

b) Tenth Legion - Granite Creek - this feature more or less continuous across the granite from E-W. Apparent displacement of the eastern granite - sediment contact I feel is due to a combination of the easterly dipping contact and topography shape. A similar apparent displacement occurs 400m further north see DWG. 2.

This lineament - joint system has caused an erosional weakness, resulting in an indentation in the "R-W" contact 400m south of Mt. Heemskirk.

#### ALTERATION AND MINERALIZATION

Tin mineralization within the granite is associated with hydrothermal alteration, the dominant components are quartz, tourmaline, topaz, muscovite/sericite and hematite. Quartz topaz tourmaline "White dykes" are the most prominent alteration type forming resistant outcrops.

#### Characteristics of alteration/mineralization

- a) hydrothermal - griesen alteration centred on joint sets, frequently with remnant granitic textures.
- b) tension gash - quartz veins absent from the granite and aren't abundant in the hornfels.
- c) contact griesens within the granite haven't been recognized, but an increase in joint griesenization occurs in the granite on the northern shallow dipping contact with Oonah hornfels.
- d) hematite, magnetite containing alteration appears to be confined to the "Red" granites.

Main types of alteration differentiated in mapping components listed in order of abundance.

1. tourmaline, quartz, topaz } "White dykes" usually 5m wide
2. quartz topaz tourmaline } occasionally with minor
3. quartz sericite/muscovite } pyrite and arsenopyrite
4. sericite quartz, specular hematite
5. magnetite hematite tourmaline pyrite
6. griesenized/tourmalinized aplites, surrounding granite unaltered
7. minor types include minor molybdenite in unaltered granite location 373, and partial feldspar replacement b. hematite location 447.

"White dyle" style alteration is located throughout the "White" granite, but in the "Red" appears to be confined to granites immediately above the "Red-White" contact. The eastern part of the Heemskirk-Agnew range is completely lacking in exposed alteration see DWG. 2 with the exception of quartz tourmaline veins - 2 cm wide. In this area very strong lineaments occur with outcrop lacking for 5-50m, these may coincide with non resistant sericitic/argillic alteration.