

GRAVITY INTERPRETATION

Regional Gravity Interpretation

The regional gravity data was collected from the B.M.R. and the Tasmania Department of Mines results, and Zadoroznyj, (1975). The results over the west coast of Tasmania, (Figure 19), identify a large amplitude gravity high south-west of Tasmania which has produced a regional gravity gradient parallel to the coast. The source of the high correlates with the top edge of the continental slope and is largely a gravity edge effect caused by the abrupt changes in water depth and crustal thickness, Symonds & Willcox (1976). The interpretation of the regional gravity data, (Figure 20), has identified a number of regional lineaments warranting discussion.

- (1) The Mt. Balfour Lineament is a north-easterly striking feature dividing the Smithton Gravity High to the north-west from the Rocky Cape Gravity low to the south-east.
- (2) The Arthur Lineament has a coincident gravity high which correlates with the zone of most intense magnetic activity.
- (3) The Cleveland Lineament strikes north-east and intersects with the Arthur Lineament at an acute angle, forming the north-west boundary of the Meredith & Husetop Gravity Low.
- (4) The Renison Lineament is parallel to the Cleveland Lineament and forms the south-eastern boundary of the Meredith & Husetop Gravity Low. This Lineament can be traced through to the west coast, south of the Heemskirk Gravity Low.
- (5) The St. Dizier Lineament is a small strike length gravity lineament on the north-west of the Heemskirk Gravity Low which may be associated with the same line of weakness as the Cleveland Lineament.
- (6) The Mt. Lyell Lineament is a short feature striking north-east and forming the southern boundary of a gravity high over a synclinal structure in the Dundas Trough.
- (7) The Adamsfield Lineament is a minor feature over the Tyennan Nucleus, but where it intersects the Mt. Read Volcanics it correlates with a magnetic feature interpreted as a major fault.
- (8) The Queenstown Lineament is the only northerly striking feature in the gravity data. This can be traced from Elliot Bay in the south to where it is terminated by the Renison Lineament.
- (9) The Zeehan Lineament strikes south-east and terminates to the north at the Arthur Lineament High and to the south at the Queenstown Lineament.