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EL 2573

LAKE ALEXANDRINA

ANNUAL AND RELINQUISHMENT REPORT FOR THE PERIOD 4/1/99 TO 3/1/2000

Submitted by

S. and C.R. Kennedy
2000

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PRIMARY INDUSTRIES AND RESOURCES SA

S. AND C.R. KENNEDY

EXPLORATION LICENCE 2573

LAKE ALEXANDRINA

SOUTH AUSTRALIA

FIRST ANNUAL
AND RELINQUISHMENT REPORT
TO
PRIMARY INDUSTRIES - SOUTH AUSTRALIA

JANUARY 2000

SEAN KENNEDY

GEOLOGIST

INTRODUCTION

Exploration Licence 2573 was granted on 4 January 1999. It is centred some 75 kilometres southeast of Adelaide and has an area of 140 square kilometres. It occupies the northern part of Lake Alexandrina, a large body of fresh water, and also includes Tolderol Point and Mosquito Point. (***Figures 1, 2*** and ***3***)

The partnership, S. and C.R. Kennedy took out this Exploration Licence to investigate the mineral sand potential. Mineral sands had been reported offshore from Tolderol Point by Elizabeth Barnett in a PhD thesis from the Flinders University School of Earth Sciences in 1993.

Two field trips were undertaken in May and October, 1999. Five push tube samples were taken, onshore and offshore from Tolderol Point. The partnership found no significant mineral sands.

Exploration Licence 2573 is hereby relinquished.

LITERATURE SEARCH

Elizabeth Barnett wrote a PhD thesis entitled "Recent Sedimentary History of Lake Alexandrina and the Murray Estuary", and this was presented at Flinders University in July 1993. About 30 cores were taken by Barnett in this area.

Of most interest was Core 9, taken in 1.2 metres of water about 400m off Tolderol Point. The exact location is not given, but the approximate position is shown in a 1:333333 map. In Core 9, up to 10% rutile and 10% garnet were reported at 5cm. Rutile and garnet content diminished below this depth in the sediment but were still present at less than 5% at 55cm. Traces of these minerals were reported at 115cm.

FIELD WORK

In May 1999, two push tube samples, TP1 and TP2 were taken onshore at Tolderol Point. A boat was hired in October 1999 and three push tube samples, TP3 to TP5 were taken offshore from Tolderol Point. Of these, TP3 and TP4 were probably close to the location of Core 9 taken by Elizabeth Barnett. Locations are shown in ***Figure 3.***

Logs of the TP push tube cores are given in **Table 1**. No significant mineral sands were observed.

EXPENDITURE FOR PERIOD OF TENURE

EL Application, Rent and Stamp Duty	612
Photocopying	10
Telephone	10
Postage	29
Sampling equipment	55
Professional time	2 376
Field assistant	270
4WD vehicle rent	452
Accommodation and meals	67
Boat and outboard hire	150
Total expenditure	**$ 4 031**

CONCLUSIONS

Only trace amounts of heavy mineral were located in and adjacent to Lake Alexandrina in the Tolderol point area.

A costly exploration program would be required to outline any mineral sand concentration on the lake floor. A study of winds and currents would be necessary

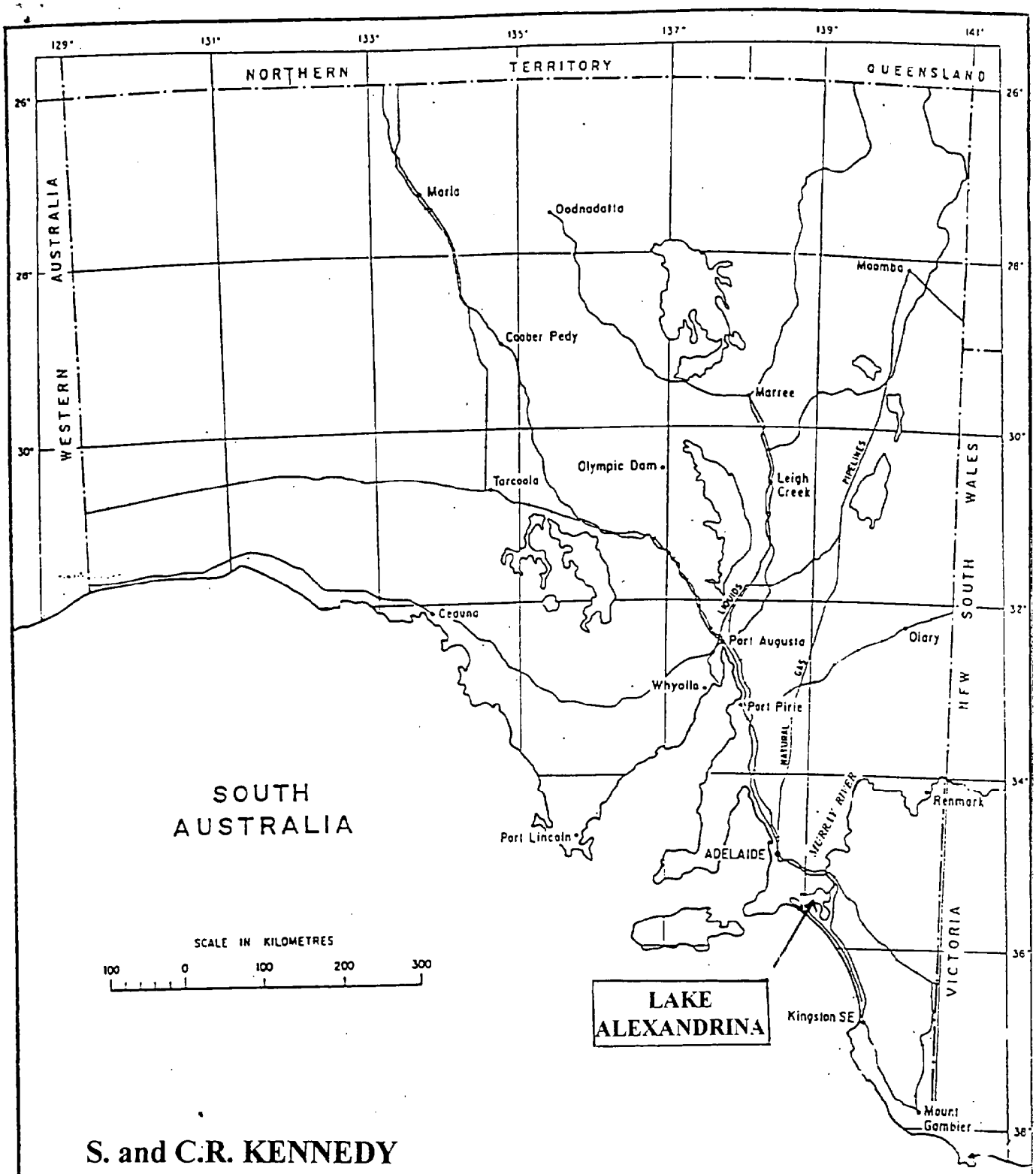
Exploration Licence 2573 is hereby relinquished.

Sean Kennedy

Sean Kennedy **4 January 2000**
Geologist and Senior Partner

TABLE 1
LOGS OF TOLDEROL POINT
PUSH TUBE SAMPLES

TP1	**331243E**	**6083489N**
0.00 - 0.88m	light grey fine to medium grainedsand	
0.88 - 1.44	grey green clay	
TP2	**331898E**	**6084300N**
0.00 - 0.37m	vegetation and soil grading to black clay	
0.37 - 0.92	white medium grained sand	
0.92 - 1.64	grey medium grained sand	
TP3	**333340E**	**6085860N**
0.00 - 0.16m	grey sand with minor clay	
0.16 - 0.31	black to dark grey clay with traces of very fine grained heavy mineral	
TP4	**333050E**	**6085760N**
0.00 - 0.07m	black mud	
0.07 - 0.49	grey green clay	
0.49 - 0.85	grey green clay with minor fine grained sand.	
TP5	**333057E**	**6084113N**
0.00 - 0.71m	grey sand with trace of very fine grained heavy mineral	

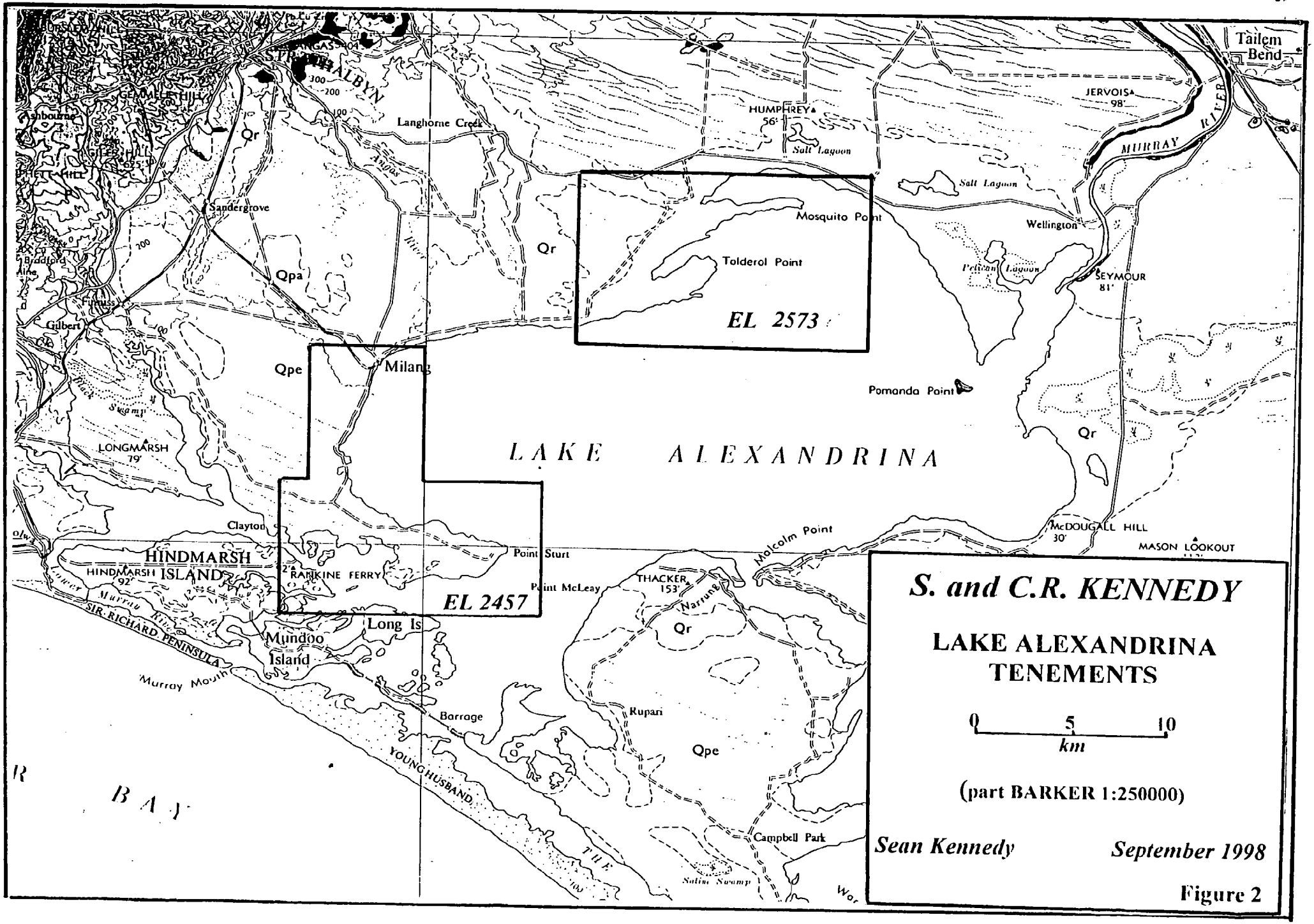


S. and C.R. KENNEDY

LAKE ALEXANDRINA

LOCALITY PLAN

Figure 1



S. and C.R. KENNEDY

LAKE ALEXANDRINA TENEMENTS

0 5 10 km

(part BARKER 1:250000)

Sean Kennedy *September 1998*

Figure 2

LAKE ALEXANDRINA

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EXPLORATION LICENCE 2573

1999 sample sites xTP2

0 — 5 km

Sean Kennedy — January 2000

FIGURE 3

35°19'

35°24'

139°05'

139°15'

WELLINGTON 12km