

5. GEOLOGICAL MAPPING

5.1. Results Achieved

5.1.1. General

The rocks at GAP comprise a tightly folded turbiditic sequence of arenaceous, argillaceous and clastic sediments with mafic volcanic rocks and ultramafic-mafic complexes. This sequence appears to be unfossiliferous but is assigned to the Cambrian Crimson Creek Formation on the basis of correlation by lithology. The south-east sector of the area is underlain by a sequence of black shales, siltstones, arkoses and acid pyroclastics assigned to the overlying Dundas Group.

These rocks, together with the underlying Upper Proterozoic Success Creek Group, are thought to have been deposited in a broad, longitudinal basin or trough that developed between the Tyennan and Rocky Cape geanticlinal massifs. To the east, the sedimentary succession is flanked by the Mount Read Volcanics, an Andean type accumulation of predominantly acid rocks.

5.1.2. Lithologies

The geological succession in the Renison Bell - Zeehan area was established by Blissett in 1962 (3). The three major stratigraphic units defined by him are still maintained for the purpose of this report. Detailed mapping in the mine area of Renison Bell (4) has defined the Success Creek Group - Crimson Creek Formation contact zone; but the boundary between the Crimson Creek Formation and the Dundas Group (youngest) remains a problem. Table 5-1 (p 14) illustrates the interpreted lithological succession at GAP, but must be regarded as tentative. The stratigraphic sequence at the Success Creek Group - Crimson Creek Formation is based on that observed at the Renison Mine (Appendix III) and is thought to underly GAP (albeit at 1000+ metres). Definition of units within the Crimson Creek Formation and the Dundas Group is difficult due to the paucity of outcrop, the lenticular nature of most of the beds, the facies changes and the structural complexity.