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ARIZONA DEPARTMENT OF MINES AND MINERAL RESOURCES AZMILS DATA

PRIMARY NAME: KNAPP GROUP 1

ALTERNATE NAMES:
OLD DELANEY GROUP

PINAL COUNTY MILS NUMBER: 112B

LOCATION: TOWNSHIP 2 S RANGE 12 E SECTION 13 QUARTER E2
LATITUDE: N 33DEG 15MIN 20SEC LONGITUDE: W 111DEG 04MIN 35SEC
TOPO MAP NAME: SUPERIOR - 7.5 MIN

CURRENT STATUS: DEVEL DEPOSIT

COMMODITY:
MANGANESE
TITANIUM RUTILE

BIBLIOGRAPHY:
ADMMR KNAPP GROUP FILE

DEPARTMENT OF MINERAL RESOURCES

STATE OF ARIZONA
FIELD ENGINEERS REPORT

Mine Knapp Group

Date September 24, 1959

District Mineral Hill, Pinal County

Engineer Lewis A. Smith

Subject: Mine Visit

FILED

OCT 28 1959

Property: 9 claims (Old DeLaney Group) unpatented

Owner: Lloyd G. Knapp, Box 1414, Miami, Arizona

Location: $3\frac{1}{2}$ miles south of Superior, $1\frac{1}{2}$ mile east of highway between Ray and Superior (T 2 S, R 13 E, Sec. 13)

Work: 12
1 75 ft. inclined shaft (45° incline) (old)
1 30 ft. tunnel (adit) (new)
1 cut 20' long, 10' deep at face, and 15' wide (new)

Mineral: Rutile with minor copper.

Geology: The mine lies within the Dripping Spring Mountains fault mosaic which essentially consists of a series of more or less parallel north-south major faults which have been disjunctured by numerous transverse east-west faults of variable strikes and dips. These formations consist of two groups:

- (1) The older Apache group composed of limestones, quartzites, conglomerates and shales invaded by widespread diabase sills.
- (2) Overlying this is a series of sedimentaries of the Paleozoic group.

Both have been effected by the fault mosaic. The area, in which the mine is located, is in the Apache Group. The Apache Group usually consists of the following rocks from the base upwards:

Scanlon Conglomerate
Pioneer Shale
Barnes Conglomerate
Dripping Springs Quartzite
Mescal Limestone
Basalt

The diabase intruded between sub-members of the Mescal limestone and the rutile showing appears to lie in the lower member of the Mescal a short distance above the diabase sill. The showing also lies adjacent to an E-W fracture. Whether the fracture was responsible for the local mineralization is not definitely clear. However, it either provided the source of the mineralizing solutions, or localized them. Since in this region the diabase is believed to have furnished at least part of the solution, the fracture may have acted as the localizer. From the incomplete field data, this could not be definitely established without more underground work, or drilling. The rutile is associated with iron oxides, mainly limonite, and small quartz stringers. Some of the limonite form fracture planes indicating that copper was present at least locally, but apparently not in strong concentration. The limestone is highly altered in the vicinity of the rutile. The rutile outcrop is about 25' long and 10'

wide and appears to be lenticular in form. The tunnel is headed in the proper direction to intercept this lense at about 30-40' in depth, and has within the last 3' penetrated iron mineralization similar to that which is affiliated with the rutile. It will help to determine if the rutile goes down. The shaft had a U-shaped drift to the southwest from the north, and it penetrated iron oxide bearing material. This was not accessible so that a comparison between the oxides from the drift and from the tunnel could not definitely be made. Dump material showed some similarity to the tunnel material. Neither showed appreciable rutile. The rutile shows crystals up to 1 inch in maximum dimension, but most were much smaller. A grab sample from the outcrop showed 12.4% of titanium. The distribution of the rutile in the iron oxides was variable from bare disseminations to massive bunches, and was more concentrated nearest to the fault. Several places, along other fractures, manganese oxides appeared up to 17% Mn content. These were undeveloped, but appeared to be lenses. One fault gouge contained balls composed of chert, quartz, or agate, but they did not often show cutting characteristics due to minute fractures. To the west the older formations plunged under the mid-Tertiary rhyolite and dacite along an angular unconformity of erosional character. The volcanics continue into Picket Post Mountain a few miles to the south and are doubtless a continuation of the Picket Post flows. Time did not permit a detailed study of the entire group.

Mr. Knapp plans to continue the tunnel work.