GEOLOGIC SUMMARY of SAM-MICRO Claim Area: Outcropping rocks in the Churchill Butte Hills (claim area) are Quaternary basalt and sediments in the western half is comprised mostly of Mesozoic metasediments and grandicrite, covered locally by Tertiary volcanies. Minoralization is pre-middle Tertiary and rarely is the alteration associated with mineralization reflected in the Tertiary cap rock. In Sec. 16 weak alteration in the Alta (?) formation can be observed along a NE shear zone. Major faults in the area trend northwest, and north-south. In this district the proximity of intersection of the two (NV-NE), former faults seems to be the most favorable as ore-controlling structures. The NV structures are the oldest and can be traced for many miles. They are deep-seated in origin and thus are expressed on aero-magnetic maps as lineaments tens of miles long. Both the SAM & MICRO claims occur in the above described geologic environment. The predominate intrusive in the area is a grandicrite which is believed to be pre-ore. It weathers into a typical decomposed granite except where it has been altered and silicified by hydrothermal activity, sometimes associated with significant mineralization.

Thus, the degree of alteration imposed upon the grandicrite directly reflects a nearby or distant source of hydrothermal solutions, possibly associated with a younger monzonite porphyry intrusive which could be copper bearing. The alteration in the grandicrite at the west edge of SAM #1 & #2 claims is of such intensity to suggest a nearby source, and thus warrants investigation.

(E. Adrian, Aug. 1972)

