

Lottah Mining Pty Ltd

Annual Report

on

Exploration Licence 25/2009

For the period

May 2015 – May 2016

Prepared by:

L Eiseman

A Rae

Lottah Mining Pty Ltd

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For

Lottah Mining Pty Ltd

15 Anglesea St

Wivenhoe, Tasmania 7320

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 EL 25/2009 during May 2015 - May 2016.

1.2 Role in the Regulation Process

This document fulfils the role of an Annual Report on EL 25/2009 for the May 2015 – May 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 EL25/2009 Highclere. The EL forms part of a tenement package prospective for Magnetite and Tungsten mineralisation around the House Top Granite in NW Tasmania.

Exploration completed on EL25-2009 consisted of further compilation of the 2014-2015 drilling program, continued evaluation of magnetic data, ground reconnaissance and the planning of a gravity survey.

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1 INTRODUCTION

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 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.

EL 25/2009 (figure 1) hosts the Highclere Iron deposit, a magnetite skarn similar to the Kara skarns located further south.



Figure 1: Map showing the location of EL25/2009.

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 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 volcanoclastics of the Western Volcano-sedimentary sequence and the Tyndall Group quartz-feldspar phyric 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.

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.

2.1 LOCAL GEOLOGY

The geology of EL25/2009 is dominated by Tertiary basalt flows covering most of the Paleozoic geology. Several basement windows expose granite intrusions with adjacent skarn mineralisation associated with metasomatised Ordovician Gordon Group calcareous sediments or Cambrian Dundas Group calcareous volcanoclastics. Two prospective skarns have been identified historically including the Highclere Iron deposit and Buckby's Prospect.

Buckby's Prospect was identified by Comalco in the 1980's. The geology of the prospect is dominated by Tertiary basalt flows covering most of the earlier lithologies. A window through the basalt reveals a basement of Cambrian Dundas Group dolomite and dolomitic conglomerate interbedded with acid volcanoclastics intruded by the Devonian Husetop Granite. The geology consists of north striking, moderately west dipping sediments and volcanics intruded by the Husetop Granite on the eastern margin. The dolomites have been variably metasomatised to phlogopite diopside±magnetite±pyrrhotite skarn. The Cambrian carbonate in close proximity to a known tin-tungsten granite encouraged Shell and Comalco to explore the prospect for tin and tungsten mineralisation based on analogies with the Cleveland tin deposit or Dolphin Scheelite mines.

The outcropping Cambrian geology is characterised by a magnetic high of 400m by 100m length. Ground magnetic surveys indicate the anomaly is made up of several discrete highs of small size. Soil sampling surveys indicate the prospect to be anomalous in Cu, F and Sn supporting the exploration model of Comalco.

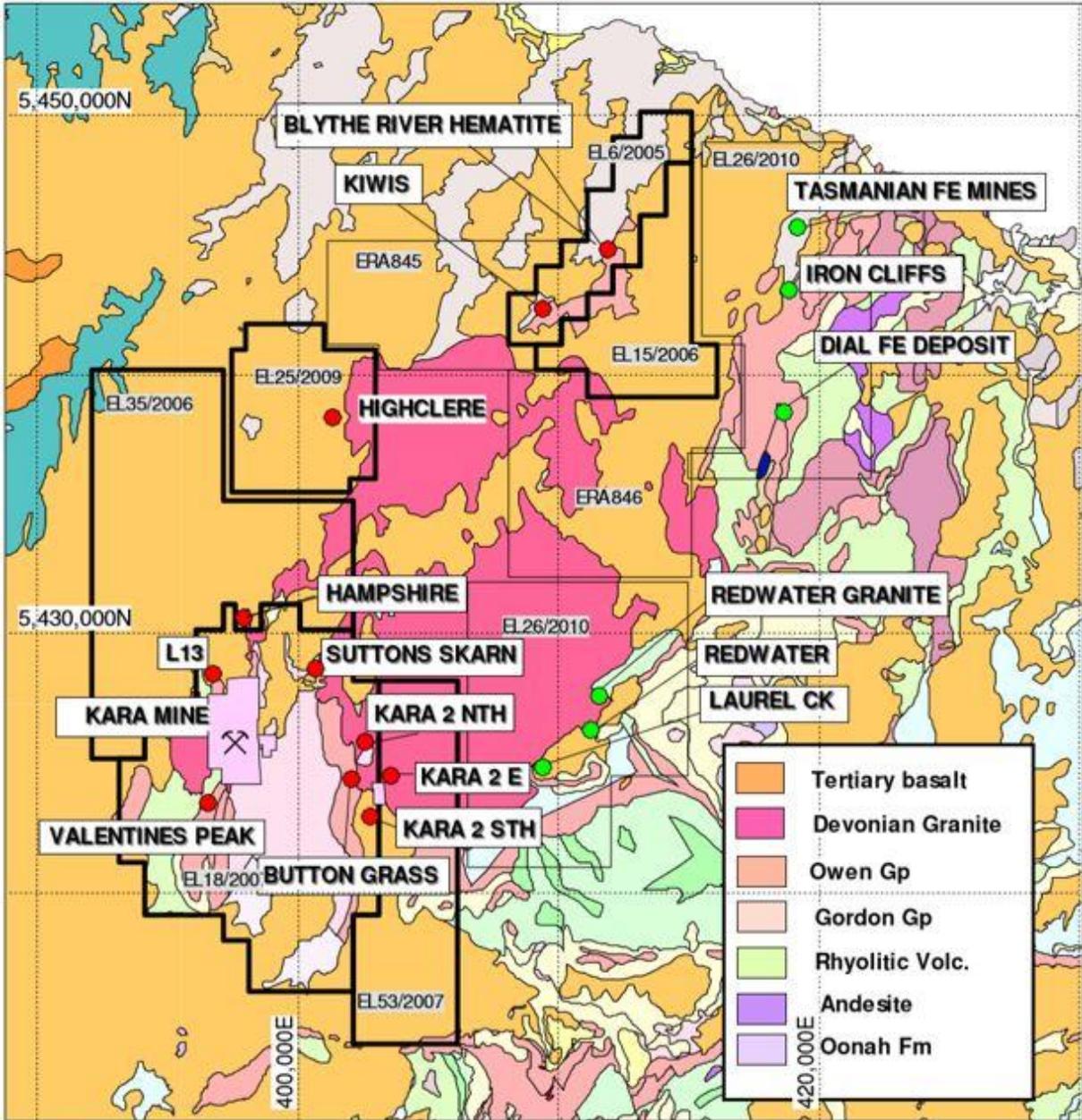


Figure 2. Blythe River Project location, Fe Prospects and MRT 250k Geology. Red dots are Blythe Project Fe prospects, green dots are other regional Fe Prospects.

3 EXPLORATION HISTORY

The Tasmanian Mines department assessed the deposit for its iron ore potential in the early 1960's completing an aeromagnetic survey culminating in the drilling of 4 diamond drill holes in 1964. The drill holes intersected nodules and lenses of hematite-magnetite mineralisation hosted in limonitic clay. The Mines Department holes did not appear to extend to the granite basement, most ending at less than 30m depth. Analysis of the Mines Department core has returned high grade iron from a mixture of hematite and magnetite mineralisation:

Hole ID	Depth (m)	Length (m)	Fe %
H1	1.8-25.0	23.2	41.2
H2	0.0-26.5	26.5	58.8
H3	1.8-25.9	24.1	45.6
H4	0.0-21.0	21.0	43.3

Table 1. Iron assays from the Mines Department holes.

Iron assays from the Mines Department holes are encouraging however the recoveries were poor suggesting some of the clay may have washed away, biasing the iron analyses.

The prospect has been explored for its Sn-WO₃ potential by ANZECO in the 1970's (Brandt, 1973, 1974), Comalco in the late 1970's (Askins, 1978 and 1980) and Shell in the 1980's (Lawton, 1982).

ANZECO completed systematic grid based ground magnetics, and mapping surveys over the prospect and re-assayed the Mines Department core for Sn-WO₃ with only minor tungsten mineralisation observed (Brandt, 1974). Most of the drill core was re-logged as limonitic clay. A series of short auger holes were drilled, most intersecting highly weathered granite with only 6 holes intersecting highly weathered calc-silicate skarn with minor hematite-magnetite mineralisation. The holes were assayed for WO₃ and Sn but not Fe. Minor localised Scheelite mineralisation has been described at the prospect (Brandt, 1974).

They concluded that the deposit consists of small roof pendants of highly weathered calc-silicate skarn with minor magnetite mineralisation.

Comalco (Askins, 1978) assessed the potential of the northern part of the Highclere Iron deposit magnetic anomaly with ground based gravity, magnetics and IP. They also re-logged the Mines Department core noting the very low recoveries. They concluded that the discontinuous nature of the magnetic and chargeability - resistivity anomalies suggest there is very limited potential for significant mineralisation from the northern part of the Highclere Iron deposit.

Most of Comalco's work concentrated on Buckby's Prospect located several Kilometres southwest of the Highclere Iron deposit. They completed a similar program of ground based magnetic, IP, soil sampling and geological mapping follow up by diamond drilling. The drill holes intersected a thick sequence of dolomitic limestone and calcareous sediments, variable metasomatised to diopside skarn with minor magnetite and pyrrhotite skarn. All holes ended in granite basement. No significant Sn-WO₃ or Fe mineralisation was observed.

Shell/Billiton re-assessed the magnetics of the district, targeting Kara style magnetite skarn mineralisation. They drilled several percussion holes into magnetic anomalies in basalt and one extra hole into the Highclere Iron deposit. They concluded that the magnetic signature of the basalt cover obstructed the delineation of magnetite skarn and discontinued work in the district.

Drill collars from the historic holes have not been surveyed and their locations are imprecise. Historic drill locations have been derived from old paper plans registered in MapInfo. Collar locations will have an estimated error of 20m.

Blythe River Iron Pty Ltd drilled 3 diamond holes into the Highclere Iron Deposit in early 2012. Assays of their drilling is shown below in table 2.

Hole ID	Depth (m)	Length (m)	Fe %
H5	1.4-26.0	24.6	44.6
H6	1.5-13.0	11.5	56.5
	28.0-37.8	10.8	44.1
	42.0-67.0	25.0	48.8
H7	1.5-3.6	2.1	56.8
	8.1-14.4	5.7	59.5

Table 2. Blythe River Iron Pty assay results.

LMPL completed four diamond drill holes on the Highclere tenement between June 2014 - July 2014. The drill holes intercepted predominantly weathered lithologies including varying thickness of magnetite, hematite, goethite, limonite and iron rich clays. Locations of the drill holes are displayed in Figure 3 and located in Table 3. Holes were located by hand held GPS.

HOLE ID	Easting	Northing	Depth (m)	DIP	RL	AZM	DATE
DD14HC010	401451.733812	5438382.268309	50.9	-90	385.0	0	20/06/14
DD14HC011	401512.576179	5438377.998759	50.0	-90	386.0	0	26/06/14
DD14HC012	401535.851447	5438405.969915	55.4	-90	385.0	0	01/07/14
DD14HC013	401567.497645	5438427.407662	50.0	-90	373.0	0	04/07/14

Table 3: LMPL 2014 Highclere drilling campaign.

A drill hole summary of LMPL 2014 drilling program is listed below:

Drill hole: DD14HC010

DD14HC010 was located 40m east of previous drilling efforts on a magnetic high. The drill hole intercepted hematite between 9.4m-13.3m, 17.8m-32.0m and 34.3m-40.2m. However, the hematite was extremely weathered and consisted of large amounts of oxidised clays. The majority of the drill hole had undergone extreme weathering with clay down to 50m.

Drill hole: DD14HC011

DD14HC011 was located 50m east of DD14HC010. The hole intercepted predominately iron oxide rich clays with some areas of highly weathered magnetite and hematite. Magnetite between 4.1m-6.8m, 7.8m-9.3, 16.4m-21.7m, 23.2m-24.1m and 43.8m-44.6m. Hematite between 43.8-44.6m. The majority of the drill hole had undergone extreme weathering with clay down to 50m.

Drill hole: DD14HC012

DD14HC012 was located 50m north-east DD14HC011 on the magnetic high. The hole intercepted predominately clay with some extremely weathered hematite and magnetite. The hole intercepted magnetite between 14.6m-32.8m, 40.0m-4.4m and 49.4m-55.4m. Hematite was intercepted between 10.4m-14.6m.

Drill hole: DD14HC013

DD14HC013 located 50m north-east DD14HC012 on the magnetic high. The hole intercepted clay from 0-50m. The clay had areas rich in magnetite nodules and hematite. However, the true extent of the Fe levels is still not known due to the wash/loss of core recovery.



Figure 3. Map of Highclere drill holes (blue are LMPL 2014 drill holes & yellow are historic drill holes).

4 WORK COMPLETED

Work on EL25-2009 consisted of further compilation of the 2014-2015 drilling program, continued evaluation of magnetic data, ground reconnaissance and the planning of a gravity survey.

5 DISCUSSION

The 2014-2015 drilling program combined with historic drilling has identified the Highclere deposit to be a deeply weathered clay altered calc-silicate skarn near surface, containing irregular lenses and remnant lag deposits of oxidised hematite, magnetite-limonite. Historic Mines Department drilling returned high grade Fe assays from the surficial magnetite-hematite mineralisation but recoveries were very poor suggesting some of the clays may have washed away during drilling, upgrading the nodular iron mineralisation. Triple tube coring employed in the recent program ensured good recoveries, providing a true sample of the oxidised mineralisation.

Recent drilling confirms the high iron grades of the skarn, however the iron is present as several different species within the deeply weathered skarn, principally magnetite, hematite, goethite, limonite and iron rich clays.

Several other magnetic anomalies were drilled at Nolan's Hill (KD1, KD2), south of Buckby's prospect (KD3) and in the Guide River (GRD1) by Comalco and Shell in the 1980's. The magnetic anomalies were found to be associated with magnetite bearing Tertiary Basalt and no further work is recommended.

6 PROPOSED WORK PROGRAM

The work plan for EL25/2009 for 2016 - 2017 involves furthering the understanding of the geological setting through reconnaissance mapping, historic data compilation and target generation. There is the potential for a geophysical gravity survey to be conducted on the area.

There is the potential for a down hole electromagnetic (EM) survey to be conducted on EL25/2209 during the 2016-2017 period, provide suitable holes can be located. Data generated by the downhole EM would greatly increase the knowledge of the size and nature of the Highclere deposit.

7 EXPENDITURE

Expenditure for EL25/2009 2015 – 2016 are presented below.

2015	Q2	\$18,400.00
	Q3	\$639.00
	Q4	\$0.00
2016	Q1	\$3,300.00
	Q2	\$2,950.00

Table 4. EL25-2009 2015-2016 quarterly expenditure

Expenditure for EL25/2009 during the 2015-2016 year was \$25,289.00. Proposed expenditure for EL25/2009 in the upcoming year is \$25,000.00.

8 ENVIRONMENTAL

Environmental disturbance on EL25/2009 during the reporting period was minimal. Existing infrastructure access was utilised when required for site visits. The previous 2014-2015 drilling campaign was successfully rehabilitated at the time of drilling and is now back to its original state.

9 REFERENCES

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