

# 2013 Partial Relinquishment Report

Derby Project

ASF Group Limited

Title: EL23/2011

Reporting Period From: 13 September 2011

To: 12 September 2014

Licensee: Austin Resources Pty Ltd

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

Report Date: 9 August 2014

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

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## 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.

As the relinquished portion of EL 23/2011 comprised mainly outcropping granitoids the deep lead potential was negligible and no further exploration is warranted by Austin Resources

## Keywords

File Name	
Location Name:	Derby
Environment of Mineralisation:	Deep Lead
Commodities:	Alluvial tin, Cassiterite, Gold
Exploration Methods:	Gravity traverses and geological mapping followed by selective drill traverses
Stratigraphic Name:	Blue Tier Batholith, Mathinna Beds, Tertiary Basalt
Lithologic Name:	S and I Type Granitoids, Quartz Mica Schist, Quartzite Turbidites and, Basalt
Geological Province:	Arthur Metamorphic Complex and Blue Tier Batholith
Geological Age:	Devonian, Ordovician to Devonian, Middle Eocene, Middle Miocene

**Table 1:** Key words associated with EL 23/2011

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# 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 109km<sup>2</sup>. The licence was transferred to Austin Resources Ltd., a wholly owned subsidiary of ASF Group Ltd. on 10 February, 2012. In 2014 the tenement was reduced by 42km<sup>2</sup> as shown in Table 2 and Figure 1

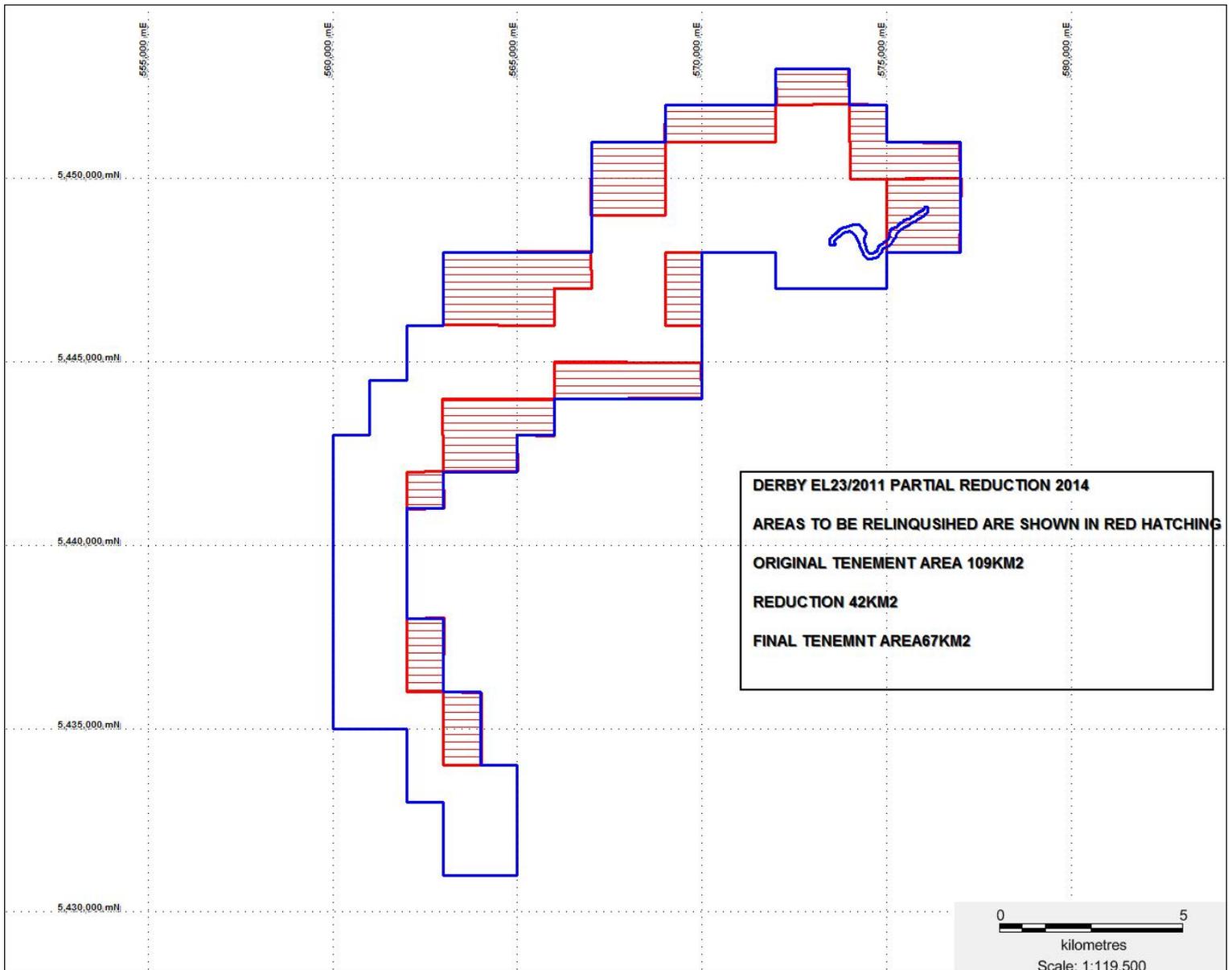


Figure 1 DerbyEL23/2011 showing t the reduced area as red hatching

Tenement	Reduced Area	Grant Date	Final Date
EL 23/2011	42	13/09/2011	12/09/2014

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 2).

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).



Figure 2 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. The area relinquished comprises primarily S and I type granitoids which have intruded metasediments of the Arthur Metamorphic Complex and as such have limited deep lead potential.

## GEOLOGICAL SETTING

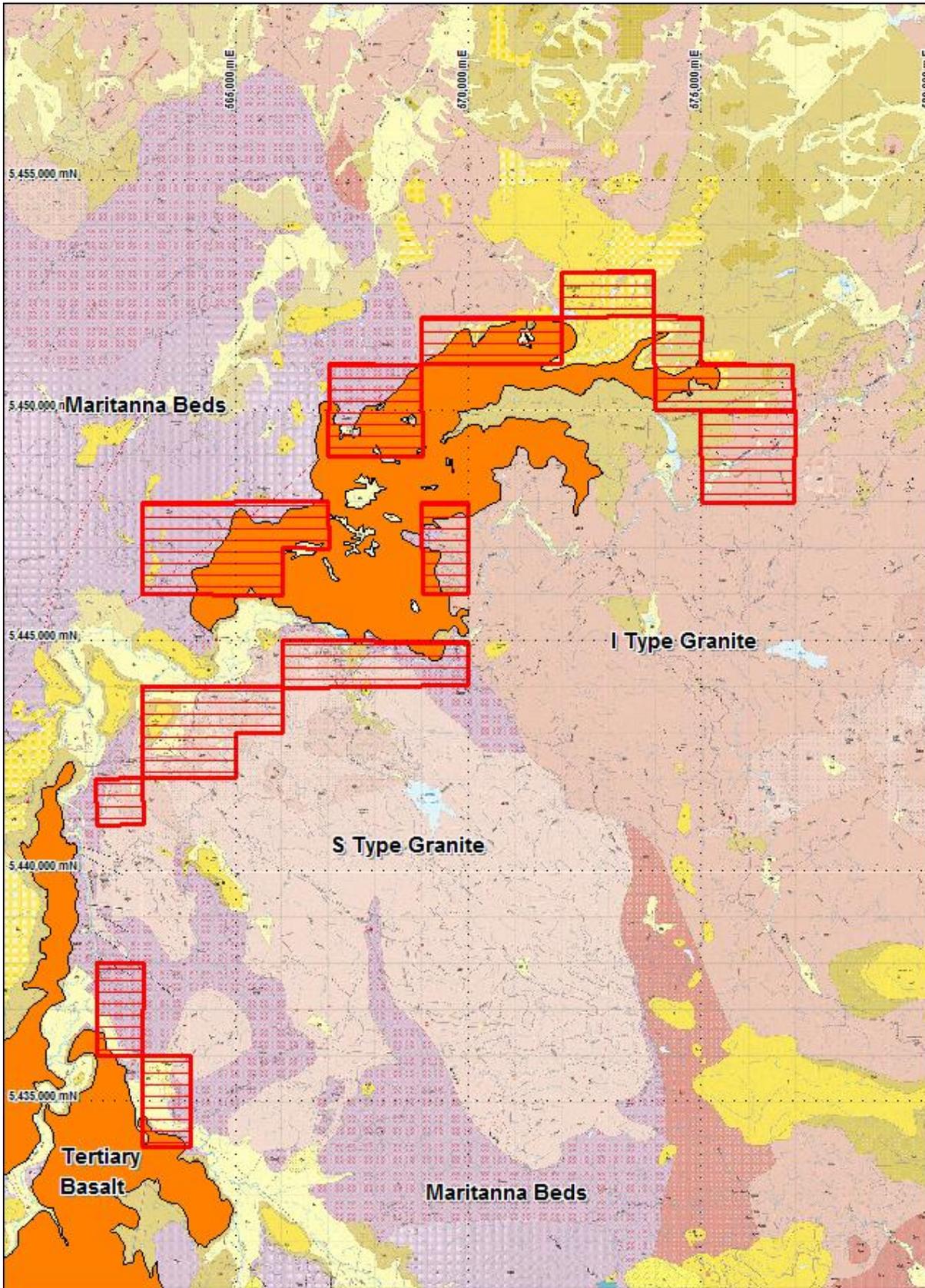
The geology and the mineralisation of the area have been well reviewed in studies undertaken by the previous holder of the licence area, Kintore Resources Ltd as EL 65/2004. The reader is referred to appendices 1 and 2 of the 2009 Annual Report for EL65/2009 lodged with Mineral Resources Tasmania for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

In summary, the Devonian S and I type 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.



**Figure 3** Geology of the relinquished portion of EL23/2011

## Past Production

There is no historical deep lead tin production from the relinquished area

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.

There has been no historical deep lead tin production from the relinquished portion of EL23/2011

## 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 and it was determined there is no deep lead potential within the relinquished portion of EL23/2011

## Exploration Completed During 2012-2014

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

## Environment

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

### Expenditure in 2012 – 2014 All Tenement

Expenditure during the period was \$39,365 (Table 3).

Exploration Category	Description of Activity	Quantity	Expenditure (AU\$)
Office Administration			2,853
Authority Management	Consultant Fees		5,000
Office Activities			5,000
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		13,892
	Contractors		10,219
		<b>Grand Total</b>	<b>\$39,365</b>

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.

Derriman, M, 2014. 3<sup>rd</sup> *Annual Report EL23/2011, Derby, North East Tasmania*, s.l.: s.n.

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Yap, E., 2013. 2<sup>nd</sup> *Annual Report EL23/2011, Derby, North East Tasmania*, s.l.: s.n.