

GENERAL COMMENTS1. Red Hills

The Samples 10962 and 10963 are schistose sericitic rocks interpreted to have originated as pelitic sediments. In each case it is uncertain whether the abundant sericite is solely a product of regional metamorphism or whether it formed initially in response to hydrothermal alteration. Similar uncertainty attaches to carbonate in 10962, but carbonate in 10963 appears to post-date the metamorphic foliation. Probable fine pyrite in 10963 and pyrite with sphalerite in 10962 are thought to pre-date metamorphism.

Sample 10965 is considered to be an arenite formed by aqueous transport and deposition of volcanic detritus. It has been subjected to hydrothermal alteration involving patchy sericitization and carbonate formation and crystallization of disseminated pyrite and sphalerite. The alteration is considered to pre-date regional metamorphism.

Sample 10964 is interpreted to be a crystal lithic tuff which experienced moderate hydrothermal sericitization and formation of carbonate, along with crystallization of disseminated and vein pyrite and sphalerite. Regional metamorphic effects are minor and probably subsequent. There is no evidence of aqueous sorting or transportation in this sample, but the tuff could have been deposited on land or into still water.

The abundance of sericite and the presence of sphalerite in three samples suggests proximity to a massive sulphide ore horizon.

2. Jukes

Sample 10966 is interpreted to have formed as a sandy and pebbly metapelite. Samples 10967 and 10968 were probably porphyritic rhyolite and perhaps the same lava. Sample 10969 was tuffaceous, but probably a muddy sediment. Sample 10970 seems to have been a porphyritic rhyolite, generally similar to 10967 and 10968. The samples 10971 and 10972 originated as very similar quartz-trachyte which may well have been of subvolcanic intrusive origin, although an extrusive origin is not precluded.

The three rhyolites and the two trachytes show prominent stockwork veining and alteration minerals suggestive of the feeder system to a volcanogenic massive sulphide deposit. Chlorite, calcite, quartz and pyrite are persistent vein minerals, but there may be a useful zoning pattern discernible from some of the other vein and disseminated minerals. For example magnetite is present in 10972 and 10971, chalcopyrite in 10972, 10971 and 10970, and pyrite and sericite are prominent in 10968 and 10967. This sequence may indicate an upward progression in a mineralizing system. The tuff 10969 has chlorite and chalcopyrite, in harmony with the Samples 10970 - 10972, and the pelite 10966 is a heavily sericitic, slightly pyritic rock, suggestive of a high level in the mineralizing system and perhaps approaching a potential massive sulphide horizon.