

**KING ISLAND PROJECT**

**EL 19/2001**

**ANNUAL REPORT  
2005**

**Prepared for:**

***King Island Scheelite Limited  
Level 9 1 York Street  
Sydney NSW 2000***

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***Prepared by:***

**Lindsay Newnham, BSc, FAusIMM, CPGeo  
Newnham Exploration and Mining Services  
PO Box 183 Exeter Tasmania 7275  
Ph: (03) 6394 3434 Fax: (03) 6394 3435**

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## **1. SUMMARY**

Exploration Licence 19/2001 lies immediately adjacent to the major scheelite deposits at Grassy, on King Island.

The formations which host these deposits extend west and north into areas of EL 19/2001 and these areas are thus considered highly prospective for additional deposits of scheelite.

Throughout 2005, in response to an attractive scheelite market, King Island Scheelite Limited has focused upon a major multi-disciplinary evaluation of the scheelite resources remaining adjacent to the former Dolphin underground and open-cut mines, to determine if they are capable of supporting a new open-cut operation.

The discovery of additional resources in the contiguous EL 19/2001 would favourably impact on the economics of such an operation.

With the detailed evaluation of Dolphin now at an advanced stage, it is planned to actively assess the exploration potential of EL 19/2001 by undertaking in 2006 a detailed evaluation of previous exploration and mining data from the licence area.

Identification of resource opportunities which could have a significant impact on the Dolphin Mine redevelopment, would result in early drill assessment of such opportunities.

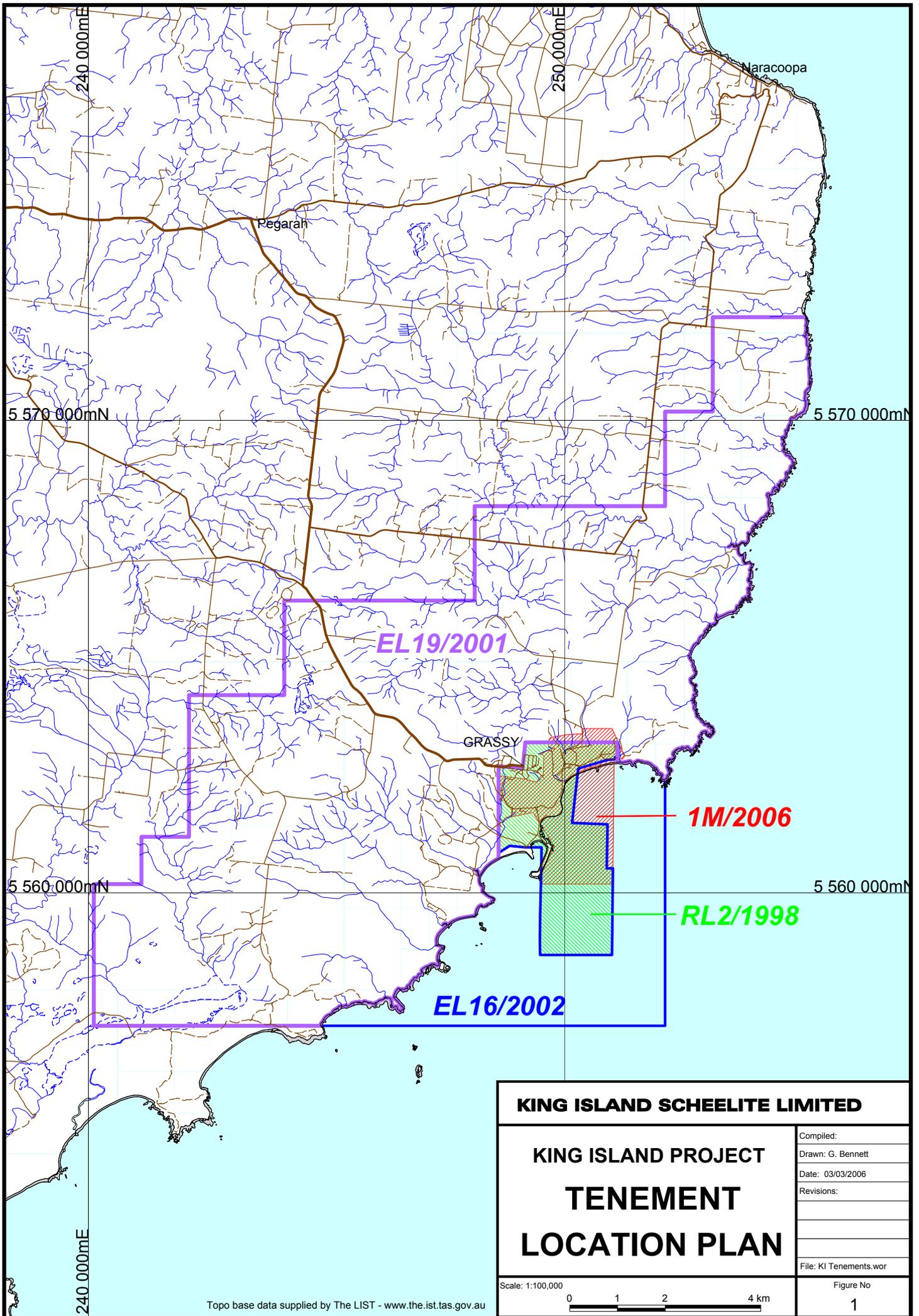
A budget estimate for 2006 to facilitate both the detailed data assessment and early stage drilling, is \$70,000-75,000.

## **2. TENURE**

Exploration Licence 19/2001 of 91 sq km is held by Australian Tungsten Proprietary Limited, a wholly-owned subsidiary of King Island Scheelite Limited.

The Licence was granted for industrial and metallic minerals on 14 December 2001 and has a final date of 14 December 2006, subject to extension.

The tenement is located on the south-east corner of King Island (Fig 1) and land tenure includes areas of Multiple Use State Forest, Private Land and Crown Land (Fig 2).



**KING ISLAND SCHEELITE LIMITED**

**KING ISLAND PROJECT  
TENEMENT  
LOCATION PLAN**

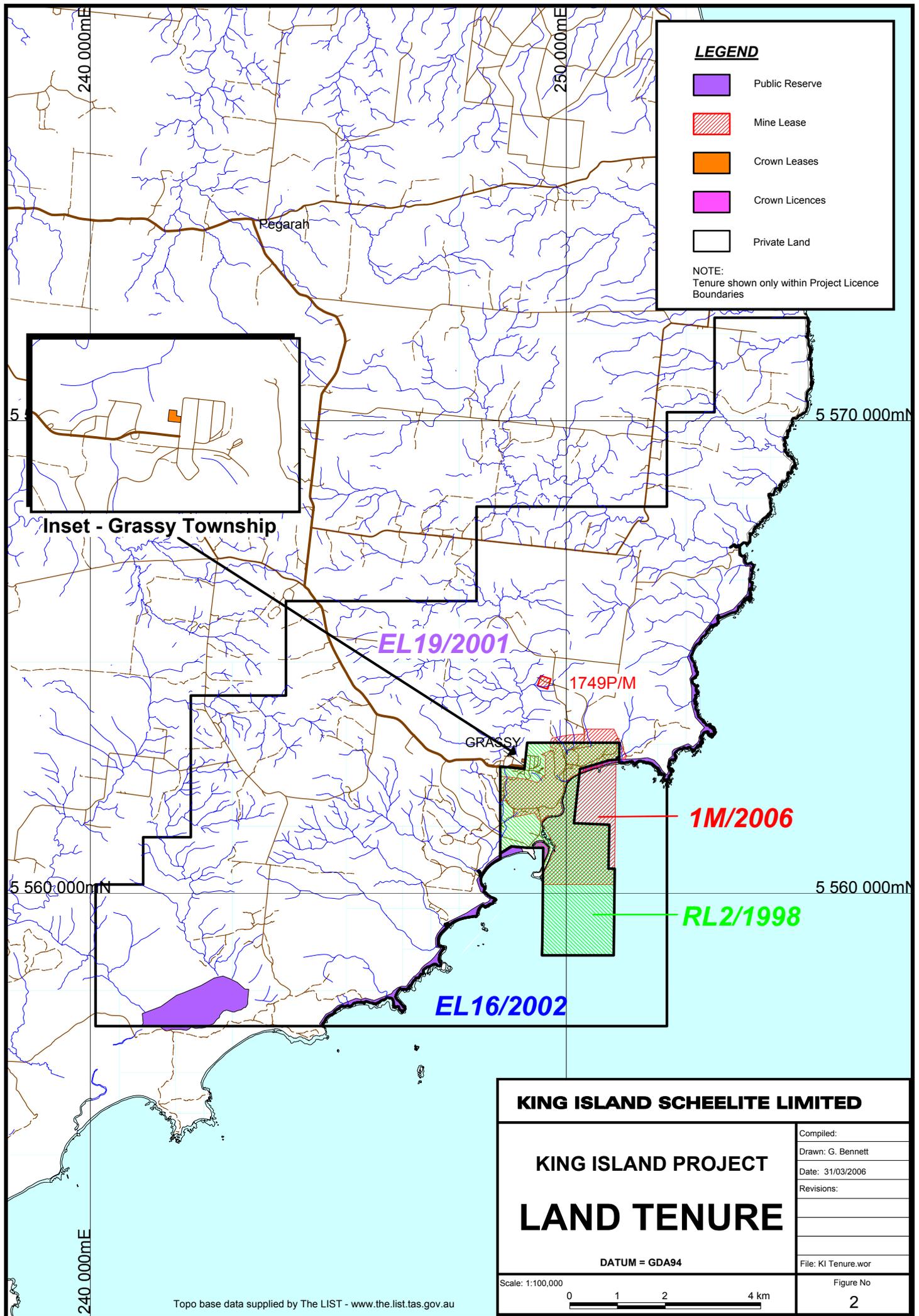
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Drawn: G. Bennett	
Date: 03/03/2006	
Revisions:	
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Scale: 1:100,000



Figure No

1



**LEGEND**

- Public Reserve
- Mine Lease
- Crown Leases
- Crown Licences
- Private Land

NOTE:  
Tenure shown only within Project Licence Boundaries

**Inset - Grassy Township**

**EL19/2001**

**1749P/M**

**1M/2006**

**RL2/1998**

**EL16/2002**

**KING ISLAND SCHEELITE LIMITED**

**KING ISLAND PROJECT**

**LAND TENURE**

DATUM = GDA94

Scale: 1:100,000

0 1 2 4 km

Compiled:	
Drawn: G. Bennett	
Date: 31/03/2006	
Revisions:	
File: KI Tenure.wor	
Figure No	2

Topo base data supplied by The LIST - www.the.list.tas.gov.au

### **3. EXPLORATION OBJECTIVES**

Exploration Licence 19/2001 is considered prospective for primary scheelite deposits and secondary silica sand deposits.

Scheelite mineralisation was discovered on the beach near Grassy in 1911 and, between 1917-1990, 9.7 Mt of ore averaging 0.65% WO<sub>3</sub> were mined from the Dolphin Open-Cut south of Grassy and the Dolphin and Bold Head underground mines.

Rapidly falling tungsten prices in the late 1980s led to the mines' closure in 1990, despite the fact that substantial resources were known to remain.

With the recent strong increases in tungsten price, King Island Scheelite Limited (KIS) decided to evaluate the commercial opportunity of reopening the mine, based on the concept of an extension of the existing Dolphin open-cut, to mine remaining lower grade ores and the higher grade remnants within the former Dolphin underground mine.

The commercial robustness of such an operation would be enhanced with the identification of substantial new resources in the district which could be developed to both increase throughput and lengthen the life-of-mine of the new operation.

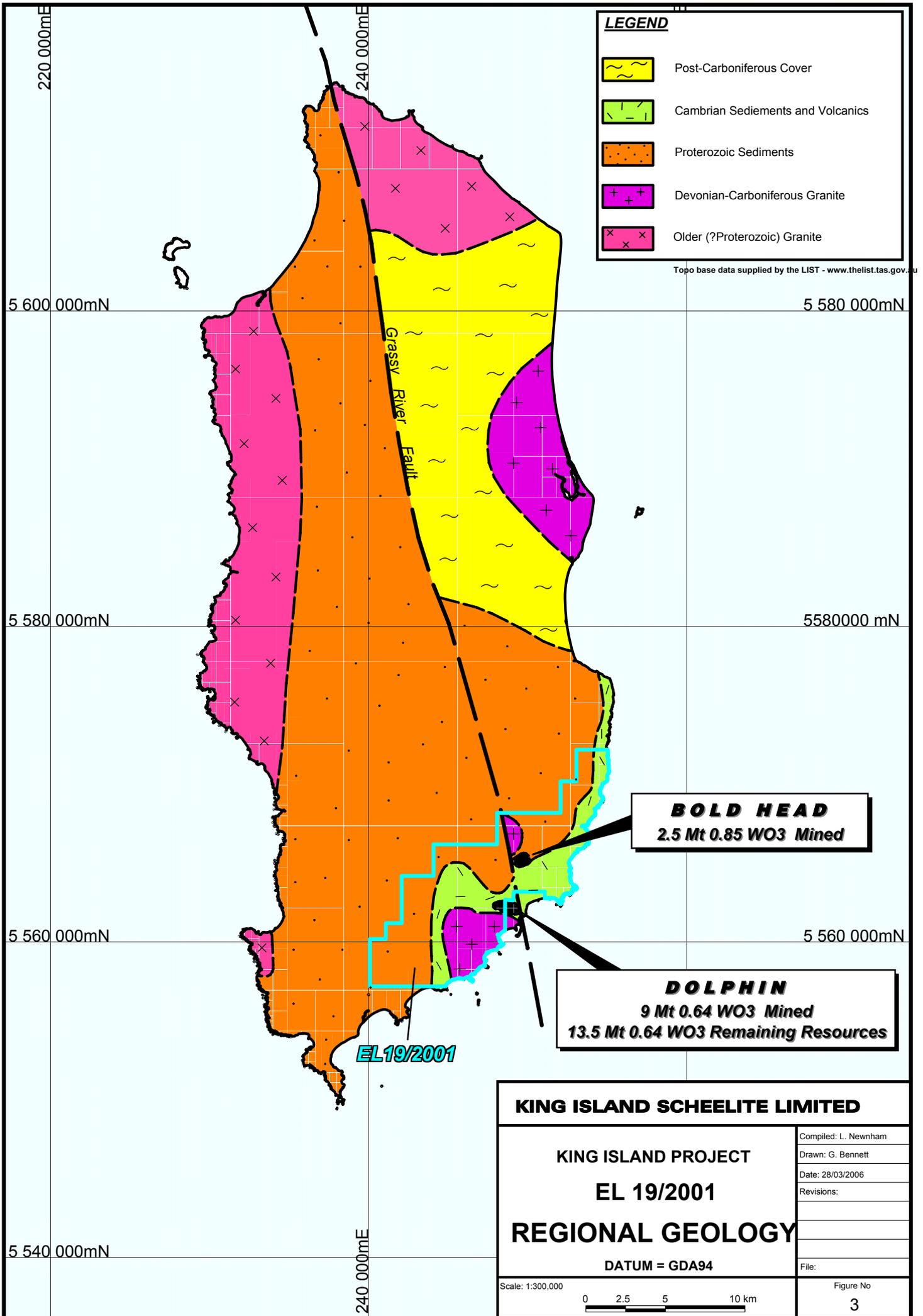
The area covered by EL 19/2001 is considered to be of high prospectivity for the discovery of additional scheelite resources.

Regionally, King Island is underlain by Proterozoic sediments intruded by both Precambrian and Carboniferous granites (Fig 3).

In the south-east corner of the island a younger sequence of sediments (?Proterozoic-Cambrian), including several carbonate beds and overlying mafic volcanics, have been intruded by a Carboniferous granite (Fig 4). This granite intrusion resulted in tectonic deformation (folding, faulting) of the younger sediments and volcanics and intensive alteration of the carbonate units.

The alteration resulted in the formation of extensive scheelite bearing pyroxene-garnet skarns in two principal carbonate beds locally known as B and C Horizons or Lenses.

Of possible genetic and, therefore, economic importance is the Grassy River Fault which is believed to be a regional, long lived structure which cuts north-north-west through King Island. The fault dips steeply to the south-west and is interpreted as having an east block north transcurrent movement of 2.5 km. It may have both controlled the shape and nature of the granite intrusion and provided a structural focus for the subsequent mineralising hydrothermal fluids.



220 000mE

240 000mE

5 600 000mN

5 580 000mN

5 580 000mN

5580000 mN

5 560 000mN

5 560 000mN

5 540 000mN

240 000mE

Grassy River Fault

EL19/2001

Prerequisites for discovery of additional scheelite deposits on King Island are:-

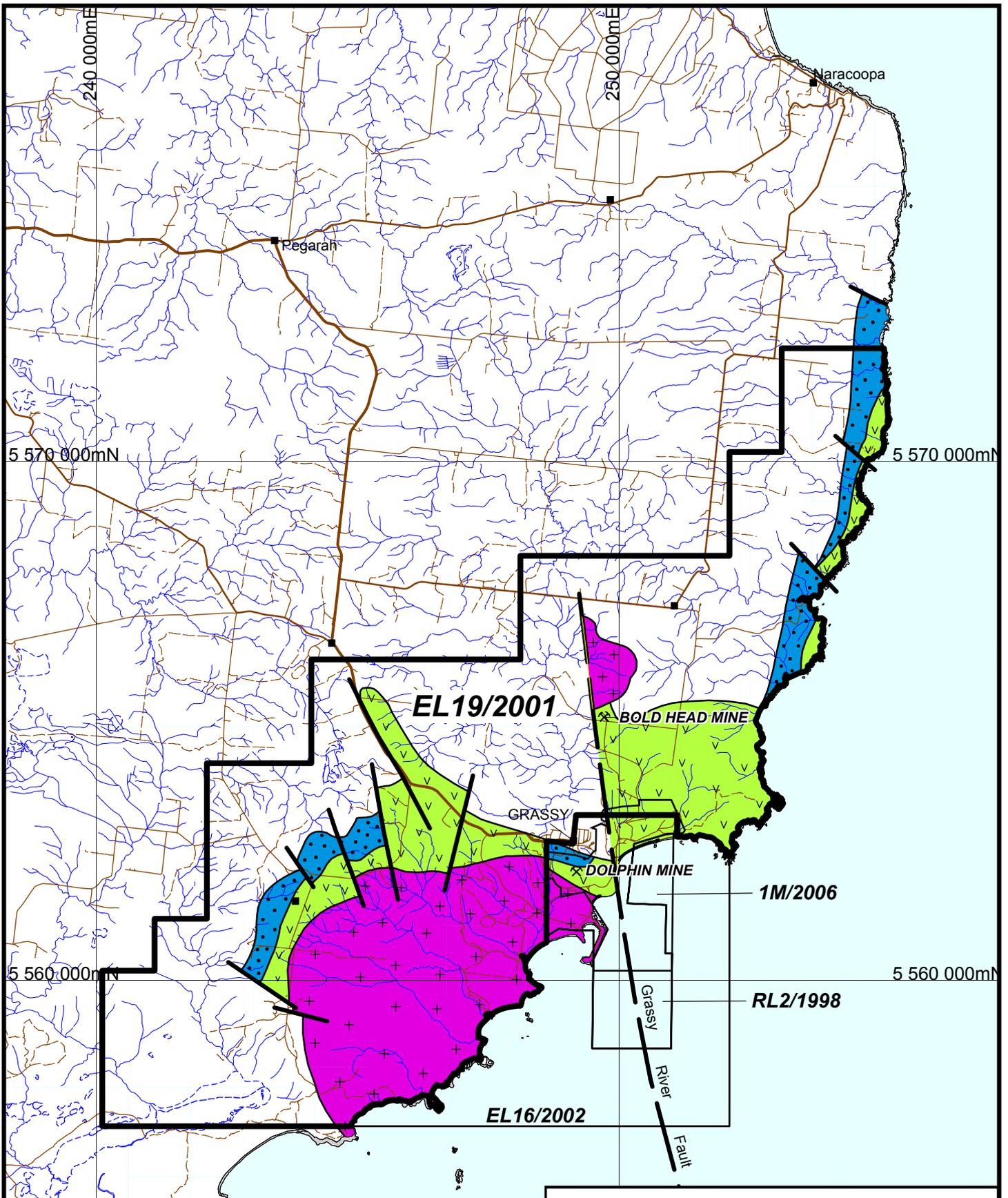
- the presence of the younger Grassy Group calcareous sediments
- these carbonates must lie within the hydrothermal metamorphic aureole of the Carboniferous granite.

Extensive areas within EL 19/2001 have both these prerequisites for scheelite rich skarn formation.

The Mine Series host rocks are known from drilling to extend west of the Dolphin Open-Cut and to then wrap around the granite to the south, over a prospective strike length of 6 km. Scattered scheelite-molybdenite occurrences have been recorded in this area (Figs 4, 5).

The Mine Series carbonate rocks are also known to extend north of the Dolphin Mine along the Grassy River Fault and to be intruded by granite in that area.

Critical to discovery of additional scheelite resources within EL 19/2001 will be the identification of areas underlain by Mine Series rocks and intruded by Carboniferous granite at a depth of <1 km.



**LEGEND**

- Mine Series Rocks
- v v v Upper-Volcanics
  - . . . Calcareous Sediments
  - + + + Carboniferous Granite

Topo base data supplied by the LIST - www.thelist.tas.gov.au

**KING ISLAND SCHEELITE LIMITED**

**KING ISLAND PROJECT**  
**EL 19/2001**  
**LOCAL GEOLOGY**

DATUM = GDA94

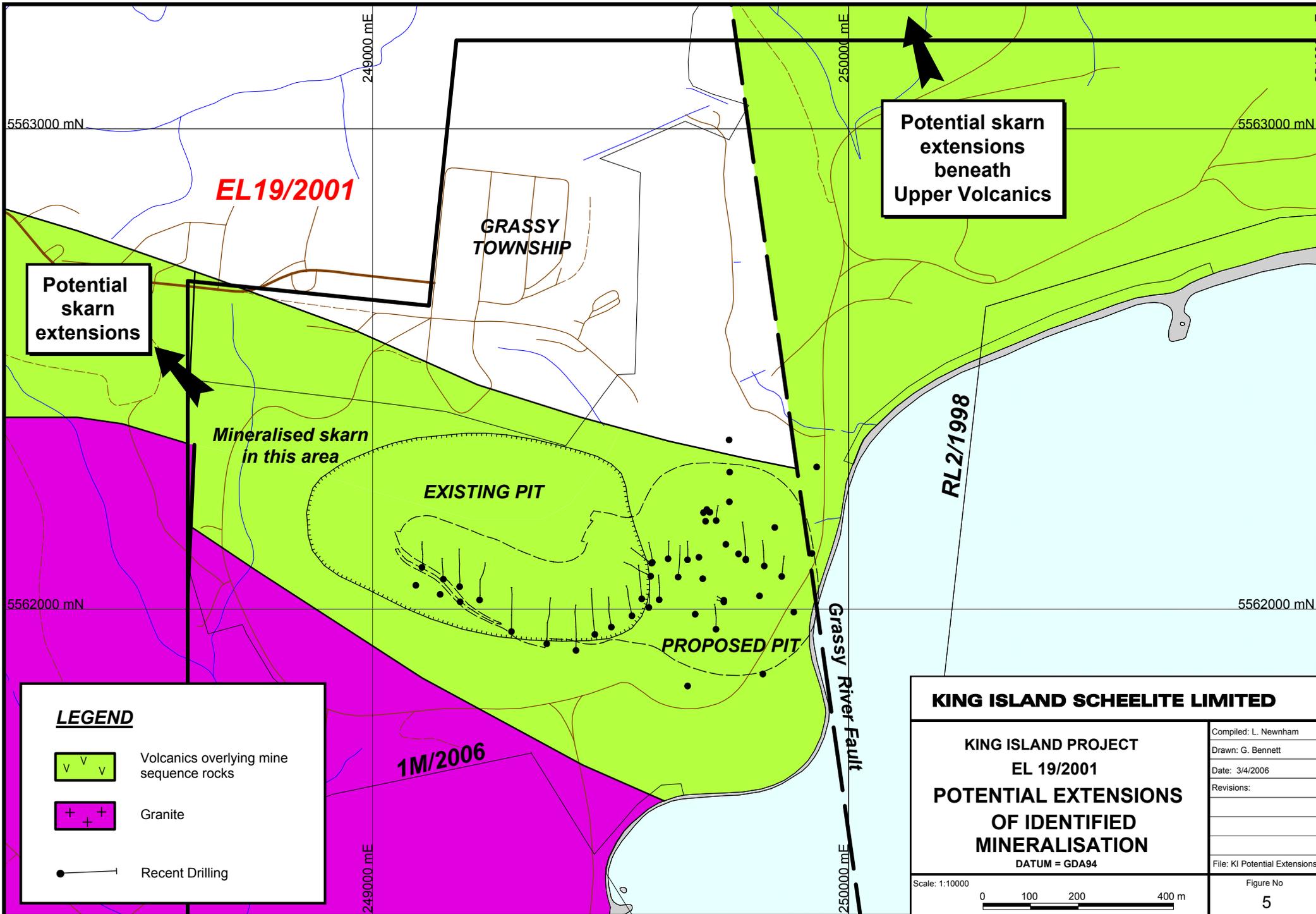
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 Date: 28/03/2006  
 Revisions:  
 File: KI Tenement Base.wor

Figure No

4



**EL 19/2001**

**GRASSY TOWNSHIP**

**Potential skarn extensions**

**Potential skarn extensions beneath Upper Volcanics**

*Mineralised skarn in this area*

**EXISTING PIT**

**PROPOSED PIT**

**RL 2/1998**

**Grassy River Fault**

**1M/2006**

**LEGEND**



Volcanics overlying mine sequence rocks



Granite



Recent Drilling

**KING ISLAND SCHEELITE LIMITED**

**KING ISLAND PROJECT  
EL 19/2001  
POTENTIAL EXTENSIONS  
OF IDENTIFIED  
MINERALISATION**

DATUM = GDA94

Scale: 1:10000



Compiled: L. Newnham  
Drawn: G. Bennett  
Date: 3/4/2006  
Revisions:  
File: KI Potential Extensions1

Figure No  
**5**

#### **4. WORK COMPLETED 2005**

During 2005 KIS focused a major multi-disciplinary study on the Dolphin Mine to evaluate the commercial viability of developing a large scale open-cut mine on the scheelite resources remaining around the former open-cut and underground workings.

This on-going study included:

- 6,000 m core drilling
- metallurgical test work
- mine design studies
- civil engineering studies
- market negotiations

Whilst no active field work was undertaken during the year on EL 19/2001, the resource definition program came within 500 m of the tenement boundary. Results from this program suggest mineralised Mine Series rocks will extend west from the drilled area into EL 19/2001 along the northern flank of the Carboniferous granite.

## **5. WORK PLANNED 2006**

Given the encouraging results obtained on the adjacent tenements in 2005, it is proposed in 2006 to extend the exploration effort into EL 19/2001 in two principal directions:

- (a) west and south in Mine Series rocks adjacent to the northern and western margins of the granite
- (b) north along the Grassy River Fault towards the Bold Head mine in areas where the granite can be demonstrated to be relatively shallow (<1 km).

Work planned will include:

- (i) Detailed assessment of all existing exploration data in these areas. Because of the longevity of mining operations in this district, the amount of existing data is substantial and this will be a major exercise.
- (ii) Assessment of geophysical surveys over the region which may have contributed to the sub-surface definition of the granite and areas of possible skarn development.
- (iii) Possible drilling of selected targets. Whilst the focus of KIS work will be the establishment of a commercial mining operation on the Dolphin deposits, if opportunities for additional resources emerge from the assessment program, they will probably justify assessment by drilling.

A budget estimate for 2006 to cover the assessment program and initial follow-up drilling is \$70,000-75,000.