

Report No. GD91/1S

EL 51/86

Final Report on Exploration Completed
in the Marrawah-Woolnorth Areas of
North-Western Tasmania to
14th June 1991

TCR 91-3305

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Exploration Philosophy

Aim: To examine the Tasmanian north west coast between Woolnorth and Marrawah for economic heavy mineral sand occurrences.

Reason: Recent increases in the price of mineral sand commodities, particularly rutile and zircon, have been caused by shortage of supply. Price rises combined with technological advances have given impetus to examination of areas previously considered to be unattractive.

Tenement Information

Exploration Licence 51/86 was held by National Mineral Sands Pty. Ltd. (formally Butlers No. 27 Pty. Ltd.) as part of the Sandex Joint Venture between National Mineral Sands Pty Ltd and Peko-Wallsend Operations Ltd., and originally covered an area of 145 km² on the north west coast of Tasmania, see Figure 1.

Areas of 5.3 km² and 0.5 km² were excluded from the original application as they contained the Mt Cameron West Aboriginal Site and Commonwealth land respectively.

Following exploration work carried out during the 12 months to 15.6.88 the licence was reduced to 63 km²; after the 82 km² relinquished by the Company was deemed unprospective following the initial work. The relinquished area covered the land to the north of Australian Map Grid line 5 480 000 mN.

Further work during the 12 months to 15.6.89 led to a reduction in the size of the tenement during 1989 to 17 km², with only the area around Ann Bay deemed prospective.

EL 51/86 was relinquished on 14/6/91.

Summary

No active field programme was undertaken during the final year of tenure so no results are to be reported further to those of previous Annual Reports 10/88, 9/89 and 5/90 by Peter H Stitt & Associates Pty Ltd.

A review of previous work showed that investigations have indicated in the order of 100,000t of contained heavy mineral with various grades of rutile, zircon, leucoxene and cassiterite at Ann Bay near Marrawah.

An interpretation of aerial photographs enabled the location of the most prospective areas for mineral concentration, being Three Mile Sand, Two Mile Sand and Studland Bay, see Figure 2.

Three traverse lines were hand drilled near Marrawah (Ann Bay), and two, one a redrill, near Woolnorth (Studland Bay).

Heavy Mineral grades in the north of Studland Bay range from 0.11% to 1.23% and average approximately 0.5%. In the south of Studland Bay grades range from 0.12% to 0.73% and average approximately 0.20%. Mineralogy of 1 sample, comprising a composite of 3 drill holes from the south of Studland Bay yielded zircon 2%, rutile 1%, leucoxene 14% and monazite < 1%. No further work was warranted in this area so 82km² were relinquished. Drill hole logs and results of laboratory heavy mineral separations and mineralogical examinations are presented in Annual Report No. 10/88.

Significant mineralisation was encountered in all 3 lines drilled near Marrawah, with grades ranging from 4-9% and mineralisation extending over widths of up to 200m. Mineralogical examinations revealed a minimum 20% economic heavy mineral was contained in the heavy mineral suite of each of the 5 samples tested.

3.

Two traverse lines were hand drilled to the north of the previously drilled M-line 1 to further delineate the mineralisation at Marrawah. Assay results for M-line 3 show heavy mineral grades in excess of 1.5%, over a width of 80m. In areas of thicker sand some drill holes were terminated at 10 metres depth with heavy mineral grades > 2%. Assay results for M-line 4 were all under 1.5%. Drill logs, assays and mineralogical results are presented in Annual Reports Nos 10/88, 9/89 and 5/90.

The drilling results give an Indicated and Inferred heavy mineral resource in the order of 200,000 tonnes. Details of this preliminary estimation are given in Annual Report No. 5/90.

Conclusion

The Marrawah (Ann Bay) area is the most promising of the entire tenement area. Results indicate heavy mineral concentrations occur in the frontal dunes and extend approximately 3.25km along the beach. The grades in the frontal dunes are evident for depths of up to 10 metres but once the dunes are traversed the thickness of mineralisation reduces to the top 2 metres.

Although the resource potential of this tenement is good the likelihood of contention because of the tourism and farming potential of the site suggested that retention of the licence would not prove justified.

Bibliography

Peter H Stitt & Associates Pty Ltd Reports:-

Report No. 10/88: EL 51/86 - Annual Report on Exploration Completed in the Marrawah-Woolnorth Areas of North-Western Tasmania to 15.6.88. A Dove, G Lee, May 1988.

Report No. 29/88: EL 51/88 - Relinquishment Report for Exploration Carried Out in the Woolnorth Area of North Western Tasmania. A Dove, Dec 1988.

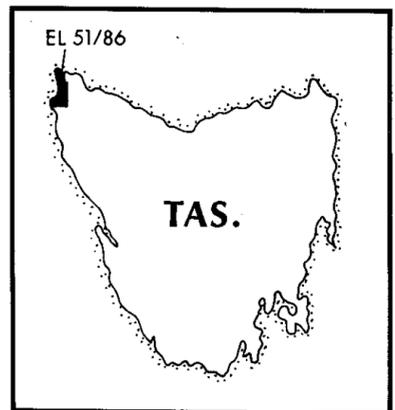
Report No. 9/89: EL 51/86 - Annual Report on Exploration Completed in the Marrawah Area of North Western Tasmania to 15.6.89. A Dove, G Lee, May 1989.

Report No. 5/90: EL 51/86 - Annual Report on Exploration Completed in the Marrawah Area of North-Western Tasmania to 15.6.90. A Dove, May 1990.

5 500 000 m N (AMG)

310 000 m E

10056



WOOLNORTH POINT

WOOLNORTH

308

Woolnorth
Road

310

5 490 000 m N

5 480 000 m N

5 470 000 m N

STUDLAND
BAY

LINE 1

AREA OF

RELINQUISHMENT

LINE 2

MOUNT CAMERON
WEST
ABORIGINAL SITE

ANN BAY

EL 51/86

MARRAWAH

Green
Point

Road

Arthur River
Smithton

N

91-3305.

NATIONAL MINERAL SANDS

EL 51/86

LOCATION MAP

Author: A. DOVE

Date: NOV '88

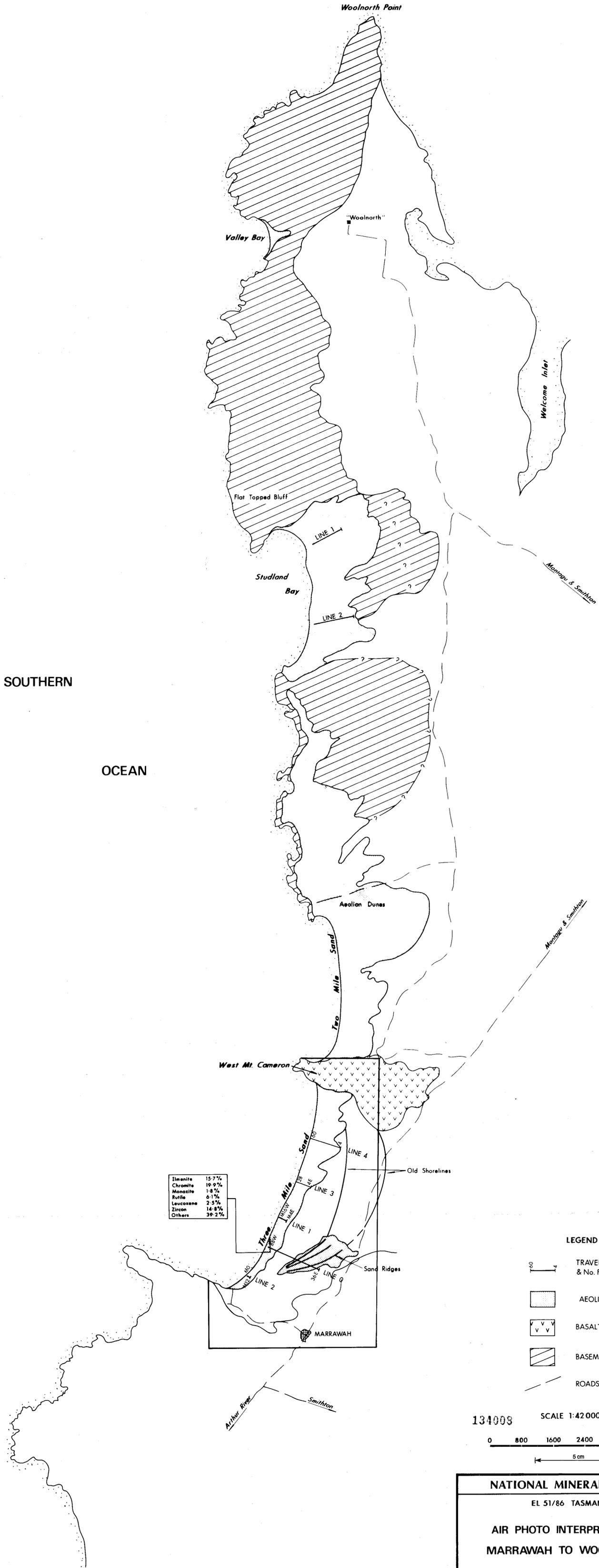
Fig.No.: 1

134007

SCALE 1:50000

0 1 2 3 4 km.

5 cm



SOUTHERN OCEAN



Ilmenite	15.7%
Chromite	19.9%
Monazite	1.8%
Rutile	6.1%
Leucosene	2.5%
Zircon	14.8%
Others	39.2%

LEGEND

- TRAVERSE LINE WITH POSITION & No. FOR END DRILL HOLES.
- AEOLIAN DUNES
- BASALT
- BASEMENT ROCKS
- ROADS & TRACKS

134003 SCALE 1:42000
 0 800 1600 2400 3200 4000 m.
 5 cm

NATIONAL MINERAL SANDS		
EL 51/86 TASMANIA		
AIR PHOTO INTERPRETATION		
MURRUMBIGEE TO WOOLNORTH		
Author: G. LEE	Date: JUNE '89	Fig: 2

91-3305.