Lottah Mining Pty Ltd

Annual Report

on

Exploration Licence 22/2014

For the period

04/03/2015 – 04/03/2016

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1. Foreword

1.1 Function of the Annual Report

This Annual Report has been prepared as a public document for submission to Mineral Resources Tasmania (MRT). The report provides a summary of the exploration activities undertaken by Lottah Mining Pty Ltd within Exploration Licence EL22/2014 during April 2015 - April 2016.

1.2 Role in the Regulation Process

This document fulfils the role of an Annual Report on EL 22/2014 for the period April 2015 – April 2016, as required under Section 28 of the *Mineral Resources Development Act 1995*.

1.3 Datum

Geocentric Datum MGA94, zone 55 has been used for this report unless otherwise stated.

Distribution

1 x Mineral Resources Tasmania

1 x Lottah Mining Pty Ltd – Sydney Office

1 x Lottah Mining Pty Ltd – Wivenhoe Field Office

EXECUTIVE SUMMARY

This report covers exploration activities completed on EL22/2014 – South Riana. The EL forms part of a tenement package prospective for Magnetite and Tungsten mineralisation as well as the potential for various industrial minerals around the House Top Granite in NW Tasmania.

Exploration completed on the South Riana EL over the last 12 months includes compilation of data relating to reconnaissance, geological mapping/survey, historic exploration, magnetic geophysical modelling and the commencement of a feasibility study.

CONTENTS

FIGURES & TABLES

2 INTRODUCTION

The Blythe River Iron Project (BRIP) consists of a number of small to medium size magnetite skarn deposits located in NW Tasmania. Exploration is focused on resource delineation of semi massive to massive magnetite deposits to provide a resource base for a magnetite mining operation for the iron ore market.

EL22/2014 is 103 square kilometres and located around the South Riana area. Previous work on EL22/2014 identified the potential for favourable geological conditions for the formation of a magnetite skarn deposit as well as other industrial minerals.

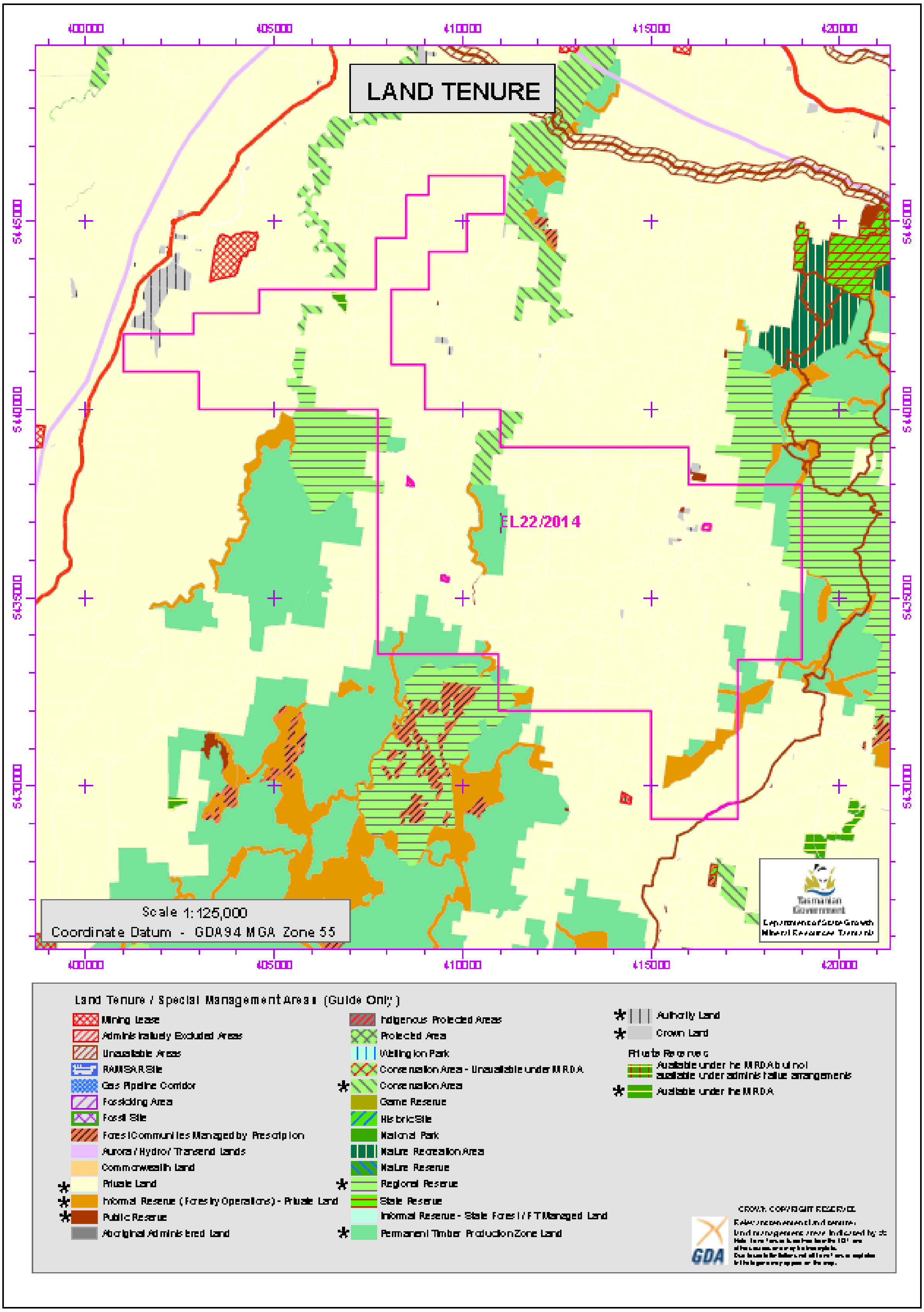

Figure 1. EL22/2014 Land Tenure.

3 REGIONAL GEOLOGY

The Blythe River Iron Project is located on the western margin of the Dial Range Trough and is underlain by lithologies of the Late Proterozoic Oonah Formation, Owen Group Siliciclastics, Gordon Group Limestone, Devonian Granites and Tertiary Basalt (Figure 1). The Dial Trough is a structurally interesting basin that includes a possible Northern Extension of the Hellyer Fault, and significant basin bounding faults on the western and eastern sides. The Devonian post orogenic Housetop Granite dominates the geology to the south of the project area and is considered to underlie much of the southern Dial Trough. The Dial Trough has been poorly mapped and stratigraphic correlations are uncertain for many units.

Oonah Formation

The oldest rocks in the district are the Proterozoic Oonah formation, consisting of polydeformed quartzwacke, siltstone and pelite with lesser dolerite intrusives. These are overlain by a sequence of pelite-carbonate with minor mafic volcanics and conglomerate. This association is host to replacement deposits at Mt Bischoff and near Zeehan and consequently represents a potential host for similar styles of skarn mineralisation.

Mt Read Volcanics

Mt Read Volcanic associations have been correlated with the felsic volcaniclastics of the Western Volcano-sedimentary sequence and the Tyndall Group quartz-feldspar phyric volcaniclastics.

Owen Group

The Late Cambrian to Ordovician Owen Group overlies the Mt Read Volcanics and is comprised dominantly of siliciclastic conglomerate and sandstone. Locally volcanic derived conglomerates are associated with basal members. The Moina Sandstone, comprised of coarse to fine siliciclastic sandstone with minor intercalated conglomerate is the uppermost siliciclastic unit of the Owen Group and has a gradational contact with the overlying Gordon Group.

Gordon Group Limestone

Conformably overlying the Owen Group is the Gordon Group limestone and dolomite sequence which is the host of the Kara district magnetite skarns. The stratigraphic thickness of the limestone is regionally variable ranging between 50-1000m.

Housetop Granite

The Housetop granite outcrops in much of the Blythe River Prospect and is believed to extend below much of the area (Leaman, 1993). Leaman concludes that the Housetop granite is anomalously dense and highly magnetic, which may explain the abundance of iron metasomatism in the district. The granite is responsible for massive Magnetite-SnWO3 mineralisation of the Kara District. The association of Tasmanian Devonian granites with Magnetite, Sn-WO3, Pb-Zn-Ag and Au mineralisation is well documented.

Tertiary Basalt

Basaltic flows are widespread throughout the Blythe River Iron Project area, flooding Tertiary palaeo-topographic lows. The basalts vary widely in thickness and frequently have a high magnetic susceptibility creating difficulties for magnetite exploration below basaltic cover. Recent resource and exploration drilling at the Kara Mine indicates that the magnetite skarn extends below basalt cover.

3.1 LOCAL GEOLOGY

The geology of EL22/2014 is dominated by thick Tertiary basalt flows and Devonian granite, with the Ordovician-Oonah formation boundary located at the East West corner of the tenement. From early inspection it appears that the largest magnetite deposit follows a north-west strike parallel to Adams Creek. Smaller deposits also appear to follow this north-west strike.

4 WORK COMPLETED

Work completed on EL22/2014 included compilation of previous data, reconnaissance and commencement of geological surveys/mapping. Early in the 2015 Lottah Mining contacted GHD to undertake a feasibility study of all possible iron deposits across their nine tenements and geophysical modelling on areas of interest. The feasibility study is still ongoing. Magnetic Geophysical modelling results for EL22/2014 are listed below. The full report is located in the Appendices.

Area	Min. Easting (m)	Max. Easting (m)	Min. Northing (m)	Max. Northing (m)
Riana	413798	416293	5438107	5442297

Table 1. Riana 3D inversion modelling area extents.

Area	Volume
Riana	85 million cubic metres

Table 2. Approximate volume of causative magnetic anomalies.

The magnetic susceptibility subsurface models displayed in Figure 2 display iso-surfaces constructed with a lower cut off of 0.05 SI. An elongated near surface body with elevated magnetic susceptibility value is observed in the north of the modelling area. This body trends to the north-west and is relatively shallow in depth. A number of smaller satellite bodies are present in close proximity to the body. A deeper body is imaged to the south ((Anderson, 2015).

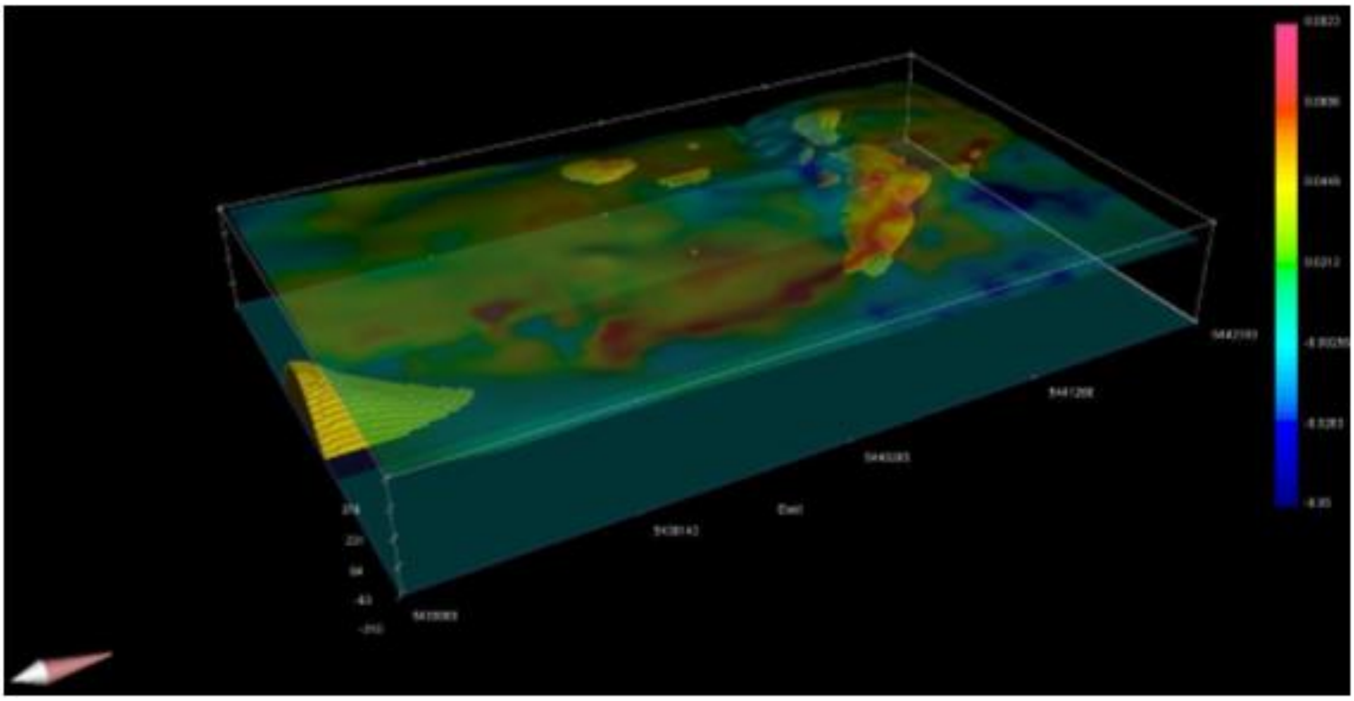

Figure 2. Subsurface model produced from magnetic data in the Riana Area, lower cut off 0.0025 SI (south-eastern aspect)

5 DISCUSSION

The cylindrical shaped magnetic body in the near surface of the Riana model trends to the north-west running parallel with Adams Creek. High magnetic values are observed in regional data extending to the south of this body, but no subsurface magnetic body was imaged through the modelling process. Smaller satellite bodies are observed to the north and south of the main body, the largest of which is positioned to the north-west. A deep body is observed in the south of the model that coincides with outcropping House Top Granite to the south of the Riana modelling area (Anderson, 2015).

Modelling results indicate the presence of an elongated near surface distribution of magnetic material. Further field mapping in the area is recommended to evaluate whether drilling any of these anomalies is warranted (Anderson, 2015).

6 PROPOSED WORK PROGRAM

Proposed work for EL22/2014 in the next year will consist of geological mapping, ground reconnaissance and potential geophysics surveys. Geophysics surveys may include detailed gravity and/or seismic surveys.

7 EXPENDITURE

2015	Q1	$22,000.00
	Q2	$2,500.00
	Q3	$392.00
	Q4	$4,539.00

Table 3. Table of Expenditure on EL22/2014.

A total of $29,431.00 was spent on EL22/2014 for the year.

The proposed work program for 2016 - 2017 includes: reconnaissance, geological ground mapping and the potential for geophysical surveys. Proposed expenditure for the 2016-2017 year is $90,569.

8 ENVIRONMENTAL

No Rehabilitation required.

9 APPENDICIES

Lottah Mining Pty Ltd

Potential Field Geophysical Modelling
Processing and Modelling Report

February 2015

WATER | ENERGY & RESOURCES | ENVIRONMENT | PROPERTY & BUILDINGS | TRANSPORTATION

Table of contents

Table index

Figure index

1. Introduction

1.1 Background

Lottah Mining Pty. Ltd. (LMPL) engaged GHD to perform geophysical modelling of recently acquired magnetic potential field data within set areas of interest in northern Tasmania. The four areas to be modelled are displayed in Figure 1, and are referred to as Rogetta, Cuprona, Camena and Riana throughout this report.

1.2 Purpose of this report

The purpose of this report is to provide LMPL with details and results of processing and modelling conducted by GHD. Revised magnetic susceptibility models are produced for the Rogetta and Cuprona areas and new models developed for the Camena and Riana areas. Deliverables from magnetic potential field modelling are:

- Digital ERMapper grids of elevation and magnetic data used for modelling.
- Isometric view maps of the geological models derived from geophysical modelling.
- Digital version of geological models derived from geophysical modelling suitable for import into Micromine.
- Report detailing methodology, a discussion of results obtained and any recommendations for additional work.

Subsurface models of the subject areas produced will provide a mesh of magnetic susceptibility values that can aid resource estimation and future exploration targeting.

1.3 Scope and limitations

This report: has been prepared by GHD for LMPL and may only be used and relied on by LMPL for the purpose agreed between GHD and the LMPL as set out in section 1.2 of this report.

GHD otherwise disclaims responsibility to any person other than LMPL arising in connection with this report. The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report (Section 1.4). GHD disclaims liability arising from any of the assumptions being incorrect.

GHD has prepared this report on the basis of information provided by LMPL and others who provided information to GHD (including Government authorities), which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.

1.4 Assumptions

The following assumptions have been relied upon in preparing this report;

- That potential field magnetic and gravity data provided by LMPL is accurate in value and is correctly geo-referenced.

- That the potential field and elevation data provided by Department of State Growth, Mineral Resources Tasmania (MRT) and Geoscience Australia (GA) is accurate in value and correctly geo-referenced.
- That petrophysical measurements of drill core and chip samples provided by LMPL have been accurately logged and are reflective of the indicated lithologies.
- That petrophysical data of drill core obtained from MRT and GA has been accurately logged and is reflective of the indicated lithologies.

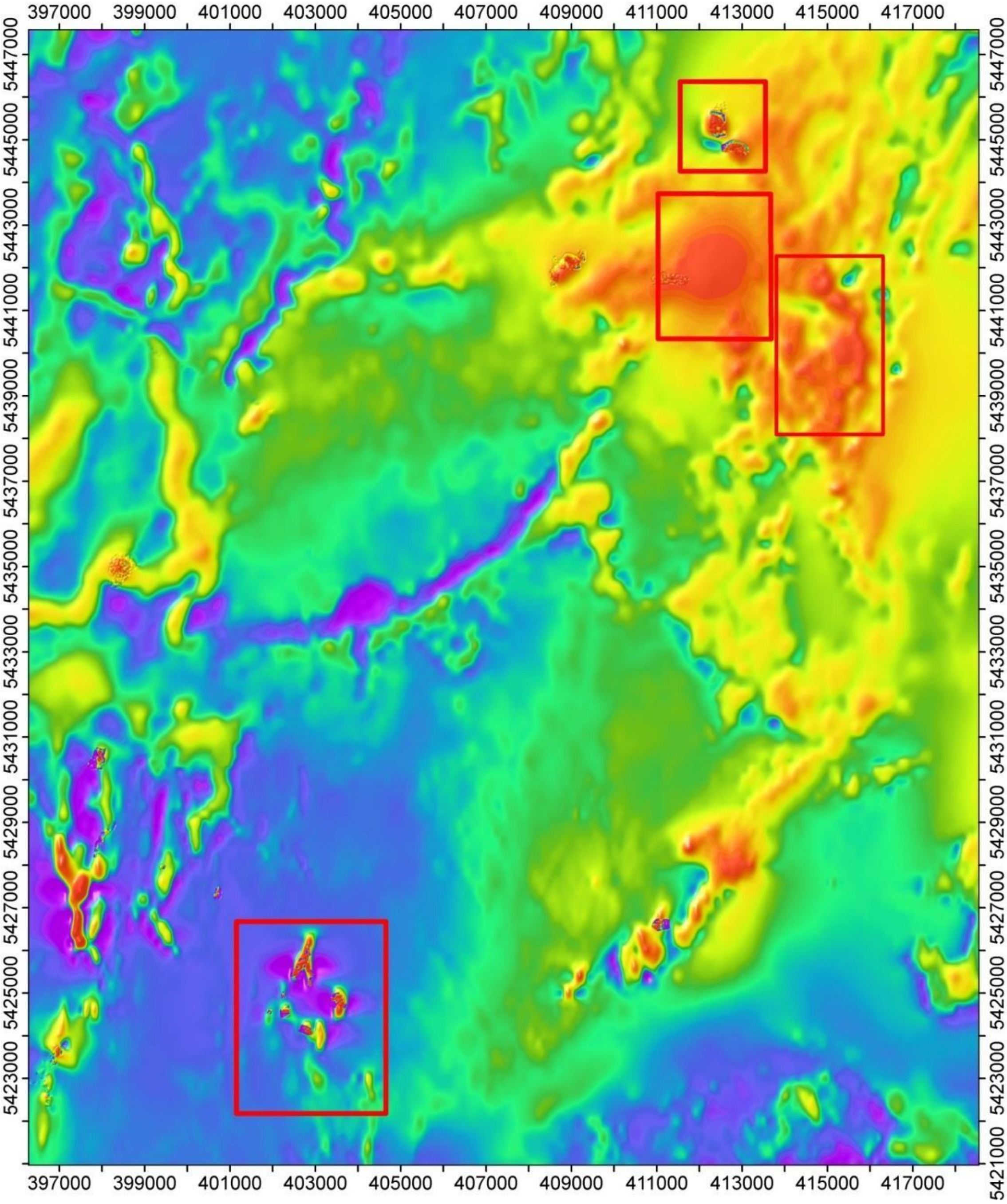

Figure 1 The four areas to undergo unconstrained 3D inverse modelling of potential field magnetic data.

2. Data Preparation

2.1 Data Sources

The recently acquired magnetic data flown by Thomson Aviation and regional magnetic and elevation datasets were utilised in the modelling process. Regional datasets utilised include:

2.1.1 Elevation Data

- MRTASP825.ers (regional dataset, MRT)
- MRTASP823.ers (regional dataset, MRT)
- LiDAR area A, raw data (local dataset, LMPL) • LiDAR area B, raw data (local dataset, LMPL)

2.1.2 Magnetic Data

- Area_B_MAG.ers (NW Tasmania Survey 2001, regional dataset, MRT)
- TMI.ers (West Tasmania Survey 2001, regional dataset, MRT)

2.2 Data Processing and Grid Creation

Data preparation included the processing of the collected elevation and magnetic data into a form suitable for standalone interpretation and modelling. The Geocentric Datum of Australia 94 (GDA94) and the Map Grid of Australia (MGA) projection for Zone 55 are used throughout this report. Heights are all specified to Australian Height Datum (AHD). All datasets using alternate datums and/or projections were transformed prior to further processing.

The recently acquired magnetic data was combined with regional datasets. The data was then gridded with the Surfer software package utilising a Kriging interpolation algorithm and a cell spacing of 5 m. Areas of the created grids that lay outside the range of observations were blanked or removed. The following grids were created by this process;

1. Digital elevation model (DEM, m)
2. Total Magnetic Intensity (TMI, nT)

The magnetic grid was further processed to create a residual dataset suitable for incorporating into the University of British Columbia (UBC) geophysical inversion software packages. The residual grid was produced by subtracting a magnetic field intensity of 61,467nT. This value is the calculated magnetic field intensity using the International Geomagnetic Reference Field (IGRF) at the time of the recently flown magnetic survey. The following grid was created by this process:

1. Residual magnetics (nT)

3. Inverse Modelling

3.1 Introduction to Inverse Modelling

In geophysics, inversion modelling is the process of predicting properties of the subsurface utilising observations made from a geophysical survey. The subsurface is discretised into mesh cells and each cell is given a physical property relating to the survey technique. By an iterative process the physical properties of the cells are altered until the calculated response from the modelled subsurface is acceptably consistent with the observed survey values, the difference between the calculated and observed values is termed ‘misfit’ or ‘error’. Figure 2 display a flow diagram depicting the general processing flow of the inversion process.

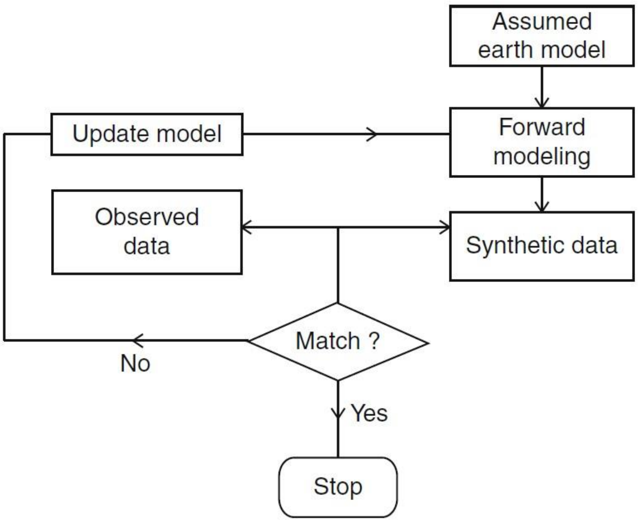

Figure 2 Flow diagram depicting the processing flow of the inversion process

3.1.1 Non-Uniqueness and Equivalent Sources

Key issues that must be taken into account when performing geophysical inverse modelling is non-uniqueness and the concept of equivalent sources. In summary, these issues describe how it is possible for the same calculated response to result from a variety of subsurface models, with differing distributions of the physical property in question.

This problem is known as non-uniqueness, and when assessing models produced from an inversion process it is important that the interpreter acknowledges and takes into account that the subsurface model produced is one of many models that could produce the calculated response. It is therefore a process of geological inference based upon other available information to assess the probability that the geophysical model produced is a valid representation of the subsurface geology and target.

Figure 3 displays an example of this effect of “equivalent sources”. Three subsurface bodies are shown of differing volumes and geometries. If the physical property (such as density) of these bodies increases with depth it is possible for all three of these bodies to produce an identical response at the surface from a geophysical survey (response indicated by the red line).

It is critical that this uncertainty is taken into consideration when assessing and interpreting results of geophysical inversion.

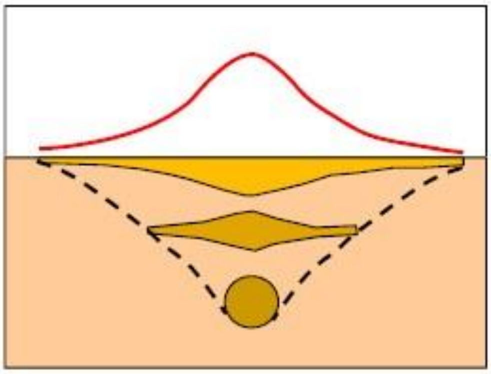

Figure 3 Example of equivalent sources. The same observed anomaly may result from a number of different subsurface bodies.

3.2 Data Extraction

Elevation and potential field data utilised for inverse modelling was extracted from the digital elevation model and residual magnetic grids detailed in section 2.2. Table 1 details the modelling extents of the Rogetta, Cuprona, Camena and Riana modelling areas and the limits of the XYZ Ascii data extracted from the gridded datasets.

Table 1 3D inversion modelling area extents

	Min. Easting (m)	Max. Easting (m)	Min. Northing (m)	Max. Northing (m)
Rogetta	401148	404643	5422157	5426697
Cuprona	411548	413543	5444257	5446352
Camena	410998	413693	5440307	5443747
Riana	413798	416293	5438107	5442297

3.3 Data Reformatting and Error Assignment

The XYZ ASCII data extracted in section 3.2 was imported into Microsoft Excel and reformatted in order to match UBC data formats. Standard deviation error was assigned to observation as constant value and as a percentage of the observed value, as per Table 2. The assignment of standard deviation error to observations ensures errors in observed values and/or spatial location of the observation do not halt or negatively impact the inversion process.

Table 2 Parameters utilised to assign standard deviation error

Data Type	Constant	Percentage (%) of observed value
Magnetics	5 nT	2.5

3.4 Model Discretisation

The subsurface beneath each of the modelling areas was discretised into a network of cells (Figure 4). Larger cells (padding) were added to the extremities of the subsurface models to mitigate edge effects. Table 3 details the number of potential field observations and the number of model cells that are utilised in the inversion process for each of the modelling areas. Observations are spaced at 5 or 10 m intervals (depending on the size of the dataset) and the smallest model cells of the mesh are 25 m long in the horizontal and vertical directions.

The time needed to complete an inversion is directly proportional to the number of observations and the number of cells in the model mesh (for each particular area). Hence, the computational time for the Rogetta area greatly exceeded that of the Cuprona, Camena and Riana areas.

Each cell of the mesh is assigned a magnetic susceptibility value, in SI units. Magnetic susceptibility is directly proportional to the concentration of magnetite. Areas with high magnetic susceptibility values are composed of elevated levels of magnetite.

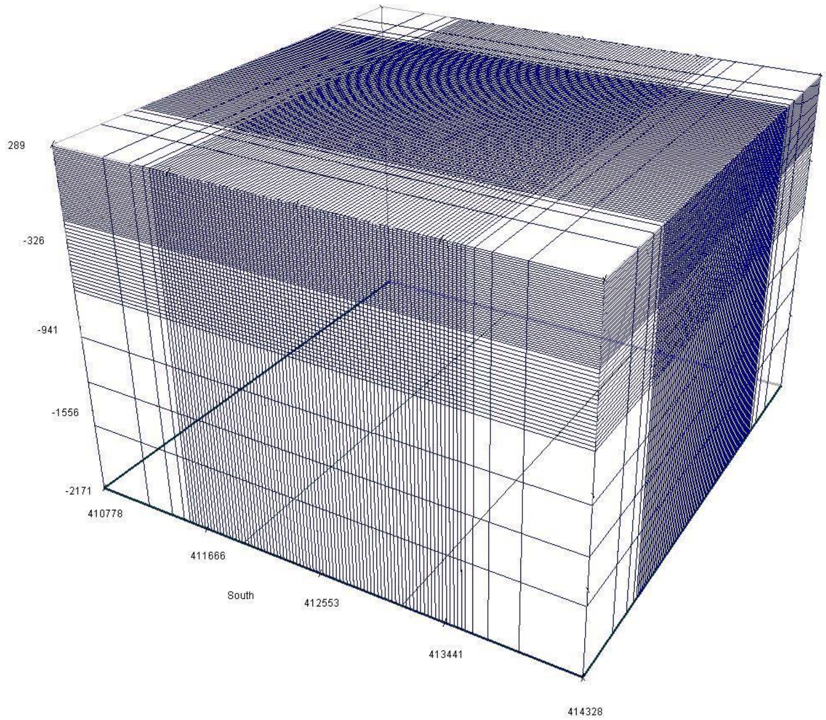

Figure 4 Discretised 3D subsurface model of the Cuprona area

Table 3 Number of observations and number of model cells utilised in the inversion process

Area	No. Observations	Min. Obs. Interval	No. Model Cells	Min. Cell Size
Rogetta	318500	10 m	3974400	25 m
Cuprona	168000	5 m	541440	25 m
Camena	186300	10 m	1833720	25 m
Riana	210000	10 m	2486660	25 m

3.5 Inversion Parameters

There are a number of inversion parameters that can be adjusted prior to conducting a modelling inversion. These parameters apply constraints to the resulting subsurface mode. The following parameters were systematically altered in a sensitivity analysis program prior to inversions being run to ensure the resulting subsurface model was geologically plausible. Sensitivity analysis runs included the following:

1. Depth weighing; controls the depth at which causative bodies are formed by allowing for the natural decay of potential fields.
2. Chifact; loosen or tightens the allowable misfit (error) between the observed survey values and the calculated values of the inversion process.
3. Smallness and smoothness; adjusts the allowable transition between the values of adjacent cell, and
4. Bounds; specifies the minimum and maximum value that a mesh cell may be assigned.

The inversion parameters ultimately selected to produce the final magnetic subsurface models for each of the modelling area are detailed in Table 4.

Table 4 Magnetic modelling parameters utilised for the inversion process

Area	Depth weighting factors (exp,z0)	Chifact	Smallness and Smoothness (As, Ae, An, Az)	Bounds (lower SI, upper SI)
Rogetta	1.5, 0.5	5	0.0001, 60, 60, 0.1	-0.1, 0.75
Cuprona	1.5, 0.25	2.5	0.0001, 50, 50, 1	-0.05, 0.75
Camena	1.5, 0.5	2.5	0.0001, 50, 50, 10	-0.05, 0.75
Riana	1.5, 0.25	2.5	0.0001, 50, 50, 1	-0.05, 0.75

4. Results

Magnetic subsurface models produced from inverse modelling are supplied in the accompanying digital media in UBC (.model), Mircomine (.dxf) and ER-Mapper (.ers) formats. The following figures display iso-surfaces of the subsurface models produced. Iso-surface are constructed by assigning upper and/or lower cut off limits that dictate which cells within a model will be displayed. The iso-surfaces displayed are intended to highlight zones of elevated magnetic susceptibility (elevated magnetite content).

4.1 Rogetta

The magnetic susceptibility subsurface model in Figure 5 displays iso-surfaces constructed with a lower cut off of 0.05 SI. Three significant high magnetic susceptibility bodies are observed, with the two larger bodies spatially correlating with Kara 2 North and Kara 2 East. It is noted that the western body (Button Grass) is smaller in size than modelling on the basis of regional magnetic data previously indicated.

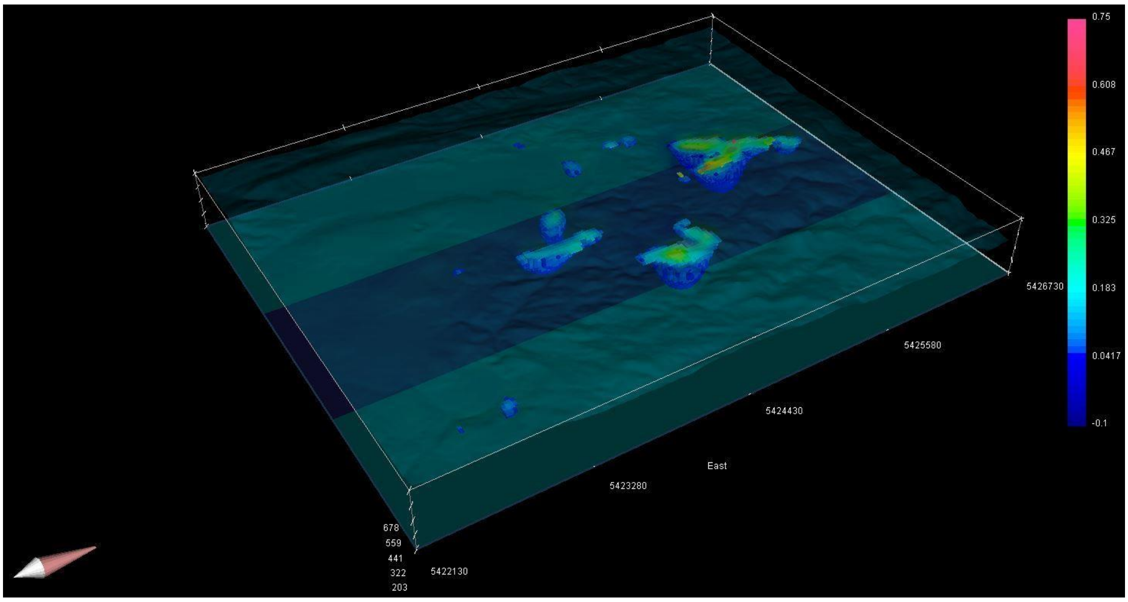

Figure 5 Subsurface model produced from magnetic data in the Rogetta Area, lower cut off 0.005 SI (south-eastern aspect)

4.2 Cuprona

The magnetic susceptibility subsurface model in Figure 6 displays iso-surfaces constructed with a lower cut off of 0.06 SI. The high magnetic susceptibility bodies identified in previous modelling for the Cuprona area are present although there has been a significant reduction in the depth extent of the bodies. The highest magnetic susceptibility values are observed in the upper region of the western body.

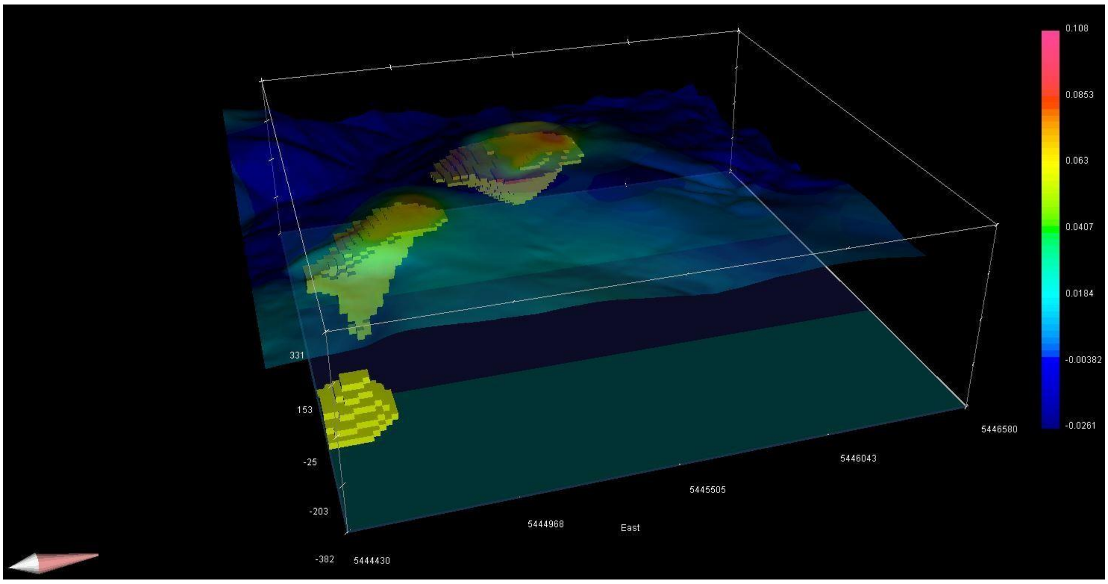

Figure 6 Subsurface model produced from magnetic data in the Cuprona Area, lower cut off 0.0.06 SI (south-eastern aspect)

4.3 Camena

The magnetic susceptibility subsurface model in Figure 7 displays an iso-surface constructed with a lower cut off of 0.05 SI. A large smooth body with high magnetic susceptibility values is observed at significant depth (>400 m) and correlates with a long wavelength anomaly observed in magnetic data for the region. These high values extend toward the south and appear to have spatial association with the House Top Granite to the south. No near surface bodies are identified. It should be noted that haematite generally has a low magnetic susceptibility value and is not imaged by the modelling of magnetic data.

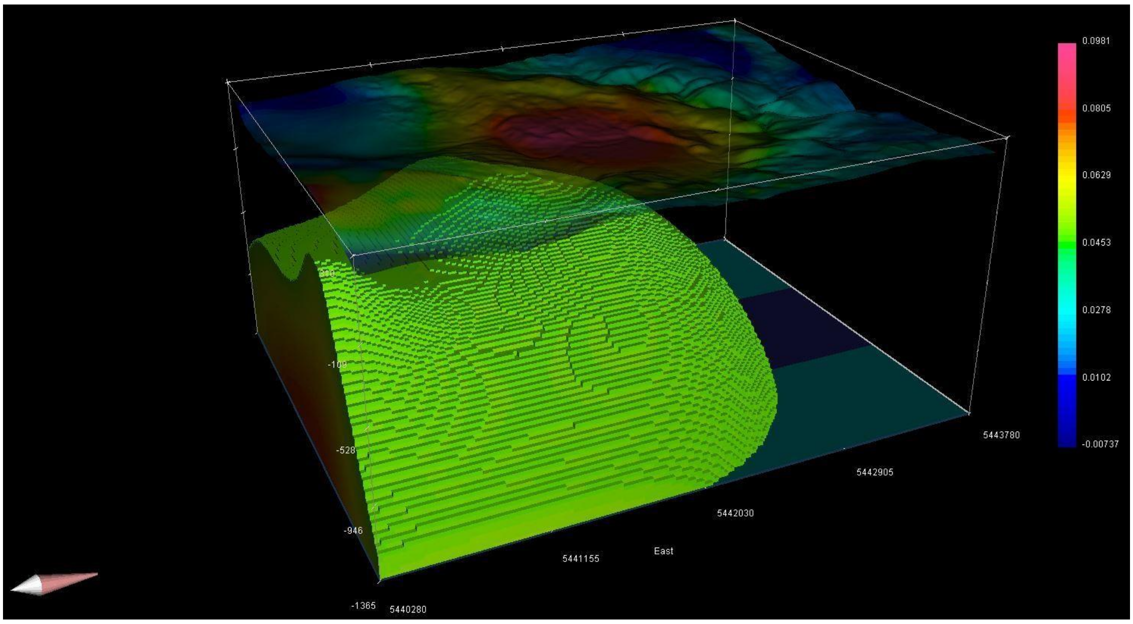

Figure 7 Subsurface model produced from magnetic data in the Camena area, lower cut off 0.06 DC (south-eastern aspect)

4.4 Riana

The magnetic susceptibility subsurface models displayed in Figure 8 display iso-surfaces constructed with a lower cut off of 0.05 SI. An elongated near surface body with elevated magnetic susceptibility value is observed in the north of the modelling area. This body trends to the north-west and is relatively shallow in depth. A number of smaller satellite bodies are present in close proximity to the body. A deeper body is imaged to the south.

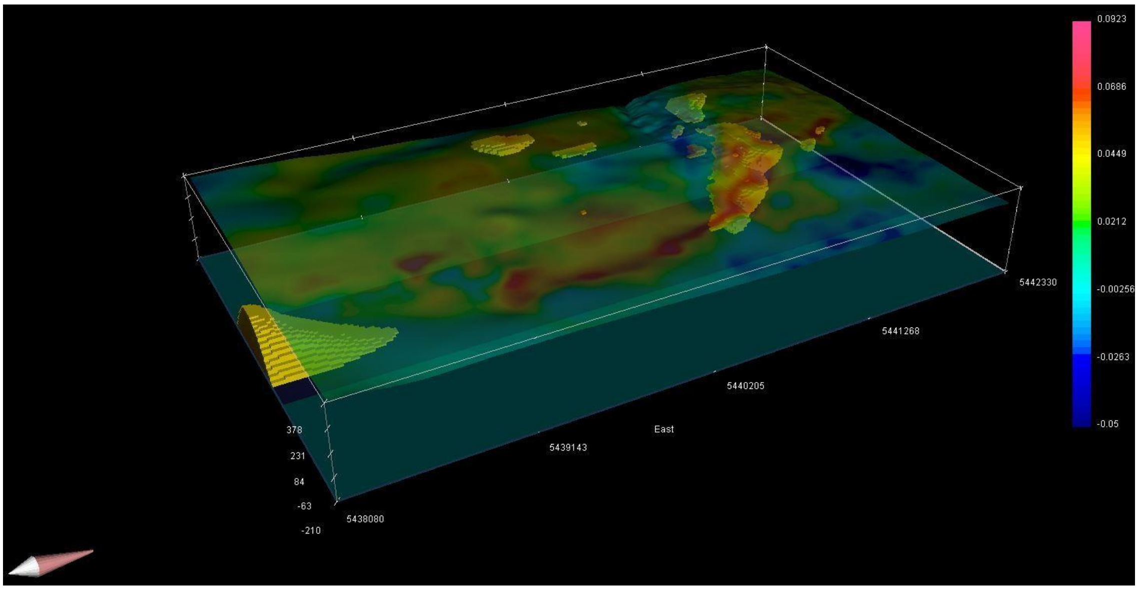

Figure 8 Subsurface model produced from magnetic data in the Rogetta Area, lower cut off 0.0025 SI (south-eastern aspect)

4.5 Anomaly Volumes

To assist in geological modelling and exploration program development, the relative size (in volume) of the causative magnetic anomalies are provided in Table 1. Volumes are based upon the magnetic susceptibility contrast thresholds specified in Section 4. Note that these volumes are provided only to assist in illustrating the overall geometry of the magnetic anomalies with respect to each other and should not be used to directly infer tonnage estimates. Volume calculations are based on all high magnetic susceptibility bodies imaged for each respective model. The volume of the deep body underlying the Camena area has not been calculated.

Table 5 Approximate volume of causative magnetic anomalies

	Volume
Rogetta	68 million cubic metres
Cuprona	42 million cubic metres
Riana	85 million cubic metres

5. Discussion and Recommendations

5.1 Discussion

The revised Rogetta area model indicates that Kara 2 North and Kara 2 East are the most promising magnetite targets in terms of volume. The revised model displays a significant decrease in the volume of the Button Grass body, and previously imaged connectivity between Button Grass and Kara 2 North appears to no longer exist. The highest magnetic susceptibility values are observed in the south-eastern extension of Kara 2 North and Kara 2 East.

The revised Cuprona area model indicates a significant decrease in the volume of magnetic susceptibility bodies. The western body is disk like in geometry and has highest magnetic susceptibilities in the near surface. The body no longer extends to significant depth due to improved constraint from the new survey; likewise depth to top of the body is significantly deeper than the original model. The eastern body is now imaged as two distinct bodies with a loss of connectivity at moderate depths.

No isolated magnetic bodies are observed in the near surface of the Camena magnetic susceptibility model. This indicates that a significant magnetite body near the surface is unlikely but does not rule out whether a haematite body could exist. The high magnetic susceptibility values at depth are likely a result of magnetite mineralisation relating to the House Top Granite. House Top Granite outcrops to the south of the Camena area and gravity lows observed in regional gravity data suggest that it also underlies the Camena area.

The cylindrical shaped magnetic body in the near surface of the Riana model trends to the north-west running parallel with Adams Creek. High magnetic values are observed in regional data extending to the south of this body, but no subsurface magnetic body was imaged through the modelling process. Smaller satellite bodies are observed to the north and south of the main body, the largest of which is positioned to the north-west. A deep body in observed in the south of the model that coincides with outcropping House Top Granite to the south of the Riana modelling area.

5.2 Summary

The recently acquired magnetic data proved to be highly beneficial in the inverse modelling process. Revised magnetic models for the Rogetta and Cuprona area show well defined subsurface bodies that will aid in future exploration efforts. A potential magnetite target(s) has been identified in the north of the Riana area. Magnetic data for the Cuprona area suggests deep magnetite mineralisation and the presence of House Top Granite. Given the right structural controls this is favourable to the formation of magnetite mineralisation.

5.3 Recommendations

The following section outlines recommendations in regards to providing greater geological and geophysical definition of magnetite and haematite mineralisation on LMPL tenements:

5.3.1 Commence drilling at Rogetta East and Rogetta South

On the basis of updated magnetic modelling for the Rogetta area, the Rogetta East (formerly Kara 2 East) and Rogetta South (Formerly Kara 2 North) appear to have the most significant volume of magnetite associated with them. Accordingly, it is recommended that exploration drilling effort be focussed upon these areas. The new results indicate a reduced magnetite body associated with the Button Grass deposit and as such, drilling on this body is of lowest priority.

5.3.2 Continue drilling at Cuprona West for hematite

New modelling results for Cuprona are largely consistent with recent drilling. A significant but highly variable thickness of basalt overlies the region. Modelling results indicate a disk-shaped body at reasonable depth beneath the basalt cover. Depth to bottom of the Cuprona bodies has decreased but still has poor constraint due to the high magnetic susceptibilities of the body itself and the overlying basalt.

Due to the thick cover of basalt over the top of these magnetic bodies, it is recommended that drilling effort instead be focused upon examining hematite resources on the northern valley wall of the Blythe river. A gravity survey is also planned to investigate the extent of hematite in this area.

5.3.3 Field mapping at Riana

Modelling results indicate the presence of an elongated near surface distribution of magnetic material. Further field mapping in the area is recommended to evaluate whether drilling any of these anomalies is warranted.

5.3.4 Perform structural analysis of geophysical data

GHD recommend that a structural lineament analysis of gravity and magnetic data be performed to provide better regional definition of major structural features associated with Cambrian and Ordovician host rocks. Limited structural measurements have been recorded due to the majority of the host sequences being situated beneath the Tertiary basaltic cover. Structural analysis should be carried out to assist in identifying:

- Fluid migration pathways.
- Location of host sequences, and
- Interpret shallowing of depth / presence of granitic intrusives.

It is recommended that structural analysis be performed most efficiently as a joint exercise between LMPL geologists and GHD geophysicists

5.3.5 Perform detailed 2D forward modelling and geologically constrained modelling on Rogetta South and Rogetta East

GHD recommend that 2D forward modelling using petrophysical constraints on profiles through the Rogetta ore bodies be conducted after more detailed data has been collected from gravity and ground potential field surveys. This modelling will facilitate improved definition of mineralisation and assist in guiding the drilling program on satellite bodies surrounding Rogetta North.

5.3.6 Perform geochemical analysis of haematite at Cuprona

As discussed in Section 5.1, GHD consider that valuable insight into the formation of haematite mineralisation, particularly at Cuprona be carried out. Specifically, geochemical analysis will assist in determining whether haematite at Cuprona is an oxidation product of weathering of the primary magnetite orebody, or whether the haematite represents primary mineralisation from haematite replacement processes which have been previously proposed.

5.3.7 Perform logistic regression on assay grade and susceptibility data (Rogetta East and Rogetta South)

As part of 5.3.5, GHD recommend that logistic regression be perform to establish an accurate relationship between magnetic susceptibility and magnetite grade. This will assist in inferring magnetic resources from geophysical modelling results and should reduce the required quantities of resource drilling and assay for Rogetta East and South.

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Document Status

Rev No.	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
0	M. Anderson	H. Tassell		N. Gunadasa		

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10 REFERENCES

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