

districts? The question prompts the recommendation that completion of this information base should be a priority in respect of future review of data and integration with deep drilling exploration programmes in the district.

Overview

Discussion with Aberfoyle geologists has suggested that geophysics and drilling have essentially sterilised the district to about 200 meters depth apart from areas close to major power lines. Any research program relating to future exploration should therefore focus on techniques which may enhance the information recovery and search radius of deep drillholes.

The inter-related information bases required for evaluating exploration non-geophysical exploration tools below 200 metres are as follows and presume that deep drilling on geophysical targets will provide samples suitable for isotopic and geochemical analysis.

- o Detailed geological structure of the district
- o Recognition of chemical or isotopic vectors
- o Systematics of post -DMS isotope and geochemical remobilisation

This report provides discussion of some of the key geological and geochemical information which will be required to aid deep exploration in the Mount Read volcanic belt.

Geological Structure

The structural geology of the Mackintosh region has recently been reviewed on the broad regional scale (Rattenbury, 1990). This review provided a broad scale NNW-SSE balanced cross section and an interpretation of the Henty and Mount Charter Faults as primary listric normal faults governing sedimentation in the Dundas Group. Devonian compression along this axis is believed to have reactivated these structures as reverse faults. In this regional scale work the possibility of local thrusting is not admitted although not explicitly excluded. The synoptic view which is gaining acceptance is that DMS mineralisation is localised by syn-depositional faulting within a series of basins and implicit in this view are acceptance of a simple extensional basin morphology and assumptions regarding the style and role of the