CONTENTS ENVELOPE 6584

TENEMENTS: E.L. 1300.

TENEMENT HOLDER: CRA Exploration Pty. Ltd.

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1.
           #CNO=0001583
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                                                                #D0E=26/08/86
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COMPANY
CRA Expln Pty Ltd;
AUTHOR
Le Messurier, L A; #DOP=1986
NOTES
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ABSTRACT
   Regional gravel sampling returned negative results for kimberlitic
indicators.
KEYWORDS
#SC=1345; Diamond exploration; Heavy mineral sampling; #TECT=(Gawler Craton);
Thurlga; #250=SI5303 #MAP=YARDEA; #100=6032:1:4; #100=6033;
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CRA EXPLORATION PTY. LIMITED

PARTIAL RELINQUISHMENT REPORT ON THURLGA E.L. 1300, SOUTH AUSTRALIA

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AUTHOR:

L.A. Le MESSURIER

COPIES TO:

CIS CANBERRA

SADME

DATE:

9TH JULY, 1986

SUBMITTED BY: Suille Le Messurier.

ACCEPTED BY:

130671

OPEN FILE

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| SAa 3145 | Thurlga E.L. 1300, S.A. Location Plan of Relinquished Area | 1:250 | 000 |
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| SAa 3582 | Thurlga E.L. 1300, S.A. Diamond Exploration Gravel Sample Location Map | 1:100 | 000 |

1. SUMMARY

Exploration Licence 1300, Thurlga was granted to CRA Exploration on the 30th July 1985. Exploration within the area has been for diamonds with a regional reconnaissance gravel sampling programme completed. The heavy mineral concentrate was observed for both indicator minerals and microdiamonds. All results within the portion of the licence area to be relinquished (refer plan SAa 3145) were negative.

2. CONCLUSIONS AND RECOMMENDATIONS

The results from the regional reconnaissance heavy mineral gravel sampling justify the partial relinquishment of Exploration licence 1300, Thurlga. All results within the area were negative for both indicator minerals and microdiamonds.

3. INTRODUCTION

This is the partial relinquishment report for Thurlga E.L. 1300 which was granted to CRA Exploration Pty. Limited on the 30th July, 1985 and renewed on the 30th January, 1986 for a further six month period. Exploration to date has involved a regional gravel sampling programme with the heavy mineral concentrates being observed for both indicator minerals and microdiamonds. All results within the relinquished portion of the licence area were negative.

4. GEOLOGY

The northern section of the E.L. is dominated by ridges of Middle Proterozoic Gawler Range Volcanics trending north north east/south south west. The area is divided by a north east/south west trending valley containing Quaternary Lake and deposits fluviatile sands and gravels presumably representing ancient extensions of Lake Gardiner. Further ridges of Gawler Range Volcanics are present in the south, flanked by Quaternary Pooraka Formation and talus deposits (refer SAa 4057 and SAa 4058 for geology modified from Yardea 1:250 000 geological mapping by G.S.S.A.).

5. PREVIOUS WORK BY CRA EXPLORATION PTY. LIMITED

A regional sampling programme was carried out with samples being collected from heavy mineral trap sites. Sample locations are plotted on SAa 3581 and SAa 3582 and all results are tabulated in Tables 1 and 2. All results were negative for both indicator minerals and microdiamonds.

L.A. LE MESSURIER

LAL/dp

TABLE 1

Indicator Mineral Results - Thurlga E.L. 1300

| SAMPLE NUMBER | INDICATOR MINERAL RESULTS |
|---------------|---------------------------|
| 1233906 | Noootius |
| 1233900 | Negative |
| 1233913 | Negative |
| 1233954 | Negative |
| 1233955 | Negative |
| 1233955 | Negative |
| 1233962 | Negative |
| 1233851 | Negative |
| 1233916 | Negative |
| 1233910 | Negative |
| 1233921 | Negative |
| 1233921 | Negative |
| 1233944 | Negative |
| 1233944 | Negative |
| 1233945 | Negative |
| 1233940 | Negative |
| 1233948 | Negative |
| 1233951 | Negative Negative |
| 1233952 | Negative |
| 1233953 | Negative |
| 1233963 | Negative |
| 1233976 | Negative |
| 1233981 | Negative |
| 1233984 | Negative |
| 1233856 | Negative |
| 1233893 | Negative |
| 1233907 | Negative |
| 1233922 | Negative |
| 1233941 | Negative |
| 1233982 | Negative |
| 1234002 | Negative |
| 1233824 | Negative |
| 1233843 | Negative |
| 1233845 | Negative |
| 1233849 | Negative |
| 1233852 | Negative |
| 1233853 | Negative |
| 1233854 | Negative |
| 1233983 | Negative |

TABLE 1 (cont.)

<u>Indicator Mineral Results - Thurlga E.L. 1300</u>

| SAMPLE NUMBER | INDICATOR MINERAL RESULTS |
|---------------|---------------------------|
| 1000050 | |
| 1233850 | Negative |
| 1233855 | Negative |
| 1233857 | Negative |
| 1233859 | Negative |
| 1233894 | Negative |
| 1233896 | Negative |
| 1233909 | Negative |
| 1233910 | Negative |
| 1233911 | Negative |
| 1233912 | Negative |
| 1233914 | Negative |
| 1233915 | Negative |
| 1233917 | Negative |
| 1233918 | Negative |
| 1233919 | Negative |
| 1233920 | Negative |
| 1233923 | Negative |
| 1233926 | Negative |
| 1233928 | Negative |
| 1233940 | Negative |
| 1233942 | Negative |
| 1233949 | Negative |
| 1233950 | Negative |
| 1233956 | Negative |
| 1233957 | Negative |
| 1233964 | Negative |
| 1233965 | Negative |
| 1233974 | Negative |
| 1233979 | Negative |
| 1233980 | Negative |
| 1233927 | Negative |

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TABLE 2

Microdiamond Results - Thurlga E.L. 1300

| SAMPLE NUMBER | MICRODIAMOND RESULTS |
|---------------|----------------------|
| | |
| 1233918 | Negative |
| 1233927 | Negative |
| 1233920 | Negative |
| 1233944 | Negative |
| 1233951 | Negative |
| 1233976 | Negative |
| 1233855 | Negative |
| 1233896 | Negative |
| 1233963 | Negative |
| 1233895 | Negative |
| 1233922 | Negative |
| 1233845 | Negative |
| 1233913 | Negative |
| 1233850 | Negative |
| 1233856 | Negative |
| 1233853 | Negative |
| 1233941 | Negative |
| 1233914 | Negative |
| 1233926 | Negative |
| 1234002 | Negative |
| 1233950 | Negative |
| 1234056 | Negative |
| 1234067 | Negative |
| 1234003 | Negative |
| 1233954 | Negative |
| 1233946 | Negative |
| 1233980 | Negative |
| 1233917 | Negative |
| 1233957 | Negative |
| 1233982 | Negative |
| 1233984 | Negative |
| 1233909 | Negative |
| 1233916 | Negative |
| 1233962 | Negative |
| 1233858 | Negative |
| 1233859 | Negative |
| 1233925 | Negative |
| 1233945 | Negative |
| 1233851 | Negative |
| 1233974 | Negative |

TABLE 2 (cont.)

Microdiamond Results - Thurlga E.L. 1300

| SAMPLE NUMBER | MICRODIAMOND RESULTS |
|---------------|----------------------|
| | |
| 1233981 | Negative |
| 1233983 | Negative |
| 1233849 | Negative |
| 1233843 | Negative |
| 1.233854 | Negative |
| 1233907 | Negative |
| 1233906 | Negative |
| 1233910 | Negative |
| 1233894 | Negative |
| 1233928 | Negative |
| 1233965 | Negative |
| 1233824 | Negative |
| 1233911 | Negative |
| 1233942 | Negative |
| 1233964 | Negative |
| 1233857 | Negative |
| 1233915 | Negative |
| 1233948 | Negative |
| 1233949 | Negative |
| 1233893 | Negative |
| 1233956 | Negative |
| 1233852 | Negative |
| 1233952 | Negative |
| 1233979 | Negative |
| 1233923 | Negative |
| 1233947 | Negative |
| 1233912 | Negative |
| 1233921 | Negative |
| 1233919 | Negative |
| 1233940 | Negative |

LOCATION

Yardea SI 53-3 ·

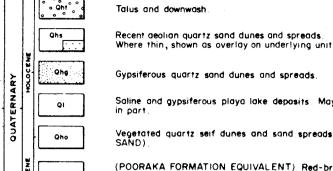
1:250 000 sheet, S.A.

KEYWORDS

Diamonds, Indicator Minerals







Gypsiferous quartz sand dunes and spreads.

(POORAKA FORMATION EQUIVALENT). Red-brown and yellow-brown gravelly and sandy clays, silts and sands with soft earthy carbonates (LOVEDAY PALEOSOL). Hard calcrete nodules, and BAKARA-type calcrete in lower part.

Densely-welded black, dark grey and mottled reddish-brown dacite

| OC OL OU | CAL BOUNDARY |
|----------|---|
| NFERR | D CONCEALED FAULT |
| TREND | OF JOINTS OBSERVED ON AERIAL PHOTOGRAPHS |
| STRIKE | AND DIP OF LAYERING IN VOLCANICS |
| STRIKE | AND DIP DETERMINED FROM COLUMNAR JOINTING |
| STRIKE | AND DIF OF JOINTS |
| STRIKE | OF VERTICAL JOINTS |
| STRIKE | OF VERTICAL SHEAR JOINTS |

HIGHWAY OR MAIN ROAD SECONDARY ROAD TRACK ALONG BOUNDARY FENCE RAILWAY AND STATION RAILWAY AND SIDING MAJOR ROAD BRIDGE FOR YAW HAR HOLAM ANDING GROUND AFRODROME PROHIBITED AREA AND BOUNDARY OF PROHIBITED AREA RESERVES BOUNDARY FINCE VERMIN PROOF DOG FENCE NATURAL GAS PIPELINE TRIG STATION ASTRONOMICAL STATION IDENTIFIED HILL OR MOUNTAIN CAIRN PILE SPOT ELEVATION ESCARPMENT MANGROVE SAND DUNE DRAINAGE RIVER CREEKS BRAIDED STREAM WITH FLOOD CHANNEL FLOOD PLAIN BOUNDARY CLAY PAN. SALT PAN (PLAYA LAKE) SWAMP TANK BORE WELL ARTESIAN BORE SPRING WATERHOLE

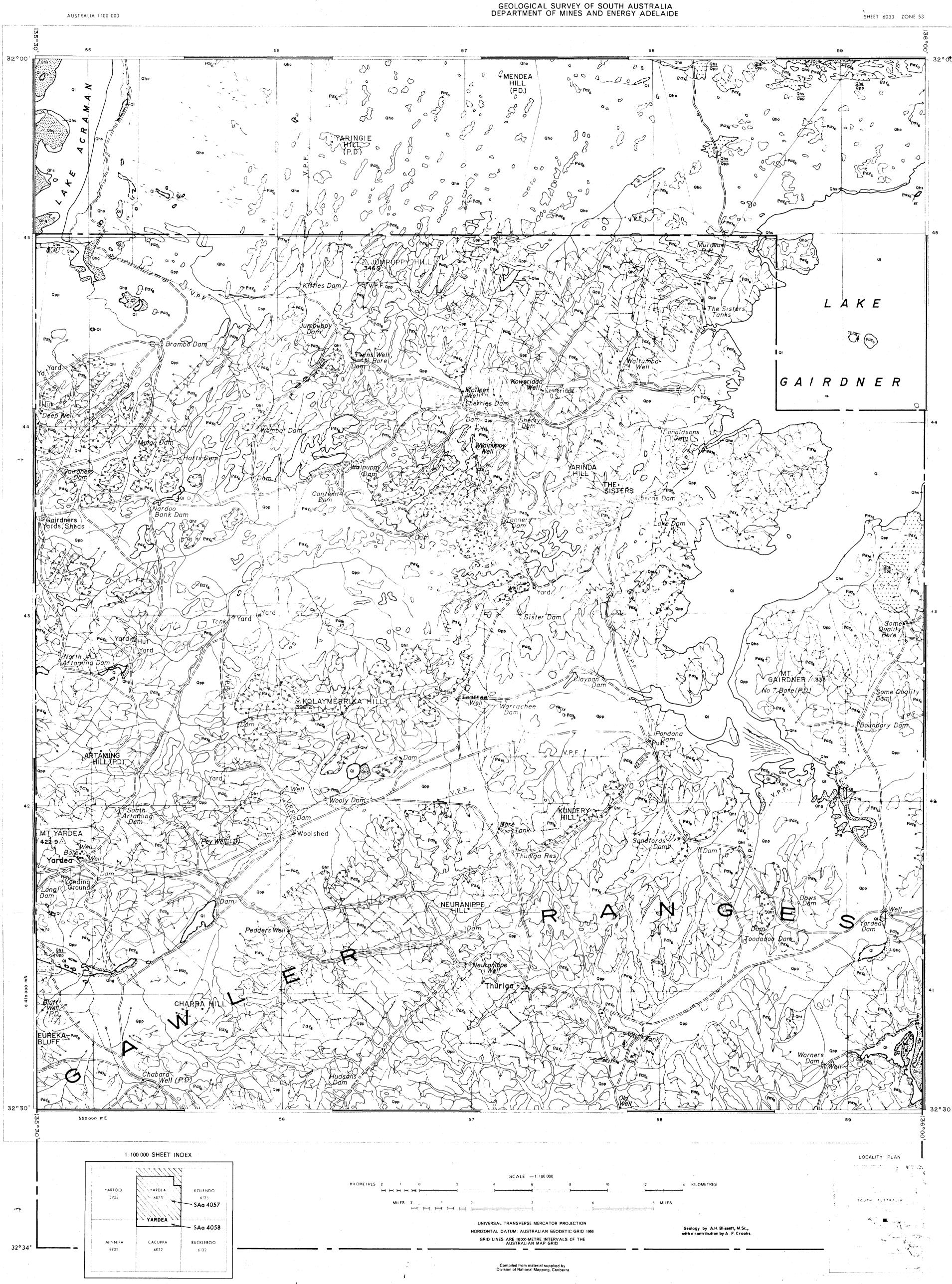
HEAD STATION OUTSTATION HUT NATIONAL ROUTE NUMBER

DAM

THURLGA E.L.1300 - S.A. GEOLOGY

CRA EXPLORATION PTY. LIMITED.

| SHEET 1 of 2 | | |
|--------------|-----------|-------------------|
| Ref.: | YARDEA | \$1 53 - 3 |
| Scale | 1:100 000 | Drawn R.D.D. |
| Author | L.A.L | Report No. 130671 |
| Date | Lula 86 | Plan No. SAG 4057 |



Prepared by the Cartographic Division for use within the S.A. Department of Mines and Energy

