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

224 New Customhouse
Denver 2, Colorado

November 9, 1954

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
RECEIVED
NOV 12 1954

Memorandum

To: Chairman, Operating Committee

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docket No. DMEA 3384 (Uranium), Vaughey and Vaughey, Garfield County, Utah

Reference is made to the memorandum dated October 29, 1954, from the Bureau of Mines Member of the Uranium Commodity Committee to the DMEA Member of the Uranium Commodity Committee.

This memorandum suggested that the Field Team be contacted and an effort made to determine if the Atomic Energy Commission were aware of Docket No. 3384 and of the Field Team's findings.

A copy of the memorandum was transmitted to A. L. Brokaw requesting advice on this matter. We are enclosing a copy of his reply.

John F. Shaw
for W. H. King

Enclosure

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

Ellis
Selfridge
Kiilsgaard
Mitterdorf

OCT 25 1954

Mr. W. H. King
Executive Officer
DMEA Field Team, Region IV
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-3384 (Uranium)
Vaughey and Vaughey
North Wash Prospect
Garfield County, Utah

Dear Mr. King:

Enclosed are two copies of a memorandum dated October 20, 1954, by John E. Crawford, member of the Uranium Commodity Committee, pertaining to the captioned application.

The memorandum is self-explanatory. Kindly let us have your views on the subject.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee (GCS)

Enclosures 2

EWEllis/gla
10/22/54
cc to: Admr. Reading File
Operating Committee
Docket
Messrs. J. E. Crawford, Rm. 3641
T. H. Kiilsgaard, Rm. 5224
Code 700

APPROVED:

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

Thor H. Kiilsgaard
Member, Geological Survey (THK)

R.C.B.

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

October 20, 1954

Defense Minerals Administration
RECEIVED
OCT 21 1954

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4640

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

Subject: DMEA Docket No. 3384, Vaughey and Vaughey, Garfield County, Utah

Reference is made to the Field Team report of examination included in the subject docket.

Mr. Joseph O. Hosted, representative of the Atomic Energy Commission, has called to my attention the fact that the report of examination did not mention that the Atomic Energy Commission field representatives were consulted with regard to the application.

Inasmuch as the claim lies in an area favorable to uranium mineralization, Mr. Hosted is somewhat concerned regarding the apparent lack of liaison between the DMEA field team and AEC field representatives.

I suggest that the field team be contacted and effort made to determine if the Commission was aware of the application and the field team's findings.

John E. Crawford

John E. Crawford

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

THE INTERIOR
Administration
SEP 27 1954

224 New Customhouse
Denver 2, Colorado

SEP 16 1954

Memorandum

To: Administrator, Defense Minerals Exploration Administration, Attention: 200

From: DMEA Field Team, Region IV

Subject: Report of Examination, Docket DMEA 3384 (Uranium), Vaughey and Vaughey, Garfield County, Utah.

Enclosed are four copies of the report of examination on the subject docket, a copy of the letter to the applicant and two copies of Form 3b.

John F. Shaw
For W. H. King

A. H. Koschmann
A. H. Koschmann

Enclosures

10/1/54

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

COPY

224 New Customhouse
Denver 2, Colorado

September 20, 1954

Messrs. W. M. Vaughey, E. A. Vaughey
and W. T. Blackburn
312 C. A. Johnson Building
Denver, Colorado

Re: Docket DMEA 3384

Gentlemen:

Reference is made to your application for Government aid on your claims which are located in T. 33 S., R. 13 and 14 E., in Garfield County, Utah.

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

A careful study of your property and data available to this agency reveals that the probability of disclosing mineable reserves of uranium is not considered sufficiently promising to justify Government participation. Under these circumstances, we regret to advise that your application for exploration aid is denied.

Very truly yours,

/s/ W. H. KING
W. H. King
DMEA Field Team, Region IV

/s/ A. H. KOSCHMANN
A. H. Koschmann
DMEA Field Team, Region IV

HMC:mb

cc: Docket
Administrator, DMEA
SRWilsin
Mining Division
AHKoschmann
ERGordon
Chron.

Reviewed by
DMEA OPERATING COMMITTEE
10/1/54
(date)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

SEP 27 1954

SEP 17 1954

Mining Division
Region IV

Memorandum

To: DMEA Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Report of Examination, Docket DMEA 3384 (Uranium), Vaughey & Vaughey, Garfield County, Utah.

Enclosed are extra copies of the engineering report of examination on the subject docket.

The applicant requested $33,156.25 to explore the property by wagon drilling 126 holes and building 5 miles of access road.

The engineer examiner concludes that the limited extent and weakness of the mineralization does not warrant exploration, and he recommends that the application be denied. We concur in this recommendation.

John F. Shaw
For W. H. King

Enclosures

REVIEWED BY
DMEA OPERATING COMMITTEE
10/1/54

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

September 1, 1954

Memorandum

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

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: Docket No. DMEA-3384 (Uranium), Vaughey and Vaughey, Garfield County, Utah.

Enclosed are the original and ten copies of an engineering report concerning examination of the subject property for DMEA loan appraisal. The report was prepared by M. M. Gilkey. Also included are the original and ten copies of a separate section, Summary, Conclusions and Recommendations, and three copies each of forms 6-803 and 6-993. The brochure and copy of the Geologic report, mailed to this office with your memorandum of August 3, 1954, are enclosed.

The examining engineer and geologists of the Survey recommend that the loan request be denied. Uranium mineralization is considered to be too low in grade and too limited in extent to justify Government participation in an exploratory program. I concur with the recommendations of the examining team.

Stephen R. Wilson

Stephen R. Wilson

Received by
DMEA OPERATING [illegible]
10/1/54
[illegible]

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Defense Minerals Exploration Administration
Denver Federal Center
Denver 2, Colorado

July 26, 1954

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 3384, Vaughey and Vaughey, Garfield County, Utah

Enclosed are 11 copies of the geologic report by H. S. Johnson of the U. S. Geological Survey covering the above docket.

Mr. Johnson concludes that although the Moss Back channel-fill sediments on the Pip and Moth claims are the best prospects for uranium on the Vaughey and Vaughey property, there is little chance of finding a significant deposit. He recommends denial of the application for exploration assistance.

E. M. Hauchman
for A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures: (20)

Reviewed by
DMEA OPERATING COMMITTEE
10/1/54
Date

COPY

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Grand Junction, Colo.

July 26, 1954

Memorandum

To: E. N. Harshman

Through: A. H. Koschmann

From: W. P. Williams

Subject: Revised report of field examination, DMEA Docket 3384, Vaughey and Vaughey (uranium), Garfield County, Utah

Transmitted herewith are eleven copies of a revised geologic report covering the subject property. The original report, by H. S. Johnson, was returned to us on July 15, 1954, accompanied by a memorandum of criticism.

Johnson, in his original report, attempted to make a recommendation which differentiated between:

1) The applicants' extensive and expensive proposed exploration program.

2) Denial of the application, or a much reduced program of a "wildcat" nature.

Many practicing geologists realize, especially in uranium mining, that it is sometimes difficult to make a completely unequivocal decision about a mining property when that decision is based upon geologic inferences that often are little better than reasoned guesses. However, your memorandum and criticism of Johnson's report are plain enough. In the future you will receive flat "yes or no" decisions.

Johnson's revised recommendations should completely obviate the necessity for even the smallest decision on anyone else's part. This would seem to be especially desirable since, as pointed out in your criticism of Johnson's report, "any decisions made 'up the line' would have less chance of being the best decisions possible." (How did these people get promoted?)

In accordance with revision, figure 2 should now be deleted from the report. You already have enough copies of figure 1 (index map) to put with the revised report.

/s/ W. P. Williams

W. P. Williams

Reviewed by DMEA OPERATING COMMITTEE 10/1/54 (date)

Enclosures

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By H. S. Johnson and M. M. Gilkey

Vaughey and Vaughey, a partnership of Denver, Colorado, has applied for exploratory assistance on uranium property in Garfield County, Utah. The area was examined by DMEA personnel during June 1954 to appraise the loan request.

The applicant has proposed a non-coring drilling project estimated to cost $33,156.25. This total includes funds for road building, direct cost of drilling, and miscellaneous costs.

Formations present in the area of the proposed project consist principally of sandstones and shales. They include the Navajo, Kayenta and Wingate of Jurassic age and the Chinle and Moenkopi of Triassic age. The Morrison and Shinarump formations, ore-bearing in other parts of southeastern Utah, appear to be absent in the area of the Vaughey claims. Uranium mineralization on the applicant's property is confined to the Chinle formation. Radiometric readings indicate uranium mineralization in two areas in this formation. Weak mineralization is present in a channel in Area No. 1 and in Area No. 2, on the Moth No. 8 claim, a slump block contains low grade mineralization.

The examining engineer and geologist do not believe that a significant uranium deposit will be found by exploration proposed

Received by
DMEA Grants and Loans
10/6/54
Date

by the applicant. The paucity of carbonaceous material in the sediments, the weak mineralization at the outcrop, and the lack of known deposits in the Chinle formation in this area, lead to the conclusion that the exploration is not warranted. It is therefore recommended that the loan request be denied.

UNITED STATES DEPARTMENT OF THE INTERIOR

DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA 3384, Vaughey and Vaughey
Garfield County, Utah

Uranium

Geologic Report

by

H. S. Johnson
U. S. Geological Survey

July 20, 1954

Reviewed by
DMEA OPERATING COMMITTEE
10/1/54
(date)

SUMMARY

In May 1954, Vaughey and Vaughey (DMEA 3384) applied for Government aid to explore for uranium in nearly flat-lying beds of the Triassic Chinle formation along North Wash about seven miles north of Hite in Garfield County, Utah (Fig. 1). The proposed exploration sites were examined by the DMEA field team on June 23, 1954, and weak radioactivity was noted at several places in channel-fill sediments at the base of the Moss Back member of the Chinle formation. These channels scour down about 30 feet into the underlying Monitor Butte member (largely equivalent to the "D" division of the Chinle formation) and are sedimentary structures which should be favorable for the occurrence of sandstone-type uranium deposits. However, the general absence of mineralization at the outcrop and the sparseness of carbonaceous material in the channel-fill sediments lead the writer to believe that the chances of finding a significant uranium deposit are not good enough to warrant an exploration program as has been proposed by the applicant. It is recommended that the application be denied.

INTRODUCTION

Vaughey and Vaughey (a copartnership composed of W. M. Vaughey, E. A. Vaughey, and W. T. Blackburn) applied in May 1954 for Government aid to explore for uranium on 104 unpatented mining claims in T. 33 S., R. 13 and 14 E. (unsurveyed), Garfield County, Utah. Claim names and location data are given in Exhibits "A" and "D" accompanying the application. The property is about seven miles north of Hite, Utah, and access is provided by Utah Highway 95.

On June 23, 1954, the proposed exploration sites were examined by a party consisting of M. M. Gilkey of the Bureau of Mines; W. P. Williams, H. S. Johnson, and L. R. Beddoes of the Geological Survey; and D. V. Watrous representing the applicant. Because of the relative inaccessibility of the other claims and the fact that no exploration was proposed on them, the examination was confined to areas No. 1 and No. 2 as shown on Exhibit "D" accompanying the application.

The terrain in the vicinity of the Vaughey and Vaughey property is rough canyon country typical of the Colorado Plateau. Relief ranges from 1,000 to 1,500 feet with the land being divided into rough mesas and steep-walled canyons. Water for any mining or exploration project could probably be obtained from the Colorado River near Hite. At the present time, the nearest buying station for uranium ore is at Thompsons, Utah, a distance of 137 miles for the most part over rough dirt roads.

GEOLOGY

The rocks exposed in the vicinity of the Vaughey and Vaughey property along North Wash are principally sandstones and shales ranging from Permian to Jurassic (?) in age. The beds have a total thickness of about 1,500 to 2,000 feet and strike approximately north with a very gentle westerly dip. The permian Cutler formation is partially exposed in North Wash and is represented by reddish-brown to white fine-grained sandstones of the Organ Rock and White Rim members. The Triassic Moenkopi formation unconformably overlies the Cutler formation and consists of about 250 feet of red-brown fine-grained sandstone and red-brown to chocolate-brown sandy shale. Unconformably overlying the Moenkopi is the 500-foot thick Chinle formation composed largely of fine-grained, thin-bedded red-brown sandstone and purple-brown shale and siltstone. The lower 150 feet or so of the Chinle section in this area has been previously mapped as the Shinarump conglomerate, but it is now thought that no true Shinarump is present in this area. The light gray, crossbedded, massive, fine- to medium-grained conglomeratic sandstone that forms a strong 30-50 foot thick ledge about 50-100 feet above the top of the Moenkopi formation is now considered as a member of the Chinle formation and is tentatively called the Moss Back sandstone (J. H. Stewart and G. A. Williams, USGS, report in preparation). The 50-100 foot thick purple- to reddish-brown shaly sandstone and mudstone unit between the Moss Back and the top of the Moenkopi is now tentatively named the Monitor Butte member (Witkind, USGS, report in preparation) and is for the most part equivalent to Gregory's "D" division of the Chinle formation. _/

_/ Gregory, H. E., 1917, Geology of the Navajo Country: U. S. Geol. Survey Prof. Paper 93.

Above the Chinle formation, the Wingate, Kayenta, and Navajo formations consist of 600 feet or more of light red-brown, cliff-forming sandstone. The Wingate and Navajo sandstones are predominantly eolian in origin and the Kayenta is partly eolian and partly fluviatile in origin.

In the vicinity of the Vaughey and Vaughey property, the Kayenta formation caps most of the mesas and the Wingate forms sheer cliffs with a steep cliff-like Chinle-Moenkopi slope below. The Moss Back usually makes a narrow bench which breaks the continuity of the steep Chinle-Moenkopi slope.

URANIUM DEPOSITS

Uranium deposits in eastern Utah are largely confined to sandstone type deposits in the Morrison, Chinle, and Shinarump formations. In the vicinity of the Vaughey and Vaughey property, the Morrison and Shinarump formations are not present and only weak and spotty mineralization is known in the Chinle formation. At Poison Springs Box Canyon, about 14 miles north of the Vaughey and Vaughey property, there are several low-grade uranium deposits in sandstone lenses of the Monitor Butte member of the Chinle formation. About 15 tons of ore averaging 0.10 percent U_3O_8 have been produced here, but there seems to be little potential for further production in appreciable amounts. In Happy and Hatch Canyons, about 25 miles north of the Vaughey and Vaughey property, extensive exploration has disclosed only very minor mineralization in the Moss Back and in sandstone lenses of the Monitor Butte member. The nearest uranium deposits of any consequence are the Jomac and the Happy Jack mines in the White Canyon district about 10 miles east of the Vaughey and Vaughey property. Both of these deposits, however, are thought to be in the Shinarump conglomerate.

At the time of the field examination there were no workings on the Vaughey and Vaughey property. Exposures of radioactive material were limited to several weak shows on the Pip Nos. 6-9 and the Moth Nos. 6-8 claims. On these claims, erosion has cut down to the Moenkopi formation and exposed a 200-300 foot wide and 30-40 foot deep scour or channel at the base of the Moss Back. This Moss Back channel comes down to within about 10 feet of the top of the Moenkopi and cuts out the purple and red shales of the Monitor Butte member of the Chinle. It appears likely that the channel trend is northwest and that the exposures on the Moth and Pip claims are on the same structure. The channel-fill sediments are white to gray-green, cross-bedded fine-grained sandstone and siltstone. Carbonaceous material occurs very sparsely as seams and small blebs of trashy carbon in sandstone. Uranium mineralization is confined to these carbon seams and to a one-foot thick zone of slightly higher than normal radioactivity at the base of the channel-fill sediments. Counts on a Precision Model 111 scintillator averaged 0.03 mr/hr at the base of the channel and reached a maximum of 0.07 mr/hr over a one-foot thick zone of carbonaceous sandstone on the Pip No. 8 claim. (The background reading on the scintillator was 0.015 mr/hr and it is estimated that none of the rock tested would assay greater than 0.05 percent U_3O_8.) In the bottom of the wash on the southwest corner of the Moth No. 8 claim, a pile of slumped mudstone and siltstone carried a small amount of carbonaceous material which gave a maximum count of 0.15 mr/hr on the scintillator. This rock is form the Monitor Butte member of the Chinle formation and the uranium-bearing carbonaceous siltstone is not thought to be in sufficient abundance to justify further prospecting of this unit.

The writer feels that the Moss Back channel-fill sediments on the Pip Nos. 6-9 and the Moth Nos. 6-8 claims are the most likely prospects for uranium deposits on the Vaughey and Vaughey property. The lithology of the channel-fill sediments and the sedimentary structure itself are both considered relatively favorable for uranium deposition. However, the sparseness of carbonaceous material (which the writer feels is probably necessary as the agent which causes precipitation of uranium from through-going solutions), the weakness of uranium mineralization on the outcrop, and the general lack of known deposits in the Moss Back in this part of Utah combine to make the writer believe there is little hope of finding a significant uranium deposit on the Vaughey and Vaughey property.

PROPOSED EXPLORATION

The applicants proposed the following program of exploration (see Exhibits "A" and "C" attached to the application):

In area 1 (see map): To drill by wagon drill 28 holes averaging 100 feet in depth with 6 of these deepened to 200 feet. Contingent on the results of the first 28 holes, to drill 63 additional holes averaging 150 feet in depth. To check cuttings for radioactivity and to probe all holes with radiation detection equipment after drilling.

In area 2: To drill 21 holes averaging 225 feet in depth. Contingent on the results of the first 21 holes, to drill 14 angle holes averaging 325 feet in depth.

About 5 miles of road building is considered necessary by the applicants, and they request that funds be provided to rent a Geiger counter, scintillator, and other equipment.

The writer feels that the chances of finding a significant uranium deposit on the Vaughey and Vaughey property are not good enough to justify an exploration program such as the applicants propose. In any event, it is felt that the drilling of wagon-drill holes greater than 150 feet in depth would be extremely difficult if not practically impossible. Probing the proposed angle holes would also be a very difficult job, and the rental of a scintillator is not considered necessary at all.

CONCLUSIONS AND RECOMMENDATIONS

The writer feels that the Moss Back channel-fill sediments on the Pip and Moth claims are the best prospects for uranium mineralization on the Vaughey and Vaughey property. However, the absence of carbonaceous material in the sediments, the weak mineralization present on the outcrop, and the lack of known deposits in the Moss Back in this part of Utah combine to make the writer believe there is little chance of finding a significant deposit here. Because of this, the fairly extensive exploration proposed by the applicant is not considered justifiable. It is recommended that the application be denied.

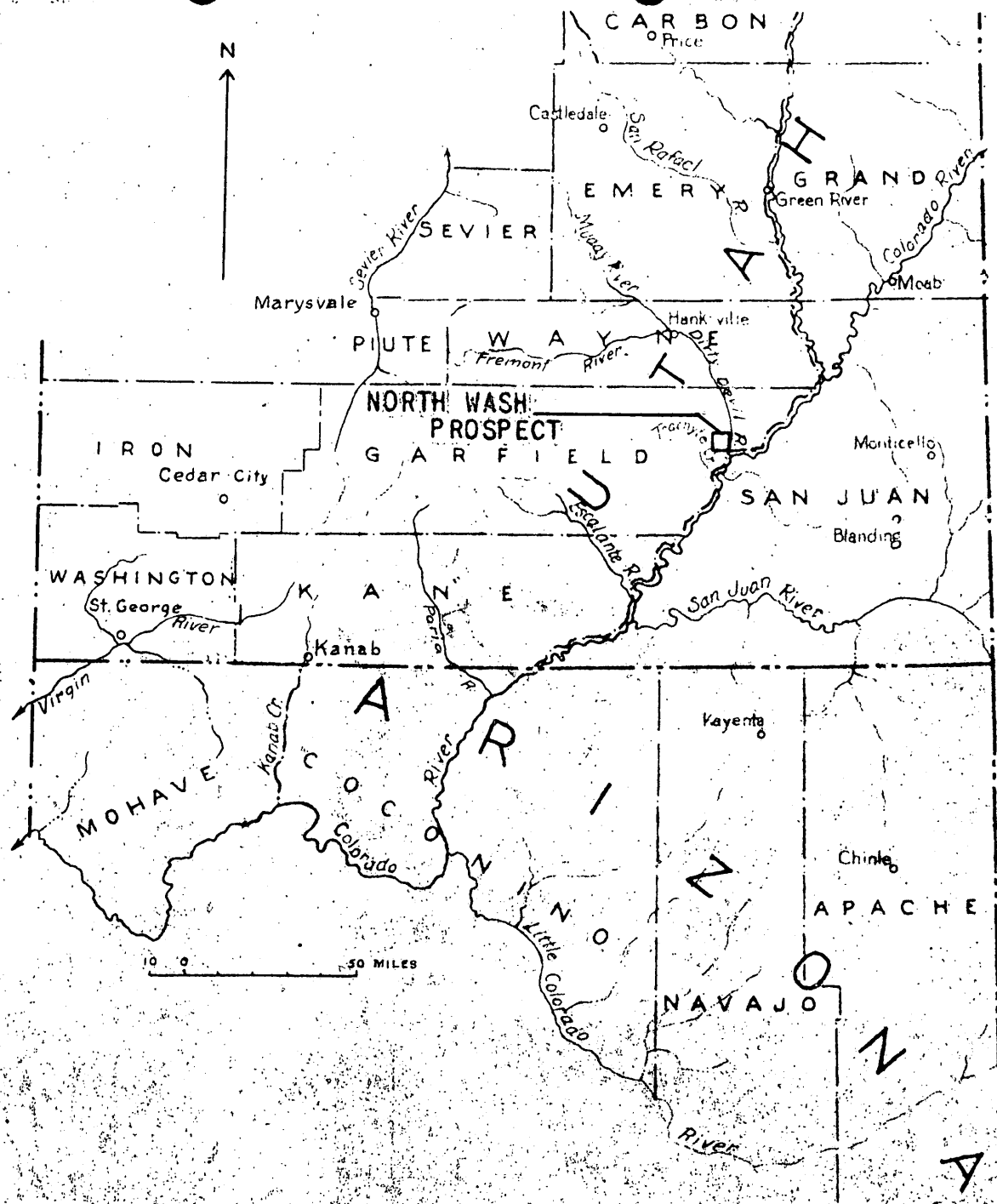

Figure 1. INDEX MAP OF PARTS OF UTAH AND ARIZONA SHOWING LOCATION OF NORTH WASH PROSPECT, GARFIELD COUNTY, UTAH

VANOSKY AND VANOSKY
GARFIELD COUNTY, UTAH
DMEA-3384
Uranium

Engineering Report

By M. M. Gilkey
Mining Engineer
Bureau of Mines

VAUGHEY AND VAUGHEY
GARFIELD COUNTY, UTAH

CONTENTS

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Location, topography and climate	3
History, production and ore reserves	4
Ownership and extent	4
Description of the deposits	5
Proposed exploration	7
Conclusions and recommendations	8

ILLUSTRATIONS

Fig. 1 Location map, Vaughey and Vaughey property, Garfield County, Utah

SUMMARY

Vaughey and Vaughey submitted an application, dated May 28, 1954, for Government aid in an exploratory project on uranium property situated in Garfield County, Utah, and approximately 10 miles northwest of Hite on the Colorado River. The property was examined June 23, 1954, by Geological Survey and Bureau of Mines personnel.

The applicant proposes a non-core drilling project estimated to cost $33,156.25. Included in this amount are $4,000 for construction of 5 miles of access road, $4,770 for miscellaneous costs, and $24,386.25 for direct cost of drilling 126 holes ranging in depth from 100 to 325 feet.

Topographically the area is typical of the Colorado Plateau. Relief ranges up to 1,500 feet. The climate is arid and vegetation is sparse. Nearest water for project use is available at a distance of 4 miles from the project.

There has been no production from the property and no ore reserves are known.

Formations exposed in the area include the Navajo, Kayenta, and Wingate of Jurassic age and Chinle and Moenkopi of Triassic age. The Morrison and Shinarump, productive horizons in other sections of southeastern Utah, are absent in this vicinity. Uranium mineralization found on the Vaughey and Vaughey property is confined to the Chinle. Radiometric readings indicate the presence of uranium mineralization in two areas in that formation.

Weak mineralization is present in a channel in Area No. 1 and in a slump block in Area No. 2. Paucity of associated carbonaceous material is considered an unfavorable feature.

It is recommended that the applicant's request for Government aid be denied as the uranium mineralization exposed in the proposed drilling areas is considered to be too low in grade and too limited in extent to justify Government participation.

INTRODUCTION

Vaughey and Vaughey submitted an application, dated May 28, 1954, for Government aid in an exploratory project on uranium property in Garfield County, Utah. The property was examined June 23, 1954, by W. P. Williams, H. S. Johnson, and L. R. Beddoes of the Geological Survey and M. M. Gilkey of the Bureau of Mines. D. W. Watrous, the company's geologist, accompanied the examining party.

The applicant proposes a drilling project estimated to cost $33,156.25. Included in this amount are $4,000 for construction of 5 miles of access road, $24,386.25 for drilling 126 exploratory holes ranging in depth from 100 to 325 feet, and miscellaneous costs totaling $4,770.

LOCATION, TOPOGRAPHY AND CLIMATE

The property is situated in Garfield County and approximately 10 miles by road northwest of Hite, Utah. The area (unsurveyed) lies in T. 33 S., R. 13 and 14 E., S.L.B. & M. Access to the vicinity of the area is provided by an unimproved section of Utah

Highway No. 95 which follows North Wash after leaving the Colorado River near Hite.

Topographically the area is characterized by deep canyons and high mesas, typical of the Colorado Plateau. Relief ranges up to 1,500 feet.

Vegetation, which is sparse as a result of the low annual precipitation, consists mainly of sagebrush. There is no timber in the vicinity of the applicant's claims.

Water for project use may be obtained from a spring in North Wash 4 miles north of the proposed project area.

Uranium ore receiving stations are situated at Thompson, Utah, approximately 135 miles to the north and at Monticello, Utah, about 125 miles to the east.

HISTORY, PRODUCTION AND ORE RESERVES

The applicant states in Exhibit "A" attached to the application: "There have been no mining operations on this land."

There are no known ore reserves.

OWNERSHIP AND EXTENT

A total of 62 unpatented lode mining claims are included in the property presently held by the applicant. The claims are recorded in the County Recorder's office at Panguitch, Garfield County, Utah. Names of the claims with recording data are listed below:

Name of Claims		Book	Page
Wat Mo's	1 through 9	23	387 to 395
Fip	1 through 9	21	9 to 17
Biz	1 through 4	21	328 to 331
Jiggs	1 through 4	21	332 to 335
Irene	1 through 7	21	347 to 353
Doug	1, 2 and 4	21	344 to 346
Moth	1 through 9	20	491 to 499
Thom	1 through 8	20	500 to 507
Lil	1 through 9	21	18 to 26

The applicant states that locations of 42 additional claims, yet to be recorded, include the following: Pard 1 through 10, Bill 1 through 11, Jackson 1 through 8, Cat 1 through 10, and Doug 3, 5, and 6.

A map of the claims, titled Vaughey and Vaughey, North Wash Prospect, Garfield County, Utah, accompanies the application.

DESCRIPTION OF THE DEPOSITS

Rocks exposed in the vicinity of the proposed project area are principally sandstones and shales. The formations include the Navajo, Kayenta, and Wingate of Jurassic age and Chinle and Moenkopi of Triassic age. Most conspicuous of these is the reddish-brown, cliff forming Wingate sandstone of eolian origin. The beds strike northerly and dip slightly to the west, and have a total thickness in excess of 1,500 feet.

In southeastern Utah, uranium deposits have been found mainly in the Morrison, Chinle, and Shinarump formations. Of these three favorable formations only the Chinle is present in the vicinity of

the Vaughey and Vaughey claims. Mineralization of commercial grade in sandstone lenses in the Chinle has been found about 1¼ miles north of the property, but only weak mineralization has been found in the Chinle exposed on the property. Radiometric count indicates the presence of weak uranium mineralization on the property in two areas in the Chinle. These are in two deep canyons tributary to North Wash from the northeast side. From the road in North Wash, the airline distance to Area No. 1 on the Pip claims is approximately 1 mile and to Area No. 2 on the Moth claims is about 1-1/4 miles.

Mineralization in Area No. 1 occurs in a channel some 200 feet long by 40 feet deep in the Moenkopi member of the Chinle formation. Material in the channel consists of light colored, cross-bedded sandstone and mudstone. A small amount of carbonaceous material is present in seams in the sandstone. Uranium mineralization occurs in the carbon seams and in a zone 1-foot thick at the base of the channel. It is estimated from scintillator readings that none of this material contains more than 0.05 percent U_3O_8.

In Area No. 2 on the Moth No. 8 claim uranium mineralization is found in a 6-inch structure passing through a 5-ton block of mudstone lying in the bottom of the canyon and at the base of a vertical cliff. The block apparently had fallen from a stratum 25 feet above the canyon bottom. Radiometric readings indicate that further investigation is not warranted.

PROPOSED EXPLORATION

The applicant proposes a non-core drilling exploratory project estimated to cost a total of $33,156.25. This includes $4,000 for 5 miles of access road construction, $4,770 for miscellaneous costs, and $24,386.25 for direct cost of drilling a total of 22,125 feet.

The proposed drilling program consists of drilling 126 holes ranging from 100 to 325 feet in depth and would be done in the two areas shown on the map accompanying the application (Vaughey and Vaughey, North Wash Prospect, Garfield County, Utah).

As outlined by the applicant, the drilling in each area would be done in two phases, phase A and phase B. In each case phase B drilling would be contingent on the results obtained in phase A; negative results from phase A drilling would eliminate phase B drilling. Footages and costs involved in the proposed program are itemized below:

Phase	Number of holes	Average depth (ft.)	Footage	Cost per foot	Total cost
			Area No. 1		
A	22	100	2,200	$0.75	$ 1,650.00
A	6	200	1,200	1.25	1,500.00
B	63	150	9,450	.90	8,505.00
			Area No. 2		
A	21	225	4,725	1.25	5,906.25
B	14	325	4,550	1.50	6,825.00
	Total direct cost of drilling ————				$24,386.25

Cuttings from the holes would be tested for radioactivity as the holes are drilled, and probed after completion.

CONCLUSIONS AND RECOMMENDATIONS

The nature of the rock in the proposed drilling areas on the Vaughey and Vaughey property is such that the proposed non-core drilling is operationally feasible. However, an exploratory project involving a preliminary expenditure of $4,000 for access road construction, does not seem justifiable because of the limited extent and weakness of the mineralization. It is recommended that the application be denied.

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

224 New Customhouse
Denver 2, Colorado

September 20, 1954

Messrs. W. M. Vaughey, E. A. Vaughey
and W. T. Blackburn
312 C. A. Johnson Building
Denver, Colorado

Re: Docket DMEA 3384

Gentlemen:

Reference is made to your application for Government aid on your claims which are located in T. 33 S., R. 13 and 14 E., in Garfield County, Utah.

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

A careful study of your property and data available to this agency reveals that the probability of disclosing mineable reserves of uranium is not considered sufficiently promising to justify Government participation. Under these circumstances, we regret to advise that your application for exploration aid is denied.

Very truly yours,

W H King
W. H. King
DMEA Field Team, Region IV

A. H. Koschmann
A. H. Koschmann
DMEA Field Team, Region IV

HMC:mb

cc: Docket
Administrator, DMEA
SRWilsin
Mining Division

AHKoschmann
ERGordon
Chron.

Reviewed by
DMEA OPERATING COMMITTEE
10-1-54
(date)

9/27/54 gla

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

September 27, 1954

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee

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

Subject: Docket No. 3384, Vaughey and Vaughey, 312 C. A. Johnson Bldg., Denver, Colorado

I have reviewed the subject report and have discussed it with Joseph O. Hosted, representative of the Atomic Energy Commission.

We concur with the recommendation of the Field Team that the application involved under the subject docket be denied.

The report has been forwarded to the Chief, Minerals Division, Bureau of Mines, in accord with the routing slip attached thereto.

John E. Crawford

John E. Crawford

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

SEP 27 1954

SEP 16 1954

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Administrator, Defense Minerals Exploration Administration, Attention: 200

From: DMEA Field Team, Region IV

Subject: Report of Examination, Docket DMEA 3384 (Uranium), Vaughey and Vaughey, Garfield County, Utah.

Enclosed are four copies of the report of examination on the subject docket, a copy of the letter to the applicant and two copies of Form 3b.

John F. Shaw
For W. H. King

A. H. Koschmann

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Mining Division
Region IV

SEP 27 1954
SEP 17 1954

Memorandum

To: DMEA Field Team, Region IV

From: Chief, Mining Division, Region IV

Subject: Report of Examination, Docket DMEA 3384 (Uranium), Vaughey & Vaughey, Garfield County, Utah.

Enclosed are ten copies of the engineering report of examination on the subject docket.

The applicant requested $33,156.25 to explore the property by wagon drilling 126 holes and building 5 miles of access road.

The engineer examiner concludes that the limited extent and weakness of the mineralization does not warrant exploration, and he recommends that the application be denied. We concur in this recommendation.

John F. Shaw
For W. H. King

Enclosures

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES
1600 EAST FIRST SOUTH STREET
SALT LAKE CITY 1, UTAH

September 1, 1954

Memorandum

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

From: Chief, Minerals Development Branch, Mining Division, Region IV

Subject: Docket No. DMEA-3384 (Uranium), Vaughey and Vaughey, Garfield County, Utah.

Enclosed are the original and ten copies of an engineering report concerning examination of the subject property for DMEA loan appraisal. The report was prepared by M. M. Gilkey. Also included are the original and ten copies of a separate section, Summary, Conclusions and Recommendations, and three copies each of forms 6-803 and 6-993. The brochure and copy of the Geologic report, mailed to this office with your memorandum of August 3, 1954, are enclosed.

The examining engineer and geologists of the Survey recommend that the loan request be denied. Uranium mineralization is considered to be too low in grade and too limited in extent to justify Government participation in an exploratory program. I concur with the recommendations of the examining team.

Stephen R. Wilson

Stephen R. Wilson

IN REPLY REFER TO:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
Defense Minerals Exploration Administration
Denver Federal Center
Denver 2, Colorado

July 26, 1954

Memorandum

To: DMEA Field Team, Region IV

From: A. H. Koschmann

Subject: DMEA Docket 3384, Vaughey and Vaughey, Garfield County, Utah

Enclosed are 11 copies of the geologic report by H. S. Johnson of the U. S. Geological Survey covering the above docket.

Mr. Johnson concludes that although the Moss Back channel-fill sediments on the Pip and Moth claims are the best prospects for uranium on the Vaughey and Vaughey property, there is little chance of finding a significant deposit. He recommends denial of the application for exploration assistance.

E. M. Hauchman
for A. H. Koschmann
Supervising Geologist
Colorado-Wyoming

Enclosures (20)

COPY

IN REPLY REFER TO:

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

July 26, 1954

Memorandum

To: E. N. Harshman

Through: A. H. Koschmann

From: W. P. Williams

Subject: Revised report of field examination, DMEA Docket 3384, Vaughey and Vaughey (uranium), Garfield County, Utah

Transmitted herewith are eleven copies of a revised geologic report covering the subject property. The original report, by H. S. Johnson, was returned to us on July 15, 1954, accompanied by a memorandum of criticism.

Johnson, in his original report, attempted to make a recommendation which differentiated between:

1) The applicants' extensive and expensive proposed exploration program.

2) Denial of the application, or a much reduced program of a "wildcat" nature.

Many practicing geologists realize, especially in uranium mining, that it is sometimes difficult to make a completely unequivocal decision about a mining property when that decision is based upon geologic inferences that often are little better than reasoned guesses. However, your memorandum and criticism of Johnson's report are plain enough. In the future you will receive flat "yes or no" decisions.

Johnson's revised recommendations should completely obviate the necessity for even the smallest decision on anyone else's part. This would seem to be especially desirable since, as pointed out in your criticism of Johnson's report, "any decisions made 'up the line' would have less chance of being the best decisions possible." (How did these people get promoted?)

In accordance with revision, figure 2 should now be deleted from the report. You already have enough copies of figure 1 (index map) to put with the revised report.

/s/ W. P. Williams

W. P. Williams

Enclosures

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

By H. S. Johnson and M. M. Gilkey

Vaughey and Vaughey, a partnership of Denver, Colorado, has applied for exploratory assistance on uranium property in Garfield County, Utah. The area was examined by DMEA personnel during June 1954 to appraise the loan request.

The applicant has proposed a non-coring drilling project estimated to cost $33,156.25. This total includes funds for road building, direct cost of drilling, and miscellaneous costs.

Formations present in the area of the proposed project consist principally of sandstones and shales. They include the Navajo, Kayenta and Wingate of Jurassic age and the Chinle and Moenkopi of Triassic age. The Morrison and Shinarump formations, ore-bearing in other parts of southeastern Utah, appear to be absent in the area of the Vaughey claims. Uranium mineralization on the applicant's property is confined to the Chinle formation. Radiometric readings indicate uranium mineralization in two areas in this formation. Weak mineralization is present in a channel in Area No. 1 and in Area No. 2, on the Moth No. 8 claim, a slump block contains low grade mineralization.

The examining engineer and geologist do not believe that a significant uranium deposit will be found by exploration proposed

by the applicant. The paucity of carbonaceous material in the sediments, the weak mineralization at the outcrop, and the lack of known deposits in the Chinle formation in this area, lead to the conclusion that the exploration is not warranted. It is therefore recommended that the loan request be denied.

UNITED STATES DEPARTMENT OF THE INTERIOR

DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION
REPORT OF EXAMINATION BY FIELD TEAM
REGION IV

DMEA 3384, Vaughey and Vaughey
Garfield County, Utah

Uranium

Geologic Report

by

H. S. Johnson
U. S. Geological Survey

July 20, 1954

SUMMARY

In May 1954, Vaughey and Vaughey (DMEA 3384) applied for Government aid to explore for uranium in nearly flat-lying beds of the Triassic Chinle formation along North Wash about seven miles north of Hite in Garfield County, Utah (Fig. 1). The proposed exploration sites were examined by the DMEA field team on June 23, 1954, and weak radioactivity was noted at several places in channel-fill sediments at the base of the Moss Back member of the Chinle formation. These channels scour down about 30 feet into the underlying Monitor Butte member (largely equivalent to the "D" division of the Chinle formation) and are sedimentary structures which should be favorable for the occurrence of sandstone-type uranium deposits. However, the general absence of mineralization at the outcrop and the sparseness of carbonaceous material in the channel-fill sediments lead the writer to believe that the chances of finding a significant uranium deposit are not good enough to warrant an exploration program as has been proposed by the applicant. It is recommended that the application be denied.

INTRODUCTION

Vaughey and Vaughey (a copartnership composed of W. M. Vaughey, E. A. Vaughey, and W. T. Blackburn) applied in May 1954 for Government aid to explore for uranium on 104 unpatented mining claims in T. 33 S., R. 13 and 14 E. (unsurveyed), Garfield County, Utah. Claim names and location data are given in Exhibits "A" and "D" accompanying the application. The property is about seven miles north of Hite, Utah, and access is provided by Utah Highway 95.

On June 23, 1954, the proposed exploration sites were examined by a party consisting of M. M. Gilkey of the Bureau of Mines; W. P. Williams, H. S. Johnson, and L. R. Beddoes of the Geological Survey; and D. V. Watrous representing the applicant. Because of the relative inaccessibility of the other claims and the fact that no exploration was proposed on them, the examination was confined to areas No. 1 and No. 2 as shown on Exhibit "D" accompanying the application.

The terrain in the vicinity of the Vaughey and Vaughey property is rough canyon country typical of the Colorado Plateau. Relief ranges from 1,000 to 1,500 feet with the land being divided into rough mesas and steep-walled canyons. Water for any mining or exploration project could probably be obtained from the Colorado River near Hite. At the present time, the nearest buying station for uranium ore is at Thompsons, Utah, a distance of 137 miles for the most part over rough dirt roads.

GEOLOGY

The rocks exposed in the vicinity of the Vaughey and Vaughey property along North Wash are principally sandstones and shales ranging from Permian to Jurassic (?) in age. The beds have a total thickness of about 1,500 to 2,000 feet and strike approximately north with a very gentle westerly dip. The permian Cutler formation is partially exposed in North Wash and is represented by reddish-brown to white fine-grained sandstones of the Organ Rock and White Rim members. The Triassic Moenkopi formation unconformably overlies the Cutler formation and consists of about 250 feet of red-brown fine-grained sandstone and red-brown to chocolate-brown sandy shale. Unconformably overlying the Moenkopi is the 500-foot thick Chinle formation composed largely of fine-grained, thin-bedded red-brown sandstone and purple-brown shale and siltstone. The lower 150 feet or so of the Chinle section in this area has been previously mapped as the Shinarump conglomerate, but it is now thought that no true Shinarump is present in this area. The light gray, crossbedded, massive, fine- to medium-grained conglomeratic sandstone that forms a strong 30-50 foot thick ledge about 50-100 feet above the top of the Moenkopi formation is now considered as a member of the Chinle formation and is tentatively called the Moss Back sandstone (J. H. Stewart and G. A. Williams, USGS, report in preparation). The 50-100 foot thick purple- to reddish-brown shaly sandstone and mudstone unit between the Moss Back and the top of the Moenkopi is now tentatively named the Monitor Butte member (Witkind, USGS, report in preparation) and is for the most part equivalent to Gregory's "D" division of the Chinle formation. _/

_/ Gregory, H. E., 1917, Geology of the Navajo Country: U. S. Geol. Survey Prof. Paper 93.

Above the Chinle formation, the Wingate, Kayenta, and Navajo formations consist of 600 feet or more of light red-brown, cliff-forming sandstone. The Wingate and Navajo sandstones are predominantly eolian in origin and the Kayenta is partly eolian and partly fluviatile in origin.

In the vicinity of the Vaughey and Vaughey property, the Kayenta formation caps most of the mesas and the Wingate forms sheer cliffs with a steep cliff-like Chinle-Moenkopi slope below. The Moss Back usually makes a narrow bench which breaks the continuity of the steep Chinle-Moenkopi slope.

URANIUM DEPOSITS

Uranium deposits in eastern Utah are largely confined to sandstone type deposits in the Morrison, Chinle, and Shinarump formations. In the vicinity of the Vaughey and Vaughey property, the Morrison and Shinarump formations are not present and only weak and spotty mineralization is known in the Chinle formation. At Poison Springs Box Canyon, about 14 miles north of the Vaughey and Vaughey property, there are several low-grade uranium deposits in sandstone lenses of the Monitor Butte member of the Chinle formation. About 15 tons of ore averaging 0.10 percent U_3O_8 have been produced here, but there seems to be little potential for further production in appreciable amounts. In Happy and Hatch Canyons, about 25 miles north of the Vaughey and Vaughey property, extensive exploration has disclosed only very minor mineralization in the Moss Back and in sandstone lenses of the Monitor Butte member. The nearest uranium deposits of any consequence are the Jomac and the Happy Jack mines in the White Canyon district about 10 miles east of the Vaughey and Vaughey property. Both of these deposits, however, are thought to be in the Shinarump conglomerate.

At the time of the field examination there were no workings on the Vaughey and Vaughey property. Exposures of radioactive material were limited to several weak shows on the Pip Nos. 6-9 and the Moth Nos. 6-8 claims. On these claims, erosion has cut down to the Moenkopi formation and exposed a 200-300 foot wide and 30-40 foot deep scour or channel at the base of the Moss Back. This Moss Back channel comes down to within about 10 feet of the top of the Moenkopi and cuts out the purple and red shales of the Monitor Butte member of the Chinle. It appears likely that the channel trend is northwest and that the exposures on the Moth and Pip claims are on the same structure. The channel-fill sediments are white to gray-green, cross-bedded fine-grained sandstone and siltstone. Carbonaceous material occurs very sparsely as seams and small blebs of trashy carbon in sandstone. Uranium mineralization is confined to these carbon seams and to a one-foot thick zone of slightly higher than normal radioactivity at the base of the channel-fill sediments. Counts on a Precision Model 111 scintillator averaged 0.03 mr/hr at the base of the channel and reached a maximum of 0.07 mr/hr over a one-foot thick zone of carbonaceous sandstone on the Pip No. 8 claim. (The background reading on the scintillator was 0.015 mr/hr and it is estimated that none of the rock tested would assay greater than 0.05 percent U_3O_8.) In the bottom of the wash on the southwest corner of the Moth No. 8 claim, a pile of slumped mudstone and siltstone carried a small amount of carbonaceous material which gave a maximum count of 0.15 mr/hr on the scintillator. This rock is form the Monitor Butte member of the Chinle formation and the uranium-bearing carbonaceous siltstone is not thought to be in sufficient abundance to justify further prospecting of this unit.

The writer feels that the Moss Back channel-fill sediments on the Pip Nos. 6-9 and the Moth Nos. 6-8 claims are the most likely prospects for uranium deposits on the Vaughey and Vaughey property. The lithology of the channel-fill sediments and the sedimentary structure itself are both considered relatively favorable for uranium deposition. However, the sparseness of carbonaceous material (which the writer feels is probably necessary as the agent which causes precipitation of uranium from through-going solutions), the weakness of uranium mineralization on the outcrop, and the general lack of known deposits in the Moss Back in this part of Utah combine to make the writer believe there is little hope of finding a significant uranium deposit on the Vaughey and Vaughey property.

PROPOSED EXPLORATION

The applicants proposed the following program of exploration (see Exhibits "A" and "C" attached to the application):

In area 1 (see map): To drill by wagon drill 28 holes averaging 100 feet in depth with 6 of these deepened to 200 feet. Contingent on the results of the first 28 holes, to drill 63 additional holes averaging 150 feet in depth. To check cuttings for radioactivity and to probe all holes with radiation detection equipment after drilling.

In area 2: To drill 21 holes averaging 225 feet in depth. Contingent on the results of the first 21 holes, to drill 14 angle holes averaging 325 feet in depth.

About 5 miles of road building is considered necessary by the applicants, and they request that funds be provided to rent a Geiger counter, scintillator, and other equipment.

The writer feels that the chances of finding a significant uranium deposit on the Vaughey and Vaughey property are not good enough to justify an exploration program such as the applicants propose. In any event, it is felt that the drilling of wagon-drill holes greater than 150 feet in depth would be extremely difficult if not practically impossible. Probing the proposed angle holes would also be a very difficult job, and the rental of a scintillator is not considered necessary at all.

CONCLUSIONS AND RECOMMENDATIONS

The writer feels that the Moss Back channel-fill sediments on the Pip and Moth claims are the best prospects for uranium mineralization on the Vaughey and Vaughey property. However, the absence of carbonaceous material in the sediments, the weak mineralization present on the outcrop, and the lack of known deposits in the Moss Back in this part of Utah combine to make the writer believe there is little chance of finding a significant deposit here. Because of this, the fairly extensive exploration proposed by the applicant is not considered justifiable. It is recommended that the application be denied.

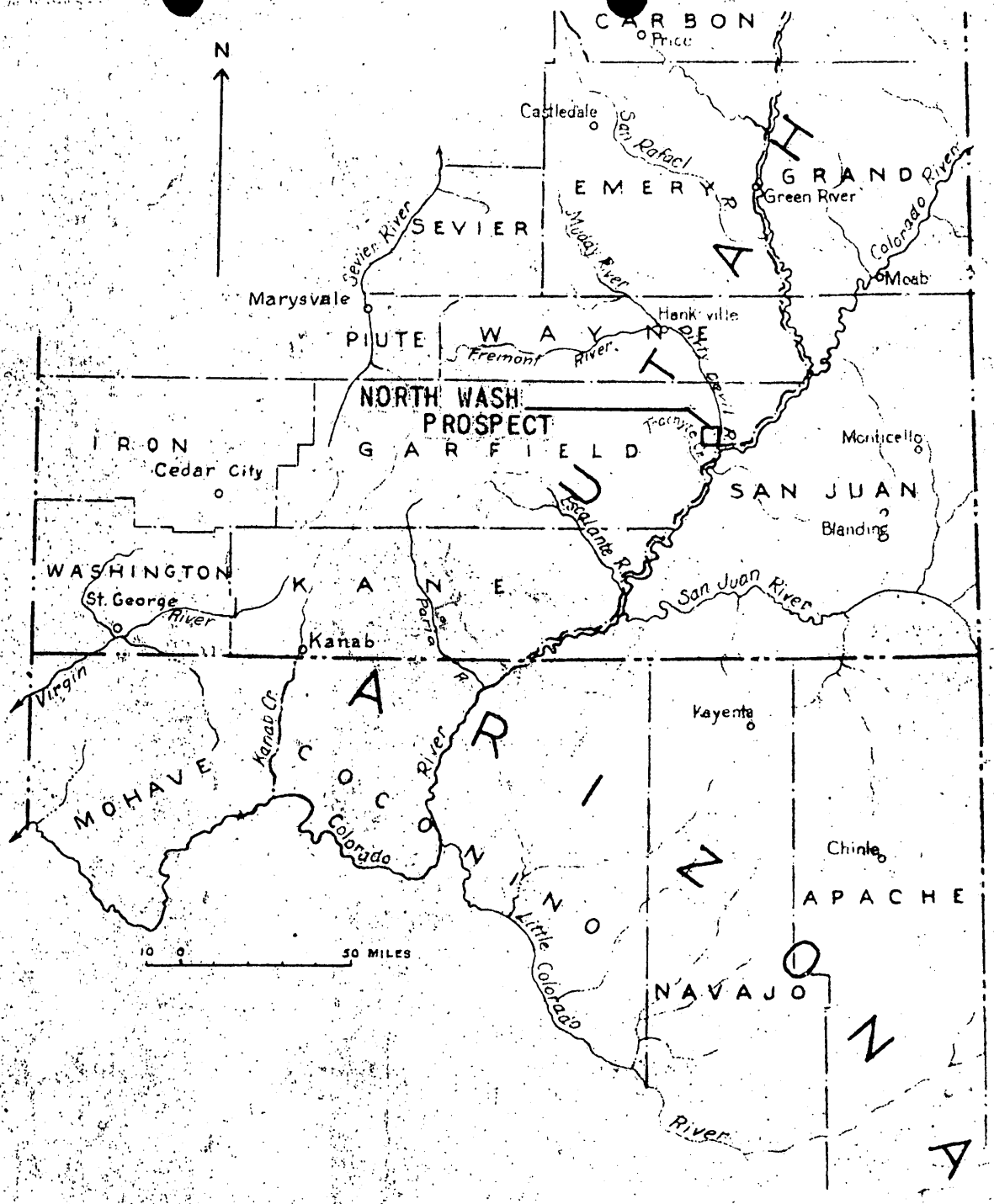

Figure 1. INDEX MAP OF PARTS OF UTAH AND ARIZONA SHOWING LOCATION OF NORTH WASH PROSPECT, GARFIELD COUNTY, UTAH

VAUGHEY AND VAUGHEY
GARFIELD COUNTY, UTAH
DMEA-3384
Uranium

Engineering Report

By M. M. Gilkey
Mining Engineer
Bureau of Mines

VAUGHEY AND VAUGHEY
GARFIELD COUNTY, UTAH

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Location, topography and climate	3
History, production and ore reserves	4
Ownership and extent	4
Description of the deposits	5
Proposed exploration	7
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ILLUSTRATIONS

Fig. 1 Location map, Vaughey and Vaughey property, Garfield County, Utah

SUMMARY

Vaughey and Vaughey submitted an application, dated May 28, 1954, for Government aid in an exploratory project on uranium property situated in Garfield County, Utah, and approximately 10 miles northwest of Hite on the Colorado River. The property was examined June 23, 1954, by Geological Survey and Bureau of Mines personnel.

The applicant proposes a non-core drilling project estimated to cost $33,156.25. Included in this amount are $4,000 for construction of 5 miles of access road, $4,770 for miscellaneous costs, and $24,386.25 for direct cost of drilling 126 holes ranging in depth from 100 to 325 feet.

Topographically the area is typical of the Colorado Plateau. Relief ranges up to 1,500 feet. The climate is arid and vegetation is sparce. Nearest water for project use is available at a distance of 4 miles from the project.

There has been no production from the property and no ore reserves are known.

Formations exposed in the area include the Navajo, Kayenta, and Wingate of Jurassic age and Chinle and Moenkopi of Triassic age. The Morrison and Shinarump, productive horizons in other sections of southeastern Utah, are absent in this vicinity. Uranium mineralization found on the Vaughey and Vaughey property is confined to the Chinle. Radiometric readings indicate the presence of uranium mineralization in two areas in that formation.

Weak mineralization is present in a channel in Area No. 1 and in a slump block in Area No. 2. Paucity of associated carbonaceous material is considered an unfavorable feature.

It is recommended that the applicant's request for Government aid be denied as the uranium mineralization exposed in the proposed drilling areas is considered to be too low in grade and too limited in extent to justify Government participation.

INTRODUCTION

Vaughey and Vaughey submitted an application, dated May 28, 1954, for Government aid in an exploratory project on uranium property in Garfield County, Utah. The property was examined June 23, 1954, by W. P. Williams, H. S. Johnson, and L. R. Beddoes of the Geological Survey and M. M. Gilkey of the Bureau of Mines. D. W. Watrous, the company's geologist, accompanied the examining party.

The applicant proposes a drilling project estimated to cost $33,156.25. Included in this amount are $4,000 for construction of 5 miles of access road, $24,386.25 for drilling 126 exploratory holes ranging in depth from 100 to 325 feet, and miscellaneous costs totaling $4,770.

LOCATION, TOPOGRAPHY AND CLIMATE

The property is situated in Garfield County and approximately 10 miles by road northwest of Hite, Utah. The area (unsurveyed) lies in T. 33 S., R. 13 and 14 E., S.L.B. & M. Access to the vicinity of the area is provided by an unimproved section of Utah

Highway No. 95 which follows North Wash after leaving the Colorado River near Hite.

Topographically the area is characterized by deep canyons and high mesas, typical of the Colorado Plateau. Relief ranges up to 1,500 feet.

Vegetation, which is sparse as a result of the low annual precipitation, consists mainly of sagebrush. There is no timber in the vicinity of the applicant's claims.

Water for project use may be obtained from a spring in North Wash 4 miles north of the proposed project area.

Uranium ore receiving stations are situated at Thompson, Utah, approximately 135 miles to the north and at Monticello, Utah, about 125 miles to the east.

HISTORY, PRODUCTION AND ORE RESERVES

The applicant states in Exhibit "A" attached to the application: "There have been no mining operations on this land."

There are no known ore reserves.

OWNERSHIP AND EXTENT

A total of 62 unpatented lode mining claims are included in the property presently held by the applicant. The claims are recorded in the County Recorder's office at Panguitch, Garfield County, Utah. Names of the claims with recording data are listed below:

Name of Claims		Book	Page
Wat No's	1 through 9	23	387 to 395
Pip	1 through 9	21	9 to 17
Biz	1 through 4	21	328 to 331
Jiggs	1 through 4	21	332 to 335
Irene	1 through 7	21	347 to 353
Doug	1, 2 and 4	21	344 to 346
Moth	1 through 9	20	491 to 499
Thom	1 through 8	20	500 to 507
Lil	1 through 9	21	18 to 26

The applicant states that locations of 42 additional claims, yet to be recorded, include the following: Pard 1 through 10, Bill 1 through 11, Jackson 1 through 8, Cat 1 through 10, and Doug 3, 5, and 6.

A map of the claims, titled Vaughey and Vaughey, North Wash Prospect, Garfield County, Utah, accompanies the application.

DESCRIPTION OF THE DEPOSITS

Rocks exposed in the vicinity of the proposed project area are principally sandstones and shales. The formations include the Navajo, Kayenta, and Wingate of Jurassic age and Chinle and Moenkopi of Triassic age. Most conspicuous of these is the reddish-brown, cliff forming Wingate sandstone of eolian origin. The beds strike northerly and dip slightly to the west, and have a total thickness in excess of 1,500 feet.

In southeastern Utah, uranium deposits have been found mainly in the Morrison, Chinle, and Shinarump formations. Of these three favorable formations only the Chinle is present in the vicinity of

the Vaughey and Vaughey claims. Mineralization of commercial grade in sandstone lenses in the Chinle has been found about 14 miles north of the property, but only weak mineralization has been found in the Chinle exposed on the property. Radiometric count indicates the presence of weak uranium mineralization on the property in two areas in the Chinle. These are in two deep canyons tributary to North Wash from the northeast side. From the road in North Wash, the airline distance to Area No. 1 on the Pip claims is approximately 1 mile and to Area No. 2 on the Moth claims is about 1-1/4 miles.

Mineralization in Area No. 1 occurs in a channel some 200 feet long by 40 feet deep in the Mossback member of the Chinle formation. Material in the channel consists of light colored, cross-bedded sandstone and mudstone. A small amount of carbonaceous material is present in seams in the sandstone. Uranium mineralization occurs in the carbon seams and in a zone 1-foot thick at the base of the channel. It is estimated from scintillator readings that none of this material contains more than 0.05 percent U_3O_8.

In Area No. 2 on the Moth No. 8 claim uranium mineralization is found in a 6-inch structure passing through a 5-ton block of mudstone lying in the bottom of the canyon and at the base of a vertical cliff. The block apparently had fallen from a stratum 25 feet above the canyon bottom. Radiometric readings indicate that further investigation is not warranted.

PROPOSED EXPLORATION

The applicant proposes a non-core drilling exploratory project estimated to cost a total of $33,156.25. This includes $4,000 for 5 miles of access road construction, $4,770 for miscellaneous costs, and $24,386.25 for direct cost of drilling a total of 22,125 feet.

The proposed drilling program consists of drilling 126 holes ranging from 100 to 325 feet in depth and would be done in the two areas shown on the map accompanying the application (Vaughey and Vaughey, North Wash Prospect, Garfield County, Utah).

As outlined by the applicant, the drilling in each area would be done in two phases, phase A and phase B. In each case phase B drilling would be contingent on the results obtained in phase A; negative results from phase A drilling would eliminate phase B drilling. Footages and costs involved in the proposed program are itemized below:

Area No. 1

Phase	Number of holes	Average depth (ft.)	Footage	Cost per foot	Total cost
A	22	100	2,200	$0.75	$ 1,650.00
A	6	200	1,200	1.25	1,500.00
B	63	150	9,450	.90	8,505.00
			Area No. 2		
A	21	225	4,725	1.25	5,906.25
B	14	325	4,550	1.50	6,825.00
	Total direct cost of drilling ----------				$24,386.25

Cuttings from the holes would be tested for radioactivity as the holes are drilled, and probed after completion.

CONCLUSIONS AND RECOMMENDATIONS

The nature of the rock in the proposed drilling areas on the Vaughey and Vaughey property is such that the proposed non-core drilling is operationally feasible. However, an exploratory project involving a preliminary expenditure of $4,000 for access road construction, does not seem justifiable because of the limited extent and weakness of the mineralization. It is recommended that the application be denied.

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

JUN 7 1954

224 New Customhouse
Denver 2, Colorado

June 4, 1954.

Memorandum

To: Administrator, Defense Minerals Exploration Administration
Attention: Code 200

From: Executive Officer, DMEA Field Team, Region IV

Subject: Docketing for Exploration Assistance

Enclosed herewith in duplicate is DMEA Form 3a and MF-103 and supporting data pertaining to the following applications for Government assistance in exploration work:

Vaughey and Vaughey (Uranium)
Garfield County
Utah

N. B. Knight, Sr. (Uranium)
San Juan County
Utah

W. H. King

W. H. King

Enclosures

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

JUN 7 1954

224 New Customhouse
Denver 2, Colorado

June 2, 1954.

Messrs. W. M. Vaughey, E. A. Vaughey and
W. T. Blackburn
312 C. A. Johnson Building
Denver, Colorado

Re: Application for DMEA Assistance (Uranium), Vaughey and Vaughey, Garfield County, Utah.

Gentlemen:

We hereby acknowledge receipt of your application for aid in the exploration of your property for uranium.

According to the terms of your lease dated April 14, 1954, a payment of $2,500.00 was to be made prior to May 14, 1954 in order to secure your lease for an additional six-month period. We will require a certification from you that this amount has been paid and that your lease is in good standing at the present time.

If a contract is recommended after the field investigation has been made, it will then be necessary for you to extend the lease for an additional period as provided in the lease before a contract can be formulated.

You will be notified prior to the date of the examination so your representative may be present at that time.

Very truly yours,

W H King

W. H. King
Executive Officer
DMEA Field Team, Region IV

RDB: cwm

cc: Docket
Administrator, DMEA
SRWilson
WPWilliams
AHKoschmann
Chron.

JUN 7 1954

JUNE 3, 1954

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION
224 NEW CUSTOMHOUSE
DENVER 2, COLORADO

ATTENTION: MR. W. H. KING, EXECUTIVE OFFICER
DMEA FIELD TEAM, REGION IV

RE: APPLICATION FOR DMEA ASSISTANCE (URANIUM), VAUGHEY AND VAUGHEY, GARFIELD COUNTY, UTAH.

GENTLEMEN:

THIS WILL ACKNOWLEDGE RECEIPT OF YOUR LETTER DATED JUNE 2, 1954, AND WILL CERTIFY THAT WE MADE PAYMENT OF $2,500.00 BY REGISTERED MAIL MAY 10, 1954, AND HAVE CONFORMED WITH THE TERMS OF OUR LEASE DATED APRIL 14, 1954, WHICH IS IN FULL FORCE AND AFFECT.

VERY TRULY YOURS,

VAUGHEY AND VAUGHEY

BY: W. T. BLACKBURN,
ONE OF THE PARTNERS

WTB:PM

SWORN TO BEFORE ME THIS 3RD DAY OF JUNE, 1954.

MY COMMISSION EXPIRES
JANUARY 9, 1955

NOTARY PUBLIC

[illegible]

[illegible] 1, 195[illegible]

[illegible]
[illegible]
[illegible]
[illegible]
[illegible]

Re: Application for DMEA Assistance (Grazing), Kingsley and Kingsley Cattle Company, Inc.

Gentlemen:

We hereby acknowledge receipt of your application for aid in the amplification of your property for grazing.

According to the terms of your loans dated April 16, 195[illegible], a payment of $[illegible],500.00 was to be made prior to May 14, 195[illegible] in order to secure your loans for an additional extended period. We will require a certification from you that this amount has been paid and that your loans is in good standing at the present time.

If a contract is recommended after the field investigation has been made, it will then be necessary for you to extend the loans for an additional period as provided in the loans before a contract can be formulated.

You will be notified prior to the date of the examination so your representative may be present at that time.

Very truly yours,

W. H. King

W. H. King
Executive Officer
DMEA Field Team, Region IV

RDB:cwm

cc: Docket
Administrator, DMEA
SRWilson
WPWilliams
AHKoschmann
Chron.

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

DEPARTMENT OF THE INTERIOR
Defense Minerals Administration
JUN 8 1954

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. 3384
Metal or Mineral Uranium
Date Received
Estimated Cost $33,156
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: VAUGHEY AND VAUGHEY, A COPARTNERSHIP COMPOSED OF W. M. VAUGHEY, E.A.VAUGHEY AND W.T. BLACKBURN, DOING BUSINESS AT 312 C.A.JOHNSON BLDG., DENVER, COLO. (NOT INCORPORATED ADDRESSES OF PARTNERS: W. M. VAUGHEY AND E. A. VAUGHEY, P. O. BOX 4268, JACKSON, MISSISSIPPI, AND W. T. BLACKBURN, 312 C.A. JOHNSON BLDG., DENVER, COLORADO.

(*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 SEE EXHIBIT "A"

(*b*) State any mine name by which the property is known. NONE

(*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. SEE EXHIBIT "B"

(*e*) If you own the land, describe any liens or encumbrances on it NONE. NO LIENS OF ANY DESCRIPTION AGAINST THIS PROPERTY BY ANYONE.

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

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

(*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.

SEE EXHIBIT "A"

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

(*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. SEE REPORT - EXHIBIT C AND MAP - EXHIBIT D (ATTACHED)

(*c*) The work will start within 45 days and be completed within 8 months from the date of an exploration project contract.

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

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

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

(*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)? YES

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

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

Explain in detail on acompanying paper.

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 MAY 28, 1954

VAUGHEY AND VAUGHEY
(Applicant)

By W. T. Blackburn

W. T. BLACKBURN, PARTNER
312 C. A. JOHNSON BLDG.
DENVER, COLORADO

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

MAY 28, 1954

VAUGHEY AND VAUGHEY - D. M. E. A. APPLICATION

SHOULD YOU DESIRE TO EXAMINE THE PROPERTY COVERED BY THIS APPLICATION, IT WOULD EXPEDITE MATTERS TO CALL W. T. BLACKBURN AT THESE THREE TELEPHONE NUMBERS:

CHERRY 4-7134 AND CH 4-8166 - 312 C. A. JOHNSON BLDG.
AND - CHERRY 4-7776 (RES.) 930 E. 7TH AVE., BOTH IN DENVER, COLO.

OR - D. W. WATROUS
1520 COLORADO STREET, IDAHO SPRINGS, COLORADO
TELEPHONE: 498
DENVER TELEPHONE NUMBERS: EAST 2-9351
TABOR 5-5663

(ATTACHMENT) EXHIBIT "A"

3. (A) APPLICANT'S PROPERTY RIGHTS:
THE FOLLOWING DESCRIBED LODE MINING CLAIMS COVERING LANDS IN TOWNSHIP 33 SOUTH, RANGES 13 AND 14 EAST, S.L.M. (UNSURVEYED), GARFIELD COUNTY, UTAH, AND RECORDED AT COUNTY RECORDER'S OFFICE. THERE ARE NO OIL & GAS LEASES INVOLVED:

WAT	LODE	CLAIMS,	NO'D	1 TO 9, INCLUSIVE,	RECORDED,	BOOK	23,	PAGE	387	TO	395
PIP	"	"	"	1 TO 9, INCLUSIVE,	"	"	21,	"	9	TO	17
BIZ	"	"	"	1 TO 4, INCLUSIVE,	"	"	21,	"	328	TO	331
JIGGS	"	"	"	1 TO 4, INCLUSIVE,	"	"	21,	"	332	TO	335
IRENE	"	"	"	1 TO 7, INCLUSIVE,	"	"	21,	"	347	TO	353
DOUG	"	"	"	1, 2, AND 4;	"	"	21,	"	344	TO	346
MOTH	"	"	"	1 TO 9, INCLUSIVE,	"	"	20,	"	491	TO	499
THOM	"	"	"	1 TO 8, INCLUSIVE,	"	"	20,	"	500	TO	507
LIL	"	"	"	1 TO 9, INCLUSIVE,	"	"	21,	"	18	TO	26

IN ADDITION, THE PARD 1 TO 10, BILL 1 TO 11, JACKSON 1 TO 8, CAT 1 TO 10 AND DOUG 3, 5 AND 6, LODE CLAIM LOCATIONS WILL BE RECORDED AND THE DATA FORWARDED AS SOON AS POSSIBLE. SEE ATTACHED PLAT FOR MORE PARTICULAR DESCRIPTION OF SAID CLAIMS (EXHIBIT D)

IN DRILLING AREA 1 THE DRILLING WILL BE DONE ON THE PIP NO'S 7, 8 AND 9 CLAIMS, AND THE BILL NO'S 7, 8 AND 9 CLAIMS. OTHER CLAIMS THAT MAY BENEFIT FROM THE DRILLING ARE THE PIP NO'S 5 AND 6, AND THE LIL NO'S 6, 7, 8 AND 9 AND THE BILL NO'S 5, 6 AND 10.

IN DRILLING AREA 2 THE DRILLING WILL BE DONE ON THE MOTH NO'S 6, 7, 8 AND 9 CLAIMS. OTHER CLAIMS THAT MAY BENEFIT FROM THE DRILLING ARE THE MOTH NO'S 4 AND 5, AND THE JACKSON NO'S 1, 2, 3, 4, AND 5 CLAIMS.

(D) SEE EXHIBIT "B" (LEASE)

(F) SEE ABOVE.

4. (A) THERE HAVE BEEN NO MINING OPERATIONS ON THIS LAND. THERE ARE NO MINE WORKINGS OR PRODUCTION FACILITIES THEREON. SEE GEOLOGICAL REPORT (EXHIBIT C) FOR ACCESSIBILITY INFORMATION.
(B) NONE
(C) SEE GEOLOGICAL REPORT (EXHIBIT C)
(D) " " " "
(E) " " " "

5. (D) VAUGHEY AND VAUGHEY HAVE BEEN ACTIVE IN THE EXPLORATION FOR AND PRODUCTION OF CRUDE OIL FOR THE PAST 18 YEARS. THIS PARTNERSHIP HAS ALSO BEEN ACTIVE IN A LIMITED WAY IN THE EXPLORATION FOR URANIUM FOR THE PAST YEAR. THIS PARTNERSHIP HAS ACQUIRED THE SERVICES OF MR. P. D. WILLHITE, WHO HAS BEEN ACTIVE IN THE URANIUM FIELD FOR THE PAST 3 YEARS, AND MR. D. V. WATROUS WHOSE EDUCATIONAL AND EXPERIENCE BACKGROUND IS AS FOLLOWS:

GRADUATE OF COLO. SCHOOL OF MINES, 1940, E.M.
PROFESSIONAL ENGINEER
EXPLORATION FOR URANIUM ORES ONE AND ONE-HALF YEARS.
18 YEARS GENERAL MINING EXPERIENCE.

(ATTACHMENT) EXHIBIT "A" - CONTINUED:

6. (A) ROAD WILL BE CONTRACTED FOR $800.00 PER MILE FOR A TOTAL OF $ 4,000.00 FOR 5 MILES OF ROAD.

NON-CORE DRILLING WILL BE CONTRACTED ON THE FOLLOWING BASIS:
HOLES UP TO 100' DEEP @ 70¢ PER FOOT UP TO 150 FEET DEEP AT 90¢ PER FOOT UP TO 250 FEET DEEP AT $1.25 PER FOOT UP TO 350 FEET @ $1.50 PER FOOT.

AREA 1 PHASE A DRILLING		
22 HOLES 100 FEET DEEP AT 75¢ PER FT.	$1650.00	
6 " 200 " " " $1.25 " "	1500.00	
TOTAL PHASE A DRILLING		$ 3,150.00
AREA 1 PHASE B DRILLING		
63 HOLES 150 FEET DEEP AT 90¢ PER FT.		8,505.00
TOTAL AREA 1 DRILLING - - - - -		$11,655.00
AREA 2 PHASE A DRILLING		
21 HOLES 225 FEET DEEP AT $1.25 PER FT.		5,906.25
AREA 2 PHASE B DRILLING		
14 HOLES 325 FEET DEEP AT $1,50 PER FT.		6,825.00
TOTAL AREA 2 DRILLING - - - - -		$ 12,731.25
TOTAL DRILLING AREA 1 AND AREA 2 -		$ 24,386.25

(B) GEOLOGIST ON THE JOB AT $600.00 PER MONTH - 2 MONTHS	-	$ 1,200.00
SUPERVISION $35.00 PER DAY - 20 DAYS	-	700.00
TRAVEL ALLOWANCE	-	500.00
(C) CAMPING EQUIPMENT AND SUPPLIES (EXPENDABLE)		45.00
(D) OPERATING EQUIPMENT		
1. PICKUP TRUCK - RENTAL $150.00 PER MONTH	-	300.00
2. GIEGER COUNTER - RENTAL $75.00 PER MONTH	-	150.00
3. SINTILATOR - RENTAL $250.00 PER MONTH	-	500.00
4. CAMP INSTALLATION - RENTAL $75.00 PER MONTH	-	150.00
(E) NONE		
(F) NONE		
(G) ASSAYING - 30 @ $7.50 PER ASSAY	-	225.00
(H) CONTINGENCIES		$ 1,000.00
TOTAL	-	$ 33,156.25

EXHIBIT "B"

OPTION AND AGREEMENT

THIS AGREEMENT, made and entered into this 14 day of April A. D. 1954, by and between CLARION W. TAYLOR, GERALD L. O'CONNOR, VERNON BUZICK, R. HUNT and H. S. MECHAM, hereinafter sometimes called "Optionors" and sometimes called "Lessors," and VAUGHEY AND VAUGHEY, a copartnership, consisting of E. A. Vaughey, W. H. Vaughey and W. T. Blackburn, with offices in Denver, Colorado, hereinafter sometimes called "Optionee" and sometimes called "Lessee,"

WITNESSETH:

WHEREAS, said Clarion W. Taylor, and said Gerald L. O'Connor, covenant and warrant that they are the owners and holders of valid and subsisting Lode Mining Claims covering lands in Township Thirty-three (33) South, Ranges Thirteen (13) and Fourteen (14) East, S. L. M., (unsurveyed), Garfield County, Utah, briefly described as follows:

Wat Lode Claims numbered from 1 to 9, inclusive;
Pip Lode Claims numbered from 1 to 9, inclusive;
Lil Lode Claims numbered from 1 to 9, inclusive;
Biz Lode Claims numbered from 1 to 4, inclusive;
Jiggs Lode Claims numbered from 1 to 4 inclusive;
Irene Lode Claims numbered from 1 to 7, inclusive;
Doug Lode Claims numbered from 1 to 4, inclusive;

hereinafter referred to as Group "A"; and

WHEREAS, said Optionors above named covenant and warrant that they are the owners and holders of valid and subsisting Lode Mining Claims covering lands in Township Thirty-three (33) South, Ranges Thirteen (13) and Fourteen (14) East, S. L. M., (unsurveyed), Garfield County, Utah, briefly described as follows:

Moth Lode Claims numbered from 1 to 9, inclusive;
Thom Lode Claims numbered from 1 to 8, inclusive;

hereinafter referred to as Group "B"; and

WHEREAS, Optionee desires to obtain the exclusive right and option to enter upon said claims for the purpose of ascertaining whether or not said claims appear to have potential commercial value for uranium and other valuable minerals and to determine whether or not said claims are located in accordance with the Mining Laws of the United States and of the State of Utah, and

upon being satisfied, to obtain the exclusive right and option, for an additional period of six (6) months, of exploring said claims for uranium content by the conduct of coring and other exploratory operations and in the event such exploratory work results in satisfactory evidence to Optionee of the commercial possibilities of mining and producing uranium and other valuable minerals from said claims, to obtain a lease covering said claims for an additional period of two (2) years and as long thereafter as producing, and Optionors are willing to give and grant to Optionee the rights and options herein mentioned upon and subject to the terms and provisions hereinafter set forth;

NOW THEREFORE, for and in consideration of the sum of Ten Dollars ($10.00) in hand paid by Optionee to Optionors, the receipt and sufficiency of which is hereby confessed and acknowledged, it is agreed between the parties hereto as follows:

I

Optionee shall have the exclusive right, privilege, and option, for a period of thirty (30) days from the date hereof, to enter upon the claims hereinabove described for the purpose of determining whether or not said claims appear to have potential value for uranium or other valuable minerals and to determine whether or not said claims are properly located, surveyed, and claimed and to make such further examination thereof as Optionee may determine to be necessary in the premises, including an examination of title of Optionors. In this connection, Optionors agree, if not previously furnished, to furnish to Optionee full and complete certified copies of the recorded Notices filed in connection with such claims and such other information pertaining to the title thereto as may be in the possession of Optionors or which can be reasonably obtained from Optionors.

Optionors hereby represent, covenant, and warrant that to the best of their knowledge and belief, said claims are valid and subsisting; that by, through, and under them, said claims are free and clear of all liens and encumbrances; that they have full

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right and lawful authority to deal with said claims as herein set forth; and that, for the same consideration, Optionors hereby covenant and warrant to defend the title thereto against the lawful claims of all persons whomsoever claiming by, through or under them.

II

This Option and Agreement shall be and become null and void and of no further force or effect unless Optionee, at or before the expiration of thirty (30) days from the date hereof, pays or tenders to Optionors the sum of Twenty-five Hundred Dollars ($2,500.00), which sum, if paid, shall serve as a rental for the extension of all of the terms and provisions hereof for an additional period of six (6) months from the expiration of the aforementioned thirty (30) day period and during said period of six (6) months, Optionee shall have and is hereby given and granted the full and exclusive right and privilege of entering upon the above described claims for the purpose of conducting, coring, and other exploratory operations thereon to determine the presence or absence of commercial quantities of uranium or other valuable minerals.

III

This Agreement and all rights, privileges, and options herein granted shall be and become null and void and of no further force and effect at the expiration of seven (7) months from the date hereof unless, at or before the expiration of seven (7) months from the date hereof, Optionee shall pay or tender to Optionors an additional sum of Twenty-five Hundred Dollars ($2,500.00). In the event said sum is so paid by Optionee to Optionors, this Agreement shall be and remain in full force and effect for a period of two (2) years and seven (7) months from the date hereof and as long thereafter as uranium or any other valuable mineral or ore is produced, saved, and marketed from the premises hereinabove described.

In the event the last mentioned sum of Twenty-five Hundred

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Dollars ($2,500.00) is paid by Optionee to Optionors, as herein provided, Optionors do hereby grant, demise, lease, and let unto Optionee all of those certain Mining Claims hereinabove described and referred to, together with the appurtenances, rights and privileges to prospect the same for uranium and other valuable minerals and ores and to mine and extract the same and to sell, mill or smelt or otherwise reduce the same.

In the following provisions Optionors are referred to as Lessors and Optionee is referred to as Lessee.

IV

In consideration of the said grant, demise, lease, and letting of the above described premises, Lessee does covenant and agree with the Lessors as follows:

(a) Lessee agrees to enter upon the above described mining claims and to work the same in mining fashion and in manner necessary to good economical mining so as to remove therefrom a reasonable amount of uranium ore or ore containing other valuable minerals, having due regard to safety, development and preservation of the said premises as a workable mine or mining property.

Such operations shall be conducted without cessation of more than ninety (90) days at any one time.

Lessee further agrees to mine said premises in a good and workmanlike manner and with reasonable diligence, having due regard for weather, road, and market conditions.

(b) To pay to Lessors as rent and royalty the following:

A royalty of Fifteen Per Cent (15%) on all ores or minerals produced and marketed from said claims, except that all royalty for uranium shall be paid as follows:

A royalty of Fifteen Per Cent (15%) where the uranium content is Twenty-three One Hundredths Per Cent (23/100%) or better; or

A Royalty of Eleven and One-Quarter Per Cent (11-1/4%) where the uranium content is less than Twenty-three One Hundredths Per Cent (23/100%).

Such royalties shall be computed upon gross mill or smelter settlement tickets or returns, payable to Lessors on or before the Fifteenth (15th) day of the calendar month next following the month in which payment is received by Lessee from the sale of such ores.

All royalties accruing on account of the sale of ore from the claims hereinabove designated as Group "A" shall be paid to Clarion W. Taylor and Gerald L. O'Connor in equal portions. All royalties accruing on account of the sale of ores from the claims herein designated as Group "B" shall be paid in equal portions to Clarion W. Taylor, Gerald L. O'Connor, Vernon Buzick, R. Hunt and A. S. Mecham.

V

During the term hereof, Lessee agrees to pay for and do all assessment work necessary, appropriate or required under the Mining Laws of the United States, in connection with the maintenance, preservation, and perfection of any lode, permit or lease rights now held by Lessors in connection with the Mining Claims herein described and referred to, and at the sole cost and expense of Lessee, and, in the event that Lessee is unable or unwilling to engage in any such assessment work, it shall timely notify Lessors and surrender unto Lessors any and all such part or parcels of said Mining Claims or leased premises with respect to which Lessee does not intend or is unable to carry out such assessment work at least Sixty (60) days prior to the last date upon which Lessors would have or might have within which to make or complete such assessment work without loss of rights or interest pertaining thereto.

VI

Lessors shall always have the right, at their own risk, to go upon the properties herein described for the purpose of witnessing any and all operations conducted thereon by Lessee and shall have free and complete access to all information obtained by Lessee in the conduct of operations thereon. The books and records of Lessee, insofar as they pertain to the development and operations conducted

upon the above described claims, shall be open to the inspection of Lessors at any and all reasonable times.

Lessors shall be entitled at reasonable times and from time to time to enter upon said leased premises for the purpose of taking samples therefrom, and Lessee agrees to furnish to Lessors, or any of them copies of any and all core analysis, assay or laboratory analysis pertaining to any prospecting or exploratory work or operations conducted upon said leased premises or Mining Claims.

VII

Lessee covenants and agrees to take out, carry and maintain full Industrial Insurance or in lieu thereof, Workmen's Compensation Insurance, as may be applicable under the laws of the State of Utah, adequate to cover and protect any and all persons employed in or upon said leased premises or Mining Claims by Lessee; and, Lessee agrees to take out and carry Public Liability Insurance having reasonable limits designed to cover the ordinary type of accident or liability which might arise or be occasioned from the operations contemplated to be conducted pursuant hereto.

VIII

Lessee agrees to pay all taxes and assessments levied or assessed against said leased premises or Mining Claims during the term hereof, except as to any severance or production taxes which may be applicable to the royalty interest herein reserved to be paid to Lessors or any of them.

IX

Lessee covenants and agrees to post notices in at least three (3) conspicuous places on the property showing that the property is being operated by Lessee, and that all creditors must look to the Lessee for payment of any accounts incurred after operations commence by Lessee, and to hold harmless the Lessors from any and all claims or demands arising or growing out of the exploration, development, and operation of said properties by Lessee.

X

Lessee covenants and agrees to pay all bills and expenses incurred by Lessee or those in privity with Lessee, and thus to prevent the filing of any and all liens of miners, mechanics, or material men, against said demised premises; and, if by reason of the failure of Lessee to pay such bills or expenses, any lien or liens shall be filed against said leased premises, Lessors may forthwith pay off and discharge the same, and Lessee shall be bound to pay Lessors of such sums so advanced or paid to discharge and clear any such liens or encumbrances from said leased premises.

XI

IT IS EXPRESSLY AGREED, That no default, breach or inability to perform hereunder shall be declared or asserted if the same shall be due to acts of God, strikes, fires, floods, shortages of labor or materials, transportation stoppages or inadequacies, acts or orders of State or Federal agencies, bureaus, commissions or courts, or to any condition above and beyond the control of either of the parties hereto, and in the event of any default, breach or inability to perform hereunder not being of the nature of such contingencies as is hereinabove expressed, the party guilty of such breach or default, and upon written notice by the other party that such a breach or default is being declared or asserted, shall have a period of thirty (30) days within which to remedy or correct any such breach or default of performance. The provisions of this paragraph shall not extend the time or excuse the making of payments provided for in preceding paragraphs.

XII

IT IS EXPRESSLY AGREED, That Lessee shall have full right and privilege to remove from said leased premises any and all tools, materials, equipment, structures, hoists, and trackage that shall have been placed upon said leased premises by Lessee, its successors or assigns, or put to use pursuant to the terms and provisions hereof, at any time, whether before or subsequent to the termination of this Lease, subject to a reasonable time

being allowed for such purpose, not to exceed sixty (60) days.

XIII

IT IS EXPRESSLY AGREED, That Lessee shall have full right and privilege to terminate and surrender this Lease at any time, upon the giving of thirty (30) days' written notice to Lessors, and by making any and all payments or remittances unto Lessors as will have become due and owing pursuant to the terms and provisions of this Lease.

XIV

IT IS EXPRESSLY AGREED, That upon a default or breach of any covenant, term or condition herein contained and not being excused, remedied, or corrected as hereinabove set forth, this Lease shall, at the option of Lessors, expire and terminate, and said leased premises together with any and all improvements thereon, except as is hereinabove otherwise expressed become forfeited to Lessors, and thereupon, Lessors, their agent or representative, may demand in writing for possession of said leased premises, and enter upon said leased premises and depossess any and all persons occupying the same, with or without force and with or without process of law.

XV

LESSORS HEREBY COVENANT AND AGREE, That, if Lessee, its successors or assigns, pays all expense incurred and complete assessment work with respect to any of the above described unpatented claims or placers, then patents are to be applied for and taken on proven claims only as mutually agreed between the parties hereto and if the application and taking of such patents is deemed to be necessary for the production of the interests of both of the parties hereto, and Lessee shall have at all times the full benefit of such patents and the same shall be deemed to be a part and parcel of the leased premises hereof and subject to all the terms and provisions hereof.

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XVI

IT IS HEREBY AGREED, That any and all payments, notices, demands or transmittals required to be sent pursuant to the terms hereof, or as may be appropriate, shall be placed in the United States mail, postage prepaid, and addressed to the parties hereto at their respective addresses, set forth below, to-wit:

Lessors: CLARION W. TAYLOR, 605 SO. LOGAN ST., DENVER, COLO.
GERALD L. O'CONNOR, 519 SO. CEDAR, COLO. SPRINGS, COLO.
VERNON BUZICK, 1940 GENEVA ST., AURORA, COLORADO
R. HUNT, HANKSVILLE, UTAH
H. S. MECHAM, c/o R. HUNT, HANKSVILLE, UTAH

Lessee: VAUGHEY AND VAUGHEY, 312 C. A. JOHNSON BLDG., DENVER, COLO.

XVII

THIS AGREEMENT shall be binding upon and inure to the benefit of the heirs, assigns, representatives, and successors of the parties hereto.

IN WITNESS WHEREOF, the parties have hereunto set their hands and seals the day and year first above written, in the State of Colorado.

Clarion W. Taylor
CLARION W. TAYLOR

Gerald L. O'Connor
GERALD L. O'CONNOR

Vernon Buzick
VERNON BUZICK

R. Hunt
R. HUNT

H. S. Mecham
H. S. MECHAM
- Optionors and Lessors -

VAUGHEY AND VAUGHEY
By [illegible]
One of the Partners
- Optionee and Lessee -

STATE OF Colorado)
City and : ss.
COUNTY OF Denver)

On the 30th day of April, A. D. 1954, personally appeared before me CLARION W. TAYLOR, the signer of the above instrument, who duly acknowledged to me that he executed the same.

My commission expires Jan. 1, 1955

Peare O. Metzger
Notary Public

STATE OF Colorado)
City and : ss.
COUNTY OF Denver)

On the 30th day of April, A. D. 1954, personally appeared before me GERALD L. O'CONNOR, the signer of the above instrument, who duly acknowledged to me that he executed the same.

My commission expires Jan. 1, 1955

Peare O. Metzger
Notary Public

STATE OF Colorado)
: ss.
COUNTY OF Arapahoe)

On the 5 day of May, A. D. 1954, personally appeared before me VERNON BUZICK, the signer of the above instrument, who duly acknowledged to me that he executed the same.

My commission expires 3/10/58

Leaney M. [illegible]
Notary Public

STATE OF Utah)
: ss.
COUNTY OF Wayne)

On the 4th day of May, A. D. 1954, personally appeared before me R. HUNT, the signer of the above instrument, who duly acknowledged to me that he executed the same.

My commission expires Jan 27 1957

[illegible]
Notary Public

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STATE OF Utah)
) SS.
COUNTY OF [illegible])

ON THE 4 DAY OF May, A. D. 1954, PERSONALLY APPEARED BEFORE ME H. S. MECHAM, THE SIGNER OF THE ABOVE INSTRUMENT, WHO DULY ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME.

MY COMMISSION EXPIRES [illegible]

[illegible]
NOTARY PUBLIC

STATE OF Colorado)
City &) SS.
COUNTY OF Denver)

ON THE 30th DAY OF April, A.D. 1954, PERSONALLY APPEARED BEFORE ME W. T. BLACKBURN, ONE OF THE PARTNERS OF VAUGHEY AND VAUGHEY, A COPARTNERSHIP, THE SIGNER OF THE ABOVE INSTRUMENT, WHO DULY ACKNOWLEDGED TO ME THAT HE EXECUTED THE SAME.

MY COMMISSION EXPIRES Jan 9, 1957.

[illegible]
NOTARY PUBLIC

(ATTACHMENT TO EXHIBIT C - GEOLOGICAL REPORT)

5. (B) SEE MAP. IN AREA NO. 1 WE PROPOSE TO DRILL BY WAGON DRILL 28 HOLES AVERAGING 100 FEET IN DEPTH WITH SIX OF THESE HOLES DEEPENED TO 200 FEET. THESE HOLES ARE MARKED PHASE A ON ATTACHED MAP, AND TOTAL 3400 FEET. SHOULD SUFFICIENT ORE SHOWS BE ENCOUNTERED BY PHASE A DRILLING, THEN PHAST B DRILLING WOULD BE STARTED. PHASE B DRILLING WOULD INCLUDE THE DRILLING OF 63 HOLES AVERAGING 150 FEET IN DEPTH, AS MARKED ON ATTACHED MAP, AND TOTAL 9450 FEET. CUTTINGS FROM ALL HOLES WILL BE CHECKED FOR RADIATION AS THE HOLES ARE DRILLED, AND THE HOLES WOULD BE PROBED AND LOGGED AFTER DRILLING.

IN AREA NO. 2, AS MARKED PHAST A ON ATTACHED MAP, WE PROPOSE TO DRILL 21 HOLES AVERAGING 225 FEET IN DEPTH FOR A TOTAL OF 4725 FEET. SHOULD SUFFICIENT ORE SHOWS BE ENCOUNTERED BY PHASE A DRILLING, THEN PHASE B DRILLING WOULD BE STARTED.

PHASE B DRILLING WOULD INCLUDE THE DRILLING OF 14 ANGLE HOLES AVERAGING 325 FEET IN DEPTH FOR A TOTAL OF 4550 FEET.

216 Denver Theatre Bldg.
Denver, Colorado
April 22, 1954

Mr. W. T. Blackburn
Vaughey and Vaughey Oil Producers
C. A. Johnson Building
Denver 2, Colorado

Dear Mr. Blackburn:

At your request I have made a surface reconnaissance examination of mining claims owned by Mr. Clarion Taylor of Denver, Colorado, and his partners. These claims were offered to your company through Mr. Phil D. Willhite of Denver, Colorado.

The purpose of this examination lies in the determination of the possibility of existance of uranium ores on this property, and if such ores might exist, to recommend a procedure which might be used to evaluate these claims.

All 62 claims are located on the north side of North Wash, a tributary to the Colorado River about 7 miles north of Hite, Utah. The area is unsurveyed, but if surveyed the claims would lie in Sections 13, 23, 24, 25, 26, 35, and 36, T. 33 S., R. 13 E., and Sections 30 and 31, T. 33 S., R. 14 E., Garfield County, Utah. This area is in the southeastern portion of the State.

Hite, a town of about 75 people is located where Utah Highway #95 is a poor unimproved road between Blanding, a town of 1200 people 90 miles east of Hite, and Greenriver, a town of 600 people 112 miles north of Hite.

The nearest buying stations for uranium ores would be Thompson, Utah, about 130 miles north via Greenriver or Monticello, Utah, 125 miles east via Blanding.

The climate of this area is arid with an estimated rainfall of less than four inches per year. Over most of the area, there is a light sagebrush cover, but no timber. A water supply for drilling and mining operations can be obtained from North Wash during the spring, and may be developed for operations during the remainder of the year. There is one spring in North Wash about three miles from the Taylor claims, that can supply drinking water for a mining camp. The nearest other water supply is the Colorado River three miles away.

Topographically, the area is characterized by vertical scarps at all sandstone outcrops and gentle slopes to nearly flat benches where the sandstones are overlain by shales. Relief on the claim group will exceed 1300 feet.

Access to the Taylor claims can only be accomplished by construction of a road from the present road down North Wash. The first mile of such

a road would have to climb an estimated 500 feet from the canyon floor, up across a fairly steep outcrop of Moenkopi and Chinle shale, then up on top of the Mossback rim. From here access roads to much of the area could be fairly level through roughly half of all roadwork done would be across large landslide blocks which offer a rough surface with much blocky sandstone. The remainder of the roadwork would be across the top of solid Mossback sandstone and would require very little leveling. I believe most of this work could be accomplished by bulldozing with very little blasting required. Estimated total road mileage required for test drilling operations is five miles. This same road, with very little additional work would serve potential mining operations. It is estimated total road cost will be about $5,000.

The formations exposed in the North Wash area include the Navajo, Kayenta, and Wingate formations of Jurassic age and the Chinle and Moenkopi formations of Triassic age. These formations will be treated separately in the following descriptions and in a descending order with regard to age.

Navajo

The Navajo formation consists of approximately 300 feet of massive crossbedded light pink sandstone. It caps many of the scarps in the vicinity of North Wash. At present it is not known to contain commercial uranium deposits in this vicinity.

Kayenta

The Kayenta formation consists of approximately 200 feet of poorly bedded brick red sandstones interbedded with thin red shales. It usually forms a nearly vertical scarp; this formation has not produced commercial uranium ores.

Wingate

The Wingate formation consists of approximately 300 feet of massive red sandstone. Typically the sandstone forms a vertical to overhanging scarp and in much of the North Wash area it is characterized by many small holes wind eroded into the cliff face. This formation has not produced commercial uranium ore.

Chinle

The Chinle formation is estimated to be 700 feet thick in the North Wash area. It consists of interbedded red and gray shales with one prominent conglomeratic sandstone with its top about 180 feet above the base of the formation. This sandstone is as the Mossback member of the Chinle formation and is the producing horizon at the C. A. Steen property on the Lisbon anticline, San Juan County, Utah. The Mossback member at North Wash will average about 90 feet in thickness and consists of poorly bedded, fine to conglomeratic, gray-white sandstones interbedded with gray shales. It grades downward into an underlying gray shale which is about 35 feet thick. Immediately below this gray shale is 25 feet of red shale which in turn is underlain by 40 feet of blue-gray shale. This latter shale is equivalent to the Shinarump conglomerate. The Shinarump is normally a carbonaceous

conglomeratic sandstone with a maximum thickness of 75 feet. This section produces uranium - copper ores in the White Canyon area about ten air miles east of North Wash. Most of the larger uranium ore bodies are in channel deposits at the base of the Shinarump and along the contact between the Shinarump and Moenkopi formations.

Moenkopi

The Moenkopi formation consists of 200 to 350 feet of thin-bedded dark brown to grayish red siltstone interbedded with red shales. Approximately 200 feet of the formation is exposed in this area. Though there have been shows, no commercial uranium ore has been developed in this formation.

From reconnaissance examination of the Taylor claims, I believe there are two limited areas that merit evaluation and a third area that merits a minor amount of test drilling. These three areas are shown on the accompanying map in what I believe to be their order of relative merit.

Area number one, and the best prospect, is a channel development in the Mossbeck member of the Chinle formation. This channel is exposed in cross section on a canyon rim and is approximately 250 feet wide and 40 feet deep. The material filling the channel consists of interbedded gray sandstones and shales. Some of the shale is calcareous and there are zones of trash carbon. Scintillator readings across the entire channel face were sufficiently high to warrant test drilling.

For reconnaissance evaluation of this area, at least 2000 feet of diamond drilling should be expected. The majority of the test holes should average 100 feet deep while about four of the test holes, to be picked at random, might be drilled to 200 feet or through the Shinarump. This group of holes should be laid out on 100 foot centers in such a manner as to best define the underground route of this channel.

Area number two is a zone six inches thick at the Shinarump-Moenkopi contact. Because the exposure is about 25 feet above the base of a vertical cliff examinations had to be made on a shale block that had fallen from the cliff. Again scintillator readings were high enough to warrant test drilling.

To evaluate this show I would again recommend a 100 foot grid of core holes. The holes in this instance would have to average approximately 200 feet in depth. I believe 6,000 feet of drilling may be necessary for reconnaissance evaluation.

Area number three was detected by the scintillator which we walked across the top of the Mossbeck formation. This area should warrant about four reconnaissance core holes, two to be 200 feet steep and two to be 100 feet deep.

Total reconnaissance drilling outlined here would be 8600 feet and would cost somewhere between $17,200 and $20,000. If ore was found during this program, drilling should be continued to completely define the ore body. Such additional drilling should be laid out on a grid of 50 foot centers.

I believe the Taylor properties are worth acquiring if this can be done for a small cash outlay and a small royalty.

Though the Taylor claims are supposed to form a contiguous group I suspect there are several large gaps between the claim groups. These gaps will probably lie across the tops of the high Kayenta - Wingate scarps, and though they probably would not cause trouble before ore was found, they should be claimed immediately upon making a discovery. I believe the claims will be found to be undersize and in general poorly laid out.

Before acquisition, the legal status of the claims should be thoroughly investigated. If this is satisfactory, I recommend the following procedure:

1. Build the proposed access roads as shown on the accompanying map.

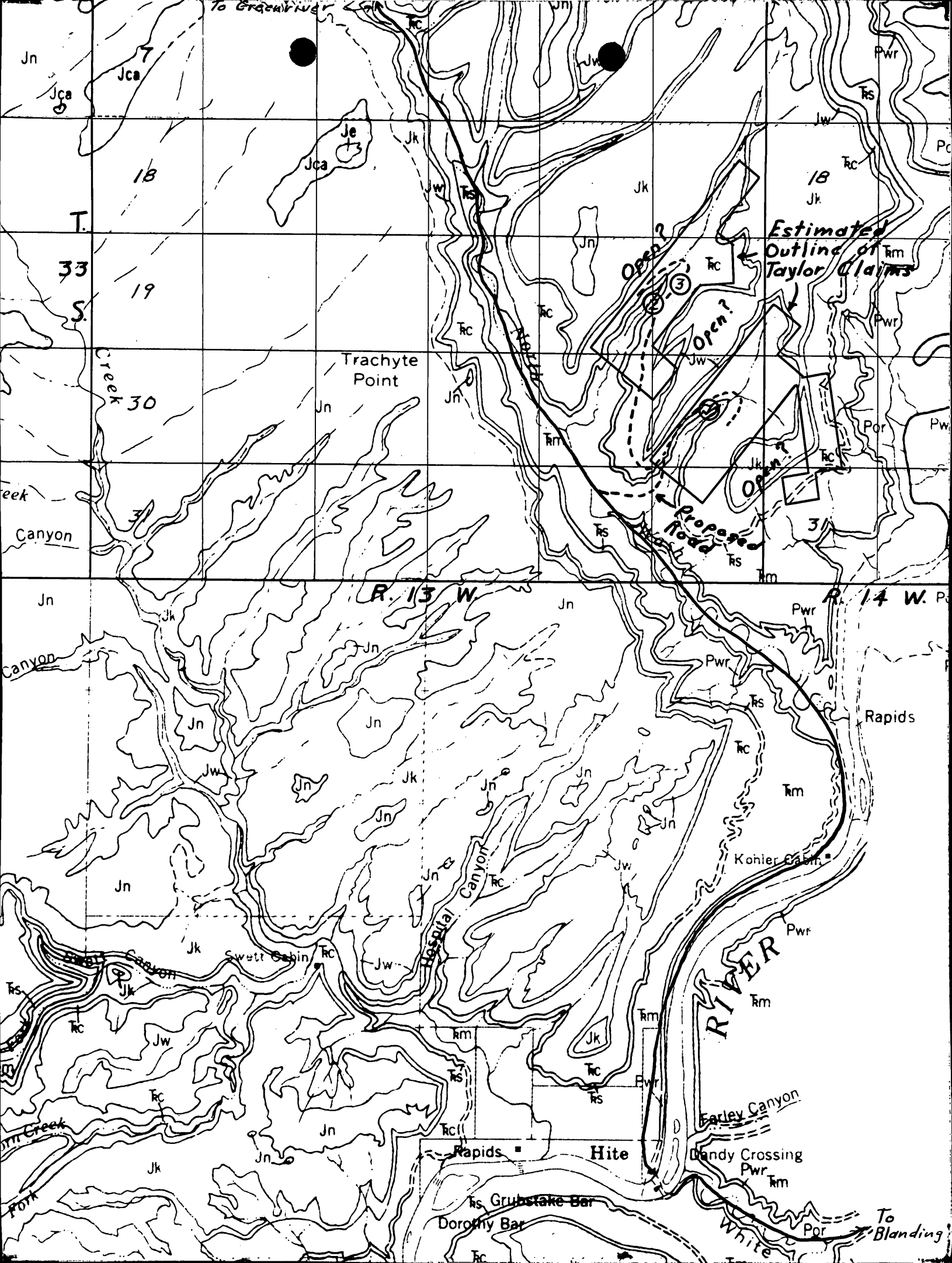
2. Proceed with drilling of areas 1, 2, and 3 as outlined above. If at any time commercial ore is discovered, licensed surveyors should be immediately engaged to tie in all claims and to claim all desirable open ground.

3. If ore is found in any drill holes, the orebody should be defined by further diamond drilling preparatory to mining.

Maynard F. Ayler

Maynard F. Ayler

MFA:H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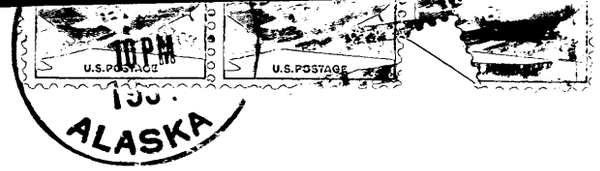
Hospital Canyon
Swett Cabin
Swett Canyon
RIVER
Farley Canyon
Dandy Crossing
Rapids
Hite
Grubstake Bar
Dorothy Bar
White
To
Blanding
Fork
Creek

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

OFFICIAL BUSINESS

Bureau of Mines
P.O. Box 560
Juneau, Alaska



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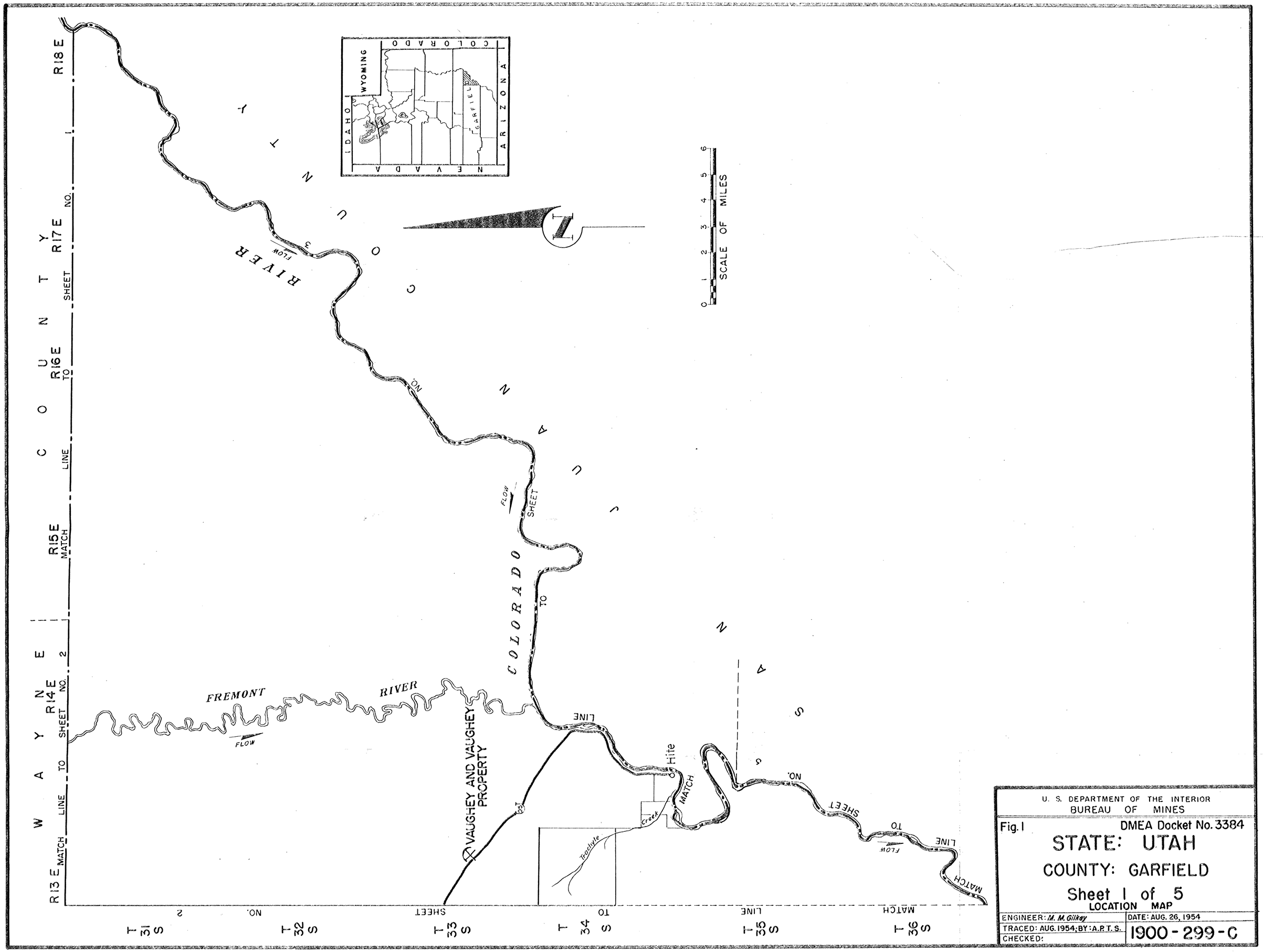
VIA AIR MAIL

U. S. DEPARTMENT OF THE INTERIOR

DEFENSE MINERALS EXPLORATION ADMINISTRATION

WASHINGTON 25, D. C.



U. S. DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

Fig. 1

DMEA Docket No. 3384

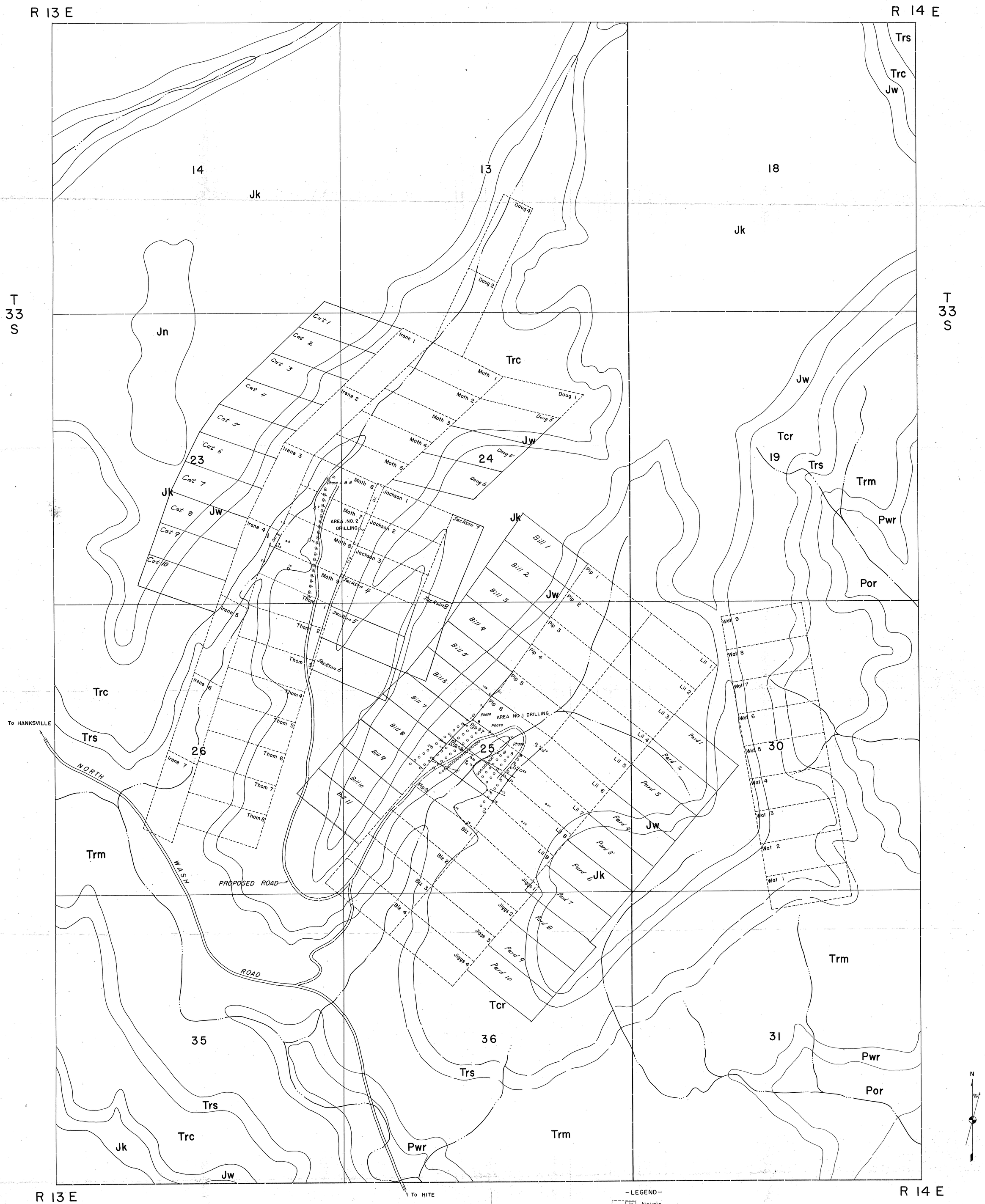
STATE: UTAH

COUNTY: GARFIELD

Sheet 1 of 5

LOCATION MAP

ENGINEER: M. M. Gilkey	DATE: AUG. 26, 1954
TRACED: AUG. 1954; BY: A.P.T.S.	1900-299-C
CHECKED:	



-LEGEND-

Jurassic	Jn	Navajo
	Jk	Kayenta
	Jw	Wingate
Triassic	Trc	Chinle
		Mossback rim lies just above the Chinle-Shinarump contact
	Trs	Shinarump
	Trm	Moenkopi
Permian	Pwr	White Rim
	Por	Organ Rock

- Survey rod stations
- Plane table stations
- Claim discovery monuments
- Proposed drill holes
- Possible ore channel

VAUGHEY & VAUGHEY

NORTH WASH PROSPECT

GARFIELD COUNTY UTAH

Geologist: M.F. Ayler

SCALE	DATE
1" = 500'	May 21, 1954