

## 1. INTRODUCTION

- 1.1 The Mount Jacob prospect is situated immediately north of Lake Gairdner in the Moina-Wilmot region of Northern Tasmania. That prospect is currently being explored by R.G.C. Exploration Pty. Ltd. for volcanogenic massive sulphides and exploration to date has included geology, geochemistry and geophysics. The latter has been in the form of a) a magnetometer survey and b) a fixed loop Sirotem Survey.
- 1.2 The Mount Jacob grid consists of twelve north-south grid lines at 200 metre spacings and encompasses a contact between Ordovician Moina sandstone in the south and Cambrian Volcanics to the north. The contact zone has a predominantly E-W trend but is offset to the north in the western half of the grid by a series of NNW-SSE faults. That geological contact zone encompasses a relatively thin succession consisting of the basal conglomerate member of the Moina sandstone and the upper sandstone member of the Cambrian, Owen Conglomerate. These rocks have a shallow dip to the south and unconformably overly the undifferentiated Cambrian Volcanics. Flat lying Tertiary basalt occurs in the north-west corner of the grid.
- 1.3 The magnetometer survey of the Mt. Jacob grid was carried out in early 1990 and reported on by this Author (Deakin 1990) in April of that year. The results of the magnetics can be summarised as:
- a) Noisy data in the northern and north-western parts of the grid, related to structure and/or lithologies within the Cambrian volcanics and the Tertiary basalt and
  - b) A broad high trending approximately East-West in the south of the grid which is related to unknown lithologies at depths of 100m or more.
- 1.4 In early February 1991 the Mount Jacob grid was surveyed with fixed loop Sirotem by McSkimming Geophysics International Pty. Ltd. This work consisted of the measurement of both the vertical (Z) component and horizontal (X) component (along grid lines- +ve to the north) of the secondary electromagnetic field induced by 600m x 300m transmitting loops. The field layouts consisted of :-

	Transmitting Loop	Lines Measured
1.	8700N - 9000N 500E - 1100E	500E, 700E, 900E, 1100E and 1300E
2.	8700N - 9000N 1300E - 1900E	1100E, 1300E, 1500E, 1700E, 1900E and 2100E