NOTE: Use a separate form for each request.

DESCRIPTION OF RECORD(S) OR INFORMATION REQUESTED

DMEA Docket 4852

REMARKS

NATURE OF SERVICE

☐ FURNISH COPY OF RECORD(S) ONLY ☐ PERMANENT WITHDRAWAL ☐ LOAN OF RECORD(S) ☐ OTHER (Specify)

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REMARKS

Pick up Friday 3:30PM.

MAR 17 12 01 PM '77

DATE	SERVICE	TIME REQUIRED	SEARCHER'S INITIALS
3-18-77			HCB

FOR USE OF REQUESTER

NAME OF REQUESTER: Mrs. Wiegand

TELEPHONE NO.: 8/928-6681

DATE:

NAME AND ADDRESS OF AGENCY (Include building, room no. and Zip Code): ➡ Geological of Mineral Exploration
Geological Survey
923 National Center
Reston Virginia 22091
(In Washington, D.C. area also include STOP number)

RECEIPT OF RECORDS

Requester please sign, date and return this form, for file item(s) listed above, *ONLY* if the block to right has been checked by the Records Center. ☐

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OPTIONAL FORM 11
REVISED FEBRUARY 1971
GENERAL SERVICES ADMINISTRATION
FPMR (41CFR) 101 - 11.4
5011 - 104

REFERENCE REQUEST — FEDERAL RECORDS CENTERS

AGENCY SUSPENSE FILE COPY

DMEA Form 9
Rev. 6/57

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE Idm-E NO._____ DMEA NO. 4852

Application
- [x] Denied
- [ ] Withdrawn

Contract
- [ ] Terminated - Not Certified
- [ ] Terminated - Certified
- [ ] Cancelled
- [ ] Royalty Agreement

The records contained in this file are marked (x) and arranged in this order:

Folder No. 1:

Left Side

- [ ] Royalty Audits
- [ ] Certification of Discovery
- [ ] Closing Letter
- [ ] Cost Audits
- [ ] Termination Notice or Agreement
- [ ] Recision Notice
- [ ] Assignment of Contract
- [ ] Contract Amendments
- [ ] Contract with all exhibits and annexes
- [ ] Owner's Consent to Lien and Subordination Agreement
- [x] Application and attachments

Right Side

- [x] Project summary (final)
- [ ] Work Completed analysis (final)

All other material filed in chronological order including the following reports if checked:

- [ ] Field Team Semi-Annual Report for Certified Project
- [ ] Final Field Team Report (Tab)
- [ ] Operator's Final Report (Tab)
- [ ] Interim Field Team Reports
- [ ] Operator's monthly reports and all attachments
- [x] On-site Exam Report (Tab)
- [ ] Settlement Sheets
- [ ] Drill Logs

Additional Folders:

Left Side

Folders No._____: Reports
- [ ] Analysis of Semi-Annual Inspection Reports
- [ ] Project Summary (Interim) by DMEA Engineers

Right Side

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

Folders No._____: Maps (Use pocket folder or envelope)

Folders No._____: Settlement Sheets

Folders No._____: Drill Logs

Folders No._____: Royalty material

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

224 New Customhouse
Denver 2, Colorado

October 14, 1957

Memorandum

To: Secretary to the Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: Application for DMEA Aid, (Uranium) Cog Minerals Corporation, (Bull's Eye, Spook, Cadillac, et al. claims) San Juan County, Utah

Enclosed are the original and one copy of the subject application. One copy was retained in the Grand Junction Office and one copy is being retained in our files.

The Applicant proposes a drilling program aggregating approximately 13,245 feet of plug drilling and 725 feet of core drilling with incident bulldozing in the preparation of access roads and drill sites at a total estimated cost of $35,000.00

The Applicant enclosed drilling bids from Martin E. Buell, Inc., Minerals Engineering Company, and Sprague & Henwood, Inc., and bids on bulldozer work from Carrol Wilcox, Everett J. Edgar, and William Certonio.

E. N. Harshman

E. N. Harshman
Acting Executive Officer

OFFICIAL FILE COPY
D M E A
RECEIVED OCT 16 1957
DATE | INITIALS | CODE

COG MINERALS CORPORATION
727 3rd AVENUE
GRAND JUNCTION, COLORADO

DMEA

Form MF-103
Revised Feb. 1957

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Budget Bureau No. 42-R1053.3
Approval Expires June 30, 1958

DMEA
DEPARTMENT OF THE INTERIOR
OCT 14 1957
REGION III
DENVER, COLORADO

RECEIVED OCT 16 1957 D.M.E.A.

APPLICATION FOR AID IN AN EXPLORATION PROJECT

PURSUANT TO DMEA ORDER I, UNDER THE DEFENSE PRODUCTION ACT OF 1950, AS AMENDED

NAME OF APPLICANT (Full legal name and mailing address as it should appear on contract if one is executed)

COG Minerals Corporation
1000 Denver Club Building
Denver, Colorado

And
727 3rd Avenue
Grand Junction, Colorado

APPLICANT NOT TO USE THIS BLOCK

Docket Number: DMEA-4852
Date Received: 10/16/57
Government Participation %:
Region: III
Division Code: 700

BUSINESS ORGANIZATION (Check one)

- Individual [ ]
- Corporation [X]
- Partnership [ ]
- Other (Specify) [ ]

State in which firm is organized: Delaware

LIST CORPORATE OFFICERS OR PARTNERS HERE, IF APPLICABLE

Name	Address	Title
W. C. Norman	1000 Denver Club Bldg, Denver, Colo.	President
J. H. Nason	" "	Vice-Pres.
R. I. Galland	" "	Secretary & "
J. S. Bowman	" "	Vice-Pres.
D. F. Taylor	" "	Treasurer & " "

Mineral(s) for which you wish to explore: Uranium

Estimated Cost of Project: $35,000.00

LOCATION OF PROPERTY

Name	County	State
Cove Group	San Juan	Utah

GENERAL INSTRUCTIONS

Before filling out this application, please read DMEA Order-I, Amended, "Government Aid in Defense Exploration Projects." To assure prompt action, your application must provide all applicable material and information specified on the back of this application form. Avoid unnecessary correspondence and delays by submitting complete and accurate information. *Please submit four copies of this application and all accompanying papers* except as otherwise noted. Place your name and address on each sheet. Each item of information, maps, and reports required as a part of this application is described on the back of this form. Identify each attached statement by the item number to which it applies. If an item does not apply to your application, show the item number on your statement and after it write "not applicable." Maps or sketches should be used to supplement narrative descriptions of the property location and boundaries in item 1, existing mine workings and geology in item 2, and the proposed exploration project in item 4. When this information is not too complex, all of it may be shown on one map or sketch. All documents and other attachments submitted as a part of this application, except those in item 2(g) which you mark to be returned, become the property of the Government and will not be returned to the applicant. Send true copies, *not originals*, of leases, contracts, and other documents which are an essential part of your business records. *File this application with the Defense Minerals Exploration Administration, Department of the Interior, Washington 25, D. C., or with the nearest DMEA Field Office.*

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.

Oct 10 1957
Dated

Clare Gregg
BY *(Signature)*

COG GEOLOGIST
Title

A wilfully false statement or certification to any Department or Agency of the United States Government is a criminal offense. U. S. Code, Title 18, Sec. 1001.

INFORMATION REQUIRED WITH THIS APPLICATION

1. *Applicant's Property Rights:*

(a) State the legal description (section, township, and range; metes and bounds; patent number of claims) of the land upon which you wish to explore and all land adjacent to the proposed project area which you own or control. Describe any part of the project land or workings which should not be subject to Government lien for royalty payments. If the land consists of unpatented claims, state the book and page number for each recorded location notice, including amended locations, and the place where recorded (courthouse, recorder's office, county, and state).

(b) State all the names by which you know the property.

(c) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise. If you are not the owner, submit with this application one exact copy of the lease, contract, or other document (with address of owner) under which you control the property.

(d) Describe all liens, mortgages, or other encumbrances on the property.

2. *Physical Description:*

(a) Describe in detail and illustrate with maps or sketches all mining or exploration operations which you know have been or are being conducted upon the lands, including existing mine workings. Describe all production facilities.

(b) State your interest, if any, in operations stated in 2*(a)*.

(c) State, as far as you know, the past and current production, supporting your statement with copies of settlement sheets, mine records, or published data if available.

(d) Describe known ore reserves on the property giving quantities and grades and sampling methods used, supporting your statement with copies of assay certificates and assay maps if available.

(e) Describe by narrative and maps or sketches the geologic features of the property, including ore minerals, geologic formations if known, and type of deposit (vein, bedded, etc.).

(f) State your reasons for expecting to find ore, and if you have sampled the area you propose to explore, show where the samples were taken, describe sampling methods used, and provide copies of assay certificates.

(g) Send with your application at least *two* copies of all geologic or engineering reports, assay maps, or technologic information which you may have, indicating on each whether you require its return to you.

3. *Accessibility of Project:*

(a) To aid DMEA representatives who may be required to examine the property, state the name and address of the person who will meet the DMEA representative; give directions for reaching the property; and describe accessibility of the property including the mine workings.

(b) Name the shipping and supply points and places where employees reside and state the distances between them and the property.

4. *The Exploration Project:*

(a) Describe fully the proposed exploration project giving individual footages and sizes of openings *for each item of work.* Use narrative, maps, plans, and longitudinal and cross sections as necessary. Show the location of the proposed work as related to geologic features such as veins, ore-bearing beds, contacts of rock formations, etc. Show also the relation of the proposed work to any existing mine workings and to *property boundaries* or to the closest identifiable corner.

(b) If an access road to the project must be built, show the location on the property map and state the length, type, and construction methods proposed.

(c) In the event that an exploration contract with DMEA is executed, how soon will the work start and how many months will be required to complete it? State your anticipated average daily or monthly rate of progress for each type of work.

5. *Experience:*

State your operating experience and background with relation to your ability to carry out this exploration project, and also that of the person or persons who will supervise the operations.

6. *Estimate of Costs:*

Furnish detailed estimates of the costs *for each item of the work proposed in 4(a)* under the headings listed below with a total for each heading and the estimated total cost of the project. Costs for any work to be performed by an independent contractor should be shown separately under category *(a)* below. Costs for any work that is not to be performed by an independent contractor should be given in detail under categories *(b)* through *(g)*.

(a) Independent contracts. State the cost of any proposed independent contract for the performance of all or any part of the work, expressed in units of work, such as per foot of drilling, per foot of drifting, per hour of bulldozer operations, per cubic yard of material moved. Cost estimates should be supported by bids from three contractors if possible. *(Note* – If none of the work is to be contracted, write "none" after this item.)

(b) Personal services. For necessary supervision, engineering and geological services, and labor, include an itemized schedule of numbers, classes, rates of wages, salaries or fees, and periods of employment. State whether these technicians and employees are available.

(c) Operating materials and supplies. List items of material and supplies with their cost. Include under this heading power, water, and fuel, and units of equipment and tools costing less than $50 each.

(d) Operating equipment. List items of operating equipment to be used giving specifications and indicating how each item is to be acquired – i.e., rented, purchased, or provided by the applicant. If it is rented or purchased, state the estimated rental or purchase price. If it is to be furnished by the applicant, give its present fair market value.

(e) Initial rehabilitation and repairs. Describe the type and the cost of necessary *initial* rehabilitation or repair of existing buildings, fixtures, installations (exclusive of mine workings), and movable operating equipment now owned by the applicant, which will be used on the exploration project.

(f) New buildings, fixtures, installations. Describe each building, fixed improvement, and installation to be purchased, constructed, or installed for the exploration project stating specifications and cost including labor, materials and supervision.

(g) Miscellaneous. For the operating equipment listed in 6*(d)*, describe the type and estimate the cost of repairs and maintenance expected during project operations. Do not repeat initial repairs listed in 6*(e)*. Show also the costs of analytical work, accounting, workmen's compensation and employees' liability insurance, payroll taxes, and other required costs that do not fall within the previous categories.

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)* State whether you are prepared to furnish your share of the cost of the proposed project in accordance with the regulations on Government participation stated in Sec. 7 of DMEA Order–I, Amended.

(b) Explain to what extent you propose to furnish your share of the costs by providing money, by use of equipment owned by you, or otherwise.

* * * * *

INT.-DUP. SEC., WASH., D.C. 15539

COG MINERALS CORPORATION
Grand Junction, Colorado

DMEA Loan Application

1 (a) The claims in question are located in Sections 1, 6, 12, and 7, T37S, R16 and 15E, SLM, San Juan County, Utah, White Canyon Mining District. Our property adjacent to this includes areas in Sections 18, 19, 30, 30, 29, 31, 32, and 33, T36S, R16E; Sections 13, 24, 25, and 36, T36S, R15E; Sections 6, 5, 4, 7, and 8, T37S, R16E; Sections 1 and 12, T37S, R15E. See Map #1. All claims listed below are under lease to COG Minerals Corporation.

DMEA-3625
Idm-E-879

Claim	Book	Page	Relocation Book	Relocation Page
Cove 1 - 40	97	161 - 180		
Cove 41 - 44	97	159 - 160		
Gift 1 - 3	100	45 - 46		
Bullseye 1 - 5	19	432 - 434	87	91 - 95
Bullseye 6 - 10	45	258 - 260	87	96 - 100
Bullseye 11 - 15	59	420 - 422	87	101 - 105
Spook	45	243	93	464
Dee	45	242	93	463

McCarty-Coleman Claims

Cadillac	1 - 21	109	530-450
"	22 - 150	111	1- 65
"	151 - 191	111	112-132
"	192 - 207	113	318-325
Packard	1 - 19	109	214-223
Austin	1 - 9	109	209-213
Chrysler	1 - 6	109	203-208
"	34 - 38	109	203-208
Mercury	31 - 42	109	197-203

DMEA Loan Application

McFall Claims		Book	Page
"P"	1-7	129	394-397
"Z"	1-21	103	17-27
"	22-33	117	230-235
"Q"	1-12	103	5-10
"	21-24	103	11-14
"	28-29	103	15-16
"	31-34	103	11-14
"	38-39	103	15-16

Only claims listed below will be subject to Government lien under this DMEA application:

Cove 21-24
Cove 37-44
Gift 1-3
Bullseye 11 and 12

All claims mentioned above are recorded in San Juan County Courthouse, Monticello, Utah.

(b) The various properties are usually called by their claim name. When referring to all of the area owned by McCarty-Coleman, this is then called the "Coleman Area" and the Cove claims are sometimes called by their owners, Uranium King. The P, Q and Z claims are called by their original owners, the McFall Group.

2.

(a) The AEC deliniated the "Cairns" channel by drilling on the southeast to the north end of the Spook-Bullseye property and a part of the Cove area. The channel was entered by an incline on the Spook Dee Claims and drifting has progressed about 1800 feet northwesterly from this entrance. Meanwhile an incline was sunk on the north end of this channel. (Coleman Incline) and drifting was done northerly for about 2,000 feet (with DMEA aid) on what was thought to be the same channel (See Map #2). Another incline just south of this working was bottomed in the channel recently (Bullseye #2 Entry).

Uranium King drilled several holes around the Coleman Entry on a scattered pattern. Most of these holes were out of the Cairns channel. Mineral Mining drilled several holes just east of this area for discovery proposed on their claims. (see Map #2)

Just recently COG Minerals drilled discovery holes on the Bullseye Claims but since these holes had to be put on each claim they only intersected the Cairns channel in a few instances.

At present COG is using rubber tire shuttle car haulage in the Spook-Bullseye #1 Entry with an Eimco Loader at the face and a gable bottom side dumping car out the incline into steel bins.

2.

(a) Continued

The Bullseye #2 Entry is all rubber tire haulage (even out of the incline) with an "Oremaster". The Coleman Entry is all track with Mancha locomotive and cars and a 12B Eimco loader and out of the incline with a self dumping cable skip.

There is a maintenance shop at the Spook-Bullseye #1 Entry. The COG Camp is 2 miles east of Fry Store and has good facilities for about 60 men. Also at Camp, COG has a 75 ton a day upgrading mill now operating.

(b) COG Minerals is now complete operator-leasor of all land and mining mentioned in 2 (a), with the exception of the four Mineral Mining Claims under litigation (see Map #2). The work done in the Coleman Incline and the drilling in the same area by Uranium King was done before COG leased these areas. Drilling on the Mineral Mining Area was done by Mineral Mining.

(c) See enclosed shipping records for COG Minerals Corporation Spook-Bullseye property.

(d) There are no known ore reserves for the area to be explored in this program. (See Map #3) The object of this exploration will be to find the extention of the Ula Channel (see Map #1) where it should cross our property. The only drilling done here was for discovery purposes. The holes encountered some weak radiometric count just above the Triassic Moenkopi contact. The probing of these holes showed a count of up to 0.10% U_3O_8 for thicknesses not exceeding one foot.

(e) The Cove and Bullseye property lies on the west flank of the Monument Uplift. The sediments have a gentle dip of approximately 1½ degrees to the southwest.

The stratigraphic column of sediments exposed in the area starts with the Cedar Mesa Member, the Organ Rock Member and the Hoskinnini Member of the Permian Cutler Formation. Continuing in ascending order, these Permian beds are overlain by the Triassic Moenkopi, the Triassic Shinarump (ore bearing conglomerate), the Triassic Chinle Formation (shales with some sand members) and next the massive cliff-forming Jurrasic Wingate sandstone.

The Bullseye claims contain a northwest trending paleo stream channel at the base of the Shinarump Formation which has scoured 20 feet into the underlying red beds of the Moenkopi Formation

(e) continued

and is about 200 feet wide. This channel is ore bearing for 5600 feet on our property and is a producer at other points along its five mile known length.

The channel contains coarse conglomerate quartzose material so as to serve as a conduit for easy lateral migration of ground water. Here and there lenses of finer grained sandstone and interbedded layers of shale are found. Locat stratigraphic traps where channel mud forms an envelope around smaller lenses may have influenced ore deposition. However, judging by the abundant replacement of wood particles and carbon trash with ore, the accumulation of organic material is probably of greater importance in the localization of ore. Inter-channel low areas may also have influenced ore deposition where other factors were favorable, as well as the fact that the channel runs along the strike of the regional dip.

The only identifiable Uranium minerals in the channel are Uraninite and Pitchblende. Uranium occurs as wood replacement, as streaks on bedding planes, and in lenses and blebs ranging in size from microscopic to many feet across and several feet thick. The ore also contains between 0.65% to 1.50% Copper for which we receive an occasional payment. The copper minerals are mostly Chalcopyrite and Bornite and are closely associated with the Uranium.

(e) continued

All of the foregoing discription is based on the channel that is now being mined on the north and east sides of the Bullseye property. The area for this exploration program is on the Cove, Gift and the northwest side of the Bullseye Claims where another channel should be intersected and will probably have the features that have been described.

(f) As one can see from Map #1, a northeast extention of the Ula Channel should cross somewhere near the northwest side of the Bullseye property and into the southwest side of the Cove property. The Ula Channel is a large one and the Ula leasors have followed it with drilling toward the northeast to where the line is solid in Map #1.

The only drilling that has been done in the area where the channel is expected to come through our property was for discovery purposes (see Map #3). These holes encountered only a thin radioactive zone with a Babbel probe at the Moenkopi contact, (drill hole 127 has 1 ft. of 0.10% U_3O_8 .) but what may be of more importance is the greater thickness of the Shinarump here (16 to 18 feet) and the Shinarump-Moenkopi contact (with dip removed) has gone down 9 feet toward the west from drill hole 124 to drill hole 113. This may suggest that we were coming into the flank of the Ula Channel.

2

(f) continued

In the Coleman workings there is a geologically confusing area where the possibility of the Ula Channel may be coming across the Bullseye Channel or the running together of the two. Also there is a possibility here that the Bullseye Channel turns to the west and then flows southwest to form the Ula Channel. However, the most feasable, is that the Ula Channel turns to the northwest before it gets to the Bullseye Channel and the exploration done so far has not found a junction.

(g) No reports have been written on this immediate area on which this work is to be done.

3

(a) One of the following persons will be able to show the DMEA representative the property.

Ross V. Seeton, Jr.)		COG Minerals
Darrell F. Spencer)	of	727 3rd Avenue
Clare Gregg)		Grand Junction, Colorado

Take the road west from Blanding, Utah to Fry Canyon Store. The COG camp is 2 miles east of the store and on the north side of the wash. The Spook-Bullseye #1 entry is 10 miles further on from the camp south on this same road. The Bullseye #2 entry and the Coleman Entry are on further another 1.5 miles. The property is west across the wash from the Bullseye #2 Entry and south from there. (See Map #3)

3

(a) continued

Two drill roads penetrate the area to be explored. Both leave the road just south of the Bullseye #2 Entry.

(b) The ore is shipped to Monticello, 93 miles from the mine. The camp, etc., have been discribed in 3 (a).

4

(a) A diamond core drill will drill on 200 foot spacings forming "fences" of holes 400 feet apart. The first fence of holes should begin at the southwest side of the Bullseye-Cove Claims and run N 45 W so as to be normal to the projection of the Ula Channel (see Map #3). There will be 6 holes on the first fence from hole #1 northwest to the Wingate Cliff, which is a natural barrier and would not be practicable to drill through this formation and continue the fence. If the channel is not intersected on this fence of holes, the fence should be continued from hole #1 in the other direction southeast (skipping over the discovery holes already drilled) and continue with 2 holes to a point 200 feet from our discovery hole DH 109. If the channel is not intersected on this entire first fence then another fence of 4 holes should be placed several hundred feet to the northeast to assure that the channel does not come across west of the first fence (See Map #3). If the channel is not intersected on these 2 fences then the project should be halted. However, if there is an abnormal thickness of Shinarump or an abnormal depression below the expected

(a) continued

contact of the Shimarump-Moenkopi then a hole should be put on either side (100 ft.) of such a hole on the first fence.

The holes will be plug drilled to the top of the Shinarump Sandstone or into the Shinarump far enough to be sure of the formation, then core drilled to the Moenkopi. Each hole will average about 25 feet of coring. The drilling is very difficult here and it is our experience that the holes should be cased to the Shinarump to avoid these problems. The footages for the first fence of holes will be approximately as follows:

	Plug Drilled	Core
G1	400	25
G2	525	25
G3	630	25
G4	675	25
G5	200	25
G6	170	25
	2600	150

If the channel is intersected in the first fence of holes then the next fence of holes should consist of 4 holes just opposite the channel intersection of the first fence.

The second fence having the following approximate footages:

	Plug Drilled	Core
G7	520	25
G8	500	25
G9	630	25
G10	670	25
	2320	100

Since the channel should be delineated fairly well by the two

(a) continued

fences of holes, the drilling now can progress in 400 foot jumps and consist of 3 holes per fence to follow the channel. If one of these fences of holes is not in the channel, then one or two offset holes should be drilled to pick it up again. 18 holes have been figured for all of the fences after the first two fences, which should average about 500 feet (475 feet plugging and 25 feet coring per hole) for a total for this phase of 8550 feet plugging and 450 feet coring.

Total footage for this program has been calculated at 13,245 feet of plug drilling and 725 feet of core drilling.

Subsurface contour maps will be kept up to date on the drilling to follow the channel and to spot each progressive hole. Map #3 shows all of the existing holes and those that are proposed for this project. The holes become increasingly deeper to the west because the beds dip to the west and the topography rises in that direction.

(b) About 9,000 feet of road will have to be built on the Chinle shale slopes of the drill area shown in Map #3. These can be made by a D 6 Cat or the equivalent. The roads will be of such grade and width as to allow the drill rig to move about comfortably. It is probable that after the main roads have been built by the big contracted bulldozer, then COG's smaller HD7 can make the sites and short access roads. About 260 hours of bulldozer work is estimated for the project and some 50 hours of standby time.

4 (b) continued

About 20 hours of compressor time is estimated for road building. This will be furnished by COG Minerals Corporation.

(c) Once the contract is made with DMEA the road work will begin within 30 days unless rain or unseen weather conditions do not permit. Road building should progress at about 1,000 feet per week. However, in the last phase of following the channel, the bulldozer work will be dependent on the drilling progress in order to know where the next drill site is to be. The drilling should progress at about 4,000 ft. per month. Therefore, the project should be completed in 3 months after the day of the contract execution with DMEA.

5 COG Minerals Corporation has actively operated and explored Shinarump channels in this area for over a year by mining and drilling. The two geologists of the company have been in charge of Shinarump drilling projects off and on since 1952 and 1953 respectively. Both worked for the Atomic Energy Commission on Shinarump Channel exploration drilling for over two years. The geologists are Darrell F. Spencer and Clare Gregg. The Company's Manager, Ross V. Seeton, has worked with Shinarump Channel drilling in the area since 1952 for the Atomic Energy Commission and COG Minerals Corporation.

6 (a) The drilling and the bulldozing (road building) will be contracted as follows:

Drilling costs per foot shown on bids for:

Plug Drilling					Core Drilling				
From	0	feet	to	100	from	0	feet	to	100
"	100	"	"	200	"	100	"	"	200
"	200	"	"	300	"	200	"	"	300
"	300	"	"	400	"	300	"	"	400
"	400	"	"	500	"	400	"	"	500
"	500	"	"	600	"	500	"	"	600
"	600	"	"	700	"	600	"	"	700

The lowest bid for drilling (Martin and Buell) is $10,821.00 (including standby time) for the minimum guaranteed footage of 6,000 feet and a sum of $26,152.00 for the estimated maximum of 15,000 feet.

Contract bulldozing on an hourley rate of operation and an hourly rate for standby time is based on an estimated 260 hours bulldozing operation and 50 hours standby time.

Carrol S. Wilcox was the sucessful bidder with a total of $2,950.00 (including standby time). It would be possible for COG to use its small HD-7 bulldozer for making drill sites after the contracted bulldozer has made the main access roads. If this is done, COG will charge $8.00 per hour for operating time which would be a savings to the program.

See enclosed bids.

The total for 6 (a) - $29,102.00.

6 (b) One geologist, one surveyor and one rodman will be charged to the project during the time of physical operation.

Geologist	for	2½	months	@ 600.00/month	$1,500.00
Surveyor	"	"	"	@ 450.00/ "	1,125.00
Rodman	"	"	"	@ 300.00/ "	750.00

These personnel are available at any time the project should get underway. Expenses for 8 men (including 4 drillers and 1 bulldozer operator eating at COG's camp) at $4.00 per day for 2½ months - $1,760.00.

Total for 6 (b) - $5,135.00.

6 (c) Not applicable.

6 (d) Operating equipment used by the gologist and surveyor will be furnished by the Company and will include:

Transit	$550.00
Tripod	95.00
Rod	60.00
Babble Counter	210.00
Reel and Probe	240.00
	$1155.00

Three months use amortized for 5 years - $58.00.

The Company will furnish a compressor for any blasting needed for road building. It is a Leroy 125 and the Company will charge $2.50 an hour for its use to the project. Estimating a maximum of 20 hours use this equals $50.00.

Total for 6 (d) - $1,263.00.

DMEA Loan Application

6 (e) Not applicable.

(f) Not applicable.

(g) The only repairs from items listed in 6 (d) are $20.00 expected on the counter and probe. This has been our experience with a drill project of this size.

A sum of $100.00 can be expected for costs of core assaying.

A sum of $250.00 can be expected for accounting and other required costs performed by COG Minerals.

Total for 6 (g) - $370.00.

Total for all categories under 6 - $35,870.00.

7 (a) COG Minerals Corporation will pay 25% of the total expenditure of this program.

(b) COG Minerals will furnish their share by paying for:

1. The services of all of the personnel other than the contractors on the job.
2. Food for all of the men (contractors included).
3. COG's equipment used: Bulldozer (when used); probe; surveying equipment; compressor.
4. The contract bulldozing.
5. The analytical and accounting costs.
6. Any part of the drilling contract that would make our total share 25%.

WILCOX EXPLORATIONS
CARROL S. WILCOX
GRAND JUNCTION, COLORADO

Cog Minerals
727 3rd Ave.
Grand Junction, Colorado

Dear Sirs;

I would like to submit bids as follows for work in the White Canyon area in Utah. This work would be done with a 1955 D-6 Cat74 gauge and 202" pads, equipped with a 12' hydraulic blade.

$10.00 per hour for a minimum of 60 hours.

travel time one way unless there is a minimum of100 hours.

$7.00 per hour stand by time.

Sincerely,

Carrol Wilcox

WILLIAM CERTONIO

Bulldozer Contractor

P. O. Box 346 — Phone ~~5083~~ 2501

BLANDING, UTAH

....., 19.....

M. BID-ON-ROAD-OR-RIM-WORK.

RATES-FOR NEW D-6 CATERPILLAR

Date	Description	Hours	Amount
60 hrs.	$12.00 per Hr.		
OVER-60 hrs.	11.00 " "		
STANDBY-TIME	6.00 " "		

If job is under $1000.00 I charge round trip (from Blanding to Job & back to Blanding) for Hauling D-6 Cat. If over $1000.00 I charge one way Hauling. ~~[illegible]~~

If Road is to Bad for Hauling Cat - Then Regular Hourly Rate starts when Cat is traveling to Work & back to where Truck can Haul it.

I-HAVE-A-D-6 CAT-WITH HYDRAULIC-UNIT.

TOTAL

Martin & Buell, Inc.
Drilling Contractors
P. O. Box 925—Phone CHapel 2-5982
GRAND JUNCTION, COLORADO

OFFICIAL FILE COPY
DMEA
RECEIVED OCT 16 19
DATE | INITIALS | CODE

August 30, 1957

Drilling Bid as per page 4 of specifications of COG Minerals Corp. DMEA Project, White Canyon Area, Utah.

Description

Non-Core Drilling (no core required)	Est. Min. Ft.	Price per ft.	Total
From 0 feet to 100 ft.	1400	$1.35	$1890.00
From 100 feet to 200 ft.	1300	1.45	1885.00
From 200 feet to 300 ft.	1170	1.60	1872.00
From 300 feet to 400 ft.	1050	1.70	1785.00
From 400 feet to 500 ft.	640	1.80	1152.00
From 500 feet to 600 ft.	90	1.90	162.00
From 600 feet to 700 ft.	50	2.00	100.00

Core Drilling (core required)	Est. Min. Ft.	Price per ft.	Total
From 101 feet to 200 ft.	25	3.75	$93.75
From 200 feet to 300 ft.		4.00	
From 300 feet to 400 ft.	25	4.25	106.25
From 400 feet to 500 ft.	100	4.50	450.00
From 500 feet to 600 ft.	100	4.75	475.00
From 600 feet to 700 ft.	50	5.00	250.00

Payment For Stand-By Time

Estimated time: 30 hours @ $20.00 per hour per drill, $600.00 Total

Drilling In Excess Of Guaranteed Minimum

Drilling in all categories for each additional foot in excess of the minimum guarantee of 6,000 feet shall be performed at the aforementioned prices.

August 30, 1957

Martin & Buell, Inc.

By N. D. Beck

MINERALS ENGINEERING COMPANY
P. O. BOX 1951
GRAND JUNCTION, COLORADO

August 23, 1957

COG Minerals Corporation
727 Third Avenue
Grand Junction, Colorado

Attention Clare Gregg

Gentlemen:

In reply to your invitation for drilling bid to be submitted to D.M.E.A., please accept the following quotations as our bid for drilling a minimum of 6,000 total feet to a maximum depth per hole of 700 feet on your property in the White Canyon Area, State of Utah:

Depth	Price per Foot Non Core Drilling	Core Drilling
0-100 feet	$ 1.75	$ 2.50
100-200 feet	1.90	3.00
200-300 feet	2.10	3.75
300-400 feet	2.35	4.75
400-500 feet	3.00	6.00
500-600 feet	3.75	7.25
600-700 feet	4.75	8.75

Drilling in all categories for each additional foot in excess of the minimum guarantee of 6,000 feet shall be performed at a reduction in price of 15¢ per foot or $1,350 for 9,000 feet additional.

Standby time would be at the rate of $15 per hour.

It is our understanding that there would be approximately 25 feet of core per hole and holes would be cased through the overburden and Chinle to top of the Shinarump formation.

Core boxes would be furnished at our cost and are not included in above prices per foot.

If there is any further question, please contact me.

Very truly yours,

MINERALS ENGINEERING COMPANY

Edson Foster

Edson Foster
Assistant Drill Superintendent

EF/k

MANUFACTURERS OF
DIAMOND DRILLS
DRILLING EQUIPMENT
DIAMOND BITS

BRANCH OFFICES
NEW YORK · PITTSBURGH
PHILADELPHIA
GRAND JUNCTION, COLO.

EXECUTIVE OFFICES & PLANT
221 W. OLIVE STREET
SCRANTON, PA.

SPRAGUE & HENWOOD, INC.

SINCE 1883

CONTRACTORS FOR
DIAMOND DRILLING
SHOT DRILLING · SOIL SAMPLING · PRESSURE GROUTING
WATER WELLS & CHURN DRILLING

PLEASE REPLY TO
P. O. BOX 645
GRAND JUNCTION, COLO.
TELEPHONE 834
CHapel 2-0444

September 3, 1957

Cog Minerals Corporation
727 - 3rd Avenue
Grand Junction, Colorado

Attn: Mr. Ross Seaton

Gentlemen:

In reply to your invitation dated August 13, 1957 we herewith submit our proposal for drilling on DMEA Project White Canyon Area, Utah.

PROPOSAL:

Non-Core Drilling

0 to 100 feet	$2.50/ft.
100 to 200 feet	$2.50/ft.
200 to 300 feet	$2.00/ft.
300 to 400 feet	$2.00/ft.
400 to 500 feet	$2.00/ft.
500 to 600 feet	$2.25/ft.
600 to 700 feet	$2.50/ft.

Core Drilling

0 to 100 feet	$4.00/ft.
100 to 200 feet	$4.00/ft.
200 to 300 feet	$4.00/ft.
300 to 400 feet	$4.25/ft.
400 to 500 feet	$4.25/ft.
500 to 600 feet	$4.50/ft.
600 to 700 feet	$5.00/ft.

Cog Minerals Corporation September 3, 1957

Standby Time . . . . . $12.00/hr. per drill

Drilling in all categories for each additional foot in excess of minimum guarantee of 600 feet shall be performed at a reduction in price of $0.10 per foot or $900.00 for 9,000 feet.

The above proposal is based on performing the work in accordance with specifications dated August 13, 1957.

Very truly yours

R. R. Carver
Western Manager

RRC: nr

SHOP PHONE
CH 2-3260

OFFICE PHONE
CH 2-4768

EVERETT J. EDGAR

CONTRACTOR

1661 DOLORES

GRAND JUNCTION, COLORADO

August 20, 1957

Bulldozer D4 for [illegible] - [illegible] [illegible]

Caterpillar D7 Angle Dozer 81 drawbar horsepower

Moving in set @ $1.00 per mile (277 miles) - - - - - - - - - - - - - - - - - - $277.00
(Grand Junction to Mill Area)

Operating time $12.00 per hour
Minimum guaranteed time of 60 hours - $720.00

Time over 60 hours @ $12.00 per hour

Standby time @ $7.00 per hour

Available anytime after October 5, 1957.

Everett J Edgar

UNITED STATES
ATOMIC ENERGY COMMISSION
GRAND JUNCTION OPERATIONS OFFICE
GRAND JUNCTION, COLORADO

IN REPLY REFER TO: [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] conversation between you [illegible] you requested [illegible] buying stations [illegible] presently operated [illegible] deliveries from these [illegible].

[illegible] requested information, [illegible]:

[illegible]

Very truly yours,

Charles A [illegible]

[illegible] Chief
[illegible] Branch
[illegible] Division

JUN 5 10 00 AM '57

R-3261

AGREEMENT

THIS AGREEMENT, made this 1 day of ~~April~~ May, 1957, between URANIUM KING CORPORATION and TAYLOR URANIUM CORPORATION, parties of the first part, and COG MINERALS CORPORATION, party of the second part. Parties of the first part undertaking jointly and severally as hereinafter set forth are herein together called "Lessor". Party of the second part is hereinafter called "Lessee".

WITNESSETH:

I. Lessor represents as follows:

A. Lessor is the owner, subject to the Outstanding Interests hereinafter set forth, of the following-described mining claims, located in San Juan County, Utah (hereinafter called Mining Properties):

Cove 1 to 44, inclusive, and Gulch 1 to 20, inclusive, said claims being located in the White Canyon Mining District and within the following legal subdivisions when surveyed: Township 36 South, Range 16 East, Part of Section 31; Township 37 South, Range 16 East, Parts of Sections 5, 6, 7 and 8; and Township 37 South, Range 15 East, Part of Section 1; which mining claims were located and are recorded as follows:

Claims	Date of Location	Recording Date	Book	Page
Cove 1 through 44	4-25-54	5-21-54	97	159 through 180
Gulch 1 through 20	5-13-54	5-19-54	95	530 through 540

B. Said claims are valid and existing mining claims free and clear of any adverse claims of which Lessor has knowledge, other than the claim of Mineral Mining Corporation which is now under litigation, and free and clear of any royalties or other burdens other than the following (herein called Outstanding Interests):

1. Interests of "Parties of First Part" under an agreement dated March 10, 1955, between Williston Basin Oil Exploration Company, et al., as "Parties of the First Part" and Hans J. Nielsen, Burnhard Black, Francis D. Nielsen and Uranium King Corporation as "Parties of the Second Part" (hereinafter called the Cairn Channel Agreement).

2. A royalty of 15% of the proceeds received on ore mined from the Mining Properties, including bonuses but excluding development and haulage allowances, which royalty is owned as follows:

Name	Royalty Interest	Mailing Address
Milton C. Nielson	1.25%	Monticello, Utah
E. J. Hall	1.25%	Monticello, Utah
Kenneth Bailey, Jr.	1.25%	Monticello, Utah
Allan E. Mecham	1.125%	351 S. State St., Salt Lake City, Utah
Burnhard Black	3.1875%	Blanding, Utah
Hans J. Nielson	1.59375%	Blanding, Utah
Francis D. Nielson	1.59375%	Blanding, Utah
Barbara Certonio	1.875%	Blanding, Utah
Eugene K. Stephen	1.875%	Rte. 2, Grand Junction, Colorado
Total	15.000%	

II. Lessee represents that subject to certain rights of reversion, as of November 1, 1956, Lessee has succeeded to the rights of the "Parties of the First Part" under said agreement dated March 10, 1955.

III. Lessee has constructed and commenced operations at a mill at its Fry Camp for the upgrading of uranium ores of the White Canyon area, which mill embodies a physical concentration process developed by Lessee. Such mill as it

may from time to time be expanded and the physical concentration process therein as it may from time to time be improved is hereinafter referred to as the Upgrading Mill.

IV. the parties hereto desire to enter into an agreement so as to provide that Lessee may enter upon, mine and operate any or all of the above-described mining claims.

NOW, THEREFORE, in consideration of the sum of Ten Dollars ($10.00) and other valuable consideration, receipt of which is hereby acknowledged by Lessor, and the mutual covenants hereinafter contained, the parties hereto agree as follows:

1. Lease. Subject to the Outstanding Interests, Lessor does hereby lease, let and demise to the Lessee the above-described Mining Properties for the purpose of conducting thereon, at the Lessee's sole cost and expense, exploration, prospecting, development and mining operations for ores, materials and minerals of all kinds, with the right to remove, treat, sell and dispose of the same, and to retain the proceeds therefrom, subject to the further provisions hereof.

2. Payment. Lessee shall pay to Lessor a portion of Lessee's profit from the Mining Properties as follows:

(a) There shall be computed the sum of (i) Lessee's cost of operating the Mining Properties, including [illegible] exploration, development, mining, maintenance, transportation, the equipping of the Mining Properties for such activities, and the construction and maintenance of access roads, mine entries, and other facilities useful in such activities, whether or not such costs shall be capitalized on the books of the Lessee, plus (ii) Lessee's cost of any upgrading in the Upgrading Mill of ore mined from the Mining

Properties before the sale of such ore. In computing such costs, there shall be included the items of expense set forth in Schedule A to this Agreement, all of which shall be apportioned among the Mining Properties and the other properties, if any, operated by Lessee which are benefited by such expenditures in accordance with Lessee's standard accounting practice. It is the intention of the parties that, if the cost of any item of equipment or facilities shall have been included as a cost of operation hereunder, then no subsequent charge shall be made on account of the depreciation of such item, whether or not such item shall have been capitalized on the books of the Lessee.

(b) There shall be determined Lessee's gross receipts from the sale of ore produced from the Mining Properties, including concentrates of ore upgraded by Lessee in the Upgrading Mill. In the case of such ore and concentrates not sold but additionally processed by Lessee or by others under contract with Lessee, gross receipts therefrom shall be deemed to be the greater of (i) the prevailing price at the mill at which the ore shall be additionally processed for ore of similar content or (ii) the price for such ore and concentrates offered by others, less in each case costs of transportation.

(c) Lessee shall pay to the owners of the royalty mentioned in paragraph I-B-2 of the recitals the amounts owing to them on account of ore mined by Lessee from the Mining Properties and such amounts shall be deemed to be a cost of operating the Mining Properties for the purposes of sub-paragraph (a) above.

(d) As of April 30 each year, there shall be computed with respect to the preceding twelve months' period (hereinafter called a contract year) the excess of Lessee's gross receipts, determined in accordance with sub-paragraph (b), over Lessee's cost, determined in accordance with sub-paragraph (a). An amount equal to 40% of such excess shall be paid to Lessor on or about June 15 of such year. Not more than forty-five (45) days following each quarterly period of each contract year, Lessee shall furnish Lessor an accounting with respect to operations during such quarterly period and shall advance to Lessor against subsequent payments to become due hereunder an amount equal to one-quarter (1/4) of the amount estimated to be payable to Lessor with respect to such contract year. Payments becoming due to Lessor hereunder shall be made as follows: 50% to Uranium King Corporation and 50% to Taylor Uranium Corporation, except, however, that all payments for ore mined up to and including September 13, 1959, from Cove Claims Nos. 17, 18, 23 and 24 shall be paid 100% to Uranium King Corporation. The addresses to which such payments shall be mailed shall, unless Lessee shall be otherwise notified in writing by the party to whom such payment is due, be:

Uranium King Corporation	320 Ness Building Salt Lake City 1, Utah
Taylor Uranium Corporation	320 Ness Building Salt Lake City 1, Utah

3. Term. This agreement shall continue in full force and effect for a period of fifty (50) years unless sooner terminated in accordance with the provisions of paragraph 4; provided, however, that Lessee may terminate this Agreement at any time on thirty (30) days' written notice to the Lessor.

4. Minimum Expenditure. If Lessee's expenditures upon operating the Mining Properties and upgrading ores therefrom, determined as costs in accordance with paragraph 2(a) above, shall, during the first five contract years, be less than $50,000 per year, and thereafter less than $25,000 per year, Lessor may, by written notice to Lessee within sixty (60) days following such contract year, terminate this Agreement, subject, however, to the provisions of paragraph 5 below.

5. Use of Mine for Benefit of Other Properties. Lessee may drive tunnels, shafts and inclines through the Mining Properties onto other properties owned or leased by Lessee and may use such tunnels, shafts and inclines for the purpose of access to and removal of ore mined from such other properties. Lessee's right to use such tunnels, shafts and inclines entering such other properties shall continue following the expiration or termination of this Agreement, and Lessor shall, upon request by Lessee, grant to Lessee a permanent easement in writing for this purpose; provided, however, that following the expiration or termination of this Agreement, Lessor and Lessee shall have an equal right to use such tunnels, shafts and inclines and shall conduct their operations so that the use by each shall not unreasonably interfere with the use thereof by the others. As consideration for the right to use such tunnels, shafts and inclines, Lessee shall pay Lessor a charge following the expiration or termination of this Agreement determined, mutatis mutandis, in accordance with the last sentence of Item 5 of Schedule A attached hereto. This Agreement shall not apply to ore mined from such other properties.

6. Removable Facilities. All equipment and machinery now on or hereafter constructed or brought upon the Mining Properties by Lessee shall remain property of Lessee, and Lessee may remove same from said Mining Properties at any time during the term of this Agreement or within a reasonable time

thereafter so long as Lessee shall not damage any of the workings or property herein leased in removing said property. Timber placed in any of the mine workings may not be removed without the written consent of Lessor.

7. Inspection, Records. Lessor or its duly authorized agents may at any reasonable time enter upon the Mining Properties for purposes of inspection. Lessee shall maintain complete books and records of its operation of the Mining Properties, reflecting all costs and receipts and payments made or due Lessor hereunder, and Lessor shall have the right at any reasonable time to inspect such books and records.

8. Government Payments and Loans. Lessor shall take any necessary action to notify mills and buying stations to pay all proceeds from ore produced from the Mining Properties directly to Lessee. Upon Lessee's request, Lessor will cooperate with Lessee in obtaining any DMEA loan or AEC bonus or allowance which may be obtainable on the Mining Properties or the ore mined therefrom during the term of this Agreement, and Lessor agrees that the amount thereof shall be paid to Lessee. For the purposes of paragraph 2, the amount of any DMEA loan or any AEC bonus or allowance received by Lessee shall be included in "gross receipts" and any royalty payable to DMEA shall be included as a cost of operating the Mining Properties.

9. Assessment Work. Lessee shall perform all necessary assessment work required by the laws of the United States of America and the State of Utah on or for the benefit of all unpatented mining claims covered hereby, beginning with the assessment year ending June 30, 1957, and shall file Proofs of Labor and post the same as required by law on or before May 30 of each assessment year during the term of this Agreement.

10. Adverse Claims. In the event any third party should assert a claim of ownership or interest in any of the Mining Properties covered hereby, then, for the period until such adverse claim has been finally resolved in favor of Lessor, Lessee will pay into escrow pending settlement of such claim, at the Walker Bank and Trust Company, Salt Lake City, Utah, any payments which may be due Lessor hereunder on ore mined from that part of the Mining Properties as to which such adverse claim is asserted and the provisions of paragraph 4 hereof shall not apply. Lessor shall indemnify and hold Lessee harmless from any liability to any third party (other than owners of the Outstanding Interests) which may arise by reason of such third party's owning or claiming to own an interest in the Mining Properties. Unless Lessee shall hold such adverse claim, Lessee shall have the right, but not the obligation, in the event Lessor shall not promptly undertake the defense of such claim to defend any such claim and, in the event Lessor shall so undertake to defend such claim, to join in such defense in the name of Lessor and to charge as a cost of operating the Mining Properties under paragraph 2(a) hereof all costs and expenses of Lessee's participation in such defense litigation, including actual expenses of securing evidence. The foregoing provisions of this paragraph 10 shall not apply with respect to the above-mentioned claim of Mineral Mining Corporation but, as to such claim, Lessee shall have the right to assist Lessor in the litigation of said claim.

11. Insurance. Lessee agrees to carry workmen's compensation insurance for all persons employed by Lessee in accordance with the laws of the State of Utah, and to carry and pay all social security taxes, unemployment insurance or other taxes or assessments required by the State of Utah and the United States. Lessee shall carry liability insurance in reasonable amounts satisfactory to Lessor, fully protecting Lessor from liability for damages arising from injuries to persons

or property inflicted by Lessee in the course of its operations hereunder.

12. Taxes. Lessee shall pay all sales taxes upon the sale of ores, and any severance taxes, or taxes upon ore mined, moved or blocked out, mineral right taxes, production and/or depletion taxes during the term of this Agreement.

13. Cairn Channel Agreement. This Agreement shall not affect the rights of the parties to the Cairn Channel Agreement. However, notwithstanding Lessee's rights as successor to Parties of First Part under the Cairn Channel Agreement, during the term of this Agreement:

(a) All operations of the Mining Properties and all accounting with respect to ore mined therefrom shall be in accordance with the terms of this Agreement;

(b) If Lessee performs its obligations hereunder Lessor shall not claim any default by Parties of the First Part of their obligations under the Cairn Channel Agreement with respect to the period of this Agreement. Lessor reserves the right to assert any rights against parties to the Cairn Channel Agreement other than Lessee with respect to nonperformance of their obligations under that Agreement except nonperformance during the term of this Agreement.

(c) Lessee agrees not to claim any moneys to be due to it and not to sue Lessee on account of any rights to which it may be entitled under the Cairn Channel Agreement.

(d) Lessee shall, in accordance with its standard accounting practice, keep separate accounts with respect to operations hereunder which are covered by the Cairn Channel Agreement so that, in the event of the reversion or reassignment of said agreement to Lessee's

predecessor in interest therein the rights of the parties with respect to the period of operations hereunder may be determined in accordance with the provisions of the Cairn Channel Agreement.

14. Existing Entry. Lessee shall be entitled to charge as a cost of operating the Mining Properties under paragraph 2(a) hereof an amount of $8,500 per year during each of the first five contract years which shall be in lieu of all other charges for depreciation of the present mine entry and the tracks, hoist and related facilities now in use at the entry now on the Mining Properties.

15. Mining Practice. Lessee shall enter upon the Mining Properties and work the same in a manner necessary to good and economical mining, so as to take out the greatest amount of ore possible with due regard to the development and preservation of the same as a workable mine. Lessee shall at all times keep the drifts, shafts, tunnels and other workings well drained and clear of loose rock and rubbish, muck or other debris, unless prevented by extraordinary mining casualty.

16. Default. In the event that Lessee shall default any of its obligations hereunder and such default shall continue for a period of sixty (60) days following written notice thereof to Lessee, this Agreement shall, at the option of Lessor to be exercised in writing within thirty (30) days, expire. Thereupon, subject to the provisions of paragraph 6, Lessee shall promptly deliver the Mining Properties to Lessor in good order and condition with all drifts, shafts, tunnels and other passages clear of loose rock and rubbish, and drained and the mine ready for immediate continued working (accident not arising from negligence alone excusing) without demand or further notice.

17. Acquisition of Royalty. In the event any of the royalty mentioned in paragraph I-B-2 of the recitals shall be acquired by Lessor (or either

thereof) such royalty shall be held in abeyance during the term of this Agreement and no amount shall be payable in accordance with paragraph 2(c) hereof on account of royalty so acquired.

18. Assignment. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns provided that Lessee shall not assign this Agreement without the consent of Lessor except to an assignee financially able to perform this Agreement in accordance with its terms.

EXECUTED as of the day and year first above written.

ATTEST:

Secretary

URANIUM KING CORPORATION

By

President

ATTEST:

Secretary

TAYLOR URANIUM CORPORATION

By

President

ATTEST:

Secretary

COG MINERALS CORPORATION

By

Vice President

STATE OF Colorado)
COUNTY OF Denver) ss.

BE IT REMEMBERED that on this 24th day of April, 1957, before me, the undersigned, a Notary Public, duly commissioned, in and for the county and state aforesaid, came Clay Sutton, as President of URANIUM KING CORPORATION, a corporation of the State of Utah, personally known to me to be such officer, and to be the same person who executed as such officer the foregoing instrument of writing in behalf of said corporation, and he duly acknowledged the execution of the same for himself and for said corporation for the uses and purposes therein set forth.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal on the year last above written.

Esther A. Olson
Notary Public

My commission expires:
My Commission expires February 14, 1959

STATE OF Utah)
COUNTY OF Salt Lake) ss.

BE IT REMEMBERED that on this 2ND day of MAY, 1957, before me, the undersigned, a Notary Public, duly commissioned, in and for the county and state aforesaid, came GEORGE TAYLOR, as VICE-President of TAYLOR URANIUM CORPORATION, a corporation of the State of DELAWARE, personally known to me to be such officer, and to be the same person who executed as such officer the foregoing instrument of writing in behalf of said corporation, and he duly acknowledged the execution of the same for himself and for said corporation for the uses and purposes therein set forth.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal on the year last above written.

Notary Public

My commission expires:
January 23 1958

STATE OF Colorado)
COUNTY OF Denver) ss.

BE IT REMEMBERED that on this 6th day of May, 1957, before me, the undersigned, a Notary Public, duly commissioned, in and for the county and state aforesaid, came J. S. Nixon, as Vice President of COG MINERALS CORPORATION, a corporation of the State of Delaware, personally known to me to be such officer, and to be the same person who executed as such officer the foregoing instrument of writing in behalf of said corporation, and he duly acknowledged the execution of the same for himself and for said corporation for the uses and purposes therein set

IN WITNESS WHEREOF, I have hereunto set my hand and official seal on the day and year last above written.

My commission expires: My Commission expires February 14, 1959

Esther A. Olson
Notary Public

SCHEDULE "A"

OPERATING CHARGES

Subject to limitations hereinafter prescribed, Lessee (Operator) shall charge as costs the following items:

1. Labor and Related Charges

   A. Salaries and wages of Operator's employees directly engaged in operating the Mining Properties, including salaries or wages paid to geologists, engineers, and other employees who are temporarily assigned to and directly employed thereon.

   B. Operator's cost of holiday, vacation, sickness and disability benefits, life insurance, retirement and other benefit plans, and other customary allowances applicable to the salaries and wages chargeable.

   C. Costs of expenditures or contributions made pursuant to assessments imposed by governmental authority which are applicable to Operator's labor cost of salaries and wages.

2. Equipment and Material

   Equipment, material, and supplies purchased or furnished by Operator for use on the Mining Properties. So far as it is reasonably practical and consistent with efficient and economical operation, only such material shall be purchased or transferred as may be required for immediate use; and the accumulation of surplus stocks shall be avoided.

3. Transporation

   Transporation of employees, equipment, ore, waste and other materials and supplies necessary for the operation of the Mining Properties.

4. Outside Services, Equipment and Facilities

   The cost of contract services, utilities, equipment and facilities procured from outside sources.

5. Operator's Equipment and Facilities

   Use of and service by equipment and facilities of Operator the cost of which shall not have been charged as an operating cost under the Agreement, at a fair rate which shall be ample to cover the cost of ownership and operation, including, without limitation, repairs and maintenance, operating supplies, insurance, research, depreciation, taxes, and labor and related charges and expenses of Operator. In determining charges for upgrading ore mined from

the Mining Properties, costs shall be allocated according to the tons of ore fed to the upgrading process. In determining charges for the use of tunnels, shafts and inclines located on properties other than the Mining Properties, through which the Mining Properties shall be mined, costs shall be limited to costs of operation plus amortization of the cost of such tunnel, shaft or incline, as the case may be, less the value of any ore mined therefrom in the course of driving the same, and such costs shall be allocated according to the tons of material moved through such tunnel, shaft or incline.

6. Damages and Losses to Property and Equipment

All costs or expenses necessary to replace or repair damages or losses incurred by fire, flood, storm, theft, accident, or any other cause not controllable by Operator through the exercise of reasonable diligence.

7. Taxes

All taxes of every kind and nature assessed or levied upon or in connection with the Mining Properties, the production therefrom or the operation thereof.

8. Insurance and Claims

Premiums paid for insurance carried with respect to the Mining Properties or the operations referred to in this Agreement, together with all expenditures incurred and paid in settlement of any and all losses, claims, damages, judgments, and other expenses, including legal services, not recovered from insurance carrier.

9. District and Camp Expense (Field Supervision and Camp Expense)

A pro rata portion of the salaries and expenses of Operator's production superintendent and other employees serving the Mining Properties and other properties of the Operator in the same operating area, whose time is not allocated directly to the Mining Properties, and a pro rata portion of the cost of maintaining and operating a production office known as Operator's Fry Camp Office, and all necessary camps, including housing facilities for employees if required, used in the conduct of the operations on the Mining Properties and other properties operated in the same locality. The expense of, less any revenue from, these facilities shall be inclusive of depreciation or a fair monthly rental in lieu of depreciation on the investment. Such charges shall be apportioned to all properties served on an equitable basis consistent with Operator's accounting practice.

10. Administrative Overhead

Operator shall assess the following management and administrative overhead charges, which shall be in lieu of all expenses of all offices of the Operator not covered by paragraph 9 above, including salaries and expenses of personnel assigned to such offices, except that salaries of geologists and

other employees of Operator who are temporarily assigned to and directly serving on the Mining Properties will be charged as provided in paragraph 1 above. Salaries and expenses of other technical employees assigned to such offices will be considered as covered by overhead charges in this paragraph unless charges for such salaries and expenses are agreed upon between Operator and Non-Operator as a direct charge to the Mining Properties:

15% of the sum of all other operating costs chargeable in accordance with this Schedule A.

11. Other Expenditures

Any other expenditure incurred by the Operator for the necessary and proper conduct of operations under the Agreement.

Entry No. P 3261 247
Recorded 6-5-57 At 10:00 a M. Book 172 Page 261
FEE PAID
ARVILLA E. WARREN.
San Juan County Recorder
29.40 By [illegible] Deputy

OFFICIAL FILE COPY
D M E A
RECEIVED OCT 16 1957

DATE	[illegible]	CODE

Jun 17 9 19 AM '57

#1,3.00

R-3824

A G R E E M E N T

THIS AGREEMENT, made this 29th day of April, 1957, between BULLSEYE URANIUM CORPORATION, hereinafter called "Lessor", and COG MINERALS CORPORATION, hereinafter called "Lessee",

WITNESSETH:

WHEREAS, Lessor represents it is the owner of the following described mining claims, located in San Juan County, Utah (hereinafter called Mining Properties), which claims are described by name and recorded in the official records of San Juan County as follows:

Name	Location Date	Recording Date	Book	Page
Bullseye Nos. 1-15, incl.	4-8-54	4-29-54	87	91 et seq.
Bullseye No. 16	6-14-54	7-3-54	121	394

and which claims other than Bullseye No. 16 Lessor represents are valid and existing mining claims free and clear of any adverse claims, royalties or other burdens; and

WHEREAS, the parties hereto desire to enter into an agreement so as to provide that Lessee may enter upon, mine and operate any or all of the above-described mining claims, subject to the terms and conditions hereinafter set forth; and

WHEREAS, Lessee has constructed and commenced operations at a mill at its Fry Camp for the upgrading of uranium ores of the White Canyon area, which mill embodies a physical concentration process developed by Lessee. Such mill as it may from time to time be expanded and the physical concentration process therein as it may from time to time be improved is hereinafter referred to as the Upgrading Mill;

NOW, THEREFORE, in consideration of the sum of Ten Dollars ($10.00) and other valuable consideration, receipt of which is hereby acknowledged by

Lessor, and the mutual covenants hereinafter contained, the parties hereto agree as follows:

1. Lease. Lessor does hereby lease, let and demise to the Lessee the above-described Mining Properties for the purpose of conducting thereon, at the Lessee's sole cost and expense, exploration, prospecting, development and mining operations for ores, materials and minerals of all kinds, with the right to remove, treat, sell and dispose of the same, and to retain the proceeds therefrom, subject to the further provisions hereof.

2. Payment. Lessee shall pay to Lessor a portion of Lessee's profit from the Mining Properties as follows:

(a) There shall be computed the sum of (i) Lessee's cost of operating the Mining Properties, including without limitation exploration, development, mining, maintenance, transportation, the equipping of the Mining Properties for such activities, and the construction and maintenance of access roads, mine entries, and other facilities useful in such activities, whether or not such costs shall be capitalized on the books of the Lessee, plus (ii) Lessee's cost of any upgrading in the Upgrading Mill of ore mined from the Mining Properties before the sale of such ore. In computing such costs, there shall be included the items of expense set forth in Schedule A to this Agreement, all of which shall be apportioned in accordance with Lessee's standard accounting practice.

(b) There shall be determined Lessee's gross receipts from the sale of ore produced from the Mining Properties, including concentrates of ore upgraded by Lessee in the Upgrading Mill which, in the case of such ore and concentrates not sold but additionally processed by Lessee or by others under contract with Lessee, shall be deemed to be the prevailing price at the mill at which the ore shall be additionally processed for ore of similar content.

(c) As of April 30 each year, there shall be computed with respect to the preceding twelve months' period (hereinafter called a contract year) an amount equal to forty per cent times the excess of Lessee's gross receipts, determined in accordance with subparagraph (b), over Lessee's cost, determined in accordance with subparagraph (a). On or about June 15 of such year, the amount so computed, if it shall be $100,000 or less, shall be paid to Lessor. If the amount so computed shall exceed $100,000, then the amount to be paid Lessor with respect to the preceding contract year shall be $100,000 plus 70% of such excess until Lessee shall have reimbursed itself, out of the 30% of the excess retained each year, a total of $282,000.00 minus earned royalty accrued and credited to Lessor's account through April 30, 1957, under the agreement referred to in Paragraph 13 of this Agreement.

3. Term. This agreement shall continue in full force and effect for a period of fifty (50) years unless sooner terminated in accordance with the provisions of paragraph 4; provided, however, that Lessee may terminate this Agreement at any time on thirty (30) days' written notice to the Lessor.

4. Minimum Expenditure. If Lessee's expenditures upon operating the Mining Properties and upgrading ores therefrom, determined as costs in accordance with paragraph 2(a) above, shall, during the first five contract years, be less than $100,000 per year, and thereafter less than $25,000 per year, Lessor may, by written notice to Lessee within sixty (60) days following such contract year, terminate this Agreement, subject, however, to the provisions of paragraph 5 below.

5. Use of Mine for Benefit of Other Properties. Lessee may drive tunnels or drifts through the Mining Properties onto other properties owned or

leased by Lessee and may use such tunnels or drifts for the purpose of access to and removal of ore mined from such other properties. Lessee's right to use such tunnels or drifts entering such other properties shall continue following the expiration or termination of this Agreement, and Lessor shall, upon request by Lessee, grant to Lessee a permanent easement in writing for this purpose; provided, however, that following the expiration or termination of this Agreement, Lessee shall have the right to use such tunnels and drifts only to the extent that such use does not unreasonably interfere with the use of such tunnels and drifts by Lessor. This Agreement shall not apply to ore mined from such other properties.

6. Removable Facilities. All equipment and machinery now on or hereafter constructed or brought upon the Mining Properties by Lessee shall remain property of Lessee, and Lessee may remove same from said Mining Properties at any time during the term of this Agreement or within a reasonable time thereafter. Timber placed in any of the mine workings may not be removed without the written consent of Lessor.

7. Inspection, Records. Lessor or its duly authorized agents may at any reasonable time enter upon the Mining Properties for purposes of inspection. Lessee shall maintain complete books and records of its operation of the Mining Properties, reflecting all costs and receipts and payments made or due Lessor hereunder, and Lessor shall have the right at any reasonable time to inspect such books and records and to observe methods employed in the sampling of ore. Lessee shall furnish copies of all mill return sheets to Lessor.

8. Government Payments and Loans. Lessor shall take any necessary action to notify mills and buying stations to pay all proceeds from ore produced

from the Mining Properties directly to Lessee. Upon Lessee's request, Lessor will cooperate with Lessee in obtaining any DMEA loan or AEC bonus or allowance which may be obtainable on the Mining Properties or the ore mined therefrom during the term of this Agreement, and Lessor agrees that the amount thereof shall be paid to Lessee. For the purposes of paragraph 2, the amount of any DMEA loan or any AEC bonus or allowance received by Lessee shall be included in "gross receipts" and any royalty payable to DMEA shall be included as a cost of operating the Mining Properties.

9. Assessment Work. Lessee shall perform all necessary assessment work required by the laws of the United States of America and the State of Utah on or for the benefit of all unpatented mining claims covered hereby, beginning with the assessment year ending June 30, 1957, and shall file Proofs of Labor on or before May 30 of each assessment year during the term of this Agreement.

10. Adverse Claims. In the event any third party should assert a claim of ownership or interest in any of the Mining Properties covered hereby, then, for the period until such adverse claim has been finally resolved in favor of Lessor, Lessee may retain any payments which may be due Lessor hereunder on ore mined from that part of the Mining Properties as to which such adverse claim is asserted and the provisions of paragraph 4 hereof shall not apply. In the event Lessor shall not promptly undertake the defense of any claim adverse to the Mining Properties, Lessee shall have the right, but not the obligation, in the name of Lessor to defend any such claim and to charge as a cost of operating the Mining Properties under paragraph 2(a) hereof all costs and expenses of litigation, including actual expenses of securing evidence.

11. Insurance. Lessee agrees to carry workmen's compensation insurance for all persons employed by Lessee in accordance with laws of the State of

Utah, and to carry and pay all social security taxes, unemployment insurance or other taxes or assessments required by the State of Utah and the United States. Lessee shall carry liability insurance in reasonable amounts satisfactory to Lessor, fully protecting Lessor from liability for damages arising from injuries to persons or property inflicted by Lessee in the course of its operations hereunder, and to furnish proof of said insurance to Lessor.

12. Taxes. Lessee shall pay all sales taxes upon the sale of ores, and any severance taxes, or taxes upon ore mined, moved or blocked out, mineral right taxes, production and/or depletion taxes during the term of this Agreement.

13. Termination of Prior Agreement. The parties hereto agree that that certain lease agreement dated March 14, 1956, between Bullseye Uranium Corporation, as Lessor, and Midwest Consolidated Uranium Corporation, as Lessee, relating to the Mining Properties, under which lease COG Minerals Corporation has succeeded to the rights of the Lessee, is hereby terminated without further obligation or liability on the part of either party thereto. Upon termination of this Agreement Lessor shall enjoy the right to use the present Spook entry for twelve hours each day.

14. Default. In the event that Lessee shall default any of its obligations hereunder and such default shall continue for a period of sixty (60) days following written notice thereof to Lessee, this Agreement shall, at the option of Lessor to be exercised in writing within thirty (30) days expire. Thereupon, subject to the provisions of paragraph 6, Lessee shall promptly deliver the Mining Properties to Lessor in good order and condition with all drifts, shafts, tunnels and other passages clear of loose rock and rubbish, and drained and the mine ready for immediate continued working

(accident not arising from negligence alone excusing) without demand or further notice.

15. Assignment. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns provided that Lessee shall not assign this Agreement without the consent of Lessor except to an assignee financially able to perform this Agreement in accordance with its terms.

EXECUTED as of the day and year first above written.

BULLSEYE URANIUM CORPORATION

Secretary

By Donald V. Blake
President

ATTEST:

Secretary

COG MINERALS CORPORATION

By J. Mason
Vice President

STATE OF Utah)
) SS
COUNTY OF San Juan)

BE IT REMEMBERED that on this 7th day of May, 1957, before me, the undersigned, a Notary Public, duly commissioned, in and for the county and state aforesaid, came Donald V. Blake, as the President of BULLSEYE URANIUM CORPORATION, a corporation of the State of Utah, personally known to me to be such officer, and to be the same person who executed as such officer the foregoing instrument of writing in behalf of said corporation, and he duly acknowledged the execution of the same for himself and for said corporation for the uses and purposes therein set forth.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal on the day and year last above written.

Eleanor E. Stewart
Notary Public
residing at Monticello Utah

My commission expires:
[illegible]

STATE OF COLORADO)
) SS
COUNTY OF Denver)

BE IT REMEMBERED that on this 1st day of May, 1957, before me, the undersigned, a Notary Public, duly commissioned, in and for the county and state aforesaid, came J. H. Nason, as Vice President of COG MINERALS CORPORATION, a corporation of the State of Delaware, personally known to me to be such officer, and to be the same person who executed as such officer the foregoing instrument of writing in behalf of said corporation, and he duly acknowledged the execution of the same for himself and for said corporation for the uses and purposes therein set forth.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal on the day and year last above written.

Esther A. Olson
Notary Public
residing at Denver, Colorado

My commission expires:
My Commission expires February 14, 1957

SCHEDULE "A"

OPERATING CHARGES

Subject to limitations hereinafter prescribed, Lessee (Operator) shall charge as costs the following items:

1. Labor and Related Charges

   A. Salaries and wages of Operator's employees directly engaged in operating the Mining Properties, including salaries or wages paid to geologists, engineers, and other employees who are temporarily assigned to and directly employed thereon.

   B. Operator's cost of holiday, vacation, sickness and disability benefits, life insurance, retirement and other benefit plans, and other customary allowances applicable to the salaries and wages chargeable.

   C. Costs of expenditures or contributions made pursuant to assessments imposed by governmental authority which are applicable to Operator's labor cost of salaries and wages.

2. Equipment and Material

   Equipment, material, and supplies purchased or furnished by Operator for use on the Mining Properties. So far as it is reasonably practical and consistent with efficient and economical operation, only such material shall be purchased or transferred as may be required for immediate use; and the accumulation of surplus stocks shall be avoided.

3. Transportation

   Transportation of employees, equipment, ore, waste and other materials and supplies necessary for the operation of the Mining Properties.

4. Outside Services, Equipment and Facilities

   The cost of contract services, utilities, equipment and facilities procured from outside sources.

5. Operator's Equipment and Facilities

   Use of and service by equipment and facilities of Operator the cost of which shall not have been charged as an operating cost under the Agreement, at a fair rate which shall be ample to cover the cost of ownership and operation, including, without limitation, repairs and maintenance, operating supplies, insurance, research, depreciation, taxes, and labor and related charges and expenses of Operator. In determining charges for upgrading ore mined from the Mining Properties, costs shall be allocated according to the tons of ore fed to the upgrading process.

6. Damages and Losses to Property and Equipment

   All costs or expenses necessary to replace or repair damages or losses incurred by fire, flood, storm, theft, accident, or any other cause not controllable by Operator through the exercise of reasonable diligence.

Entry No. P 3824 159
Recorded 6-17-57 At 9 M. Book 174 Page 168
FEE PAID
ARVILLA E. WARREN
San Juan County Recorder
$13.00 By ..... Deputy

COG MINERALS CORPORATION
Denver Club Building
Denver 1, Colorado

7. Taxes

All taxes of every kind and nature assessed or levied upon or in connection with the Mining Properties, the production therefrom or the operation thereof.

8. Insurance and Claims

Premiums paid for insurance carried with respect to the Mining Properties or the operations referred to in this Agreement, together with all expenditures incurred and paid in settlement of any and all losses, claims, damages, judgments, and other expenses, including legal services, not recovered from insurance carrier.

9. District and Camp Expense (Field Supervision and Camp Expense)

A pro rata portion of the salaries and expenses of Operator's production superintendent and other employees serving the Mining Properties and other properties of the Operator in the same operating area, whose time is not allocated directly to the Mining Properties, and a pro rata portion of the cost of maintaining and operating a production office known as Operator's Fry Camp Office, and all necessary camps, including housing facilities for employees if required, used in the conduct of the operations on the Mining Properties and other properties operated in the same locality. The expense of, less any revenue from, these facilities shall be inclusive of depreciation or a fair monthly rental in lieu of depreciation on the investment. Such charges shall be apportioned to all properties served on an equitable basis consistent with Operator's accounting practice.

10. Administrative Overhead

Operator shall assess the following management and administrative overhead charges, which shall be in lieu of all expenses of all offices of the Operator not covered by Paragraph 9, above, including salaries and expenses of personnel assigned to such offices, except that salaries of geologists and other employees of Operator who are temporarily assigned to and directly serving on the Mining Properties will be charged as provided in Paragraph 1, above. Salaries and expenses of other technical employees assigned to such offices will be considered as covered by overhead charges in this paragraph unless charges for such salaries and expenses are agreed upon between Operator and Non-Operator as a direct charge to the Mining Properties:

15% of the sum of all other operating costs.

11. Amortization of Bullseye #2 Entry

Twenty per cent of the cost of the Bullseye #2 Entry heretofore incurred by Operator, $75,960, shall be charged against operations in each of the first five contract years.

12. Other Expenditures

Any other expenditure incurred by the Operator for the necessary and proper conduct of operations under the Agreement.

OFFICIAL FILE COPY
D M E A
RECEIVED OCT 16 1957

DATE	INITIALS	CODE

A G R E E M E N T

THIS AGREEMENT, made this 1st day of June, 1957, between FRANCIS D. NIELSON and JOSEPH E. SHERMAN, parties of the first part, and COG MINERALS CORPORATION, party of the second part. Parties of the first part undertaking jointly and severally as hereinafter set forth are herein together called "Lessor". Party of the second part is hereinafter called "Lessee".

WITNESSETH:

I. Lessor represents as follows:

A. Lessor is the sole owner of the following described mining claims located in the White Canyon area of San Juan County, Utah (hereinafter called Mining Properties):

Claims	Date of Location	Recording Date	Book	Page
Gift 1 through 3	3-11-56	4-5-56	100	45 and 46
Jo 1 through 7	4-10-56	4-16-56	100	318 through 321

B. Said claims are valid and existing mining claims free and clear of any adverse claims of which Lessor has knowledge, other than areas of conflict or overlap with the Bullseye claims, and Lessor hereby acknowledges that all of the Bullseye claims numbered 1 through 15 were located prior to and are superior in all respects to the Gift and Jo claims described above with respect to any such areas of conflict or overlap.

II. Lessee has constructed and commenced operations at a mill at its Fry Camp for the upgrading of uranium ores of the White Canyon area, which mill embodies a physical concentration process developed by Lessee. Such mill as it may from time to time be expanded and the physical concentration process therein as it may from time to time be improved is hereinafter referred to as the Upgrading Mill.

III. The parties hereto desire to enter into an agreement so as to provide that Lessee may enter upon, mine and operate any or all of the above-described mining claims.

NOW, THEREFORE, in consideration of the sum of Ten Dollars ($10.00) and other valuable consideration, receipt of which is hereby acknowledged by Lessor, and the mutual covenants hereinafter contained, the parties hereto agree as follows:

1. Lease. Lessor does hereby lease, let and demise to the Lessee the above-described Mining Properties for the purpose of conducting thereon, at Lessee's discretion and at Lessee's sole cost and expense, exploration, prospecting, development and mining operations for ores, materials and minerals of all kinds, with the right to remove, treat, sell and dispose of the same, and to retain the proceeds therefrom subject to the further provisions hereof.

2. Payment. Lessee shall pay to Lessor a portion of Lessee's profit from the Mining Properties as follows:

(a) There shall be computed the sum of (i) Lessee's cost of operating the Mining Properties, including exploration, development, mining, maintenance, transportation, the equipping of the Mining Properties for such activities, and the construction and maintenance of access roads, mine entries, and other facilities useful in such activities, whether or not such costs shall be capitalized on the books of the Lessee, plus (ii) Lessee's cost of any upgrading in the Upgrading Mill of ore mined from the Mining Properties before the sale of such ore. In computing such costs, there shall be included the items of expense set forth in Schedule A to this Agreement, all of which shall be apportioned among the Mining Properties and the other properties, if any, operated by

Lessee which are benefited by such expenditures in accordance with Lessee's standard accounting practice. It is the intention of the parties that, if the cost of any item of equipment or facilities shall have been included as a cost of operation hereunder, then no subsequent charge shall be made on account of the depreciation of such item, whether or not such item shall have been capitalized on the books of the Lessee.

(b) There shall be determined Lessee's gross receipts from the sale of ore produced from the Mining Properties, including concentrates of ore upgraded by Lessee in the Upgrading Mill. In the case of such ore and concentrates not sold but additionally processed by Lessee or by others under contract with Lessee, gross receipts therefrom shall be deemed to be the greater of (i) the prevailing price at the mill at which the ore shall be additionally processed for ore of similar content or (ii) the price for such ore and concentrates offered by others, less in each case costs of transportation.

(c) As of April 30 each year, there shall be computed with respect to the preceding twelve months' period, or shorter period as to April 30, 1958 (hereinafter called a contract year) the excess of Lessee's gross receipts, determined in accordance with sub-paragraph (b), over Lessee's cost, determined in accordance with sub-paragraph (a). An amount equal to 40% of such excess shall be paid to Lessor on or about June 15 of such year. Not more than forty-five (45) days following each quarterly period of each contract year, Lessee shall furnish Lessor an accounting with respect to operations during such quarterly period and shall advance to Lessor against subsequent payments to become due hereunder an amount equal to one-quarter (1/4) of the amount estimated

to be payable to Lessor with respect to such contract year. Payments becoming due to Lessor hereunder shall be made as follows: 50% to Francis D. Nielson and 50% to Joseph E. Sherman. The addresses to which such payments shall be mailed shall, unless Lessee shall be otherwise notified in writing by the party to whom such payment is due, be:

Francis D. Nielson — BLANDING, UTAH ~~300 Ness Building~~ ~~Salt Lake City 1, Utah~~ J.E.S.

Joseph E. Sherman — 221 B STREET ~~300 Ness Building~~ Salt Lake City 1, Utah J.E.S.

3. Other Payments. Concurrently with the execution of this Agreement, Lessee has paid Lessor the sum of Three Thousand Dollars ($3,000), receipt of which is hereby acknowledged by Lessor. Lessee agrees to pay Lessor the additional sum of $3,000 on or before April 30 of each of the next succeeding four years while this Agreement is in effect but in no event shall such additional sums to be so paid exceed in the aggregate Twelve Thousand Dollars ($12,000), provided however, at such time as Lessee may commence mining operations on the Mining Properties, Lessee shall pay to Lessor the difference, if any, between $15,000 and the sum of all payments previously made to Lessor pursuant to this paragraph 3. All money paid Lessor under the provisions of this paragraph 3 (except the $3,000 paid on execution hereof) shall be deducted from any money subsequently payable to Lessor under the provisions of paragraph 2 above.

4. Term. This Agreement shall continue in full force and effect for a period of fifty (50) years; provided, however, that Lessee may terminate this Agreement at any time on thirty (30) days' written notice to the Lessor after which the parties hereto shall have no further obligations hereunder not previously accrued.

5. Use of Mine for Benefit of Other Properties. Lessee may drive tunnels, shafts and inclines through the Mining Properties onto other proper-

ties owned or leased by Lessee and may use such tunnels, shafts and inclines for the purpose of access to and removal of ore mined from such other properties. Lessee's right to use such tunnels, shafts and inclines entering such other properties shall continue following the expiration or termination of this Agreement, and Lessor shall, upon request by Lessee, grant to Lessee a permanent easement in writing for this purpose; provided, however, that following the expiration or termination of this Agreement, Lessor and Lessee shall have an equal right to use such tunnels, shafts and inclines and shall conduct their operations so that the use by each shall not unreasonably interfere with the use thereof by the others. As consideration for the right to use such tunnels, shafts and inclines, Lessee shall pay Lessor a charge following the expiration or termination of this Agreement determined, mutatis mutandis, in accordance with the last sentence of Item 5 of Schedule A attached hereto. This Agreement shall not apply to ore mined from such other properties.

6. Removable Facilities. All equipment and machinery now on or hereafter constructed or brought upon the Mining Properties by Lessee shall remain property of Lessee, and Lessee may remove same from said Mining Properties at any time during the term of this Agreement or within a reasonable time thereafter so long as Lessee shall not damage any of the workings or property herein leased in removing said property. Timber placed in any of the mine workings may not be removed without the written consent of Lessor.

7. Inspection, Records. Lessor or its duly authorized agents may at any reasonable time enter upon the Mining Properties for purposes of inspection. Lessee shall maintain complete books and records of its operation of the Mining Properties, reflecting all costs and receipts and payments made or due Lessor hereunder, and Lessor shall have the right at any reasonable time to inspect such books and records.

8. Government Payments and Loans. Lessor shall take any necessary action to notify mills and buying stations to pay all proceeds from ore produced from the Mining Properties directly to Lessee. Upon Lessee's request, Lessor will cooperate with Lessee in obtaining any DMEA loan or AEC bonus or allowance which may be obtainable on the Mining Properties or the ore mined therefrom during the term of this Agreement, and Lessor agrees that the amount thereof shall be paid to Lessee. For the purposes of paragraph 2, the amount of any DMEA loan or any AEC bonus or allowance received by Lessee shall be included in "gross receipts" and any royalty payable to DMEA shall be included as a cost of operating the Mining Properties.

9. Assessment Work. Lessee shall perform all necessary assessment work required by the laws of the United States of America and the State of Utah on or for the benefit of all unpatented mining claims covered hereby, beginning with the assessment year ending June 30, 1957, and shall file Proofs of Labor and post the same as required by law on or before June 30 of each assessment year during the term of this Agreement.

10. Adverse Claims. In the event any third party should assert a claim of ownership or interest in any of the Mining Properties covered hereby, then, for the period until such adverse claim has been finally resolved in favor of Lessor, Lessee will pay into escrow pending settlement of such claim, at the Walker Bank and Trust Company, Salt Lake City, Utah, any payments which may be due Lessor hereunder on ore mined from that part of the Mining Properties as to which such adverse claim is asserted. Lessor shall indemnify and hold Lessee harmless from any liability to any third party which may arise by reason of such third party's owning or claiming to own an interest in the Mining Properties. Unless Lessee shall hold such adverse claim, Lessee shall have the

right, but not the obligation, in the event Lessor shall not promptly undertake the defense of such claim, to defend any such claim and, in the event Lessor shall so undertake to defend such claim, to join in such defense in the name of Lessor and to charge as a cost of operating the Mining Properties under paragraph 2(a) hereof all costs and expenses of Lessee's participation in such defense litigation, including actual expenses of securing evidence.

11. Insurance. Lessee agrees to carry workmen's compensation insurance for all persons employed by Lessee in accordance with the laws of the State of Utah, and to carry and pay all social security taxes, unemployment insurance or other taxes or assessments required by the State of Utah and the United States. Lessee shall carry liability insurance in reasonable amounts satisfactory to Lessor, fully protecting Lessor from liability for damages arising from injuries to persons or property inflicted by Lessee in the course of its operations hereunder.

12. Taxes. Lessee shall pay all sales taxes upon the sale of ores, and any severance taxes, or taxes upon ore mined, moved or blocked out, mineral right taxes, production and/or depletion taxes during the term of this Agreement.

13. Mining Practice. When Lessee enters upon the Mining Properties, Lessee shall work the same in a manner necessary to good and economical mining, so as to take out the greatest amount of ore practicable with due regard to the development and preservation of the same as a workable mine. Lessee shall at all times keep the drifts, shafts, tunnels and other workings well drained and clear of loose rock and rubbish, muck or other debris, unless prevented by extraordinary mining casualty.

14. Default. In the event that Lessee shall default any of its obligations hereunder and such default shall continue for a period of sixty (60) days following written notice thereof to Lessee, this Agreement shall, at the option of Lessor to be exercised in writing within thirty (30) days, expire. Thereupon, subject to the provisions of paragraph 6, Lessee shall promptly deliver the Mining Properties to Lessor in good order and condition with all drifts, shafts, tunnels and other passages clear of loose rock and rubbish and drained, and the mine ready for immediate continued working (accident not arising from negligence alone excusing) without demand or further notice.

15. Assignment. This Agreement shall be binding upon and inure to the benefit of the parties hereto and their respective successors and assigns, provided that Lessee shall not assign this Agreement without the consent of Lessor except to an assignee financially able to perform this Agreement in accordance with its terms.

EXECUTED as of the day and year first above written.

Francis D. Nielson

Joseph E. Sherman

COG MINERALS CORPORATION

By _____
Vice President

ATTEST:

_____
Asst. Secretary

The undersigned, Hans J. Nielson, does hereby consent to the above Agreement and declares that his interest, if any, in the mining claims described above shall be subject to the terms of this Agreement and that he, his heirs, successors or assigns, shall not assert any claim or interest adverse to the interest of Lessee under this Agreement.

Hans J. Nielson

STATE OF Utah)
) ss.
COUNTY OF Garfield)

On the 24 day of June, 1957, personally appeared before me HANS J. NIELSON, a signer of the above instrument, who duly acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal on the day and year last above written

Notary Public

My commission expires: 4-4-60

STATE OF Utah)
) ss.
COUNTY OF Garfield)

On the 24 day of June, 1957, personally appeared before me FRANCIS D. NIELSON, a signer of the above instrument, who duly acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal on the day and year last above written.

Notary Public

My commission expires:

4-4-60

STATE OF UTAH)
) ss.
COUNTY OF SALT LAKE)

On the 18th day of JUNE, 1957, personally appeared before me JOSEPH E. SHERMAN, a signer of the above instrument, who duly acknowledged to me that he executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal on the day and year last above written.

Katherine J. Peterson
Notary Public
Residing at Salt Lake City

My commission expires: Feb. 27, 1960

STATE OF COLORADO)
) ss.
COUNTY OF DENVER)

BE IT REMEMBERED that on this 1st day of July, 1957, before me, the undersigned, a Notary Public, duly commissioned, in and for the county and state aforesaid, came J. H. Mason, as Vice President of COG MINERALS CORPORATION, a corporation of the State of Delaware, personally known to me to be such officer, and to be the same person who executed as such officer the foregoing instrument of writing in behalf of said corporation, and he duly acknowledged the execution of the same for himself and for said corporation for the uses and purposes therein set forth.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal on the day and year last above written.

Esther A. Olson
Notary Public

My commission expires:

My Commission expires February 14, 1959

SCHEDULE "A"

OPERATING CHARGES

Subject to limitations hereinafter prescribed, Lessee (Operator) shall charge as costs the following items:

1. Labor and Related Charges

   A. Salaries and wages of Operator's employees directly engaged in operating the Mining Properties, including salaries or wages paid to geologists, engineers, and other employees who are temporarily assigned to and directly employed thereon.

   B. Operator's cost of holiday, vacation, sickness and disability benefits, life insurance, retirement and other benefit plans, and other customary allowances applicable to the salaries and wages chargeable.

   C. Costs of expenditures or contributions made pursuant to assessments imposed by governmental authority which are applicable to Operator's labor cost of salaries and wages.

2. Equipment and Material

   Equipment, material, and supplies purchased or furnished by Operator for use on the Mining Properties. So far as it is reasonably practical and consistent with efficient and economical operation, only such material shall be purchased or transferred as may be required for immediate use; and the accumulation of surplus stocks shall be avoided.

3. Transporation

   Transporation of employees, equipment, ore, waste and other materials and supplies necessary for the operation of the Mining Properties.

4. Outside Services, Equipment and Facilities

   The cost of contract services, utilities, equipment and facilities procured from outside sources.

5. Operator's Equipment and Facilities

   Use of and service by equipment and facilities of Operator the cost of which shall not have been charged as an operating cost under the Agreement, at a fair rate which shall be ample to cover the cost of ownership and operation, including, without limitation, repairs and maintenance, operating supplies, insurance, research, depreciation, taxes, and labor and related charges and expenses of Operator. In determining charges for upgrading ore mined from

the Mining Properties, costs shall be allocated according to the tons of ore fed to the upgrading process. In determining charges for the use of tunnels, shafts and inclines located on properties other than the Mining Properties, through which the Mining Properties shall be mined, costs shall be limited to costs of operation plus amortization of the cost of such tunnel, shaft or incline, as the case may be, less the value of any ore mined therefrom in the course of driving the same, and such costs shall be allocated according to the tons of material moved through such tunnel, shaft or incline.

6. Damages and Losses to Property and Equipment

All costs or expenses necessary to replace or repair damages or losses incurred by fire, flood, storm, theft, accident, or any other cause not controllable by Operator through the exercise of reasonable diligence.

7. Taxes

All taxes of every kind and nature assessed or levied upon or in connection with the Mining Properties, the production therefrom or the operation thereof.

8. Insurance and Claims

Premiums paid for insurance carried with respect to the Mining Properties or the operations referred to in this Agreement, together with all expenditures incurred and paid in settlement of any and all losses, claims, damages, judgments, and other expenses, including legal services, not recovered from insurance carrier.

9. District and Camp Expense (Field Supervision and Camp Expense)

A pro rata portion of the salaries and expenses of Operator's production superintendent and other employees serving the Mining Properties and other properties of the Operator in the same operating area, whose time is not allocated directly to the Mining Properties, and a pro rata portion of the cost of maintaining and operating a production office known as Operator's Fry Camp Office, and all necessary camps, including housing facilities for employees if required, used in the conduct of the operations on the Mining Properties and other properties operated in the same locality. The expense of, less any revenue from, these facilities shall be inclusive of depreciation or a fair monthly rental in lieu of depreciation on the investment. Such charges shall be apportioned to all properties served on an equitable basis consistent with Operator's accounting practice.

10. Administrative Overhead

Operator shall assess the following management and administrative overhead charges, which shall be in lieu of all expenses of all offices of the Operator not covered by paragraph 9 above, including salaries and expenses of personnel assigned to such offices, except that salaries of geologists and

other employees of Operator who are temporarily assigned to and directly serving on the Mining Properties will be charged as provided in paragraph 1 above. Salaries and expenses of other technical employees assigned to such offices will be considered as covered by overhead charges in this paragraph unless charges for such salaries and expenses are agreed upon between Operator and Non-Operator as a direct charge to the Mining Properties:

15% of the sum of all other operating costs chargeable in accordance with this Schedule A.

11. Other Expenditures

Any other expenditure incurred by the Operator for the necessary and proper conduct of operations under the Agreement.

OFFICIAL FILE COPY
D M E A
RECEIVED OCT 16 1957

DATE	[illegible]	CODE

U. S. Government Messenger Envelope

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

1. Use blocks consecutively, one at a ti
2. Void previous block.
3. Write clearly.

NAME OR TITLE OF PERSON, DEPARTMENT, ADDRESS, AND ROOM		NAME OR TITLE OF PERSON, DEPARTMENT, ADDRESS, AND ROOM	
W. S. MARTIN D.M.E.A., 3538 Interior	RUN STOP		RUN STOP
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	RUN STOP		RUN STOP

Send surplus envelopes to supply room for reissue.

Use other side

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

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AND ROOM

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Use other side first

OFFICIAL FILE COPY

Date	Surname	Code
2/12/59	Murphy	700
2/12	Knowlle	700
2/13	Martin	130
		~~110~~
		~~100~~
		220
		225

2/13 Lurson (130

2/13 Nelson (130

FEB 13 1959

Mr. Frank A. Seeton
Operations Manager
COG Minerals Corporation
Denver Club Building
Denver, Colorado

Re: Docket No. DMEA-4852 (Uranium)
Cove Group
San Juan County, Utah

Dear Mr. Seeton:

In accordance with your letter of February 10, 1959, we are closing our records on the above-referenced application.

Sincerely yours,

Frank E. Johnson

Acting Director

FMMurphy/gla
2-10-59
cc to: Director's Reading File
Operating Committee
THKiilsgaard, 5224
FMMurphy
OME Field Team, Region III (2) w/2cc incoming letter

43683

OFFICIAL FILE COPY
O. M. E.
RECEIVED FEB 12 1959

DATE	INITIALS	CODE
2-12	C	220
2-12	Murphy	700

COG MINERALS CORPORATION
DENVER CLUB BUILDING
DENVER, COLORADO

February 10, 1959

Mr. Frank E. Johnson
U. S. Department of Interior
Office of Mineral Exploration
Washington 25, D. C.

Re: Docket No. DMEA-4852 (Uranium)
Cove Group
San Juan County, Utah

Dear Mr. Johnson:

Referring to your letter of January 29, this is to advise you that we do not wish to have our partly-processed DMEA application considered under the OME regulations at this time.

Unless the policy announced by the Atomic Energy Commission on November 24, 1958, is modified, we unfortunately cannot see the incentive for new exploration work by private or government funds.

Very truly yours,

Frank A. Seeton

Frank A. Seeton
Operations Manager

FAS/ms

Form 7
(8)

OFFICIAL FILE COPY

Date	Surname	Code
1/20/59	Murphy	700
1/20	Kuonse	700
1/22	Selfridge	120
		~~120~~
		~~100~~
1/29	C	220
		700

JAN 29 1959

~~JAN 2 3 1959~~

Mr. J. H. Nason, Vice President
COG Minerals Corporation
Denver Club Building
Denver, Colorado

Re: Docket No. DMEA-4852 (Uranium)
Cove Group
San Juan County, Utah

Dear Mr. Nason:

Enclosed is a copy of the regulations for obtaining Federal assistance in financing mineral exploration under which the new Office of Minerals Exploration will operate.

If you wish that your partly-processed DMEA application be considered under the OME regulations, please complete and return four of the copies of the attached application, MME Form 40.

Your attention is called especially to the certification which when signed declares that you would not ordinarily undertake the proposed exploration under current conditions and circumstances at your sole expense, and to Item 1(a) - and 1(c) if applicable - which relates to information used to determine your financial eligibility under the new exploration program. Information that is included in your DMEA application need not be repeated in the OME application, but you can add new information, e.g., results, if available, of recent mining or drilling on the Ula Channel, nearby or on your property, which might indicate that the channel extends into the proposed project area.

Also enclosed are five sets (six copies each) of the Lien and Subordination Agreements, MME Form 52, referred to in Item 2(c) of the application. The following should each sign a set:

For the Cove 21-24 and Cove 37-44 claims:

1. Milton C. Nielson, E. J. Hall, Kenneth Bailey, Jr., Allan E. Mecham, Burnhard Black, Hans J. Nielson, Francis D. Nielson, Barbara Certonio, and Eugene K. Stephen;

2. Uranium King Corporation; and

3. Taylor Uranium Corporation.

43683

For the Gift 1, 2, and 3 claims:

4. Francis D. Nielson and Joseph H. Sherman.

For the Bullseye 11 and 12 claims:

5. Bullseye Uranium Corporation.

Early submittal of five completed copies of each set of the forms will save time in case you apply for exploration assistance under the OME program and a contract is granted.

If you do not wish to participate in the OME program, we will appreciate being so informed.

Sincerely yours,

Frank E. Johnson

Acting Director

Enclosures

FMMurphy/gla
1-20-59
cc to: Director's Reading File
THKiilsgaard, 5224
FMMurphy
OME Field Team, Region III (2)

OFFICIAL FILE COPY

Date	Surname	Code
9/19	Murphy	700
9/19	Knowlt	700
"	Johnson	110
22	COM	100
9/22	C	220
	Pending	225

SEP 22 1958

Mr. J. H. Nason, Vice President
CGG Minerals Corporation
Denver Club Building
Denver, Colorado

Re: Docket No. DMEA-4852 (Uranium)
Cove Group
San Juan County, Utah

Dear Mr. Nason:

We have your letter of August 29, requesting consideration of your application for Government assistance in an exploration project on the above-cited property under the new program.

You may wish to study the proposed OME regulations and comment on them before October 17 as provided in the first paragraph of the enclosed notice reprinted from the Federal Register of September 17.

Sometime after October 17 when the final regulations become effective, we will send you the new application form so you may furnish any additional information necessary to process your application for aid under the new program.

Sincerely yours,

C. O. Mittendorf

ACTING Director

Enclosure

gla
9/19/58
cc to: Director's Reading File
Field Team, Region III (2)

8623

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

224 New Customhouse
Denver 2, Colorado

September 12, 1958

OFFICE OF THE DIRECTOR DMEA RECEIVED SEP 15 1958		
DATE	INITIALS	CODE
9/15	C	220
		700
		225

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Acting Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA-4852 (Uranium) COG Minerals Corporation (Cove Group) San Juan County, Utah

We have received a copy of the subject applicant's letter to you, dated August 29, 1958.

Will you please forward us a copy of your reply to that letter so that we may complete our file on the subject docket.

E. N. Harshman

E. N. Harshman

ORIGINAL FILE COPY
DMEA
RECEIVED SEP 2 1958

DATE	INITIALS	CODE
9/2	C	220
9/3	Ching	700
	(Murphy)	

COG MINERALS CORPORATION
DENVER CLUB BUILDING
DENVER, COLORADO

J. H. NASON
VICE PRESIDENT

August 29, 1958

Department of the Interior
Defense Minerals Exploration Administration
Washington 25, D. C.

Re: Docket No. DMEA-4852 (Uranium)
Cove Group
San Juan County, Utah

Gentlemen:

Referring to your letter of June 19, 1958, we understand that the DMEA program has been reactivated and we are by this letter requesting consideration of the above numbered application under the rules and regulations established by the new program.

We are quite anxious to press this exploratory phase of our uranium activities as we feel quite confident we can locate the extension of the Ula channel upon our lease held on Uranium King properties.

Anything you can do to expedite approval of this request would indeed be appreciated.

Very truly yours,

JHNason

JHN/ms

No action required until new program is set up.
mc

2 cc to Region III without covering letter 9/3/58 gla

6/26 H.J. 225
Murphy 200

224 New Customhouse
Denver 2, Colorado
June 24, 1958

Memorandum

To: J. W. Hasler w/enclosures 1-7 below
H. F. Robertson w/enclosures 1-5 below

From: Alternate Acting Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA 4852 (Uranium) COG Minerals Corporation (Cove Group) San Juan County, Utah

Enclosed is a copy of a letter from the Chairman, Operating Committee, DMEA, requesting a review of the subject application. Also enclosed are the following:

1. Copy of a letter from Ross V. Scoton, Jr. to the Administrator, DMEA, dated May 19, 1958.

2. Copy of a letter from Uranium King Corporation to Mr. Ross Scoton of COG Minerals Corporation dated May 10, 1958.

3. Copy of a letter from the Administrator to the Applicant dated June 19, 1958.

4. Memorandum of Review by N. E. Nelson, USGS.

5. Memorandum of Review by James Pasmo, USBM.

6. Copy of logs mentioned in Mr. Scoton's letter.

7. Copy of aerial photo mentioned in Mr. Scoton's letter.

Original signed by
J. W. TOWNSEND
J. W. Townsend

MMC:dp
cc: Hartman w/enclosures 1-5
Docket
Chron.
COG Minerals Corp. 2

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
6/11/58	Murphy	700
6/12	[illegible]	700
6/13	[illegible]	130
6/18	Johnson	110
"	[illegible]	100
		220
		~~[illegible]~~
		700

Mr. J. W. Townsend
Alternate Acting Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-4852 (Uranium)
COG Minerals Corporation
Cove Group
San Juan County, Utah

Dear Mr. Townsend:

Enclosed are three copies of a self-explanatory letter, dated May 19, 1958, by Mr. Ross V. Seeton, Jr., General Manager of COG Minerals Corporation. Also enclosed are copies of the Uranium King Corporation's letter, dated May 10, the aerial photo and logs mentioned in Mr. Seeton's letter, and copies of memoranda, dated June 3 and 10, 1958, by N. E. Nelson, USGS, and James Paone, USBM, respectively, relating to Mr. Seeton's request.

Please review this material and submit your recommendations with regard to Mr. Seeton's request. Kindly return the photo and logs to this office as only one copy of each was submitted.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

Enclosures

FMMurphy/gla
6-11-58
cc to: Admr.'s Reading File
Operating Committee
THKiilsgaard, 5224
FMMurphy

APPROVED:

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

Thor H. Kiilsgaard (THK)
Member, Geological Survey

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
6/17/58	Murphy	700
6/17	[illegible]	700
6/18	Selfridge	430
"	[illegible]	110
"	[illegible]	100
6/19	C	220
		700
6/18	Lamb	130
6/18	[illegible]	230

JUN 19 1958

Mr. Ross V. Seeton, Jr., General Manager
COG Minerals Corporation
727 3rd Avenue
Grand Junction, Colorado

Re: Docket No. DMEA-4852 (Uranium)
Cove Group
San Juan County, Utah

Dear Mr. Seeton:

This is to acknowledge your letter of May 19, 1958, wherein you request reconsideration of your application for exploration aid and enclose drill logs and an aerial photo in support of your request.

It is now probably impossible to process reconsideration of your application to completion, which will involve some correspondence with the Regional Field Team, before the expiration of the DMEA program as announced in a June 6 news release, copy enclosed. However, we shall do as much as time permits.

You will note from the press release that legislation has been introduced in the Congress to continue the DMEA type of program. If such legislation is enacted, upon written request, your application will be considered under the rules and regulations established for the new program.

Sincerely yours,

C. O. Mittendorf

Administrator

Enclosure

FMMurphy/GCSelfridge/gla
6-17-58
cc to: Admr.'s Reading File
Operating Committee
THKiilsgaard, 5224
FMMurphy
DMEA Field Team, Region III (2)

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
6/11/58	Murphy	700
6/12	Ellis	700
6/13	Selfridge	130
		110
		100
		220
		225
6/13	Lamb	130
6/13	Kiilsgaard	130

Mr. Ross V. Seeton, Jr., General Manager
COG Minerals Corporation
727 3rd Avenue
Grand Junction, Colorado

Re: Docket No. DMEA-4852 (Uranium)
Cove Group
San Juan County, Utah

Dear Mr. Seeton:

This is to acknowledge your letter of May 19, 1958, in which you request further consideration of aid in exploring the Cove group of claims.

Your letter, with the drill hole logs and aerial photo of the proposed project area have been reviewed by the Washington staff. We are now referring your request to the Regional Field Team for its review and recommendations. As soon as the Field Team's report is received, we will advise you of our decision in this matter.

Sincerely yours,

Administrator

FMMurphy/gla
6-11-58
cc to: Admr.'s Reading File
Operating Committee
THKiilsgaard, 5224
FMMurphy
DMEA Field Team, Region III (2)

Mr. Selfridge -

Suggest deleting last sentence in letter and add paragraph about expiration of DMEA, possible new program; enclosing copy of Press Release.

FEJohnson

8623

OFFICIAL FILE COPY
DMEA
RECEIVED JUN 11 1958

DATE	INITIALS	CODE
6/11	C	220
"	Murphy	700

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

Date June 10, 1958

DMEA Docket No. 4852
DMEA Contract No.
Commodity Uranium
Name of Applicant COG Minerals Corporation
Name of property Cove Group
Location of property San Juan County, Utah
Estimated cost of project $35,870

Memorandum ✓

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee
From: James Paone, Bureau of Mines Member JP
Uranium Commodity Committee
Subject: Review of Application (Supplemental Information)
(Application, Field Team Report, etc.)

1. Date of subject document: 6/3/58. 2. Date received by reviewer: 6/4/58

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

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

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

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

7. Explain items marked 'yes' above:

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

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

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

The field team should review the data sent by the applicant. If the new data is encouraging, the field team may request a new application, if not, the case can remain closed.

6/26 H.J. 225
Murphy 200

224 New Customhouse
Denver 2, Colorado
June 24, 1958

Memorandum

To: J. W. Hesler w/enclosures 1-7 below
H. F. Robertson w/enclosures 1-5 below

From: Alternate Acting Executive Officer, DMEA Field Team, Region III

Subject: Docket No. DMEA 4852 (Uranium) COG Minerals Corporation (Cove Group) San Juan County, Utah

Enclosed is a copy of a letter from the Chairman, Operating Committee, DMEA, requesting a review of the subject application. Also enclosed are the following:

1. Copy of a letter from Ross V. Scoton, Jr. to the Administrator, DMEA, dated May 19, 1958.

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6. Copy of logs mentioned in Mr. Scoton's letter.

7. Copy of aerial photo mentioned in Mr. Scoton's letter.

Original signed by
J. W. TOWNSEND
J. W. Townsend

MMC:dp
cc: Harshman w/enclosures 1-5
Docket
Chron.
COG Region 2

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
6/11/58	Murphy	700
6/12	Ellis	700
6/13	GCS	130
6/18	Johnson	110
"	Wellesley	100
		220
		~~[illegible]~~
		700

Mr. J. W. Townsend
Alternate Acting Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-4852 (Uranium)
COG Minerals Corporation
Cove Group
San Juan County, Utah

Dear Mr. Townsend:

Enclosed are three copies of a self-explanatory letter, dated May 19, 1958, by Mr. Ross V. Seeton, Jr., General Manager of COG Minerals Corporation. Also enclosed are copies of the Uranium King Corporation's letter, dated May 10, the aerial photo and logs mentioned in Mr. Seeton's letter, and copies of memoranda, dated June 3 and 10, 1958, by N. E. Nelson, USGS, and James Paone, USBM, respectively, relating to Mr. Seeton's request.

Please review this material and submit your recommendations with regard to Mr. Seeton's request. Kindly return the photo and logs to this office as only one copy of each was submitted.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

Enclosures

FMMurphy/gla
6-11-58
cc to: Admr.'s Reading File
Operating Committee
THKiilsgaard, 5224
FMMurphy

APPROVED:

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

Thor H. Kiilsgaard (THK)
Member, Geological Survey

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
6/17/58	Murphy	700
6/17	[illegible]	700
6/18	Selfridge	230
"	[illegible]	110
"	Mittendorf	100
6/19	C	220
		700
6/18	Lamb	130
6/18	Regan	230

JUN 19 1958

Mr. Ross V. Seeton, Jr., General Manager
COG Minerals Corporation
727 3rd Avenue
Grand Junction, Colorado

Re: Docket No. DMEA-4852 (Uranium)
Cove Group
San Juan County, Utah

Dear Mr. Seeton:

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You will note from the press release that legislation has been introduced in the Congress to continue the DMEA type of program. If such legislation is enacted, upon written request, your application will be considered under the rules and regulations established for the new program.

Sincerely yours,

C. O. Mittendorf

Administrator

Enclosure

FMMurphy/GCSelfridge/gla
6-17-58
cc to: Admr.'s Reading File
Operating Committee
THKiilsgaard, 5224
FMMurphy
DMEA Field Team, Region III (2)

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
6/11/58	Murphy	700
6/12	Ellis	700
6/13	Selfridge	~~130~~
		110
		100
		~~220~~
		~~225~~
6/13	Lamb	130
6/13	Kiilsgaard	130

Mr. Ross V. Seeton, Jr., General Manager
COG Minerals Corporation
727 3rd Avenue
Grand Junction, Colorado

Re: Docket No. DMEA-4852 (Uranium)
Cove Group
San Juan County, Utah

Dear Mr. Seeton:

This is to acknowledge your letter of May 19, 1958, in which you request further consideration of aid in exploring the Cove group of claims.

Your letter, with the drill hole logs and aerial photo of the proposed project area have been reviewed by the Washington staff. We are now referring your request to the Regional Field Team for its review and recommendations. As soon as the Field Team's report is received, we will advise you of our decision in this matter.

Sincerely yours,

Administrator

FMMurphy/gla
6-11-58
cc to: Admr.'s Reading File
Operating Committee
THKiilsgaard, 5224
FMMurphy
DMEA Field Team, Region III (2)

Mr. Selfridge -

Suggest deleting last sentence in letter and add paragraph about expiration of DMEA, possible new program; enclosing copy of Press Release.

FEJohnson

8623

OFFICIAL FILE COPY
DMEA
RECEIVED JUN 11 1958

DATE	INITIALS	CODE
6/11	C	220
"	Murphy	700

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

Date June 10, 1958

DMEA Docket No. 4852
DMEA Contract No.
Commodity Uranium
Name of Applicant COG Minerals Corporation
Name of property Cove Group
Location of property San Juan County, Utah
Estimated cost of project $35,870

Memorandum ✓

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee
From: James Paone, Bureau of Mines Member JP
Uranium Commodity Committee
Subject: Review of Application (Supplemental Information)
(Application, Field Team Report, etc.)

1. Date of subject document: 6/3/58. 2. Date received by reviewer: 6/4/58

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

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

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

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

7. Explain items marked 'yes' above:

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

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

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

The field team should review the data sent by the applicant. If the new data is encouraging, the field team may request a new application, if not, the case can remain closed.

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DMEA
RECEIVED JUN 4 1958
DATE | TIME | CODE
6/4 | N.g. | 325
" Murphy | 700

IN REPLY REFER TO:

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

June 3, 1958
Re: DMEA 4852
COG Minerals Corp.
Cove Group
San Juan County, Utah
Appl. Est. $35,870 - Uranium

Memorandum

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

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

Subject: Review of applicant's request for reconsideration of the Letter of Denial

The applicant requests that the Letter of Denial of February 27, 1958, be reconsidered and submits supplementary information in support of the request.

The graphic presentation of the results of drilling in the DH 109 - DH 201 fence showing the progressive increase in depth of the possible Shinarump-Moenkopi channel is illuminating. However, the probing failed to show a corresponding increase in the eU_3O_8 content and does not encourage the proposed deeper drilling to the northwest of DH 201.

I am still curious as to the ore hole 5785. If the information is reliable and encouraging, it would seem to be important. Perhaps the inferred channel lies in the 600-foot interval between DH 113 and DH 201.

If the information on 5785 is favorable, one or two holes near the COG boundary, and near the road, would be warranted.

I recommend that information on drill hole 5785 be requested.

N. E. Nelson

N. E. Nelson

OFFICIAL FILE COPY
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RECEIVED MAY 27 1958

DATE	INITIALS	CODE
5/27	C	220
"	Murphy	700
	✓	

COG MINERALS CORPORATION
727 3 RD AVENUE
GRAND JUNCTION, COLORADO

May 19, 1958

Mr. C. O. Mittendorf, Administrator
United States Department of the Interior
Defense Minerals Exploration Administration
Washington 25, D. C.

Re: Docket No. DMEA-4852 (Uranium)
Cove Group
San Juan County, Utah

Dear Sir:

Reference is made to your letter of Feb. 27, 1958 to Mr. Norman, president of COG Minerals Corporation, wherein our application for DMEA assistance was denied. I was, of course, very disappointed to hear this and at a loss as to the reasons for denial unless the temporary abundance of uranium assessed by the AEC was the underlying basis. If that were the reason, we would naturally have no recourse, but if not, I felt perhaps some misunderstanding or a failure on our part to properly present our case might have caused the denial.

Consequently, I visited your local office in Grand Junction AEC compound and spoke with William Hassler. He was very courteous and, although not completely encouraging, said it would not be out of line to submit any additional information we might have for further consideration.

I believe that the possibilities of finding the Ula (Radium King) channel are reasonably good and that, once located on our property, commercial quantities of uranium ore will be discovered upon further drilling of the channel. We are asking for help in initially locating the Ula channel as once this is accomplished, I believe, our management will release funds for exploration in such a favorable target area. Two series of fences of no more than four holes and six holes respectively drilled normal to the projected direction of the channel should delineate the width and direction of the channel.

Enclosed is some additional data which I hope will justify further consideration of our application. The 30" x 30" aerial photo should be reasonably self explanatory, and together satisfactorily explain the following:

1. We are aware that the Cove claims once received a DMEA loan. However, we feel that since we are a different company and since there is no known physiographic or geologic connection between the work done under DMEA Docket No. 3625, Contract No. Idm-E879 and the work to be performed under the present application that the application be treated without prejudice. Although, we had no connection with Contract No. Idm-E879,

COG MINERALS CORPORATION
727 3 RD AVENUE
GRAND JUNCTION, COLORADO

we understood there was some confusion in regard to payments for work accomplished under the contract. We feel that we can assure the government that no such awkwardness will accompany the fulfillment of the application we ourselves have submitted. I would like to point out, also, that of the $26,736.94 involved in the previous loan, we and our predessors have repaid a total of $5,617.46.

2. As to the question concerning the discrepancy between the location of Cove 43 and Cove 44 claims on our present map as compared to that submitted under Contract No. 3625, I have asked Uranium King Corporation for their explanation as to how this could have occurred. Enclosed is their answer. We have verified that these two claims lie where the recent map places them, which is the logical place from a normal numerical sequence. However, from the aerial photographic work recently completed, their relationship to the McFall, "Z" group is slightly different from what we had thought. This difference is in our favor in that no gap was found to exist between the, McFall, "Z" group and the Cove 37 through Cove 44 claims.

3. The enclosed strip logs show that the thickness of Shinarump sand is increasing from east to west and that a ten foot scour has gradually developed in the Moenkopi contact. We believe this indicates that the deepest drilling (DH 201) was done on the outwash flank of a channel. The Ula or Radium King channel can be projected through an area lying just to the west of our westernmost drill hole (DH201). This projection, as can be seen from the 30" x 30" black and white vertical photograph, is based on extending a known straight channel length of 3,600 feet an an additional 5,200 feet. We believe this extension justified and reasonable as high angle turns in White Canyon Shinarump channels occur slowly. In other words, we are not speaking of projecting a "trend" as is often necessary in drilling the Salt Wash member of the Morrison formation; rather, we are projecting a 400 foot wide ore bearing structure 150% of its known length. If the channel is not found in the drilling, we will then know that the only hope of finding it is to run a long crosscut tunnel and our planning can be done accordingly.

Very truly yours,

COG MINERALS CORPORATION

Ross V. Seeton Jr.

Ross V. Seeton, Jr.
General Manager

RVS/c
Enc. Drill hole strip logs (6)
Photostatic copy letter from Uranium King Corporation
30" x 30" Aerial photograph (1)

URANIUM KING CORPORATION
307 NESS BUILDING
SALT LAKE CITY 1, UTAH

REC
DA

May 10, 1958

Mr. Ross Seeton
COG Minerals Corporation
727 Third Avenue
Grand Junction, Colorado

Dear Ross:

This letter is in answer to your request for an explanation of why the Cove Claims 43 and 44 as shown on Plat II prepared by Geoprofessional Services, Inc. are in a different area than as shown on the survey map prepared by J. H. Cone who surveyed these claims in June 1955.

As can be seen from our original D.ME.A. application dated Dec. 17, 1958, our only interest in the Cove was a five year lease on Cove claims 17, 18, 23 and 24. As can be seen by the lease agreement and the assignment, we had just very recently obtained this lease. We were not particularly concerned about the location of the other Cove claims our interest being in the four claims.

Uranium King Corporation requested Geoprofessional services to make a geologic report on the entire 44 claims for several reasons. One reason was to aid us in our D.M.E.A. loan application. I asked the locators of the Cove claims Burnhard Black and Hans J. Nielson how the claims lay. As there had been no survey of the claims at the time the locators could give me the relative location of the claims in a general way only.

As Burnhard Black and Hans J. Nielson lived in Blanding and I lived in Salt Lake City at the time, I did not check with them further on the Cove claims relative location. I told the Geoprofessional Services the claims were located as shown on their Plat II. It was at a later date when the locators told me that the claims were out of place as shown on Plate II of the Geoprofessional Services.

Myself and J. H. Cone, who is on the U. of Utah mining engineering staff, made the survey of the Cove claims in June 1955. Cove claims 43 and 44 were found to be as shown on the survey map which was connected to the southerly side of Cove 42. A short time before the survey, Uranium King Corporation had acquired a 50% ownership in the 44 Cove claims.

Very truly yours,

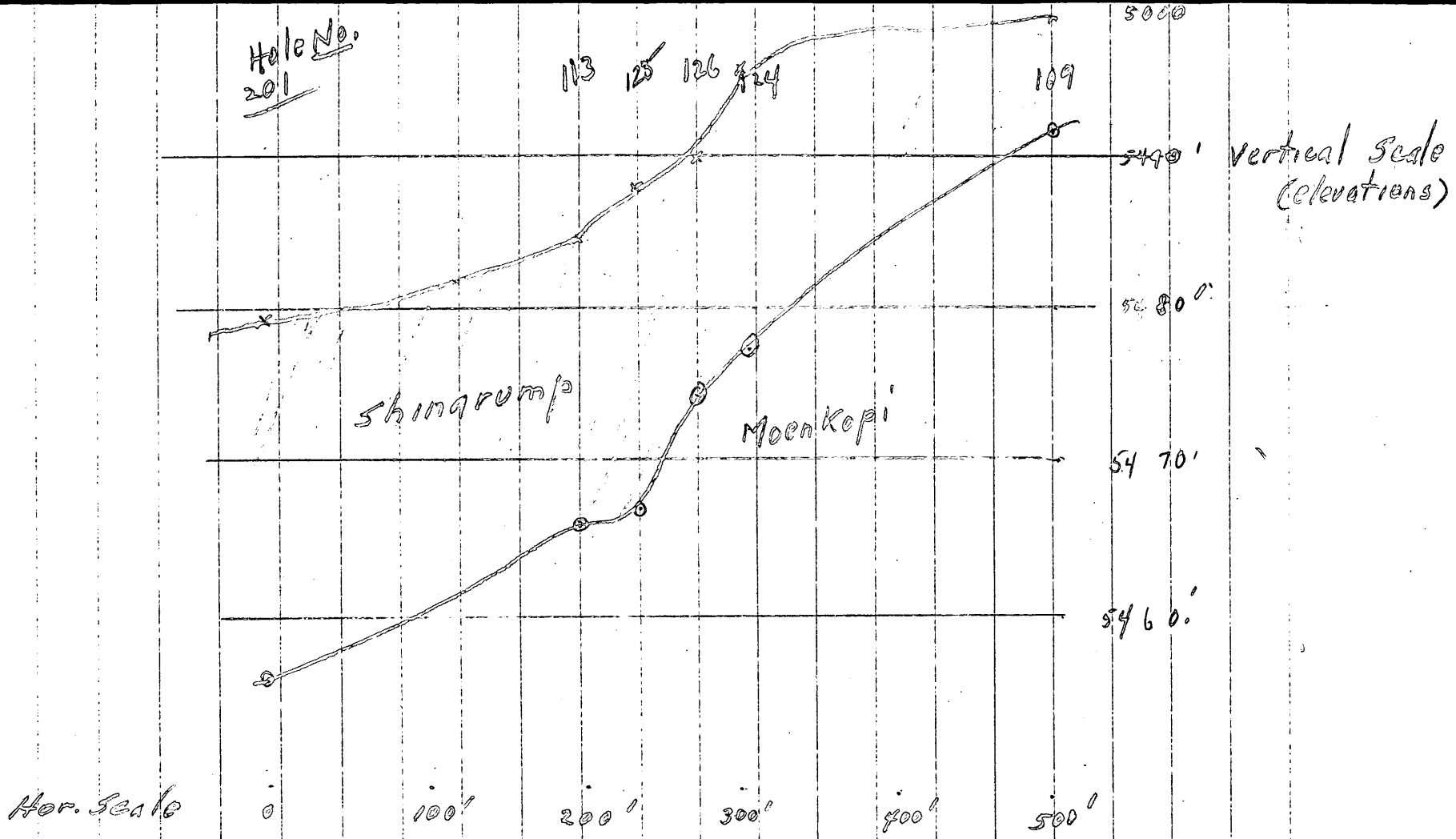
Uranium King Corporation

Joseph Sherman, President

Lines going from East to West

Hole	Collar Elv.	Depth Top Shin	True depth Mentopi	Depth of Shinarump	Not Corrected for Regional Dip Elv. Mentopi
109	5584.5'	83.5'	93'	7.5'	5491.5'
124	5696.6	202.0	219.5	17.5'	5477.1
126	5706.6	218.0	233.0	15.0'	5473.6
125 (Plugged)	5722.6	235'	256.0	21.0'	5466.6
113	5766.3	282	300.6	18.6'	5465.7
201	6050.5'	571	594.	23.0'	5456.5'

Memphis


Hole No.
201
113
125
126
124
109
5000
5440'
Vertical Scale
(elevations)
5480'
Shimarumpo
Moenkopi
5470'
5460'
Hor. Scale
0
100'
200'
300'
400'
500'

For ready reference - drill logs and map received
with COG Minerals Corporation's letter May 19, 1958

DOCKET

February 25, 1958

Murphy
Ellis

Summary of Proposed Project

Subject: Denial of application for exploration aid.

Docket No.: DMEA-4852

Commodity: Uranium

Amount of Application: $35,870.00

Applicant: COG Minerals Corporation
1000 Denver Club Building
Denver, Colorado

Property Rights: Lessee of unpatented lode mining claims Cove 21-24, Cove 37-44, Gift 1-3, and Bullseye 11 and 12, situate in unsurveyed secs. 1 and 12, T. 37 S., R. 16 E., S.L.B.M., San Juan County, Utah and in secs. 6 and 7, T. 37 S., R. 15 E.,

Note: The above Cove claims listed in the application are subordinated under Contract Idm-E879 (Docket No. DMEA-3625, Uranium King Corporation), which was certified October 12, 1956.

Date of Application: October 10, 1957

Referred to Region III: October 28, 1957

Field Examination made: December 4, 1957

Field Team Report received: February 10, 1958

Work Proposed: Drill a total of 28 holes in 8 fences aligned normal to the projected northeast trend of the Ula Channel. The initial fence would consist of 6 holes and the second 4 holes. If the channel was not intersected by either of the two fences, the project would be terminated.

Estimated Costs:

13,245 ft. non-core drilling and 725 ft. core drilling	$26,152.00
Bulldozing	2,950.00
Supervision	5,135.00
Operating equipment (depreciation)	1,263.00
Miscellaneous	370.00
TOTAL	$35,870.00

Excerpts from field examiners' Joint Geologic & Engineering Report by D. P. Elston, USGS, & H. F. Robertson, USBM, & the Field Team's memorandum of February 7, 1958:

The field examiners recommended a project similar to the Applicant's in regard to the initial 2 fences, however, they amplified the Applicant's program to include more drilling in a second and third stage in the event the channel was found to traverse the property. The estimated total cost of the examiners' proposal would amount to $44,293.00.

The Field Team recommended that the application be denied because; the chance that the Ula Channel would be found was only poor to fair, and also, with the exception of one Stage I hole on Gift No. 2 claim, the holes proposed by the examiners would be on land already subordinated under Contract Idm-E879.

The known uranium ore deposits in the immediate area of the subject claims occur in well developed channels at the base of the Shinarump member of the Chinle formation.

The two main channels developed are the Cairns Channel, which crosses the northeastern corner of the subject claims, and the Ula channel which has been proven for a length of about 7,000 feet.

The objective of the proposed project is to determine whether or not the Ula Channel extends northward into the subject claims. Data from A.E.C. show production from the Ula Channel to October 1, 1957 has been 41,745 tons of 0.30% U_3O_8 ore, and reserves of indicated and inferred ore as 211,739 tons of 0.31% U_3O_8 in place.

A series of drill hole fences define the northeast part of the Ula Channel to within 4,500 feet southwest of the subject claims. Four of the five northeasternmost holes penetrated ore; one penetrated rock below ore grade or thickness. The ore holes penetrated material which ranged in grade from 0.17% to 0.48% eU_3O_8 over zones from 1.6 to 8.8 feet in thickness (2 zones).

The field examiners considered the probability of the Ula Channel extending through the subject property is only fair. However, they point out that the known length of the channel exhibits a relatively straight, northeastward trend and, where last known, is a well-defined, narrow channel containing uranium ore; and if present on the property the deposits in the channel would likely be in excess of 10,000 tons averaging 0.30% U_3O_8.

Commodity Members' Comments: (Excerpts)

N. E. Nelson, USGS, in a memorandum, dated February 14, 1958, mentions that the examiners' data indicate the Ula Channel may become smaller northeast of the Ula mine. He tentatively concurs in the Field Team's recommendation.

James Paone, USBM, in a memorandum, dated February 17, 1958, concurs in the Field Team's recommendation that the application be denied.

Division of Rare and Miscellaneous Metals:

F. M. Murphy, in a memorandum, dated February 21, 1958, agrees with the findings and conclusions of the field examiners.

Conclusions and Recommendations:

Production from the Cove claims is subject to royalty payments under Contract Idm-E879. Drilling to explore for the possible extension of the Ula Channel into the Cove claims will require holes averaging at least 600 feet in depth which would make the project very costly.

Since the ore holes mentioned in the examiners report are about 4,500 feet south of the claims there is no assurance that the Ula Channel might not trend west of the Cove claims. This possibility is more or less indicated by the Operator's drilling which covered the southeast part of the proposed project area; hence, the Applicant's proposed project might be classified as being of a prospecting nature.

Since the examiners proposed program has only a poor to fair chance of finding significant uranium ore deposits, this Division concurs in the Field Team's recommendation that application DMEA-4852 should be denied.

Ernest W. Ellis

E. W. Ellis, Director
Division of Rare and Miscellaneous Metals

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
2/26	Murphy	700
2/26	Ellis	700
2/26	Selfridge	130
"	Johnson	110
"	Mattingly	100
2/26	Kilgaard	220
2/27		220
		225
2/26	Lamb	(130)

FEB 27 1958

Mr. W. C. Norman, President
COG Minerals Corporation
1000 Denver Club Building
Denver, Colorado

Re: Docket No. DMEA-4852 (Uranium)
Cove Group
San Juan County, Utah

Dear Mr. Norman:

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

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

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

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

Sincerely yours,

C. O. Mitchell (fw)

Administrator

FMMurphy/izm 2-25-58
cc: Mr. Murphy
Admr.'s Reading File
Operating Committee
THKiilsgaard, 5224
DMEA FT Reg. 3 (2)

8623

DMEA RECEIVED FEB 19 1958		
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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Washington 25, D. C.

Date February 17, 1958

DMEA Docket No. 4852
DMEA Contract No.
Commodity Uranium
Name of applicant C.O.G. Minerals Corporation
Name of property Cove group of claims
Location of property San Juan County, Utah
Estimated cost of project $35,870.00

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee
From: James Paone, Bureau of Mines Member
Uranium Commodity Committee

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

1. Date of subject document: _____. 2. Date received by reviewer: _____

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

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

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

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

7. Explain items marked yes above:

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

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

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

IN REPLY REFER TO:

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

DMEA
RECEIVED FEB 20 1958

DATE	INITIALS	CODE
2/20	C	220
"	FMM	700
Completed		

February 14, 1958
Re: DMEA 4852
C. O. G. Minerals Corp.
Cove Group
San Juan Co., Utah
Appl. Est. $35,870
Rec'd " $44,293 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 searching by drilling for an inferred long extension of the Ula Shinarump-Moenkopi channel. The Ula channel has a known length of 7,000 feet in which distance there are 3 producing mines, two of which are as yet small and one has a recorded production of 34,318 tons of 0.31% U_3O_8 ore and reserves of:

Mine	Class	Tons	Grade % U_3O_8
Hersey & Dermis	Indicated	22,820	0.33
	Inferred	57,800	0.33

A second mine in the Ula channel has produced 2,977 tons of 0.19% U_3O_8 and has reserves of:

Mine	Class	Tons	Grade % U_3O_8
Copper Claim	Indicated	53,762	0.30
	Inferred	71,600	0.30

The third mine, Allen #2, has produced 4,450 tons of 0.30% U_3O_8 and has an indicated reserve of 5,757 tons of 0.28% U_3O_8.

Fig. 2 showing the relation of the proposed project area to some of the known part of the Ula channel shows the location of the Ula mine and a second one not named but from the information at hand neither can be identified as the mines

whose tonnages are given. If the Ula mine is one with a large tonnage of indicated reserves, the probability of the channel extending northeasterly is better than if the smallest tonnage is in the Ula mine.

The report says the channel appears to be shrinking northeasterly from the Ula mine and where drilled by Radium King Mines the results, as reported, are negative. However, a drill hole, No. 5785, is shown in Fig. 3 as an ore hole 800 feet southwest of the proposed project area. It is 200 feet southeast of the inferred Ula channel axis. Although information concerning the hole would be valuable in judging the application, none is given. If reliable information is available, it should be forwarded.

I tentatively concur with the opinion of the Field Team and recommend that the application be denied.

N. E. Nelson

N. E. Nelson

Mr. Murphy -

DMEA-4852 - COG Minerals Corp.

Denial appears to be in order. Stage I is primarily prospecting for target.

Potential target is not of sufficient size to justify expenditures required.

Any ore found would be subject to royalties under Uranium King Corporation. It would also have to be of sufficient size and grade to repay balance due under UK contract as well as new funds expended.

Expecting poor to fair. Closest known Ula channel 4,500 ft. Likely to curve and miss property of expectancy.

FEJohnson

Re: Memo, Feb. 21, 1958 to Ellis.

DOCKET COPY

Ellis

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

February 21, 1958

Memorandum

To: Ernest Wm. Ellis, Director
Division of Rare and Miscellaneous Metals

From: F. M. Murphy, Mining Engineer
Division of Rare and Miscellaneous Metals

Subject: Joint Report of Examination and Region III Field Team's Memorandum of February 7, 1958

Docket No. DMEA-4852 (Uranium)
C.O.G. Minerals Corporation
San Juan County, Utah

The examiners recommended a project to explore the claims listed under the above-referenced application, but the Field Team recommended the application be denied.

The principal reasons given for denial are:

1. The Cove claims listed in the application are already subordinated under Contract Idm-E879 which was certified October 12, 1956. (Docket No. DMEA 3625, Uranium King Corporation); and

2. The chance of finding that the Ula Channel extends through the proposed project area is only poor to fair. The field examiners also stated these odds in their report.

Information on the area developed since the DMEA work indicates that the Ula Channel with an inferred S. 60° W. gradient and the Cairnes Channel with a due south gradient are separated by a topographic high on the Moenkopi formation. Hence the drilling under the Uranium King contract was too far east of the now inferred Ula Channel Paleo-stream flow to be of any use in judging the merits of the C.O.G. application.

The writer believes the examiners' recommended project should be approved for the following reasons:

1. From about 4,500 feet south of the proposed project area the southward trend of the Ula Channel is known. From A.E.C. data complete to October 1, 1957, production from the channel is 41,745 tons assaying 0.30% U_3O_8, with indicated and inferred ore reserves of 211,739 tons containing 0.31% U_3O_8. This indicates excellent uranium potential along the channel trend;

2. The now inferred Ula Channel trend through the property has not been explored;

3. The Ula Channel has a greater uranium potential than the Cairnes Channel. Hence the possibility of finding the Ula Channel by the drilling under the Uranium King contract was one of the reasons the contract was approved;

4. The examiners' proposed project to initially test out the area by drilling 4 holes in Phase A and 5 holes in Phase B of Stage I is a conservative and not too costly program;

5. The expected size of the ore deposits found on the Ula Channel would likely be in excess of 10,000 tons, averaging 0.30% U_3O_8;

6. Judging from information to date on the production and ore reserves from the claims subordinated under the Uranium King contract, it is unlikely that the Government's contribution to the costs will be fully repaid. However, if the Ula Channel is found on the property by the proposed drilling, it is quite likely that the Government's participation costs under the proposed contract as well as the sum previously expended under the Uranium King contract will be repaid; and

7. It is the writer's opinion that the chance of finding the Ula Channel by the examiners' proposed project should be rated as fair to good, rather than poor to fair as the Field Team states.

F. M. Murphy

F. M. Murphy

FMMurphy/izm 2-21-58
cc: Mr. Murphy
Mr. Selfridge
Mr. Johnson
Mr. Kiilsgaard
Admr.'s Reading File

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
224 New Customhouse
Denver 2, Colorado

FEB 7 1958

DMEA
RECEIVED FEB 10 1958

		CODE
2-10	C	220
2/12		130
2-12	C	220
	Murphy	700

Memorandum

To: Secretary to the Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: Docket No. DMEA 4852 (Uranium) C.O.G. Minerals Corporation (Cove Group of Claims) San Juan County, Utah - Joint Report of Examination

Enclosed are the original and two copies of the joint report of examination on the subject property.

The Field Examiners recommend an exploration program designed to determine first the presence or absence of the extension of the Ula channel, and secondly, to trace and explore the channel, if it is found to be present. They believe that the chance of such an extension being present on the property is only poor to fair, but if present the expected size of the deposits would likely be in excess of 10,000 tons, averaging 0.30 percent U_3O_8.

Cove claims 1 - 44 inclusive, ~~were~~ are subordinated under Docket No. DMEA 3625, Contract Idm-E879, Uranium King Corporation, and a certification of discovery or development was issued as a result of work performed under that contract.

Only one Stage I hole proposed by the examiners is on land not already subordinated under Contract Idm-E879. Under these conditions the Field Team recommends that the application be denied.

W. H. King
W. H. King

E. N. Harshman
E. N. Harshman

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
2-12-58
(date)

ON-SITE EXAM. REPORT

TRANSMITTED

FEB 7 1958

DMEA

DEPARTMENT OF THE INTERIOR

FEB 3 - 1958

REGION III
DENVER, COLORADO

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

MINERALS IN REPLY REFER TO:

DMEA
RECEIVED
JAN 31 1958

U.S. GEOLOGICAL SURVEY
DENVER, COLORADO
RECEIVED FEB 10 1958

January 30, 1958

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2/12	2/13	130
		220

Memorandum

To: W. H. King, Executive Officer, DMEA Field Team, Region III

Through: E. N. Harshman

From: J. William Hasler

Subject: Transmittal of a joint geologic and engineering report by D. P. Elston and H. F. Robertson on Docket No. DMEA 4852 (Uranium), COG Minerals Corporation, Cove group of claims, San Juan County, Utah.

Transmitted herewith is a joint geologic and engineering report of a field examination on DMEA docket 4852, COG Minerals Corporation, Cove group of claims (uranium), San Juan County, Utah.

The COG Minerals Corporation, 1000 Denver Club Building, Denver, Colorado, and 727 3rd Avenue, Grand Junction, Colorado, applied for Government assistance in an exploration program on a part of the Cove group of claims in the Red Canyon area of the White Canyon mining district, San Juan County, Utah.

The application was referred to the field and an examination was made on December 4, 1957 by H. F. Robertson, U. S. Bureau of Mines and D. P. Elston, U. S. Geological Survey, accompanied by Clare Gregg, COG geologist.

The property consists of 17 contiguous lode mining claims located in secs. 1, 12, 6, and 7, T. 37 S., R. 15 and 16 E., SLM. Exploration and development work to date consists of a series of A.E.C. and privately drilled holes to explore for and define the Cairns channel, which is generally east of the property, underground exploration including DMEA work to the northeast in an extension of the Cairns channel, and, several claim validating holes which test the Shinarump member in the southern part of the claims for an upstream, northeastward extension of the Ula channel.

Significant ore deposits in the White Canyon district occur in Shinarump filled channels cut in the underlying Moenkopi formation. One of the largest of these deposits occurs in the Ula channel and has been traced to about 4,500 feet southwest of the subject area. Additional tracing of the deposit and the channel by drilling became unfeasible because of the presence of the cliff-forming Wingate sandstone and the Kayenta formation which cap the prominent mesas of the area. A likely projection

Reviewed by
DMEA OPERATING COMMITTEE
2-12-58
(date)

of the Ula channel extends onto the subject property. Thus, the proposed exploration program has been designed to determine first the presence or absence of the extension of the Ula channel, and secondly, to trace and explore the channel, if it is found to be present. The chance of such an extension being present on the property is only poor to fair, but if present the expected size of the deposits would likely be in excess of 10,000 tons averaging 0.30 percent U_3O_8. Sufficient exploratory work has been done to eliminate a part of the claim area and only a relatively small amount of drilling would be necessary to prove or disprove the presence of the projected extension of the Ula channel. In view of this and of the probable large size of deposits if the channel is present, the examining team recommends approval of a program, slightly modified from that which was submitted by the applicant.

Enclosed also are figure 1, index map showing approximate location of Cove group of claims, COG Minerals Corporation, San Juan County, Utah; figure 2, map showing general geology and channels in relation to ground subordinated for DMEA exploration, COG Minerals Corporation, San Juan County, Utah; figure 3, map showing subordinated ground, geology, a part of the Cairns channel, underground workings, existing drill holes and recommended Stage I drill holes, COG Minerals Corp.,San Juan County, Utah. Eleven extra copies of figure 3 are enclosed for possible inclusion in a contract.

Information concerning the Cairns and Ula channels was obtained from Clare Gregg, Edward Carnahan, geologist for Radium King Mines, Inc., and Raymond N. Larsen, geologist for the Atomic Energy Commission. Memoranda of review of the subject application by James Paone, USBM, and W. P. Williams, USGS, were noted.

I concur with the conclusions and recommendations of the examining team that the modified program as proposed in this report be considered and a contract be executed to perform the work herein.

The applicant's brochure and related material is also enclosed with the report of examination.

J. William Hasler
J. William Hasler,
Geologist

JWH/bh
Enclosures

FOR UNITED STATES GOVERNMENT USE ONLY

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

TRANSMITTED
FEB 7 1958

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY EXAMINING TEAM
REGION III

DMEA
RECEIVED FEB 10 1958

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DMEA 4852

COG Minerals Corporation

Cove group of claims

San Juan County, Utah

Uranium

Joint Geologic and Engineering Report

by

D. P. Elston
U. S. Geological Survey

H. F. Robertson
U. S. Bureau of Mines

January 1958

Reviewed by
DMEA OPERATING COMMITTEE
2-12-58
(date)

DMEA 4852
COG MINERALS CORPORATION
COVE GROUP OF CLAIMS
SAN JUAN COUNTY, UTAH

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DMEA 4852
COG MINERALS CORPORATION
COVE GROUP OF CLAIMS
SAN JUAN COUNTY, UTAH

INTRODUCTION AND SUMMARY

COG Minerals Corporation, 1000 Denver Club Building, Denver, Colorado, and 727 3rd Avenue, Grand Junction, Colorado, applied, on October 10, 1957, for Government assistance in an exploration program on a part of the Cove group of claims in the Red Canyon area of the White Canyon mining district, San Juan County, Utah. The applicant requested aid in the drilling of approximately 13,245 feet of non-core drilling and 725 feet of core drilling in 28 holes, designed to test the Shinarump member of the Chinle formation for significant uranium deposits along an inferred extension of the Ula channel. The total estimated cost of the proposed program is $35,870.00 with Government participation at 75 percent amounting to $26,902.50.

A field examination was made December 4, 1957 by H. F. Robertson, Bureau of Mines and D. P. Elston, Geological Survey, accompanied by Clare Gregg, COG geologist.

The property consists of 17 contiguous lode mining claims located in secs. 1, 12, 6, and 7, T. 37 S., R. 15 & 16 E., S.L.M. Exploration and development work done to date consists of a series of A.E.C. and privately drilled holes to explore for and define the Cairns channel, which is generally east of the property, underground exploration including DMEA work

(Docket 3625) to the northeast in an extension of the Cairns channel, and, several claim validating drill holes which tested the Shinarump member in the southern part of the claims for an upstream, northeastward extension of the Ula channel.

Significant ore deposits in the White Canyon district occur in Shinarump filled channels cut in the underlying Moenkopi formation. One of the largest of these deposits occurs in the Ula channel and has been traced to about 4,500 feet southwest of the subject area. Additional tracing of the deposit and the channel by drilling became unfeasible because of the presence of the cliff-forming Wingate sandstone and the Kayenta formation which cap the prominent mesas of the area. A likely projection of the Ula channel extends onto the subject property. Thus, the proposed exploration has been designed to determine first the presence or absence of the extension of the Ula channel, and secondly, to trace and explore the channel, if it is found to be present. The chance of such an extension being present on the property is only poor to fair, but if present the expected size of the deposits would likely be in excess of 10,000 tons averaging 0.30 percent U_3O_8. Sufficient exploratory work has been done to eliminate a part of the claim area and only a relatively small amount of drilling would be necessary to prove or disprove the presence of the projected extension of the Ula channel. In view of this and of the probable large size of deposits if the channel is present, the examining team recommends approval of a program, slightly modified from that submitted by the applicant.

ACKNOWLEDGMENTS

Information concerning the Cairns and Ula channels was obtained from Clare Gregg, COG geologist, Edward Carnahan, geologist for Radium King Mines, Inc., and Raymond N. Larsen, geologist for the A.E.C. The Radium King Mines, Inc. Hersey mine in the Ula channel had been visited earlier by Donald P. Elston with permission of A. E. Flint, chief geologist for the company. The accessible parts of the workings reached through the Coleman incline in the Cairns channel were inspected by the examining team accompanied by Clare Gregg. Production and reserves were obtained from the ore reserves section in the Grand Junction Operations Office of the A.E.C.

Memoranda of review of the subject application by James Paone, USBM, and W. P. Williams, USGS, were noted.

LOCATION, TOPOGRAPHY, AND PHYSICAL FEATURES

The subject property is located in sections 1 and 12, T. 37 S., R. 15 E., and in adjoining sections 6 and 7, T. 37 S., R. 16 E., S.L.M., White Canyon Mining District, San Juan County, Utah (fig. 1). The area is unsurveyed so the above location data are based on projections of land lines from the nearest surveyed area.

The altitude of the project area ranges from 5,800 feet to 6,800 feet, averaging about 6,000 feet along the bench on which the proposed exploration would be performed. Steep slopes and benches of the Chinle formation, covered by landslide debris and talus breccia at the base of vertical cliffs

of the Wingate sandstone, and cut by narrow, steep-walled gulches, comprise the rugged terrain on the property.

The climate is arid, hot in summer, and moderate to cold in winter, with low total precipitation, but subject to severe storms of short duration in any season. Year-around operations are carried on both underground and on the surface. Water and vegetation are sparse.

The property is about 12 miles by good access road from the Frey Canyon store, and 61 miles further from Blanding, Utah, over State Highway 95, a graveled road. Blanding is 77 miles south of Moab, Utah, where almost complete stocks of most mining supplies are maintained. Repair services, limited supply stocks, and the uranium ore buying station and treatment plant of the National Lead Company are located at Monticello, Utah, 22 miles north of Blanding. The applicant has an upgrading plant, just recently expanded from 75 to 200 tons per day capacity, located about two miles east of the Frey Canyon store. All ore produced from COG Minerals Corp. property would be sent first to the upgrading plant, thence to the mill at Monticello.

Power needs in connection with mining or exploration activities in the subject area must be furnished by the individual operator, using gasoline- or diesel-powered equipment. Water for domestic and mining use is obtained from springs in Frey Canyon. Run-off is also caught in retaining ponds when possible. In dry seasons, water for exploration needs on the Cove claims would have to be hauled about 12 miles.

HISTORY AND PRODUCTION

The White Canyon and Red Canyon uranium mining activities date from 1951 with the discovery of minable ore in channel outcrops of the Triassic Shinarump member on the slopes above the main canyons. The Atomic Energy Commission has completed extensive mapping and drilling projects in the area which have resulted in the discovery of a number of ore bodies in Shinarump-filled channels. Subsequent mining operations have produced substantial tonnages of uranium ore. Table 1 shows production and reserves for mines and properties in the general area.

OWNERSHIP AND EXTENT

A total of 17 unpatented lode mining claims are included in the property which would be subject to Government lien in the event a contract is signed.

The location notices and subsequent instruments are recorded at the San Juan County courthouse at Monticello, Utah as follows:

Claim	Location date	Book	Page
Cove 21-24 incl.	4-25-54	97	171-172
Cove 37-40 incl.	4-25-54	97	179-180
Cove 41-44 incl.	4-25-54	97	159-160
Gift 1-3 incl.	3-11-56	100	45-46
Bullseye 11-12	4-8-54	59	420
(amended)		87	101-102

Copies of agreements whereby the applicant leased the above claims were submitted with the application. These documents appear to be in order and the applicant apparently has a valid and controlling interest in the claims. Provision is made in each of the three agreements for payment of royalty to the Defense Minerals Exploration Administration. It should be noted that the Cove claim nos. 1-44 inclusive were subordinated in connection with DMEA 3625, Contract Idm-E 879, Uranium King Corporation. A certification of discovery or development was issued as a result of the exploration work performed under Contract Idm-E 879 and the Cove claims are subject to Government lien until September 22, 1965.

A discrepancy in Uranium King's map of the Cove claims (attached to Contract Idm-E 879) and the claim map submitted by the applicant is noted. An actual survey of the Cove group by the COG Minerals places the Cove claim nos. 43 and 44 southwest of Cove claim no. 42 instead of northeast of Cove claim no. 37. Discovery notices and claim corners on the property indicate that the applicant's map shows the true location of the two claims.

PRESENT STATUS

Exploration and Development

Drilling by the Atomic Energy Commission delineated the Cairns channel and, for the most part, explored the area east of the subject claims (fig. 3). The applicant has drilled a total of 8 holes on the Gift nos. 2 and 3 and Bullseye nos. 11 and 12 claims. The company holes were classed

as "discovery holes" and were drilled to validate claims rather than explore for channel positions. The information gained by this drilling has served to eliminate a part of the claim area for the presence of the inferred extension of the Ula channel.

Much exploration and development drilling has been done immediately east of the applicant's claims. However, since this drilling was concerned mainly with tracing and exploring the Cairns channel, the results are of little direct use in evaluation of the applicant's proposed project.

The mining and exploration work on the Cove claim nos. 17, 18, 23 and 24 by Uranium King Corporation (DMEA 3625, Contract Idm-E 879) constitute the only underground work performed on the claims included in the proposed exploration project.

Mining and Milling Equipment and Other Facilities

As of the date of the field examination, the applicant had no mining or exploration equipment on the subject claims. However, the Uranium King mine and Bullseye no. 2 mine (both operated by the applicant) are fully equipped and producing mines.

The applicant has established a camp for exploration and mining personnel in Frey Canyon about 12 miles distant from the proposed project area. Domestic water, housing, and electric power are all available at the camp. At the same location, an upgrading mill, recently expanded to 200 tons per day capacity, has been installed by COG Minerals to treat

uranium ore from company operated mines.

The proposed exploration work would be done by independent contractors furnishing the required equipment and operating personnel. The applicant has an Allis-Chalmers HD-7 bulldozer (probably equivalent to a Caterpillar D-4) and air compressor available for use in conjunction with the independent contractor's larger bulldozer.

Supervising and technical personnel would be obtained from the applicant's regular staff.

Access roads to the southern part of the project area already exist but will need a minor amount of bulldozer work to clear rock-slides and repair washouts.

GEOLOGY

Sedimentary strata exposed on or near the Cove claims include the Moenkopi formation of Lower and Middle Triassic age, the Chinle formation, including the Shinarump member at the base, of Upper Triassic age, the Wingate sandstone of Upper Triassic age and the Kayenta formation of Jurassic (?) age (figs. 2 and 3). The Moenkopi formation is composed of pale reddish brown horizontally laminated and ripple-laminated siltstone and some beds of very fine-grained cross-stratified sandstone.

The Shinarump member is composed mainly of gray and yellowish gray medium- to coarse-grained quartzose sandstone. Lenses of conglomeratic sandstone are common as are lenticular beds of fine-grained sandstone and greenish-gray shale. It unconformably overlies the Moenkopi formation.

The unconformity is erosional but in most places the surface of unconformity is regular and here the Shinarump member is about 15 feet thick. At places the unconformity is marked by scours or channels filled with Shinarump sediments and at such places the Shinarump member is markedly thicker. These channels contain the uranium ore deposits in the White Canyon area. They range from about 100 to 500 feet in width, and although the depth of scour is as much as 60 feet it more commonly is about 15-20 feet. Figure 2 shows the trace and extent of the major channels in the vicinity of the Cove claims.

The Chinle formation, exclusive of the Shinarump member, is about 750 feet thick in the subject area. It has been subdivided into several units (Stewart, 1957) which are, in ascending order, the Monitor Butte, Moss Back, Petrified Forest, Owl Rock and Church Rock members; these consist of bentonitic greenish gray and reddish-brown mudstone and minor sandstone, conglomeratic sandstone, variegated claystone and minor sandstone, and, reddish-brown siltstone, fine-grained sandstone and minor limestone. The formation forms steep rubble covered slopes.

The massive Wingate sandstone and the Kayenta formation which aggregate about 600 feet on the property, form sheer cliffs above the Chinle formation.

The regional structure consists of a gentle southwesterly dip of beds of 1°-2° off the northerly trending Monument Upwarp. A series of widely spaced northerly to northeasterly trending faults exist southwest and west of the property. Downward displacement is most commonly on the west and

is small, although individual faults and fault sets are traceable for several miles. The easternmost of the fault sets was mapped within a mile south of the property before being concealed by landslide and talus breccia (A.F. Trites, Jr., unpublished map). Large, highly fractured blocks of Wingate sandstone in the talus breccia along the inferred extension of the fault set suggests that it extends to the southern part of the subject property. If such is the case then structure contours at the base of the Shinarump member, corrected for regional dip, may fail to present a true picture as to the presence or absence of a Shinarump-filled channel.

ORE DEPOSITS

Uranium ore deposits in the White Canyon area occur in well developed channels at the base of the Shinarump member. In addition, small, generally non-economic deposits also occur on what apparently are terraces beyond the main flanks of the channels. The more important channels have known, restored, and inferred lengths of about one-half to about five miles, widths commonly of about 200 feet, and scour depths of 15-30 feet. The uranium ore consists typically of uraninite, accompanied by iron- and copper-bearing sulfides, which impregnate sandstone intergranularly, and locally replace carbonaceous material. The ore is most commonly localized along the base and on the flanks of channels. The detailed configuration of the ore is locally controlled by the presence of interbeds of mudstone and by the sedimentary structures of the host sandstone. Individual ore

deposits range in size from small pods to elongate deposits, several hundreds of feet in length, ten to two hundred feet in width and one to twelve feet in thickness.

The Cairns channel (figs. 2,3) has a known length of about 5 miles, and, in the vicinity of the property, is about 200 feet wide and has a scour depth of about 20 feet. Plaeo-stream flow, as measured from sedimentary structures indicate a westerly and northerly direction of stream flow which deposited the filling sediments. DMEA exploration (docket 3625, contract Idm-E 879) tested, by drifting, the northerly downstream extension of the Cairns channel in the northern part of the Cove claims. DMEA work and subsequent company work, amounting to 1,600 feet beyond a stoped area near the Coleman incline, showed that the channel becomes less sharply defined to the north and finally is indiscernable. Only small pods of ore-grade material were discovered by the exploratory drifting, other than the moderate sized deposit found near the incline.

The Ula channel, which has a southwesterly direction of paleo-stream flow, has a known and restored length of about 7,000 feet (fig. 2). Its width from drill hole data apparently narrows from about 350 feet, northeast of the Ula workings, to perhaps 150 feet at the limit of drill hole data just beneath the Wingate rim, 900 feet further to the northeast. The scour depth appears to decrease to the northeast from about 25 feet to 10 feet. The upstream narrowing of the channel and the decrease of scour depth may be only apparent. The channel trends downdip and it is likely that no correction has been made for regional dip on the drill

hole and structure contour map made available to the examining team. The "upstream" closure of the structure contours tend to narrow the structure. This is coupled with the lack of exploratory holes beyond the lateral boundaries of the channel which, if present, might define a wider and deeper structure.

A series of drill hole fences spaced 150 to 300 feet apart, define the northeast part of the Ula channel. The holes in the fences intersected ore in widths of about 125-200 feet, and in thicknesses of about 2-12 feet. It is thought that the ore is largely continuous along the channel. Four of the five northeasternmost holes penetrated ore; one penetrated mineralized rock below ore grade or thickness. The northeasternmost ore holes penetrated material which ranged in grade from 0.17 percent eU_3O_8 to 0.48 percent eU_3O_8, and ranged in thickness from 1.6 feet to 8.8 feet (2 zones). These holes are about 4,500 feet southwest of the Cove claims.

An attempt was made to locate the continuation of the Ula channel on the northeast part of the Radium King Mines, Inc. property, southwest of the Cove claims but the results are reported to have been negative. An interpretation of the data by company personnel is that the holes possibly were drilled on the southeast flank of the channel.

Drill hole data on and near the subject claims (fig. 3) do not indicate the presence of an extension of the Ula channel. The data, however, are inadequate to disprove the channel's presence as the most likely places for its extension in the western part of the claims have not been

adequately tested. The drilling and underground exploration to the north, in the vicinity of the Coleman incline, do not indicate or even strongly suggest a confluence of the Cairns and Ula channels although there is a possibility that a confluence may exist in the vicinity of the largest stoped area as suggested both by the applicant's geologist and by Raymond N. Larsen, area geologist for the A.E.C. The data as to the timing of the channel-cutting and subsequent filling of the divergently trending Cairns and Ula channels are insufficient to postulate a reconstruction of the local paleotopography in sufficient detail for use for exploration purposes. However, the broad sweep of the trace of the Cairns channel and its dimunition north of the Coleman incline, suggests that a slight topographic high may have existed between the Cairns and Ula channels, which might have effected a more north-south trace of the Ula channel, further upstream from where it is presently known.

impt. respons. channel ~~ext.~~ to this point.

The probable upstream extent of the Ula channel cannot be estimated with any degree of certainty. The possible range in length is a few hundreds of feet to several thousands of feet, sufficient to extend even beyond the subject property.

The unknown factors of trace and extent of the Ula channel suggest that the chance of defining an upstream extension at nearly a mile's distance is only poor to fair. However, only a limited amount of drilling would be required to establish the presence or absence of the channel in the most likely direction of its extension. Negative results would indicate either that the extension of the channel is of short length, or

that its' course is largely beneath the mesas on the west covered by the Wingate sandstone and the Kayenta formation.

If the Ula channel is intersected by the proposed drilling, and is of size comparable to the nearby parts of the Cairns and Ula channels, uranium ore will probably be found and the size and grade of the deposits can be expected to be on the order of those of the nearby mines. Note that the higher average grade of ore as well as the larger deposits occur in the Ula channel (table 1).

PROPOSED EXPLORATION

Applicant's Proposed Project

The applicant proposes drilling a maximum of 28 holes in 8 fences aligned normal to the projected northeast trend of the Ula channel (fig. 3). Each hole would be non-core drilled to about the top of the Shinarump member, then core drilled to the Moenkopi formation. The average coring interval would be about 25 feet. Hole spacing within the fences would be 200 feet.

The initial fence, consisting of 6 holes, would be located approximately along the north side lines of the Gift no. 3 and Cove no. 44 claims. This fence would utilize 6 previously drilled holes and is designed to locate the Ula channel with respect to the applicant's property boundaries.

If the first fence fails to locate the channel, the applicant proposes a second fence containing 4 holes and located about 1,800 feet northeast of the first fence. The location of the second fence would

Table 1.--Production and Reserves from the Cairns and Ula channels. 1/

Cairns channel	Production Tons	Production % U_3O_8	Indicated Tons	Indicated % U_3O_8	Inferred Tons	Inferred % U_3O_8
Bullseye	16,975	0.24	12,000	0.13	10,500	0.13
Cove (J. P. Coleman)	3,386	0.23	400	0.25	1,200	0.30
Spook	18,864	0.21	12,000	0.14	--	
Uranium King Mineral King	--	--	6,600	0.29	7,300	0.29
Cove #1 2/	42	0.14				
Cove #17 2/	37	0.11				
	39,304	0.22	31,000	0.17	19,000	0.20
Ula channel						
Allen #2	4,450	0.30	5,757	0.28	--	
Copper claim (Westside Hersey group)	2,977	0.19	53,762	0.30	71,600	0.30
Hersey & Dermis Fraction	34,318	0.31	22,820	0.33	57,800	0.33
	41,745	0.30	82,339	0.31	129,400	0.31
					82,339	
					211,739	

1/ Data from ore reserves section U.S.A.E.C., Grand Junction, Colorado complete to October 1, 1957.

2/ Not producing

determine whether or not the channel crosses the property west of the first fence. If the Ula channel is not intersected by either of the two fences, the project would be terminated.

In the event that one or more holes in the first fence indicate the presence of a channel, then such hole or holes would be offset 100 feet on either side to locate the approximate center of the channel. The second fence, consisting of 4 holes, would then be located about 500 feet northeast of the first fence and would intersect the projected trend of the channel.

The remaining six fences, consisting of 3 holes per fence, would be spaced about 400 feet apart and would trace the channel northeastward to the northeast boundary of the project area.

The applicant's proposed program, as outlined above is estimated to require a minimum of 4,500 feet non-core and 250 feet core drilling (if no channel is intersected) and a maximum of 13,245 feet non-core and 725 feet core drilling (if the inferred channel is located and traced across the subject claims).

The estimated overall cost of the project as proposed by the applicant would be $35,870.00 with DMEA participation at 75 percent of the total or $26,902.50.

Recommended Program

The examining team is of the opinion that the property warrants exploration as only a moderate amount of exploratory drilling will be required to prove or disprove the presence of the extension of a

significant ore-bearing structure. The recommended program is essentially the same as that proposed by the applicant. Minor modifications have been made in the total number of proposed holes and in the estimated costs of the project.

The modified program is divided into three stages and requires a maximum of 33 holes distributed among 6 to 8 fences of drill holes. The first stage is further sub-divided into Phase A and Phase B. The complete recommended program is described below.

Stage I, Phase A, consists of 4 holes located as shown on figure 3. Each of the holes is to be drilled non-core to about the upper contact of the Shinarump, and then core-drilled through the Shinarump member and bottomed in not more than ten feet of the underlying, red Moenkopi formation. Evaluation of the results obtained by the first four holes, in conjunction with previously completed company holes, should indicate whether or not the Ula channel is present on the southwestern part of the Cove claim group. If the channel is not intersected by the initial fence of drill holes, Phase B, Stage I--if approved by the DMEA after evaluation of results obtained by Phase A drilling--would be performed. The five holes included in Phase B would be drilled at the locations shown on figure 3. If no trace of the inferred channel is found by Phase B, the project would be terminated.

Assuming that the inferred channel is located by Phase A, Stage I, the program would go directly to Stage II. The drilling footage allocated to Phase B, Stage I should be available for transfer, if needed and

approved by the DMEA, to the second or third stage of the project. If the channel is not located until completion of Phase B, Stage I, then the work will progress normally into Stage II.

Stage II will consist of 16 holes drilled with the same core and non-core drilling specifications as the first stage holes. Because the location of the second stage holes will be determined by results obtained by the initial drilling, no specific position can be shown. However, the holes will be distributed among 4 or 5 fences with 3 or 4 holes per fence. The fences should be from 400 to 500 feet apart and each fence comprised of holes on 175- to 200-foot centers. The first hole drilled in each fence should be on the projected axis of the channel, and lateral holes on the fence drilled to define the channel. The intent of the second stage drilling is to trace the channel across the project area and explore for uranium mineralization. All second stage holes must have Government approval before being drilled.

Stage III, the final stage of the project, will consist of a maximum of 8 holes which shall be drilled as offsets to previously drilled holes which are considered favorable by the Government. No hole drilled under Stage III should be closer than 150 feet to any other drill-hole. The results of previous drilling may indicate that the Stage III holes should be used as supplementary fences of holes instead of offsets. All Stage III work will, of course, require Government approval before being performed.

Estimated Costs of the Project

Independent contractor's bids on the proposed drilling and bulldozer work were included with the application. The lowest bid on drilling was by Martin & Buell, Inc., and the lowest on bulldozing was by Carrol S. Wilcox. Both bids are reasonable and comparable to the current prices charged for work in the White Canyon area.

The estimate of drilling costs is based on the following bid by Martin & Buell, Inc.:

Interval		Price per foot Core	Non-core
from 0 feet to 100 feet		--	$1.35
100	200	$3.75	1.45
200	300	4.00	1.60
300	400	4.25	1.70
400	500	4.50	1.80
500	600	4.75	1.90

Standby time - $20.00 per hour per drill

The average hole is estimated to be 600 feet in depth and to require 575 feet of non-core drilling and 25 feet of core drilling. An average price of $1.63 per foot for non-core drilling and $4.75 per foot of core drilling is used in estimating the cost of the proposed project.

Stage I, Phase A

Estimated time for completion -- 1.0 month

Basis - 1 drill rig - 1 shift per day

25 days per month - 110 feet per day

(1) Independent Contracts

Drilling (4 holes totaling 2,400 ft.)		
Non-core-2,300 feet at $1.63/ft.	$3,749.00	
Core-100 feet at $4.75/ft.	475.00	
Standby-4 hours at $20.00/hr.	80.00	
Bulldozing (4 drill sites and access roads)		
20 hours at $10.00/hr. D-7 D-4 ?	200.00	
Total independent contracts		$ 4,504.00

(2) Labor, Supervision, and Technical Services

Geological and engineering services		
1 month at $600/mo.	600.00	
Total labor, supervision, etc.		$ 600.00

(3) Operating Material and Supplies

Office and field supplies		
1 month at $50/mo.	50.00	
Total materials and supplies		$ 50.00

(4) Operating Equipment

Value of equipment			
1 jeep	$1,900.00		
1 transit & rod	710.00		
1 hole probing unit	450.00		
Total	$3,060.00		
Depreciation on 60 month basis			
$\frac{\$3,060}{60}$ = $51.00 per month			
Depreciation for 1 month		51.00	
Total operating equipment			$ 51.00

(7) Miscellaneous

Direct accounting costs at $50/mo.	$ 50.00	
Payroll taxes and ins. at 8% of $600	48.00	
Chemical assays for U_3O_8		
5 samples at $3.50 each	17.50	
Core boxes-10 boxes at $1.00 each	10.00	
Total miscellaneous		$ 125.50

Total estimated cost of Stage I, Phase A $5,330.50

Incidental allowance (total costs less independent contracts, core boxes and chemical assays)

$\frac{\$799.00}{2,400 \text{ ft.}}$ = $0.33 per foot

Stage I, Phase B

Estimated time for completion - $1\frac{1}{4}$ months

Basis - 1 drill rig - 1 shift per day

25 days per month - 110 feet per day

Actual Costs

Drilling (5 holes totaling 3,000 feet)

Non-core-2,875 feet at $1.63/ft.	$4,686.25	
Core-125 feet at $4.75/ft.	593.75	
Standby-5 hours at $20/hr.	100.00	
Bulldozing (5 drill sites and access roads)		
30 hours at $10.00/hr.	300.00	
Total actual costs		$5,680.00

Fixed Unit Costs

Incidental allowance for each foot of non-core and core drilling completed 3,000 feet at $0.33/ft.	$ 990.00	

Chemical assays for U_3O_8		
6 samples at $3.50 each	$ 21.00	
Core boxes-13 boxes at $1.00 each	13.00	
Total fixed unit costs		$1,024.00
Total estimated cost of Stage I, Phase B		$6,704.00

Stage II

Estimated time for completion - $3\frac{1}{2}$ months

Basis - 1 drill rig - 1 shift per day

25 days per month - 110 feet per day

Actual Costs

Drilling (16 holes totaling 9,600 feet)		
Non-core-9,200 feet at $1.63/ft.	$14,996.00	
Core-400 feet at $4.75/ft.	1,900.00	
Standby-16 hours at $20.00/hr.	320.00	
Bulldozing(16 drill sites and access roads)		
100 hours at $10.00/hr.	1,000.00	
Total actual costs		$18,216.00

Fixed Unit Costs

Incidental allowance for each foot of non-core and core drilling completed 9,600 feet at $0.33/ft.	$ 3,168.00	
Chemical assays for U_3O_8		
20 samples at $3.50 each	70.00	
Core boxes-40 boxes at $1.00 each	40.00	
Total fixed unit costs		$ 3,278.00
Total estimated cost of Stage II		$21,494.00

Stage III

Estimated time for completion - 1-3/4 months

Basis - 1 drill rig - 1 shift per day

25 days per month - 110 feet per day

Actual Costs

Drilling (8 holes totaling 4,800 feet)		
Non-core-4,600 feet at $1.63/ft.	$7,498.00	
Core-200 feet at $4.75/ft.	950.00	
Standby-8 hours at $20.00/hr.	160.00	
Bulldozing (8 drill sites and access roads)		
50 hours at $10.00/hr.	500.00	
Total actual costs		$ 9,108.00

Fixed Unit Costs

Incidental allowance for each foot of non-core and core drilling completed 4,800 feet at $0.33/ft.	$1,584.00	
Chemical assays for U_3O_8 15 samples at $3.50 each	52.50	
Core boxes-20 boxes at $1.00 each	20.00	
Total fixed unit costs		$ 1,656.50
Total estimated cost of Stage III		$10,764.50

Summary of Proposed Program

	No. of Holes	Aver. depth	Core feet	Non-core feet	Total feet	Overall Cost
Stage I, Phase A	4	600	100	2,300	2,400	$5,330.50
Stage I, Phase B	5	600	125	2,875	3,000	6,704.00
Stage II	16	600	400	9,200	9,600	21,494.00
Stage III	8	600	200	4,600	4,800	10,764.50
Total	33	600	825	18,975	19,800	$44,293.00

Average overall cost per foot	$ 2.237
Government participation at 75 percent or	$33,219.75
Estimated time for completion	7½ months

Consideration was given to the use of two or more drill rigs on the proposed work, thus reducing the incidental allowance. However, since hole locations after completion of the first stage are dependent on immediate drilling results, it would be almost impossible to efficiently utilize more than one drill.

Although the larger portion of the drilling is non-core, progress is expected to be rather slow. The drill holes will penetrate a certain amount of talus breccia and landslide debris before entering the Shinarump member and will probably require casing through a part of the non-cored portions. The necessity for casing the holes is reflected in the relatively low estimated rate of drilling.

CONCLUSIONS AND RECOMMENDATIONS

The groups of claims included in the proposed exploration project are located such that a likely projection of the Ula channel extends onto the property. The drilling program recommended by the examining team is designed to determine first the presence or absence of the extension of the Ula channel, and secondly, to trace and explore the channel if present. The probability of the channel extending through the property is only fair considering the fact that the nearest drill holes penetrating the channel are 4,500 feet southwest of the subject area. However, the known length of the Ula channel exhibits a relatively straight, northeastward trend and, where last known, is a well-defined, narrow channel containing uranium ore. If the northeastward trend continues, the channel should cross the applicant's property. Sufficient exploratory

work has been done to eliminate a part of the claim area and only a small amount of drilling would be necessary to prove or disprove the presence of the extension of the Ula channel.

Evaluation of the available information indicates that a reasonable chance exists for discovering a significant deposit of uranium ore. The examining team recommends DMEA participation in a three-stage project requiring a maximum of 18,975 feet of non-core drilling and 825 feet of core drilling in 33 holes at an estimated cost of $44,293.00. Government participation at 75 percent would be $33,219.75.

The following provisions should be incorporated in the recommended contract:

(1) No hole should be drilled closer than 100 feet to the outer boundary lines of the project area.

(2) No core should be smaller than BX in size.

(3) The usual provisions for geologically and radiometrically logging holes and submitting appropriate records thereof.

(4) Bulldozer work should be performed with a D-6 Caterpillar or equivalent unit. (It is suggested, however, that allowable rates and hours for the use of a D-4 Caterpillar or equivalent unit be included.)

(5) A competent geologist-supervisor should be assigned full time to the project work and should be physically present on the project when the drill is operating.

LITERATURE CITED

Stewart, John H., Proposed nomenclature of part of upper Triassic strata in southeastern Utah, A.A.P.G. Bull., Vol. 41, p.441-465, March, 1957.

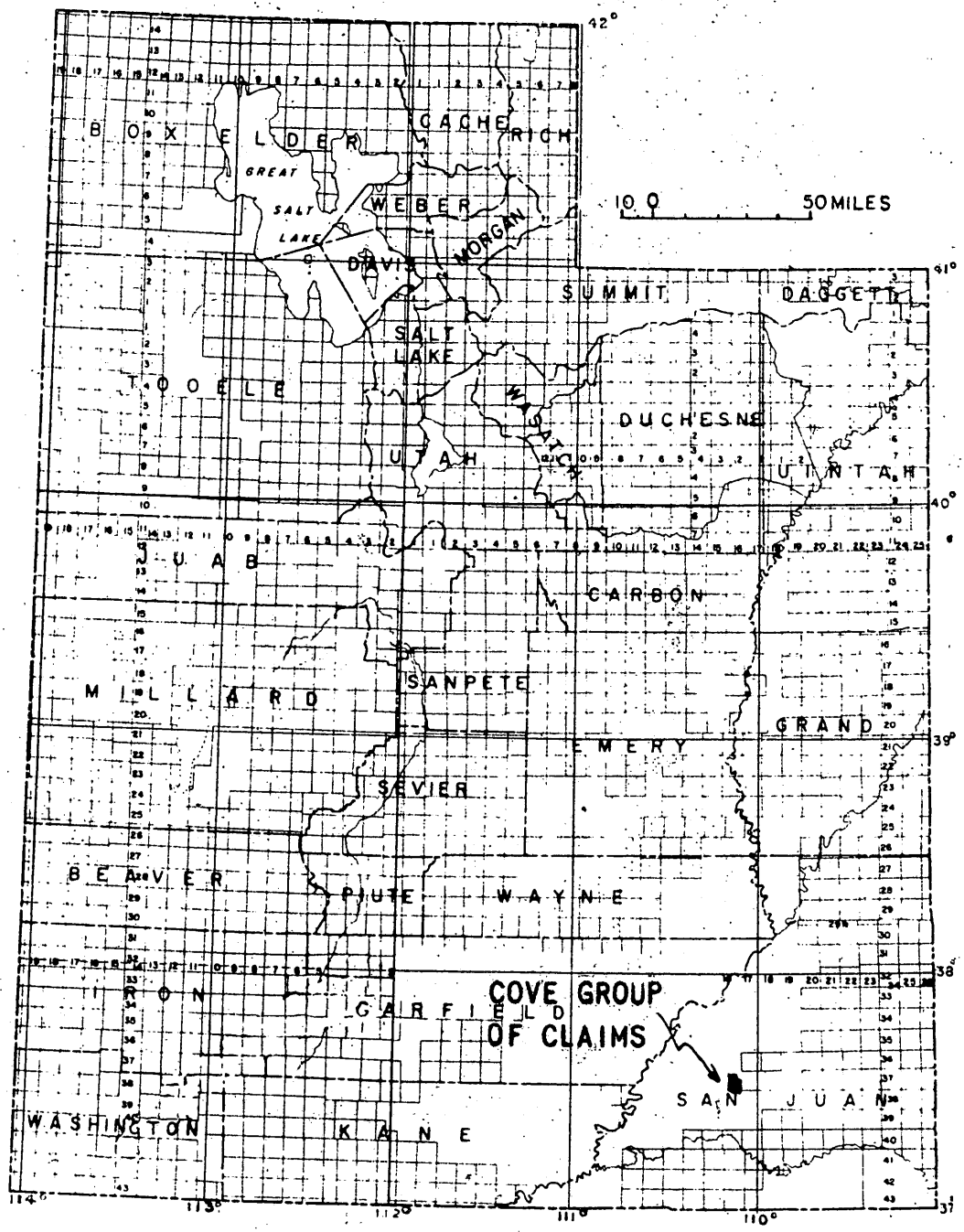


FIGURE 1.--INDEX MAP OF UTAH SHOWING LOCATION OF COVE GROUP OF CLAIMS, COG MINERALS CORP., SAN JUAN COUNTY, UTAH.

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFI[illegible]ALS EXPLORATION ADMINISTRATION
JANU[illegible]
DOCKET 4852

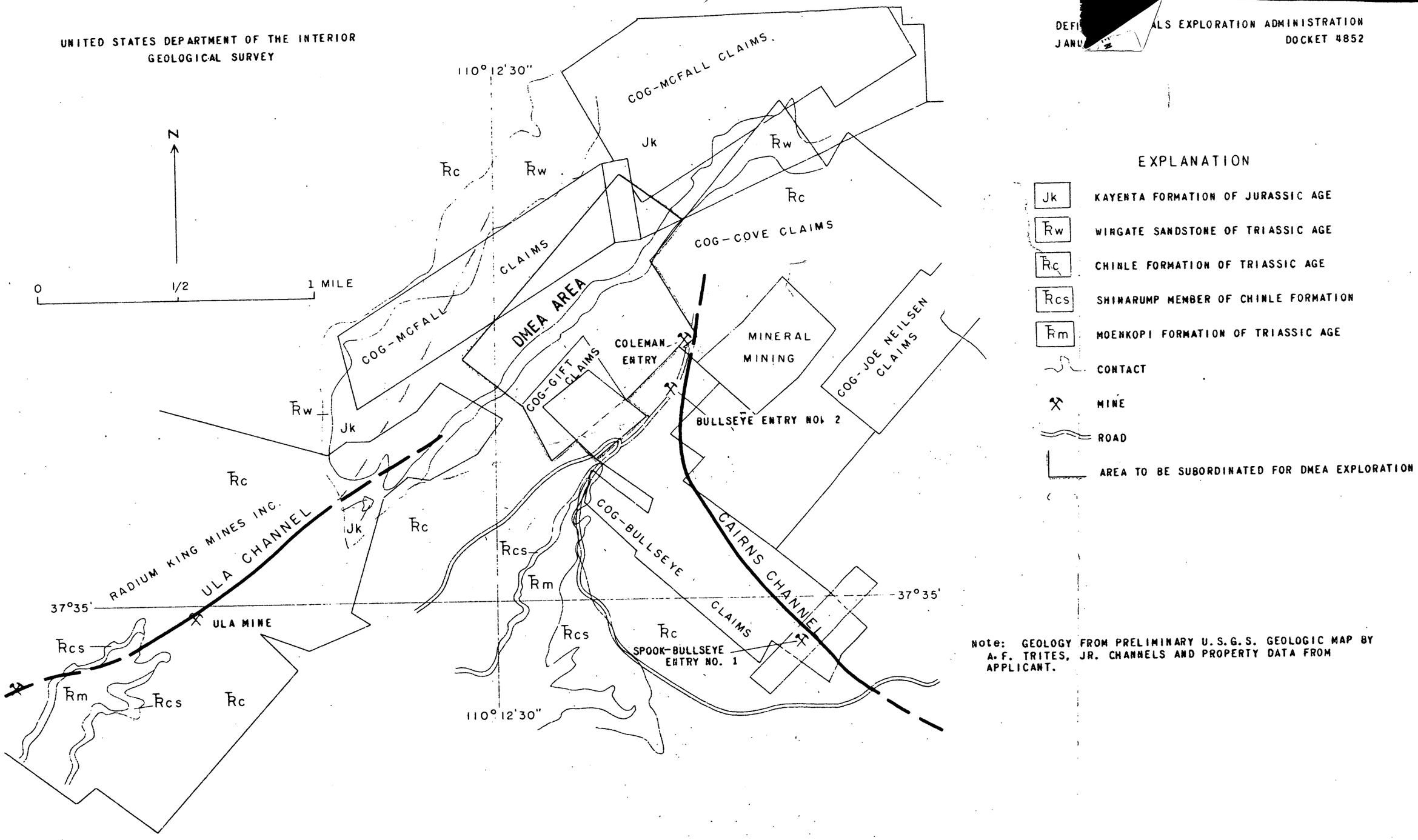


FIGURE 2.--MAP SHOWING GENERAL GEOLOGY AND CHANNELS IN RELATION TO GROUND SUBORDINATED FOR DMEA EXPLORATION, COG MINERALS CORP., SAN JUAN COUNTY, UTAH.

OFFICIAL FILE COPY
DMEA
REMOVED FEB 10 1958

OFFICIAL FILE COPY
DMEA
RECEIVED NOV 4 1957

DATE	INITIALS	CODE
11/4	gb	220
11	[illegible]	700

224 New Customhouse
Denver 2, Colorado

November 1, 1957

Memorandum

To: J. W. Hasler W/enclosures, Items 2-5 Below
DMEA/G. Jct. Att: M. H. Salsbury) W/enc., Items 1-5 Below

From: DMEA Field Team, Region III

Subject: Docket No. DMEA 4852 (Uranium) COG Minerals Corporation (Cove Group) San Juan County, Utah

Enclosed is the following material relating to the subject docket:

1. Copy of application for Government assistance in exploration work under the DMEA program.
2. Memorandum of Review by James Paone, USBM.
3. Memorandum of Review by W. P. Williams, USGS.
4. Letter of transmittal of the foregoing to this office, dated October 28, 1957, from the Chairman, Operating Committee, DMEA.
5. Routing Control Sheet.

A field examination of the property and a joint report of findings and recommendations pertaining to the Applicant's work proposal are requested.

If the field examiners view the project proposal favorably, the Applicant should be instructed that we will require forms MF-205. At the same time, the field examiners should inform this office of this action at once so that we may request the proper forms to be prepared for signature.

If the field examiners recommend Government participation in the proposed exploration program, please submit eleven extra copies of each map used in the joint report which show the land to be subordinated and the location and extent of recommended work, relative to property boundaries.

The Bureau of Mines' copy of the application should not be returned to this office, but is to be kept for the Examining Engineer's file. The Routing Control Sheet, however, is to be completed, detached from the application, and forwarded to the Executive Officer with the Joint Examination Report. The Survey's copy of the application is to be returned to Mr. Harshman's office.

E. N. [illegible]

for E. N. Harshman
Acting Executive Officer

Enclosures

BMC:eh

cc: Sec. Op. Comm. (2)
Harshman W/enclosures, Items 2-4
Docket
Chron.

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
10/25	Murphy	700
10/28	Ellis	700
10/28	GCS.	130
"	Jones	110
		~~130~~
10/29	gb	220
		700

OCT 28 1957

Mr. E. N. Harshman
Acting Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-4852 (Uranium)
COG Minerals Corporation
Cove Group
San Juan County, Utah

Dear Mr. Harshman:

The captioned application is referred to Region III Field Team for investigation, a field examination if deemed advisable, and recommendations.

Enclosed are copies of memoranda, dated October 17 and 25, 1957, by W. P. Williams, USGS, and James Paone, USBM, respectively, relating to the application. Also enclosed for Field Team use is one copy of the application.

In the event a contract is approved, we will require the usual number of Consent to Lien and Subordination Agreements signed by the following:

Cove 21-24 and Cove 37-44 claims:
Milton C. Nielson, E. J. Hall, Kenneth Bailey, Jr., Allan E. Mecham, Burnhard Black, Hans J. Nielson, Francis D. Nielson, Barbara Certonio, Eugene K. Stephen; and by Uranium King Corporation and Taylor Uranium Corporation, the sublessors;

Gift 1, 2, and 3 claims:

Francis D. Nielson and Joseph H. Sherman; and

Bullseye 11 and 12 claims:

Bullseye Uranium Corporation

8623

Accordingly, the Field Team, in the event it recommends a project, should inform the Applicant of this requirement. Also, it should advise the Applicant that while early submission of these forms would expedite the processing of the application, the presentation of the forms does not imply that a contract will be granted.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

Enclosures

APPROVED:

P. F. Yopes (PFY)

Member, Bureau of Mines

W. P. Williams (WPW)

Member, Geological Survey

FMMurphy/gla
10-25-57
cc to: Admr.'s Reading File
Operating Committee
THKiilsgaard, Rm. 5224
FMMurphy

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
10/25	Murphy	700
10/28	[illegible]	700
10/28	Selfridge	130
		~~140~~
		~~100~~
10/29	gb	220
		700
10/28	Williams	130
10/28	Yates	130

OCT 28 1957

Mr. W. C. Norman, President
COG Minerals Corporation
1000 Denver Club Building
Denver, Colorado

Re: Docket No. DMEA-4852 (Uranium)
Cove Group
San Juan County, Utah

Dear Mr. Norman:

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

Mr. E. N. Harshman
Acting Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

The Regional Office will contact you in regard to your project if additional information is required.

Sincerely yours,

Frank E. Johnson (for)

ACTING Administrator

FMMurphy/gla
10-25-57
cc to: Admr.'s Reading File
FMMurphy
DMEA Field Team, Region III (2)

8623

OFFICIAL FILE COPY
DMEA
RECEIVED OCT 25 1957

DATE	INITIALS	CODE
10/25	C	220
"	Murphy	700

October 25, 1957

4852

Commodity Uranium

Cog Minerals Corp.

Bull's Eye, Spook, Cadillac, et al.

Location of property San Juan County, Utah

Estimated cost of project $35,000.00

Ernest William Ellis, DMEA Member
Uranium Commodity Committee

James Paone, Bureau of Mines Member JP
Uranium Commodity Committee

Application

10/16/57 10/25/57

x

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

OFFICIAL FILE COPY
DMEA
RECEIVED OCT 21 1957
IN REPLY REFER TO:

DATE	INITIALS	CODE
10/21	C	220
10/22	Ellis	700

Memorandum October 17, 1957

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

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

Subject: Review of application, DMEA 4852 (uranium), COG Minerals Corp., Bull's Eye et al claims, San Juan County, Utah

The applicant proposes to explore for uranium ore deposits on 17 mining claims. The property is located in Red Canyon and is adjacent to DMEA 3625, which was certified as a discovery on October 12, 1956.

The proposed project would consist of a coring and plug-bit drilling project that would cost an estimated $35,000. The objective of the drilling would be to seek for channel structures and ore deposits in the Shinarump member.

The property is located in a general area where large ore bodies might exist. The Field Team very likely has much information about the property from other DMEA applications in the vicinity. I recommend that the application be sent to the Field Team for review and report.

W. P. Williams

W. P. Williams

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

October 16, 1957

Vog Minerals Corporation
727 Third Avenue
Grand Junction, Colorado

Gentlemen

Subject: DMEA-4852

Your application for exploration assistance, dated October 10, 1957 submitted to our office at Denver, Colorado has been assigned Docket Number DMEA-4852 and referred to the Rare and Miscellaneous Metals Division in the Washington office. Kindly identify all future correspondence relating to your application by this Docket Number.

Sincerely yours,

Allen S. Dakan, Director
Operations Control and
Statistics Division

Copy to:

Region III

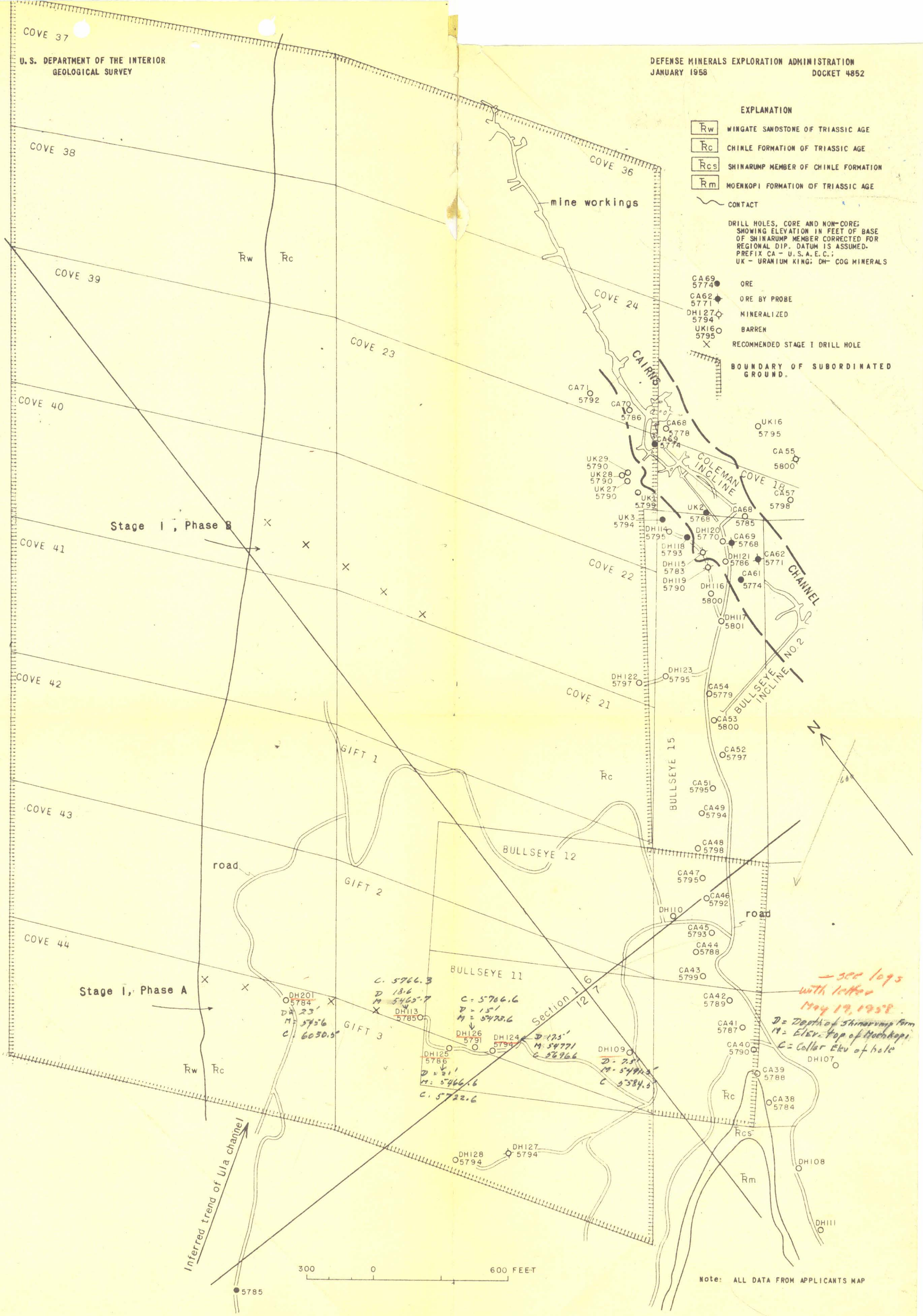
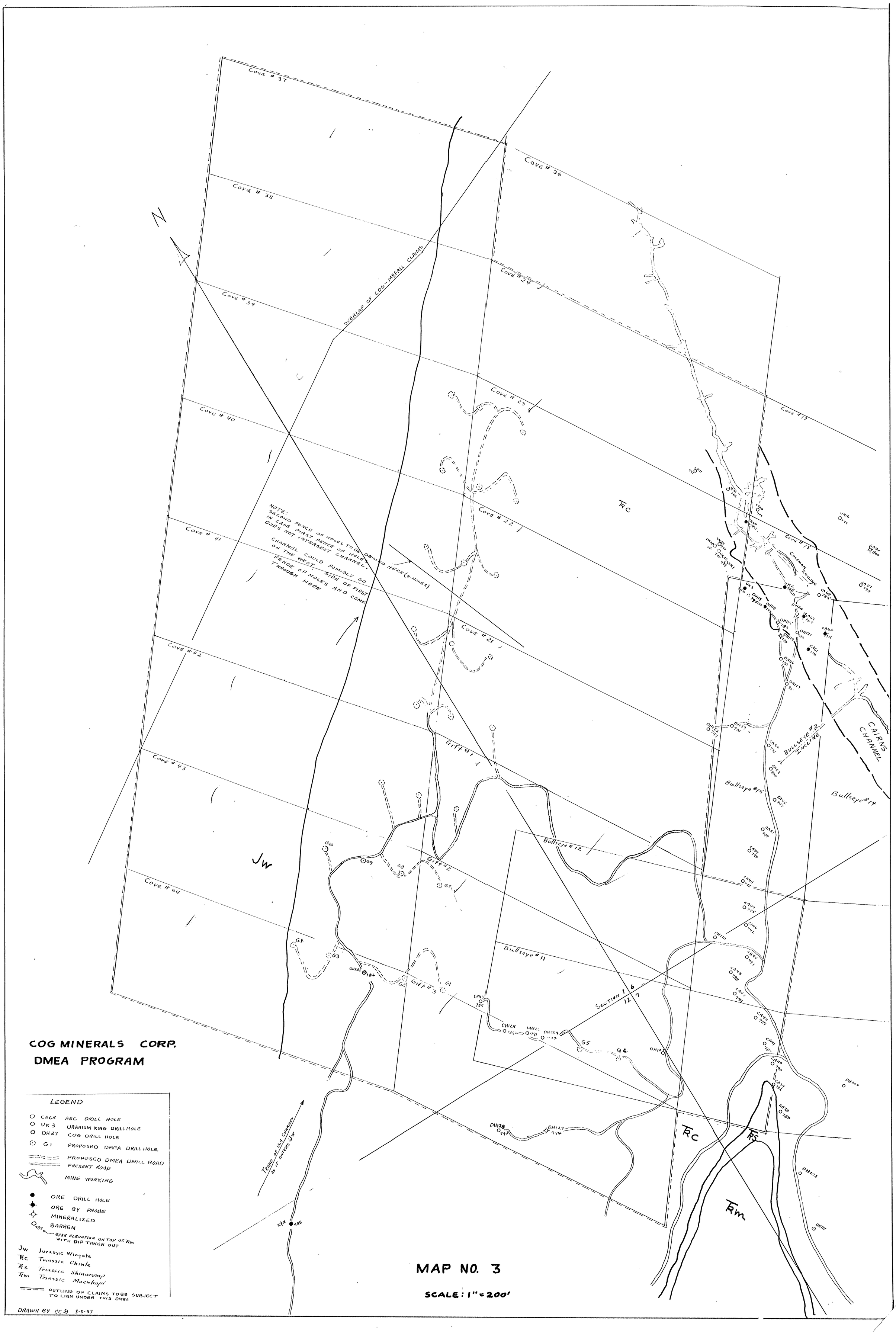
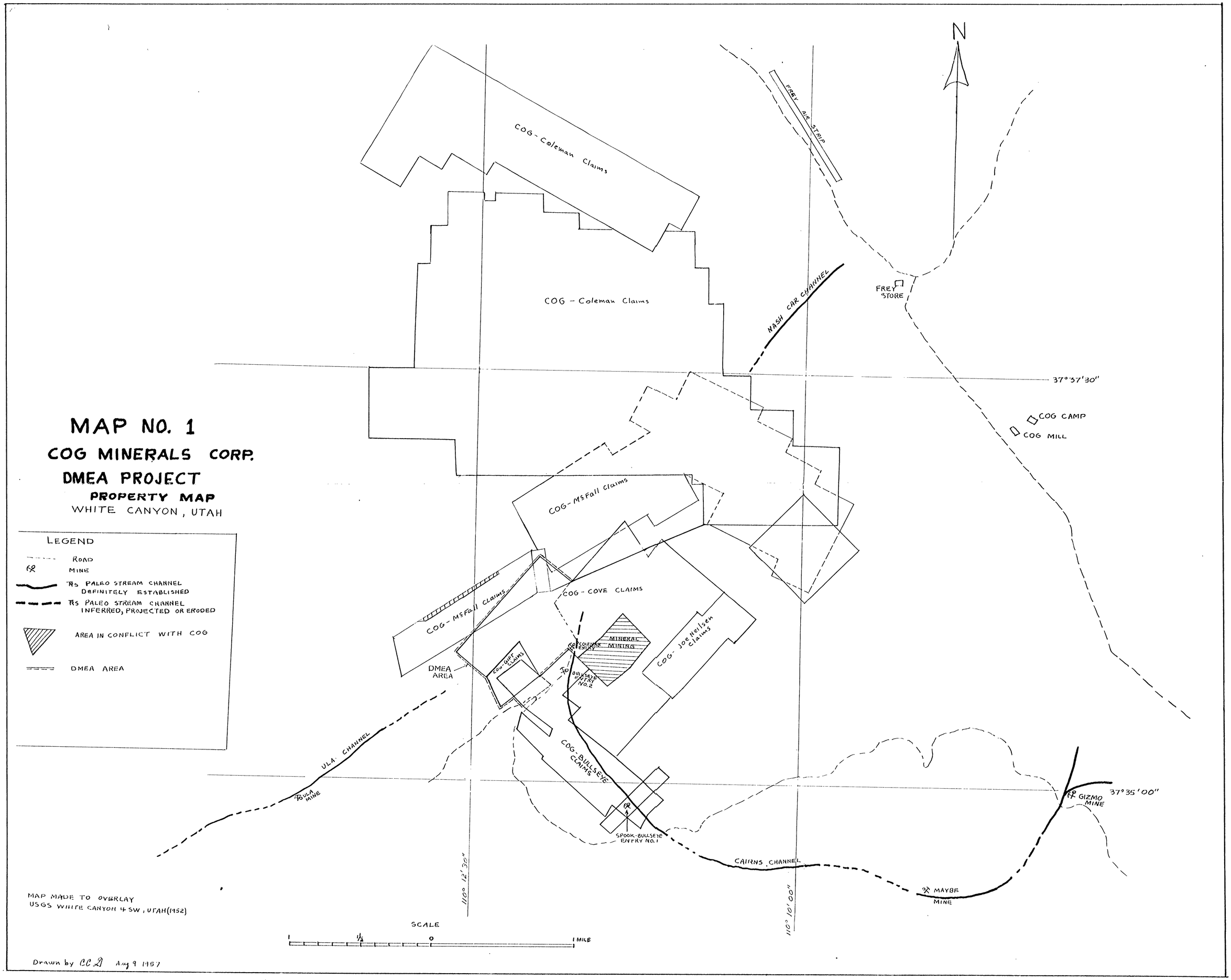


FIGURE 3.--MAP SHOWING SUBORDINATED GROUND, GEOLOGY, A PART OF THE CAIRNS CHANNEL, UNDERGROUNG WORKINGS, EXISTING DRILL HOLES, AND RECOMMENDED STAGE I DRILL HOLES, COG MINERALS CORP., SAN JUAN COUNTY, UTAH.


COG MINERALS CORP.
DMEA PROGRAM
LEGEND
CA65 NEC DRILL HOLE
UK 3 URANIUM KING DRILL HOLE
DH 27 COG DRILL HOLE
G1 PROPOSED DMEA DRILL HOLE
PROPOSED DMEA DRILL ROAD
PRESENT ROAD
MINE WORKING
ORE DRILL HOLE
ORE BY PROBE
MINERALIZED
BARREN
5785' ELEVATION ON TOP OF Rm WITH DIP TAKEN OUT
Jw Jurassic Wingate
Rc Triassic Chinle
Rs Triassic Shinarump
Rm Triassic Moenkopi
OUTLINE OF CLAIMS TO BE SUBJECT TO LIEN UNDER THIS DMEA
DRAWN BY CC 8-8-51
MAP NO. 3
SCALE: 1" = 200'
Cove # 37
Cove # 38
Cove # 36
Cove # 39
Cove # 24
Cove # 23
Cove # 40
Cove # 17
Cove # 22
Cove # 41
Cove # 15
Cove # 21
Cove # 42
Cove # 43
Cove # 44
OVERLAP OF COG-MCFALL CLAIMS
NOTE: SECOND FENCE OF HOLES TO BE DRILLED HERE (4 HOLES) IN CASE FIRST FENCE OF HOLES DOES NOT INTERSECT CHANNEL. CHANNEL COULD POSSIBLY GO ON THE WEST SIDE OF FIRST FENCE OF HOLES AND COME THROUGH HERE
Rc
Jw
Rs
Rm
COLEMAN INCLINE
CAIRNS CHANNEL
BULLSEYE #2 INCLINE
Bullseye #15
Bullseye #14
Bullseye #12
Bullseye #11
Giff #1
Giff #2
Giff #3
SECTION 1 6 12 7
TREND OF UW CHANNEL AS IT ENTERS Jw


MAP NO. 1
COG MINERALS CORP.
DMEA PROJECT
PROPERTY MAP
WHITE CANYON, UTAH
LEGEND
ROAD
MINE
PS PALEO STREAM CHANNEL DEFINITELY ESTABLISHED
PS PALEO STREAM CHANNEL INFERRED, PROJECTED OR ERODED
AREA IN CONFLICT WITH COG
DMEA AREA
N
COG - Coleman Claims
COG - Coleman Claims
FREY AIR STRIP
NASH CAR CHANNEL
FREY STORE
37°37'30"
COG CAMP
COG MILL
COG - McFall Claims
COG - McFall Claims
COG - COVE CLAIMS
COG - Joe Nelsen Claims
MINERAL MINING
COLEMAN ADIT
DMEA AREA
COG - GEF CLAIMS
BULLSEYE ADIT NO. 2
COG - BULLSEYE CLAIMS
ULA CHANNEL
ULA MINE
SPOOK-BULLSEYE ENTRY NO. 1
CAIRNS CHANNEL
GIZMO MINE
37°35'00"
MAYBE MINE
110° 12' 30"
110° 10' 00"
MAP MADE TO OVERLAY
USGS WHITE CANYON 4 SW, UTAH (1952)
SCALE
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1/2
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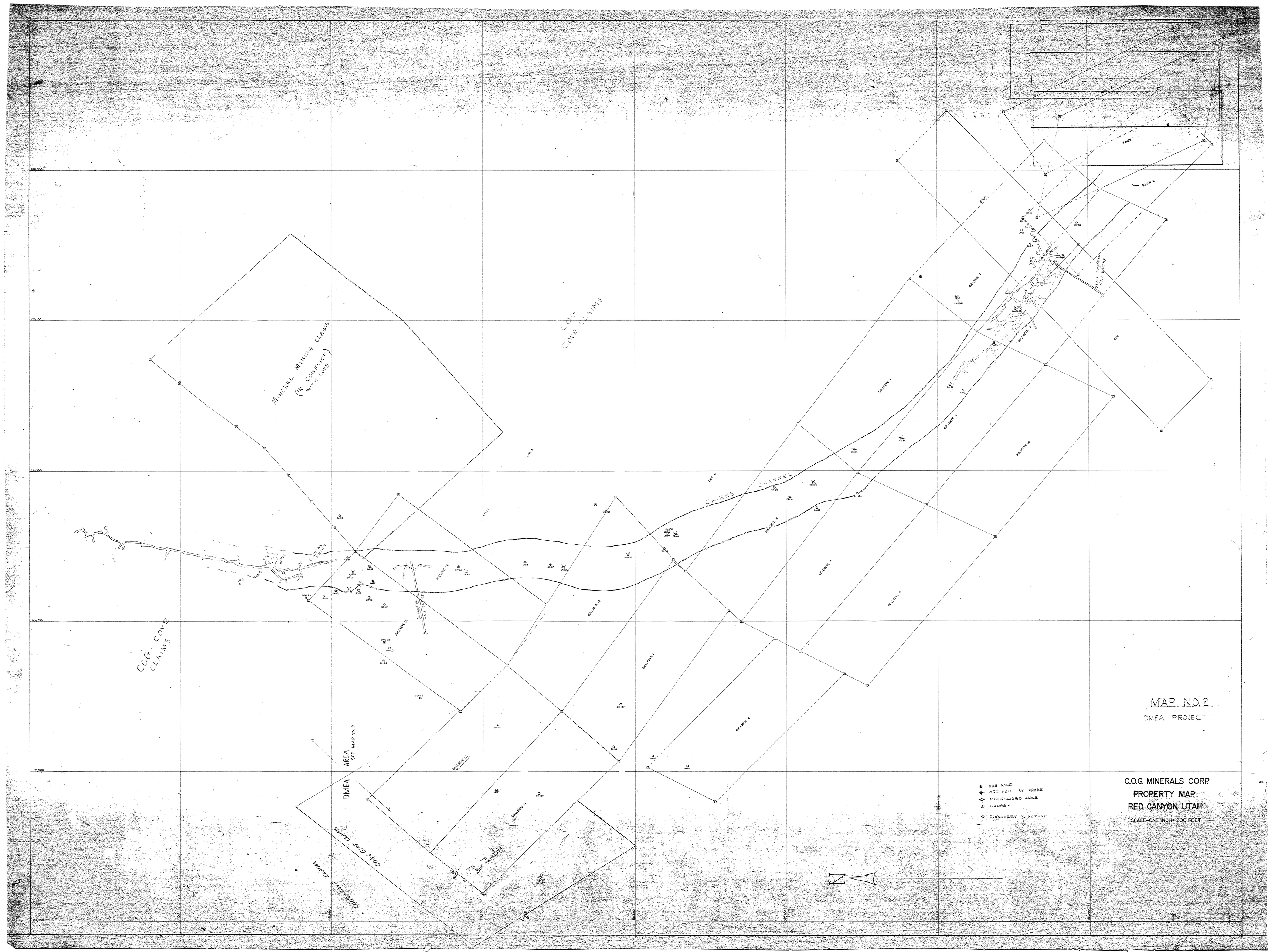
1 MILE
Drawn by CCD Aug 9 1957


MAP NO. 2
DMEA PROJECT
C.O.G. MINERALS CORP.
PROPERTY MAP
RED CANYON UTAH
SCALE-ONE INCH = 200 FEET
ORE HOLE
ORE HOLE BY PROBE
MINERALIZED HOLE
BARREN
DISCOVERY MONUMENT
MINERAL MINING CLAIMS
(IN CONFLICT WITH COVE
COG COVE CLAIMS
CAIRNS CHANNEL
COG-COVE CLAIMS
DMEA
AREA
SEE MAP NO. 3
COG'S STAR CLAIMS
COG'S COVE CLAIMS
RAVEN 1
RAVEN 2
RAVEN 3
BULLSEYE 1
BULLSEYE 2
BULLSEYE 3
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BULLSEYE 5
BULLSEYE 6
BULLSEYE 7
BULLSEYE 8
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