

SOUTHERN GEOSCIENCE CONSULTANTS

Pty Ltd | ACN 067 552 461 | Level 1, 183 Great Eastern Hwy, Belmont WA 6104, AUSTRALIA

Phone | +61 (08) 6254-5000

Fax | +61 (08) 6254-5099

Email | ben.jones@sgc.com.au

Web | www.sgc.com.au

MEMORANDUM

To:	Paul Burton	From:	Ben Jones
Cc:	Dr Nigel Brand, Geochemical Services Pty Ltd	Date:	29 August 2010
Company:	TNG Limited	SGC Report No:	2081
Subject:	Results of Detailed Gravity and Ground EM Follow-up Surveys, Mt Peake - NT		

Executive Summary

A detailed gravity survey was completed over target M1, a circular magnetic 'low' identified from the GEOTEM survey. A small gravity response was observed in the vicinity of the magnetic response and is recommended for testing with a 150m vertical drill hole.

Two lines of ground EM were completed over GEOTEM anomalies G10 & G34, two of the higher priority targets from the recent review. Both datasets confirmed the original GEOTEM responses with both targets recommended for testing with relatively shallow drill holes.

During August 2010, Haines Gravity Surveys completed a small gravity survey over the M1 target, an anomaly identified in the recent review of the GEOTEM survey as a discrete, circular 'low' in the magnetic dataset. At the same time, the services of Outer Rim Exploration were engaged to perform ground EM follow-up over some of the GEOTEM anomalies identified in the same review (SGC report #2070). Due to timing/budget constraints and access difficulties in the field, the EM crew was only able to complete the work over targets G10 & G34.

Gravity

The survey was conducted predominantly on a regular 200x50m grid spacing for a total of 240 readings. The results are summarised in Figure 1.

A small circular anomaly (~400x400m) was observed in the gravity data, centred at approximately 316400E, 7616400N. The position is ~200m towards the south-east of the centre of the GEOTEM magnetic response. There are several possible explanations for this offset. Firstly the gravity is reflecting the density of the sub-surface, which is not necessarily the same as the magnetic response. Secondly, the presence of remanent magnetisation (causing the magnetic low) is complicating the actual location of the source. Thirdly, the line resolution of the gravity is 200m while the GEOTEM is 250m meaning the centre of both anomalies could lie between lines. It is likely that all three explanations are contributing to the apparent offset. Regardless, in the absence of specific measurements on the magnetic properties of the source, it is recommended that any testing be based on the results of the gravity survey.

Models of the gravity response are shown in Figure 2. Several possibilities have been included given the ambiguity of gravity modelling. As the results show, it is possible to fit the data using different combinations of density, depth and size. However, the centre of the source is the same in all three scenarios so a vertical drill hole to cover each option would be recommended.

The source is obviously unknown, but possible explanations include a non-descript volcanic plug/intrusion within the country rock. However, some more interesting possibilities include a pipe-like feature, with/without a 'cap' of higher density material. The combination of an associated magnetic response makes this gravity anomaly a high priority target. Recommended drill holes details are as follows:

Target: M1

Collar: 316400E, 7616450N (AGD84/AMG53), or approximately 316530E, 7616620N in GDA94/MGA53

Vertical Hole

End of hole: approx 150m

Ground EM

Due to last minute changes in the budget, the original programme of obtaining ground EM data over twelve GEOTEM anomalies was reduced to four. In order of priority they were G34, G32, G10 and G13. The crew could not gain access to target G32 and due to slower than expected production ran out of time to complete G13, meaning only two targets were surveyed – G34 and G10.

G34 was identified as a high priority, moderately-strong, mid-late time GEOTEM anomaly. The single line of ground EM over the target confirmed the presence of an anomaly. The data was modelled using two weakly conductive units dipping towards the east, with the possibility of a small zone of increased conductivity sitting in between (Figure 3). The anomaly is by no means a convincing target, but represents an untested bedrock conductor which can be tested with a relatively short drill hole. The following drill hole has been designed to test all modelled conductors. It is recommended as medium priority.

Target: G34

Collar: 317475E, 7599750N (AGD84/AMG53), or approximately 317605E, 7599920N in GDA94/MGA53

Azimuth: 270deg (west)

Dip: -55deg

End of hole: approx 200m

G10 was identified as a medium priority, weak mid-late time GEOTEM anomaly but with some similarities and relatively close proximity to the high priority BGC1(G9) target. Once again the ground EM was successful in confirming the presence of an anomaly. In this case, the response detected was only attributable to a very weak conductor. However, the size of the body was relatively large (400x400m) and shallow. The data was modelled with a flat-dipping conductor and the following drill hole has been recommended as low-medium priority.

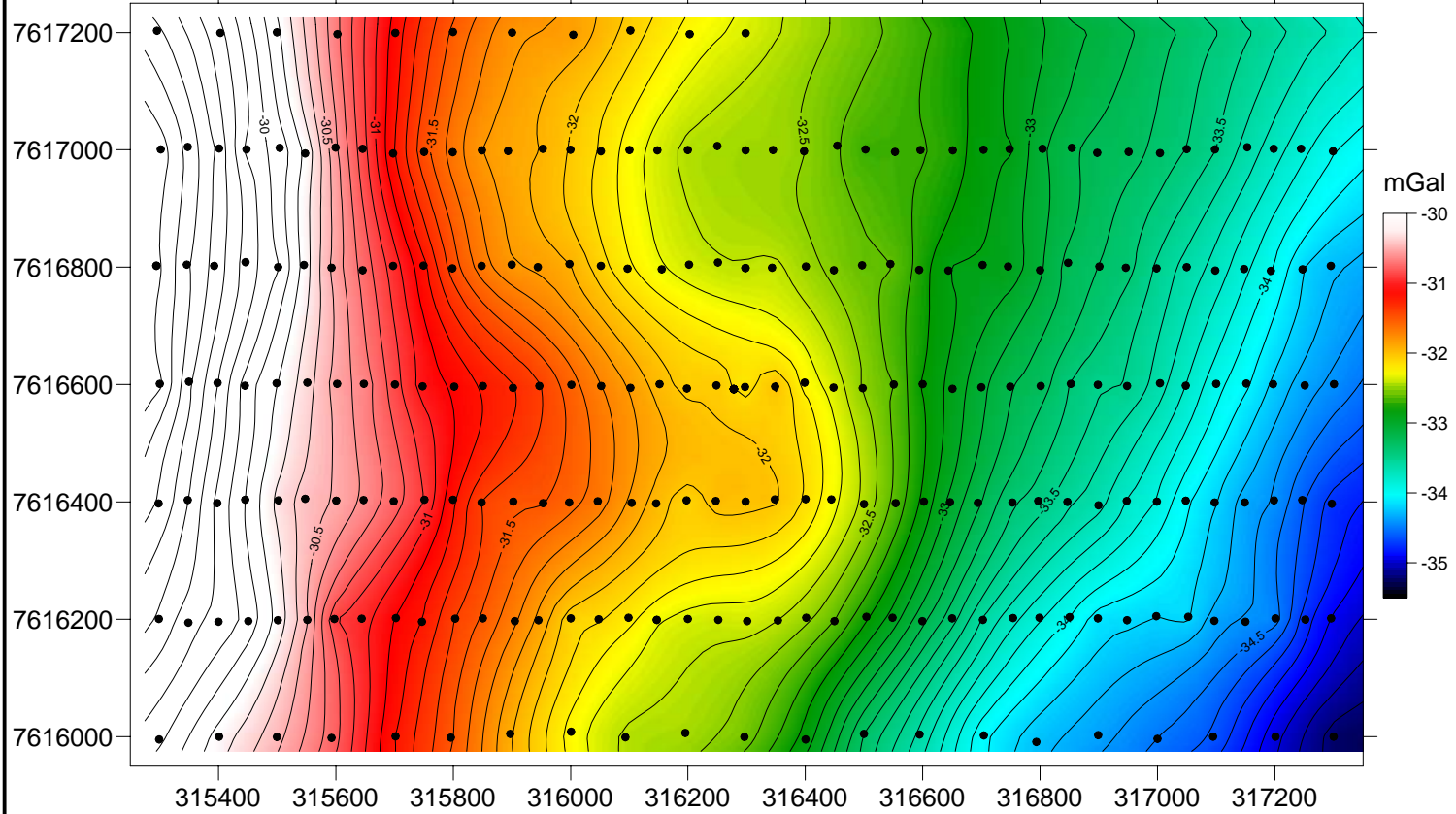
Target: G10

Collar: 315000E, 7621300N (AGD84/AMG53), or approximately 315130E, 7621470N in GDA94/MGA53

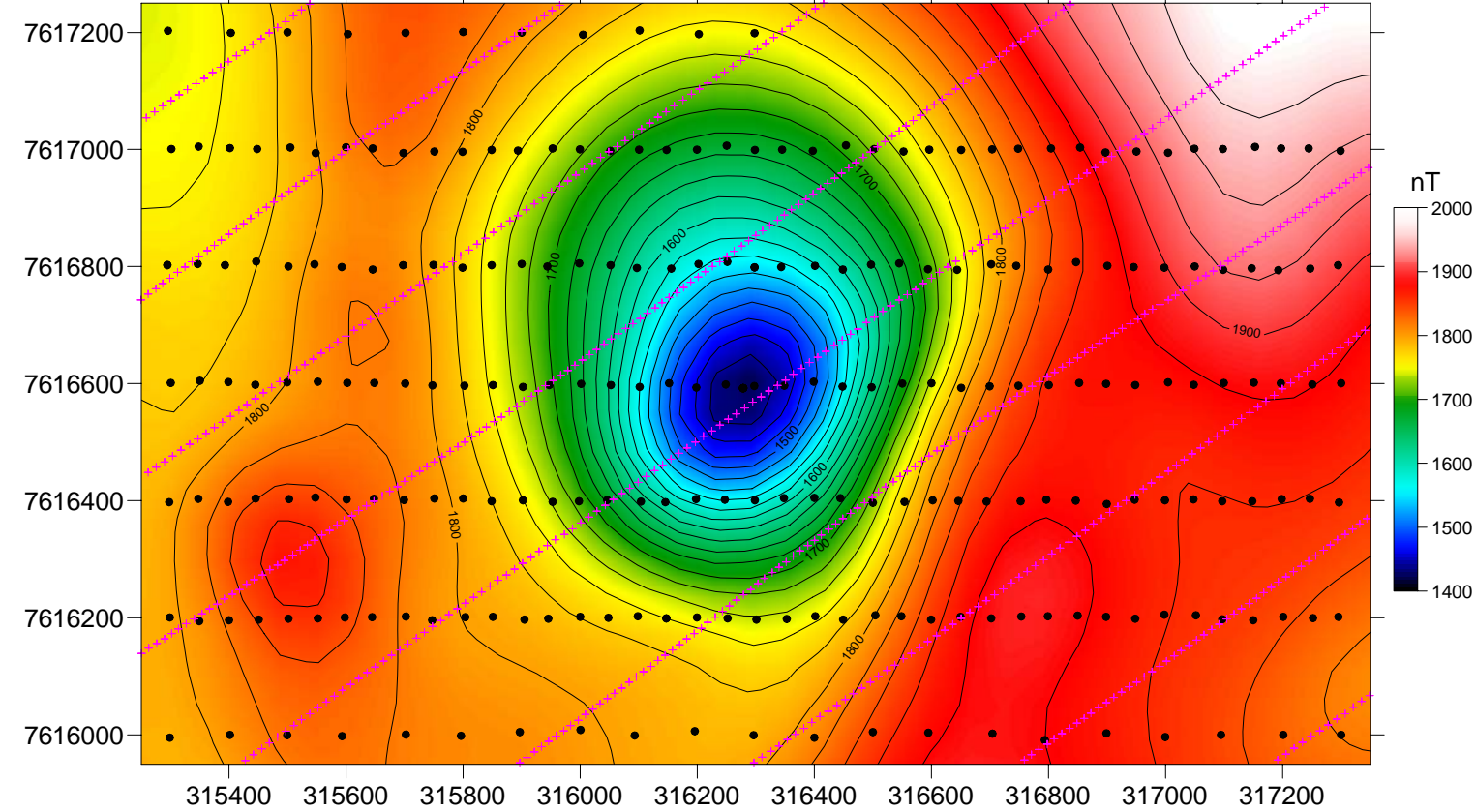
Vertical Hole

End of hole: approx 150m

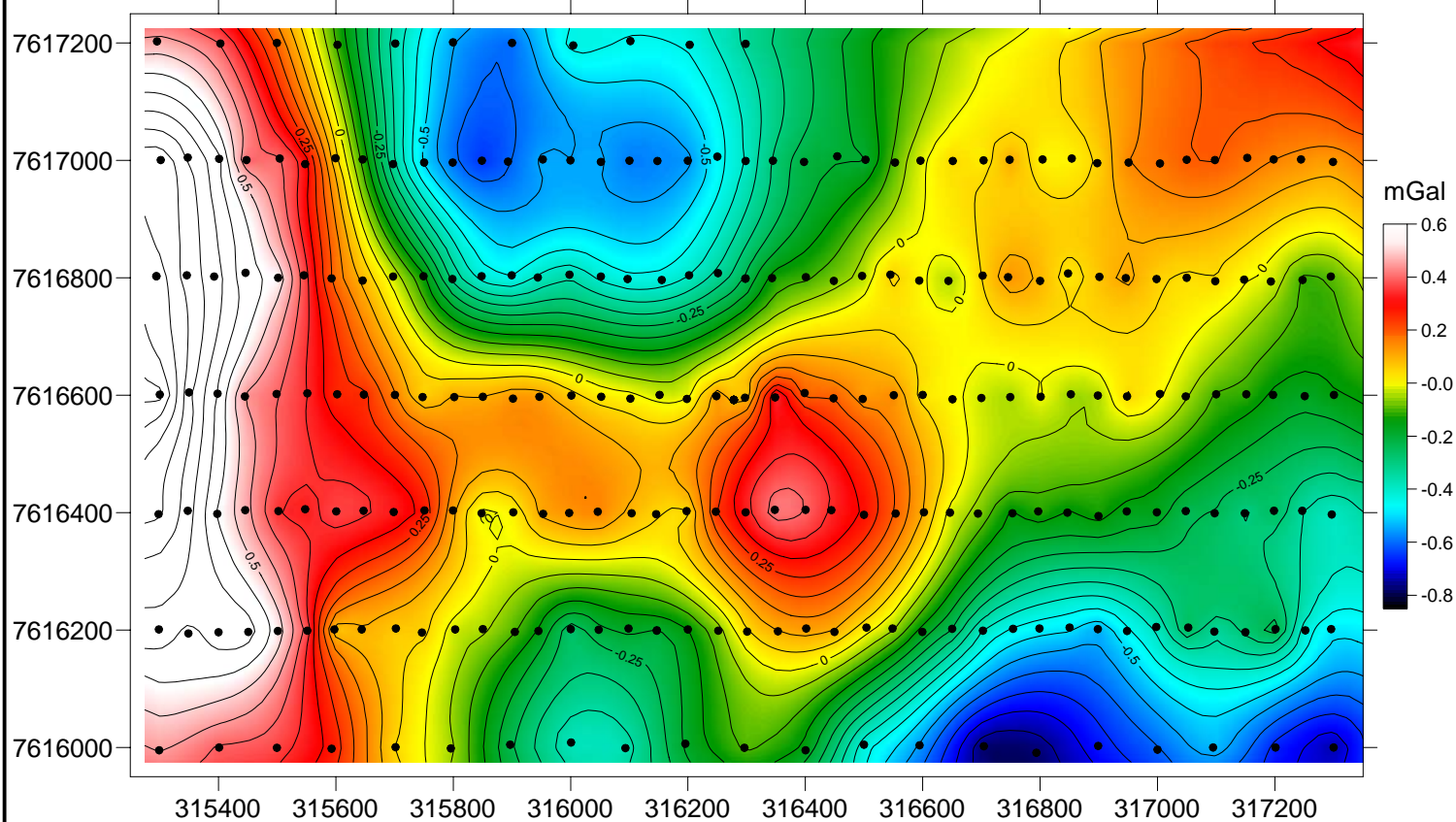
Bouguer Gravity



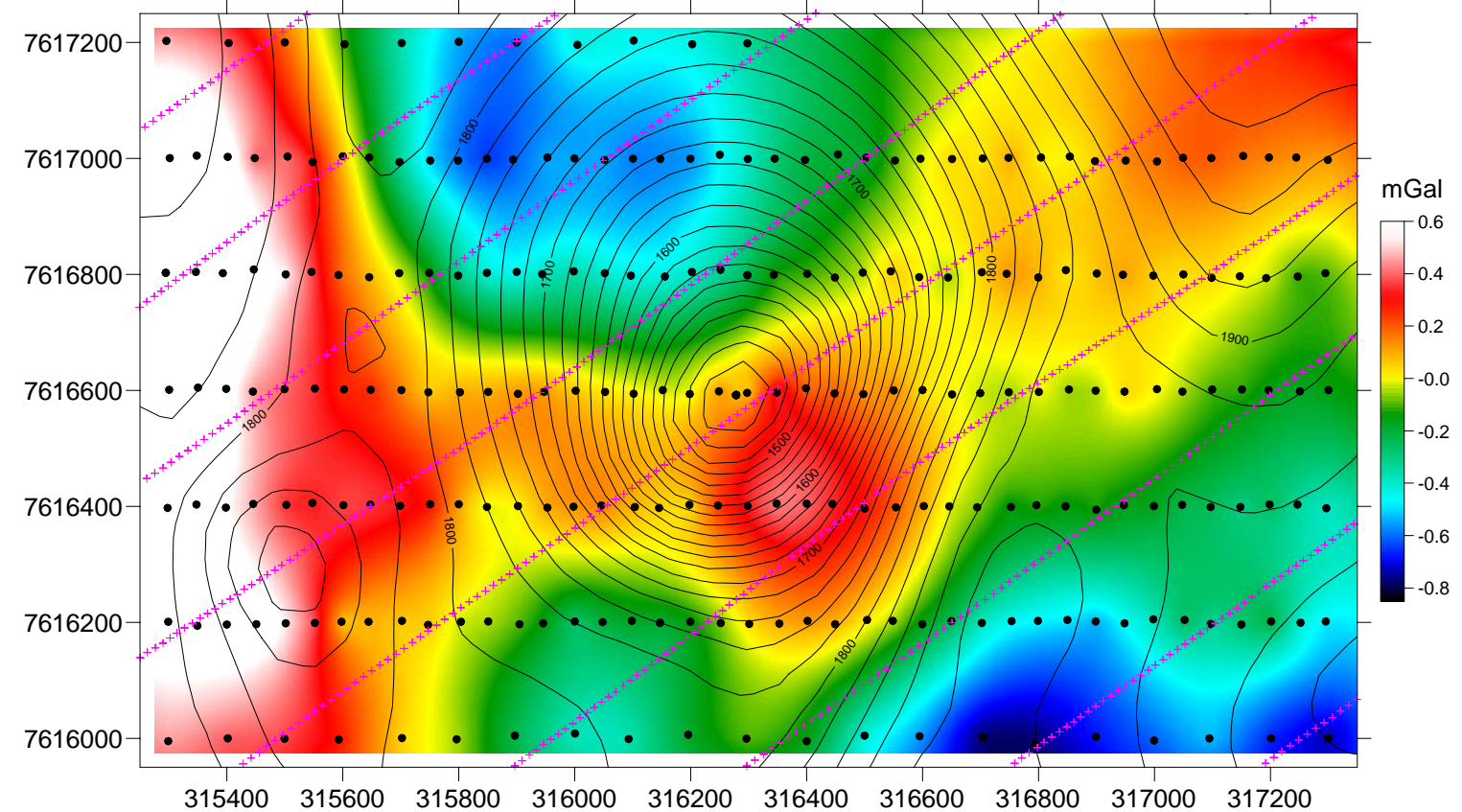
Total Magnetic Intensity



Residual Gravity (planar regional removal)



Residual Gravity + TMI Contours

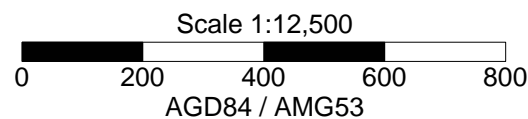


Gravity Survey Details

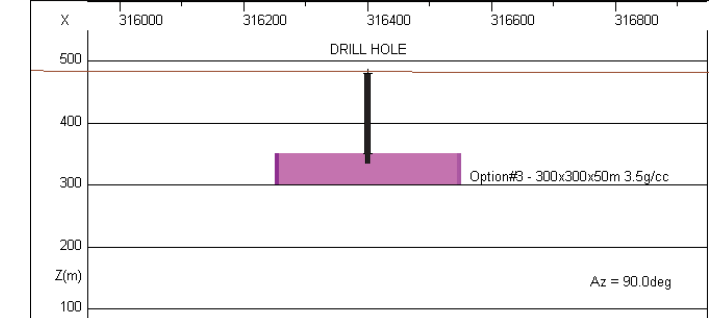
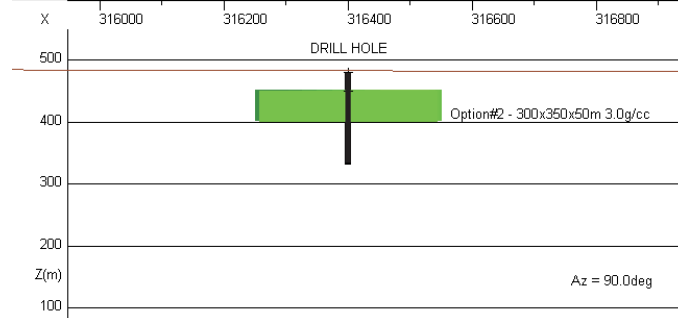
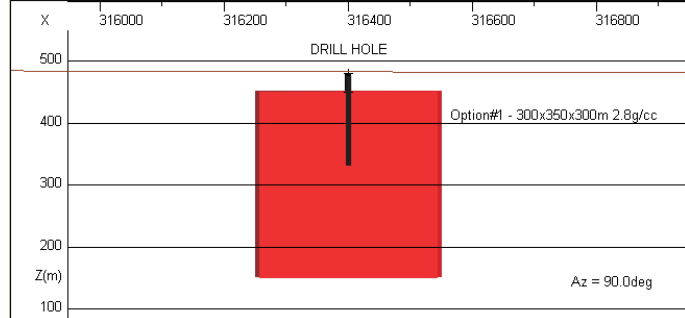
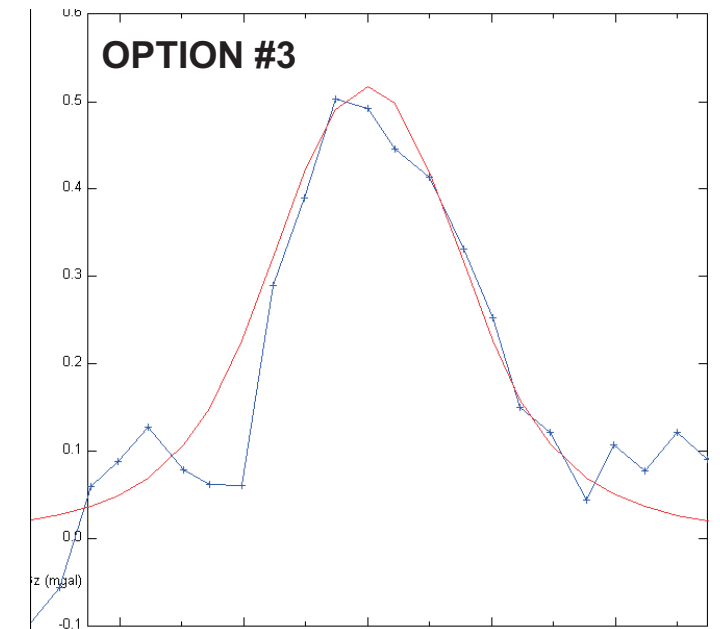
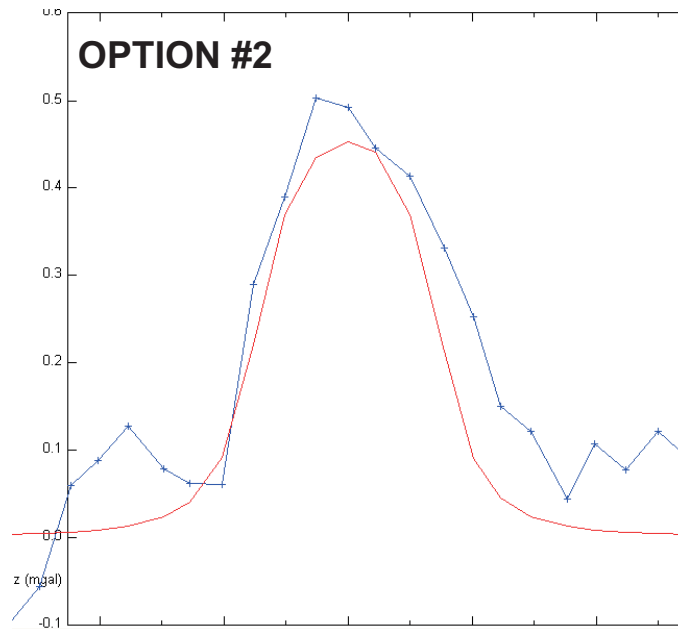
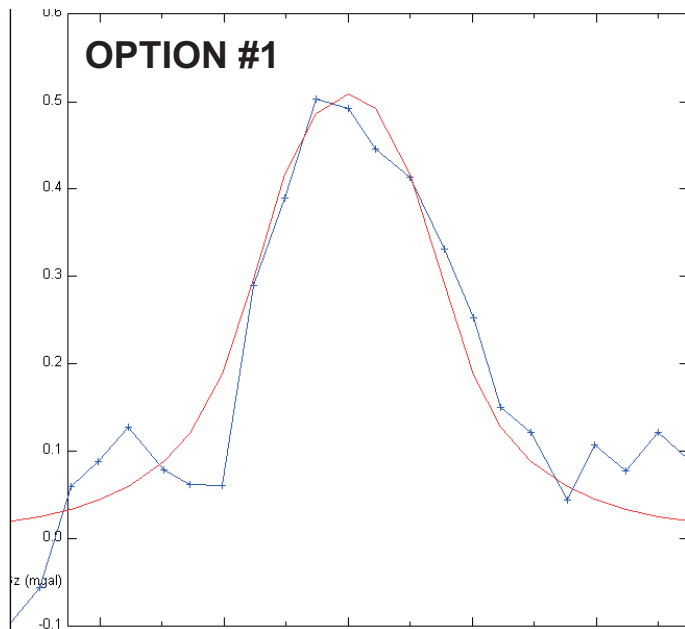
Contractor - Haines
Date - August 2010
Station Spacing - 200x50m

Aeromagnetic Survey Details

Contractor - Fugro
Date - January 2003
System - GEOTEM
Line Spacing - 250m
Sensor Height - 65m



TNG Limited - Mt Peake Project, NT
Comparison of Detailed Gravity Data
over M1 Aeromagnetic Anomaly



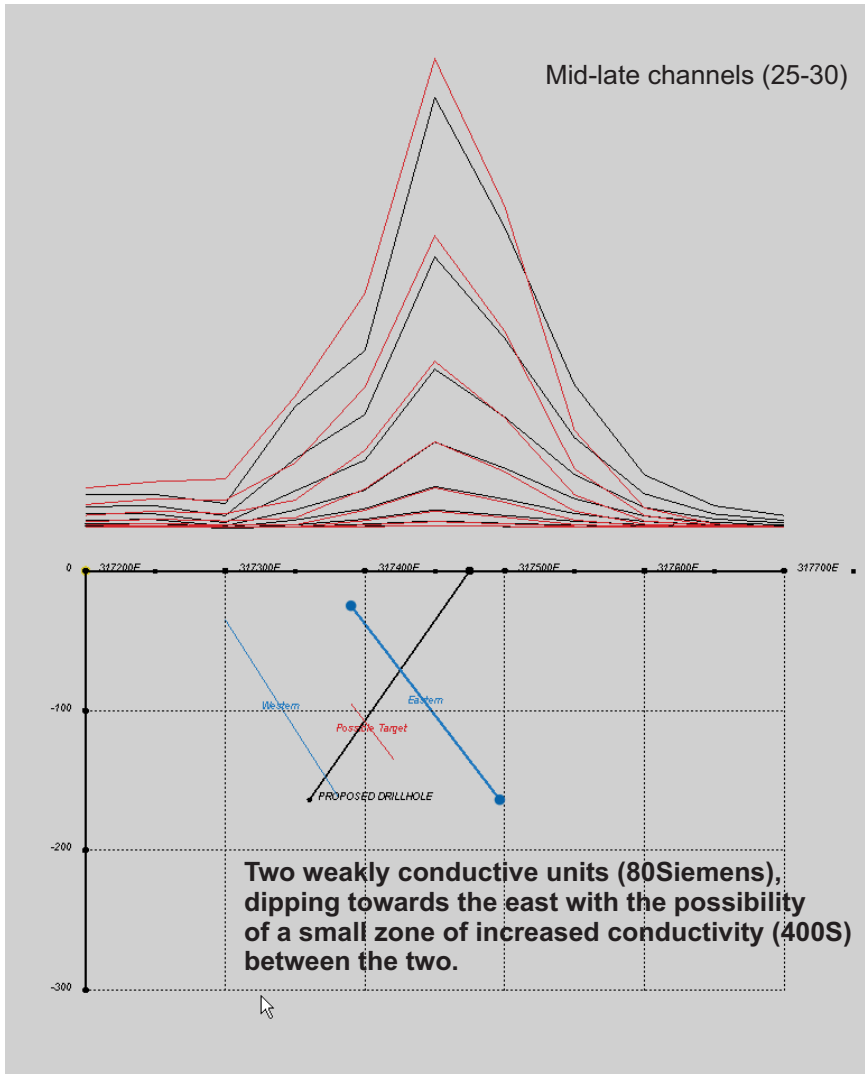
Starting model - relatively low density, relatively large source.
Possible Scenario - Pipe, Volcanic 'plug' / Gabbro.

Density increased, depth extent reduced.
Possible Scenario - higher density 'cap' of pipe.

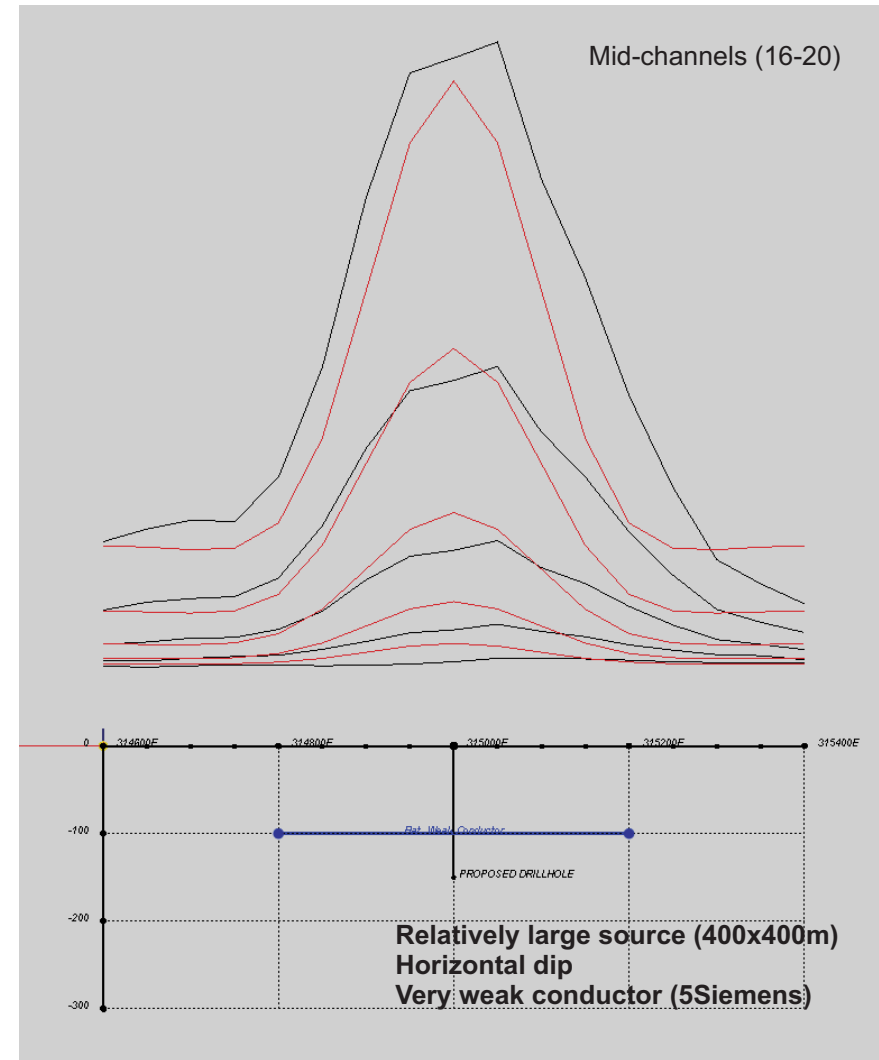
Density increased further, deeper source.
Test to determine maximum depth of potential source.

TNG Limited - Mt Peake Project, NT
Detailed Gravity Survey over M1 Target (Magnetic Low)
Various Model Options for Section 7616400N
AGD84 / AMG53 Coordinates

Figure 2



Line 7599750N - Target G34



Line 7621300N - Target G10

TNG Limited - Mt Peake Project, NT
Ground EM Survey Results over GEOTEM Targets G10 & G34
EW Cross Sections and EM Profiles (Modelled Response in Red)
AGD84 / AMG53 Coordinates

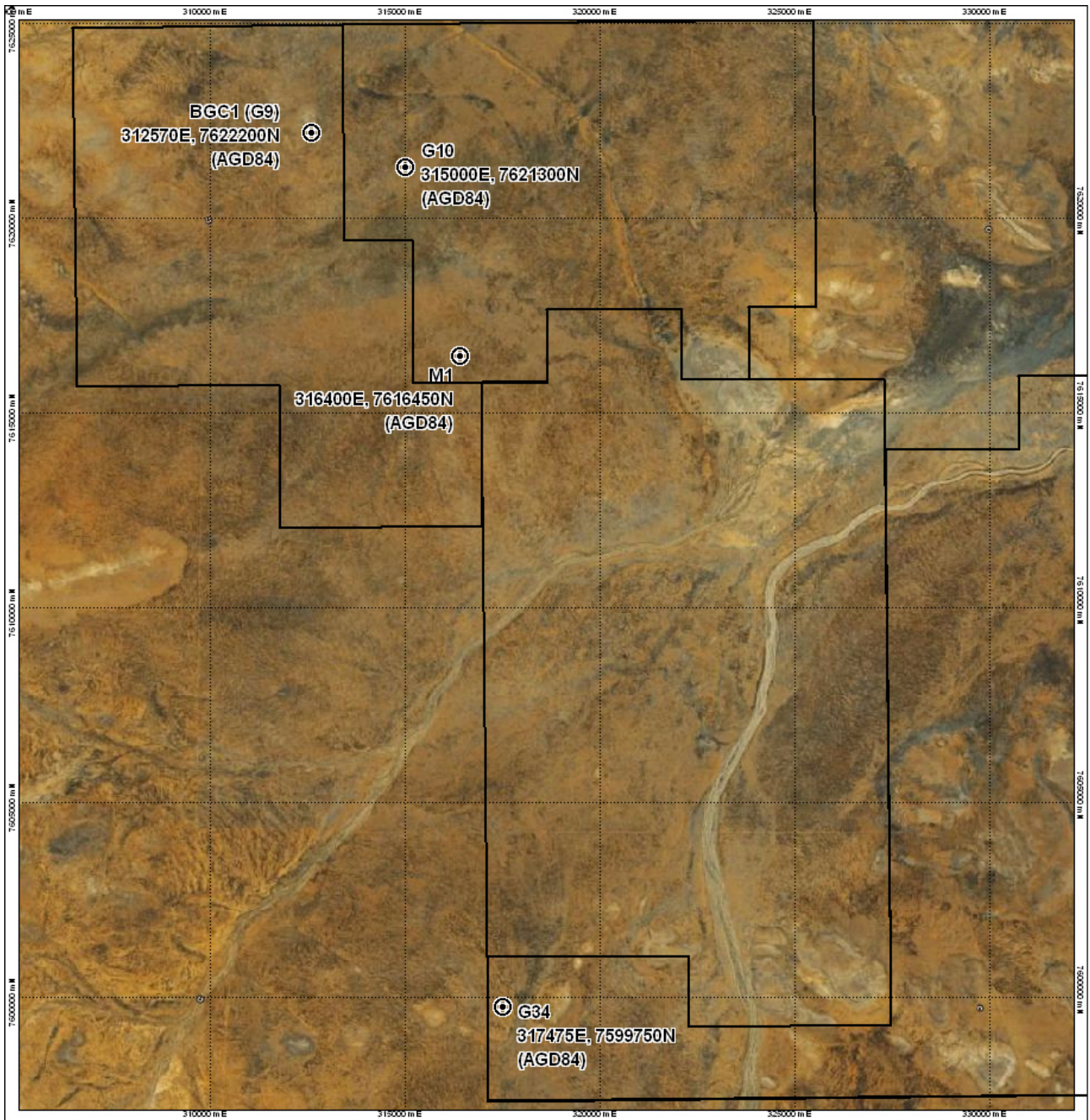


Figure 4 – Summary of drill holes recommended from SGC report #2070 and this memo.