DMEA - 4th copy

Form MF-103

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

submitted by

CHESAPEAKE AND COLORADO URANIUM CORPORATION
909 - 16th Street, N. W.
Washington 6, D. C.

September 19, 1955

MF-103
(Revised April 1952)

DMEA
Date Rec'd.
SEP 19 1955
BUREAU OF MINES
Denver, Colorado

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

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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. 3990
Metal or Mineral uranium
Date Received
Estimated Cost
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 AND COLORADO URANIUM CORPORATION
909 - 16th Street, N. W., Washington, D. C.,
a corporation organized and existing under and by virtue of the laws of the S tate of Delaware

(*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. (Page 3, attached.)

(*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 (Please see pages 4 and 5, attached.)

(*b*) State any mine name by which the property is known. (Please see page 6, attached.)

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Applicant is sole owner of mining claims embracing all the land covered by this application. (And see page 6 attached.)

(*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 None

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. (See pages 4 and 5, attached.)

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. (Please see page 7, attached.)

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades. (Page 7, attached.)

(*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. (Please see page 7, attached.)

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points. (Please see page 8, attached.)

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power. (Please see page 8, attached.)

16—66551-1

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 exploration work as related to such features as contacts, veins, ore-bearing beds, etc. (Please see Exhibit A and accompanying maps.)

(*c*) The work will start within 30* days and be completed within 12 months from the date of an exploration project contract. *unless weather conditions prevent.

(*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. (Pages 9-13, attached.)

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.). (Please see page 15, attached.)

(*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. (Please see page 16, attached.)

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel. (Please see page 17, attached.)

(*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. (Please see page 18, attached.)

(*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. (Please see page 19, attached.)

(*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. (Page 19.)

(*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. (Please see page 19, attached.)

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

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

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

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

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

Explain in detail on acompanying paper. (Please see page 20, attached.)

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 19, 1955.

CHESAPEAKE AND COLORADO URANIUM CORPORATION
(Applicant)

By Francis M. Tompkins
Francis M. Tompkins, President

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

Item 1. (c) Officers of the corporate applicant, their names and addresses, are as follows:

Name	Address	Title
Francis M. Tompkins	909 - 16th St., N.W. Washington 6, D. C.	President and a directo
Joe D. Farris	133 South Fourth St. Grand Junction, Col.	Vice-President and a directo
Gillis W. Long	The Wyatt Building Washington 5, D. C.	Secretary
Howard Ritter	909 - 16th St., N.W. Washington 6, D. C.	Treasurer
Lytle Brown, Jr.	133 South Fourth St. Grand Junction, Col.	Chief Engineer
David L. Hoover	133 South Fourth St. Grand Junction, Col.	Project Geologist-Engineer

Item 3. Applicant's property rights.

(a) The land upon which the applicant wishes to explore consists of fifty-six (56) unpatented lode mining claims situate in Sections 26, 27, 34 and 35 of T. 50 N., R. 18 W., N.M.P.M., and Sections 2 and 3 of T. 49 N., R. 18 W., N.M.P.M., Mesa County, Colorado (see maps submitted herewith for exact locations of claims). These mining claims are described as follows:

NAME	Location (or Amended Location) DATE (Mo/day/year)	Recording DATE	Mesa County BOOK	(Col.) Records PAGE
Queen Bee No. 1	2/5/54	2/19/54	598	238
(Queen Bee No. 1-Amended)	5/2/55	8/2/55	(655)	(529)
Queen Bee No. 2	2/5/54	2/19/54	598	239
(Queen Bee No. 2-Amended)	5/2/55	8/2/55	(655)	(530)
Queen Bee No. 3	2/5/54	2/19/54	598	240
(Queen Bee No. 3-Amended)	5/2/55	8/2/55	(655)	(531)
Queen Bee No. 4	2/5/54	2/19/54	598	241
(Queen Bee No. 4-Amended)	5/2/55	8/2/55	(655)	(532)
Queen Bee No. 5	2/5/54	2/19/54	598	242
(Queen Bee No. 5 -Amended)	5/2/55	8/2/55	(655)	(533)
Queen Bee No. 6	2/5/54	2/19/54	598	243
(Queen Bee No. 6 -Amended)	5/2/55	8/2/55	(655)	(534)
Queen Bee No. 7	2/5/54	2/19/54	598	244
(Queen Bee No. 7-Amended)	5/3/55	8/2/55	(655)	(535)
Queen Bee No. 8	2/5/54	2/19/54	598	245
(Queen Bee No. 8-Amended)	5/3/55	8/2/55	(655)	(536)
Queen Bee No. 9	2/5/54	2/19/54	598	246
(Queen Bee No. 9-Amended)	5/3/55	8/2/55	(655)	(537)
Queen Bee No. 10	2/5/54	2/19/54	598	247
(Queen Bee No. 10-Amended)	5/3/55	8/2/55	(655)	(538)
Queen Bee No. 11	2/5/54	2/19/54	598	248
(Queen Bee No. 11-Amended)	5/2/55	8/2/55	(655)	(539)
Queen Bee No. 12	2/5/54	2/19/54	598	249
(Queen Bee No. 12-Amended)	5/2/55	8/2/55	(655)	(540)
Queen Bee No. 13	2/5/54	2/19/54	598	250
(Queen Bee No. 13-Amended)	5/2/55	8/2/55	(655)	(541)
Queen Bee No. 14	2/5/54	2/19/54	598	251
(Queen Bee No. 14-Amended)	5/2/55	8/2/55	(655)	(542)
Queen Bee No. 15	2/5/54	2/19/54	598	252
(Queen Bee No. 15-Amended)	5/2/55	8/2/55	(655)	(543)
Queen Bee No. 16	2/5/54	2/19/54	598	253
(Queen Bee No. 16-Amended)	5/2/55	8/2/55	(655)	(544)
Queen Bee No. 17	2/5/54	2/19/54	598	254
(Queen Bee No. 17-Amended)	5/3/55	8/2/55	(655)	(546)
Queen Bee No. 18	2/5/54	2/19/54	598	255
(Queen Bee No. 18-Amended)	5/3/55	8/2/55	(655)	(547)

NAME	Location (or Amended Location) DATE (Mo/day/year)	Recording DATE	Mesa County BOOK	(Col.) Records PAGE
Queen Bee No. 19	2/5/54	2/19/54	598	256
(Queen Bee No. 19-Amended)	5/3/55	8/2/55	(655)	(548)
Queen Bee No. 20	2/5/54	2/19/54	598	257
(Queen Bee No. 20-Amended)	5/3/55	8/2/55	(655)	(549)
T Bar F No. 1	5/28/55	6/6/55	648	206
T Bar F No. 2	5/28/55	6/6/55	648	207
T Bar F No. 3	5/28/55	6/6/55	648	208
T Bar F No. 4	5/28/55	6/6/55	648	209
T Bar F No. 5	5/28/55	6/6/55	648	210
T Bar F No. 6	5/28/55	6/6/55	648	211
T Bar F No. 7	5/28/55	6/6/55	648	212
T Bar F No. 8	5/28/55	6/6/55	648	213
T Bar F No. 9	5/28/55	6/6/55	648	214
T Bar F No. 10	5/28/55	6/6/55	648	215
T Bar F No. 11	5/28/55	6/6/55	648	216
T Bar F No. 12	5/28/55	6/6/55	648	217
Virginia W. No. 1	5/28/55	6/6/55	648	218
Virginia W. No. 2	5/28/55	6/6/55	648	219
Virginia W. No. 3	5/28/55	6/6/55	648	220
Virginia W. No. 4	5/28/55	6/6/55	648	221
Virginia W. No. 5	5/28/55	6/6/55	648	222
Virginia W. No. 6	5/28/55	6/6/55	648	223
Virginia W. No. 7	5/28/55	6/6/55	648	224
Virginia W. No. 8	5/28/55	6/6/55	648	225
Virginia W. No. 9	5/28/55	6/6/55	648	226
Virginia W. No. 10	5/28/55	6/6/55	648	227
Virginia W. No. 11	5/28/55	6/6/55	648	228
Virginia W. No. 12	5/28/55	6/6/55	648	229
Jamie T. No. 1	5/20/55	6/6/55	648	230
Jamie T. No. 2	5/20/55	6/6/55	648	231
Jamie T. No. 3	5/20/55	6/6/55	648	232
Jamie T. No. 4	5/20/55	6/6/55	648	233
Jamie T. No. 5	5/20/55	6/6/55	648	234
Jamie T. No. 6	5/20/55	6/6/55	648	235
Jamie T. No. 7	5/20/55	6/6/55	648	236
Jamie T. No. 8	5/20/55	6/6/55	648	237
Jamie T. No. 9	5/20/55	6/6/55	648	238
Jamie T. No. 10	5/20/55	6/6/55	648	239
Jamie T. No. 11	5/20/55	6/6/55	648	240
Jamie T. No. 12	5/20/55	6/6/55	648	241

(b) A small, presently inoperative mine located on the subject property is known as "The Stormy Treasure Mine." The entire subject property, consisting of 56 unpatented lode mining claims, is known as and sometimes hereinafter referred to as "the Calamity Creek Claim Block."

(c) The applicant is the owner of all of the claims. Applicant owns the Queen Bee Nos. 1 through 20 under and by virtue of a Mining Deed, dated November 3, 1954, from Jerome Craig, Jr. and E. L. Hess, the locators of these claims. The deed was recorded in the records of Mesa County, Colorado, on November 9, 1954, in Book 624 at Page 176. Applicant is the locator of the T Bar F Nos. 1 through 12, Virginia W. Nos. 1 through 12 and Jamie T. Nos. 1 through 12.

Item 4. Physical description. (a) For a detailed description of past and present mining and exploration operations on the Calamity Creek Claim Block, including existing mine workings and production facilities, please see: R. T. Brown, Report on the Geology of the Properties Held by Chesapeake & Colorado Uranium Corporation in the Blue Creek - Calamity Creek Areas, July 29, 1955, pages 5 through 8. (This document is submitted herewith as Exhibit A and is hereinafter referred to as "the Brown Report".) As to accessibility, please see the Brown Report, page 3.

(b) Past and current production is covered on pages 5 and 6 of the Brown Report. Ore reserves (there are none developed as yet) are covered on page 16 of the Brown Report.

(c) Geologic features of the subject property are covered on pages 9 through 16 of the Brown Report. Applicant's reasons for wishing to explore are covered in these pages and in the balance of the Brown Report, pages 16 through 29, in which pages applicant's proposed exploration program is also set out. In addition to the Brown Report itself, submitted herewith as Exhibit A, applicant also respectfully submits herewith four maps: Plate A, Plate B, Plate C and Plate 1, the titles of which are given on the last page of the Brown Report and on page 20 hereof. For convenience, Plate 2 and Plate 3, mentioned on the last page of the Brown Report, are not being submitted separately. These two plates were transparent overlays for Plate 1. The contents of Plate 2 have been transposed directly onto Plate 1 in the color ORANGE, and the contents of Plate 3 have similarly been transposed onto Plate 1 in the color BLACK. None of these maps need be returned.

(d) Please see pages 3, 6 and 7 of the Brown Report as to accessibility, distances, roads, and housing.

(e) Pages 6 through 8 of the Brown Report cover the subject of manpower, materials, supplies, equipment, water and power.

Item 5 (d). Qualifications of applicant and of persons who will direct the exploration project.

The Chesapeake and Colorado Uranium Corporation was incorporated under the laws of the State of Delaware on September 9, 1954, to carry on the activities of a partnership formed in late 1953 (the Tompkins-Farris Mining Company) 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.

The land acquisition phase has now progressed to the point where the Company is the owner or lessee of over 450 claims, of which 56, the Calamity Creek Claim Block, are the subject of this application. The Company is continuing to locate claims as worthwhile open areas are discovered on the Colorado Plateau. The Company and its predecessor partnership have now demonstrated through nearly two years of operation the ability to carry forward the program described above. Its activities have included the drilling of over 176 test holes in four claim groups (not on the subject property, however), totaling approximately 20,000 feet of drilling in all; exploratory tunnelling for and production of ore in its Stormy Treasure Mine (see the Brown report for details); extensive clearing, grubbing and access road building; surveying and mapping. On the business and administrative end, a cohesive and smoothly operating managerial staff and plan has been developed. A recently completed public financing has put the Company on a solid financial basis and has enabled it to acquire a well-rounded equipment spread and to complete a modern, all-weather mining camp for its employees in the immediate area of the subject property.

Mr. David L. Hoover will serve as the applicant's full-time Geologist-Engineer on this project and as the applicant's agent to complete and sign progress reports and other day-to-day working documents for the DMEA, if this application is approved. Mr. Hoover was graduated from the Colorado School of Mines on May 27, 1955, with the degree of Engineer of Petroleum Geology. Among the specialized two- or three-semester hour courses he took at the School of Mines were Mineralogy, Subsurface Geology, Field Geology, Sedimentation and Stratigraphy, Air Photos and Map Interpretation, Structural Geology, Optical Mineralogy, Plane Surveying, Uranium Geology, and Economic Geology and Ore Deposits. In addition to his technical education in engineering-geology, Mr. Hoover had field experience during his undergraduate days as a core drill helper ("roughneck") with the United States Bureau of Mines and has been steadily employed by your applicant since his graduation in positions of increasing responsibility, and with great success, in the exploration and development of the Company's Colorado uranium and fluorspar prospects. (In any conferences with DMEA field representatives involving negotiation and the making of technical and procedural decisions, the applicant will also be represented by Mr. R. T. Brown of Technical Services, Inc. (see below).)

Mr. Francis M. Tompkins, the President, a director and one of the founders of the Company, is and for many years has been the Senior Vice President of Chas. H. Tompkins Co., nationwide building and heavy construction contractors of Washington, D. C. His long and diverse experience with that company has included direct supervision of many and varied construction projects,

including earth and rock filled dams and tunnels of various types. He perceived in the early days of the uranium mining industry that earth-moving and tunnelling techniques and equipment, with which he had become intimately familiar in heavy construction work, could be applied to mining. Prior to his entry into the uranium exploration and mining business he had also acquired experience in oil wildcatting. 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.

Mr. Joe D. Farris, Vice President, a director and one of the founders of the applicant, has had 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. Mr. Farris has been in charge of the Company's Grand Junction office and of all the Company's field activities since its inception and will participate actively in the direction of the project for which application is made hereby.

Mr. 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 of water and sewer installations at Camp Campbell, Kentucky. He also served as assistant project manager of the Huntsville Ordnance project. In 1942-43 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 in 1944-45. 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, and as a project manager and construction supervisor for the Chas. H. Tompkins Co. For the past few months he has served the Chesapeake and Colorado Uranium Corporation, your applicant, as manager of its Wasatch-Low Boy Division.

The applicant has retained, on a consulting basis, for the rendering of geological, engineering and technical advice and supervision on the project for which application is hereby made--

<u>Technical Services, Inc., of Grand Junction, Colorado.</u> This concern, specializing in the "hard rock" mining and prospecting industry, has on its staff three mining geologists, one mining geophysicist, five mining engineers, one registered land

surveyor, one draftsman and office manager, and several field assistants. Mr. H. T. Brown, the author of "the Brown Report" filed as Exhibit A herewith, is an officer and mining geologist of Technical Services, Inc. and will serve as applicant's consultant and as its technical representative to the DMEA, if this project is approved. The experience of Technical Services personnel has been with the following companies and organizations:

American Smelting and Refining Company, Vanadium, New Mexico
Anaconda Copper Company, Butte, Montana
Argyle Mining Company, Silverton, Colorado
Atomic Energy Commission, Grand Junction, Colorado
Chesapeake and Colorado Uranium Corporation, Grand Junction, Colorado
Climax Molybdenum, Climax, Colorado
Climax Uranium Co. (Exploration farm-outs to R. O. Dulaney, Jr.)
R. O. Dulaney, Jr., Grand Junction, Colorado
Minerals Engineering Company, Grand Junction, Colorado
Ortmayer Mining Company, Grand Junction, Colorado
Elmer V. Reinhardt, Grand Junction, Colorado
Ryan Oil Company, Grand Junction, Colorado
Simpson Mining Company, Grand Junction, Colorado
Skidmore Mining Company, Dove Creek, Colorado
Utarado Mining Company, Gateway, Colorado

and others. Services performed have consisted of surface and underground surveying; examination and evaluation of properties; radiometric, electrical and magnetic geophysical surveys; exploration supervision; development planning; and production contracting. Technical Services is at the present time developing ore at the Osceola mine at Silverton; conducting surveying, probing and planning work prior to development and production of ore at the Uintah lease, Legin Group, Slick Rock district; supervising contract drifting operations at the Blackhawk mine, Silverton; conducting radiometric surveys and geological work on the Knot mine

lease, Tenderfoot Mesa; supervising an exploration program for R. O. Dulaney, Jr. on Beaver Mesa, near Gateway; supervising exploration for the Chesapeake and Colorado Uranium Corporation on Calamity and Blue Mesas; and carrying on claim surveying work in the La Sal Mountain area.

Item 6. Estimate of costs.

(a) Independent contracts.

Description	Quantity	Unit	Unit Cost	Total Cost
Independent contract drilling (at low-bid rates of Cannon Diamond Drilling Company of Grand Junction, Colorado):				
Non-core drilling to 300' depths	35,370*	Lin.ft.	$1.50	$53,055
Core drilling to 300' depths	32,920*	Lin.ft.	$2.75	$90,530
Non-core drilling 300-700' depths	10,840*	Lin.ft.	$2.05	$22,222
Core drilling 300-700' depths	13,125*	Lin.ft.	$4.00	$52,500
Drill rig waiting time and Gamma Ray logging	972	Hours	$14.00	$13,608
Lost cores (est. 10%)	4,605	Lin.ft.	$3.12	$14,368
Lost casings (est. 1%)	920	Lin.ft.	$3.00	$ 2,760
Gamma Ray Logging	92,255	Lin.ft.	$0.20	$18,451
Assays (est. 4 assays for each of 221 holes)	884	Assays	$5.00	$ 4,420
TOTAL, independent contracts				$271,914

*Figures include total footage for Stage 1, Stage 2 and Stage 3 drilling as described and explained in the Brown Report.

Item 6. Estimate of Costs (Continued).

(b) Labor, supervision, consultants. (Based on 12 months, 2 shifts.)

Description	Quantity	Unit	Unit Cost	Total Cost
Geologist (Company payroll)	52	Weeks	$125.00	$6,500
Ass't Geologist (Company payroll)	52	Weeks	$100.00	$5,200
Supervising Geologist (Consultant: from Technical Services, Inc., Grand Junction, Colorado; two days per week.)	104	Days	$100.00	$10,400
Consulting Geologist (Mr. Dorsey Hager, Salt Lake City; two days per month)	24	Days	$230.00	$5,520
General Superintendent (Company payroll; ½-time of officer)	26	Weeks	$250.00	$6,500
Draftsman	52	Weeks	$100.00	$5,200
Layout of roads and holes:				
Instrument Man	3,240	Hours	$2.50	$8,240
Rodman	3,240	Hours	$2.00	$6,480
Chainman	3,240	Hours	$1.80	$5,832
Other labor:				
Clearing and grubbing (labor costs only)	15	Acres	$100.00	$1,500
Excavation for access and drill locations (labor costs only)	24,450	Cu. yds.	$0.70	$17,115
Transportation (labor costs only):				
Pickup for hauling cores	3,240	Hours	$2.20	$7,128
Pickup for geologist and crew	3,240	Hours	$0.20	$ 648
Pickup for engineering crew	3,240	Hours	$0.20	$ 648
Jeep for Gen'l Supt. (½ time)	1,620	Hours	$0.20	$ 324
Warehouse for cores (labor cost only)	8,000	Cu. ft.	$0.25	$2,000
Office and furniture (labor cost only)	2,000	Cu. ft.	$0.40	$ 800
TOTAL, labor, supervision, consultants				$90,035

Item 6. Estimate of Costs (Continued).

(c) Operating materials and supplies

	Quantity	Unit	Unit Cost	Total Cost
Clearing and grubbing (materials costs only)	15	Acres	$50.00	$ 750
Layout of roads and holes: cost of stakes	7,726	Stakes	$ 0.10	$ 773
Excavation for access and drill locations (materials costs only)	24,450	Cu.yds.	$ 0.50	$12,225
Drafting materials	52	Weeks	$20.00	$ 1,040
Core boxes	7,600	Boxes	$ 2.00	$15,200
Warehouse for cores (materials costs only)	8,000	Cu.ft.	$ 0.25	$ 2,000
Office and furniture (materials costs only)	2,000	Cu.ft.	$ 0.40	$ 800
Car allowance for supervising geologist	15,600	Miles	$ 0.10	$ 1,560
Transportation (materials costs only):				
Pickup for hauling cores	3,240	Hours	$ 0.40	$ 1,296
Pickup for geologist and crew	3,240	Hours	$ 0.40	$ 1,296
Pickup for engineering crew	3,240	Hours	$ 0.40	$ 1,296
Jeep for Gen'l Supt. (½ time)	1,620	Hours	$ 0.40	$ 648
Water and Power				*
TOTAL, operating materials and supplies				$38,884

*A water well heretofore drilled by the applicant near the subject property will provide drinking water at the project. Costs of water and power for drilling are included in the independent contract per-foot drilling prices under (a) above.

Item 6. Estimate of Costs (Continued).

(d) Operating equipment (Costs of equipment owned by applicant; suggested use allowance*.)

Description	Quantity	Unit	Unit Cost	Total Cost
Clearing and Grubbing (equipment costs only)	15	Acres	$70.00	$ 1,050
Excavation for access and drill locations (equipment costs only)	24,450	Cu.yds.	$ 0.30	$ 7,335
Transportation (equipment costs only):				
Pickup for hauling cores	3,240	Hours	$ 0.60	$ 1,944
Pickup for geologist and crew	3,240	Hours	$ 0.60	$ 1,944
Pickup for engineering crew	3,240	Hours	$ 0.60	$ 1,944
Jeep for Gen'l Supt. (½ time)	1,620	Hours	$ 0.60	$ 972
TOTAL, operating equipment				$15,189

*The applicant contemplates that principal items of equipment used on the project, notably all equipment used in actual drilling operations, will be the property of the drilling contractor. Applicant will use its own equipment for the jobs listed in the above summary, and the figures presented in the summary represent applicant's best estimate of the actual cost to it of such use.

Following is a list of the equipment owned by the applicant that will be used on this project.

BUILDINGS

Mess Hall (Butler Building)	1,500.00
Food Storage Building	720.00
Bath House	950.00
Geologist Office & Quarter (Butler Building)	1,500.00
4 Bunk Houses @ 612.00 ea.	2,448.00
Shop & Supply Room	3,210.00
Melody Home Trailer	5,350.00
	15,678.00

CAMP EQUIPMENT

21 metal cots @ 12.00	252.00
21 mattresses	168.00
1 butane gas stove	170.00
2 Oil Heaters	120.00
1 Butane Refrigerator 10'	350.00
1 Butane Refrigerator 8' used	75.00
1 Ideal 2 compartment sink	19.00
4 Benches	33.00
2 Tables	79.00
3 Cabinets (72.50) 3 ea Coleman Lanterns (43.50)	116.00
Cooking Utensils	273.00
Knives, Forks, Spoons, Dishes etc.,	62.00
1 Laundry Tub, and water coolers	93.00
150 ft. Well (210.50) Pump (282.50), Elect. Wiring (240.00) Water Dist. Sys.(680.00)	1,172.00
	3,006.00

SHOP

1 Air Compressor	193.00
1 300 Amp.Hobart Welder (w/crysler gasoline) engine	1,370.00
1 Hobart M5 Elect. Gen.Plant 3KV	750.00
1 "Shopmaster" 1/2 Hp Bench Grinder	74.50
1 3/4 Black & Decker Power drill	110.00
2 Spray guns w/hose	115.00
1 Combination forge and bench	237.00
1 Combination Welding, cutting and gauges	240.00
Parts, Supplies and Hand Tools	1,575.00
	4,664.50

BLUE CREEK
FIELD EQUIPMENT LIST

1 D6 Cat Hydraulic Dozer	14,364.00
1 Dodge Pickup	1,774.80
1 Dodge 4x4 Truck	1,002.50
1 Chevrolet Pickup (new)	1,832.57
1 Chevrolet Pickup (used)	100.00
1 1 1/2 Ton Ford Truck	350.00
1 Jeep Station Wagon (4 cylinder)	1,867.50
1 Jeep Station Wagon (6 cylinder)	2,688.36
1 Willys Jeep	1,050.00
1 210 LeRoi Compressor	4,800.00
1 99 Gardner Denver Wagon Drill	2,800.00
1 89 Gardner Denver Jack Hammer	600.00
1 Horse	65.00
	33,294.73

RECAPITULATION OF INVENTORY BUILDINGS & EQUIPMENT

Camp Buildings	15,678.00
Camp Equipment	3,006.00
Shop Equipment & Inventory	4,664.50
Field Equipment	33,294.73
Total Blue Creek Inventory	56,643.23

Additional Camp Facilities required to house contract drilling crews

No. 1*	4 Bunk Houses @ 612.00	2,448.00
No. 2**	1 Well (210.50), 1 Pump (282.50)	493.00
	4 Cots and Mattresses @ 20.00	80.00
		3,021.00

No. 1* One of the bunk houses will be used by the geologist for sleeping quarters and the space made available for the removal of their bunks from the Butler building will be used for office space.

Item 6. Estimate of Costs (Continued)

(e) Rehabilitation and repairs

(Costs of rehabilitation and repairs of applicant's equipment are included in the foregoing estimates of labor, materials and equipment-use costs, (b), (c) and (d) above.)

(f) New buildings, improvements, installations.

(Costs of constructing temporary office and warehouse facilities at the project site are shown, broken down into labor and materials costs, in the foregoing summaries, (b) and (c) above. No other costs in this category are contemplated. It is believed these structures will have little or no sale or salvage value and their cost should accordingly be figured as operating expense.)

(g) Miscellaneous

Insurance, Social Security and Workmen's Compensation, figured at 6% of total costs	$ 4,447
Mess and housing for employees (3,413 man-days @ $5.00)	$17,065
TOTAL, Miscellaneous	$21,512

(h) Contingencies

(No allowance for contingencies is requested.)

Summary estimate of costs:

(a) TOTAL, independent contracts	$271,914
(b) TOTAL, labor, supervision, consultants	90,035
(c) TOTAL, operating materials and supplies	38,884
(d) TOTAL, operating equipment	15,189
(e) TOTAL, rehabilitation and repairs (see (e) above)	(None)
(f) TOTAL, new buildings, improvements, installations (see (f) above)	(None)
(g) TOTAL, miscellaneous	21,512
(h) TOTAL, contingencies (see (h) above)	(None)
GRAND TOTAL, estimate of costs of project	$437,534

Item 7. If the project is approved in the amount requested, applicant's 25% share of the total cost of $437,534 will be $109,384. Of this amount, applicant contemplates that it will furnish $15,189 through the use of equipment owned by it, as summarized in Item 6 (d), above, and will furnish the remaining $94,195 in cash.

LIST OF EXHIBITS.

Exhibit A.	R. T. Brown, Report on the Geology of the Properties Held by Chesapeake and Colorado Uranium Corporation in the Blue Creek - Calamity Creek Areas (Including Recommendations for DMEA Loan Assistance), Grand Junction, Colorado, Technical Services, Inc., July 29, 1955. (Referred to in this application as "the Brown Report".)
Exhibit B. (In envelope)	Map of the Calamity Mesa Quadrangle, Mesa County, Colorado. Prepared by Technical Services, Inc., Grand Junction, Colorado. (Referred to in the Brown Report as "Plate A".)
Exhibit C. (In envelope)	Geologic Map of the Gateway Area, Mesa County, Colorado and the adjoining part of Grand County, Utah, showing Calamity Creek Claim Block location. (Referred to in the Brown Report as "Plate B".)
Exhibit D. (In envelope)	General Geologic Cross Section, Calamity Creek Claim Block, Mesa County, Colorado. (Referred to in the Brown Report as "Plate C".)
Exhibit E. (In envelope)	Calamity Creek Claim Block base map. (Referred to in the Brown Report as "Plate 1". NOTE: The contents of transparent overlays, Plate 2 and Plate 3, referred to in the Brown Report, have been transposed directly onto Plate 1.)

EXHIBIT A

REPORT ON THE GEOLOGY OF THE PROPERTIES HELD BY CHESAPEAKE & COLORADO CORPORATION IN THE BLUE CREEK - CALAMITY CREEK AREAS

(Including Recommendations for DMEA Assistance)

July 29, 1955

R. T. Brown

EXHIBIT A

COPY

REPORT ON THE GEOLOGY
OF THE PROPERTIES HELD BY
CHESAPEAKE & COLORADO URANIUM CORPORATION
IN THE BLUE CREEK - CALAMITY CREEK AREAS

(Including Recommendations for DMEA Loan Assistance)

Respectfully submitted to:

Chesapeake and Colorado Uranium Corporation

Date: July 29, 1955

By R. T. Brown Jr.

TECHNICAL SERVICES, INC.

R. T. Brown, Consulting Geologist

CONTENTS

	Page
Introduction	1
Purpose and Scope	2
Name of Property	2
Location	3
Accessibility	3
Climate	3
Physical Features	4
Claims and Area	4
Adjoining and other Nearby Properties	4
Ownership and Title	5
Production - Surrounding Properties	5
Production	5
Past Production	5
Current Production	6
Facilities	6
Transportation	6
Power	6
Water	6
Housing	7
Development	7
Equipment	7
Exploration Equipment	7
Mining Equipment	8
General Equipment	8

C O N T E N T S
(Cont'd.)

	Page
Geology	9
Regional	9
Stratigraphy	9
Structure	10
Local	11
Stratigraphy and Lithology	12
Structure	13
Trends	14
Ore Occurrence	14
Assay Data	15
Ore Reserves	16
Exploration Possibilities	16
Stage 1	16
Stage 2	17
Stage 3	17
Holes in Radiometric Anomalies	26
Off-set Drilling	26
Total Drilling Footage	28
Conclusions	27
Recommendations	28

INTRODUCTION

On the 6th of June, 1955, the writer, a geologist of Technical Services, Inc. was retained on a consultant basis by Mr. Joe D. Farris, Vice President, Chesapeake and Colorado Uranium Corporation, to prepare a geological report on properties held by the Chesapeake and Colorado Uranium Corporation for a DMEA loan application.

The following geological report is respectfully submitted to the Chesapeake and Colorado Uranium Corporation. The information contained in this report is based on data correlated from field observations made by the writer from 13 June to 12 July, 1955 and from conversations with numerous people in the field.

The writer wishes to express his appreciation for the valuable assistance and help he has received from Mr. Dorsey Hager who made many useful comments on the relative merits of the area; and to Messrs. Lee Hammond and David Hoover, geologists with the company, who did much of the detailed work in the field and to Mr. Joe D. Farris and the personnel employed by the company for the wholehearted cooperation received by the writer. The writer also wishes to express his appreciation to Mr. J. W. Hasler, DMEA representative

in this area, for his many useful suggestions as to the preparation of this report.

PURPOSE AND SCOPE:

This preliminary field examination was undertaken with the following objectives in mind:

1. To determine whether the Calamity Creek Claims merited extensive exploration work.
2. The most economical method of conducting this exploration program.
3. The approximate cost and time required to complete this program.

This exploration program will be designed to discover any major ore-body or mineralized area which may be present.

NAME OF PROPERTY:

The following group of claims in this report being submitted will be referred to as the Calamity Creek Claim Block which includes:

(a) Queen Bee Claim Group

(b) T Bar F Claim Group

(c) Jamie T. Claim Group

(d) Virginia W. Claim Group

All of this property is held by Chesapeake and Colorado Uranium Corporation by right of undisputed unpatented mining claims which have been properly located and surveyed in accordance with Colorado Mining Law and have been recorded in the Mesa County courthouse, Grand Junction, Colorado.

LOCATION:

The Calamity Creek Claim Block lies in Sections 26, 27, 34, and 35, Township 50 North, Range 18 West, NMPM, and in Sections 2 and 3, Township 49 North, Range 18 West, NMPM. Topographically the block lies northwest of the junction of Calamity Creek and Blue Creek in Mesa County and on the southeastern flank of Calamity Mesa.

Processing mills are located at Uravan, 17 miles; Naturita, 35 miles; and Grand Junction, 67 miles, Colorado.

ACCESSIBILITY:

The Calamity Creek Claim Block lies in rugged topographic terrain but numerous bulldozer drill roads and access roads have been built in the area and it is readily accessible to 4-wheel-drive vehicles in all but very inclement weather. During winter, it will be necessary to plow the northern slopes free of snow. The Blue Creek ranch road connects the area to the graveled Uravan-Uncompahgre road which is passable the year around and joins Colorado Highway 141 at Taylor Ranch 26 miles south and east from Grand Junction.

CLIMATE:

The climate is semi-arid with temperatures ranging from minus 20 degrees Fahrenheit to plus 100 degrees Fahrenheit. Altitudes range from 5000 to 8000 feet above sea level. Moderate snows cover the area during the winter. There is little moisture during the summer and most of the drainage is intermittent.

PHYSICAL FEATURES

CLAIMS AND AREA:

The Calamity Creek Claim Block is composed of 4 groups of claims which are here broken down into claims by group and approximate area per claim:

20 Queen Bee Claims	20 x 20 equals 400 acres
12 T Bar F Claims	12 x 20 equals 240 acres
12 Jamie T. Claims	12 x 20 equals 240 acres
12 Virginia W. Claims	12 x 20 equals 240 acres
Calamity View) Stormy Treasure)	Overstaked by other portions of the block.

A total of 1120 acres are claimed in this block.

ADJOINING AND OTHER NEARBY PROPERTIES:

To the south and east across Blue Creek on the northeastern flank of Blue Mesa, Chesapeake and Colorado Uranium Corporation owns claims commonly known as the Blue Creek Group including small blocks of property under the following claim names:

6 Raven Claims	7 Starvation Claims
1 Shortie Claim	33 Murphy Claims
2 Kennie Claims	2 Bimbo Claims
8 F. W. D. Claims	2 Lone Pine Claims

Other small groups of claims include 5 claims in the Tepee Pole group; the Tepee Pole Millsite; 15 claims in the Blue Bird group, and 5 claims in the Dorothea's Baby group.

This property is held in Section 36, Township 50 North, Range 18 West, NMPM; Sections 1, 2, 11 and 12, Township 49 North, Range 18 West, NMPM; Sections 31 and 32, Township 50 North, Range 17 West, NMPM; and Sections 5 and 6, Township 49 North, Range 17 West, NMPM.

OWNERSHIP AND TITLE:

All claims held by the Chesapeake and Colorado Uranium Corporation are wholly owned, unpatented mining claims, located in conformance with Colorado Mining Law.

PRODUCTION - SURROUNDING PROPERTIES:

There are numerous good producing mines in the area surrounding the junction of Calamity Creek with Blue Creek. Climax Uranium Company has two mines, G #1 and G #2, on Outlaw Mesa, a short distance to the northeast, which are excellent producers. Both Climax Uranium Company and U. S. Vanadium Corporation have many small mines producing ore from northern Calamity Mesa. The Hunt Oil Company is in the process of developing moderately large ore reserves on their Black Streak property in the center portion of Section 31, Township 50 North, Range 17 West, which is quite close to the area on which application for assistance is being made.

PRODUCTION:

Past Production:

Approximately 5 tons of 0.16% ore has been shipped to the

Climax mill at Grand Junction, Colorado this year by the Corporation from the Stormy Treasure prospect.

Current Production:

At this date no ore is being mined from this immediate area.

FACILITIES:

(a) Transportation:

The nearest rail junction for supplies is Grand Junction, Colorado which lies 67 miles by road to the northwest of this area. The Chesapeake and Colorado Uranium Corporation maintains two supply vehicles which commute daily between Grand Junction and the Blue Creek Camp.

(b) Power:

There are no sources of commercial power in this area. All power is supplied by portable gasoline or diesel units.

(c) Water:

There is a shortage of water in the area in the summer months. Both Blue Creek and Calamity Creek which are quite close to the Calamity Creek Claim Block are flowing until late August. At that time, Calamity Creek usually ceases to flow and the water level in Blue Creek drops to a low level. The company has drilled a water well which produces 300 gallons per hour on its Blue Creek camp site.

(d) Housing:

There are adequate housing facilities in the Blue Creek camp for all employees. Shower facilities are available and a change-house will be built when mining operations commence. Bunk houses are prefabricated in Grand Junction and the mess hall and office are constructed of aluminum sheeting. In all, the camp is well situated and presents a well-kept appearance.

DEVELOPMENT:

At this time, the Calamity Creek Claim Block is totally undeveloped. A few random percussion holes were drilled previously but no useful geologic information is available from this drilling. The Stormy Treasure main adit penetrated only 36 feet with an 8 foot off-set before drifting ceased.

Areas surrounding the Calamity Creek Claim Block, however, are well developed. The G #1 mine, owned by Climax Uranium Company on Outlaw Mesa is well into its production stages with good ore reserves blocked out.

No portion of the areas claimed by Chesapeake and Colorado Uranium Corporation can be considered to be in the development stage. However, extensive exploration is underway in the Tepee Pole Group, the Dorothea's Baby Group, the FWB Group, and the Raven Group.

EQUIPMENT:

Exploration Equipment:

The company owns 2 Winter-Weiss core drills, one mounted on a D-6 Caterpillar and one mounted on an International truck;

a small Joy 12-B core-drill; a large 600 Gryaflow Ingersol-Rand wagon-drill and 4 small Gardner-Denver wagon drills. The company also owns all the accessory equipment needed to operate this drilling equipment. In addition the corporation has a contracted wagon-drill.

Mining Equipment:

The company owns 4 hammers and jacklegs of various makes and sizes and a 215 Gardner-Denver compresser with accessory equipment for underground mining.

General Equipment:

The corporation owns a new D-8 and a D-6 Caterpillar bull-dozer, also complete shop facilities including welding equipment, etc. Items too numerous to mention, for the over-all exploration work under way in the area, are all owned by the corporation.

The total cost of equipment and accessorys owned is in excess of $175,000.00

GEOLOGY

Locally, and in a regional sense, the geology is complex. The Calamity Creek Claim Block is located in a region of sharp erosional features forming deep canyons with massive walls with prominent rims of sands and steep slopes of shales. Many of the flats are covered by heavy overburden and considerable timber and brush.

REGIONAL:

The claims held by the corporation in the Blue Creek area lie on the western edge of the northern end of the Uravan Mineral Belt.

This portion of the Colorado Plateau has been mined since the early 1900's for radium and vanadium and recently vanadium and uranium. Beginning in 1948, activity sharply increased and has been on the up-swing ever since. At this time the area is undergoing extensive prospecting by thousands of part-time prospectors and by numerous companies who are employing qualified personnel to actively guide exploration in the area.

Stratigraphy:

The sediments exposed in and around the Calamity Creek

Claim Block range in age from the Jurassic Entrada formation in the Blue Creek Canyon up through the Cretaceous Burro Canyon formation which caps most of the mesas surrounding the area. Erosion has exposed Wingate sandstone and Chinle shales lying upon the pre-Cambrian granites and gneisses of the Uncompahgre Uplift near its crest and northeast of the Calamity area. Massive exposures of Wingate, Kayenta and Navajo sands and shales underlie the massive Entrada marker horizon in the Dolores River Canyon. In the Blue Creek Canyon, there is 820 feet of vertical section exposed from the top of the Entrada formation to the base of the Burro Canyon formation which includes 100 feet of Summerville shales; 340 feet of Salt Wash sands and shales; and 380 feet of Brushy Basin shales.

Structure:

The Calamity Creek Claim Block lies on the western flank of a southeasterly plunging syncline with an axial trend of North 30° West which has been formed between the two positive areas of the La Sal mountains and the Uncompahgre Uplift. On the western flank the strike of the formations is almost north-south, varying somewhat along the flank, and dipping east 1° to 5°. The axial trend of the syncline cuts through Sections 18, 12, and of Township 49 North, Range 18 West, NMPM, and Sections 2, 34, 27 of Township 50 North, Range 18 West, NMPM. A portion of

the property held on the Calamity Creek Claim Block lies on the east flank of the syncline. On the northeast flank of the syncline southwesterly dips increase toward the Uncompahgre Uplift up to approximately 15° in Section 33, Township 50 North, Range 17 West, NMPM. There is very little evident faulting visible in the regional area. The large fault to the northeast has a northwest-southeast strike. In the opinion of the writer, structure in the area was formed during and after the Laramide Revolution and will be considered Tertiary in age.

Erosion has sharply dissected the entire area into numerous dry washes, sharp V-shaped valleys with little flood plain and numerous sharp ridges or flat benches capped by rims of the Jurassic Morrison Salt Wash formation. The flat-topped mesas isolated by erosional features are generally capped by Cretaceous Burro Canyon sands.

LOCAL:

Sixty-five percent of the Calamity Creek Claim Block lies on the west flank of the southeasterly plunging syncline. The easterly dips are gentle (1° - 4°) and the strike of the formation is approximately north-south except where the claim block covers the nose of the syncline. There the strike swings through east-west to southeast.

Stratigraphy and Lithology:

Stratigraphic sections exposed in Blue Creek Canyon on the south side of the Claim Block and in Calamity Creek Canyon on the east side of the Claim Block range in age from the Jurassic Entrada to the Cretaceous Burro Canyon formations. The most prominent formation visible in the area is in outcrops of the lensing sands of the Jurassic Morrison Salt Wash formation which is the ore-bearing horizon in this area. Lying between the Jurassic Morrison Salt Wash and the top of the Jurassic Entrada is approximately 100 feet of Jurassic Summerville shale. Overlying the Jurassic Morrison Salt Wash are 380 feet of altered green shales with massive green conglomerate member, and thin sands of the Jurassic Morrison Brushy Basin member. The Cretaceous Burro Canyon formation overlies the Jurassic Brushy Basin and caps Calamity Mesa in this area.

Generally speaking, there are four prominent rims of Morrison Salt Wash continuously visible in the canyons and valleys of the area. However, in the channels, the lensing sands may produce as many as 9 prominent "rims". The third rim up from the base of the formation is a thick massive sandstone, well mineralized with small radiometric anomalies along the outcrop and is locally the major producing ore horizon. The first rim up in the formation also shows mineralization. Channels in these two horizons are believed by the writer to be the prime exploration targets in this area.

All of the sandstone rims of the Morrison Salt Wash are well cross-bedded, medium grained sandstones, with sub-angular to round sand grains containing much interstitial clay and variable amounts of carbonaceous material. Alteration from percolating ground waters is apparent. In the channels, alteration of the intervening shales under and over the sands and the interstitial shales or clays in the sands, is pronounced. Also, in the channels an increase in amount of carbon present and an increase in uraniferous mineralization is apparent and is closely associated with the alteration of the shales and clays. The degrees of silicification and the amount of contained calcite is variable. In mineralized outcrops, the percentage of contained calcite varies up to 14% and 18%, whereas, in non-mineralized outcrops it may be as low as 1%.

Structure:

The megascopic joints visible in the area occur in well defined systems. The first set of joints trend or strike South 80° West dipping 80° north. A later set of joints superimposed on and off-setting the first set, strike South 20° East and dip 85° - 90° to the west. The writer did not observe faulting in this area although slump areas along the rims can be expected to exist under the overburden cover. The major features of the syncline are not visible except in Blue Creek Canyon where they can

be measured along the Entrada-Summerville contact for some distance. The cross-bedded nature of the Continental Morrison deposits precludes the determination of accurate strikes and dips in that formation.

Trends:

Whenever possible, channels have been correlated across erosional features in Calamity Creek Canyon and Blue Creek Canyon. Detailed mapping between the Dorothea's Baby Claim Group and the FWD Group in Blue Creek Canyon revealed an apparent trend of South 80° West for the major channel exposed in that area. Correlation of general geologic sections run in the Calamity Creek Claim Block area yield an apparent channel trend of South 65° to 75° West. The channel being drilled in the Black Streak property owned by the Hunt Oil Company to the northeast of Chesapeake and Colorado Uranium Corporation's property has a well defined trend of South 70° West.

The writer believes that insufficient work has been done to accurately establish the trends of channelization in this area but he believes that trends of channelization will not vary beyond South 50° West to South 80° West.

ORE OCCURRENCE:

Minable uraniferous mineralization in this area is probably confined to the channels of porous and permeable cross-bedded sands of the Jurassic Morrison Salt Wash formation. The ore-body now being drilled-out in the

Black Streak property is contained in a channel in the third rim of the Morrison formation and the trend of mineralization is approximately the same as the trend of channelization. The ore contained in channels is closely associated with very abundant dark brown limonite, dark red hematite, very abundant carbon, and with intense alteration of the interstitial shales and clays. The thickness of the ore varies from 6" to as much as 6 feet. There is little warping or folding of the ore horizon in the areas examined by the writer.

ASSAY DATA:

The writer cut a channel sample from a pillar in the Old Black Streak incline on the 12th of July, 1955. The results of this assay are tabulated below. The writer believes that the results of this assay will be representative of the mineralization to be found in the third rim in this major channel which he believes extends from the Black Streak property through the southern portion of the Calamity Creek Claim Block.

The trends of channelization apparently conform closely to an apparent trend of mineralization of South 65° West established on topographic maps from prospects and mines shown on the Calamity topo in the Blue Creek Camp area.

Results of Assay

Sample #3270 - Black Streak Incline (2 ft. face)

0.88% U_3O_8

4.17 V_2O_5

0.66 $CaCO_3$

ORE RESERVES:

No ore reserves are developed to date in the Calamity Creek Claim Block.

EXPLORATION POSSIBILITIES:

The claims lie in a very favorable area and are surrounded by producing mines. The area has all of the favorable guides-to-mineralization which have been developed in this portion of the Plateau. It also contains numerous small outcrops of mineralization or radiometric anomalies located on the ground and by aerial methods. In the Calamity Creek Calim Block area, 60% of the block overlies a full Morrison section containing the first and third rims generally considered to be the best producing horizons. In the Calamity Creek Claim Block area the drilling will not exceed 350 feet in the southern and eastern portion. The western and the northern portion of the Block area to the Cretaceous capping rim will require 600 feet of drilling in the deeper holes. Numerous rims are visible and detailed surface geologic mapping of the exposed portions of the rims will contribute much valuable information to be correlated with the drilling of the unexposed portions. The writer has laid out an exploration drilling program in three basic stages:

Stage 1:

The channel believed to exist in this Calamity Creek Claim Block area will be drilled on 250 feet centers with a staggered pattern of holes where topography permits.

Stage 2:

The deeper portions of the area and that portion not including the supposed locations of the channel will be drilled on 500 feet centers with a staggered pattern of holes.

Stage 3:

Individual radiometric anomalies will be contoured by ground radiometric methods and the centers of the highs of the radiometric iso-rad contours will be drilled.

Once the initial stages of drilling have been completed the mineralized or "ore-holes" will be off-set on 100 feet centers in four directions. All sandstone rims and intervening shales of the Morrison Salt Wash member will be cored in:

(a) All holes in the apparent channel and on its fringe.

(b) Every other hole in the 500 feet grid.

The holes not cored in the 500 feet grid will be plugged to the Summerville shale contact. All holes in the first and second stages of drilling will bottom in the Jurassic Summerville shale. The holes drilled in the anomalous highs will bottom 10 feet below the sandstone rim containing the anomaly. In the secondary stages of off-set drilling, only the ore-horizons will be cored and the holes will bottom 15 feet below the mineralized zone.

The proposed location of the drill holes of the initial three stages of drilling have been plotted on Plate 3 of the accompanying maps. The expected total depth of hole (TD), the distances to be cored (C), and the distances to be drilled by plugging (rock-bit methods (P), have been tabulated below.

The writer estimates that 10% of the holes drilled will be mineralized. On that basis and using 4 - 100 feet off-sets per hole, an additional 24,000 feet of drilling should be added to the total footage. The off-set footage is calculated using an average of 300 feet per hole.

The following figures are tabulated totals:

Number of holes to be drilled - - - - - - - - - - - 221

Plug footage - - - - - - - - - - - - - - - - - - - 46,210

Cored footage - - - - - - - - - - - - - - - - - - -46,045

Total drilled footage - - - - - - - - - - - - - - 92,255

Percentage of core - - - - - - - - - - - - - - - - 49.91

Number	Plug (P)	Core (C)	Total Depth (TD)
1	0	160	160
2	0	200	200
3	0	330	330
4	20	330	350
5	40	330	370
6	50	330	380
7	470	0	470
8	160	360	520
9	550	0	550
10	250	360	610

Number	Plug (P)	Core (C)	Total Depth (TD)
11	620	0	620
12	320	340	660
13	650	0	650
14	200	340	540
15	530	0	530
16	190	330	520
17	490	0	490
18	150	320	470
19	570	0	570
20	350	320	670
21	640	0	640
22	330	320	650
23	600	0	600
24	180	320	500
26	130	330	460
27	480	0	480
28	140	330	470
29	530	0	530
30	250	350	600
31	600	0	600
32	230	350	580
33	550	0	550
34	160	340	500
35	470	0	470
36	80	330	410

Number	Plug (P)	Core (C)	Total Depth (TD)
37	60	330	390
38	80	330	360
39	30	330	360
40	0	320	320
41	0	200	200
42	110	0	110
43	0	290	290
44	0	330	330
45	20	330	350
46	50	330	380
47	50	330	380
48	420	0	420
49	110	330	440
50	440	0	440
51	170	330	500
52	510	0	510
53	190	340	530
54	520	0	520
55	100	340	440
56	430	0	430
57	90	330	420
58	370	0	370
59	60	320	380
60	520	0	520
61	240	310	550
62	540	0	540

Number	Plug (P)	Core (C)	Total Depth (TD)
63	230	310	540
64	450	0	450
65	125	310	435
66	485	0	485
67	85	310	395
68	300	0	300
69	80	320	400
70	410	0	410
71	90	340	430
72	460	0	460
73	150	340	490
74	500	0	500
75	160	330	490
76	460	0	460
77	100	330	430
78	420	0	420
79	70	330	400
80	40	330	370
81	40	330	370
82	0	330	330
83	170	0	170
84	0	90	90
85	0	310	310
86	0	310	310
87	0	330	330

Number	Plug (P)	Core (C)	Total Depth (TD)
88	0	330	330
89	20	330	330
90	30	330	360
91	410	0	410
92	90	330	420
93	450	0	450
94	110	340	450
95	430	0	430
96	80	340	420
97	400	0	400
98	0	340	340
99	340	0	340
100	0	340	340
101	350	0	350
102	100	320	420
103	370	0	370
104	90	310	400
105	400	0	400
106	0	300	300
107	310	0	310
108	0	310	310
109	320	0	320
110	0	320	320
111	320	0	320
112	0	320	320

Number	Plug (P)	Core (C)	Total Depth (TD)
113	340	0	340
114	30	340	370
115	420	0	420
116	110	340	450
X 117	420	0	470
118	110	330	440
119	430	0	430
120	100	330	430
121	80	330	410
122	60	330	390
123	50	330	380
124	40	330	370
125	360	0	360
126	0	310	310
127	220	0	220
128	0	300	300
129	420	0	420
130	100	330	430
131	60	330	390
132	40	330	370
133	50	330	380
134	40	330	370
135	390	0	390
136	80	330	410

Number	Plug (P)	Core (C)	Total Depth (TD)
137	390	0	390
138	0	250	210
139	220	0	220
140	0	280	280
141	220	0	220
142	0	220	220
143	200	0	200
144	0	200	200
145	290	0	290
146	50	310	360
147	220	0	220
148	0	180	180
149			
150			
151	120	0	120
152	0	90	90
153			
154	0	80	80
155	60	0	60
156	0	80	80
157	90	0	90
158	0	100	100
159	300	0	300
160	0	320	320
161	370	0	370
162	30	330	360
163	30	330	360

Number	Plug (P)	Core (C)	Total Depth (TD)
164	20	330	350
165	0	330	330
166	20	330	350
167	360	0	360
168	30	330	360
169	230	0	230
170	0	180	180
171	210	0	210
172	20	330	350
173	180	0	180
174	0	120	120
175	0	140	140
176	0	240	240
177	0	330	330
178	340	0	340
179	0	230	230
180	80	0	80
181	0	80	80
182	60	0	60
183	0	70	70
184	0	70	70
187	180	0	180
188	0	220	220
189	70	0	70

Number	Plug (P)	Core (C)	Total Depth (TD)
190	0	70	70
191	0	70	70
Total	34,185	33,100	67,285

Holes in Radiometric Anomalies

Number	Plug (P)	Core (C)	Total Depth (TD)	Rim Position
149	0	70	70	3rd Rim
150	0	60	60	1st Rim
153	0	60	60	3rd Rim
183	0	70	70	3rd Rim
184	0	100	100	1st Rim
192	0	100	100	3rd Rim
193	0	110	110	1st Rim
194	0	110	110	1st Rim
195	0	120	120	4th Rim
196	0	70	70	3rd Rim
197	0	100	100	3rd Rim
Total	0	970	970	
TOTAL	34,185	34,070	68,255	

Off-set Drilling

80	12,025	11,975	24,000

TOTAL DRILLING FOOTAGE

~~281~~ 277	46,210	46,045	92,255

Percentage of Core - 49.91

CONCLUSIONS

The writer is impressed by the apparent potential of this well located area. The area is surrounded by producing properties and the possibility of finding a large uraniferous ore deposit in this large unit block of ground is quite high and merits thorough exploration. It contains all of the numerous guides-to-mineralization, generally considered to be favorable on the Plateau. It contains what may well be a very large paleo-channel existing through much of Morrison time with numerous dendritic feeder channels, all of which may contain uraniferous ore-bodies. In the writer's opinion, it would be difficult to find a more promising area for extensive exploration than this block of ground.

RECOMMENDATIONS

The writer makes the following recommendations:

1. Application for aid to Defense Minerals Exploration Administration be made promptly. Before the contract is approved, it will be late fall and continuation of the program from that time on will be interrupted by seasonal climatic changes in the winter months.

2. Provisions should be made in the application for continuation of the contract into the spring months since the drilling will not be completed by 1 December 1955.

3. Detailed surface geologic mapping should be continued on this property.

4. Application should be made for assistance in the surface phase of the exploration also.

5. Drilling should continue behind the Stormy Treasure adit. The information obtained from this drilling will be quite useful for future deeper exploration on portions of the Calamity Creek Claim Block.

6. Ground radiometric work should continue uninterruptedly on the many airborne anomalies located in the claim block. It will be necessary to contour these anomalies before drilling the radiometric highs.

7. Other exploration and additional road building, etc. should cease in this area until the application for aid is approved or disapproved because the cost of such exploration prior to approval of the application may not be included in the exploration contract.

8. If the request for aid is denied, wide-center deep drilling should commence by 1 March 1956 on the apparent trend of channelization in the Virginia N. group on the pattern laid out in the application for aid noted on Plate 2 of the accompanying maps. The corporation should continue this recommended exploration within a reasonable limit of its financial ability.

9. Underground work should not commence until sufficient ore has been blocked out to warrant the cost of the development work.

ILLUSTRATIONS

Plate A

Calamity Mesa Quadrangle, Mesa County, Colorado
Scale 1:24000
1950

Showing Calamity Creek Claim Block location and apparent channelization in Jurassic Morrison Salt Wash.

Plate B

Geologic Map of the Gateway Area
Mesa County, Colorado and the adjoining part of Grand County, Utah showing Calamity Creek Claim Block location.

Plate C

General Geologic Cross Section,
Calamity Creek Claim Block, Mesa County, Colorado

Plate 1

Calamity Creek Claim Block base map.
Scale - 1 inch = 500 feet

Plate 2

Geologic Overlay of the Calamity Creek Claim Block.

Plate 3

Overlay showing proposed drill sites in the Calamity Creek Claim Block.

700

FILE COPY
Surname:
Murphy
Wh
Fishman
Hillegaard
Hecker
Selfridge

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

MAR 12 1956

Mr. Francis M. Tompkins, President
Chesapeake and Colorado Uranium Corporation
909 - 16th Street, N. W.
Washington, D. C.

Re: Docket No. DMEA-3990 (Uranium)
Calamity Creek Claim Block
Mesa County, Colorado

Dear Mr. Tompkins:

Reference is made to your application for Government aid in an exploration program on the above-named block of claims.

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 a small amount of uranium mineralization on your property, indicates to us that the probability of disclosing significant ore reserves is not sufficiently promising to justify Government participation in an exploration program. 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 Program and for bringing your property to our attention.

Sincerely yours,

C. O. Mittendorf

Administrator

FMMurphy 3-8-56
cc to Docket
Code 700
Mr. Murphy
Admr.'s Reading File
Operating Committee
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA
DMEA Field Team, Region III (2)

R.C.B.

Docket Copy

Murphy Ellis 700

March 8, 1956

Summary of Proposed Project

Object: Denial of application for exploration aid.

Docket No.: DMEA-3990

Commodity: Uranium

Applicant: Chesapeake and Colorado Uranium Corporation
909 - 16th Street, N. W.
Washington, D. C.

Property: Owners of 56 claims, the Queen B, T-Bar-F, Virginia W., and Jamie T. groups, situated in secs. 26, 27, 34, and 35, T. 50 N., R. 18 W., and in secs. 2 and 3, T. 49 N., R. 18 W., N.M.P.M., Mesa County, Colorado. Note: claim conflicts with those of DMEA-4041 appear to exist.

Date of Application: September 19, 1955

Grand Junction Memo: December 1, 1955

Field Team Report Received: February 23, 1956

Amount of Application: $437,534.00

Work Proposed:

46,210 ft. non-core & 46,045 ft. core drilling
Stage I - 53 holes on 250-foot centers
Stage II -186 holes on 500-foot centers
Stage III - 11 holes on anomalies
Stage IV - 80 holes offsets to mineralized holes

Estimated Costs:

Core & non-core drilling & gamma logging	$267,494	
Analyses 884 samples @ $5/each	4,420	
Labor, supervision, consultants	90,035	
Operating materials and supplies	38,884	
Operating equipment	15,189	
Payroll taxes, etc.	4,447	
Mess & housing for employees	17,065	
Total		$437,534

Excerpts from Field Team Report:

The subject claims lie on the west flank of a very open syncline which plunges in a southeasterly direction. The claims are underlain by the Jurassic Summerville formation and the Salt Wash and Brushy Basin members of the Jurassic Morrison formation. These rock formations are exposed along the southern boundary of the claim group on the north rim of Blue Creek canyon, and along the eastern boundary on the west rim of Calamity Creek Canyon.

The Applicants proposed drilling is based on a S-80°W projection of the Black Streak Mine and the American Leduc Mine mineralization. These mines lie about 2½ miles to the east of the subject property, on the north rim of Blue Creek Canyon. These mines are on the southern edge of the known Uravan mineral belt that trends in a northwesterly direction. Hence, the subject claims are too far south to be in the principal mineralized belt.

If the Applicant's premise of a S. 80° W. mineralized trend was correct then favorable sandstone would have been found on the rim exposures of the subject claims. The field examiners could not find any evidence of favorable sandstone along the rims on the subject property.

The potential ore-bearing horizon is in the upper sandstone unit of the Salt Wash. On the subject claims a few small ore bodies have been found in the upper, middle, and basal sandstone units of the Salt Wash. Estimated ore reserves on the property are estimated at 495 tons of 0.78% U_3O_8. 29 holes were drilled behind mineralized zones found along the rim. None of the holes penetrated ore and all penetrated unfavorable red sandstone and mudstone similar to that found on both the Blue and Calamity Creek Canyon rims.

The relatively few and small, pod-like ore bodies, the preponderence of reddish sandstone and mudstone all through the Salt Wash section, and the distance of several miles to the Uravan Mineral Belt, strongly indicate that the subject claims probably do not contain more than a few small widely scattered ore bodies of 500 tons or less. Furthermore, mineralized trends, such as faults or channels, on which to base a drilling program, are not known to exist on the ground held by the Applicants.

The Field Team and examiners recommend that the application be denied.

Commodity Members' Comments: (excerpts)

USGS, N. E. Nelson, March 6, 1956:

The Applicants exploration proposal is elaborate and expensive in relation to the probable size of ore occurrences and it does not appear that either this program or a smaller one would be likely to find significant ore bodies.

Mr. Nelson concurs in Field Team's recommended denial.

USBM, J. E. Crawford, March 7, 1956:

Summarizes field examiners report and concurs in their recommendation to deny the application.

Rare & Miscellaneous Metals Division, F. M. Murphy, March 8, 1956:

This Division concurs in the Field Team's recommendation that the subject application be denied because:

1. The potential ore-bearing sandstone units of the Salt Wash exposed on the rims and penetrated by drill holes, are all a reddish color, which according to USGS criteria indicate the subject claims are not in an area favorable for significant uranium ore occurrances.

2. The known mineralized trend of the Uravan Mineral Belt is in a northwest direction and therefore cannot be projected in a southwest direction to enter the subject property as the Applicant states.

3. No significant uranium ore deposits are known to occur within $2\frac{1}{2}$ miles of the subject property.

Ernest Wm. Ellis, Chief
Rare and Miscellaneous
Metals Division

3/7/56

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

RECEIVED
MAR - 7 1956

March 7, 1956

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

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

Subject: Report of Examination, DMEA Docket 3990, Chesapeake and Colorado Uranium Corporation, Queen Bee, Bar F, Virginia W, and Jamie T claims, Mesa County, Colorado

I have reviewed the report of examination, Chesapeake and Colorado Uranium Corporation, DMEA Docket 3990, dated February 21 and received in this office February 28. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

The applicant is desirous of exploring the subject claims by an extensive drilling program. In Stage I, 53 holes would be drilled on 250-foot centers to explore an alleged channel crossing the southern end of the claims. In Stage II, 127 holes would be drilled on 500-foot centers to explore the balance of the claims. Therefore, in the first two stages of exploration, there would be a total of 180 holes drilled, at an average depth of 362 feet. In Stage III, there would be 11 holes drilled, averaging 88 feet in depth, to explore radiometric anomalies detected by the applicant's airborne surveys. In addition, 80 holes averaging 300 feet in depth are proposed to offset mineralized holes found in the preceding stages of drilling. The total estimated cost of such a project is $437,534, with Government participation at 75 percent.

Because the Field Team has indicated that (1) underground exploration on the Stormy Treasure claim was unfavorable, (2) the drilling behind the underground workings was negative, and (3) there was no evidence of channeling in the Salt Wash outcrops, we concur that the area does not appear to be favorable for such detailed exploration. Inasmuch as there does not seem to be any opportunity for finding substantial uranium ore deposits on the subject claims, we recommend denial.

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

John E Crawford

John E. Crawford

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

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

RECEIVED
MAR - 7 1956

March 7, 1956

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

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

Subject: Report of Examination, DMEA Docket 3990, Chesapeake and Colorado Uranium Corporation, Queen Bee, Bar F, Virginia W, and Jamie T claims, Mesa County, Colorado

I have reviewed the report of examination, Chesapeake and Colorado Uranium Corporation, DMEA Docket 3990, dated February 21 and received in this office February 28. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

The applicant is desirous of exploring the subject claims by an extensive drilling program. In Stage I, 53 holes would be drilled on 250-foot centers to explore an alleged channel crossing the southern end of the claims. In Stage II, 127 holes would be drilled on 500-foot centers to explore the balance of the claims. Therefore, in the first two stages of exploration, there would be a total of 180 holes drilled, at an average depth of 362 feet. In Stage III, there would be 11 holes drilled, averaging 88 feet in depth, to explore radiometric anomalies detected by the applicant's airborne surveys. In addition, 80 holes averaging 300 feet in depth are proposed to offset mineralized holes found in the preceding stages of drilling. The total estimated cost of such a project is $437,534, with Government participation at 75 percent.

Because the Field Team has indicated that (1) underground exploration on the Stormy Treasure claim was unfavorable, (2) the drilling behind the underground workings was negative, and (3) there was no evidence of channeling in the Salt Wash outcrops, we concur that the area does not appear to be favorable for such detailed exploration. Inasmuch as there does not seem to be any opportunity for finding substantial uranium ore deposits on the subject claims, we recommend denial.

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

John E. Crawford

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

RECEIVED
MAR - 7 1956

March 7, 1956

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

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

Subject: Report of Examination, DMEA Docket 3990, Chesapeake and Colorado Uranium Corporation, Queen Bee, Bar F, Virginia W, and Jamie T claims, Mesa County, Colorado

I have reviewed the report of examination, Chesapeake and Colorado Uranium Corporation, DMEA Docket 3990, dated February 21 and received in this office February 28. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

The applicant is desirous of exploring the subject claims by an extensive drilling program. In Stage I, 53 holes would be drilled on 250-foot centers to explore an alleged channel crossing the southern end of the claims. In Stage II, 127 holes would be drilled on 500-foot centers to explore the balance of the claims. Therefore, in the first two stages of exploration, there would be a total of 180 holes drilled, at an average depth of 362 feet. In Stage III, there would be 11 holes drilled, averaging 88 feet in depth, to explore radiometric anomalies detected by the applicant's airborne surveys. In addition, 80 holes averaging 300 feet in depth are proposed to offset mineralized holes found in the preceding stages of drilling. The total estimated cost of such a project is $437,534, with Government participation at 75 percent.

Because the Field Team has indicated that (1) underground exploration on the Stormy Treasure claim was unfavorable, (2) the drilling behind the underground workings was negative, and (3) there was no evidence of channeling in the Salt Wash outcrops, we concur that the area does not appear to be favorable for such detailed exploration. Inasmuch as there does not seem to be any opportunity for finding substantial uranium ore deposits on the subject claims, we recommend denial.

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

John E. Crawford

IN REPLY REFER TO:

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

RECEIVED
MAR - 6 1956

March 6, 1956

Re: DMEA 3990
Chesapeake and Colorado
Uranium Corporation
Queen Bee and other claims
Mesa County, Colorado
$437,535.00 - Uranium

Memorandum

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

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

Subject: Review of Field Team report.

The applicant requested assistance in a large program of non-core and core drilling of a large group of claims. A large number of claims are in conflict with claims of another applicant, DMEA 4041.

The referenced property is several miles west and south of the highly productive Outlaw-Calamity-Maverick mining area. Nearer the property are 3 or 4 properties credited with small productions and from a claim in the midst of the disputed claim area, the Stormy Treasure claim, 5 tons of low-grade was produced and the A.E.C. estimates there are 195 tons of indicated and 300 tons of inferred ore of a grade of 0.16% U_3O_8 remaining. The Stormy Treasure claim does not belong to the applicant, but the applicant drilled 29 closely spaced holes on adjacent claims in an attempt to find an extension of the small ore body. Two holes showed weakly mineralized sandstones.

The examiners conclude that "the relatively few and small poddy ore bodies found on and near the proposed exploration area indicate that only a few small scattered ore bodies containing a maximum of 500 tons are likely to occur on the claims." "There does not appear to be anything on which a logical drilling program could be based. The applicants exploration proposal is elaborate and expensive in relation to the probable size of the ore occurrences and it does not appear that either this program or a smaller one would be likely to find significant ore bodies."

I concur with the recommendation of the examiners and the Field Team that the application be denied.

N. E. Nelson

N. E. Nelson

IN REPLY REFER TO:

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

RECEIVED
MAR - 6 1956

March 6, 1956

Re: DMEA 3990
Chesapeake and Colorado
Uranium Corporation
Queen Bee and other claims
Mesa County, Colorado
$437,535.00 - Uranium

Memorandum

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

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

Subject: Review of Field Team report.

The applicant requested assistance in a large program of non-core and core drilling of a large group of claims. A large number of claims are in conflict with claims of another applicant, DMEA 4041.

The referenced property is several miles west and south of the highly productive Outlaw-Calamity-Maverick mining area. Nearer the property are 3 or 4 properties credited with small productions and from a claim in the midst of the disputed claim area, the Stormy Treasure claim, 5 tons of low-grade was produced and the A.E.C. estimates there are 195 tons of indicated and 300 tons of inferred ore of a grade of 0.16% U_3O_8 remaining. The Stormy Treasure claim does not belong to the applicant, but the applicant drilled 29 closely spaced holes on adjacent claims in an attempt to find an extension of the small ore body. Two holes showed weakly mineralized sandstones.

The examiners conclude that "the relatively few and small pocky ore bodies found on and near the proposed exploration area indicate that only a few small scattered ore bodies containing a maximum of 500 tons are likely to occur on the claims." "There does not appear to be anything on which a logical drilling program could be based. The applicants exploration proposal is elaborate and expensive in relation to the probable size of the ore occurrences and it does not appear that either this program or a smaller one would be likely to find significant ore bodies."

I concur with the recommendation of the examiners and the Field Team that the application be denied.

H. E. Nelson

H. E. Nelson

HENelson:jeh
3/6/56
cc: Director's reading 4212
Branch reading 4212
IMEA (3)
Docket file
J. E. Crawford 3641
J. O. Kested, 3210 GSA

IN REPLY REFER TO:

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

RECEIVED
MAR - 6 1956

March 6, 1956

Re: DMEA 3990
Chesapeake and Colorado
Uranium Corporation
Queen Bee and other claims
Mesa County, Colorado
$437,535.00 - Uranium

Memorandum

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

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

Subject: Review of Field Team report.

The applicant requested assistance in a large program of non-core and core drilling of a large group of claims. A large number of claims are in conflict with claims of another applicant, DMEA 4041.

The referenced property is several miles west and south of the highly productive Outlaw-Calamity-Maverick mining area. Nearer the property are 3 or 4 properties credited with small productions and from a claim in the midst of the disputed claim area, the Stormy Treasure claim, 5 tons of low-grade was produced and the A.E.C. estimates there are 195 tons of indicated and 300 tons of inferred ore of a grade of 0.16% U_3O_8 remaining. The Stormy Treasure claim does not belong to the applicant, but the applicant drilled 29 closely spaced holes on adjacent claims in an attempt to find an extension of the small ore body. Two holes showed weakly mineralized sandstones.

The examiners conclude that "the relatively few and small pocky ore bodies found on and near the proposed exploration area indicate that only a few small scattered ore bodies containing a maximum of 500 tons are likely to occur on the claims." "There does not appear to be anything on which a logical drilling program could be based. The applicants exploration proposal is elaborate and expensive in relation to the probable size of the ore occurrences and it does not appear that either this program or a smaller one would be likely to find significant ore bodies."

I concur with the recommendation of the examiners and the Field Team that the application be denied.

N. E. Nelson

N. E. Nelson

NENelson:jeh
3/6/56
cc: Director's reading 4212
Branch reading 4212
DMEA (3)
Docket file
J. E. Crawford 3641
J. O. Hosted, 3210 GSA

IN REPLY REFER TO:

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

RECEIVED
MAR - 6 1956

March 6, 1956

Re: DMEA 3990
Chesapeake and Colorado
Uranium Corporation
Queen Bee and other claims
Mesa County, Colorado
$437,535.00 - Uranium

Memorandum

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

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

Subject: Review of Field Team report.

The applicant requested assistance in a large program of non-core and core drilling of a large group of claims. A large number of claims are in conflict with claims of another applicant, DMEA 4041.

The referenced property is several miles west and south of the highly productive Outlaw-Calamity-Maverick mining area. Nearer the property are 3 or 4 properties credited with small productions and from a claim in the midst of the disputed claim area, the Stormy Treasure claim, 5 tons of low-grade was produced and the A.E.C. estimates there are 195 tons of indicated and 300 tons of inferred ore of a grade of 0.16% U_3O_8 remaining. The Stormy Treasure claim does not belong to the applicant, but the applicant drilled 29 closely spaced holes on adjacent claims in an attempt to find an extension of the small ore body. Two holes showed weakly mineralized sandstones.

The examiners conclude that "the relatively few and small pocky ore bodies found on and near the proposed exploration area indicate that only a few small scattered ore bodies containing a maximum of 500 tons are likely to occur on the claims." "There does not appear to be anything on which a logical drilling program could be based. The applicants exploration proposal is elaborate and expensive in relation to the probable size of the ore occurrences and it does not appear that either this program or a smaller one would be likely to find significant ore bodies."

I concur with the recommendation of the examiners and the Field Team that the application be denied.

N. E. Nelson

N. E. Nelson

NENelson:jeh
3/6/56
cc: Director's reading 4212
Branch reading 4212
IMEA (3)
Docket file
J. E. Crawford 3641
J. O. Rested, 3210 GSA

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

FEB 27 1956

RECEIVED
FEB 23 1956

February 21, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Joint Report of Examination, Docket DMEA 3990 (Uranium), Chesapeake and Colorado Uranium Corporation, Queen Bee, Bar F, Virginia W., and Jamie T. claims, Mesa County, Colorado

Enclosed are the original and three copies of a Joint Engineering and Geologic Report on the subject docket.

The field examiners recommend denial of the application based on the poor results of underground exploration on the Stormy Treasure claim, the negative results of drilling behind the workings, and the absence of channeling in Salt Wash outcrops in Calamity Creek Canyon. It does not appear that either the applicant's proposed exploration program or a smaller one would be likely to encounter significant ore bodies.

We concur in the recommendation that the application be denied.

DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
2-27-56
(date)

DMEA
Date Rec'd.

FEB 21 1956

BUREAU OF MINES
Denver, Colorado

RECEIVED
FEB 23 1956

Region III

Building 20
Denver Federal Center
Denver 2, Colorado
February 20, 1956

Memorandum

TRANSMITTED

FEB 21 1956

To: Executive Officer, DMEA Field Team, Region III

From: John F. Shaw
E. N. Harshman

Subject: Joint Engineering and Geologic Report, Docket DMEA 3990, Chesapeake and Colorado Uranium Corp., Mesa County, Colo.

Enclosed are the original and 9 copies of the Joint Engineering and Geologic Report by F. M. Byers, Jr., Geologist and M. H. Salsbury, Mining Engineer, covering Docket DMEA 3990.

The Chesapeake and Colorado Uranium Corp. applied for Defense Minerals Exploration Administration assistance to explore 56 unpatented claims on the southeast flank of Calamity Mesa by 46,210 feet of non-core and 46,045 feet of core drilling in three stages at an estimated cost of $437,535.00.

The property was examined on 12/1/55 by F. M. Byers, Jr. and M. H. Salsbury. It was determined that part of the claims were in conflict with claims under the control of American Ledue Corporation. The examining team concluded that there was little possibility of discovering a significant amount of uranium on the property controlled by the Chesapeake and Colorado Uranium Corporation.

It is recommended that the application be denied.

E. N. Harshman

E. N. Harshman
Member Field Team

John F. Shaw

John F. Shaw
Supervising Mining Engineer

cc 9
ENHarshman
DMEA 3990
Chron.

JFS/eh

Reviewed by
DMEA OPERATING COMMITTEE
2-27-56
(date)

MINERAL DEPOSITS
DMEA
RECEIVED
FEB 7 1956
U. S.
GEOLOGICAL SURVEY
DENVER, COLORADO

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. BOX 360
GRAND JUNCTION, COLORADO

February 1, 1956

RECEIVED
FEB 23 1956

TRANSMITTED
FEB 21 1956

Memorandum

To: E. N. Harshman, DMEA Field Team, Region III

From: J. William Hasler

Subject: DMEA 3990 (Uranium) Chesapeake and Colorado Uranium Corporation, Queen Bee, Bar F, Virginia W., and Jamie T. claims, Mesa County, Colorado

Transmitted herewith is a joint geologic and engineering report, prepared by F. M. Byers, Jr., U. S. Geological Survey, and M. H. Salsbury, U. S. Bureau of Mines, as result of a field examination made December 1, 1955.

The applicant applied for a DMEA loan for assistance to explore for uranium on 56 located claims in the southeast flank of Calamity Mesa. The claims included in the proposal are owned by the applicant. The 20 Queen Bee claims were purchased from Jerome Craig, Jr., and E. L. Hess of Whitewater, Colorado. The others were located by the applicant.

Maps in the U. S. Geological Survey and the map submitted by the American Leduc Corporation under DMEA 4041, showed areas of conflict on three sides of applicant's property. In fact, American Leduc has applied for assistance on some of the same claims. Neither the applicant nor the American Leduc Corporation indicates, at least in the applications, that these conflicts exist. These conflicts must, of course, be resolved in any event that a contract was approved for either applicant.

The applicant's claims are located on the southwest flank of Calamity Mesa. It is on the west side of Calamity Creek, south of properties on which two previous DMEA applications have been made and both of which were recommended for denial. The claims are underlain by rocks of Jurassic and Cretaceous age. The main ore-bearing formation is the Salt Wash member of the Jurassic Morrison formation, which consists of three prominent sandstone ledges. The ore deposits are found in the topmost Salt Wash rim. The claims are several miles south of the limits of favorable ore-bearing Salt Wash sandstone indicated by U. S. Geological Survey drilling on the north end of Calamity and Outlaw Mesas. The applicant's ground and immediate surrounding area are classified as unfavorable, according to criteria established through Survey drilling.

Reviewed by
DMEA OPERATING COMMITTEE
2-27-56
(date)

Several small prospects and mines have produced a very small tonnage of ore. An examination of these prospects show that the sandstones and assorted mudstones are predominantly red and thin, which indicate general unfavorability for the deposition of ore deposits. The ore bodies in this area are small and pod like. The preponderance of reddish sandstone and mudstone throughout the Salt Wash member, and the distance of several miles to the Uravan mineral belt, strongly indicate that the ground underlying claims held by the Chesapeake and Colorado Uranium Corporation on the southeast flank of Calamity Mesa probably does not contain more than a few small, widely scattered ore bodies of 500 tons or less.

Furthermore, no mineralized trend such as faults or channels on which to base an adequate drilling program are known to exist on ground held by the applicant. Because of these unfavorable criteria, it is concluded that the chances of discovering ore bodies of significant size and grade are not good. It is recommended that the application for assistance be denied. I concur with the conclusions and recommendations of the examining team.

The Atomic Energy Commission has been consulted relative to the appraisal of the property.

Enclosed are the required number of maps, as well as the applicant's brochure.

J. William Hasler

J. William Hasler,
Geologist

JWH/mlr

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

RECEIVED
FEB 23 1956

DEFENSE MINERALS EXPLORATION ADMINISTRATION

JOINT REPORT OF EXAMINATION BY EXAMINING TEAM
REGION III

TRANSMITTED
FEB 21 1956

DMEA 3990

CHESAPEAKE AND COLORADO URANIUM CORPORATION

Queen Bee, TBar F, Virginia W. and Jamie T. Claims

Mesa County, Colorado

Uranium

Joint Engineering and Geologic Report

By

Reviewed by
DMEA OPERATING COMMITTEE
2-27-56
(date)

F. M. Byers, Jr., Geologist
Geological Survey

M. H. Salsbury, Mining Engineer
Bureau of Mines

February 14, 1956

DMEA 3990

CHESAPEAKE AND COLORADO URANIUM CORPORATION
QUEEN BEE, T BAR F, VIRGINIA W. AND JAMIE T. CLAIMS
MESA COUNTY, COLORADO

RECEIVED
FEB 23 1956

CONTENTS

Joint Engineering and Geologic Report — Page

Introduction and summary 1
Acknowledgments 3
Location, topography and climate 3
History, production and property ownership 4
Ownership and extent 5
Present status 7
    Exploration and development 7
    Mining, milling equipment and other facilities 8
Geology 8
Ore deposits and reserves 9
Proposed exploration 11
Conclusions and recommendations 13
References 14

ILLUSTRATIONS

Figure — Follows Page

1. Location map, Queen Bee, T Bar F, Virginia W. and Jamie T. claims, Chesapeake and Colorado Uranium Corporation, Mesa County, Colorado, DMEA 3990 3

2. Geologic map of south part of Calamity-Outlaw Mesa area, showing ore bodies, existing U.S. Geological Survey drill holes, Queen Bee, T Bar F, Jamie T., Virginia W., Calamity View, and Stormy Treasure groups of claims, Chesapeake and Colorado Uranium Corporation, Mesa County, Colorado 3

DMEA 3990

CHESAPEAKE AND COLORADO URANIUM CORPORATION
Queen Bee, T Bar F, Virginia W. and Jamie T. Claims
Mesa County, Colorado

RECEIVED
FEB 23 1956

INTRODUCTION AND SUMMARY

On September 19, 1955, the Chesapeake and Colorado Uranium Corporation, 909 - 16th St., N.W., Washington, D. C., applied for Defense Minerals Exploration assistance to explore for uranium ore on 56 located claims on the southeast flank of Calamity Mesa, Mesa County, Colorado. The proposal calls for 46,210 feet of non-core and 46,045 feet of core drilling in three stages at an estimated cost of $437,534.00 or $7,800.00 per claim. Government participation at 75 percent would be $328,150.50.

The property was examined on December 1, 1955 in company with T. P. Campbell, Manager, and David Hoover, geologist for the applicant.

The 56 claims included in the proposed DMEA project are owned by the applicant. The twenty Queen Bee claims were purchased from Jerome Craig, Jr., and E. L. Hess of Whitewater, Colorado. The others were located by the applicant. Maps in the Geological Survey records and a map submitted by American Leduc Corporation under DMEA 4041 show areas of conflict with claims on three sides of the applicant's property. In fact, the American Leduc Uranium Corporation has applied for DMEA assistance on some of the same claims. Neither the applicant nor American Leduc Uranium Corporation indicate in their applications that these conflicts exist. However, they would have to be settled in the event that a contract was approved for either applicant.

The claim area covered in the proposed project lies on a bench on the west side of Calamity Creek south of properties on which two other DMEA applications have been made (DMEA 3934 and DMEA 4046). Both of these applications have been recommended for denial. The claims are underlain by the Jurassic Summerville formation, and the Salt Wash and Brushy Basin members of the Jurassic Morrison formation. The southern end of Calamity Mesa, capped by the Cretaceous Burro Canyon formation, lies just west of the claims.

The important potential ore-bearing horizon of the area is the topmost sandstone unit of the Salt Wash member of the Morrison formation. However, the applicant proposed to drill the entire Salt Wash section. Two southwest trending ore trends or channels crossing the property are postulated by the applicant, and are shown on Plate A with the brochure. These are projected extensions of known mineralization which has been explored two miles to the east. However, the drilling pattern proposed blankets the entire claim area rather than the specific areas where the projected trends would cross. The existence of these trends on the applicant's property is not substantiated by examination of the outcrops in the walls of Calamity Creek canyon where some evidence of them should be visible if they extend this far southwest.

From the evidence of the relatively few and small, poddy ore bodies on the property or in the vicinity, the preponderance of reddish sandstone and mudstone through the Salt Wash section, and the absence of known mineralized trends crossing the property, it is probable that only small scattered ore bodies of 500 tons or less are likely to be found on the property. Denial of the DMEA application is recommended.

ACKNOWLEDGMENTS

Data on the property furnished by the applicant included a geologic report by R. T. Brown of Technical Services, Inc., Grand Junction, Colorado, various geologic and claim maps, and an elaborate drilling plan with a cost estimate. The Atomic Energy Commission had been consulted on other recent examinations made in the vicinity, and all pertinent data obtained.

The results of Geological Survey and Atomic Energy Commission drilling in the area were available to the examining team.

LOCATION, TOPOGRAPHY AND CLIMATE

The Queen Bee, T Bar F, Virginia W. and Jamie T. claims, 56 in all, are in secs. 26, 27, 34 and 35, T. 50 N., and in secs. 1 and 2, T. 49 N., R. 18 W. of the New Mexico Principal Meridian, Mesa County, Colorado (figure 1). The claims are 36 miles north of Uravan, Colo., most of the distance over a poor dirt access road connecting with Colorado State Highway 141 in the Dolores River canyon at Mesa Creek. A somewhat better route over the top of the Uncompahgre uplift connects with the same highway at Taylor's ranch in Uniweep canyon. By this route the distance to Grand Junction, Colorado, the nearest major source of supplies, is 62 miles.

Most of the claim area is on the moderate to precipitous east slope at the south end of Calamity Mesa overlooking Calamity Creek (figure 2). They are at an altitude of 5800 to 6200 feet and would be accessible without excessive cost for drill roads.

Operations are feasible throughout the year with interruptions during occasional heavy storms. In wet weather roads are nearly impassable except for 4-wheel drive vehicles.

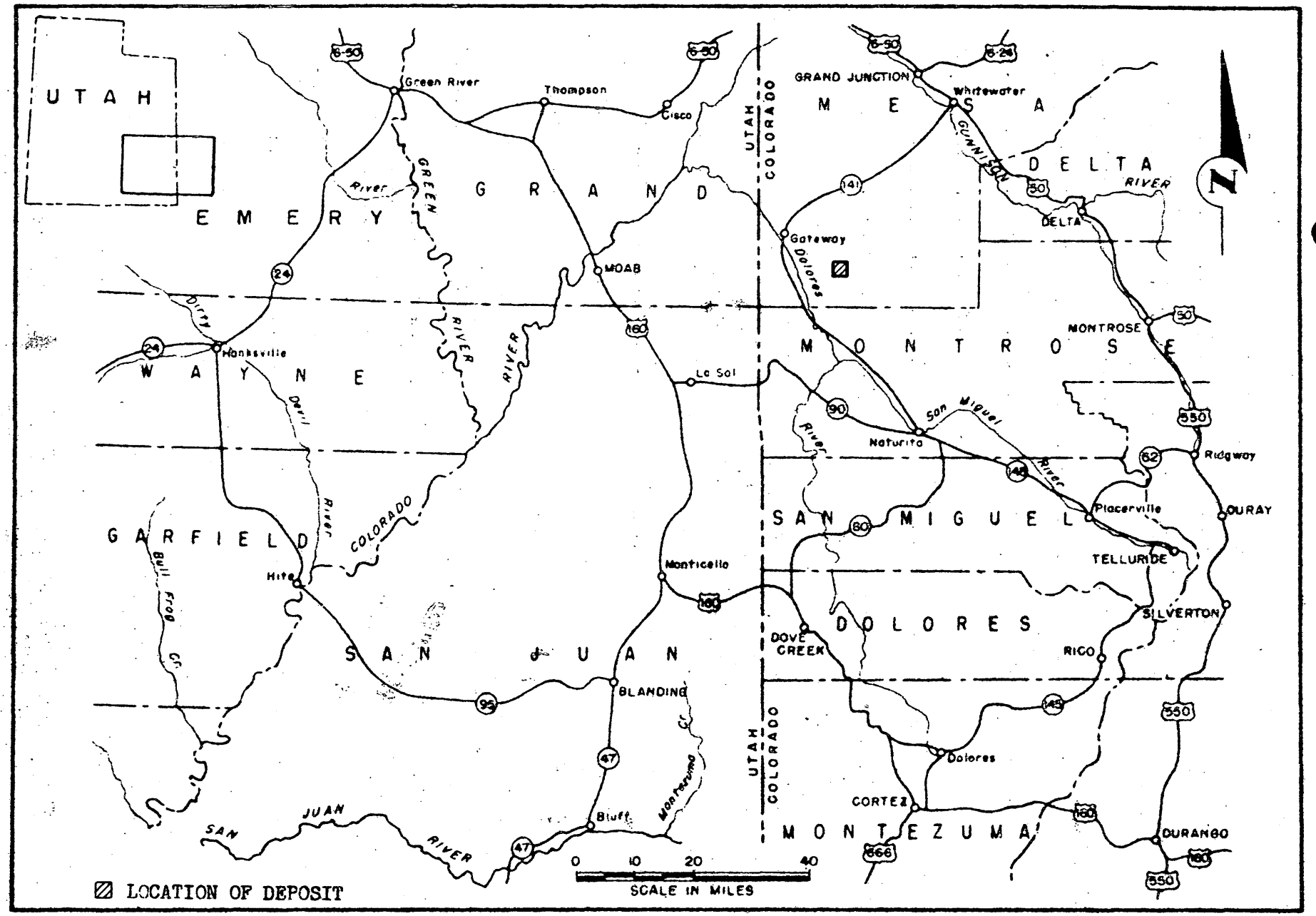
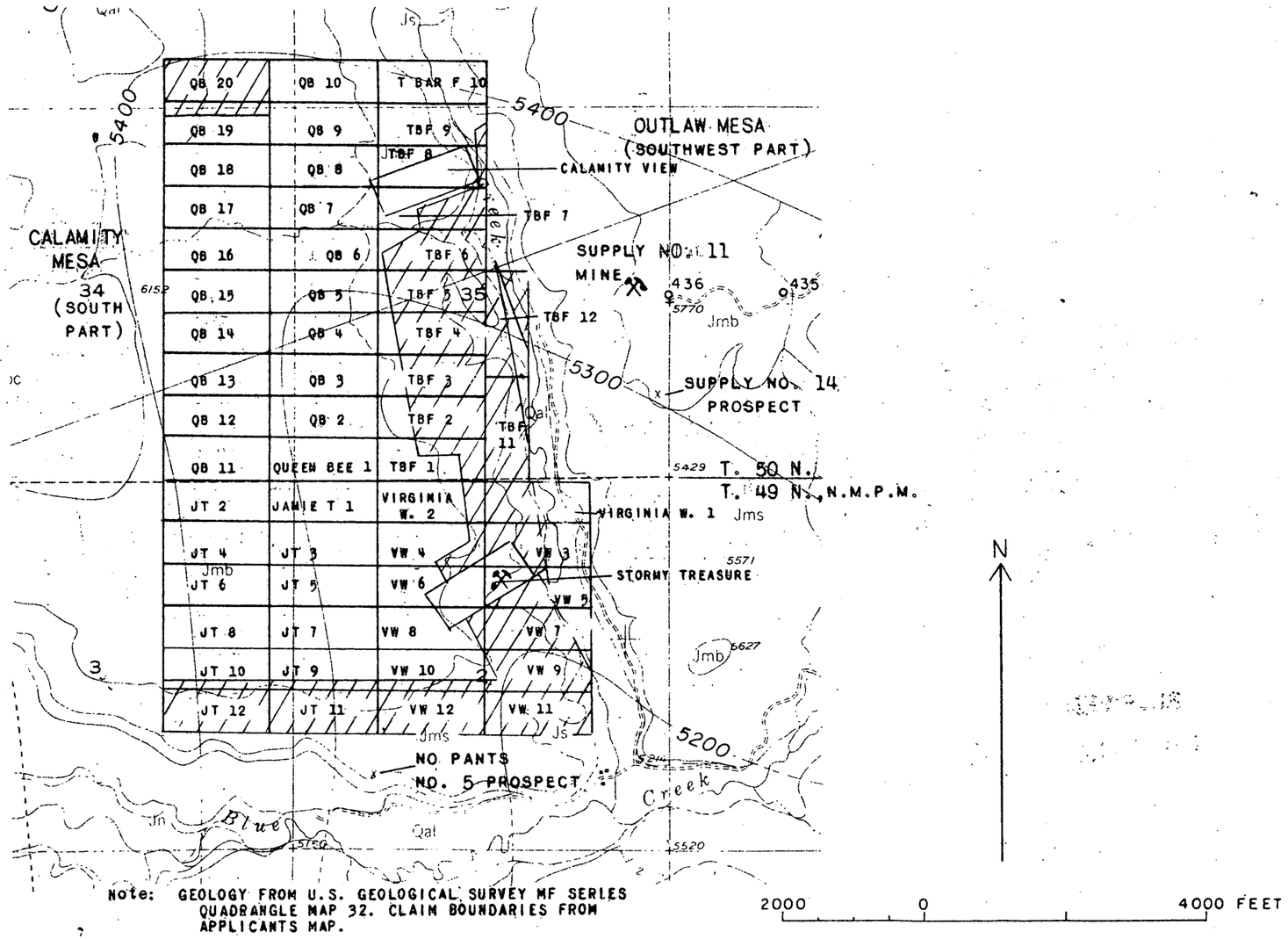


FIGURE 1 - LOCATION MAP, QUEEN BEE, T BAR F, VIRGINIA W AND JAMIE T CLAIMS, CHESAPEAKE AND COLORADO URANIUM CORPORATION, MESA COUNTY, COLO. DMEA 3990

RECEIVED
FEB 23 1956



Note: GEOLOGY FROM U.S. GEOLOGICAL SURVEY MF SERIES QUADRANGLE MAP 32. CLAIM BOUNDARIES FROM APPLICANTS MAP.

2000 0 4000 FEET

EXPLANATION

Qal	QUATERNARY ALLUVIUM
Kbc	CRETACEOUS BURRO CANYON FORMATION
Jmb / Jms	JURASSIC MORRISON FORMATION: BRUSHY BASIN MEMBER, Jmb; SALT WASH MEMBER, Jms
Js	JURASSIC SUMMERVILLE FORMATION
Jec	JURASSIC ENTRADA SANDSTONE AND CARMEL FORMATIONS, UNDIVIDED
Jn	JURASSIC NAVAJO SANDSTONE
Jk	JURASSIC(?) KAYENTA FORMATION
	GEOLOGIC CONTACT
5300	STRUCTURE CONTOUR DRAWN ON TOP OF ENTRADA SANDSTONE. INTERVAL 100 FEET
	ORE BODY
	CLAIM AREA IN CONFLICT
X	PROSPECT
	MINE
836	DRILL HOLE, U.S. GEOLOGICAL SURVEY

Note: COMPANY DRILL HOLES NEAR STORMY TREASURE ORE BODY NOT SHOWN.

FIGURE 2. GEOLOGIC MAP OF SOUTH PART OF CALAMITY-OUTLAW MESA AREA, SHOWING ORE BODIES, EXISTING U.S. GEOLOGICAL SURVEY DRILL HOLES, QUEEN BEE, T BAR F, JAMIE T., VIRGINIA W., CALAMITY VIEW, AND STORMY TREASURE GROUPS OF CLAIMS, CHESAPEAKE AND COLORADO URANIUM CORPORATION, MESA COUNTY, COLORADO.

RECEIVED
FEB 23 1956

Water, mining supplies, power and accessibility present no unusual problems. The applicant has established an elaborate camp on Blue Creek, with accomodations for 25 men. Labor for the proposed project would be furnished by a drilling contractor.

HISTORY, PRODUCTION AND PROPERTY OWNERSHIP

The Calamity Mesa district has been worked successively for radium, vanadium and uranium with earliest operations dating from before World War I. Current exploration for uranium dates from 1949 when drilling was undertaken by the Geological Survey on ground which the Government had acquired through the Union Mines Development Corporation. A large amount of drilling has been done in the area by the Geological Survey, the Atomic Energy Commission and private operators with discovery of large uranium-vanadium deposits in the main Uravan mineral belt where it crosses the north end of Calamity and Outlaw Mesas.

The property which the applicant corporation wishes to explore with Government assistance was acquired as the result of expansion of the corporation's other holdings, totaling more than 400 claims. The corporation, originally a partnership, the Tomkins-Farris Mining Co., has partially explored 4 groups of claims, not including the subject property, by 20,000 feet of drilling in 176 holes. There has been a limited amount of underground exploration and drilling on the claims covered by the DMEA exploration proposal.

The only production from the subject claims is 5 tons of low-grade ore from the Stormy Treasure, according to the Atomic Energy Commission records. The production from other parts of the applicant's property has also been small.

OWNERSHIP AND EXTENT

Following are recording data on the claims included in the proposed DMEA project as furnished by the applicant:

Claim	Location date	Recording date	Mesa County Records Book	Page
Queen Bee Nos. 1-20	2/5/54	2/19/54	598	238-255
Queen Bee Nos. 1-20 (Amended)	5/2/55, 5/3/55	8/2/55	655	529-549
T Bar F Nos. 1-12	5/28/55	6/6/55	648	206-217
Virginia W. Nos. 1-12	5/28/55	6/6/55	648	218-229
Jamie T. Nos. 1-12	5/20/55	6/6/55	648	230-241

Location procedures on the claims appear to have been in order. The discovery date on several of the Virginia W. claims location notices was May 17, 1955, and the location date, May 28, 1955. Evidence of conflicts which were indicated by data from other sources was not found in the field.

There are several areas of claim conflicts as shown on figure 2, that are plotted on Geological Survey working maps, and on the map furnished by the American Leduc Uranium Corporation with another DMEA application covering some of the same ground (DMEA 4041). The subject applicant did not refer to any conflicts in the brochure and has not resolved any of the conflicts, so far as known to the examining team. The Red Horn No. 5 and Blue Horn No. 5 claims, owned by the New Verde Mines Company, P. O. Box 1472, Grand Junction, Colorado, overlay part of the applicant's Queen Bee Nos. 19 and 20 claims in the northwest corner

of the property. Comparative recording data as shown in the Mesa County records are as follows:

Claim	Location date	Date of Certificate	Date of Recording	Locator
Blue Horn No. 5	4/2/54	4/19/54	4/29/54	Floyd Hamrick & H. D. Clark
Red Horn No. 5	4/2/54	4/19/54	4/29/54	Floyd Hamrick
Queen Bee No. 19	2/5/54		2/19/54	Jerome Craig, Jr. E. L. Hess
(Queen B No. 19 Amended)	5/3/55		8/2/55	Jerome Craig, Jr. E. L. Hess
Queen B No. 20	2/5/54		2/19/54	Jerome Craig, Jr. E. L. Hess
(Queen B No. 20 Amended)	5/3/55		8/2/55	Jerome Craig, Jr. E. L. Hess

The applicant's Queen Bee claims are the prior locations according to these records.

The American Leduc Uranium Corporation's Son and No Pants claims are recorded on pages 351 to 401 in Book 562 as having been discovered and located on February 20, 1952, recorded on March 11, 1952. Amended locations were filed on October 28, 1953. The subject applicant's claims in conflict with these, the T Bar F Nos. 1 through 12, the Virginia W. Nos. 1 through 12, and the Jamie T. Nos. 9, 10, 11 and 12, were discovered and located in May 1954, recorded in June 1954, and are therefore junior locations.

Two older claims, the Stormy Treasure and the Calamity View, originally located by the Blue Creek Mining Company, have been allowed to lapse and do not, according to the applicant, affect the validity of the later claims overlying them.

No attempt was made by the examining team to reach conclusions on validity of ownership.

PRESENT STATUS

Exploration and Development

The only exploration done to date has been core and non-core drilling north of the mineralized outcrop on the Stormy Treasure claim, a small amount of rim stripping on the Calamity View and Stormy Treasure claims, and a short drift driven 33 feet on the minor mineralization found in the outcrop on Stormy Treasure. This did not prove to be of economic value, and examination of the workings did not reveal more than small isolated spots of mineralization. The exposure on the Calamity View claim is a one-foot sandstone bed weakly mineralized for twenty feet along the outcrop. It is unfavorable according to geological criteria. The results of drilling 29 holes behind the Stormy Treasure outcrop were negative. The hole logs were furnished for the DMEA geologist's use but were not submitted with the application.

East of the subject property, small pods of ore have been found on the Supply No. 11 and Supply No. 14 claims. About 15 tons of ore averaging 0.29 percent U_3O_8 was shipped from shallow workings on the Supply No. 11. Still further northeast about 1225 tons of ore has been shipped from the Crescent No. 1 and No. 2 claims which lie on the fringe of the Uravan mineral belt in line with a channel or trend which the applicant suggests may run southwest from the ore bodies of the Blue Creek mines in the Uravan mineral belt. The Supply Nos. 11 and 14 are also in line with this projected channel, but the mineralization appears to be weakening in a southwesterly direction with increasing

distance from the favorable ground within the Uravan mineral belt. This channel is the more northerly of two which the applicant has shown as traversing the proposed DMEA exploration area. The second channel is projected from the Black Streak mine, 2 miles east of the subject property, and is assumed to cross in the vicinity of the Stormy Treasure claim. Examination of the outcrops in Calamity Creek Canyon, which both channels would have to cross, shows no evidence of either one.

There are two other small mineralized exposures south of the subject property on the No Pants No. 5 and Speckled Pup claims. No significant trends or extensions are indicated and no production has been made.

Mining and Milling Equipment and Other Facilities

The applicant Corporation has assembled one of the most complete sets of exploration equipment in the area, including 8 vehicles of various types, a 210 Le Roi portable compressor, a D-6 caterpillar tractor, equipment for wagon, dry rotary, or core drilling, and, miscellaneous mining and repair equipment. In addition, they have erected and equipped 6 buildings providing excellent living accommodations for 25 men.

GEOLOGY

The claims of the Chesapeake and Colorado Uranium Corporation are on the southeast flank of Calamity Mesa near the trough of a broad, very open syncline plunging southeasterly (fig. 2; Cater, 1955). The attitude of the beds is nearly horizontal. Just north of the property the beds rise very gradually to the Uncompahgre uplift, several miles to the north. The claims are underlain by the Jurassic Summerville formation, the Salt Wash and Brushy Basin members of the Jurassic Morrison formation. The southern end of Calamity Mesa, capped by the

Cretaceous Burro Canyon formation, lies just west of the claims.

The Salt Wash member of the Jurassic Morrison formation consists of three distinct sandstone ledges, which representatives of the applicant have numbered in ascending order. A rough estimate of the stratigraphic column follows:

Unit	Approximate thickness	"Rim" No.
Sandstone, red, mudstone split toward south end of claims	50 to 80	3rd
Mudstone, red	70 to 40	
Sandstone, red	30	2nd
Mudstone, red, local thin sandstone near top contains Calamity View prospect	60	
Sandstone, red, locally gray where it contains Stormy Treasure ore body	30	1st
Approximate total thickness of Salt Wash	240	

A conglomeratic sandstone containing red and green chert pebbles overlies the 3rd or top rim and is the basal unit of the Brushy Basin member of the Morrison formation.

ORE DEPOSITS AND RESERVES

The applicant's claims are several miles south of the limits of favorable ore-bearing Salt Wash sandstone indicated by U. S. Geological Survey drilling on the north end of Calamity and Outlaw Mesas (Fischer and Hilpert, 1952, figs. 2 and 3; also Stager, 1951, fig. 3, and Brasher, 1952, fig. 3). The applicant's ground and the immediately surrounding area are unfavorable, according to criteria established by Weir (1952). USGS drill holes 435 and 436, along the access road to

the Supply No. 11 mine, on the east side of Calamity Creek (fig. 2), are barren and unfavorable. The Supply No. 11 mine consists of a 60-foot adit, from, which about 15 tons of ore containing 0.29 percent of U_3O_8 have been produced to date, according to records of the Atomic Energy Commission. Adits on the Supply Nos. 11 and 14 claims were examined in connection with the American Leduc Corporation (DMEA 4041) and each contained only a few tons of ore in sight. The sandstone rims and associated mudstone in the vicinity of the Supply Nos. 11 and 14 claims is reddish and unfavorable and there is no exposure of a belt of favorable sandstone in the east canyon wall of Calamity Creek. No production or reserves is reported by the AEC on the No Pants No. 5 prospect (fig. 2), south of the applicant's claims. The Salt Wash sandstone ledges on the north side of Blue Creek are reddish and unfavorable.

A small prospect on the Calamity View claim was shown to the examining team by representatives of the applicant. A 1-foot sandstone bed about 10 feet below the second Salt Wash rim is weakly mineralized (not more than 0.10 percent eU_3O_8) for about 20 feet along the outcrop. The associated mudstones and thin sandstones are mottled red and green, an indication of general unfavorability.

At the Stormy Treasure mine (fig. 2) an ore body is in the lower part of Salt Wash member. The ore-bearing sandstone is 10 to 15 feet thick, and one foot of ore is exposed for a width of 10 feet in a short adit, 33 feet in length. The total production is about 5 tons of low-grade ore; the ore reserves carried by the Atomic Energy Commission as of June 30, 1955, are as follows:

	Tons	$\%U_3O_8$	V_2O_5
Indicated ore	195	0.16	0.78
Inferred ore	300	0.16	0.78

The extent of the Stormy Treasure ore body has been tested further by the applicant with 26 closely-spaced rotary drill holes and 3 core drill holes on the Virginia W. Nos. 3 and 4 claims. None of the 29 holes penetrated ore and all penetrated unfavorable red sandstone and mudstones. Only two of the holes showed weakly mineralized sandstone.

The relatively few and small, pod-like ore bodies, the preponderance of reddish sandstone and mudstone all through the Salt Wash section, and the distance of several miles to the Uravan Mineral Belt (Outlaw-Calamity-Maverick mining areas), strongly indicate that the ground underlying claims held by the Chesapeake and Colorado Uranium Corporation on the southeast flank of Calamity Mesa probably do not contain more than a few small widely scattered ore bodies of 500 tons or less. Furthermore, mineralized trends, such as faults or channels, on which to base a drilling program, are not known to exist on the ground held by the applicant.

PROPOSED EXPLORATION

The three stages of exploration proposed by the applicant do not fall into the usual categories of drilling used in DMEA proposals. They correspond to a DMEA first stage. Additional offset drilling, as proposed, would actually be the usual second stage of a DMEA project. Following is a tabulation of the suggested drilling:

(a) Stage I - 53 holes on 250-foot centers to explore the supposed southwest trending channel crossing the southern end of the subject claims.

Stage II- 127 holes on 500 foot centers to explore the balance of the subject claims.

Total drilling in first two stages - 186 holes averaging 362 feet deep requiring 34,185 feet of non-core and 33,100 feet of core drilling.

Stage III- Eleven holes averaging 88 feet in depth requiring 970 feet of core drilling to explore anomalies which have been detected by the applicant's air-borne radiometric surveys.

(b) An additional 12,025 feet of non-core and 11,975 feet of core drilling in 80 holes averaging 300 feet in depth is proposed to offset mineralized holes found in the other stages of drilling. All drilling totals 287 holes requiring an estimated 46,210 feet of non-core and 46,045 feet of core drilling, or 92,255 feet. The applicant used a total of 221 holes in the estimate. This number appears to be in error. The estimated cost is $437,534.00, in which Government participation at 75 percent would be $328,150.50. An itemized list of holes has been furnished with estimated depths and a map of hole locations keyed to this list.

The estimated overall cost per foot of the applicant's proposal is $4.74. This figure is entirely out of line with unit costs in current and completed DMEA projects on the Colorado Plateau. For a project of this size, the cost per foot of technical services, supervision, and other expenses should be fairly low. The quoted bid for drilling used by the applicant was reported to be the lowest of several

bids, although the other bids were not listed. Following is breakdown of costs, as proposed, on a basis of 92,255 feet of drilling:

	Total	Per foot
Drilling only all types	$218,307.00	$ 2.37
Chemical analyses	4,420.00	.05
All other costs	201,807.00	2.32
Total for project	$437,534.00	$ 4.74

The costs listed above are in line except the $2.32 per foot for all other costs. These should not total over $0.75 per foot. Nearly every item contributing to the estimated $2.32 per foot is excessive.

Because of the recommendation made in this report, a modified exploration program with revised costs is not suggested by the examining team.

CONCLUSIONS AND RECOMMENDATIONS

The relatively few and small, poddy ore bodies found on and near the proposed exploration area indicate that only a few small scattered ore bodies containing a maximum of 500 tons are likely to occur on the claims. The preponderance of reddish sandstone and mudstone found all through outcrop exposures of the Salt Wash section on the property is evidence of unfavorable geologic conditions. The poor results of underground exploration on the Stormy Treasure claim, the negative results of drilling behind the workings, and the absence of channeling in Salt Wash outcrops in Calamity Creek canyon all substantiate the conclusion that the area is unfavorable. There does not appear to be anything on which a logical drilling program could be based.

The applicant's exploration proposal is elaborate and expensive in relation to the probable size of ore occurrences, and it does not appear that either this program, or a smaller one would be likely to find significant ore bodies.

It is recommended that the application under DMEA 3990 be denied.

REFERENCES

Brasher, G. K., November 1952, Carnotite resources of Outlaw Mesa, Mesa County, Colorado: U. S. Geol. Survey TEIR-163, 117 p.

Fischer, R. P., and Hilpert, L. S., 1952, Geology of the Uravan Mineral Belt: U. S. Geol. Survey Bull. 988-A, 13 p.

Stager, H. K., June 1951, Carnotite resources of the Calamity group area, Mesa County, Colorado: U. S. Geol. Survey TEIR-146, 30 p.

Weir, Doris Blackman, 1952, Geological guides to prospecting for carnotite deposits on Colorado Plateau: U. S. Geol. Survey Bull. 988--B, 27 p.

2-24-56 [illegible]

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

RECEIVED FEB 23 1956

February 21, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Joint Report of Examination, Docket DMEA 3990 (Uranium), Chesapeake and Colorado Uranium Corporation, Queen Bee, Bar F, Virginia W., and Jamie T. claims, Mesa County, Colorado

Enclosed are the original and three copies of a Joint Engineering and Geologic Report on the subject docket.

The field examiners recommend denial of the application based on the poor results of underground exploration on the Stormy Treasure claim, the negative results of drilling behind the workings, and the absence of channeling in Salt Wash outcrops in Calamity Creek Canyon. It does not appear that either the applicant's proposed exploration program or a smaller one would be likely to encounter significant ore bodies.

We concur in the recommendation that the application be denied.

DMEA Field Team, Region III

By W. M. Traver
Executive Officer

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
2-27-56
(date)

RECEIVED

FEB 23 1956

DMEA
Date Rec'd.

FEB 21 1956

BUREAU OF MINES
Denver, Colorado

Region III

Building 20
Denver Federal Center
Denver 2, Colorado
February 20, 1956

Memorandum

TRANSMITTED

FEB 21 1956

To: Executive Officer, DMEA Field Team, Region III

From: John F. Shaw
E. N. Harshman

Subject: Joint Engineering and Geologic Report, Docket DMEA 3990, Chesapeake and Colorado Uranium Corp., Mesa County, Colo.

Enclosed are the original and 9 copies of the Joint Engineering and Geologic Report by F. M. Byers, Jr., Geologist and M. H. Salsbury, Mining Engineer, covering Docket DMEA 3990.

The Chesapeake and Colorado Uranium Corp. applied for Defense Minerals Exploration Administration assistance to explore 36 unpatented claims on the southeast flank of Calamity Mesa by 46,210 feet of non-core and 46,045 feet of core drilling in three stages at an estimated cost of $437,535.00.

The property was examined on 12/1/55 by F. M. Byers, Jr. and M. H. Salsbury. It was determined that part of the claims were in conflict with claims under the control of American Lead Corporation. The examining team concluded that there was little possibility of discovering a significant amount of uranium on the property controlled by the Chesapeake and Colorado Uranium Corporation.

It is recommended that the application be denied.

E. N. Harshman

E. N. Harshman
Member Field Team

John F. Shaw

John F. Shaw
Supervising Mining Engineer

cc 9
EHHarshman
DMEA 3990
Chron.

JFS/ch

Forwarded by
DMEA OPERATING COMMITTEE
2-27-56
(date)

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
P. O. BOX 360
GRAND JUNCTION, COLORADO

RECEIVED
FEB 23 1956

February 1, 1956

TRANSMITTED
FEB 21 1956

Memorandum

To: E. N. Harshman, DMEA Field Team, Region III

From: J. William Hasler

Subject: DMEA 3990 (Uranium) Chesapeake and Colorado Uranium Corporation, Queen Bee, Bar F, Virginia W., and Jamie T. claims, Mesa County, Colorado

Transmitted herewith is a joint geologic and engineering report, prepared by F. M. Byers, Jr., U. S. Geological Survey, and M. H. Salsbury, U. S. Bureau of Mines, as result of a field examination made December 1, 1955.

The applicant applied for a DMEA loan for assistance to explore for uranium on 56 located claims in the southeast flank of Calamity Mesa. The claims included in the proposal are owned by the applicant. The 20 Queen Bee claims were purchased from Jerome Craig, Jr., and E. L. Hess of Whitewater, Colorado. The others were located by the applicant.

Maps in the U. S. Geological Survey and the map submitted by the American Leduc Corporation under DMEA 4041, showed areas of conflict on three sides of applicant's property. In fact, American Leduc has applied for assistance on some of the same claims. Neither the applicant nor the American Leduc Corporation indicates, at least in the applications, that these conflicts exist. These conflicts must, of course, be resolved in any event that a contract was approved for either applicant.

The applicant's claims are located on the southwest flank of Calamity Mesa. It is on the west side of Calamity Creek, south of properties on which two previous DMEA applications have been made and both of which were recommended for denial. The claims are underlain by rocks of Jurassic and Cretaceous age. The main ore-bearing formation is the Salt Wash member of the Jurassic Morrison formation, which consists of three prominent sandstone ledges. The ore deposits are found in the topmost Salt Wash rim. The claims are several miles south of the limits of favorable ore-bearing Salt Wash sandstone indicated by U. S. Geological Survey drilling on the north end of Calamity and Outlaw Mesas. The applicant's ground and immediate surrounding area are classified as unfavorable, according to criteria established through Survey drilling.

Reviewed by
DMEA OPERATING COMMITTEE
2-27-56
(Date)

Several small prospects and mines have produced a very small tonnage of ore. An examination of these prospects show that the sandstones and assorted mudstones are predominantly red and thin, which indicate general unfavorability for the deposition of ore deposits. The ore bodies in this area are small and pod like. The preponderance of reddish sandstone and mudstone throughout the Salt Wash member, and the distance of several miles to the Uravan mineral belt, strongly indicate that the ground underlying claims held by the Chesapeake and Colorado Uranium Corporation on the southeast flank of Calamity Mesa probably does not contain more than a few small, widely scattered ore bodies of 500 tons or less.

Furthermore, no mineralized trend such as faults or channels on which to base an adequate drilling program are known to exist on ground held by the applicant. Because of these unfavorable criteria, it is concluded that the chances of discovering ore bodies of significant size and grade are not good. It is recommended that the application for assistance be denied. I concur with the conclusions and recommendations of the examining team.

The Atomic Energy Commission has been consulted relative to the appraisal of the property.

Enclosed are the required number of maps, as well as the applicant's brochure.

J. William Hasler

J. William Hasler,
Geologist

JWH/mlr

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

RECEIVED
FEB 23 1956

DEFENSE MINERALS EXPLORATION ADMINISTRATION

JOINT REPORT OF EXAMINATION OF EXPLORING TRAM
PROJECT III

TRANSMITTED

FEB 21 1956

DMEA 3272

CHESAPEAKE AND COLORADO URANIUM CORPORATION

Owner Rept Rec F. Virginia M. and Jessie T. Slaine

Mesa County, Colorado

Uranium

Joint Engineering and Geologic Report

By

Transmitted to
DMEA OPERATING COMMITTEE
2-27-56
(date)

F. M. Byers, Jr., Geologist
Geological Survey

M. H. Salsbury, Mining Engineer
Bureau of Mines

February 14, 1956

DMEA 3990

CHESAPEAKE AND COLORADO URANIUM CORPORATION
QUEEN BEE, T BAR F, VIRGINIA W. AND JAMIE T. CLAIMS
MESA COUNTY, COLORADO

RECEIVED
FEB 23 1956

CONTENTS

Joint Engineering and Geologic Report — Page

Introduction and summary 1
Acknowledgments 3
Location, topography and climate 3
History, production and property ownership 4
Ownership and extent 5
Present status 7
Exploration and development 7
Mining, milling equipment and other facilities 8
Geology 8
Ore deposits and reserves 9
Proposed exploration 11
Conclusions and recommendations 13
References 14

ILLUSTRATIONS

Figure — Follows Page

1. Location map, Queen Bee, T Bar F, Virginia W. and Jamie T. claims, Chesapeake and Colorado Uranium Corporation, Mesa County, Colorado, DMEA 3990 3

2. Geologic map of south part of Calamity-Outlaw Mesa area, showing ore bodies, existing U.S. Geological Survey drill holes, Queen Bee, T Bar F, Jamie T., Virginia W., Calamity View, and Stormy Treasure groups of claims, Chesapeake and Colorado Uranium Corporation, Mesa County, Colorado 3

DMEA 3990

CHESAPEAKE AND COLORADO URANIUM CORPORATION
Queen Bee, Tiger F, Virginia W. and Jamie T. Claims
Mesa County, Colorado

RECEIVED
FEB 28 1958

INTRODUCTION AND SUMMARY

On September 19, 1955, the Chesapeake and Colorado Uranium Corporation, 909 - 16th St., N.W., Washington, D. C., applied for Defense Minerals Exploration assistance to explore for uranium ore on 56 located claims on the southeast flank of Calamity Mesa, Mesa County, Colorado. The proposal calls for 46,210 feet of non-core and 46,045 feet of core drilling in three stages at an estimated cost of $437,534.00 or $7,800.00 per claim. Government participation at 75 percent would be $328,150.50.

The property was examined on December 1, 1955 in company with T. P. Campbell, Manager, and David Hoover, geologist for the applicant.

The 56 claims included in the proposed DMEA project are owned by the applicant. The twenty Queen Bee claims were purchased from Jerome Craig, Jr., and E. L. Moss of Whitewater, Colorado. The others were located by the applicant. Maps in the Geological Survey records and a map submitted by American Ledue Corporation under DMEA 4041 show areas of conflict with claims on three sides of the applicant's property. In fact, the American Ledue Uranium Corporation has applied for DMEA assistance on some of the same claims. Neither the applicant nor American Ledue Uranium Corporation indicate in their applications that these conflicts exist. However, they would have to be settled in the event that a contract was approved for either applicant.

The claim area covered in the proposed project lies on a bench on the west side of Calamity Creek south of properties on which two other DMEA applications have been made (DMEA 3934 and DMEA 4046). Both of these applications have been recommended for denial. The claims are underlain by the Jurassic Summerville formation, and the Salt Wash and Brushy Basin members of the Jurassic Morrison formation. The southern end of Calamity Mesa, capped by the Cretaceous Burro Canyon formation, lies just west of the claims.

The important potential ore-bearing horizon of the area is the topmost sandstone unit of the Salt Wash member of the Morrison formation. However, the applicant proposed to drill the entire Salt Wash section. Two southeast trending ore trends or channels crossing the property are postulated by the applicant, and are shown on Plate A with the brochure. These are projected extensions of known mineralization which has been explored two miles to the east. However, the drilling pattern proposed blankets the entire claim area rather than the specific areas where the projected trends would cross. The existence of these trends on the applicant's property is not substantiated by examination of the outcrops in the walls of Calamity Creek canyon where some evidence of them should be visible if they extend this far southeast.

From the evidence of the relatively few and small, poddy ore bodies on the property or in the vicinity, the preponderance of reddish sandstone and mudstone through the Salt Wash section, and the absence of known mineralized trends crossing the property, it is probable that only small scattered ore bodies of 500 tons or less are likely to be found on the property. Denial of the DMEA application is recommended.

ACKNOWLEDGMENTS

Data on the property furnished by the applicant included a geologic report by R. T. Brown of Technical Services, Inc., Grand Junction, Colorado, various geologic and claim maps, and an elaborate drilling plan with a cost estimate. The Atomic Energy Commission had been consulted on other recent examinations made in the vicinity, and all pertinent data obtained.

The results of Geological Survey and Atomic Energy Commission drilling in the area were available to the examining team.

LOCATION, TOPOGRAPHY AND CLIMATE

The Queen Bee, T Bar F, Virginia W. and Jessie T. claims, 56 in all, are in secs. 26, 27, 34 and 35, T. 50 N., and in secs. 1 and 2, T. 49 N., R. 18 W. of the New Mexico Principal Meridian, Mesa County, Colorado (figure 1). The claims are 36 miles north of Bracken, Colo., most of the distance over a poor dirt access road connecting with Colorado State Highway 141 in the Dolores River canyon at Mesa Creek. A somewhat better route over the top of the Uncompahgre uplift connects with the same highway at Taylor's ranch in Unaweep canyon. By this route the distance to Grand Junction, Colorado, the nearest major source of supplies, is 62 miles.

Most of the claim area is on the moderate to precipitous east slope at the south end of Calamity Mesa overlooking Calamity Creek (figure 2). They are at an altitude of 5800 to 6200 feet and would be accessible without excessive cost for drill roads.

Operations are feasible throughout the year with interruptions during occasional heavy storms. In wet weather roads are nearly impassable except for 4-wheel drive vehicles.

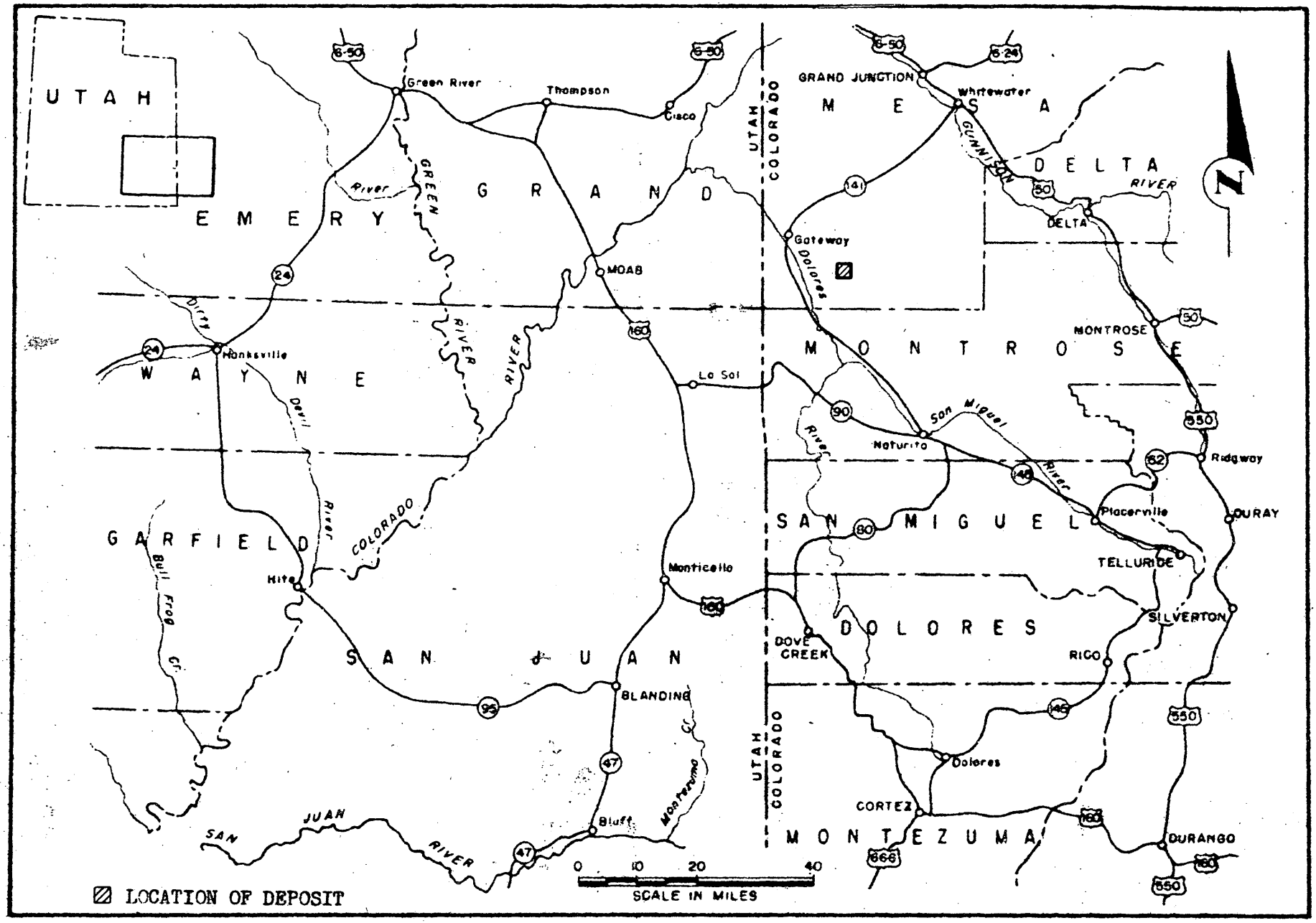
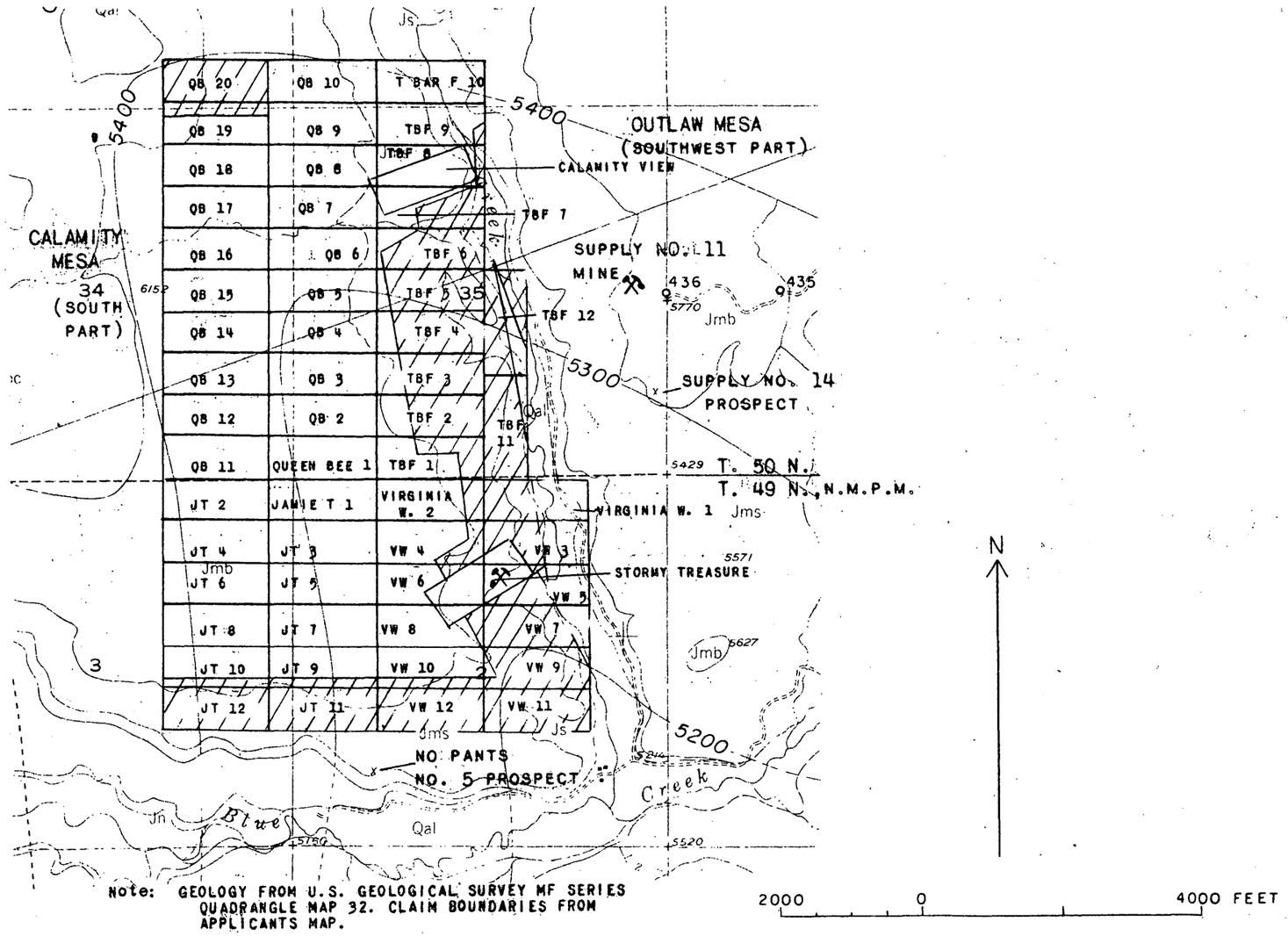


FIGURE 1 - LOCATION MAP, QUEEN BEE, T BAR F, VIRGINIA W AND JAMIE T CLAIMS, CHESAPEAKE AND COLORADO URANIUM CORPORATION, MESA COUNTY, COLO. DMEA 3990

RECEIVED
FEB 23 1956



Note: GEOLOGY FROM U.S. GEOLOGICAL SURVEY MF SERIES QUADRANGLE MAP 32. CLAIM BOUNDARIES FROM APPLICANTS MAP.

EXPLANATION

Qal	QUATERNARY ALLUVIUM
Kbc	CRETACEOUS BURRO CANYON FORMATION
Jmb / Jms	JURASSIC MORRISON FORMATION: BRUSHY BASIN MEMBER, Jmb; SALT WASH MEMBER, Jms
Js	JURASSIC SUMMERVILLE FORMATION
Jec	JURASSIC ENTRADA SANDSTONE AND CARMEL FORMATIONS, UNDIVIDED
Jn	JURASSIC NAVAJO SANDSTONE
Jk	JURASSIC(?) KAYENTA FORMATION
	GEOLOGIC CONTACT
5300	STRUCTURE CONTOUR DRAWN ON TOP OF ENTRADA SANDSTONE. INTERVAL 100 FEET
•	ORE BODY
	CLAIM AREA IN CONFLICT
X	PROSPECT
	MINE
436	DRILL HOLE, U.S. GEOLOGICAL SURVEY

Note: COMPANY DRILL HOLES NEAR STORMY TREASURE ORE BODY NOT SHOWN.

FIGURE 2. GEOLOGIC MAP OF SOUTH PART OF CALAMITY-OUTLAW MESA AREA, SHOWING ORE BODIES, EXISTING U.S. GEOLOGICAL SURVEY DRILL HOLES, QUEEN BEE, T BAR F, JAMIE T., VIRGINIA W., CALAMITY VIEW, AND STORMY TREASURE GROUPS OF CLAIMS, CHESAPEAKE AND COLORADO URANIUM CORPORATION, MESA COUNTY, COLORADO.

RECEIVED
FEB 23 1956

Water, mining supplies, power and accessibility present no unusual problems. The applicant has established an elaborate camp on Mine Creek, with accomodations for 25 men. Labor for the proposed project would be furnished by a drilling contractor.

HISTORY, PRODUCTION AND PROPERTY OWNERSHIP

The Calamity Mesa district has been worked successively for radium, vanadium and uranium with earliest operations dating from before World War I. Current exploration for uranium dates from 1949 when drilling was undertaken by the Geological Survey on ground which the Government had acquired through the Union Mines Development Corporation. A large amount of drilling has been done in the area by the Geological Survey, the Atomic Energy Commission and private operators with discovery of large uranium-vanadium deposits in the main Uravan mineral belt where it crosses the north end of Calamity and Outlaw Mesas.

The property which the applicant corporation wishes to explore with Government assistance was acquired as the result of expansion of the corporation's other holdings, totaling more than 400 claims. The corporation, originally a partnership, the Tomkins-Ferris Mining Co., has partially explored 4 groups of claims, not including the subject property, by 20,000 feet of drilling in 176 holes. There has been a limited amount of underground exploration and drilling on the claims covered by the DMEA exploration proposal.

The only production from the subject claims is 5 tons of low-grade ore from the Stormy Treasure, according to the Atomic Energy Commission records. The production from other parts of the applicant's property has also been small.

OWNERSHIP AND EXTENT

Following are recording data on the claims included in the proposed DMEA project as furnished by the applicant:

Claim	Location date	Recording date	Mesa County Records Book	Page
Queen Bee Nos. 1-20	2/5/54	2/19/54	598	238-255
Queen Bee Nos. 1-20 (Amended)	5/2/55, 5/3/55	8/2/55	655	539-549
T Bar F Nos. 1-12	5/28/55	6/6/55	648	206-217
Virginia W. Nos. 1-12	5/28/55	6/6/55	648	218-229
Jamie T. Nos. 1-12	5/30/55	6/6/55	648	230-241

Location procedures on the claims appear to have been in order. The discovery date on several of the Virginia W. claims location notices was May 17, 1955, and the location date, May 28, 1955. Evidence of conflicts which were indicated by data from other sources was not found in the field.

There are several areas of claim conflicts as shown on figure 2, that are plotted on Geological Survey working maps, and on the map furnished by the American Lodus Uranium Corporation with another DMEA application covering some of the same ground (DMEA 4041). The subject applicant did not refer to any conflicts in the brochure and has not resolved any of the conflicts, as far as known to the examining team. The Red Horn No. 5 and Mine Horn No. 5 claims, owned by the New Verde Mines Company, P. O. Box 1472, Grand Junction, Colorado, overlay part of the applicant's Queen Bee Nos. 19 and 20 claims in the northeast corner

of the property. Comparative recording data as shown in the Mesa County records are as follows:

Claim	Location date	Date of Certificate	Date of Recording	Locator
Blue Horn No. 5	4/2/54	4/19/54	4/20/54	Floyd Heuerich & E. D. Black
Red Horn No. 5	4/2/54	4/19/54	4/20/54	Floyd Heuerich
Queen Bee No. 19	2/3/54		2/19/54	Jerome Craig, Jr. E. L. Ness
(Queen B No. 19 Amended)	5/3/55		8/2/55	Jerome Craig, Jr. E. L. Ness
Queen B No. 20	2/3/54		2/19/54	Jerome Craig, Jr. E. L. Ness
(Queen B No. 20 Amended)	5/3/55		8/2/55	Jerome Craig, Jr. E. L. Ness

The applicant's Queen Bee claims are the prior locations according to these records.

The American Ledge Uranium Corporation's Ken and Ro Pants claims are recorded on pages 351 to 401 in Book 562 as having been discovered and located on February 20, 1952, recorded on March 11, 1952. Amended locations were filed on October 28, 1953. The subject applicant's claims in conflict with these, the T Bar F Nos. 1 through 12, the Virginia W. Nos. 1 through 12, and the Junie T. Nos. 9, 10, 11 and 12, were discovered and located in May 1954, recorded in June 1954, and are therefore junior locations.

Two older claims, the Stormy Thousands and the Calamity View, originally located by the Blue Creek Mining Company, have been allowed to lapse and do not, according to the applicant, affect the validity of the later claims overlying them.

No attempt was made by the examining team to reach conclusions on validity of ownership.

PRESENT STATUS

Exploration and Development

The only exploration done to date has been core and non-core drilling north of the mineralized outcrop on the Stormy Treasure claim, a small amount of rim stripping on the Calamity View and Stormy Treasure claims, and a short drift driven 33 feet on the minor mineralization found in the outcrop on Stormy Treasure. This did not prove to be of economic value, and examination of the workings did not reveal more than small isolated spots of mineralization. The exposure on the Calamity View claim is a one-foot sandstone bed weakly mineralized for twenty feet along the outcrop. It is unfavorable according to geological criteria. The results of drilling 29 holes behind the Stormy Treasure outcrop were negative. The hole logs were furnished for the DMMA geologist's use but were not submitted with the application.

East of the subject property, small pods of ore have been found on the Supply No. 11 and Supply No. 14 claims. About 15 tons of ore averaging 0.29 percent U_3O_8 was shipped from shallow workings on the Supply No. 11. Still further northeast about 1225 tons of ore has been shipped from the Crescent No. 1 and No. 2 claims which lie on the fringe of the Uravan mineral belt in line with a channel or trend which the applicant suggests may run southwest from the ore bodies of the Blue Creek mines in the Uravan mineral belt. The Supply Nos. 11 and 14 are also in line with this projected channel, but the mineralization appears to be weakening in a southwesterly direction with increasing

distance from the favorable ground within the Uravan mineral belt. This channel is the more northerly of two which the applicant has shown as traversing the proposed DMEA exploration area. The second channel is projected from the Black Streak mine, 2 miles east of the subject property, and is assumed to cross in the vicinity of the Stormy Treasure claim. Examination of the outcrops in Calamity Creek Canyon, which both channels would have to cross, shows no evidence of either one.

There are two other small mineralized exposures south of the subject property on the No Points No. 5 and Speckled Pup claims. No significant trends or extensions are indicated and no production has been made.

Mining and Milling Equipment and Other Facilities

The applicant Corporation has assembled one of the most complete sets of exploration equipment in the area, including 8 vehicles of various types, a 210 Le Roi portable compressor, a D-6 caterpillar tractor, equipment for wagon, dry rotary, or core drilling, and, miscellaneous mining and repair equipment. In addition, they have erected and equipped 6 buildings providing excellent living accommodations for 25 men.

GEOLOGY

The claims of the Chesapeake and Colorado Uranium Corporation are on the southeast flank of Calamity Mesa near the trough of a broad, very open syncline plunging southeasterly (fig. 2, Gater, 1955). The attitude of the beds is nearly horizontal. Just north of the property the beds rise very gradually to the Uncompahgre uplift, several miles to the north. The claims are underlain by the Jurassic Summerville formation, the Salt Wash and Brushy Basin members of the Jurassic Morrison formation. The southern end of Calamity Mesa, capped by the

Cretaceous Burro Canyon formation, lies just west of the claims.

The Salt Wash member of the Jurassic Morrison formation consists of three distinct sandstone ledges, which representatives of the applicant have numbered in ascending order. A rough estimate of the stratigraphic column follows:

Unit	Approximate thickness	"Rim" No.
Sandstone, red, mudstone split toward south end of claims	30 to 80	3rd
Mudstone, red	70 to 40	
Sandstone, red	30	2nd
Mudstone, red, local thin sandstone near top contains Calamity View prospect	60	
Sandstone, red, locally gray where it contains Stormy Treasure ore body	30	1st
Approximate total thickness of Salt Wash	240	

A conglomeratic sandstone containing red and green chert pebbles overlies the 3rd or top rim and is the basal unit of the Brushy Basin member of the Morrison formation.

ORE DEPOSITS AND RESERVES

The applicant's claims are several miles south of the limits of favorable ore-bearing Salt Wash sandstone indicated by U. S. Geological Survey drilling on the north end of Calamity and Outlaw Mesas (Fischer and Hilpert, 1952, figs. 2 and 3; also Stager, 1951, fig. 3, and Brasher, 1952, fig. 3). The applicant's ground and the immediately surrounding area are unfavorable, according to criteria established by Weir (1952). USGS drill holes 435 and 436, along the access road to

the Supply No. 11 mine, on the east side of Calamity Creek (fig. 2), are barren and unfavorable. The Supply No. 11 mine consists of a 60-foot adit, from, which about 15 tons of ore containing 0.29 percent of U_3O_8 have been produced to date, according to records of the Atomic Energy Commission. Adits on the Supply Nos. 11 and 14 claims were examined in connection with the American Lodes Corporation (DMEA 4041) and each contained only a few tons of ore in sight. The sandstone rims and associated mudstone in the vicinity of the Supply Nos. 11 and 14 claims is reddish and unfavorable and there is no exposure of a belt of favorable sandstone in the east canyon wall of Calamity Creek. No production or reserves is reported by the AEC on the No Punto No. 5 prospect (fig. 2), south of the applicant's claims. The Salt Wash sandstone ledges on the north side of Mine Creek are reddish and unfavorable.

A small prospect on the Calamity View claim was shown to the examining team by representatives of the applicant. A 1-foot sandstone bed about 10 feet below the second Salt Wash rim is weakly mineralized (not more than 0.10 percent U_3O_8) for about 30 feet along the outcrop. The associated mudstones and thin sandstones are mottled red and green, an indication of general unfavorability.

At the Stormy Treasure mine (fig. 2) an ore body is in the lower part of Salt Wash member. The ore-bearing sandstone is 10 to 15 feet thick, and one foot of ore is exposed for a width of 10 feet in a short adit, 33 feet in length. The total production is about 5 tons of low-grade ore; the ore reserves carried by the Atomic Energy Commission as of June 30, 1955, are as follows:

	Tons	$\%U_3O_8$	V_2O_5
Indicated ore	195	0.16	0.78
Inferred ore	300	0.16	0.78

The extent of the Stormy Treasure ore body has been tested further by the applicant with 26 closely-spaced rotary drill holes and 3 core drill holes on the Virginia W. Nos. 3 and 4 claims. None of the 29 holes penetrated ore and all penetrated unfavorable red sandstone and mudstones. Only two of the holes showed weakly mineralized sandstone.

The relatively few and small, pod-like ore bodies, the preponderance of reddish sandstone and mudstone all through the Salt Wash section, and the distance of several miles to the Uravan Mineral Belt (Outlaw-Calamity-Maverick mining areas), strongly indicate that the ground underlying claims held by the Chesapeake and Colorado Uranium Corporation on the southeast flank of Calamity Mesa probably do not contain more than a few small widely scattered ore bodies of 500 tons or less. Furthermore, mineralized trends, such as faults or channels, on which to base a drilling program, are not known to exist on the ground held by the applicant.

PROPOSED EXPLORATION

The three stages of exploration proposed by the applicant do not fall into the usual categories of drilling used in DMEA proposals. They correspond to a DMEA first stage. Additional offset drilling, as proposed, would actually be the usual second stage of a DMEA project. Following is a tabulation of the suggested drilling:

(a) Stage I - 53 holes on 250-foot centers to explore the supposed southwest trending channel crossing the southern end of the subject claims.

Stage II- 127 holes on 500 feet centers to explore the balance of the subject claims.

Total drilling in first two stages - 186 holes averaging 362 feet deep requiring 34,185 feet of non-core and 33,100 feet of core drilling.

Stage III- Eleven holes averaging 88 feet in depth requiring 970 feet of core drilling to explore anomalies which have been detected by the applicant's air-borne radiometric surveys.

(b) An additional 12,025 feet of non-core and 11,975 feet of core drilling in 80 holes averaging 300 feet in depth is proposed to offset mineralized holes found in the other stages of drilling. All drilling totals 287 holes requiring an estimated 46,210 feet of non-core and 46,045 feet of core drilling, or 92,255 feet. The applicant used a total of 221 holes in the estimate. This number appears to be in error. The estimated cost is $437,534.00, in which Government participation at 75 percent would be $328,150.50. An itemized list of holes has been furnished with estimated depths and a map of hole locations keyed to this list.

The estimated overall cost per foot of the applicant's proposal is $4.74. This figure is entirely out of line with unit costs in current and completed DMEA projects on the Colorado Plateau. For a project of this size, the cost per foot of technical services, supervision, and other expenses should be fairly low. The quoted bid for drilling used by the applicant was reported to be the lowest of several

bids, although the other bids were not listed. Following is breakdown of costs, as proposed, on a basis of 92,255 feet of drilling:

	Total	Per foot
Drilling only all types	$216,307.00	$ 2.37
Chemical analyses	4,430.00	.05
All other costs	201,797.00	2.32
Total for project	$437,534.00	$ 4.74

The costs listed above are in line except the $2.32 per foot for all other costs. These should not total over $0.75 per foot. Nearly every item contributing to the estimated $2.32 per foot is excessive.

Because of the recommendation made in this report, a modified exploration program with revised costs is not suggested by the examining team.

CONCLUSIONS AND RECOMMENDATIONS

The relatively few and small, poddy ore bodies found on and near the proposed exploration area indicate that only a few small scattered ore bodies containing a maximum of 500 tons are likely to occur on the claims. The preponderance of reddish sandstone and mudstone found all through outcrop exposures of the Salt Wash section on the property is evidence of unfavorable geologic conditions. The poor results of underground exploration on the Starry Treasure claim, the negative results of drilling behind the workings, and the absence of channeling in Salt Wash outcrops in Calamity Creek canyon all substantiate the conclusion that the area is unfavorable. There does not appear to be anything on which a logical drilling program could be based.

The applicant's exploration proposal is elaborate and expensive in relation to the probable size of ore occurrences, and it does not appear that either this program, or a smaller one would be likely to find significant ore bodies.

It is recommended that the application under DMRA 3990 be denied.

REFERENCES

Bresher, G. K., November 1952, Carnotite resources of Cutlay Mesa, Mesa County, Colorado: U. S. Geol. Survey TEIB-163, 117 p.

Fischer, R. P., and Hilpert, L. S., 1952, Geology of the Uravan Mineral Belt: U. S. Geol. Survey Bull. 986-A, 13 p.

Stager, H. K., June 1951, Carnotite resources of the Calamity group area, Mesa County, Colorado: U. S. Geol. Survey TEIB-146, 30 p.

Weir, Doris Hinshaw, 1952, Geological guides to prospecting for carnotite deposits on Colorado Plateau: U. S. Geol. Survey Bull. 988-B, 27 p.

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

RECEIVED
OCT 24 1955

October 19, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

To: J. F. Shaw
J. W. Hasler

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3990 (Uranium), Chesapeake and Colorado Uranium Corporation, Calamity Creek Claim Block, Mesa County, Colorado

Attached for your information is a copy of a letter from the Chairman of the Operating Committee and attached memoranda of review of the subject application by members of the Commodity Committee.

W. M. Traver

Enclosures

HMC:ab
cc: Chair. Opr. Comm. (2)
Harshman
Docket 3990
Chron.

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

RECEIVED
OCT 24 1955

October 19, 1955

[redacted] New Customhouse
Denver 2, Colorado

Memorandum

To: J. F. Shaw
J. W. Hasler

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3990 (Uranium), Chesapeake and Colorado Uranium Corporation, Calamity Creek Claim Block, Mesa County, Colorado

Attached for your information is a copy of a letter from the Chairman of the Operating Committee and attached memoranda of review of the subject application by members of the Commodity Committee.

W. M. Traver

W. M. Traver

Enclosures

HMC:ab
cc: Chair. Opr. Comm. (2)
Harshman
Docket 3990
Chron.

Surname copy

700

Murphy
Ellis
Geehan
Kilsgaard
Selfridge

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

OCT 13 1955

Mr. Francis M. Tompkins, President
Chesapeake and Colorado Uranium Corporation
909 - 16th Street, N. W.
Washington, D. C.

Re: Docket No. DMEA-3990 (Uranium)
Calamity Creek Claim Block
Mesa County, Colorado

Dear Mr. Tompkins:

The application for assistance in exploring the subject property under the captioned docket number has been reviewed by the Rare and Miscellaneous Metals Division.

The DMEA Field Team, Region III, Mr. W. M. Traver, Executive Officer, 224 New Customhouse Building, Denver 2, Colorado, will schedule a field examination of your property in the near future if it has not already done so.

Any assistance you may give the members of the Field Team during the examination will be appreciated.

Sincerely yours,

Frank E. Johnson

Acting Administrator

FMMurphy/gla
10-11-55
cc to: Admr.'s Reading File
Docket
Code 700
Mr. Murphy
DMEA Field Team, Region III (2)

700

Surname copy

Murphy
Ellis
Selfridge
Johnson

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

OCT 13 1955

Mr. W. M. Traver
Executive Officer
Region III, DMEA Field Team
22k New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-3990 (Uranium)
Chanteauxe & Colorado Uranium Corp.
Calamity Creek Claim Block
Mesa County, Colorado

Dear Mr. Traver:

This is to acknowledge your memorandum, dated September 26, in which you concur with the Grand Junction Office in recommending a field examination of the captioned property.

Enclosed are copies of memoranda, dated October 3 and 7, 1955, by J. E. Crawford, USBM, and H. E. Nelson, USGS, respectively, relating to the subject application.

We concur in the recommendations mentioned in the Grand Junction joint memorandum, dated September 22, 1955, addressed to your office.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

Enclosures

FMMurphy/gla
10-11-55

APPROVED:

/s/ Robert W. Geehan (RWG)
Member, Bureau of Mines

Thor H. Kiilsgaard (THK)
Member, Geological Survey

cc to: Admr.'s Reading File
Operating Committee
Docket
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA
Code 700
Mr. Murphy

R.C.K.

10/10/55 - Ca

IN REPLY REFER TO:

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

RECEIVED
OCT 10 1955

October 7, 1955

Re: DMEA 3990
Chesapeake and Colorado
Uranium Corporation
Calamity Creek block
Mesa County, Colorado
$437,534.00 - Uranium

Memorandum

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

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

Subject: Review of application.

The Field Team has decided that an examination is warranted. A referral thus becomes a formality.

The large program is proposed for a group of 56 unpatented claims. The work would consist of:--

Non core drilling, 46,210 feet	$ 75,277.00
Core drilling, 46,045 feet	143,030.00
	$218,307.00
Gamma ray logging and other incidental expenses	53,607.00
	$271,914.00
Overhead-supervision, consultants, etc.	39,320.00
Drill site work, roads, etc.	50,715.00
Materials	38,884.00
Operating equipment allowance	15,189.00
Miscellaneous, insurance, S. S., mess, housing, etc.	21,512.00
Total	$437,534.00

The claims are close to producers. That a belt or channel lies within them has not been demonstrated. All work proposed probably is not warranted since it may be possible to safely eliminate some ground by inference after a few holes have been drilled.

I concur with the recommendation of the Field Team that an examination be made.

N. E. Nelson

N. E. Nelson

IN REPLY REFER TO:

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

October 7, 1955

Re: DMEA 3990
Chesapeake and Colorado
Uranium Corporation
Calamity Creek block
Mesa County, Colorado
$437,534.00 - Uranium

RECEIVED
OCT 10 1955

Memorandum

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

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

Subject: Review of application.

The Field Team has decided that an examination is warranted. A referral thus becomes a formality.

The large program is proposed for a group of 50 unpatented claims. The work would consist of:--

Non core drilling, 46,810 feet	$ 75,277.00
Core drilling, 46,045 feet	143,030.00
	$218,307.00
Gamma ray logging and other incidental expenses	53,607.00
	$271,914.00
Overhead-supervision, consultants, etc.	39,380.00
Drill site work, roads, etc.	50,715.00
Materials	38,884.00
Operating equipment allowance	15,189.00
Miscellaneous, insurance, S. S., mess, housing, etc.	21,512.00
Total	$437,534.00

The claims are close to producers. That a belt or channel lies within them has not been demonstrated. All work proposed probably is not warranted since it may be possible to safely eliminate some ground by inference after a few holes have been drilled.

I concur with the recommendation of the Field Team that an examination be made.

N. E. Nelson

N. E. Nelson

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

NENelson:jml
0-10/7/55

10/5/55 gla

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

October 3, 1955

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

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

Subject: Application for assistance, DMEA Docket 3990, Chesapeake and Colorado Uranium Corporation, The Stormy Treasure Mine, Mesa County, Colorado

I have reviewed the application of the Chesapeake and Colorado Uranium Corporation, Docket 3990, and I have discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

A memorandum dated September 26, 1955, from the Field Team, Region III, to the chairman of the Operating Committee was attached to the application. The memorandum indicates the DMEA Grand Junction office has determined that a field examination of the Chesapeake and Colorado Uranium Corp. claims in Mesa County, Colo., is warranted, and that such an examination will be scheduled as soon as possible.

We concur that a field examination of the Calamity Creek claim block is in order. Evidence submitted by the Chesapeake and Colorado Uranium Corp. affirms the presence of favorable geologic horizons, reasonably good channel trends, and significant mineralization.

The organization owns a wide variety of equipment which it will apparently utilize in its exploration work.

The estimate of costs for labor, supervision, and consultants, listed in the application, appears excessive. The need for two full time geologists, a supervising consultant geologist, as well as a consulting geologist is dubious. Other cost items should also be carefully scrutinized, if an exploration project is to be approved.

The drilling program outlined by the applicant is a formidable one. Undoubtedly the field examiners will suggest a

more modest approach, should they find that exploration assistance is justified.

We are forwarding the application to Thor Kilsgaard of the Geological Survey.

John E. Crawford

John E. Crawford

10/5/55 gla

September 28, 1955

Memorandum

To: John F. Shaw

From: Superintendent, Denver Experiment Station, Reg. III

Subject: Docket DMEA 3990 (Uranium), Chesapeake and Colorado Uranium Corporation, Mesa County, Colorado

The subject application in the amount of $437,534.00 is enclosed herewith. The docket has not been given a number. The brochure bound in one folder, consists of the following:

1. Form MF-103 and supplementary information
2. Exhibit A - Report on Geology of the properties held by Chesapeake & Colorado Corporation, by R. T. Brown.
3. Exhibits B, C, D, and E, consisting of maps
4. Copy of Executive Officer's memo of transmittal to this office.

A field examination and suitable report are required. The completed report should be sent directly to the Executive Officer with a copy of your memo of transmittal to this office.

W. H. King

Enclosures

Copy to: E. W. Marshman
J. W. Hasler
Traver (3)
Sec. Op. Con (2)

September 28, 1955

Memorandum

To: John F. Shaw

From: Superintendent, Denver Experiment Station, Reg. III

Subject: Docket DMEA _____(Uranium), Chesapeake and Colorado Uranium Corporation, Mesa County, Colorado

The subject application in the amount of $437,534.00 is enclosed herewith. The docket has not been given a number. The brochure bound in one folder, consists of the following:

1. Form MF-103 and supplementary information
2. Exhibit A - Report on Geology of the properties held by Chesapeake & Colorado Corporation, by R. T. Brown.
3. Exhibits B, C, D. and E, consisting of maps
4. Copy of Executive Officer's memo of transmittal to this office.

A field examination and suitable report are required. The completed report should be sent directly to the Executive Officer with a copy of your memo of transmittal to this office.

W. H. KING

W. H. King

Enclosures

Copy to: E. N. Harshman
J. W. Hasler
Traver (3)
Sec. Op. Comm. (2)

9/28/55 gla

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

RECEIVED
SEP 28 1955

September 26, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Chairman of the Operating Committee, DMEA

From: Field Team, Region III

Subject: Docket DMEA .3990, (Uranium), Chesapeake and Colorado Uranium Corporation, Mesa County, Colorado

Enclosed are four copies of a review of the subject application by the Grand Junction Office. We concur in their recommendation that a field examination is warranted.

Our copy of the brochure is being forwarded for use of the examining engineer.

W. M. Traver

E. N. Harshman

Enclosures

DMEA
Date Rec'd.
SEP 23 1955
BUREAU OF MINES
Denver, Colorado

September 22, 1955

Memorandum

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

From: J. W. Hasler USGS
M. H. Salsbury USBM

Subject: DMEA.....,(uranium), Chesapeake and Colorado Uranium Corporation Mesa County, Colorado

The above referenced applicant has applied for Government assistance to explore for uranium on 56 unpatented mining claims in Mesa County, Colorado.

The subjects claims are located in an area which has produced a considerable tonnage of uranium ore. In the event a contract is executed, a modified program would be advisable as the one suggested by the applicant seems overly ambitious. A field examination is warranted, and the date for examination will be set as soon as possible.

J. William Hasler
J. William Hasler
Geologist

M. H. Salsbury by JWH
M. H. Salsbury
Mining Engineer

JWH/vll

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

RECEIVED
SEP 23 1955

September 26, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Chairman of the Operating Committee, DMEA

From: Field Team, Region III

Subject: Docket DMEA 3.9.90, (Uranium), Chesapeake and Colorado Uranium Corporation, Mesa County, Colorado

Enclosed are four copies of a review of the subject application by the Grand Junction Office. We concur in their recommendation that a field examination is warranted.

Our copy of the brochure is being forwarded for use of the examining engineer.

W. M. Traver
W. M. Traver

E. N. Harshman
E. N. Harshman

Enclosures

RECEIVED
SEP 23 1955

DMEA
Date Rec'd.
SEP 23 1955
BUREAU OF MINES
Denver, Colorado

September 22, 1955

Memorandum

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

From: J. W. Hasler USGS
M. H. Salsbury USBM

Subject: DMEA.....,(uranium), Chesapeake and Colorado Uranium Corporation Mesa County, Colorado

The above referenced applicant has applied for Government assistance to explore for uranium on 56 unpatented mining claims in Mesa County, Colorado.

The subjects claims are located in an area which has produced a considerable tonnage of uranium ore. In the event a contract is executed, a modified program would be advisable as the one suggested by the applicant seems overly ambitious. A field examination is warranted, and the date for examination will be set as soon as possible.

J. William Hasler
J. William Hasler
Geologist

M. H. Salsbury by JWH
M. H. Salsbury
Mining Engineer

JWH/vll

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

RECEIVED
SEP 26 1955

September 26, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

To: W. H. King

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA 3990, (Uranium), Chesapeake and Colorado Uranium Corporation, Mesa County, Colorado

Enclosed is the subject application in the amount of $437,534.00.

A field investigation and suitable report are required.

W. M. Traver

Enclosure

HMC:ab

cc: Chair. Opr. Comm. (2)
Harshman
Hasler
Docket
Chron.

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

RECEIVED
SEP 28 1955

September 26, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

To: W. H. King

From: Executive Officer, DMEA Field Team, Region III

Subject: Docket DMEA . . . . , (Uranium), Chesapeake and Colorado Uranium Corporation, Mesa County, Colorado

Enclosed is the subject application in the amount of $437,534.00.

A field investigation and suitable report are required.

W. M. Traver

W. M. Traver

Enclosure

HMC:ab

cc: Chair. Opr. Comm. (2)
Harshman
Hasler
Docket
Chron.

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

224 New Customhouse
Denver 2, Colorado

September 20, 1955

Memorandum

To: J. W. Hasler

From: Executive Officer, DMEA Field Team, Region III

Subject: Application for DMEA assistance (Uranium), Chesapeake and Colorado Uranium Corporation, Mesa County, Colorado

Enclosed is a copy of the subject application in the amount of $437,534.00.

Please study this application and discuss it with the AEC and Bureau of Mines representatives in Grand Junction, and forward this office eight copies of your recommendations regarding a field examination of the property.

W. M. Traver

W. M. Traver

Enclosure

HMC:pw

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Defense Minerals Exploration Administration

224 New Customhouse
Denver 2, Colorado

September 20, 1955

RECEIVED
SEP 23 1955

Memorandum

To: Secretary to the Operating Committee

From: Executive Officer, DMEA Field Team, Region III

Subject: Application for DMEA assistance (Uranium) Chesapeake and Colorado Uranium Corporation, Mesa County, Colorado

Enclosed are two copies of the subject application in the amount of $437,534.00.

One copy of the application has been forwarded to the Grand Junction office for study and recommendations and one copy has been retained in our files.

W. M. Traver

W. M. Traver

Enclosures

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

224 New Customhouse
Denver 2, Colorado

September 20, 1955

Memorandum

To: J. W. Hasler

From: Executive Officer, DMEA Field Team, Region III

Subject: Application for DMEA assistance (Uranium), Chesapeake and Colorado Uranium Corporation, Mesa County, Colorado

Enclosed is a copy of the subject application in the amount of $437,534.00.

Please study this application and discuss it with the AEC and Bureau of Mines representatives in Grand Junction, and forward this office eight copies of your recommendations regarding a field examination of the property.

W. M. Traver

W. M. Traver

Enclosure

HMC:pw

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

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

DMEA
Date Rec'd.
SEP 19 1955

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

BUREAU OF MINES
Denver, Colorado

RECEIVED SEP 20 1955

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

Not to be filled in by applicant

Docket No. DMEA-3990
Metal or Mineral Uranium
Date Received 9/23/55
Estimated Cost $437,534.00
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 AND COLORADO URANIUM CORPORATION
909 - 16th Street, N. W., Washington, D. C.,
a corporation organized and existing under and by virtue of the laws of the State of Delaware

(*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. (Page 3, attached)

(*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 (Please see pages 4 and 5, attached.)

(*b*) State any mine name by which the property is known. (Please see page 6, attached.)

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Applicant is sole owner of mining claims embracing all the land covered by this application. (And see page 6 attached.)

(*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 None

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. (See pages 4 and 5, attached.)

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. (Please see page 7, attached.)

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades. (Page 7, attached.)

(*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. (Please see page 7, attached.)

(*d*) State the facts with respect to the accessibility of the project: Access roads, distances to shipping, supply and residence points. (Please see page 8, attached.)

(*e*) State the availability of manpower, materials, supplies, equipment, water, and power. (Please see page 8, attached.)

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 exploration work as related to such features as contacts, veins, ore-bearing beds, etc. (Please see Exhibit A and accompanying maps.)

(*c*) The work will start within 30* days and be completed within 12 months from the date of an exploration project contract. *unless weather conditions prevent.

(*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. (Pages 9-13, attached.)

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.). (Please see page 15, attached.)

(*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. (Please see page 16, attached.)

(*c*) *Operating materials and supplies.*—Furnish an itemized list, including items of equipment costing less than $50 each, and power, water and fuel. (Please see page 17, attached.)

(*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. (Please see page 18, attached.)

(*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. (Please see page 19, attached.)

(*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. (Page 19.)

(*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. (Please see page 19, attached.)

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

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

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

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

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

Explain in detail on acompanying paper. (Please see page 20, attached.)

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 19, 1955

CHESAPEAKE AND COLORADO URANIUM CORPORATION
(Applicant)

By Francis M. Tompkins
Francis M. Tompkins, President

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 - 3rd Copy

Form MF-103

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

submitted by

CHESAPEAKE AND COLORADO URANIUM CORPORATION
909 - 16th Street, N. W.
Washington 6, D. C.

September 19, 1955

Item 1. (c) Officers of the corporate applicant, their names and addresses, are as follows:

Name	Address	Title
Francis M. Tompkins	909 - 16th St., N.W. Washington 6, D. C.	President and a directo
Joe D. Farris	133 South Fourth St. Grand Junction, Col.	Vice-President and a directo
Gillis W. Long	The Wyatt Building Washington 5, D. C.	Secretary
Howard Ritter	909 - 16th St., N.W. Washington 6, D. C.	Treasurer
Lytle Brown, Jr.	133 South Fourth St. Grand Junction, Col.	Chief Engineer
David L. Hoover	133 South Fourth St. Grand Junction, Col.	Project Geologist-Engineer

Item 3. Applicant's property rights.

(a) The land upon which the applicant wishes to explore consists of fifty-six (56) unpatented lode mining claims situate in Sections 26, 27, 34 and 35 of T. 50 N., R. 18 W., N.M.P.M., and Sections 2 and 3 of T. 49 N., R. 18 W., N.M.P.M., Mesa County, Colorado (see maps submitted herewith for exact locations of claims). These mining claims are described as follows:

NAME	Location (or Amended Location) DATE (Mo/day/year)	Recording DATE	Mesa County BOOK	(Col.) Records PAGE
Queen Bee No. 1	2/5/54	2/19/54	598	238
(Queen Bee No. 1-Amended)	5/2/55	8/2/55	(655)	(529)
Queen Bee No. 2	2/5/54	2/19/54	598	239
(Queen Bee No. 2-Amended)	5/2/55	8/2/55	(655)	(530)
Queen Bee No. 3	2/5/54	2/19/54	598	240
(Queen Bee No. 3-Amended)	5/2/55	8/2/55	(655)	(531)
Queen Bee No. 4	2/5/54	2/19/54	598	241
(Queen Bee No. 4-Amended)	5/2/55	8/2/55	(655)	(532)
Queen Bee No. 5	2/5/54	2/19/54	598	242
(Queen Bee No. 5 -Amended)	5/2/55	8/2/55	(655)	(533)
Queen Bee No. 6	2/5/54	2/19/54	598	243
(Queen Bee No. 6 -Amended)	5/2/55	8/2/55	(655)	(534)
Queen Bee No. 7	2/5/54	2/19/54	598	244
(Queen Bee No. 7-Amended)	5/3/55	8/2/55	(655)	(535)
Queen Bee No. 8	2/5/54	2/19/54	598	245
(Queen Bee No. 8-Amended)	5/3/55	8/2/55	(655)	(536)
Queen Bee No. 9	2/5/54	2/19/54	598	246
(Queen Bee No. 9-Amended)	5/3/55	8/2/55	(655)	(537)
Queen Bee No. 10	2/5/54	2/19/54	598	247
(Queen Bee No. 10-Amended)	5/3/55	8/2/55	(655)	(538)
Queen Bee No. 11	2/5/54	2/19/54	598	248
(Queen Bee No. 11-Amended)	5/2/55	8/2/55	(655)	(539)
Queen Bee No. 12	2/5/54	2/19/54	598	249
(Queen Bee No. 12-Amended)	5/2/55	8/2/55	(655)	(540)
Queen Bee No. 13	2/5/54	2/19/54	598	250
(Queen Bee No. 13-Amended)	5/2/55	8/2/55	(655)	(541)
Queen Bee No. 14	2/5/54	2/19/54	598	251
(Queen Bee No. 14-Amended)	5/2/55	8/2/55	(655)	(542)
Queen Bee No. 15	2/5/54	2/19/54	598	252
(Queen Bee No. 15-Amended)	5/2/55	8/2/55	(655)	(543)
Queen Bee No. 16	2/5/54	2/19/54	598	253
(Queen Bee No. 16-Amended)	5/2/55	8/2/55	(655)	(544)
Queen Bee No. 17	2/5/54	2/19/54	598	254
(Queen Bee No. 17-Amended)	5/3/55	8/2/55	(655)	(546)
Queen Bee No. 18	2/5/54	2/19/54	598	255
(Queen Bee No. 18-Amended)	5/3/55	8/2/55	(655)	(547)

CHESAPEAKE AND COLORADO URANIUM CORP.
909 - 16th Street, N.W.
Washington 6, D. C.

NAME	Location (or Amended Location) DATE (Mo/day/year)	Recording DATE	Mesa County BOOK	(Col.) Records PAGE
Queen Bee No. 19	2/5/54	2/19/54	598	256
(Queen Bee No. 19-Amended)	5/3/55	8/2/55	(655)	(548)
Queen Bee No. 20	2/5/54	2/19/54	598	257
(Queen Bee No. 20-Amended)	5/3/55	8/2/55	(655)	(549)
T Bar F No. 1	5/28/55	6/6/55	648	206
T Bar F No. 2	5/28/55	6/6/55	648	207
T Bar F No. 3	5/28/55	6/6/55	648	208
T Bar F No. 4	5/28/55	6/6/55	648	209
T Bar F No. 5	5/28/55	6/6/55	648	210
T Bar F No, 6	5/28/55	6/6/55	648	211
T Bar F No. 7	5/28/55	6/6/55	648	212
T Bar F No. 8	5/28/55	6/6/55	648	213
T Bar F No. 9	5/28/55	6/6/55	648	214
T Bar F No. 10	5/28/55	6/6/55	648	215
T Bar F No. 11	5/28/55	6/6/55	648	216
T Bar F No. 12	5/28/55	6/6/55	648	217
Virginia W. No. 1	5/28/55	6/6/55	648	218
Virginia W. No. 2	5/28/55	6/6/55	648	219
Virginia W. No. 3	5/28/55	6/6/55	648	220
Virginia W. No. 4	5/28/55	6/6/55	648	221
Virginia W. No. 5	5/28/55	6/6/55	648	222
Virginia W. No. 6	5/28/55	6/6/55	648	223
Virginia W. No. 7	5/28/55	6/6/55	648	224
Virginia W. No. 8	5/28/55	6/6/55	648	225
Virginia W. No. 9	5/28/55	6/6/55	648	226
Virginia W. No. 10	5/28/55	6/6/55	648	227
Virginia W. No. 11	5/28/55	6/6/55	648	228
Virginia W. No. 12	5/28/55	6/6/55	648	229
Jamie T. No. 1	5/20/55	6/6/55	648	230
Jamie T. No. 2	5/20/55	6/6/55	648	231
Jamie T. No. 3	5/20/55	6/6/55	648	232
Jamie T. No. 4	5/20/55	6/6/55	648	233
Jamie T. No. 5	5/20/55	6/6/55	648	234
Jamie T. No. 6	5/20/55	6/6/55	648	235
Jamie T. No. 7	5/20/55	6/6/55	648	236
Jamie T. No. 8	5/20/55	6/6/55	648	237
Jamie T. No. 9	5/20/55	6/6/55	648	238
Jamie T. No. 10	5/20/55	6/6/55	648	239
Jamie T. No. 11	5/20/55	6/6/55	648	240
Jamie T. No. 12	5/20/55	6/6/55	648	241

(b) A small, presently inoperative mine located on the subject property is known as "The Stormy Treasure Mine." The entire subject property, consisting of 56 unpatented lode mining claims, is known as and sometimes hereinafter referred to as "the Calamity Creek Claim Block."

(c) The applicant is the owner of all of the claims. Applicant owns the Queen Bee Nos. 1 through 20 under and by virtue of a Mining Deed, dated November 3, 1954, from Jerome Craig, Jr. and E. L. Hess, the locators of these claims. The deed was recorded in the records of Mesa County, Colorado, on November 9, 1954, in Book 624 at Page 176. Applicant is the locator of the T Bar F Nos. 1 through 12, Virginia W. Nos. 1 through 12 and Jamie T. Nos. 1 through 12.

Item 4. Physical description. (a) For a detailed description of past and present mining and exploration operations on the Calamity Creek Claim Block, including existing mine workings and production facilities, please see: R. T. Brown, Report on the Geology of the Properties Held by Chesapeake & Colorado Uranium Corporation in the Blue Creek - Calamity Creek Areas, July 29, 1955, pages 5 through 8. (This document is submitted herewith as Exhibit A and is hereinafter referred to as "the Brown Report".) As to accessibility, please see the Brown Report, page 3.

(b) Past and current production is covered on pages 5 and 6 of the Brown Report. Ore reserves (there are none developed as yet) are covered on page 16 of the Brown Report.

(c) Geologic features of the subject property are covered on pages 9 through 16 of the Brown Report. Applicant's reasons for wishing to explore are covered in these pages and in the balance of the Brown Report, pages 16 through 29, in which pages applicant's proposed exploration program is also set out. In addition to the Brown Report itself, submitted herewith as Exhibit A, applicant also respectfully submits herewith four maps: Plate A, Plate B, Plate C and Plate 1, the titles of which are given on the last page of the Brown Report and on page 20 hereof. For convenience, Plate 2 and Plate 3, mentioned on the last page of the Brown Report, are not being submitted separately. These two plates were transparent overlays for Plate 1. The contents of Plate 2 have been transposed directly onto Plate 1 in the color ORANGE, and the contents of Plate 3 have similarly been transposed onto Plate 1 in the color BLACK. None of these maps need be returned.

(d) Please see pages 3, 6 and 7 of the Brown Report as to accessibility, distances, roads, and housing.

(e) Pages 6 through 8 of the Brown Report cover the subject of manpower, materials, supplies, equipment, water and power.

Item 5 (d). Qualifications of applicant and of persons who will direct the exploration project.

The Chesapeake and Colorado Uranium Corporation was incorporated under the laws of the State of Delaware on September 9, 1954, to carry on the activities of a partnership formed in late 1953 (the Tompkins-Farris Mining Company) 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.

The land acquisition phase has now progressed to the point where the Company is the owner or lessee of over 450 claims, of which 56, the Calamity Creek Claim Block, are the subject of this application. The Company is continuing to locate claims as worthwhile open areas are discovered on the Colorado Plateau. The Company and its predecessor partnership have now demonstrated through nearly two years of operation the ability to carry forward the program described above. Its activities have included the drilling of over 176 test holes in four claim groups (not on the subject property, however), totaling approximately 20,000 feet of drilling in all; exploratory tunnelling for and production of ore in its Stormy Treasure Mine (see the Brown report for details); extensive clearing, grubbing and access road building; surveying and mapping. On the business and administrative end, a cohesive and smoothly operating managerial staff and plan has been developed. A recently completed public financing has put the Company on a solid financial basis and has enabled it to acquire a well-rounded equipment spread and to complete a modern, all-weather mining camp for its employees in the immediate area of the subject property.

Mr. David L. Hoover will serve as the applicant's full-time Geologist-Engineer on this project and as the applicant's agent to complete and sign progress reports and other day-to-day working documents for the DMEA, if this application is approved. Mr. Hoover was graduated from the Colorado School of Mines on May 27, 1955, with the degree of Engineer of Petroleum Geology. Among the specialized two- or three-semester hour courses he took at the School of Mines were Mineralogy, Subsurface Geology, Field Geology, Sedimentation and Stratigraphy, Air Photos and Map Interpretation, Structural Geology, Optical Mineralogy, Plane Surveying, Uranium Geology, and Economic Geology and Ore Deposits. In addition to his technical education in engineering-geology, Mr. Hoover had field experience during his undergraduate days as a core drill helper ("roughneck") with the United States Bureau of Mines and has been steadily employed by your applicant since his graduation in positions of increasing responsibility, and with great success, in the exploration and development of the Company's Colorado uranium and fluorspar prospects. (In any conferences with DMEA field representatives involving negotiation and the making of technical and procedural decisions, the applicant will also be represented by Mr. R. T. Brown of Technical Services, Inc. (see below).)

Mr. Francis M. Tompkins, the President, a director and one of the founders of the Company, is and for many years has been the Senior Vice President of Chas. H. Tompkins Co., nationwide building and heavy construction contractors of Washington, D. C. His long and diverse experience with that company has included direct supervision of many and varied construction projects,

including earth and rock filled dams and tunnels of various types. He perceived in the early days of the uranium mining industry that earth-moving and tunnelling techniques and equipment, with which he had become intimately familiar in heavy construction work, could be applied to mining. Prior to his entry into the uranium exploration and mining business he had also acquired experience in oil wildcatting. 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.

Mr. Joe D. Farris, Vice President, a director and one of the founders of the applicant, has had 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. Mr. Farris has been in charge of the Company's Grand Junction office and of all the Company's field activities since its inception and will participate actively in the direction of the project for which application is made hereby.

Mr. 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 of water and sewer installations at Camp Campbell, Kentucky. He also served as assistant project manager of the Huntsville Ordnance project. In 1942-43 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 in 1944-45. 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, and as a project manager and construction supervisor for the Chas. H. Tompkins Co. For the past few months he has served the Chesapeake and Colorado Uranium Corporation, your applicant, as manager of its Wasatch-Low Boy Division.

The applicant has retained, on a consulting basis, for the rendering of geological, engineering and technical advice and supervision on the project for which application is hereby made--

Technical Services, Inc., of Grand Junction, Colorado. This concern, specializing in the "hard rock" mining and prospecting industry, has on its staff three mining geologists, one mining geophysicist, five mining engineers, one registered land

surveyor, one draftsman and office manager, and several field assistants. Mr. R. T. Brown, the author of "the Brown Report" filed as Exhibit A herewith, is an officer and mining geologist of Technical Services, Inc, and will serve as applicant's consultant and as its technical representative to the DMEA, if this project is approved. The experience of Technical Services personnel has been with the following companies and organizations:

American Smelting and Refining Company, Vanadium, New Mexico
Anaconda Copper Company, Butte, Montana
Argyle Mining Company, Silverton, Colorado
Atomic Energy Commission, Grand Junction, Colorado
Chesapeake and Colorado Uranium Corporation, Grand Junction, Colorado
Climax Molybdenum, Climax, Colorado
Climax Uranium Co. (Exploration farm-outs to R. O. Dulaney, Jr.)
R. O. Dulaney, Jr., Grand Junction, Colorado
Minerals Engineering Company, Grand Junction, Colorado
Ortmayer Mining Company, Grand Junction, Colorado
Elmer V. Reinhardt, Grand Junction, Colorado
Ryan Oil Company, Grand Junction, Colorado
Simpson Mining Company, Grand Junction, Colorado
Skidmore Mining Company, Dove Creek, Colorado
Utarado Mining Company, Gateway, Colorado

and others. Services performed have consisted of surface and underground surveying; examination and evaluation of properties; radiometric, electrical and magnetic geophysical surveys; exploration supervision; development planning; and production contracting. Technical Services is at the present time developing ore at the Osceola mine at Silverton; conducting surveying, probing and planning work prior to development and production of ore at the Uintah lease, Legin Group, Slick Rock district; supervising contract drifting operations at the Blackhawk mine, Silverton; conducting radiometric surveys and geological work on the Knot mine

lease, Tenderfoot Mesa; supervising an exploration program for R. O. Dulaney, Jr. on Beaver Mesa, near Gateway; supervising exploration for the Chesapeake and Colorado Uranium Corporation on Calamity and Blue Mesas; and carrying on claim surveying work in the La Sal Mountain area.

Item 6. Estimate of costs.

(a) Independent contracts.

Description	Quantity	Unit	Unit Cost	Total Cost
Independent contract drilling (at low-bid rates of Cannon Diamond Drilling Company of Grand Junction, Colorado):				
Non-core drilling to 300' depths	35,370*	Lin.ft.	$1.50	$53,055
Core drilling to 300' depths	32,920*	Lin.ft.	$2.75	$90,530
Non-core drilling 300-700' depths	10,840*	Lin.ft.	$2.05	$22,222
Core drilling 300-700' depths	13,125*	Lin.ft.	$4.00	$52,500
Drill rig waiting time and Gamma Ray logging	972	Hours	$14.00	$13,608
Lost cores (est. 10%)	4,605	Lin.ft.	$3.12	$14,368
Lost casings (est. 1%)	920	Lin.ft.	$3.00	$ 2,760
Gamma Ray Logging	92,255	Lin.ft.	$0.20	$18,451
Assays (est. 4 assays for each of 221 holes)	884	Assays	$5.00	$ 4,420
TOTAL, independent contracts				$271,914

*Figures include total footage for Stage 1, Stage 2 and Stage 3 drilling as described and explained in the Brown Report.

Item 6. Estimate of Costs (Continued).

(b) Labor, supervision, consultants. (Based on 12 months, 2 shifts.)

Description	Quantity	Unit	Unit Cost	Total Cost
Geologist (Company payroll)	52	Weeks	$125.00	$6,500
Ass't Geologist (Company payroll)	52	Weeks	$100.00	$5,200
Supervising Geologist (Consultant: from Technical Services, Inc., Grand Junction, Colorado; two days per week.)	104	Days	$100.00	$10,400
Consulting Geologist (Mr. Dorsey Hager, Salt Lake City; two days per month)	24	Days	$230.00	$5,520
General Superintendent (Company payroll; ½-time of officer)	26	Weeks	$250.00	$6,500
Draftsman	52	Weeks	$100.00	$5,200
Layout of roads and holes:				
Instrument Man	3,240	Hours	$2.50	$8,240
Rodman	3,240	Hours	$2.00	$6,480
Chainman	3,240	Hours	$1.80	$5,832
Other labor:				
Clearing and grubbing (labor costs only)	15	Acres	$100.00	$1,500
Excavation for access and drill locations (labor costs only)	24,450	Cu. yds.	$0.70	$17,115
Transportation (labor costs only):				
Pickup for hauling cores	3,240	Hours	$2.20	$7,128
Pickup for geologist and crew	3,240	Hours	$0.20	$ 648
Pickup for engineering crew	3,240	Hours	$0.20	$ 648
Jeep for Gen'l Supt. (½ time)	1,620	Hours	$0.20	$ 324
Warehouse for cores (labor cost only)	8,000	Cu. ft.	$0.25	$2,000
Office and furniture (labor cost only)	2,000	Cu. ft.	$0.40	$ 800
TOTAL, labor, supervision, consultants				$90,035

Item 6. Estimate of Costs (Continued).

(c) Operating materials and supplies

	Quantity	Unit	Unit Cost	Total Cost
Clearing and grubbing (materials costs only)	15	Acres	$50.00	$ 750
Layout of roads and holes: cost of stakes	7,726	Stakes	$ 0.10	$ 773
Excavation for access and drill locations (materials costs only)	24,450	Cu.yds.	$ 0.50	$12,225
Drafting materials	52	Weeks	$20.00	$ 1,040
Core boxes	7,600	Boxes	$ 2.00	$15,200
Warehouse for cores (materials costs only)	8,000	Cu.ft.	$ 0.25	$ 2,000
Office and furniture (materials costs only)	2,000	Cu.ft.	$ 0.40	$ 800
Car allowance for supervising geologist	15,600	Miles	$ 0.10	$ 1,560
Transportation (materials costs only):				
Pickup for hauling cores	3,240	Hours	$ 0.40	$ 1,296
Pickup for geologist and crew	3,240	Hours	$ 0.40	$ 1,296
Pickup for engineering crew	3,240	Hours	$ 0.40	$ 1,296
Jeep for Gen'l Supt. (½ time)	1,620	Hours	$ 0.40	$ 648
Water and Power				*
TOTAL, operating materials and supplies				$38,884

*A water well heretofore drilled by the applicant near the subject property will provide drinking water at the project. Costs of water and power for drilling are included in the independent contract per-foot drilling prices under (a) above.

Item 6. Estimate of Costs (Continued).

(d) Operating equipment (Costs of equipment owned by applicant: suggested use allowance*.)

Description	Quantity	Unit	Unit Cost	Total Cost
Clearing and Grubbing (equipment costs only)	15	Acres	$70.00	$ 1,050
Excavation for access and drill locations (equipment costs only)	24,450	Cu.yds.	$ 0.30	$ 7,335
Transportation (equipment costs only):				
Pickup for hauling cores	3,240	Hours	$ 0.60	$ 1,944
Pickup for geologist and crew	3,240	Hours	$ 0.60	$ 1,944
Pickup for engineering crew	3,240	Hours	$ 0.60	$ 1,944
Jeep for Gen'l Supt. (½ time)	1,620	Hours	$ 0.60	$ 972
TOTAL, operating equipment				$15,189

*The applicant contemplates that principal items of equipment used on the project, notably all equipment used in actual drilling operations, will be the property of the drilling contractor. Applicant will use its own equipment for the jobs listed in the above summary, and the figures presented in the summary represent applicant's best estimate of the actual cost to it of such use.

Following is a list of the equipment owned by the applicant that will be used on this project.

BUILDINGS

Mess Hall (Butler Building)	1,500.00
Food Storage Building	720.00
Bath House	950.00
Geologist Office & Quarter (Butler Building)	1,500.00
4 Bunk Houses @ 612.00 ea.	2,448.00
Shop & Supply Room	3,210.00
Melody Home Trailer	5,350.00
	15,678.00

CAMP EQUIPMENT

21 metal cots @ 12.00	252.00
21 mattresses	168.00
1 butane gas stove	170.00
2 Oil Heaters	120.00
1 Butane Refrigerator 10'	350.00
1 Butane Refrigerator 8' used	75.00
1 Ideal 2 compartment sink	19.00
4 Benches	33.00
2 Tables	79.00
3 Cabinets (72.50) 3 ea Coleman Lanterns (43.50)	116.00
Cooking Utensils	273.00
Knives, Forks, Spoons, Dishes etc.,	62.00
1 Laundry Tub, and water coolers	93.00
150 ft. Well (210.50) Pump (222.50), Elect. Wiring (240.00) Water Dist. Sys.(680.00)	1,122.00
	3,006.00

SHOP

1 Air Compressor	193.00
1 300 Amp.Hobart Welder (w/crysler gasoline) engine	1,370.00
1 Hobart M5 Elect. Gen.Plant 3KV	750.00
1 "Shopmaster" 1/2 Hp Bench Grinder	74.50
1 3/4 Black & Decker Power drill	110.00
2 Spray guns w/hose	115.00
1 Combination forge and bench	237.00
1 Combination Welding, cutting and gauges	240.00
Parts, Supplies and Hand Tools	1,575.00
	4,664.50

BLUE CREEK
FIELD EQUIPMENT LIST

1	D6 Cat Hydraulic Dozer	14,364.00
1	Dodge Pickup	1,774.80
1	Dodge 4x4 Truck	1,002.50
1	Chevrolet Pickup (new)	1,832.57
1	Chevrolet Pickup (used)	100.00
1	1 1/2 Ton Ford Truck	350.00
1	Jeep Station Wagon (4 cylinder)	1,867.50
1	Jeep Station Wagon (6 cylinder)	2,688.36
1	Willys Jeep	1,050.00
1	210 LeRoi Compressor	4,800.00
1	99 Gardner Denver Wagon Drill	2,800.00
1	89 Gardner Denver Jack Hammer	600.00
1	Horse	65.00
		33,294.73

RECAPITULATION OF INVENTORY BUILDINGS & EQUIPMENT

Camp Buildings	15,678.00
Camp Equipment	3,006.00
Shop Equipment & Inventory	4,664.50
Field Equipment	33,294.73
Total Blue Creek Inventory	56,643.23

Additional Camp Facilities required to house contract drilling crews

No. 1*	4 Bunk Houses @ 612.00	2,448.00
No. 2**	1 Well (210.50), 1 Pump (282.50)	493.00
	4 Cots and Mattresses @ 20.00	80.00
		3,021.00

No. 1* One of the bunk houses will be used by the geologist for sleeping quarters and the space made available for the removal of their bunks from the Butler building will be used for office space.

Item 6. Estimate of Costs (Continued)

(e) Rehabilitation and repairs

(Costs of rehabilitation and repairs of applicant's equipment are included in the foregoing estimates of labor, materials and equipment-use costs, (b), (c) and (d) above.)

(f) New buildings, improvements, installations.

(Costs of constructing temporary office and warehouse facilities at the project site are shown, broken down into labor and materials costs, in the foregoing summaries, (b) and (c) above. No other costs in this category are contemplated. It is believed these structures will have little or no sale or salvage value and their cost should accordingly be figured as operating expense.)

(g) Miscellaneous

Insurance, Social Security and Workmen's Compensation, figured at 6% of total costs	$ 4,447
Mess and housing for employees (3,413 man-days @ $5.00)	$17,065
TOTAL, Miscellaneous	$21,512

(h) Contingencies

(No allowance for contingencies is requested.)

Summary estimate of costs:

(a) TOTAL, independent contracts	$271,914
(b) TOTAL, labor, supervision, consultants	90,035
(c) TOTAL, operating materials and supplies	38,884
(d) TOTAL, operating equipment	15,189
(e) TOTAL, rehabilitation and repairs (see (e) above)	(None)
(f) TOTAL, new buildings, improvements, installations (see (f) above)	(None)
(g) TOTAL, miscellaneous	21,512
(h) TOTAL, contingencies (see (h) above)	(None)
GRAND TOTAL, estimate of costs of project	$437,534

Item 7. If the project is approved in the amount requested, applicant's 25% share of the total cost of $437,534 will be $109,384. Of this amount, applicant contemplates that it will furnish $15,189 through the use of equipment owned by it, as summarized in Item 6 (d), above, and will furnish the remaining $94,195 in cash.

LIST OF EXHIBITS.

Exhibit A.	R. T. Brown, Report on the Geology of the Properties Held by Chesapeake and Colorado Uranium Corporation in the Blue Creek - Calamity Creek Areas (Including Recommendations for DMEA Loan Assistance), Grand Junction, Colorado, Technical Services, Inc., July 29, 1955. (Referred to in this application as "the Brown Report".)
Exhibit B. (In envelope)	Map of the Calamity Mesa Quadrangle, Mesa County, Colorado. Prepared by Technical Services, Inc., Grand Junction, Colorado. (Referred to in the Brown Report as "Plate A".)
Exhibit C. (In envelope)	Geologic Map of the Gateway Area, Mesa County, Colorado and the adjoining part of Grand County, Utah, showing Calamity Creek Claim Block location. (Referred to in the Brown Report as "Plate B".)
Exhibit D. (In envelope)	General Geologic Cross Section, Calamity Creek Claim Block, Mesa County, Colorado. (Referred to in the Brown Report as "Plate C".)
Exhibit E. (In envelope)	Calamity Creek Claim Block base map. (Referred to in the Brown Report as "Plate 1". NOTE: The contents of transparent overlays, Plate 2 and Plate 3, referred to in the Brown Report, have been transposed directly onto Plate 1.)

COPY

CHESAPEAKE AND COLORADO URANIUM CORPORATION
909 - 16th Street, N. W.: Washington 6, D. C.

REPORT ON THE GEOLOGY
OF THE PROPERTIES HELD BY
CHESAPEAKE & COLORADO URANIUM CORPORATION
IN THE BLUE CREEK - CALAMITY CREEK AREAS

(Including Recommendations for DMEA Loan Assistance)

Respectfully submitted to:

Chesapeake and Colorado Uranium Corporation

Date: July 29, 1955

By R. T. Brown

TECHNICAL SERVICES, INC.

R. T. Brown, Consulting Geologist

CONTENTS

	Page
Introduction	1
Purpose and Scope	2
Name of Property	2
Location	2
Accessibility	2
Climate	3
Physical Features	4
Claims and Area	4
Adjoining and other Nearby Properties	4
Ownership and Title	5
Production - Surrounding Properties	5
Production	5
Past Production	5
Current Production	6
Facilities	6
Transportation	6
Power	6
Water	6
Housing	7
Development	7
Equipment	7
Exploration Equipment	7
Mining Equipment	8
General Equipment	8

C O N T E N T S
(Cont'd.)

Page

Geology 9

Regional 9

Stratigraphy 9

Structure 10

Local 11

Stratigraphy and Lithology 12

Structure 13

Trends 14

Ore Occurrence 14

Assay Data 15

Ore Reserves 16

Exploration Possibilities 18

Stage 1 16

Stage 2 17

Stage 3 17

Holes in Radiometric Anomalies 26

Off-set Drilling 26

Total Drilling Footage 26

Conclusions 27

Recommendations 28

INTRODUCTION

On the 6th of June, 1955, the writer, a geologist of Technical Services, Inc. was retained on a consultant basis by Mr. Joe D. Farris, Vice President, Chesapeake and Colorado Uranium Corporation, to prepare a geological report on properties held by the Chesapeake and Colorado Uranium Corporation for a DMEA loan application.

The following geological report is respectfully submitted to the Chesapeake and Colorado Uranium Corporation. The information contained in this report is based on data correlated from field observations made by the writer from 12 June to 12 July, 1955 and from conversations with numerous people in the field.

The writer wishes to express his appreciation for the valuable assistance and help he has received from Mr. Barney Hager who made many useful comments on the relative merits of the area; and to Messrs. Lee Hammond and David Beover, geologists with the company, who did much of the detailed work in the field and to Mr. Joe D. Farris and the personnel employed by the company for the wholehearted cooperation received by the writer. The writer also wishes to express his appreciation to Mr. J. W. Hasler, DMEA representative

in this area, for his many useful suggestions as to the preparation of this report.

PURPOSE AND SCOPE:

This preliminary field examination was undertaken with the following objectives in mind:

1. To determine whether the Calamity Creek Claims merited extensive exploration work.
2. The most economical method of conducting this exploration program.
3. The approximate cost and time required to complete this program.

This exploration program will be designed to discover any major ore-body or mineralized area which may be present.

NAME OF PROPERTY:

The following group of claims in this report being submitted will be referred to as the Calamity Creek Claim Block which includes:

(a) Queen Bee Claim Group

(b) T Bar F Claim Group

(c) Jamie T. Claim Group

(d) Virginia W. Claim Group

All of this property is held by Chesapeake and Colorado Uranium Corporation by right of undisputed unpatented mining claims which have been properly located and surveyed in accordance with Colorado Mining Law and have been recorded in the Mesa County courthouse, Grand Junction, Colorado.

LOCATION:

The Calamity Creek Claim Block lies in Sections 26, 27, 34, and 35, Township 50 North, Range 18 West, NMPM, and in Sections 2 and 3, Township 49 North, Range 18 West, NMPM. Topographically the block lies northwest of the junction of Calamity Creek and Blue Creek in Mesa County and on the southeastern flank of Calamity Mesa.

Processing mills are located at Uravan, 17 miles; Naturita, 35 miles; and Grand Junction, 87 miles, Colorado.

ACCESSIBILITY:

The Calamity Creek Claim Block lies in rugged topographic terrain but numerous bulldozer drill roads and access roads have been built in the area and it is readily accessible to 4-wheel-drive vehicles in all but very inclement weather. During winter, it will be necessary to plow the northern slopes free of snow. The Blue Creek ranch road connects the area to the graveled Uravan-Uncompahgre road which is passable the year around and joins Colorado Highway 141 at Taylor Ranch 28 miles south and east from Grand Junction.

CLIMATE:

The climate is semi-arid with temperatures ranging from minus 20 degrees Fahrenheit to plus 100 degrees Fahrenheit. Altitudes range from 5000 to 8500 feet above sea level. Moderate snows cover the area during the winter. There is little moisture during the summer and most of the drainage is intermittent.

PHYSICAL FEATURES

CLAIMS AND AREA:

The Calamity Creek Claim Block is composed of 4 groups of claims which are here broken down into claims by group and approximate area per claim:

20 Queen Bee Claims	20 x 20 equals 400 acres
12 T Bar F Claims	12 x 20 equals 240 acres
12 Jamie T. Claims	12 x 20 equals 240 acres
12 Virginia W. Claims	12 x 20 equals 240 acres
Calamity View Stormy Treasure	Overstaked by other portions of the block.

A total of 1120 acres are claimed in this block.

ADJOINING AND OTHER NEARBY PROPERTIES:

To the south and east across Blue Creek on the northeastern flank of Blue Mesa, Chesapeake and Colorado Uranium Corporation owns claims commonly known as the Blue Creek Group including small blocks of property under the following claim names:

6 Raven Claims	7 Starvation Claims
1 Shortie Claim	38 Murphy Claims
2 Kennie Claims	2 Bimbo Claims
8 F. W. D. Claims	2 Lone Pine Claims

Other small groups of claims include 8 claims in the Topee Pole group; the Topee Pole Millsite; 15 claims in the Blue Bird group, and 8 claims in the Dorothea's Baby group.

This property is held in Section 36, Township 50 North, Range 18 West, NMPM; Sections 1, 2, 11 and 12, Township 49 North, Range 18 West, NMPM; Sections 31 and 32, Township 50 North, Range 17 West, NMPM; and Sections 5 and 6, Township 49 North, Range 17 West, NMPM.

OWNERSHIP AND TITLE:

All claims held by the Chesapeake and Colorado Uranium Corporation are wholly owned, unpatented mining claims, located in conformance with Colorado Mining Law.

PRODUCTION - SURROUNDING PROPERTIES:

There are numerous good producing mines in the area surrounding the junction of Calamity Creek with Blue Creek. Climax Uranium Company has two mines, G #1 and G #2, on Cutler Mesa, a short distance to the northeast, which are excellent producers. Both Climax Uranium Company and U. S. Vanadium Corporation have many small mines producing ore from northern Calamity Mesa. The Hunt Oil Company is in the process of developing moderately large ore reserves on their Black Streak property in the center portion of Section 31, Township 50 North, Range 17 West, which is quite close to the area on which application for assistance is being made.

PRODUCTION:

Past Production:

Approximately 5 tons of 0.18% ore has been shipped to the

Climax mill at Grand Junction, Colorado this year by the Corporation from the Stormy Treasure prospect.

Current Production:

At this date no ore is being mined from this immediate area.

FACILITIES:

(a) Transportation:

The nearest rail junction for supplies is Grand Junction, Colorado which lies 87 miles by road to the northwest of this area. The Chesapeake and Colorado Uranium Corporation maintains two supply vehicles which commute daily between Grand Junction and the Blue Creek Camp.

(b) Power:

There are no sources of commercial power in this area. All power is supplied by portable gasoline or diesel units.

(c) Water:

There is a shortage of water in the area in the summer months. Both Blue Creek and Calamity Creek which are quite close to the Calamity Creek Claim Block are flowing until late August. At that time, Calamity Creek usually ceases to flow and the water level in Blue Creek drops to a low level. The company has drilled a water well which produces 300 gallons per hour on its Blue Creek camp site.

(d) Housing:

There are adequate housing facilities in the Blue Creek camp for all employees. Shower facilities are available and a change-house will be built when mining operations commence. Bunk houses are prefabricated in Grand Junction and the mess hall and office are constructed of aluminum sheeting. In all, the camp is well situated and presents a well-kept appearance.

DEVELOPMENT:

At this time, the Calamity Creek Claim Block is totally undeveloped. A few random percussion holes were drilled previously but no useful geologic information is available from this drilling. The Stormy Treasure main adit penetrated only 35 feet with an 8 feet off-set before drifting ceased.

Areas surrounding the Calamity Creek Claim Block, however, are well developed. The G #1 mine, owned by Climax Uranium Company on Outlaw Mesa is well into its production stages with good ore reserves blocked out.

No portion of the areas claimed by Chesapeake and Colorado Uranium Corporation can be considered to be in the development stage. However, extensive exploration is underway in the Tepee Pole Group, the Dorothea's Baby Group, the FWD Group, and the Raven Group.

EQUIPMENT:

Exploration Equipment:

The company owns 2 Winter-Heine core drills, one mounted on a D-6 Caterpillar and one mounted on an International truck;

a small Joy 12-B core-drill; a large 600 Cryaflow Ingersol-Rand wagon-drill and 4 small Gardner-Denver wagon drills. The company also owns all the accessory equipment needed to operate this drilling equipment. In addition the corporation has a contracted wagon-drill.

Mining Equipment:

The company owns 4 hammers and jacklegs of various makes and sizes and a 315 Gardner-Denver compressor with accessory equipment for underground mining.

General Equipment:

The corporation owns a new D-8 and a D-6 Caterpillar bulldozer, also complete shop facilities including welding equipment, etc. Items too numerous to mention, for the over-all exploration work under way in the area, are all owned by the corporation.

The total cost of equipment and accessorys owned is in excess of $175,000.00

GEOLOGY

Locally, and in a regional sense, the geology is complex. The Calamity Creek Claim Block is located in a region of sharp erosional features forming deep canyons with massive walls with prominent rims of sands and steep slopes of shales. Many of the flats are covered by heavy overburden and considerable timber and brush.

REGIONAL:

The claims held by the corporation in the Blue Creek area lie on the western edge of the northern end of the Uravan Mineral Belt.

This portion of the Colorado Plateau has been mined since the early 1900's for radium and vanadium and recently vanadium and uranium. Beginning in 1948, activity sharply increased and has been on the up-swing ever since. At this time the area is undergoing extensive prospecting by thousands of part-time prospectors and by numerous companies who are employing qualified personnel to actively guide exploration in the area.

Stratigraphy:

The sediments exposed in and around the Calamity Creek

Claim Block range in age from the Jurassic Entrada formation in the Blue Creek Canyon up through the Cretaceous Burro Canyon formation which caps most of the mesas surrounding the area. Erosion has exposed Wingate sandstone and Chinle shales lying upon the pre-Cambrian granites and gneisses of the Uncompahgre Uplift near its crest and northeast of the Calamity area. Massive exposures of Wingate, Kayenta and Navajo sands and shales underlie the massive Entrada marker horizon in the Dolores River Canyon. In the Blue Creek Canyon, there is 820 feet of vertical section exposed from the top of the Entrada formation to the base of the Burro Canyon formation which includes 100 feet of Summerville shales; 340 feet of Salt Wash sands and shales; and 380 feet of Brushy Basin shales.

Structure:

The Calamity Creek Claim Block lies on the western flank of a southeasterly plunging syncline with an axial trend of North 30° West which has been formed between the two positive areas of the La Sal mountains and the Uncompahgre Uplift. On the western flank the strike of the formations is almost north-south, varying somewhat along the flank, and dipping east 1° to 5°. The axial trend of the syncline cuts through Sections 18, 12, and of Township 49 North, Range 18 West, NMPM, and Sections 2, 34, 27 of Township 50 North, Range 18 West, NMPM. A portion of

the property held on the Calamity Creek Claim Block lies on the (east) flank of the syncline. On the northeast flank of the syncline southwesterly dips increase toward the Uncompahgre Uplift up to approximately 15° in Section 33, Township 50 North, Range 17 West, NMPM. There is very little evident faulting visible in the regional area. The large fault to the northeast has a northwest-southeast strike. In the opinion of the writer, structure in the area was formed during and after the Laramide Revolution and will be considered Tertiary in age.

Erosion has sharply dissected the entire area into numerous dry washes, sharp V-shaped valleys with little flood plain and numerous sharp ridges or flat benches capped by rims of the Jurassic Morrison Salt Wash formation. The flat-topped mesas isolated by erosional features are generally capped by Cretaceous Burro Canyon sands.

LOCAL:

Sixty-five percent of the Calamity Creek Claim Block lies on the (west) flank of the southeasterly plunging syncline. The easterly dips are gentle (1° - 4°) and the strike of the formation is approximately north-south except where the claim block covers the nose of the syncline. There the strike swings through east-west to southeast.

Stratigraphy and Lithology:

Stratigraphic sections exposed in Blue Creek Canyon on the south side of the Claim Block and in Calamity Creek Canyon on the east side of the Claim Block range in age from the Jurassic Entrada to the Cretaceous Burro Canyon formations. The most prominent formation visible in the area is in outcrops of the lensing sands of the Jurassic Morrison Salt Wash formation which is the ore-bearing horizon in this area. Lying between the Jurassic Morrison Salt Wash and the top of the Jurassic Entrada is approximately 100 feet of Jurassic Summerville shale. Overlying the Jurassic Morrison Salt Wash are 200 feet of altered green shales with massive green conglomerate member, and thin sands of the Jurassic Morrison Brushy Basin member. The Cretaceous Burro Canyon formation overlies the Jurassic Brushy Basin and caps Calamity Mesa in this area.

Generally speaking, there are four prominent rims of Morrison Salt Wash continuously visible in the canyons and valleys of the area. However, in the channels, the lensing sands may produce as many as 9 prominent "rims". The third rim up from the base of the formation is a thick massive sandstone, well mineralized with small radiometric anomalies along the outcrop and is locally the major producing ore horizon. The first rim up in the formation also shows mineralization. Channels in these two horizons are believed by the writer to be the prime exploration targets in this area.

All of the sandstone rims of the Morrison Salt Wash are well cross-bedded, medium grained sandstones, with sub-angular to round sand grains containing much interstitial clay and variable amounts of carbonaceous material. Alteration from percolating ground waters is apparent. In the channels, alteration of the intervening shales under and over the sands and the interstitial shales or clays in the sands, is pronounced. Also, in the channels an increase in amount of carbon present and an increase in uraniferous mineralization is apparent and is closely associated with the alteration of the shales and clays. The degrees of silicification and the amount of contained calcite is variable. In mineralized outcrops, the percentage of contained calcite varies up to 14% and 18%, whereas, in non-mineralized outcrops it may be as low as 1%.

Structure:

The megascopic joints visible in the area occur in well defined systems. The first set of joints trend or strike South 80° West dipping 80° north. A later set of joints superimposed on and off-setting the first set, strike South 80° East and dip 85° - 90° to the west. The writer did not observe faulting in this area although slump areas along the rims can be expected to exist under the overburden cover. The major features of the synclines are not visible except in Slim Creek Canyon where they can

be measured along the Entrada-Summerville contact for some distance. The cross-bedded nature of the Continental Morrison deposits precludes the determination of accurate strikes and dips in that formation.

Trends:

Whenever possible, channels have been correlated across erosional features in Calamity Creek Canyon and Blue Creek Canyon. Detailed mapping between the Dorothea's Baby Claim Group and the FMB Group in Blue Creek Canyon revealed an apparent trend of South 80° West for the major channel exposed in that area. Correlation of general geologic sections run in the Calamity Creek Claim Block area yield an apparent channel trend of South 65° to 75° West. The channel being drilled in the Black Streak property owned by the Hunt Oil Company to the northeast of Chesapeake and Colorado Uranium Corporation's property has a well defined trend of South 70° West.

The writer believes that insufficient work has been done to accurately establish the trends of channelization in this area but he believes that trends of channelization will not vary beyond South 50° West to South 80° West.

ORE OCCURRENCE:

Minable uraniferous mineralization in this area is probably confined to the channels of porous and permeable cross-bedded sands of the Jurassic Morrison Salt Wash formation. The ore-body now being drilled-out in the

Black Streak property is contained in a channel in the third rim of the Morrison formation and the trend of mineralization is approximately the same as the trend of channelization. The ore contained in channels is closely associated with very abundant dark brown limonite, dark red hematite, very abundant carbon, and with intense alteration of the interstitial shales and clays. The thickness of the ore varies from 6" to as much as 6 feet. There is little warping or folding of the ore horizon in the areas examined by the writer.

ASSAY DATA:

The writer cut a channel sample from a pillar in the Old Black Streak incline on the 12th of July, 1955. The results of this assay are tabulated below. The writer believes that the results of this assay will be representative of the mineralization to be found in the third rim in this major channel which he believes extends from the Black Streak property through the southern portion of the Calamity Creek Claim Block.

The trends of channelization apparently conform closely to an apparent trend of mineralization of South 65° West established on topographic maps from prospects and mines shown on the Calamity tops in the Blue Creek Camp area.

Results of Assay

Sample #3270 - Black Streak Incline (2 ft. face)

0.82% U_3O_8

4.17 V_2O_5

0.64 $CaCO_3$

ORE RESERVES:

No ore reserves are developed to date in the Calamity Creek Claim Block.

EXPLORATION POSSIBILITIES:

The claims lie in a very favorable area and are surrounded by producing mines. The area has all of the favorable guides-to-mineralization which have been developed in this portion of the Plateau. It also contains numerous small outcrops of mineralization or radiometric anomalies located on the ground and by aerial methods. In the Calamity Creek Claim Block area, 90% of the block overlies a full Morrison section containing the first and third rims generally considered to be the best producing horizons. In the Calamity Creek Claim Block area the drilling will not exceed 850 feet in the southern and eastern portion. The western and the northern portion of the Block area to the Cretaceous capping rim will require 600 feet of drilling in the deeper holes. Numerous rims are visible and detailed surface geologic mapping of the exposed portions of the rims will contribute much valuable information to be correlated with the drilling of the unexposed portions. The writer has laid out an exploration drilling program in three basic stages:

Stage 1:

The channel believed to exist in this Calamity Creek Claim Block area will be drilled on 250 foot centers with a staggered pattern of holes where topography permits.

Stage 2:

The deeper portions of the area and that portion not including the supposed locations of the channel will be drilled on 500 foot centers with a staggered pattern of holes.

Stage 3:

Individual radiometric anomalies will be contoured by ground radiometric methods and the centers of the highs of the radiometric iso-rad contours will be drilled.

Once the initial stages of drilling have been completed the mineralized or "ore-holes" will be off-set on 100 foot centers in four directions. All sandstone rims and intervening shales of the Morrison Salt Wash member will be cored in:

(a) All holes in the apparent channel and on its fringe.

(b) Every other hole in the 500 feet grid.

The holes not cored in the 500 feet grid will be plugged to the Summerville shale contact. All holes in the first and second stages of drilling will bottom in the Jurassic Summerville shale. The holes drilled in the anomalous highs will bottom 10 feet below the sandstone rim containing the anomaly. In the secondary stages of off-set drilling, only the ore-horizons will be cored and the holes will bottom 15 feet below the mineralized zone.

The proposed location of the drill holes of the initial three stages of drilling have been plotted on Plate 3 of the accompanying maps. The expected total depth of hole (TD), the distances to be cored (C), and the distances to be drilled by plugging (rock-bit methods (P), have been tabulated below.

The writer estimates that 10% of the holes drilled will be mineralized. On that basis and using 4 - 100 feet off-sets per hole, an additional 24,000 feet of drilling should be added to the total footage. The off-set footage is calculated using an average of 300 feet per hole.

The following figures are tabulated totals:

Number of holes to be drilled - - - - - - - - - - - 321

Ping footage - - - - - - - - - - - - - - - - - - - 48,210

Cored footage - - - - - - - - - - - - - - - - - - 48,045

Total drilled footage - - - - - - - - - - - - - - 96,255

Percentage of core - - - - - - - - - - - - - - - 49.91

Number	Ping (P)	Core (C)	Total Depth (TD)
1	0	180	180
2	0	200	200
3	0	350	350
4	20	330	350
5	40	330	370
6	50	330	380
7	470	0	470
8	180	340	520
9	550	0	550
10	330	280	610

Number	Flat (F)	Core (C)	Total Depth (TD)
11	620	0	620
12	320	340	660
13	650	0	650
14	200	340	540
15	530	0	530
16	190	330	520
17	400	0	400
18	150	320	470
19	570	0	570
20	350	320	670
21	640	0	640
22	320	320	640
23	600	0	600
24	180	320	500
25	130	330	460
27	450	0	450
28	140	330	470
29	530	0	530
30	290	310	600
31	600	0	600
32	230	350	580
33	550	0	550
34	160	340	500
35	470	0	470
36	80	330	410

Number	Plug (P)	Core (C)	Total Depth (TD)
37	60	330	390
38	50	320	360
39	30	330	360
40	0	330	330
41	0	300	300
42	110	0	110
43	0	300	300
44	0	330	330
45	20	330	350
46	50	330	380
47	50	330	380
48	420	0	420
49	110	330	440
50	440	0	440
51	170	330	500
52	510	0	510
53	190	340	530
54	520	0	520
55	100	340	440
56	420	0	420
57	90	330	420
58	370	0	370
59	60	320	380
60	530	0	530
61	340	310	650
62	540	0	540

Number	Plug (P)	Core (C)	Total Depth (TD)
63	230	310	540
64	450	0	450
65	115	310	425
66	485	0	485
67	85	310	395
68	380	0	380
69	80	320	400
70	410	0	410
71	90	340	430
72	460	0	460
73	190	340	430
74	500	0	500
75	160	320	480
76	460	0	460
77	100	330	430
78	420	0	420
79	70	320	390
80	40	330	370
81	40	330	370
82	0	330	330
83	170	0	170
84	0	90	90
85	0	310	310
86	0	310	310
87	0	330	330

909 - 16th Street, N. W.; Washington 6, D. C.

Number	Flow (F)	Copy (C)	Total Depth (TD)
88	0	330	330
89	10	320	330
90	30	330	360
91	410	0	410
92	90	330	420
93	450	0	450
94	110	340	450
95	430	0	430
96	90	340	430
97	400	0	400
98	0	340	340
99	340	0	340
100	0	340	340
101	350	0	350
102	100	330	430
103	370	0	370
104	90	310	400
105	400	0	400
106	0	300	300
107	310	0	310
108	0	310	310
109	320	0	320
110	0	320	320
111	330	0	330
112	0	320	320

Number	Plug (P)	Core (C)	Total Depth (TD)
113	340	0	340
114	30	340	370
115	420	0	420
116	110	340	450
117	420	0	470
118	110	330	440
119	420	0	420
120	100	330	430
121	80	330	410
122	60	330	390
123	50	330	380
124	40	330	370
125	360	0	360
126	0	310	310
127	230	0	230
128	0	300	300
129	420	0	420
130	100	330	430
131	60	330	390
132	40	330	370
133	50	330	380
134	40	330	370
135	390	0	390
136	80	330	410

Number	Plug (P)	Core (C)	Total Depth (TD)
137	380	0	380
138	0	210	210
139	220	0	220
140	0	200	200
141	220	0	220
142	0	220	220
143	200	0	200
144	0	200	200
145	190	0	190
146	50	310	360
147	220	0	220
148	0	130	130
151	120	0	120
152	0	90	90
154	0	80	80
155	60	0	60
156	0	80	80
157	90	0	90
158	0	100	100
159	300	0	300
160	0	320	320
161	370	0	370
162	30	330	360
163	30	330	360

Number	Flag (F)	Core (C)	Total Depth (TD)
164	20	330	350
165	0	320	320
166	20	320	340
167	260	0	260
168	30	230	260
169	120	0	120
170	0	180	180
171	210	0	210
172	20	330	350
173	180	0	180
174	0	130	130
175	0	140	140
176	0	240	240
177	0	320	320
178	340	0	340
179	0	230	230
180	80	0	80
181	0	80	80
182	60	0	60
183	0	70	70
184	0	70	70
187	180	0	180
188	0	220	220
189	70	0	70

Number	Plug (P)	Core (C)	Total Depth (TD)
190	0	70	70
191	0	70	70
Total	34,185	32,100	67,285

Holes in Radiometric Anomalies

Number	Plug (P)	Core (C)	Total Depth (TD)	Rim Position
148	0	70	70	3rd Rim
150	0	60	60	1st Rim
152	0	60	60	3rd Rim
153	0	70	70	3rd Rim
154	0	100	100	1st Rim
192	0	100	100	3rd Rim
193	0	110	110	1st Rim
194	0	110	110	1st Rim
195	0	120	120	4th Rim
196	0	70	70	3rd Rim
197	0	100	100	3rd Rim
Total	0	970	970	
TOTAL	34,185	34,070	68,255	

Off-set Drilling

	12,025	11,975	24,000

TOTAL DRILLING FOOTAGE

321	46,210	46,045	92,255

Percentage of Core - 49.91

CONCLUSIONS

The writer is impressed by the apparent potential of this well located area. The area is surrounded by producing properties and the possibility of finding a large uraniferous ore deposit in this large unit block of ground is quite high and merits thorough exploration. It contains all of the numerous guides-to-mineralization, generally considered to be favorable on the Plateau. It contains what may well be a very large paleo-channel existing through much of Morrison time with numerous dendritic feeder channels, all of which may contain uraniferous ore-bodies. In the writer's opinion, it would be difficult to find a more promising area for extensive exploration than this block of ground.

RECOMMENDATIONS

The writer makes the following recommendations:

1. Application for aid to Defense Minerals Exploration Administration be made promptly. Before the contract is approved, it will be late fall and continuation of the program from that time on will be interrupted by seasonal climatic changes in the winter months.

2. Provisions should be made in the application for continuation of the contract into the spring months since the drilling will not be completed by 1 December 1955.

3. Detailed surface geologic mapping should be continued on this property.

4. Application should be made for assistance in the surface phase of the exploration also.

5. Drilling should continue behind the Sterny Treasure adit. The information obtained from this drilling will be quite useful for future deeper exploration on portions of the Calamity Creek Claim Block.

6. Ground radiometric work should continue uninterruptedly on the many airborne anomalies located in the claim block. It will be necessary to contour these anomalies before drilling the radiometric highs.

7. Other exploration and additional road building, etc. should cease in this area until the application for aid is approved or disapproved because the cost of such exploration prior to approval of the application may not be included in the exploration contract.

8. If the request for aid is denied, wide-center deep drilling should commence by 1 March 1956 on the apparent trend of channelization in the Virginia W. group on the pattern laid out in the application for aid noted on Plate 3 of the accompanying maps. The corporation should continue this recommended exploration within a reasonable limit of its financial ability.

9. Underground work should not commence until sufficient ore has been blocked out to warrant the cost of the development work.

CHESAPEAKE AND [illegible] URANIUM CORPORATION
909 - 16th Street, N. W., Washington 6, D. C.

ILLUSTRATIONS

Plate A

Calamity Mesa Quadrangle, Mesa County, Colorado
Scale 1:24000
1949

Showing Calamity Creek Claim Block location and apparent channelization in Jurassic Morrison Salt Wash.

Plate B

Geologic Map of the Gateway Area
Mesa County, Colorado and the adjoining part of Grand County, Utah showing Calamity Creek Claim Block location.

Plate C

General Geologic Cross Section,
Calamity Creek Claim Block, Mesa County, Colorado

Plate 1

Calamity Creek Claim Block base map.
Scale - 1 inch = 500 feet

Plate 2

Geologic Overlay of the Calamity Creek Claim Block.

Plate 3

Overlay showing proposed drill sites in the Calamity Creek Claim Block.

September 23, 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number

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

DMEA - 3990 Chesapeake and Colorado Uranium Corp.

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

September 23, 1955

Chesapeake and Colorado Uranium Corp.
909 16th Street, N. W.
Washington, D. C.

Subject: DMEA-3990
Re: Exploration Assistance
The Stormy Treasure Mine

Gentlemen:

The receipt of your application dated September 19, 1955, for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

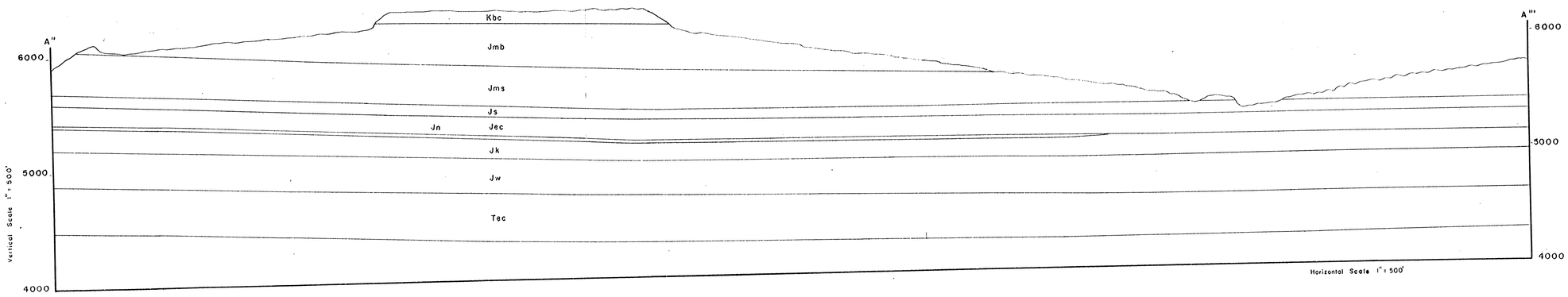
Your application has been assigned Docket Number DMEA-3990 and referred to the Rare & Misc. Metals Division.

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

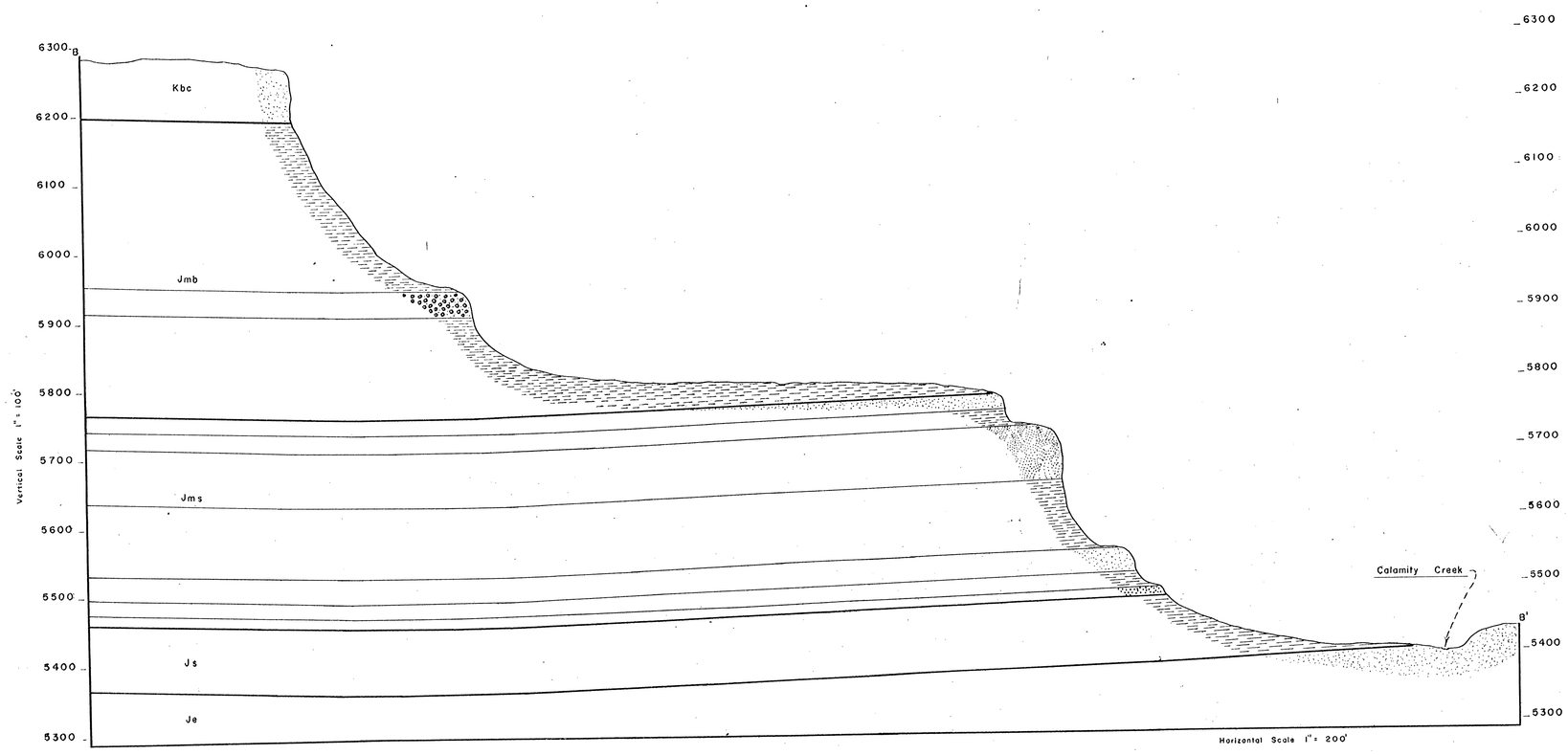
Sincerely yours,

Robert E. Adams, Chief
Operations Control and
Statistics Division

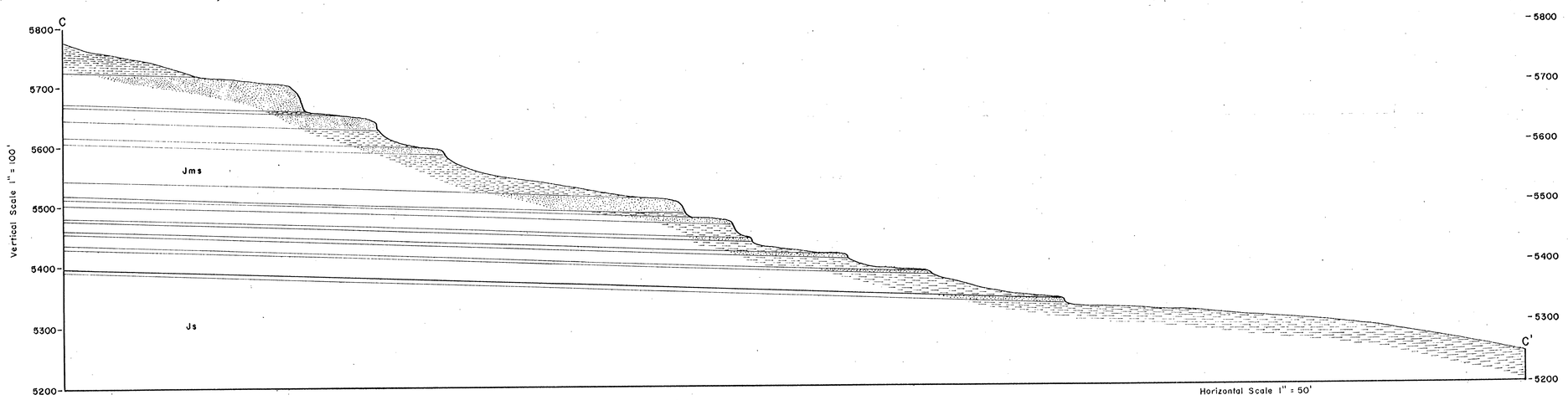
60932



Section taken from Geologic map of Calamity Mesa Quadrangle, Colorado
by Fred W. Cater Jr. 1955



QUEEN BEE CROSS SECTION



STORMY TREASURE CROSS SECTION

Note:
Vertical scales indicate elevation in feet above mean sea level.

L E G E N D

Shale. *Pebble Conglomerate* *Sandstone* *Cross-bedded Sandstone*

Drafting by
Technical Services Inc.
JULY, 1955

CHESAPEAKE AND COLORADO URANIUM CORPORATION
909 - 16th Street, N. W.; Washington 6, D. C.

GENERAL GEOLOGIC CROSS SECTIONS

CALAMITY CREEK CLAIM BLOCK

MESA COUNTY, COLORADO

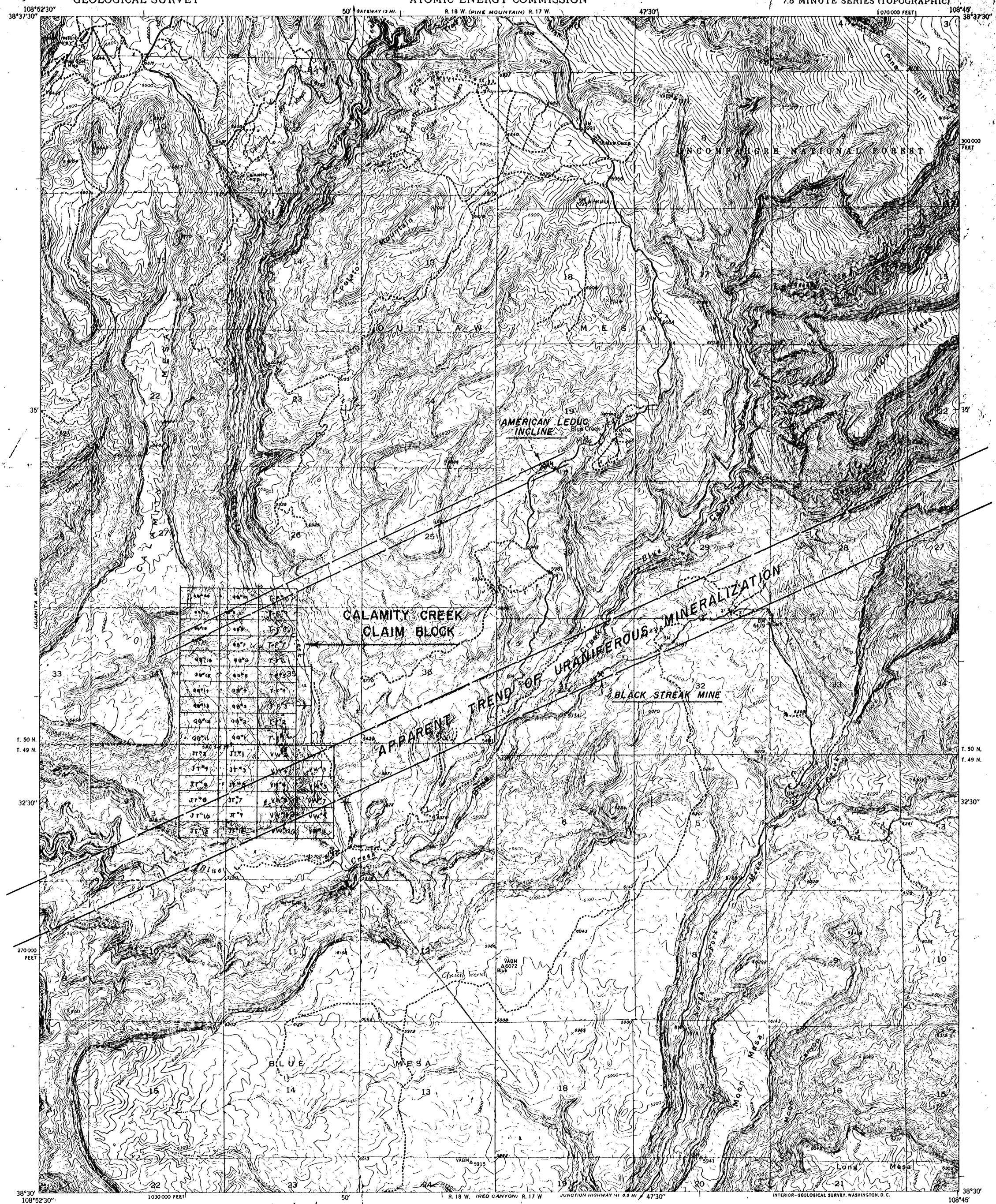
PLATE C

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

UNITED STATES
ATOMIC ENERGY COMMISSION

CHESAPEAKE AND COLORADO URANIUM CORPORATION
909 - 16th Street, N. W.; Washington 6, D. C.

CALAMITY MESA QUADRANGLE
COLORADO-MESA CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography from aerial photographs by multiplex methods, and by plane-table surveys
Aerial photographs taken September 1947. Field check 1949

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

Dashed land lines indicate approximate location
Land lines unsurveyed in part of T. 49 N.-R. 18 W. and T. 50 N.-R. 18 W.

Unchecked elevations are shown in brown

Airborne Anomaly

15°
TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN DECLINATION, 1949

SCALE 1:24000

1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS

FOR SALE BY U. S. GEOLOGICAL SURVEY, FEDERAL CENTER, DENVER, COLORADO OR WASHINGTON 25, D. C.
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

PLATE A

CHESAPEAKE AND COLORADO URANIUM CORPORATION
909 - 16th Street, N. W.; Washington 6, D. C.

ROAD CLASSIFICATION

HARD-SURFACE ALL WEATHER ROADS		DRY WEATHER ROADS
Heavy-duty	4 LANE 18 LANE	Improved dirt
Medium-duty	4 LANE 18 LANE	Unimproved dirt

Loose-surface, graded, or narrow hard-surface

U. S. Route State Route

CALAMITY MESA, COLO.
N3830—W10845/7.5

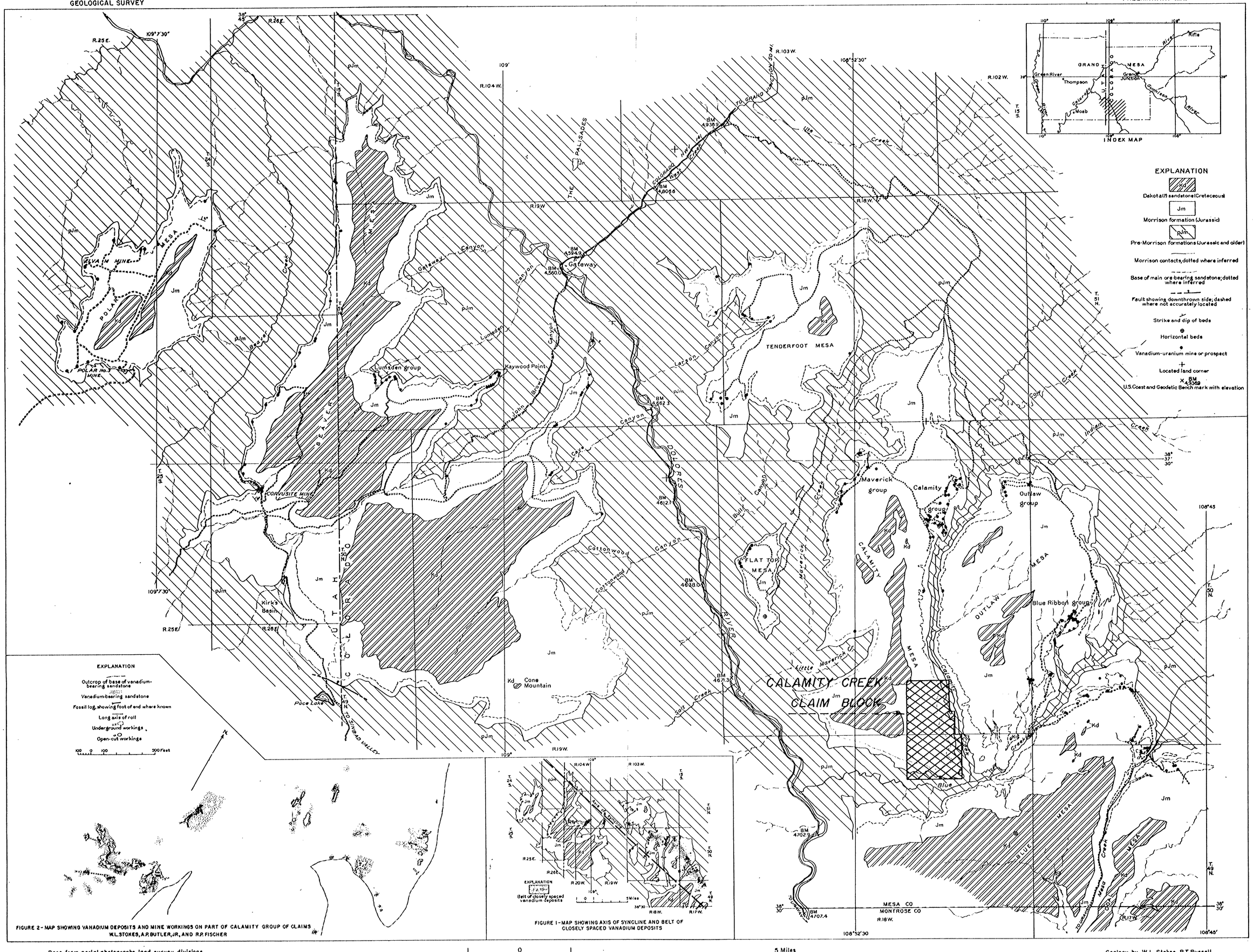
EDITION OF 1950

NIELSEN BLUE PRINT CO., INC.
108 North 3rd St. Phone 2124
Grand Junction, Colorado

CHESAPEAKE AND COLORADO URANIUM CORPORATION
909 - 16th Street, N. W.; Washington 6, D. C.

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STRATEGIC MINERALS INVESTIGATIONS
PRELIMINARY MAP



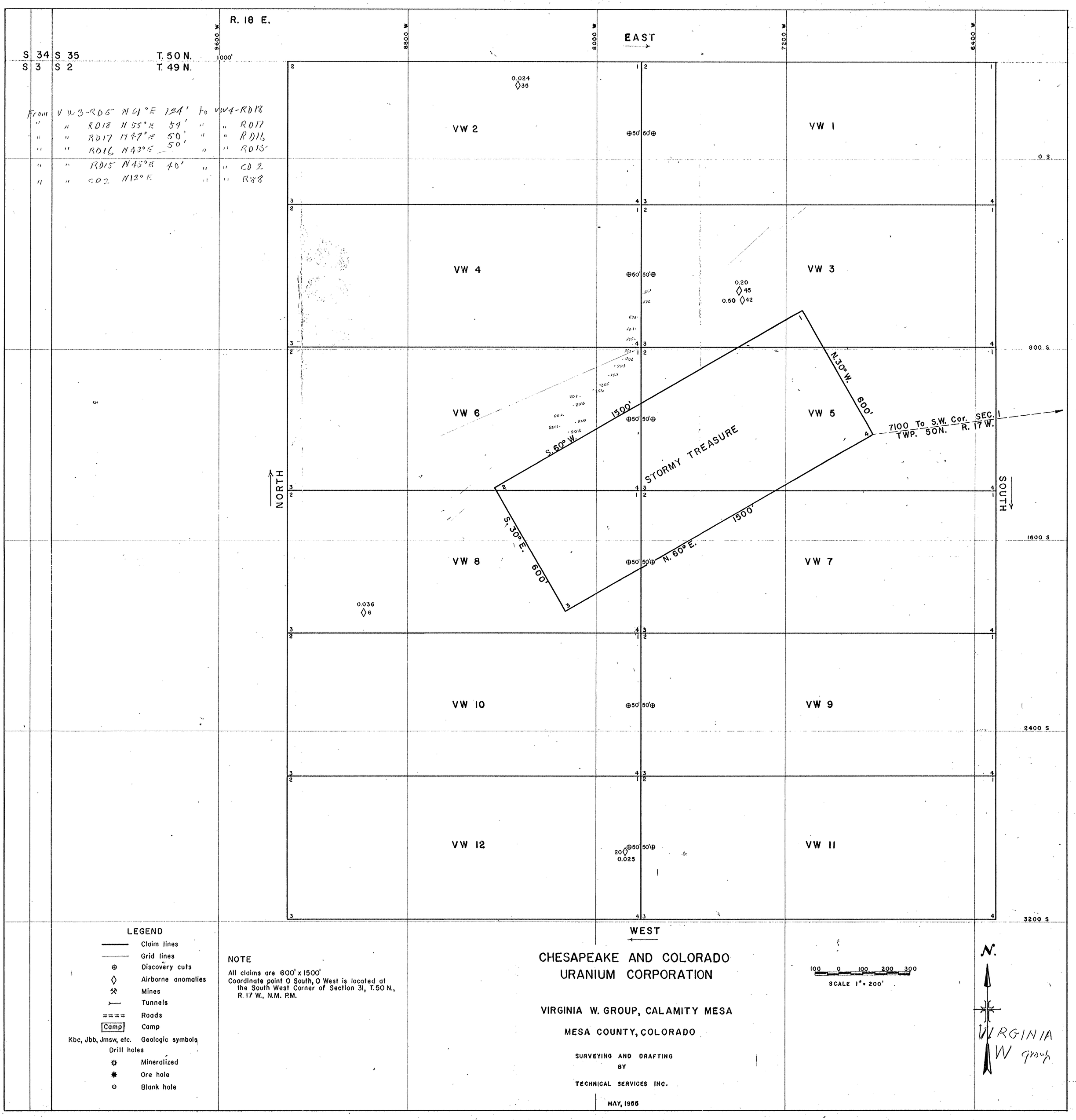
Base from aerial photographs, land survey divisions from General Land Office plats adjusted to observed land corners as plotted on photographic base.

Geology by W. L. Stokes, R.T. Russell, R.P. Fischer, and A.P. Butler, Jr.
1945

GEOLOGIC MAP OF THE GATEWAY AREA, MESA COUNTY, COLORADO, AND THE ADJOINING PART OF GRAND COUNTY, UTAH

CHESAPEAKE AND COLORADO URANIUM CORPORATION
909 - 16th Street, N. W.; Washington 6, D. C.

PLATE B


R. 18 E.
9600 W
8800 W
8000 W
EAST
7200 W
6400 W
S 34
S 35
T. 50 N.
1000'
S 3
S 2
T. 49 N.
From VW3-RD5 N 61° E 124' to VW4-RD18
" " RD18 N 55° E 54' " " RD17
" " RD17 N 47° E 50' " " RD16
" " RD16 N 43° E 50' " " RD15
" " RD15 N 45° E 40' " " CD 2
" " CD2 N 12° E " " R88
VW 1
VW 2
VW 3
VW 4
VW 5
VW 6
VW 7
VW 8
VW 9
VW 10
VW 11
VW 12
0.024
35
0.20
45
0.50
42
0.036
6
0.025
20
STORMY TREASURE
N.30° W.
600'
1500'
S. 60° W.
S. 30° E.
600'
1500'
N. 60° E.
7100 To S.W. Cor. SEC. 1
TWP. 50N. R. 17 W.
NORTH
SOUTH
0 S.
800 S.
1600 S
2400 S
3200 S
WEST
LEGEND
Claim lines
Grid lines
Discovery cuts
Airborne anomalies
Mines
Tunnels
Roads
Camp
Kbc, Jbb, Jmsw, etc. Geologic symbols
Drill holes
Mineralized
Ore hole
Blank hole
NOTE
All claims are 600' x 1500'
Coordinate point 0 South, 0 West is located at the South West Corner of Section 31, T. 50 N., R. 17 W., N.M. P.M.
CHESAPEAKE AND COLORADO
URANIUM CORPORATION
VIRGINIA W. GROUP, CALAMITY MESA
MESA COUNTY, COLORADO
SURVEYING AND DRAFTING
BY
TECHNICAL SERVICES INC.
MAY, 1956
100 0 100 200 300
SCALE 1" = 200'
N.
VIRGINIA
W group

LEGEND
Claim lines
Grid lines
Discovery cuts
0.019 Airborne anomaly and intensity
Mines
Tunnels
Roads
Camp
Kbc, Jbb, Jmsw, etc. Geologic symbols
Drill holes
Mineralized
Ore hole
Blank hole
Note:
GEOLOGY TAKEN FROM PRELIMINARY GEOLOGIC MAP OF CALAMITY MESA, COLORADO.
NOTE
Coordinate point O North, O West is located at the South West Corner of Section 31, T. 50 N. R. 17 W., N.M. P.M.
CHESAPEAKE AND COLORADO URANIUM CORPORATION
QUEEN BEE GROUP, T BAR F GROUP
JAMIE T. GROUP, VIRGINIA W. GROUP
MESA COUNTY, COLORADO
SURVEYING AND DRAFTING by TECHNICAL SERVICES, INC.
JULY, 1955
OVERLAY OF PROPOSED DRILL SITES
TD-P = Core Thickness
SCALE 1" = 500'
CONTOUR INTERVAL 100 FT.
Note: Contours taken from U.S.G.S. Quadrangle of Calamity Mesa, Scale 1:24,000.
N.
CALAMITY VIEW
STORMY TREASURE
APPARENT CHANNEL
PLATE 3
PLATE 2
PLATE 1

CHESAPEAKE AND COLORADO URANIUM CORPORATION
909 - 16th Street, N. W.; Washington 6, D. C.

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STRATEGIC MINERALS INVESTIGATIONS
PRELIMINARY MAP

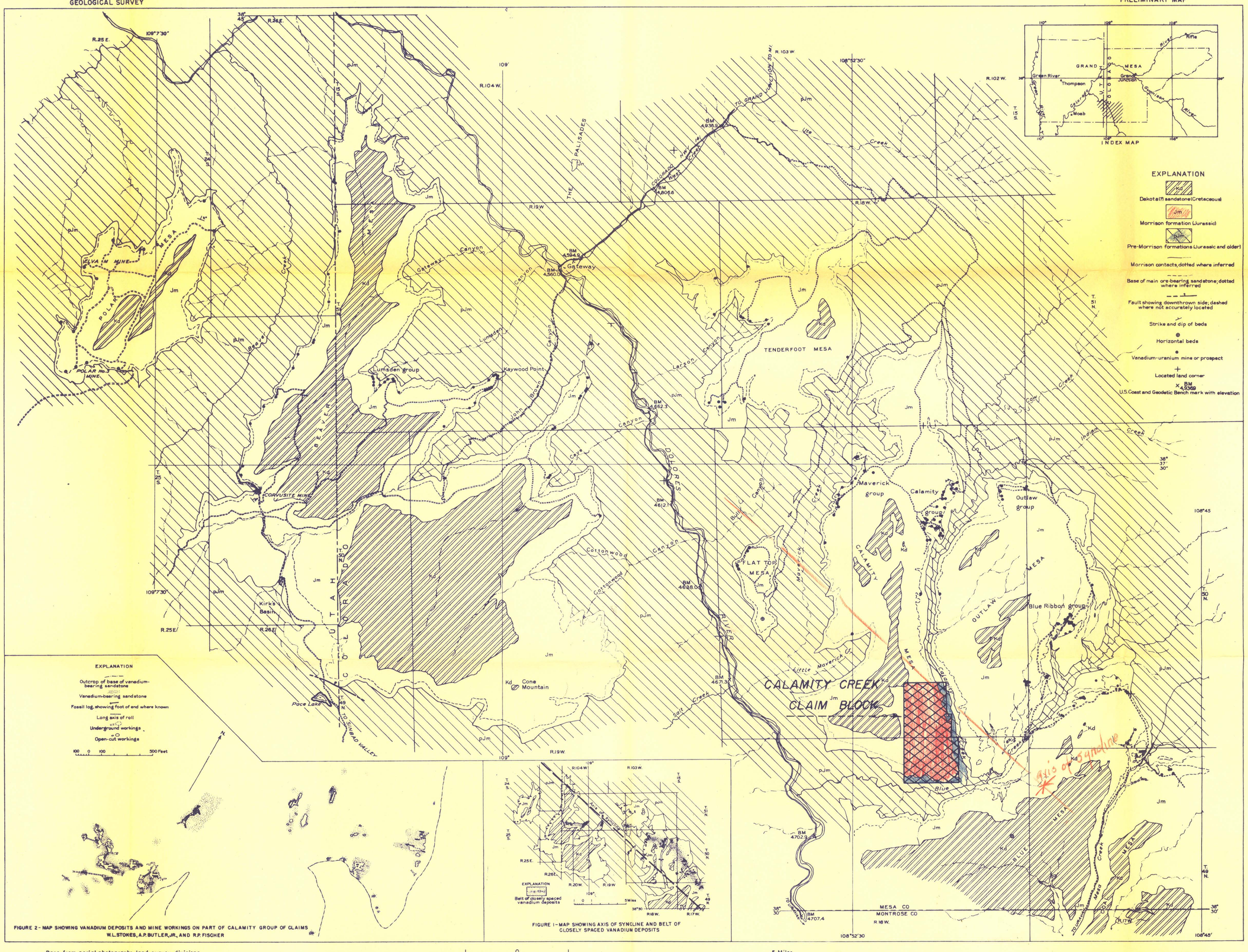


FIGURE 2 - MAP SHOWING VANADIUM DEPOSITS AND MINE WORKINGS ON PART OF CALAMITY GROUP OF CLAIMS
W.L. STOKES, A.P. BUTLER, JR., AND R.P. FISCHER

FIGURE 1 - MAP SHOWING AXIS OF SYNCLINE AND BELT OF CLOSELY SPACED VANADIUM DEPOSITS

Base from aerial photographs, land survey divisions from General Land Office plats adjusted to observed land corners as plotted on photographic base.

Geology by W. L. Stokes, R.T. Russell, R.P. Fischer, and A.P. Butler, Jr.
1945

GEOLOGIC MAP OF THE GATEWAY AREA, MESA COUNTY, COLORADO, AND THE ADJOINING PART OF GRAND COUNTY, UTAH

CHESAPEAKE AND COLORADO URANIUM CORPORATION
909 - 16th Street, N. W.; Washington 6, D. C.

PLATE B