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Report No. GD91/2S

EL 44/86

**Final Report on Exploration Completed
in South-Western King Island to
10th April 1991**

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CONTENTS

Exploration Philosophy	1
Tenement Information	1
Summary	2
Conclusions	3
Bibliography	3

LIST OF FIGURES

Figure 1	Location Map of EL 44/86
Figure 2	Airphoto Interpretation, King Island (South)

Exploration Philosophy

Aim: To investigate the potential for mineral sand occurrences in the southern and western areas of King Island.

Reason: During recent years demand for mineral sand products has outstripped the supply available from current production areas. As a consequence, significant price rises have occurred in the mineral sands commodities - rutile, leucoxene, ilmenite (all TiO_2 raw minerals), zircon and monazite. King island has a previous history of mineral sand production from the Naracoopa area on the east coast.

Tenement Information

Exploration Licence 44/86 was held by National Mineral Sands as part of the Sandex Joint Venture between National Mineral Sands Pty Ltd and Peko-Wallsend Operations Ltd. PWOL was manager of the tenement.

The licence was granted on 12/5/87 and originally covered an area of 103 square kilometres in the south-western corner of King Island (see Figure 1). This comprised 16km² of private property and 2km² of the Seal Rocks Conservation Area (proposed State Reserve). An area of 4km² was excluded from the original application as it was public reserve.

In April, 1988 EL 44/86 was reduced in size to 30km² covering the Big Lake strandlines.

The licence was relinquished on 10/4/91 as insufficient potential existed to justify retention.

Summary

All field work investigations were carried out in the first year of grant of this licence and are fully documented in Peter H Stitt & Associates Pty Ltd Report No. 3/88. Further work was not considered warranted after this initial year.

A study of aerial photographs covering the licence area was completed, and concluded that the most prospective areas for minerals are the strandlines developed around Seal Bay and Big Lake in the south-west of the island (see Figure 2).

Field investigation concentrated on surveying and drilling 46 hand auger and case sludged holes on 3 traverse lines. Four drill holes were selected for analysis; two from Big Lake and one each from Seal Bay and Badger Box. The Big Lake area is the most promising, returning average grades for the two holes assayed of 0.48% and 0.34% HM. In one hole 25% of the heavy mineral is made up of rutile, zircon and leucoxene, which is significantly greater than the other holes mineralogically examined.

The Badger Box drill hole tested showed mineral concentrations towards the bottom of the drill hole. Average grade for the drill hole was 0.5% HM, with rutile, zircon and leucoxene only representing 11% of the total heavy mineral concentration.

The average grade of the Seal Bay drill hole was 0.16% HM, with rutile, zircon and leucoxene constituting only 3% of the total heavy mineral concentration.

Drill hole logs, results of laboratory heavy mineral separations and results of the mineralogical study of heavy mineral concentrates were submitted with Annual Report No. 3/88.

Conclusions

The most promising area within the EL is the Big Lake area, even though at present the grades are sub-economic. The mineralogy is higher in rutile, zircon and leucoxene than the other areas, and similar to that of Naracoopa.

The Badger Box drill hole tested shows mineral concentrations towards the bottom of the hole which may represent buried strandlines, however the mineral suite is still low in rutile and zircon.

Further work to find higher grade mineralisation does not prove economically justifiable, so the tenement has been relinquished.

Bibliography

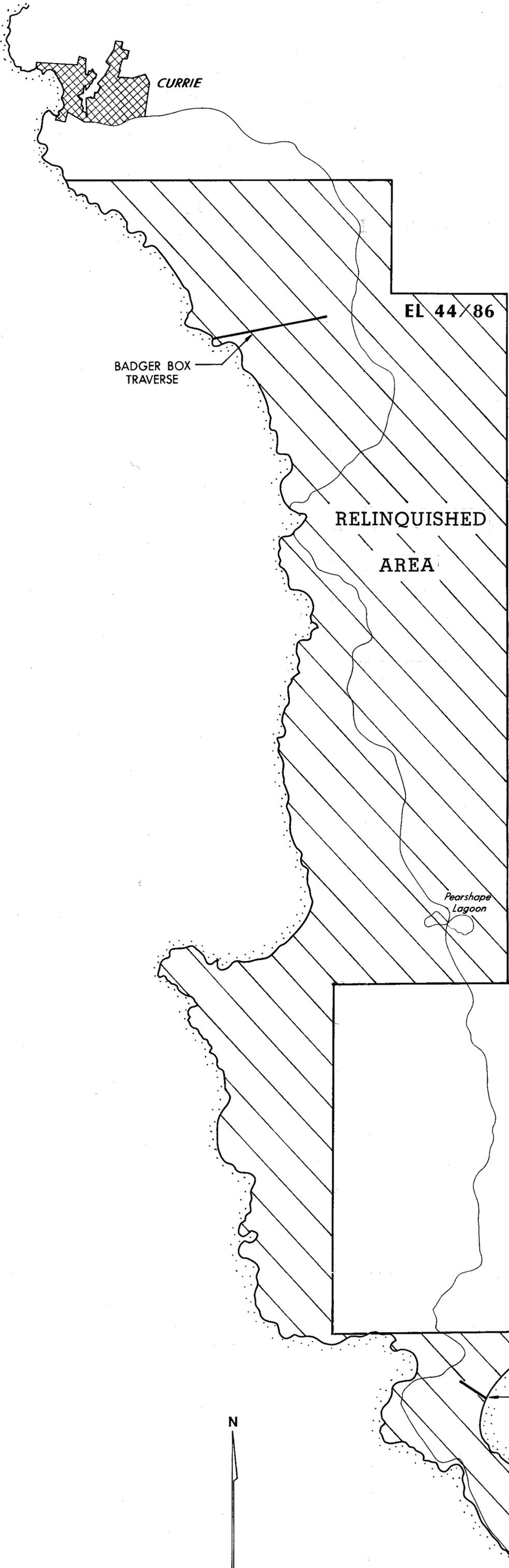
Peter H Stitt & Associates Pty Ltd Reports:-

Report No. 3/88: EL 44/86 Tasmania. Annual Report on Exploration Completed in South-Western King Island to 11/4/88.

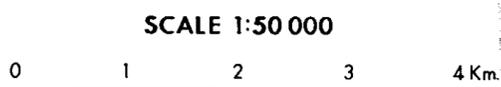
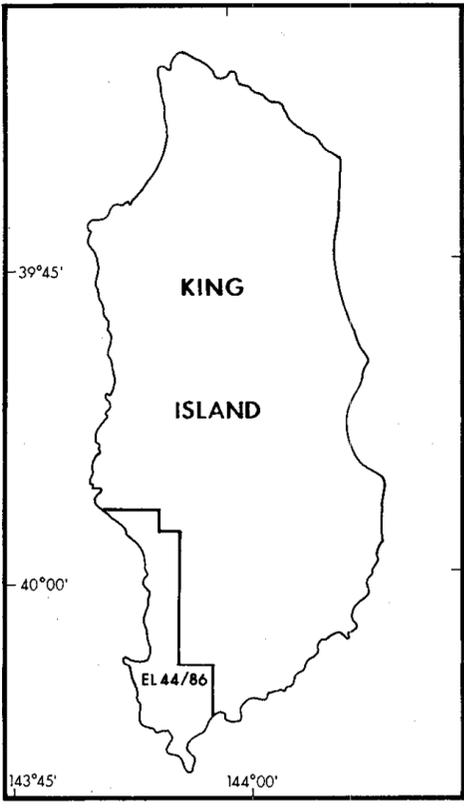
A Dove, G Lee, April 1988.

Report No. 3A/88: EL 44/86 - Relinquishment Report on Exploration Carried out on South Western King Island between 11/4/87 and 11/4/88.

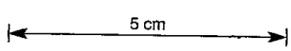
A Dove, G Lee, April 1988.



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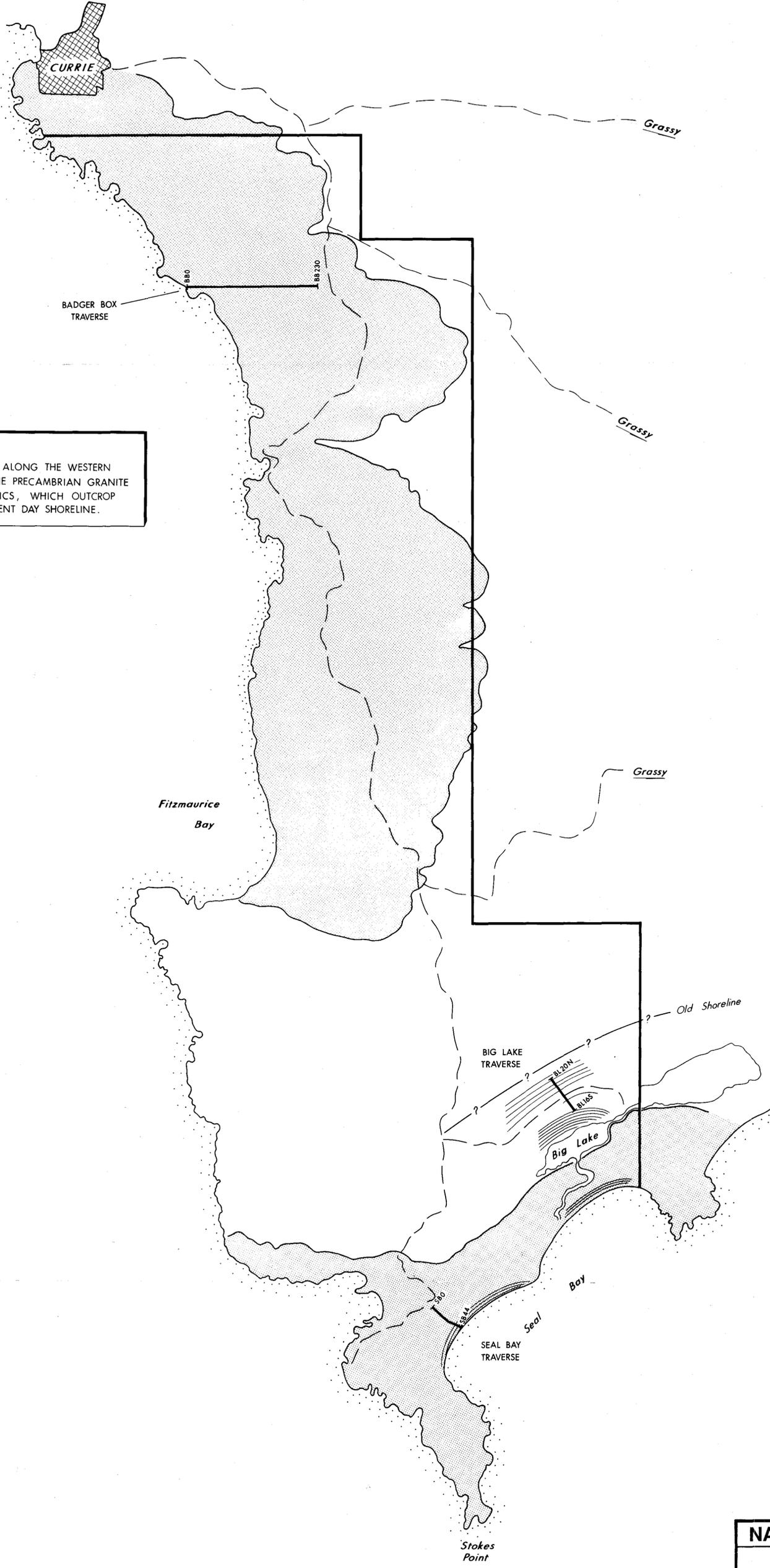


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NATIONAL MINERAL SANDS	
EL 44/86 - TASMANIA	
LOCATION MAP	
	Fig. 1

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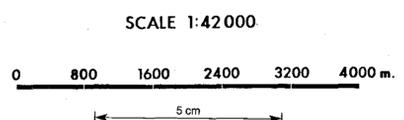


NOTE:-
 AEOLIAN DUNES ALONG THE WESTERN COASTLINE OVERLIE PRECAMBRIAN GRANITE AND METAMORPHICS, WHICH OUTCROP ALONG THE PRESENT DAY SHORELINE.

SOUTHERN OCEAN



- LEGEND**
-  Photo Interpretation, Inland Margin of Sand, Aeolian Dunes.
 -  Strandline Sand Deposits.
 -  Track / Road



NATIONAL MINERAL SANDS		
EL 44/86 TASMANIA		
AIR PHOTO INTERPRETATION		
KING ISLAND (SOUTH)		
133007		
Author: G. LEE	Date: FEB '88	Figure: 2

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