



## Exploration Licence EL8/2014 at Pipeline Road Annual Report

30 July 2015  
to  
30 July 2016

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(1) Grange Savage River

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## INTRODUCTION

### *Exploration Rationale*

Grange's interest is focussed on the entire catchment of streams and drainage flowing southwards from the northern divide (Figure 2 Land tenure as at May 2016:) onto the northern extent of the existing Savage River mine lease 2M-2001. Planning for potential life of mine extensions indicate that due to the possibility that water inundation north of planned waste rock dumps, the mine lease may need to expand beyond existing northern mine lease limits.

This exploration licence EL8-2014 and the work conducted are aimed at conversion of this EL into a mine lease in the near future.

The following report summarises exploration activities completed at EL8/2014 at Pipeline Road during the second year of tenure (2015/16).

This document reports all activities using the GDA94 datum.

### *Licence Details*

Exploration licence EL8/2014 at Pipeline Road

Located at Pipeline Road 3km north of Savage River Tasmania.

ID: 23550

Area: 11 sq km blocks

Status: Granted 8 August 2014

Term: The term of the licence expires 29 June 2019

Reporting period: July 30 -2015 to July 30 2016

Tenement Holder: Grange Resources (Tasmania) Pty Ltd

Product categories: Category 1 - Metallic minerals and atomic Substances,  
Category 3 – Construction Materials; sand gravel and stone.

### *Location*

The Exploration licence EL8-2014 at Pipeline Road is located approximately 10.7km north by road of the Savage River Mine and concentrator. Savage River is located approximately 100km south west by sealed road from Burnie (Figure 2). The lease is accessed by the all-weather gravel road between Savage River and Corinna, and then by a bush track of approximately 2km.

Local topography in the Broderick Creek catchment is rugged, with a broad elevated plain to the north of the licence area and incised valleys and steep hills extending southwards. The drainage flows southward onto the Savage mine lease via McAuliff and Broderick creeks.

Regional vegetation includes undisturbed rain forest, wet eucalypt, acacia and open heath land. The immediate area of the prospect has previously been logged extensively approximately 20 years ago, with almost no mature trees present in the working area. Climate is wet temperate with an average annual rainfall of 1,950mm and mean monthly temperatures ranging from 3-19°C.



**Figure 1 Savage River Location Map**

#### Tenure

Exploration Lease EL 8/2014 “Pipeline Road” was granted to Grange Resources Tasmania Pty Ltd on 8<sup>th</sup> August 2014, following an open tender process on Exploration Release Area 959 ( ERA959). EL8/2014 comprises an area of 11km<sup>2</sup>. The licence encompasses the entirety of the Broderick Creek catchment north of and adjoining Mine lease 2M-2001 and provides continuous leasehold connecting EL8/2014 and the Savage River Mine Lease 2M/2001 as shown in figure 2 land tenure below.

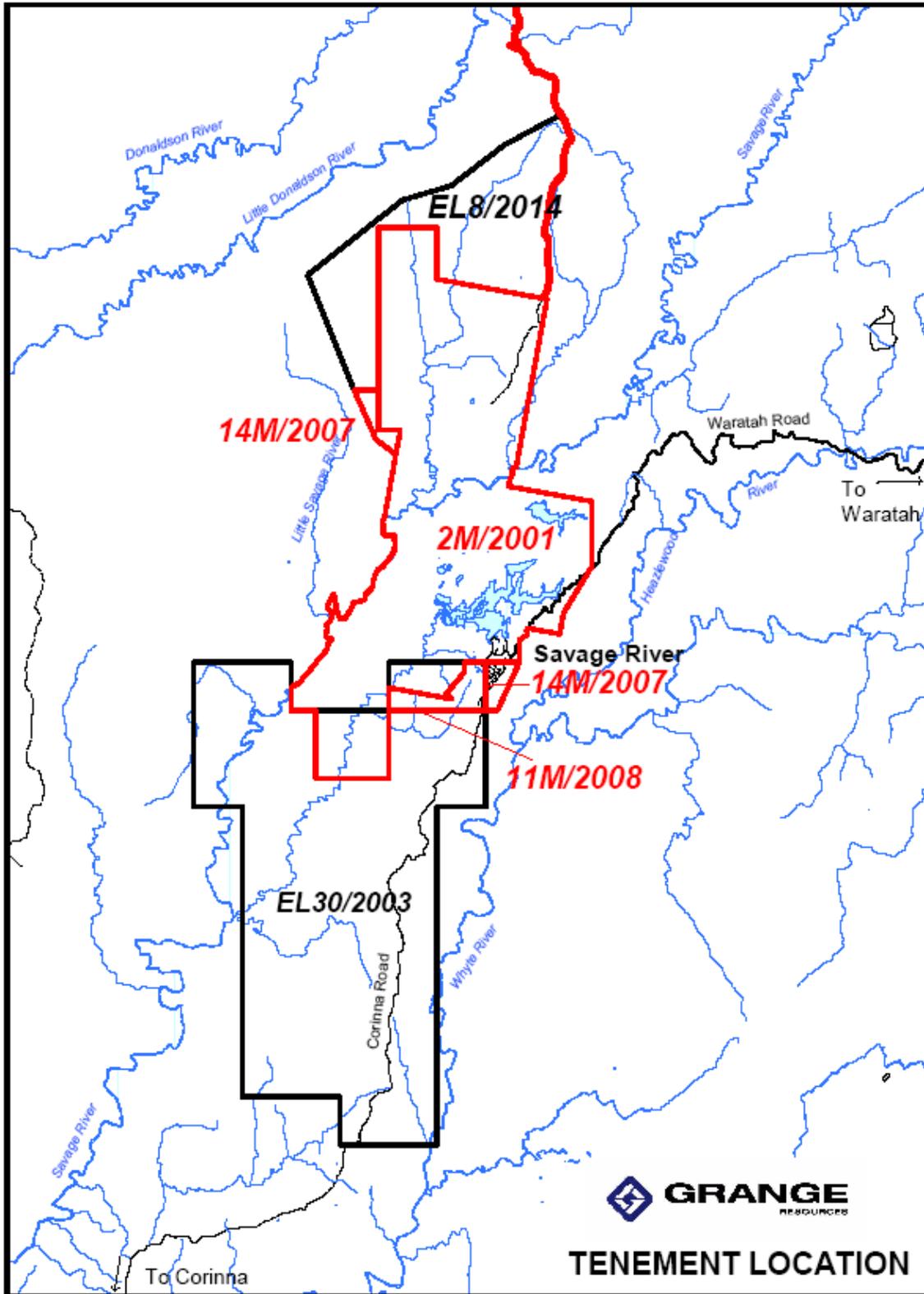
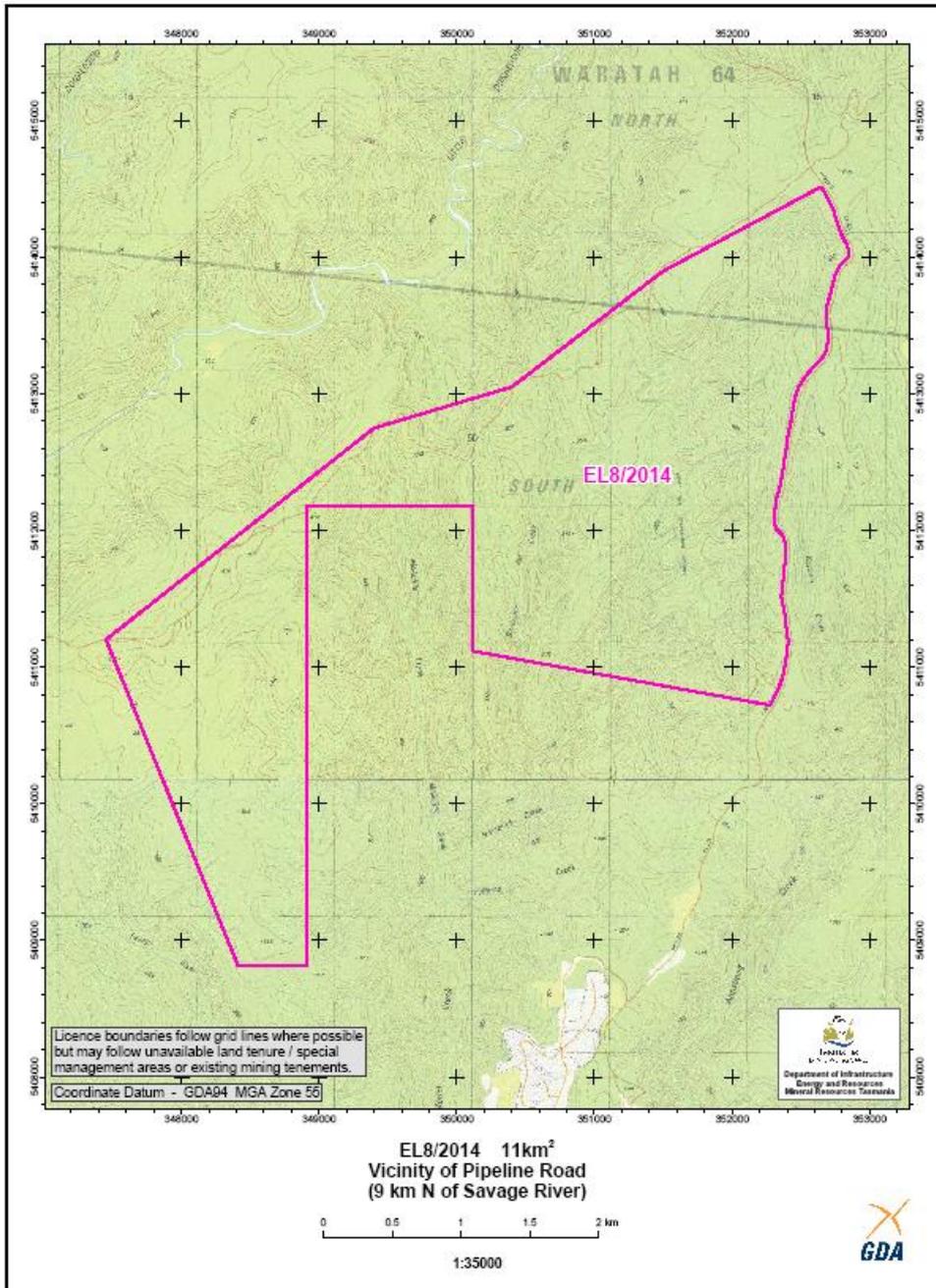


Figure 2 Land tenure as at May 2016  
 ( EL8/2014 shown top of page)

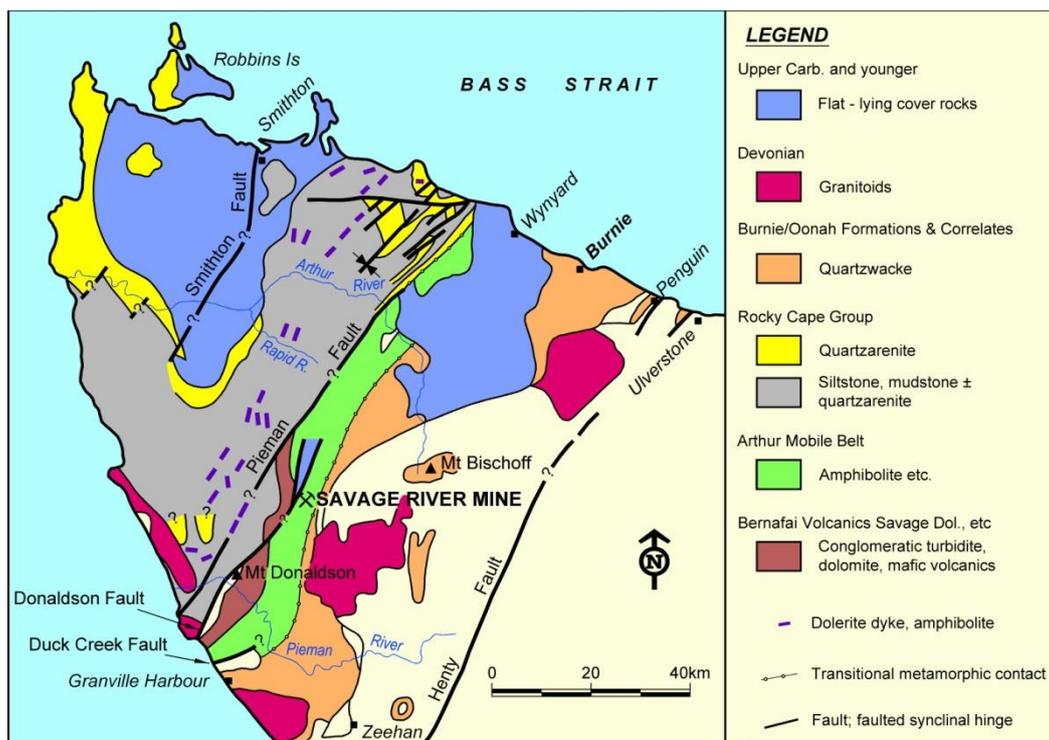


**Figure 3 Land Tenure EL8-2014 granted 8 August 2014**

## Geology

The project area covers that portion of the Arthur Metamorphic Complex (“AMC”) immediately to the north of the Savage River iron deposit. The complex is also known as the Arthur Lineament. It is an elongate zone that has been subject to multiphase metamorphism, tectonism, alteration, and veining. The central portion of the complex strikes north-northeast along the centre of the project area. Alteration was especially intense to the south of the tenement at Savage River, where iron deposits formed within the zone as the result of skarn replacement.

The original rock units within the complex were of Neoproterozoic age and have been interpreted to include basaltic volcanoclastics and/or lithic arenites, dolerite, and dolomite. Low grade regionally metamorphosed Neoproterozoic clastic, sediments, basalts, and dolomite are present, and strike parallel to the complex, both to its west and east. Cambrian mafic and ultramafic rocks are to the southeast of the project area and have been prospected and mined for platinum group elements and base metals.).



**Figure 4 Geology**

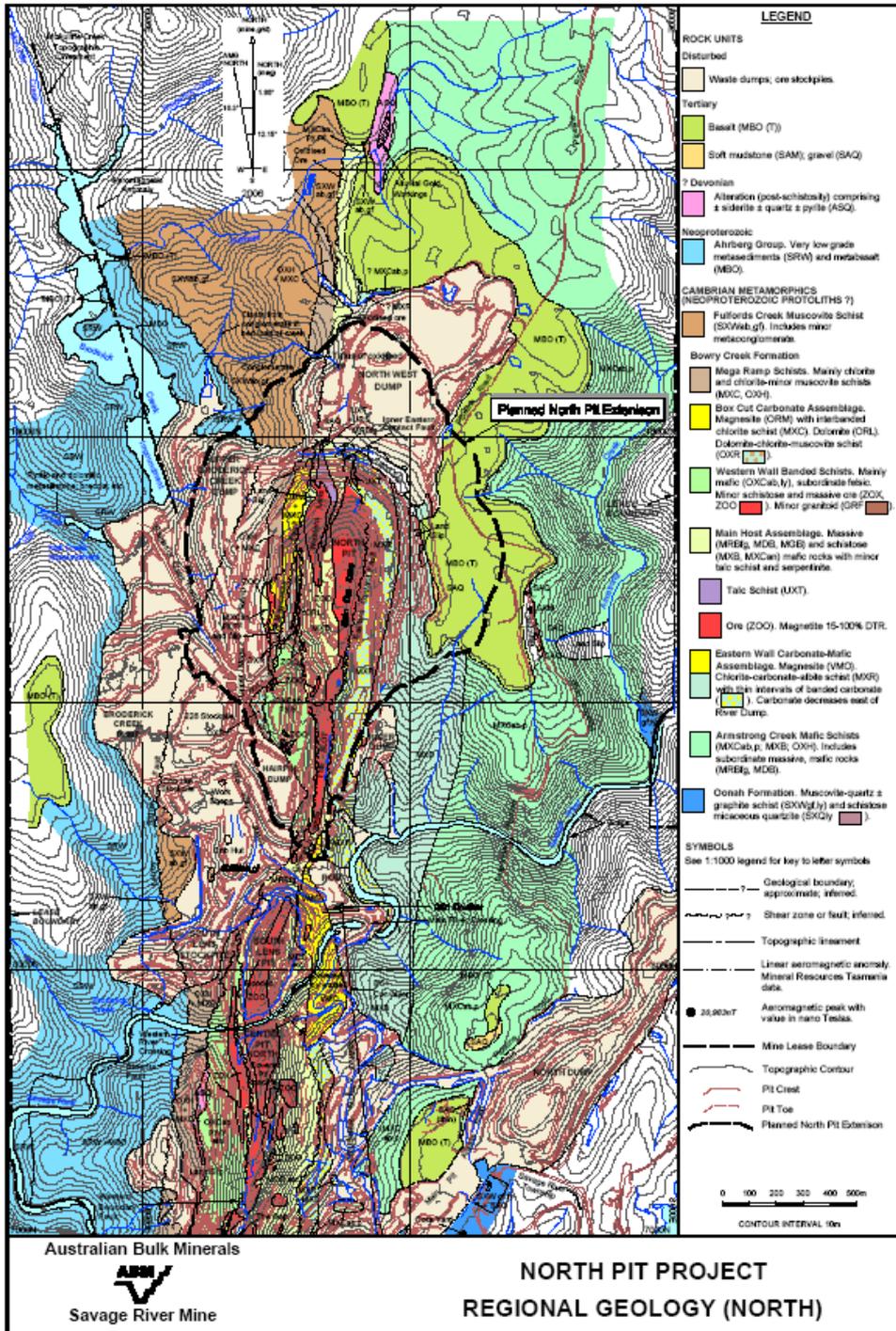


Figure 5 Local Mine Scale Geology

Review of previous work

Prior to Current Tenement- Literature search summary 2015

Specimen Reef Field was discovered by Thomas Greenway and Joseph Thunder in late 1882 and was visited by Government Geologist G. Thureau in 1884.

A thorough discussion of the field at that time is given in the following references;

- Thureau, 1884, pp3-4.
- Report of the Secretary of Mines for 1896-97, p.xlvii.

A century later, Industrial Mining and Investigations reported on the Specimen Reef Field as well as other local prospects then held under tenement EL4/61.

During the late 1960's to 1982 Industrial Mining and Investigations ( then Savage Resources) completed geological, geochemical and geophysical surveys Geochemical surveys including stream sediment surveys at Davis and Specimen Creeks in 1981-2 with discouraging results.

In 1982, 15 diamond drill holes were drilled over a 600m strike length at Specimen Reef.

Only one significant result was DDH SPC1, as a narrow but high grade gold intersection; 0.2m @ 910g/t Au.

Savage Resources attempted to deepen several holes in 1989 after discovering the reef dipped steeper than originally targeted, with limited success, such that only 3 holes penetrated the reef. Savage concluded in 1988 ( prior to deepening the holes) that most gold occurrences were like Specimen Reef; as narrow flat-lying carbonate-magnetite-gold zones with very little quartz. They further concluded that there was little scope for a bulk mineable gold target, existing as two narrow gold zones.

In 1997, GoldStream Mining NL / Titan Resources NL completed two diamond drill holes, intersecting 2m @ 0.56g/t Au in one hole and only 0.05g/t Au from the reef position in the second hole.

The aero-magnetic interpretation indicates that Specimen Reef is within a northeast trending structure which may extend for up to 2km in either direction.

No potentially economic magnetite was encountered in any of the holes drilled.

In June 2007 Regency Resources filed a final report on EL11/2005 and stated that ;"Within EL11/2005, magnetite having the resource potential as defined at Savage River is unlikely". The identified magnetite targets do not suggest a high probability for development to sustain a stand-alone operation, but smaller lenses may occur. Regency recommended geologically controlled airborne magnetic and gravity modelling focussing on a 2-3km stretch under the Comstock/Pineapple Creek area that has a prominent but low intensity magnetic signature. (This may be influenced by capping Tertiary basalts. )

This work was never done.

ref: EL11-2005 Specimen Reef 2010SavageRiverAnnual1; John Doppel 2009

1999 MRT ; An archaeological survey of the historic Specimen Reef Goldfield. Parry Kostoglou. Specimen Creek

Exploration Completed during the previous Reporting Period 2014-2015 on the current tenement;

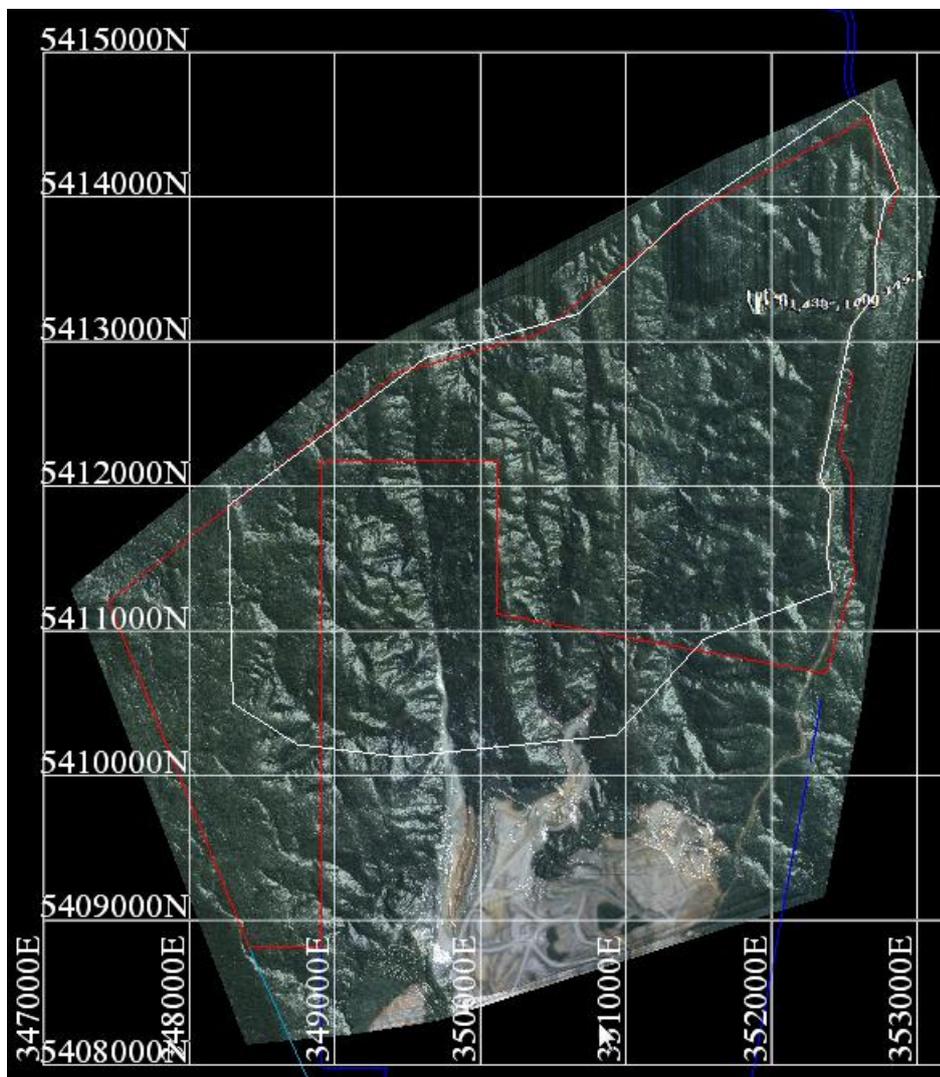
Work completed 2014-15 consisted of:

- a) a LiDAR survey of the tenement area to aid in long term planning and exploration planning and
- b) a desktop geological study of previous work in the area.
- c) Two reconnaissance geology surveys were conducted in early March 2015.
- d) A prospectivity analysis ( 2014-15)

Details of this work may be found in the annual report for 2014-2015

**Exploration Completed during the Reporting Period 2015-2016;**

*The work completed in 2015-2016 consisted of a large botanical and flora/Fauna survey of the majority of the area of EL8-2014 as depicted by the white outline in figure 8 below.*



**Figure 6 Study Area (white) over ML 2M-2001 (blue) and EL8-2014 (red)**

The botanical and flora/fauna study adjoins (and overlaps in areas) previous botanical and flora/fauna study areas for the Savage River mining lease 2M-2001 immediately south of the EL. The area covered by this most recent survey is within the white outline and covers most of EL8-2014 and some of Lower Broderick Creek on the mine lease (2M-2001).



## Expenditure:

M:\Geology\Exploration Drilling\Exploration\Quarterly_Costs\2016\MRT_costs_Mar2016.xlsx\EL8-2014 Reporting 15-16		Actuals		Actuals	Actuals	Estimates	Total for
Exploration Quarterly Report EL8/2014 Pipeline Road		Q3 2015	Q4 2015	Q1 2016	Q2 2016		reporting
4 Quarters Q3 2015 to Q2 2016(est)		July-Sept	Oct-Dec	Jan-Mar	Apr-Jun		
1. Geoscientific Costs	Geology	\$ -	\$ -	\$ 2,000	\$ 2,000		\$ 4,000
	Geochemistry	\$ -	\$ -	\$ -			\$ -
	Geophysics	\$ -	\$ -	\$ -	\$ -		\$ -
	Remote Sensing				\$ -		\$ -
	<b>Total</b>	\$ -	\$ -	\$ 2,000	\$ 2,000		\$ 4,000
2. Drilling & Gridding Costs	Gridding	\$ -	\$ -	\$ -	\$ -		\$ -
	Drilling						
	Diamond	m	0	0	0		\$ -
	Reverse Circulation	m	0	0	\$ -		\$ -
	<b>Total</b>	(see note below)	\$ -	\$ -	\$ -		\$ -
3. Land Access Costs							\$ -
4. Rehabilitation Costs							\$ -
5. Feasibility Study Costs	Flora and fauna study-North Barker	\$ 15,910		\$ -	\$ -		\$ 15,910
6. Other Costs							\$ -
	<b>Totals</b>	\$ 15,910	\$ -	\$ 2,000	\$ 2,000		\$ 19,910
9. Cumulative Expenditure at time of last report		\$ 45,993	\$ 61,903	\$ 61,903	\$ 63,903		
Total expenditure to date	(sum of 8 and 9)	\$ 61,903	\$ 61,903	\$ 63,903	\$ 65,903		
<b>Exploration Progress Report</b>							
Q3 2015	Flora and fauna study completed Sept 2015 as part of requirements for a possible DPEMP to extend mine lease to the Broderick catchment.						
Q4 2015	No activity						
Q1 2016	Preparation (initial) of exploration annual report						
Q2 2016	Compilation of annual report						
M:\Geology\Exploration Drilling\Exploration\Quarterly_Costs\2016\MRT_costs_Mar2016.xlsx\EL8-2014 Reporting 15-16							

**Table 1 EL8-2014 Quarterly Expenditure Report-July2015-May 2016**

Planned expenditure on the exploration licence was \$15,000 in each of the first two years, namely:

**Yr 1** Reconnaissance mapping (\$10,000), literature review and analysis of existing database (\$5,000) totalling \$15,000 (2014-2015) and;

**Yr 2** Follow-up field work to investigate areas of interest identified in Yr1 (\$15,000) (2015-2016)

Actual expenditure in Yr 1 included \$10,000 on geologists for the literature review, reconnaissance visits and field surveying as well as \$32,660 for remote sensing consisting of the LiDAR survey. In year 2 (2015-2016), a botanical survey and a flora and fauna survey were completed for \$19,910, bringing the total spent in the first two years of the license to \$62,570. (vs planned \$30,000) Thus, the total spend in yrs 1 and 2 exceeds the proposed spend for the first two years by over \$32,000. (licence application document).

The revised proposed work plan for year 3 is outlined in the next section.

Work Plan for July 2016-July 2017 ( Year 3 of the license)

*The exploration work plan has the objective to follow-up field work to investigate areas of interest identified in years 1 and 2 ; being:*

- 1) *Evaluate the LiDAR and other remote sensing data sets to complete a geological compilation on the licence area including recording and classifying the geo-hazards on the exploration licence.*
- 2) *Limited reconnaissance geological mapping to evaluate by surface outcrop mapping the weathered soil depth and surface geology along the stream catchments in order to evaluate the foundation for potential waste dumps and/or areas that may eventually be inundated (or have the potential for inundation during flooding events).*

Given the expenditure of \$42,660 in year 1 and \$19,990 in year 2, Grange would like to suggest that the expenditure requirement for yr 3 be limited to \$10,000 for a desktop study(1) and limited reconnaissance mapping(2) to complete the compilation as above.



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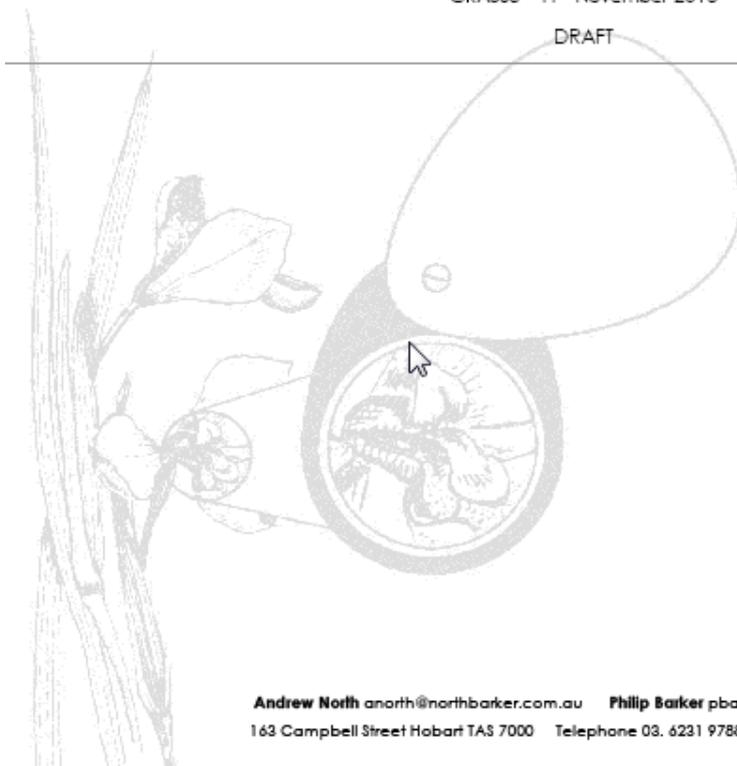
Savage River Mine  
North Pit Extension

**BOTANICAL SURVEY AND FAUNA HABITAT ASSESSMENT**

For Grange Resources

GRA003 – 11<sup>th</sup> November 2015

DRAFT



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