700

FILE COP
Surnames
Murphy
Kilgaard
Hughes
Selfridge
Hyman

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

FEB - 1 1956

Messrs. John A. Williams
and William D. Williams
Post Office Box 31
Montrose, Colorado

Re: Docket No. DMEA-4053 (Uranium)
Sunset group of claims
Gunnison County, Colorado

Gentlemen:

Reference is made to your application for Government aid in an exploration project on the above-named claims.

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

Careful study of all our information, although noting the occurrence of minor radioactivity in small areas of the subject claims, indicates to us that the possibility of disclosing significant ore reserves is not sufficiently promising to justify Government participation in an exploration project. We regret to advise you that, under these circumstances, your application for exploration assistance is denied.

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

Sincerely yours,

C. O. Mu[illegible]

Administrator

FMMurphy/izm 2-1-56

cc to: Docket
Code 700
Mr. Murphy
Admr.'s Reading File
Operating Committee
DMEA Field Team, Region III (2)
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA
Mr. W. D. Williams

Docket Copy

700 Murphy

February 1, 1956

SUMMARY OF PROPOSED PROJECT

Object: Denial of application for exploration aid.

Docket No.: DMEA-4053

Commodity: Uranium

Applicant: J. A. and W. D. Williams
P. O. Box 31
Montrose, Colorado

Property: Owners' of Sunset group of 5 claims situated in the SW$\frac{1}{4}$ of Section 7 and the NW$\frac{1}{4}$ of Section 18, T. 47 N., R. 1 W., N.M.P.M., Gunnison County, Colorado

Date of Application: October 31, 1955

Referred to Field Team: November 21, 1955

Field Examination made: November 16, 1955 in conjunction with other DMEA work.

Field Team Report Received: January 19, 1955

Amount of Application: $74,916.40

Work Proposed:

Stage I - 26 core drill holes ...	5,200	feet
Stage II- 13 core drill holes ...	2,600	feet
Total Drilling	7,800	feet

Under Stage I average estimated depth of holes given as 200 feet. Depth of holes for Stage II not stated.

Estimated Costs: (17 month program)

Access roads - bulldozer 2 days @ $100/day	$200.00	
Labor and Supervision	27,744.00	
Engineering and Consultants	5,000.00	
Operating materials and supplies	11,244.40	
Operating equipment	28,358.00	
Rehabilitation and repairs (jeep)	300.00	
Rehabilitation bunkhouse & dining hall	1,000.00	
Maintenance of drill rig	900.00	
Maintenance of jeep	170.00	
Total		$74,916.40

Excerpts from Field Team Report:

The country rocks consist of granite and schist of Precambrian age. On the Sunset No. 2 claim a quartz vein containing pyrite and secondary copper minerals has been prospected by three shallow shafts over a distance of 300 feet. The vein is steep dipping and is not exposed beyond the shafts. Two adits (now caved) were driven on Sunset Nos. 2 and 3 claims.

The results of radioactivity measurements made over the claim group and in nearby areas indicate that there are no significant radioactive deposits on the Applicants' property. No uranium or thorium minerals could be detected in any of the material collected from the immediate area and no mineralized structures are exposed that might control the erratic distribution of the weak, radioactivity anomalies noted. It is concluded that the radioactivity noted is due to the normal trace uranium and thorium content of the country rock.

It is recommended the application be denied because the proposed drilling is considered prospecting, and the area is unfavorable.

Commodity Members' Comments:

USGS, N. E. Nelson, January 24, 1956:

Agrees with conclusions of the field examiners and concurs in denial of the application.

USBM, J. E. Crawford, January 27, 1956:

Concurs in Field Team's recommendation to deny the subject application.

Rare and Miscellaneous Metals Division, F. M. Murphy, February 1, 1956:

The field examination of the subject property indicated that the proposed project to explore for uranium or thorium deposits has no justification. The Applicant reported radiometric assays of .01 to .06% eU_3O_8 on uraniferous rocks from the area. The field examiners reported recording some scattered, weak, anomaly readings on the subject claims, but no uranium or thorium minerals could be found in the samples taken.

This Division recommends that the subject application should be denied.

Ernest Wm. Ellis

Ernest Wm. Ellis, Chief
Rare and Miscellaneous
Metals Division

1/30/56 gla

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

RECEIVED
JAN 30 1956

January 27, 1956

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

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

Subject: Report of Examination, Docket DMEA 4053, J. A. and W. D. Williams, Sunset claim group, Gunnison County, Colorado

I have reviewed the report of examination of DMEA Docket 4053, dated January 16, 1956, and received in this office on January 24. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

The applicants requested DMEA assistance in exploring for uranium and thorium on the Sunset claim group, Gunnison County, Colo., by diamond drilling 39 holes in a two-stage program at an estimated cost of $62,400.

Upon examination of subject property by DMEA personnel on November 16, 1955, no uranium or thorium minerals could be detected in any of the material collected and no mineralized structures are exposed that might control the erratic distribution of the weak, radioactive anomalies noted.

The field team recommend denial of the application.

We concur in the recommendation of the field team that the application for exploration assistance be denied because the proposed work is pure prospecting.

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

John E Crawford
John E. Crawford

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

RECEIVED
JAN 30 1956

January 27, 1956

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

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

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John E. Crawford

1-25-56 Lgm

IN REPLY REFER TO:

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

RECEIVED
JAN 24 1956

January 24, 1956

Re: DMEA 4053
J. A. and W. D. Williams
Sunset claim group
Gunnison County, Colorado
$74,916.40 - Uranium, Thorium

Memorandum

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

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

Subject: Review of Field Team report.

The applicants requested assistance in exploring by drilling a somewhat undefined zone showing low grade radioactivity.

No uranium minerals were seen by the examiners and no significant radioactive structures or deposits have been indicated. The work proposed would therefore be prospecting and the weak radioactivity does not justify such work.

I concur with the recommendation of the examiners and the Field Team that the application be denied.

N. E. Nelson

N. E. Nelson

1-23-56 dgm

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

RECEIVED
JAN 19 1956

January 16, 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Joint Report of Examination, Docket DMEA 4053 (Uranium-Thorium), J. A. and W. D. Williams, Sunset claim group, Gunnison County, Colorado

Enclosed are the original and three copies of a Joint Report of Examination on the subject property.

No uranium or thorium minerals could be detected in any of the material collected from the immediate area, and no mineralized structures are exposed that might control the erratic distribution of the weak radioactive anomalies noted.

The work requested by the applicant on the Sunset claims at this time would be strictly of a prospecting nature.

Denial of the application for exploration assistance is recommended.

DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
1-23-56
(date)

IN REPLY REFER TO:

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

RECEIVED
JAN 24 1956

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N. E. Nelson

N. E. Nelson

NENelson:iml
G-1/24/56

cc: Director's reading, 4212
Branch reading, 4212
DMEA (3)
Docket file
J. E. Crawford, 3641
J. O. Hosted, 3210

IN REPLY REFER TO:

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

RECEIVED
JAN 24 1956

January 24, 1956

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J. A. and W. D. Williams
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GEOLOGICAL SURVEY
WASHINGTON 25, D. C.

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NENelson:iml
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Docket file
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J. O. Hosted, 3210

IN REPLY REFER TO:
DMEA
Date Rec'd.
JAN 16 1956
BUREAU OF MINES
Denver, Colorado

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

RECEIVED
JAN 19 1956

Defense Minerals Exploration Administration
Denver Federal Center
Denver, Colorado

January 13, 1956

Memorandum

TRANSMITTED
JAN 16 1956

To: Executive Officer, DMEA Field Team, Region III

From: John F. Shaw
E. N. Harshman

Subject: DMEA Docket 4053 (Uranium-Thorium), J. A. and W. D. Williams, Sunset claim group, Gunnison County, Colorado

Enclosed are the original and nine copies of a joint engineering and geologic report by W. D. McMillan, Bureau of Mines, and R. U. King, Geological Survey, covering their examination of the subject property. The examination was made prior to the field referral by Washington while the examiners were in the area on other DMEA examinations.

The applicant proposes to explore the Sunset claim group for uranium and thorium by diamond drilling 39 holes in a two stage program. Their estimated cost was $74,916.40, later, reduced to $62,400.00.

The examiners failed to find evidence of the presence of significant deposits of uranium, thorium, or other strategic minerals on the claims and conclude that the proposed program is prospecting.

Denial of the application for exploration assistance, DMEA Docket 4053, is recommended.

John F. Shaw
John F. Shaw
Supervising Mining Engineer

Reviewed by
DMEA OPERATING COMMITTEE
1-23-56
(date)

E. N. Harshman
E. N. Harshman
Member, Field Team

Enclosures (10)
ENHarshman:mp

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

RECEIVED
JAN 19 1956

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

TRANSMITTED

JAN 16 1956

DMEA 4053

J. A. Williams and W. D. Williams

Sunset Claim Group

Domingo (Vulcan) Mining District

Gunnison County, Colorado

Uranium and Thorium

Joint Engineering and Geologic Report

by

Reviewed by
DMEA OPERATING COMMITTEE
1-23-56
(date)

W. D. McMillan
Bureau of Mines

R. U. King
Geological Survey

January 12, 1956

RECEIVED
JAN 19 1956

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Mining, Milling, and other Facilities	6
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ILLUSTRATIONS

Figure	Follows page
1. Location map, John A. Williams and William D. Williams, Sunset Claim Group, Domingo Mining District, Gunnison County, Colorado. DMEA 4053	2
2. Map showing proposed exploration, Sunset Group of claims, Domingo Mining District, Gunnison County, Colorado	5

DMEA 4053

RECEIVED
JAN 19 1956

J. A. WILLIAMS AND W. D. WILLIAMS
SUNSET GROUP
GUNNISON COUNTY, COLORADO

SUMMARY

J. A. and W. D. Williams applied for Defense Minerals Exploration Administration assistance to explore for uranium and thorium on the Sunset group of claims. They proposed to explore the claims by diamond drilling from the surface. They estimated the cost of exploration to be $74,916.40.

The applicants' property is in the Domingo (Vulcan) mining district one-half mile west of the abandoned mining town of Vulcan, in Gunnison County, Colorado. A small production of gold, silver, and copper is reported from the district. An examination of the applicants' property on November 16, 1955, revealed only scattered, weak radioactivity anomalies associated with a fine-grained granitic rock of probable volcanic origin.

The examining team concludes that the applicants' proposed work is in fact prospecting and that there is no evidence to indicate the presence of significant deposits of uranium, thorium, or other strategic minerals.

It is recommended that the application for DMEA assistance be denied.

INTRODUCTION

John A. Williams and W. D. Williams of Montrose, Colorado, applied to the Defense Minerals Exploration Administration for assistance to explore their Sunset group of claims for uranium and thorium. The applicants propose to explore the claims by diamond drilling from surface locations. Twenty-six core drill holes, averaging 200 feet in depth, are proposed to test areas underneath uraniferous outcrops to locate primary ore veins, to be followed by 13 holes to determine extent of veins discovered by the first stage of drilling. The applicants estimate the cost of exploration to be $74,916.40.

The property was examined on November 16, 1955, by W. D. McMillan and R. U. King, in conjunction with other DMEA work in the area.

The Grand Junction office of the U. S. Atomic Energy Commission concurs with the conclusions of the examining team.

LOCATION, TOPOGRAPHY, AND GENERAL FEATURES

The Sunset group of claims is in the SW 1/4 sec. 7, T. 47 N., R. 1 W., N. Mex. P. M., Domingo (Vulcan) mining district, one-half mile west of the abandoned town of Vulcan, Gunnison County, Colorado. The claims are 15 miles south-southwest of Gunnison (fig. 1) and are accessible by road from Iola on U. S. Highway 50, twelve miles west of Gunnison.

The claims are at an elevation of about 9,000 feet on the lower northwest slope of Sawtooth Mountain. Local relief amounts to about

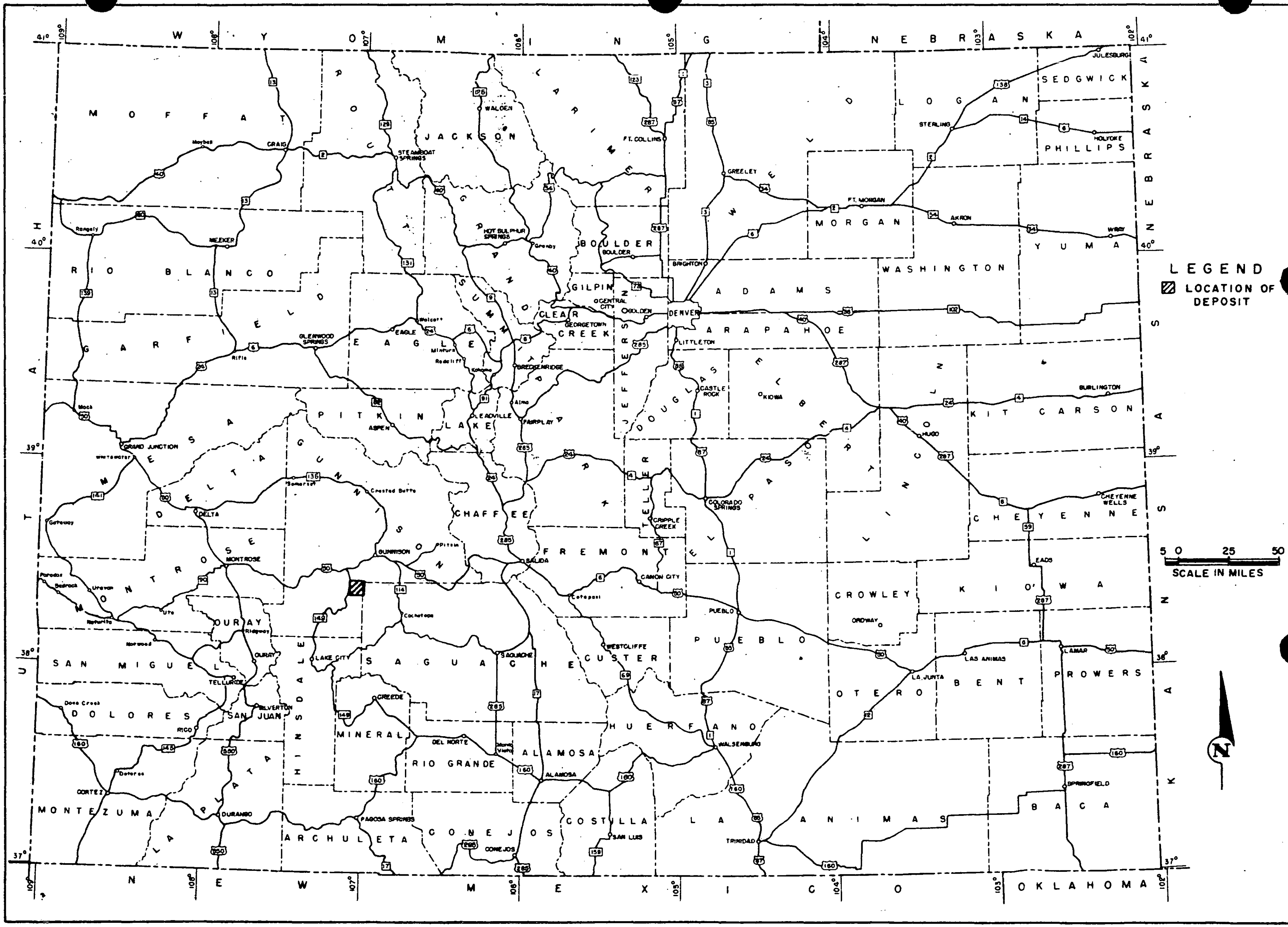


FIGURE 1 - LOCATION MAP, JOHN H. WILLIAMS AND WILLIAM D. WILLIAMS, SUNSET CLAIM GROUP, DOMINGO MINING DISTRICT, GUNNISON COUNTY, COLO. DMEA 4053

RECEIVED
JAN 19 1956

200 feet. Tributaries of Willow Creek that flows northward into the Gunnison River drain the area. Aspen and pine cover the hills south of the property.

HISTORY, PRODUCTION, AND OWNERSHIP

Gold was discovered in the "Gunnison Gold Belt" in the middle 90's, and the discovery of the ore bodies of the Vulcan and Mammoth mines are reported to have been made in 1895. In 1901 production from the Good Hope and Vulcan mines is reported to have amounted to about $400,000, chiefly in gold. In 1907 the Good Hope shaft was reported to be 700 feet deep and in a refractory sulfide ore that contained gold, silver, and copper. The principal production from the mines at Vulcan has been gold obtained from pyrite zones in Precambrian schist. A small production of lead, gold-silver, and copper-gold-silver ores is reported from vein deposits in the Vulcan district. From 1901 to 1941 production amounted to about 6,000 tons that contained on the average 1 ounce gold and 4 ounces silver per ton, 2 percent copper, and 3 percent lead. No production is reported from this district since 1941.

The applicants located the group of five claims, known as the Sunset Nos. 1 to 5 claims, in the summer of 1955. They state that the claims are recorded in Book 306, on pages 232 and 237, in the County Clerk's office, Gunnison County, Colorado. Verification of these entries was not made by the examining team.

The applicants have not done physical exploration on the claims, other than testing outcrops for radioactivity.

GEOLOGY

The Vulcan district is on the north flank of the San Juan Mountains in the southwestern part of Colorado. The country rocks consist chiefly of granite and schist of Precambrian age, but volcanic intrusive and extrusive rocks of Tertiary age are widespread in neighboring areas. Jurassic sedimentary rocks overly and are faulted against Precambrian rocks to the east and south of the area.

A persistent fault or fracture zone that trends west-northwest is mapped in the vicinity of Vulcan and is inferred to cross the area of proposed exploration. Because of the west-northwesterly alignment of the Ute Trail, Iron Cap, Gunnison, and Red Top mines, it is inferred that the fracture zone continued for several miles beyond the applicants' property.

The geology of the San Juan region is described by Cross and Larsen in USGS Bulletin 843, 1935.

According to Vanderwilt (Mineral Resources of Colorado, 1947), the ore deposits of the Vulcan district have been gold-silver veins and gold-pyrite zones. The principal production at Vulcan has been gold obtained from a pyrite zone that is roughly parallel to the schistosity of the enclosing rocks. Small shipments of lead, gold-

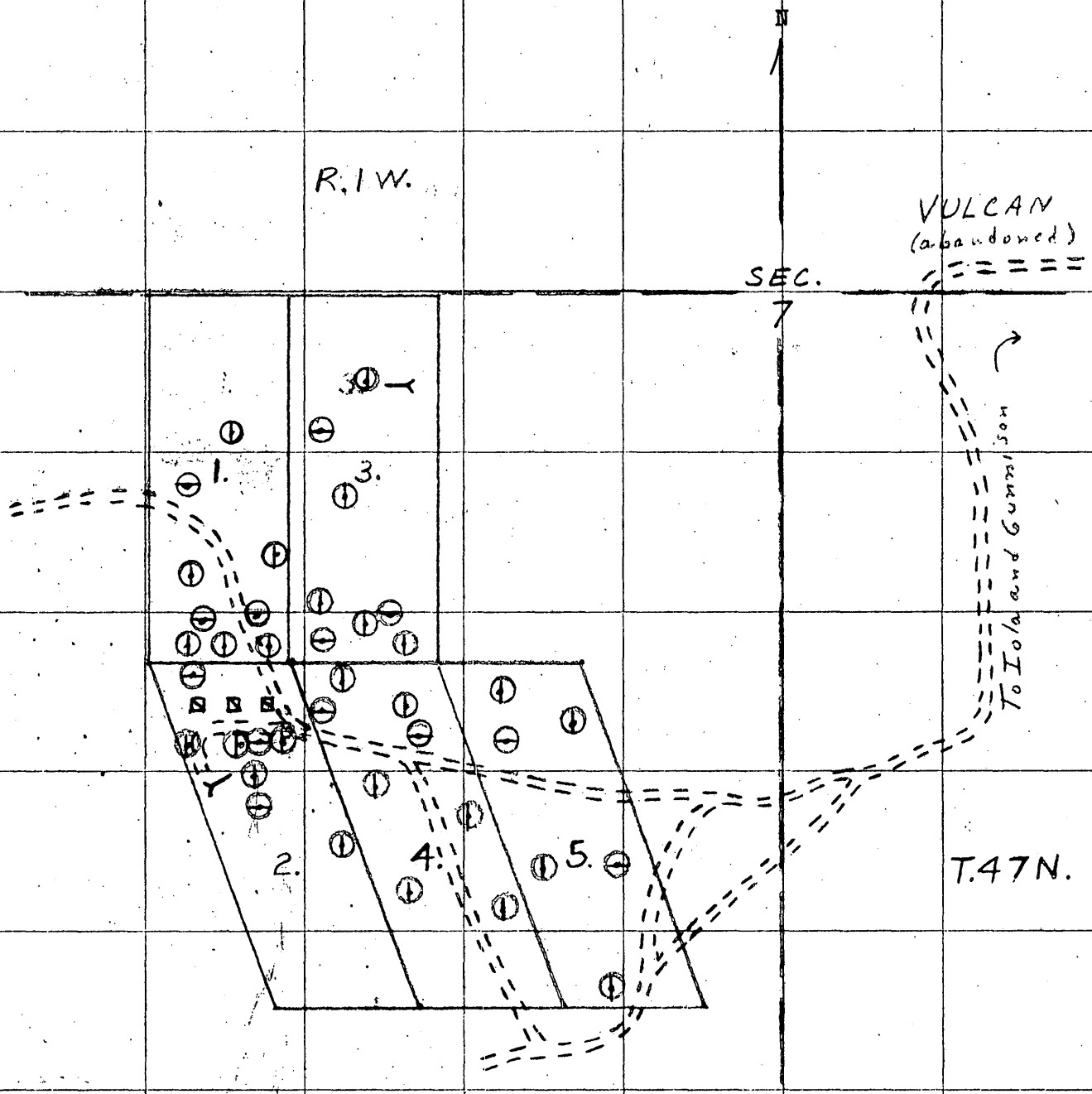
silver, and copper-gold-silver ores are reported from other veing. The veins are in Precambrian schist and possibly in Cretaceous sedimentary rocks.

Within the area of proposed exploration on the Sunset No. 2 claim, a quartz vein containing pyrite and secondary copper minerals has been prospected by three shallow shafts (fig. 2) over a length of about 300 feet. It is steeply dipping and apparently is lenticular in shape; it is not exposed beyond the shafts. The vein material on the dumps exhibits no abnormal radioactivity.

Burbank and Pierson (USGS Circular 236, 1953) obtained slight radioactivity anomalies in this area during reconnaissance investigations in 1951, but material collected from old mine dumps contained only 0.006 percent eU and 0.002 percent U.

The applicants report that they have obtained radioactive material from the Sunset No. 1 and No. 2 claims that contained 0.01 and 0.06 percent equivalent U_3O_8, respectively, and indicate in their application that radioactive anomalies are widespread over most of the claims.

Measurements of radioactivity made by the examining team indicated a few anomalies that were as much as two or three times the normal background radioactivity, but no significant concentrations of radioactivity were noted. Samples of the most radioactive material consisting of schist, porphyritic volcanic rocks, and quartz vein material that were tested in the laboratory failed to show any sig-



Note: After map supplied by applicant.

EXPLANATION

Adit

Shaft

Proposed daimond drill holes, stages 1 & 2 respectively.

R. U. King Dec. 1955

FIGURE 2.— MAP SHOWING PROPOSED EXPLORATION, SUNSET GROUP OF CLAIMS, DOMINGO MINING DISTRICT, GUNNISON COUNTY, COLORADO.
Scale: 1 inch = 660 feet.

nificant radioactive mineral content. A sample of reddish volcanic rock collected by AEC personnel from this area contained 0.009 percent equivalent uranium.

ORE RESERVES

None.

PRESENT STATUS

Exploration and Development

The claims have been prospected by three shallow shafts and two short adits (now caved) at locations shown on Figure 2. This work was done by prior operators. The present applicants have done no physical exploration or development work on the Sunset claims.

Mining, Milling, and other Facilities

None.

PROJECT PROPOSALS

The applicants propose to explore the claims by a 2 stage drilling program as follows:

Stage I - Twenty-six core drill holes with an average depth of 200 feet.

Stage II - Thirteen rotary and core drill holes of unstated depth.

The applicants originally estimated the total cost of the proposed program to be $74,916.40. In an undated letter to the Executive Officer, received November 4, 1955, the applicants reduced this estimate to $62,400.00.

CONCLUSIONS AND RECOMMENDATIONS

The results of radioactivity measurements made over the claim group and in nearby areas indicate that there are no significant radioactive deposits on the applicants' property, the Sunset Group of claims. No uranium or thorium minerals could be detected in any of the material collected from the immediate area, and no mineralized structures are exposed that might control the erratic distribution of the weak, radioactive anomalies noted. It is concluded that the radioactivity noted is due to the normal trace uranium and thorium content of the country rock.

The search for uranium and thorium on the Sunset claims would be strictly prospecting and in the opinion of the examining team would be in an unfavorable area.

It is recommended that the application for Government assistance to explore for uranium and thorium on the Sunset claims be denied.

1-19-56 [illegible]

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

January 16, 1956

RECEIVED
JAN 19 1956

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Field Team, Region III

Subject: Joint Report of Examination, Docket DMEA 4053 (Uranium-Thorium), J. A. and W. D. Williams, Sunset claim group, Gunnison County, Colorado

Enclosed are the original and three copies of a Joint Report of Examination on the subject property.

No uranium or thorium minerals could be detected in any of the material collected from the immediate area, and no mineralized structures are exposed that might control the erratic distribution of the weak radioactive anomalies noted.

The work requested by the applicant on the Sunset claims at this time would be strictly of a prospecting nature.

Denial of the application for exploration assistance is recommended.

DMEA Field Team, Region III

W. M. Traver

By W. M. Traver
Executive Officer

Enclosures

Reviewed by
DMEA OPERATING COMMITTEE
1-23-56
(date)

RECEIVED JAN 19 1956

IN REPLY REFER TO: DMEA

Date Rec'd. JAN 16 1956

BUREAU OF MINES Denver, Colorado

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Defense Minerals Exploration Administration
Denver Federal Center
Denver, Colorado

January 13, 1956

Memorandum

TRANSMITTED

JAN 16 1956

To: Executive Officer, DMEA Field Team, Region III

From: John F. Shaw
E. N. Harshman

Subject: DMEA Docket 4053 (Uranium-Thorium), J. A. and W. D. Williams, Sunset claim group, Gunnison County, Colorado

Enclosed are the original and nine copies of a joint engineering and geologic report by W. D. McMillan, Bureau of Mines, and R. U. King, Geological Survey, covering their examination of the subject property. The examination was made prior to the field referral by Washington while the examiners were in the area on other DMEA examinations.

The applicant proposes to explore the Sunset claim group for uranium and thorium by diamond drilling 39 holes in a two stage program. Their estimated cost was $74,916.40, later, reduced to $62,400.00.

The examiners failed to find evidence of the presence of significant deposits of uranium, thorium, or other strategic minerals on the claims and conclude that the proposed program is prospecting.

Denial of the application for exploration assistance, DMEA Docket 4053, is recommended.

John F. Shaw
John F. Shaw
Supervising Mining Engineer

Reviewed by
DMEA OPERATIONS COMMITTEE
1-23-56
(date)

E. N. Harshman
E. N. Harshman
Member, Field Team

Enclosures (10)
ENHarshman:mp

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

RECEIVED
JAN 19 1956

TRANSMITTED
JAN 16 1956

DMEA 4053

J. A. Williams and W. D. Williams

Sunset Claim Group

Domingo (Vulcan) Mining District

Gunnison County, Colorado

Uranium and Thorium

Reviewed by
DMEA OPERATING COMMITTEE
1-23-56
(date)

Joint Engineering and Geologic Report

by

W. D. McMillan
Bureau of Mines

R. U. King
Geological Survey

January 12, 1956

RECEIVED
JAN 1 9 1956

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DMEA 4053

RECEIVED
JAN 19 1956

J. A. WILLIAMS AND W. D. WILLIAMS
SUNSET GROUP
GUNNISON COUNTY, COLORADO

SUMMARY

J. A. and W. D. Williams applied for Defense Minerals Exploration Administration assistance to explore for uranium and thorium on the Sunset group of claims. They proposed to explore the claims by diamond drilling from the surface. They estimated the cost of exploration to be $74,916.40.

The applicants' property is in the Domingo (Vulcan) mining district one-half mile west of the abandoned mining town of Vulcan, in Gunnison County, Colorado. A small production of gold, silver, and copper is reported from the district. An examination of the applicants' property on November 16, 1955, revealed only scattered, weak radioactivity anomalies associated with a fine-grained granitic rock of probable volcanic origin.

The examining team concludes that the applicants' proposed work is in fact prospecting and that there is no evidence to indicate the presence of significant deposits of uranium, thorium, or other strategic minerals.

It is recommended that the application for DMEA assistance be denied.

INTRODUCTION

John A. Williams and W. D. Williams of Montrose, Colorado, applied to the Defense Minerals Exploration Administration for assistance to explore their Sunset group of claims for uranium and thorium. The applicants propose to explore the claims by diamond drilling from surface locations. Twenty-six core drill holes, averaging 200 feet in depth, are proposed to test areas underneath uraniferous outcrops to locate primary ore veins, to be followed by 13 holes to determine extent of veins discovered by the first stage of drilling. The applicants estimate the cost of exploration to be $74,916.40.

The property was examined on November 16, 1955, by W. D. McMillan and R. U. King, in conjunction with other DMEA work in the area.

The Grand Junction office of the U. S. Atomic Energy Commission concurs with the conclusions of the examining team.

LOCATION, TOPOGRAPHY, AND GENERAL FEATURES

The Sunset group of claims is in the SW 1/4 sec. 7, T. 47 N., R. 1 W., N. Mex. P. M., Domingo (Vulcan) mining district, one-half mile west of the abandoned town of Vulcan, Gunnison County, Colorado. The claims are 15 miles south-southwest of Gunnison (fig. 1) and are accessible by road from Iola on U. S. Highway 50, twelve miles west of Gunnison.

The claims are at an elevation of about 9,000 feet on the lower northwest slope of Sawtooth Mountain. Local relief amounts to about

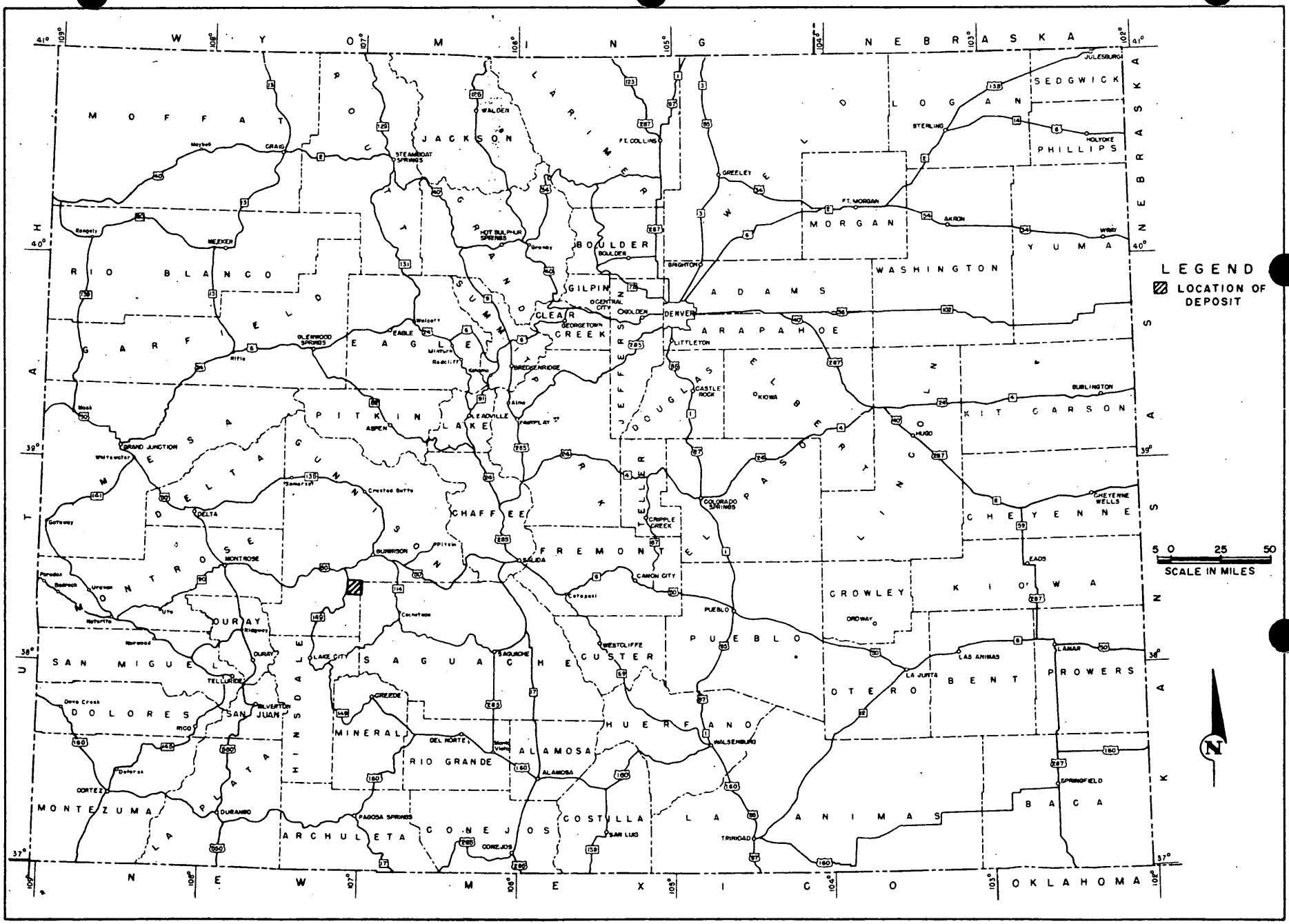


FIGURE 1 - LOCATION MAP, JOHN H. WILLIAMS AND WILLIAM D. WILLIAMS, SUNSET CLAIM GROUP, DOMINGO MINING DISTRICT, GUNNISON COUNTY, COLO. DMEA 4053

200 feet. Tributaries of Willow Creek that flows northward into the Gunnison River drain the area. Aspen and pine cover the hills south of the property.

HISTORY, PRODUCTION, AND OWNERSHIP

Gold was discovered in the "Gunnison Gold Belt" in the middle 90's, and the discovery of the ore bodies of the Vulcan and Mammoth mines are reported to have been made in 1895. In 1901 production from the Good Hope and Vulcan mines is reported to have amounted to about $400,000, chiefly in gold. In 1907 the Good Hope shaft was reported to be 700 feet deep and in a refractory sulfide ore that contained gold, silver, and copper. The principal production from the mines at Vulcan has been gold obtained from pyrite zones in Precambrian schist. A small production of lead, gold-silver, and copper-gold-silver ores is reported from vein deposits in the Vulcan district. From 1901 to 1941 production amounted to about 6,000 tons that contained on the average 1 ounce gold and 4 ounces silver per ton, 2 percent copper, and 3 percent lead. No production is reported from this district since 1941.

The applicants located the group of five claims, known as the Sunset Nos. 1 to 5 claims, in the summer of 1955. They state that the claims are recorded in Book 306, on pages 232 and 237, in the County Clerk's office, Gunnison County, Colorado. Verification of these entries was not made by the examining team.

The applicants have not done physical exploration on the claims, other than testing outcrops for radioactivity.

GEOLOGY

The Vulcan district is on the north flank of the San Juan Mountains in the southwestern part of Colorado. The country rocks consist chiefly of granite and schist of Precambrian age, but volcanic intrusive and extrusive rocks of Tertiary age are widespread in neighboring areas. Jurassic sedimentary rocks overly and are faulted against Precambrian rocks to the east and south of the area.

A persistent fault or fracture zone that trends west-northwest is mapped in the vicinity of Vulcan and is inferred to cross the area of proposed exploration. Because of the west-northwesterly alignment of the Ute Trail, Iron Cap, Gunnison, and Red Top mines, it is inferred that the fracture zone continued for several miles beyond the applicants' property.

The geology of the San Juan region is described by Cross and Larsen in USGS Bulletin 843, 1935.

According to Vanderwilt (Mineral Resources of Colorado, 1947), the ore deposits of the Vulcan district have been gold-silver veins and gold-pyrite zones. The principal production at Vulcan has been gold obtained from a pyrite zone that is roughly parallel to the schistosity of the enclosing rocks. Small shipments of lead, gold-

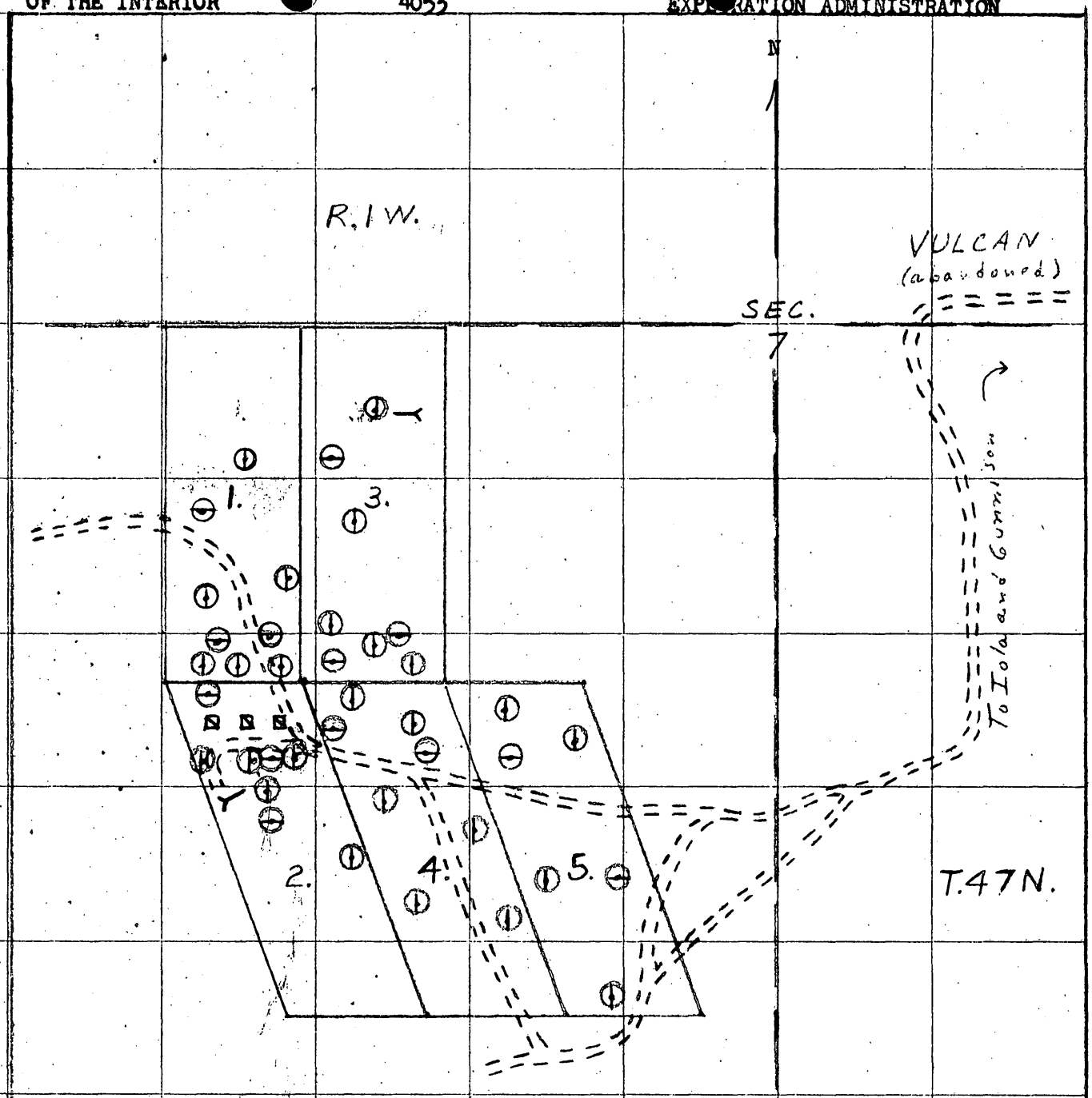
silver, and copper-gold-silver ores are reported from other veins. The veins are in Precambrian schist and possibly in Cretaceous sedimentary rocks.

Within the area of proposed exploration on the Sunset No. 2 claim, a quartz vein containing pyrite and secondary copper minerals has been prospected by three shallow shafts (fig. 2) over a length of about 300 feet. It is steeply dipping and apparently is lenticular in shape; it is not exposed beyond the shafts. The vein material on the dumps exhibits no abnormal radioactivity.

Burbank and Pierson (USGS Circular 236, 1953) obtained slight radioactivity anomalies in this area during reconnaissance investigations in 1951, but material collected from old mine dumps contained only 0.006 percent eU and 0.002 percent U.

The applicants report that they have obtained radioactive material from the Sunset No. 1 and No. 2 claims that contained 0.01 and 0.06 percent equivalent U_3O_8, respectively, and indicate in their application that radioactive anomalies are widespread over most of the claims.

Measurements of radioactivity made by the examining team indicated a few anomalies that were as much as two or three times the normal background radioactivity, but no significant concentrations of radioactivity were noted. Samples of the most radioactive material consisting of schist, porphyritic volcanic rocks, and quartz vein material that were tested in the laboratory failed to show any sig-



Note: After map supplied by applicant.

EXPLANATION

Adit

Shaft

Proposed daimond drill holes, stages 1 & 2 respectively.

R. U. King Dec. 1955

FIGURE 2.— MAP SHOWING PROPOSED EXPLORATION, SUNSET GROUP OF CLAIMS, DOMINGO MINING DISTRICT, GUNNISON COUNTY, COLORADO.

Scale: 1 inch = 660 feet.

The applicants originally estimated the total cost of the proposed program to be $74,916.40. In an undated letter to the Executive Officer, received November 4, 1955, the applicants reduced this estimate to $62,400.00.

CONCLUSIONS AND RECOMMENDATIONS

The results of radioactivity measurements made over the claim group and in nearby areas indicate that there are no significant radioactive deposits on the applicants' property, the Sunset Group of claims. No uranium or thorium minerals could be detected in any of the material collected from the immediate area, and no mineralized structures are exposed that might control the erratic distribution of the weak, radioactive anomalies noted. It is concluded that the radioactivity noted is due to the normal trace uranium and thorium content of the country rock.

The search for uranium and thorium on the Sunset claims would be strictly prospecting and in the opinion of the examining team would be in an unfavorable area.

It is recommended that the application for Government assistance to explore for uranium and thorium on the Sunset claims be denied.

RECEIVED
DEC 12 1955

December 1, 1955

Memorandum

To: W. M. Traver, Executive Officer, DMEA Field Team, Reg.III

From: Acting Superintendent, Denver Experiment Station, Reg. III

Subject: Doclmt DMEA 4053 (Uranium), J. A. and W. D. Williams, Sunset group of claims, Gunnison County, Colorado

The above brochure was received in this office on December 1, 1955.

An examination will be made and report prepared by an engineer from the Denver office.

JOHN F. SHAW

John F. Shaw

cc: 2 w/orig.
E. N. Harshman
J. F. Shaw
Sec. Op. Com. (2)

DMEA
Data Bank
DEC 7 1955

RECEIVED
DEC 12 1955

December 1, 1955

Memorandum

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From: Acting Superintendent, Denver Experiment Station, Reg. III

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JOHN F. SHAW

John F. Shaw

cc: 2 w/orig.
E. N. Harshman
J. F. Shaw

12-2-55 rzm

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

November 30, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

To: E. N. Harshman
J. F. Shaw

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

Subject: Docket DMEA 4053 (Uranium), J. A. and W. D. Williams, Sunset group of claims, Gunnison County, Colorado

Enclosed is a copy of a letter from the Chairman of the Operating Committee dated November 21, 1955 on the subject docket. Also enclosed are copies of memoranda of review of the application by N. E. Nelson and John E. Crawford.

E. N. Harshman

E. N. Harshman

Enclosures

HMC:ab

cc: Sec. Op. Comm. (2)

RECEIVED
DEC - 2 1955

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

November 30, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

To: E. N. Marshman
J. F. Shaw

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

Subject: Docket DMEA 4053 (Uranium), J. A. and W. D. Williams, Sunset group of claims, Gunnison County, Colorado

Enclosed is a copy of a letter from the Chairman of the Operating Committee dated November 21, 1955 on the subject docket. Also enclosed are copies of memoranda of review of the application by N. E. Nelson and John E. Crawford.

E. N. Marshman

E. N. Marshman

Enclosures

HMC:ab

cc: Sec. Op. Comm. (2)

RECEIVED
DEC - 2 1955

Surname copy 700

Murphy
Ellis
Fitzsimmons

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

NOV 21 1955

Mr. W. M. Traver
Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

Re: Docket No. DMEA-4053 (Uranium)
J. A. and W. D. Williams
Sunset group of claims
Gunnison County, Colorado

Dear Mr. Traver:

The captioned application is referred to Region III Field Team for investigation, a field examination if deemed advisable, and recommendation. A copy of the application was retained by your office.

Enclosed are copies of memoranda, dated November 14 and 16, 1955, by N. E. Nelson, USGS, and J. E. Crawford, USBM, respectively, relating to the subject application.

The application appears to be a request for aid in a prospecting venture rat er than an exploration project based on geologic evidence of definite target areas. A study of the application indicates that other than staking and recording the claims, and taking a few samples, no actual work has been done on the property by the applicants.

The application would have been denied here on the basis that no geologic data on which a drilling program could be planned have been presented. However, it is referred to the Field Team with the thought that the Regional Office may have information that the subject property is in a favorable uranium-mineralized district. In that case, possibly we should request additional information from the Applicant before taking other action.

Sincerely yours,

George C. Selfridge
Chairman, Operating Committee

FMMurphy/gla
11-18-55
cc to: Admr.'s Reading File
Operating Committee
Docket
Messrs. JECrawford, Rm. 3641
THKiilsgaard, Rm. 5224
JOHosted, Rm. 3210, GSA
Code 700
Mr. Murphy

appd:
USBM
/s/ Robert W. Geehan
USGS
N. E. Nelson

700

Murphy
Gleeson
Selfridge
Nelson

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

NOV 21 1955

Messrs. John A. Williams
and William D. Williams
P. O. Box 31
Montrose, Colorado

Re: Docket No. DMEA-4053 (Uranium)
Sunset group of claims
Gunnison County, Colorado

Gentlemen:

The application for assistance in exploring the subject claims in Gunnison County, Colorado, under the captioned docket number, has been reviewed by the Rare and Miscellaneous Metals Division of the Defense Minerals Exploration Administration. It has been referred to the Executive Officer of Region III at the following address:

Mr. W. M. Traver
Executive Officer
DMEA Field Team, Region III
224 New Customhouse Building
Denver 2, Colorado

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

Sincerely yours,

Frank E. Johnson (lw)

ACTING Administrator

FMMurphy/gla
11-18-55
cc to: Admr.'s Reading File
Docket
Code 700
Mr. Murphy
DMEA Field Team, Region III (2)

RAG.

11-17-55 [illegible]

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

November 16, 1955

RECEIVED
NOV 17 1955

Memorandum

To: Ernest William Ellis, DMEA Member
Uranium Commodity Committee, Room 4445

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

Subject: Application for assistance, DMEA Docket 4053, John A. Williams and William D. Williams, Sunset claims, Gunnison County, Colorado

I have reviewed the attached application of John A. Williams and William D. Williams, DMEA Docket 4053, dated October 31, 1955, and received in this office November 10. I have also discussed it with Joseph O. Hosted, Washington representative of the Atomic Energy Commission.

The results of analyses of sample material taken from outcrops on the Sunset group of claims and submitted by the applicants indicate that the equivalent uranium content of the rock is .06 percent U_3O_8 or less. Thus, the uranium content of the material sampled is not significant enough to warrant much interest.

The property consists of old workings for lead and silver on a quartz vein. To the best of the applicants' knowledge there has been no activity on the claims and in the immediate area since 1941.

Messrs. Williams and Williams are desirous of exploring for uranium because of (1) the presence of uraniferous outcroppings over a large area; (2) the proximity of the mineralization to faulting; (3) the presence of a mineralized quartz vein; and (4) nearness to Good Hope and Humboldt patented claims, and others having a record of base and precious metals production.

The proposed exploration program would consist of two-stage core drilling. The first stage drilling would require about 29 holes, each approximately 200 feet deep to delineate the mineralized zone, and the second stage drilling would require about 11 holes to more precisely determine the depth and extent of zone. Cores would be tested radiometrically and favorable sections assayed. Drill holes would be probed and logged.

Because of the inadequacy of the map provided by the applicants, it is difficult, if not impossible, to determine where and how the holes would be drilled with relation to the claim boundaries, quartz vein, outcroppings, etc. Should the area be highly faulted the advisability of drilling might be questioned.

We suggest that the applicants be requested to furnish more favorable assay reports, particularly of the uraniferous outcrops if such are available, as well as more descriptive maps showing claim boundaries, geology, mineralization, and more discernable hole locations.

John E Crawford

John E. Crawford

Attachment

11/15/55 gfa

IN REPLY REFER TO:

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

November 14, 1955

Re: DMEA 4053
Williams and Williams
Sunset Group
Gunnison County, Colo.
$74,916.40 - Uranium

Memorandum

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

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

Subject: Review of application.

The applicants request assistance in looking for and exploring a vein type uraniferous deposit. The information given by the sketch map suggests that the deposit may be a flat lying quartz vein perhaps in the Morrison formation, but such is not made clear.

Numerous "uraniferous outcrops" are shown on the map and radiometric assays show values up to 0.06% U_3O_8 along with mineralization by copper, silver and/or lead and possibly thorium minerals.

The work program proposed by the applicants consists of:

Stage I

Core drilling 26 holes at 200 feet each 5,200'

Stage II

Rotary and core drilling 13 holes, depth not estimated

Cost, drilling	$71,546.40
" rehabilitation, etc.	2,370.00
Total	$74,916.40

Unless experience in the area suggests and the outcrops are better looking than indicated, no definite exploratory target is presented and the work program, in large part designed to find a target appears to be unduly ambitious.

Perhaps information with the field office will permit denial without an examination.

Referral to the Field Team is recommended.

N. E. Nelson

N. E. Nelson

IN REPLY REFER TO:

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

November 14, 1955

Re: MERA 4053
Williams and Williams
Bunnet Group
Gunnison County, Colo.
$74,916.40 - Uranium

Memorandum

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

From: H. K. Nelson, U. S. Geological Survey

Subject: Review of application.

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Numerous "uraniferous outcrops" are shown on the map and radiometric assays show values up to 0.08% U_3O_8 along with mineralization by copper, silver and/or lead and possibly thorium minerals.

The work program proposed by the applicants consists of:

Stage I

Core drilling 26 holes at 200 feet each 5,200'

Stage II

Rotary and core drilling 13 holes, depth not estimated

Cost, drilling	$71,546.40
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Perhaps information with the field office will permit denial without an examination.

Referral to the Field Team is recommended.

W. E. Nelson

W. E. Nelson

WENelson:jah
6-11/14/55
cc: Director's reading, 4212
Branch reading, 4212
NGRA (3)
Docket file
Mr. J. E. Crawford, 3641 Int.
Mr. J. O. Rostad, 3210 Int.

November 10, 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: Chief, Operation's Control and Statistics Division

Subject: Assignment of Docket Number

There is listed below the assigned docket number to an application recently received from Region III

DMEA - 4053 John A. Williams and William D. Williams

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

November 10, 1955
Subject: DMEA-4053
Re: Exploration Assistance

Mr. John A. Williams &
William D. Williams
P. O. Box 31, Montrose, Colorado

Gentlemen:

The receipt of your application dated October 31, 1955, for exploration assistance under the Defense Production Act of 1950, as amended, is hereby acknowledged.

Your application has been assigned Docket Number DMEA-4053 and referred to the Rare & Misc. Metals Division.

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

Sincerely yours,

Robert E. Adams, Chief
Operations Control and
Statistics Division

60932

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

RECEIVED
NOV 7 1955

November 4, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

Subject: Application for DMEA Assistance (Uranium-Thorium), John A. Williams, William D. Williams, Ruth F. Williams, and Joseph R. Williams, Sunset claims, Gunnison County, Colorado

Enclosed are three copies of the subject application in the amount of $71,716.40.

While the applicant states that uranium and thorium are the minerals for which he wishes to explore, he states that "The dump appears to contain lead, silver, and copper."

One copy of the application is being retained in our file.

W. M. Traver

By J. W. Townsend
J. W. Townsend

Enclosures

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

November 4, 1955

224 New Customhouse
Denver 2, Colorado

Memorandum

To: Secretary to the Operating Committee, DMEA

From: Executive Officer, DMEA Field Team, Region III

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By J. W. Townsend

Enclosures

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

November 4, 1955

224 New Customhouse
Denver 2, Colorado

DMEA - 4053

Mr. John A. Williams
P. O. Box 31
Montrose, Colorado

Dear Mr. Williams:

Your application forwarded with your letter of November 3, 1955 has been received in this office and has been placed in line for processing.

The Radioactive Sample Report forwarded with your application is returned herewith in accordance with your request.

Very truly yours,

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

By J. W. Townsend
J. W. Townsend

Enclosure

HMC:ab
cc: Sec. Op. Comm. (2)

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

RECEIVED

November 4, 1955

OMEA 4053

224 New Customhouse
Denver 2, Colorado

Mr. John A. Williams
P. O. Box 31
Montrose, Colorado

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Very truly yours,

W. M. Traver
Executive Officer, DMEA
Field Team, Region III

By J. W. Townsend
J. W. Townsend

Enclosure

HMC:ab
cc: Sec. Op. Comm. (2)

Examining Officer
DMEA
224 New Customhouse Bldg.
Denver 2, Colorado

John A. Williams
P.O. Box 54
Manitou, Colo

Dear Sir,

The costs of operating supplies and equipment, paragraphs 5 (c) and (d), include casing for 100' per hole and anticipates being able to drill 40' per diamond bit. If conditions warrant, these items could be decreased considerably.

Sprague and Hammond, Inc. who is drilling within a few miles of these claims, gave me a verbal figure of about $5 per foot, for drilling under contract, in this area. This would make a contract drilling program cost $62,400.

Yours very truly,

John A. Williams
122 South Park
Phone 4644-W
Manitou, Colo

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

1600 East 1st South
Salt Lake City 1, Utah

7/26/55

Mr. [illegible] Williams
P. O. Box [illegible]
Montrose, Colorado

RADIOACTIVE SAMPLE REPORT

Sample Reference No.

UP-4695-3

Name and Location of Property:
1. Orient No. 1, NW-1/4, NW-1/4, Sec. 7, T47N, R1W., Gunnison County, Colorado
2. Orient No. 2, [illegible] of Gunnison County line in Saguache County, Colorado

Nature and Analysis of Sample:

No. 1. Feldspathic type igneous rock.

No. 2. Manganese stained calcite.

No. 3. Limestone.

Radiometric analysis:

No. 1	0.01% U_3O_8	equivalent
No. 2	0.04% "	"
No. 3	0.01% "	"

The U. S. Bureau of Mines offers free radiometric analysis for equivalent U_3O_8 content as a service to the general public. This service does not include chemical analysis, spectrographic analysis, or fire assay. If you wish a chemical analysis, spectrographic analysis, or a fire assay on your samples, you should submit them to a commercial laboratory.

nificant radioactive mineral content. A sample of reddish volcanic rock collected by AEC personnel from this area contained 0.009 percent equivalent uranium.

ORE RESERVES

None.

PRESENT STATUS

Exploration and Development

The claims have been prospected by three shallow shafts and two short adits (now caved) at locations shown on Figure 2. This work was done by prior operators. The present applicants have done no physical exploration or development work on the Sunset claims.

Mining, Milling, and other Facilities

None.

PROJECT PROPOSALS

The applicants propose to explore the claims by a 2 stage drilling program as follows:

Stage I - Twenty-six core drill holes with an average depth of 200 feet.

Stage II - Thirteen rotary and core drill holes of unstated depth.

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

RECEIVED
NOV - 7 1955

DMEA Fore Rect.
NOV 4 1955
BUREAU OF MINES
Denver, Colo.

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. DMEA-~~1056~~ 1053
Metal or Mineral Uranium
Date Received 11-7-55
Estimated Cost $74,916.40
Participation (Government %) 9

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: John A. Williams and William D. Williams
P.O. Box 31, Montrose, 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 page 1

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

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise See page 1

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

(*e*) If you own the land, describe any liens or encumbrances on it See page 1

(*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.

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

(*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.

(*c*) The work will start within 180 days and be completed within 17 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.

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)?

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

☑ Money ☑ Use of equipment owned by you ☑ Other

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated October 31, 195[illegible]

By John A. Williams (Applicant)
William A. Williams

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

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

RECEIVED
NOV - 7 1955

1. NAME OF APPLICANT (a) John A. Williams and William D. Williams, P. O. Box 31, Montrose, Colorado
   (b) Partnership organized in the state of Kansas
   (c) Not incorporated
   (d) John A. Williams and William D. Williams, P. O. Box 31, Montrose, Colorado; Ruth F. Williams, 1500 Third Street, Dodge City, Kansas and Joseph R. Williams, 2219 Anna, North Platte, Nebraska.
2. Complied
3. (a) Sunset Group of 5 claims situated in the SW/4 of section 7, township 47North, range 1 West of the New Mexico Principal Meridian and in the NW/4 of section 18, township 47North, range 1 West of the NMPM, in the Domingo Mining District of Gunnison County, Colorado.
   (b) Property is not known by any mine name.
   (c) We hold this land by right of located claims.
   (d)
   (e) These claims are located on vacant public land.
   (f) Sunset #1, Book 306, Page 232; Sunset # 2, Book 306, Page 232; Sunset # 3, Book 306, Page 237; Sunset # 4, Book 306, Page237; Sunset # 5,
4. (a) Sunset #1, there are several shallow prospect pits into quartz outcrops but no apparent production and no production facilities; Sunset #2, there are two thirty foot shafts and 3 deep prospect pits along a quartz vein which trends northeast-southwest on the claim. Buildings, windlasses, shaft and tunnel timbering and loading shute could be put in usable condition with rather extensive repairs. This operation was unpatented and the production, if any, was apparently lead and silver. The East portion of this operation extends into Sunset # 4 claim. There are also an old tunnel and several prospect pits southwest of the shaft operation. Sunset # 3, there are several prospect pits and an old tunnel on this claim. Sunset # 4 includes part of the shaft operation on # 2 and several prospect pits. Sunset # 5 has several prospect pits and a 200 gallon per hour spring and 10,000 gallon concrete reservoir. It is apparent that no mining activity has taken place on the land embraced in these claims for a number of years. These claims lie in the Domingo Mining District and the last reported production in this district was in 1941. These properties are accessible by unmaintained roads leading West from the abandoned mining town of Vulcan. The enclosed map shows the roads of access.
   (b) These workings are on unpatented land and the former operators are unknown. For these reasons, past production, if any, is unknown. Rock on the dump appears to contain lead, silver and copper.
   (c) Property is apparently cut across by a fault between pre Cambrian granite, gneiss and hornblende and the Jurassic Morrison formation. A mineralized quartz vein runs East-West for about 100 yards through the North ends of claims 2 and 4. A hematite and limonite stained uraniferous rock outcrops over wide areas on claims 1 and 2 and over more restricted areas on claims 3 and 4. This uraniferous rock has been assayed radiometrically at from .01 to .06% U308. Mineralization in addition to the U308 includes copper, silver and/or lead and possibly some thorium. The uranium deposit would be of the vein type.

John A. Williams
P. O. Box 31
Montrose, Colorado

Reasons for wishing to explore are the presence of uraniferous outcroppings over a large area, the proximity of faulting, the presence of a mineralized quartz vein and situation adjacent to the Good Hope and Humbolt patented claims and near a number of other patented claims in the East half of the section which have a record of base and precious metal production. These factors are favorable to the existence of a vein type deposit. Ease of accessibility to the properties, an adequate water supply and nearby housing facilities all would be of value in conducting the exploration program.

(d) Properties can be reached by driving 3 miles South of Iola on the Iola-Powderhorn road, thence southeast 9 miles to the abandoned mining town of Vulcan on a road maintained by the county for the benefit of ranchers in the area. From Vulcan, in the NE/4 of section 7, 47N, 1W, there are several poor vehicle roads to the Sunset properties. These roads can readily be travelled by 4-wheel drive vehicle or pick-up. Any part of these properties can be reached by 4-wheel drive vehicle. Shipping could be done directly from the properties by truck if some repair work were done to the road from Vulcan to the properties. Shipping would be over 14 miles of dirt roads to U. S. Highway 50 at Iola thence 54 miles to the railroad at Montrose, Colorado. Supplies could be obtained from Gunnison, 26 miles; Montrose, 64 miles and Grand Junction, 124 miles. Residence points for miners could be Iola, Gunnison and there are several frame dwellings in Vulcan that could be remodeled and used for on the site housing.

(e) Manpower could be obtained from towns in the area including Gunnison, Crested Butte and Montrose. Materials, supplies and equipment could be obtained from Gunnison, Montrose and Grand Junction. Water could be obtained from the spring and reservoir located on Sunset # 5 claim. The nearest power transmission line is on the Iola-Powderhorn road about 4 miles west of the properties.

5. (a) We wish to explore for uranium and thorium.

(b) Work to be done consists of first and second stage drilling. First stage drilling to test areas of uraniferous outcrops in order to locate the primary ore vein. Second stage drilling is to determine the extent of the vein found in stage 1 drilling. First stage drilling to be all core drilling to depth of 200 feet per hole. Second stage drilling to depth of ore then coreing into vein to depth determined by vertical dimension of vein. Proposed work to be done with portable rotary drilling machine capable of 300 foot hole in hard rock. Cores to be tested on removal from hole and radioactive cores to be assayed . Drill holes to be probed with standard deep hole geiger probe and log of radioactivity made.

(c) The work will sta rt within 150 days and be completed within 17 months from the date of an exploration project contract.

(d) Operations to be conducted and supervised by applicants. Knowlege of drilling procedure and business gained through oil well and shot hole rig appraisal and repair would enable the applicants to properly conduct this shallow drilling program. Geologic, engineering and assay data to be furnished by registered professionals.

John A. Williams
P. O. Box 31
Montrose, Colorado

6. (a) Independent contracts-
2 days bulldozer work @ $ 100.00/day — $ 200.00

(b) Labor, supervision, consultants-
Driller's wage/shift $ 34.00 or $816.00/ mo.
2 helpers @$17.00/shift or $816.00/mo.
Total labor $1632.00/mo.
Estimated progress- 20'/shift or 480'/ mo.
Estimated total wages / 17 month program — 27,744.00
Engineering and geologic consultation and work — 5,000.00

(c) Operating materials and supplies-

9,000 gallons gasolene @ $ 0.30/ gallon	2,700.00
170 lbs. grease @ $ 0.20/ lb.	34.00
110 gallons oil @ $ 1.50/ gallon	165.00
20 core boxes @ $ 5.00 each	100.00
A hoisting swivel, ball bearing	49.95
25 - 10' sections AA rod @$16.80/ section	420.00
cat head rope	10.00
390 - 10' sections flush coupled AX casing	7,410.00
A safety foot clamp	86.65
AX core lifters, 78 @ $ 2.30 each	179.40
AA holding iron	14.40
AA rod fishing tools	75.00
11 244.40	

(d) Operating equipment-

Acker Toredo model TH core drill mounted on Chevrolet 4 X 4 truck	5340. 00
Two- 500 gallon skid mounted water tanks	600.00
AA rod ball bearing swivel	125.00
Portable gasolene powered water pump	125.00
* 1953 4-wheel driv jeep station wagon @ $ 70.00	1,190.00
* El-Tronics Geiger counter @ $ 9.00/ month	153.00
Deep hole geiger probe	150.00
* Mt. Sopris scintillator @ $ 25.00/ month	435.00
190 AX diamond bits AA grade, Bortz @ $ 104.70	19,893.00
2 AX 10' double tube core barrels @ $ 94.70 ea.	189.40
AX diamond reaming shell, double tube	64.10
Drive weight, 250#	93.50
28 358.00	

* OPERATOR OWNED

(e) Rehabilitation and repairs-
Overhaul jeep — 300.00

(f) New buildings, improvements, installations-
Rehabilitate bunk house and chow hall — 1,000.00

(g) Miscellaneous-
Maintenance or rig — 900.00
Maintenance of jeep — 170.00
other items included in above figures — 74,716.40

(h) Contingencies- Only allowance to be made is for extra time in case of inclement weather — 74916.40

7. (a) Yes.
(b) We plan to furnish our sha re of the costs by use of our equipment indicated by the asterisks in section 6 (d), by performing the labor ourselves and by the contribution of money as necessary.

The undersigned certifies that the information set forth in this application and accompanying papers is correct and complete to the best of his knowlege and belief.

Dated, October 31, 1955 at montrose, Colorado

John A. Williams
William [illegible] Williams

MF-103
(Revised April 1952)

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

RECEIVED
NOV - 8 1955

DMEA
Proc Branch

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. DMEA - ~~5056~~ 4053
Metal or Mineral Uranium
Date Received 11-7-55
Estimated Cost $74,716.40
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: John A. Williams and William D. Williams
P.O. Box 31, Montrose, 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 page 1

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

(*c*) State your interest in the land, whether owner, lessee, purchaser under contract, or otherwise
See page 1

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

(*e*) If you own the land, describe any liens or encumbrances on it
See page 1

(*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.

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

(*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.

(*c*) The work will start within 150 days and be completed within 17 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.

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.

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

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

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

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

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

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

☐ Money ☐ Use of equipment owned by you ☐ Other

Explain in detail on acompanying paper.

CERTIFICATION

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

Dated October 31, 1955

(Applicant)

By John A. Williams

William D. Williams

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

RECEIVED
NOV - 7 1955

UNITED STATES DEPARTMENT OF THE INTERIOR
DEFENSE MINERALS EXPLORATION ADMINISTRATION

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

1. NAME OF APPLICANT (a) John A. Williams and William D. Williams, P. O. Box 31, Montrose, Colorado
(b) Partnership organized in the state of Kansas
(c) Not incorporated
(d) John A. Williams and William D. Williams, P. O. Box 31, Montrose, Colorado; Ruth P. Williams, 1500 Third Street, Dodge City, Kansas and Joseph P. Williams, 2.1 Ave, North Platte, Nebraska.
2. Complied
3. (a) Sunset Group of 5 claims situated in the SW/4 of section 7, township 47North, range 1 West of the New Mexico Principal Meridian and in the NW/4 of section 18, township 47North, range 1 West of the NMPM, in the Bonanza Mining District of Gunnison County, Colorado.
(b) Property is not known by any mine name.
(c) We hold this land by right of located claims.
(d)
(e) These claims are located on vacant public land.
(f) Sunset #1, Book 306, Page 286; Sunset # 2, Book 306, Page 286; Sunset # 3, Book 306, Page 287; Sunset # 4, Book 306, Page 287; Sunset # 5,
4. (a) Sunset #1, there are several shallow prospect pits into quartz outcrops but no apparent production and no production facilities; Sunset #2, there are two thirty foot shafts and 5 deep prospect pits along a quartz vein which trends northwest-southeast on the claim. Buildings, windlasses, shaft and tunnel timbering and loading shutes could be put in usable condition with rather extensive repairs. This operation was unpatented and the production, if any, was apparently lead and silver. The last portion of this operation extends into Sunset # 4 claim. There are also an old tunnel and several prospect pits southwest of the shaft operation. Sunset # 3, there are several prospect pits and an old tunnel on this claim. Sunset # 4 includes part of the shaft operation on # 2 and several prospect pits. Sunset # 5 has several prospect pits and a 200 gallon per hour spring and 10,000 gallon concrete reservoir. It is apparent that no mining activity has taken place on the land embraced in these claims for a number of years. These claims lie in the Bonanza Mining District and the last reported production in this district was in 1941. These properties are accessible by unmaintained roads leading west from the abandoned mining town of Vulcan. The enclosed map shows the roads of access.
(b) These workings are on unpatented land and the former operators are unknown. For those reasons, past production, if any, is unknown. Rock on the dump appears to contain lead, silver and copper.
(c) Property is apparently cut across by a fault between pre Cambrian granite, gneiss and hornblende and the Jurassic Morrison Formation. A mineralized quartz vein runs east-west for about 100 yards through the North ends of claims 2 and 4. A hematite and limonite stained uraniferous rock outcrops over wide areas on claims 1 and 2 and over more restricted areas on claims 3 and 4. This uraniferous rock has been assayed radiometrically at from .01 to .03% U_3O_8. Mineralization in addition to the U_3O_8 includes copper, silver and/or lead and possibly some thorium. The uranium deposit would be of the vein type.

John A. Williams
P. O. Box 31
Montrose, Colorado

 RECEIVED
JUL 7 1975

Reasons for wishing to explore are: the presence of uraniferous outcroppings over a large area, the proximity of faulting, the presence of a mineralized quartz vein and situation adjacent to the Good Hope and Humbolt patented claims and near a number of other patented claims in the east half of the section which have a record of being and producing metal production. These factors are favorable to the existence of a vein type deposit. Ease of accessibility to the properties, an adequate water supply and nearby housing facilities all would be of value in conducting the exploration program.

(d) Properties can be reached by driving 3 miles south of Iola on the Iola-Pondarhorn road, thence southeast 8 miles to the abandoned mining town of Vulcan on a road maintained by the county for the benefit of ranch rs in the area. From Vulcan, in the NW/4 of section 7, 47N, 1E, there are several poor vehicle roads to the Sunset properties. These roads can readily be travelled by 4-wheel drive vehicle or pick-up. Any part of these properties can be reached by 4-wheel drive vehicle. Shipping could be done directly from the properties by crush if some repair work were done to the road from Vulcan to the properties. Shipping would be over 14 miles of dirt roads to U. S. Highway 50 at Iola thence 68 miles to the railroad at Montrose, Colorado. Supplies could be obtained from Gunnison, 40 miles; Montrose, 68 miles and Grand Junction, 116 miles. Residence points for miners could be Iola, Gunnison. There are several frame dwellings in Vulcan that could be remodeled and used for on the site housing.

(e) Manpower could be obtained from towns in the area including Gunnison, Crested Butte and Montrose. Materials, supplies and equipment could be obtained from Gunnison, Montrose and Grand Junction. Water could be obtained from the spring and reservoir located on Sunset [illegible] claim. The nearest power transmission line is on the Iola-Pondarhorn road about 4 miles west of the properties.

5. (a) To climb to explore for uranium and thorium.

(b) Work to be done consists of first and second stage drilling. First stage drilling to test areas of uraniferous outcrops in order to locate the primary ore vein. Second stage drilling is to determine the extent of the vein found in hole 1 drilling. First stage drilling to be all core drilling to depth of 100 feet per hole. Second stage drilling to depth of ore if is coring into vein to depth determined by vertical dimension of vein. Proposed work to be done with portable rotary drilling machine capable of 200 foot hole in hard rock. Cores to be tested on removal from hole and radioactive cores to be surveyed. Drill holes to be probed with standard deep hole geiger probe and log of radioactivity made.

(c) The work will start within 180 days and be completed within 17 months from the date of an exploration project contract.

(d) Operations to be conducted and supervised by applicants. Knowledge of drilling procedure and business gained through oil well and shot hole rig operations and repair would enable the applicants to properly conduct this shallow drilling program. Geologic, engineering and assay data to be furnished by registered professionals.

John A. Williams
P. O. Box 21
Montrose, Colorado

RECEIVED
NOV - 7 1955

6. (a) Independent contractors-
2 days bullcozer work @ $ 100.00/day $ 200.00

(b) Labor, supervision, consultants-
Driller's wage/shift @ $4.00 or $016.00/ mo.
2 helpers @$17.00/shift or $910.00/mo.
Total labor $1022.00/mo.
Estimated progress- 1555 00'/shift or 4200'/ mo.
Estimated total wages / 17 month program $7,744.00
Engineering and geologic consultation and work 5,000.00

(c) Operating materials and supplies-
3,000 gallons gasoline @ $ 0.30/ gallon 2,700.00 13
170 lbs. grease @ $ 0.00/ lb. 34.00
110 gallons oil @ $ 1.50/ gallon 165.00
50 core boxes @ $ 2.00 each 100.00
A hoisting swivel, ball bearing 48.95
35 - 10' sections A rod @$10.00/ section 350.00
cat head rope 10.00
300 - 10' sections flush coupled AX casing 7,010.00
A safety foot clamp 83.05
AX core lifters, 75 @ $ 2.30 each 173.40
A holding iron 14.40
A rod fishing tools 75.00

(d) Operating equipment-
Acker Torado model TH core drill mounted on Chevrolet 4 X 4 truck 5340. 00
* OPERATOR OWNED
Two- 500 gallon skid mounted water tanks 600.00
A rod ball bearing swivel 100.00
Portable gasoline powered water pump 125.00
* 1955 4-wheel driv jeep station wagon @ $ 70.00 1,150.00
* El-Tronics Geiger counter @ $ 5.00/ month 155.00
Deep hole geiger probe 150.00
* Mt. Sopris scintillator @ $ 25.00/ month 400.00
150 AX diamond bits AA grade, Barts @ $ 100.70 15,000.00
2 AX 10' double tube core barrels @ $ 90.70 ea. 180.00
AX diamond reaming shell, double tube 00.10
Drive weight, 450# 98.50

(e) Rehabilitation and repairs-
Overhaul jeep 200.00

(f) New buildings, improvements, installations-
Rehabilitate bunk house and show hall 1,000.00

(g) Miscellaneous-
Maintenance or rig 400.00
Maintenance of jeep 170.00
other items included in above figures
74,716.40

(h) Contingencies- Only allowance to be made is for extra time in case of inclement weather

7. (a) Yes.
(b) We plan to furnish our share of the costs by use of our equipment insofar by the asterisks in section 6 (d), by performing the labor ourselves and by the contribution of money as necessary.

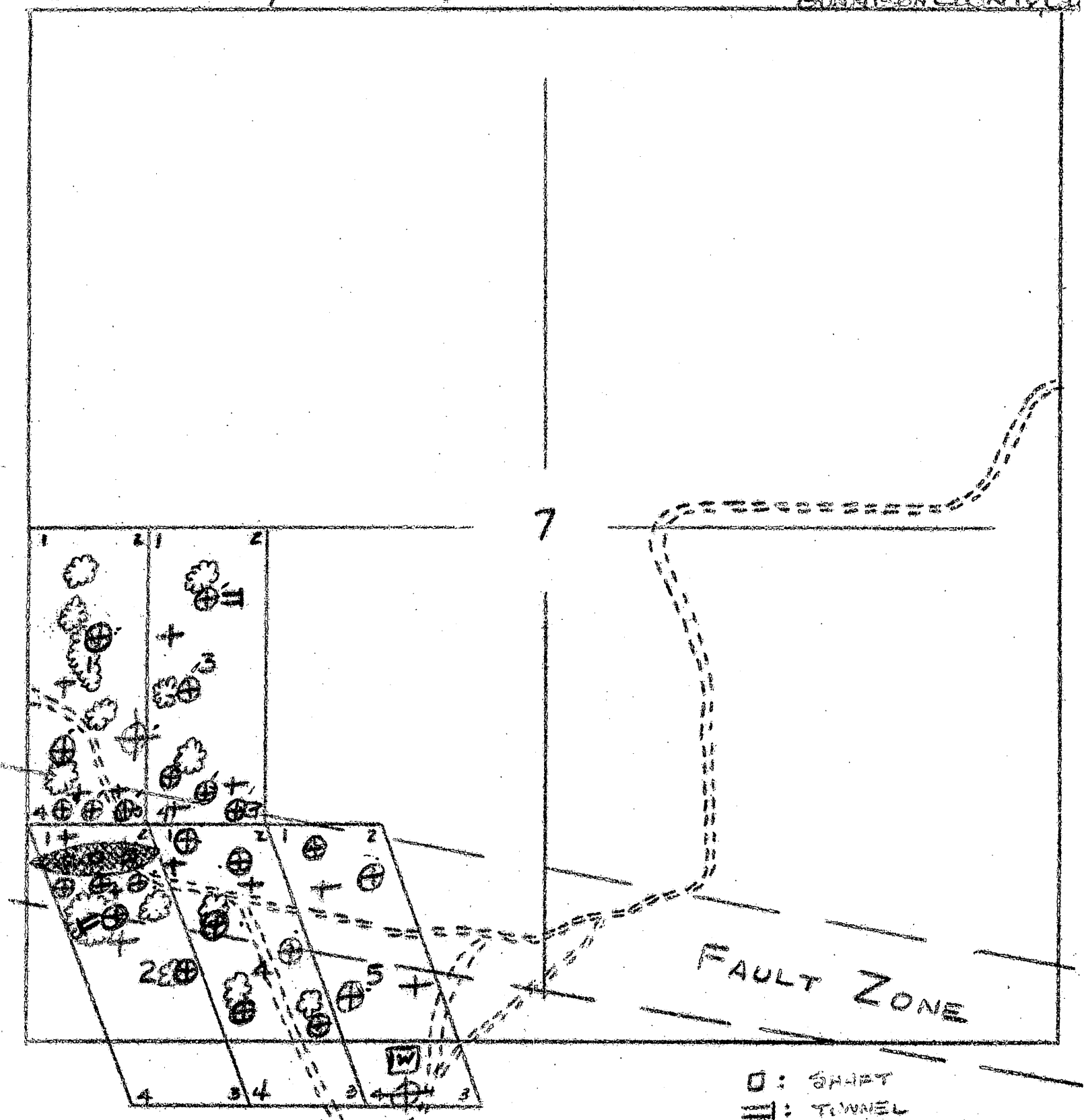
The undersigned certifies that the information set forth in this application and accompanying papers is correct and complete to the best of his knowledge and belief.

Dated, October 21, 1955 at Montrose, Colorado

John A. Williams
William H. Williams

SUNSET GROUP
DOMINGO MINING DISTRICT

SITUATED: SW/4 SECT. 7, TWP 47N, RANGE 1W OF THE NMPM
GUNNISON COUNTY, CO



SCALE: 1" = 660'

W : SPRING & RESERVOIR

⊕ : FIRST STAGE DRILL HOLES, 26

+ : SECOND STAGE DRILL HOLES, 13

: URANIFEROUS OUTCROPS

□ : SHAFT

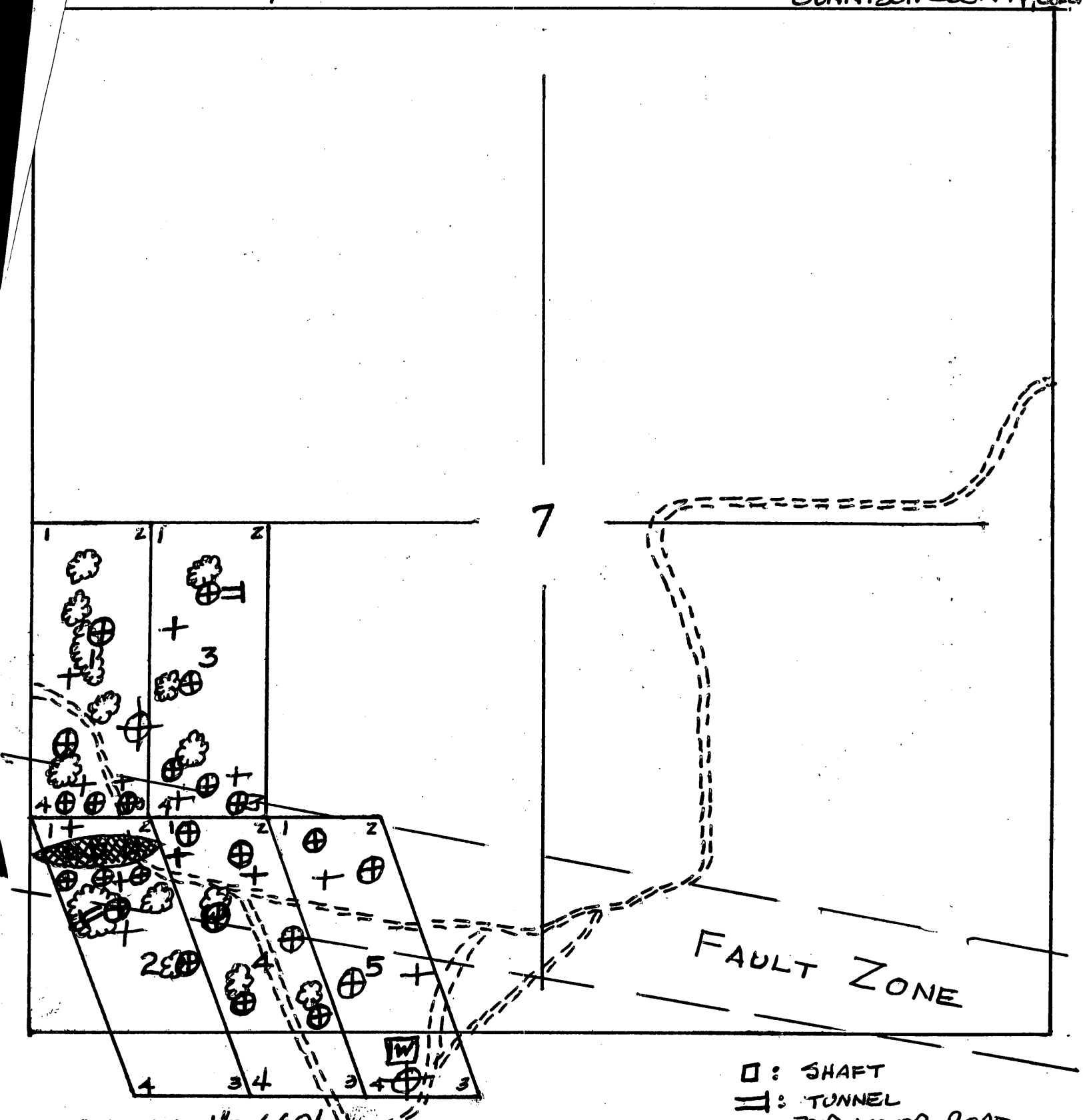
: TUNNEL

: ROAD MOTOR ROAD

: QUARTZ VEIN

SUNSET GROUP
DOMINGO MINING DISTRICT

SITUATED: SW/4 SECT. 7, TWP 47N, RANGE 1W OF THE NMPM
GUNNISON COUNTY, COLO.



SCALE: 1" = 660'

W : SPRING & RESERVOIR

⊕ : FIRST STAGE DRILL HOLES, 26

+ : SECOND STAGE DRILL HOLES, 13

: URANIFEROUS OUTCROPS

□ : SHAFT

: TUNNEL

==== : POOR MOTOR ROAD

: QUARTZ VEIN