

**R. A. Gregory**  
**Exploration Licence 9/2013 Priority**  
**Partial Relinquishment Report No 2.**

**Ken Morrison**  
**22 November 2015**

## 1. Introduction

EL 9/2013 was originally a 205 km<sup>2</sup> Categories 1 and 5 Exploration Licence in the Priory area, northwest of St Helens (Figure 1). The EL was acquired by R.A. Gregory primarily to explore primarily for sapphire and zircon gemstones associated with Tertiary basalts and detrital sediments derived in part from the weathering products of basalts. Alluvial tin was a secondary target.

Exploration in licence year 1, ending on November 7, 2014, reviewed existing aeromagnetic data and field checked a number of discrete magnetic highs interpreted to potentially be generated by basalt plugs. The results effectively sterilised a substantial portion of the EL and consequently a partial surrender of the EL was submitted, reducing the EL to an area of 70 km<sup>2</sup> (Figure 2).

In licence year 2 exploration continued to focus prospectivity for potential small deposits of gemstones and/or tin, in two portions of the EL (Morrison, 2015a), resulting in an additional area to be surrendered and a residual area of 11 km<sup>2</sup> within which all future exploration will be conducted (Figure 3).

This report documents the area proposed for the current relinquishment and summarises the exploration completed in the EL to date. A more comprehensive account of all exploration within EL 9/2013 to date is included in the year 1 and year 2 Annual Reports.

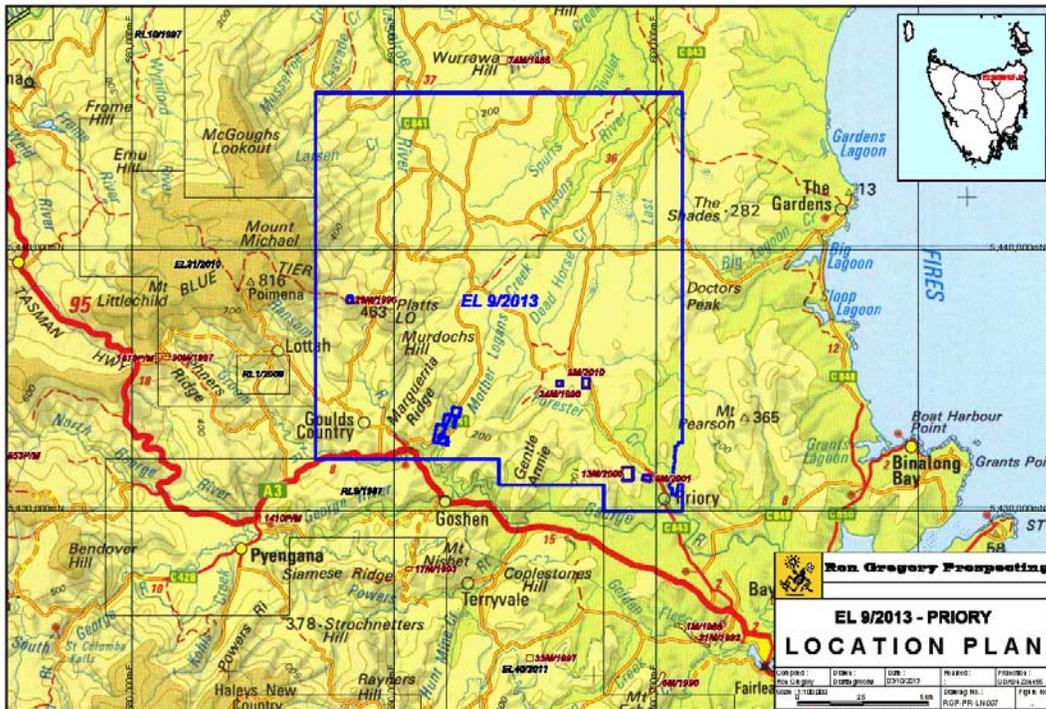


Figure 1. Original EL 9/2013 Location Map

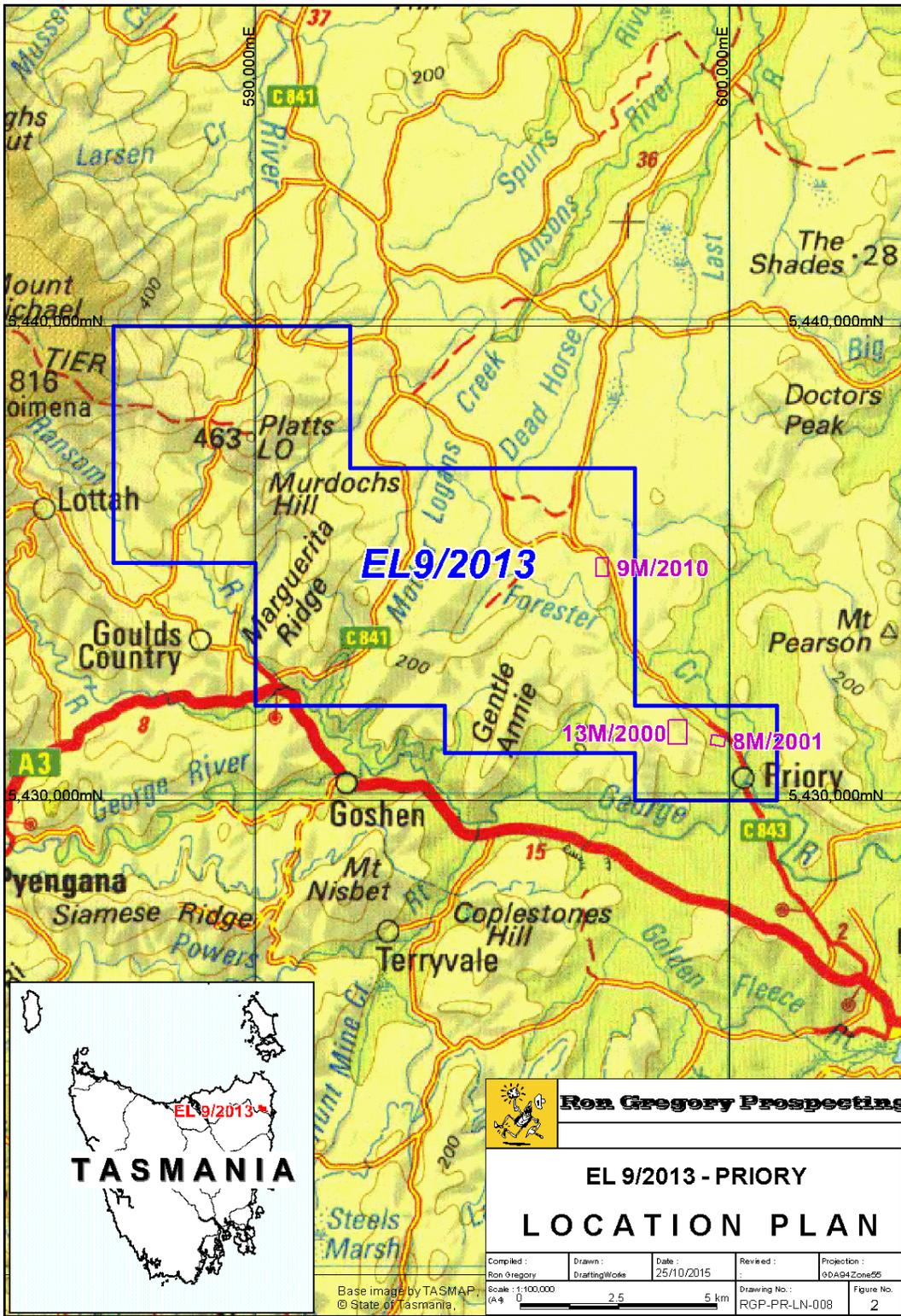
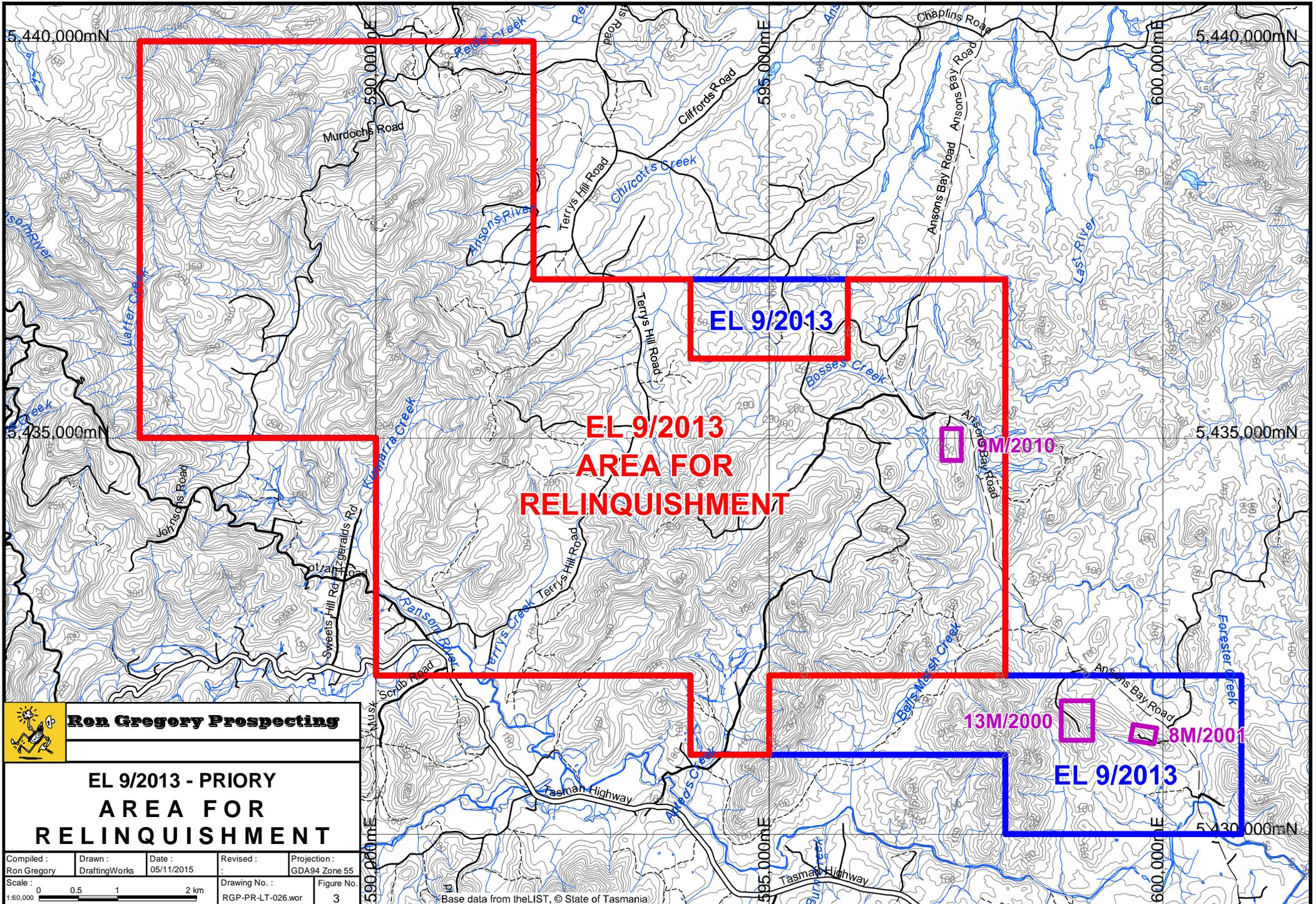


Figure 2 Current EL9/2013 Location Map




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**EL 9/2013 - PRIORY  
AREA FOR  
RELINQUISHMENT**

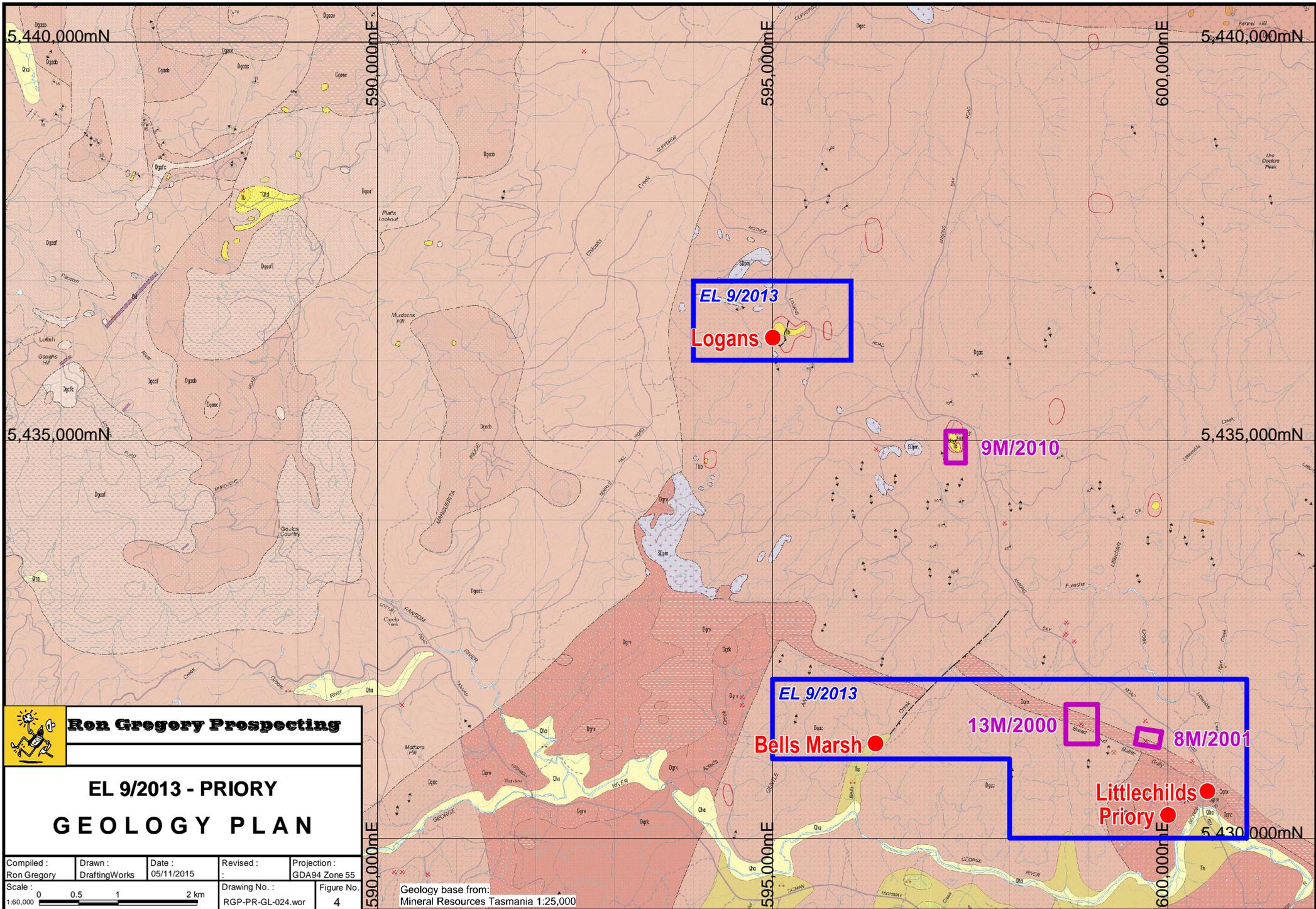
Compiled : Ron Gregory	Drawn : DraftingWorks	Date : 05/11/2015	Revised : :	Projection : GDA94 Zone 55
Scale : 0 0.5 1 2 km		Drawing No. : RGP-PR-LT-026.wor		Figure No. : 3

Base data from theLIST, © State of Tasmania

## 2. Geology

Figure 4 shows the portion of the 1:25,000 MRT Blue Tier and Binalong geology sheets covered by EL 9/2013. Basement rocks are predominantly Devonian granites with minor rafts and roof remnants of contact metamorphosed Mathinna Supergroup meta turbidites, scattered through the central part of the EL. Several small basalt outcrops are mapped and those exposed at Logans and Halfway quarries are pipe-like bodies intruding through the granite, and containing abundant inclusions of olivine and spinel. Based on whole rock and trace element composition the plugs at the Logans and Halfway Hill quarries are assigned an IUGS classification of basanites (John Everard, MRT, pers. comm.). These two sites were used to calibrate the magnetic responses which generated the additional features field checked during 2014 (Figure 4).

A small outcrop of Tertiary sediment exists in the far southeast corner of the EL and is likely to be a distal fragment of the alluvial deep lead system (Thureaus Lead) which hosts the abandoned placer tin mines of the St Helens district. Minor Quaternary alluvial sands, predominantly granite derived, overlie basement around some of the larger creeks. Minor occurrences of detrital sapphire and zircon are known from amateur fossicking in Cenozoic stream gravels in the southeast part of the EL, within the area of EL 9/2013 to be retained.



 **Ron Gregory Prospecting**

# EL 9/2013 - PRIORY GEOLOGY PLAN

Compiled : Ron Gregory	Drawn : DraftingWorks	Date : 05/11/2015	Revised :	Projection : GDA94 Zone 55
Scale : 0 0.5 1 2 km			Drawing No. : RGP-PR-GL-024.wor	Figure No. : 4

Geology base from:  
Mineral Resources Tasmania 1:25,000

### **3. Exploration Results from the Area to be Relinquished**

No known gemstone occurrences exist within the area proposed for relinquishment and no known reports on exploration for gemstones, prior to the current work, have been identified. During licence years 1 and 2, discrete magnetic features interpreted as possible plugs with magnetic signatures similar to the basalts at Logans and Halfway Hill (Figure 4), were field checked. All sites were determined to be unprospective for gemstones on the basis of some combination of; no basalt at surface, basalt interpreted as massive olivine lava, or nearby alluvial sediments showing no indications of a basalt source (Gregory, 2015, Morrison, 2015a and b).

Van Dieman Mines Pty Ltd, within former tenement SEL 22/1999, conducted some exploration for sapphires in the Priory area but their work was located south of Priory and outside of EL9/2013 (Gregory, 2015).

The area to be relinquished is outlined on Figure 3. A more comprehensive account of the aeromagnetic interpretation which generated the anomalous potential basalt features is included in the EL 9/2013 Annual Reports for licence years 1 and 2, which will remain under Closed File status for the duration of the EL.

### **4. References**

Gregory, R., 2015. EL 9/2013 Priory Annual Report 2014, Ron Gregory Prospecting.

Morrison, K., 2015a. Exploration Licence 9/2013 Priory, Partial Relinquishment Report.

Morrison, K., 2015b. Exploration Licence 9/2013 Priory, Annual Report Licence Year 2.