CONTACT INFORMATION
Mining Records Curator
Arizona Geological Survey
3550 N. Central Ave, 2nd floor
Phoenix, AZ, 85012
602-771-1601
http://www.azgs.az.gov
inquiries@azgs.az.gov

June 23, 1977

Wyoming Minerals Corporation
3301 Northland Drive, #408
Austin, Texas 78731

Attention: Mr. R. D. Maxwell

Gentlemen:

Re: Your P.O. #D548 9839 M
GEOEX Job #1166
Mapping
Dripping Springs Area

At Wally Platt's request, we herewith transmit to you one copy of his report: "Exploration for Uranium in The Bull Canyon - Deep Creek Area, Gila County, Arizona", dated June 20, 1977.

A copy is also being mailed today to Mr. Kenneth Ragland in care of the Copper Hills Motel in Globe, Arizona.

Sincerely,

Heinrichs GEOEXploration Co.

Walter E. Heinrichs, Jr.
President & General Manager

WEH:mt
Enclosure
cc: Mr. Kenneth Ragland

EXPLORATION FOR URANIUM IN
THE BULL CANYON - DEEP CREEK AREA
GILA COUNTY, ARIZONA

AREA

Field work in the Bull Canyon - Deep Creek area was conducted during May and June, 1977. The area includes all or parts of sections 23, 24, and 25, T5N, R14E, and sections 19, 30 and 31, T5N, R15E.

The area is readily accessible over a dirt road connecting with the Cherry Creek road.

PURPOSE

The purpose of this field work was three-fold:

1. Identify and map the top and bottom of the Gray Unit of the Upper Member of the Dripping Spring Quartzite;

2. Note strike and dip of joints in the Gray Unit at 1000'± intervals;

3. Employ a scintillometer to detect variations in gamma radiation and construct, if possible, an anomaly trend map.

GENERAL GEOLOGY

Stratigraphy

The stratigraphy of the DSQ (Dripping Spring Quartzite) is described in detail in several publications. Appended to this report is a copy of page 18, U.S.G.S. Bull. 1168, Granger & Raup, 1964, illustrating the stratigraphic column. The Gray Unit was examined at frequent intervals (1000±) and plotted on 200 scale maps with the aid of a Thommen altimeter. Inconsistencies between the altimeter (modest changes during the day) and the topographic maps precluded accurate plotting, but this problem was more an inconvenience than an hindrance to the work.

The gray sandstone and barren quartzite, a marker bed, usually appears as intermittent but bold outcrops permitting the distinction between gray and black facies. Scintillometer readings and joint patterns were noted above and below this stratigraphic marker.

Structure

Bedding in the DSQ is often flat but local variations up to 10 or 12 degrees were noted. Many dip measurements exceeding several degrees may be attributed to local flexures. Normal faulting of blocks has resulted in actual tilting in excess of 20 degrees.

The predominate joint pattern is NNE and WNW. Secondary joints are superimposed over the primary set and, locally, are the only joints. The joints are usually normal to the bedding.

Joint swarms (close spaced joints occupying a zone up to 20± feet across) occur throughout the area but are not common. Their trend and frequency of occurrence cannot be determined without considerably more work. Like other joints, their horizontal continuity is limited, in most cases, to several hundred feet or less and their vertical continuity to several tens of feet or less.

The DSQ appears to have undergone appreciable expansion: a few joints show evidence of slight vertical displacement but it is not uncommon for joints up to several inches wide to be filled with a fine foreign material (dirt fill, clay).

Basin and Range (?) type faulting of several tens of feet displacement or more is readily apparent. Only cursory efforts were made to resolve stratigraphic problems arising from this type of faulting. Strike slip movement along these or other types of faults was not determined.

Igneous Rocks

Precambrian diabase intrudes the DSQ as dikes and sills throughout the Sierra Ancha Range. The thickness of these intrusive bodies varies from several inches to hundreds of feet. In the Bull Canyon area only one small occurrence of diabase in the Gray Unit has been noted.

MINERALIZATION

Uranium occurrences in the Gray Unit of the DSQ may owe its genesis to one of the following:

1. a more or less even areal distribution of syngenetic uranium later concentrated by roll-front mechanics and influenced by a widespread distribution of very very fine carbon and pyrite;

2. uranium-rich hydrothermal solutions introduced into favorable stratigraphic horizons (top of Gray and bottom of Black facies) following the introduction of diabase;

3. combination of items 1 and 2.

EXPLORATION

Numerous scintillometer readings indicate that maximum readings are often associated with open joints (often filled with clays, rubble, etc.) and/or thin friable zones in the bedding. Further, anomalous areas are often associated with drainage cuts.

The relationship between drainage (faster erosion) and anomalous areas may be due to a more contiguous rock exposure in the wash or canyon bottom. Thus the field man has a greater chance of detecting an anomalous reading where the exposure area of in-place rock is the greatest. Leaching of uranium values (and daughter products) on slopes may be more extensive (has had more time) than in gullies where erosion is faster.

CONCLUSIONS AND RECOMMENDATIONS

Jointing is widespread and persistent in the DSQ. Although uranium deposition in the joints is an observed fact the mapping of joint sets and trends on a regional basis may not be a valuable exploration tool: It is probable that uranium, in a highly mobile state (roll-front, hydrothermal), was simply deposited in the nearest joint or set of joints in stratigraphically favorable zones.

Detailed mapping of joints over a large area is physically impractical. Nor do high elevation photos permit plotting of any but the coarse features. However, it may be profitable to conduct detailed (20 scale) mapping in several anomalous areas to determine what joint patterns or trends may exist and their relationship to detailed scintillometer readings. For example, good rock exposure on a gentle slope may reveal a slight convergence and then divergence of the overall joint trend. Such trends, if present, may even be apparent from a low flying aircraft.

The deployment of radon cups on covered areas where mapping (joints, readings) indicates a possible projection of values may prove to be a valuable exploration tool preliminary to drilling.

Oxidation of pyrite and leaching of uranium minerals appear to be a very shallow phenomenon. It follows that shallow drilling may afford excellent field data in anomalous areas where roads do not exist at this time. Following the detailed mapping of joints and scintillometer readings, a portable back-pack drill can be employed to drill a line or grid of holes ten feet deep and 1 1/2 to 2 inches in diameter. These machines are quite capable of deeper holes but the steel is not commonly available. Cuttings may be collected by removing the steel and introducing a suction hose (portable blower adapted for suction). Upon completion the hole may be logged with your portable scintillometer which Jon Haacke reports is available. An obvious advantage of such a system is the avoidance of roads construction and the prerequisite red tape involved in getting road building permits.

Respectfully submitted,

Wallace S. Platt, Geologist

cc: Mr. Kenneth Ragland
Copper Hills Motel
Globe, Arizona

GEOEX #1166
6/20/77
Tucson,AZ

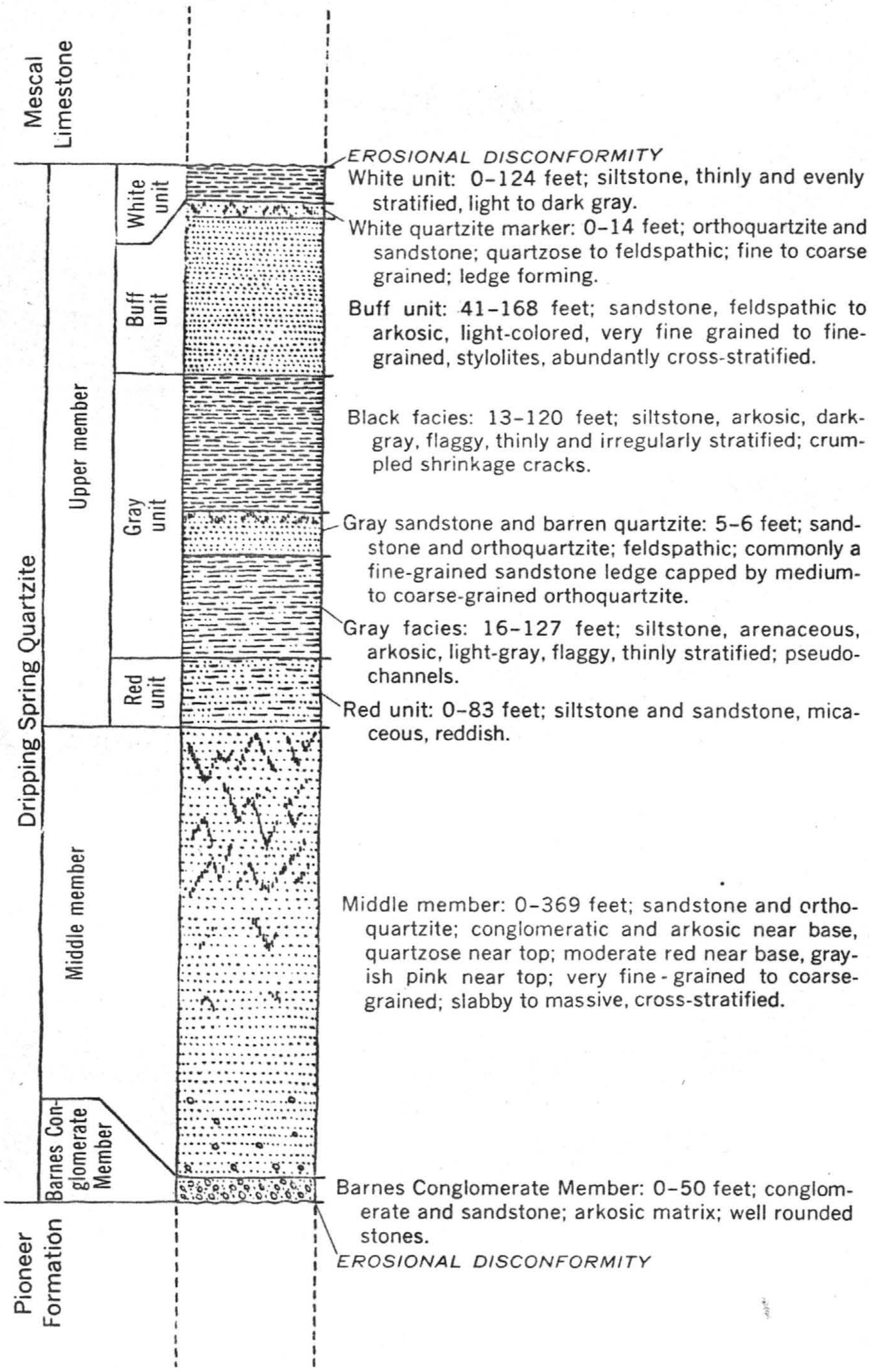

FIGURE 4.—Generalized columnar section of the Dripping Spring Quartzite, Gila County, Ariz.

and filled with c
feet deep. Loca
has been noted.
as 30° in places
the Diamond Bu
18° between the
tion were noted
southeast of Glob
The top of the
places, however,
glomeratic and l
stratification pla
of the rock and
than 50 percent p

The thickness
although it comn
known and loca
Ancha, for exan
1956) even thou
away. Other th
Mountains wher
Tortilla Mounta
thickness of 50
41), and in the
where a cliff of
lace (1951).
Gastil (1953)
ward in the Dia
discontinuous st
Barnes thins to
Carpenter (194
part of the Veko
With the exce
has no consisten
feet to 20 feet i
sections that cor
as to form no reg

SPL

The Barnes (
also blocky an