

ALAN ROBERT GRANT
CONSULTING GEOLOGIST
P. O. BOX 15
LANGLEY, WASHINGTON 98260
(206) 321-4365

Report of Geological Survey

Claims: Penny, Penny #1 - #17

Location: Section 34, T4N, R5E, (W.M.)
Section 3, T3N, R5E, (W.M.)

Survey for: Alan Robert Grant

Survey by: Middle Fork Copper Mines Inc.

Date of survey: July - August, 1972

Personnel involved: A.R. Grant, Consulting Geologist
Bob Anderson, McPhar Geophysics
Tony Ard, McPhar Geophysics
W.A. Grant, D. Jones

Instruments used: McPhar M 700 magnetometer
McPhar I.P. Transmitter and Receiver

Results: The purpose of this survey was to subject the entire claim block to detailed geological mapping referenced to a surveyed grid. Over 58,000' of surveyed line were run in conjunction with the geologic mapping and in preparation for an induced potential geophysical survey.

Over 2 line miles of I.P. survey were made by McPhar Geophysics Inc., W. 818 Miracle Mile, Tucson Arizona 85705. This survey has indicated that the entire area is underlain by sulfide bearing rock. The west side of the claim block appears to contain higher total sulfides than to the east. This response is probably due to a pyritic halo surrounding the cupriferous core.

The geologic mapping resulted in the delineation of specific zones of mineralization. The winter floods in January 1972, exposed considerable additional outcrop along the creeks. This new outcrop allowed a much more accurate geologic appraisal of the claim block. Prior to the floods, outcrop was very scattered and disconnected.

The mineralized zones are located in shattered zones within and along the contact of the Silver Star intrusive stock. NE trending structural controls are evident. Specific areas, as outlined by geologic mapping, are currently being subjected to induced potential geophysical surveys. This combined exploration effort should furnish data to allow the accurate