DMEA [redacted]m 1

DEFENSE MINERALS EXPLORATION ADMINISTRATION
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DMEA Form 9

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE

DMEA NO. 4573

Application (Denied
(Withdrawn
(After disposition, delete items not applicable)

Contract (Terminated - not Certified
(Cancelled
(Terminated - Certified
(Royalty Agreement

This is the official contract file containing all official records of the project. The records contained in the files are checked and are arranged in this order:

Left Side

Interim Royalty Audits
Reports of Royalty Review
Certification of Discovery
Certificate of Audit (Final)
Interim Audit(s)
Report of Review
Termination Notice or Agreement
Recision Notice
Assignment of Contract
Contract Amendments (latest on top)
Contract with all exhibits and annexes
Owner's Consent to Lien
Subordination Agreement
Leases and assignments of leases
✓ Application and attachments
(3) Envelope for maps

Right Side

Project summary
Work completed analysis
✓ All other material is filed in chronological order with correspondence including the following reports as checked:

Final Field Team Report (Tab)
Operator's Final Report
(2R) Interim Reports
(2R) Operator's monthly reports and all attachments (latest on top)
On-site Exam Report(s) (Tab)
(4) Settlement Sheets

When the volume of records is expected to warrant additional folders, or when convenience of reference warrants separate folders for certain records, they should be set up in this order:

Left Side

Folder No. 2: (In chron. order) Interim Summary Reports by W. O. Engineers

Right Side

Operator's Semi-Annual Report for Certified Project, Field Team Interim Reports, Operator's Monthly Report with transmittal, narrative, maps, and Field Team review.

Folder No. 3: Maps (Use pocket folder or envelope. Fold maps with title block out and show reference to related document or correspondence.)

Folder No. 4: Settlement Sheets

Folder No. 5: Drill Logs

9776

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

224 New Customhouse
Denver 2, Colorado

December 14, 1956

RECEIVED
DEC 17 1956
D.M.E.A.

Memorandum

To: Secretary to the Operating Committee

From: DMEA Field Team, Region III

Subject: Application for DMEA Aid (Uranium) Chesapeake & Colorado Corporation (Raven Claims) Mesa County, Colorado

Enclosed are the original and one copy of the subject application in the amount of $5,844.10. One copy of the application is being forwarded the Grand Junction Office, DMEA, for their recommendations concerning the advisability of making a field examination. One copy of the application is being retained in our file.

No drilling bids were submitted by the Applicant since they propose to do their own drilling.

DMEA Field Team, Region III

W. M. Traver

W. M. Traver
Executive Officer

Enclosures

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

224 New Customhouse
Denver 2, Colorado

December 14, 1956

RECEIVED

Memorandum

To: J. W. Hasler

From: DMEA Field Team, Region III

Subject: Application for DMEA Aid (Uranium) Chesapeake & Colorado Corporation (Raven Claims) Mesa County, Colorado

Enclosed is the subject application in the amount of $5,844.10.

Will you please discuss this application with the Bureau of Mines representative in the Grand Junction Office, DMEA, and the AEC, and forward this office nine copies of your joint recommendations concerning the advisability of making a field examination on the property.

DMEA Field Team, Region III

Original signed by
W. M. TRAVER

By W. M. Traver
Executive Officer

Enclosures
HMC:ytl
cc
Sec. Op. Comm. (2)
Harbman
Hasler
Shaw (2)
Docket
Chron.

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

224 New Customhouse
Denver 2, Colorado

December 14, 1956

RECEIVED

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

Re: Application for DMEA Aid
(Uranium) Raven Claims,
Mesa County, Colorado

Dear Mr. Brown:

This will acknowledge receipt of your letter dated December 10, 1956 and four copies of the application for DMEA aid on the captioned docket.

You will receive due and timely notice regarding the date of a possible field examination of your property when the application is released from the Washington Office.

Yours very truly,

Original signed by
W. M. TRAVER

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

Enclosures

HMC:ytl
cc
Sec. Op. Comm. (4)
Harshman
Hasler
Shaw (2)
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.

DEPARTMENT OF THE INTERIOR
DEC 14 1956
REGION III
DENVER, COLORADO

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

Not to be filled in by applicant

Docket No. 4573
Metal or Mineral Uranium
Date Received 12-17-56
Estimated Cost $5,844.10
Participation (Government %) 5

RECEIVED 17 1956 D.M.E.A.

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: _____

(*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.

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 Dec. 3, 1956 PLEASE NOTE [illegible]

(Applicant)

By Kyle Brown

Vice Pres.

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

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Appendix A

Sale of Raven Claims to Joe D. Farris

Sale of Raven Claims to C & C

Appendix B

Cost Calculations

Plate I

Index map

Plate II

Claim map

Plate III

Raven 3 mine map

Plate IV

Isopach map

Plate V

Drill hole map

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 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:

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	Lytle Brown Jr. 133 South Fourth St. Grand Junction, Colorado
Secretary	Gillis Long 1324 Wyatt 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.

The property consists of 9 unpatented mining claims in Sections 31 and 32, T.50N., R.17W., New Mexico Principal Meridian, Gateway Mining District, Mesa County Colorado.

(See Plates 1 & 2). The 9 claims included in the proposed exploration are Raven 1-7 and 9 and Raven 8 Fraction.

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

The Raven No. 3 mine

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

See Appendix A.

Raven 1-7 were originally located by and purchased from Kyle Brown and Louis Mendicelli by Joe D. Farris acting for Tompkins-Farris Mining Co who turned the claims over to Chesapeake & Colorado Corporation. The original locations were invalid, however, and Chesapeake & Colorado Corporation relocated Raven 1-7 in October, 1956. Raven 8 Fraction was staked by Chesapeake & Colorado Corporation in December, 1955 and Raven 9 was staked by Chesapeake & Colorado Corporation in October, 1956.

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

Does not apply.

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.

The property consists entirely of 9 unpatented mining claims recorded in the Mesa County Court House, Grand Junction, Colorado.

Name of Claim	Locator	Recording Date	Book	Page
Raven No. 1	Kyle Brown and Louis Mendicelli		606	551
Raven No. 1 (Amended)	Tompkins-Farris Mining Co	Nov. 18, 1954	625	234
Raven No. 1 (Relocated)	Chesapeake & Colorado Corporation	Oct. 23, 1956	697	31
Raven No. 2	Brown & Mendicelli		606	552
Raven No. 2 (Amended)	Tompkins-Farris Mining Co	Nov. 18, 1954	625	235
Raven No. 2 (Relocated)	Chesapeake & Colorado Corporation	Oct. 23, 1956	697	32
Raven No. 3	Brown & Mendicelli		606	553
Raven No. 3 (Amended)	Tompkins-Farris Mining Co	Nov. 18, 1954	625	236
Raven No. 3 (Relocated)	Chesapeake & Colorado Corporation	Oct. 23, 1956	697	33
Raven No. 4	Brown & Mendicelli		606	554
Raven No. 4 (Amended)	Tompkins-Farris Mining Co	Nov. 18, 1954	625	237
Raven No. 4 (Relocated)	Chesapeake & Colorado Corporation	Oct. 23, 1956	697	34
Raven No. 5	Brown & Mendicelli		606	555
Raven No. 5 (Amended)	Tompkins-Farris Mining Co	Nov. 18, 1954	625	238
Raven No. 5 (Relocated)	Chesapeake & Colorado Corporation	Oct. 23, 1956	697	35
Raven No. 6	Brown & Mendicelli		606	556

Name of Claim	Locator	Recording Date	Book	Page
Raven No. 6 (Amended)	Tompkins-Farris Mining Co	Nov. 18, 1954	625	239
Raven No. 6 (Relocated)	Chesapeake & Colorado Corporation	Oct. 23, 1956	697	36
Raven No. 7	Tompkins-Farris Mining Co	Nov. 18, 1954	625	240
Raven No. 7 (Relocated)	Chesapeake & Colorado Corporation	Oct. 24, 1956	697	87
Raven No. 8 Fraction	Chesapeake & Colorado Corporation	Dec. 28, 1955	671	263
Raven No.9	Chesapeake & Colorado Corporation	Oct. 23, 1956	697	37

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.

Mining

The Raven No. 3 is the only mine or working on the Raven claims and consists of approximately 205 feet of main incline and main drift and 90 feet of drift with small side rooms. The mine has been stripped of production facilities except the ore bin and had about 1 to 2 feet of water in the bottom, but was still accessible as of November 1, 1956. The mining was done entirely by Chesapeake & Colorado Corporation. A map of the Raven No. 3 mine is shown on Plate 3.

Drilling

A total of 193 holes for a total footage of 17,548 feet was drilled on the Raven Claims by Chesapeake & Colorado Corporation. Due to a combination of poorly kept records, poor drill pattern planning, lack of mapping, dust sample loss due to water, and insufficient depth, a large amount of the footage was wasted. Some of this footage is in the proposed drilling area. Probe records and lithologic logs for most of the holes are available from Chesapeake & Colorado Corporation. A map of most of the drill holes is shown on Plate V.

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

Past production consisted of 85.52 tons averaging .22% U_3O_8 and .96% V_2O_5. Production was during October and November, 1955. Ore reserves are approximately 50 tons averaging approximately .25% U_3O_8 and 1.00% V_2O_5. This tonnage is located around WD29 on Raven 3 near the north end line of Raven 3.

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 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.

General Geology

The Raven Claims lie mostly on the Brushy Basin member and partly on the Saltwash member of the Morrison formation which is relatively horizontal in this area. They lie just within the western edge of the Uravan Mineral Belt as defined by U.S.G.S. Bulletin 1009-J. The orebearing sandstone is the upper sandstone of the Saltwash member. The Raven 3 orebody lies approximately 2,000 to 4,000 feet west of the orebodies at the northeast corner of Blue Mesa and approximately 8,000 feet northwest of the Elizabeth group of mines.

Geology of Raven 3, Blackstreak, and Craig Mines

The Raven 3 orebody lies at the eastern end of a mineralization trend which extends approximately 1,500 feet along a well-defined paleo-channel in the upper sandstone of the Saltwash member of the Morrison formation. This paleo-channel has been cut off at its western end by Blue Creek canyon. The Craig workings extend from the edge of the canyon to the Blackstreak property which extends up to the Raven claims. The paleo-channel ranges in thickness from 20 to 60 feet or more with a probable average thickness of 30 to 35 feet. The evaluation rating of the paleo-channel as defined by U.S.G.S. Bulletin 988-B ranges from 20 to 35.

The direction of the paleo-channel appears to be N85E from the Craig workings to WD29 on Raven 3, but isopach studies (see Plate IV) show a channel trend of N75-80E from WD29 to CD7-9 on Raven 3. For various reasons drill data is insufficient east of the area covered by Plate IV for isopach studies.

The orebodies along the Raven-Blackstreak paleo-channel usually consist of several small pods of ore connected by lowgrade or thin ore and are located on the north side of the channel. The ore lies at or near the bottom of the sandstone and conforms to the shape of the channel. The ore ranges from 2-8 feet in thickness with an average of about 3½ feet. The ore is usually only 10 to 20 feet wide. Minerals are carnotite and the black U-V minerals. In places, especially in the thinner parts of a pod, the ore is soft and high is U_3O_8 content, but usually averages .20 to .30% U_3O_8 and 1.00% V_2O_5.

Accompanying the mineralization is the usual halo of altered gray-green clay beneath the ore which ranges from 3 feet up to as much as 11 feet in thickness. Also accompanying the mineralization and usually not as large a target as the altered clay is a heavily limonite-stained layer which may be directly above or below the ore. This limonite-stained layer does not always accompany mineralization, but usually is present where there is ore. Isopach studies of both the altered clay and the limonite stained layer indicate that once the channel is defined these features can be used to guide drilling.

Further exploration east of Raven 3 should be done by first outlining the channel and then drilling along the channel for favorable areas. For various reasons, previous drilling east of Raven 3 has not furnished sufficient information to outline the channel. By using the holes which have sufficient

information and information from the proposed holes, the channel should be defined sufficiently for exploration as far east as the east side line of Raven 4. The direction of the channel should also be defined sufficiently to minimize drilling necessary for channel delineation east of Raven 4.

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

The Raven claims are accessible by 11 miles of graded road and 15 miles of unimproved road up Mesa Creek from Uravan or by 22 miles of paved road to Taylors Ranch on U.S. Highway 50 and Colorado Highway 141 from Grand Junction and then approximately 45 miles on semi-improved and unimproved roads through the Uncompahgre National Forest and across Outlaw Mesa. The nearest rail shipping point is Whitewater at the junction of U.S. Highway 50 and Colorado Highway 141, a distance of approximately 58 miles. The nearest supply point is Grand Junction, a distance of 65 miles. The residence point is at the Chesapeake & Colorado Corporation, a distance of approximately 2 miles.

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

Manpower, materials, supplies, and company-owned equipment are available at Grand Junction. Water for drilling is available at the Chesapeake & Colorado Corporation camp. Power is not available except for gasoline-powered generators.

5. The Exploration Project

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

Uranium

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 work as related to such features as contacts, veins, ore-bearing beds, etc.

The exploration of the Raven Claims and more specifically, of the Raven 3-Blackstreak paleo-channel will consist of the following stages.

Stage 1 - Drilling on Raven 3, 4, and 8 Fraction to accomplish these objectives:

1. Delineate the channel as far east as the east side line of Raven 4.
2. Establish a direction for the channel so as to minimize drilling necessary for channel delineation east of Raven 4.

Stage 1 is the drilling proposed in this application.

Stage 2 - Drilling on channel west of the east side line of Raven 4 and on Raven 5 and 9 to accomplish these objectives:

1. Find ore and areas favorable for ore along channel on Raven 3, 4, and 8 Fraction.
2. Delineate channel on Raven 5 and 9.

Stage 3 - Drilling on channel on Raven 5 and 9 to find ore and areas favorable for ore.

Stage 4 - Blocking out ore.

Amount of drilling in each stage depends on the results of the preceeding stage.

To accomplish the objectives of Stage 1 the applicant proposes to drill 13 holes as shown on Plate V. The specifications of these holes are as follows:

Hole No.	Total Depth	Collar Elev.	Core Footage
XP 1	115	1075	30
XP 2	120	1075	35
XP 3	115	1075	30
XP4	120	1080	35
XP 5	135	1095	35
XP 6	140	1100	35
XP 7	150	1105	45
XP 8	155	1110	45
XP 9	150	1120	30
XP 10	170	1130	40
XP 11	155	1110	45
XP 12	165	1120	45
XP 13	160	1125	35

Elevations are relative-elevation of corner 3 of Raven 3 is 1000.0. The total footage of these holes is 1,850 feet and the total core footage is 485 feet. Coring of the ore-bearing sandstone is necessary as dust samples in this area do not yield adequate information needed to delineate the channel. All holes will be drilled with the company-owned Portadrill which yields a 2 1/8 inch diameter core. This drill has proved very successful in both speed and core recovery.

All holes have been placed at least 100 feet apart and at least 100 feet from previous holes which yielded sufficient information necessary for channel delineation. Total depths are estimations only based on data from lithology logs from nearby holes. The proposed holes are shown on Plate V. All cores will be stored temporarily at the camp and later moved to Grand Junction. Dust samples will be taken every 5 feet where possible and core will be pulled at 5 foot intervals or less if necessary. All radioactive cores will be split and sampled.

c. The work will start within 30 days and be completed within 2 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.

From November, 1954 to date, Chesapeake & Colorado Corporation has drilled over 90,000 feet-both company and contract footage and has drilled over 45,000 feet with the Portadrill. It has operated two uranium mines during this period and is operating a base-metal and a feldspar mine at present.

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 building of flood control projects on the Ohio and Mississippi Rivers, as well as Construction Superintendent 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 application.

Company Geologist - David L. Hoover

Mr. Hoover is a graduate of the Colorado School of Mines with the degree of Engineer of Petroleum Geology and has worked for one and one-half years since graduation for Chesapeake & Colorado Corporation. His experience with the applicant has included mine and prospect examination and evaluation, exploration planning and directing, and surface and sub-surface geologic work in uranium and base metals. Previous experience before graduation included working on a U.S. Bureau of Mines drill crew and assistant sampler at a tungsten mill.

6. Estimate of Costs

Furnish a detailed estimate of the costs of the proposed work, under the following headings. Add the totals under all headings to give the estimated total cost of the project:

See Appendix B for calculations.

a. Independent Contracts

None

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

Labor	$ 997.50
Supervision	100.00
Geologist	500.00
Total	$1597.50

c. Operating materials and supplies-furnish an itemized list including items of equipment costing less than $50 each, and power, water, and fuel.

Bits	$ 550.50
Fuel	380.00
Coreboxes	60.00
Food	360.00
Total	$1350.50

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.

Total	$ 950.00

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 benefit of the exploration project.

Drill sites	$ 600.00
Total	$ 600.00

g. Miscellaneous - Furnish a detailed list showing the cost of repairs to and maintenance of operating equipment (not including initial rehabilitation or repairs of operators' equipment), analytical work, accounting, workmen's compensation and employers' 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.

Total	$ 899.40

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

The applicant requests that an allowance by made to cover contingencies arising during the course of the exploration project such as excessive water requiring abandoning of a hole or lost time due to fishing for broken or dropped tools in a hole. Ten per cent (10%) of the costs set forth should cover any excess of those computed under the proposed project.

Total	$ 449.70

Recapitulation of costs

Labor, supervision, consultants	$ 1597.50
Materials and supplies	1348.50
Equipment	950.00

Installations	$ 600.00
Total	$4497.00
Miscellaneous	899.40
	$5394.40
Contingencies	449.70
Total project cost	$5844.10

7.

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

Yes

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

Use of equipment	$ 950.00
Bits	550.50
Total Contribution	$1500.50

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: December 3, 1956

CHESAPEAKE & COLORADO CORPORATION

(SEAL)

By: Francis M. Tompkins

Francis M. Tompkins
President

Attest:

Gillis W. Long

Secretary

APPENDIX A

Book 639 Page 588 Recorded at 3:24 o'clock P. M., Apr. 8, 1955

Reception No. 630826 Annie M. Dunston Recorder.

THIS INDENTURE, Made this 14th day of September, in the year of our Lord one thousand nine hundred fifty-four, between

KILE BROWN and LOUIS MENDICELLI

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

JOE D. FARRIS

of the County of Dallas and State of ~~Colorado~~ Texas, party of the second part;

WITNESSETH, That the said part 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, his heirs and assigns, the following described property, situate, lying and being in Gateway (unorganized) Mining District, in the County of Mesa, and State of Colorado, to-wit:

Claim Name	Recorded in Book at	Page
Raven No. 1	606	551
Raven No. 2	606	552
Raven No. 3	606	553
Raven No. 4	606	554
Raven No. 5	606	555
Raven No. 6	606	556
Shortie	606	557

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 part 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 party of the second part his 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

/s/ Kile Brown [SEAL]

/s/ Louis Mendicelli [SEAL]

[SEAL]

STATE OF COLORADO, County of Mesa } ss.

The foregoing instrument was acknowledged before me this 14th day of September A. D. 19 54, by Kile Brown and Louis Mendicelli.

My commission expires February 20, 19 57. Witness my hand and official seal.

/s/ Marcedus Murphy
Notary Public.

NO.....

MINING DEED

.....

.....

.....

TO

.....

.....

.....

STATE OF COLORADO }
.....County of..... } ss.

I hereby certify that this instrument was filed for record in my office at..... o'clock.....M., ..., 19..... and is duly recorded in book..... page.....

.....
Recorder.

By .....
Deputy.

Fees, $.....

8-55 BRADFORD-ROBINSON PTG. CO., DENVER

DEC 1 1956
DALLAS
MARSHALL

Recorded at 3:05 o'clock P. M., Dec. 29, 1955

Reception No. 656528 Annie M. Dunston Recorder.

THIS INDENTURE, Made this 29th day of December, in the year of our Lord one thousand nine hundred Fifty-five, between

JOE D. FARRIS

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

CHESAPEAKE & COLORADO URANIUM CORPORATION

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

WITNESSETH, That the said party of the first part, for and in consideration of the sum of Ten dollars and other good and valuable consideration - - - - - - - - - - - Dollars, 100

to him in hand paid by the said party of the second part, the receipt whereof is hereby acknowledged, has granted, bargained, sold, remised, released and forever quit-claimed, and by these presents does grant, bargain, sell, remise, release and forever quit-claim, unto the said party of the second part, their heirs and assigns, the following described property, situate, lying and being in Gateway (unorganized) Mining District, in the County of Mesa, and State of Colorado, to-wit:

Claim Name	Recorded in Book	at Page
Raven No. 1	606	551
Raven No. 2	606	552
Raven No. 3	606	553
Raven No. 4	606	554
Raven No. 5	606	555
Raven No. 6	606	556
Shortie	606	557

(Beneficial Interest - No Revenue Required)

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 party 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 party of the second part their heirs and assigns forever.

IN WITNESS WHEREOF, The said party of the first part has hereunto set his hand and seal the day and year first above written.

Signed, sealed and delivered in the presence of

/s/ Joe D. Farris [SEAL]

[SEAL]

[SEAL]

STATE OF COLORADO, County of Mesa } ss.

The foregoing instrument was acknowledged before me this 29th day of December A. D. 19 55, by Joe D. Farris

My commission expires March 1, 19 59. Witness my hand and official seal.

/s/ Mary Slaven
Notary Public.

NO.....

MINING DEED

.....

.....

.....

TO

.....

.....

.....

STATE OF COLORADO }
.....County of..... } ss.

I hereby certify that this instrument was filed for record in my office at..... o'clock.....M., ..., 19..... and is duly recorded in book..... page.....

.....
Recorder.

By .....
Deputy.

Fees, $.....

8-55 BRADFORD-ROBINSON PTG. CO., DENVER

APPENDIX B

I. Labor, Supervision, Consultant Costs

Footage @ 15'/hr for non-core drilling

Footage @ 5'/hr for core drilling (5' pulls)

Time includes setups

$$\left(\frac{1365\ ft}{15\ ft/hr} + \frac{485\ ft}{5\ ft/hr}\right) = 188\ hrs.\quad \text{Assume 190 hrs}$$

Labor Cost

190 x $5.25/hr =	$ 997.50
Geologist	
190/8 = 23.75 days = 1 working month@ $500.00/month =	500.00
Superintendent	
1 day/working month @ $100.00/day =	100.00
Total	$ 1597.50

II. Supplies

Fuel	
190 hrs @ $2.00/hr =	$ 380.00
Tri-cone non-core bits	
1365 ft x $.35/ft =	477.75
Diamond core bits	
485 ft x $.15/ft =	72.75
Coreboxes	
50 @ $1.20 ea =	60.00

Food

As the project will necessitate a camp a considerable distance from supplies, it will be necessary to provide food for the drill crew and the geologist while away from Grand Junction

$5/day/man x 3 men x 24 days =	$ 360.00
Total	$ 1350.50

III. Operating equipment

1 Winter-Weiss Portadrill Model BHP-C mounted on International Model RB-190 truck with cab; fully equipped valued @	$32,000.00

Past experience has shown that $3.00/hr is required to cover use-allowance (depreciation) on the above drill.

190 hrs x $3.00/hr =	$ 570.00

The following items are charged out at a flat rate per hour based on past experience. This rate includes labor, fuel, and depreciation.

2 1955 ½T Dodge pickup trucks
(1 for drill crew and 1 for geologist)

190 hrs x $1.00/hr/vehicle x 2 =	$ 380.00

IV. Drill sites

It will be necessary to bulldoze the drill

sites. As there are access roads to most of the drilling area it is felt that $50 per drill site is sufficient. One drill site is on an existing road.

12 drill sites @ $50 =	$ 600.00

DMEA Form 7
(12-56)

700

OFFICIAL FILE COPY

Date	Surname	Code
1-17	Ching	700
"	Ellis	700
1/18	Jeffrey	130
1-18	[illegible]	110
"	Mitchell	100
		225

JAN 18 1957

Chesapeake & Colorado Corporation
133 South 4th Street, P. O. Box 1298
Grand Junction, Colorado

Re: Docket No. DMEA-4573 (Uranium) Bishop
Raven Claims
Mesa County, Colorado

Kiilsgaard

Gentlemen:

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

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

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

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

Sincerely yours,

C. O. Mitchell (for)

Administrator

MChing/izm 1-17-58
cc to: Code 700
Mr. Ching
Admr.'s Reading File
Operating Committee
DMEA Field Team, Reg. III (2)
Messrs. JECrawford, Rm. 3643
THKiilsgaard, Rm. 5224
JKratchman, AEC

R.G.S.

8623

Docket

700

Ching

January 17, 1957

Summary of Proposed Project

Object: Denial of application for an exploration project.

Docket No.: DMEA-4573

Commodity: Uranium

Applicant: Chesapeake & Colorado Corporation
133 South 4th Street, P. O. Box 1298
Grand Junction, Colorado

Property: 9 unpatented lode mining claims, Raven Nos. 1-7, 8 (Fraction), and 9, situated in secs. 31 and 32, T. 50 N., R. 17 W., N.M.P.M.&B., Mesa County, Colorado. Applicant is the owner by purchase and location.

Date of Application: December 3, 1956

Amount of Application: $5,845.10

Work Proposed:

Explore a paleo-channel by core and non-core drilling. The work consists of 13 holes aggregating 1,850 feet, of which 485 feet will be cored. Costs follow:

Labor, supervision, consultants	$1,597.50
Materials and supplies	1,348.50
Equipment	950.00
Bulldozing drill sites	600.00
Miscellaneous	899.40
Contingencies	449.70

Total Cost of Project $5,845.10
Government Participation @ 75% $4,383.82

Reports: Grand Junction memorandum, dated December 31, 1956, by D. P. Elston, USGS, and M. H. Salsbury, USBM:

The property is located on the north side of Blue Mesa.

Most of the claim area lies on the Brushy Basin member, and the mineralization is in the uppermost sandstone layer of the Salt Wash member of the Morrison formation. Ore bodies in this area are small and discontinuous. They are seldom over 100 feet long and 10 to 20 feet wide. Thickness is commonly between 1 and 2 feet. Although locally quite rich, the ore bodies are usually marginal because of their small size.

The claims are on the western edge of the Uravan mineral belt. The area is classed as generally unfavorable for ore through USGS drilling and outcrop investigations.

The Cullen Minerals Corporation property (Docket 4446) lies about one mile to the east and is more favorably situated than the subject property, but the former application was denied because of the probable small size and erratic distribution of ore bodies.

The American Leduc property (Docket 4041) lies about one mile to the northwest. A contract was executed because considerable favorable ground was included. Unfavorable ground south of the property extends to the subject Raven claims. Ore deposits found under Docket 4041 were small and scattered, but the grade will probably be good.

The subject claims have produced 101 tons of ore averaging 0.20% U_3O_8 and 0.96% V_2O_5. Combined indicated and inferred reserves are estimated as 100 tons. Combined production of the Black Streak and Craig properties, largest nearby producers, totaled 1,669 tons averaging 0.36% U_3O_8 and 1.63% V_2O_5.

Because of the general unfavorability of the ground and the small size and erratic distribution of potential ore bodies, it is recommended that the application be denied without a field examination.

Commodity Group Comments:

USGS, W. P. Williams, January 10, 1957:

The Applicant has already drilled 193 holes on the property without encouraging results. The Raven No. 3 mine consists of 295 feet of underground workings and some small stopes, but total production has been only 85 tons. Considerable information is available on Blue Mesa through Government drilling and investigations, and private projects. A field examination would make no significant contribution to the already large fund of knowledge about the subject area. Recommends that the application be denied without a field examination.

USBM, John E. Crawford, January 14, 1957:

Agrees with the Field Team that the application should be denied without a field examination.

Rare & Miscellaneous Metals Div., M. Ching, January 17, 1957:

The history of the Blue Mesa area shows that the ground on the subject property is unfavorable for significant ore deposits.

Considerable work done by the Applicant bears this out to a large extent. Therefore, a field examination is not required to support a denial of the application.

Conclusions and Recommendations:

It has already been established that the potential of this property is quite limited. It is recommended that the application be denied without a field examination.

Ernest Wm. Ellis

Ernest Wm. Ellis, Chief
Rare and Miscellaneous
Metals Division

OFFICIAL FILE COPY DMEA RECEIVED JAN 15 1957		
DATE	INITIALS	CODE
1-15	CW	220
1-15	Ellis	700

Comments Complete

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

Date January 14, 1957

DMEA Docket No. 4573
DMEA Contract No.
Commodity Uranium
Name of applicant Chesapeake & Colorado Corp.
Name of property Raven Claims
Location of property Mesa fCounty, Colo.
Estimated cost of project $5,844.10

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

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

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

1. Date of subject document: 1/3/57. 2. Date received by reviewer: 1/11/57.

3. Prior reports on this property known to reviewer: Yes ☐ No ☐

4. Prior reports on nearby properties known to reviewer: Yes ☐ No ☐

5. Information available on past production: Yes ☐ No ☐

6. Other pertinent factors known to reviewer: Yes ☐ No ☐

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]
      1. Consult with Mr. _____ at _____ AEC office.
   e. Disagree with Field Team ☐
   f. Suggest alternate plan ☐
   g. Request another examination ☐
   h. Approval ☐

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

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

IN REPLY REFER TO:

OFFICIAL FILE COPY
DMEA
RECEIVED JAN 11 1957

DATE	INITIALS	CODE
1-11-57	Ellis	900
~~January 10, 1957~~		

Memorandum

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

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

Subject: Review of application, DMEA 4573, Chesapeake & Colorado Corporation, Raven Claims, Blue Mesa, Mesa County, Colorado (uranium).

The applicant proposes to explore for uranium ore deposits on nine unpatented mining claims in the Gateway district of Colorado. The proposed work would consist of core drilling in four stages, although only the drilling in Stage I, 13 holes, seems to have been provided for in cost estimates in the application.

The applicant has already completed 193 holes on the property. The claims are also the site of the Raven No. 3 mine which comprises about 295 linear feet of underground workings plus some small stopes. The previous drilling did not find ore, and the total production from the Raven No. 3 has been only 85 tons.

The Government has considerable information about Blue Mesa through Government drilling, private drilling and mining, Government geologic studies, and previous DMEA applications and contracts, DMEA 4446, 4041. The ground on which the property is located is classed as unfavorable; and the ore deposits in the vicinity are known to be very small and scattered.

As pointed out by Grand Junction personnel this certainly seems to be a case in which denial is indicated. I see no significant contribution a field examination would make to the already large fund of knowledge about the subject area. Consequently I recommend, along with the Field Team and Grand Junction, that the application be denied without field examination.

W. P. Williams

W. P. Williams

700

Docket

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

OFFICIAL FILE COPY DMEA		
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DATE	INITIALS	CODE
1-7	C	720 700

T E L E T Y P E

W. M. TRAVER

REURTT JANUARY 3, DMEA 4559 MINERALS INC., NO, WE WILL PROCESS APPLICATION. PLEASE ADVISE WHEN WE MAY EXPECT GRAND JUNCTION MEMORANDA FOR DMEA 4566 COLUMBIA URANIUM INC., AND DMEA 4573 CHESAPEAKE AND COLORADO CORPORATION.

FLKnouse/izm 1-4-57
cc to: Confirmation to Reg. III
Hosted,
Crawford
Kiilsgaard
Operating Committee
Admr.'s Reading File
Code 700
Mr. Knouse

Docket 4566 DMEA
Docket 4573 DMEA

George C. Selfridge

Chairman, Operating Committee

A.C.G.

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

OFFICIAL FILE COPY DMEA RECEIVED JAN 7 1957		
DATE	INITIALS	CODE
~~1-9~~	~~C~~	~~220~~
1-7-57	E.	700

224 New Customhouse
Denver 2, Colorado

January 3, 1957

Memorandum

To: Secretary to the Operating Committee

From: DMEA Field Team, Region III

Subject: Docket DMEA 4573 (Uranium) Chesapeake & Colorado Corporation (Raven Claims) Mesa County, Colorado

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

Because of the general unfavorability of the ground, the probable small size and erratic distribution of ore bodies, and our past experience in this area, they recommend that the application be denied without a field examination. We concur in this recommendation.

DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures
HMC:ytl

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

IN REPLY REFER TO:
MINERAL DEPOSITS

DMEA
RECEIVED
JAN 2 1957
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

DMEA
DEPARTMENT OF THE INTERIOR
JAN 2 1957
REGION III
DENVER, COLORADO

December 31, 1956

OFFICIAL FILE COPY
DMEA
RECEIVED JAN 7 1957

DATE	INITIALS	CODE

Memorandum

To: Executive Officer, DMEA Field Team, Region III

Through: J. William Hasler
E. N. Harshman
~~J. F. Shaw~~

From: D. P. Elston
M. H. Salsbury

Subject: DMEA 4573 (Uranium), Chesapeake & Colorado Corporation, Raven claims (Blue Mesa area), Mesa County, Colorado
Advisability of making a field examination

The above corporation has applied to DMEA for aid in an exploration program consisting of 13 diamond drill holes bottoming at depths that range from 115 to 170 feet to be drilled at an overall cost of $5,844.10.

The Raven claims are located on the north side of Blue Mesa, Mesa County, Colorado, in sections 31 and 32, T. 50 N., R. 17 W., N.M.P.M. No tie to any land corner is shown on the applicant's claim map. The ore reserves section of the Atomic Energy Commission was consulted and the small mine on the Raven No. 3 claim was approximately located by reference to distinctive bends in the roads in the SE$\frac{1}{4}$, SE$\frac{1}{4}$, NE$\frac{1}{4}$ of section 31 about 400 feet west of the section line. The Craig and Black Streak properties are about 1,000 feet west of the mine on the Raven No. 3 claim. From this data the northern edge of the claims, in part, generally coincides with the contact of the Salt Wash-Brushy Basin members of the Morrison formation of Jurassic age (Geologic map of the Calamity Mesa Quadrangle, by F. W. Carter, Jr., 1955). As stated by the applicant, most of the claim area lies on the Brusy Basin member, and the ore minerals are in the uppermost sandstone layer of the Salt Wash member.

The applicant's description of the habits and size of ore bodies in the Raven-Blackstreak trend is in conformity with observations made by Geological Survey personnel during subsequent investigations. Ore bodies in Blue Mesa are small and discontinuous. They are seldom over 100 feet long and generally are no more than 10 to 20 feet wide. Thickness of ore commonly is between 1 and 2 feet. Although locally quite rich, ore bodies tend to be so small that they are little more than marginal and may not be economic even in stripping operations.

The claims are on the western edge of the Uravan mineral belt in an area that is classed as generally unfavorable for ore, although such areas may contain small ore deposits. Data for such classification were obtained from Geological Survey drilling and outcrop investigations.1/2/

1/ Finch, W. I., February 1953, Carnotite Resources of part of Blue Mesa, Mesa County, Colorado; TEI 154.

2/ McKay, E. J., 1955, Criteria for Outlining Areas favorable for uranium deposits in parts of Colorado and Utah: U. S. Geol. Survey Bull. 1009-J

Production from the Craig Homestead on patented ground was prior to 1951 and totals less than 300 tons. Combined production of the Black Streak and Craig properties to October 1, 1956, totals 1669 short tons having an average grade of 0.36 percent U_3O_8 and 1.63 percent V_2O_5. Atomic Energy Commission reserves for the Black Streak are 236 tons of indicated ore and 1,000 tons of inferred ore having an average grade of 0.21 percent U_3O_8 and 1.70 percent V_2O_5. In the period October-December 1955, the Raven No. 3 property produced 101 tons having an average grade of 0.20 percent U_3O_8 and 0.96 percent V_2O_5. Combined indicated and inferred reserves are estimated at 100 tons.

The applicant proposes to explore for an extension of a favorable channel-like trend on the Raven Nos. 3 and 4 claims with 13 core drill holes on about 100-foot centers. Subsequent exploration to extend and to better define such a trend, if found, would be the subject of a subsequent application. A final stage to block out ore is not within the scope of DMEA policy, especially since spacing of such holes would be on centers of 25 feet or less as is the practice on Blue Mesa. The erratic distribution of ore bodies within these ore deposits does not permit the estimation of reserves without such close-spaced drilling.

Reference is made to the Cullen Minerals Corporation application for assistance (DMEA 4446). This property, about one mile to the east, is more favorably situated than the subject property but, because of the probable small size and erratic distribution of ore bodies, denial of the request for assistance has been recommended. Reference also is made to the Government-assisted program on the American Leduc property on the south side of Outlaw Mesa about one mile northwest of the Raven claims (DMEA 4041, contract Idm-E 969). The area explored under contract Idm-E 969 is at the southwest edge of the Uravan Mineral Belt. Ground classed as unfavorable for ore bounds the south side of these deposits. This includes the area in which the Raven claims

lie. The ore deposits found during DMEA exploration are very small, probably not averaging over 100 tons each, and the frequency of occurrence is low. The grade as mined will probably be good.

Because of the general unfavorability of the ground and the probable small size and erratic distribution of ore bodies, it is recommended that the application for assistance in exploration be denied without field examination, even though DMEA personnel have not actually examined the claims on which exploration is proposed.

D. P. Elston by JHH
D. P. Elston,
Geological Survey

M. H. Salsbury by H.J.R.
M. H. Salsbury,
Bureau of Mines

DPE/mlr

cc: DMEA file
Chron.

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

December 10, 1956

Chesapeake & Colorado Corp.
133 S. 4th St, P. O. Box 1298
Grand Junction, Colorado

Subject: DMEA-4573

Gentlemen

Your application for exploration assistance, dated December 3, 1956 submitted to our office at Denver, has been assigned Docket Number DMEA-4573 and referred to the Rare and Miscellaneous Metals Division in the Washington office. Kindly identify all future correspondence relating to your application by this Docket Number.

Sincerely yours,

(Sgd) Allen S. Dakan

Allen S. Dakan, Director
Operations Control and
Statistics Division

Copy to:

Region III. Denver 2, Colorado

Code 700

6416

U. S. Government Messenger Envelope

Standard Form No. 65 (Rev. 1/46)

1. Use blocks consecutively, one at
2. Avoid previous block.
3. Write clearly.

NAME OR TITLE OF PERSON, DEPARTMENT, ADDRESS, AND ROOM		NAME OR TITLE OF PERSON, DEPARTMENT, ADDRESS, AND ROOM	
[illegible]	RUN / STOP	2) Duplicating Sect. Rm. 1061 (Qual.)	RUN / STOP
~~Mr. [illegible]~~ ~~Room 5231~~ GSA	RUN / STOP	Mrs. Rothbuck ~~Fiscal Section~~ ~~Room 5308~~	RUN / STOP
~~[illegible] Sec 1061 [illegible]~~	RUN / STOP	Bureau of Mines Acounts Mrs. Snowden	RUN / STOP
~~Mr Eisenhower 40~~	RUN / STOP	Mr. Chamberlain OMEA - Rm-4454	RUN / STOP
Mr. Hoffman Rm 2224	RUN / STOP		RUN / STOP
~~Mrs. Kozicki Rm 2230~~	RUN / STOP		RUN / STOP
[illegible] 2240	RUN / STOP		RUN / STOP
~~Mr. Ryan Rm. 5242~~	RUN / STOP		RUN / STOP
Judy Romack WR Dist.	RUN / STOP		RUN / STOP
1) Mr. Schade Rm. 5214 (PSA)	RUN / STOP		RUN / STOP

Send surplus envelopes to supply room for reissue.

Use other side

16—38

Use RUN and STOP only when messenger service between Government buildings in Washington is required. Your mail room has RUN and STOP information.

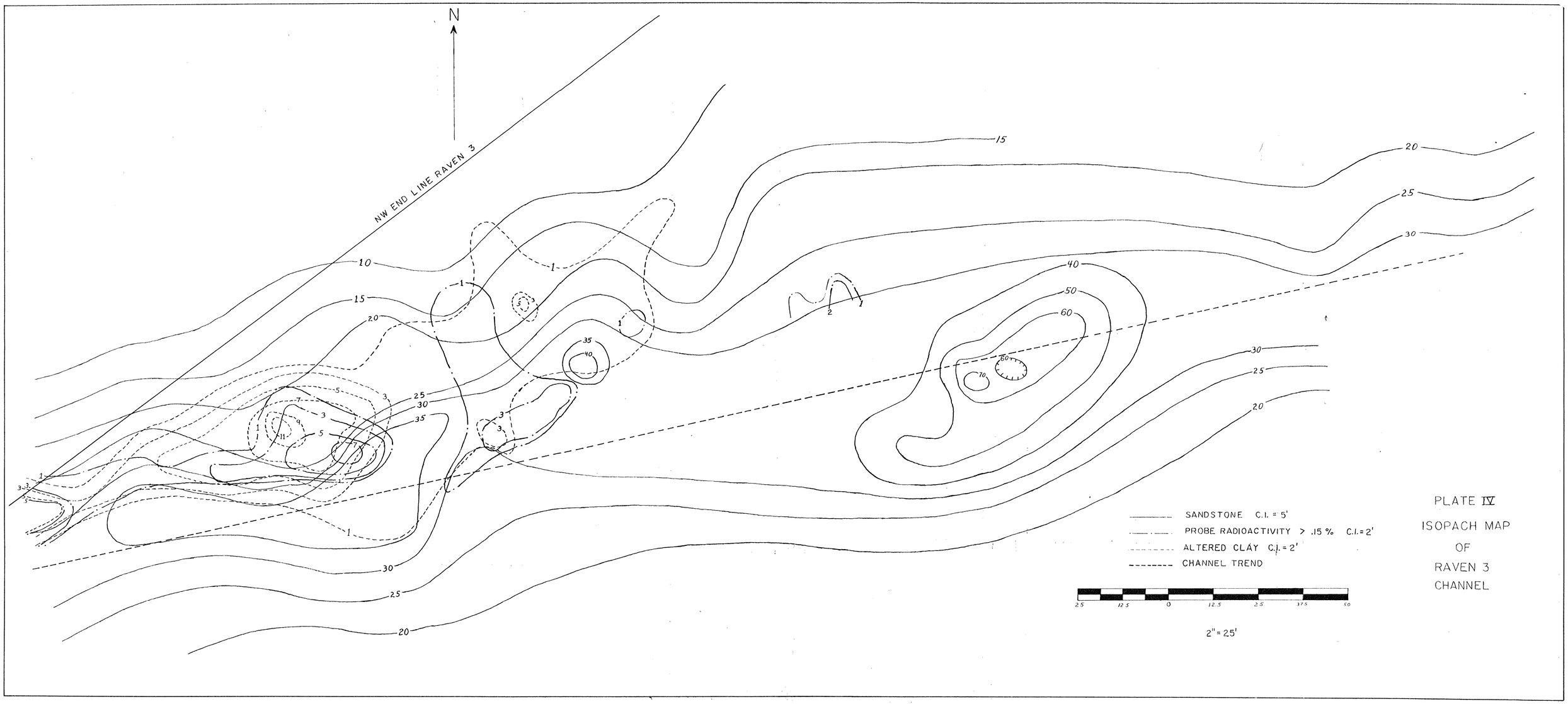

PLATE IV

ISOPACH MAP OF RAVEN 3 CHANNEL

PLATE II
RAVEN CLAIMS
MESA CO.
COLORADO

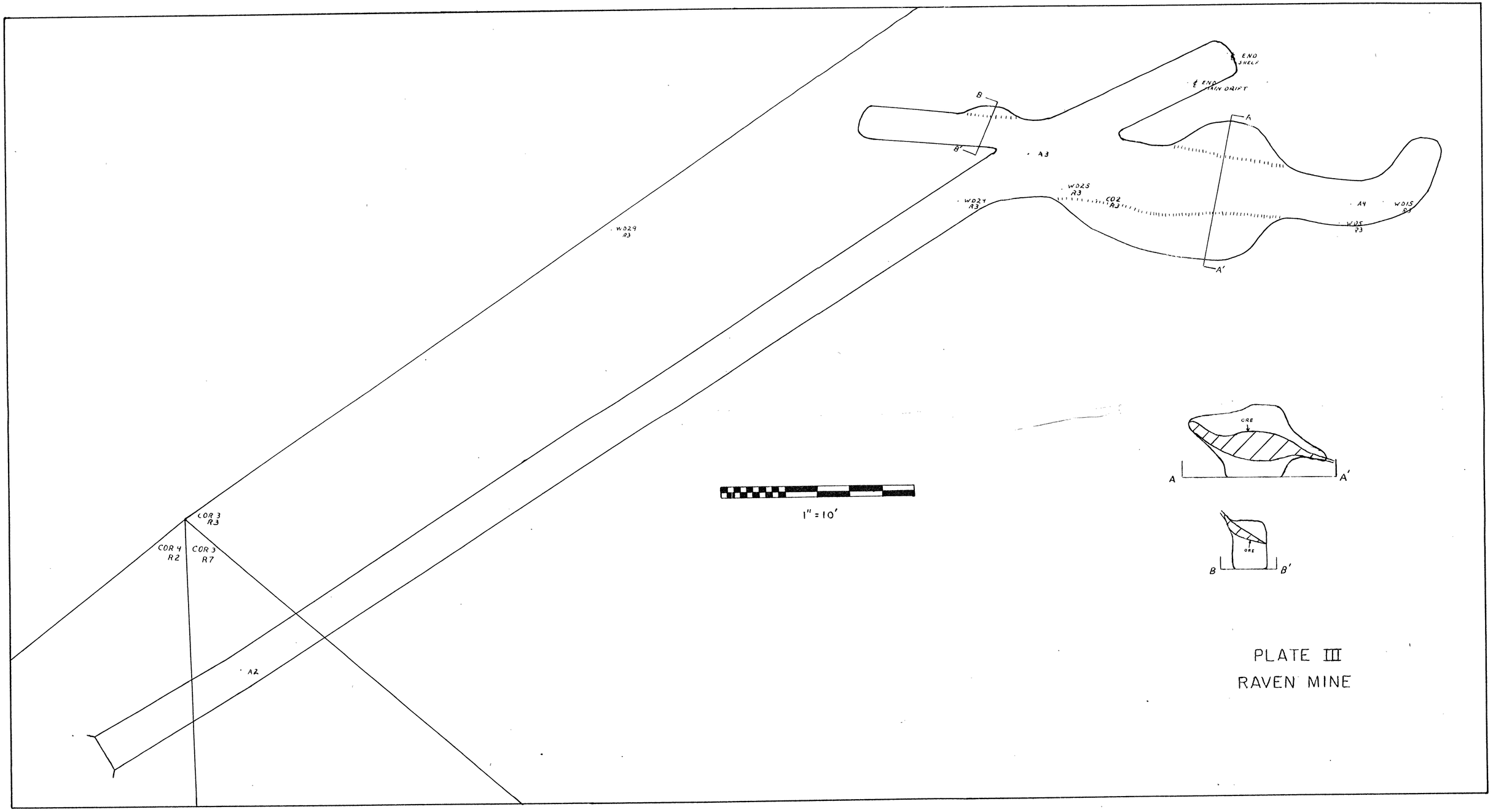

PLATE III
RAVEN MINE

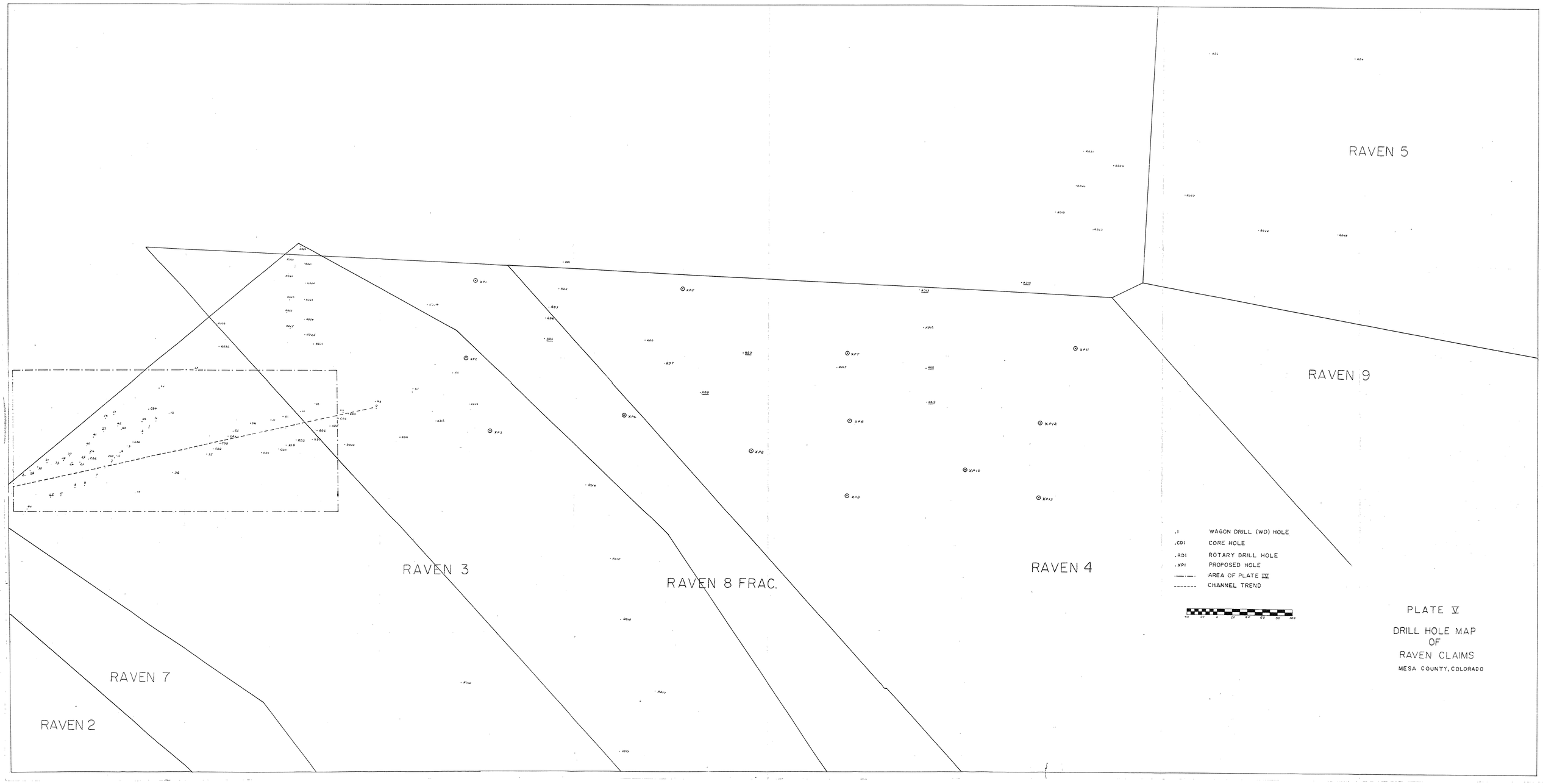

PLATE V

DRILL HOLE MAP
OF
RAVEN CLAIMS

MESA COUNTY, COLORADO