



Suite 301,
68 Alfred Street,
Milsons Point NSW 2061
Australia

T 61 2 9929 6868
F 61 2 9923 1112
E info@mineralgeos.com
www.mineralgeos.com

MINERALS EXPLORATION | INDUSTRIAL MINERALS | ENERGY RESOURCES | TENEMENTS MANAGEMENT

2013 Annual Report

Derby Project

ASF Group Limited

Title: **EL23/2011**

Reporting Period From: **13 September 2012**

To: **12 September 2013**

Licensee: **Austin Resources Pty Ltd**

Address: **Suite 2, 3B Macquarie Street, Sydney NSW 2000**

Job No. **2514-01**

Report Date: **16 August 2013**

Grant Date: **13 September 2011** Expiry Date: **12 September 2016**

Prepared for:

Mineral Resources Tasmania

The Director of Mines

Prepared by:

Esther Yap

BSc, GAIG

Geologist

Reviewed by:

Jeff Randell

BSc (Hons), MAIG

Project Manager

Verification:

A handwritten signature in blue ink, appearing to read "J.P. Randell", with a horizontal line underneath.

Abstract

EL 23/2011 is located in the Derby area of NE Tasmania, a region of significant historic tin production. The licence covers the interpreted trend of the paleo-Ringarooma Deep Lead.

Previous exploration has comprised review of available data while a reconnaissance trip was carried out during the reporting period.

The objective of a proposed gravity survey is to determine the location of the Ringarooma Deep Lead and tributaries beneath Tertiary basalt cover. The method has proven effective for similar targets in Central Victoria. No environmental disturbance will be involved and no landholder agreements are necessary at this stage as all measurements are on government property

Keywords

File Name	
Location Name:	Derby
Earth Science Related Terms:	
Environment of Mineralisation:	Deep Lead
Commodities:	Alluvial tin, Cassiterite
Exploration Methods:	
Stratigraphic Name:	Blue Tier Batholith, Mathinna Beds, Tertiary Basalt
Lithologic Name:	
Geological Province:	
Geological Age:	Devonian, Ordovician to Devonian, Middle Eocene, Middle Miocene

Table 1: Key words associated with EL 23/2011

Disclaimer

While every effort has been made, within the time constraints of this assignment, to ensure the accuracy of this report, Geos Mining accepts no liability for any error or omission. Geos Mining can take no responsibility if the conclusions of this report are based on incomplete or misleading data.

Geos Mining and the authors are independent of ASF Group Limited, and have no financial interests in ASF Group Limited or any associated companies. Geos Mining is being remunerated for this report on a standard fee for time basis, with no success incentives.

Contents

ABSTRACT	1
KEYWORDS	1
INTRODUCTION	3
LICENCE.....	3
LOCATION AND ACCESS	3
EXPLORATION RATIONALE	4
GEOLOGICAL SETTING	5
PAST PRODUCTION	5
REVIEW OF PREVIOUS WORK	6
PRIOR TO CURRENT TENEMENT	6
DURING CURRENT TENEMENT	6
2011-2012	6
EXPLORATION COMPLETED DURING 2012-2013	6
PROPOSED EXPLORATION 2013-2014	6
ENVIRONMENT	7
EXPENDITURE IN 2012-2013	8
BIBLIOGRAPHY.....	9

Tables

TABLE 1: KEY WORDS ASSOCIATED WITH EL 23/2011	1
TABLE 2: EL 23/2011 LICENCE DETAILS	3
TABLE 3: EXPENDITURE DURING THE REPORTING PERIOD.....	8

Figures

FIGURE 1: EL 23/2011 LOCATION MAP	4
FIGURE 2: LOCATION OF PROPOSED GRAVITY TRAVERSES	7

Photos

PHOTO 1: TOWNSHIP OF DERBY, SHOWING FLOODED BRISEIS MINE WORKINGS	3
---	---

Introduction

LICENCE

EL 23/2011 was granted to ASF Group Ltd. on 13 September 2011 with an expiry of 12 September 2016. The area of the licence is 109km². The licence was transferred to Austin Resources Ltd., a wholly owned subsidiary of ASF Group Ltd. on 10 February, 2012.

Tenement	Area (km ²)	Grant Date	Final Date
EL 23/2011	109	13/09/2011	12/09/2016

Table 2: EL 23/2011 Licence Details

LOCATION AND ACCESS

EL 23/2011 is located in the Derby area of NE Tasmania, a region of significant historic tin production. The licence covers the interpreted trend of the paleo-Ringarooma Deep Lead. The settlements of Ringarooma, Branxholm, Derby and Winnaleah locate within the licence area (Figure 1 and Photo 1).

The topography is of generally moderate relief with much of the area located in the current Ringarooma valley and tributaries or on the relatively flat to undulating plateau of the Tertiary basalt paleo-valley fill. Most of the area comprises private land with the area south of Branxholm being lightly to moderately forested. North of Branxholm, the land is mostly cleared for pasture and crops. Access is good with the Tasman Highway traversing the licence area in addition to a relatively dense network of secondary roads (Swensson, 2012).



Photo 1: Township of Derby, showing flooded Briseis mine workings

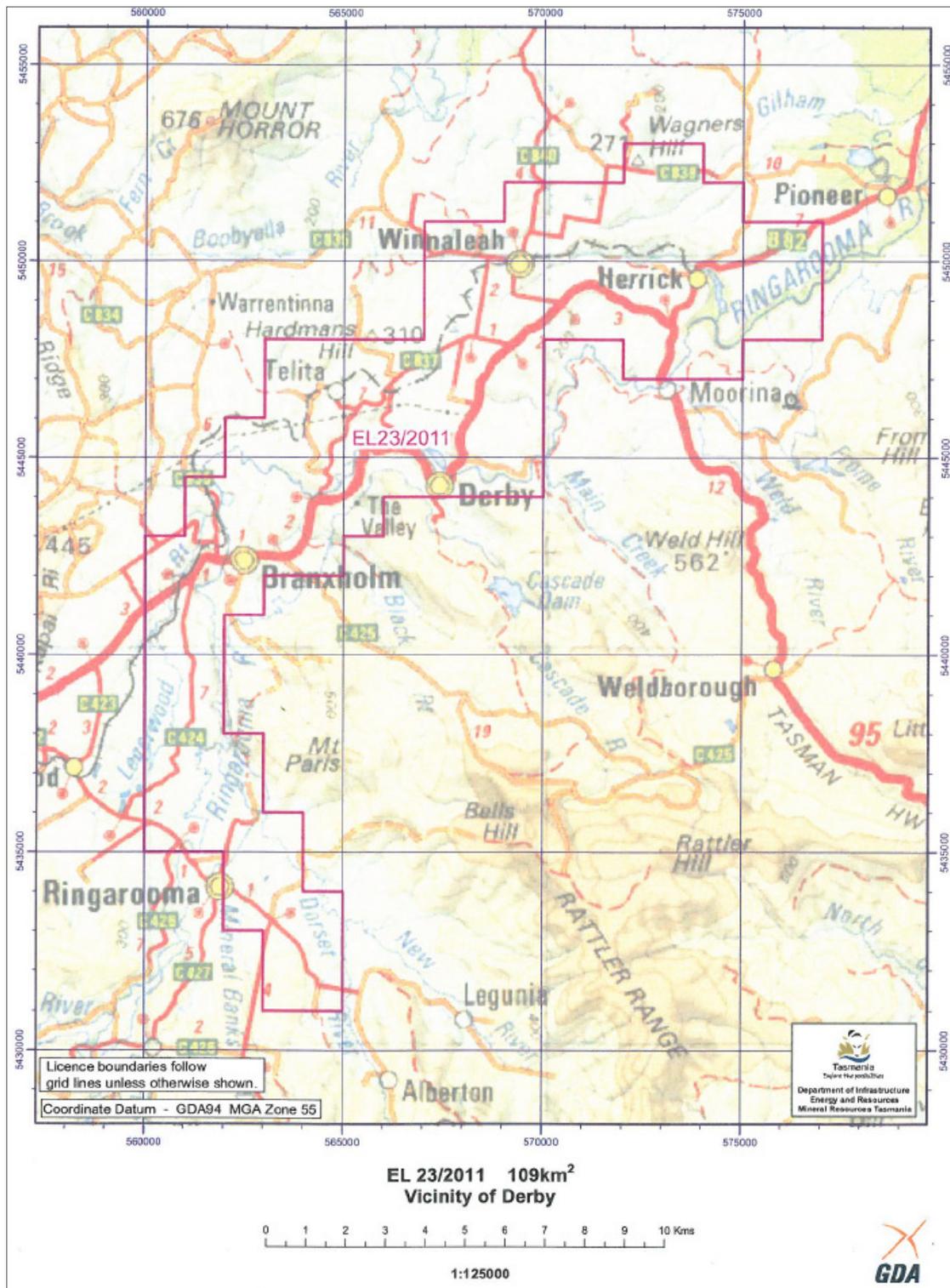


Figure 1: EL 23/2011 Location Map

EXPLORATION RATIONALE

EL 23/2011 was applied for the area’s well documented potential for alluvial tin. Despite a considerable history of exploitation, significant potential tin resources are considered to be associated with extensions of previously exploited exposed deep leads and in particular for unmined deep leads covered by Tertiary basalt. Recent advances in geophysical techniques and potentially new methods in mining in unconsolidated strata provide the encouragement to explore in what are largely unexplored environments.

GEOLOGICAL SETTING

The geology and the mineralisation of the area have been well reviewed in studies undertaken by the previous holder of the licence area, Kintore Resources Ltd as EL 65/2004. The reader is referred to appendices 1 and 2 of the 2009 Annual Report for EL65/2009 lodged with Mineral Resources Tasmania for a detailed review.

In summary, the Devonian granitic intrusives of the Blue Tier batholith dominate the lithologies to the west of the tenement while the Ordovician to Devonian turbidites of the Mathinna Beds underlie most of the tenement and the area to the east. Two periods of Tertiary basaltic volcanism have variably covered the basement lithologies during the Middle Eocene and Middle Miocene. This volcanism variably filled the pre-Eocene drainages, resulting in the formation of deep leads with basalt covering and preserving the original valley-fill sequence.

Differential erosion along the flanks of the basalt flows filling the valleys due to the basement sediments being weathered and softer than the basalts has resulted in topographic inversion in much of the area with the basalts forming elevated plateaux. In places this erosion has cut through the base of the basalt flows exposing the deep lead sediments below the basalt plateau, allowing easy exploitation of the cassiterite-bearing basal sequence of the deep lead sediments by hydraulic sluicing and dredging with the Briseis and Arba Valley mines being the largest examples.

Deep leads of mid to late Eocene age are distributed throughout the Lachlan Fold Belt in Eastern Australia and share a common fining upward stratigraphy from coarse basal wash through coarse sandy gravels, coarse sands and clays at the top of the sequence. Heavy minerals are disproportionately concentrated in the basal cobble or "wash" zone and in the Derby area tin in economic concentrations tends to occur within 5-10m of the base of the lead. Approximately 23,522 tonnes of tin metal is reported to have been mined from within the tenement, representing 63% of the total tin production from NE Tasmania.

The potential for economic concentrations of tin is both from extensions to previously worked exposed deep leads such as the Arba Valley and Briseis Mines and in particular the extensions of the tributary leads to the Ringarooma Deep Lead identified from previous prospecting and from the larger Ringarooma Deep Lead which has been inferred to traverse the licence area to the north of the present Ringarooma River.

Past Production

In NE Tasmania the total recorded production from alluvial deposits is about 36,300 tonnes of tin metal (Askins & Stewart, 2007). Of this, 23,855 tonnes, or 65.7%, was produced in the general area of EL23/2011. By far the largest producer was the Cascade Lead, about 21 000 tonnes, or about 58% of all alluvial tin in NE Tasmania.

The Briseis Mine on the Cascade Lead produced concentrates containing 20,787 tons of tin metal, the average grade of the alluvium being about 1.7 lb/cu yd of 70% tin. The lead contained up to 300 ft of river gravels covered by approximately 150 ft of basalt; 50% of the cassiterite occurred within 30 ft of the bottom of the lead where values up to 78 lb/cu yd occurred over 5 ft bore lengths.

The Branxholm Lead was worked to a depth of 190 ft including 50 ft of basalt overburden, the average grade was 0.9 lb/cu yd of 70% tin. The Valley Lead has been worked in the top 45 ft and averaged 1.2 lb/cu

yd, while boring to 120 ft in the lead indicates the grade of the unworked lower part to be about 1.5 lb/cu yd of 70% tin. The Clifton Lead worked by the Endurance Tin Mining Company is up to 120 ft deep, and the grade during recent years has been about 0.35 lb/cu. yd. of 70 per cent tin, though higher grade material was worked in the past.

Review of Previous Work

PRIOR TO CURRENT TENEMENT

Kintore Resources Ltd held EL 65/2004 and had reviewed the geology and the mineralisation of the area. The reader is referred to appendices 1 and 2 of the 2009 Annual Report for EL65/2009 lodged with Mineral Resources Tasmania for a detailed review.

DURING CURRENT TENEMENT

2011-2012

Previous exploration and available data was reviewed, however proposed exploration programme was not implemented (Swensson, 2012).

Exploration Completed During 2012-2013

The only exploration completed during the reporting period was a brief reconnaissance inspection of some of the old workings. No samples were collected.

Proposed Exploration 2013-2014

Exploration proposed for the next reporting period will include:

- Gravity survey lines (200 stations initially)

The objective of the gravity survey is to determine the location of the Ringarooma Deep Lead and tributaries beneath Tertiary basalt cover. This method has proven effective for similar targets in Central Victoria. The proposed programme involves the collection of gravity readings at 50m intervals along existing country roads utilizing a gravity meter and differential GPS to provide location and altitude data (Figure 2). The survey will be tied into the national grid.

The survey will initially involve a trial of three traverses involving about 10km of readings for approximately 200 stations. If effective, data for a further 10-15km of traverses is proposed. The work will involve two people using one vehicle over a period of approximately 3-6 days. No environmental disturbance will be involved and no landholder agreements are necessary at this stage as all measurements are on government property, although landholder consultation as a matter of courtesy is planned.

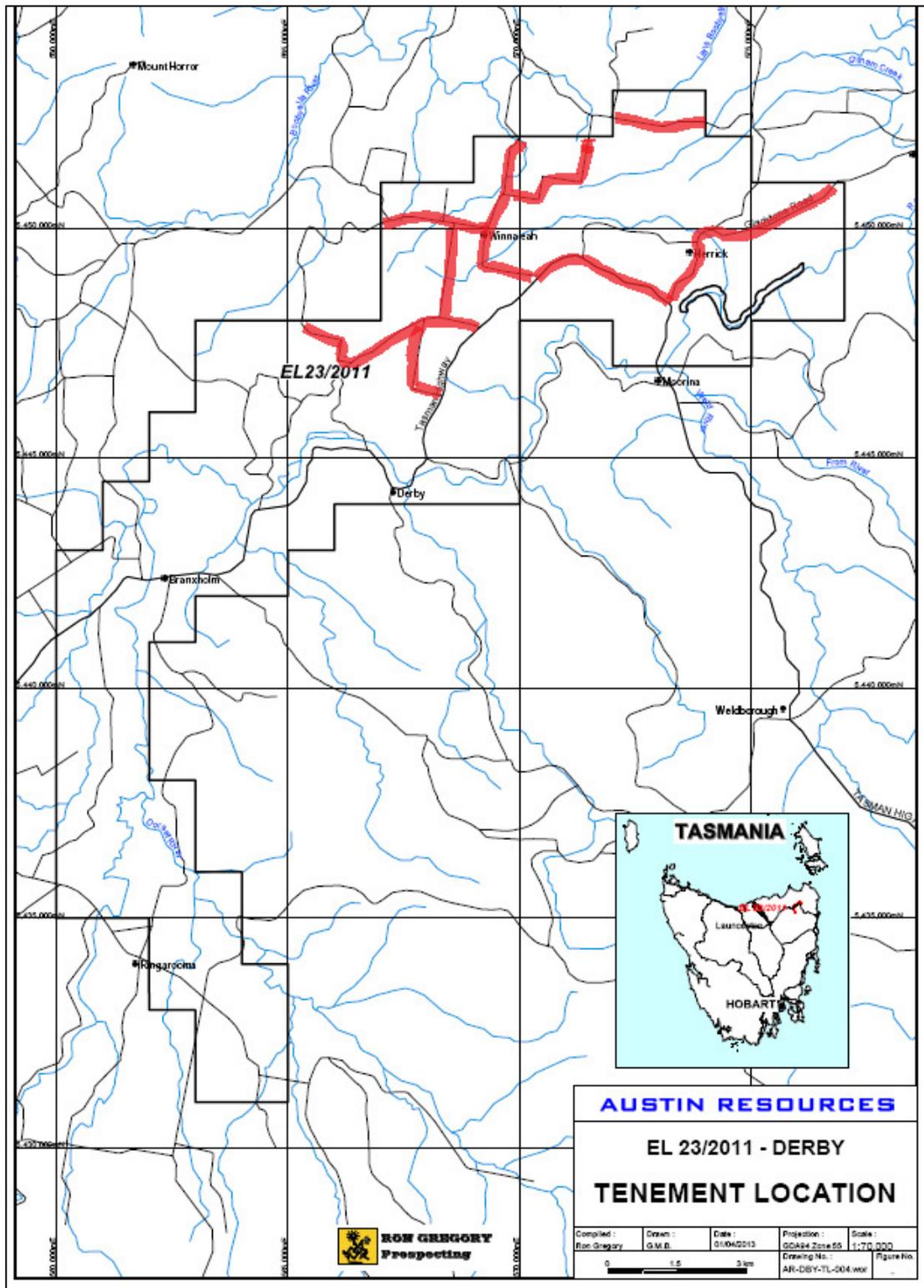


Figure 2: Location of Proposed Gravity Traverses

Environment

As there was no on ground exploration conducted during the reporting period, there was no rehabilitation required.

Expenditure in 2012-2013

Expenditure during the period was \$13,593 (Table 3).

Exploration Category	Description of Activity	Quantity	Expenditure (AU\$)
Office Administration			
Authority Management	Consultant Fees		
Office Activities			
Field Activities	Geological Mapping		
	Sampling		
	Equipment Hire		
	Accommodation and Travel		2,401
	Landholder Liaison		
	Geophysics		
	<i>Airborne</i>		
	Type		
	<i>Ground</i>		
	Type		
	Drilling (program cost)		
	RAB/AC		
	RC		
	Diamond		
Laboratory	Describe Analyses/Tests		
Salaries/Wages	Employees		1,892
	Contractors		9,300
		Grand Total	\$13,593

Table 3: Expenditure during the reporting period

Bibliography

Askins, P. & Stewart, J., 2007. *Report on Prospectivity of EL65/2004 Derby Deep Leads Tin Project*, s.l.: s.n.

Swensson, C., 2012. *Annual Report EL23/2011, Derby, North East Tasmania*, s.l.: s.n.