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Memo

To : Darren Hicks – Zinifex Tasmania
From: Rob Angus – RAMA Geoscience
CC:
Date: 28 February 2008
Re: Castra Rd Electromagnetics Survey
Ref: RG_ZL13

Introduction

A fixed loop electromagnetics (EM) survey was completed by Quantec Geoscience at the Castra Rd Prospect in NW Tasmania during January and February 2008.

Survey specifications are included at the end of this memo. Two transmitter loops (3 & 4) were used for the survey as illustrated in Figure 1. The main receiver sensor used was a tri-axial fluxgate magnetometer which allows simultaneous measurement of all three components of the step response or B-field. A standard RVR coil receiver was also used to measure the vertical component of the impulse response (or dB/dt).

Raw data files are provided with this memo.

Results

Results of the Castra Rd EM survey are presented as PDF plots files provided with this memo. The plots show the three components of the fluxgate magnetometer response in profile form, and a conductivity depth image (CDI). The CDI is a transformation of each EM channel to a conductivity and depth which creates a conductivity pseudo-section for easy visualisation and rapid initial interpretation of the EM data. The CDI's presented here are calculated from the total magnetic induction amplitude which is the sum of all three components of the EM data (Z, X, & Y).

Unfortunately there are no indications of conductive mineralisation in this data. The CDI's illustrate quite clearly that there is a veneer of moderately conductive cover up to 50m thick over a uniformly resistive basement. Given the resistive environment, any slightly conductive targets would have produced a significant anomaly in this EM data. As there are no such anomalies, it is quite safe to assume that this EM survey has failed to discover any massive conductive mineralisation at Castra Rd.

Survey Specifications (see Figure 1 for survey layout)

Contractor : Quantec Geoscience

Survey Date : Jan-Feb 2008

Configuration : Fixed Loop Electromagnetics

Receiver : SMARTem

Sensors : RVR & Tri-Axial Fluxgate Mag

Transmitter : Zonge GGT-10

Station Spacing : 50m

Frequency : 4.1667 Hz

Ramp : 0.2 ms

Tx Loop : 3

Tx Loop Size : 900m x 550m

Tx Current : 16 Amps

Tx Loop 3 Corners

Tx Loop 1 : 3000E 3300N

Tx Loop 2 : 3000E 4200N

Tx Loop 3 : 3550E 4200N

Tx Loop 4 : 3550E 3300N

Rx Lines : 3400N, 3600N, 3800N, 4000N, 4200N

Tx Loop : 4

Tx Loop Size : 800m x 400m

Tx Current : 17 Amps

Tx Loop 4 Corners

Tx Loop 1 : 2600E 2900N

Tx Loop 2 : 2600E 3700N

Tx Loop 3 : 3000E 3700N

Tx Loop 4 : 3000E 2900N

Rx Lines : 3000N, 3200N, 3400N, 3600N

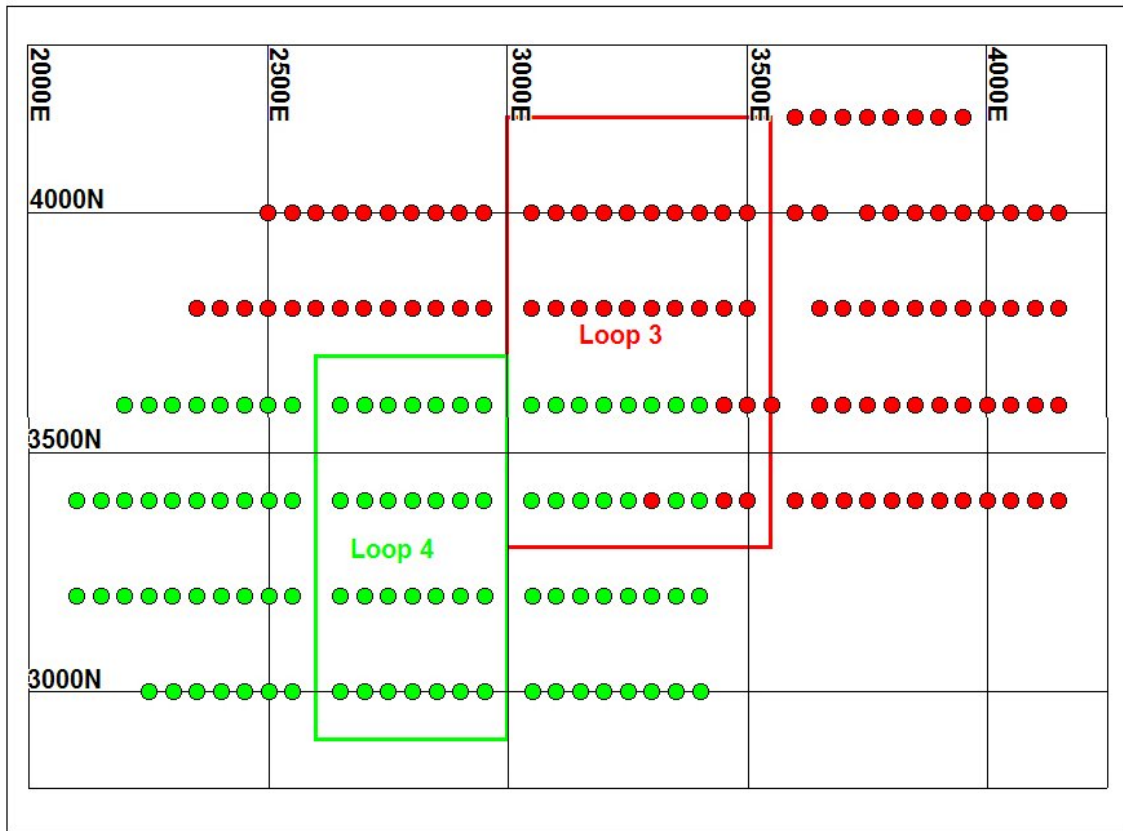


Figure 1. Castra Rd Fixed Loop EM Survey Layout. Stations coloured red were read using Tx Loop 3, while stations coloured green were read using Tx Loop 4.