

outcrop along strike to the north and south and the poor geophysical response of lead-zinc orebodies compared to black shales which are also found within this sequence makes prospecting for such a horizon difficult.

The black shales intersected within the hole explains the major chargeability anomaly and resistivity low to the west while the disseminated pyrite explains the lesser geophysical responses to the east. See Figure 56 for the drilling profile and Figure 58 for the down hole 3 array I.P. profile.

#### Re-assaying of D.D.H. BL1 and BL2

Sections of D.D.H. BL1 and BL2 were re-assayed by Amdel (Report AC55/81) for Au but all values were  $< 0.01$  g/t Au.

Sections of BL1, not previously assayed, (i.e. 65.0-203.0 m, 211.9-296.0 m, 330.5-398.0 m, 464.0-484.0 m), were analysed by Mount Lyell for Cu, Pb, Zn, Mn, S and Ag. Except for an assay at 294.7-296.0 m of 0.1% Pb, 0.27% Zn and 2 g/t Ag all other assays were  $< 300$  ppm Cu,  $< 300$  ppm Pb,  $< 400$  ppm Zn and  $< 2$  g/t Ag.

#### 2.5.6 Geology

A comparison of the relative stratigraphy of drill holes and costeans within the Upper Cambrian Sequence of the Howard's Anomaly-East Tyndall-Basin Lake area is presented on Figure 59. This was achieved by the relogging of drill holes BL1, BL2, TYN1, TYN2, HA2, HA3, HA4 which were then compared to drill holes and costeans completed during the 1980-81 field season. The holes are plotted as true thickness relative to the readily recognisable and mapable Tyndall Group boundary with the upper "Queenstown Pyroclastics" sequence.

Structures within the area appear to be relatively simple with an east facing, east dipping Cambrian sequence abutting against the Great Lyell Fault to the east. How cross faulting (i.e. NW-SE and NE-SW faults) affects the relative stratigraphy cannot be easily determined but positioning of the drill holes, (in particular TYN1, TYN3, BL3, BL4), relative to the Tyndall Group contact is considered to be accurate within 10-50 m.

Over the area covered, 6 kilometres from Newton Creek (Howard's Anomaly) to BL1 (Basin Lake), three distinct units within the upper part of the Cambrian pyroclastic sequence can be recognised on this larger scale, with local correlation within units.

The underlying unit, of the studied area, contains coarse grained porphyritic feldspar hornblende andesitic lavas and crystal-lithic tuff (Unit 1 of Section 2.1.6). This unit which has previously been described as an intrusive due to the porphyritic character of the rock, shows an agglomeratic character in BL4 interbedded with minor grey shales. From geophysical and geochemical evidence this unit appears to be unprospective.

The porphyritic andesite is <sup>over</sup>underlain by a sequence of medium grained andesitic tuffs, minor dacitic tuffs, black shales, cherts and carbonates (units 2-7 of Section 2.1.6). This unit has an apparent thickness of 800 m in Newton Creek but appears to diminish to 600 m near BL4, 4.7 km to the south. Characteristics of this unit include the variability of sedimentary lenses (in particular the black shales), above average base metal values in residual soils, disseminated pyrite mineralisation and moderate to strong chargeability I.P. responses (in particular at Howard's Anomaly). Sediments appear to be more predominant near TYN1 and TYN3 (i.e. between lines 17N and 10N of the East Tyndall Grid), whereas on