

to the west. Thus the basalts and lithicwackes may be block faulted into position by a series of step like normal faults rather than by a simple anticlinal fold.

A north-east trending fault is interpreted as forming the contact between the Upper Crimson Creek Formation and the Dundas Group. This postulated fault downthrows the sequence to the east. Its existence is inferred by lithological changes and by the trend of the microgranodiorite dyke.

The Colebrook Hill Serpentinite is faulted into the sequence in a similar manner as the Serpentine Hill Complex, and is associated with a number of shear zones within the complex. The serpentinite is truncated by a north-west trending fault which also truncates the Dundas Group sediments. This fault downthrows the rocks to the west and complements the direction of throw in the Bassett-Federal Fault. It may be tentatively traced to the north-west where it is truncated by the Serpentine Hill structure.

The Serpentine Hill Complex is itself cut by a number of east-west faults. Some of the faults can only be inferred from the pattern of the magnetic profiles, but one fault of some importance has been mapped in the Ring River. This fault downthrows the serpentinite to the south and has a lateral displacement north block to the west.

The distribution and pattern of the faults at GAP is of importance since the structures could have acted as conduits for mineralising hydrothermal solutions. Large scale replacement of the sediments may have occurred where the faults are sufficiently open to have acted as major channel ways.

5.1.5. Alteration

Three types of alteration may be recognised at GAP:

- (i) Penecontemporaneous weathering of the basalts.
- (ii) Alteration associated with the process of serpentinisation.