

Zone 39 Mt. Kershaw-Boco Area; is a series of linear features striking north-east which have been identified as either andesite or a folded sequence which includes a magnetic horizon.

Zone 40 Mt. Block and Mt. Charter; has been attributed to andesite however, it was pointed out that the same andesite at Que River had no magnetic response and that the younger dolerite at Mt. Charter also failed to give a magnetic anomaly. The source of these anomalies should be grouped with Zone 38.

To summarise, the magnetic results over the Mt. Read Volcanics have a close relationship with the geology. The Eastern Sequence is the most magnetic and can be traced as an almost continuous belt 2.5 kilometres wide extending from South Darwin Peak in the south, to where it is terminated by the Henty Fault. North-west of the Fault the magnetic signature of the Mt. Read Volcanics changes and there are no large amplitude anomalies similar to the Eastern Sequence recorded over this area. The Central and Western Sequences are less magnetic and the boundaries cannot be traced accurately from the magnetics. A model has been proposed to explain the magnetic anomalies over the Eastern Sequence and this should only be considered as a possible alternative.

THE DUNDAS TROUGH

The Dundas Trough has been described by many authors including a review by Solomon (1981).

"The Dundas Trough system developed along the northern and western margins of the Tyennan Geanticline by extension of the Precambrian crust. The trough was initially filled with a sandstone-shale-carbonate sequence (Success Creek Group), then by mudstone, lithic wacke, and basalt (Crimson Creek Formation) and finally by a succession including mudstone, lithic wacke conglomerate and minor volcanic rock (the Dundas Group, of early Middle to late Cambrian age). The early phase of extension probably produced rift structures floored by basalt crust (oceanic crust) and mantle, and during later movements (Dundas Group time) dismembered and serpentinized ophiolitic material was thrust into the sediments of the trough and locally eroded."

The eastern boundary of the trough is an interbedded sequence of Mt. Read Volcanics and sedimentary rocks. The western boundary of the trough is not clearly defined in the literature. Solomon (1981) shows the Arthur Lineament as the western boundary whereas Hutchinson (1979), extends it further to the west to the Rocky Cape Region. For the purpose of this discussion the western boundary will be the Arthur Lineament, (Figures 2 & 3), (Plate 2).

In this review the Dundas Trough basically includes the Ordovician, Cambrian and Precambrian systems which form a belt of