

Annual Report  
for EL40/2008 East Lisle  
for the Period 13 January 2009 to 12 January 2010

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## **ABSTRACT**

EL40/2008 East Lisle is located 25km north-east of Launceston in north-east Tasmania and covers Mathinna Group meta-sediments. The company's main focus is gold mineralisation.

Work completed during the period comprised compilation and review of previous exploration data and field reconnaissance. Compilation and review of data highlighted areas in the north-west and central west with sufficient potential to justify further work. Field reconnaissance was carried out in these areas.

## **KEYWORDS**

Geology/Mineralisation

Mathinna Group

Minerals

Gold

Deposits/Occurrences

Lisle

## **COORDINATES**

All lat/long co-ordinates in this report refer to the GDA94 Datum

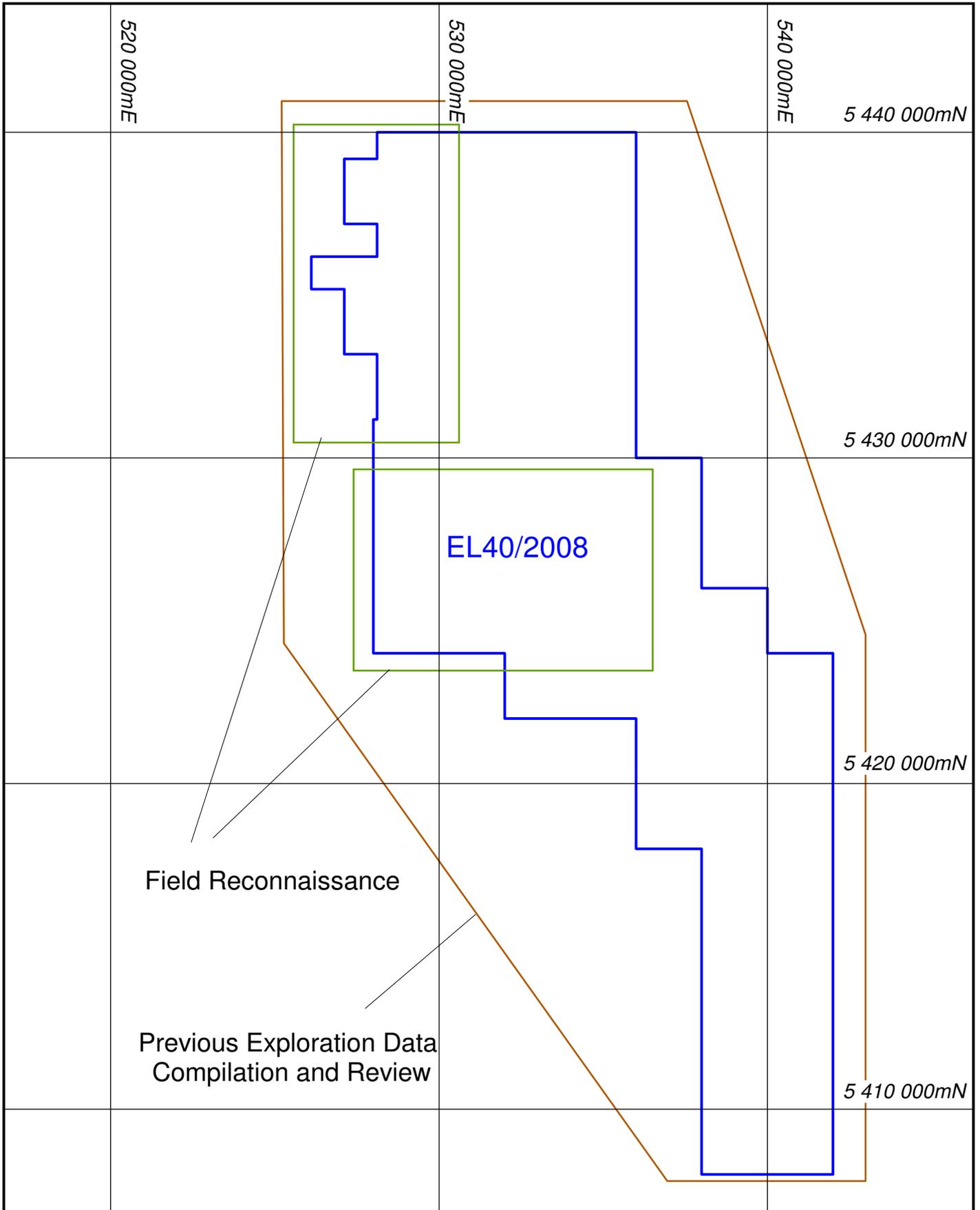
All AMG co-ordinates in this report refer to the GDA94 - Zone55

## FILE SUMMARY LIST

File Name	Format	Contents
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### **SUMMARY OF ACTIVITIES FOR EL40/2008 EAST LISLE FOR THE PERIOD 13 JANUARY 2009 TO 12 JANUARY 2010**

- Compilation and Review of Previous Exploration Data
- Field Reconnaissance



GDA94-ZONE55



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**GREATLAND PTY LTD**

**EL40/2008 EAST LISLE**

Exploration Index Map

## CONTENTS

	page
1.0 Introduction	1
2.0 Tenement Details	1
3.0 Location and Access	1
4.0 Geology and Mineralisation	2
5.0 Previous Exploration	5
6.0 Work Carried Out During the Period	6
7.0 Conclusions	6
References	6

## FIGURES

Figure 1	Project Location Map	in text
Figure 2	Regional Geology	in text
Figure 3	Project Geology	in text

## TABLES

Table 1	Tenement Details	1
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## 1.0 Introduction

This report details the exploration activities completed within EL40/2008 during the period 13 January 2009 to 12 January 2010. The lease is located 25km north-east of Launceston in north-east Tasmania.

The tenement covers Mathinna Group meta-sediments. The company's main focus is gold mineralisation.

Work completed during the period comprised compilation and review of previous exploration data and field reconnaissance.

## 2.0 Tenement Details

EL40/2008 East Lisle was applied for by Greatland Pty Ltd during May 2008 and was granted during January 2009. A variation in licence area was approved in June 2009. The tenement covers an area of some 225 square kilometres. Tenement details are shown in Table 1.

Table 1 – Tenement Details

Tenement	Holder	Date Applied	Date Granted	Size
EL40/2008 East Lisle	Greatland Pty Ltd 100%	20 May 2008	13 Jan 2009	225km <sup>2</sup>

## 3.0 Location and Access

EL40/2008 East Lisle is located 25km north-east of Launceston in north-east Tasmania (Figure 1). The tenement forms the Company's East Lisle project (Figure 2). The bulk of land within the tenement is logged state forest and timber plantation, with minor areas covering private farming land.

The project lies within the Tasmania NE (SK55-21) 1:250,000 map sheet, and the 1:100,000 map sheet of St Patricks (8315).

From Launceston, access to the project area is by sealed road to Targa. Formed local roads and logging tracks provide good access within the project area.

#### **4.0 Geology and Mineralisation**

The East Lisle project area covers Mathinna Group rocks (Figure 3) which comprise metamorphosed sandstones, siltstones and mudstones of late Cambrian to Early Devonian age. The Mathinna Group metasediments, together with intrusive Devonian granites, cover much of the north eastern parts of Tasmania and are considered to be equivalent to rocks of the Melbourne Trough which host the bulk of Victoria's gold mineralisation. Goldfields in north eastern Tasmania hosted by the Mathinna group or adjacent rocks of the same age include Beaconsfield, Lefroy, Mangana, Mathinna, Alberton, Warrentinna, Forester, Waterhouse, Scamander and Portland (Figure 2).

The NE Tasmanian terrain consists of autochthonous Ordovician to Early Devonian quartz-wacke to pelitic turbidites known as the Mathinna Supergroup, which are intruded by Devonian granitoid batholiths. These older units are overlain by Tertiary basalts occupying paleovalleys.

The Mathinna Supergroup has been multiply deformed, thought to occur prior to intrusion of the Scottsdale Batholith, a composite granitoid batholith intruded during the Devonian. The Mathinna Supergroup is locally hornfelsed in contact metamorphic aureoles around the granitoid plutons. Quaternary deposits include alluvial and colluvial valley fill.

The Mathinna beds generally consist of a monotonous sequence of graded, quartz-wacke turbidites with lesser siltstones and black shales. The Mathinna

beds are locally hornfelsed with chlorite after cordierite spotting common within hundreds of metres of contacts with the Devonian intrusives. Granitic to dioritic intrusives are generally deeply weathered and rarely outcrop.

Rare outcrop and core intersections indicate the intrusives are complex and heterogenous with numerous inclusions of hornfelsed Mathinna beds and dark diorite. Textures vary from equigranular, feldspar-biotite-quartz granodiorites to feldspar-hornblende-biotite porphyritic diorites. Intrusions occur as dykes and small cupolas or porphyritic apophyses, possibly off a larger buried body. The largest known intrusive of this type occurs in the Lisle Valley, and measures approximately 4km by 4 km. In terms of Rb and Sr the Lisle granodiorites are the least fractionated of the Tasmanian Devonian Granitoids.

The Lisle-Golconda goldfield is situated approximately 30 km north-east of Launceston in north-east Tasmania. The goldfield was the site of considerable mining activity in the latter half of the 19th century, and contains a variety of different styles of gold mineralisation. A number of historical gold mining areas occur within the region (Roach, 1992). These include the Lisle Goldfield, and to the north outside the licence are Cradle Creek, Lone Star, Golconda, Panama, Denison and Lebrina goldfields.

The tenement area lies to the west of the bulk of the Devonian Scottsdale Batholith which intruded the Mathinna Beds, a thick, poorly-documented succession of regionally metamorphosed turbiditic sediments of presumed Siluro-Devonian age. The Mathinna Beds crop out over much of the tenement area, where they consist of steeply-dipping, north-west trending beds of quartzite with minor finer-grained interbeds. Tertiary basalt flows are present as erosional remnants. The topography consists of a deeply-dissected plateau approximately 600 m above sea level.

Many of the known sites of gold mineralisation show regionally a close spatial association with small cupolas of granodiorite which have intruded the Mathinna Beds up to 10 km west of the main boundary of the Scottsdale

Batholith. The granodiorite is highly weathered at the surface, and its outcrop is often obscured by surficial sediments. Granodiorite was exposed by mining activities in the Lisle, Golconda, Panama and Lone Star goldfields. The outcropping areas of granodiorite are interpreted to be the apical regions of a larger subsurface body, the extent of which is roughly delineated by the extent of the mapped area of hornfelsed sediments.

A particularly prominent feature of the intrusions is their surface expression. Marked topographic depressions occur in all areas where the granodiorite is exposed. The strongly hornfelsed sediments within the contact aureole of the intrusion are resistant to both chemical and mechanical weathering, while the granodiorite appears to be particularly susceptible to chemical breakdown, and is consequently eroded. The largest of these features is associated with the intrusion at Lisle (Figure 3). Here the resultant crater-like feature has dimensions of approximately 4 x 5 km and a depth of up to 350 metres. The slopes on the flanks of the depression are steep, and considerable thicknesses of talus have been shed from the enclosing ridges into the basin, the floor of which is flat or gently undulating. The single hydrological outlet from the Lisle valley is to the north through a narrow, deeply incised gully. The smaller intrusions, such as at Panama or Golconda, display the same basic form as the intrusion at Lisle.

Gold mineralisation in the Lisle-Golconda goldfield is unusual for mining districts in northeast Tasmania in that more than 95% of all the gold recovered was won from alluvial workings. The majority of this production came from the Lisle goldfield, which has produced an estimated 250,000 ounces of gold. Despite the high alluvial production no obvious hard rock source of the alluvial gold was not found.

Gold was first discovered at Lisle in 1879 by Charles Bessell (Roach, 1992). Initial returns from claims on the floor of the valley of Lisle Creek were very high and a gold rush ensued. By the end of 1879 some 3000 miners were working claims within the field. By 1885 most of the highly productive ground had been worked over, and the majority of claims were abandoned. By 1900

the field was largely abandoned. A large amount of prospecting work was carried out by miners in the 1880s with the aim of finding the source of the gold at Lisle. With the exception of a few thin quartz veins, both within the granodiorite and the adjacent Mathinna Beds, no source of the detrital gold was discovered.

The aim of Greatland is to determine the hard-rock source for the alluvial gold.

## **5.0 Previous Exploration**

Previous exploration activities in the area surrendered were carried out by Mineraux (Hull, 1970), Australian and New Zealand Exploration Company (Callow, 1971), Oceanic Exploration (Chronic and Gallagher, 1971), Comalco (Askins, 1977), CRA Exploration (Broadbent, 1982), Beams (1983), BP Minerals (Storer, 1984), Placeco (Morrison 1988 and 1989), Billiton (Randell, 1991), Macmin (Macdonald, 1994), CSR Ltd (Ellis, 1995), Holden (1995, 1996, 1997, 1998, 1999), and Bardenhagen (Fulton, 2000).

Sporadic gold anomalism and narrow gold mineralised quartz veins were located by the previous exploration work. Compilation and review of data highlighted areas in the north-west and central west with sufficient potential to justify further work.

A relevant aeromagnetic and radiometric survey was flown by Mineral Resources Tasmania in 2007. Interpretation of the data sets was completed by Godbear (2008), Leaman (2008) and Webster (2008). The reader is referred to these reports.

## **6.0 Work Carried Out During the Period**

Work completed during the period comprised compilation and review of previous exploration data and field reconnaissance. A summary of previous exploration work is provided above.

Field reconnaissance was carried out in the north-west and central west of the tenement. Approximately two dozen rock chip samples were collected and results will be presented in the 2011 annual report.

## **7.0 Conclusions**

EL40/2008 East Lisle is located 25km north-east of Launceston in north-east Tasmania. The tenement covers Mathinna Group meta-sediments. The company's main focus is gold mineralisation.

Work completed during the period comprised compilation and review of previous exploration data and field reconnaissance. Compilation and review of data highlighted areas in the north-west and central west with sufficient potential to justify further work. Field reconnaissance was carried out in these areas.

## **References**

Askins, P.W., 1977. EL25/76 Lisle Final Report on Exploration. Comalco Ltd, pp8. (TCR77-1238)

Beams, J.E., 1983. EL4/80 Final Report. Beams, pp1. (TCR83-1891)

Broadbent, G., 1982. Pipers River EL53/80 Geological Report for Year Ending 17th December 1982. CRA Exploration Pty Ltd, pp9. (TCR83-1955)

- Callow, K.J., 1971. Report on Exploration Licence 32/71, Diddleum Plains, Tasmania. Australia and New Zealand Exploration Company, pp1. (TCR71-0799)
- Chronic, J. And Gallagher, A.V., 1971. A Molybdenum Prospect in Tasmania. Oceanic Exploration Pty Ltd, pp12. (TCR71-0826)
- Ellis, P.D., 1995. Assorted Stream Sediment Geochemistry, Tasmania Wide. CSR Ltd, pp300. (TCR95-3711)
- Fulton, R., 2000. Annual and Final Report EL1/99 Sideling Range to 12/4/2000. FC Bardenhagen, pp10. (TCR00-4453)
- Godber, K., 2008. Northeastern Tasmania TasExplore Airborne Radiometric and Magnetic Survey Geophysical Interpretation Report. Mitre Geophysics, pp14. (GPCR2008-03)
- Holden, R.J., 1995. EL16/93 St Patricks River Annual Report to 6 May 1995. RJ Holden, pp34. (TCR95-3717)
- Holden, R.J., 1996. EL31/94 Sideling Annual Report to 24 February 1996. RJ Holden, pp4. (TCR96-3835)
- Holden, R.J., 1996. EL16/93 St Patricks River Annual Report to 6 May 1996. RJ Holden, pp7. (TCR96-3854)
- Holden, R.J., 1996. EL16/95 Georges Plain Annual Report to 4 November 1996. RJ Holden, pp2. (TCR96-3955)
- Holden, R.J., 1997. EL16/93 St Patricks River Annual Report to 6 May 1997. RJ Holden, pp8. (TCR97-4040)
- Holden, R.J., 1997. EL16/95 Georges Plain Annual Report to 4 November 1997. RJ Holden, pp2. (TCR97-4078)

Holden, R.J., 1998. EL16/93, EL31/94 and EL16/95 Exploration Report. RJ Holden, pp3. (TCR98-4154)

Holden, R.J., 1999. EL16/93 St Patricks River Annual Report to 6 May 1999. RJ Holden, pp20. (TCR99-4329)

Hull, J., 1970. Reconnaissance Geochemical Survey, Lilydate, Tasmania. Mineraux Pty Ltd, pp3. (TCR70-0637)

Leaman, D.E., 2008. Assessment of Selected Features in the 2007 Magnetic Surveys of Northeast Tasmania. Mineral Resources Tasmania, pp84. (GPCR2008-01)

Macdonald, G., 1994. EL2/92 Lisle Annual Report on Exploration Activity to June 1994. Macmin NL, pp12. (TCR94-3579)

Morrison, K.C., 1988. EL35/86 Burns Creek Annual Report to 24 August 1988. Placeco Australia Pty Ltd, pp7. (TCR88-2846)

Morrison, K.C., 1989. EL35/86 Burns Creek Annual and Final Report to 24 August 1989. Placeco Australia Pty Ltd, pp5. (TCR89-2992)

Randell, J.P., 1991. EL6/90 Lisle Exploration Progress Report for the Period Ending 8th June 1991. Billiton Australia, pp15. (TCR91-3259)

Randell, J.P., 1991. Reconnaissance Gold Exploration North East Tasmania. Billiton Australia, pp15. (TCR92-3337)

Roach, M.J., 1992. Geology and Geophysics of the Lisle-Golconda Goldfield, North-east Tasmania. Geological Survey of Tasmania, Bulletin 70, p189-198. (GSB70-189-198)

Storer, R.M., 1984. Lisle EL20/83 First Annual Report to 24 August 1984. BP Minerals Australia, pp26. (TCR84-2287)

Webster, S.S., 2008. Quantitative Interpretation of Regional Geophysical Data for NE Tasmania. Mineral Resources Tasmania, pp21. (GPCR2008-02)

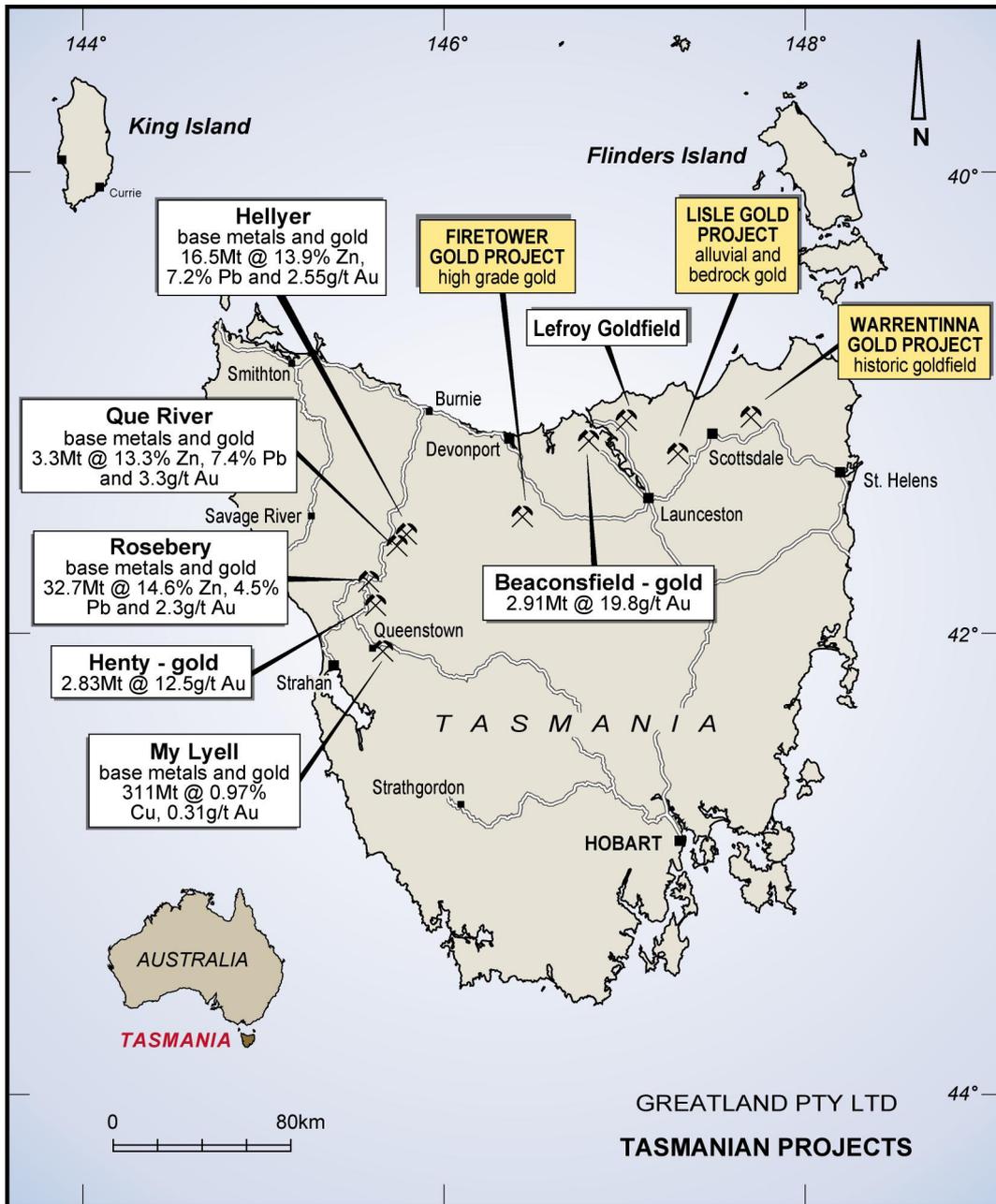


Figure 1 – Project Location Map

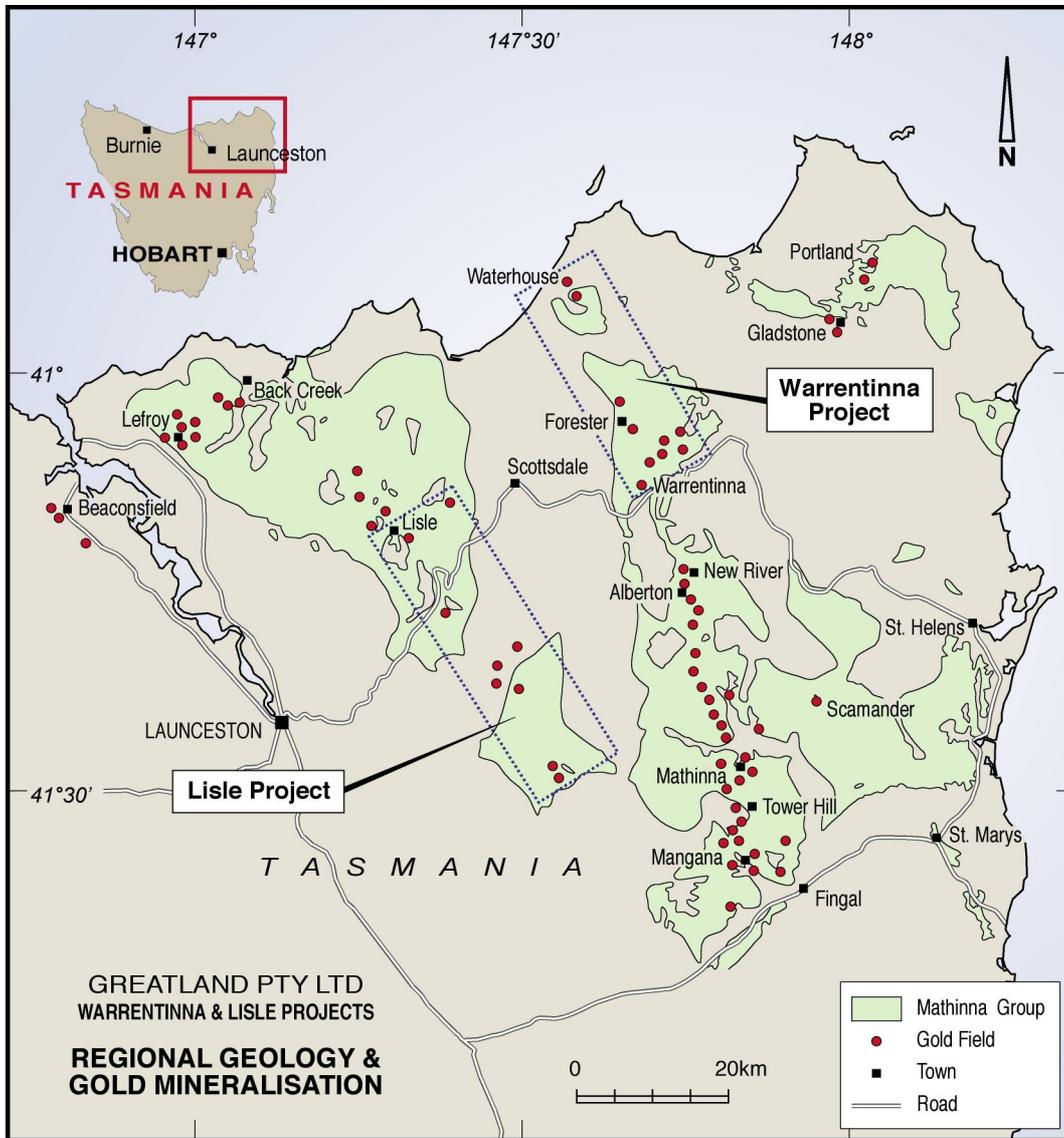
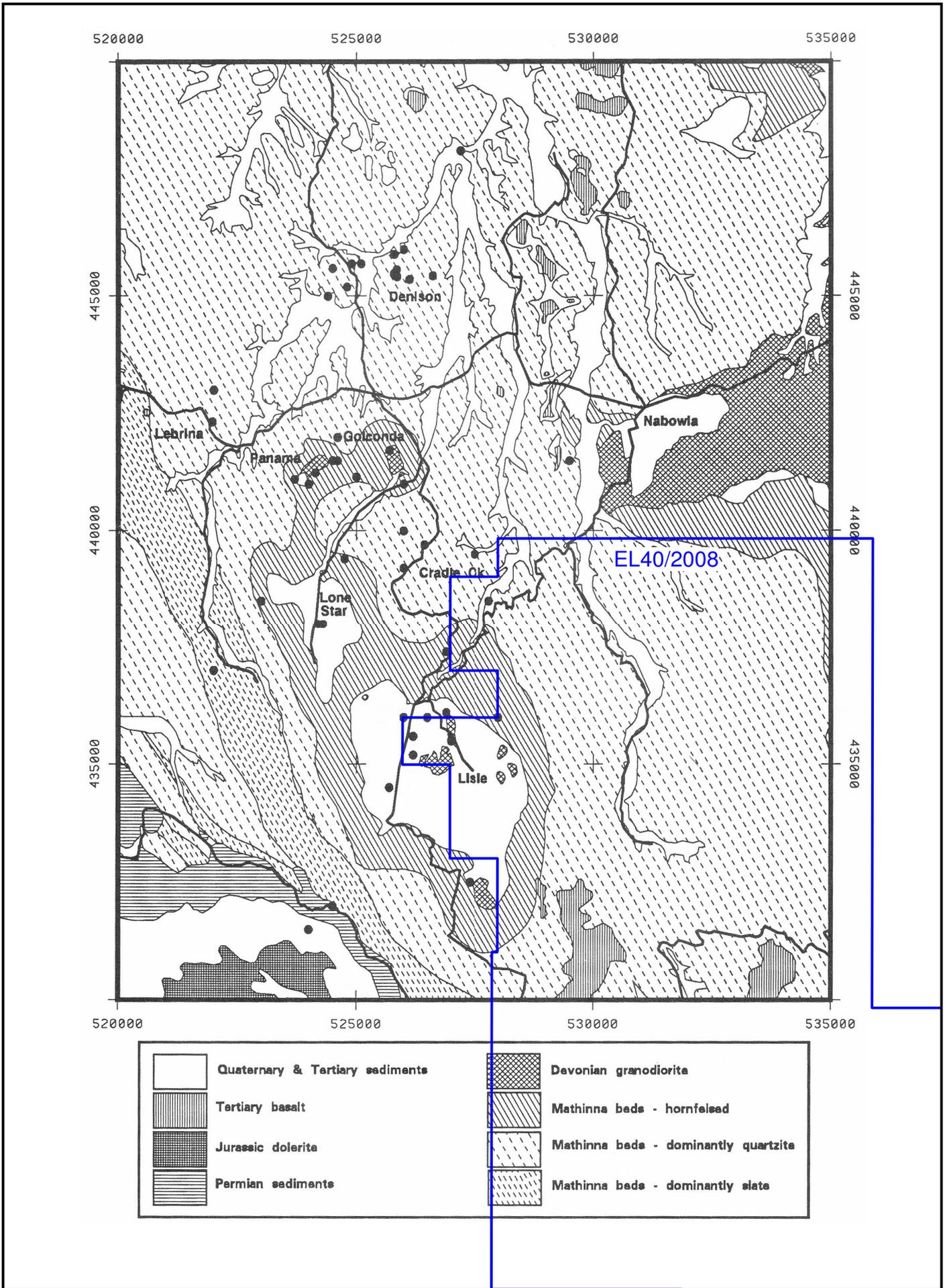


Figure 2 – Regional Geology



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 EAST LISLE PROJECT  
 Project Geology

Figure 3