DMA Form 1

DEFENSE MINERALS ADMINISTRATION
Control Slip

CONTROLLED DOCUMENT

DMA Docket No. 3679

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Cys to USBM and USGS.

This document has been recorded as

Exploration

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Routing Slip

To:	700	Date	2/11/55
To:	Oper Com	Date	3-29-55
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4/27/55 gla

[redacted]
No. 157 Howard Street
Spokane 4, Washington

April 18, 1955

Air Mail

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3679 (uranium)
Atomic Minerals Corporation
Mossman Group
Silver Bow County, Montana

Dear Mr. Selfridge:

Attached is a memorandum from George E. Becraft, Geological Survey, commenting on the application of the Atomic Minerals Corporation and recommending approval of proposed shaft sinking and crosscutting.

Also enclosed is a memorandum from H. W. Zoldok, Bureau of Mines, pointing out that because of the 12 holes drilled by the AEC on the property, the applicant's proposal appears to be more development and preparation for mining than it is exploration. Because of this Zoldok recommends denial of the application. In a letter dated February 16, 1955(copies enclosed), E. E. Thurier, Chief of the Salt Lake Exploration Branch, Division of Raw Materials, Atomic Energy Commission, states, "basically we object to further exploration at Government expense inasmuch as a small though minable ore body has already been outlined by our drilling." It is Becraft's contention that the drilling by the Atomic Energy Commission has been concentrated pretty much in one spot and that the results are not entirely conclusive because the ore body may be of larger extent than indicated by the drilling. He also points to the possibility of other ore shoots along the strike of the deposit.

The Field Team recognizes that it may be quite true that the ore has not been completely blocked out and also that there is a possibility of finding other ore shoots by additional exploration. However, in view of the fact that the proposed project will in essence merely extend the small ore body already partly developed by the AEC drilling, we conclude that Government participation in

the program proposed by the applicant is not justified. Therefore, we recommend that the application be denied.

By Field Team, Region I, BM District

A. E. Weissenborn, Executive Officer
U. S. Geological Survey

Wing S. Agnew, Member
U. S. Bureau of Mines

Enclosures

cc: BLM (2)
AEC, Butte
AEC, SLC
Bearsft
USGS(SMC)

P.S. Bearsft has written an additional memorandum reaffirming his recommendation for the exploration of this property, which we are enclosing for your consideration.

No. 137 Howard Street
Spokane 4, Washington

February 23, 1955

Memorandum

To: DMEA Field Team, Region I, Northwest District

From: George E. Bearsett, Geologist, U. S. Geological Survey

Subject: Appraisal of an application for aid in an exploration project for uranium, Docket No. DMEA-3679, Atomic Minerals Corporation, Mooney Group, Silver Bow County, Montana.

After study of the memorandum dated February 3, 1955, on the subject application by S. W. Zeldek, Bureau of Mines, and the letter to A. E. Weissenborn from E. E. Shurlow, U. S. Atomic Energy Commission, dated February 16, 1955, it is still my belief that the Mooney group has not been adequately explored by diamond drilling and there are not enough data to put distinct boundaries on an ore body nor to determine with any reasonable accuracy the grade of the ore over any given width. It is my opinion that the only conclusions that can be drawn from the drilling data are: (1) there is uranium of ore grade on the Mooney claim, (2) the western extent of one ore shoot is vaguely defined by drill holes 4, 5, 6, and 7, (3) the ore shoot probably extends below the depth of drill hole 12, (4) the dip of the vein is vertical to a depth of about 50 feet and below this point the dip changes to the north.

The accompanying map and two sections are compiled from information supplied with the application. It should be noted that there are discrepancies between the exhibits in schedule 4 and the logs of individual holes. In exhibit 4, schedule 4, hole 12 shows a down inclination of 60 degrees and on exhibit 3, schedule 4, the assay width is listed as 2 feet of 0.14% U_3O_8; on figure 12 (diamond drill hole log) the inclination of hole 12 is given as 45 degrees and four radiometric assays are given, none of which are 2 feet at 0.14% U_3O_8.

The accompanying plan map shows the position of the radioactivity in each of the diamond drill holes vertically above the actual position in the hole. This illustrates that the vein is not vertical below a depth of about 50 feet. Cross section A-A' shows the diamond drill holes and the location of radioactivity in each

hole transposed on a single plane. This section indicates that the dip of the vein is steeply to the north at the west end of the section and the dip may be almost vertical or to the south between the depth of hole 3 and the depth of hole 11. Longitudinal section B-B' shows the diamond drill holes and the location of radioactivity in each hole (the dashed lines indicate that part of each hole north of a vertical plane B-B'). The analyses are taken from exhibit 3, schedule 4, and from figure 12 (mentioned above). Drill holes 1, 8, 9, 10, and 12 are shown as having ore-grade uranium. It may be seen on section B-B' that the ore shoot probably does not extend to the west beyond holes 4, 5, 6, and 7 unless these holes intersected the vein where it locally did not contain ore. It is my opinion that the ore shoot is not defined to the east by two holes, 3 and 11. I do not believe that two diamond drill holes provide enough information to draw the margin shown on schedule 4, exhibit 3. In addition, hole 11 may be poorer ore grade than is indicated. The analyses for holes 8 and 9 show that the uranium is out of equilibrium, with the U_3O_8 being higher than the eU_3O_8. If the uranium in holes 11 and 12 is out of equilibrium in the same direction, then the U_3O_8 content would be somewhat higher than indicated.

Considering the drilling results in the light of the above possible interpretation, I believe that only a beginning stage of exploration has been accomplished--the presence of an ore shoot has been demonstrated but the length, thickness, depth, and grade of the shoot has definitely not been established by the drilling, and now a second stage of exploration is warranted. This stage should consist of sinking an exploration shaft to a depth of at least 150 feet on the vein as nearly as possible and to drive some exploratory drifts to outline the ore body. I recommend that an exploration contract to provide for this amount of work be granted.

Attachment
Distribution:
DMEA (orig. & 3)
[illegible] (2)
USGS(SRO)
Denver
AEC, Butte
AEC, SLC
Recref

[redacted]
No. 157 Howard Street
Spokane 4, Washington

January 25, 1955

[redacted]

To: DMEA Field Team, Region I, Northwest District

From: George E. Bennett, Geologist, U. S. Geological Survey

Subject: Review of application for DMEA exploration contract, Docket No. DMEA-3079 (uranium), Atomic Minerals Corporation, Mooney Group, Silver Bow County, Montana.

The writer has reviewed the subject application and recommends that the application for an exploration contract be approved. It is recommended that only the exploration shaft and drifts be approved because the remainder of the project is development and not exploration.

The application is well documented with geological data obtained from the U. S. Atomic Energy Commission Butte subOffice. I have discussed this property with geologists of the Atomic Energy Commission, and I do not believe that a field examination would add materially to the data submitted with the application.

Distribution:
DMEA (orig. & 3)
USGS (2)
USGS(DMS)
Docket
AEC, Butte
AEC, SLC
Bennett

UNITED STATES
ATOMIC ENERGY COMMISSION
DIVISION OF RAW MATERIALS
Salt Lake Exploration Branch

ADDRESS REPLY TO:

U. S. Atomic Energy Commission
P. O. Box 2196
Salt Lake City, Utah

AND REFER TO:

SLEB:EET:af

February 16, 1955

DATE

al
Jack
Geo.

USGS cc

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 2 8 1955

Mr. A. E. Weissenborn
Administrative Geologist
U. S. Geological Survey
South 157 Howard Street
Spokane, Washington

Dear Al:

This will acknowledge receipt of Verne Fryklund's letter of February 7 concerning an application for exploration assistance submitted by the Atomic Minerals Corporation for exploration of the Mooney group, Silver Bow County, Montana.

I have discussed this proposal with Jerry Jarrard and the following comments represent our thinking in the matter. While the Mooney claim undoubtedly contains uranium ore and is worthy of development and mining, our contention is that the property has been sufficiently explored by means of diamond drilling conducted by our Butte office and therefore no further government funds should be spent for exploration. I presume that the property might qualify for a development loan although we are not sure what your requirements may be in this regard.

We completed a total of twelve diamond drill holes which resulted in developed and indicated ore totaling 750 tons assaying 0.29 percent U_3O_8 and about 1500 tons of inferred ore of a similar grade. It appears that with the information already furnished to the company by our Butte office, the Atomic Minerals Corporation should be able to determine whether or not they can profitably mine the ore that has been outlined along the Mooney vein. If further government assistance is granted for the exploration and development of this property, we feel that the amount of work and the unit prices should both be materially reduced.

RECEIVED
FEB 18 1955
U.S.G.S.
SPOKANE, WASH.

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

1201 N. Division St.
Spokane 2, Washington
February 3, 1955

MEMORANDUM

To: DMEA Field Team, Region I

From: S. W. Zoldok, mining engineer, Bureau of Mines

Subject: Appraisal of an application for aid in an exploration project for uranium, Mooney Group, Silver Bow County, Mont.

A high radioactivity anomaly on the Mooney claim was explored by the A.E.C. by 12 diamond drill holes, 5 of which intersected significant amounts of uranium. The deepest intersection was at 170 feet below the surface; however, the vein was only 0.2 feet thick and assayed 0.14 percent U_3O_8. From the drilling data the indicated dimensions of the oreshoot are 125'x27.5'x1.95' with an average grade of 0.36 percent U_3O_8. Over a mining width of 3 feet there are indicated 859 tons of ore having a grade of 0.24 percent U_3O_8 or a gross value of $31,439.40.

Cost of Development and Mining

Shaft - 125 feet @ $135.00/ft.	$16,875.00
Crosscut - 20 feet @ $40.00/ft.	800.00
Timbered drift - 35 feet @ $37.50/ft.	1,312.50
Headframe	350.00
Compressor house	550.00
Misc. administrative, etc.	1,000.00
Contract mining - 859 tons @ $20.00/ton	17,180.00
	$38,067.50
Value of ore	31,439.40
Loss to applicant without DMEA participation	$ 6,628.10

With DMEA Participation

Applicant's participation - 25% of $20,887.50	$ 5,221.88
Applicant's mining cost	17,180.00
DMEA royalty - 5% of $31,439.40	1,571.97
Total cost to applicant	$23,973.85
Profit to applicant ($31,439.40 - $23,973.85)	$ 7,465.55

Conclusions and Recommendations

The applicant's proposed exploration appears to be more development and preparation for mining and should be denied.

Orig. & 3 cys - Wash.
USGS (2)--DMEA--Engr.

S. W. Zoldok

Because of the relatively small size of the deposit, the original prospect shaft should serve both to explore the deposit at depth and to extract what ore may be mined. Also, unless the loan is in the nature of a development grant, it should not be necessary for the government to assist in driving drifts at both the 75-foot and 150-foot levels. At least the 75-foot level should be eliminated. The unit prices for the type of work specified also appear to be far too high for that area. The prospect shaft should cost no more than $110 per foot, and drifting and crosscutting for about $25 per foot. If raising is allowed, the price should probably be lowered to about $45 per foot timbered. The amount for supervision, geological and engineering fees, etc., also appears to be high. Basically, we object to further exploration at government expense inasmuch as a small, though mineable, ore body has already been outlined by our drilling.

We will be interested to learn of your decision on this proposal and will be glad to discuss it further if you desire.

With best regards.

Sincerely yours,

Ernest E. Thurlow, Chief
Salt Lake Exploration Branch
Division of Raw Materials

cc:LD JARRARD

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

Form Approved.
Budget Bureau No. 42-R1085.2.

RECEIVED
JAN 18 1955
U. S. G. S.
SPOKANE, WASH.

Department of the Interior
Defense Minerals Administration
RECEIVED
FEB 10 1955

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

Not to be filled in by applicant

Docket No. 3679
Metal or Mineral Uranium
Date Received 2-10-55
Estimated Cost $29,650
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: Atomic Minerals Corporation, a Montana corporation, % J. R. Marchi Attorney-in-fact, Securities Bldg., Helena, Montana; J.R. Marchi, President, address as above; Wm. G. Chebul, vice-president, Havre, Montana; and Daniel J Sullivan, Secy.-Treas., Securities Bldg., Helena, Montana

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

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

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

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

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract Please see Schedule 1 attached

(*b*) State any mine name by which the property is known. Mooney Claim

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Lessee

(*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. Attached herewith as Schedule 2.

(*e*) If you own the land, describe any liens or encumbrances on it Not applicable

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. Attached herewith as Schedule 3.

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

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

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

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

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

16—66551-1

Attached herewith as Schedule 4.

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

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc. Attached herewith as Schedule 5.

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

(*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. Schedule 7.

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: Schedule 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.).

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

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

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

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

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

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

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

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

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

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

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

Explain in detail on acompanying paper. Attached herewith as Schedule 9.

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 January 5, 195

ATOMIC MINERALS CORPORATION, a Montana corporation
(Applicant)
By [signature]
President

Attest:

[signature]
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

4 Nov 0

RECEIVED
BUREAU OF MINES
JAN 31 1955
SPOKANE, WASH.

ATOMIC MINERALS CORPORATION

Attorney in Fact

J. R. MARCHI
SECURITIES BUILDING
LAST CHANCE GULCH
HELENA, MONTANA

29 January 1955

Mr. T. E. Howard
Mr. S. W. Zoldok
Defense Minerals Exploration Administration
1201 North Division Street
Spokane 2, Washington

Subject: Supplemental Information to Application for Aid in an Exploration Project; Uranium; Mooney Group, Silver Bow County, Montana

Gentlemen:

As a follow-up to our recent Spokane conference, we have had prepared and enclose herewith additional exhibits pertinent to these prospects. These are diagrammatic exhibits of the diamond drilling project heretofore completed.

As further comment to our discussions of that date, this uraniferous deposit is found associated with silicified reefs or veins. These form numerous prominent ridges in the area. Anomalous radioactivity has been observed by the U. S. Atomic Energy Commission in the area staked by the Mooney Claim and also in the northwest quarter of Section five (5) (See "Anomaly Location Map, German Gulch District"). As a result of a scintillometer ground survey of all surface outcrops in this vicinity, it is our opinion that we have located still another anomaly in the southwest quarter of the northeast quarter of section thirty-two (32) and within the group of claims comprising the Mooney Group. These anomalies have all been noted on outcroppings of siliceous reefs, being the same type of siliceous reefs which have been commercially productive in the Clancy Mining District, Jefferson County, Montana, on the northeast periphyry of the Boulder Batholith. We think it significant that the Mooney Group is in an area comprising the southwest periphyry of the Batholith and of a similar-type geologic formation as the uranium producing Clancy Group. In discussing this matter, the AEC geologists have commented upon the similarity of uranium deposition between the Mooney and the Clancy area.

The reef on the Mooney claim has been drilled to show the existence of uranium minerals. This reef is not localized to

the Mooney Claim area. Outcroppings of the reef are noticeable to the west. Immediately to the west overburden conceals further surface indications although farther to the west, near the west line of section thirty-two, a strong continuation of the Mooney reef has been observed which evidences anomalous radioactivity. Aerial examination of the geology led us to the conclusion that the uranium deposition in the Mooney group is more likely to be widespread than localized, but that this can be confirmed now only by underground exploration work.

If we can be of further assistance please advise.

Sincerely,

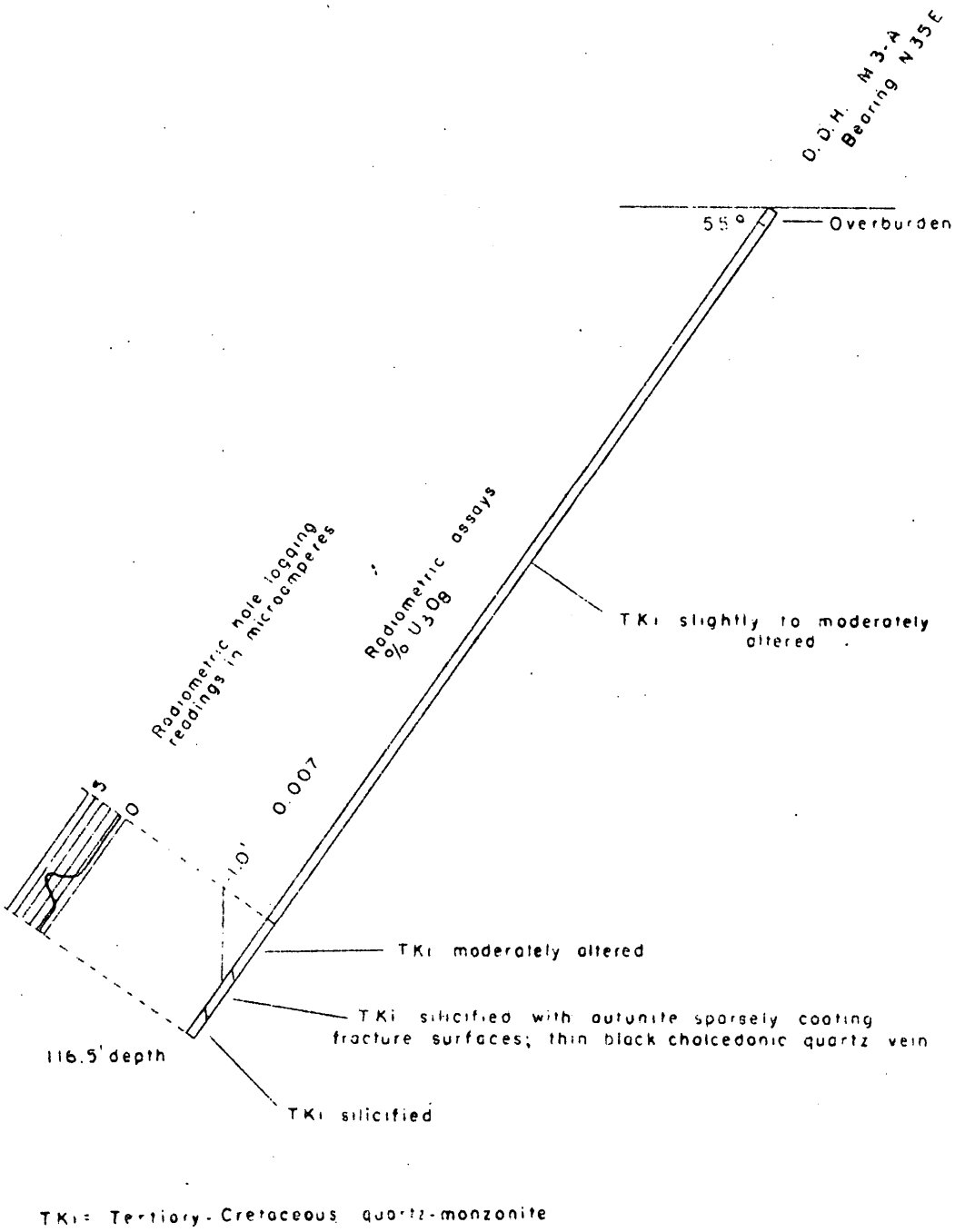
ATOMIC MINERALS CORPORATION

ORIGINAL SIGNED BY
J. R. MARCHI

By_____

J. R. Marchi/cl

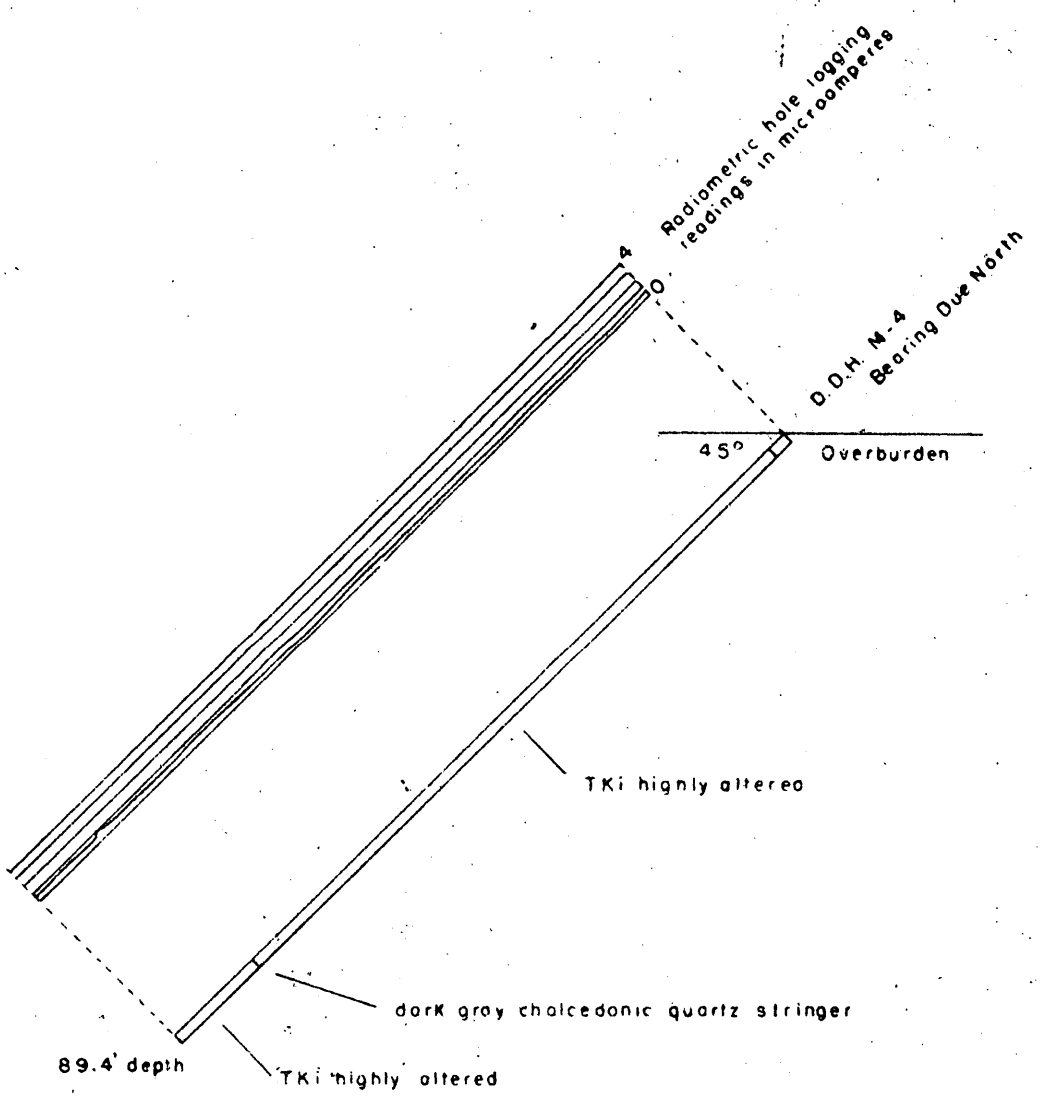
Encl.



USAEC DIAMOND DRILLING PROJECT
DIAMOND DRILL HOLE M-3A
MOONEY CLAIM, SILVER BOW CO. MONT.

Fig 3

Scale, 1" = 20'

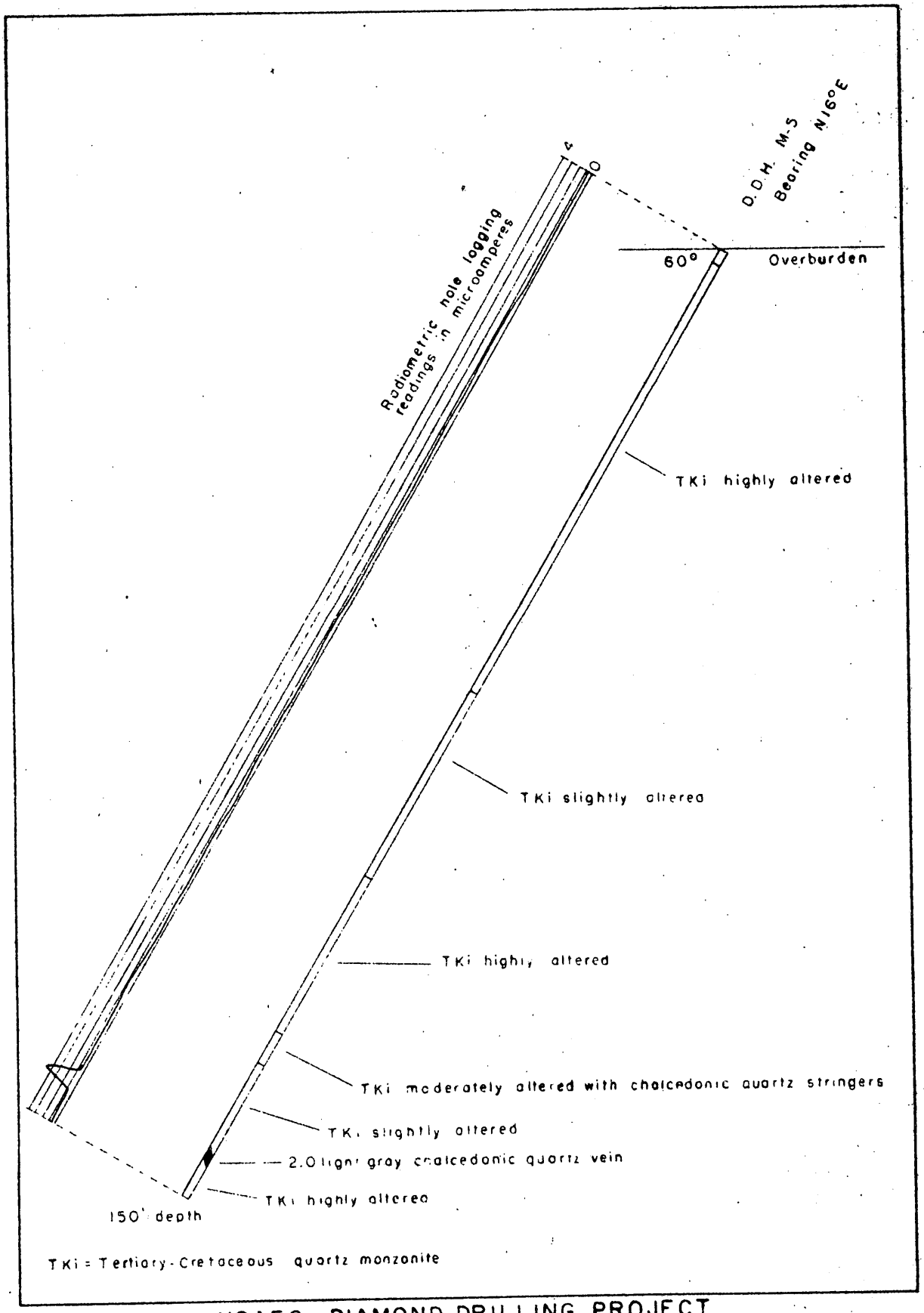


TKi = Tertiary-Cretaceous quartz-monzonite

USAEC DIAMOND DRILLING PROJECT
DIAMOND DRILL HOLE M-4
MOONEY CLAIM, SILVER BOW CO. MONT.

Fig. 4

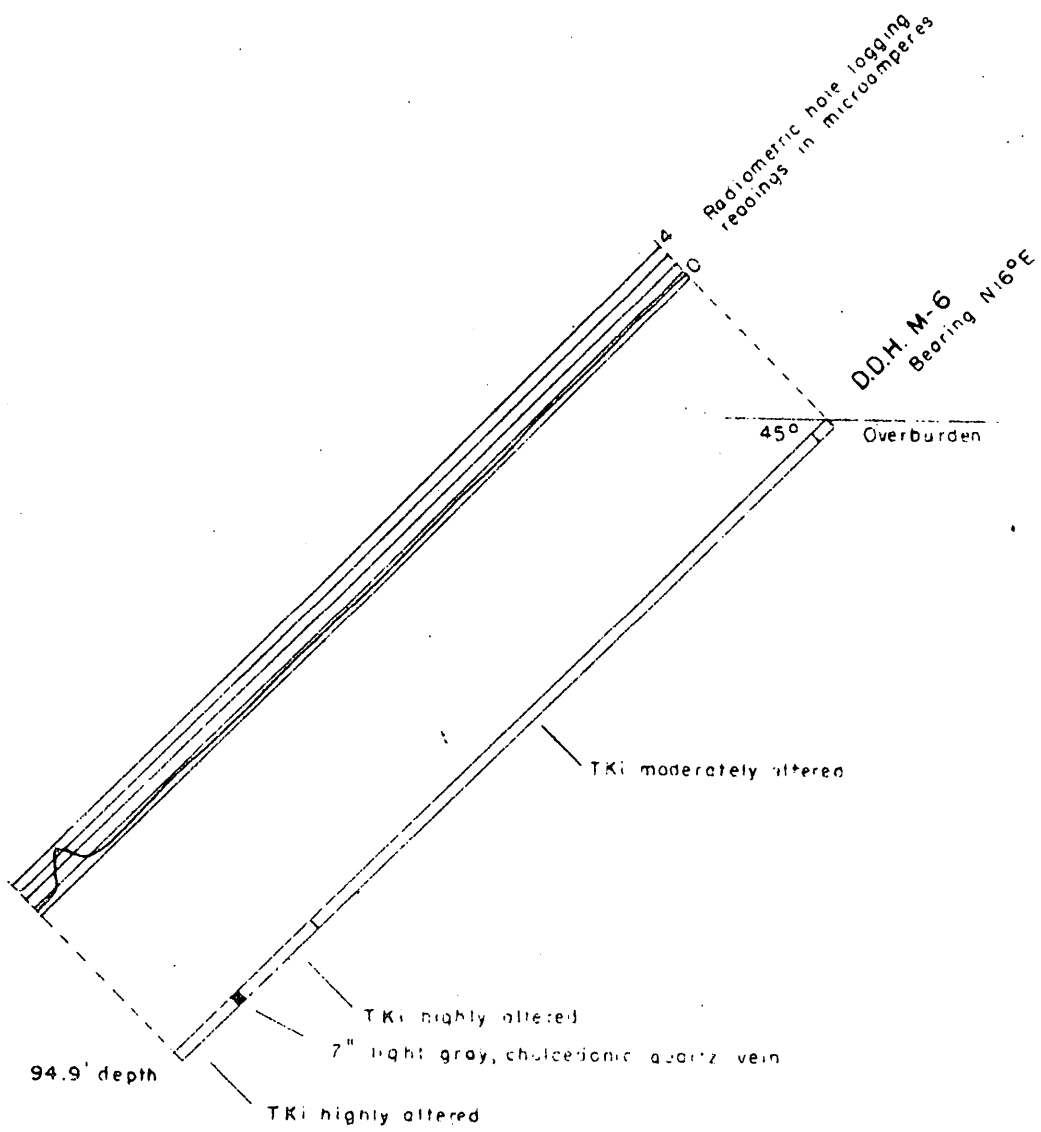
Scale, 1" = 20'



USAEC DIAMOND DRILLING PROJECT
DIAMOND DRILL HOLE M-5
MOONEY CLAIM, SILVER BOW CO. MONT.

Fig. 5

Scale, 1" = 20'



TKi = Tertiary-Cretaceous quartz-monzonite

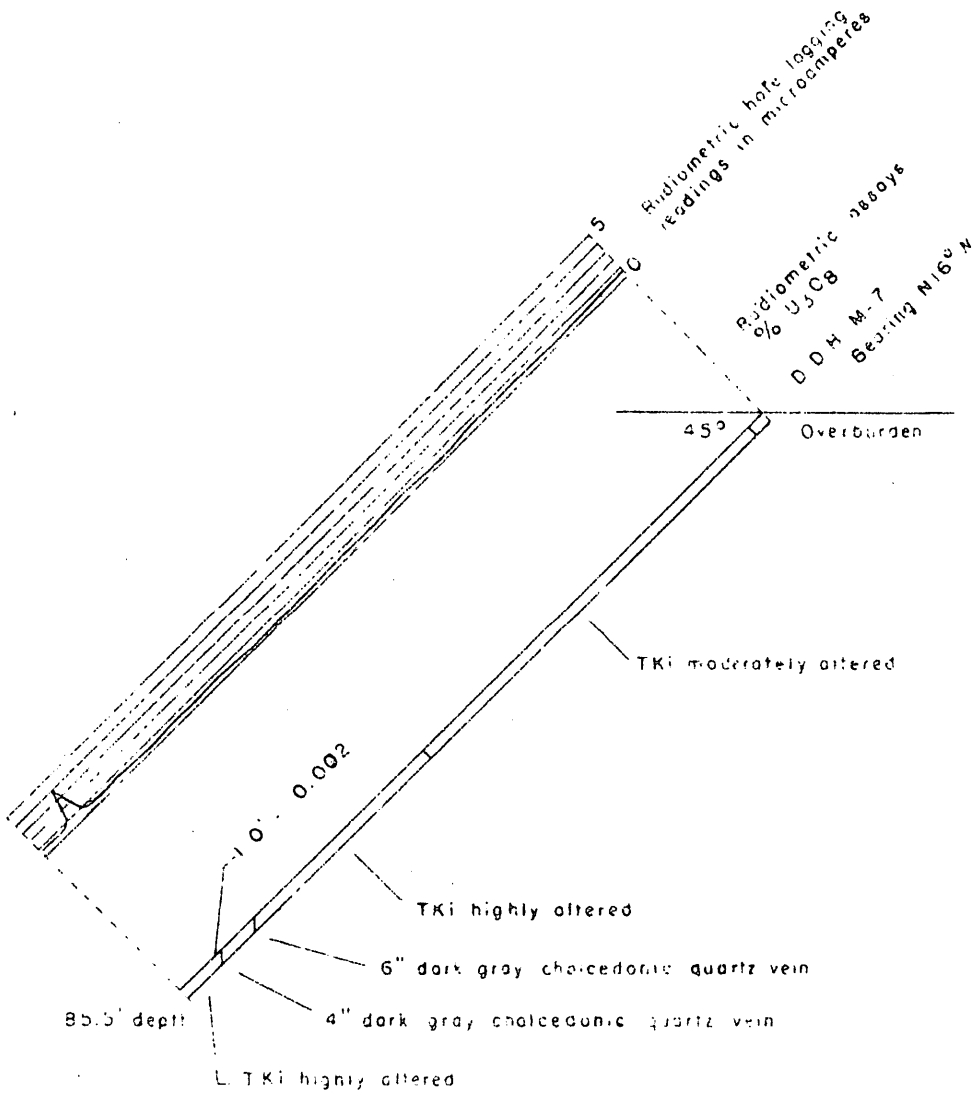
USAEC DIAMOND DRILLING PROJECT

DIAMOND DRILL HOLE M-6

MOONEY CLAIM, SILVER BOW CO. MONT.

Fig 6

Scale, 1" = 20'



TKi = Tertiary-Cretaceous quartz-monzonite

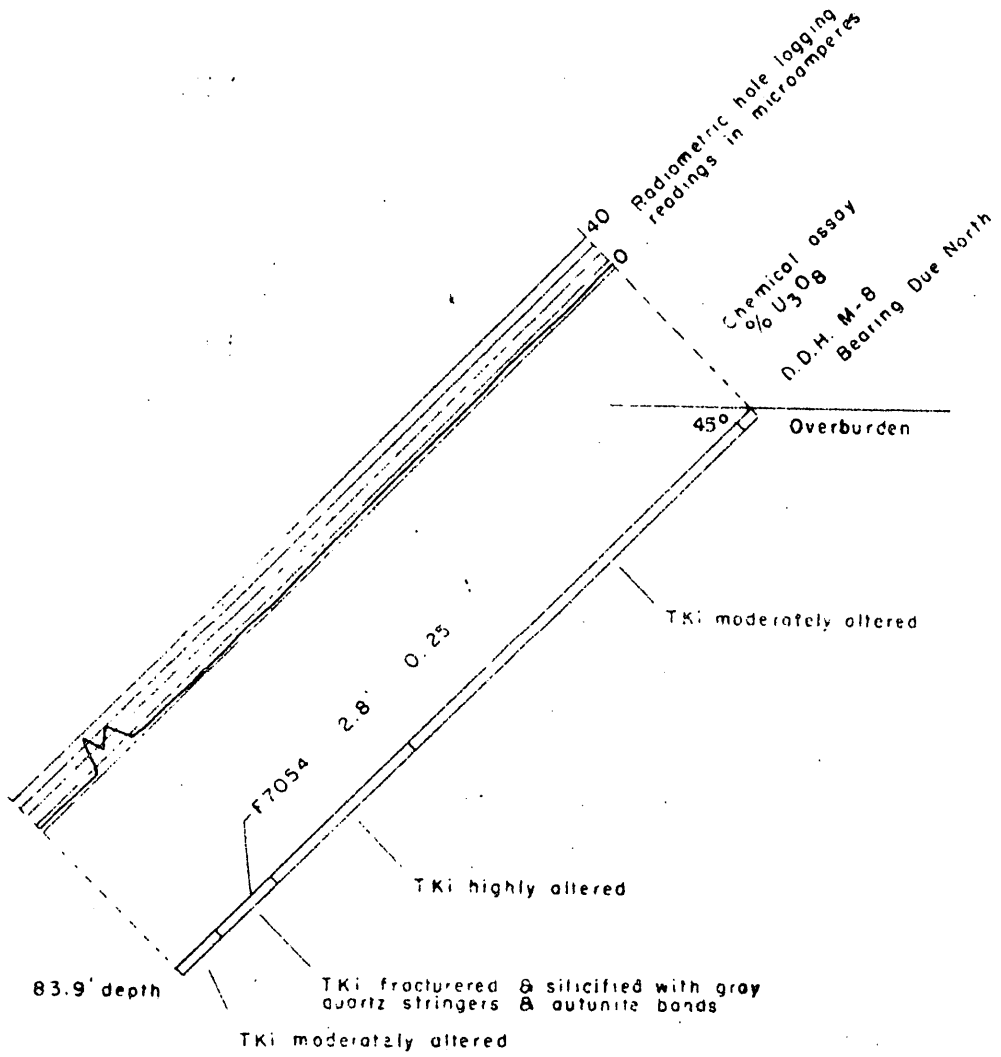
USAEC DIAMOND DRILLING PROJECT

DIAMOND DRILL HOLE M-7

MOONEY CLAIM, SILVER BOW CO. MONT.

Scale, 1" = 20'

Fig. 7



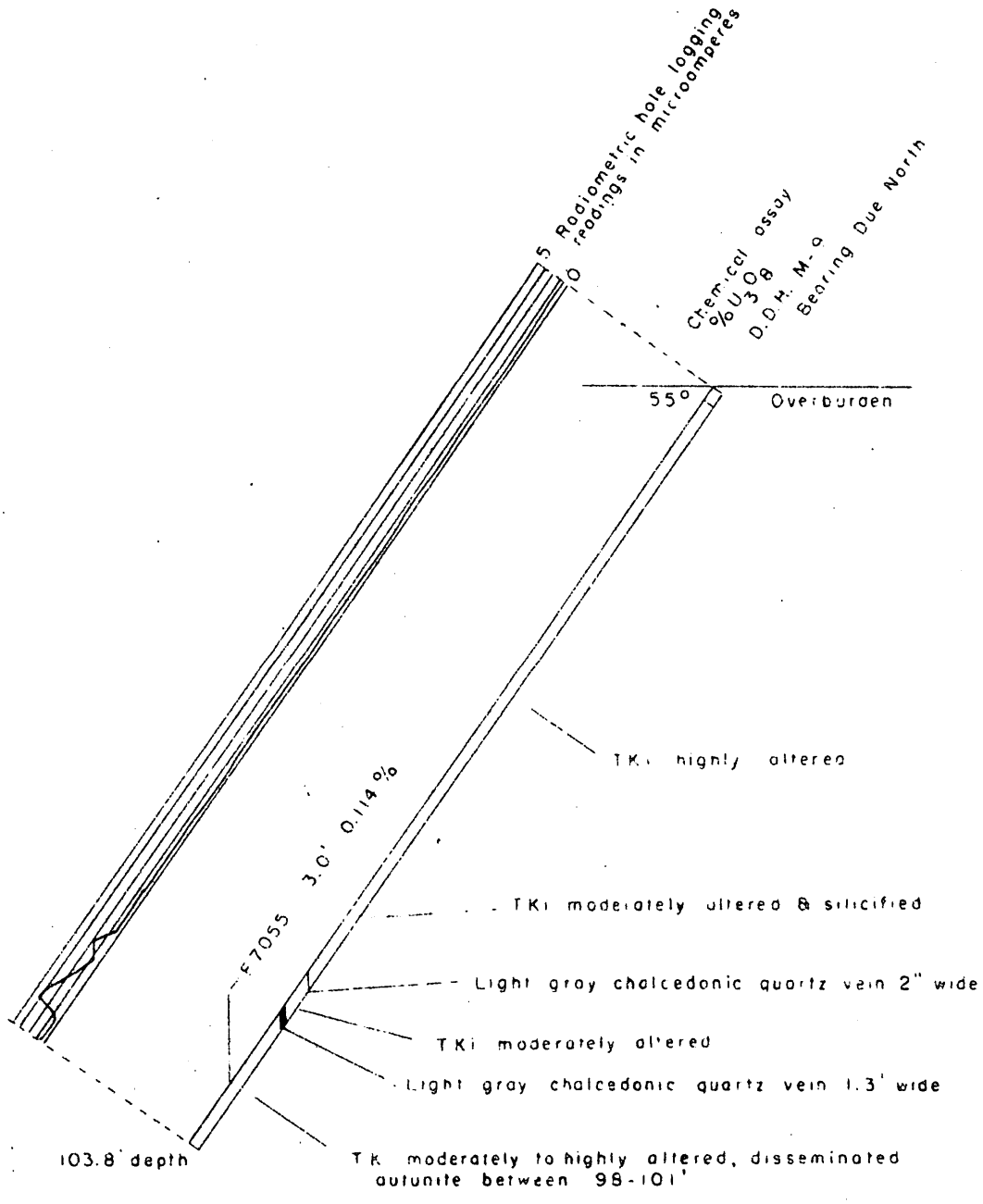
TKi = Tertiary - Cretaceous quartz-monzonite

USAEC DIAMOND DRILLING PROJECT

DIAMOND DRILL HOLE M-8
MOONEY CLAIM, SILVER BOW CO. MONT.

Fig. 8

Scale, 1" = 20'



TKi = Tertiary-Cretaceous quartz-monzonite

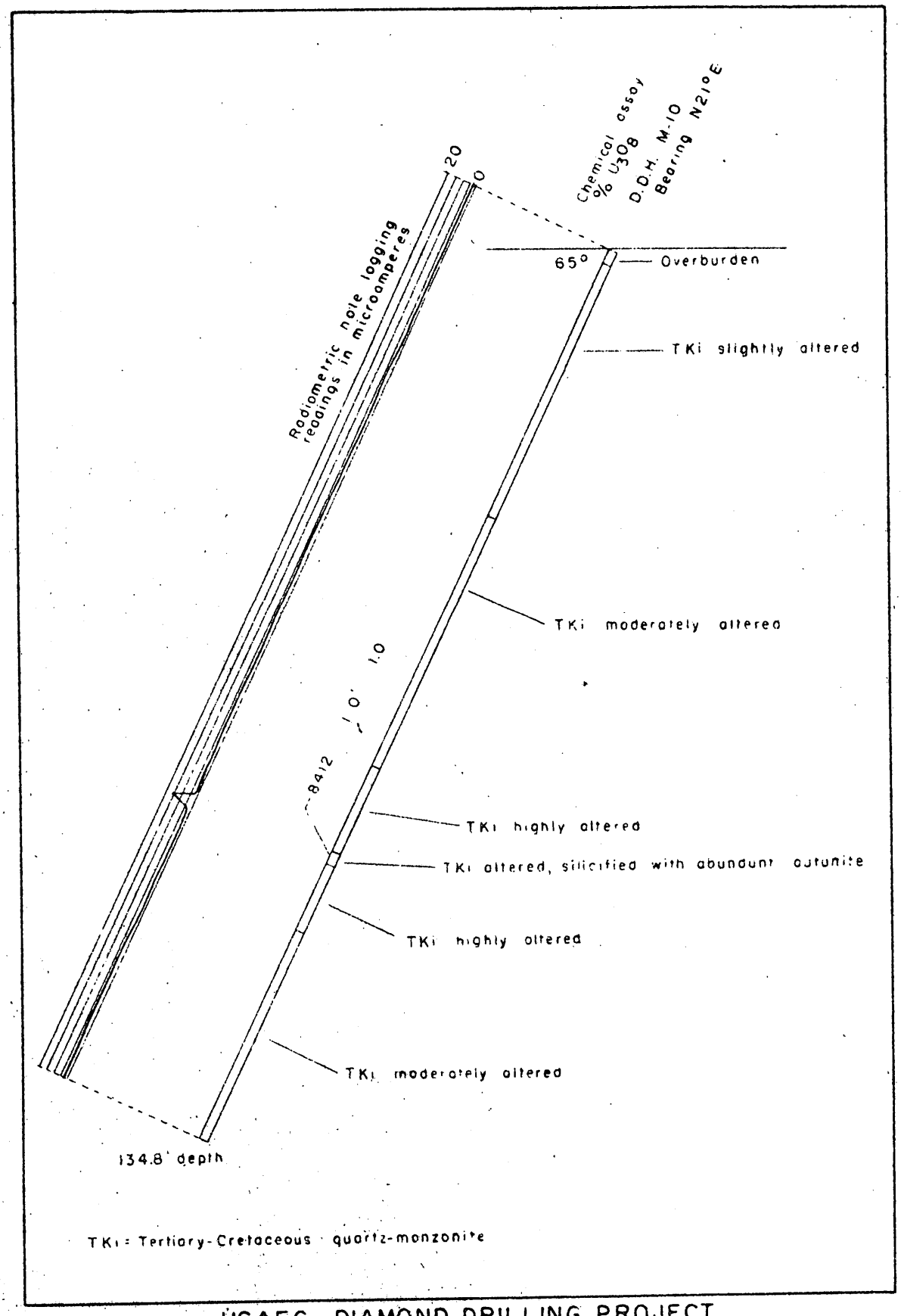
USAEC DIAMOND DRILLING PROJECT

DIAMOND DRILL HOLE M-9

MOONEY CLAIM, SILVER BOW CO. MONT

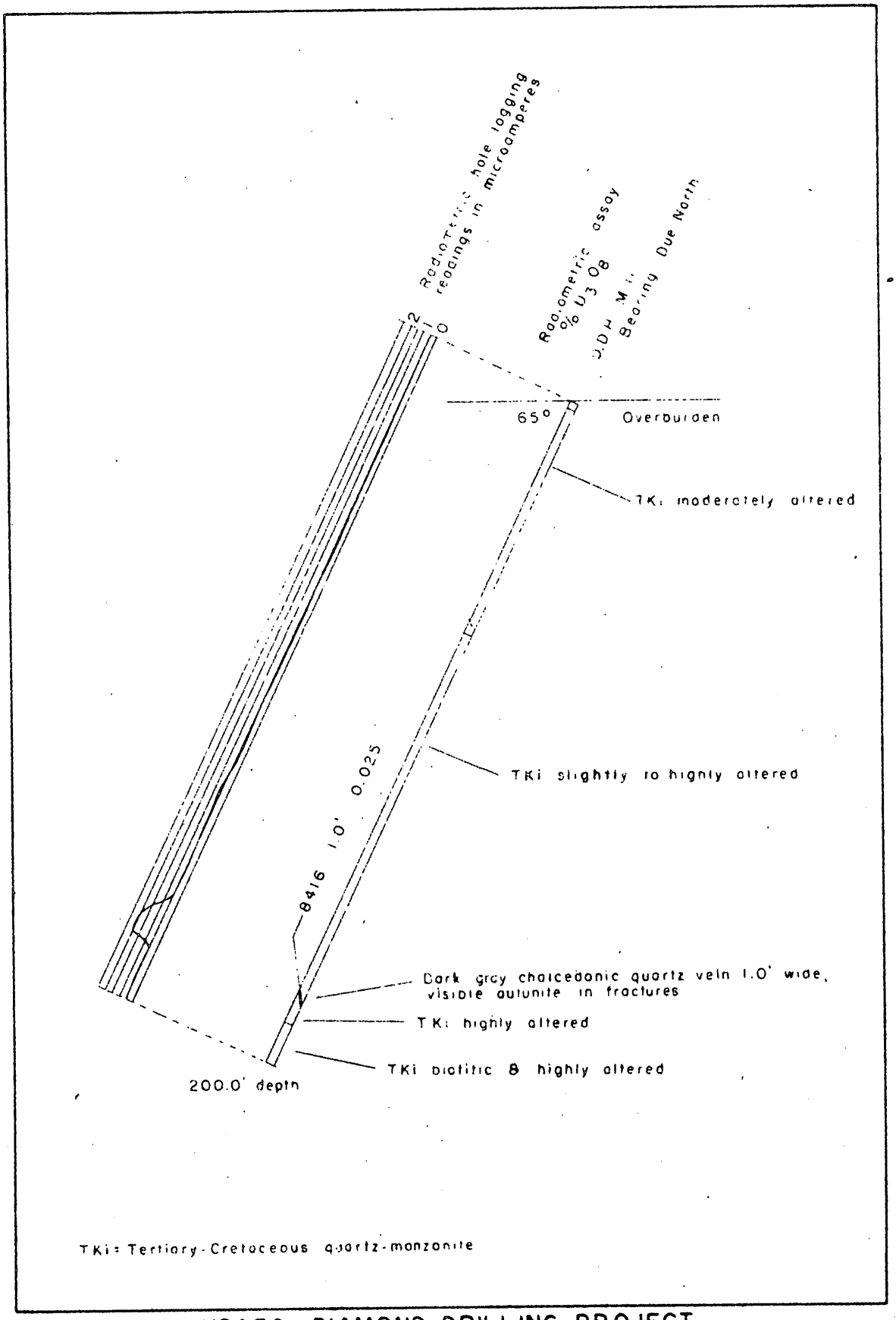
Fig. 9

Scale, 1" = 20'



USAEC DIAMOND DRILLING PROJECT
DIAMOND DRILL HOLE M-1C
MOONEY CLAIM, SILVER BOW CO. MONT.
Scale, 1" = 20'

Fig 10



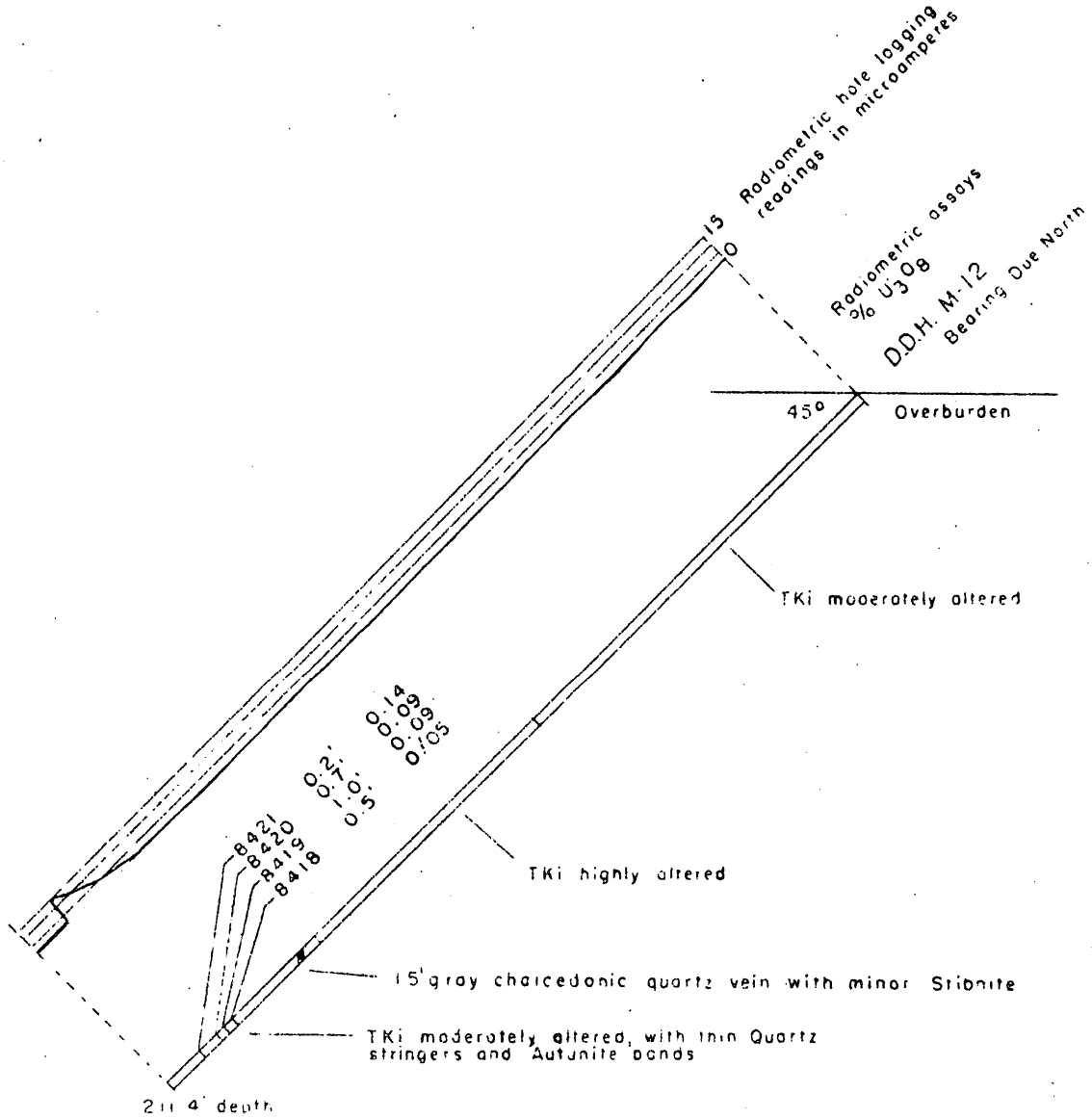
USAEC DIAMOND DRILLING PROJECT

DIAMOND DRILL HOLE M-11

MOONEY CLAIM, SILVER BOW CO. MONT.

Fig. 11

Scale, 1" = 40'



TKi = Tertiary-Cretaceous Quartz-monzonite

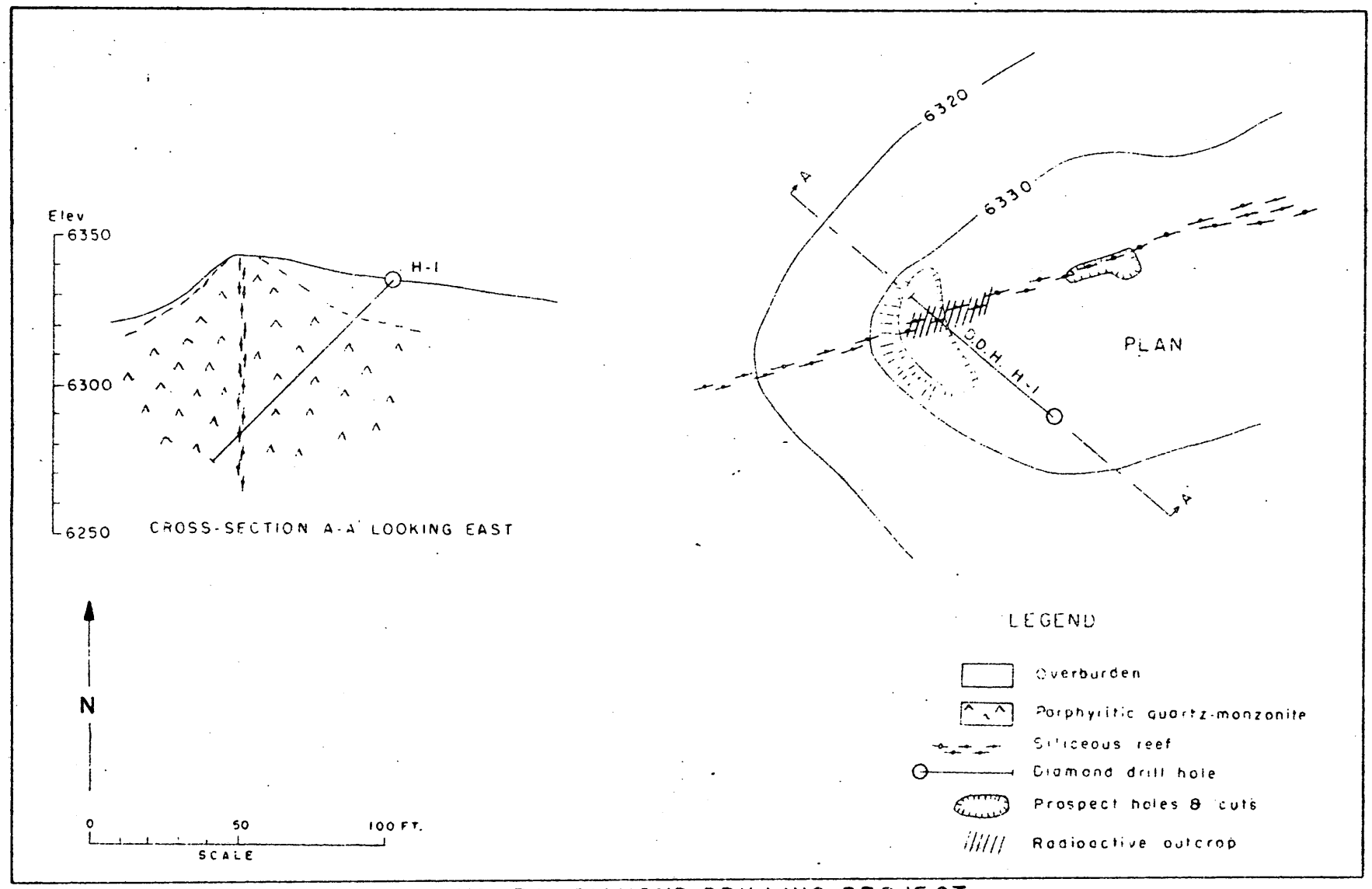
USAEC DIAMOND DRILLING PROJECT

DIAMOND DRILL HOLE M-12

MOONEY CLAIM, SILVER BOW CO. MONT.

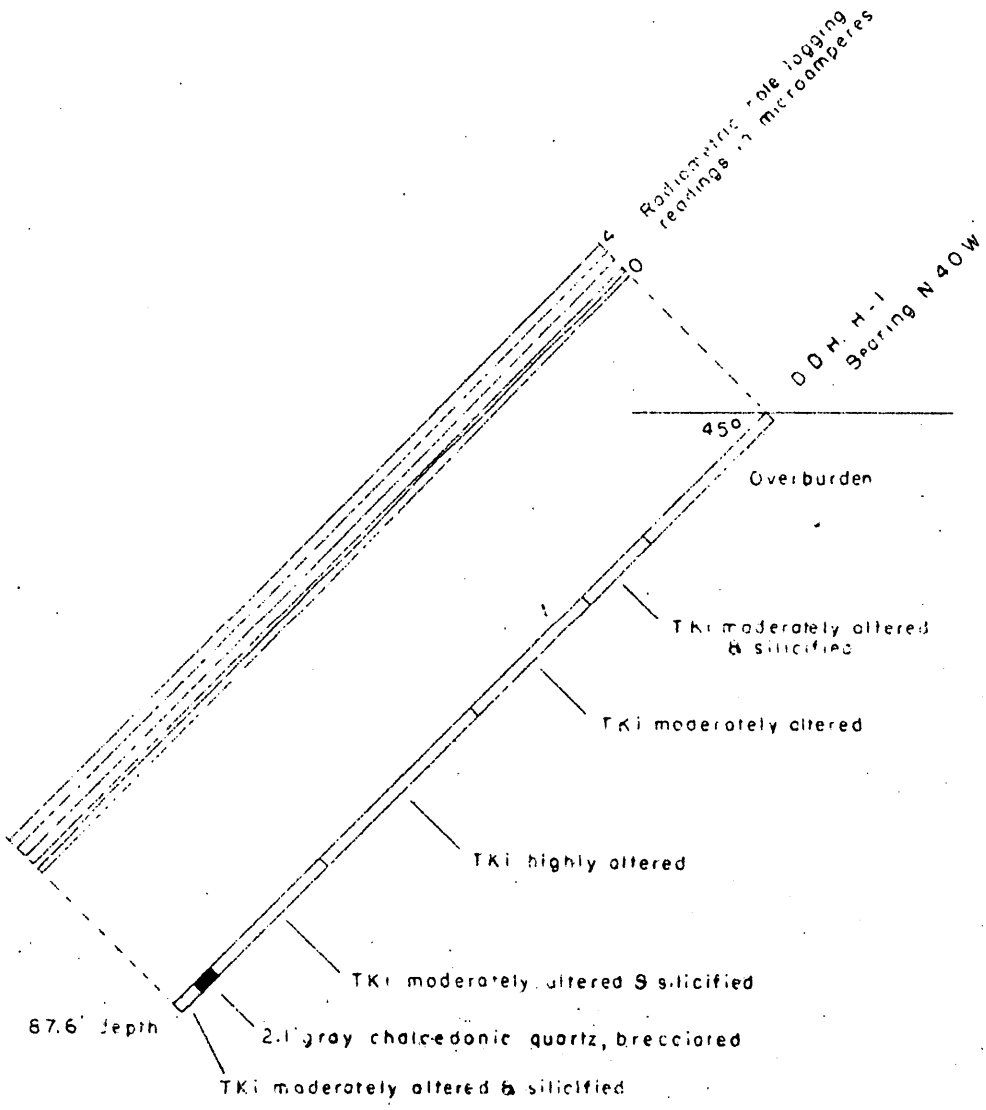
Scale, 1" = 40'

Fig. 12



USAEC DIAMOND DRILLING PROJECT
HILLTOP CLAIM, SILVER BOW CO., MONT.

Fig 13

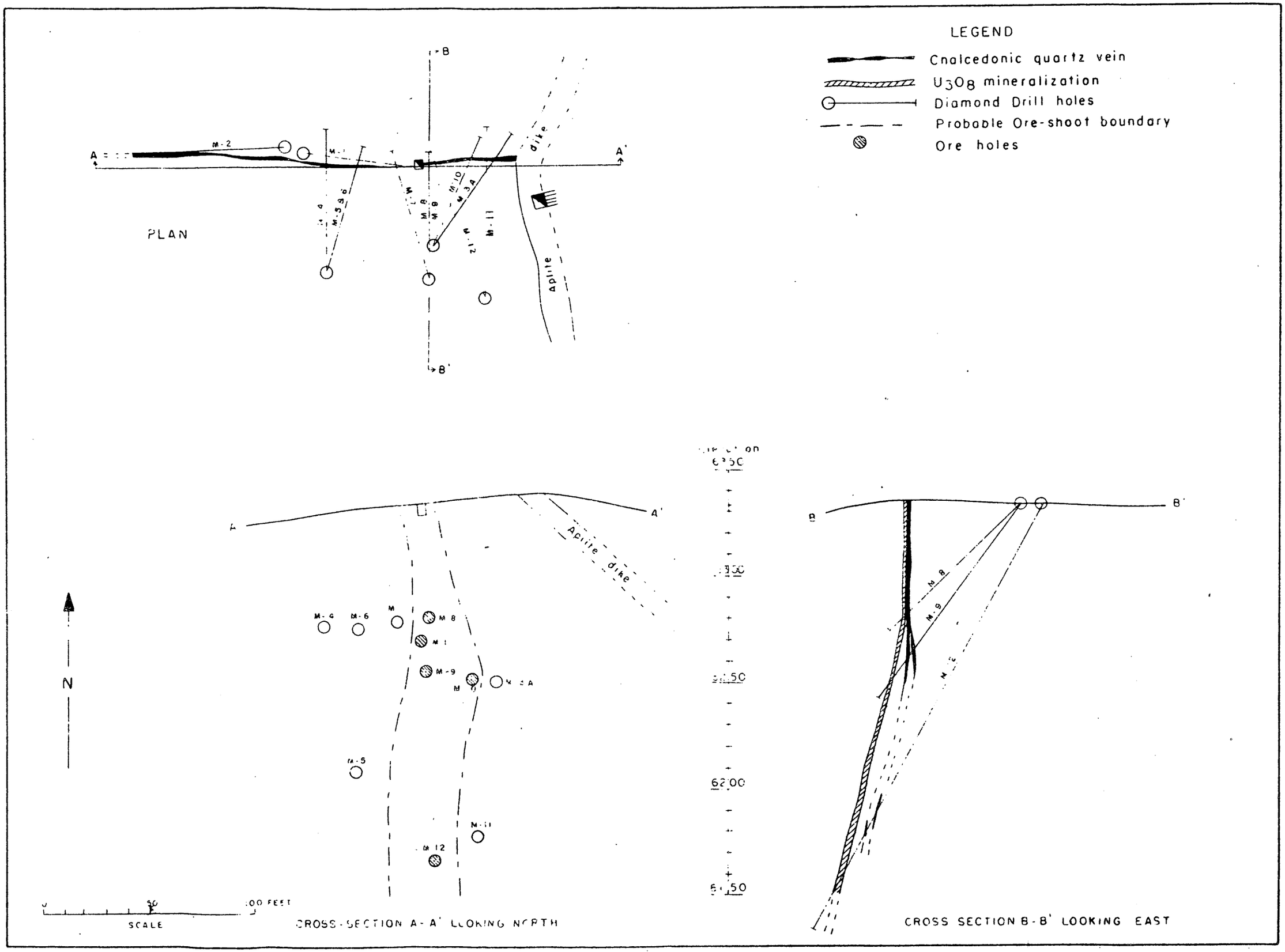


TKi= Tertiary-Cretaceous quartz-monzonite

USAEC DIAMOND DRILLING PROJECT
DIAMOND DRILL HOLE H-1
HILLTOP CLAIM, SILVER BOW, MONT.

Fig. 14

Scale, 1" = 20'



USAEC DIAMOND DRILLING PROJECT

MOONEY CLAIM, SILVER BOW CO. MONT.

Fig 2

ATOMIC MINERALS CORPORATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
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FEB 10 1955

Attorney in Fact

J. R. MARCHI
SECURITIES BUILDING
LAST CHANCE GULCH
HELENA, MONTANA

7 January 1955

United States Department of the Interior
Defense Minerals Exploration Administration
1201 N. Division Street
Spokane 2, Washington

Subject: Application for Aid in an Exploration Project; Uranium; Mooney Group, Silver Bow County, Montana

Gentlemen:

We enclose herewith Forms MF-103(with Exhibits) in quadruplicate and two sets of Forms MF-203 in sextuplicate.

These have been completed in accordance with DMEA Order 1, amended, and other instructions received, but if further information is desired we shall be pleased to comply with your request.

The writer and Mr. Wm. G. Chebul, an officer of this corporation, are intending to come to Spokane, Friday, January 21st, to confer with you further regarding this application. We are sending the application now, however, in order that processing may commence and you may complete a preliminary examination. Should this examination result in a request for additional information, it is our thought that we can deliver this to you personally at that time.

Sincerely yours,

ATOMIC MINERALS CORPORATION

By J. R. Marchi
J. R. Marchi

JRM:cl
Encls.

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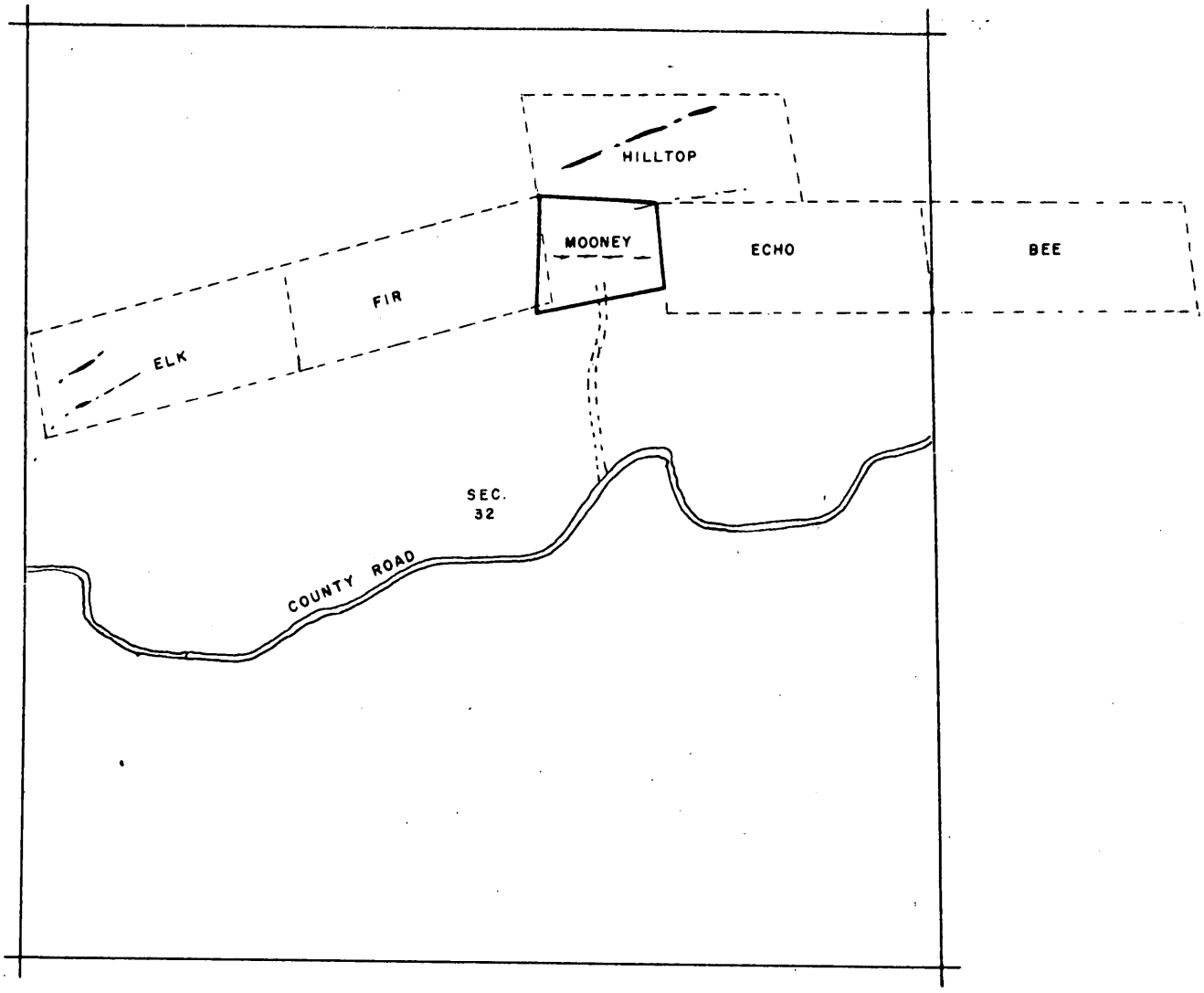
JAN 18 1955
U. S. G. S.
SPOKANE, WASH.

ATOMIC MINERALS CORPORATION
c/o J. R. Marchi
Securities Building
Helena, Montana



ATOMIC MINERALS CORP.

LAYOUT OF MOONEY CLAIM GROUP
Sec. 32 & 33 - 3N-9W
Silver Bow Co., Mont.

Schedule 1.

SILICIFIED REEF

SCALE: 1" = 1000'

NOTE: MAP TRACED FROM AEC REPORT RME 2006
DASHED CLAIM BOUNDARIES PLOTTED FROM DESCRIPTION

Atomic Minerals Corporation
c/o J. R. Marchi
Securities Building
Helena, Montana

SCHEDULE 2

Chain of title of this property is as follows:

1. Mooney claim located by William R. Mooney on July 15, 1953.
   Bee and Echo claims located by George Vidrich on February 1, 1954.
   Fir and Elk claims located by George Vidrich on January 15, 1954.
   Hilltop claim located by George Vidrich on March 15, 1954.

2. Bee, Echo, Fir and Elk claims subject of deed of an undivided two-thirds interest from George Vidrich to Clyde L. McRae and Buford Miles, April 17, 1954, recorded in Book 242 of Deeds, page 63, Records of Silver Bow County, Montana.

3. Mooney claim subject of deed of entire interest from William R. and Hazel Mooney, his wife, to Clyde L. McRae and Buford Miles, September 13, 1954, recorded in Book 240 of Deeds, page 311, Records of Silver Bow County, Montana.

4. Hilltop claim subject of deed of an undivided two-thirds interest from George Vidrich to Clyde L. McRae and Buford Miles, December 7, 1954, recorded in Book 242 of Deeds, page 65, Records of Silver Bow County, Montana.

5. Bee, Echo, Fir, Elk and Hilltop claims subject of deed from George Vidrich to Clyde L. McRae and Buford Miles of an undivided one-third interest dated December 17, 1954, recorded in Book M of Deeds, page 39, Records of Silver Bow County, Montana.

6. Mooney, Bee, Echo, Fir, Elk and Hilltop claims subject of Agreement to Sell Mining Claims (with escrow provisions), January 5, 1955, by and between Buford Miles and Eleanor Miles, his wife, and C. L. McRae and Theresa I. McRae, his wife, vendors, and Raymond A. Lenhart, William G. Chebul and J. R. Marchi.

7. Mooney, Bee, Echo, Fir, Elk and Hilltop claims subject of Mining Lease, dated January 5, 1955, from vendees listed in item 6 to Atomic Minerals Corporation.

Attached as Schedule 2 (Exhibit 1) is a true and correct copy of the Mining Lease referred to in item 7 above. Also enclosed are Owner's Consent to Lien (6 originals) from Buford Miles and Eleanor Miles, his wife, C. L. McRae and Theresa I. McRae, his wife, Raymond A. Lenhart, William C. Chebul and J. R. Marchi.

ATOMIC MINERALS CORPORATION
c/o J. R. Marchi
Securities Building
Helena, Montana

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10

MINING LEASE, made in the City of Helena, State of Montana, on January 5, 1955, between RAYMOND A. MERHART and MARY MERHART, husband and wife, and WILLIAM G. CHESEL and MARJORIE J. CHESEL, husband and wife, all of Butte, Montana, and J. R. MARCHI and JOAN T. MARCHI, husband and wife, of Helena, Montana (herein called the "Lessor"), and ATOMIC MINERALS CORPORATION, a corporation duly created, organized and existing under and by virtue of the laws of the State of Montana, and having its principal office at Helena, Montana (herein called the "Lessee"), WITNESSETH:

That the Lessor, in consideration of the royalties, covenants and agreements hereinafter reserved, and by the Lessee to be paid, kept, observed and performed, hereby lease to the Lessee all of the following property and rights, but without covenant, or warranty, of title in respect thereof, to-wit:

The Mooney (sometimes called the "Mooney #1") Quartz Lode Mining Claim, located by William R. Mooney on July 14, 1952, certificate of location of which, being Document No. _____, was recorded on September 15, 1952, in Volume 17 of Quartz Lode Record, at Page 126, records of the County Clerk and Recorder of Silver Bow County, Montana;

The Bee Quartz Lode Mining Claim, located by George Vidrich on February 2, 1954, certificate of location of which, being Document No. 190934, was recorded on March 11, 1954, in Volume 17 of Quartz Lode Record, at Page 137, records of the County Clerk and Recorder of Silver Bow County, Montana;

The Lone Quartz Lode Mining Claim, located by George Vidrich on February 2, 1954, certificate of location of which, being Document No. 190935, was recorded on March 11, 1954, in Volume 17 of Quartz Lode Record, at Page 139, records of the County Clerk and Recorder of Silver Bow County, Montana;

The Elk Quartz Lode Mining Claim, located by George Vidrich on January 15, 1954, certificate of location of which, being Document No. 190936, was recorded on March 11, 1954, in Volume 17 of Quartz Lode Record, at Page 141, records of the County Clerk and Recorder of Silver Bow County, Montana;

The Elk Quartz Lode Mining Claim, located by George Vidrich on January 15, 1954, certificate of location of which, being Document No. 190937, was recorded on March 11, 1954, in Volume 17 of Quartz Lode Record, at Page 143, records of the County Clerk and Recorder of Silver Bow County, Montana;

The Hilltop Quartz Lode Mining Claim, located by George Vidrich on March 15, 1954, certificate of

Schedule 2 (Exhibit 1)

location of which, being Document No. 192339, was recorded on May 26, 1954, in Volume 17 of Quartz Lode Record, at Page 149, records of the County Clerk and Recorder of Silver Bow County, Montana.

Together with the rights of ingress and egress at all times for the purpose of mining, drilling and exploring said land for all minerals, and removing the same therefrom, and any and all rights and privileges necessary, incident to, or convenient for the economical operation of said land for such purpose.

TO HAVE AND TO HOLD the same unto the Lessee until noon of the 1st day of January, 1962, unless sooner terminated or forfeited through, or by reason of, the violation or non-observance of any of the agreements or covenants hereinafter set forth on the part of the Lessee to be kept, observed and performed, and for a further and additional period of ten (10) years from and after January 1, 1962, upon the same property and premises herein described, and upon the same terms and conditions as set forth herein, provided, however, that Lessee shall give written notice at least thirty (30) days prior to the expiration date of January 1, 1962, of its intention to renew.

That, in consideration of the said leasing, the Lessee covenants and agrees with the Lessor as follows:

1. To work the said property mine-fashion in manner necessary to good and economical mining, so as to take out the greatest amount of ore possible with due regard to the safety, development and preservation of the said premises as a workable mine;

2. To well and sufficiently timber said mine at all points where proper, in accordance with good mining; and to repair all old timbering wherever it may become necessary;

3. To keep the drifts, shafts, tunnels and other works, at all times, thoroughly drained and clear of loose rock and rubbish, unless prevented by extraordinary mining casualty;

4. To allow Lessor to enter upon and into all parts of said mine for the purpose of inspection, with the use of all passages, ropes, windlasses, ladder-ways and all other means of ingress and egress for such

purpose;

5. To give the Lessor access to all of its books and papers connected in any way with its operations upon the said property;

6. To pay and deliver to the Lessor, or cause to be paid, by the smelter, as the case may be, as royalty upon all ores that may be mined, shipped or sold from the property during the term of this lease, including material from the dump and other loose materials:

> Fifty per cent (50%) of the net profits, as defined below, resulting from any and all mining operations hereunder, which shall be paid quarter-annually, commencing on the 31st day of March, 1954.
>
> The term "net profits" means the net smelter returns, i.e., that amount paid for ores or minerals after deduction therefrom of the costs of smelting and the usual cost of delivery at the smelter, less the following deductions: the cost of mining, which cost of mining shall include the cost of all materials used and the cost of labor directly applied thereto, exclusive of management services; taxes chargeable, allowances for depreciation of equipment; interest; Defense Minerals Exploration Administration or Atomic Energy Commission royalties payable, if any; and, an additional five per cent (5%) of net smelter returns to cover overhead expenses, viz., management services, administrative expenses, office expense, and other expenses not listed above.

7. To maintain and keep in good repair all buildings now upon the property or hereafter placed thereon;

8. To pay and keep paid (without reimbursement), as and when the same shall become due and payable, all taxes of every kind and nature upon the said property, including taxes for the year 1954, as payable;

9. That, upon the failure of the Lessee to keep, observe or perform any of the agreements or covenants hereinabove to be kept, observed or performed by the Lessee, the term of this lease shall, at the option of the Lessor, expire, and the same, and the property hereby demised, together with all structures erected thereon, and all fixed machinery placed therein, shall become forfeited to the Lessor; and the Lessor, or its agents or attorneys, may, thereupon, immediately after demand for possession, enter upon the said property and dispossess all persons occupying the same, with or without force, and with or without process of law;

10. That, upon the termination of this lease by expiration, forfeiture or otherwise, the Lessee shall deliver up the property with all structures erected thereon, and all fixed machinery placed therein, in good order and condition, with the mine ready for immediate and continuous working, so far as the same shall have been opened or reopened, unavoidable accidents alone excepted;

11. That time shall be of the essence of this indenture and of every agreement and covenant thereof; and,

12. That this indenture shall inure to the benefit of and be binding upon the parties hereto, and their successors and assigns respectively.

IN WITNESS WHEREOF, the parties hereto have caused this indenture to be executed, in quadruplicate, and have hereunto set their hands and seals the day and year first above written.

LESSOR:

Raymond A. Lenhart (L. S.)

Mary Lenhart (L. S.)

Lillian M. Ickes (L. S.)

Margaret E. Ickes (L. S.)

(L. S.)

John T. Marchi (L. S.)

LESSEE:

ATOMIC MINERALS CORPORATION

By _____
President

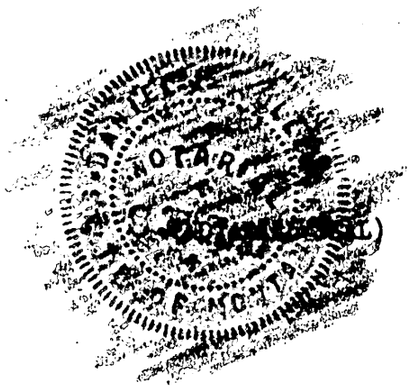
ATTEST:

_____
Secretary

STATE OF MONTANA)
: ss.
County of Lewis & Clark)

On this 28th day of December, 1954, before me, a Notary Public in and for the State of Montana, personally appeared Raymond A. Lenhart and Mary Lenhart, known to me to be the persons whose names are subscribed to the within and foregoing Lease and acknowledged to me that they executed the same.

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



Daniel J. Sullivan
Notary Public for the State of Montana
Residing at Helena, Montana
My commission expires August 18, 1956

STATE OF MONTANA)
: ss.
County of Lewis & Clark)

On this 2nd day of January, 1955, before me, a Notary Public in and for the State of Montana, personally appeared William G. Chebul and Marjorie J. Chebul, known to me to be the persons whose names are subscribed to the within and foregoing Lease and acknowledged to me that they executed the same.

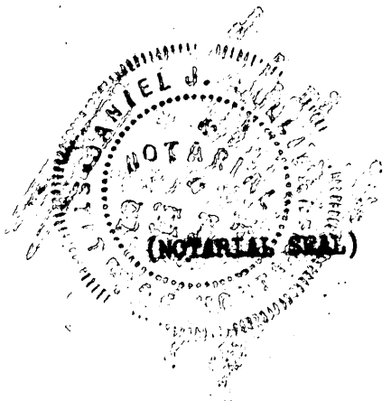
IN WITNESS WHEREOF, I have hereunto set my hand and affixed my notarial seal the day and year last above written.

J. R. Marks
Notary Public for the State of Montana
Residing at Helena, Montana
My commission expires 10-15-56

STATE OF MONTANA)
: ss.
County of Lewis and Clark)

On this 31st day of December, 1954, before me, a Notary Public in and for the State of Montana, personally appeared J. R. Marchi and Joan T. Marchi, known to me to be the persons whose names are subscribed to the within and foregoing Lease and acknowledged to me that they executed the same.

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



Daniel J. Sullivan
Notary Public for the State of Montana
Residing at Helena, Montana
My commission expires August 18, 1956

STATE OF MONTANA)
: ss.
County of Lewis and Clark)

On this 31st day of December, 1954, before me, a Notary Public in and for the State of Montana, personally appeared J. R. Marchi, known to me to be the president of the corporation that executed the within instrument, and acknowledged to me that such corporation executed the same.

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

A. B. Gillespie
Notary Public for the State of Montana
Residing at Helena, Montana
My commission expires March 1, 1956

ic Minerals Corporation
J. R. Marchi
curities Building
elena, Montana

SCHEDULE 3

The legal description of the land upon which we wish to explore, including all land which we possess or control that may be benefited by the exploration, and excluding any land or interest which is not to be included in the exploration contract is as follows, to-wit:

The following described six (6) unpatented quartz lode mining claims situated in the German Gulch Mining District (unorganized) or Butte (unorganized) Mining District, in Section Thirty-two (32), Township Three (3) North, Range Nine (9) West, M.P.M., in the County of Silver Bow, State of Montana, to-wit:

The Mooney (sometimes called the "Mooney #1") Quartz Lode mining claims, located by William R. Mooney on July 15, 1953, certificate of location of which, being Document No. _____, was recorded on September 11, 1953, in Volume 17 of Quartz Lode Record, at page 121, Records of the County Clerk and Recorder of Silver Bow County, Montana;

The Bee Quartz Lode Mining Claim, located by George Vidrich on February 1, 1954, certificate of location of which, being Document No. 190984, was recorded on March 11, 1954, in Volume 17, of Quartz Lode Record, at page 137, Records of the County Clerk and Recorder of Silver Bow County, Montana;

The Echo Quartz Lode Mining Claim, located by George Vidrich on February 1, 1954, certificate of location of which, being Document No. 190985, was recorded on March 11, 1954, in Volume 17 of Quartz Lode Record, at page 139, Records of the County Clerk and Recorder of Silver Bow County, Montana;

The Fir Quartz Lode Mining Claim, located by George Vidrich on January 15, 1954, certificate of location of which, being Document No. 190986, was recorded on March 11, 1954, in Volume 17 of Quartz Lode Record, at page 141, Records of the County Clerk and Recorder of Silver Bow County, Montana;

Atomic Minerals Corporation
c/o J. H. Marchi
Securities Building
Helena, Montana

Schedule 3 (Page 2)

The Elk Quartz Lode Mining Claim, located by George Vidrich on January 15, 1954, certificate of location of which, being Document No. 190987, was recorded on March 11, 1954, in Volume 17 of Quartz Lode Record, at page 143, Records of the County Clerk and Recorder of Silver Bow County, Montana; and

The Hilltop Quartz Lode Mining Claim, located by George Vidrich on March 15, 1954, certificate of location of which, being Document No. 192339, was recorded on May 26, 1954, in Volume 17 of Quartz Lode Record, at page 149, Records of the County Clerk and Recorder of Silver Bow County, Montana.

ATOMIC MINERALS CORPORATION
c/o J. R. Marchi
Securities Building
Helena, Montana

UNITED STATES ATOMIC ENERGY COMMISSION

RME-2006

URANIUM MINERALIZATION AT THE MOONEY CLAIM, SILVER BOW COUNTY, MONTANA

By
Wayne S. Moen

February 1954

Salt Lake Exploration Branch
Division of Raw Materials
Salt Lake City, Utah

Technical Information Service, Oak Ridge, Tennessee

Schedule 4 (Exhibit 1)

Atomic Minerals Corporation
c/O J. R. Marchi
Securities Building
Helena, Montana

SCHEDULE 3

The legal description of the land upon which we wish to explore, including all land which we possess or control that may be benefited by the exploration, and excluding any land or interest which is not to be included in the exploration contract is as follows, to--wit:

The following described six (6) unpatented quartz lode mining claims situated in the German Gulch Mining District (unorganized) or Butte (unorganized) Mining District, in Section Thirty-two (32), Township Three (3) North, Range Nine (9) West, M.P.M., in the County of Silver Bow, State of Montana, to-wit:

The Mooney (sometimes called the "Mooney #1") Quartz Lode mining claims, located by William R. Mooney on July 15, 1953, certificate of location of which, being Document No. _____, was recorded on September 11, 1953, in Volume 17 of Quartz Lode Record, at page 121, Records of the County Clerk and Recorder of Silver Bow County, Montana;

The Bee Quartz Lode Mining Claim, located by George Vidrich on February 1, 1954, certificate of location of which, being Document No. 190984, was recorded on March 11, 1954, in Volume 17, of Quartz Lode Record, at page 137, Records of the County Clerk and Recorder of Silver Bow County, Montana;

The Echo Quartz Lode Mining Claim, located by George Vidrich on February 1, 1954, certificate of location of which, being Document No. 190985, was recorded on March 11, 1954, in Volume 17 of Quartz Lode Record, at page 139, Records of the County Clerk and Recorder of Silver Bow County, Montana;

The Fir Quartz Lode Mining Claim, located by George Vidrich on January 15, 1954, certificate of location of which, being Document No. 190986, was recorded on March 11, 1954, in Volume 17 of Quartz Lode Record, at page 141, Records of the County Clerk and Recorder of Silver Bow County, Montana;

Atomic Minerals Corporation
c/o J. R. Marchi
Securities Building
Helena, Montana

Schedule 3 (Page 2)

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The Hilltop Quartz Lode Mining Claim, located by George Vidrich on March 15, 1954, certificate of location of which, being Document No. 192339, was recorded on May 26, 1954, in Volume 17 of Quartz Lode Record, at page 149, Records of the County Clerk and Recorder of Silver Bow County, Montana.

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Subject Category, GEOLOGY AND MINERALOGY.

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URANIUM MINERALIZATION AT THE MOONEY CLAIM
SILVER BOW COUNTY, MONTANA

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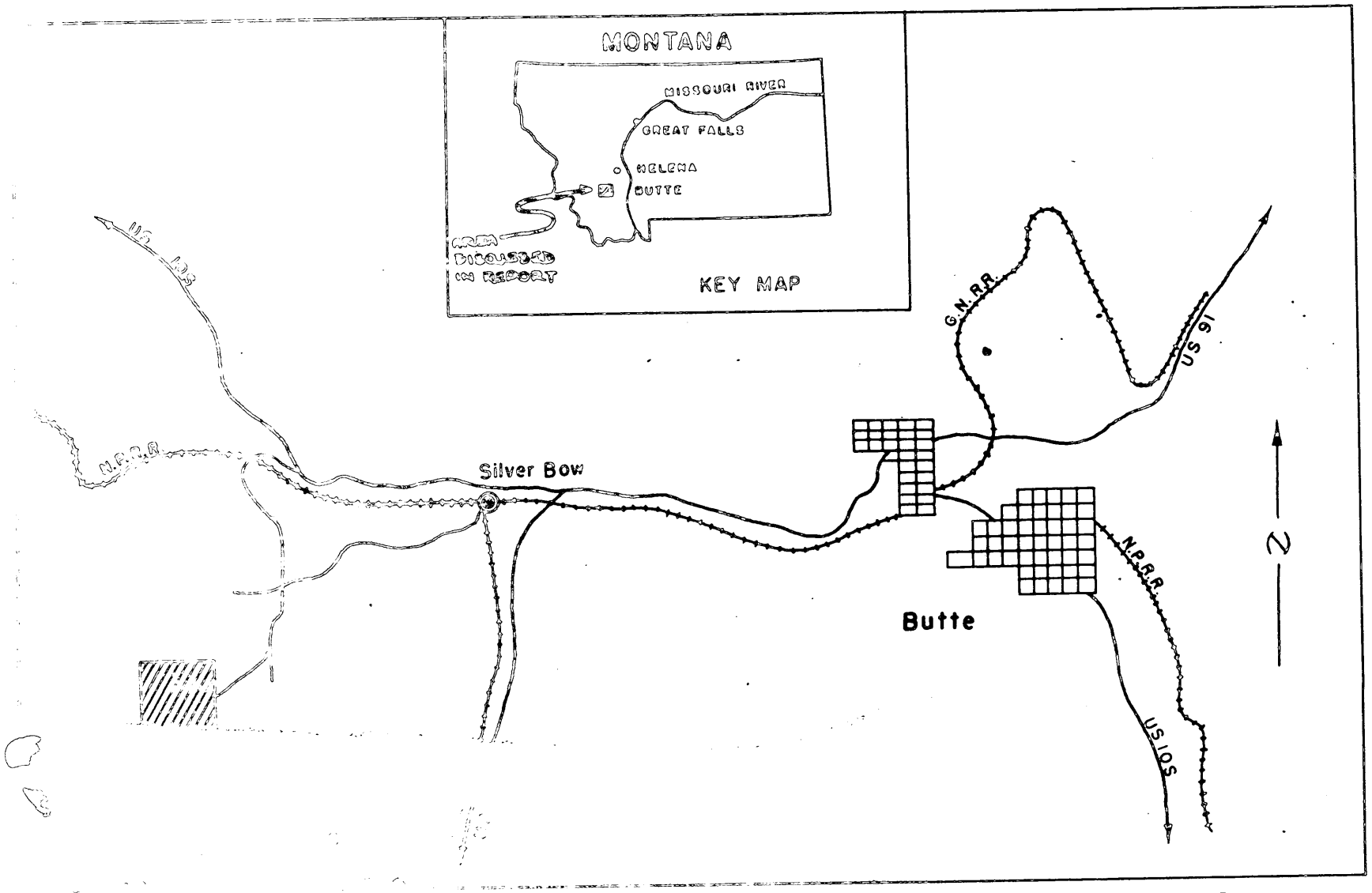
URANIUM MINERALIZATION AT THE MOONEY CLAIM SILVER BOW COUNTY, MONTANA

ABSTRACT

Uranium minerals associated with stibnite occur in a vein-type deposit about ten miles west of Butte, Montana. Meta-autunite, and possibly pitchblende, is disseminated throughout a brecciated quartz-stibnite vein as well as in the adjacent altered quartz monzonite.

The mineralized structure is the so-called silicified reef type previously described from the Clancy, Montana, area. Diamond drilling has proven the existence of ore-grade uranium-bearing material at depth.



[illegible] OF AN AREA CONTAINING URANIFEROUS SILICEOUS REEFS
[illegible] SILVER BOW COUNTY, MONTANA

[illegible] roads (Figure 1)

Silver Bow on both the Northern Pacific and Union Pacific roads is the closest railroad shipping point.

This occurrence was first discovered by a reconnaissance from the Butte Sub-Office, Division Lake Exploration Branch, Atomic Energy Commission, and published as a ground anomaly in 1953. Mr. William R. Mooney, along with several others, had snap searched for the anomalous area. The area was staked by at least three different parties but all with the exception of Mr. Mooney relinquished their claims.

An area of approximately three square miles was selected for reconnaissance geologic mapping in the course of which several additional anomalies were located. Detailed geologic mapping, as well as topographic mapping, was also carried out in the immediate vicinity of the Mooney claim by geologists of the Atomic Energy Commission during the fall of 1953.

History

The German Gulch mining district has produced $14,000,000 in gold, chiefly from early day placer operations in German Gulch. However, little mining has been done in the area covered by this report. Several shallow prospect trenches and pits have been dug along silica stringers and veins with one inclined shaft sunk to a depth of 30 feet. Most of the work was performed in the early 1900's in the

search for silver, and with the exception of Mr. Mooney's discovery shaft, there has been no mining in the area since that time.

Geography

The area covered by this report is situated approximately ten miles west of Butte and the Continental Divide in a mountainous region with elevations ranging from 5,200 feet to 7,000 feet. The moderately rugged topography is covered with abundant pine trees, sagebrush, and bunchgrass.

Numerous intermittent and permanent streams, which have dissected moderately steep canyons and valleys, provide drainage for the area. These drain northward into the Clark Fork of the Columbia River.

Outcrops are extensive and numerous with the granitic rocks of the area weathering into gentle slopes while aplite dikes and silicified fracture zones form prominent ridges.

GENERAL GEOLOGY

Regional Geology

The area described in this report lies in the southwestern portion of the Boulder batholith, an elongate granitic mass 60 miles in length and averaging about 18 miles in width. Quartz monzonite predominates in the batholith and locally has weathered into huge boulders. Aplite in dikes and irregular masses is found throughout the quartz monzonite.

Silicified zones or reefs which project above [illegible] granitic rock form prominent ridges that tre[illegible] west and northwesterly [illegible]. Chalcedonic [illegible] feet in width, some three [illegible] and numerous [illegible] pits have exposed [illegible] of the [illegible]. [illegible] to the northeast [illegible] granit[illegible]

[illegible]athered [illegible]tely east [illegible] up to two [illegible] km outc[illegible] [illegible]ogy [illegible] [illegible]y c[illegible]

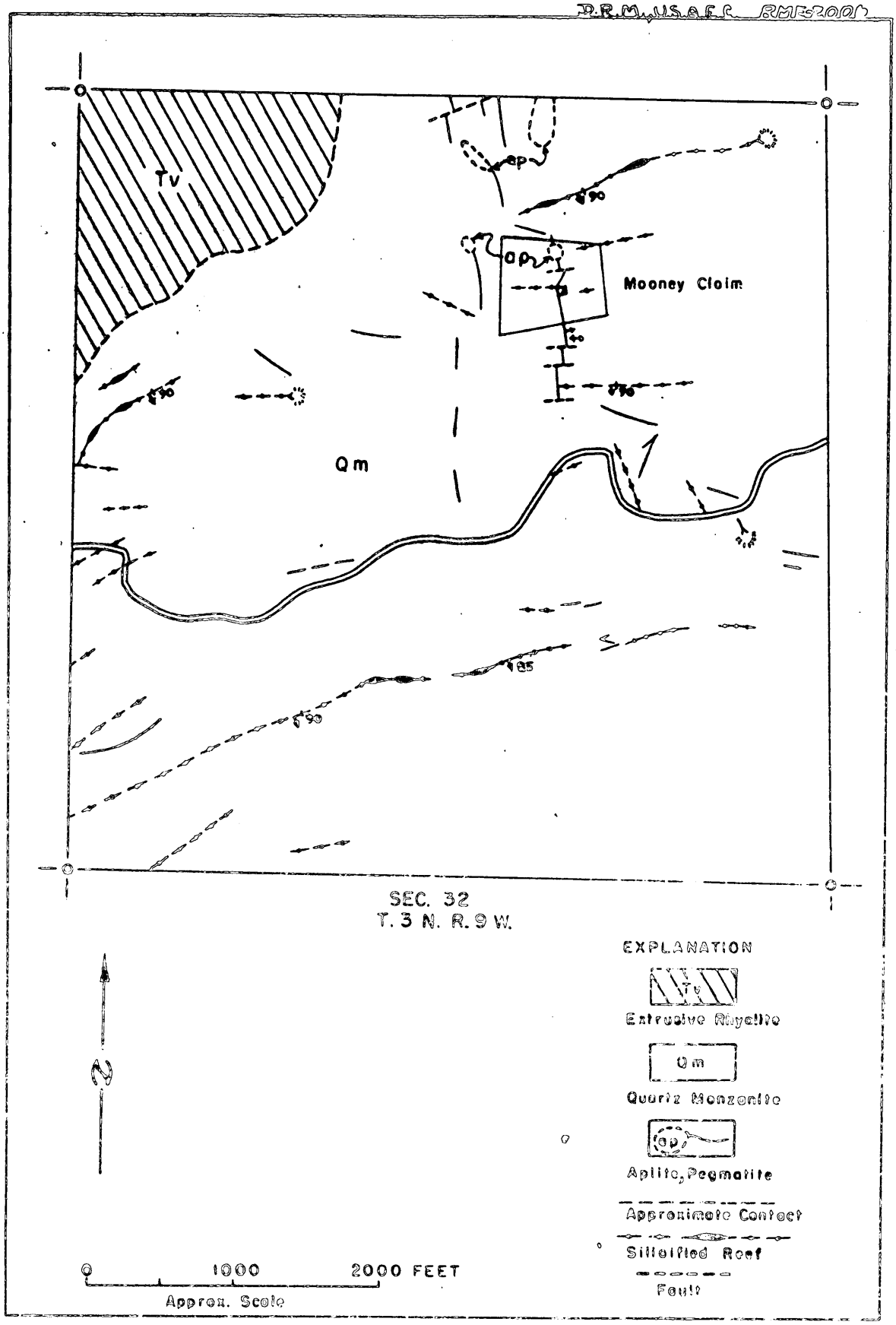


FIG. 2- SILICEOUS REEFS OF THE GERMAN GULCH MINING DISTRICT, SILVER BOW COUNTY, MONTANA

Local Geology (Figure 2)

The principal rock of the area is quartz monzonite. Megascopically the average composition is approximately 30 percent quartz, 30 percent orthoclase, 30 percent plagioclase, and ten percent biotite and hornblende. Locally the quartz monzonite is porphyritic, containing well-developed orthoclase phenocrysts up to four centimeters in length. Small xenoliths up to one foot in diameter occur in the quartz monzonite. They appear to be fine-grained basic rocks and may represent remnants of recrystallized pre-batholith volcanics.

Aplite is prominent in the area and outcrops as dikes and irregular bodies. It is fine-grained and consists of alkali-feldspar and quartz with pegmatitic facies containing well-developed tourmaline crystals. Brecciation of the aplite occurs throughout the area with a black, cherty, silica matrix cementing the angular fragments. The brecciated aplite is abnormally radioactive at several locations.

A ridge-forming aplite dike approximately ten feet thick trends north-south across the Mooney claim, dipping 40° to the east. A chalcedonic quartz vein six inches wide occupies a fracture zone within the aplite dike. This vein, which is parallel to the walls of the dike, consists of alternating light and dark banded chalcedonic quartz, the darker quartz being slightly radioactive. Red jasperoid quartz occurs as small discontinuous stringers throughout the aplite.

DETAILED GEOLOGY

Siliceous Reefs

The silicified zones, locally called reefs, are nearly vertical and trend approximately north 70° east to east-west, forming prominent ridges in the area. These reefs consist of numerous parallel discontinuous silica stringers and veins ranging from several inches to two feet in width. Recurrent movement along the silicified zones has produced breccias and slickensided surfaces.

The breccias are composed of fragments of cryptocrystalline silica of several different colors, gray, brown and black being the

most common, with the black variety cutting and surrounding fragments of the other colors. As in the reefs of the Clancy, Montana, area [1], several stages of silicification can be recognized.

The quartz monzonite adjacent to the silica stringers has invariably been altered, with the alteration consisting of silicification and the forming of clay minerals from the feldspars. A deficiency of mafic minerals in the altered area is pronounced.

Secondary uranium minerals, identified as autunite and torbernite, occur in small pockets along the silicified zones. The minerals usually occur as micaceous crystals in cavities in the silica stringers.

Mooney Deposit (Figure 3)

The Mooney vein, which is traceable for a length of 220 feet, is nearly vertical and strikes approximately east-west. The vein, essentially a siliceous filling, varies from six inches to one and one-half feet in width.

Mineralogy: Quartz, the principal nonmetallic gangue mineral, occurs in a variety of forms, these being white vein quartz, black and brownish cherty quartz, and banded chalcedonic quartz.

From megascopic examination it appears that the white vein quartz accompanied by early galena and pyrite was later brecciated and recemented by banded chalcedonic quartz. No metallic mineralization appears to have accompanied the chalcedonic quartz. A still later brecciation occurred which introduced a black and brownish cherty quartz along with stibnite, the principal sulphide mineral.

The stibnite, which is also sparsely disseminated in the altered wallrock, forms radiating clusters, some of which have been altered to secondary yellow antimonates. Polished section studies indicate that the stibnite appears to penetrate and replace the quartz matrix.

(1) Roberts, W. A. and Gude, A. J., 3rd, Uranium-Bearing Deposits West of Clancy, Jefferson County, Montana, U. S. Geol. Survey Bulletin 988-F, 1953, p. 73.

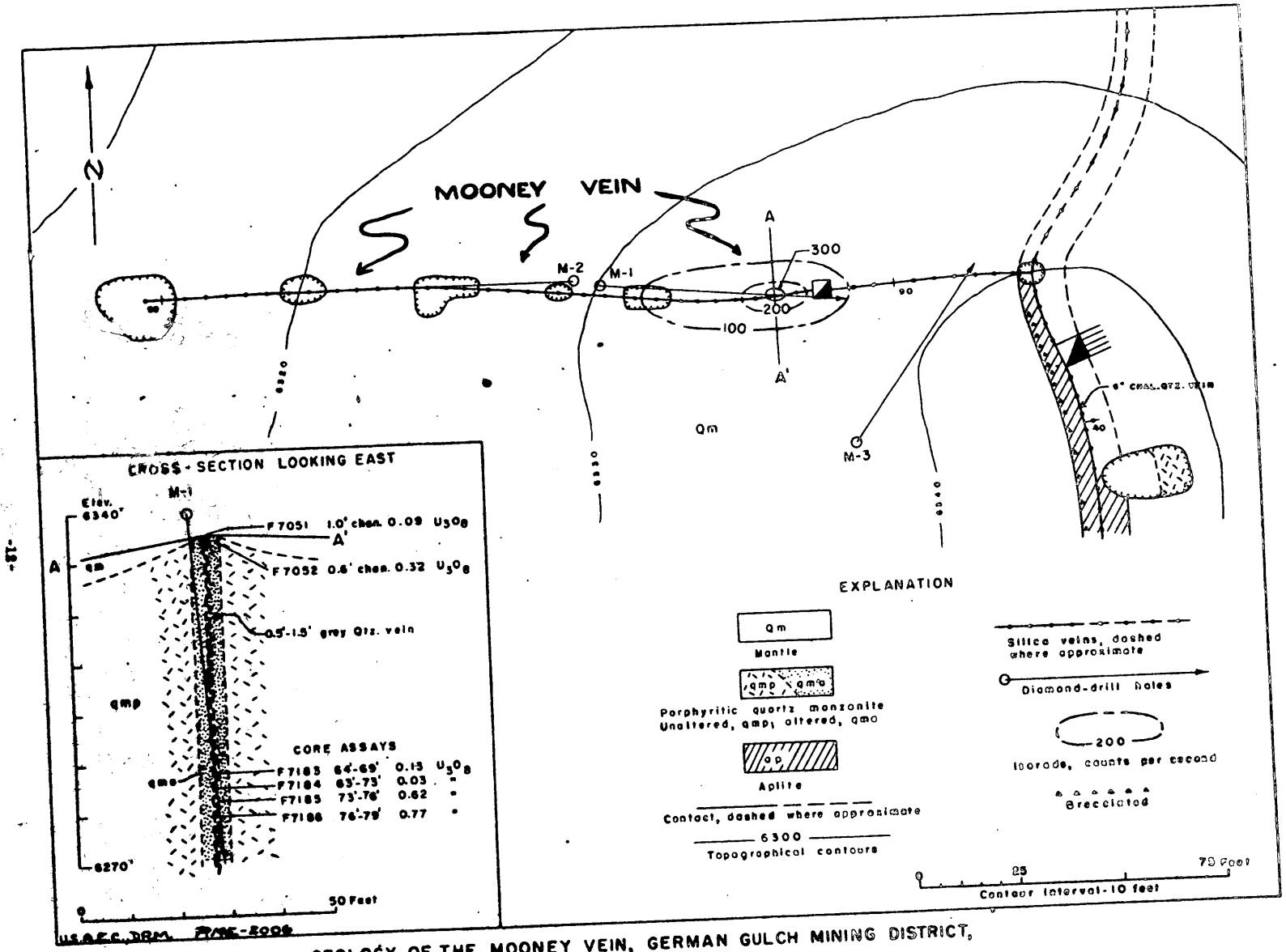


FIG. 3 GEOLOGY OF THE MOONEY VEIN, GERMAN GULCH MINING DISTRICT, SILVER BOW COUNTY, MONTANA

Examination of a diamond drill core section at 55 feet of depth shows 75 to 85 percent quartz, 10 to 20 percent stibnite, and two to five percent secondary antimonates.

Radioactivity

The black cherty quartz, as well as small irregular concentrations of meta-autunite along the Mooney vein, exhibits abnormal radioactivity. The meta-autunite occurs as fluorescent, micaceous crystals on the fracture surfaces in the vein and is also disseminated in the fractures and pore spaces of the altered granitic wallrock: No primary uranium mineral has been identified, but it is probable that the black cherty quartz, some of which assays 0.64 percent equivalent uranium, may contain finely disseminated pitchblende or uraninite.

Chemical assays of samples taken from the point of highest radioactivity on the outcrop of the Mooney vein showed 0.09 percent uranium oxide across one foot of quartz and 0.32 percent from six inches of adjacent wallrock. A section of diamond drill core from 55 feet beneath the above samples assayed 0.61 percent uranium oxide across one foot of vein material, while a three-inch section of the core assayed as high as 2.4 percent uranium oxide.

Structural Features

The siliceous reefs and the less prominent non-reef forming silica veins occupy nearly vertical fracture zones in the granitic country rock of this area. Striking north 70° east to approximately east-west, several of these fractures offset the earlier north-south trending aplite dikes. Well-developed slickensides indicate some horizontal movement along these planes also.

The Mooney vein is traceable on the surface only as far east as the major north-south trending aplite dike of the area. If the vein continues on through the aplite, there has been no apparent offset of this structure, although several cross faults along the dike do offset it as much as 20 feet.

EXPLORATION

Since the discovery of the Mooney occurrence in July of 1953, geologists of the Atomic Energy Commission have conducted radiometric surveys and geologic studies over an area of approximately three square miles in the vicinity of the Mooney claim. Several anomalies were located along the siliceous reefs in the area, but the Mooney deposit is the most promising one found to date.

In November and December of 1953 three diamond drill holes were drilled along the Mooney vein for exploration purposes only. The drilling was performed by Minerals Engineering Company of Grand Junction, Colorado, under contract with the Atomic Energy Commission.

Immediately after bottoming, each hole was probed to determine if any radioactivity was present. Sections of core from portions of the hole showing abnormal radioactivity were chemically assayed.

Hole M-1 strikes north 83° west and dips 45° east. The hole, which was bottomed at 92 feet, was mineralized from 64 to 79 feet. However, the angle of intersection is very small and the actual width of the zone may not be much over one foot. A very acute angle of intersection was chosen because of the small size and erratic distribution of uranium deposits in this type of vein in other parts of the batholith. Chemical assays of the core were as follows:

64' - 69', altered quartz monzonite, 0.13% U_3O_8.

69' - 73', silicified quartz monzonite with autunite, 0.03% U_3O_8.

73' - 76', black silica vein with stibnite, 0.62% U_3O_8.

76' - 79', silicified quartz monzonite with autunite, 0.77% U_3O_8.

Hole M-2 strikes north 85° east and dips 60° west. This hole was deflected by the main silica vein and remained in altered wallrock paralleling the vein to the bottom of the hole which was 80 feet.

Deflection of the hole is believed to have been caused by the acute angle of intersection and the soft altered wallrock. No mineralization was noted in this hole. A chemical assay from one section of core was as follows:

20' - 28', gray cryptocrystalline silica vein, 0.003% U_3O_8.

Hole M-3 strikes north 35° east and dips 55° north. This hole was designed to cut the silica vein approximately 90 feet east and 20 feet below the ore zone of hole M-1. Gouge was noted in the core at 92 feet, and it is probable that the vein had pinched out at this point. The hole was bottomed at 100 feet and no mineralization was noted. A chemical assay of one section of core was as follows:

20' - 30', limonitic stained altered quartz monzonite, 0.02% U_3O_8

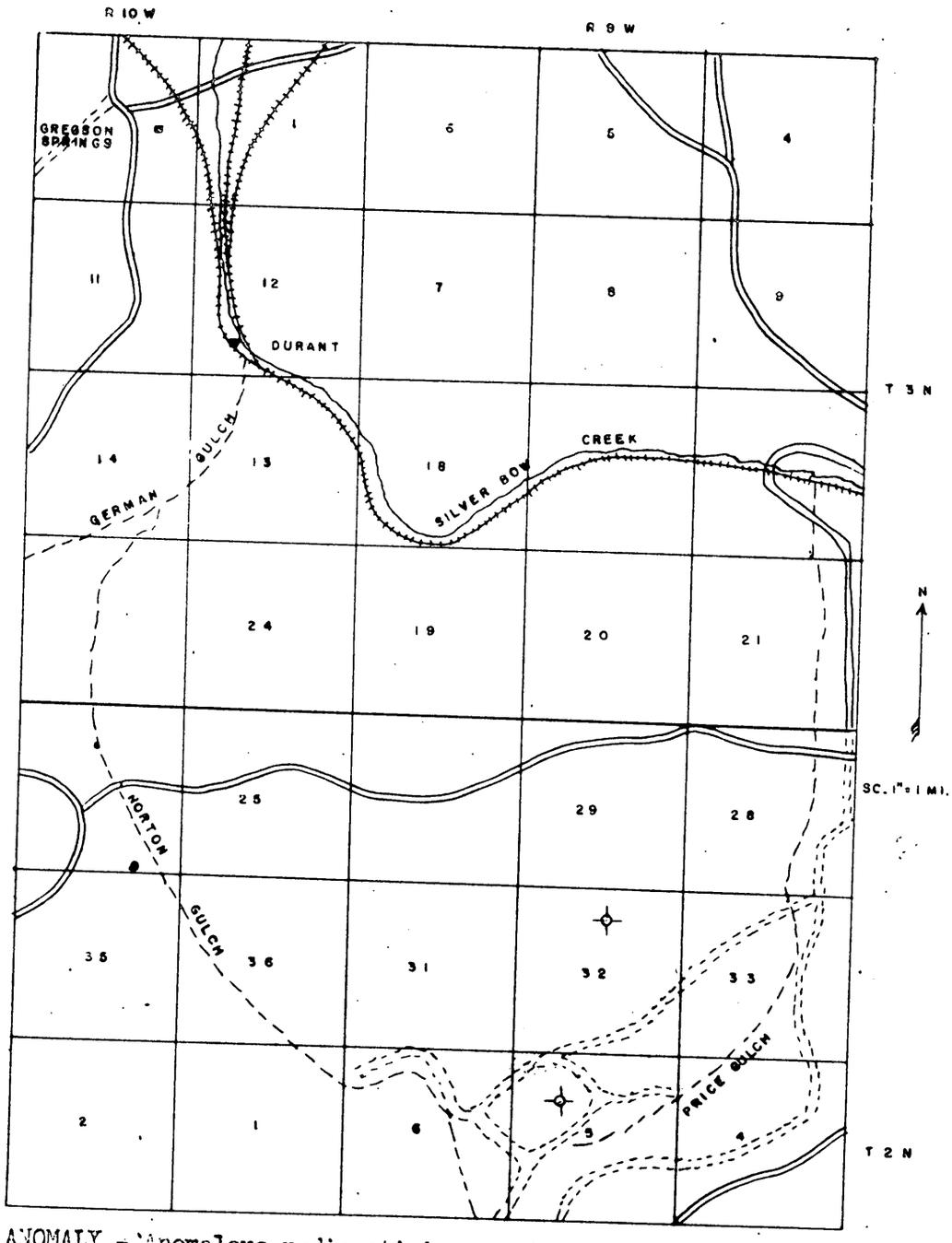
Because of sub-zero weather conditions which made further drilling impractical, exploration was suspended for the season.

CONCLUSIONS

Uranium mineralization of ore grade occurs along the Mooney vein at depth. Leaching at and near the surface may have considerably reduced the amount of uranium present there.

It is suggested that other similar deposits may be found at depth below radioactive anomalies of even lesser magnitude along other veins and siliceous reefs in the area.

ATOMIC MINERALS CORPORATION
c/o J. R. Marchi
Securities Building
Helena, Montana



ANOMALY - Anomalous radioactivity has been observed, which may not necessarily indicate uranium on the ground.

NOTE: Posted anomalies represent only those observed where no evidence of active ground operations existed at the time of discovery. Any or all posted locations may be on claimed ground.

Release date: July 15, 1953

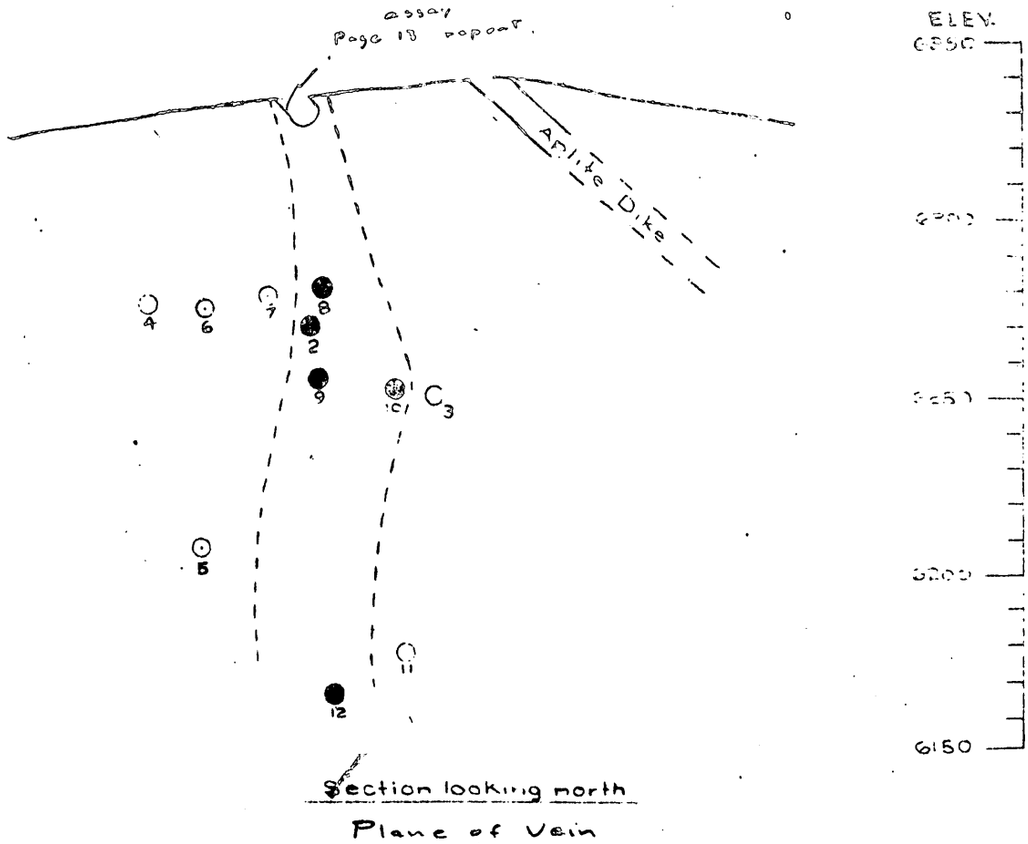
ANOMALY LOCATION MAP, GERMAN GULCH DISTRICT, SILVER BOW CO., MONTANA

U. S. Atomic Energy Commission
Salt Lake Exploration Branch, Butte Sub-Office

Schedule 4 (Exhibit 2)

ATOMIC MINERALS CORPORATION
c/o J. R. Marchi
Securities Building
Helena, Montana

MOONEY CLAIM DRILL HOLES



Hole No.	Values	
2	1.0'	0.77% U_3O_8
3	—	
4	—	
5	—	
6	—	
7	—	
8	3.0'	~~0.16~~ .250 } chemical assay
9	4.0'	0.07 .114 } chemical assay
10	2.0'	1.0 1.0
11	2.0'	0.02
12	2.0'	0.14 —(not run) radiometric only

● Ore Holes

0 — 50 feet
Scale

Schedule 4 (Exhibit 3)

ATOMIC MINERALS CORPORATION
c/o J. R. Marchi
Securities Building
Helena, Montana

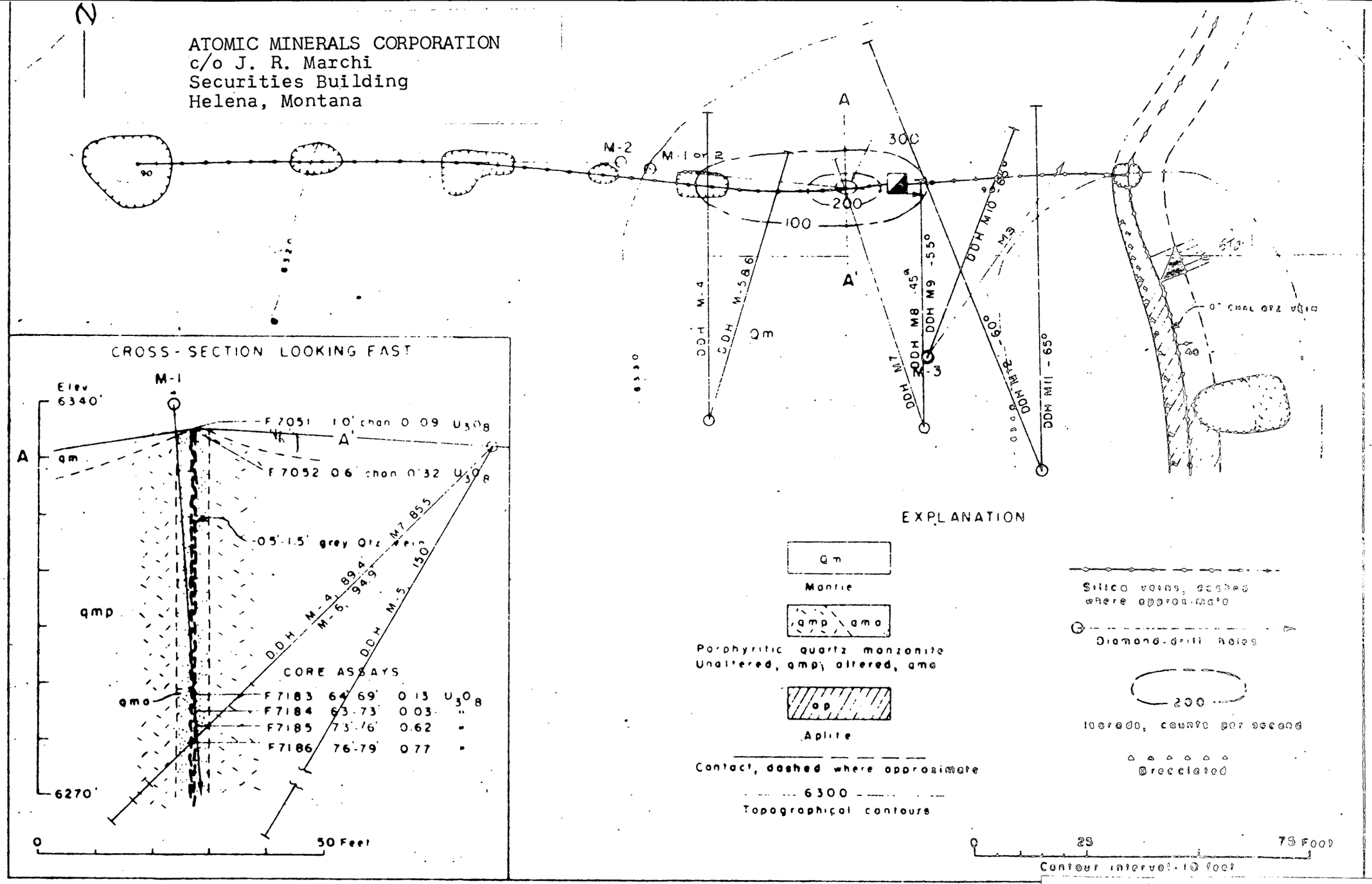


FIG. 3 GEOLOGY OF THE MOONEY VEIN, GERMAN GULCH MINING DISTRICT, SILVER BOW COUNTY, MONTANA

Schedule 4 (Exhibit 4)

Atomic Minerals Corporation
c/o J. R. Marchi
Securities Building
Helena, Montana

SCHEDULE 5

Proposal (A)

1) Sink 4½' x 7½ cribbed prospect shaft on vein to a depth of 150 feet. This will be essentially vertical, however may deviate from the vertical possibly 1 degree.

2) At depth of 75 feet explore vein with 5 x 7 drifts, both east and west from shaft for a distance of 50 feet.

3) Same at depth of 150 feet.

4) At depth of 150 feet cross cut (5 x 7) south from the prospect shaft for a distance of 40 feet; at 30 feet enlarge to 12 x 9 x 7 for small station and raise vertical 5 x 9 operating shaft timbered with 8" x 8" x (5 ft. centers) framed timbers, completely lagged with 2". Shaft shall be finished with 1 hoisting compartment and 1 manway and pipe compartment. Shaft is to be equipped with hardwood cage guides, treated timbers, ladders, and landings every set, 3 inch air line and 2 inch water lines.

5) At depth of 75 feet cut 7 x 9 x 7 station and cross cut north to intersect vein. This will intersect original prospect shaft. The prospect shaft

will then be equipped with chute mouths on 75 and 150 foot levels, and manway compartments installed. This will then be used as a raise in mining operation.

Total work: (excavation)

150'	prospect shaft (4½ x 7½)	$ 20,250
100'	drift (5 x 7) @ 75 foot level	3,000
100'	drift (5 x 7) @ 150 foot level	3,000
40'	cross-cut (5 x 7) @ 75 foot level	1,600
	enlarge for station @ 75 foot level 336 cu. ft. excavation	200
40'	cross-cut (5 x 7) @ 150 foot level	1,600
	enlarge for station @ 150 foot level 336 cu. ft. excavation	200
150	raise (operating shaft) (5 x 9) timbered as per specifications above	9,000
		$ 38,850

(Please refer to Exhibit 1)

Proposal (B)

An alternate to above plan would be to sink the 5 x 9 (timbered) operating shaft at point 35 feet south of vein, cross cut north to intersect vein at 75 and 150 foot levels, drive the drifts and put up a raise on the vein to facilitate mining operations. This would be somewhat more costly by the amount it costs to sink rather than raise the operating shaft, as against the saving of raising rather than sinking the prospect shaft (or raise as the case may be). Furthermore, this does not offer flexibility in change of plans which may be desirable as the exploration proceeds.

(Please refer to Exhibit 1)

Permanent Operating Equipment

Headframe, Hoist, Cage, and House

Compressor (and house)

Tool and supply building

Ore bin

Drilling machines (2)

Mine cars (4)

Hand tools

Rails and pipe

Atomic Minerals Corporation
c/o J. R. Marchi
Securities Building
Helena, Montana

RECEIVED

SCHEDULE 6

It is our intention to commence the work just as soon as possible and to complete it as expeditiously as possible. If an exploration project contract is granted every effort will be made to commence work within thirty days or just as quickly as an independent contractor can commence. It has been estimated that the project can be completed within ten months from date of commencement of work.

Atomic Minerals Corporation
c/o J. R. Marchi
Securities Building
Helena, Montana

SCHEDULE 7

This corporation is the operator of the President Group of uranium properties, Alhambra, Montana. This group constitutes producing uranium properties. Production is obtained from the Wilson Mine which, to date, has produced approximately fourteen cars of ore shipped under AEC license. A discovery of uranium was recently made in the President Mine. It is now confirmed that this latter mine contains producible uranium minerals and development of these ores has been commenced.

Personnel of this corporation include: (1) Virgil R. Chamberlain, Geologist; (2) K. K. Smallwood, Geologist; (3) J. B. Flugstad, consulting Mining Engineer; (4) Henning Norgaard, Mine Boss; (5) Wm. G. Chebul, Land; (6) Daniel J. Sullivan, Legal; and (7) J. R. Marchi, Administrative. All technical pe sonnel, i.e., geology, engineering, production, have had extensive mining experience and some with invaluable specialized experience. Mr. Chamberlain, for example, spent approximately three years with the Manhattan Project doing field geology for uranium minerals on the Colorado Plateau. Both Mr. Chamberlain and Mr. Flugstad are graduates of the Montana School of Mines and are former employees of Anaconda Copper Mining Company as geologist and engineer, respectively. Mr. Norgaard has been engaged in mining for over twenty-five years.

Atomic Minerals Corporation
c/o J. R. Marchi
Securities Building
Helena, Montana

SCHEDULE B

Estimate of Costs

(a)	Independent Contracts (Exhibits 1 & 2)		
	--150' prospect shaft (4½ x 7½).....	$20,250.	
	--200' drift -	6,000.	
			$26,250.00
(b)	Labor, Supervision, Consultants --Administrative, geological and engineering; fees and expenses; $25. per day for an estimated 100 days		2,500.00
(c)	Operating materials and supplies --Assumed in item (a) above.		0.00
(d)	Operating equipment --Assumed in item (a) above-		0.00
(e)	Rehabilitation and repairs --None		0.00
(f)	New buildings, improvements, installations.		
	--20' headframe, square timbers, bolted.	$350.	
	--16 x 20 compressor house	550.	
			900.00
(g)	Miscellaneous --None		0.00
(h)	Contingencies --None		0.00
	Total Cost of the Project		$29,650.00

ATOMIC MINERALS CORPORATION

Attorney in Fact

J. R. MARCHI
SECURITIES BUILDING
LAST CHANCE GULCH
HELENA, MONTANA

30 December 1954

Mr. Gunner Johnson
Mining Exploration
Radersburg, Montana

Subject: Proposed Vertical Shaft;
Mooney Claim, Silver Bow County, Montana

Dear Gunner:

In line with our conversation Monday last, we would like to have a bid from you regarding this project if you would care to make such a bid.

The project we anticipate contracting is as follows:

> A 150-foot vertical shaft, location to be staked by us, size 5' x 9', timbered with 8" x 8" on four sides with one hoisting compartment, pipe and manway compartments, laced with 2" lagging on all four sides; and with ladders and landings. And, three 25' crosscuts, 5' x 7', at the 50', 100' and 150' depths to trend north from shaft to intersect vein, with necessary timbering and rails.

A report of the U. S. Atomic Energy Commission, dated February, 1954, designated RME-2006, is enclosed for further information.

Sincerely,

ORIGINAL SIGNED
J. R. MARCHI

J. R. MARCHI

JRM:cl

Encl.

Schedule 8 (Exhibit 1)

ATOMIC MINERALS CORPORATION
c/o J. R. Marchi
Securities Building
Helena, Montana

Clancy, Mont.
Jan.2, 1955

Bid for The Atomic Minerals Corporation on proposed work at the Mooney Claim, Silver Bow County, Montana.

150 foot vertical shaft
4 feet by 7.5 feet stulled----------$105.00/ft.
4.5 feet by 7.5 feet cribbed with 3" fir---------- 135.00/ft.
5 feet by 9 feet 8" by 8" sets, 5' centers, 2"lag.- 180.00/ft.

The above prices include 2" air line, 3/4" water line, shaft ladders and landings, and 4" by 6" guides.

If water is encountered it shall be handled at cost.

75 feet of crosscutting 5' by 7' heading---------- $40.00/ft.
Timbering where needed with 6" by 6" and 2" lag.- 7.50/ft.

500 feet of drifting 5' by 7' heading---------- 30.00/ft.
Timbering where needed with 6" by 6" and 2"lag.- 7.50/ft.

Crosscut and drift prices include 2" air line, 3/4" water line, 16 lb. rail with necessary switches on each level.

Drifting on ore shall be at cost.

Twenty foot headframe of square timbers and bolted-$350.00

Sixteen feet by 20 feet compressor house---------- 550.00

By:
Gunnar Johnson
Radersburg, Montana

Schedule 8 (Exhibit 2)

Atomic Minerals Corporation
c/o J. R. Marchi
Securities Building
Helena, Montana

SCHEDULE 9

The applicant desires to contract this project to an independent contractor, if satisfactory arrangements can be completed, and to then exercise the necessary supervision over such contractor. If this is possible, then the applicant would desire to furnish its share of the cost by direct payment of money.

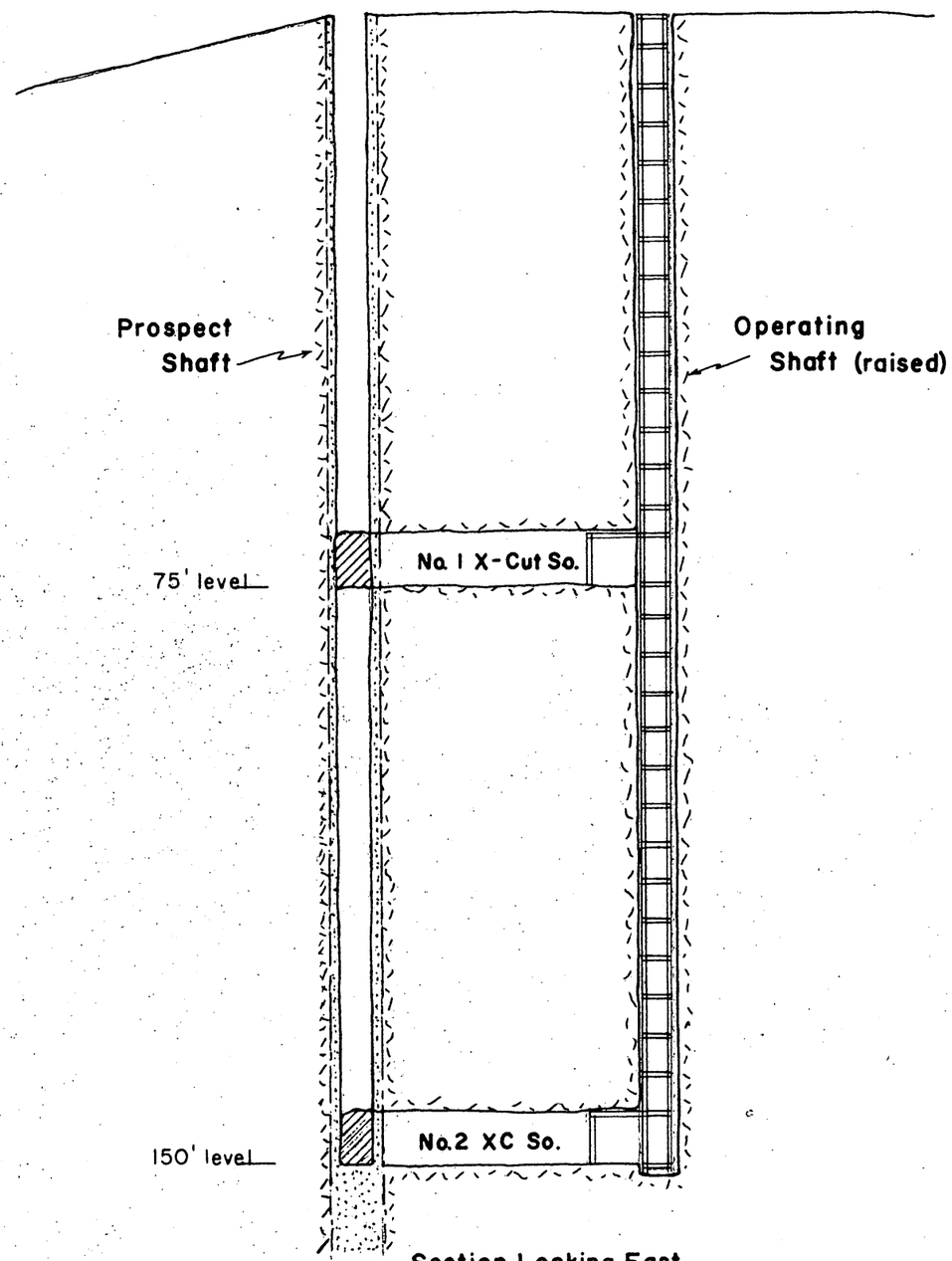
In the event this arrangement can not be satisfactorily completed, for example, if contractor bids are not low enough, then the applicant would desire to provide the necessary equipment and contract only the mining labor and, also in this case, exercise the necessary supervisory control.

ATOMIC MINERALS CORPORATION
c/o J. R. Marchi
Securities Building
Helena, Montana

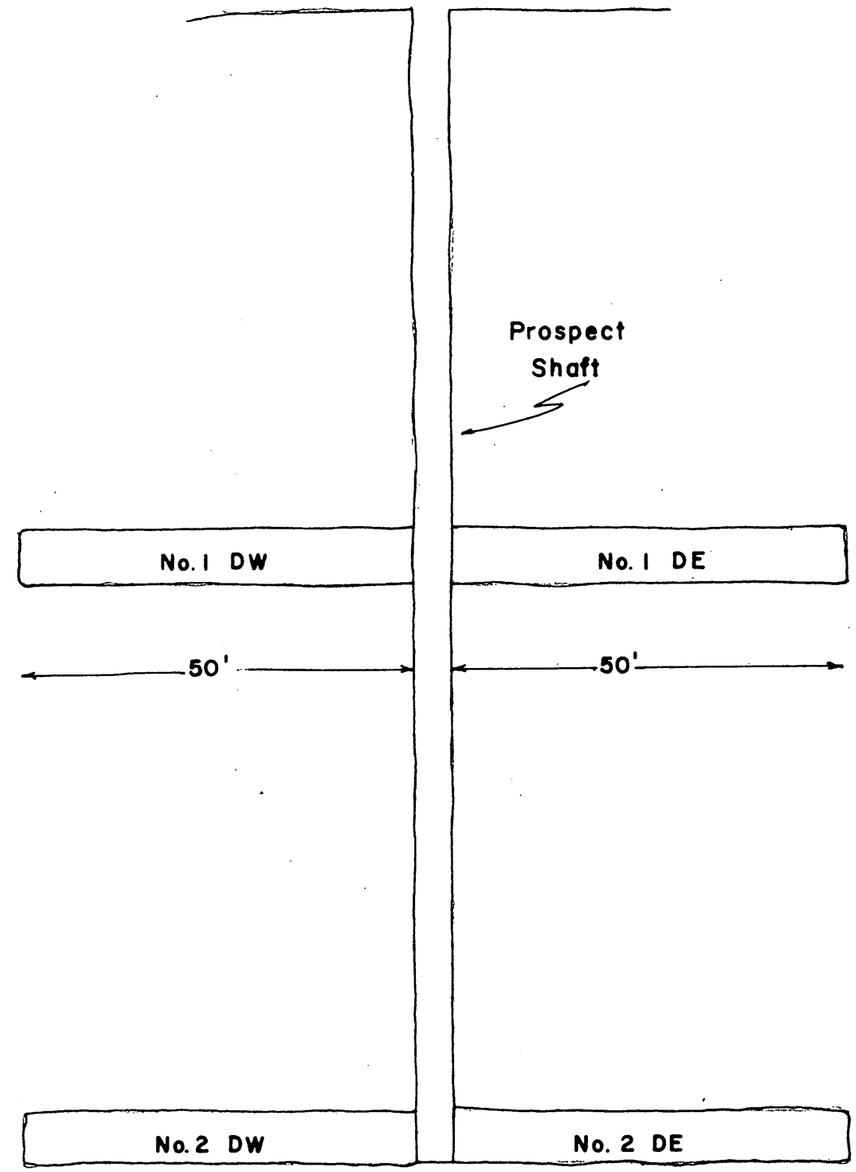
ATOMIC MINERALS CORPORATION

Proposed Plan of Exploration for the Mooney Claim, Silver Bow Co.

1" = 20' JBF 1/55



Section Looking East



Section Looking North
in Plane of Vein

Schedule 5 (Exhibit 1)

MF-203
(Revised July 1, 1954)

OWNER'S CONSENT TO LIEN

DEPARTMENT OF THE INTERIOR
Minerals Administration
RECEIVED
FEB 10 1955

WHEREAS, the undersigned, as owner, co-owner, lessor, or seller has an interest in certain property in the State of Montana, County of Silver Bow, described as follows:1/ Six (6) unpatented quartz lode mining claims, situated in the German Gulch (Unorganized) Mining District, Silver Bow County, Montana, and being more particularly described as follows, to-wit:

Mooney #1 (sometimes known as "Mooney"), Bee, Echo, Fir, Elk and Hilltop, as recorded in Volume 17 of Quartz Lode Record, at pages 121, 137, 139, 141, 143 and 149, respectively, in the office of the County Clerk and Recorder of Silver Bow County, Montana,

which is the subject of a proposed exploration project contract, hereinafter called the "contract", between the United States of America, hereinafter called the "Government", and

2/ Atomic Minerals Corporation, a corporation duly created, organized and existing under, and by virtue of, the laws of the State of Montana, and having its principal office in Helena, Montana,

hereinafter called the "Operator"; and

WHEREAS, under the provisions of said contract the Government is entitled to a percentage royalty on production and to other rights and equities which do or may conflict with or be adverse to the rights of the undersigned:

NOW THEREFORE, the undersigned, in consideration of said contract and as an inducement to the Government to enter into same, undertakes and agrees as follows:

1. The Government's equity in and right to dismantle, sever, take possession of, and remove and dispose of facilities, buildings, fixtures, equipment, or other items as provided in the contract or any amendment thereof shall prevail over and be prior and superior to any conflicting or adverse rights of the undersigned, and the Government is authorized to enter upon the land for such purposes.

2. To secure the payment to the Government of the percentage royalty on production3/ provided for under the terms of said exploration project contract or any amendment thereof there is hereby granted to the Government a lien upon the land above referred to and upon any production of minerals therefrom until said royalty is fully paid or ten years have elapsed from the date of the contract, whichever occurs first.

1/ Either (a) insert the legal description of the land, or (b) strike out the words "as follows" and insert "in a lease [or contract, deed, or other document] dated _____, and recorded in book _____ page _____ official records of said county." If (b) is used, the book and page of recordation cannot be dispensed with. If the space provided is insufficient, use an Annex, and refer to the Annex in the space.

2/ Insert the name of the Operator as it will appear in the exploration project contract.

3/ Mining or production from the land is not required, and in the absence of production there is no obligation to repay the Government.

(OVER)

3. The undersigned shall commit no act nor assert any claim that may contravene or conflict with the lien, claim, or rights of the Government under the provisions of said contract. This agreement shall be binding upon the heirs, executors, administrators, successors, and assigns of the undersigned.

4. Changes and added provisions _____

_____

_____

_____

Dated this 5th day of January, 1955.

Raymond A. Lenhart [Seal]
Raymond A. Lenhart

William G. Chebul [Seal]
William G. Chebul

J. R. Marchi [Seal]
J. R. Marchi

DEPARTMENT OF THE INTERIOR
Lands & Minerals Administration
FILED
FEB 10 1955

MF-203
(Revised July 1, 1954)

OWNER'S CONSENT TO LIEN

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4. Changes and added provisions _____

_____

_____

_____

Dated this 5th day of January, 1955.

Raymond A. Lenhart [Seal]
Raymond A. Lenhart

William G. Chebul [Seal]
William G. Chebul

J. R. Marchi [Seal]
J. R. Marchi

MF-203
(Revised July 1, 1954)

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Mooney #1 (sometimes known as "Mooney") Claim, Bee Claim, ~~Echo Claim, Fir Claim, Elk Claim, and Hilltop Claim, as~~ recorded in Volume 17 of Quartz Lode Record, at pages ~~121, 137, 139, 141 and 143 and 149, respectively, in the~~ office of the County Clerk and Recorder of Silver Bow County, Montana.

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4. Changes and added provisions _____

Dated this 5th day of January, 1955.

Raymond A. Lenhart [Seal]
Raymond A. Lenhart

William G. Chebul [Seal]
William G. Chebul

J. R. Marchi [Seal]
J. R. Marchi

MF-203
(Revised July 1, 1954)

OWNER'S CONSENT TO LIEN

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WHEREAS, under the provisions of said contract the Government is entitled to a percentage royalty on production and to other rights and equities which do or may conflict with or be adverse to the rights of the undersigned:

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William G. Chobul [Seal]
William G. Chobul

J. R. Marchi [Seal]
J. R. Marchi

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
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DEPARTMENT OF THE INTERIOR
Atomic Minerals Administration
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Dated this 5th day of January, 1955.

Buford Miles Eleanor Miles

C. L. McRae Theresa L. McRae [Seal]

_____ [Seal]

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Buford Miles Elmer Miles [Seal]

C. L. McRae Theresa D. McRae [Seal]

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DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
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Buford Miles Elenor M. [Seal]

C. L. McRae Theresa D. McRae [Seal]

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Buford Miles Verna Miles [Seal]

C. L. McRae Theresa D. McRae [Seal]

_____ [Seal]

700

Surname copy

Ching
Ellis
Johnson
Trow
Martin

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

Mr. J. R. Marchi, President
Atomic Minerals Corporation
Securities Building
Helena, Montana

MAY 10 1955

Re: Docket No. DMEA-3679 (Uranium)
Mooney Group
Silver Bow County, Montana

Dear Mr. Marchi:

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 and an analysis of the results of the Atomic Energy Commission drilling on your property indicate to us that the probability of disclosing additional minable ore reserves by your proposed program is not sufficiently promising to justify Government participation. We regret to advise you, under these circumstances, that your application for exploration assistance is denied.

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

Sincerely yours,

Frank E. Johnson (for)
ACTING Administrator

MChing/gla
5-9-55

cc to: Admr.'s Reading File
Operating Committee
Docket
Messrs. J. E. Crawford, Rm. 3641
T. H. Kiilsgaard, Rm. 5224
J. O. Hosted, Rm. 3210, GSA
Code 700
Mr. Ching
DMEA Field Team, Region I, NW District (2)

R.S.J.

(Docket Copy) 700

Ching
Ellis
Newton

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

May 6, 1955

Summary of Proposed Project

Object: Denial of application for an exploration project

Docket No.: DMEA-3679

Commodity: Uranium

Applicant: Atomic Minerals Corporation
c/o Mr. J. R. Marchi
Securities Building
Helena, Montana

Property: Mooney Group, consisting of six unpatented lode mining claims as follows: Mooney, Bee, Echo, Fir, Elk, and Hilltop in Sections 32, and 33 T.3 N., R. 9 W., M.P.M., Silver Bow County, Montana

Date of Application: January 5, 1955

Amount of Application: $29,650.00

Work Proposed: Sink on mineralized vein and drift on 75 and 150 ft. levels.

Independent Contracts

150 ft. shaft @ $135.00/ft.	$20,250.00	
100 ft. drifting on 75-foot level @ $30/ft.	3,000.00	
100 ft. drifting on 150-foot level @ $30/ft.	3,000.00	$26,250.00
Labor, supervision and other costs		3,400.00
Estimated total cost of project		$29,650.00
Government participation at 75 percent		22,237.50

Field Team Report: April 18, 1955

The field examiners disagree on the proposed project. S. W. Zoldok, USBM, believes that 12 diamond drill holes by the AEC has already outlined an oreshoot and that the proposed exploration work would be more in the nature of develop- have x

ment and preparation for mining than exploration.

George E. Becraft, USGS, believes that the work by the AEC was only a beginning stage of exploration which demonstrated only the presence of an ore shoot and that a second stage of exploration as proposed by Applicant is warranted.

In a letter to the Executive Officer, Ernest E. Thurlow of the AEC contended that the property has been sufficiently explored by means of the AEC drilling and therefore no further Government funds should be spent for exploration. He believes that the information now available should enable the Applicant to determine whether or not the ore that has been outlined along the vein can be profitably mined.

The Field Team recognizes that there is a possibility of finding other ore shoots by additional exploration. However, the proposed work will merely extend the small ore body already found by the AEC drilling. Government participation in the proposed program is not justified and it is recommended that the application be denied.

Commodity Committee Members' Comments:

Geological Survey - E. L. Newcomb - May 4, 1955

Twelve drill holes by the AEC indicated a small ore body averaging over 0.3% U_3O_8. The proposed shaft sinking and drifting represent development in preparation for mining. Concurs with the Field Team and AEC that the application be denied.

Bureau of Mines - John E. Crawford

Discussed with AEC representative in Washington. Concurs with the Field Team and AEC field representative that further Government participation is not justified.

Rare and Miscellaneous Metals Division - Michael Ching - May 6, 1955

The work as proposed would be useful in delimiting the small orebody found through the AEC drilling and perhaps in indicating extensions of that body. Its primary usefulness would lie in opening up the orebody for mining. While the AEC drilling was limited to about 100 feet measured along the strike of the vein and reached a vertical depth of 170 feet, the

proposed drifting and sinking would not extend the exploration into new ground and, therefore, would not test the possibility of other ore shoots outside the area already drilled. From an economic standpoint it is doubtful whether the existing ore body or any new body that might be found on this property could be worked profitably.

Conclusions and Recommendations:

The proposed work goes beyond a reasonable delineation and sampling of the ore and is more in the nature of preparation for mining than exploration. It is recommended that the application be denied.

Ernest Wm. Ellis

Ernest Wm. Ellis, Chief
Rare and Miscellaneous
Metals Division

5/9/55 gla

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

DMEA Minerals Materials
RECEIVED
MAY 6 - 1955

May 6, 1955

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

From: Bureau of Mines Member
Uranium Commodity Committee

Subject: Report of Examination, DMEA Docket 3679, Atomic Minerals Corporation, Mooney Group, Silver Bow County, Montana

I have reviewed the Field Team report of examination of Atomic Minerals Corporation, DMEA Docket 3679, and I have discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

We concur with the Field Team that Government participation in the exploration program proposed by the applicant is not justified, and therefore agree with the Field Team that the application should be denied.

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

John E. Crawford

John E. Crawford

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

May 6, 1955

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

From: Bureau of Mines Member
Uranium Commodity Committee

Subject: Report of Examination, DMEA Docket 3679, Atomic Minerals Corporation, Mooney Group, Silver Bow County, Montana

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John E. Crawford

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

May 6, 1955

adum

Ernest William Ellis, DMEA Member
Uranium Commodity Committee

m: Bureau of Mines Member
Uranium Commodity Committee

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John E. Crawford

5/5/55 gla

IN REPLY REFER TO:

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

Department of the Interior
Defense Minerals Administration
RECEIVED
MAY 5 - 1955

May 4, 1955

Re: DMEA-3679
Atomic Minerals Corp.
(Mooney Claims)
Silver Bow Co., Mont.
$29,650 - Uranium

Memorandum

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

From: E. L. Newcomb, U. S. Geological Survey

Subject: Review of Field Team examination report

The Field Team has recommended the applicant's proposal be denied. The A.E.C. concurs in this recommendation.

The Mooney claims were explored by the A.E.C. Results of drilling 12 holes indicated a small ore body averaging over 0.3 percent U_3O_8. Inasmuch as an ore body has been delineated by Government drilling, the proposed shaft sinking and drifting represents development in preparation for mining.

I recommend the Field Team and A.E.C. recommendations be followed and the applicant's proposed work be denied DMEA assistance.

E. L. Newcomb

E. L. Newcomb

IN REPLY REFER TO:

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

Defense Minerals Administration
RECEIVED
MAY 5 - 1955

May 4, 1955

Re: DMEA-3679
Atomic Minerals Corp.
(Mooney Claims)
Silver Bow Co., Mont.
$89,650 - Uranium

Memorandum

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I recommend the Field Team and A.E.C. recommendations be followed and the applicant's proposed work be denied DMEA assistance.

E. L. Newcomb

ELNewcomb:hlm
G-5/4/55

Copy to: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. E. Crawford, 3641 Interior
J. O. Nosted, 3210 GSA

IN REPLY REFER TO:

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

RECEIVED

May 4, 1955

Re: DMEA-3679
Atomic Minerals Corp.
(Mooney Claims)
Silver Bow Co., Mont.
$29,050 - Uranium

Memorandum

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

From: E. L. Newcomb, U. S. Geological Survey

Subject: Review of Field Team examination report

The Field Team has recommended the applicant's proposal be denied. The A.E.C. concurs in this recommendation.

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I recommend the Field Team and A.E.C. recommendations be followed and the applicant's proposed work be denied DMEA assistance.

E. L. Newcomb

ELNewcomb:hlm
G-5/4/55

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Branch reading, 4212
DMEA (3)
Docket file
J. E. Crawford, 3641 Interior
J. O. Nested, 3210 GSA

IN REPLY REFER TO:

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

Atomic Minerals Corp.
RECEIVED
MAY 5 - 1955

May 4, 1955

Re: DMEA-3079
Atomic Minerals Corp.
(Mooney Claims)
Silver Bow Co., Mont.
$29,050 - Uranium

Memorandum

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

From: E. L. Newcomb, U. S. Geological Survey

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I recommend the Field Team and A.E.C. recommendations be followed and the applicant's proposed work be denied DMEA assistance.

E. L. Newcomb

ELNewcomb:hlm
G-5/4/55

Copy to: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. E. Crawford, 3641 Interior
J. O. Kosted, 3210 GSA

5/2/55 gla

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
WASHINGTON 25, D. C.
1201 N. Division St.
Spokane 2, Washington
April 27, 1955

Mr. J. R. Marchi
Securities Building
Last Chance Gulch
Helena, Montana

Re: Docket No. DMEA 3679 (uranium)
Atomic Minerals Corporation
Mooney Group
Silver Bow County, Montana

Dear Mr. Marchi:

This will acknowledge your inquiry of April 5, 1955, concerning the status of the referenced docket.

Your application is now being processed and no additional information is presently required by this office.

No doubt you will soon be informed by the Washington, D.C. office as to what action has been taken on your application.

Sincerely yours,

Wing G. Agnew, Member
DMEA Field Team, Region I
Northwest District

cc: DMEA, Wash. (2)
USGS (2)

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~XXXXXXXXXXXXXXXX~~
WASHINGTON 25, D.C.
1201 N. Division St.
Spokane 2, Washington
April 27, 1955

Mr. J. R. Marchi
Securities Building
Last Chance Gulch
Helena, Montana

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Atomic Minerals Corporation
Meoney Group
Silver Bow County, Montana

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DMEA Field Team, Region I
Northwest District

cc: DMEA, Wash. (2)
USGS (2)

5/2/55 gh

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

April 18, 1955

Air Mail

Mr. George C. Selfridge, Chairman
Operating Committee, DMEA
Department of the Interior
Washington 25, D. C.

Re: Docket No. DMEA-3679 (uranium)
Atomic Minerals Corporation
Mooney Group
Silver Bow County, Montana

Dear Mr. Selfridge:

Attached is a memorandum from George E. Becraft, Geological Survey, commenting on the application of the Atomic Minerals Corporation and recommending approval of proposed shaft sinking and crosscutting.

Also enclosed is a memorandum from S. W. Zoldok, Bureau of Mines, pointing out that because of the 12 holes drilled by the AEC on the property, the applicant's proposal appears to be more development and preparation for mining than it is exploration. Because of this Zoldok recommends denial of the application. In a letter dated February 16, 1955(copies enclosed), E. E. Thurlow, Chief of the Salt Lake Exploration Branch, Division of Raw Materials, Atomic Energy Commission, states, "basically we object to further exploration at Government expense inasmuch as a small though minable ore body has already been outlined by our drilling." It is Becraft's contention that the drilling by the Atomic Energy Commission has been concentrated pretty much in one spot and that the results are not entirely conclusive because the ore body may be of larger extent than indicated by the drilling. He also points to the possibility of other ore shoots along the strike of the deposit.

The Field Team recognizes that it may be quite true that the ore has not been completely blocked out and also that there is a possibility of finding other ore shoots by additional exploration. However, in view of the fact that the proposed project will in essence merely extend the small ore body already partly developed by the AEC drilling, we conclude that Government participation in

Reviewed by
DMEA OPERATING COMMITTEE
4/29/55
(date)

the program proposed by the applicant is not justified. Therefore, we recommend that the application be denied.

By Field Team, Region I, NW District

A. E. Weissenborn, Executive Officer
U. S. Geological Survey

Wing G. Agnew, Member
U. S. Bureau of Mines

Enclosures

cc: USBM (2)
AEC, Butte
AEC, SLC
Becraft
USGS(SRO)

P.S. Becraft has written an additional memorandum reaffirming his recommendation for the exploration of this property, which we are enclosing for your consideration.

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

February 23, 1955

Memorandum

To: DMEA Field Team, Region I, Northwest District

From: George E. Becraft, Geologist, U. S. Geological Survey

Subject: Appraisal of an application for aid in an exploration project for uranium, Docket No. DMEA-3679, Atomic Minerals Corporation, Mooney Group, Silver Bow County, Montana.

After study of the memorandum dated February 3, 1955, on the subject application by S. W. Zoldok, Bureau of Mines, and the letter to A. E. Weissenborn from E. E. Thurlow, U. S. Atomic Energy Commission, dated February 16, 1955, it is still my belief that the Mooney group has not been adequately explored by diamond drilling and there are not enough data to put distinct boundaries on an ore body nor to determine with any reasonable accuracy the grade of the ore over any given width. It is my opinion that the only conclusions that can be drawn from the drilling data are: (1) there is uranium of ore grade on the Mooney claim, (2) the western extent of one ore shoot is vaguely defined by drill holes 4, 5, 6, and 7, (3) the ore shoot probably extends below the depth of drill hole 12, (4) the dip of the vein is vertical to a depth of about 50 feet and below this point the dip changes to the north.

The accompanying map and two sections are compiled from information supplied with the application. It should be noted that there are discrepancies between the exhibits in schedule 4 and the logs of individual holes. On exhibit 4, schedule 4, hole 12 shows a down inclination of 60 degrees and on exhibit 3, schedule 4, the assay width is listed as 2 feet of 0.14% eU_3O_8; on figure 12 (diamond drill hole log) the inclination of hole 12 is given as 45 degrees and four radiometric assays are given, none of which are 2 feet at 0.14% U_3O_8.

The accompanying plan map shows the position of the radioactivity in each of the diamond drill holes vertically above the actual position in the hole. This illustrates that the vein is not vertical below a depth of about 50 feet. Cross section A-A' shows the diamond drill holes and the location of radioactivity in each

Reviewed by
DMEA OPERATING COMMITTEE
4/29/55
(date)

hole transposed on a single plane. This section indicates that the dip of the vein is steeply to the north at the west end of the section and the dip may be almost vertical or to the south between the depth of hole 3 and the depth of hole 11. Longitudinal section B-B' shows the diamond drill holes and the location of radioactivity in each hole (the dashed lines indicate that part of each hole north of a vertical plane B-B'). The analyses are taken from exhibit 3, schedule 4, and from figure 12 (mentioned above). Drill holes 1, 8, 9, 10, and 12 are shown as having cut ore-grade uranium. It may be seen on section B-B' that the ore shoot probably does not extend to the west beyond holes 4, 5, 6, and 7 unless these holes intersected the vein where it locally did not contain ore. It is my opinion that the ore shoot is not defined to the east by two holes, 3 and 11. I do not believe that two diamond drill holes provide enough information to draw the margin shown on schedule 4, exhibit 3. In addition, hole 11 may be nearer ore grade than is indicated. The analyses for holes 8 and 9 show that the uranium is out of equilibrium, with the U_3O_8 being higher than the eU_3O_8. If the uranium in holes 11 and 12 is out of equilibrium in the same direction, then the U_3O_8 content would be somewhat higher than indicated.

Considering the drilling results in the light of the above possible interpretation, I believe that only a beginning stage of exploration has been accomplished--the presence of an ore shoot has been demonstrated but the length, thickness, depth, and grade of the shoot has definitely not been established by the drilling, and now a second stage of exploration is warranted. This stage should consist of sinking an exploration shaft to a depth of at least 150 feet on the vein as nearly as possible and to drive some exploratory drifts to outline the ore body. I recommend that an exploration contract to provide for this amount of work be granted.

Attachment
Distribution:
DMEA (orig. & 3)
USBM (2)
USGS(SRO)
Docket
AEC, Butte
AEC, SLC
Becraft

UNITED STATES
ATOMIC ENERGY COMMISSION
DIVISION OF RAW MATERIALS
Salt Lake Exploration Branch

ADDRESS REPLY TO:

U. S. Atomic Energy Commission
P. O. Box 2196
Salt Lake City, Utah

AND REFER TO:

SLEB:EET:af

February 16, 1955

Mr. A. E. Weissenborn
Administrative Geologist
U. S. Geological Survey
South 157 Howard Street
Spokane, Washington

DEPARTMENT OF INTERIOR
Defense Minerals Administration
RECEIVED
FEB 26 1955

Dear Al:

This will acknowledge receipt of Verne Fryklund's letter of February 7 concerning an application for exploration assistance submitted by the Atomic Minerals Corporation for exploration of the Mooney group, Silver Bow County, Montana.

I have discussed this proposal with Jerry Jarrard and the following comments represent our thinking in the matter. While the Mooney claim undoubtedly contains uranium ore and is worthy of development and mining, our contention is that the property has been sufficiently explored by means of diamond drilling conducted by our Butte office and therefore no further government funds should be spent for exploration. I presume that the property might qualify for a development loan although we are not sure what your requirements may be in this regard.

We completed a total of twelve diamond drill holes which resulted in developed and indicated ore totaling 750 tons assaying 0.29 percent U_3O_8 and about 1500 tons of inferred ore of a similar grade. It appears that with the information already furnished to the company by our Butte office, the Atomic Minerals Corporation should be able to determine whether or not they can profitably mine the ore that has been outlined along the Mooney vein. If further government assistance is granted for the exploration and development of this property, we feel that the amount of work and the unit prices should both be materially reduced.

RECEIVED
FEB 18 1955
U. S. G. S.
SPOKANE, WASH.

4/29/55

Encl. 3

Because of the relatively small size of the deposit, the original prospect shaft should serve both to explore the deposit at depth and to extract what ore may be mined. Also, unless the loan is in the nature of a development grant, it should not be necessary for the government to assist in driving drifts at both the 75-foot and 150-foot levels. At least the 75-foot level should be eliminated. The unit prices for the type of work specified also appear to be far too high for that area. The prospect shaft should cost no more than $110 per foot, and drifting and crosscutting for about $25 per foot. If raising is allowed, the price should probably be lowered to about $45 per foot timbered. The amount for supervision, geological and engineering fees, etc., also appears to be high. Basically, we object to further exploration at government expense inasmuch as a small, though mineable, ore body has already been outlined by our drilling.

We will be interested to learn of your decision on this proposal and will be glad to discuss it further if you desire.

With best regards.

Sincerely yours,

Ernest E. Thurlow, Chief
Salt Lake Exploration Branch
Division of Raw Materials

cc: LD JARRARD

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D.C.~~
1201 N. Division St.
Spokane 2, Washington
February 3, 1955

MEMORANDUM

Reviewed by
DMEA OPERATING COMMITTEE
4/29/55
(date)

To: DMEA Field Team, Region I

From: S. W. Zoldok, mining engineer, Bureau of Mines

Subject: Appraisal of an application for aid in an exploration project for uranium, Mooney Group, Silver Bow County, Mont.

A high radioactivity anomaly on the Mooney claim was explored by the A.E.C. by 12 diamond drill holes, 5 of which intersected significant amounts of uranium. The deepest intersection was at 170 feet below the surface; however, the vein was only 0.2 feet thick and assayed 0.14 percent U_3O_8. From the drilling data the indicated dimensions of the oreshoot are 125'x27.5'x1.95' with an average grade of 0.36 percent U_3O_8. Over a mining width of 3 feet there are indicated 859 tons of ore having a grade of 0.24 percent U_3O_8 or a gross value of $31,439.40.

Cost of Development and Mining

Shaft - 125 feet @ $135.00/ft.	$16,875.00
Crosscut - 20 feet @ $40.00/ft.	800.00
Timbered drift - 35 feet @ $37.50/ft.	1,312.50
Headframe	350.00
Compressor house	550.00
Misc. administrative, etc.	1,000.00
Contract mining - 859 tons @ $20.00/ton	17,180.00
	$38,067.50
Value of ore	31,439.40
Loss to applicant without DMEA participation	$ 6,628.10

With DMEA Participation

Applicant's participation - 25% of $20,887.50	$ 5,221.88
Applicant's mining cost	17,180.00
DMEA royalty - 5% of $31,439.40	1,571.97
Total cost to applicant	$23,973.85
Profit to applicant ($31,439.40 - $23,973.85)	$ 7,465.55

RECEIVED
FEB 4 1955
U. S. G. S.
SPOKANE, WASH.

Conclusions and Recommendations

The applicant's proposed exploration appears to be more development and preparation for mining and should be denied.

Orig. & 3 cys - Wash.
USGS (2)--DMEA--Engr.

S. W. Zoldok

Encl. 2

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

~~WASHINGTON 25, D.C.~~
So. 157 Howard Street
Spokane 4, Washington

January 25, 1955

Memorandum

To: DMEA Field Team, Region I, Northwest District

From: George E. Becraft, Geologist, U. S. Geological Survey

Subject: Review of application for DMEA exploration contract, Docket No. DMEA-3679 (uranium), Atomic Minerals Corporation, Mooney Group, Silver Bow County, Montana.

The writer has reviewed the subject application and recommends that the application for an exploration contract be approved. It is recommended that only the exploration shaft and drifts be approved because the remainder of the project is development and not exploration.

The application is well documented with geological data obtained from the U. S. Atomic Energy Commission Butte suboffice. I have discussed this property with geologists of the Atomic Energy Commission, and I do not believe that a field examination would add materially to the data submitted with the application.

Distribution:
DMEA (orig. & 3)
USBM (2)
USGS(SRO)
Docket
AEC, Butte
AEC, SLC
Becraft

Approved by
DMEA Contract Committee
4/29/55

Surname copy

Ellis
Selfridge
Fehrman
Mitchenoff

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

MAR 30 1955

Mr. A. E. Weissenborn
Executive Officer, Northwest District
DMEA Field Team, Region I
South 157 Howard Street
Spokane 4, Washington

Re: Docket No. DMEA-3679 (Uranium)
Atomic Minerals Corporation
Mooney Group
Silver Bow County, Montana

Dear Mr. Weissenborn:

According to your letter of February 7, 1955, transmitting the captioned application to Washington, and your February monthly report on activities, it is our understanding that you are preparing a report and recommendations on this proposed project from material available in your office, without making a field examination.

We would appreciate being advised the approximate date we may expect to receive your report.

Sincerely yours,

George C. Selfridge

Chairman, Operating Committee (JHB)

APPROVED:

J. H. Hedges (JHB)
Member, Bureau of Mines

E. L. Newcomb
Member, Geological Survey (JHB)

EWEllis/gla
3-28-55
cc to: Admr.'s Reading File
Operating Committee
Docket
Messrs. J. E. Crawford, Rm. 3641
T.H. Kiilsgaard, Rm. 5224
J. Q. Hosted, Rm. 3210, GSA
Code 700

R.C.L.

3/2/55 gla

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
MAR 1 - 1955

March 1, 1955

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

From: Bureau of Mines Member
Uranium Commodity Committee

Subject: DMEA Docket 3679, Atomic Minerals Corp., Mooney Claims, Silver Bow County, Montana

I have reviewed the application of the Atomic Minerals Corporation and have discussed it with Joseph O. Hosted, representative of the Atomic Energy Commission.

I tentatively recommend that the attached application be referred to the Field Team for investigation and report, and that the Field Team be requested to discuss the application with Ernest E. Thurlow, Atomic Energy Commission, Salt Lake City, Utah.

Mr. Hosted withholds comment until such time as the remarks of Mr. Thurlow, mentioned in Mr. Fryklund's letter of February 7 to George Selfridge, are made available. I should also like to withhold my final recommendation until Mr. Thurlow's review of the subject has been forwarded to me.

John E. Crawford
John E. Crawford

Attachment

Copy to: Branch of Rare and Precious Metals
Division of Minerals
J. O. Hosted (2)
J. E. Crawford (2)

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

Defense Minerals Administration
RECEIVED
MAR 1 - 1955

March 1, 1955

Memorandum

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Uranium Commodity Committee

From: Bureau of Mines Member
Uranium Commodity Committee

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John E. Crawford

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Division of Minerals
J. O. Hosted (2)
J. E. Crawford (2)

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

Defense Minerals
MAR 1 - 1950

March 1, 1950

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

From: Bureau of Mines Member
Uranium Commodity Committee

Subject: DMEA Docket 3679, Atomic Minerals Corp., Mooney Claims, Silver Bow County, Montana

I have reviewed the application of the Atomic Minerals Corporation and have discussed it with Joseph O. Hosted, representative of the Atomic Energy Commission.

I tentatively recommend that the attached application be referred to the Field Team for investigation and report, and that the Field Team be requested to discuss the application with Ernest E. Thurlow, Atomic Energy Commission, Salt Lake City, Utah.

Mr. Hosted withholds comment until such time as the remarks of Mr. Thurlow, mentioned in Mr. Fryklund's letter of February 7 to George Selfridge, are made available. I should also like to withhold my final recommendation until Mr. Thurlow's review of the subject has been forwarded to me.

John E. Crawford

Attachment

Copy to: Branch of Rare and Precious Metals
Division of Minerals
J. O. Hosted (2)
J. E. Crawford (2)

Read
U approves with the comments noted. These comments should be forwarded
JM

DEPARTMENT OF THE INTERIOR
Bureau of Mines Administration
RECEIVED
FEB 10 1955

XXXXXXXXXXXXXXXXXX
No. 157 Howard Street
Spokane 4, Washington

February 7, 1955

Mr. George C. Selfridge, Chairman
DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: Application for exploration assistance (uranium)
Atomic Minerals Corporation
Mammy Group
Silver Bow County, Montana

Dear Mr. Selfridge:

Enclosed are three copies of an application together with three copies of supplemental diagrammatic exhibits of the diamond drilling project heretofore completed, submitted by Atomic Minerals, Inc. Owner's Consent to Lease are enclosed covering Mammy No. 1, Bee, Fabo, Fir, Elk, and Hilltop claims. Two sets of forms were signed for the above property, one set executed by Raymond A. Lenhart, W. D. Chabal, and J. F. Marvelly and the other set by Buford Miles and C. L. and Theresa Mahan.

A description of the property has been published by the Atomic Energy Commission as RMO 2026, dated February 1954. Results of a diamond drilling program undertaken by the AEC are also included with the application. The application is so complete that no field examination should be necessary. An appraisal of the proposed project will be forwarded as soon as possible.

We are writing Mr. E. E. Thurlow, Chief, Salt Lake Exploration Branch, AEC, for his comments and will forward them upon receipt.

Sincerely yours,

Vernon C. Fryklund, Jr.
For: A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I
Northwest District

Enclosures

cc: DMEM (2)
AEC, HQ
AEC, Butte
Bennett

February 11, 1955
Subject: DMEA 3679
Re: Exploration Assistance
Mooney Group

Atomic Minerals Corporation
C/o Mr. J. R. Marchi
Securities Building
Helena, Montana

Gentlemen:

The receipt of your application dated January 5, 1955 for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA 3679 and referred to the Rare and Miscellaneous Metals Division.

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

Sincerely yours,

Robert E. Adams, Chief
Operations Control and
Statistics Division

February 11, 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region I Nw.

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number

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

DMEA - 3679 Atomic Minerals Corporation

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
~~WASHINGTON 25, D. C.~~
So. 157 Howard Street
Spokane 4, Washington

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 10 1955

February 7, 1955

Mr. George C. Selfridge, Chairman
DMEA Operating Committee
Department of the Interior
Washington 25, D. C.

Re: Application for exploration assistance (uranium)
Atomic Minerals Corporation
Mooney Group
Silver Bow County, Montana

Dear Mr. Selfridge:

Enclosed are three copies of an application together with three copies of supplemental diagrammatic exhibits of the diamond drilling project heretofore completed, submitted by Atomic Minerals, Inc. Owner's Consent to Lien are enclosed covering Mooney No. 1, Bee, Echo, Fir, Elk, and Hilltop claims. Two sets of forms were signed for the above property, one set executed by Raymond A. Lenhart, W. G. Chebul, and J. R. Marchi; and the other set by Buford Miles and C. L. and Theresa McRae.

A description of the property has been published by the Atomic Energy Commission as RME 2006, dated February 1954. Results of a diamond drilling program undertaken by the AEC are also included with the application. The application is so complete that no field examination should be necessary. An appraisal of the proposed project will be forwarded as soon as possible.

We are writing Mr. E. E. Thurlow, Chief, Salt Lake Exploration Branch, AEC, for his comments and will forward them upon receipt.

Sincerely yours,

Verne C. Fryklund, Jr.

Verne C. Fryklund, Jr.
For: A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I
Northwest District

Enclosures

cc: USBM (2) AEC, Butte
AEC, SLC Becraft

Defense Minerals Administration
RECEIVED
FEB 10 1955

[redacted]
So. 157 Howard Street
Spokane 4, Washington

February 7, 1955

Mr. Ernest E. Thurlow
U. S. Atomic Energy Commission
P. O. Box 2196
Salt Lake City, Utah

Re: Application for exploration assistance
Atomic Minerals Corporation
Mooney Group
Silver Bow County, Montana

Dear Ernie:

We have received an application from Mr. J. R. Marchi on behalf of Atomic Minerals, Inc. The applicant wishes to explore the Mooney group of claims that has been described in AEC RME-2006.

We would appreciate your comments on the desirability of such an exploration. I am enclosing a copy of the application, less a photostatted lease and a number of photostated geological exhibits that are all from AEC sources.

Sincerely yours,

Vernon C. Fryklund, Jr.
For: A. E. Weissenbaum
Executive Officer, DMEA
Field Team, Region I
Northwest District

Enclosure

cc: L. D. Jarrard w/encl.
P. O. Box 1984
Butte, Montana
DMEA (2)
UMRM (2)
Becraft

No. 197 Howard Street
Spokane 4, Washington

February 7, 1955

Mr. Ernest E. Thurlow
U. S. Atomic Energy Commission
P. O. Box 8196
Salt Lake City, Utah

Re: Application for exploration assistance
Atomic Minerals Corporation
Mooney Group
Silver Bow County, Montana

Dear Ernie:

We have received an application from Mr. J. R. Marchi on behalf of Atomic Minerals, Inc. The applicant wishes to explore the Mooney group of claims that has been described in AEC RME-2006.

We would appreciate your comments on the desirability of such an exploration. I am enclosing a copy of the application, less a photostated lease and a number of photostated geological exhibits that are all from AEC sources.

Sincerely yours,

Verne C. Frykland, Jr.
For: A. E. Weissenborn
Executive Officer, DMEA
Field Team, Region I
Northwest District

Enclosure

cc: L. D. Jarrard w/encl.
P. O. Box 1984
Butte, Montana

DMEA (2)
USBM (2)
Becraft

ATOMIC MINERALS CORPORATION

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
FEB 10 1955

Attorney in Fact

J. R. MARCHI
SECURITIES BUILDING
LAST CHANCE GULCH
HELENA, MONTANA

7 January 1955

United States Department of the Interior
Defense Minerals Exploration Administration
1201 N. Division Street
Spokane 2, Washington

Subject: Application for Aid in an Exploration Project; Uranium; Mooney Group, Silver Bow County, Montana

Gentlemen:

We enclose herewith Forms MF-103(with Exhibits) in quadruplicate and two sets of Forms MF-203 in sextuplicate.

These have been completed in accordance with DMEA Order 1, amended, and other instructions received, but if further information is desired we shall be pleased to comply with your request.

The writer and Mr. Wm. G. Chebul, an officer of this corporation, are intending to come to Spokane, Friday, January 21st, to confer with you further regarding this application. We are sending the application now, however, in order that processing may commence and you may complete a preliminary examination. Should this examination result in a request for additional information, it is our thought that we can deliver this to you personally at that time.

Sincerely yours,

ATOMIC MINERALS CORPORATION

By J. R. Marchi
J. R. Marchi

JRM:cl
Encls.

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

Defense Minerals Administration
RECEIVED
FEB 10 1955

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

Not to be filled in by applicant

Docket No. 3679
Metal or Mineral Uranium
Date Received 2-10-55
Estimated Cost $29,650
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: Atomic Minerals Corporation, a Montana corporation, % J. R. Marchi Attorney-in-fact, Securities Bldg., Helena, Montana; J.R. Marchi, President, address as above; Wm. G. Chebul, vice-president, Havre, Montana; and Daniel J Sullivan, Secy.-Treas., Securities Bldg., Helena, Montana

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

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

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

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

3. *Applicant's property rights.*—(*a*) State the legal description of the land upon which you wish to explore, including all land which you possess or control that may be benefited by the exploration, and excluding any land or interest in land which is not to be included in the exploration project contract Please see Schedule 1 attached

(*b*) State any mine name by which the property is known. Mooney Claim Group

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise Lessee

(*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. Attached herewith as Schedule 2.

(*e*) If you own the land, describe any liens or encumbrances on it Not applicable

(*f*) If the land consists of unpatented claims, add to the description above, the book and page numbers for each recorded location notice. Attached herewith as Schedule 3.

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

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

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

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

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

16—66551-1

Attached herewith as Schedule 4.

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

(*b*) Describe fully the proposed work, including a map or sketch of the property showing a plan (and cross sections if needed) of any present mine workings, and the location of the proposed exploration work as related to such features as contacts, veins, ore-bearing beds, etc. Attached herewith as Schedule 5.

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

(*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. Schedule 7.

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: Schedule 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.).

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

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

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

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

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

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

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

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

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

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

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

Explain in detail on acompanying paper. Attached herewith as Schedule 9.

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 January 5, 1955

ATOMIC MINERALS CORPORATION, a Montana corporation
(Applicant)

By [signature]
President

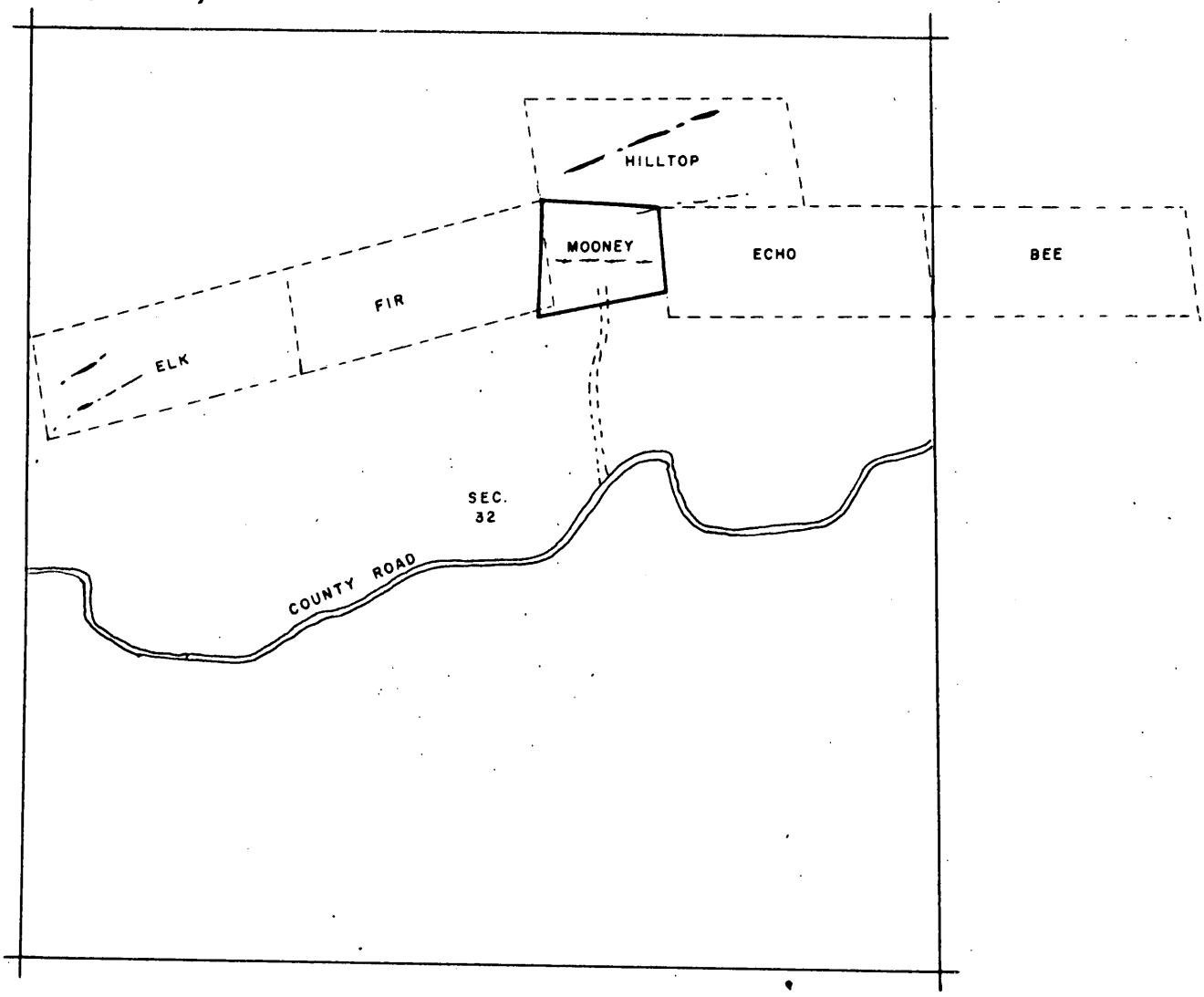
Attest:

[signature]
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

ATOMIC MINERALS CORPORATION
c/o J. R. Marchi
Securities Building
Helena, Montana



ATOMIC MINERALS CORP.

LAYOUT OF MOONEY CLAIM GROUP
Sec. 32 & 33 - 3N-9W
Silver Bow Co., Mont.

Schedule 1.

SILICIFIED REEF

SCALE: 1" = 1000'

NOTE: MAP TRACED FROM AEC REPORT RME 2006
DASHED CLAIM BOUNDARIES PLOTTED FROM DESCRIPTION

Atomic Minerals Corporation
c/o J. R. Marchi
Securities Building
Helena, Montana

DEPARTMENT OF THE INTERIOR
Lease Minerals Administration
RECEIVED
FEB 10 1955

SCHEDULE 2

Chain of title of this property is as follows:

1. Mooney claim located by William R. Mooney on July 15, 1953.
   Bee and Echo claims located by George Vidrich on February 1, 1954.
   Fir and Elk claims located by George Vidrich on January 15, 1954.
   Hilltop claim located by George Vidrich on March 15, 1954.

2. Bee, Echo, Fir and Elk claims subject of deed of an undivided two-thirds interest from George Vidrich to Clyde L. McRae and Buford Miles, April 17, 1954, recorded in Book 242 of Deeds, page 63, Records of Silver Bow County, Montana.

3. Mooney claim subject of deed of entire interest from William R. and Hazel Mooney, his wife, to Clyde L. McRae and Buford Miles, September 13, 1954, recorded in Book 240 of Deeds, page 311, Records of Silver Bow County, Montana.

4. Hilltop claim subject of deed of an undivided two-thirds interest from George Vidrich to Clyde L. McRae and Buford Miles, December 7, 1954, recorded in Book 242 of Deeds, page 65, Records of Silver Bow County, Montana.

5. Bee, Echo, Fir, Elk and Hilltop claims subject of deed from George Vidrich to Clyde L. McRae and Buford Miles of an undivided one-third interest dated December 17, 1954, recorded in Book M of Deeds, page 39, Records of Silver Bow County, Montana.

6. Mooney, Bee, Echo, Fir, Elk and Hilltop claims subject of Agreement to Sell Mining Claims (with escrow provisions), January 5, 1955, by and between Buford Miles and Eleanor Miles, his wife, and C. L. McRae and Theresa I. McRae, his wife, vendors, and Raymond A. Lenhart, William G. Chebul and J. R. Marchi.

7. Mooney, Bee, Echo, Fir, Elk and Hilltop claims subject of Mining Lease, dated January 5, 1955, from vendees listed in item 6 to Atomic Minerals Corporation.

Attached as Schedule 2 (Exhibit 1) is a true and correct copy of the Mining Lease referred to in item 7 above. Also enclosed are Owner's Consent to Lien (6 originals) from Buford Miles and Eleanor Miles, his wife, C. L. McRae and Theresa I. McRae, his wife, Raymond A. Lenhart, William G. Chebul and J. R. Marchi.

ATOMIC MINERALS CORPORATION
c/o J. R. Marchi
Securities Building
Helena, Montana

MINING LEASE

RECEIVED

MINING LEASE, made in the City of Helena, State of Montana, on January 5, 1955, between RAYMOND A. LENHART and MARY LENHART, husband and wife, and WILLIAM G. CHEBUL and MARJORIE J. CHEBUL, husband and wife, all of Havre, Montana, and J. R. MARCHI and JOAN T. MARCHI, husband and wife, of Helena, Montana (herein called the "Lessor"), and ATOMIC MINERALS CORPORATION, a corporation duly created, organized and existing under and by virtue of the laws of the State of Montana, and having its principal office at Helena, Montana (herein called the "Lessee"), WITNESSETH:

That the Lessor, in consideration of the royalties, covenants and agreements hereinafter reserved, and by the Lessee to be paid, kept, observed and performed, hereby leases to the Lessee all of the following property and rights, but without covenant, or warranty, of title in respect thereof, to-wit:

The Mooney (sometimes called the "Mooney #1) Quartz Lode Mining Claim, located by William R. Mooney on July 15, 1953, certificate of location of which, being Document No._____, was recorded on September 11, 1953, in Volume 17 of Quartz Lode Record, at Page 121, records of the County Clerk and Recorder of Silver Bow County, Montana;

The Bee Quartz Lode Mining Claim, located by George Vidrich on February 1, 1954, certificate of location of which, being Document No. 190984, was recorded on March 11, 1954, in Volume 17 of Quartz Lode Record, at Page 137, records of the County Clerk and Recorder of Silver Bow County, Montana;

The Echo Quartz Lode Mining Claim, located by George Vidrich on February 1, 1954, certificate of location of which, being Document No. 190985, was recorded on March 11, 1954, in Volume 17 of Quartz Lode Record, at Page 139, records of the County Clerk and Recorder of Silver Bow County, Montana;

The Fir Quartz Lode Mining Claim, located by George Vidrich on January 15, 1954, certificate of location of which, being Document No. 190986, was recorded on March 11, 1954, in Volume 17 of Quartz Lode Record, at Page 141, records of the County Clerk and Recorder of Silver Bow County, Montana;

The Elk Quartz Lode Mining Claim, located by George Vidrich on January 15, 1954, certificate of location of which, being Document No. 190987, was recorded on March 11, 1954, in Volume 17 of Quartz Lode Record, at Page 143, records of the County Clerk and Recorder of Silver Bow County, Montana;

The Hilltop Quartz Lode Mining Claim, located by George Vidrich on March 15, 1954, certificate of

Schedule 2 (Exhibit 1)

location of which, being Document No. 192339, was recorded on May 26, 1954, in Volume 17 of Quartz Lode Record, at Page 149, records of the County Clerk and Recorder of Silver Bow County, Montana.

Together with the rights of ingress and egress at all times for the purpose of mining, drilling and exploring said land for all minerals, and removing the same therefrom, and any and all rights and privileges necessary, incident to, or convenient for the economical operation of said land for such purpose.

TO HAVE AND TO HOLD the same unto the Lessee until noon of the 1st day of January, 1962, unless sooner terminated or forfeited through, or by reason of, the violation or non-observance of any of the agreements or covenants hereinafter set forth on the part of the Lessee to be kept, observed and performed, and for a further and additional period of ten (10) years from and after January 1, 1962, upon the same property and premises herein described, and upon the same terms and conditions as set forth herein, provided, however, that Lessee shall give written notice at least thirty (30) days prior to the expiration date of January 1, 1962, of its intention to renew.

That, in consideration of the said leasing, the Lessee covenants and agrees with the Lessor as follows:

1. To work the said property mine-fashion in manner necessary to good and economical mining, so as to take out the greatest amount of ore possible with due regard to the safety, development and preservation of the said premises as a workable mine;

2. To well and sufficiently timber said mine at all points where proper, in accordance with good mining; and to repair all old timbering wherever it may become necessary;

3. To keep the drifts, shafts, tunnels and other works, at all times, thoroughly drained and clear of loose rock and rubbish, unless prevented by extraordinary mining casualty;

4. To allow Lessor to enter upon and into all parts of said mine for the purpose of inspection, with the use of all passages, ropes, windlasses, ladder-ways and all other means of ingress and egress for such

purposes;

5. To give the Lessor access to all of its books and papers connected in any way with its operations upon the said property;

6. To pay and deliver to the Lessor, or cause to be paid, by the smelter, as the case may be, as royalty upon all ores that may be mined, shipped or sold from the property during the term of this lease, including material from the dump and other loose materials:

> Fifty per cent (50%) of the net profits, as defined below, resulting from any and all mining operations hereunder, which shall be paid quarter-annually, commencing on the 31st day of March, 1955.
>
> The term "net profits" means the net smelter returns, i.e., that amount paid for ores or minerals after deduction therefrom of the costs of smelting and the usual cost of delivery at the smelter, less the following deductions: the cost of mining, which cost of mining shall include the cost of all materials used and the cost of labor directly applied thereto, exclusive of management services; taxes chargeable, allowances for depreciation of equipment; interest; Defense Minerals Exploration Administration or Atomic Energy Commission royalties payable, if any; and, an additional five per cent (5%) of net smelter returns to cover overhead expenses, viz., management services, administrative expenses, office expense, and other expenses not listed above.

7. To maintain and keep in good repair all buildings now upon the property or hereafter placed thereon;

8. To pay and keep paid (without reimbursement), as and when the same shall become due and payable, all taxes of every kind and nature upon the said property, including taxes for the year 1954, as payable;

9. That, upon the failure of the Lessee to keep, observe or perform any of the agreements or covenants hereinabove to be kept, observed or performed by the Lessee, the term of this lease shall, at the option of the Lessor, expire, and the same, and the property hereby demised, together with all structures erected thereon, and all fixed machinery placed therein, shall become forfeited to the Lessor; and the Lessor, or its agents or attorneys, may, thereupon, immediately after demand for possession, enter upon the said property and dispossess all persons occupying the same, with or without force, and with or without process of law;

10. That, upon the termination of this lease by expiration, forfeiture or otherwise, the Lessee shall deliver up the property with all structures erected thereon, and all fixed machinery placed therein, in good order and condition, with the mine ready for immediate and continuous working, so far as the same shall have been opened or reopened, unavoidable accidents alone excepted;

11. That time shall be of the essence of this indenture and of every agreement and covenant thereof; and,

12. That this indenture shall inure to the benefit of and be binding upon the parties hereto, and their successors and assigns respectively.

IN WITNESS WHEREOF, the parties hereto have caused this indenture to be executed, in quadruplicate, and have hereunto set their hands and seals the day and year first above written.

LESSOR:

Raymond A. Lenhart (L. S.)

Mary Lenhart (L. S.)

William A. Lenhart (L. S.)

Margaret J. Lenhart (L. S.)

Joan T. Marchi (L. S.)

Joan T. Marchi (L. S.)

LESSEE:

ATOMIC MINERALS CORPORATION

By Joan T. Marchi
President

ATTEST:

Daniel J. Sullivan
Secretary

STATE OF MONTANA)
: ss.
County of Lewis & Clark)

On this 28th day of December, 1954, before me, a Notary Public in and for the State of Montana, personally appeared Raymond A. Lenhart and Mary Lenhart, known to me to be the persons whose names are subscribed to the within and foregoing Lease and acknowledged to me that they executed the same.

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

Daniel J. Sullivan
Notary Public for the State of Montana
Residing at Helena, Montana
My commission expires August 18, 1956

STATE OF MONTANA)
: ss.
County of Lewis & Clark)

On this 3rd day of January, 1955, before me, a Notary Public in and for the State of Montana, personally appeared William G. Chobul and Marjorie J. Chobul, known to me to be the persons whose names are subscribed to the within and foregoing Lease and acknowledged to me that they executed the same.

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

A. M. Wanke
Notary Public for the State of Montana
Residing at Helena, Montana
My commission expires 10-01-57

STATE OF MONTANA)
: ss.
County of Lewis and Clark)

On this 31st day of December, 1957, before me, a Notary Public in and for the State of Montana, personally appeared J. R. Marchi and Joan T. Marchi, known to me to be the persons whose names are subscribed to the within and foregoing Lease and acknowledged to me that they executed the same.

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

(NOTARIAL SEAL)

Daniel J. Sullivan
Notary Public for the State of Montana
Residing at Helena, Montana
My commission expires August 18, 1956

STATE OF MONTANA)
: ss.
County of Lewis and Clark)

On this 31st day of December, 1957, before me, a Notary Public in and for the State of Montana, personally appeared J. R. Marchi, known to me to be the president of the corporation that executed the within instrument, and acknowledged to me that such corporation executed the same.

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

A. B. Gallespie
Notary Public for the State of Montana
Residing at Helena, Montana
My commission expires November 1, 1958

Atomic Minerals Corporation
c/O J. R. Marchi
Securities Building
Helena, Montana

DEPARTMENT OF THE INTERIOR
Bureau of Mines
Minerals Administration
RECEIVED
FEB 10 1955

SCHEDULE 3

The legal description of the land upon which we wish to explore, including all land which we possess or control that may be benefited by the exploration, and excluding any land or interest which is not to be included in the exploration contract is as follows, to--wit:

The following described six (6) unpatented quartz lode mining claims situated in the German Gulch Mining District (unorganized) or Butte (unorganized) Mining District, in Section Thirty-two (32), Township Three (3) North, Range Nine (9) West, M.P.M., in the County of Silver Bow, State of Montana, to-wit:

The Mooney (sometimes called the "Mooney #1") Quartz Lode mining claims, located by William R. Mooney on July 15, 1953, certificate of location of which, being Document No. _____, was recorded on September 11, 1953, in Volume 17 of Quartz Lode Record, at page 121, Records of the County Clerk and Recorder of Silver Bow County, Montana;

The Bee Quartz Lode Mining Claim, located by George Vidrich on February 1, 1954, certificate of location of which, being Document No. 190984, was recorded on March 11, 1954, in Volume 17, of Quartz Lode Record, at page 137, Records of the County Clerk and Recorder of Silver Bow County, Montana;

The Echo Quartz Lode Mining Claim, located by George Vidrich on February 1, 1954, certificate of location of which, being Document No. 190985, was recorded on March 11, 1954, in Volume 17 of Quartz Lode Record, at page 139, Records of the County Clerk and Recorder of Silver Bow County, Montana;

The Fir Quartz Lode Mining Claim, located by George Vidrich on January 15, 1954, certificate of location of which, being Document No. 190986, was recorded on March 11, 1954, in Volume 17 of Quartz Lode Record, at page 141, Records of the County Clerk and Recorder of Silver Bow County, Montana;

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Schedule 3 (Page 2)

The Elk Quartz Lode Mining Claim, located by George Vidrich on January 15, 1954, certificate of location of which, being Document No. 190987, was recorded on March 11, 1954, in Volume 17 of Quartz Lode Record, at page 143, Records of the County Clerk and Recorder of Silver Bow County, Montana; and

The Hilltop Quartz Lode Mining Claim, located by George Vidrich on March 15, 1954, certificate of location of which, being Document No. 192339, was recorded on May 26, 1954, in Volume 17 of Quartz Lode Record, at page 149, Records of the County Clerk and Recorder of Silver Bow County, Montana.

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(a) Exploration operations have been carried on since July of 1953. These were commenced by geologists of the Atomic Energy Commission who first conducted radiometric surface and geological studies of an area of approximately three (3) square miles in the vicinity of the Mooney Claim. As stated in their report, RME--2006, "Several anomalies were located along the Siliceous levels in the area, but the Mooney deposit is the most promising one found to date." Three diamond drill holes were drilled in late 1953 by Minerals Engineering Company of Grand Junction, Colorado under contract with the Atomic Energy Commission. Since that date, nine additional diamond drill holes have been drilled, surface trenches dug, and other surface exploratory work. There has been no production to date. The applicant has had no interest in any of this prior exploratory work. With regard to accessibility of mine workings for examination purposes, this prospect is approximately ten (10) miles due west of the City of Butte, and may be reached from Butte via U. S. Highway No. 91 to Silver Bow, Montana, thence four (4) miles over secondary, all-weather roads. Access to the prospect may be accomplished at any time of the year.

(b) There has been no past and there is no current production of the property. From the best available information, tonnage reserve computations based upon exploratory work to date are seven hundred fifty (750) tons of .29 percentage U_3O_8.

(c) In answer to part (c) of Question 4, the following information is submitted herewith:

(1) Report of Virgil R. Chamberlain, Geologist, Atomic Minerals Corporation, as follows:

"Re: Mooney Claim, German Gulch mining district, Silver Bow County, Montana

"The location, general geology features, geological features, mineralization and type of deposit of the uranium bearing vein material found on the Mooney claim are well summarized in the United States Atomic Energy Commission bulletin, RME-2006, titled "Uranium Mineralization at the Mooney Claim, Silver Bow County, Montana." This bulletin was published February, 1954.

"Mr. John B. Flugstad and myself went over the property briefly approximately three months ago prior to its acquisition by the Atomic Minerals Corporation. Outcrop of vein material definitely show uranium mineralization. These uranium materials appear to be associated with stibnite in a quartz and silicified vein deposit similar to those found in the Wilson and President mines in the Clancy district. The principal uranium bearing minerals appear to be metaautunite and torbernite with some possible pitchblende disseminated through quartz veins as well as short distance away from the veins in altered quartz monzonite.

"The Mooney claim lies approximately 10 miles west of Butte and approximately 3 miles southeast of the town of Rocker, Montana. A good access road is available to the property.

"The Mooney claim lies on the southwest edge of the Butte district within the Boulder batholith. Butte has the distinction of being one of the five mining camps in the world that have produced more than a billion dollars worth of ore. Butte has produced approximately three billion dollars worth of metals and accounts for approximately three-fourths of all metals produced in Montana. Mineralization in the main Butte area occurs along near east-west striking fissure type veins. Mineralization has occurred along a system of northeast-southwest striking veins as well as along the system of northwest-southeast trending veins.

"The Butte mining district is a classic example of the zoning within the area of mineralization. This theory is based on the crystallization temperatures of minerals within a solution. Mineral temperatures with a higher melting point are first to percipitate and will form the core of the mineralized area. The metallic mineralization in the Butte veins

roughly exhibit this type of zoning. Copper minerals are found in the central zone. Radiating outward from the central zone mineralization shows an increase in the amount of lead and zinc (lower temperature) minerals which in turn grade to the pink manganese minerals. In many cases siliceous silver ores and minor gold values were found outside the latter zone. This sequence of mineral occurence probably conforms with a decreasing temperature gradient of the ore bearing solutions away from the central source.

"All the uranium minerals found to date have been on the periphery of the Butte district in silicified quartz monzonite and quartz vein material. It is possible that on the account of the known association of uranium bearing minerals with lead and antimony mineralization, the presence of these minerals may serve as a clue to prospecting areas within the Boulder batholith.

"The Mooney claim as well as the Wilson and President show mineralization of this type. The Mooney vein is traceable for the length of approximately 250' along an approximate east-west strike with a near vertical dip. The vein is essentially a siliceous filling, with quartz being the principal non-metallic vein material. The width of the vein varied from 6" to 1½'. The brecciation of the vein material and recementation are apparent. This brecciation was probably caused by the recurrent movement along the silicified zone. These silicified zones are locally known as reefs, and form prominant ridges throughout the area. They usually consist of a number of parallel, discontinuous, silicified stringers and veins which vary from a few inches up to two feet in width. Pronounced alteration of the wall rock primarily from feldspar to clay minerals is evident throughout the area.

"The uranium minerals found to date are secondary and have been identified as autunite and torbernite. These occur in small pockets along the silicified zones. They commonly occur as micaceous crystals in cavities throughout the silicified zones. They commonly occur as micaceous crystals in cavities throughout the silicified stringers.

"It seems probable that some primary pitchblende or uraninite is probably finely disseminated throughout the black cherty quartz. Some assays have averaged as much as 0.64% equivalent uranium.

"Relatively little surface exploratory work has been done on this claim. A few minor pits have been dug along the general strike. Many of which show little or no radioactivity. The vein is terminated on the east by a near north-south striking apalite dike. Cross faults along this dike offset it as much as 20'. However, there is no apparent offset to this dike where the vein intersects the apalite. There is an abrupt change in strike which may indicate a drag with faulting present at depth.

"Since the discovery of the Mooney, which occurred in July, 1953, this property has been mapped by geologists of the Atomic Energy Commission. A diamond drill hole and exploration program was carried on by the Mining Engineering Company of Grand Junction, Colorado under contract with the Atomic Energy Commission.

"The maps showing the location of the vein structures and core holes with respect to the workings as well as the geological map of the property as compiled by the U.S. Atomic Energy Commission are included with this report. The net result of their exploration was to prove that uranium mineralization of ore grade is present along the Mooney vein at depth. It is probable that leaching near the surface may considerably reduce the amount of uranium present there. The uranium leached from the surface should be concentrated near the water table. This suggests the possibility that veins currently showing low radioactivity could possibly have commercial ore at depth.

"Little exploration work has been done. As the claim now stands it is incapable of shipping any appreciable amount of commercial grade ore. I would recommend that a two compartment shaft be sunk at a point on or near the vein to a depth of 150' with crosscuts planned at 50, 100 and 160' levels, driven far enough to intersect the vein material. Drifting will have to be done to the east and west from these crosscuts far enough to intersect the strong north-south trending apalite dike. It is possible that a concentration of uranium bearing minerals will occur near this intersection."

(2) Uranium Mineralization at the Mooney Claim, Silver Bow County, Montana, Atomic Energy Commission, RME-2006 (Exhibit 1).

(3) Mooney Claim Drilled Holes Map (Exhibit 3).

(4) U. S. Atomic Energy Commission Anomaly Map (Exhibit 2).

(5) Geology of Mooney Vein (Exhibit 4).

(6) Plane-table Survey of Mooney Claim, Silver Bow County, Montana (Exhibit 5).

(d) Information with respect to the accessibility of the project has heretofore been given. Silver Bow, Montana,

is the closest shipping point readily available over all-weather roads at a distance of three miles from the project. The railhead at this point is Union Pacific, Northern Pacific, Milwaukee and Butte, Anaconda and Pacific. Any of the above are available. Butte is available as a ready mining supply center. Residence is available at Silver Bow, Montana; Butte, Montana; and Ramsay, Montana.

(e) Manpower is readily available in the Butte mining area, together with all necessary materials, supplies and equipment. Water is available from Norton Gulch and will have to be pumped an approximate distance of one-half mile. Power is available in the immediate vicinity.

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RME-2006

URANIUM MINERALIZATION AT THE MOONEY CLAIM, SILVER BOW COUNTY, MONTANA

By
Wayne S. Moen

February 1954

Salt Lake Exploration Branch
Division of Raw Materials
Salt Lake City, Utah

Technical Information Service, Oak Ridge, Tennessee

Schedule 4 (Exhibit 1)

Subject Category, GEOLOGY AND MINERALOGY.

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URANIUM MINERALIZATION AT THE MOONEY CLAIM SILVER BOW COUNTY, MONTANA

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URANIUM MINERALIZATION AT THE MOONEY CLAIM
SILVER BOW COUNTY, MONTANA

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URANIUM MINERALIZATION AT THE MOONEY CLAIM
SILVER BOW COUNTY, MONTANA

ABSTRACT

Uranium minerals associated with stibnite occur in a vein-type deposit about ten miles west of Butte, Montana. Meta-autunite, and possibly pitchblende, is disseminated throughout a brecciated quartz-stibnite vein as well as in the adjacent altered quartz monzonite.

The mineralized structure is the so-called silicified reef type previously described from the Clancy, Montana, area. Diamond drilling has proven the existence of ore-grade uranium-bearing material at depth.

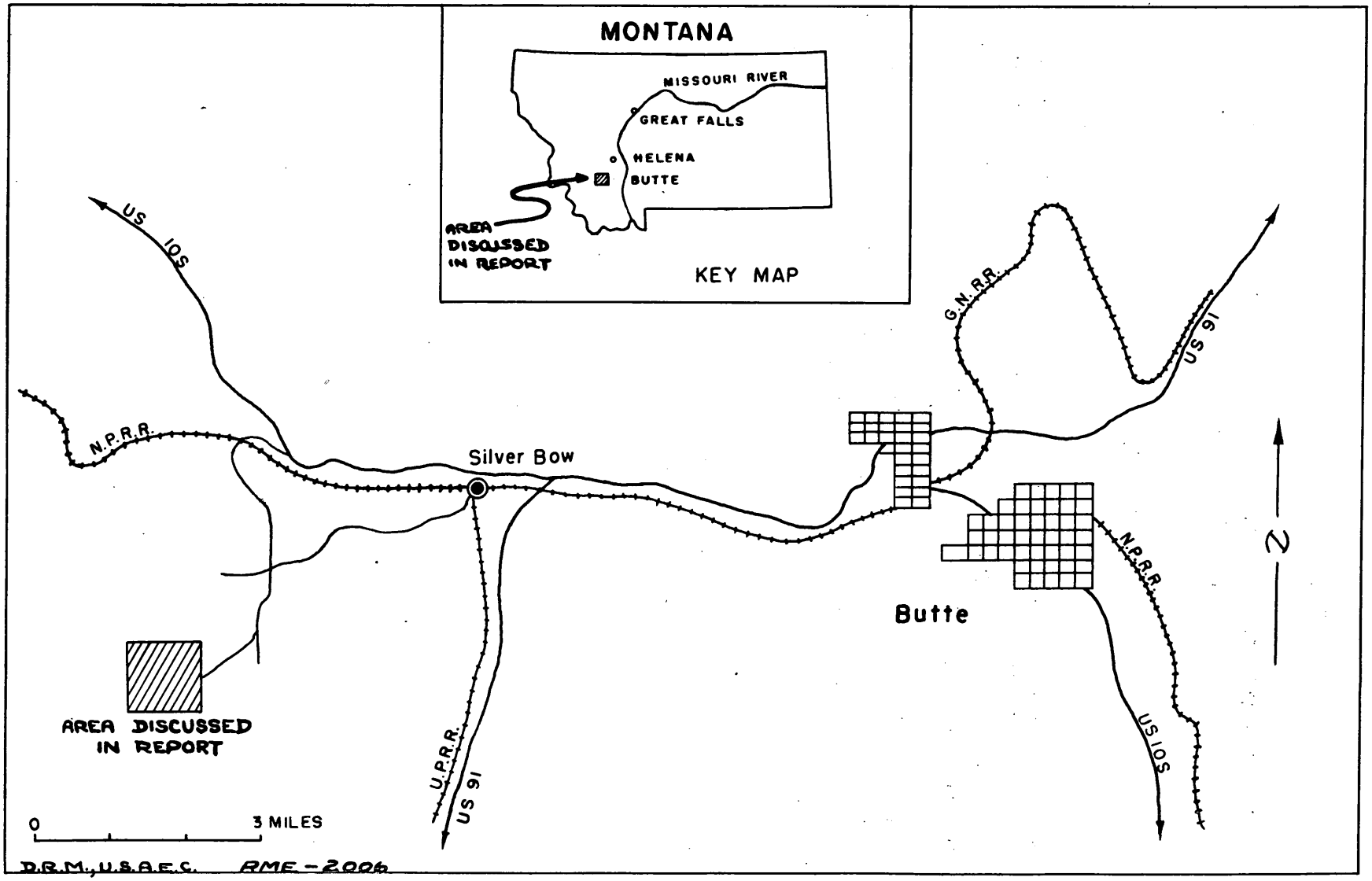

FIG. 1- INDEX MAP OF AN AREA CONTAINING URANIFEROUS SILICEOUS REEFS NEAR SILVER BOW, SILVER BOW COUNTY, MONTANA

INTRODUCTION

Location and Accessibility

The uranium-bearing prospect described in this report is located in Section 32, Township 3 North, Range 9 West, Montana Principal Meridian and on Price Creek drainage in the German Gulch mining district. The prospect is visible from the Butte hill and is only about ten miles due west of that city and may be reached from Butte via U. S. Highway No. 91 to Silver Bow, Montana, thence four miles over secondary and mountain roads (Figure 1).

Silver Bow on both the Northern Pacific and Union Pacific railroads is the closest railroad shipping point.

This occurrence was first discovered by a reconnaissance party from the Butte Sub-Office, Salt Lake Exploration Branch of the Atomic Energy Commission, and published as a ground anomaly on July 15, 1953. Mr. William R. Mooney, along with several others, who examined the map searched for the anomalous area. The area was staked by at least three different parties but all with the exception of Mr. Mooney relinquished their claims.

An area of approximately three square miles was selected for reconnaissance geologic mapping in the course of which several additional anomalies were located. Detailed geologic mapping, as well as topographic mapping, was also carried out in the immediate vicinity of the Mooney claim by geologists of the Atomic Energy Commission during the fall of 1953.

History

The German Gulch mining district has produced $14,000,000 in gold, chiefly from early day placer operations in German Gulch. However, little mining has been done in the area covered by this report. Several shallow prospect trenches and pits have been dug along silica stringers and veins with one inclined shaft sunk to a depth of 30 feet. Most of the work was performed in the early 1900's in the

search for silver, and with the exception of Mr. Mooney's discovery shaft, there has been no mining in the area since that time.

Geography

The area covered by this report is situated approximately ten miles west of Butte and the Continental Divide in a mountainous region with elevations ranging from 5,200 feet to 7,000 feet. The moderately rugged topography is covered with abundant pine trees, sagebrush, and bunchgrass.

Numerous intermittent and permanent streams, which have dissected moderately steep canyons and valleys, provide drainage for the area. These drain northward into the Clark Fork of the Columbia River.

Outcrops are extensive and numerous with the granitic rocks of the area weathering into gentle slopes while aplite dikes and silicified fracture zones form prominent ridges.

GENERAL GEOLOGY

Regional Geology

The area described in this report lies in the southwestern portion of the Boulder batholith, an elongate granitic mass 60 miles in length and averaging about 18 miles in width. Quartz monzonite predominates in the batholith and locally has weathered into huge boulders. Aplite in dikes and irregular masses is found throughout the quartz monzonite.

Silicified zones or reefs which project above the weathered granitic rock form prominent ridges that trend approximately east-west and are nearly vertical. Chalcedonic quartz veins, up to two feet in width, occur throughout the area. The veins seldom outcrop, but numerous prospect pits have exposed them. The Mooney vein is of this type. One-half mile to the northwest of the Mooney claim Tertiary tuffs and rhyolites cover the granitic rocks.

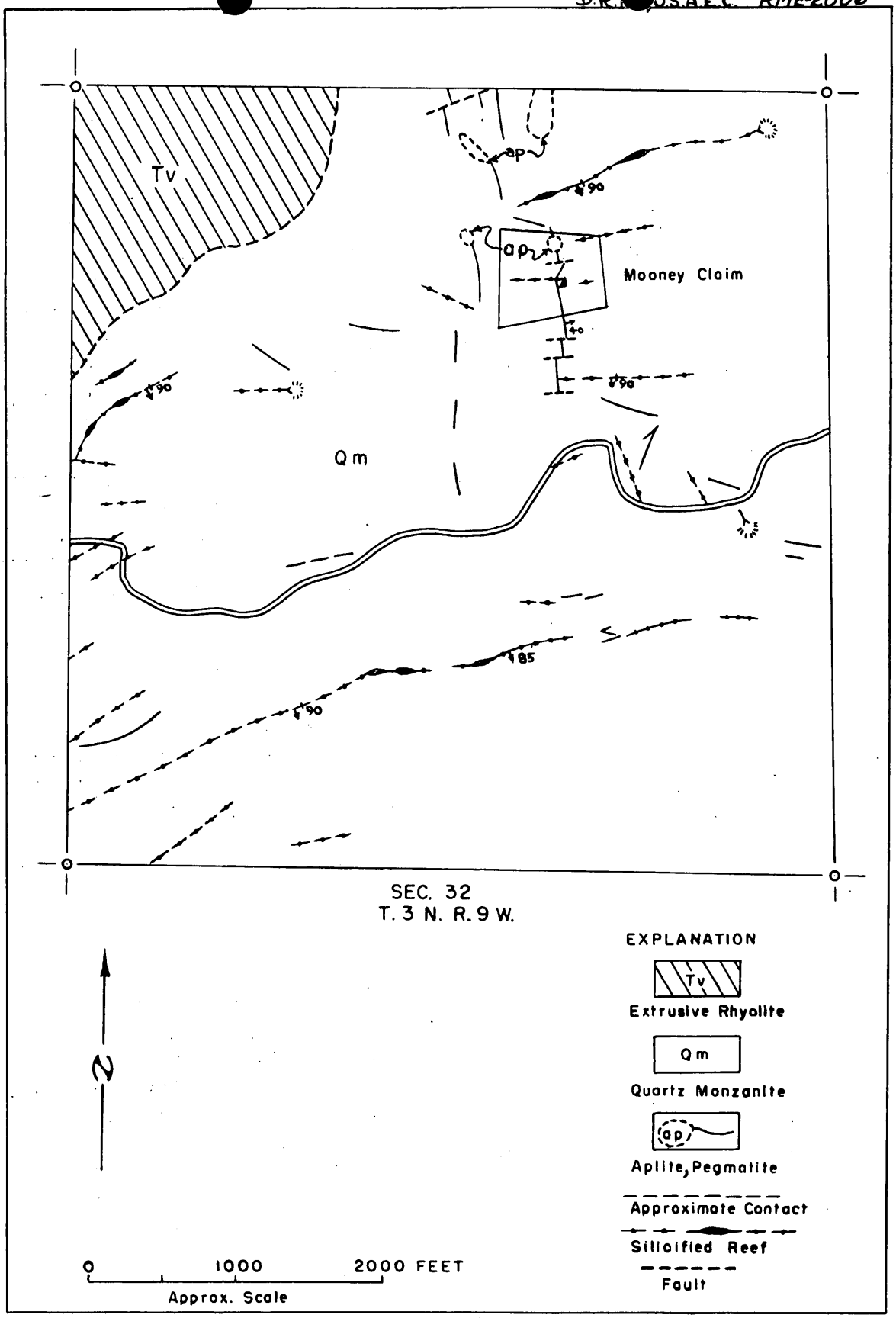

FIG. 2- SILICEOUS REEFS OF THE GERMAN GULCH MINING DISTRICT, SILVER BOW COUNTY, MONTANA

Local Geology (Figure 2)

The principal rock of the area is quartz monzonite. Megascopically the average composition is approximately 30 percent quartz, 30 percent orthoclase, 30 percent plagioclase, and ten percent biotite and hornblende. Locally the quartz monzonite is porphyritic, containing well-developed orthoclase phenocrysts up to four centimeters in length. Small xenoliths up to one foot in diameter occur in the quartz monzonite. They appear to be fine-grained basic rocks and may represent remnants of recrystallized pre-batholith volcanics.

Aplite is prominent in the area and outcrops as dikes and irregular bodies. It is fine-grained and consists of alkali-feldspar and quartz with pegmatitic facies containing well-developed tourmaline crystals. Brecciation of the aplite occurs throughout the area with a black, cherty, silica matrix cementing the angular fragments. The brecciated aplite is abnormally radioactive at several locations.

A ridge-forming aplite dike approximately ten feet thick trends north-south across the Mooney claim, dipping 40° to the east. A chalcedonic quartz vein six inches wide occupies a fracture zone within the aplite dike. This vein, which is parallel to the walls of the dike, consists of alternating light and dark banded chalcedonic quartz, the darker quartz being slightly radioactive. Red jasperoid quartz occurs as small discontinuous stringers throughout the aplite.

DETAILED GEOLOGY

Siliceous Reefs

The silicified zones, locally called reefs, are nearly vertical and trend approximately north 70° east to east-west, forming prominent ridges in the area. These reefs consist of numerous parallel discontinuous silica stringers and veins ranging from several inches to two feet in width. Recurrent movement along the silicified zones has produced breccias and slickensided surfaces.

The breccias are composed of fragments of cryptocrystalline silica of several different colors, gray, brown and black being the

most common, with the black variety cutting and surrounding fragments of the other colors. As in the reefs of the Clancy, Montana, area [1], several stages of silicification can be recognized.

The quartz monzonite adjacent to the silica stringers has invariably been altered, with the alteration consisting of silicification and the forming of clay minerals from the feldspars. A deficiency of mafic minerals in the altered area is pronounced.

Secondary uranium minerals, identified as autunite and torbernite, occur in small pockets along the silicified zones. The minerals usually occur as micaceous crystals in cavities in the silica stringers.

Mooney Deposit (Figure 3)

The Mooney vein, which is traceable for a length of 220 feet, is nearly vertical and strikes approximately east-west. The vein, essentially a siliceous filling, varies from six inches to one and one-half feet in width.

Mineralogy: Quartz, the principal nonmetallic gangue mineral, occurs in a variety of forms, these being white vein quartz, black and brownish cherty quartz, and banded chalcedonic quartz.

From megascopic examination it appears that the white vein quartz accompanied by early galena and pyrite was later brecciated and recemented by banded chalcedonic quartz. No metallic mineralization appears to have accompanied the chalcedonic quartz. A still later brecciation occurred which introduced a black and brownish cherty quartz along with stibnite, the principal sulphide mineral.

The stibnite, which is also sparsely disseminated in the altered wallrock, forms radiating clusters, some of which have been altered to secondary yellow antimonates. Polished section studies indicate that the stibnite appears to penetrate and replace the quartz matrix.

(1) Roberts, W. A. and Gude, A. J., 3rd, Uranium-Bearing Deposits West of Clancy, Jefferson County, Montana, U.S. Geol. Survey Bulletin 988-F, 1953, p. 73.

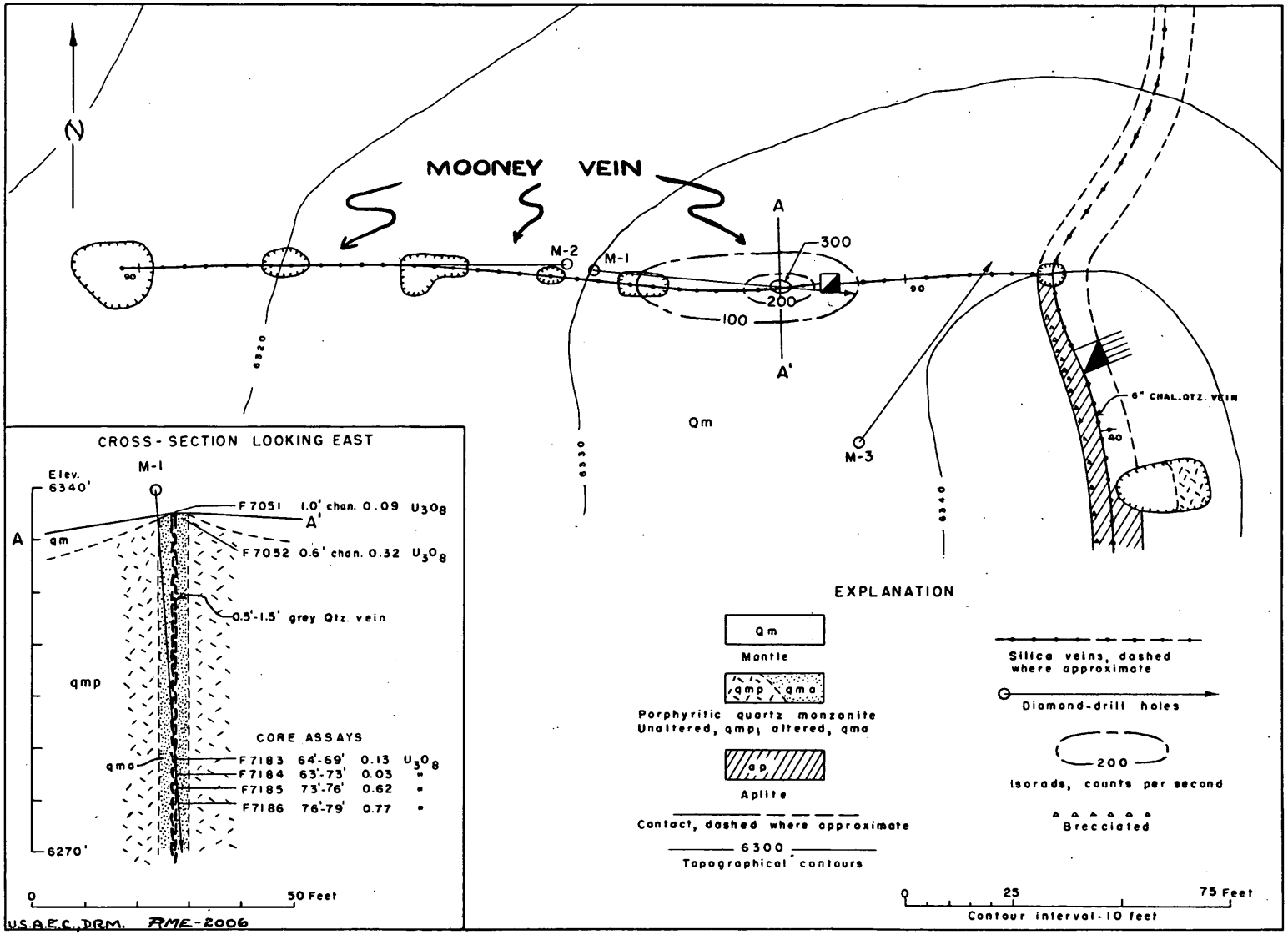

FIG. 3 GEOLOGY OF THE MOONEY VEIN, GERMAN GULCH MINING DISTRICT, SILVER BOW COUNTY, MONTANA

Examination of a diamond drill core section at 55 feet of depth shows 75 to 85 percent quartz, 10 to 20 percent stibnite, and two to five percent secondary antimonates.

Radioactivity

The black cherty quartz, as well as small irregular concentrations of meta-autunite along the Mooney vein, exhibits abnormal radioactivity. The meta-autunite occurs as fluorescent, micaceous crystals on the fracture surfaces in the vein and is also disseminated in the fractures and pore spaces of the altered granitic wallrock. No primary uranium mineral has been identified, but it is probable that the black cherty quartz, some of which assays 0.64 percent equivalent uranium, may contain finely disseminated pitchblende or uraninite.

Chemical assays of samples taken from the point of highest radioactivity on the outcrop of the Mooney vein showed 0.09 percent uranium oxide across one foot of quartz and 0.32 percent from six inches of adjacent wallrock. A section of diamond drill core from 55 feet beneath the above samples assayed 0.61 percent uranium oxide across one foot of vein material, while a three-inch section of the core assayed as high as 2.4 percent uranium oxide.

Structural Features

The siliceous reefs and the less prominent non-reef forming silica veins occupy nearly vertical fracture zones in the granitic country rock of this area. Striking north 70° east to approximately east-west, several of these fractures offset the earlier north-south trending aplite dikes. Well-developed slickensides indicate some horizontal movement along these planes also.

The Mooney vein is traceable on the surface only as far east as the major north-south trending aplite dike of the area. If the vein continues on through the aplite, there has been no apparent offset of this structure, although several cross faults along the dike do offset it as much as 20 feet.

EXPLORATION

Since the discovery of the Mooney occurrence in July of 1953, geologists of the Atomic Energy Commission have conducted radiometric surveys and geologic studies over an area of approximately three square miles in the vicinity of the Mooney claim. Several anomalies were located along the siliceous reefs in the area, but the Mooney deposit is the most promising one found to date.

In November and December of 1953 three diamond drill holes were drilled along the Mooney vein for exploration purposes only. The drilling was performed by Minerals Engineering Company of Grand Junction, Colorado, under contract with the Atomic Energy Commission.

Immediately after bottoming, each hole was probed to determine if any radioactivity was present. Sections of core from portions of the hole showing abnormal radioactivity were chemically assayed.

Hole M-1 strikes north 83° west and dips 45° east. The hole, which was bottomed at 92 feet, was mineralized from 64 to 79 feet. However, the angle of intersection is very small and the actual width of the zone may not be much over one foot. A very acute angle of intersection was chosen because of the small size and erratic distribution of uranium deposits in this type of vein in other parts of the batholith. Chemical assays of the core were as follows:

64' - 69', altered quartz monzonite, 0.13% U_3O_8.

69' - 73', silicified quartz monzonite with autunite, 0.03% U_3O_8.

73' - 76', black silica vein with stibnite, 0.62% U_3O_8.

76' - 79', silicified quartz monzonite with autunite, 0.77% U_3O_8.

Hole M-2 strikes north 85° east and dips 60° west. This hole was deflected by the main silica vein and remained in altered wallrock paralleling the vein to the bottom of the hole which was 80 feet.

Deflection of the hole is believed to have been caused by the acute angle of intersection and the soft altered wallrock. No mineralization was noted in this hole. A chemical assay from one section of core was as follows:

20' - 28', gray cryptocrystalline silica vein, 0.003% U_3O_8.

Hole M-3 strikes north 35° east and dips 55° north. This hole was designed to cut the silica vein approximately 90 feet east and 20 feet below the ore zone of hole M-1. Gouge was noted in the core at 92 feet, and it is probable that the vein had pinched out at this point. The hole was bottomed at 100 feet and no mineralization was noted. A chemical assay of one section of core was as follows:

20' - 30', limonitic stained altered quartz monzonite, 0.02% U_3O_8

Because of sub-zero weather conditions which made further drilling impractical, exploration was suspended for the season.

CONCLUSIONS

Uranium mineralization of ore grade occurs along the Mooney vein at depth. Leaching at and near the surface may have considerably reduced the amount of uranium present there.

It is suggested that other similar deposits may be found at depth below radioactive anomalies of even lesser magnitude along other veins and siliceous reefs in the area.

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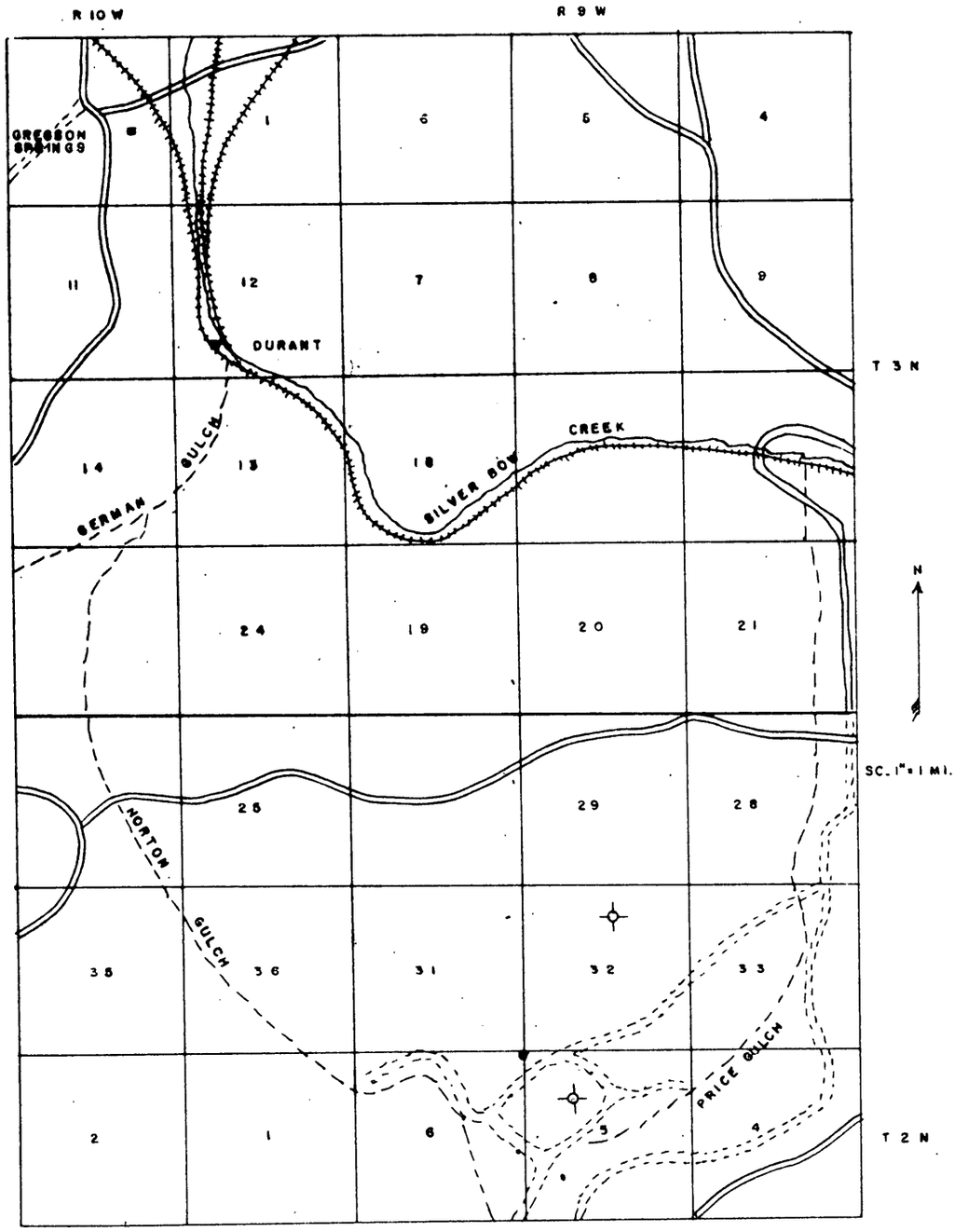

✛ ANOMALY - Anomalous radioactivity has been observed, which may not necessarily indicate uranium on the ground.

NOTE: Posted anomalies represent only those observed where no evidence of active ground operations existed at the time of discovery. Any or all posted locations may be on claimed ground.

Release date: July 1[illegible], 1[illegible]

[illegible]

U. S. Atomic Energy Commission
[illegible] Exploration Branch, [illegible] Sub-Office

Schedule 4 (Exhibit 2)

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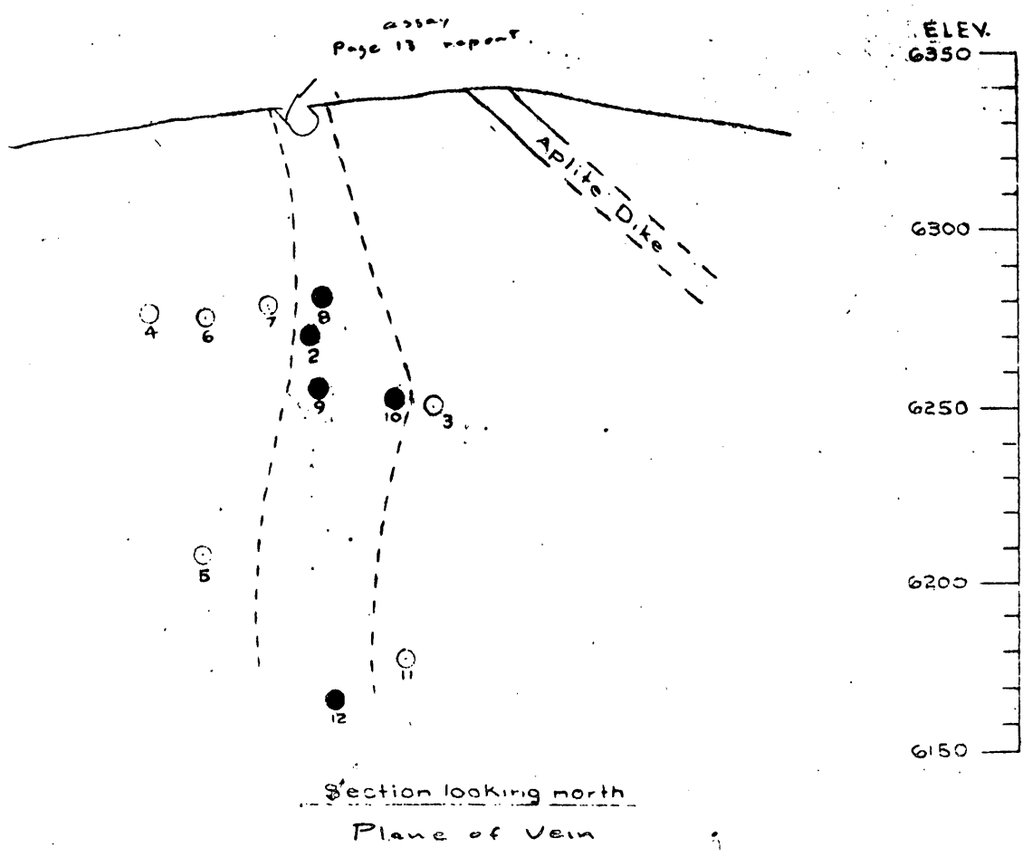
MOONEY CLAIM DRILL HOLES



Hole No.	Values		
2	1.0'	0.77% U_3O_8	
3	—		
4	—		
5	—		
6	—		
7	—		
8	3.0'	~~0.18~~ .250	chemical assay
9	4.0'	0.07 .11%	chemical assay
10	2.0'	1.0 1.0	
11	2.0'	0.02	
12	2.0'	0.14 —(no ass)	

radiometric only

Ore Holes

Scale 50 feet

Schedule 4 (Exhibit 3)

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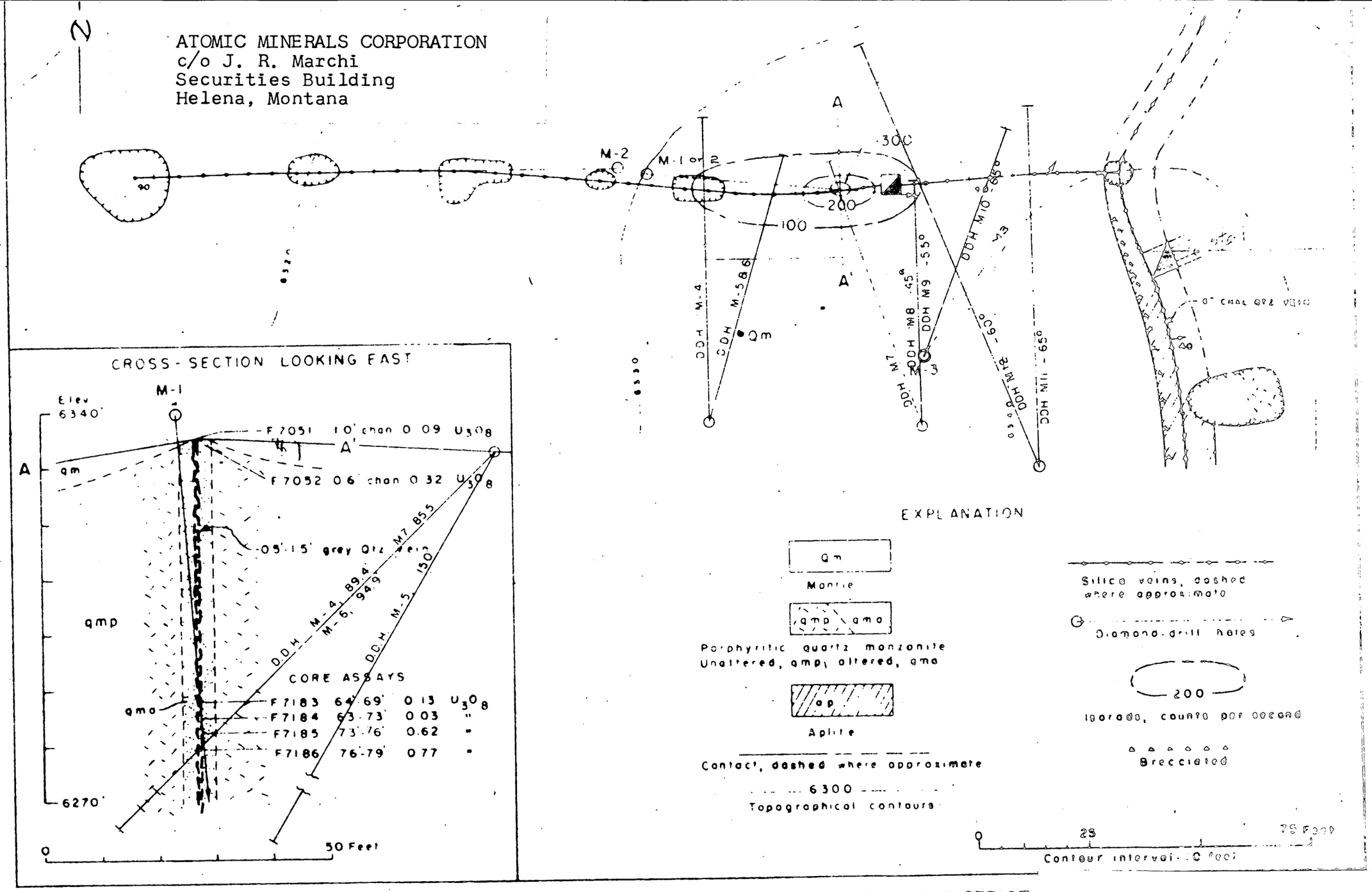

FIG. 3 GEOLOGY OF THE MOONEY VEIN, GERMAN GULCH MINING DISTRICT, SILVER BOW COUNTY, MONTANA

Schedule 4 (Exhibit 4)

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SCHEDULE 5

Proposal (A)

1) Sink 4½' x 7½ cribbed prospect shaft on vein to a depth of 150 feet. This will be essentially vertical, however may deviate from the vertical possibly 1 degree.

2) At depth of 75 feet explore vein with 5 x 7 drifts, both east and west from shaft for a distance of 50 feet.

3) Same at depth of 150 feet.

4) At depth of 150 feet cross cut (5 x 7) south from the prospect shaft for a distance of 40 feet; at 30 feet enlarge to 12 x 9 x 7 for small station and raise vertical 5 x 9 operating shaft timbered with 8" x 8" x (5 ft. centers) framed timbers, completely lagged with 2". Shaft shall be finished with 1 hoisting compartment and 1 manway and pipe compartment. Shaft is to be equipped with hardwood cage guides, treated timbers, ladders, and landings every set, 3 inch air line and 2 inch water lines.

5) At depth of 75 feet cut 7 x 9 x 7 station and cross cut north to intersect vein. This will intersect original prospect shaft. The prospect shaft

will then be equipped with chute mouths on 75 and 150 foot levels, and manway compartments installed. This will then be used as a raise in mining operation.

Total work: (excavation)

150'	prospect shaft (4½ x 7½)	$ 20,250 ✓
100'	drift (5 x 7) @ 75 foot level	3,000
100'	drift (5 x 7) @ 150 foot level	3,000
40'	cross-cut (5 x 7) @ 75 foot level	1,600
	enlarge for station @ 75 foot level 336 cu. ft. excavation	200
40'	cross-cut (5 x 7) @ 150 foot level	1,600
	enlarge for station @ 150 foot level 336 cu. ft. excavation	200
150	raise (operating shaft) (5 x 9) timbered as per specifications above	9,000
		$ 38,850

(Please refer to Exhibit 1)

Proposal (B)

An alternate to above plan would be to sink the 5 x 9 (timbered) operating shaft at point 35 feet south of vein, cross cut north to intersect vein at 75 and 150 foot levels, drive the drifts and put up a raise on the vein to facilitate mining operations. This would be somewhat more costly by the amount it costs to sink rather than raise the operating shaft, as against the saving of raising rather than sinking the prospect shaft (or raise as the case may be). Furthermore, this does not offer flexibility in change of plans which may be desirable as the exploration proceeds.

(Please refer to Exhibit 1)

Permanent Operating Equipment

Headframe, Hoist, Cage, and House

Compressor (and house)

Tool and supply building

Ore bin

Drilling machines (2)

Mine cars (4)

Hand tools

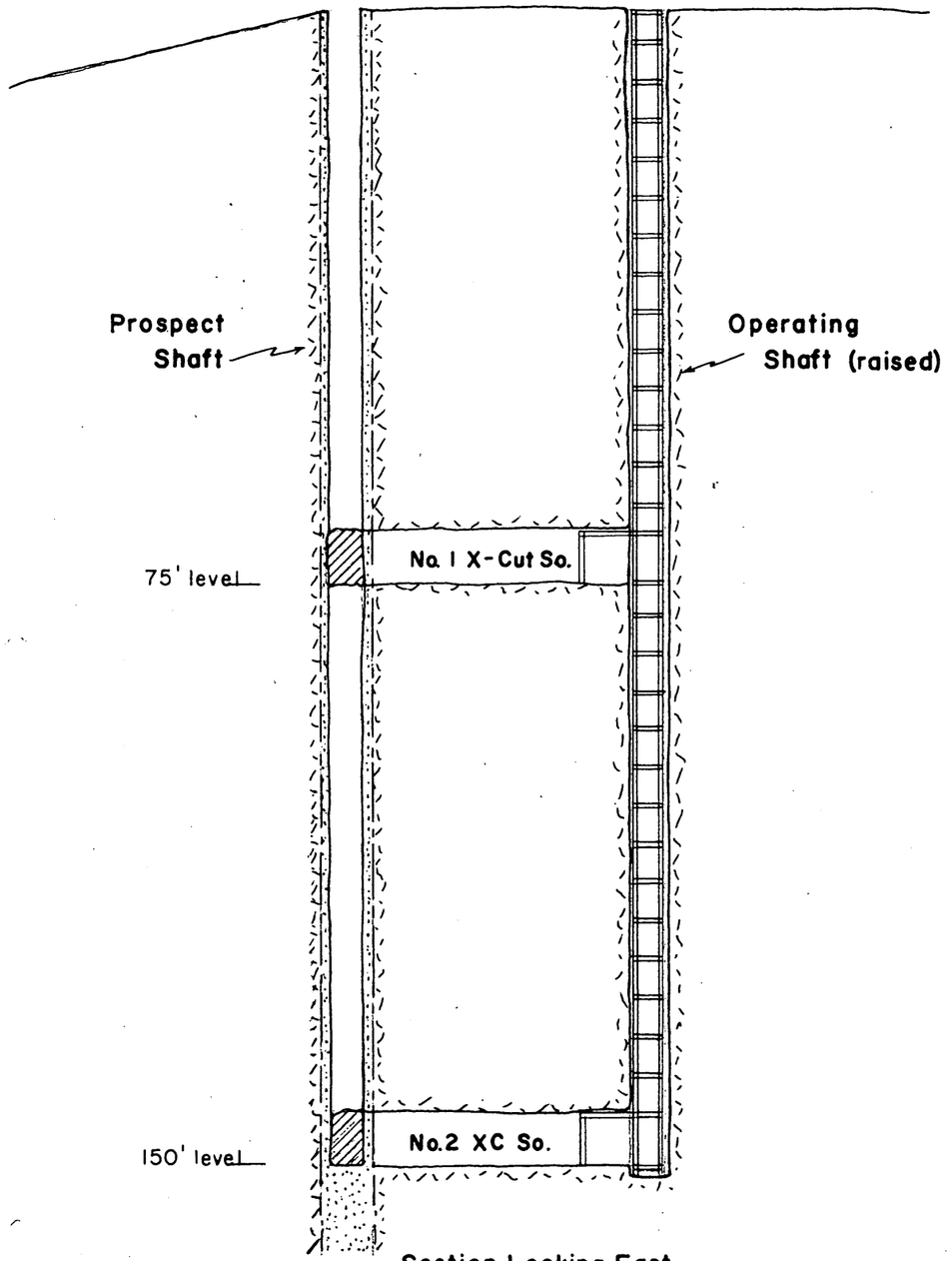
Rails and pipe

ATOMIC MINERALS CORPORATION
c/o J. R. Marchi
Securities Building
Helena, Montana

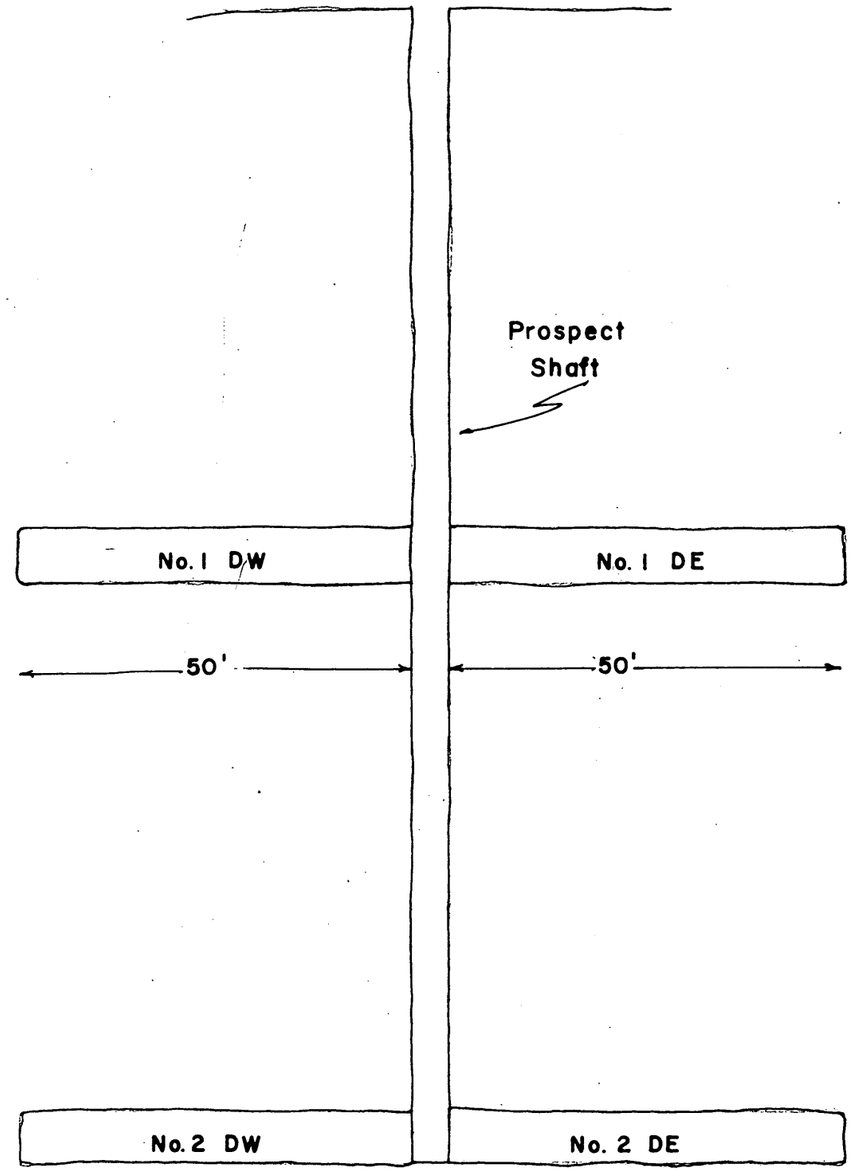
ATOMIC MINERALS CORPORATION

Proposed Plan of Exploration for the Mooney Claim, Silver Bow Co.

1" = 20' JBF 1/55



Section Looking East



Section Looking North
in Plane of Vein

Schedule 5 (Exhibit 1)

Atomic Minerals Corporation
c/o J. R. Marchi
Securities Building
Helena, Montana

DEPARTMENT OF THE INTERIOR
Bureau of Mines Administration
RECEIVED
FEB 10 1958

SCHEDULE 6

It is our intention to commence the work just as soon as possible and to complete it as expeditiously as possible. If an exploration project contract is granted every effort will be made to commence work within thirty days or just as quickly as an independent contractor can commence. It has been estimated that the project can be completed within ten months from date of commencement of work.

Atomic Minerals Corporation
c/o J. R. Marchi
Securities Building
Helena, Montana

SCHEDULE 7

This corporation is the operator of the President Group of uranium properties, Alhambra, Montana. This group constitutes producing uranium properties. Production is obtained from the Wilson Mine which, to date, has produced approximately fourteen cars of ore shipped under AEC license. A discovery of uranium was recently made in the President Mine. It is now confirmed that this latter mine contains producible uranium minerals and development of these ores has been commenced.

Personnel of this corporation include: (1) Virgil R. Chamberlain, Geologist; (2) K. K. Smallwood, Geologist; (3) J. B. Flugstad, consulting Mining Engineer; (4) Henning Norgaard, Mine Boss; (5) Wm. G. Chebul, Land; (6) Daniel J. Sullivan, Legal; and (7) J. R. Marchi, Administrative. All technical personnel, i.e., geology, engineering, production, have had extensive mining experience and some with invaluable specialized experience. Mr. Chamberlain, for example, spent approximately three years with the Manhattan Project doing field geology for uranium minerals on the Colorado Plateau. Both Mr. Chamberlain and Mr. Flugstad are graduates of the Montana School of Mines and are former employees of Anaconda Copper Mining Company as geologist and engineer, respectively. Mr. Norgaard has been engaged in mining for over twenty-five years.

Atomic Minerals Corporation
c/o J. R. Marchi
Securities Building
Helena, Montana

SCHEDULE 8

Estimate of Costs

(a)	Independent Contracts (Exhibits 1 & 2)		
	--150' prospect shaft (4½ x 7½).....	$20,250.	
	--200' drift -	6,000.	
			$26,250.00
(b)	Labor, Supervision, Consultants		
	--Administrative, geological and engineering; fees and expenses; $25. per day for an estimated 100 days		2,500.00
(c)	Operating materials and supplies		
	--Assumed in item (a) above.		0.00
(d)	Operating equipment		
	--Assumed in item (a) above-		0.00
(e)	Rehabilitation and repairs		
	--None		0.00
(f)	New buildings, improvements, installations.		
	--20' headframe, square timbers, bolted.	$350.	
	--16 x 20 compressor house	550.	
			900.00
(g)	Miscellaneous		
	--None		0.00
(h)	Contingencies		
	--None		0.00
	Total Cost of the Project		$29,650.00

ATOMIC MINERALS CORPORATION

Attorney in Fact

J. R. MARCHI
SECURITIES BUILDING
LAST CHANCE GULCH
HELENA, MONTANA

30 December 1954

Mr. Gunner Johnson
Mining Exploration
Radersburg, Montana

Subject: Proposed Vertical Shaft;
Mooney Claim, Silver Bow County, Montana

Dear Gunner:

In line with our conversation Monday last, we would like to have a bid from you regarding this project if you would care to make such a bid.

The project we anticipate contracting is as follows:

> A 150-foot vertical shaft, location to be staked by us, size 5' x 9', timbered with 8" x 8" on four sides with one hoisting compartment, pipe and manway compartments, laced with 2" lagging on all four sides; and with ladders and landings. And, three 25' crosscuts, 5' x 7', at the 50', 100' and 150' depths to trend north from shaft to intersect vein, with necessary timbering and rails.

A report of the U. S. Atomic Energy Commission, dated February, 1954, designated RME-2006, is enclosed for further information.

Sincerely,

ORIGINAL SIGNED
J. R. MARCHI

J. R. MARCHI

JRM:cl

Encl.

Schedule 8 (Exhibit 1)

ATOMIC MINERALS CORPORATION
c/o J. R. Marchi
Securities Building
Helena, Montana

Mont.
Jan. 2, 1955

Bid for The Atomic Minerals Corporation on proposed work at the Mooney Claim, Silver Bow County, Montana.

150 foot vertical shaft
4 feet by 7.5 feet stulled----------$105.00/ft.
4.5 feet by 7.5 feet cribbed with 3" fir---------- 135.00/ft.
5 feet by 9 feet 8" by 8" sets, 5' centers, 2"lag.- 180.00/ft.

The above prices include 2" air line, 3/4" water line, shaft ladders and landings, and 4" by 6" guides.

If water is encountered it shall be handled at cost.

75 feet of crosscutting 5' by 7' heading--------- $40.00/ft.
Timbering where needed with 6" by 6" and 2" lag.- 7.50/ft.

500 feet of drifting 5' by 7' heading---------- 30.00/ft.
Timbering where needed with 6" by 6" and 2"lag.- 7.50/ft.

Crosscut and drift prices include 2" air line, 3/4" water line, 16 lb. rail with necessary switches on each level.

Drifting on ore shall be at cost.

Twenty foot headframe of square timbers and bolted-$350.00

Sixteen feet by 20 feet compressor house---------- 550.00

By:
Gunnar Johnson
Radersburg, Montana

Schedule 8 (Exhibit 2)

Atomic Minerals Corporation
c/o J. R. Marchi
Securities Building
Helena, Montana

SCHEDULE 9

The applicant desires to contract this project to an independent contractor, if satisfactory arrangements can be completed, and to then exercise the necessary supervision over such contractor. If this is possible, then the applicant would desire to furnish its share of the cost by direct payment of money.

In the event this arrangement can not be satisfactorily completed, for example, if contractor bids are not low enough, then the applicant would desire to provide the necessary equipment and contract only the mining labor and, also in this case, exercise the necessary supervisory control.

4 rec'd

RECEIVED
BUREAU OF MINES
JAN 31 1955
SPOKANE, WASH.

Bureau of the Interior
Defense Minerals Administration
RECEIVED
FEB 10 1955

ATOMIC MINERALS CORPORATION

Attorney in Fact

J. R. MARCHI
SECURITIES BUILDING
LAST CHANCE GULCH
HELENA, MONTANA

29 January 1955

Mr. T. E. Howard
Mr. S. W. Zoldok
Defense Minerals Exploration Administration
1201 North Division Street
Spokane 2, Washington

Subject: Supplemental Information to Application for Aid in an Exploration Project; Uranium; Mooney Group, Silver Bow County, Montana

Gentlemen:

As a follow-up to our recent Spokane conference, we have had prepared and enclose herewith additional exhibits pertinent to these prospects. These are diagrammatic exhibits of the diamond drilling project heretofore completed.

As further comment to our discussions of that date, this uraniferous deposit is found associated with silicified reefs or veins. These form numerous prominent ridges in the area. Anomalous radioactivity has been observed by the U. S. Atomic Energy Commission in the area staked by the Mooney Claim and also in the northwest quarter of Section five (5) (See "Anomaly Location Map, German Gulch District"). As a result of a scintillometer ground survey of all surface outcrops in this vicinity, it is our opinion that we have located still another anomaly in the southwest quarter of the northeast quarter of section thirty-two (32) and within the group of claims comprising the Mooney Group. These anomalies have all been noted on outcroppings of siliceous reefs, being the same type of siliceous reefs which have been commercially productive in the Clancy Mining District, Jefferson County, Montana, on the northeast periphyry of the Boulder Batholith. We think it significant that the Mooney Group is in an area comprising the southwest periphyry of the Batholith and of a similar-type geologic formation as the uranium producing Clancy Group. In discussing this matter, the AEC geologists have commented upon the similarity of uranium deposition between the Mooney and the Clancy area.

The reef on the Mooney claim has been drilled to show the existence of uranium minerals. This reef is not localized to

the Mooney Claim area. Outcroppings of the reef are noticeable to the west. Immediately to the west overburden conceals further surface indications although farther to the west, near the west line of section thirty-two, a strong continuation of the Mooney reef has been observed which evidences anomalous radioactivity. Aerial examination of the geology led us to the conclusion that the uranium deposition in the Mooney group is more likely to be widespread than localized, but that this can be confirmed now only by underground exploration work.

If we can be of further assistance please advise.

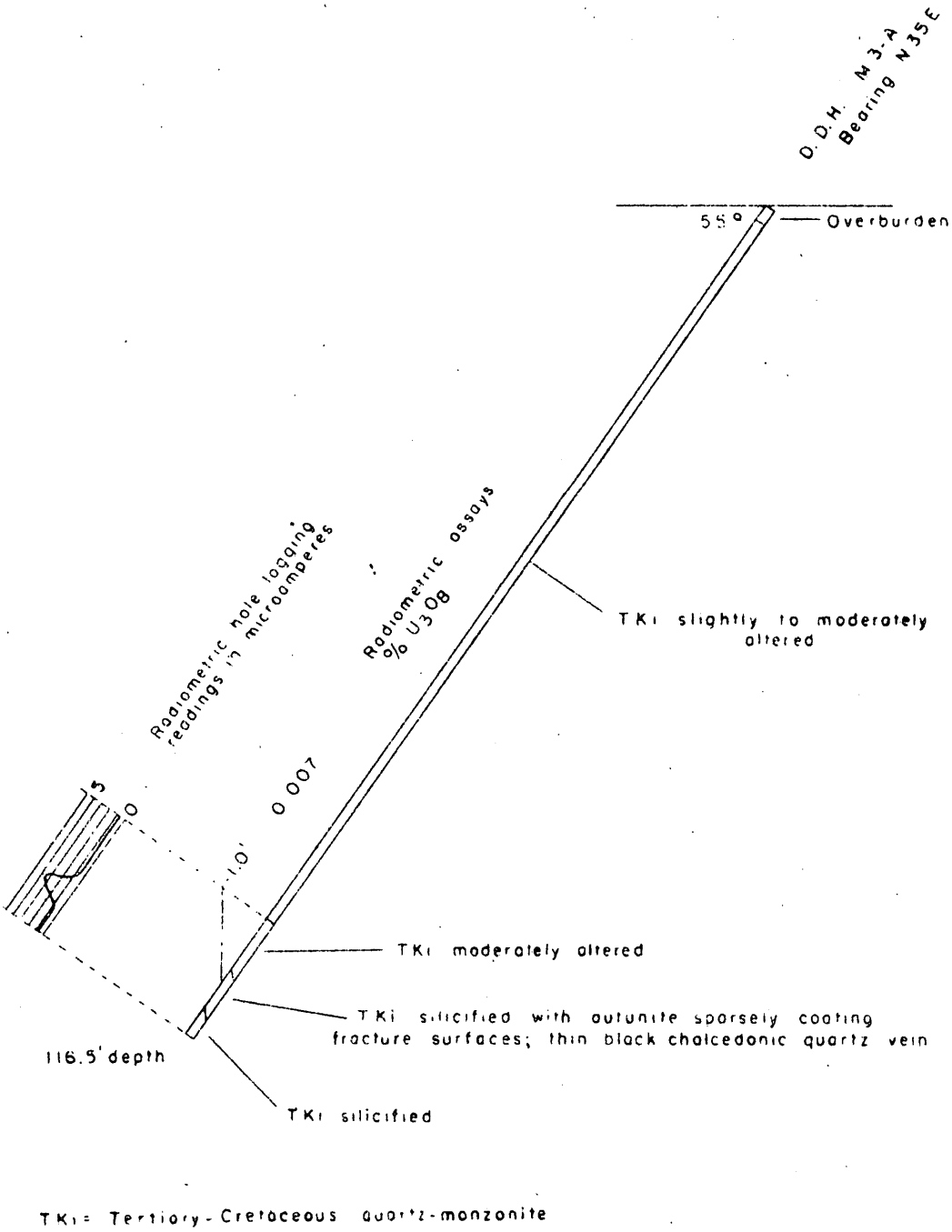
Sincerely,

ATOMIC MINERALS CORPORATION

By J. R. Marchi

J. R. Marchi/cl

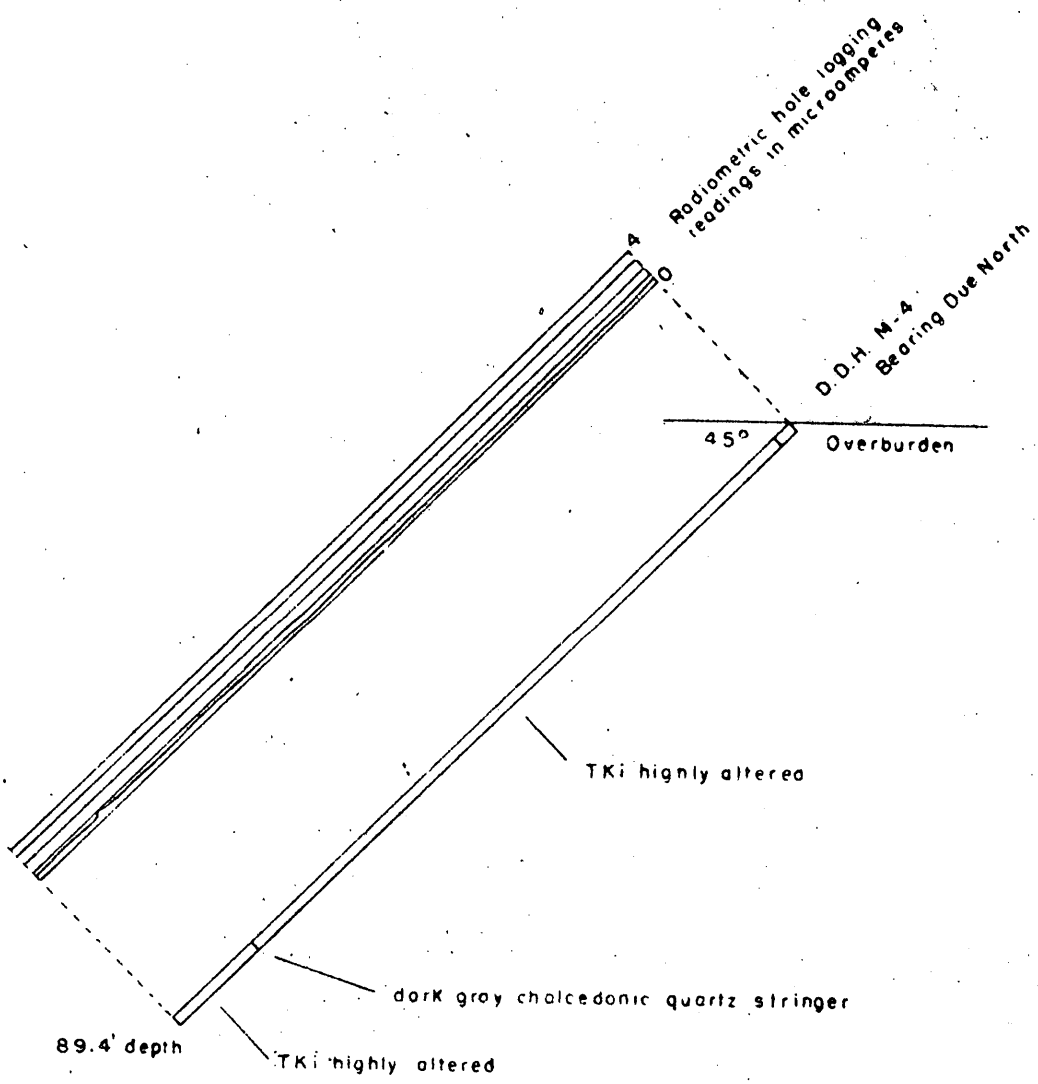
Encl.



USAEC DIAMOND DRILLING PROJECT
DIAMOND DRILL HOLE M-3A
MOONEY CLAIM, SILVER BOW CO. MONT.

Fig 3

Scale, 1" = 20'

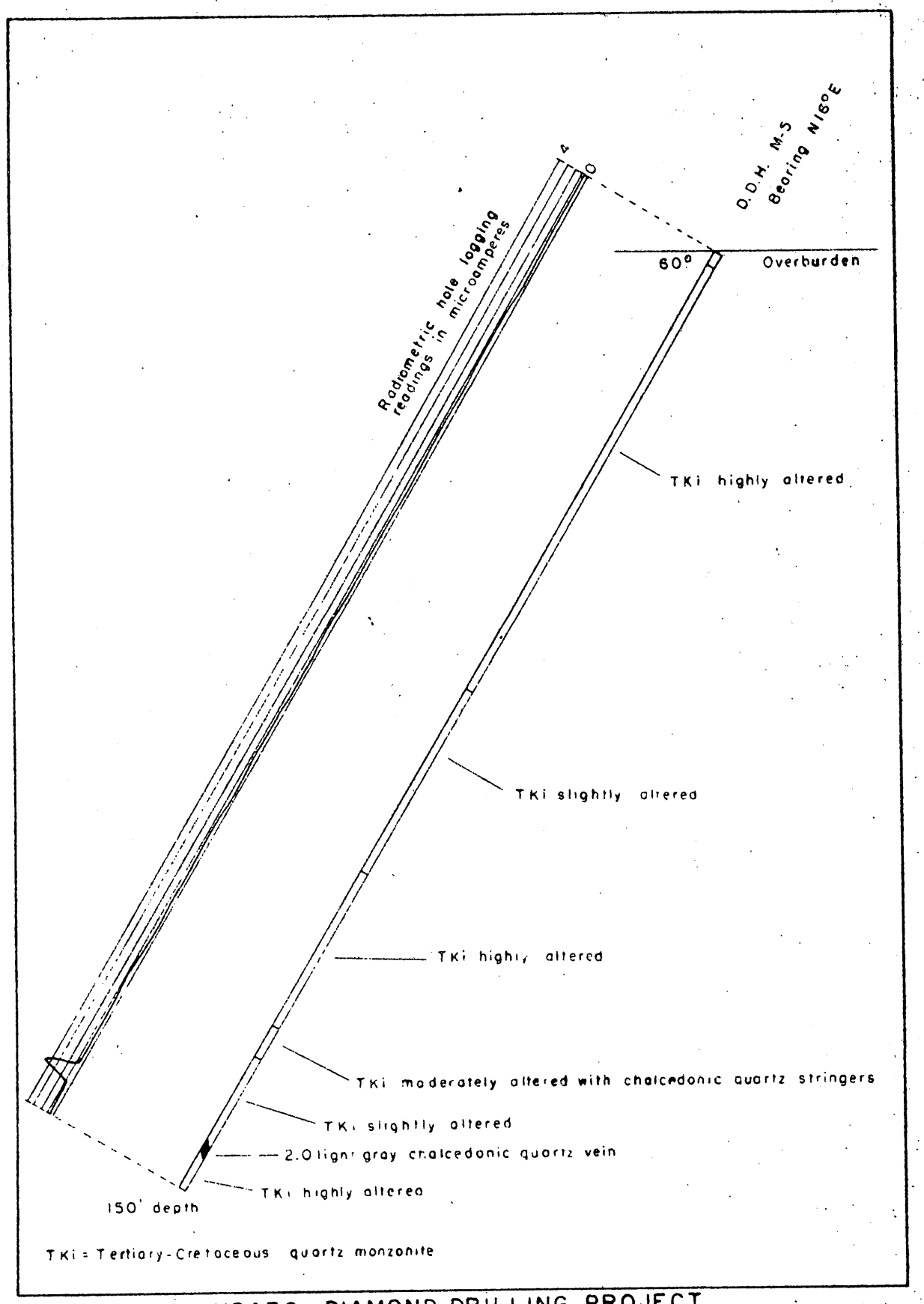


TKi = Tertiary-Cretaceous quartz-monzonite

USAEC DIAMOND DRILLING PROJECT
DIAMOND DRILL HOLE M-4
MOONEY CLAIM, SILVER BOW CO. MONT.

Scale, 1" = 20'

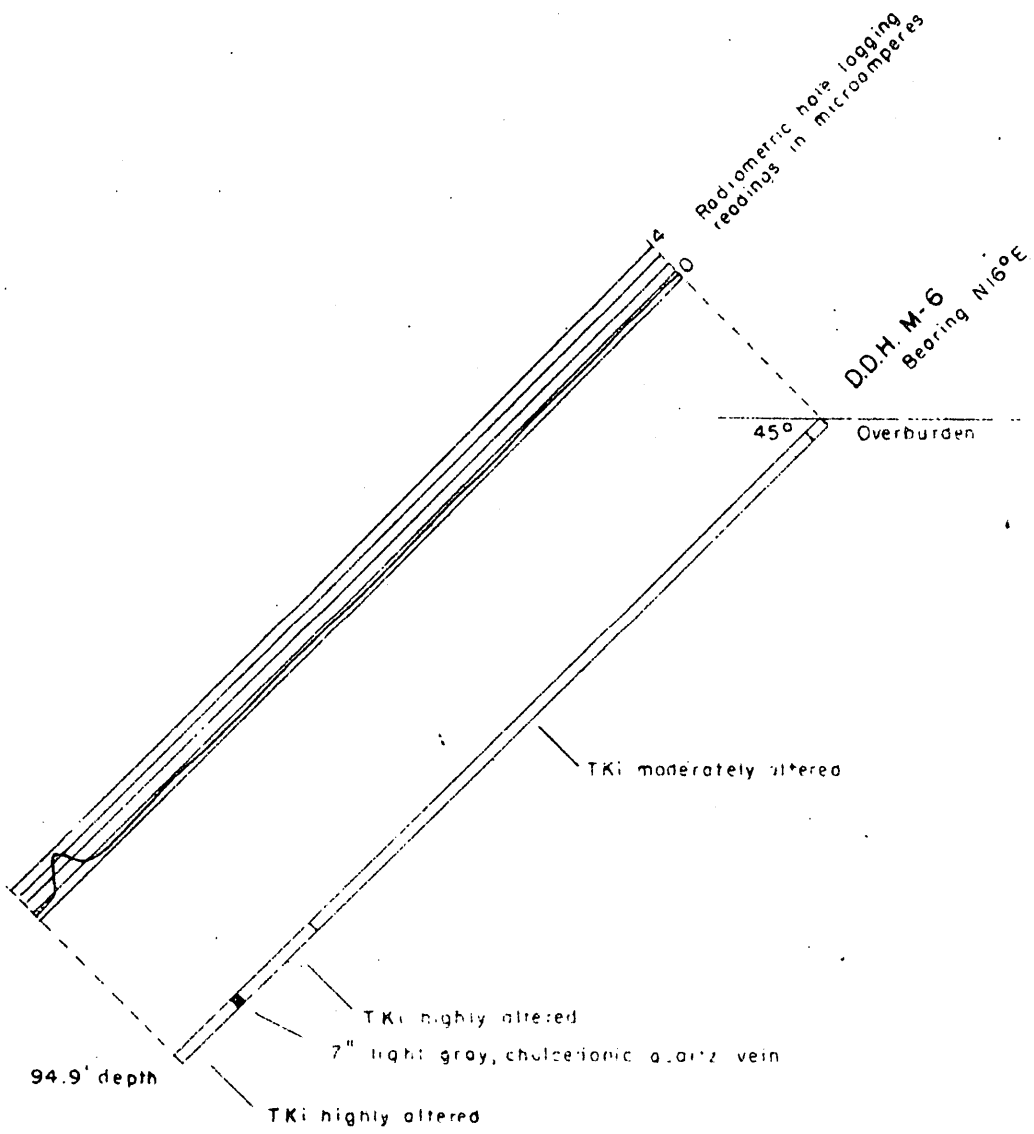
Fig 4



USAEC DIAMOND DRILLING PROJECT
DIAMOND DRILL HOLE M-5
MOONEY CLAIM, SILVER BOW CO. MONT.

Fig. 5

Scale, 1" = 20'

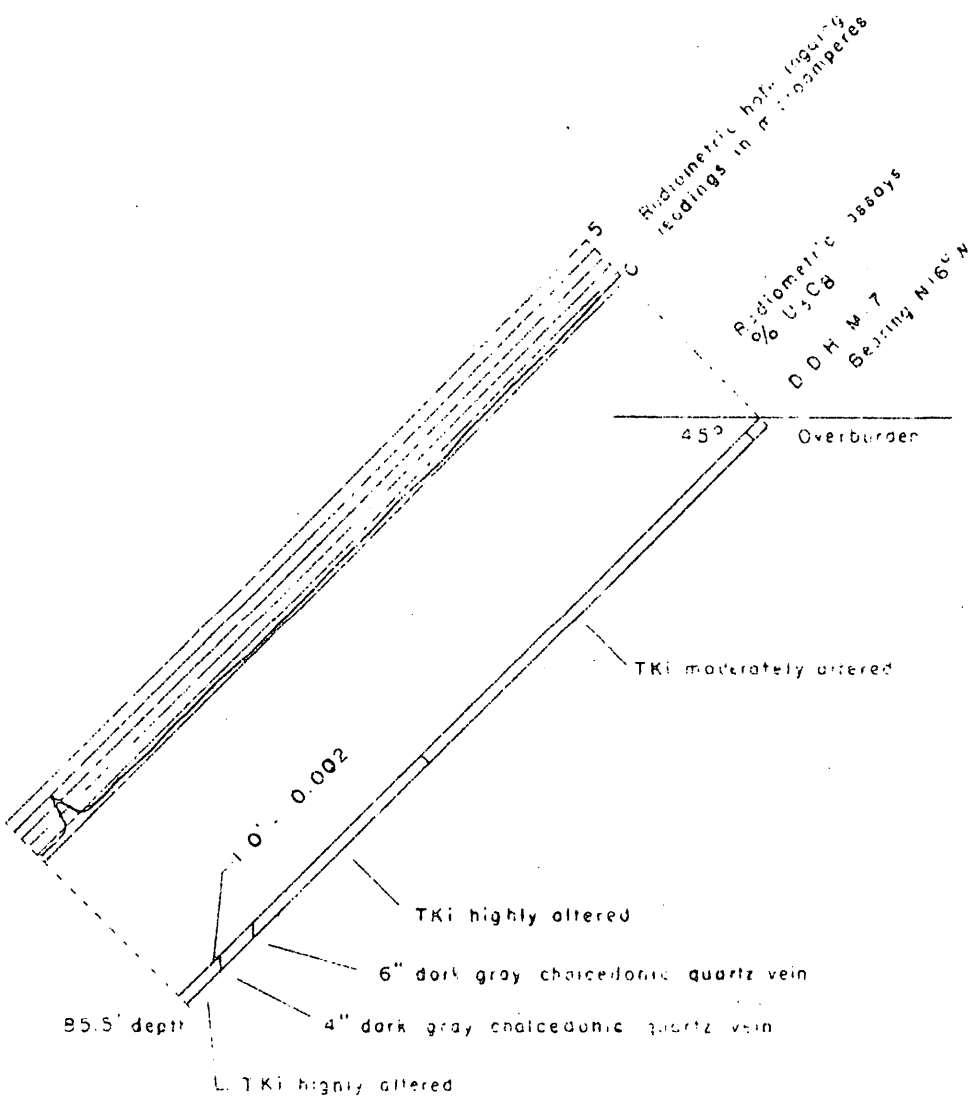


TKi = Tertiary-Cretaceous quartz-monzonite

USAEC DIAMOND DRILLING PROJECT
DIAMOND DRILL HOLE M-6
MOONEY CLAIM, SILVER BOW CO. MONT.

Fig. 6

Scale, 1" = 20'



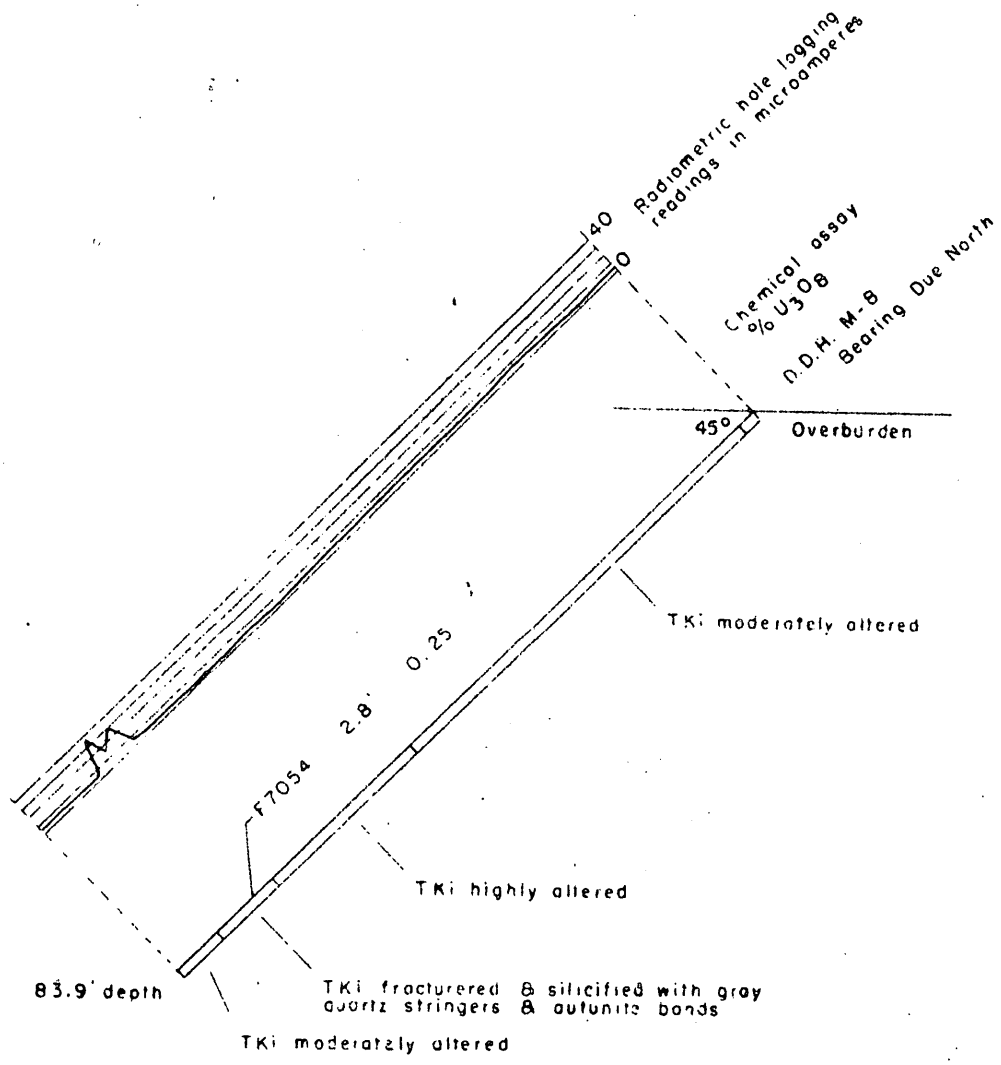
TKi = Tertiary-Cretaceous quartz-monzonite

USAEC DIAMOND DRILLING PROJECT

DIAMOND DRILL HOLE M-7
MOONEY CLAIM, SILVER BOW CO. MONT.

Scale, 1" = 20'

Fig 7



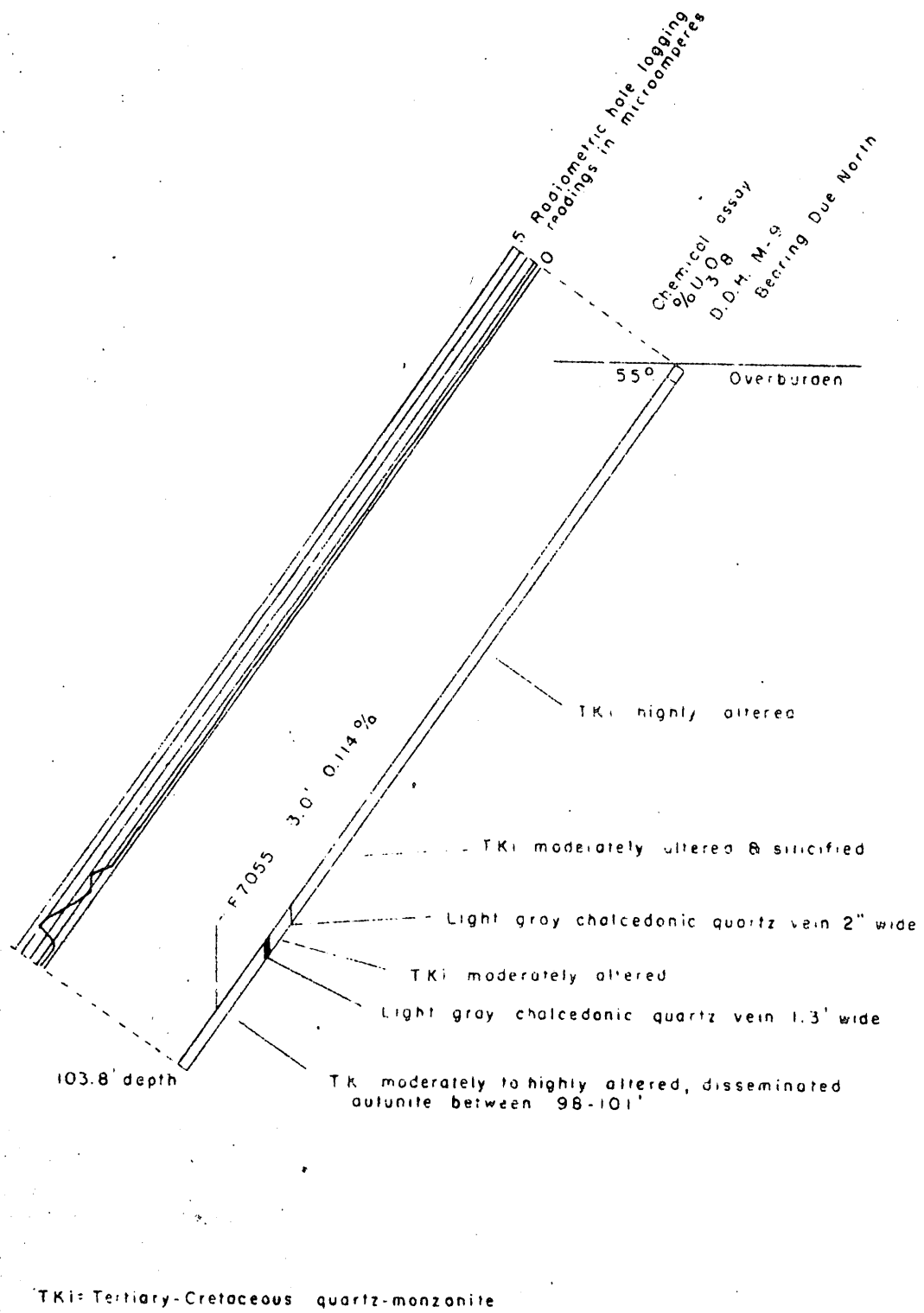
TKi = Tertiary - Cretaceous quartz-monzonite

USAEC DIAMOND DRILLING PROJECT

DIAMOND DRILL HOLE M-8
MOONEY CLAIM, SILVER BOW CO. MONT.

Fig. 8

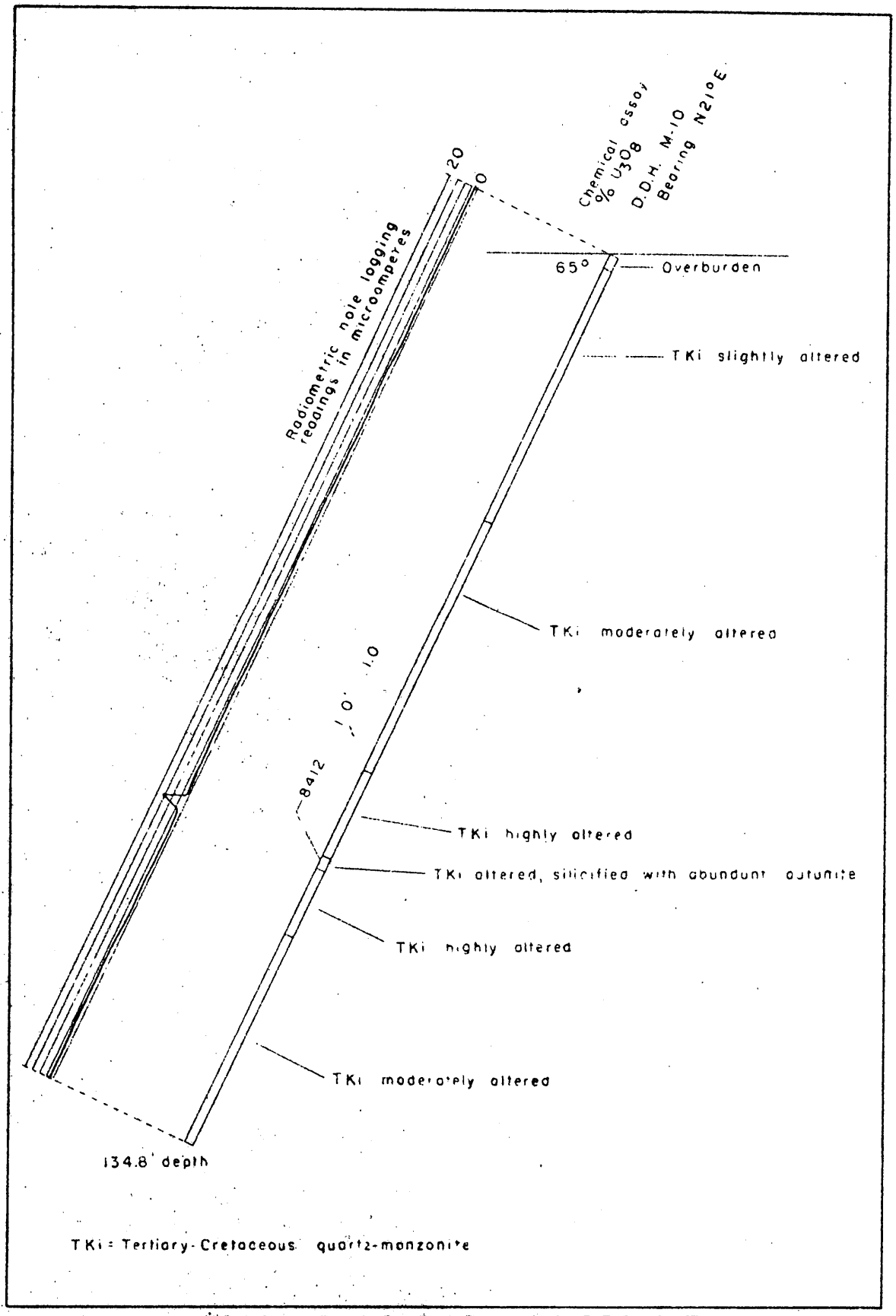
Scale, 1" = 20'



USAEC DIAMOND DRILLING PROJECT
DIAMOND DRILL HOLE M-9
MOONEY CLAIM, SILVER BOW CO. MONT

Fig. 9

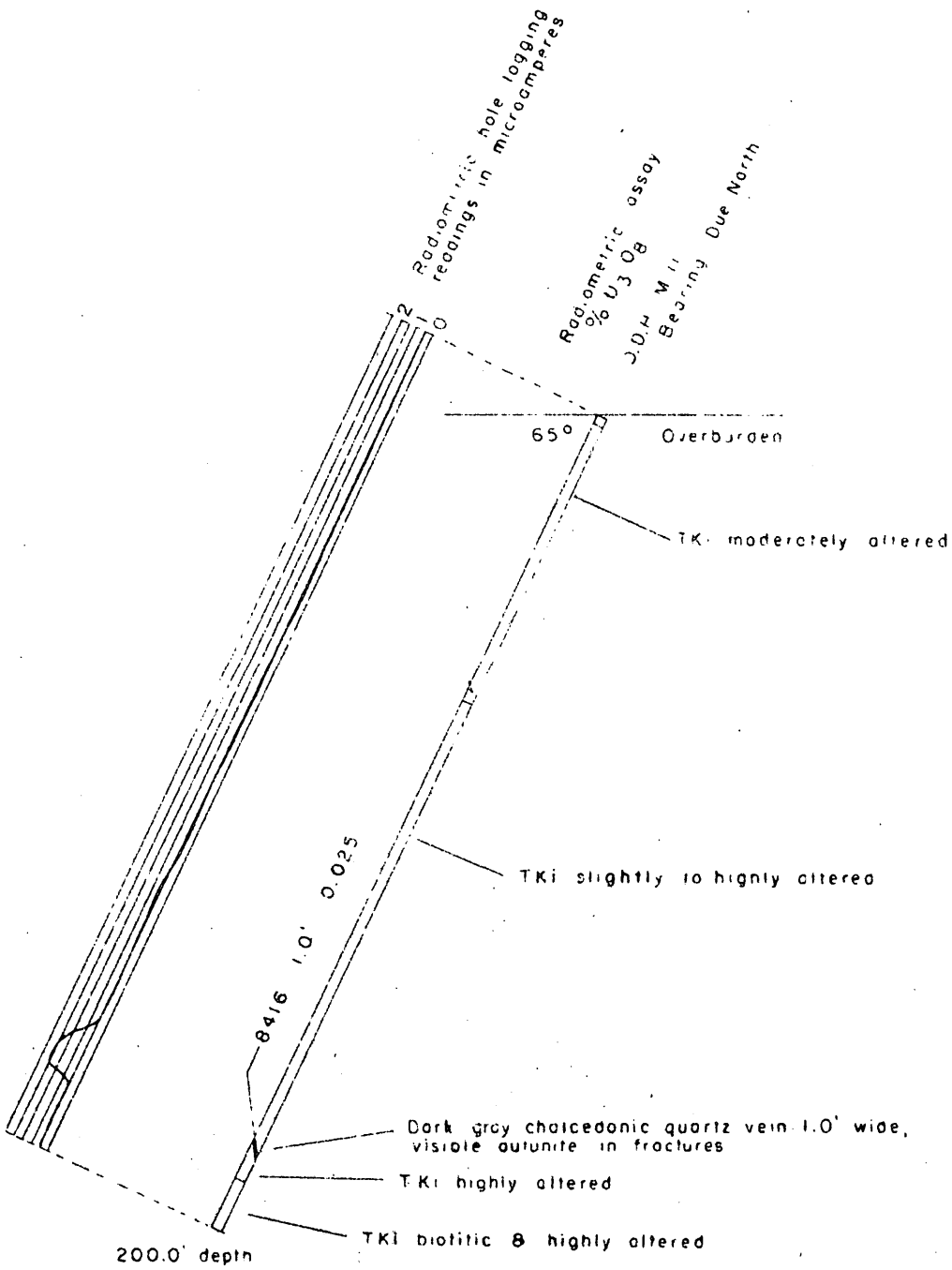
Scale, " = 20'



USAEC DIAMOND DRILLING PROJECT
DIAMOND DRILL HOLE M-10
MOONEY CLAIM, SILVER BOW CO MONT.

Fig 10

Scale, 1" = 20'



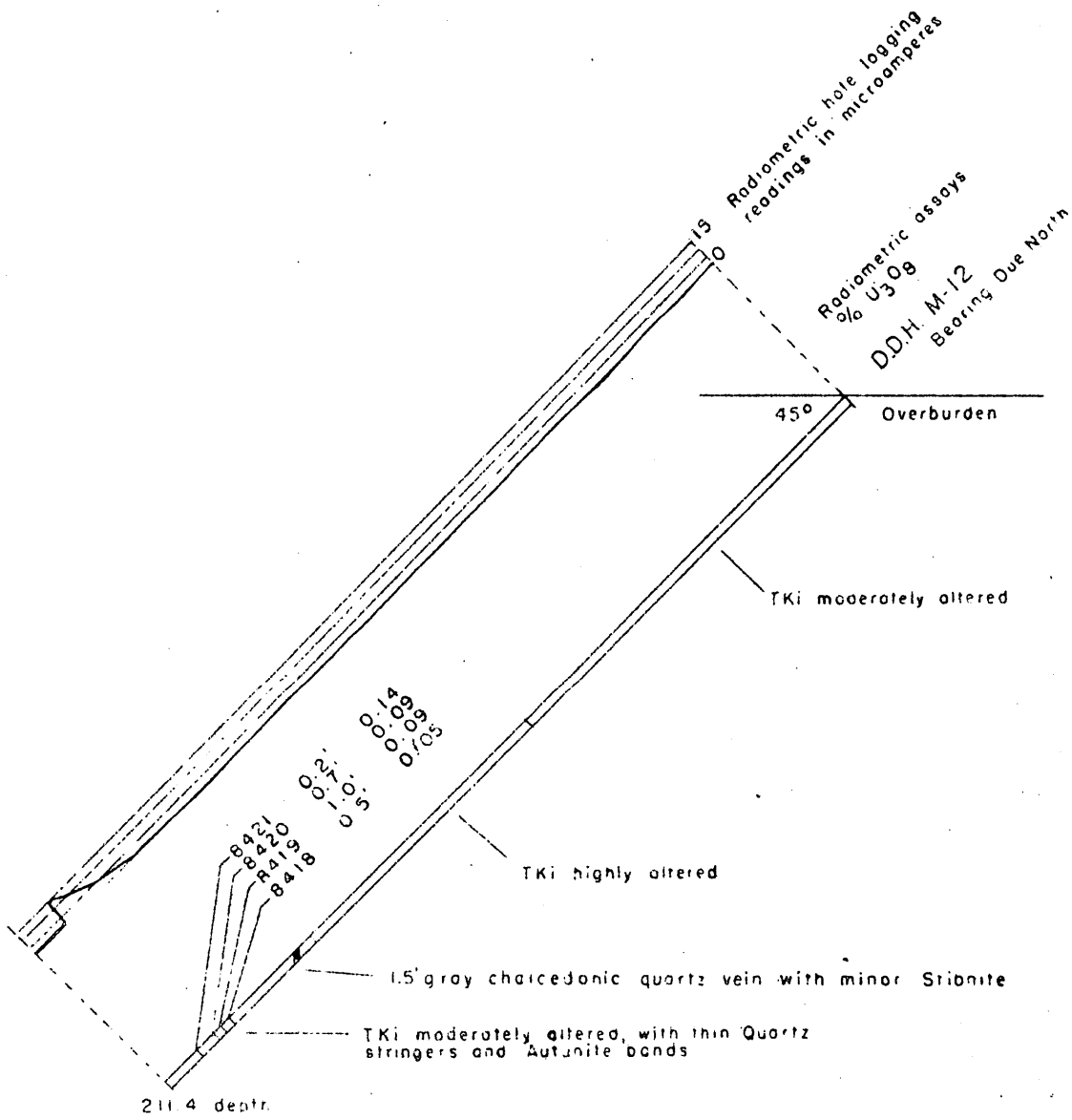
TKi = Tertiary-Cretaceous quartz-monzonite

USAEC DIAMOND DRILLING PROJECT

DIAMOND DRILL HOLE M-11
MOONEY CLAIM, SILVER BOW CO. MONT.

Scale, 1" = 40'

Fig. 11

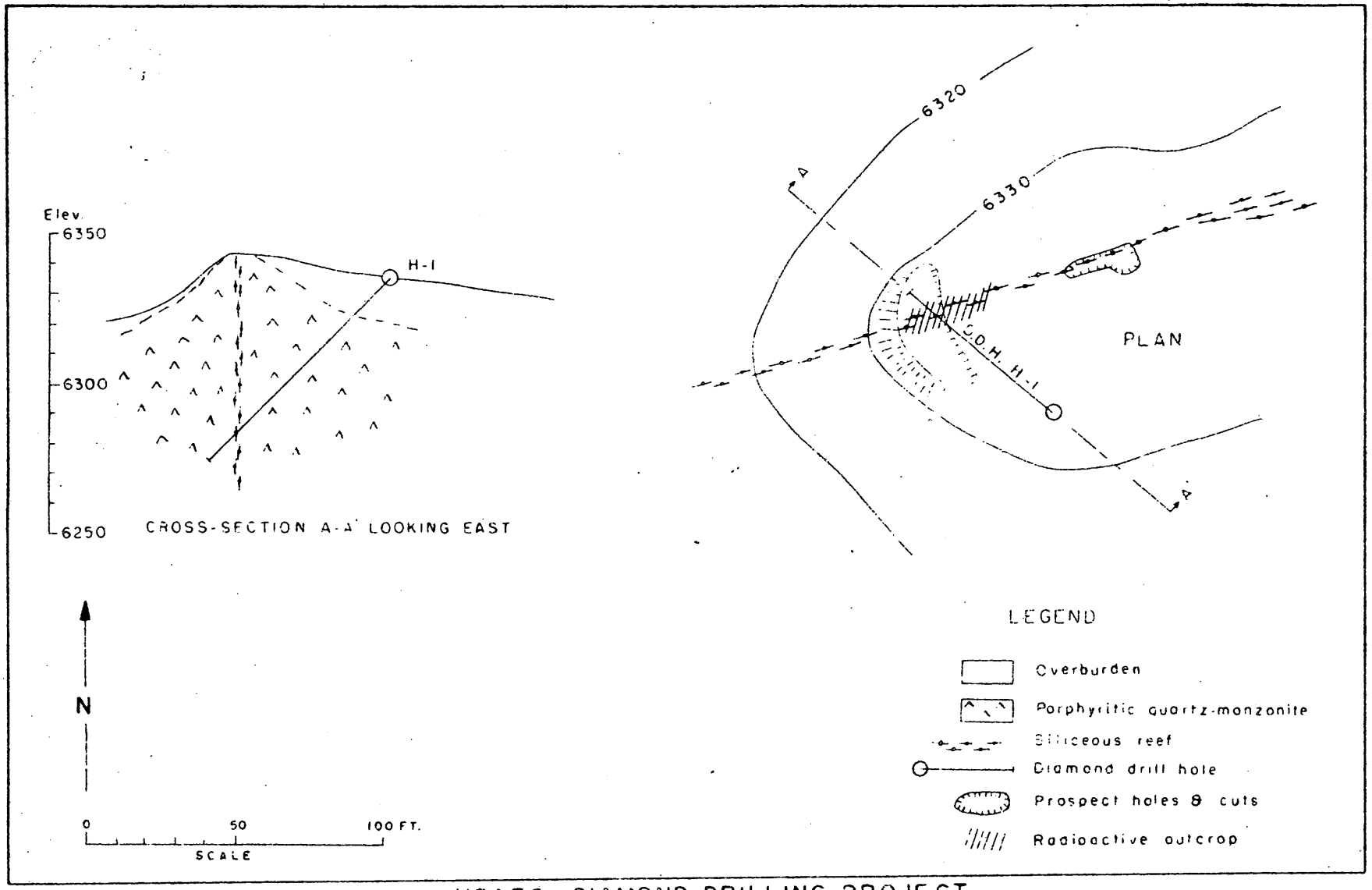


TKi = Tertiary-Cretaceous Quartz-monzonite

USAEC DIAMOND DRILLING PROJECT
DIAMOND DRILL HOLE M-12
MOONEY CLAIM, SILVER BOW CO. MONT.

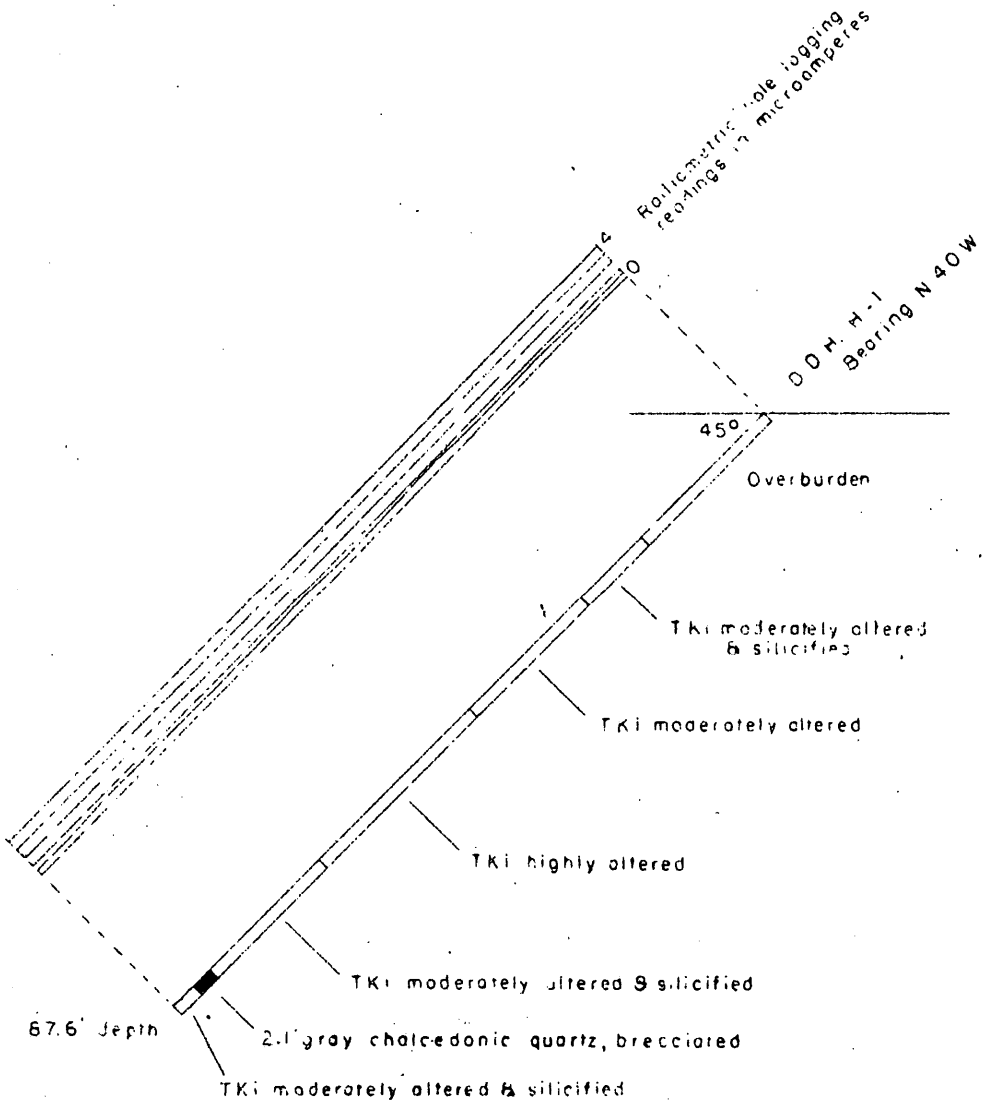
Fig. 12

Scale, 1" = 40'



USAEC DIAMOND DRILLING PROJECT
HILLTOP CLAIM, SILVER BOW CO., MONT.

Fig 13

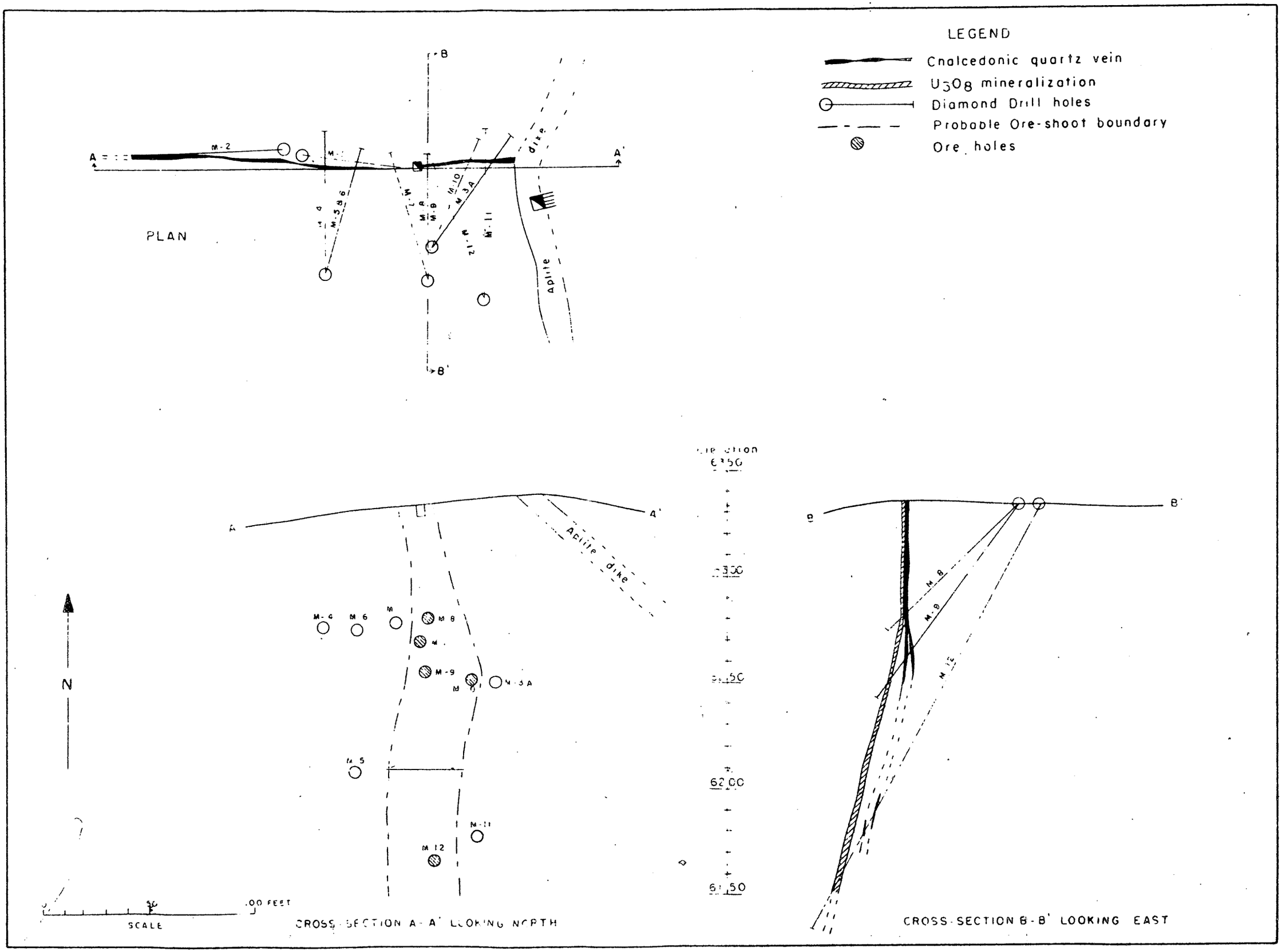


TKi= Tertiary-Cretaceous quartz-monzonite

USAEC DIAMOND DRILLING PROJECT
DIAMOND DRILL HOLE H-1
HILLTOP CLAIM, SILVER BOW, MONT.

Fig. 14

Scale, 1" = 20'



USAEC DIAMOND DRILLING PROJECT

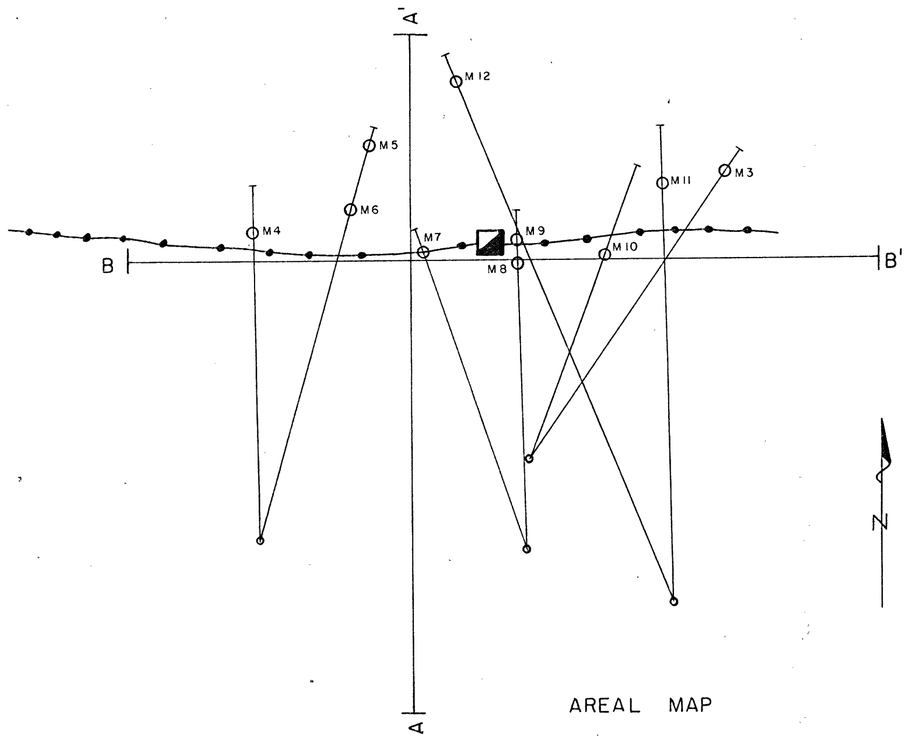
MOONEY CLAIM, SILVER BOW CO. MONT.

Fig. 2

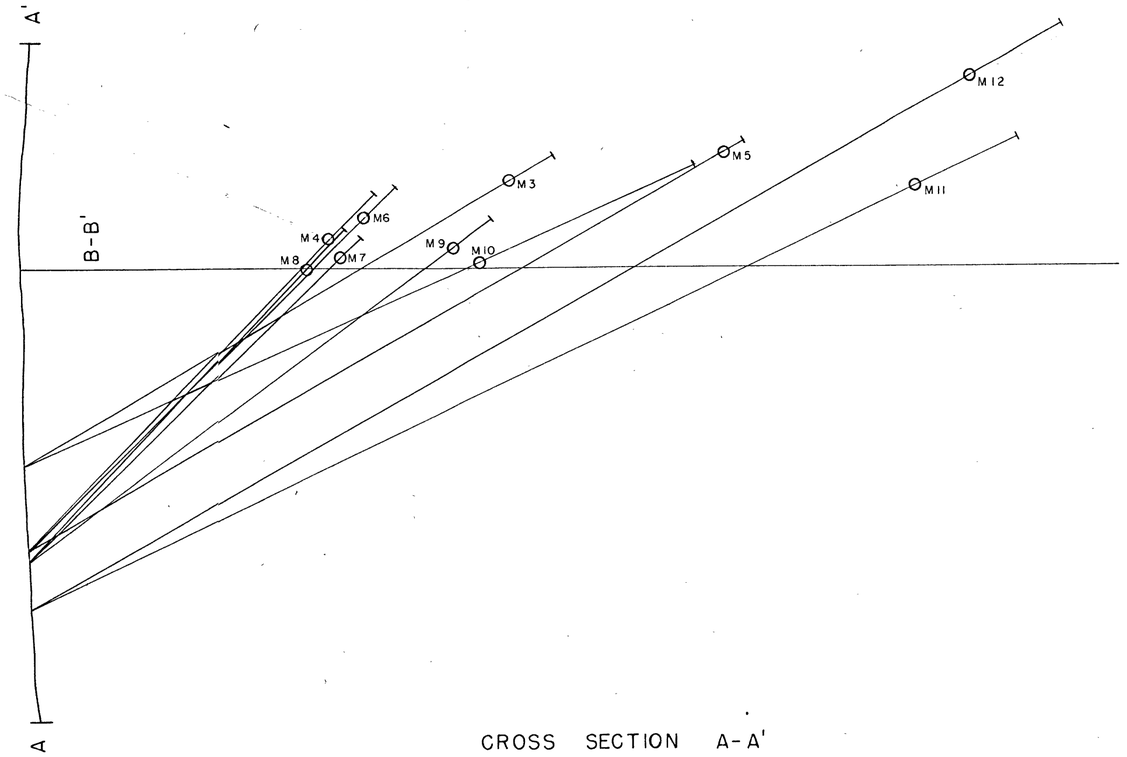
VIA AIR MAIL

VIA AIR MAIL

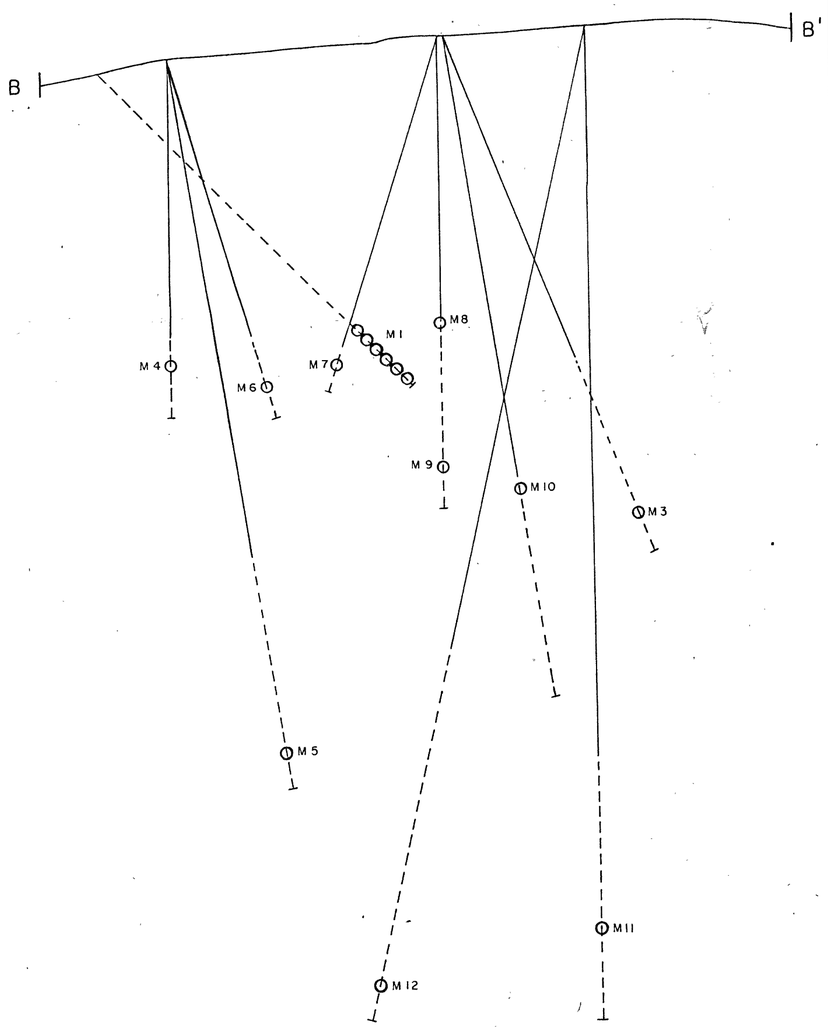
~~Mr. George C. Selfridge, Chairman~~
~~Operating Committee, DMEA~~
~~Department of the Interior~~
~~Washington 25, D. C.~~



AREAL MAP



CROSS SECTION A-A'



LONGITUDINAL SECTION B-B'

Hole No.	Width	eU	eU_3O_8
1	5'		0.13
	4'		0.03
	3'		0.62
	3'		0.77
			about 1' at 0.35 % U_3O_8
8	3'	0.16	0.25
9	4'	0.07	0.114
10	1'	1.00	1.0
11	2'	0.02	—
12	(2'?) (.2?)	0.14	—

EXPLANATION

Vein

Shaft

Radioactivity anomaly

M 7

AEC diamond drill hole

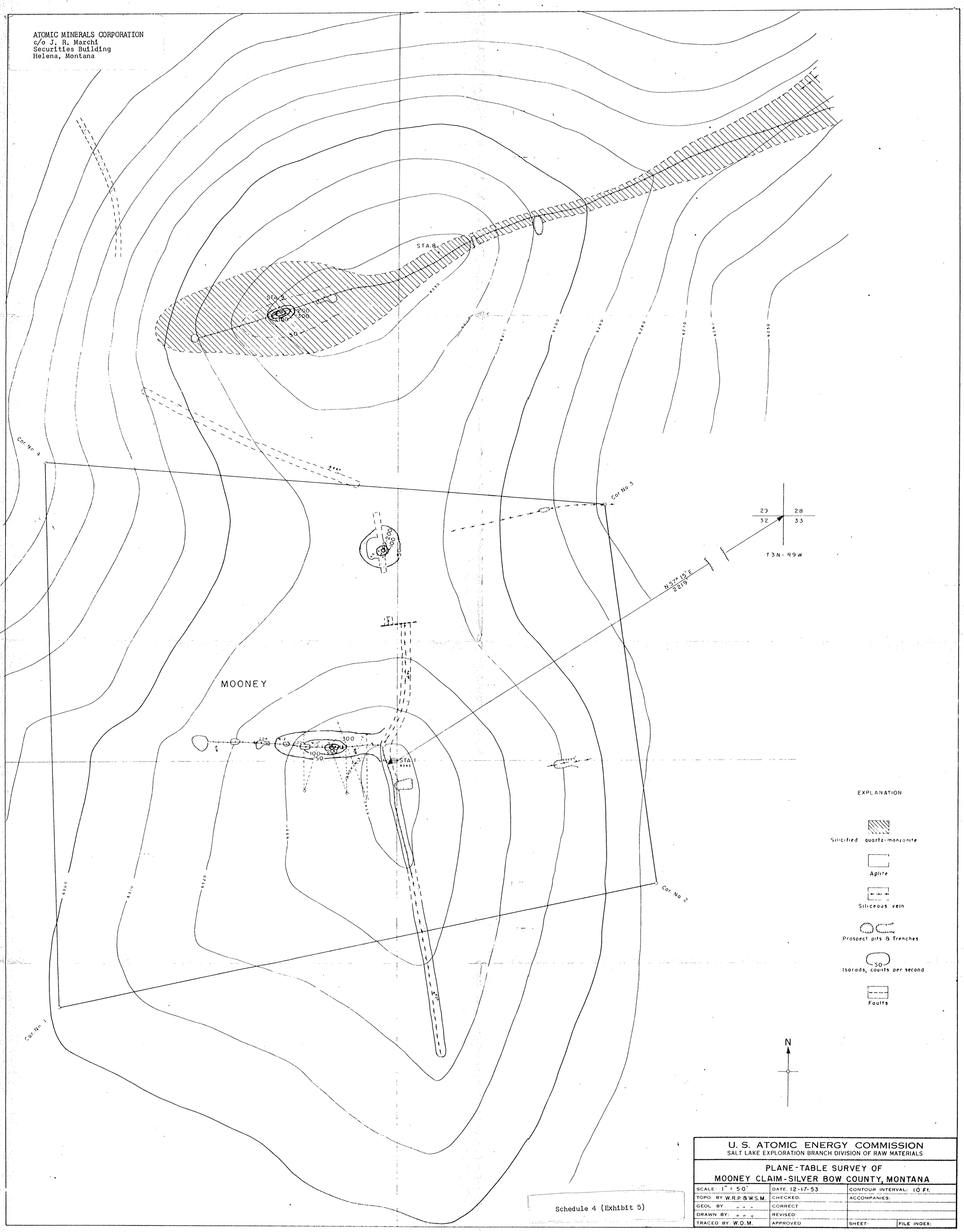
MAP AND SECTIONS OF THE MOONEY CLAIM SHOWING DIAMOND DRILL HOLES

Silver Bow County, Montana

0 20 40 60 FEET

Compiled by G.E. Becraft, from information supplied with the application

ATOMIC MINERALS CORPORATION
c/o J. R. Marchi
Securities Building
Helena, Montana



Schedule 4 (Exhibit 5)

U. S. ATOMIC ENERGY COMMISSION SALT LAKE EXPLORATION BRANCH DIVISION OF RAW MATERIALS			
PLANE-TABLE SURVEY OF MOONEY CLAIM-SILVER BOW COUNTY, MONTANA			
SCALE: 1" = 50'	DATE: 12-17-53	CONTOUR INTERVAL: 10 Ft.	
TOPO. BY W.R.P. & W.S.M.	CHECKED:	ACCOMPANIES:	
GEOL. BY " " "	CORRECT		
DRAWN BY: " " "	REVISED:		
TRACED BY: W.D.M.	APPROVED	SHEET:	FILE INDEX: