

5.3. Local Structural Geology

Within the Chester Grid (EAD) area, the Primrose Pyroclastics dip and face east, and young from west to east; this probably represents the western flank of a synclinorium as proposed by Perkin (1). The strike of the rocks is approximately north-south, with a thinning of the sequence at the southern end. At the northern end of the grid, the strike changes to north-easterly through the East Chester grid area, (TAS/2/1555).

The structural sequence through the East Chester-Pinnacles grid areas from south-east to north-west is as follows:

- 1) Western limb of a major synclinorium.
- 2) East Chester Anticline: along the strike of the EAB andesites, plunging north-east.
- 3) Burns Peak Syncline: plunging north-east, pinching out south westwards against the Pinnacles Anticline. Tightly folded and sheared at south end.
- 4) Pinnacles Anticline: a very tight primary feature, affected by Tabberabberan Orogeny. Can be traced to the south of Pinnacles, but not into the Chester area.
- 5) Que Syncline: plunging northwards to where both limbs are evident.
- 6) Owen Shear: a thrust (?zone) with a shallow dip to the east of 35° to 40° .

It appears that the East Chester Anticline and the Burns Peak Syncline pinch out to the south-west against the Pinnacles Anticline; and the Que Syncline is truncated by the Owen thrust. It is suggested that both the Que Syncline and the Burns Peak Syncline were intravolcanic basins, as evidenced by the significant development of black shales and siltstones. East-west compression during the Lower Devonian Tabberabberan Orogeny caused tight folding in parts of these basins, with the Pinnacles Anticline acting as a competent buffer.

The Owen shear is possibly related to the same period of folding, but appears to have been a late