Lottah Mining Pty Ltd

Annual Report

on

Exploration Licence 35/2006

For the period

February 2015 – February 2016

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For

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Function of the Annual Report

This Annual Report has been prepared as a public document for submission to Mineral Resources Tasmania (MRT). This report provides a summary of the exploration activities undertaken by Lottah Mining Pty Ltd within exploration Licence 35/2006 during February 2015 – February 2016.

Role in the Regulation Process

This document fulfils the role of an Annual Report on EL 35/2006 for the period February 2015 – February 2016, as required under *Section 28* of the *Mineral Resources Development Act 1995*.

Map Conventions

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

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 contains exploration activities completed on EL35/2006 Hampshire 1 during the period February 2015 – February 2016. The EL forms part of a tenement package prospective for Magnetite and Tungsten mineralisation around the House Top Granite in NW Tasmania.

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1. Introduction

1.1 Purpose of Program

The purpose of the exploration program was to gain a more detailed understanding of the magnetite deposit located on EL 35/2006.

1.2 Geological Setting

The Hampshire tenement is a magnetite skarn deposit. The deposit was formed through hot waters (iron rich mixed with other minerals) derived from the intrusion of the Upper Devonian Housetop Granite reacting with calcium - rich carbonate rocks of the pre - existing Burnie Formation, Proterozoic Oonah Formation, Ordovician Denison Group and the Dial Group (Whitehead, 1984).

1.3 Exploration Licence Location and Operation

1.3.1 Mineral Exploration Area

Exploration Licence 35/2006 covers 88 square kilometres and is located 30 km southwest of Burnie. EL35/2006 Hampshire is one of 9 current exploration licenses held by Blythe River Iron Pty Ltd (BRI). The tenements were previously held by either Iron Mountain Pty Ltd or Red River Mining Pty Ltd. Tenement details are listed in Table 1.

Exploration Licences held by Lottah Mining Pty Ltd

EL	Name	Held by	Size (km^2)	Expiry	Comments
EL6/2005	Cuprona	BRI	22	07/09/2016	Renewal granted
EL53/2007	Mt Everett	BRI	47	18/12/2016	Renewal granted
EL25/2009	Highclere	BRI	33	25/05/2016	Renewal granted
EL35/2006	Hampshire 1	BRI	89	25/02/2016	Pending renewal
EL18/2007	Rogetta	BRI	70	09/07/2016	Renewal granted
EL11/2014	Camena	BRI	30	14/09/2019	Renewal granted
EL14/2014	Mt Montgomery	BRI	32	14/09/2019	Renewal granted
EL22/2014	Circular Road	BRI	103	03/03/2020	Renewal granted
EL23/2014	West Pine	BRI	11	03/03/2020	Renewal granted

Table 1: Tenement Details of the Blythe River Project

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.

1.3.2 Site Location

As previously mentioned, EL 35/2006 is located 30 kilometres southwest of Burnie. Main access to EL 35/2006 is via the Ridgley Highway. The tenement is dissected by smaller forestry roads and tracks. Access to the tenement is good.

1.3.3 Exploration Licence Tenure

Tenement EL 35/2006, was granted to Forward Mining / Lottah Mining Pty Ltd on 07 February 2003 for a period of five years and applies to Category 1 minerals. The licence is currently granted on a year by year renewal basis.

2 Regional Geology

The regional geology of Hampshire consists of Proterozoic aged Burnie Formation (north easterly folded shales and quartzites), overlain by the Mt Read Volcanics and Owen Group Siliclastics. Conformably overlying the Owen Group is the Gordon Group Limestone. This was intruded in the Devonian by the Housetop Granite, which during the Tertiary was in turn covered by basaltic flows (Whitehead, 1984).

The basalt formed a protective layer from weathering occurrences for the future iron deposits in the region. Magnetite skarn deposits were created by the intrusion of the upper Devonian Housetop granite reacting with pre-existing Burnie and Oonah Formation stratigraphy (Kusander, Mayer & Zlatkov, 2009).

EL 35/2006 is located 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 (Callaghan, 2013).

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 (Callaghan, 2013).

Regional Geology and Lottah Mining Tenements

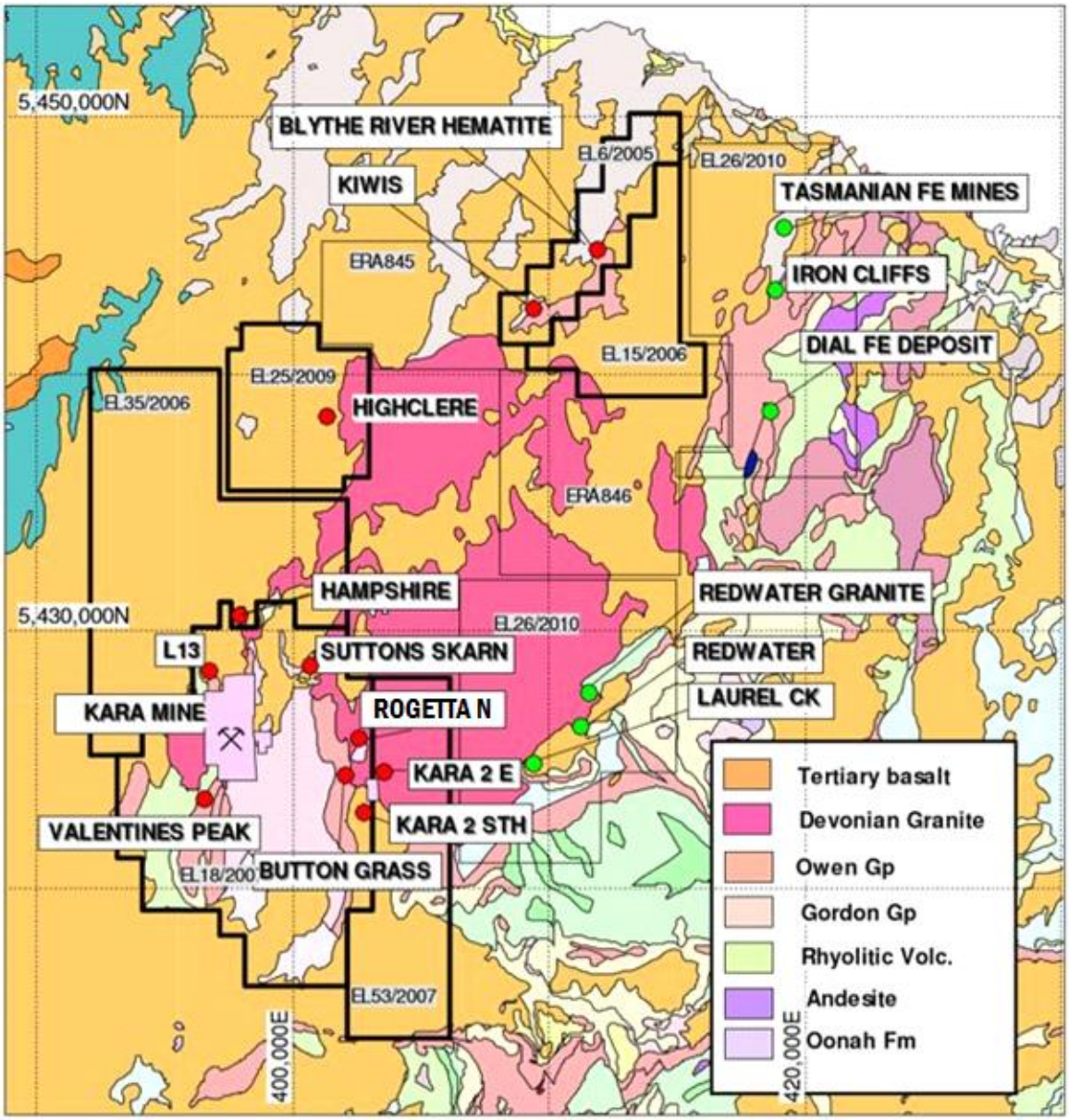

Figure 1. Lottah Mining Tenements. Green Dots depict Lottah Mining Tenements; Red dots depict other regional Fe leases.

2.1 Local Geology

The geology of EL35/2006 is dominated by Tertiary basalt flows, particularly to the north. On the southern boundary several basement windows expose granite intrusions with adjacent skarn mineralisation and the underlying Moina Sandstone including the Hampshire magnetite skarn, typical of the metasomatic magnetite rich skarns associated with the Housetop Granite.

The Hampshire Magnetite Skarn outcrops over a strike length of 500m and dips moderately west. Mineralisation consists of an approximately 10m thick massive magnetite skarn hosted in a thicker sequence of garnet-pyroxene-actinolite calc silicate skarn. Mineralisation has replaced a calcareous

sandstone located just below the Moina Sandstone. Hornfelsed quartzite sandstone of the Moina Sandstone lies directly over the skarn (Callaghan, 2014).

The skarns are proximal to the Housetop Granite which truncates the mineralisation down dip to the west. The mineralisation is considered to be hosted in a roof pendant of Paleozoic calcareous sediments on the Housetop Granite.

Tertiary Basalt flows infill palaeo-valley and for basaltic flood deposits over much of the EL. Small windows of basement outcrop in the Hampshire area and the far east of the EL.

The deposit and remains open to the south, with a prominent magnetic high extending beneath basalt cover onto EL18/2007 (Kusandar et al., 2009).

3 Summary of Previous Exploration

In 1955 the Tasmanian Department of Mines conducted a magnetic survey of the Hampshire Magnetite deposit (Tate, 1955).

From 1964-1974 the Tasmanian Department of Mines conducted a drilling program on the Hampshire region for the purpose of metallic minerals (Turner, 1992).

During 1982-1984, McIntyre Mines (Australia) Pty Ltd. conducted a ground magnetic survey and diamond drilling campaign over the Hampshire magnetite skarn and surrounding region in search of metallic minerals Sn and WO_3 (Whitehead, 1994).

2008-2013: Iron Mountain Pty Ltd completed a comprehensive 30m spaced RC drilling program on the northern 250m of the deposit in 2008. 30 holes were drilled for 1530m. Drilling returned numerous high grade magnetite intersections in a consistently west dipping lens. Tungsten values were generally low with only a few samples above 0.1% WO3.

2013-2014: Work completed specifically on EL35/2006 included drilling of 1 diamond drill hole for 73.7m. The Hole HDH001 was designed to test the southern extension of the magnetite skarn identified in an earlier RC drilling program. Minor magnetite was observed outcropping in the field south of the deposit and the magnetic anomaly remains open to the south.

The hole was collared in October 2013 and intersected calc-silicate skarn of the Transition beds that host much of the magnetite-scheelite skarn in the district. A drill summary is listed on the following page.

HD 001 Drill Hole Summary

Project	BHID	Easting	Northing	RL	Depth	Depth	Azm_Amg	Dip
Hampshire	HDH001	397952.0	5430389.0	494	73.7	0.0	90.00	-70.00
Depth (m)	**Lithology**							
0 – 10.2	Weathered Tertiary basalt.							
10.2 – 31.6	Clay weathered calc-silicate skarn (Transition Beds). Minor magnetite nodules and veins noted at 28.7 to 31.6m.							
31.6 – 50.1	Quartzite and sandstone. Moina sandstone.							
50.1 – 73.7	Granite.							

Table 2. HDH001 drill hole summary

2014-2015: Lottah Mining Pty Ltd. conducted geological research of historic works and reconnaissance of the tenement to gain further insight of the deposit. Future work includes ground work for magnetic, gravity and seismic surveys in the region.

4 Current Exploration 2015-2016

Field mapping and ground work for magnetic, gravity and seismic surveys in the region was conducted by Lottah Mining Pty Ltd. Track maintenance was also undertaken as to access the tenement. Lidar was flown and a geophysical inverse model was prepared by G.H.D (Anderson, 2015). *(MRT has been sent a copy of this data via hard drive). A future drilling program is currently being planned.

5 Discussion

Future work planned for EL35/2006 is expected to involve a resource estimation of the Hampshire deposit. Further field exploration of the southern extension of the Hampshire skarn is warranted and may involve ground magnetic and gravity surveying.

6 Environmental

Environmental disturbance in EL35 during the reporting period was negligible. Existing access infrastructure was used when required for site visits and no recent work completed created any impact on the environment. Any future rehabilitation of EL 35/2006 will be completed to MRT standards once a final decision as to the viability of the mineral potential in the area has been determined.

7 Expenditure

Expenditure from the period 2015-2016 for EL 35/2006 is presented below.

Expenditure 2015-2016

Quarter 1	$16,500
Quarter 2	$10,373
Quarter 3	$42,042
Quarter 4	$0.00
Total for Year	$68,915
Total for EL35/2006	$402,414.00

Expenditure for 2016-2017 on EL 35/2006 is anticipated to be approximately $30,000.

Reference List:

Anderson, M., 2015, G.H.D: Report for Lottah Mining Pty. Ltd. – Potential Field Geophysical Modelling.

Callaghan, T., 2014, Blythe River Project, Annual Report - EL35/2006 Hampshire 1 – NW Tasmania.

Callaghan, T., 2013, Blythe River Project, Annual Report - EL35/2006 Hampshire 1 – NW Tasmania.

Kusnandar. K., Mayer. A., Zlatkov. G., 2009, Blythe Project, Northern Tasmania Annual Report for EL 35/2006 ("Hampshire 1").

Leaman, D.E., 1993, *Preliminary Interpretation, gravity and magnetic data of N.W Tasmania.* Leaman Geophysics 1993.

Turner. J., 1992, Tasmania Department of Mines, Kara and other nearby magnetite resources.

Whitehead, C. H., 1984, McIntyre Mines (Australia) Pty Ltd: Annual Report and Statement of Expenditure Exploration Licence 17/68 & C. L. 105m/77.