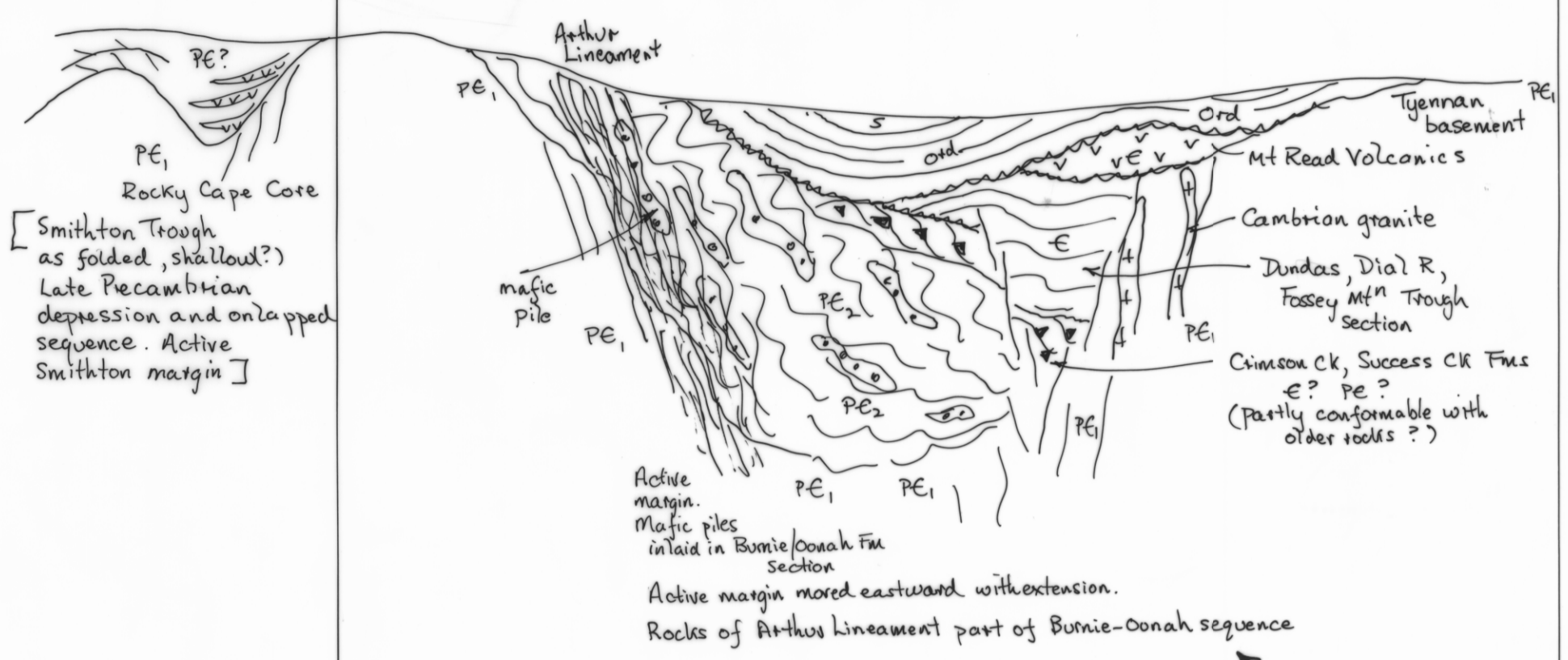


POSSIBLE FORM OF RELATIONSHIPS: SMITHTON TO CRADLE MT.  
(Burnie-Onah Trough)



- Notes
1. This map summarises a provisional primary interpretation undertaken for the Mt. Read Volcanics Project 1977. It is subject to revision and refinement and is dependent on current data coverage and interpretation methods. Based on gravity and magnetic data as at Dec. 1987.
  2. It is included as a structural guide. Relatively simple density contrast assumptions have been referenced against most Devonian granitoids (2.62-2.63 t/cm<sup>3</sup>).
  3. Interpretation derived from 2D array profile methods requiring simultaneous solution of all components against fixed line shift parameters and consistent geology property assumptions (see text). Some problem issues are worked.
  4. Further development should involve 3D methods.
  5. Any use of this model for the calculation of a regional gravity field should follow 3D tests and refinement and must include:
    - a) water, mantle, granites for improved basin definition
    - b) above plus basin inferences for specific projects or analysis of post-Lower Cambrian units.
 Exercise caution and extend regional generator at least 50 km beyond area of interest.
  6. Note that no aspect of the interpretation has been considered in detail.
  7. The Dundas, Dial Range & Fossey Mt. Troughs (of certain mid & e age) lie within, or marginal to, the Burnie-Onah Trough (of certain late pe age - pre 700 my of Coase Diorite). Due to comparable densities it is not possible at this scale to resolve the interface between Dundas Trough sediments and, say, Onah Fm. This is feasible in detail but requires full use of the magnetic data base. In N.W. Tasmania this requires evaluation of Tertiary basalts and in W. Tasmania, the Tjennan Grand ultramafics.

Analysis and data coverage limited east of Tor Granite. Depth contours to base of dense (non magnetic??) unit probably referred to Tjennan unconformity. But Carboniferous cover not generally modelled. Some supra-Tjennan basins may contain magnetic units.

Further review of this region requires additional gravity coverage, interpretation of seismic data and Tertiary/Cretaceous basins

- Contours:
- 4 Outer, upper surface of Devonian Granitoids (all km below surface) Precision uncertain
  - ⊙ Inferred, very approximate estimate of thickness of Dundas Group of and Mt. Read Volcanics
  - 4 Upper surface of siliceous basement (Rocky Cape or Tjennan core?) Boundary PE. Occasionally surped due to density banding and locally ambiguous core densities
  - 2 Specific mafic gills (in Arthur Lineament zone and in Burnie Fm.) Contours on outer surface.

W AND NW TASMANIA  
**STRUCTURAL RELATIONSHIPS**  
PRECAMBRIAN & LOWER PALAEOZOIC

PROVISIONAL

D E LEAMAN  
Feb 1988  
for Mt. Read Volcanics Project