9/23/55g

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

224 New Customhouse
Denver 2, Colorado

September 19, 1955

Memorandum

To: Secretary to the Operating Committee, Defense Minerals Exploration Administration

From: Field Team, Region III

Subject: Joint Report of Examination, Docket No. DMEA-3840 (Uranium), Edward K. Keiser and Conway A. Ulmer, Partners, Keystone claim group, Montrose County, Colorado.

Enclosed are the original and three copies of a joint engineering and geologic report of the subject application by H. M. Salsbury, U. S. Bureau of Mines and Carl H. Roach, U. S. Geological Survey, with a memorandum of transmittal and comment by E. N. Harshman and John F. Shaw.

The examining team is of the opinion that at the present time there is not sufficeient evidence of uranium mineralization to warrent a DMEA contract for exploration, even though the subject claims are in a geologically favorable area. They therefore recommend that the application be denied without prejudice.

We concur with their recommendation.

W. M. Traver

W. M. Traver

Enclosures

E. N. Harshman

E. N. Harshman

Reviewed by
Operating Committee
9/28/55

DMEA
Date Rec'd
SEP 14 1955
BUREAU OF MINES
Region III Denver, Colorado

TRANSMITTED
SEP 19 1955

Building 20
Denver Federal Center
Denver 2, Colorado
September 13, 1955

Memorandum

To: Executive Officer, DMEA Field Team, Region III

From: John F. Shaw
E. N. Herzbaum

Subject: DMEA 3840 (Uranium) Edward K. Keiser and Cammy A. Ulmer, Keystone claims, Montrose County, Colorado.

Enclosed are the original and ten copies of a Joint Engineering and Geologic Report by M. R. Salsbury, mining engineer, and Carl H. Roach, geologist, covering docket DMEA 3840.

The applicants requested exploration assistance at an estimated cost of $20,240.00 to explore the Keystone groups of claims by 8,120 feet of plug-hit and 1,680 feet of core drilling. The property was examined on July 27, 1955. The examining team concluded that there was little possibility of discovering a significant amount of uranium by the proposed exploration. It is recommended that the application be denied.

John F. Shaw
John F. Shaw
Supervising Mining Engineer

E. N. Herzbaum
E. N. Herzbaum
Member Field Team

Enclosures

cc 10 ✓
EHerzbaum
DMEA 3840
Chron

JFS/em

UNITED STATES
DEPARTMENT OF THE INTERIOR
DOUGLAS McKAY, SECRETARY

DEFENSE MINERALS EXPLORATION ADMINISTRATION

REPORT OF EXAMINATION BY FIELD TEAM
REGION III

DMEA 3640

Keystone Claims

Edward K. Keiser and Conway A. Ulmer

Montrose County, Colorado

Uranium

By

M. H. Salsbury
Mining Engineer
Bureau of Mines

Carl H. Roach
Geologist
Geological Survey

September 7, 1955

DMEA 3340

KEYSTONE CLAIMS
EDWARD K. KEISER AND CONWAY A. ULMER
MONTROSE COUNTY, COLORADO

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DMEA 3840

KEYSTONE CLAIMS
EDWARD K. KEISER AND CONWAY A. ULMER
MONTROSE COUNTY, COLORADO

JOINT ENGINEERING AND GEOLOGIC REPORT

By M. K. Salsbury and Carl H. Roach

INTRODUCTION

Edward K. Keiser, 1546 Mahantango Street, Pottsville, Pennsylvania, and Conway A. Ulmer, 1709 Mahantango Street, Pottsville, Pennsylvania, a partnership, has applied for Defense Minerals Exploration assistance in a plug and core-drilling program on claims owned by them on Carpenter Ridge, Montrose County, Colorado (fig. 1). The project calls for approximately 8,120 feet of plug drilling and 1,680 feet of core drilling, or about 28 holes in three stages at an estimated cost of $20,240.00, using the applicant's bid which is the lowest of three submitted. Government participation at 75 percent would be $15,180.00.

The property was visited on July 27, 1955 by M. K. Salsbury, and by Carl H. Roach on July 29. Mr. Keiser was contacted by phone in Pottsville in advance by J. William Beasler of the U. S. Geological Survey, but for the purposes of the examination, his presence did not appear to be essential, and it was not requested. The Atomic Energy Commission was contacted but was unable to furnish additional information.

The Keystone claims are located largely on exposures of the Brushy Basin member of the Jurassic Morrison formation in an area where general

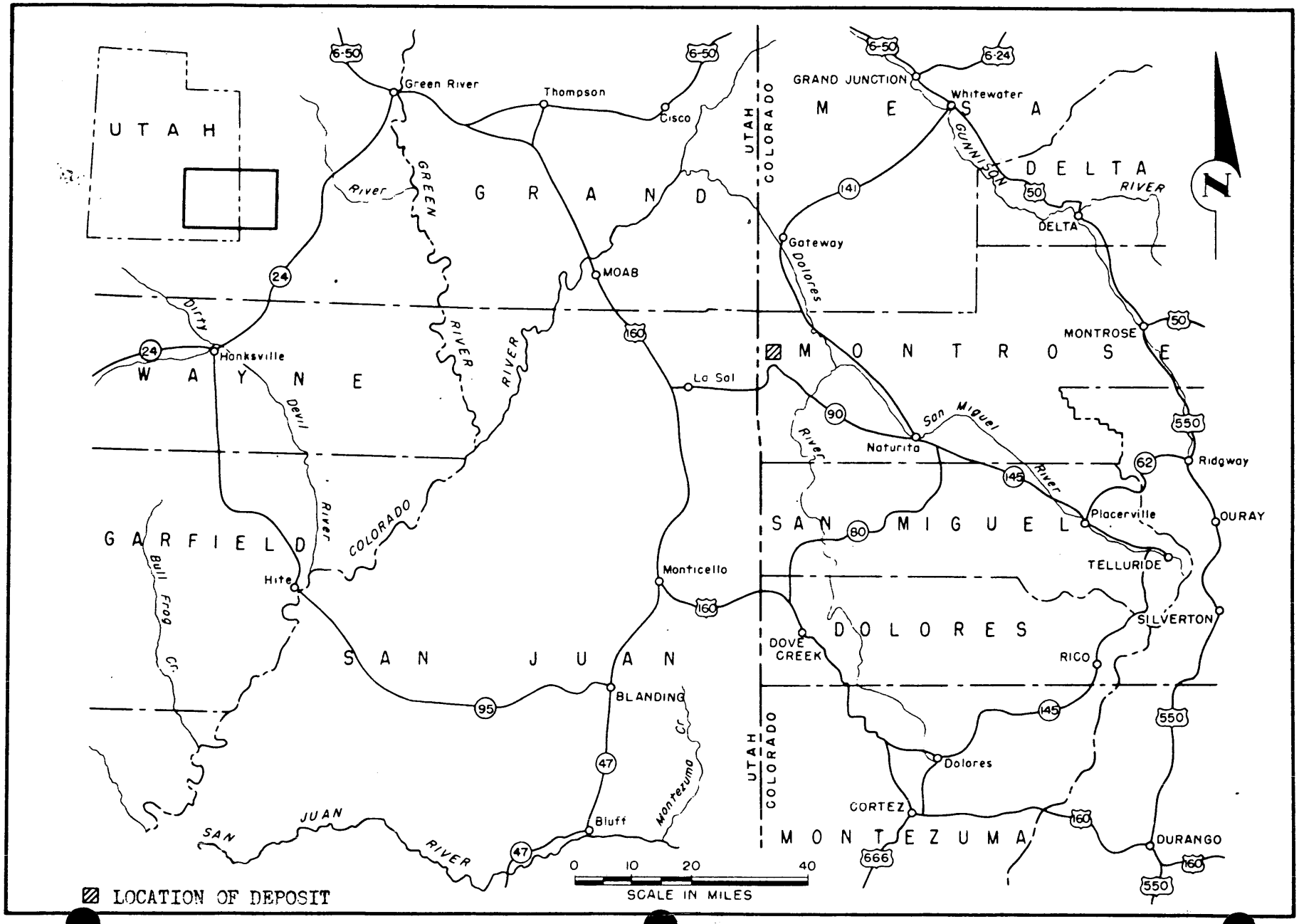


FIGURE 1 - LOCATION MAP, KEYSTONE CLAIMS, KEISER AND ULNER, MONTROSE COUNTY, COLO. DMEA 3840

geologic conditions appear to be favorable for the occurrence of commercial ore deposits in the Salt Wash member, but there has been no actual discovery of ore-grade material, or even mineralization, in 4 holes already drilled on the claims, or in any nearby property. The nearest known ore body is 2 miles away. No trends which would indicate an extension of known mineralization towards the property have been established, and there are no definite objectives on which to base a drilling program.

It is considered that the proposed exploration project does not meet minimum requirements for a DMEA project on the basis of present information. At some future time, when drilling already underway or planned approaches the Keystone group, exploration results may justify DMEA exploration, but at this time it is recommended that the request for Government assistance be denied without prejudice.

ACKNOWLEDGEMENTS

Data on the property was furnished by the applicants, including a good topographic map showing the claims accurately surveyed with locations of holes already drilled or proposed. Louis Gaybrecht of the Atomic Energy Commission and W. D. Carter, project chief for the U. S. Geological Survey in the area, were consulted. Carter furnished an evaluation of the geologic conditions in the area. No additional data was obtained from the Atomic Energy Commission.

LOCATION, TOPOGRAPHY AND CLIMATE

The ten located claims, Keystone Nos. 1 to 10, are in a compact

group on Carpenter Ridge in secs. 6 and 7, T. 48 N., R. 19 W., New Mexico principal meridian, Montrose County, Colorado (fig. 1). They are reached via a haulage road from Paradox, Colorado, 10 miles distant. Paradox is 28 miles from Naturita, Colorado, and 41 miles from Gravson, Colorado, via graveled Colorado Highway 90, where uranium-vanadium ore mills are located. Grand Junction is 147 miles farther via surfaced highways, or 107 miles via graveled or surfaced Colorado Highway 141. Mining timber is available locally, some items may be obtained in Naturita, Colorado, but most supplies must be shipped from Grand Junction, Colorado. Drilling and domestic water supplies are ample. Power would have to be furnished by diesel or gasoline-driven units.

The supply of labor for mining or exploration in the region is short, but personnel for drilling, usually furnished by a drilling contractor, would present no problem. A trailer camp would probably be established for the proposed exploration.

The region, at an altitude of about 8,000 feet, is a heavily forested mesa area in decided contrast to the more typical Colorado Plateau mining areas. The claims lie on a broad bench of Brushy Basin sediments and, except at the south end, access roads and drill sites are easily constructed.

The area enjoys substantial precipitation with frequent summer storms and moderate to heavy snowfall in winter which accumulates in the timber and remains until late spring. Surface operations have been carried on in winter, but are inadvisable unless the winter season is unusually open.

HISTORY AND PRODUCTION

Exploration and limited mining operations have been carried on in the general area since 1940, but not in the immediate vicinity of the applicant's claims. The Keystone group was located in the period December 1954 to May 1955. Surrounding claims were located in the same period. The applicant has drilled four holes on the property with inconclusive results.

There has been no production from the Keystone group or from any adjoining property. The nearest production has come from mines at least 2 miles away. Production figures up to the second and third quarters of 1954 on several properties as shown by records at the La Sal Creek camp of the Geological Survey, are given in Table 1. The Atomic Energy Commission gives the total to date for the Radium Cycle mine as about 5,000 tons of ore averaging 0.30 percent U_3O_8.

Table 1

Mine	Period	Tons	Content Percent U_3O_8	Content Percent V_2O_5
Radium Cycle	Prior to 1953	3,176.58	0.31	1.71
	1st quarter 1954	109.83	0.53	2.44
	2nd quarter 1954	46.38	0.55	2.56
	3rd quarter 1954	39.46	0.47	1.70
Valley View	1940 to 1944 (estimated)	100.00	0.60	2.41
	1948 to 1953	532.51	0.48	1.63

Mine	Period	Tons	Content Percent U_3O_8	Content Percent V_2O_5
Valley View (Cont'd)	1st quarter 1954	53.91	0.48	1.22
	2nd quarter 1954	69.67	0.20	0.80

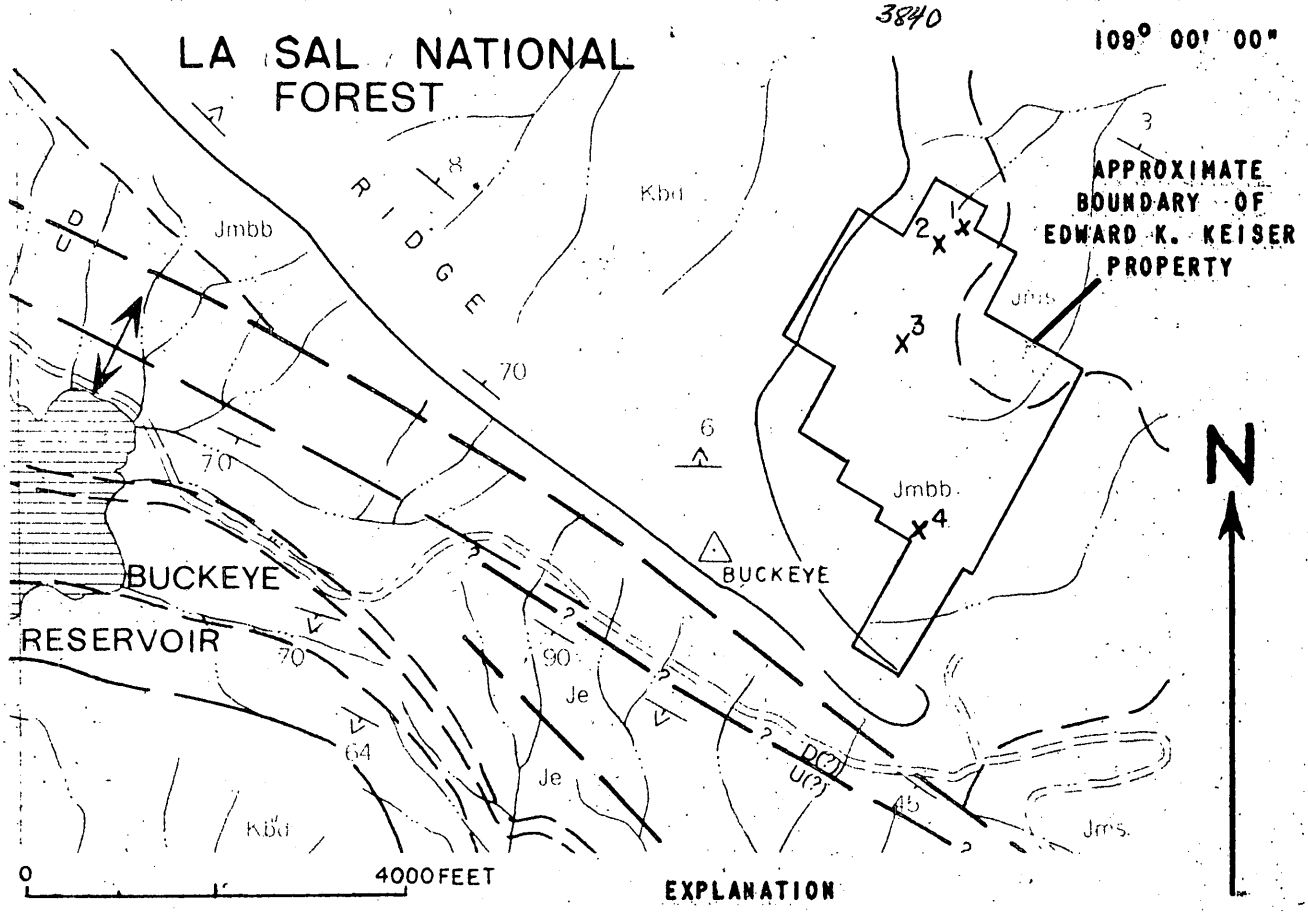
OWNERSHIP AND EXTENT

The Keystone group of 10 claims has location dates on different claims between December 24, 1954, and May 17, 1955. All claims are located in the name of the applicants. The southernmost claim, Keystone No. 1, has the name of Robert Riddle on the certificate also. A. E. Riddle and Robert I. Riddle located most of the surrounding claims. The Keystone group has been surveyed, corners and discoveries are well marked and were easily found in the field (fig. 2). All claims in the area appear to have been laid out with careful attention to adjoining claim boundaries and there is apparently no question of validity or conflicting locations.

PRESENT STATUS

Exploration and development

Exploration to date on the property has consisted of two rotary drill holes, no. 2 and 3, and two churn drill holes, Nos. 1 and 4, at locations shown in figure 2. As logged by Carter, the rotary holes did not reach the potential ore horizon, and the churn drill holes penetrated favorable thickness of sandstone but no mineralization. However, Carter states that evaluation of the churn drill sludge was difficult and by no means certain.



EXPLANATION

Kbd	CRETACEOUS BURRO CANYON FORMATION AND DAKOTA SANDSTONE, UNDIFFERENTIATED
Jm: Jmbb, Jms	BRUSHY BASIN SHALE MEMBER, Jmbb SALT WASH SANDSTONE MEMBERS, Jms OF THE JURASSIC MORRISON FORMATION, Jm
Js	JURASSIC SUMMERVILLE FORMATION
Je	JURASSIC ENTRADA FORMATION
	FAULT
	PROBABLE OR DOUBTFUL FAULT
	CONTACT (CAN BE ACCURATELY LOCATED WITHIN 30 FEET HORIZONTALLY)
	CONTACT (CAN BE APPROXIMATELY LOCATED WITHIN 30 TO 200 FEET HORIZONTALLY)
	CONTACT (CANNOT BE LOCATED ACCURATELY; PROBABLE ERROR GREATER THAN 200 FEET)
x4	LOCATION OF HOLES DRILLED BY APPLICANT

Note: GEOLOGY FROM U. S. GEOLOGICAL SURVEY PHOTOGEOLOGIC MAP, MT. PEALE 1. SECTION CORNER, AND PROPERTY BOUNDARIES FROM APPLICANT'S MAP.

Figure 2. GEOLOGIC MAP OF EDWARD K. KEISER PROPERTY AND ADJACENT AREAS, MONTROSE COUNTY, COLORADO

Mining and milling equipment and other facilities

No improvements other than access roads have been made.

GEOLOGY

Rocks cropping out in the area of the Keystone group of claims consists largely of the Brushy Basin member of the Jurassic Morrison formation. The Brushy Basin member consists of variegated shales and mudstones with minor amounts of fine-grained sandstones and conglomerate and is about 350 feet thick.

The Salt Wash member of the Morrison formation outcrops along the eastern boundary of the property and is the "ore-bearing horizon" in this area (fig. 2). The Salt Wash member is about 330 feet thick and consists mainly of fine- to medium-grained sandstone with some interbedded mudstone layers. The outcrops are covered by a dense growth of vegetation and little detail can be observed.

The Cretaceous Dakota and Burro Canyon formations outcrop along the western boundary of the area and consist mainly of coarse-grained sandstone and conglomerate with minor amounts of interbedded mudstone. The total combined thickness of the two formations, near the Keystone group of claims, is approximately 200 feet.

ORE DEPOSITS

There are no known ore deposits in the immediate area of the Keystone group of claims. The Valley View, Radium Queen, and the Lone Pine mines are located about two or more miles east of the Keiser property.

The recorded production figures for the Valley View and Lone Pine mines indicate that they are small ore deposits, probably not exceeding 1,500 tons in size. About 5,000 tons of ore averaging about 0.30 percent U_3O_8 have been produced from the Radium Cycle mine.

ORE RESERVES

There are no ore reserves in any category on the property.

PROPOSED EXPLORATION

The applicant proposed to explore the property by three stages of plug and core drilling. Holes were to be plug drilled an average of 290 feet through the Brushy Basin member and cored an additional 60 feet to penetrate the potential ore-bearing sandstones in the upper part of the Salt Wash member. Holes were to be located on about 900 foot centers in the first stage and at intermediate points in the second stage. Third stage drilling was planned for offsetting any ore holes. Following is a tabulation of the drilling proposed.

Stage	Holes	Plug drilling feet	Core drilling feet	Total drilling feet
I	15	4,350	900	5,250
II	7	2,030	420	2,450
III	6	1,740	360	2,100
Totals	28	8,120	1,680	9,800

The applicants submitted three bids for the work, including their own which was the low bid, calling for a total expenditure of $20,240.00. Government participation at 75 percent would be $15,180.00. The unit cost on this basis is $2.07 per foot, a reasonable figure.

By their statement the applicants are prepared to furnish their share of the cost in services, equipment and cash.

CONCLUSIONS AND RECOMMENDATIONS

Although the Radium Cycle mine is a moderate sized ore deposit for this area, there is little evidence, to date, to suggest that the ore trends will traverse the Keystone group of claims. Future drilling is being planned on properties adjacent to the Keystone group of claims and the results of this exploration may indicate something concerning the potential of the Keiser property. At the present, there is no geologic evidence to indicate that the Keystone group of claims has more potential than any other undeveloped property in the area.

Although the drilling results have been inconclusive and the area can be considered as generally favorable geologically, still the proposed exploration does not meet the requirements for a DMEA project.

Denial of the application without prejudice is recommended.

/jw