staked only for fluorspar. However, the positive geiger count reaction on much of the vein material, plus the presence in the vicinity of Blue Flora, such as Rattleweed, which are considered uranium markers, indicated uranium possibilities when considered with the recent discoveries of uranium in igneous veins, including the recent pitchblend discoveries in igneous intrusions of fluorspar near Golden, Colorado, and Marysville, Utah.

These claims may be potentially profitable for their possible fluorspar content alone. Current quoted domestic prices for fluorspar vary between $28.00 to $49.00 per ton, depending on the percentage of contained fluorspar and the amount of certain impurities. Mexican fluorspar, however, is quoted at a much lower price than domestic fluorspar. At the present time the Government is purchasing some domestic fluorspar for the national defense stockpile of strategic materials. The Company has no assurance as to how long this Government purchase policy will continue.

Fifty (50) of these claims are held under a lease for a period of 25 years, with an option to renew the lease for an additional 25 years, with a 5% royalty payable to the lessor. The lease was obtained for a payment of $2,500.00. The 54 additional claims were located and staked by employees of the predecessor mining company and carry no royalty. Approximately 50 additional claims entitled the P & G Group, contiguous to the 104 claims referred to above in this Group, were recently located and staked by employees of the Company. The title to these new claims has not been perfected nor have they been examined by the Company's Geologist. They are located in Townships 14 and 15 S, Range 100 W, Mesa County, Colorado.

Continuing his report, Dorsey Hager made the following statements regarding the Calamity claims.

"Group VII—Calamity Groups. 87 claims.

(Fig. 1)

The Group VII claims, numbering 87, called the Calamity claims are unsurveyed but lie approximately in the Unaweep Mining District of Mesa County, Colorado.

These claims are along a fault with a general northeast strike that cuts through both granitic and sedimentary rocks (the latter Chinle beds and the lower part of the Wingate sand-

Company's geologists, the Board of Directors may authorize the officers to enter into a contract for such favorable transactions.

When and if ore bodies are blocked out which indicate the possibility of being commercially productive, production either on a contract basis or with the Company's own equipment and forces will be commenced. There are indications on some of the claims that ore bodies (if present) may be so deposited as to make strip mining feasible by removing the overburden with shovels at low cost.

MANAGEMENT AND CONTROL

The Officers and Board of Directors of the Company consist of the following individuals:

NAME	ADDRESS	OFFICE
Francis M. Tompkins	909 - 16th Street, N. W. Washington, D. C.	President and Director
Joe D. Farris	133 South Fourth Street Grand Junction, Colorado	Vice President and Director
Gillis W. Long	Wyatt Building Washington, D. C.	Secretary
Howard Ritter	909 - 16th Street, N. W. Washington, D. C.	Treasurer
Edwin L. Jones	J. A. Jones Construction Co. Charlotte, North Carolina	Director
T. F. Smith	American General Insurance Co. Houston, Texas	Director
Lamar C. LeBron	Hercules Powder Company 1209 Delaware Trust Bldg. Wilmington, Delaware	Director
T. Peter Ansberry	Wyatt Building Washington, D. C.	Director
Joseph R. Greenwood	930 Tower Building Washington, D. C.	Director
Vaughan B. Connelly	Hunting Towers Alexandria, Virginia	Director
William H. Singleton	1240 Jefferson Davis Highway Arlington, Virginia	Director
William J. McManus	Chesapeake & Potomac Telephone Co. Washington, D. C.	Director
Lathrop Vermilye	Vermilye Bros. 30 Broad Street New York, N. Y.	Director
Lytle Brown, Jr.	133 South Fourth Street Grand Junction, Colorado	Chief Engineer

Francis M. Tompkins: President and Director. Mr. Tompkins is a registered professional engineer (District of Columbia No. 147) and a graduate of George Washington University, Washington, D. C., where he specialized in economics, business administration and engineering. He is and has long been the Senior Vice President of Chas. H. Tompkins Co., nationwide building and heavy construc-

tion contractors of Washington, D. C. In his many capacities ranging from job superintendent to senior vice president, Mr. Tompkins has had wide experience in many heavy construction projects, including earth and rock filled dams and tunnels of various types.

JOE D. FARRIS: Vice President and Director. Mr. Farris brings to the new uranium industry a lifetime of experience in oil drilling. Starting as a "supplies hauler" for J. W. Kemp Drilling Company in 1925, Mr. Farris has subsequently had experience as lease scout, oil well drilling contractor and oil entrepreneur. For some time, he was a partner in Kutz-Farris Drilling Co., oil well drilling contractors, and immediately prior to his entry into the uranium field with Francis M. Tompkins, he was engaged in the oil business in Texas, having drilled some wildcats for ventures in which he was associated with Mr. Tompkins.

GILLIS W. LONG: Secretary. Mr. Long is a graduate of the Louisiana State University Law School, a member of the Bar of the State of Louisiana, and a partner in the law firm of Martin, Ansberry & Long, Washington, D. C. He has formerly served as counsel, Select Committee on Small Business, United States Senate, and chief counsel, United States House of Representatives Special Committee to Investigate Campaign Expenditures, 1952. He is a member of the Louisiana State and the American Bar Associations. He is President and a director of Amuranium Corporation of Moab, Utah.

HOWARD RITTER: Treasurer. Mr. Ritter has had wide experience in banking and accounting having been Assistant Cashier of one of the largest banks in Baltimore, Maryland, and later serving as Auditor and Assistant to the President of the Federal Land Bank, of Baltimore, Maryland. In 1940, he left this position to become Chief Project Accountant for the Chas. H. Tompkins Co. and served in this capacity on two large construction projects. During a period of government service from 1944-1949, he served in responsible positions in the contract and procurement fields. In late 1949, he rejoined the Chas. H. Tompkins Co. as Chief Project Accountant and in charge of a part of the Accounting Department in the main office and is still serving in that position.

EDWIN L. JONES: Director. Mr. Jones is President and a director of J. A. Jones Construction Company of Charlotte, North Carolina, one of the largest construction firms in the country, engaging in large construction projects on a nation-wide scale, as well as in many foreign countries. (The firm specializes in heavy construction such as hydroelectric and flood control, dams, highway construction, tunnels, chemical plants and general building work. It has been in continuous existence since 1894). Mr. Jones served as general manager for his company in building such outstanding projects as the Gaseous Diffusion Plant of the Atomic Energy Commission at Oak Ridge, Tennessee, Albrook Field and Fort Gulick in the Canal Zone. He was a member of the official observation group, Manhattan District, at the Bikini tests in 1946, and lectures frequently on the implications of nuclear energy, and is the author of "The Church in an Atomic Age". A graduate of Duke University, of which he is a trustee, Mr. Jones is presently serving as a director and/or officer of banks, railroads, textile, real estate and other corporations.

T. F. SMITH: Director. Mr. Smith, an insurance executive, is and since 1929 has been a partner of the firm of John L. Wortham and Son, Houston, Texas. He is vice president and a director of the American General Insurance Company, Houston, Texas, and a director of Southwest Industries Inc.

LAMAR C. LEBRON: Director. Mr. LeBron is a graduate of Alabama Polytechnic Institute, Auburn, Alabama (B.S. 1920), and has had experience as a drainage and agricultural engineer, Alabama Extension Service, Auburn, and as explosives engineer for the Hercules Powder Company, with which concern he did technical work in the use of high and low explosives for mining, quarry and construction work. He has also been a consulting engineer for open-pit coal mines in Indiana and Illinois. He has had a distinguished military record, having served as commanding officer of Wabash River Ordnance Works, as contracting officer's representative for the Manhattan District (atomic energy project), and executive and contracting officer for the Ordnance Department, Field Director of Am-

The entire area is mapped as part of the Morrison Formation and thus becomes a good prospect for additional exploratory effort. The erratic nature of the carnotite ores in the Salt Wash sandstone seems to depend upon the local carbonaceous content and later oxidation processes to produce a carnotite ore with U_3O_8. Even a preliminary appraisal of the possibilities in this respect would be highly speculative, although the facts known to the writer are favorable at this time."

GROUP VI CLAIMS

This group consists of 17 claims designated as the Joannie Group and is located in Township 49 North, Range 12 West, Montrose County, Colorado, 15 miles southwest of Delta. They were located and staked by employees of the predecessor mining company and carry no royalties.

Continuing his report, Dorsey Hager made the following statements regarding the Joannie claims:

"GROUP VI—Joannie, Dorothy, Uncle Jake, and Little Jake. 17 claims.

(Fig. 1)

The Group VI claims lie fifteen miles southwest of Delta, Montrose County, Colorado, the nearest railroad point on the Denver and Rio Grande Western Railroad. They border Roubideau Creek, a deep canyon in the Uncompahgre Uplift. The claims are accessible by a fair wagon road.

Structurally, the claims lie on the southeast flank of the Uncompahgre Uplift. The beds dip northeast at low angles of 1½° to 2°.

Stratigraphically, the claims lie in the basal Dakota beds; also, the Morrison beds occur on and under the claims. (See Fig. 2). The basal Dakota outcrops as a steep cliff of 125 feet in height, extends to a bench 300 feet above the level of Roubideau Creek where a Salt Wash sandstone occurs.

Some samples with uranium mineralization have been taken from the surface by the writer in the basal Dakota sandstone at the bottom of the cliff, and from the carbonaceous shales found above the base. This is a most unusual occurrence for the Uncompahgre Uplift. However, commercial bodies of ore have not yet been found. Only one assay of 0.41% was shown to me. Additional prospecting is necessary, however, as the sandstones above the carbonaceous shales may prove good ore bearers.

The Salt Wash member of the Morrison also occurs here. One Salt Wash sand, 80 to 100 feet in thickness, underlies these claims. Other sands found north and northwest in the Blue Creek area are absent.

Depths to the Salt Wash sandstone will vary, dependent on the topography. The sandstone can be reached on a long bench above Roubideau Creek at depths from 50 to 150 feet, but on top of the plateau holes 600 feet deep will be necessary to test the Salt Wash sandstone.

The Uravan mineral belt lies 18 miles southwest across the Uncompahgre Uplift from the Group VI claims.

Also, some 30 miles southeast from these claims in the Bull Canyon area uranium ore is mined from the basal Jurassic beds, particularly the basal Wingate sandstone just above the Chinle shale. Such beds should be tested on this set of claims, but on the Group VI claims, drilling to the basal Jurassic sandstone will be 1000 feet on top of the plateau and 650 feet on the shelf along Roubideau Creek."

GROUP VII CLAIMS

This group now consists of 104 claims designated as the Calamity Group and is located in Mesa County, Colorado, in the Unaweep Mining District, at the top of the Uncompahgre Uplift. The

In my judgment the claims in Groups I, II and III well merit careful exploration by the drill and by shallow shafts or tunnels to outline ore bodies that could very well occur in the sandstones and shales underlying the claims. In my judgment the claims in Groups I, II, and III fully warrant exploration as the formations which carry commercial ore in other places in the general district underlie these properties.

Group IV (see Figs. 1 and 4) includes 10 claims. Some uranium mineralization has been found in outcrops in the basal Salt Wash beds on these claims, but no commercial ore bodies are known. Further exploration is well justified.

Group V (see Figs. 1 and 5) includes 22 claims. Some mineralization occurs on these claims in beds near the middle of the Salt Wash beds. Further exploration should be undertaken to outline possible ore bodies.

Group VI (see Figs. 1 and 6) of 17 claims, namely Joannie, Dorothy, Uncle Jake, and Little Jake, occurs in an area 65 miles southwest of Grand Junction. Some uranium mineralization was found in the basal Dakota beds, a new occurrence that may prove quite important in future prospecting on the Uncompahgre Uplift.

Group VII (see Figs. 1 and 7) at present includes 87 claims which fall in a different category from those in Groups I to VI. The Group VII claims lie along a fault 20 miles or more in length which is primarily filled with fluorspar and which may carry some uranium in places. This property has the earmarks of becoming valuable for fluorspar, but it will require careful prospecting to determine whether or not it could become commercial.

The geiger counter reactions and several assays indicate the presence of uranium at places along the fault but considerably more prospecting must be done to determine the uranium possibilities."

TITLES

Chesapeake and Colorado's spread is comprised of 251 unpatented lode mining claims in Colorado and Utah. Unpatented mining claims give the right to develop, mine and dispose of minerals found in the area embraced by such claims. The maximum (and most common) size of a claim is 1,500 feet in length by 600 feet in width—or a little over 20 acres. The possessory rights called "title" to a mining claim arise as a matter of law out of the performance by the person who locates or "stakes" the claim—called the locator—and/or his assigns, of certain acts of location in compliance with State and Federal legal requirements.

Although not a fee title in the usual sense, the possessory title acquired by location is recognized by the courts as "property in the highest sense of that term". It endures until and unless it is lost through abandonment or through a forfeiture resulting from an adverse location made while the prior location is in default in performance of annual labor. Title to a mining claim can be bought and sold, leased or optioned, in much the same way as a fee title to real estate.

The validity of a mining claim is dependent upon various conditions imposed by law, of which the following are the most important:

1. Location upon available public lands, not withdrawn at the time of location by the Federal or State Governments.
2. No conflicting prior claims or other interests.
3. Discovery of mineralization believed by the locator, in good faith, to warrant further exploration and development.
4. Erection of markers on the ground, in a manner prescribed by law.
5. Recordation of a legally sufficient location certificate.
6. Performance by the locator or his assigns of annual assessment (or other developmental) labor on the claim each year, of a value of $100 or more.

A deficiency in or failure of performance of any of the above legal requirements may render a claim invalid. Yet compliance with some of the requirements—especially the third and fourth and to an important extent the second in the foregoing list—is not always susceptible of record determination. Accordingly, any opinion relating to the validity of unpatented mining claims must be conditioned upon the uncertainties to which all such claims are subject.

After making due allowance and taking due reservations on account of these uncertainties, the Company is of the opinion that:

1. Two hundred and thirty-two (232) of its claims are valid and subsisting lode mining locations.
2. Nineteen (19) of its claims are presently subject to material clouds in title, which are described below.

This opinion of the Company as to validity of its claims is based on: (a) title opinions furnished by local counsel, which opinions have been filed with the Commission as exhibits to the Registration Statement; and (b) acts done by the Company through its agents and employees, or acts done by grantors or predecessors in interest of the Company at the request of the Company, to remove title defects revealed in the aforementioned title opinions.

The Company is in possession of all 251 of its claims and believes it is in compliance with annual labor requirements on them.

The clouds in title to 19 of the claims will not in the opinion of the Company interfere with its operations on the lands involved. The Company further believes that these 19 claims will in time be validated. The 19 claims are: Queen Bee Nos. 9, 10, 19 and 20 (in Group II); FWD Nos. 1 through 8, Kenney Nos. 1 through 3, Bimbo Nos. 1 and 2 and Lone Pine Nos. 1 and 2 (in Group I). The defect in title, in each case, involves conflicts with other locators or their assigns as to boundary or priority of conflicting and hostile locations. The Company has taken title to all 20 of the Queen Bee claims but will be relieved of $3,000 of the total purchase price if the conflicts in that group, involving boundary questions only, are not favorably settled. The conflicts as to boundary with adjacent locations do not affect the validity of the disputed claims but only their size: i. e., whether or not the boundary line is 100 feet one way or the other. The Company believes this dispute can be easily settled, but it has not as yet been settled because of the absence from Grand Junction of Mr. Vernon Pick, the present owner of the adjoining claims.

The Company is in possession of the FWD, Kenney and Bimbo claims under a contract to purchase, and of the Lone Pine claims under an option to purchase, and has recently started drilling on some of these claims. The overstaker of the two Bimbo claims, and of a portion of the two Lone Pine claims, is the Vanadium Corporation of America. The contract as to the FWDs, Kenneys and Bimbos, as well as the option as to the Lone Pines, relieves the Company of all obligation if title to the claims is not cleared. However, it is the Company's belief, on the basis of most recent developments and negotiations, that title to all these claims will be validated through withdrawal or abandonment of conflicting claims or purchase of conflicting interests. The Company's claims were all located earlier than the conflicting claims which have been located in the same areas.

Others of the Company's claims are described as of deficient title in the title opinions it has filed as exhibits. However, the Company believes that all such claims have been subsequently validated by activities of the Company or its grantors or lessors, for example: negotiations with hostile locators, relocation of claims originally located on withdrawn lands after restoration of such lands, amendment of originally deficient location certificates and instruments of conveyance, and recordation of such amended certificates and conveyances.

None of the Company's claims are subject to any royalty payments, except the Lazy Tom Nos. 1 through 5 and Lucky Tom Nos. 1 through 5 (formerly Atbo Nos. 46 through 50) which carry a six and one-fourth percent (6¼%) royalty to Mr. and Mrs. Charles A. Obermeyer, the grantors; and the Tom Boy, Cash Deal, Cash Deal Extension and Jay Boy claims—50 in all—held under option to lease from Tom Adams, which carry a royalty of five percent (5%) on all ores mined and sold.

The Company believes that it has, or its predecessors in title have, made discoveries of mineralization sufficient to meet the legal requirements in each of its principal groups of claims. All of the claims, except the seven claims in Group VIII (Tepee Pole), have been surveyed.

PURPOSE OF THE ISSUE

It is the purpose of this issue to provide funds adequate to explore and drill the substantial land spread of the Company in Colorado and Utah; to stake or otherwise acquire additional claims when and if they can be advantageously acquired; and to provide funds to commence mining operations when and if suitable ore bodies are blocked out. (Since the terms of the Underwriting Agreement are not such as to constitute a firm commitment on the part of the Underwriters to purchase any of the securities being offered, the Company has no assurance that it will receive all or any of the proceeds referred to herein.) Assuming that all of the shares being offered are sold, the net proceeds to the Company will be $875,000.00 exclusive of the proceeds of the sale of Warrants, but after deduction of the Underwriter's discounts and commissions. Deduction of the expenses of the offering estimated at $21,000 (not including legal fees scheduled below) and expenses of the Underwriter estimated not to exceed a total of $35,000.00, leaves approximately $819,000.00. It is estimated at this time that this $819,000.00 will be budgeted approximately as follows. However, the management will naturally be guided by the actual operational requirements.

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Exploration and drilling—estimated at about	$400,000.00
Excavation and mining subcontracts—estimated	147,500.00
Sinking shafts and inclines—estimated	50,000.00
Balance due on claims	15,800.00(1)
Additional prospects—estimated	40,000.00(2)
Miscellaneous tools, equipment and supplies—estimated	50,000.00
Consultants and Geologists—estimated	20,000.00
Payment of legal fees to Martin, Ansberry & Long	14,000.00(3)
Management and technical services, office expenses, etc.—estimated	55,200.00
Working capital and reserve for contingencies	26,500.00(4)
Total	$819,000.00

(1) $6,500.00 of this sum is the cash balance payable when the titles are cleared on the 13 claims in Group I with title defects (F.W.D. Nos. 1 through 8, Kenney Nos. 1 through 3, and Bimbo Nos. 1 and 2). Also, $6.500.00 in stock is payable when such defects are cleared. $3,000.00 of this amount is conditioned upon the clearing of defects in the titles on 4 of the Group II claims (Queen Bee Nos. 9, 10, 19 and 20). $6,300.00 is the balance payable on the Raven, Shortie and Lone Pine claims in Group I; however, $2,000.00 of this amount is conditioned upon the clearing of defects in the titles on the Lone Pine Nos. 1 and 2 claims. (Descriptions of these defects are set forth under the caption "Titles".)

(2) The Company does not presently intend to acquire additional properties but wishes to set up a reserve in order to avail itself of any worthwhile opportunities which may arise.

(3) Payments to Martin, Ansberry & Long for their future services as General Counsel to the Company are not included in this figure, but are included as a part of Management and Technical Service Expenses. Payments for such services are set forth under caption "Management and Control".

(4) An allowance for contingencies is believed advisable since the Company is embarking on a new venture.

It is also the intention of the Company to prospect in other localities when the personnel and geologist, now engaged, can be spared from current operations to explore for and stake out additional claims if any can be located. It is also possible that the opportunity might arise to purchase additional claims or mining properties at a favorable price. If this should occur, after approval by the

stone). The fault can be readily reached by roads at a number of places. It is crossed first only 25 miles from Grand Junction. This fault is nearly vertical in places with the displacement apparently to the east, where observed by the writer. The amount of throw could not be determined. The vein where the writer examined it in three places was nearly 36 inches in width, and vertical. Veins diverge from the main fault at several places. The ore occurs along the fault which is deep-seated as it penetrates the granite. The fluorspar is a filling along the fault. The fluorspar occurs on the north end, and I saw ore on the south and at one other immediate point. It is reasonable to suppose that fluorspar will occur at other places along this fault and may be a continuous body. Also, from its nature it will thicken and thin.

A careful survey of this fault should be made and cross sections taken across it, but unfortunately at the time of my visit no surveying had been done to locate the fault exactly.

This fault should be carefully examined for uranium ores. One assay I had made, however, showed no uranium but numerous assays are necessary to establish the presence or absence of uranium ores along such an extensive line of faulting.

The fault is apparently deep-seated as it is found in the granitic basement rocks as well as in the lower part of the Wingate sandstone (which along the fault contact is quartzitic).

A grab sample of material including gangue taken from a dump along the top of the fault gave the following figures:

Silver	0.1%
Lead	1.1
Zinc	Trace
$BaSO_4$	10.2
U_3O_8 (Uranium Oxide)	0.0
CaF_2	53.84
S_iO_2	28.64 (mainly wall rock)
$CaCO_3$	1.02
R_2O_2 (Al Fe)	2.18

The fluorspar (CaF_2) is higher where the vein is wider and one assay shows CaF_2, 78.29%; $CaCO_3$, 89%; and S_iO_2, .60%. However, some samples that I saw carry as much as 98% fluorspar. No estimate of tonnage is made and no estimate of volume is attempted until detailed surveys are made. These assays do not represent substantial tonnage.

The value of Group VII claims can only be determined by careful study and sampling. The fault extends 20 miles, perhaps more. The wider parts of the vein should be sought for mining operations. Now that purchases of fluorspar are to be made for National Defense, the Group VII claims may prove important assets, if commercial quantities of ore are developed by drilling and by mining.

Group VIII Claims

This group consists of 7 claims designated as the Tepee Pole Group and is located in Township 30 North, Ranges 17 and 18 West, in Mesa County, Colorado, less than one-half mile west of the Company's Blue Creek Group (Group I). These claims were recently purchased for $3,000.00 and carry no royalty. No geological report has been obtained on them.

SUMMARY

Mr. Hager summarizes his study of the Company's properties in part as follows:

"Groups I, II, and III (see Figs. 1 and 3) include eighty-four (84) claims. These claims are fairly close together and occur in an area which has had a number of prospect holes and good mining operations. Known ore-bearing members in the Salt Wash member of the Morrison formation occur north, south, east and west of these properties.

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2. [illegible]d previous block.
3. Write clearly.

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Mr. [illegible]	RUN STOP		RUN STOP
[illegible]	RUN STOP		RUN STOP
~~Mrs. Christie~~ ~~Room 5313~~	RUN STOP		RUN STOP
~~irector~~ ~~eological Survey~~ ~~GS Building~~	RUN STOP		RUN STOP
~~Lil Cummings~~ ~~2643~~ ~~Int Bldg.~~	RUN STOP		RUN STOP
~~Mr Udy~~ 2655 ~~Interior~~	RUN STOP		RUN STOP
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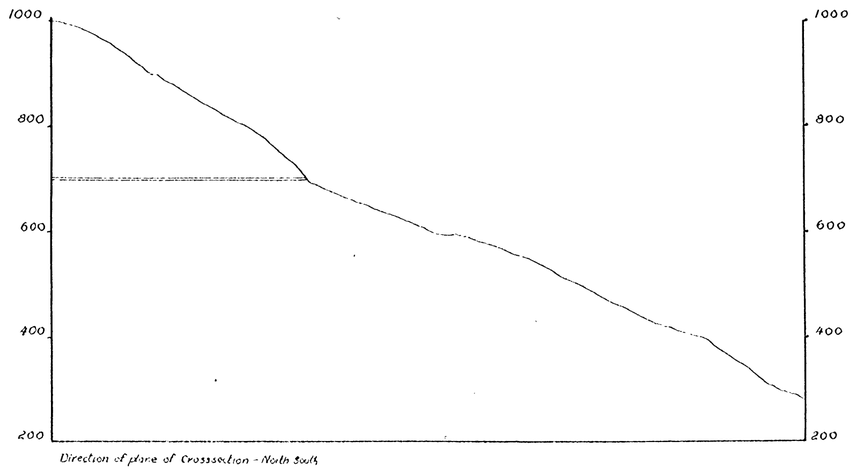
PLATE NO. 3.



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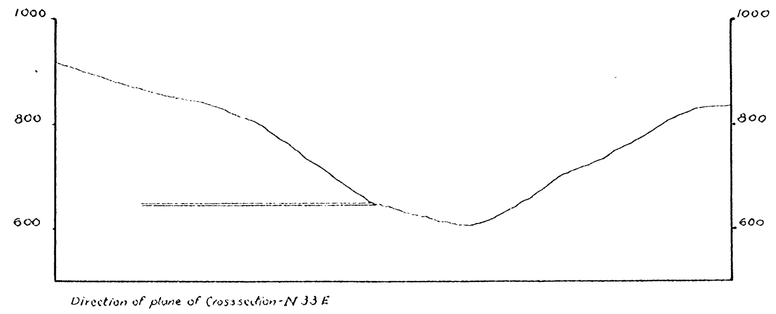
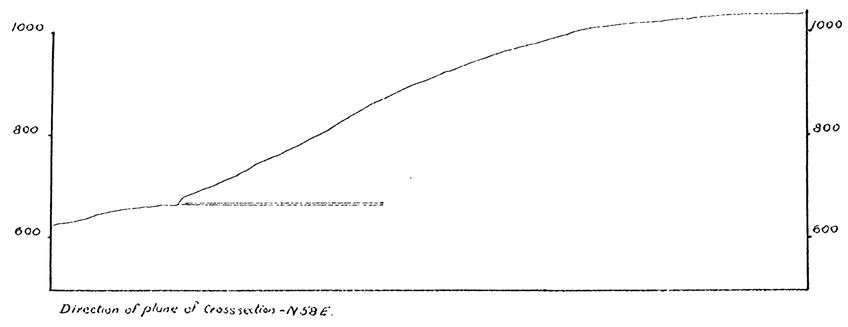


Pay Dirt No. 6



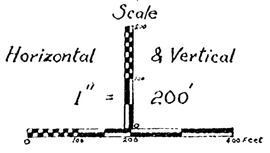
Cash Deal No. 6

Note: All elevations are relative only.

Scale

Horizontal & Vertical

1" = 200'

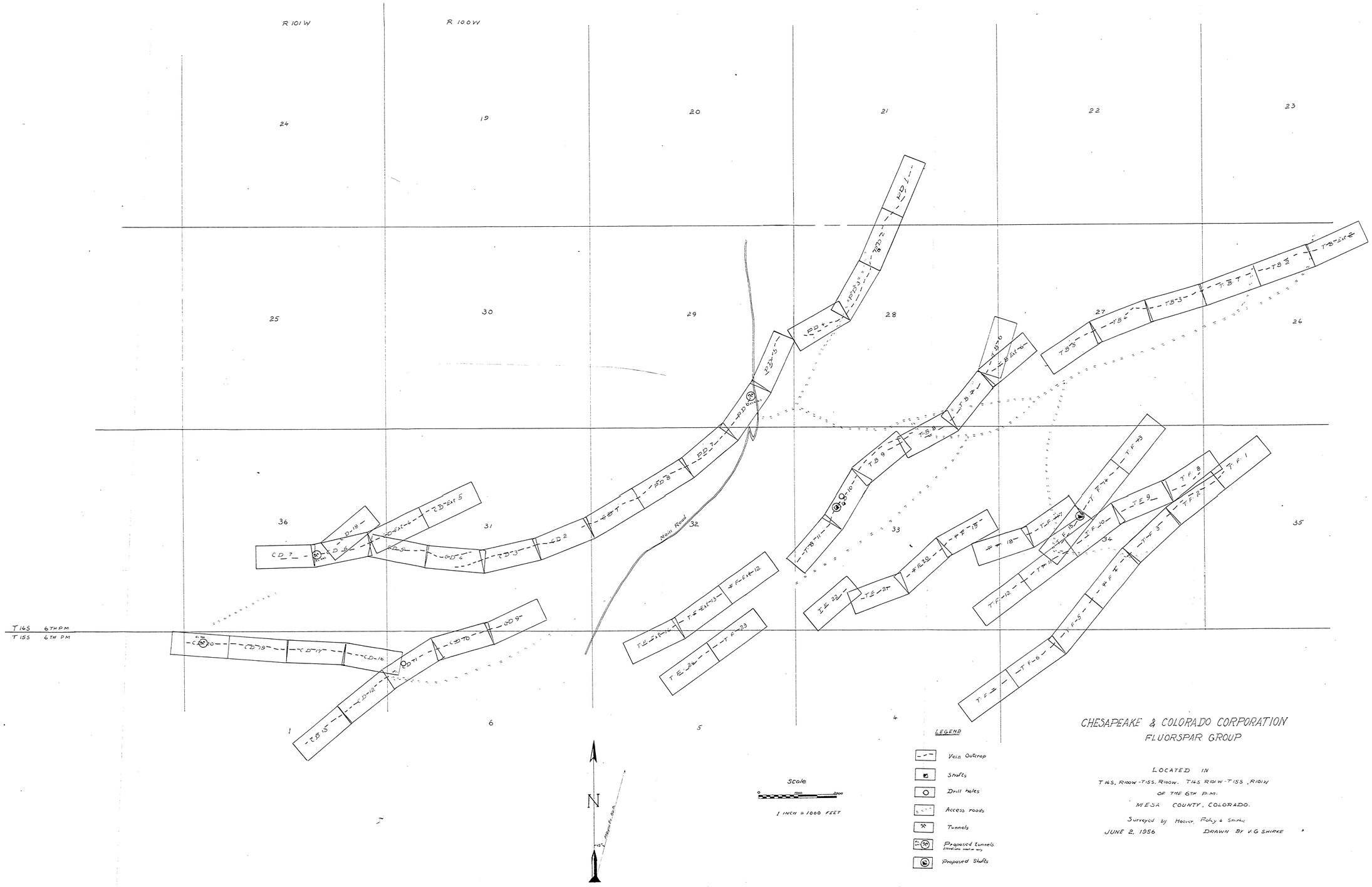


CHESAPEAKE & COLORADO CORP.
FLUORSPAR GROUP
Mesa County, Colorado

Cross-sections of proposed tunnels

August 2, 1956. Drawn by V.G. Shirke

PLATE NO. 2



CHESAPEAKE & COLORADO CORPORATION
FLUORSPAR GROUP

LOCATED IN
T 14S, R100W - T15S, R100W. T 14S R101W - T15S, R101W
OF THE 6TH P.M.
MESA COUNTY, COLORADO.

Surveyed by Hoover, Foley & Shirke
JUNE 2, 1956 DRAWN BY V.G. SHIRKE

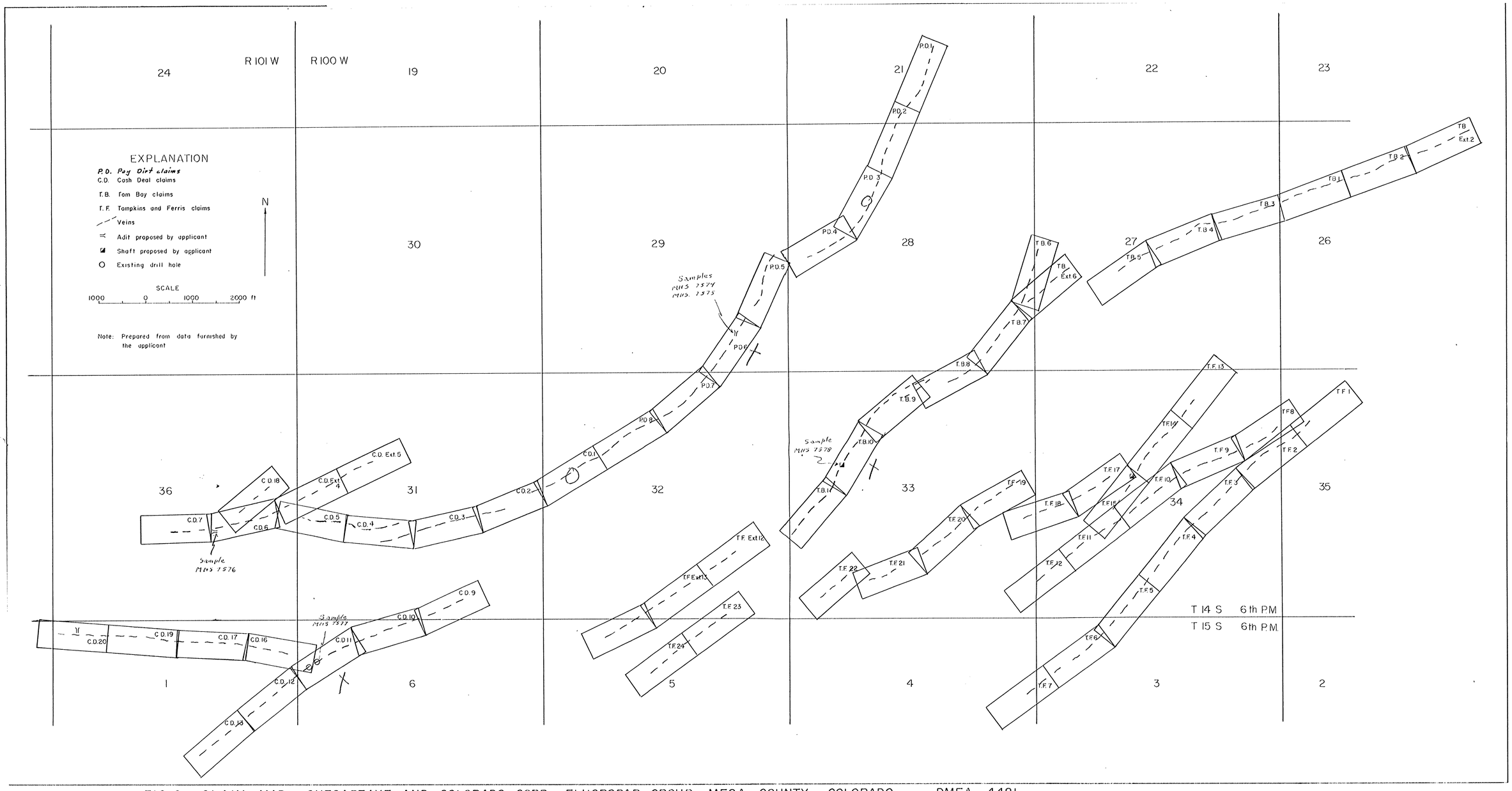
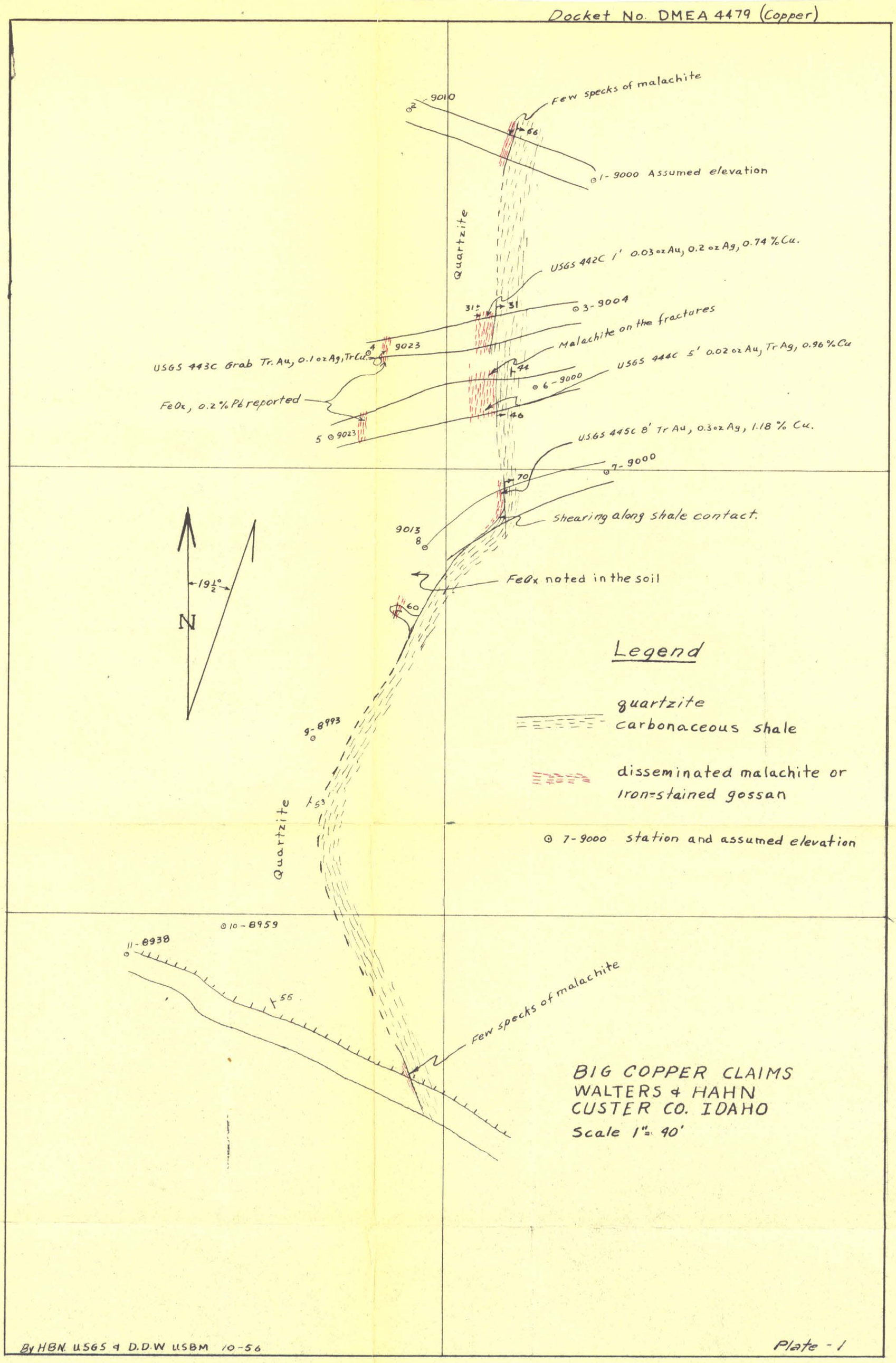


FIG. 2 CLAIM MAP, CHESAPEAKE AND COLORADO CORP., FLUORSPAR GROUP, MESA COUNTY, COLORADO. DMEA 4481.

Docket No. DMEA 4479 (Copper)



By HBN USGS & D.D.W USBM 10-56

Plate - 1

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