



Tim Callaghan – Resource and Exploration Geology



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**BLYTHE RIVER PROJECT**

**ANNUAL REPORT**

**EL15/2006 CAMENA**

**NW TASMANIA**

**Prepared for: Forward Mining Limited**

**Tim Callaghan, May 2012**

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## **MAP CONVENTIONS**

Coordinates in this report and in digital data associated with this report are recorded as GDA94 Zone 55.

RL's in this report are MSL.



## **EXECUTIVE SUMMARY**

This report covers exploration activities completed on EL15/2006 Camena. The EL forms part of a tenement package prospective for magnetite and tungsten mineralisation around the House Top Granite in NW Tasmania.

Only limited reconnaissance field work was completed in 2012. The EL is covered by a thick sequence of Tertiary basalt flows. A low order gravity anomaly is associated with a large aeromagnetic high buried beneath the basalt cover. The coincident anomalies may represent buried iron rich mineralisation or be due to the thick basalt pile. Exploration will require a deep, expensive drilling program to test the anomaly which may be drilled in conjunction with resource drilling on EL18/2007. The target, although potentially of high quality (potential iron-oxide copper gold mineralisation) must be considered high risk with a low probability of success.

The project is behind on expenditure commitments while on a term of extension with tenure tenuous. The EL is unlikely to add to the medium term production for the Blythe River Iron Project and is difficult to justify drilling expenditure drawing resources away from developing the Kara No 2 deposits. Consequently the EL should be retained if possible for future development as the project progresses. The other alternative is to relinquish the EL.



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## 1 INTRODUCTION

EL15/2006 Camena is one of 6 current exploration licenses held by either Red River Resources Ltd (RVR) or Iron Mountain Ltd (IRM) and managed by Forward Mining Ltd (FWD). FWD currently has an option to purchase the tenements off RVR and IRM pending successful listing on the ASX. Tenement details are listed in Table 1.

| <b>EL</b> | <b>Name</b> | <b>Held By</b> | <b>Size</b>        | <b>Expiry</b> | <b>Comments</b>              |
|-----------|-------------|----------------|--------------------|---------------|------------------------------|
| EL6/2005  | Cuprona     | IRM            | 22km <sup>2</sup>  | 9/2011        | Extension Expires Sept 2012  |
| EL15/2006 | Camena      | IRM            | 30km <sup>2</sup>  | 6/2011        | Apply for Extension          |
| EL25/2009 | Highclere   | RVR            | 33km <sup>2</sup>  | 5/2015        | 3 years remaining            |
| EL35/2006 | Hampshire 1 | RVR            | 89km <sup>2</sup>  | 2/2012        | Extension Expires early 2013 |
| EL18/2007 | Hampshire 2 | RVR            | 103km <sup>2</sup> | 7/2012        | Expires mid 2012             |
| EL53/2007 | Mt Everett  | IRM            | 47km <sup>2</sup>  | 12/2012       | 1 year remaining             |

Permission to submit a combined annual report for all tenements in the Blythe Project was granted on 10<sup>th</sup> June 2009. The board of FWD decided to return to separate annual reporting for the tenements in early 2012. This report contains information on exploration activities completed on EL15/2006 which have been partially reported in the Combined Annual Report for the district submitted in November 2011 (Callaghan, 2011).

Five of the six tenements are near the end of the term of tenure and will require terms of extension and diligent commitment to work programs. The majority of the work completed over the last year was focused on EL18/2007 Hampshire 2 and EL25/2009 Highclere with only limited reconnaissance work completed on EL15/2006. A term of extension of 1 year was granted for EL15/2006 in May 2012.

The Blythe River Iron Project (BRIP) consists of a number of small to medium size magnetite skarn deposits located in NW Tasmania, approximately 30km south of Burnie (Figure 1 and 2). 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.



## 2 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 Husetop 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 poly-deformed 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 volcanoclastics of the Western Volcano-sedimentary sequence and the Tyndall Group quartz-feldspar phyrlic volcanoclastics.

### *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.

### *Husetop Granite*

The Husetop 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 Husetop 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-Sn-WO<sub>3</sub> mineralisation of the Kara District. The association of Tasmanian Devonian granites with Magnetite, Sn-WO<sub>3</sub>, 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.

## **2.1 LOCAL GEOLOGY**

The geology of EL15/2006 is dominated by thick Tertiary basalt flows which cover most of the earlier lithology. There is a minor Devonian granite outcrop to the south of the EL. A thin band of Ordovician Siliciclastics is located in the far west of the EL. The Ordovician-Oonah formation boundary located just west of the EL hosts a series of massive hematite-silica bodies.

Minor magnetite-hematite nodules are associated with the soils of the Tertiary basalts.

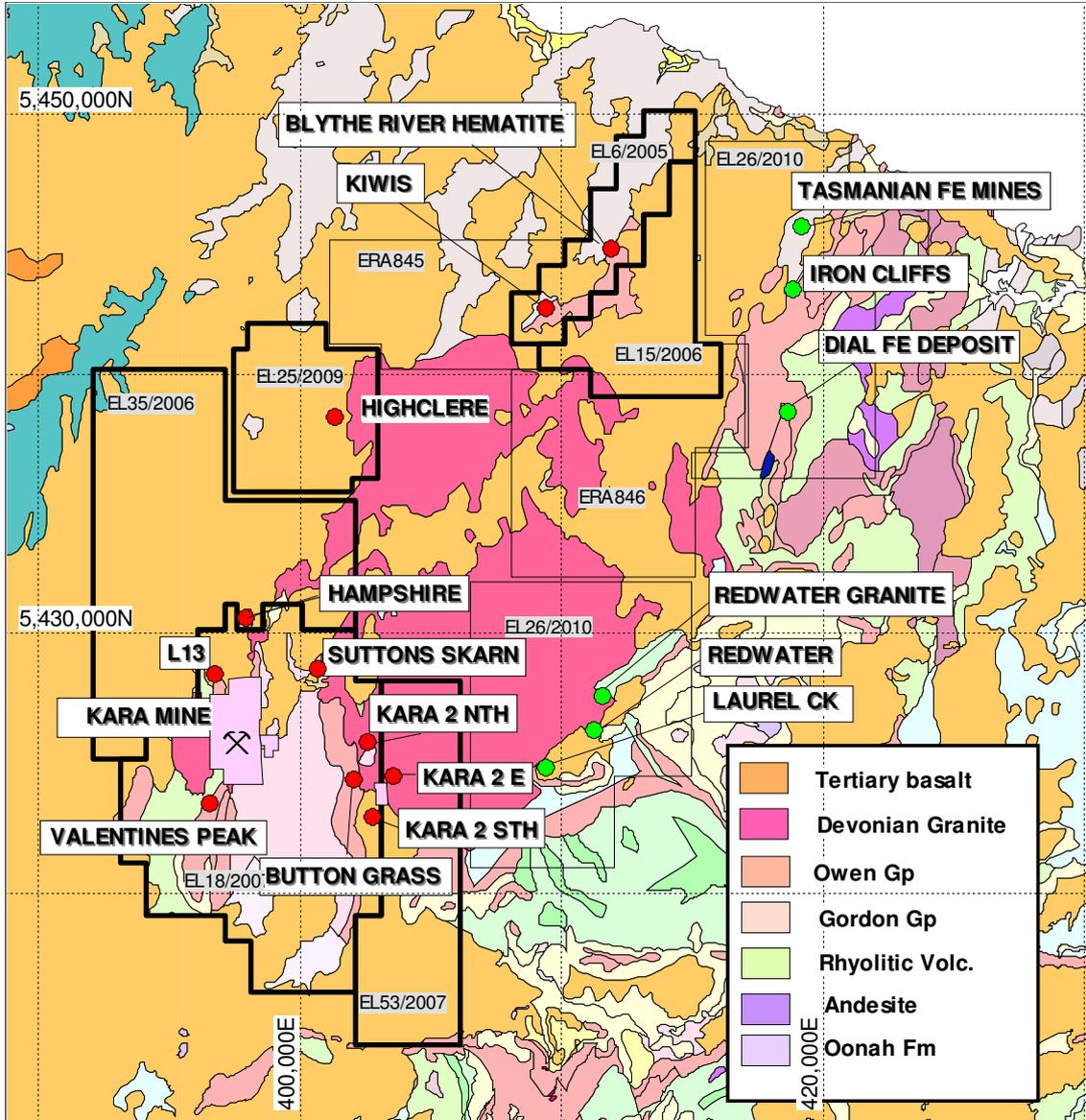


Figure 1. Blythe River Project location, Fe Prospects and MRT 250k Geology. Red dots are Blythe Project Fe prospects, green dots are other regional Fe Prospects.

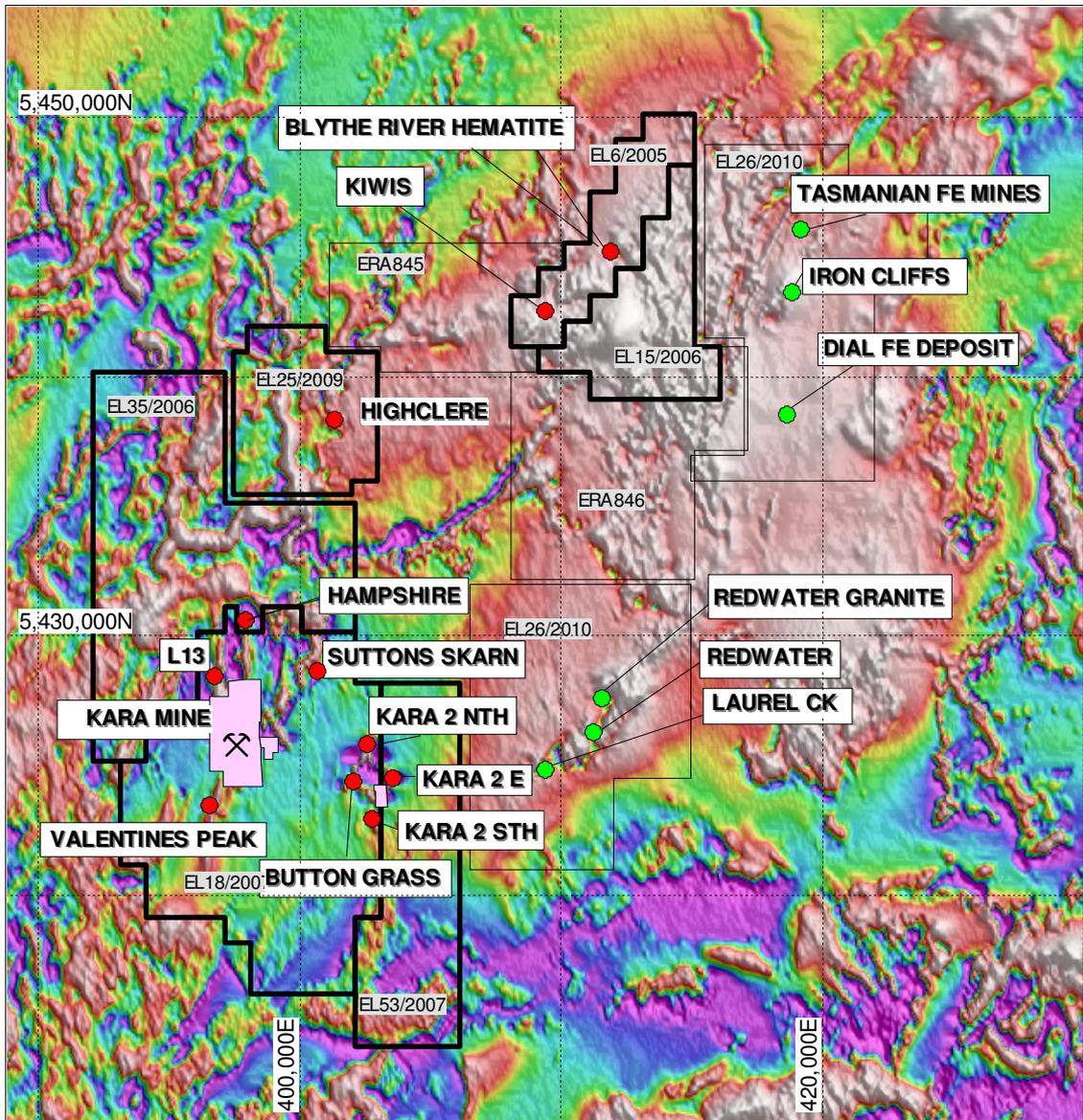


Figure 2. Blythe Project tenements, TMI and prospect locations. Red dots are Blythe Project Fe prospects, green dots are other regional Fe Prospects.

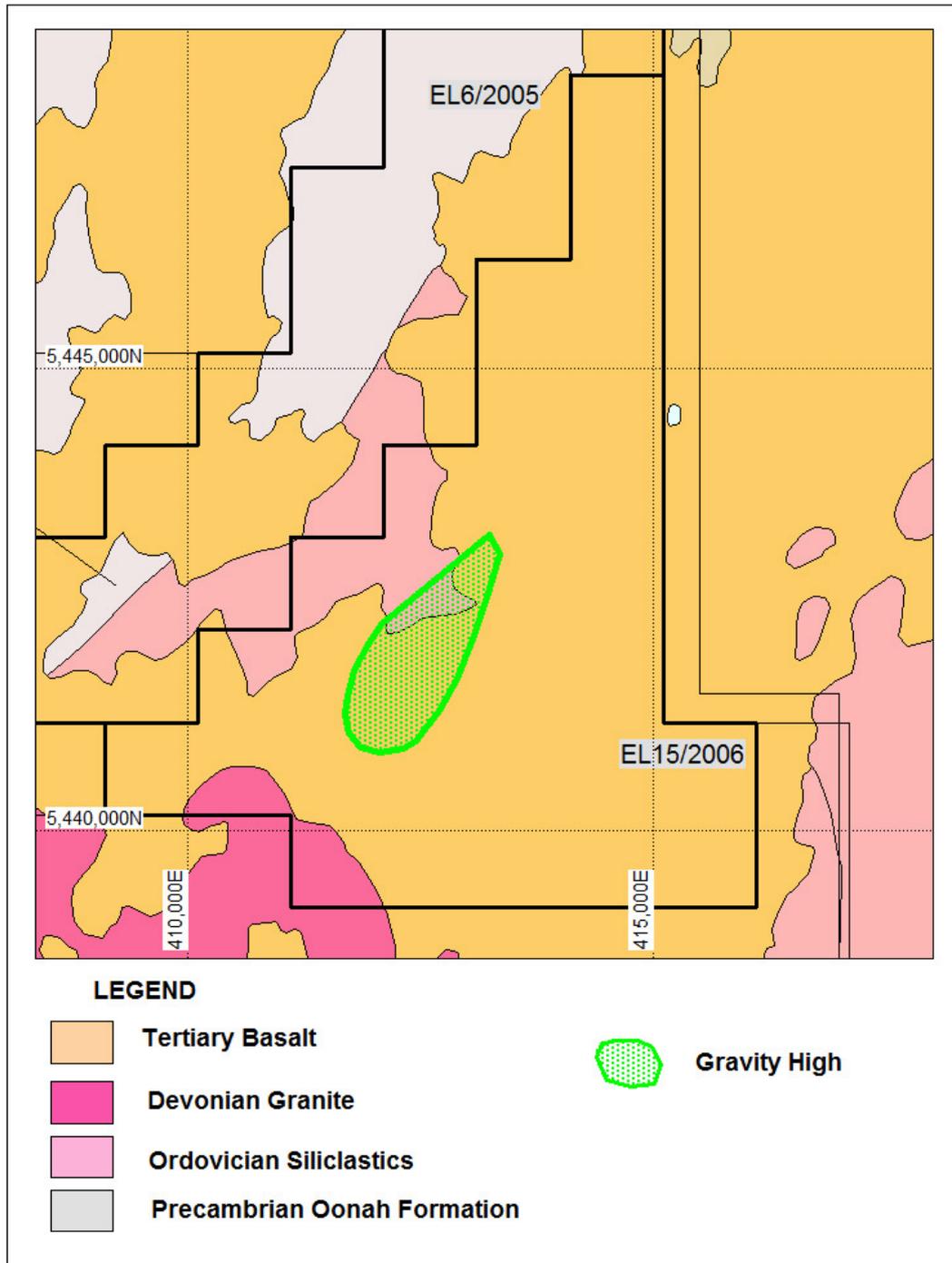


Figure 3. Camena Geology (from MRT1:250 000)

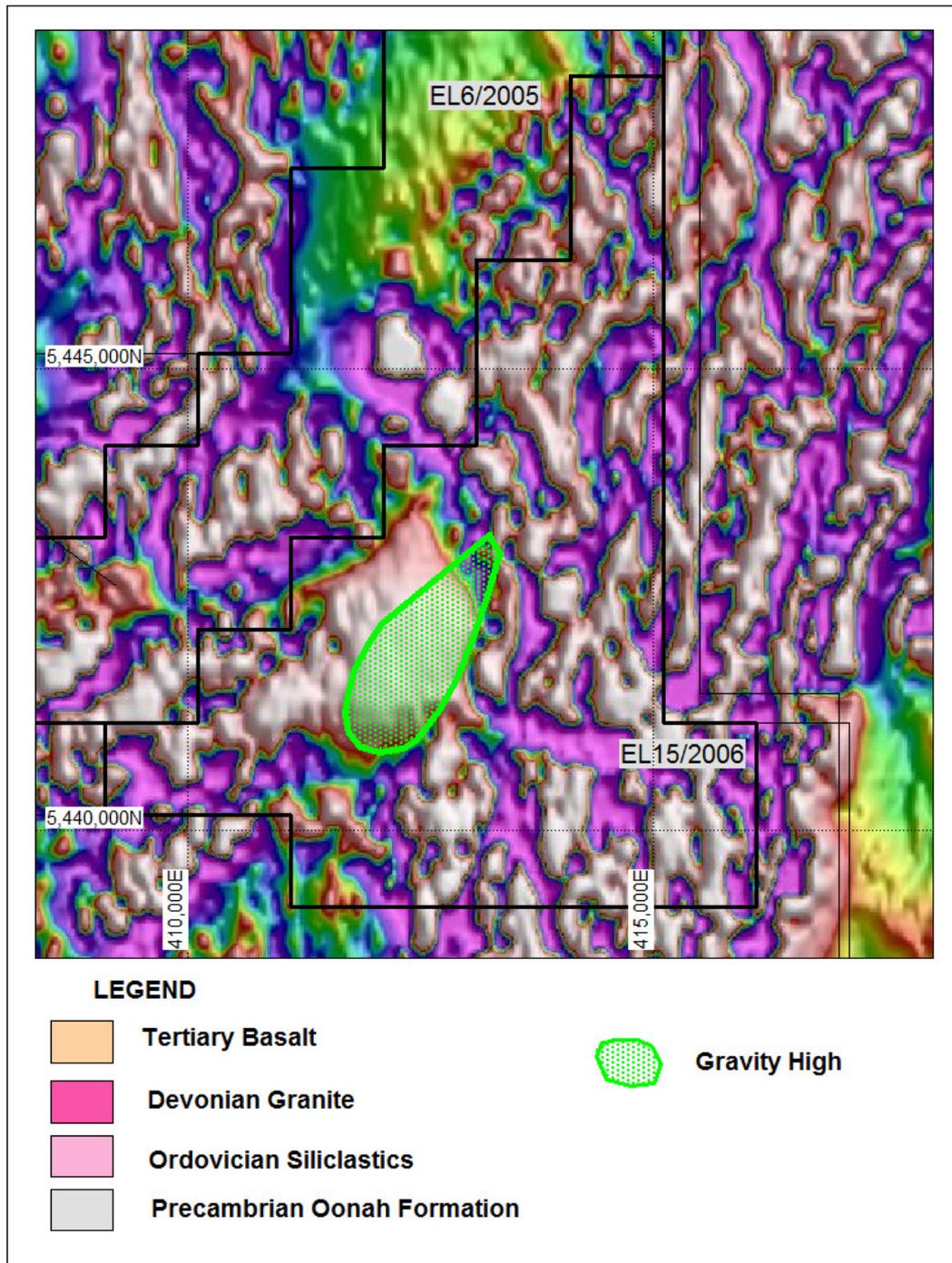


Figure 4. Camena 1VD\_TMI and gravity high.



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### **3 WORK COMPLETED**

No significant work was completed on the Camena anomaly during the last year. Work completed specifically on EL15/2006 included reconnaissance geological work, compilation of historic data and a report on proposed exploration for the Blythe River Iron Project.

The Red River-Iron Mountain JV commissioned Southern Geoscience to complete a detailed gravity survey over the EL in December 2006. As part of the survey, they were asked to process and interpret open file aeromagnetic data identify a broad, weak gravity high associated with the prominent magnetic anomaly.

A ground magnetic survey and soil sampling survey was completed in the subsequent year (2008).



#### **4 DISCUSSION**

The EL is characterised by a prominent and extensive high intensity magnetic anomaly. A broad, low order gravity anomaly is associated with the magnetic high. Southern Geoscience believe the source of the anomaly could be a deep seated (> 250m depth) rock unit with slightly increased density. They consider the deep nature and low contrast of the anomaly makes it a low order target. Given the geology of the area it is likely that the coincident anomalies represent the thick basalt cover.

The size of the anomaly is intriguing and there is a chance it may represent buried iron rich mineralisation, perhaps even an iron-oxide copper gold target. However EL15/2007 is difficult to explore given the thick basalt cover.

The EL was granted a term of extension last year with an expenditure commitment of \$30,000 to complete a ground magnetic survey and some RC drilling. The proposed program was not completed. The target is too deep to drill with an RC rig and will require more expensive diamond drilling.

Further modelling of the gravity and aeromagnetic data is required before drilling 1 deep >500m diamond drillhole testing the coincident gravity-magnetic anomaly. The cost of drilling a hole such as this and the chance of success limits the benefits of the short to medium term aims of the project. FWD are in the process of capital raising to progress the Blythe River Iron Ore Project based mainly on the magnetite resources in the Kara No 2 district. The drilling could be completed in conjunction with the resource delineation drilling on EL18/2007 if timing and funds allow.



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#### **4 PROPOSED WORK PROGRAM**

Refine gravity and aeromagnetic modeling followed by drilling of one 500m drill hole. The drilling program is best deferred if possible and drilled in conjunction with the resource drilling on the Kara No2 deposits.



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## **5 ENVIRONMENTAL**

No rehabilitation is required.



## **ADDITIONAL NOTES**

### ***LIMITATIONS AND CONSENT***

The report is provided to Forward Mining Ltd in the context of an Annual Report and should not be used or relied upon for any other purpose.

This report has been prepared using information available to the Author at the time of writing. The opinions stated herein are given in good faith and with the belief that the basic assumptions are factual and correct and the interpretations reasonable.

This report is not intended for use as a public document nor, in whole or in part, in a public document without written consent to the form and context in which it appears.

### ***COMPETENT PERSON AND JORC CODE***

This report was prepared in accordance with the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' ("JORC Code") by Tim Callaghan, who is a Member of The Australian Institute of Mining and Metallurgy ("AusIMM"), has a minimum of five years experience in the estimation and assessment and evaluation of Mineral Resources of this style and is the competent Person as defined in the JORC Code. This announcement accurately summarises and fairly reports his estimations and he has consented to the resource report in the form and context it appears.

### ***STATEMENT OF INDEPENDENCE***

Tim Callaghan has no material interest or entitlement in the securities or assets of the Forward Mining Ltd or any associated companies.