

Meares, et al, 1980, and Corbett, 1975, have suggested a low angle unconformity at the base of the Tyndall Group. However outcrop information gives no support to this hypothesis. Diamond drilling (completed July, 1981) on line 21N, intersecting this contact, showed rhyolitic lava/ash flow tuff fragments with rounded chilled edges incorporated within fine grained andesitic tuffs and tuffaceous shales of the upper part of the older western sequence. Over 20 m the rhyolite fragments increase in size and content to the east, until the rock is wholly a rhyolitic ash flow agglomerate thought to be part of the Tyndall Group. It is concluded therefore that within the Howard's Anomaly area the contact between the Tyndall Group and the older andesitic volcanics is a conformable one.

A brief summary and subdivision of units is given below (see Figure 19).

- Unit 1: C.g. andesitic feldspar hornblende porphyritic lavas and intrusives(?). The eastern boundary of this unit was well defined from mapping in Newton Creek.
- Unit 2: A sequence of interbedded acid to intermediate, fine to medium grained, ash flow, crystal lithic tuff with phenocrysts of feldspar and minor quartz with minor shales and greywackes.
- Unit 3: F. to m.g. intermediate feldspar hornblende crystal lithic tuffs. To the south this unit and unit 2 appear to lens out or laterally transpose to the more coarser grained unit 1.
- Unit 4: Medium to coarse grained feldspar quartz porphyritic lavas and ash flow, agglomerates and crystal lithic tuffs. Outcrops in Newton Creek show a distinct ash flow texture despite the presence of phenocrysts of quartz. However the outcrop at line 26N, 2900'W which has a uniform texture with phenocrysts of quartz, could be intrusive. The two outcrops are similar in composition but appear to be parts of separate horizons. On a regional scale the units appear to be limited in extent.
- Unit 5: Andesitic crystal lithic tuffs with phenocrysts of feldspar and minor hornblende and a generally chloritic matrix with minor hematite. This unit is locally pyritic and associated with minor chargeability anomalies (see Meares, et al, 1980) and zinc soil anomalies (see Section 2.1.3). The unit also contains minor shales and greywackes which increase to the south. Beds of black shale intersected by D.D.H. TYN3 (line 16N), on geophysical evidence, appear to lens out to the north (see Section 2.2.4) but may be correlated to the south with black shales outcropping in a costean on line 00, of the Basin Lake Grid, and with black shales encountered in D.D.H. BL4 (see Section 2.5.4).
- Unit 6: Silicified cleaved medium grained andesitic crystal (lithic) tuffs containing disseminated pyrite and veins of chlorite. It appears to be partially leached with minor limonitic box-work structures. This unit which outcrops through an extensive glacial cover to the north of Howard's Anomaly, (due to its high silica content?), is the possible altered northern extension of Unit 5. Minor Pb-Zn-Ag mineralisation occurs in the line 30N pit area with assays up to 1100 ppm Pb and 11 g/t Ag (see Reid, et al, 1979).
- Unit 7: Fine to coarse grained crystal lithic tuff, phenocrysts of feldspar, minor hornblende with a variable matrix of hematite and chlorite. Some albitisation of lithic fragments and feldspar phenocrysts occur. The unit also contains minor reworked tuffs, greywackes, chert and carbonates. It is differentiated from unit 5 by the presence of reworked tuffaceous sediments, finer grained tuffs and the occasional presence