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IV. CONCLUSIONS AND RECOMMENDATIONS

As mentioned above this project has revealed a considerable amount of new information on the structure, configuration, and relationships within the Mt. Read Volcanics. The main conclusions reached by this author are:-

- (a) The Mt. Read Volcanics are confined to a generally north-south trending palaeo-rift valley, that was formed in the late pre-Cambrian, and remained active until late Cambrian to early Ordovician times.
- (b) The Volcanics can be divided into an early acid-intermediate to intermediate phase, that was separated from a later acid to acid-intermediate phase, by a depositional hiatus, during which tectonism and erosion occurred.
- (c) Two main phases and directions of faulting occur in the area, namely north-south trending block faulting that was active from late pre-Cambrian to Ordovician times, and a younger, generally north-west to north-north-west cross faulting that in places offsets the earlier faults. The faults appear to be vertical with little or no strike component.
- (d) The folding is open in style, and appears to be related to the faulting, rather than to any major compressional forces.
- (e) The spatial relationships of the units within the Mt. Read Volcanics has been clarified, and two other sedimentary units, namely the Rosebery Group and the Farrell-Que River Slates have been included within the Volcanics.

Prior to the discovery of the Que River Mine, all discoveries of major base-metal deposits had been confined to sedimentary units within the Primrose Pyroclastics and to a lesser extent in the Farrell Slates and Bulgobac Group. Mineralisation at Que River is related to a pyritic horizon within an intermediate volcanic suite, termed the Que River Volcanics. Minor mineralisation related to younger acid volcanic rocks is found at Red Hills (CR 7/10) and in the Burns Peak-Pinnacles area (east of AR 3/007).