DMEA Form 9

UNITED STATES
DEPARTMENT OF THE INTERIOR
Defense Minerals Exploration Administration

OFFICIAL DOCKET FILE

DMEA NO. 4667

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(Withdrawn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

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

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

Left Side

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

Right Side

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

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

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

Left Side

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

Right Side

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

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

Folder No. 4: Settlement Sheets

Folder No. 5: Drill Logs

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

RECEIVED MAR 1 1957 D.M.E.A.

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

Not to be filled in by applicant

Docket No. 4667
Metal or Mineral Uranium
Date Received 3-1-57
Estimated Cost $17,998.00
Participation (Government %)

INSTRUCTIONS

1. *Name of applicant.*—(*a*) State here your full legal name, in the form in which you will wish to contract, and your mailing address: Uranium Geophysical, Inc.
Box 1107
Moab, Utah

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

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

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

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

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

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

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Lessee (See copies of lease agreement attached)

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

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

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

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

(*b*) State past and current production, and ore reserves, if any, giving quantities and grades. See Page Two & Page Three

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

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

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

16—66551-1

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

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

(*c*) The work will start within 90 days and be completed within 6 months from the date of an exploration project contract.

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

6. *Estimate of costs.*—Furnish a detailed estimate of the costs of the proposed work (you will have to use a separate sheet), under the following headings. Add the totals under all headings to give the estimated total cost of the project: See Page 8

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

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

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

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

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

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

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

(*h*) *Contingencies.*—Give an estimate of any necessary allowances for contingencies not included in the costs stated above. See Page 8

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

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

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

☐ Money ☒ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated February 15, 1957

Uranium Geophysical, Inc.
(Applicant)

By Calvin H. Flowers
Secretary

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

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

1(c) Henry S. Florence Jr. Pres.
1136 South Alton Way
Salt Lake City, 8, Utah

Henry S. Florence, Vice-President
4280 Wander Lane
Salt Lake City, 7, Utah

Calvin K. Florence, Secretary
Box, 1107
Moab, Utah

Kenneth W. Ingleby, Treasurer
3821 Ash Circle
Salt Lake City, Utah

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DMEA
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DATE	INITIALS	CODE

3. Applicant's property rights

(a) Recorded in the office of the County Recorder, Emery County, Utah

NAME OF CLAIM	NO.	ORIGINAL LOCATION			AMENDED LOCATION		
		Book	Page	Date	Book	Page	date
Cross Bow	1	J-20	379	5/20/54	J-83	78	4/12/55
Cross Bow	2	J-20	380	5/20/54	J-83	79	4/12/55
Cross Bow	3	J-20	381	5/20/54	J-83	80	4/12/55
Cross Bow	4	J-23	69	6/2/54	J-83	81	4/12/55
Cross Bow	5	J-23	70	6/2/54	J-83	82	4/12/55
Conrad	2	J-8	565	4/3/50	J-83	74	4/12/55
Conrad	3	J-10	352	9/21/52	J-83	75	4/12/55
Conrad	4	J-13	517	12/3/53	J-83	76	4/12/55
Conrad	5	J-13	518	12/3/53	J-83	77	4/12/55

4. Physical description

(a) The extent of the exploration activities on the Uranium Geophysical, Inc. lease to date has amounted to prospecting the rim and driving drift at the Conrad mine into the channel on the Conrad #3 claim by the lessors. This work, consisting of approximately 290 feet of exploratory drifting, is the result of the lessors activities over the past several years. An access road was built from the valley floor up to the mine adit. This is still usable. Most of the mining was done by wheel barrow and blasting. The Shinarump conglomerate (or Moss Back) is dipping north west at about 6 degrees. The drifts are practically level. At the surface most of the radiometric count is in a conglomerate tongue near the base of the Shinarump. (Refer to Fig. 6, page 14.) This conglomerate dips into the floor of the drifts on the west side of the mine workings. (Refer to Fig. 3, page 11.) All ore shipped

to date come from the drifts at A. and C. on Fig. 3, page 11. The quantities and grades are indicated in the following paragraph. South of the mine approximately 800 feet on the opposite side of the canyon the same channel is exposed and some ledging and prospecting have been done but nothing sufficient to expose the entire channel. Drilling is proposed behind this area, as outlined on the Cross Bow claim on Fig. 4, page 12. Up the canyon from the mine a few hundred feet another prospect has been opened up on the rim. Considerable count is found here with some fracturing and jointing and light faulting evident. This area is outlined by small crosses on Fig. 5, page 13, the proposed drill hole map of Area B. The radio activity at this point is high in the Shinarump rather than at its base as at the mine. As the base is not exposed several drill holes are proposed for this area to test the lower portions of the sandstone where higher radio activity is generally concentrated and formation of ore begins.

(b) The exact tonnage of ore shipped from the Conrad mine was not available at the writing of this application. In 1954 all ore was shipped under the name of Howard Staker, license #P-714. In 1955 all ore was shipped under the name of Metals Mining Co., license #P-2730. Examples of ore shipped are as follows:

10 ton in 1955 assayed .17% uranium, shipped to Thompson, Utah

12 ton in 1955 assayed .11% uranium, shipped to Monticello, Utah

39 ton in 1954 assayed .13% uranium, shipped to Monticello, Utah

All of the aforementioned ore was mined from the drift labeled "C" on Mine Workings Map, Fig. 3, page 11.

In 1956 a previous lessee shipped several tons of ore from the drift labeled "A" that assayed from .11% uranium to .14% uranium. Tonnages involved are not known. There is no current production at the Conrad mine. Considerable quantities of marginal grade ore exists at the mine. An upgrading mill installed at the mine would render

this ore of commercial value, making mining profitable on present known grades of ore. The exploration program proposed as a part of this application would explore the rock at deeper depths and under more overburden where commercial grade ore is expected to exist. If a higher grade ore is discovered much of the present exposed low grade could be mined and shipped with the high grade ore.

(c) The Uranium Geophysical lease is located on the south flank of the San Rafael Swell in Emery County, Utah. (Refer to Index Map, Fig. 1, page 9.) The lease consists of 5 Cross Bow claims and 4 Conrad claims (Refer to Claim Map Fig. 2, page 10.) These claims are situated in Reds Canyon in the area of several producing mines. The Lucky Strike mine is located 3/4 mile east of the lease and the Green Dragon mine, Tomisch Mt. mines and Delta mine are situated 3 miles west of the lease. The area is accessible via Greenriver, Utah a distance of 70 miles. Rocks exposed on the Uranium Geophysical lease, from oldest to youngest, consist of the Moenkopi formation, Shinarump conglomerate, Chinle formation and Wingate formation. These formations are dipping northwest approximately 6°. The nearest exposure of igneous rocks is in the Henry Mountains a few miles southwest.

The Shinarump conglomerate, or Moss Back formation as may rightly be the correct nomenclature, of late Triassic age, is the ore bearing sandstone formation. The Shinarump conglomerate on the Conrad and Cross Bow claims consists of lenticular beds of sandstone, conglomeratic sandstone, clay and siltstone ranging in thickness from 40 feet to 80 feet. The sandstone contains silicified and carbonized wood and fragments and seams of charcoal. In some areas pyrite has replaced some or all of the carbon, and in other areas the pyrite has localized in the sandstone independent of carbon. The carbon and pyrite traces are especially common and associated with channel fill deposits. Secondary copper minerals occur in the oxidized zone of the channel where it outcrops on the rim of the Shinarump conglomerate on the Conrad #3 and Cross Bow #1 claims. At the mine portal a section of

THE Shinarump appears to be approximately 40 feet thick with a 15 foot lense or tongue of sandstone at the top. Immediately below this is a tongue of green mudstone 2 or 3 feet thick followed by another sandstone lense approximately 10 feet thick. Below this is another mudstone tongue 3 feet thick followed by a true conglomerate lense approximately 10 feet thick. Below this is another tongue of green mudstone followed by the Moniter Butte shale. The conglomerate is mineralized and has been mined and shipped. However, the grade is not of commercial value rendering the mining profitless. The conglomerate is protected both above and below by a fairly thick mudstone tongue that seems to account for the localization of mineralization, by interrupting circulating fluids. (Refer to Cross Sections, Fig. 6, page 14.) The sandstone lense above the conglomerate is protected above and below with mudstone tongues as well and it is believed that this sandstone may develop into the ore bearing section at depth due to its character. In the north west drift a small seam of uranium ore is exposed in this sandstone lense verifying the conclusion. The seam is black and appears to be true uranium ore localized in sandstone independent of carbon or other localizers. (Refer to Mine Workings Map, Fig. 3, page 11.)

Because of the favorable mineralization and ore present on the relative surface of the Uranium Geophysical lease it is supposed or postulated that by drilling behind the outcrop, back where the sandstone is protected from leaching by more cover, uranium ore will be discovered. For that reason this application for DMEA assistance has been prepared for the purpose of further exploring the claims of this lease in the areas of the trend of the exposed channel, where ore would most probably localize in commercial quantities.

(d) The project is available by maintained dirt and oiled roads all year. From Greenriver take U.S. 60 west 4 miles to junction Utah 24 ; Utah 24 south 32 miles

to Temple Mt. junction; Temple Mt. road west 20.5 miles to Delta mine road junction, take right hand road west past "Family Butte" down Reds Canyon toward Muddy river 12 miles to Conrad mine. A sign indicating Uranium Geophysical lease is posted at this point. This is a total of 68.5 miles.

Shipping, supply and residence points are located at Greenriver, Price and Moab. There is a maximum distance to Price of 130 miles from the lease with Greenriver being the closest. Railroad facilities are available at Greenriver.

(e) Manpower, materials, supplies and equipment are available at the above named cities also.

5. The exploration project

(b) The proposed work

The Shinarump conglomerate has been explored to a limited extent by drifting at the Conrad mine on the Uranium Geophysical lease. The proposed work consists of drilling holes from the top of the Shinarump bench on the property behind the mine workings and intersecting the channel into which the mine workings were driven. The work consists of 28 holes laid out in grid fashion at relatively close intervals to test the limited extent of the channel crossing the Cross Bow #1 and Conrad #3 claims. This group of holes would be on approximately 75 feet intervals in the fence and each fence would be on 100 foot intervals. This group of fences comprises AREA A. (Refer to Proposed Exploration Map of Area A, Fig. 4, page 12.) 10 holes are proposed for AREA B testing the Shinarump around the prospect on the Cross Bow #3 and Conrad #5 claims. These holes are to be laid out back from the rim approximately 150 feet and will be on approximately 75 foot centers. (Refer to Proposed Exploration Map of Area B, Fig. 5, page 13.) 10 additional holes are proposed for further testing the Shinarump in localities of interest that develop as the drilling is carried out. These

holes are not at present designated for any one spot, hence are not shown on any of the exploration maps.

	Fence No.	No. of Holes	Approx. Depth	Total Footage in Fence	Total Core	Total Plug
AREA A	1	4	50'	200'	160'	40'
	2	4	60'	240'	160'	80'
	3	4	80'	320'	160'	160'
	4	4	150'	600'	160'	440'
	5	4	60'	240'	160'	80'
	6	4	80'	320'	160'	160'
	7	4	150'	600'	160'	440'
AREA B	-	10	70'	700'	400'	300'
RANDOM HOLES	-	10	80'	800'	400'	400'
		48		4820'	1920'	2100'

Field examination will show that the Wingate cliff rises approximately 500 feet north of the mine adit limiting the drilling in that direction. (Refer to Cross Section, Fig. 6, page 14.) Laterally the drilling is felt to be limited by the lateral extent of the channel. All drill hole elevations will be accurately surveyed and correction for dip will be made, then each elevation and hole location will be platted. Contour lines will then be drawn at the base of the Shinarump outlining the extent of the channel as it develops from drill hole data. This map will be started by surveying and platting data representing elevations along the outcrop and will be projected to the drilling area as the work progresses. The drilling will then be governed according to the projected channel as it develops from drill hole data. It is proposed that only the bottom 40 feet of each hole be cored by diamond bit methods. The upper portion of each hole is to be drilled by plug bit methods. Each hole is to be probed for additional data.

A road for access to the Shinarump bench will have to be built from the valley floor to the top of the bench. This road would rise an elevation of approximately 200 feet. The Shinarump would have to be blasted in order to make this road. This road plus the drill sites is expected to take about 125 hours of work with a size D8 caterpillar.

Two months have been estimated as the length of time needed to complete the exploration program. All costs involving time have been figured on this basis.

The supervisor would be responsible for directing the drilling program, running all surveys and probing all holes. He would plat necessary maps and receive all core and further, a consulting geologist would then come in periodically to log the core and interpret the drilling data. The consultant would advise as to the location of the 10 proposed random holes. The supervisor would run the jack hammer, drill holes, set powder and blast for the road work.

(d) The applicant, Uranium Geophysical, Inc., was organized in 1955 providing the following services on a consultant basis: Geological services, mine and property management, diamond core drilling, radio-metric services and surveying. The president of the corporation was schooled at Occidental College and graduated with a degree in mining geology in 1951. He has been engaged on a consulting basis in uranium on the Colorado Plateau since 1954.

Mr. Calvin K. Florence, the president's brother and secretary of the corporation has been actively engaged with him in performing the above named services. His major activities were with the drill crews acting as the drilling engineer. Mr. Calvin K. Florence will supervise the activities of this exploration program if approved. His activities as enumerated above well qualify him for the job.

c

6. Estimate of costs.

(a) Independent contracts.

Drilling (Costs based on low bid of 3 attached drilling bids, pages 15, 16, 17)

Plug bit drilling	2100' @ $2.10	$4,410.00
Diamond core drilling	1920' @ $4.25	8,160.00
Moving time	$1.25 per unit mile	305.00
Standing time	(Delays by supervisor or government) No time estimated @ $12.00 per hr.	
Dozer work	125 hrs. @ $12.00	1,500.00

(b) Labor, supervision and consultants.

Supervision	2 mo. @ $500.00	1,000.00
Consultant	10 days @ $50.00	500.00

(c) Operating materials and supplies

Food for supervisor	2 mos. @ $100.00	200.00
Fuel	Heating and cooking butane 2 mos. @ $20.00	40.00
Gas and oil for pick-up truck	2 mos @ $80.00	160.00
Core boxes	corregated paper 112 @ $1.25	153.00
Blasting powder fuses and caps		50.00

(d) Operating equipment

Compressor and Jackhammer with steel and bits rental		200.00
Pick-up truck for supervisor	Suggested use allowance 2 mos. @ $100.00	200.00
Hole Probe	Suggested use allowance 2 mos. @ $50.00	100.00
Engineers transit	Suggested use allowance 2 mos. @ $65.00	130.00
House trailer	Suggested use allowance 2 mos. @ $120.00	240.00

(e) Rehabilitation and repairs (None)

(f) New buildings, improvements, installations. (None)

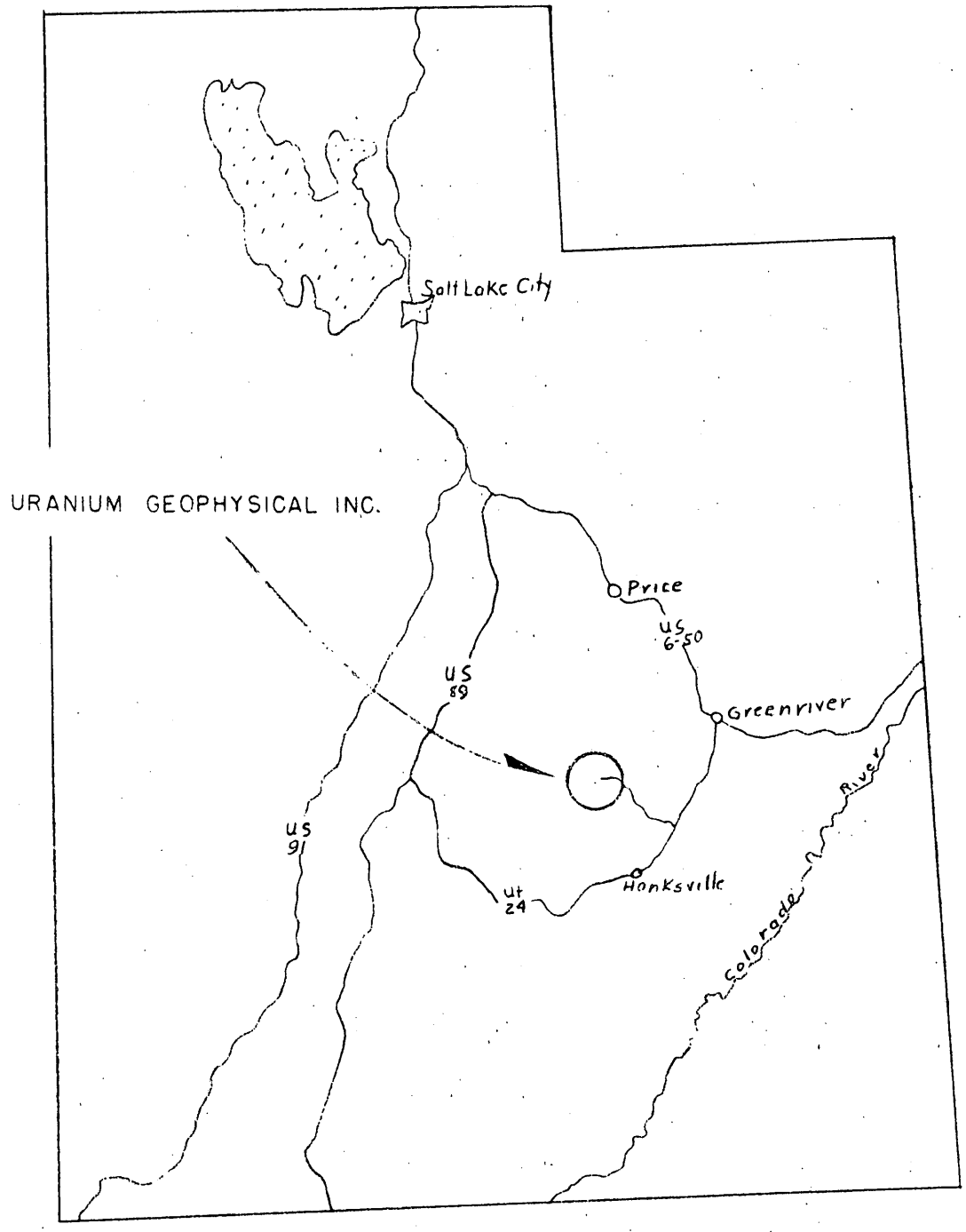
(g) Miscellaneous

Chemical assays	30 samples @ $5.00	150.00
Analytical work, accounting, workmen's compensation, employers liability insurance, pay roll taxes, estimated at		100.00

(h) Contingencies

Unexpected delays lengthening job, maximum chargeable	500.00
TOTAL	$17,998.00

7. (b) We proposed to furnish our share of the cost by using our own equipment and providing services as outlined in #6, Estimate of costs, as follows: Use of drill rig, providing supervision, geological consultant, trailer, transit, hole probe and pick-up truck.



INDEX MAP OF UTAH SHOWING LOCATION OF URANIUM GEOPHYSICAL'S LEASE IN THE SAN RAFAEL SWELL, EMERY CO., UTAH

FIG. 1

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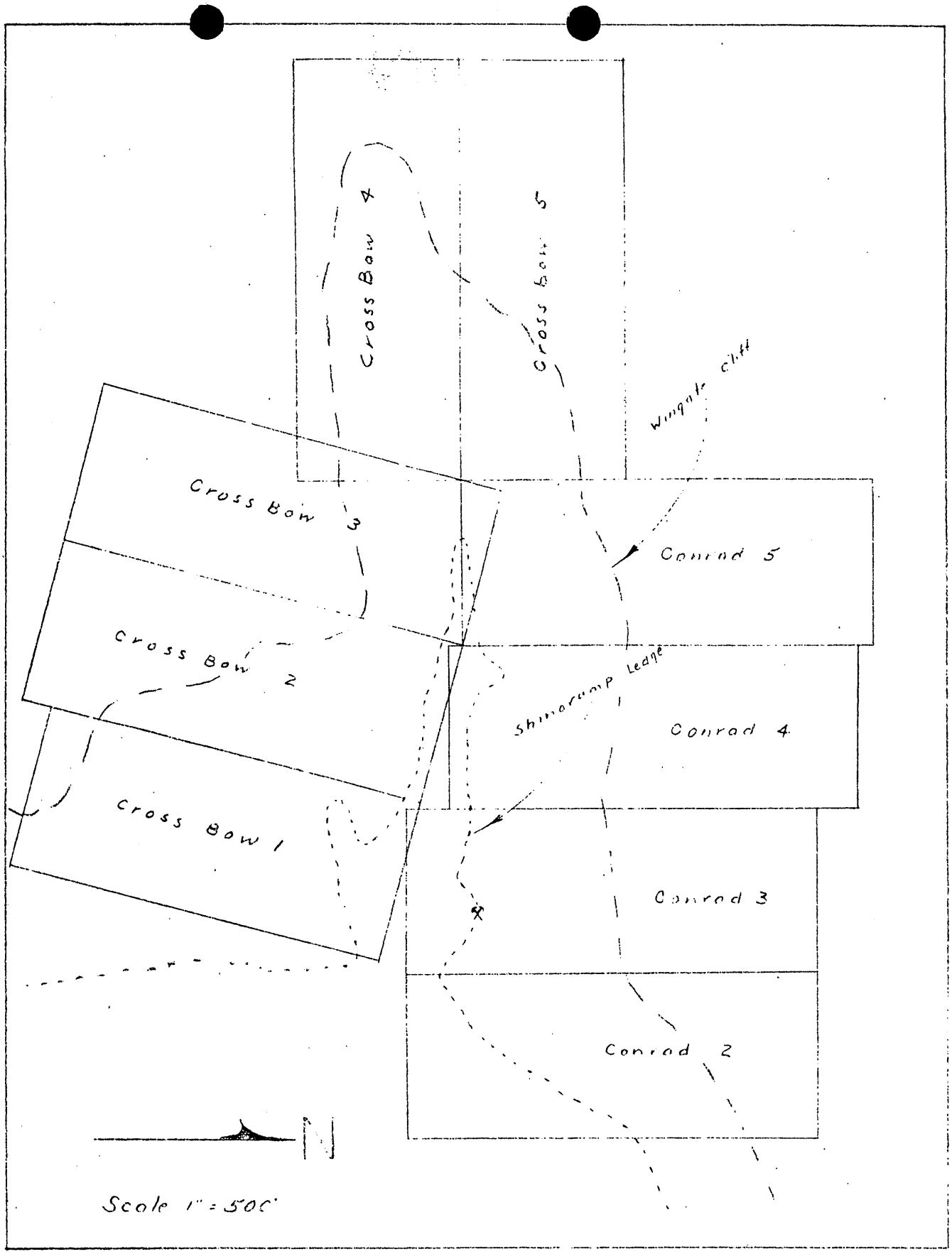
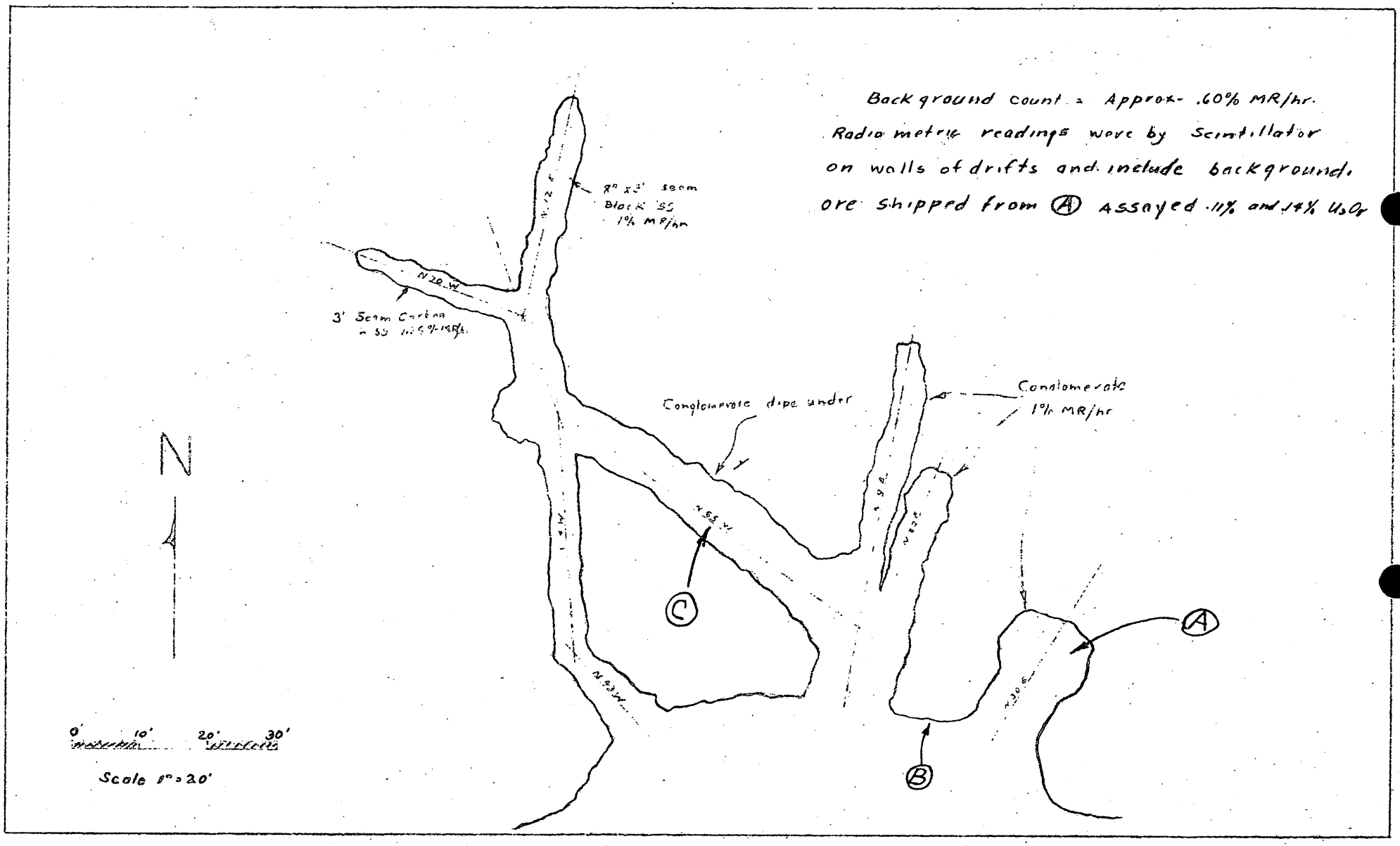
DATE	INITIALS	CODE



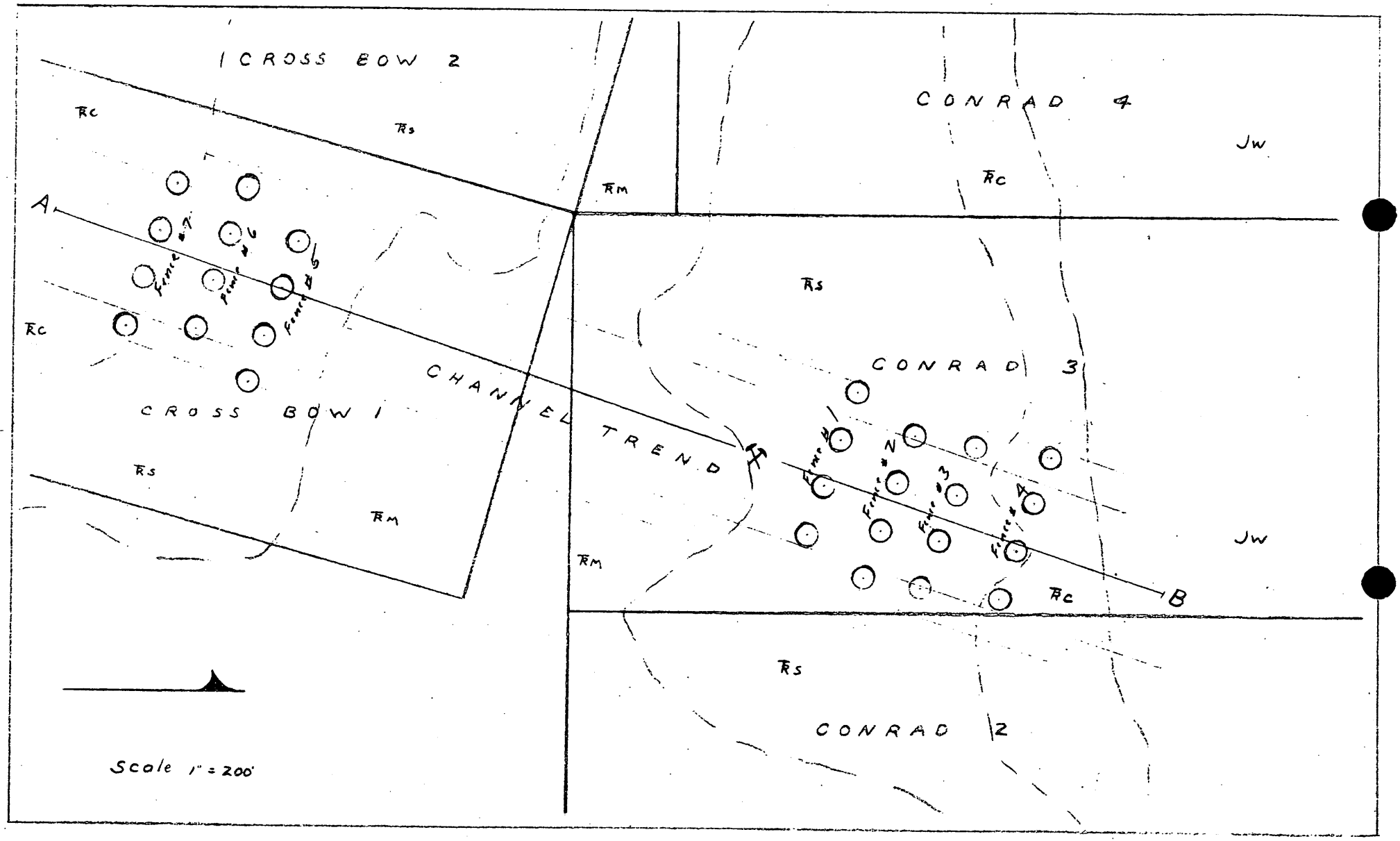
CLAIM MAP OF URANIUM GEOPHYSICAL LEASE EMERY CO., UTAH

FIG. 2



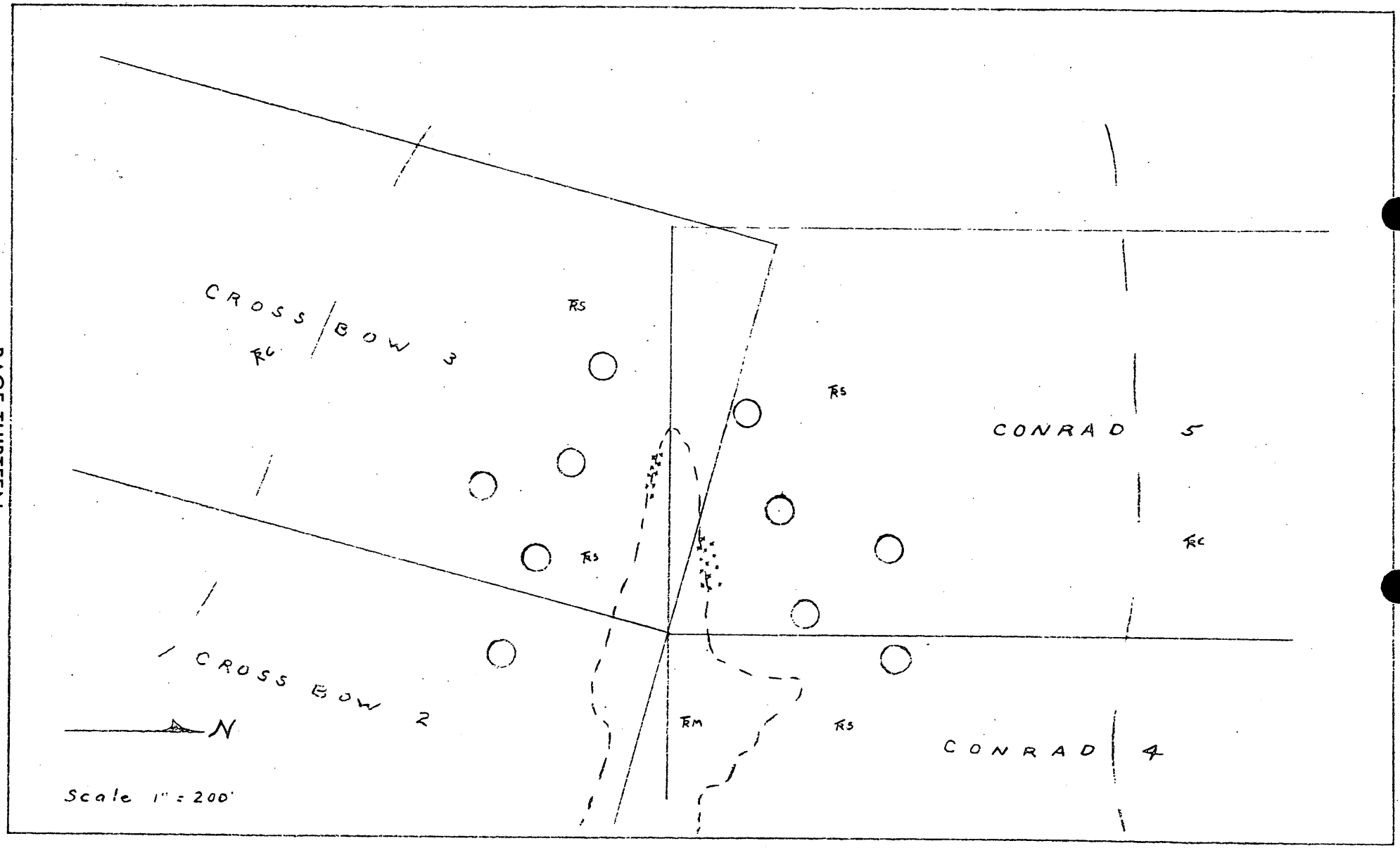
EXISTING MINE WORKINGS ON THE CONRAD NO. 3 CLAIM OF THE URANIUM GEOPHYSICAL LEASE

FIG. 3



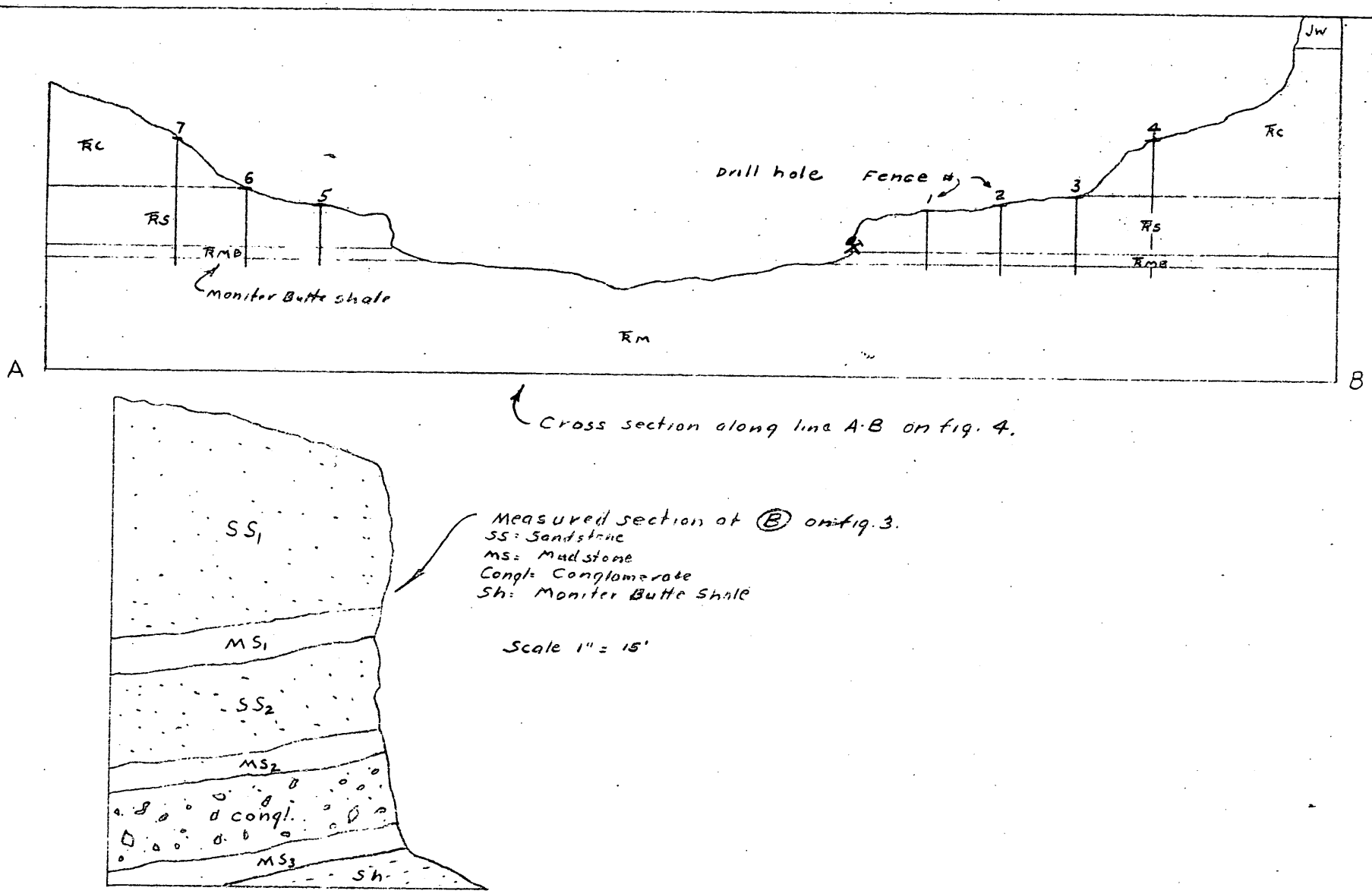
GEOLOGIC MAP SHOWING PROPOSED EXPLORATION PROGRAM, CHANNEL TREND AND CLAIM LINES ON THE URANIUM GEOPHYSICAL LEASE — AREA A

FIG. 4



PROPOSED DRILL HOLES ON URANIUM GEOPHYSICAL LEASE — AREA B

FIG. 5



CROSS SECTIONS

FIG. 6

Diamond Core Drilling
Mining
Quarries
Shaft Sinking
Tunnel Driving

Boyles Bros. DRILLING COMPANY

CONTRACTORS - ENGINEERS - GEOLOGISTS

GENERAL OFFICES
1321 SOUTH MAIN STREET PHONE HU 4-4401
SALT LAKE CITY 15, UTAH

FEBRUARY 1, 1957

REPLY TO: L.C.

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DMEA
RECEIVED MAR 1 1957

DATE	INITIALS	CODE

URANIUM GEOPHYSICAL, INC.
BOX 1107
MOAB, UTAH

GENTLEMEN:

WE SUBMIT THE FOLLOWING PRICES FOR DRILLING ON THE "CONRAD" AND "CROSSBOW" CLAIMS IN EMERY COUNTY, UTAH.

MOBILIZATION AND DEMOBILIZATION. $350.00.

1. DRILLING RATE TO A DEPTH OF 500 FEET.

PLUG BIT DRILLING. $2.15 PER FOOT.
CORE BIT DRILLING. 4.25 PER FOOT.

2. DELAYS AS ORDERED BY THE COMPANY OR THE GOVERNMENT, $12.50 PER HOUR.

THANK YOU FOR CALLING ON US.

YOURS VERY TRULY,

P. A. Park

P. A. PARK
ASSISTANT MANAGER
DRILLING DIVISION

PAP:LM

Vivian Drilling Co.

ROCK BIT & DIAMOND CORE DRILLING CONTRACTORS

P. O. BOX 1025
MOAB, UTAH

PHONE: ALPINE 3-4366

February 6, 1957

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RECEIVED MAR 1 1957

DATE	INITIALS	CODE

Uranium Geophysical, Inc.
Box 1107
Moab, Utah

Gentlemen:

We submit the following prices for drilling on the "Conrad" and "Crossbow" claims in Emery County, Utah.

Moving Rig on and off claims $215.00

Drilling rate to a depth of 450 feet

Plug bit drilling $2.10 per foot
Core bit drilling $4.55 per foot

Delays as ordered by the company or the government 12.50 per hour.

Yours very truly,

VIVIAN DRILLING CO.

Burt Vivian

Burt Vivian

PIONEER DRILLING CO.

PHONE ~~XXXXXX~~ AL 3-2621

~~3103 MIDKIFF RD. EL PASO, TEXAS~~
MIDLAND, TEXAS
~~XXXXXXXXXXXX~~
Box 471, Moab, Utah

February 5, 1957

Uranium Geophysical Inc.
Box 1107
Moab, Utah

Let this serve as our bid on your drilling.

Moving Charge $325.00 Plug Drilling ~~$225~~ $2.25 per ft.
Core Drilling $4.40 per ft. Standby time $13.00 per hour.

PIONEER DRILLING CO.

Joseph F. Costanza
By Joseph F. Costanza (partner)

RECEIVED
DATE
INITIALS
EXTRA COPY
D M E A

A G R E E M E N T

This shall constitute a contract between Uranium Geophysical, Inc., a Utah corporation, hereinafter called the party of the first part and Howard R. Staker and Lydia B. Staker, his wife, Salt Lake City, Utah, hereinafter referred to as the party of the second part.

WHEREAS: the party of the first part is desirous of conducting a mining and exploration operation upon certain claims, described and known as:

NAME OF CLAIM	DATE OF RECORD	BOOK	PAGE
Cross Bow No. 1	20 May 1954	J-20	379
Cross B ow No.2	20 May 1954	J-20	380
Cross Bow No. 3	20 May 1954	J-20	381
Cross B ow No.4	2 June 1954	J-23	69
Cross Bow No. 5	2 June 1954	J-23	70
	Also Known As		
Cross Bow No. 1A	12 April 1955	J-83	78
Cross Bow No. 2A	12 April 1955	J-83	79
Cross Bow No.3A	12 April 1955	J-83	80
Cross Bow No. 4A	12 April 1955	J-83	81
Cross B ow No. 5A	12 April 1955	J-83	82

recorded in the office of the County Recorder of Emery County, State of Utah, and whereas the party of the second part is desirous of leasing the aforesaid claims to the party of the first part, it is therefore mutually agreed that:

1. The party of the first part is to have and to hold said property for the purpose of mining and exploration for a term commencing with the date hereof and expiring on the _____ day of February, 1967, at noon on that day, unless the same shall be sooner terminated by violation of any covenant herein against the party of the first part reserved or by the surrender of this lease by said party of the first part. Said party of the first part shall have the option to renew this lease at the end of this primary term for a like period under like conditions.

2. The party of the first part shall, upon the execution of this agreement, investigate said property to determine valuation for the purpose of applying for a Defense Minerals Exploration Administration loan to be used to assist in the exploration of said property.

3. Party of the first part will thereupon make application for an exploration loan at his own expense, and if such loan is approved, said party of the first part will execute exploration of the aforementioned property under DMEA contract without obligation or expense to the party of the second part, except as to the property herein described.

4. Party of the first part will use all diligence in seeking a loan that will assist in a thorough exploration of said property and also to carry out and complete the contract between party of the

first part and the Defense Minerals Exploration Administration.

5. After completion of said exploration, if in the opinion of the party of the first part, commercial and mineable ore has been discovered as a result of the aforementioned exploration, said party of the first part will commence a mining operation to recover, so far as is economically possible, said discovered ore.

6. Party of the first part shall assume responsibility to determine the mining equipment that may be needed to operate said property, and shall procure same. Except that all equipment procured for said operation of mining costing in the excess of five hundred dollars ($500.00) shall be subject to the approval of the party of the second part as herein provided or by the agent of the party of the second part. Said equipment may be procured by money guaranteed by commercial ore discovered as a result of this agreement.

7. Party of the first part agrees to conduct a continuous mining operation upon the herein described claims unless prevented from so doing by an act of God, mine disaster, or any other conditions beyond the control of the party of the first part.

8. The party of the first part shall furnish to the party of the second part copies of all settlement sheets for ore shipped; the application in its fullness to the DMEA; any item purchased for the purpose of mining costing in the excess of $500.00, a receipt thereof; a copy of all assays from the exploration of said property; all maps, etc., but not limited to, used for record purposes in this agreement.

9. Party of the first part shall keep a complete set of records of the operations performed on said property, and agrees to permit party of the second part to inspect and examine said books and records pertaining directly to the claims covered by this agreement, at all reasonable times.

10. Party of the first part agrees to permit party of the second part or their duly authorized agent or representatives to enter upon the aforementioned claims at all reasonable hours for the purpose of inspecting the claims or any other legitimate business purpose. Party of the first part makes no guarantee or promise that such visitors will be covered by the insurance held by the party of the first part.

11. Party of the first part agrees that im the event any land adjacent to or adjoining the claims described herein, not covered by claims already legally staked, such land, if claimed, will be claimed in the name and title of the parties of the first part and party of the second part, each party sharing equal interest in such claimed land. All filing fees, staking costs, or charges for surveying such additional property shall be paid from the mining operations now owned by the party of the second part.

12. Party of the first part agrees to carry liability insurance and any necessary compensation coverage in accordance with current Federal, State and local regulations.

13. Party of the first part agrees to conduct all mining and exploration activities in accordance with standard acceptable mining practices.

14. Party of the first part may cancel this lease at any time, if in the opinion of the party of the first part, it is no longer possible to conduct a profitable mining operation. Such notice of cancellation shall be made in writing, addressed to party of the second part, via registered mail, to the address of the agent for the party of the second part as provided herein.

15. Party of the first part shall well and truly pay or cause to be paid to the said party of the second part, their executor, administrator, or agent as provided herein, as rental for the property herein described, seventy five percent (75%) of the net profit from sale of ore mined from the said premises, including all premiums and special bonuses paid by the United States Government or authorized purchasing agent to be paid by draft drawn upon account of party of the first part. The term, net profit, shall mean all monies that remain from said sale of ore or bonuses paid, after the cost of mining has been deducted. The said payments are to be made quarterly. The cost of mining shall include a salary of five hundred ($500.00) per calendar month for management; all equipment used to mine ore; all supplies used to mine ore, such as powder, caps, steel, timber, pipe, etc., wages for employees employed for carrying out the mining operations described herein; insurance and taxes, etc., and any exploration carried out after the exploration program with DMEA as described herein has been carried out. Under no circumstances shall any expense incurred from the original exploration program with the Defense Minerals Exploration Administration be deducted from sale of ore mined from the property described herein. However, any royalty due the Defense Minerals Exploration Administration as a result of any agreement entered into with said Administration by the party of the first part shall be deducted from sale of ore prior to any other deduction as described in this contract.

16. The party of the first part is solely responsible for all labor and materials furnished and used in connection with this lease, and the party of the second part shall in no way be held responsible for any indebtedness whatsoever incurred by the party of the first part in the prosecution of operations under this contract, except as to the attachment of the property herein described.

17. And the party of the first part further agrees to indemnify and save harmless the party of the second part from all loss, expense, claims and demands whatsoever arising or growing out of any accident or personal injury sustained by the party of the first part or any employee of said party of the first part from whatsoever cause arising while in or upon the property of the party of the second part.

18. In the event said party of the first part shall fail to make any payment of royalty or any other payment herein provided for, at the time and in the manner stipulated, or shall fail to keep proper books or fail to keep or perform any of the conditions, covenants, or agreements herein contained on their part to be kept and/or performed, said party of the second part may give to said party of the first part a notice in writing of such default, and if such default is not corrected with thirty (30) days after the giving of such notice, the agreement herein shall terminate and become forfeited and said party of the second part may re-enter, without legal process, said premises and the whole thereof, and repossess the same and remove all persons therefrom.

19. Upon termination of this agreement by default or other-

wise, all equipment, supplies and machinery used in connection with the mining operation of this agreement, and purchased with money received from the sale of ore from said property herein, shall be considered the property of both parties and shall be disposed of with the proceeds divided twenty five percent (25%) to the party of the first part and seventy five percent (75%) of said proceeds to the party of the second part.

20. In the event that there should arise a disagreement between the parties of the first part and the parties of the second part which cannot be resolved between them within thirty days from the inception thereof, each party shall then select an attorney of their own choice, and then in turn each such attorney shall select a third attorney, agreeable to both parties' attorney, and this third attorney then shall decide the question at hand, and his decision shall be final without recourse.

21. Party of the second part affirms and hereby guarantees that they are the duly authorized legal owners of the claims described herein and that such claims are not encumbered in any way and that they can furnish a good and merchantible title to such claims if the occasion should arise.

22. The party of the second part agrees to choose one among them to act in behalf of said party of the second part as their agent or representative and give unto said choice full power to act, execute, and approve on behalf of the party of the second part any and all covenants and conditions contained herein and to receive all monies due party of the second part from future mining operations as herein provided.

23. All members of the party of the second part herein named agree to execute any and all papers necessary to procure a Defense Minerals Exploration Administration loan so far as his or her ownership in said claims is concerned. Said party of the second part does not agree to attach any personal property other than the mining claims herein mentioned to secure such loan.

24. Time is the essence of this agreement, and each and every clause of this agreement, and all of the covenants and conditions contained herein, expressly or implied, shall extend to the successors, heirs, administrators, executors, and lawful assigns of all parties hereto.

25. Party of the first part affirms and guarantees that the signature attached hereto is that of a duly authorized agent of Uranium Geophysical, Inc., and is fully authorized to execute agreements and contracts.

IN WITNESS WHEREOF, the parties to these presents have hereunto set their hands and seals this _____ day of February, 1957.

Howard R. Staker

Lydia B. Staker

Subscribed and sworn to before me this _____ day of February, 1957

My Commission Expires:

Notary Public, Residing in
Salt Lake County, Utah

Uranium Geophysical, Inc, by
Calvin K. Florence, Secretary

Subscribed and sworn to before me this _____ day of February, 1957

My Commission Expires:

Notary Public, Residing in
Grand County, Utah

A G R E E M E N T

This shall constitute a contract between Uranium Geophysical, Inc., a Utah corporation, hereinafter called the party of the first part, and Lyman Staker, Colleen Staker, his wife, Salt Lake City, Utah; Howard R. Staker, Lydia B. Staker, his wife, Salt Lake City, Utah; Martin H. Cullum, Berniece Cullum, his wife, Huntington, Utah; Wallace G. Jensen, Lucille Jensen, his wife, Sunnyside, Utah; Carrol Cullum, Edna Cullum, his wife, Sunnyside, Utah; and Ray Staker, a single man, Salt Lake City, Utah, hereinafter referred to as the party of the second part.

WHEREAS: the party of the first part is desirous of conducting a mining and exploration operation upon certain claims, described and known as:

NAME OF CLAIM	DATE OF RECORD	BOOK	PAGE
Conrad No. 2	3 April 1950	J-8	565
Conrad No. 3	21 Sept 1952	J-10	352
Conrad No. 4	3 Dec 1953	J-13	517
Conrad No. 5	3 Dec 1953	J-13	518
	Also Known As		
Conrad No. 2-A	12 April 1955	J-83	74
Conrad No. 3-A	12 April 1955	J-83	75
Conrad No. 4-A	12 April 1955	J-83	76
Conrad No. 5-A	12 April 1955	J-83	77

recorded in the office of the County Recorder of Emery County, State of Utah, and whereas the party of the second part is desirous of leasing the aforesaid claims to the party of the first part, it is therefore mutually agreed that:

1. The party of the first part is to have and to hold said property for the purpose of mining and exploration for a term commencing with the date hereof and expiring on the _____ day of February, 1967, at noon on that day, unless the same shall be sooner terminated by violation of any covenant herein against the party of the first part reserved or by the surrender of this lease by said party of the first part. Said party of the first part shall have the option to renew this lease at the end of this primary term for a like period under like conditions.

2. The party of the first part shall, upon the execution of this agreement, investigate said property to determine valuation for the purpose of applying for a Defense Minerals Exploration Administration loan to be used to assist in the exploration of said property.

3. Party of the first part will thereupon make application for an exploration loan at his own expense, and if such loan is approved, said party of the first part will execute exploration of the aforementioned property under DMEA contract without obligation or expense to the party of the second part, except as to the property herein described.

4. Party of the first part will use all diligence in seeking a loan that will assist in a thorough exploration of said property and also to carry out and complete the contract between party of the first part and the Defense Minerals Exploration Administration.

5. After completion of said exploration, if in the opinion of the party of the first part, commercial and mineable ore has been discovered as a result of the aforementioned exploration, said party of the first part will commence a mining operation to recover, so far as is economically possible, said discovered ore.

6. Party of the first part shall assume responsibility to determine the mining equipment that may be needed to operate said property, and shall procure same. Except that all equipment procured for said operation of mining costing in the excess of five hundred dollars ($500.00) shall be subject to the approval of the party of the second part as herein provided or by the agent of the party of the second part. Said equipment may be procured by money guaranteed by commercial ore discovered as a result of this agreement.

7. Party of the first part agrees to conduct a continuous mining operation upon the herein described claims unless prevented from so doing by an act of God, mine disaster, or any other conditions beyond the control of the party of the first part.

8. The party of the first part shall furnish to the party of the second part copies of all settlement sheets for ore shipped; the application in its fullness to the DMEA; any item purchased for the purpose of mining costing in the excess of $500.00, a receipt thereof; a copy of all assays from the exploration of said property; all maps, etc., but not limited to, used for record purposes in this agreement.

9. Party of the first part shall keep a complete set of records of the operations performed on said property, and agrees to permit party of the second part to inspect and examine said books and records pertaining directly to the claims covered by this agreement, at all reasonable times.

10. Party of the first part agrees to permit party of the second part or their duly authorized agent or representatives to enter upon the aforementioned claims at all reasonable hours for the purpose of inspecting the claims or any other legitimate business purpose. Party of the first part makes no guarantee or promise that such visitors will be covered by the insurance held by the party of the first part.

11. Party of the first part agrees that in the event any land adjacent to or adjoining the claims described herein, not covered by claims already legally staked, such land, if claimed, will be claimed in the name and title of the parties of the first part and party of the second part, each party sharing equal interest in such claimed land. All filing fees, staking costs, or charges for surveying such additional property shall be paid from the mining operations now owned by the party of the second part.

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cancellation shall be made in writing, addressed to party of second part, via registered mail, to the address of the agent for the party of the second part as provided herein.

15. Party of the first part shall well and truly pay or cause to be paid to the said party of the second part, their executor, administrator, or agent as provided herein, as rental for the property herein described, seventy five percent (75%) of the net profit from sale of ore mined from the said premises, including all premiums and special bonuses paid by the United States Government or authorized purchasing agent to be paid by draft drawn upon account of party of the first part. The term, net profit, shall mean all monies that remain from said sale of ore or bonuses paid, after the cost of mining has been deducted. The said payments are to be made quarterly. The cost of mining shall include a salary of five hundred ($500.00) per calendar month for management; all equipment used to mine ore; all supplies used to mine ore, such as powder, caps, steel, timber, pipe, etc.; wages for employees employed for carrying out the mining operations described herein; insurance and taxes, etc., and any exploration carried out after the exploration program with DMEA as described herein has been carried out. Under no circumstances shall any expense incurred from the original exploration program with the Defense Minerals Exploration Administration be deducted from sale of ore mined from the property described herein. However, any royalty due the Defense Minerals Exploration Administration as a result of any agreement entered into with said Administration by the party of the first part shall be deducted from sale of ore prior to any other deduction as described in this contract.

16. The party of the first part is solely responsible for all labor and materials furnished and used in connection with this lease, and the party of the second part shall in no way be held responsible for any indebtedness whatsoever incurred by the party of the first part in the prosecution of operations under this contract, except as to the attachment of the property herein described.

17. And the party of the first part further agrees to indemnify and save harmless the party of the second part from all loss, expense, claims and demands whatsoever arising or growing out of any accident or personal injury sustained by the party of the first part or any employee of said party of the first part from whatsoever cause arising while in or upon the property of the party of the second part.

18. In the event said party of the first part shall fail to make any payment of royalty or any other payment herein provided for, at the time and in the manner stipulated, or shall fail to keep proper bpoks or fail to keep or perform any of the conditions, covenants, or agreements herein contained on their part to be kept and/or performed, said party of the second part may give to said party of the first part a notice in writing of such default, and if such default is not corrected within thirty (30) days after the giving of such notice, the agreement herein shall terminate and become forfeited and said party of the second part may re-enter, without legal process, said premises and the whole thereof, and repossess the same and remove all persons therefrom.

19. Upon termination of this agreement by default or otherwise, all equipment, supplies and machinery used in connection with the mining operation of this agreement, and purchased with money re-

ived from the sale of ore from said property herein, shall be considered the property of both parties and shall be disposed of with the proceeds divided twenty five percent (25%) to the party of the first part and seventy five percent (75%) of said proceeds to the party of the second part.

20. In the event that there should arise a disagreement between the parties of the first part and the parties of the second part which cannot be resolved between them within thirty days from the inception thereof, each party shall then select an attorney of their own choice, and then in turn each such attorney shall select a third attorney, agreeable to both parties' attorney, and this third attorney then shall decide the question at hand, and his decision shall be final without recourse.

21. Party of the second part affirms and hereby guarantees that they are the duly authorized legal owners of the claims described herein and that such claims are not encumbered in any way and that they can furnish a good and merchantible title to such claims if the occasion should arise.

22. The party of the second part agrees to choose one among them to act in behalf of said party of the second part as their agent or representative and give unto said choice full power to act, execute, and approve on behalf of the party of the second part any and all covenants and conditions contained herein and to receive all monies due party of the second part from future mining operations as herein provided.

23. All members of the party of the second part herein named agree to execute any and all papers necessary to procure a Defense Minerals Exploration Administration loan so far as his or her ownership in said claims is concerned. Said party of the second part does not agree to attach any personal property other than the mining claims herein mentioned to secure such loan.

24. Time is the essence of this agreement, and each and every clause of this agreement, and all of the covenants and conditions contained herein, expressly or implied, shall extend to the successors, heirs, administrators, executors, and lawful assigns of all parties hereto.

25. Party of the first part affirms and guarantees that the signature attached hereto is that of a duly authorized agent of Uranium Geophysical, Inc., and is fully authorized to execute agreements and contracts.

IN WITNESS WHEREOF, the parties to these presents have hereunto set their hands and seals this _____ day of February, 1957.

Howard R. Staker

Lyman Staker

Lydia B. Staker

Colleen Staker

Ray Staker

Subscribed and sworn to before me this _____ day of February, 1957.

My Commission Expires:

Notary Public

Martin H. Cullum

Berniece Cullum

Subscribed and sworn to before me this _____ day of February, 1957

My Commission Expires:

Notary Public

Wallace G. Jensen

Carrol Cullum

Lucille Jensen

Edna Cullum

Subscribed and sworn to before me this _____ day of February, 1957.

Notary Public

My Commission Expires:

Uranium Geophysical, Inc., by
Calvin K. Florence, Secretary

Subscribed and Sworn to before me this _____ day of February, 1957

My Commission Expires:

Notary Public

DMEA Form 7
(12-56)

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Date	Surname	Code
6-6	Ching	700
6-7	[illegible]	700
6/7	[illegible]	130
6/7	[illegible]	130
6/7	[illegible]	130
	[illegible]	100
6/10	[illegible]	225
		225

JUN 10 1957

Mr. Calvin K. Florence, Secretary
Uranium Geophysical, Inc.
Box 1107
Moab, Utah

Re: Docket No. DMEA-4667 (Uranium)
Cross Bow and Conrad Claims
Emery County, Utah

Dear Mr. Florence:

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

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

Careful study of all our information, although noting some uranium mineralization on your property, indicates 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,

E. O. Mittendorf (fw)

Administrator

MChing/dlm 6-6-57
cc to : Admr.'s Redding File
Operating Committee
THKiilsgaard, 5224
Code 700
Mr. Ching
DMEA Field Team, Region III (2)

8623

DOCKET COPY

Ching
Ellis

June 6, 1957

Summary of Proposed Project

Object: Denial of application for an exploration project.

Docket No.: DMEA-4667

Commodity: Uranium

Applicant: Uranium Geophysical, Inc.
Box 1107
Moab, Utah

Property: 9 lode mining claims, Cross Bow 1-5 and Conrad 2-5, located in (unsurveyed) sec. 11, T. 24 S., R. 8 E., S. L. M. & B., Emery County, Utah. Applicant holds lease agreements on the two groups.

Date of application: February 15, 1957

Amount of application: $17,998.00 ($18,098.00)

Referred to Region III: March 15, 1957

Field Examination made: April 1, 1957

Field Team Report Received: May 27, 1957

Work Proposed: Explore the Shinarump conglomerate(Moss Back) by core and noncore drilling of 28 holes in area A, 10 holes in area B, and 10 holes in promising areas disclosed by the earlier drilling. Estimated costs follow:

2,100 feet noncore drilling @ $2.10/ft	$4,410.00
1,920 feet core drilling @ $4.25/ft	8,160.00
Moving drill time	305.00
125 hrs. bulldozing @ $12.00/hr	1,500.00
Supervision and consultants	1,500.00
Operating materials and supplies	603.00
Operating equipment	870.00
Miscellaneous	250.00
Contingencies	500.00
Total	$18,098.00
Government participation @ 75%	$13,573.50

Field Team Report: May, 1957, Donald P. Elston, USGS
Carl Belser, USBM

The Moss Back member of the Chinle formation is the ore-bearing sandstone in this area. It crops out on the subject property and has a thickness of about 60 feet. The ore minerals occur in small lenses of conglomeratic sandstone and in carbonaceous material in the lower part of the member. The occurrences are spotty and although the radioactivity is high, chemical assays show the material as marginal in grade. Radioactivity is related mainly to carbonaceous material away from conglomeratic lenses and is spottily distributed in such lenses. Ore deposits in the southwest part of the San Rafael Swell commonly occur in scours at the base of the Moss Back. The presence of a channel on the subject property is not apparent. If present, it does not exceed five feet in depth. There is no apparent relationship of ore minerals to a scour or channel.

An application under Docket 3206, covering this property, was denied on January 28, 1954. Since then a total of 120 tons of ore averaging 0.13 percent U_3O_8 and 0.08 percent V_2O_5 have been produced from about 320 feet of drifting and small stoping operations. $CaCO_3$ runs about 11 percent.

The nearest producing mine, the Lucky Strke, is one of the larger mines in the area, having produced 9,010 tons of ore, averaging 0.22 percent U_3O_8, through 1956; and having estimated reserves of 3,000 tons of indicated and 10,000 tons of inferred ore.

The chance of finding a significant ore deposit on the subject property is poor. It is recommended that the application be denied.

Commodity Group Comments:

U. S. Geological Survey/- N. E. Nelson - May 28, 1957

Thousands of feet of outcrop of the Moss Back member have been prospected, and no scour, channel, or showing worth exploration appears to have been found. Concurs with the recommendation for denial.

U.S. Bureau of Mines - James Paone, May 29, 1957

Agrees with the Field Team and advises denial of the application.

The absence of scours or channels, the marginal grade and small size of ore occurrences, and the unencouraging results of 320 feet of drifting, do not encourage further exploration.

Conclusions and Recommendations:

The potential of this property is quite limited. It is recommended that the application be denied.

Ernest Wm. Ellis

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

[illegible]

[illegible] May 29, 1957

DMEA Docket No. 4667
DMEA Contract No.
Commodity Uranium
Name of applicant Uranium Geophysical, Inc.
Name of property Cross Bow and Conrad Claims
Location of property Emery County, Utah
Estimated cost of project $17,998.00

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

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

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

1. Date of subject document: 5/22/57. 2. Date received by reviewer: 5/28/57

3. Is an expert on this property known to reviewer: Yes [ ] No [ ]

4. Other experts 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. Reason meriting special consideration:
- a. Location [ ]
- b. Ownership [ ]
- c. Evidence of mineralization [ ]
- d. Geology [ ]
- e. Proposed exploration method [ ]
- f. Alternate exploration method [ ]
- g. Costs [ ]
- h. _____ [ ]

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

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

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DMEA
RECEIVED [illegible] 1957

DATE	CODE
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"	(Kuma) 700
	Oling
	Comment completed

IN REPLY REFER TO:

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DMEA
RECEIVED MAY 29 1957

DATE	INITIALS	CODE
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"	Rapuano	700

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

May 28, 1957
Re: DMEA 4667
Uranium Geophysical, Inc.
Cross Bow & Conrad Claims
Emery County, Utah
$17,998.00 - Uranium

Memorandum

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

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

Subject: Review of Field Team Report

The applicant requested assistance in exploring, by drilling, claims underlain by the Massback member of the Chinle formation, in a lower part of which member, spotty occurrences of subgrade and marginal radioactive material are found.

The Conrad claims are credited with the production of 120 tons of 0.13% U_3O_8 and 0.08% V_2O_5 material, selectively mined from conglomerate lenses and strongly mineralized carbonaceous material. The production came from 4 closely grouped and connected adits, the opening totalling 320 feet. Thousands of feet of outcrop of the Mossback member have been prospected, and no scour, channel, or showing worth exploration appears to have been found.

The examiners conclude that the chance of finding a significant orebody is poor and recommend that the application for DMEA assistance be denied.

I concur with that recommendation.

N. E. Nelson

N. E. Nelson

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

224 New Customhouse
Denver 2, Colorado

May 22, 1957

Memorandum

To: Secretary to the Operating Committee, DMEA

From: DMEA Field Team, Region III

Subject: Joint Report of Examination, Docket DMEA 4667 (Uranium)
Uranium Geophysical, Inc. (Cross Bow and Conrad Claims)
Emery County, Utah

Enclosed are the original and three copies of the Joint Report of Examination on the subject property by Carl Belser, USBM, and D. P. Elston, USGS.

The field examiners conclude that the probability for making a significant discovery is not sufficiently promising to justify Government participation. Accordingly they recommend that the Applicant's work proposal be denied to which the Field Team concurs.

E. N. Harshman

E. N. Harshman
Acting Executive Officer

Reviewed by
DMEA OPERATING COMMITTEE
5-29-57
(date)

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DMEA
RECEIVED MAY 27 1957

DATE	INITIALS	CODE
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		130
5/29	C	220
"	Ching/R	700

ON-SITE EXAM. REPORT

MINERAL DEPOSITS
DMEA
IN REPLY REFER TO:
RECEIVED
MAY 20 1957
U.S.
GEOLOGICAL SURVEY
DENVER, COLORADO

UNITED STATES
DMEA DEPARTMENT OF THE INTERIOR
DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

MAY 21 1957
REGION III
DENVER, COLORADO

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		220

May 17, 1957

Memorandum

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

Through: A. H. Carneman
A. A. Schneiman

From: J. William Fisher

Subject: Transmittal of a joint engineering and geologic report. DMEA Docket 4867 (Uranium), Uranium Geophysical, Inc., Conrad and Cross Bow claims, Emery County, Utah.

Enclosed are 12 copies of a joint geologic and engineering report by W. R. Alston, U. S. Geological Survey, and Carl Nelson, U. S. Bureau of Mines, including figures 1 and 2.

The Uranium Geophysical, Inc. applied for DMEA assistance to explore the Conrad and Cross Bow claims in Emery County, Utah. The claims are in unsurveyed ground about 25 miles west of Castle Mountain in the San Rafael Swell district.

The application was referred to the field and an examination was made on April 1, 1957. The claims are in a easterly re-entrant of the southerly trending Moss Canyon and lie about 1-1/2 miles southwest of the Lucky Strike mine and 3-1/2 miles northeast of Denison Mountain. The rocks underlying the claims are those of the Triassic age, of which the Moss Back member of the Chinle formation is the main ore-bearing sandstone. The ore minerals occur in small lenses of conglomeratic sandstone and in carbonaceous material in the lower part of the Moss Back member. The occurrences are spotty and although the radioactivity is high, the chemical assays are of marginal and sub-ore grade material. The presence of the channel and relations of the ore minerals are not apparent on the Conrad and Cross Bow claims. The spotty distribution and anomalous radioactivity in conglomeratic lenses, the distribution of radioactivity mainly in carbon away from conglomeratic lenses, and the apparent lack of relations of the ore mineralization to a channel in the Moss Back member suggests that the chance of finding a significant ore deposit here is poor. It is, therefore, recommended that the application for DMEA assistance be denied. I concur with the conclusions and recommendations of the examining team.

Reviewed by
DMEA OPERATING COMMITTEE
5-29-57
(date)

TRANSMITTED
MAY 22 1957

The Atomic Energy Commission was consulted relative to the appraisal of this property, as were members of the Geological Survey who were familiar with the area.

J. William Hasler

J. William Hasler,
Geologist

JWH/bh

Enclosures
Reports (12 copies)
Figures 1 and 2 (12 copies)

Brochure

FOR UNITED STATES GOVERNMENT USE ONLY

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

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

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DMEA 4667

Uranium Geophysical, Inc.
Conrad and Cross Bow claims
Emery County, Utah

Uranium

Joint Engineering and Geologic Report

By

Donald P. Elston, Geologist
Geological Survey

Carl Belser, Mining Engineer
Bureau of Mines

May 1957

TRANSMITTED
MAY 22 1957

Reviewed by
DMEA OPERATING COMMITTEE
5-29-57
(date)

DMEA 4667

CONTENTS

Joint Engineering and Geologic Report	Page
Introduction and Summary	1
Acknowledgments	3
Location, topography, and climate	3
History and production	4
Ownership and extent	5
Present status	5
Exploration and development	5
Mining and milling equipment and other facilities	6
Geology	6
Ore deposits	10
Applicant's estimated cost of project	13
Conclusions and recommendations	14

ILLUSTRATIONS

Figure	Follows Page
1. Location of Conrad and Cross Bow claim groups, Uranium Geophysical, Inc., Emery County, Utah	14
2. Sketch map of the Conrad and Cross Bow claims, Uranium Geophysical, Inc., Emery County, Utah	14

11:05 Mr. Rubin returned call. 6.7.

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DMEA 4667

INTRODUCTION AND SUMMARY

On February 15, 1957, Uranium Geophysical, Inc., Box 1107, Moab, Utah, applied for DMEA assistance for exploration drilling on the Conrad and Crossbow claims, Emery County, Utah. The claims are in unsurveyed ground about 25 miles west of Temple Mountain.

The applicant proposed 2,100 feet of non-core drilling and 1,920 feet of core drilling in 38 holes in one stage of exploration. The overall estimated cost of $17,998.00 with Government participation at 75 percent totaling $13,498.50. The application, DMEA 4667, was referred to the field and an examination was made on April 1, 1957. The examining team, consisting of Donald P. Elston, U. S. Geological Survey, and Carl Belser, U. S. Bureau of Mines, was accompanied by Mr. Henry S. Florence, Jr., president of the company.

Property included in the proposed project consists of nine unpatented lode mining claims on the west side of the San Rafael Swell, about 17 airline miles west of Temple Mountain. The claims are in a westerly re-entrant of the southerly trending Reds Canyon, and is about 1-3/4 miles southwest of the Lucky Strike mine and 3-1/2 miles northeast of Tomsich Mountain.

Sedimentary strata that crop out on and near the claims are the Moenkopi formation, Chinle formation, and Wingate sandstone of Triassic age. The Moss Back member of the Chinle formation is the ore-bearing sandstone in the San Rafael area and the Moss Back member crops out on the

claims, having a thickness of about 60 feet. Anomalous radioactivity was detected on these claims and mining has been attempted here. An application for DMEA aid prior to mining was made, but the application was denied (DMEA 3206). A total of 120 tons of ore, averaging 0.13 percent U_3O_8 and 0.08 percent V_2O_5, have been produced from about 320 feet of drifting and small stoping operations. Three shipments from the mine, totaling 89 tons, had an average $CaCO_3$ content of 11.12 percent.

The ore minerals occur in small lenses of conglomeratic sandstone and in carbonaceous material in the lower part of the Moss Back member. The occurrences are spotty and although the radioactivity is high, chemical assay grades are of marginal or sub-ore grade material. The presence of a channel and the relations of the ore minerals to such a channel are not apparent. If a scour is present, it probably does not exceed five feet in depth. The inferred direction of channeling is also unresolved with trends that diverge as much as 120°.

The spotty distribution of anomalous radioactivity in conglomeratic lenses, the distribution of radioactivity mainly in carbon away from conglomeratic lenses, and the apparent lack of relation of the ore minerals to a scour or channel in the Moss Back member suggest that the chance of finding a significant ore deposit here is poor. It is therefore recommended that the application for DMEA assistance be denied.

ACKNOWLEDGMENTS

Mr. Charles C. Hawley, U. S. Geological Survey, was consulted for general geologic information on and near the claims. Mr. Hawley also made available an unpublished report by Mr. Raymond C. Robeck, formerly of the Geological Survey, which is entitled "Geology of the Uranium Deposits of the San Rafael Swell, Emery County, Utah". The ore reserves section of the Atomic Energy Commission was consulted as to production and ore reserve data of mines in the general area.

Memorandums of W. P. Williams and John E. Crawford were noted.

LOCATION, TOPOGRAPHY, AND CLIMATE

The Conrad and Cross Bow claims are located approximately in (unsurveyed) sec. 11, T. 24 S., R. 8 E., SLM, Emery County, Utah, (fig. 1). The claims are on the west side of southerly trending Reds Canyon at an altitude of about 5700 feet. The base of the Moss Back member of the Triassic Chinle formation crops out about 70 feet above the bottom of the canyon and forms a rim 20 to 50 feet high. The upper part of the Chinle formation forms a sloping bench some 600 feet wide behind which the Wingate formation rises in almost vertical cliffs. The Chinle bench offers good drill sites but access roads surmounting the Moss Back rim on both the Conrad and Cross Bow claims will be difficult to construct.

To reach the claims from Green River, Utah, one travels southwest over U. S. 50 and U. S. 24 to Temple Junction, a distance of 36.5 miles, then west 6.6 miles to the end of the pavement near Temple Mountain, then westerly over a graded dirt road 25.8 miles to the claims a total distance of 68.9 miles. The Denver and Rio Grande Western Railroad passes through Green River, Utah and ore-buying depots are at Salt Lake City, Utah, and Thompson, Utah. Labor and supplies can be obtained from Green River, Utah. Pinon and juniper suitable for some mine uses grow on the property. Water for drilling might be developed in Reds Canyon.

The Lucky Strike property is about 1-3/4 miles to the northeast, Tomsich Mountain is about 3-1/2 miles southwest, and the Delta mine is about 10 miles to the south.

HISTORY AND PRODUCTION

The Conrad No. 2 claim was located by Howard Staker in 1950. Location of the other three Conrad claims followed in 1952 and 1953, and the Cross Bow claims were located in 1954. The property was leased to Metals Mining Company in 1955, and again leased in 1956. In February 1957 the claims were leased to Uranium Geophysical, Inc., but to date no mining has been done by the present lessees. Total production from the claims, to date, is 120 tons of ore averaging 0.13 percent U_3O_8 and 0.08 percent V_2O_5.

OWNERSHIP AND EXTENT

The nine unpatented claims are recorded in the office of the County Recorder of Emery County, Utah, as follows:

Claim	Original locations			Amended locations		
	Book	Page	Date recorded	Book	Page	Date recorded
Conrad No. 2	J-8	565	4/30/50	J-83	74	4/12/55
Conrad No. 3	J-10	352	9/21/52	J-83	75	4/12/55
Conrad No. 4	J-13	517	12/3/53	J-83	76	4/12/55
Conrad No. 5	J-13	518	12/3/53	J-83	77	4/12/55
Cross Bow No. 1	J-20	379	5/20/54	J-83	78	4/12/55
Cross Bow No. 2	J-20	380	5/20/54	J-83	79	4/12/55
Cross Bow No. 3	J-20	381	5/20/54	J-83	80	4/12/55
Cross Bow No. 4	J-23	69	6/ 2/54	J-83	81	4/12/55
Cross Bow No. 5	J-23	70	6/ 2/54	J-83	82	4/12/55

A 10-year lease on the five Conrad claims was granted to Uranium Geophysical, Inc., by Howard R., Lydia B., Lyman, Colleen, and Ray Staker. A similar lease on the five Cross Bow claims was granted by Howard R., Lydia B., Lyman, Colleen, and Ray Staker, Martin H., Bernice, Carrol and Edna Cullum and Wallace G., and Lucille Jensen. Both leases were granted in February 1957. The agreement requires that the leesees pay 75 percent of the net profits to the lessors.

PRESENT STATUS

Exploration and Development

Access roads were built to the conglomerate bed in the Moss Back member on the Conrad No. 3 and Cross Bow No. 1 claims and the conglomerate bed was

stripped for a short distance on both claims. The Moss Back member on the Conrad No. 3 claim has been opened by four adits, comprising about 320 feet of workings. A small amount of rim prospecting has been done on the Conrad No. 5 and the Cross Bow No. 3 claims.

Mining and milling equipment and other facilities

The only equipment on the claims is an old Sullivan compressor which is owned by Howard Staker. Other facilities consist of the access roads already mentioned.

GEOLOGY

The Conrad and Cross Bow claims are in a westerly trending re-entrant on the west side of Reds Canyon (fig. 2). Sedimentary strata exposed in the general area are, in ascending order, the Coconino sandstone and Kaibab limestone of Permian age, the Moenkopi, Chinle, and Wingate formations of Triassic age, the Kayenta formation of Jurassic (?) age, and the Navajo sandstone of Jurassic and Jurassic (?) age. Strata of the Moenkopi, Chinle and Wingate formations crop out on the claims.

The Moenkopi formation consists of dark red-brown siltstone, mudstone, and very fine- to coarse-grained sandstone. The formation is thin and very regularly bedded with beds averaging less than one foot thick. Ripple marks and current markings are abundant and are one of the typical features of the formation. The Moenkopi formation ranges from 604 to 776 feet thick on the west side of the San Rafael Swell. Only the upper part of the formation is exposed on and near the subject claims.

The Chinle formation includes four members. The Temple Mountain member is at the base and is overlain by the Monitor Butte, the Moss Back, and the Church Rock members. The Temple Mountain member apparently is absent on and near the claims. The Monitor Butte member consists principally of mudstone, siltstone, and sandstone. The member is characterized by the variations in color which range from a dark red to purple-red and maroon, lavender, pink, brown, gray, and green. On the claims, the color is dominantly a dark red to lavender. The thickness of the Monitor Butte in the general area ranges from a knife edge to about 100 feet. On the claims the thickness is about 30 to 40 feet although the lower contact is poorly exposed.

The Moss Back member is present in all exposures of the Chinle formation in the San Rafael Swell and forms cliffs, benches and flat-topped mesas. The Moss Back member consists principally of sandstone that is irregularly conglomeratic and contains numerous lenses of mudstone and siltstone. The general color on fresh surfaces is light gray but many weathered surfaces are light to dark brown and locally are stained red by wash from the overlying red units. The sandstone is fine- to coarse-grained and both cross-bedded and regularly bedded. Conglomerate is present at any interval in the section in highly variable amounts, but there is generally more conglomerate in the lower part of the member than in the upper. The pebbles consist of milky quartz, light to dark colored quartzite, chert, limestone, sandstone, and mudstone pebbles. The maximum size of pebbles is about four inches. The mudstone layers are greenish-gray,

green, or red and show bedding in places. The member is characterized by a complex interfingering of lenses of sandstone, conglomerate, and mudstone. The lower part of the Moss Back member is commonly coarser-grained than the upper part, is composed mainly of angular cross-beds, and forms steep cliffs. The upper part is commonly finer grained and thin-bedded and is exposed as irregular step-like ledges above the steep cliffs. The upper sandstones normally interfinger with the overlying siltstone of the Church Rock member.

The thickness of the Moss Back member ranges from about eight feet to about 150 feet in the San Rafael Swell and on the claims is about 60 feet thick. The lower cliff-forming part near the workings on the Conrad claims is 38 feet thick; the upper, thin-bedded part is 20 feet thick.

Fossil wood is locally abundant in the Moss Back member on the claims. Locally, however, fossil logs have been almost completely silicified and only have an irregular rind of carbonaceous material.

Moss Back channels are important physical features in regards to uranium deposits in the general area. A channel generally has been defined in the San Rafael Swell as a cut, five feet or more deep, made and filled by Moss Back sediments. Because of variable relief of the contact of the Moss Back member with the underlying Monitor Butte member (up to 10 feet in the southwest part of the San Rafael Swell), channels here have been arbitrarily defined as having a minimum cut-off depth of 10 feet. 1/

1/ Robeck, R. C., Geology of the Uranium Deposits of the San Rafael

Swell, Emery County, Utah, unpublished report.

The size of these channels range from 10 to 45 feet in depth, 100 to 1,000 feet in width, and from 200 to a known length of 4,300 feet. These channels are normally not continuous but individually have shapes like bowls or spoons, which start and end at the level of the normal position of the base of the Moss Back. The various channels generally have a northwest trend but individual spoon-shaped lows within a channel cannot be proven to have been formed by the same stream.

The Church Rock member conformably overlies the Moss Back and apparently sedimentation was continuous. In most places a generalized contact can be placed between the fine-grained gray sandstone at the top of the Moss Back and the overlying reddish sandy siltstone of the Church Rock. The Church Rock consists of red to purplish red interbedded siltstone and sandstone with minor amounts of light red to lavender conglomerate and mudstone. The member forms steep slopes and small ledges beneath the massive, nearly vertical cliff forming Wingate sandstone. The thickness ranges from about 100 to 265 feet in the San Rafael Swell. The Church Rock member, on and near the claims, is about 120 to 150 feet thick.

The Wingate sandstone is a reddish tan nearly homogenous fine- to medium-grained, cliff-forming sandstone. The thickness is variable but averages about 350 feet in the San Rafael Swell.

The overlying Kayenta formation and Navajo sandstone are exposed as benches and cliffs, behind the main cliff-forming Wingate sandstone. These strata are generally off of the subject claims.

The strata on the subject claims strike about N. 50° E., and dip about 5° to the NW. There are no known faults on the claims.

ORE DEPOSITS

Uranium ore deposits in the southwest part of the San Rafael Swell commonly occur in lows or spoon-shaped scours at the base of the Moss Back member. These features make up channels that usually are not so persistent or so well defined as those in the Shinarump member of the Chinle formation in other areas.

The Lucky Strike mine, the nearest producing mine, is one of the larger mines in the area. From 1951 through 1956 production has totaled 9,010 tons, averaging 0.22 percent U_3O_8 and 0.09 percent V_2O_5. Reserves are estimated to be about 3,000 tons of indicated ore, and about 10,000 tons of inferred ore. Production from the Conrad workings totals 120 tons that averaged 0.13 percent U_3O_8 and 0.08 percent V_2O_5. Three shipments from the Conrad mine totaling 89 tons averaged 11.12 percent $CaCO_3$. Estimated reserves by the ore reserves section of the Atomic Energy Commission are 53 tons of indicated ore, 250 tons of inferred ore. Several tons of material, similar to that shipped from the mine, is stockpiled at the portal. As the vanadium content of these ores is low, a grade cutoff of 0.10 percent is not a realistic ore-grade cutoff. At least 0.20 percent U_3O_8 is necessary for economic mining. The uranium is out of equilibrium

as field radiometric inspection indicates a grade that is higher than chemical analyses of the same material. Except for very local, quite strongly mineralized carbonaceous material, the grade of mineralized material that has been selectively mined ranges between 0.12 and 0.19 percent U_3O_8. The bulk of mineralized rock is below 0.10 percent U_3O_8. As shown in the previous report of examination (DMEA docket 3206) the highest grade material obtained was a selected sample of carbonaceous material, a skim on the outside of a silicified tree which assayed 3.12 percent U_3O_8.

The Conrad "channel" is not apparent on outcrop or in the mine workings on the Conrad No. 3 claim. However, there may be a very slight scour of about 5 feet in depth. The workings did not follow the contact of the Moss Back member on the underlying Monitor Butte member, and thus underground data are lacking as to the existence of a scour. The applicant has postulated a northeasterly trending channel (about N. 15° E.) on the basis of a projection of two separated apparent channel banks on the south side of the re-entrant which separates the Conrad from the Cross Bow claims. The westerly bank is on a small spur in the re-entrant, and is separated from what may be an apparent easterly bank on the south side of the re-entrant. The northerly extension of this inferred channel is not apparent on the north side of the re-entrant on the Conrad claims. The workings on the Conrad No. 3 claim may be at the northernmost end of a spoon-shaped scour. The sedimentary structures in the lower Moss Back, in the vicinity of and within the workings, trend northwesterly. Measurements were made on festoon and planar cross-beds and on a large diastem

in the westerly part of the mine. The trend of the sedimentary structures range from N. 30° to N. 60° W. Paleostream trends in the upper part of the Moss Back member generally trend southwest. The apparent stream trend in the workings is at nearly right angles to the northeasterly trend projected from the south.

Scouring at the base of the Moss Back member is commonly defined by measuring the differences in thicknesses of the underlying Monitor Butte member. However, on the claims the contact of the Monitor Butte member with the underlying Moenkopi formation is poorly exposed and thus the varitions of thickness could not be utilized in a satisfactory manner. The Monitor Butte member apparently ranges from about 30 to 40 feet in thickness with a thickness of 35 feet being representative near the Conrad workings.

Anomalous radioactivity was detected principally in local lenses of conglomerate and in local concentrations of carbonaceous material. Very weak anomalous radioactivity was also detected in fine-to medium-grained sandstones at approximately the horizon of the conglomerate lenses. Material selectively mined and shipped is principally from conglomerate lenses and strongly mineralized carbonaceous material is not abundant enough to be mined.

The apparent channel or scour to the south, on the Cross Bow claims, is not clearly defined on the southernmost face of the re-entrant. No anomalous radioactivity has been detected here by the applicant. There are no other apparent scours on these claims, although there are several places where weak radioactivity has been detected in the lower part of the Moss Back member west of the mine workings.

APPLICANT'S ESTIMATED COST OF PROJECT

The applicant requested aid in preparing drill sites and doing 1,920 feet of core drilling and 2,100 feet of non-core drilling. The applicant's estimated costs follow:

Independent contracts:		
Bulldozing 125 hours at $12.00/hr	$1,500.00	
2,100 feet of noncore drilling at $2.10/ft.	4,410.00	
1,920 feet of core drilling at $4.25/ft.	8,160.00	
Moving 244 miles at $1.25/mi.	305.00	
Total independent contracts		$14,375.00
Labor and supervision:		
Supervision 2 months at $500/mo.	1,000.00	
Consultant 10 days at $50.00/day	500.00	
Total labor and supervision		1,500.00
Operating materials and supplies:		
Food for supervisor, 2 months at $100/mo.	200.00	
Fuel for heating 2 months at $20.00/mo.	40.00	
Gas and oil for pickup 2 months at $30/mo.	60.00	
Core boxes 112 at $1.25 each ($140.00)	153.00	
Blasting powder, caps, fuse	50.00	
Total operating materials and supplies		503.00
Operating equipment:		
Compressor, jackhammer, steel, and bits (Rental)	200.00	
Pickup truck (use allowance) 2 months at $100.00/mo.	200.00	
Probe (use allowance) 2 months at $50.00/mo.	100.00	
Transit (use allowance) 2 months at $65.00/mo.	130.00	
Trailer (use allowance) 2 months at $120.00/mo.	240.00	
Total operating equipment		$ 870.00

Rehabilitation and repairs:

None

New buildings, improvements, installations:

None

Miscellaneous:

30 chemical assays at $5.00 each	$150.00	
Accounting, workmen's compensation, employer's liability insurance, payroll taxes	100.00	
Total miscellaneous		$250.00

Contingencies

Unexpected delays, etc.	500.00	500.00
Total estimated cost for 4020 feet of drilling		17,998.00
Estimated cost per foot		4.48

Costs are about normal. Access-road cost is too low but use allowance on equipment is high.

CONCLUSIONS AND RECOMMENDATIONS

The spotty distribution of anomalous radioactivity in scattered conglomeratic lenses, the distribution of radioactivity mainly in carbon away from conglomeratic lenses, and the unresolved relation of ore minerals to a scour or channel in the Moss Back member, indicate that the chance of finding a significant ore deposit here is poor. It is therefore recommended that this application for DMEA assistance be denied.

U. S. DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
APRIL 1957
DOCKET 4667

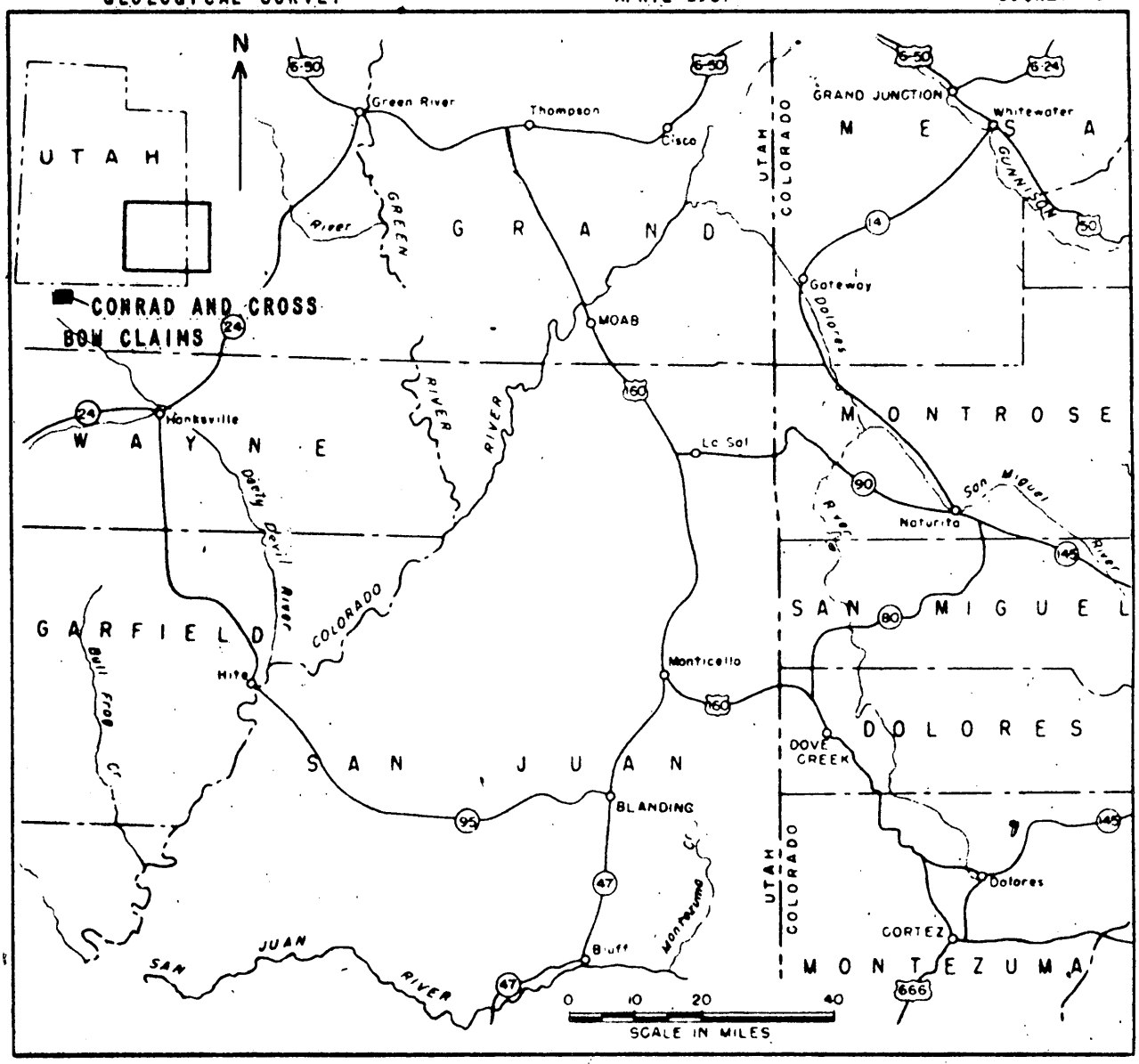

FIGURE 1.--LOCATION OF CONRAD AND CROSS BOW CLAIM GROUPS, URANIUM GEOPHYSICAL, INC., EMERY COUNTY, UTAH.

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DATE	INITIALS	CODE

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March 20, 1957		

DMEA
DEPARTMENT OF THE INTERIOR
MAR 21 1957
REGION III
DENVER, COLORADO

Memorandum

To: Executive Officer, DMEA Field Team, Reg. III

From: Superintendent, Denver Experiment Station, Reg. III

Subject: Docket DMEA 4667 (Uranium) Uranium Geophysical, Inc. (Cross Bow and Conrad Claims) Emery County, Utah

The application for Uranium Geophysical, Inc., Docket DMEA 4667, in the amount of $17,998.00 was received in this office on March 20, 1957.

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

W. H. KING

W. H. King

cc: Executive Officer (2)
E. N. Marshman
J. W. Mesler
M. H. Salsbury
J. F. Shaw

LLO(2)

224 New Customhouse
Denver 2, Colorado

March 19, 1957

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DATE	INITIALS	CODE
3/21	C	220
3/22	Knowne	200

Memorandum

To: W. H. King) W/enclosures,
J. W. Hasler) Items 1-5

From: DMEA, Field Team, Region III

Subject: Docket DMEA 4667 (Uranium) Uranium Geophysical, Inc. (Cross Bow and Conrad Claims) Emery 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 John E. Crawford, USBM.

3. Memorandum of Review by W. P. Williams, USGS.

4. Letter of transmittal of the foregoing to this office dated March 15, 1957, from the Chairman, Operating Committee, DMEA.

5. Application routing Control Sheet.

A joint report of recommendations based on available information or a joint report of findings and recommendations based on a field examination is requested.

Original signed by
E. N. HARSHMAN
By E. N. Harshman
Acting Executive Officer

Enclosures

MHM:eh
cc: Sec. Op. Comm. (2)
Harshman W/Copy of Items 2-4
King
Docket
Chron.

DMEA Form 7
(12-56)

700

OFFICIAL FILE COPY

Date	Surname	Code
3-14	Knouse	700
3-14	Ellis	700
3/16	Selfridge	130
"	Johnson	110
"	Mattendorf	100
3/18	C	220
	Bishop	750

MAR 15 1957

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

Re: Docket No. DMEA-4667 (Uranium)
Uranium Geophysical, Inc.
Cross Bow and Conrad Claims
Emery County, Utah

Dear Mr. Harshman:

The captioned application is referred to your office for either a field examination and report on the proposed project, or the Field Team's recommendations based on available information.

Enclosed are copies of memoranda, dated March 12, 1957, from W. P. Williams, USGS, and John E. Crawford, USBM, relating to the proposed project, and two extra copies of the application for the use of the Field Team.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (GCS)

Enclosures

APPROVED:

O. M. Bishop (GCS)
Member, Bureau of Mines

Thor H. Kiilsgaard (GCS)
Member, Geological Survey

FLKnouse/gla/izm 3-14-57
cc to: Mr. Knouse
Admr.'s Reading File
Operating Committee
THKiilsgaard, 5224
JKratchman, AEC

8623

DMEA Form 7
(12-56)

OFFICIAL FILE COPY

Date	Surname	Code
3/14	Knouse	700
"	Ellis	700
3/15	Selfridge	130
"	Johnson	110
"	Whittenberg	100
		220

Bishop 700
Kilsgaard

MAR 15 1957

Mr. Calvin K. Florence, Secretary
Uranium Geophysical, Inc.
Box 1107
Moab, Utah

Re: Docket No. DMEA-4667 (Uranium)
Cross Bow and Conrad Claims
Emery County, Utah

Dear Mr. Florence:

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

E. O. Hittendorf
(esf)
Administrator

FLKnouse/gla
3-14-57
cc to: Admr.'s Reading File
Mr. Knouse, Code 700
DMEA Field Team, Region III (2)

8623

IN REPLY REFER TO:

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

March 12, 1957

Memorandum

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

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

Subject: Review of application, DMEA 4667, Uranium Geophysical, Inc., Cross Box and Conrad claims, San Rafael Swell, Emery County, Utah. (uranium).

The applicant proposes to explore for uranium ore deposits on nine continguous mining claims located on the south flank of the San Rafael swell. The proposed project would consists of a total of 2,100 feet of plug-bit drilling and 1,920 feet of diamond core drilling, all at a total estimated cost of $17,998.

The claims appear to be located in unsurveyed territory; and the applicant offers no estimated township and range location. Since I do not have personal recollection of the claims the only generalized location for the property to be gained from the application is that the Delta mine is about 3 miles to the west. The Delta mine, formerly owned by Vernon Pick, is, of course, well known.

I recommend that the application be referred to the Field Team. They may have specific information about the Conrad mine. If not, a field examination of the claims may be necessary.

W. P. Williams

W. P. Williams

OFFICIAL FILE COPY
DMEA
RECEIVED MAR 13 1957

DATE	INITIALS	CODE
3/13	C	220
"	~~Ellis~~	700
3-14	~~Hawkins~~	

comments complete

OFFICIAL FILE COPY DMEA RECEIVED MAR 12 1957		
DATE	INITIALS	CODE
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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
Washington 25, D. C.

Date March 12, 1957

DMEA Docket No. 4667
DMEA Contract No.
Commodity Uranium
Name of applicant Uranium Geophysical, Inc.
Name of property Conrad Mine
Location of property Emery Co., Utah
Estimated cost of project $17,998.00

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

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

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

1. Date of subject document: 2/15/57. 2. Date received by reviewer: 3/6/57

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

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

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

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

7. Explain items marked yes above:

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

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

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

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

March 5, 1957

Uranium Geophysical, Inc.
Box 1107
Moab, Utah

Subject: DMEA-4667
Re: Exploration Assistance

Gentlemen:

Your application for exploration assistance, dated February 15, 1957 submitted to our office at Washington, D. C. has been assigned Docket Number DMEA-4667 and referred to the Rare & Miscellaneous Division in the Washington office. Kindly identify all future correspondence relating to your application by this Docket Number.

Sincerely yours,

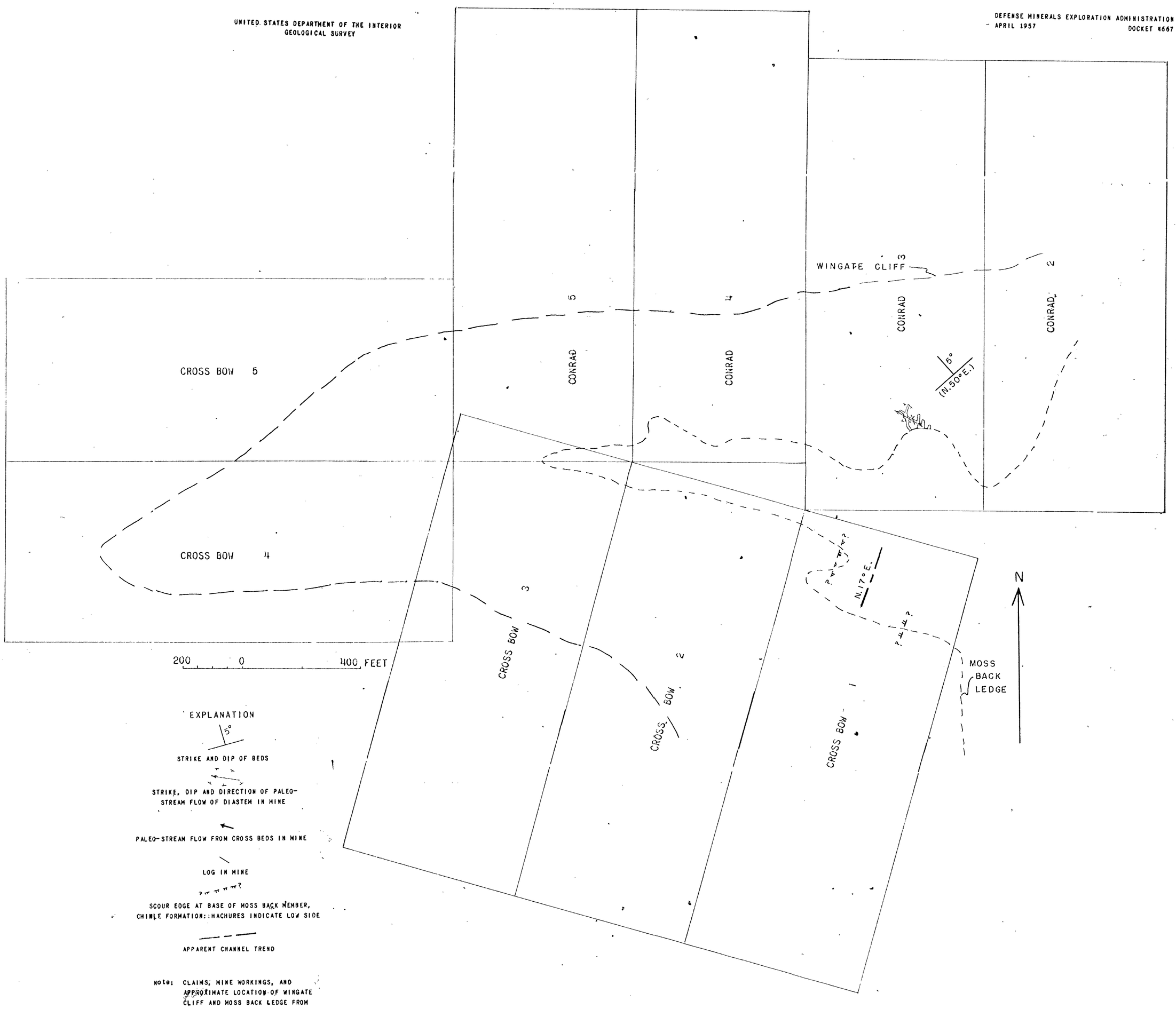
Allen S. Dakan, Chief
Operations Control and
Statistics Division

Copy to: Region III

3571

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
APRIL 1957
DOCKET #667



Note: CLAIMS, MINE WORKINGS, AND APPROXIMATE LOCATION OF WINGATE CLIFF AND MOSS BACK LEDGE FROM APPLICANTS MAP.

FIGURE 2.--SKETCH MAP OF THE CONRAD AND CROSS BOW CLAIMS, URANIUM GEOPHYSICAL, INC., EMERY COUNTY, UTAH.