

This map defines several zones of higher intersection density, intersection zones, the trend of which parallel both the regional strike (and changes of) and major fault trends. These zones emphasise the swing in the regional strike and the occurrence of a subordinate E-W structural trend in the southern half of the area.

The area of highest intersection frequency coincides with the Meredith granite and indicates that this is a lithological effect.

#### Fracture Trend Analysis (TAS-2-788)

This is a statistical method based on the relative intensities of fractures within directional classes. The method utilised is described by Huntingdon in "Methods and Application of Fracture Trace Analysis in the Quantification of Structural Geology" (Geol. Mag. Vol. 106, No. 5, 1969).

In this case blocks, based on the photogeological/topographic maps, with over 100 major fractures were determined. These blocks are Arthur River II, Huskisson North and South, Tullah North and South, Zeehan and Rosebery.

All major fracture directions in each block were recorded in a 5° classes from 0° - 180°. Rose diagrams were then drawn from the percentage of mega fractures in each class. A parallelogram is then constructed on the rose diagrams, such that the sides are parallel to the two principal fracture directions and pass through their apexes. The diagonals of these parallelograms are the direction of the main horizontal stresses that have affected the area which the rose diagram represents. Calculations with data on percentages and angles from these diagrams gives the relative dimensions of possible folds within the areas. The direction of the longer diagonal of the parallelogram should approximate the regional strike of the sedimentary rocks. In this case, apart from the Huskisson North block, which is mainly granite, the longer diagonal does equate with the regional strike and indicate a swing from SE in the South to NE in the North.

The rose diagrams themselves reflect the prominent major fracture trends and indicate that the E-W trend is only developed in the central eastern part of the area.

Calculations of the ratios of fold dimensions based on the data from the rose diagrams indicate that the folds are laterally symmetrical, this agrees with the observed fold patterns. The length to width and pericline ratios do not correspond well with observed folding and this is probably due to the polyphase deformation history of the area.