

3. GEOLOGY OF THE COMSTAFF TENEMENTS

During the regional stream sediment sampling programme from 1969 to 1972, most of the streams within Exploration Licence 5/63 were mapped, but in Exploration Licence 1/68, only part of the Heazlewood River Basin was covered and the area to the west of the river is unknown. Fact mapping was plotted on imperial sheets at a scale of 1:10 000 and coloured pencils were used to distinguish the varying lithologies which makes these plans unprintable. Geological data was transferred to the new metric base plans at a scale of 1:5000. Due to discrepancies in topography, the transfer of data was on a best fit basis, and as the mapping was done by different geologists, differences in rock descriptions occur. Generally the rocks get younger towards the east, but this pattern is modified by arcuate anticlines and synclines. Although mineralising epochs in Tasmania are regarded as being Cambrian and Devonian in age, the latter mineralisation appears to favour dolomites within the Success Creek Phase for replacement massive pyrrhotite/cassiterite mineralisation. This is probably because these rocks are near the base of the Dundas Trough sedimentary basin and thus closer to the granite source. The differences between the Dundas and Crimson Creek Groups, defined by G. Pigott in his work in the Renison East area, have been used in the interpretation of the mapped area to form the basis for the geological map.

The oldest rocks mapped in the Comstaff tenements are siltstones and quartzites with minor dolomites which have been equated with the Success Creek Phase. They occur in the cores of the Mount Bischoff and Just-in-Time Anticlines and on the western limb of the Heazlewood Syncline.

Overlying these rocks, generally with an unconformable contact, is the unfossiliferous Crimson Creek Group which consists of greywackes, basic volcanics and minor siltstones and shales. These rocks are found in the Heazlewood and Arthur River basins, the Hatfield-Coldstream areas and south of the Pieman River Fault in Renison East.

A change in the sedimentation pattern marks the base of the Dundas Group which consists of interbedded shales and acid pyroclastics with minor greywacke horizons. These rocks occur north of the Pieman Fault in the Pieman area, in the south-eastern part of Renison East and in the