DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

CONTROLLED DOCUMENT

DMA Docket No. 1937

DO NOT DETACH THIS SLIP

Action on this document is recorded and controlled in Reports and Records Branch. Any movement of this document between divisions or offices of DMA or movement outside DMA must be reported to the Reports and Records Branch. Actions taken that affect status of the case must also be reported.

This document has been recorded as

EXPLORATION LOAN

Any action taken to change the type of request for assistance must be promptly reported to the Reports and Records Branch. Use DMA Form 2 for submitting these reports.

Routing Slip

Code 330 - Bonnel

To: ~~Minor and Rare Metals~~ Date ~~8-7-51~~

To: Adm. Mang Div Date SEP 4 3 1951

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CONTROLLED DOCUMENT

330

FILE COPY
SURNAME:

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

SEP 4 1951

Memorandum

To: Administrative Management Division

Through: Director, Supply Division

From: Minor and Rare Metals Branch

Subject: Prospecting in Crazy Mt., Montana
DMA docket 1937

Under date of August 2, 1951, we received application and attachments from Mr. E. E. Conway, Big Timber, Montana, in reply to which we wrote, enclosing copy of Mineral Order 5, and Press Release of May 14. These were returned as unclaimed. Accordingly, we are closing the docket.

Attached, please find complete docket comprised of the following:

(a) 4 copies of MF-103 and exhibits.

(b) Letter from Mr. Adams to applicant acknowledging application.

(c) Unclaimed letter of August 10, 1951, together with dated envelope.

Ernest R. Gordon

Weston Bourret, Chief
Minor and Rare Metals

Approved: Tom Lyon

Director, Supply Division

EGordon/mh 8-31-51
cc: Adm. Read. File
Reports and Records
Lyon
Bourret
Keiser-Hosted, U.S.
Dma docket file

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

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for Weston Bourret, Chief
Minor and Rare Metals

Approved:

Director, Supply Division

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DMA docket file

STAT

UN[illegible]
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
WASHINGTON, D. C.

OFFICIAL BUSINESS

PENALTY FOR PRIVATE USE TO AVOID
PAYMENT OF POSTAGE, $300

Return to Writer

REASON CHECKED
Unclaimed.....
Unknown.....
Refused.....
For better address.....
Moved, Left no address.....
No such office in state.....

BIG TIMBER
AUG 27
4 PM
1951
MONT.

WASHINGTON
AUG 10
1951
D.C.

Return to Writer

REASON CHECKED
Unclaimed.....
Unknown.....
Refused.....
For better address.....
Moved, Left no address.....
No such office in state.....

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

AUG 10 1951

Mr. E. E. Conway
Big Timber,
Montana

Re: Uranium - DMA-1937
Prospecting in Crazy Mt., Montana

Dear Mr. Conway:

Your application for an exploration project, DMA-1937x, in the sum of $5,000, has been received by the Minor and Rare Metals Branch.

We regret to advise you that at present there is no program for subsidizing or grubstaking any prospector to search for minerals.

The program of exploration for strategic and critical minerals administered by the Defense Minerals Administration provides for financial assistance on a matching basis, to bona fide owners and leasees of mineral properties. It does not provide for prospecting on property not owned or otherwise controlled by applicant. This is explained in the endorsed copy of press release of May 14, 1951. For your further information we enclose copy of MO-5 as amended.

If you control a property on which you have found definite indications of the presence of strategic or critical minerals, we shall be glad to consider an application for exploration assistance thereon.

Yours very truly,

Weston Bourret

Weston Bourret, Chief
Minor and Rare Metals

Enclosure

Close this as we did the "Montana" docket.

330

FILE COPY
SURNAME:

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

A. E. C. Bourret

AUG 10 1951

Mr. E. E. Conway
Big Timber,
Montana

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Yours very truly,

8/10

/s/ Weston Bourret

Weston Bourret, Chief
Minor and Rare Metals

Enclosure
EGordon/mh 8-10-51
cc: Am. Read. File
Bourret
Reports and Records
Field Team I
Keiser, Hosted, USGS
Lyon
DMA docket files

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

AUG 20 1951

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Montana

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Yours very truly,

/s/ Weston Bourret

Weston Bourret, Chief
Minor and Rare Metals

Enclosure

DGordon/mh 8-13-51
cc: Ar. Read. File
Bourret
Reports and Records
Field Team 1
Reiber, Bossed, USGS
Lyon
DMA docket files

August 8, 1951

Mr. E. E. Conway
Big Timber
Montana

Subject: DMA-1937
Re: Exploration Loan -
Crazy Mountains

My dear Mr. Conway:

Receipt is acknowledged of your application and attachments for an exploration loan under the Defense Production Act of 1950.

The application was assigned Docket Number DMA-1937 and referred to Mr. Weston Bourret, Chief, Minor & Rare Metals Branch on August 7, 1951.

In any future correspondence relating to your application, kindly refer to DMA-1937.

Sincerely yours,

ROBERT E. ADAMS
Robert E. Adams
Chief, Reports & Records Unit

REAdams:jc
cc: Bourret
Lyon
✓ Reports & Records File

MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. DMA 1987

Date received 8-7-51

Participation

Name and address of applicant

Date

FILL IN THIS BLOCK

Date of application 8/2/51

Estimated cost 85,000

Mineral or metal URANIUM [+ BERYL CORUNDUM]

Percentage of Government participation 90%

Location of mine CRAZY MTS. - LEWIS + CLARK NATIONAL FOREST - STATE OF MONTANA

Date of filing MF-100

DMA Docket Number, if available 1987

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 6 1951

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation? AN INDIVIDUAL

*2. If a partnership, state names and addresses of partners. IN APPLICABLE

*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders. IN APPLICABLE

*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project. SEE ATTACHED SHEET

*5. Are you the owner or the lessee of the property? NO

6. If owner, state what claims, liens, or encumbrances, if any, are against the property. NOT APPLICABLE

7. If lessee, attach a copy of the lease and state if it is in good standing. NOT APPLICABLE

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement. NOT APPLICABLE

9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)? $500 - YES

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property. SEE ATTACHED SHEET No. 1

(*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted. SEE ATTACHED SHEET No. 1

NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any. CRAZY MTS. - LEWIS & CLARK NATIONAL FOREST

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads. SEE ATTACHED SHEET

*13. State source and quantity of water available for operations and its sufficiency at all seasons. State amount of power to be used, rate per hour or other cost, and source. SEE ATTACHED SHEET

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work. NOT APPLICABLE

15. State in detail how the ore could be shipped and how and where milled. SEE ATTACHED SHEET

*16. History:

(*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations. SO FAR AS I KNOW NO EXTENSIVE EXPLORATION HAS BEEN MADE FOR THESE ORES IN THIS AREA

(*b*) State briefly the known history and production of adjoining and neighboring properties. SOME GOLD, SILVER, AND LEAD TAKEN OUT

(*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations. SEE ATTACHED SHEET

*17. Production: NOT APPLICABLE

(*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.) SEE ATTACHED SHEET

(*a*) Describe the ore or mineral deposits briefly.

(*b*) Submit available maps and assay data.

(*c*) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions. COVERED BY PREVIOUS QUESTIONS.

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted? SEE ATTACHED SHEET

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it. SEE ATTACHED SHEET

NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data. SEE ATTACHED SHEET

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows: SEE ATTACHED SHEET

(*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.

(*b*) Supervisors, by numbers and positions, with salaries of each.

(*c*) Cost of necessary repairs to existing facilities, structures, and buildings.

(*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.

(*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.

(*f*) Cost of rental for equipment which the operator proposes to rent.

(*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.

(*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.

(*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent. SEE ATTACHED SHEET

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

(Name of company)	By Mr. E. E. Conway (Signature of authorized official)
8/3/51 (Date)	(Title)

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.

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

ATTACHED INFORMATION FOR FORM MF- 103
Sheet No. I

(a)
4. School geology course-- working experience in gold mine --considerable time spent in prospecting and mineral study.
(b)
Same individual as above.

10. (a) Proposed site of uranium exploration project is the Crazy Mts.--Lewis and Clark National Forest area located as shown in Park County--Sweet Grass County--Meagher County and Wheatland County of southwestern Montana including the Big Timber Creek field an area on the eastern slope of the Crazy Mts. twenty-one miles northwest of Big Timber in Section 6 in which some unpatented gold, silver and lead prospects are held--- the Kelly prospect in Sec.6, T3N, R13E an adit in diorite and the Stemwinder prospect, Sec. 6, T3N, R12E another dormant claim from which some ore has been shipped. This ore is anglesite, galena, and pyrite in a quartz gangue.

(b) Proposed site of uranium exploration project is the crazy Mts.--Lewis and Clark National Forest area (southern sector) shown on attached map extending from R9E to R12E and from T2N to T7N.

12. Location extends from Parallels 45° 55' and 46° 24' North and Meridians 110° 10' and 111° 34' West, an area in south-central Montana extending in Park County, Sweetgrass County, Meagher County and Wheatland County. On the south the Big Timber mining district of the Crazy Mts. is served by Big Timber, Montana as the Northern Pacific R.R. shipping point the distance between Big Timber and the Big Timber mining district being twenty-seven miles-- eleven miles improved and sixteen unimproved road and trail. The entire location is served by four improved and a dozen or so unimproved roads connecting the area to U.S. Hiway No. 10 twenty-eight miles south, to Montana State Hiway No.19 Ten Miles east, State Hiway No.6 eleven miles north, and U.S. Hiway No. 89 seven miles west.

The Chicago, Milwaukee, St. Paul, and Pacific R.R. skirts the northwest corner of the area with shipping points at Dorsey and New Dorsey.

15.

(a) The U.S. Weather Bureau, Helena, Montana gives the precipitation statistics for the U.S. Weather Bureau Stations at Livingston, Park County and Big Timber, Sweetgrass County as indicated:

STATION	LIVINGSTON PARK COUNTY		BIG TIMBER SWEETGRASS COUNTY	
Elevation Ft.	4,485		4,100	
	Prec.	Snow Fall	Prec.	Snow Fall
Length of Record Yr.	44	30	42	34
January	0.80	8.8	0.62	9.4
February	.55	6.3	.68	5.0
March	.60	7.6	1.09	8.6
April	1.22	6.0	1.22	5.6
May	2.44	1.1	2.60	1.7
June	2.04	TRACE	2.80	.1
July	1.56	0.0	1.[illegible]6	.0
August	1.12	.1	1.12	TRACE
September	1.30	.7	1.41	.9
October	1.17	3.9	1.49	6.8
November	.60	8.9	.75	10.1
December	.80	7.4	.85	6.5
Annual Average	14.85	63.4	14.70	56.1

These figures however are taken in the Yellowstone valley and both the precipitation and snow fall figures are known to be much higher in the higher elevations of the national forest area in question.

There is water available in practically unlimited quantity in the indicated areas. It forms the headwater area for scores of streams and the Shields River which literally not over the area. The area contains twenty-six small permanent lakes.

15.

(b) The amount of power to be used would of course not be known for development of any possible discoveries and would not be used in the proposed exploratory project. However the surrounding area is completely served with electric power supplied by the Montana Power Co. Those main power stations for this County have a capacity of 7,000 kilowatts at a nominal operating voltage of 50,000 volts

RATE:

.75 for first 10 KWH
.015 per KWH for next 990 KWH
.015 per KWH for next 1,000 KWH
.015 per KWH for next 2,000 KWH
.009 per KWH for next 10,000 KWH
.007 per KWH for next 985 KWH per kilowatt
.006 per KWH for all additional KWH

and

First 10 kilowatts-- 10 charge
Next 20 kilowatts-- 8¢ per kilowatt
All additional kilowatts-- 7¢ per kilowatt

16.

Ore could be shipped by ground transcontinental hauls or B.P.R.R. or Milwaukee R.R. to various refining points about U.S.

16. (c)

All private reports show that pitchblende or uranite, the major uranium ore occurs in Precambrian rocks. Ore found near Golden Valley, Mont. is the most large part of the indicated terrain. Silver corundum also occurs in veins scattered thru the rocks as. Beryl is found in pegmatite granite and schists the exploration for these minerals is favorably indicated. The Livingston formation (Late Cretaceous sediments) which occupies the remaining area are partly continental and consequently too in which carnotite--secondary uranium ore--is found in the large Utah and Colorado deposits of that mineral.

16. The area in question is indicated by national forest boundaries on the hand maps and circular areas of Park, Gallatin, Madison and Beaverhead counties on the geological maps of the Bureau of Mines and Geology. As indicated, this is an area of Cretaceous intrusive rocks intruded thru Late Cretaceous sediments.

ATTACHED INFORMATION FOR FORM MF--I03
S heet No. 4

20.

URANIUM-- Pitchblende and secondary ores
BERYL---- Crystallizations in pegmatite veins and cavities of the intrusive granites and crystallizations in the limestones and slates of the Livingston Formation.
CORUNDUM- Crystallizations in veins thruout the dike rocks of the tertiary intrusions and granular limestones of the Livingston Formation.

21.

I propose intensive exploration by self with geiger counter for pitchblende and secondary uranium ores with confirmatory examinations by flourescent , streak and hardness and other tests plus exploration for beryl and corundum.

22.

The area, as enclosed by national forest boundary lines on the hand maps and circled areas on the geological maps, is one of tertiary intrusive rocks thru cretaceous sedimentary rocks (Livingston Formation) (Fort Union Formation). Pitchblende or uranite is most frequently found in such tertiary mineralization and is often indicated by gold and silver depo its such as are found in this area. Carnotite is found in formation similiar to the Livingston Formations. Beryl and corundum also occurs in both tertiary mineralization and Cretaceous sedimentary formations.

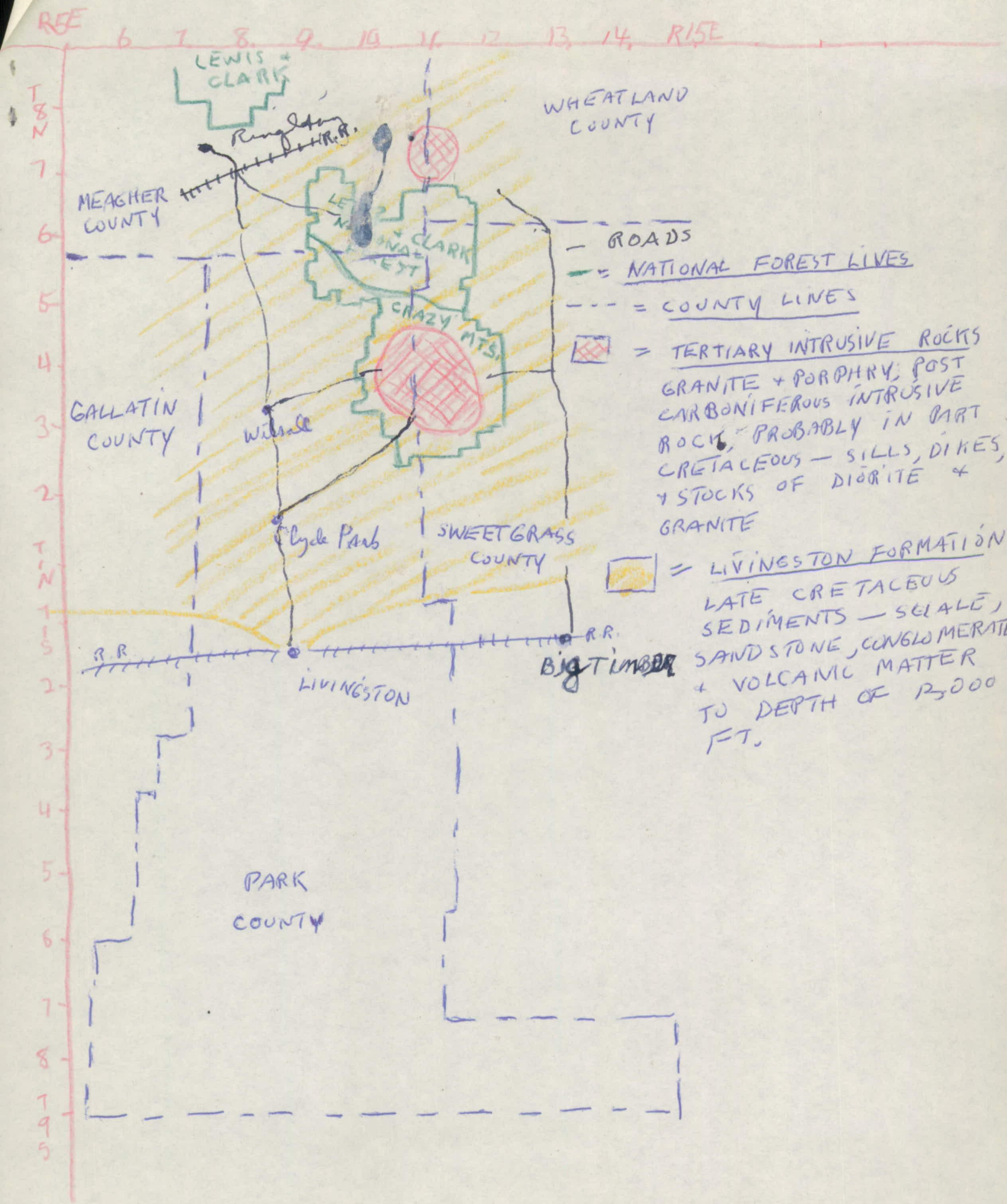
ATTACHED INFORMATION FOR FORM 103
Sheet No. 5

23. (a)	No.	Kind	Cost per Day	Total Equip. Cost
Labor, by numbers and classes with wages of each	I.	Prospector	$I7	
Supervisors				
----------SAME AS ABOVE----------				
Costs of necessary repairs	0.	0	0	0
Cost of necessary installation or additional construction of structures	0.	0	0	0
Cost of items of equipment not now owned by applicant which must be purchased at cost of $50 or more each	I.	Geiger Counter		$I95
Cost of rental of equipment which operator propeses to rent	I.	Trailer House	$I	
Rental value of equipment which operator now owns and which will be devoted to work	I.	UV Lamp	$.50	
	I.	Auto	$.50	
Cost of materials and supplies including items of equipment costing less than $50 each		General Supplies	$I.00	
Cost of power, water, utilities and other items not provided for above	0.	0	0	0
TOTAL			$20	$I95

24.

I want to commence systematic radiation and visual examination of the area within Lewis andClark-- Crazy Mts. national forest immediately after desired project approval for uranium, beryl and corundum at the total cost indicated by No.23 at $20 per day for labor, equipment rental and other items plus an initial outlay of $I95 for equipment-- 90% of the initial and per diem cost to be provided by the Defense Mineral Administration and I0% by self. I would expect this per diem cost to remain constant until completion of project in approximately 250 days (working days) at an approxinate total cost of $5000.

LEWIS + CLARK NATIONAL FOREST (CRAZY MTS. + SOUTHERN SECTOR) MONTANA



orm MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. DMA 1937

Date received 8-7-51

Participation

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 6 1951

Name and address of applicant

Date

FILL IN THIS BLOCK

Date of application 8/2/51

Estimated cost $5,000

Mineral or metal URANIUM [BERYL, CORUNDUM]

Percentage of Government participation 90%

Location of mine CRAZY MTS.-LEWIS & CLARK NATIONAL FOREST-STATE OF MONTANA

Date of filing MF-100

DMA Docket Number, if available 1937

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation? AN INDIVIDUAL

*2. If a partnership, state names and addresses of partners. IN APPLICABLE

*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders. IN APPLICABLE

*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project. SEE ATTACHED SHEET

*5. Are you the owner or the lessee of the property? NO

6. If owner, state what claims, liens, or encumbrances, if any, are against the property. NOT APPLICABLE

7. If lessee, attach a copy of the lease and state if it is in good standing. NOT APPLICABLE

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement. NOT APPLICABLE

9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)? $500 - YES

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property. SEE ATTACHED SHEET NO. 1

(*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted. SEE ATTACHED SHEET NO. 1

NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any. CRAZY MTS.-LEWIS & CLARK NATIONAL FOREST

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads. SEE ATTACHED SHEET

*13. State source and quantity of water available for operations and its sufficiency at all seasons. SEE ATTACHED SHEET State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work. NOT APPLICABLE

15. State in detail how the ore could be shipped and how and where milled. SEE ATTACHED SHEET

*16. History:

(*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, with reasons for any past suspensions of operations. SO FAR AS I KNOW NO EXTENSIVE EXPLORATION HAS BEEN MADE FOR THESE ORES IN THIS AREA

(*b*) State briefly the known history and production of adjoining and neighboring properties. SOME GOLD, SILVER & LEAD TAKEN OUT

(*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations. SEE ATTACHED SHEET

*17. Production: NOT APPLICABLE

(*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.) SEE ATTACHED SHEET

(*a*) Describe the ore or mineral deposits briefly.

(*b*) Submit available maps and assay data.

(*c*) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions. COVERED BY PREVIOUS QUESTIONS

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted? SEE ATTACHED SHEET

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it. SEE ATTACHED SHEET

NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data. SEE ATTACHED SHEET

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows: SEE ATTACHED SHEET

(*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each.

(*b*) Supervisors, by numbers and positions, with salaries of each.

(*c*) Cost of necessary repairs to existing facilities, structures, and buildings.

(*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.

(*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.

(*f*) Cost of rental for equipment which the operator proposes to rent.

(*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.

(*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.

(*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent. SEE ATTACHED SHEET

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

(Name of company) By Mr. E. E. Conway (Signature of authorized official)

8/3/51 (Date) (Title)

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.

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

ATTACHED INFORMATION FOR FORM MF- I03
Sheet No. I

(a)
4. School geology course-- working experience in gold mine --considerable time spent in prospecting and mineral study.
(b)
Same individual as above.

I0. (a) Proposed site of uranium exploration project is the Crazy Mts.--Lewis and Clark National Forest area located as shown in Park County--Sweet Grass County--Meagher County and Wheatland County of southwestern Montana including the Big Timber Creek field an area on the eastern slope of the Crazy Mts. twenty-one miles northwest of Big Timber in Section 6 in which some unpatented gold, silver and lead prospects are held--- the Kelly prospect in Sec.6, T3N, RI2E an adit in diorite and the Stemwinder prospect, Sec. 6, T3N, RI2E another dormant claim from which some ore has been shipped. This ore is anglesite, galena, and pyrite in a quartz gangue.

(b) Proposed site of uranium exploration project is the crazy Mts.--Lewis and Clark National Forest area (southern sector) shown on attached map extending from R9E to RI2E and from T2N to T7N.

I2. Location extends from Parallels 45° 55' and 46° 24' North and Meridians II0° I0' and III° 34' West, an area in south-central Montana extending in Park County, Sweetgrass County, Meagher County and Wheatland County. On the south the Big Timber mining district of the Crazy Mts. is served by Big Timber, Montana as the Northern Pacific R.R. shipping point the distance between Big Timber and the Big Timber mining district being twenty-seven miles-- eleven miles improved and sixteen unimproved road and trail. The entire location is served by four improved and a dozen or so unimproved roads connecting the area to U.S. Hiway No. I0 twenty-eight miles south, to Montana State Hiway No.I9 Ten Miles east, State Hiway No.6 eleven miles north, and U.S. Hiway No. 89 seven miles west.

The Chicago, Milwaukee, S t. Paul, and Pacific R.R. skirts the northwest corner of the area with shipping points at Dorsey and New Dorsey.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 6 1951

ATTACHED INFORMATION FOR FORM MF--I03
Sheet No. 2

I3.

(a) The U.S. Weather Bureau, Helena, Montana gives the precipitation statistics for the U.S. Weather Bureau Stations at Livingston, Park County and Big Timber, Sweetgrass County as indicated:

STATION	LIVINGSTON PARK COUNTY		BIG TIMBER SWEETGRASS COUNTY	
Elevation Ft.	4,485		4,I00	
	Prec.	Snow Fall	Prec.	Snow Fall
Length of Record yr.	44	28	42	24
January	0.56	9.5	0.64	9.4
February	.54	6.5	.68	5.8
March	.86	7.4	I.00	9.6
April	I.32	3.9	I.22	5.4
May	2.44	I.I	2.69	I.7
June	2.04	TRACE	2.00	.I
July	I.26	0.0	I.38	.0
August	I.I2	.I	I.I2	TRACE
September	I.58	.7	I.4I	.9
October	I.I7	3.9	I.40	6.6
November	.80	8.9	.75	I0.I
December	.60	7.4	.53	6.5
Annual Average	I4.29	49.4	I4.74	56.I

These figures however are taken in the Yellowstone valley and both the precipitation and snow fall figures are known to be much higher in the higher elevations of the national forest area in question.

There is water available in practically unlimited quantity in the indicated area as it forms the headwater area for scores of creeks and the shields river which literally net work the area. The area contains twenty-six small permanent lakes.

ATTACHED INFORMATION FOR FORM MF--I03
Sheet No. 3

I3.
(b) The amount of power to be used would of course not be known for development of any possible discoveries and would not be used in the proposed exploratory project. However the surrounding area is completely serviced with electric power supplied by the Montana Power Co. whose main power artery for Park County has a capacity of 7,000 kilowatts at a nominal operating value of 50,000 volts

RATES:

$ .75 for Ist I2 KWH
.035 per KWH for Next 288 KWH
.025 per KWH for Next I,500 KWH
.0I5 per KWH for Next 3,200 KWH
.009 per KWH for Next I5,000 KWH
.007 per KWH for Next 200 KWH per kilowatt
.005 per KWH for all additional KWH

and

First I0 kilowatts-- No Charge
Next 20 kilowatts-- 95¢ per kilowatt
All additional kilowatts-- 75¢ per kilowatt

I5.
Ore could be shipped by transcontinental hiways or N.P.R.R. or Milwaukee R.R. to various refining points about U.S.

I6. (c)
All private reports show that pitchblende or uranite, the primary uranium ore occurs in tertiary mineralization frequently found near gold and silver such as composes a large part of the indicated terrain. Since corundum also occurs in veins scattered thru dike rocks and beryl is found in coarse grained granites and schists the exploration for these minerals is favorably indicated. The Livingston formation (late Cretaceous sediments) which compose the remaining area are partly sandstone and conglomerates in which carnotite---secondary uranium ore--- is found in the large Utah and Colorado deposits of that mineral.

I8. The area in question is indicated by national forest boundaries on the hand maps and circled areas of Park, Meagher, Wheatland and Sweetgras counties on the geological maps of the Montana Bureau of Mines and Geology. As indicated, this is an area of tertiary intrusive rocks intruded thru late Cretaceous sediments.

20.

URANIUM-- Pitchblende and secondary ores
BERYL---- Crystallizations in pegmatite veins and cavities of the intrusive granites and crystallizations in the limestones and slates of the Livingston Formation.
CORUNDUM- Crystallizations in veins thruout the dike rocks of the tertiary intrusions and granular limestones of the Livingston Formation.

21.

I propose intensive exploration by self with geiger counter for pitchblende and secondary uranium ores with confirmatory examinations by flourescent , streak and hardness and other tests plus exploration for beryl and corundum.

22.

The area, as enclosed by national forest boundary lines on the hand maps and circled areas on the geological maps, is one of tertiary intrusive rocks thru cretaceous sedimentary rocks (Livingston Formation) (Fort Union Formation). Pitchblende or uranite is most frequently found in such tertiary mineralization and is often indicated by gold and silver depo its such as are found in this area. Carnotite is found in formation similiar to the Livingston Formations. Beryl and corundum also occurs in both tertiary mineralization and Cretaceous sedimentary formations.

ATTACHED INFORMATION FOR FORM MF- I03
Sheet No. 5

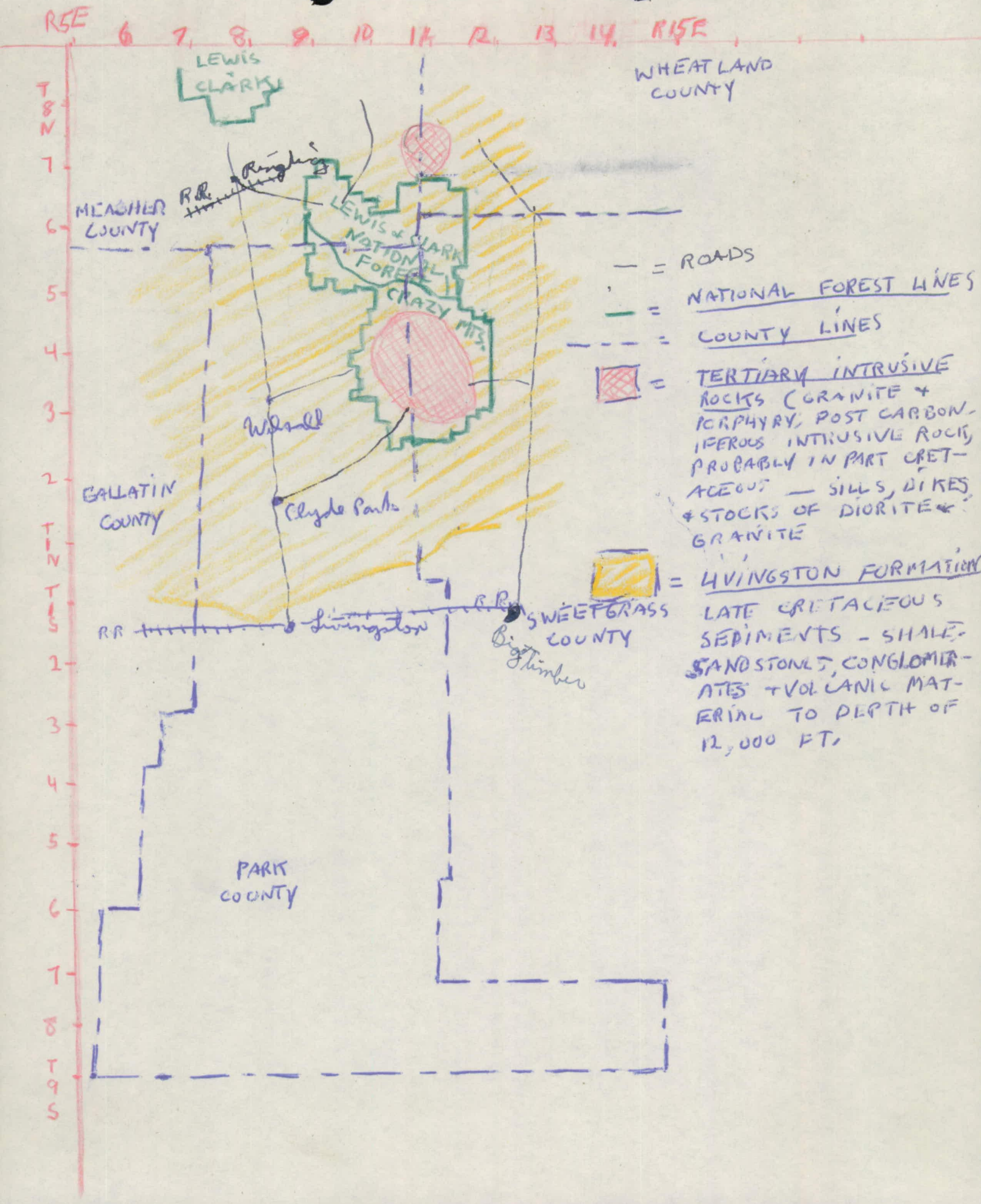
23.

	No.	Kind	Cost per Day	Total Equip. Cost
(a) Labor, by numbers and classes with wages of each	I.	Prospector	$I7	
Supervisors				
----------SAME AS ABOVE----------				
Costs of necessary repairs	0.	0	0	0
Cost of necessary installation or additional construction of structures	0.	0	0	0
Cost of items of equipment not now owned by applicant which must be purchased at cost of $50 or more each	I.	Geiger Counter		$I95
Cost of rental of equipment which operator propeses to rent	I.	Trailer House	$I	
Rental value of equipment which operator now owns and which will be devoted to work	I. I.	UV Lamp Auto	$.50 $.50	
Cost of materials and supplies including items of equipment costing less than $50 each.		General Supplies	$I.00	
Cost of power, water, utilities and other items not provided for above	0.	0	0	0
TOTAL			$20	$I95

24.

I want to commence systematic radiation and visual examination of the area within Lewis andClark-- Crazy Mts. national forest immediately after desired project approval for uranium, beryl and corundum at the total cost indicated by No.23 at $20 per day for labor, equipment rental and other items plus an initial outlay of $I95 for equipment-- 90% of the initial and per diem cost to be provided by the Defense Mineral Administration and I0% by self. I would expect this per diem cost to remain constant until completion of project in approximately 250 days (working days) at an approxinate total cost of $5000.

LEWIS AND CLARK NATIONAL FOREST (CRAZY MTS. & SOUTHERN SECTOR) MONTANA



Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. DMA 1937

Date received 8-7-51

Participation

Name and address of applicant

Date

FILL IN THIS BLOCK

Date of application 8/2/51

Estimated cost $5,000

Mineral or metal URANIUM [+ BERYL CORUNDUM]

Percentage of Government participation 90%

Location of mine CRAZY MTS.-LEWIS & CLARK NATIONAL FOREST

Date of filing MF-100

DMA Docket Number, if available 1937

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 6 1951

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation? AN INDIVIDUAL

*2. If a partnership, state names and addresses of partners. INAPPLICABLE

*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders. IN APPLICABLE

*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project. SEE ATTACHED SHEET

*5. Are you the owner or the lessee of the property? NO

6. If owner, state what claims, liens, or encumbrances, if any, are against the property. NOT APPLICABLE

7. If lessee, attach a copy of the lease and state if it is in good standing. NOT APPLICABLE

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement. NOT APPLICABLE

9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)? $500 - YES

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

16—64067-1

THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property. SEE ATTACHED SHEET No 1

(*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted. SEE ATTACHED SHEET No. 1

NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any. CRAZY MTS. - LEWIS & CLARK NATIONAL FOREST

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads. SEE ATTACHED SHEET

*13. State source and quantity of water available for operations and its sufficiency at all seasons. State amount of power to be used, rate per hour or other cost, and source. SEE ATTACHED SHEET

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work. NOT APPLICABLE

15. State in detail how the ore could be shipped and how and where milled. SEE ATTACHED SHEET

*16. History:

(*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, so with reasons for any past suspensions of operations. FAR AS I KNOW NO EXTENSIVE EXPLORATION HAS BEEN MADE FOR THESE ORES IN THIS AREA

(*b*) State briefly the known history and production of adjoining and neighboring properties. SOME GOLD, SILVER & LEAD TAKEN OUT

(*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations. SEE ATTACHED SHEET

*17. Production: NOT APPLICABLE

(*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.) SEE ATTACHED SHEET

(*a*) Describe the ore or mineral deposits briefly.

(*b*) Submit available maps and assay data.

(*c*) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions. COVERED BY PREVIOUS QUESTIONS

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted? SEE ATTACHED SHEET

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it. SEE ATTACHED SHEET

NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data. SEE ATTACHED SHEET

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:

(*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each. SEE ATTACHED SHEET

(*b*) Supervisors, by numbers and positions, with salaries of each.

(*c*) Cost of necessary repairs to existing facilities, structures, and buildings.

(*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.

(*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.

(*f*) Cost of rental for equipment which the operator proposes to rent.

(*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.

(*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.

(*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent. SEE ATTACHED SHEET

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

(Name of company)	By Jm. P. E. Conway D (Signature of authorized official)
8/3/57 (Date)	(Title)

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.

*Same as footnote on page 1.

16—64067-1 U. S. GOVERNMENT PRINTING OFFICE

ATTACHMENT TO LETTER [illegible] DMEA- [illegible]
Sheet No. 2

(c)
4. [illegible] geology courses - mining experience in gold [illegible] considerable time spent in prospecting and mineral study.
(b)
Same individual as above.

2a. (a) Proposed site of uranium exploration project in the Crazy Mountains [illegible] National Forest area located as shown in Park County--Sweet Grass county--Meagher County and Wheatland county of south-central Montana including the Big Timber [illegible] area on the eastern slope of the Crazy Mts. Twenty-one miles northwest of Big Timber in [illegible] in which some [illegible] gold, silver and lead prospects are [illegible]-- the [illegible] prospect in Sec. [illegible], [illegible], [illegible] [illegible] in [illegible] and the [illegible] prospect, Sec. 6, [illegible], [illegible] contact [illegible] from which some ore has been shipped. This ore is [illegible], galena, and pyrite in a quartz gangue.

(b) Proposed site of uranium exploration project in the Crazy Mts.--[illegible] National Forest area (southern sector) shown on attached map extending from [illegible] to [illegible] and from [illegible] to [illegible].

3. Location extends from latitudes 46° 00' and 46° 30' North and Longitudes 110° 30' and 111° [illegible], an area in south-central Montana extending in Park County, Sweetgrass County, Meagher County and Wheatland County. On the south the Big Timber mining district of the Crazy Mts. is served by Big Timber, located on the Northern Pacific R.R. shipping point the distance between Big Timber and the Big Timber mining district being twenty-[illegible] miles-- eleven miles improved and [illegible] unimproved [illegible]. The entire location is served by four improved and a total of 60 unimproved roads connecting the area to U.S. Hwy No. 10 twenty-one miles south, to [illegible] U.S. Hwy No. [illegible] ten miles east, [illegible] Hwy No. [illegible] eleven miles north, and U.S. Hwy [illegible] [illegible] miles west.

The Chicago, Milwaukee, St. Paul, and Pacific R.R. skirts the northeast corner of the area with shipping points at [illegible] and [illegible].

ATTACHED INFORMATION FOR FORM MF--103
Sheet No. 2

13.

(a) The U.S. Weather Bureau, Helena, Montana gives the precipitation statistics for the U.S. Weather Bureau Stations at Livingston, Park County and Big Timber, Sweetgrass County as indicated:

STATION	LIVINGSTON PARK COUNTY		BIG TIMBER SWEETGRASS COUNTY	
Elevation Ft.	4,435		4,100	
	Prec.	Snow Fall	Prec.	Snow Fall
Length of Record yr.	44	28	42	24
January	0.56	9.5	0.64	9.4
February	.54	6.5	.68	5.8
March	.86	7.4	I.00	9.6
April	I.32	3.9	I.22	5.4
May	2.44	I.I	2.69	I.7
June	2.04	TRACE	2.00	.I
July	I.26	0.0	I.58	.0
August	I.I2	.I	I.I2	TRACE
September	I.58	.7	I.4I	.9
October	I.I7	3.9	I.40	6.6
November	.80	8.9	.75	10.I
December	.60	7.4	.53	8.5
Annual Average	I4.29	49.4	I4.74	56.I

These figures however are taken in the Yellowstone valley and both the precipitation and snow fall figures are known to be much higher in the higher elevations of the national forest area in question.

There is water available in practically unlimited quantity in the indicated area as it forms the headwater area for scores of creeks and the shields river which literally not work the area. The area contains twenty-six small permanent lakes.

ATTACHED INFORMATION FOR FORM MF--103
Sheet No. 3

13.
(b) The amount of power to be used would of course not be known for development of any possible discoveries and would not be used in the proposed exploratory project. However the surrounding area is completely serviced with electric power supplied by the Montana Power Co. whose main power artery for Park County has a capacity of 7,000 kilowatts at a nominal operating value of 50,000 volts

RATES:

$ .75 for Ist 12 KWH
.035 per KWH for Next 288 KWH
.025 per KWH for Next 1,500 KWH
.015 per KWH for Next 3,200 KWH
.009 per KWH for Next 15,000 KWH
.007 per KWH for Next 200 KWH per kilowatt
.005 per KWH for all additional KWH

and

First 10 kilowatts-- No Charge
Next 20 kilowatts-- 95¢ per kilowatt
All additional kilowatts-- 75¢ per kilowatt

15.
Ore could be shipped by transcontinental hiways or N.P.R.R. or Milwaukee R.R. to various refining points about U.S.

16. (c)
All private reports show that pitchblende or uranite, the primary uranium ore occurs in tertiary mineralization frequently found near gold and silver such as composes a large part of the indicated terrain. Since corundum also occurs in veins scattered thru dike rocks and beryl is found in coarse grained granites and schists the exploration for these minerals is favorably indicated. The Livingston formation (late Cretaceous sediments) which compose the remaining area are partly sandstone and conglomerates in which carnotite---secondary uranium ore--- is found in the large Utah and Colorado deposits of that mineral.

18. The area in question is indicated by national forest boundaries on the hand maps and circled areas of Park, Meagher, Wheatland and Sweetgrass counties on the geological maps of the Montana Bureau of Mines and Geology. As indicated, this is an area of tertiary intrusive rocks intruded thru late Cretaceous sediments.

ATTACHED INFORMATION FOR FORM MP--103
Sheet No. 4

10.

URANIUM-- Pitchblende and secondary ores
BERYL---- Crystallizations in pegmatite veins and cavities of the intrusive granites and crystallizations in the limestones and slates of the Livingston Formation.
CORUNDUM- Crystallizations in veins thruout the dike rocks of the tertiary intrusions and granular limestones of the Livingston Formation.

11.

I propose intensive exploration by self with geiger counter for pitchblende and secondary uranium ores with confirmatory examinations by flourescent , streak and hardness and other tests plus exploration for beryl and corundum.

12.

The area, as enclosed by national forest boundary lines on the hand maps and circled areas on the geological maps, is one of tertiary intrusive rocks thru cretaceous sedimentary rocks (Livingston Formation) (Fort Union Formation). Pitchblende or uranite is most frequently found in such tertiary mineralization and is often indicated by gold and silver depo its such as are found in this area. Carnotite is found in formation similar to the Livingston Formations. Beryl and corundum also occurs in both tertiary mineralization and Cretaceous sedimentary formations.

ATTACHED INFORMATION FOR FORM [illegible] 105
Sheet No. 5

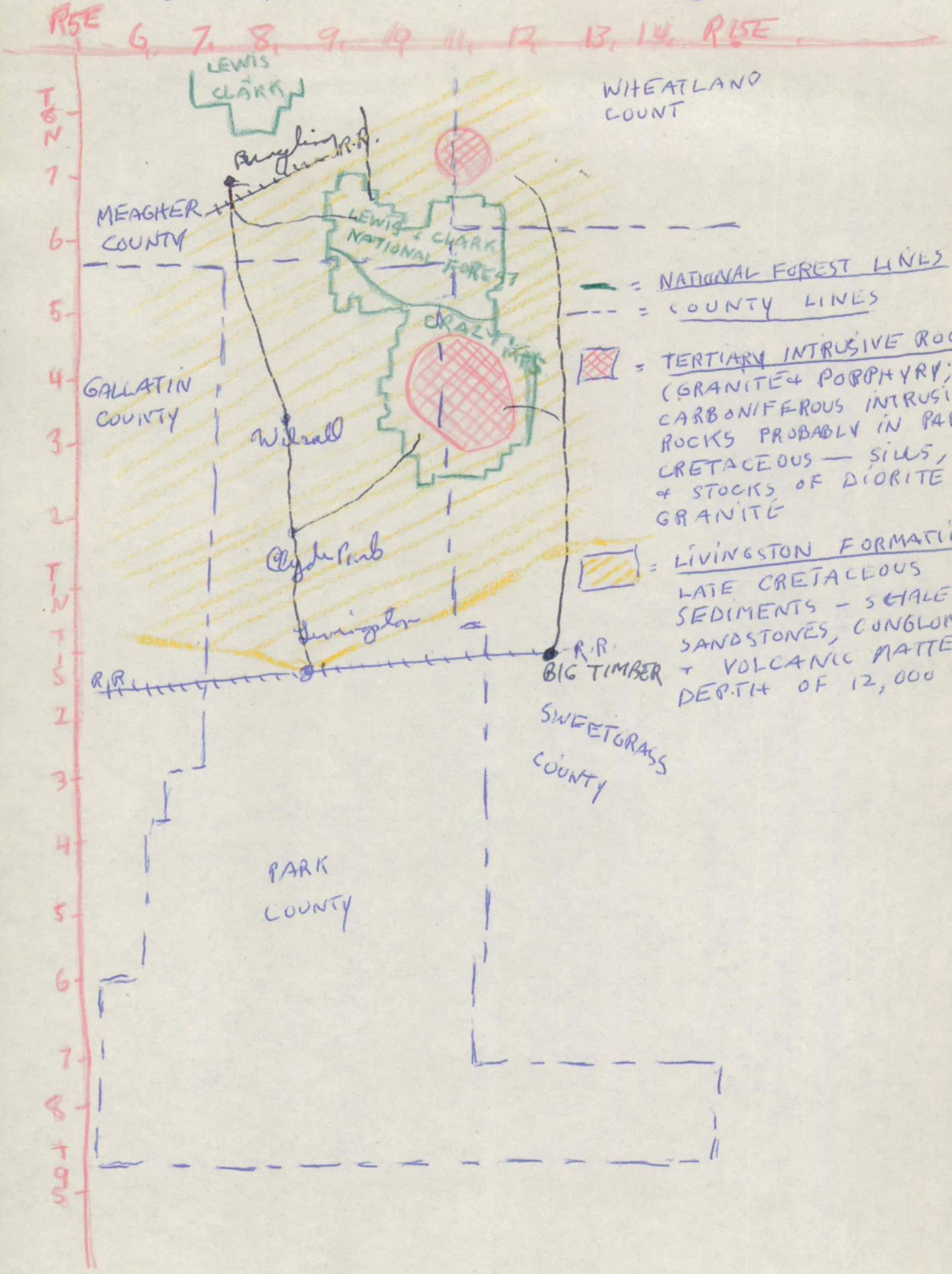
23.
(a)

	No.	Kind	Cost per Day	Total Equip. Cost
Labor, by numbers and classes with wages of each	I.	Prospector	$17	
Supervisors				
----------SAME AS ABOVE----------				
Costs of necessary repairs	0.	0	0	0
Cost of necessary installation or additional construction of structures	0.	0	0	0
Cost of items of equipment not now owned by applicant which must be purchased at cost of $50 or more each	I.	Geiger Counter		$105
Cost of rental of equipment which operator proposes to rent	I.	Trailer House	$I	
Rental value of equipment which operator now owns and which will be devoted to work	I.	UV Lamp	$.50	
	I.	Auto	.50	
Cost of materials and supplies including items of equipment costing less than $50 each		General Supplies	$1.00	
Cost of power, water, utilities and other items not provided for above	0.	0	0	0
TOTAL			$20	$105

24.

I want to commence systematic radiation and visual examination of the area within Lewis and Clark-- Crazy Mts. national forest immediately after desired project approval for uranium, beryl and corundum at the total cost indicated by N.23 at $20 per day for labor, equipment rental and other items plus an initial outlay of $105 for equipment-- 90% of the initial and per diem cost to be provided by the Defense Mineral Administration and 10% by self. I would expect this per diem cost to remain constant until completion of project in approximately 250 days (working days) at an approximate total cost of $5000.

LEWIS & CLARK NATIONAL FOREST MONTANA
(CRAZY MTS, & SOUTHERN SECTOR)



Form MF-103
(April 1951)

U. S. DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS ADMINISTRATION

Budget Bureau No. 42-R1035.
Approval expires 6-30-51.

APPLICATION FOR AID FOR AN EXPLORATION PROJECT PURSUANT TO MINERAL ORDER 5, UNDER DEFENSE PRODUCTION ACT OF 1950

DO NOT FILL IN THIS BLOCK

Docket No. DMA 1937

Date received 8-7-51

Participation

Name and address of applicant

Date

FILL IN THIS BLOCK

Date of application 8/2/51

Estimated cost $5,000

Mineral or metal URANIUM [BERYL CORUNDUM]

Percentage of Government participation 90%

Location of mine CRAZY MTS-LEWIS & CLARK NATIONAL FOREST-STATE OF MONTANA

Date of filing MF-100

DMA Docket Number, if available 1937

INSTRUCTIONS

Read Mineral Order 5, Regulations Governing Government Aid in Defense Projects, before completing this application. Submit four signed copies of the application to Defense Minerals Administration, Department of the Interior, Washington 25, D. C., or to the nearest field executive officer thereof, with your name and address on each sheet of the application and all accompanying papers. If any question is inapplicable, or if you cannot answer it, so state on the form. Where the space provided for answer is insufficient, answer on a separate sheet, annex it to the application form, and refer to it in space for answer. If the application is approved, you will be presented with an exploration project contract on Form MF-200, for your signature.

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
AUG 6 1951

THE APPLICANT

*1. Is applicant an individual, partnership, or corporation? AN INDIVIDUAL

*2. If a partnership, state names and addresses of partners. INAPPLICABLE

*3. If a corporation, state names and addresses of officers, directors, and five largest stockholders. INAPPLICABLE

*4. Describe the mining and general business experience of (*a*) the applicant, and (*b*) the person or persons who will manage the project. SEE ATTACHED SHEET

*5. Are you the owner or the lessee of the property? NO

6. If owner, state what claims, liens, or encumbrances, if any, are against the property. NOT APPLICABLE

7. If lessee, attach a copy of the lease and state if it is in good standing. NOT APPLICABLE

NOTE.—It will be necessary to procure and attach to the exploration project contract agreements of claimants, lienors, encumbrances and lessors subordinating their interests in the property to the interest of the Government under the contract.

8. Furnish current financial statement, showing assets and liabilities, and a profit and loss statement. NOT APPLICABLE

9. How much money is applicant prepared to invest in proposed project? Is it sufficient to pay your part of the cost of the project as detailed in question 23 of this application form, in accordance with the regulations on Government participation (Section 9 of Mineral Order 5)? $500 - YES

*If you have already answered these questions on MF-100, you are not required to answer the questions for this application.

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THE PROPERTY

10. (*a*) Give a description of the real property that will be in any way involved in the exploration project, including any existing mine or operating property. SEE ATTACHED SHEET No. 1

(*b*) Give the legal description of the exact parcel, plot, or area upon which the exploration is to be conducted. SEE ATTACHED SHEET No. 1

NOTE.—If both areas are the same, so state. The only obligation to repay the Government is from the net earnings from any commercial discovery made in the area specified in (*b*) above in which the exploration is to be conducted, and the expenditure of funds which may be charged as costs of the project must be limited to that area or to work necessary to perform the exploration in that area.

*11. State the present and former names of the property, if any. CRAZY MTS.-LEWIS & CLARK NATIONAL FOREST

*12. State, in detail, the location of the property with reference to towns, railroads, roads, shipping points, including distances and directions and kinds and conditions of roads. SEE ATTACHED SHEET

*13. State source and quantity of water available for operations and its sufficiency at all seasons. SEE ATTACHED SHEET
State amount of power to be used, rate per hour or other cost, and source.

*14. Describe any existing useable facilities, equipment, buildings, or structure now on the property that will be devoted to the exploration work. NOT APPLICABLE

15. State in detail how the ore could be shipped and how and where milled. SEE ATTACHED SHEET

*16. History:

(*a*) Give a statement, as complete as possible, of previous exploration, development, operation, and production of property, so with reasons for any past suspensions of operations. FAR AS I KNOW NO EXTENSIVE EXPLORATION HAS BEEN MADE FOR THESE ORES IN THIS AREA

(*b*) State briefly the known history and production of adjoining and neighboring properties. SOME GOLD SILVER & LEAD TAKEN OUT

(*c*) Furnish any available (private) reports that may apply to this application, including results of mine examinations, recommended exploration and development, and metallurgical investigations. SEE ATTACHED SHEET

*17. Production: NOT APPLICABLE

(*a*) If mine is in production, furnish the following information:

	Tons per day	*Grade or analysis*	*Cost per ton*	*Net value per ton*
(1) Mining				
(2) Milling				
(3) Shipped or sold				

*18. Ore or mineral reserves: (If property is or has been operating.) SEE ATTACHED SHEET

(*a*) Describe the ore or mineral deposits briefly.

(*b*) Submit available maps and assay data.

(*c*) Give estimated tonnage and grade of each class of ore reserves.

19. State any conditions or circumstances regarding the property not sufficiently brought out by the foregoing questions. COVERED BY PREVIOUS QUESTIONS

THE EXPLORATION

20. For what mineral or minerals and for what types of deposits and ores will the exploration be conducted? SEE ATTACHED SHEET

21. Describe briefly, but concisely, the proposed work and the estimated time required to complete it. SEE ATTACHED SHEET

NOTE.—The Government will not participate in a project that will require more than 2 years to complete.

22. Furnish statement of the geological basis of the project with particular emphasis on factors leading the operator to expect the finding of commercial ore bodies. This statement should be accompanied by supporting maps such as geological maps, maps of the proposed openings and assay maps, sample lists, and other pertinent data. SEE ATTACHED SHEET

THE REQUIREMENTS AND COSTS

23. Tabulate in the form of an itemized statement with a sum for each item the estimated requirements and costs of the project so that the total will give the estimated cost of the project in which the Government will participate, as follows:

(*a*) Labor, by numbers and classes (miners, muckers, millmen, etc.), with wages of each. SEE ATTACHED SHEET

(*b*) Supervisors, by numbers and positions, with salaries of each.

(*c*) Cost of necessary repairs to existing facilities, structures, and buildings.

(*d*) Cost of necessary installation or construction of additional facilities, structures, and buildings.

(*e*) Cost of items of equipment, not now owned by the applicant which must be purchased for operations at a cost of $50 or more each.

(*f*) Cost of rental for equipment which the operator proposes to rent.

(*g*) Rental value of items of equipment which the operator now owns and which will be devoted to the work.

(*h*) Cost of materials and supplies, including items of equipment costing less than $50 each.

(*i*) Cost of power, water, utilities, and any other items not provided for above.

24. Furnish a time schedule of the project, stated in terms of months after project is approved, showing progress expected to be accomplished and the money expected to be spent. SEE ATTACHED SHEET

CERTIFICATION

The undersigned company, and the official executing this certification on its behalf, hereby certify that the information contained in this form and accompanying papers is correct and complete to the best of their knowledge and belief.

_____ (Name of company)

By Inc E.E. Conway (Signature of authorized official)

8/3/51 (Date)

_____ (Title)

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.

*Same as footnote on page 1.

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ATTACHED INFORMATION FOR FORM 17- 106
Sheet No. 1

(c)
4. School geology course-- working experience in gold mine --considerable time spent in prospecting and mineral study.
(b)
Same individual as above.

10. (a) Proposed site of uranium exploration project is the Crazy Mts.--Lewis and Clark National Forest area located as shown in Park County--Sweet Grass County--Meagher County and Musselshell County of southwestern Montana including the Big Timber Creek field an area on the eastern slope of the Crazy Mts. twenty-one miles northwest of Big Timber in Section 6 in which some unpatented gold, silver and lead prospects are held--- the Kelly prospect in Sec.6, T2N, R12E an adit in diorite and the Stewardson prospect, Sec. 6, T2N, R12E another dormant claim from which some ore has been shipped. This ore is anglesite, galena, and pyrite in a quartz gangue.
(b) Proposed site of uranium exploration project is the Crazy Mts.--Lewis and Clark National Forest area (southern sector) shown on attached map extending from R8E to R12E and from T2N to T7N.

12. Location extends from Parallels 46° 55' and 46° 04' North and Meridians 110° 10' and 111° 10' West, an area in south-central Montana extending in Park County, Sweetgrass County, Meagher County and Musselshell County. In the south the Big Timber mining district of the Crazy Mts. is served by Big Timber, Montana on the Northern Pacific R.R. shipping point the distance between Big Timber and the Big Timber mining district being twenty-seven miles-- eleven miles improved and sixteen unimproved road and trail. The entire location is served by four improved and a dozen or so unimproved roads connecting the area to U.S. Hwy No. 10 twenty-eight miles south, to Montana State Hwy No. 12 ten miles east, State Hwy No. 6 eleven miles north, and U.S. Hwy No. 89 seven miles west.
The Chicago, Milwaukee, St. Paul, and Pacific R.R. skirts the northeast corner of the area with shipping points at Dorsey and New Dorsey.

1.

(a) The U.S. [illegible] Bureau, Idaho, has [illegible] River [illegible] precipitation records for the U.S. [illegible] Station at Livingston, Park County, and Big Timber, Sweetgrass County as indicated:

STATION	LIVINGSTON (Park County)		BIG TIMBER (Sweetgrass County)	
Elevation Ft.	4,485		4,100	
	Prec.	Snow 9-11	Prec.	Snow 9-11
Length of Record Yrs.	40	18	41	18
January	0.50	0.0	0.05	0.0
February	.05	0.0	.05	0.0
March	.60	0.0	1.00	0.0
April	1.32	0.0	1.[illegible]	0.0
May	2.44	1.1	.[illegible]	1.7
June	2.[illegible]	TRACE	2.00	1
July	1.[illegible]	0.0	1.[illegible]	0
August	1.1[illegible]	.1	1.1[illegible]	TRACE
September	1.00	.7	1.01	.9
October	1.17	3.9	1.40	6.6
November	.60	8.9	.75	10.1
December	.60	7.0	.55	6.5
Annual Average	14.[illegible]	41.4	12.70	30.1

These figures however are misleading in the Yellowstone Valley area both the precipitation and snowfall figures are known to be much higher on the higher elevations in the mountains which drain in section.

There is water available in practically unlimited quantity in the indicated areas. It forms the boundary area for needs of groups and the children river which lies only not more the area. The area contains twenty-six million acres at least.

ATTACHED INFORMATION FOR FORM UT--103
Sheet No. 3

13.
(b) The amount of power to be used would of course not be known for development of any possible discoveries and would not be used in the proposed exploratory project. However the surrounding area is completely serviced with electric power supplied by the Montana Power Co. whose main power artery for Park County has a capacity of 7,000 kilowatts at a nominal operating value of 50,000 volts

Rates:

.75 for 1st 10 KWH
.065 per KWH for Next 200 KWH
.025 per KWH for Next 1,500 KWH
.015 per KWH for Next 3,200 KWH
.009 per KWH for Next 15,000 KWH
.007 per KWH for Next 500 KWH per kilowatt
.005 per KWH for all additional KWH

and

First 10 kilowatts-- No Charge
Next 40 kilowatts-- 95¢ per kilowatt
All additional kilowatts-- 75¢ per kilowatt

15.
Ore could be shipped by transcontinental hiways or N.P.R.R. or Milwaukee R.R. to various refining points about U.S.

16. (c)
All private reports show that pitchblende or uranite, the primary uranium ore occurs in tertiary mineralization frequently found near gold and silver such as composes a large part of the indicated terrain. Since corundum also occurs in veins scattered thru dike rocks and beryl is found in coarse grained granites and pegmatites the exploration for these minerals is favorably indicated. The Livingston formation (late Cretaceous sediments) which compose the remaining area are partly sandstone and conglomerates in which carnotite---secondary uranium ore---is found in the large Utah and Colorado deposits of that mineral.

18. The area in question is indicated by national forest boundaries on the hand maps and circled areas of Park, Meagher, Wheatland and Sweetgrass counties on the geological maps of the Montana Bureau of Mines and Geology. As indicated, this is an area of tertiary intrusive rocks intruded thru late Cretaceous sediments.

ATTACHED INFORMATION FOR FORM MT--I03
S heet No. 4

20.

URANIUM-- Pitchblende and secondary ores
BERYL---- Crystallizations in pegmatite veins and cavities of the intrusive granites and crystallizations in the limestones and slates of the Livingston Formation.
CORUNDUM- Crystallizations in veins thruout the dike rocks of the tertiary intrusions and granular limestones of the Livingston Formation.

21.

I propose intensive exploration by self with geiger counter for pitchblende and secondary uranium ores with confirmatory examinations by flourescent , streak and hardness and other tests plus exploration for beryl and corundum.

22.

The area, as enclosed by national forest boundary lines on the hand maps and circled areas on the geological maps, is one of tertiary intrusive rocks thru cretaceous sedimentary rocks (Livingston Formation) (Fort Union Formation). Pitchblende or uranite is most frequently found in such tertiary mineralization and is often indicated by gold and silver depo its such as are found in this area. Carnotite is found in formation similiar to the Livingston Formations. Beryl and corundum also occurs in both tertiary mineralization and Cretaceous sedimentary formations.

ATTACHED INFORMATION FOR FORM [illegible] - 103
Sheet No. 5

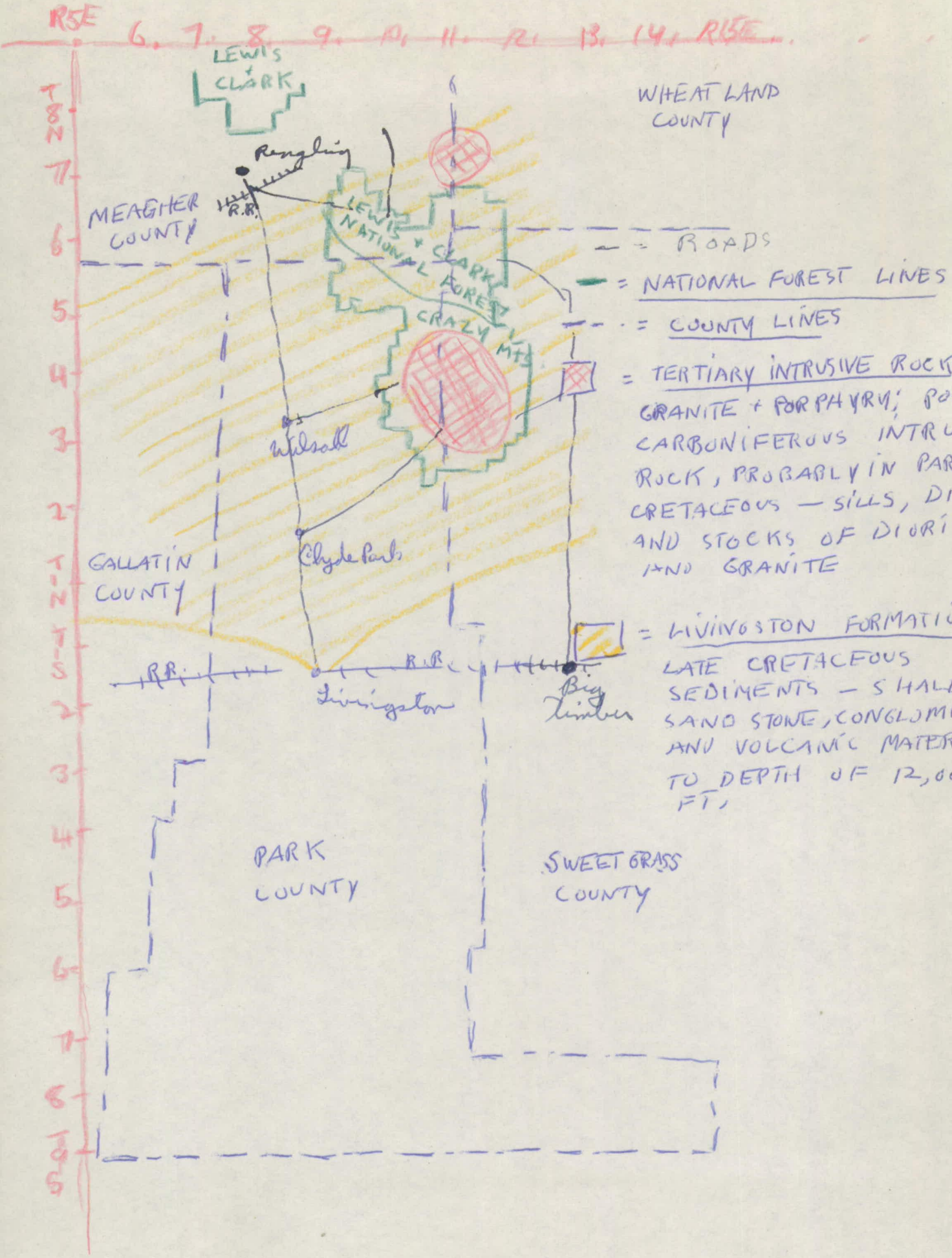
23. (a)	No.	Kind	Cost per Day	Total Equip. Cost
Labor, by numbers and classes with wages of each	I.	Prospector	$17	
Supervisors				
----------SAME AS ABOVE----------				
Costs of necessary repairs	0.	0	0	0
Cost of necessary installation or additional construction of structures	0.	0	0	0
Cost of items of equipment not now owned by applicant which must be purchased at cost of $50 or more each	I.	Geiger Counter		$195
Cost of rental of equipment which operator proposes to rent	I.	Trailer House	$1	
Rental value of equipment which operator now owns and which will be devoted to work	I.	UV Lamp	$.50	
	I.	Auto	$1.50	
Cost of materials and supplies including items of equipment costing less than $50 each		General Supplies	$1.00	
Cost of power, water, utilities and other items not provided for above	0.	0	0	0
TOTAL			$20	$195

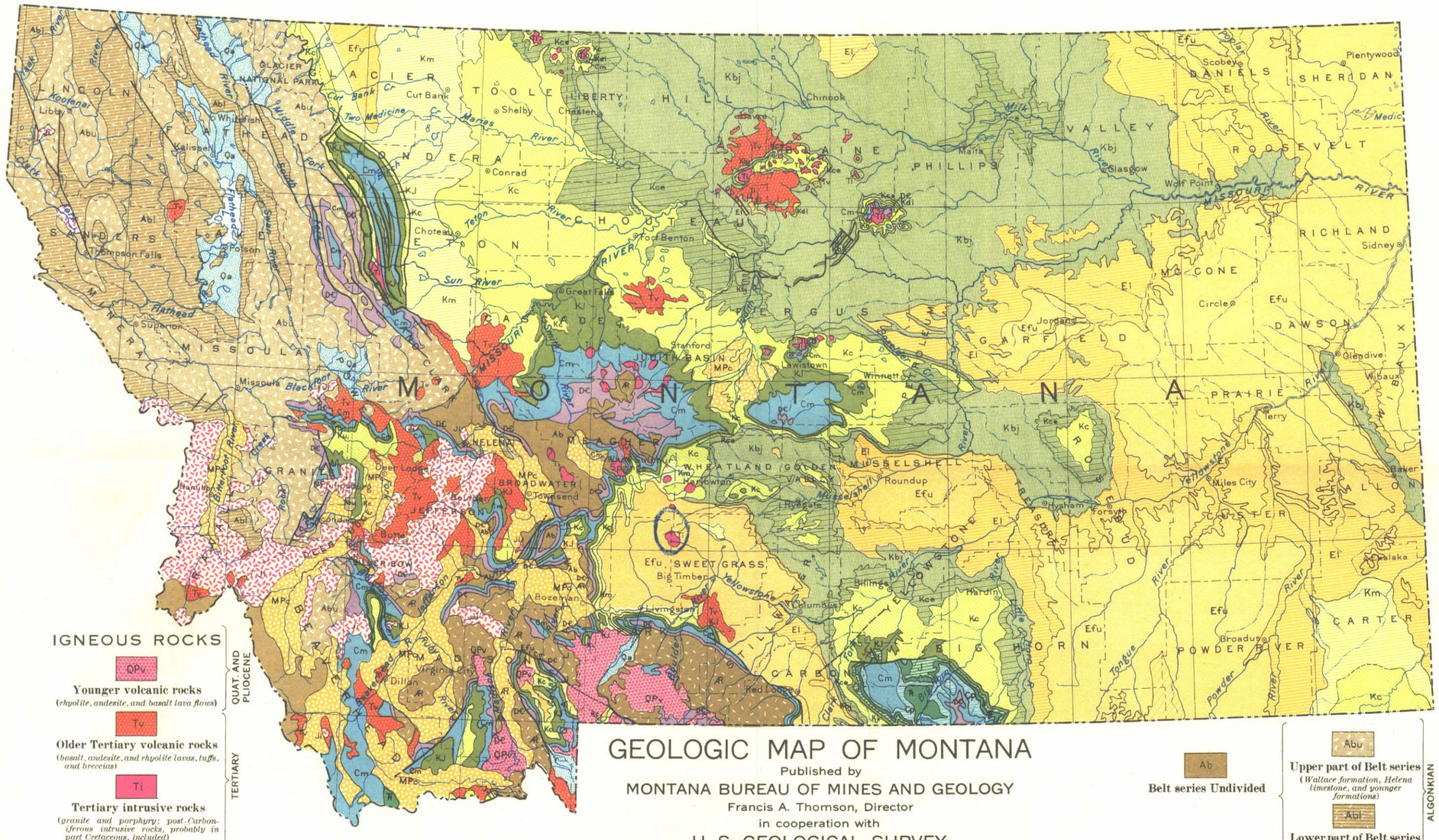
24.

I want to commence systematic radiation and visual examination of the area within Lewis and Clark-- Crazy Mts. national forest immediately after desired project approval for uranium, beryl and corundum at the total cost indicated by No.23 at $20 per day for labor, equipment rental and other items plus an initial outlay of $195 for equipment-- 90% of the initial and per diem cost to be provided by the Defense Mineral Administration and 10% by self. I would expect this per diem cost to remain constant until completion of project in approximately 250 days (working days) at an approximate total cost of $5000.

LEWIS AND CLARK NATIONAL FOREST
(CRAZY MTS. & SOUTHERN SECTOR)

MONTANA





GEOLOGIC MAP OF MONTANA

Published by

MONTANA BUREAU OF MINES AND GEOLOGY

Francis A. Thomson, Director

in cooperation with

U. S. GEOLOGICAL SURVEY

Prepared by George W. Stose, O. A. Ljungstedt, and A. J. Collier

Scale

25 0 25 50 75 100 Miles

1933

(Minor errors in geology are being corrected on Geologic map of Montana on a scale of 1:500,000, now in preparation)

EXPLANATION

QUATERNARY

Qa — **Alluvium**

TERTIARY

Miocene and Pliocene

Mpc — **Miocene and Pliocene continental deposits**
(Late Tertiary lake beds; some Oligocene deposits included)

Oligocene

Φw — **White River group**

Eocene

Ews — **Wasatch formation**

Efu — **Fort Union formation**

El — **Lance formation**

CRETACEOUS

Upper Cretaceous

Km — **Montana group**
(Pierre shale and Foxhill sandstone)

Kc — **Colorado group**
(Dakota included in places in foothills)

Kbj — **Bear Paw and Judith River formations**

Kce — **Claggett and Eagle formations**

Lower Cretaceous

Kdl — **Dakota sandstone and Lower Cretaceous**

Kj — **Dakota sandstone to Morrison formation**
(Dakota sandstone, Upper Cretaceous; Comanche series, Cloverly and Kootenai formations, Lower Cretaceous; Morrison formation, Jurassic (?); Ellis formation, Jurassic, included in places)

JURASSIC

J — **Jurassic rocks**
(Sundance and Ellis formations, Ankareh shale, Nugget sandstone, and Twin Creek limestone; Triassic included in places)

TRIASSIC

Ꞧ — **Triassic rocks**
(Chugwater formation, in part Permian; Woodside shale and Thaynes formation; Jurassic included in places)

CARBONIFEROUS

Cp — **Pennsylvanian rocks**
(Embar and Amsden formations and Tensleep sandstone)

Cm — **Mississippian rocks**
(Quadrant formation, in part Pennsylvanian; Madison limestone)

DЄ — **Devonian to Cambrian rocks**
(Jefferson limestone and Threeforks shale, Devonian Bighorn dolomite, Ordovician; Flathead, Gros Ventre, and Gallatin formations, Cambrian)

ALGONKIAN

Abu — **Upper part of Belt series**
(Wallace formation, Helena limestone, and younger formations)

Abl — **Lower part of Belt series**
(Pre-Wallace and pre-Helena formations)

Ab — **Belt series Undivided**

ARCHEAN?

Ar — **Archean rocks**
(Schist, gneiss, and quartzite probably in part Algonkian)

IGNEOUS ROCKS

QUAT. AND PLIOCENE

QPv — **Younger volcanic rocks**
(rhyolite, andesite, and basalt lava flows)

TERTIARY

Tv — **Older Tertiary volcanic rocks**
(basalt, andesite, and rhyolite lavas, tuffs, and breccias)

Ti — **Tertiary intrusive rocks**
(granite and porphyry; post-Carboniferous intrusive rocks, probably in part Cretaceous, included)

JURASSIC?

Jꞧ — **Older intrusive rocks**
(Idaho batholith, quartz monzonite of late Jurassic or early Cretaceous age; Boulder batholith, of late Cretaceous (Laramide) age)