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002

TENEMENT: EXPLORATION LICENCE NO. 164

TENEMENT HOLDER: PECHINEY AUSTRALIA EXPLORATION PTY. LTD

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REPORTS:

PECHINEY 1976

HERBRETEAU, C.

Exploration Licence 164 (Ifould Lake) Quarterly report. December 1975 to February 1976 (pg 18)
(No Plans)

PECHINEY 1976

VALSARDIEU, C.

Exploration Licence 164 (Ifould Lake) Quarterly report:March/ May 1976 (pg 19)
(No Plans)

PECHINEY 1976

BUTLER, M.A.

Letter concerning Expenditure during Second Quarter. 1976 (pg. 20)

REPORT:

COCQUIO, D. 1976
Final report, Exploration Licence 164 (Ifould Lake) South Australia (pgs. 21-50)

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2504-1

PECHINEY

(AUSTRALIA) EXPLORATION PTY. LIMITED

151 MACQUARIE STREET SYDNEY AUSTRALIA ★ TELEX AA20624 ★ TELEPHONE 27 9469-27 3262

BOX 4473, G.P.O., SYDNEY. 2001

The Director of Mines,
Department of Mines of South Australia,
Box 38, Rundle Street,
ADELAIDE, S.A. 5000.

006

YOUR REF.
OUR REF. MC:gg/0356-1173

Sydney 7th March, 1975.

Dear Sir,

Re: Exploration Licence 164 (Ifould Lake)
Quarterly Report: December 1974 to February 1975.

I. INTRODUCTION

Exploration Licence 164 which covers the reduced part of Exploration Licence 10 was officially granted to Pechiney (Australia) Exploration Pty. Limited for a period of one year commencing on 29th November, 1974. (reference letter from the Mining Registrar JJ:TB dated 27th November, 1974).

II. OPERATIONS CARRIED OUT DURING THE FIRST QUARTER OF OCCUPANCY

No field work was carried out during the first quarter. However, operations carried out consisted of :-

- Completion of a work programme and budget.

- Preparation of the 1975 field campaign.

III. EXPENSES

General and Administration	$ 13.10
Staffing costs	110.36
Travel and Accommodation	4.75
Contract services and Processing	-
Lease and Agreement costs	459.50
Field Office	10.00
Exploration materials	4.89
TOTAL ...	$ 602.60

Yours faithfully,
PECHINEY (AUST.) EXPLORATION PTY. LTD.

M. Chaigne,
Assistant Exploration Manager

PECHINEY

(AUSTRALIA) EXPLORATION PTY. LIMITED

151 MACQUARIE STREET SYDNEY AUSTRALIA ★ TELEX AA 20624 ★ TELEPHONE 27 9469-0

BOX 4473, G.P.O., SYDNEY. 2001

008

The Director of Mines,
Department of Mines of South Australia,
Box 38, Rundle Street P.O.
ADELAIDE. S.A. 5000.

YOUR REF.
OUR REF. CH/bak/1124-1408

Sydney 31st July, 1975.

Dear Sir,

Re : Exploration Licence 164 (Ifould Lake)
Quarterly Report : March to May 1975.

During the second quarter of occupancy, the assessment of previously obtained results has been continued.

The field operations, which had to be delayed, are scheduled to start early in August. The programme will consist of a Track-Etch survey and drilling.

Expenditure	March to May, 1975
General Administration	$ 132.00
Staffing costs	709.19
Travel and Accommodations	-
Contract Services and Processing	-
Lease and Agreement costs	-
Field office	185.00
Exploration materials	115.68
	$1,141.87

Yours faithfully,
Pechiney (Aust) Exploration Pty. Ltd.

C. HERBRETEAU.
Assistant to Exploration Manager.

PECHINEY

(AUSTRALIA) EXPLORATION PTY. LIMITED

151 MACQUARIE STREET SYDNEY AUSTRALIA ★ TELEX AA 20624 ★ TELEPHONE 27 9469-0

BOX 4473, G.P.O., SYDNEY. 2001

The Director of Mines,
Department of Mines of South Australia,
Box 38, Rundle Street P.O.,

ADELAIDE S.A. 5000

009

YOUR REF.
OUR REF. CV/cg/1420-1524

Sydney 25th September 1975.

Dear Sir,

Re : Exploration Licence 164 (Ifould Lake)
Quarterly Report : June to August 1975

I. Description of operations carried out during the third quarter of occupancy

During the period under review, operations consisted of :

- office studies :

  - geological review and compilation of results previously obtained in the area,
  - definition of targets and methods, cost estimation,
  - preparation for field work,
  - contacts with grading and drilling contractors.

- field studies :

  - positioning of personnel and equipment, setting up camp,
  - gridding of the areas of interest,
  - shallow drilling and placing of track etch cups,
  - sampling and radiometric readings.

Actual field work started on August 19th, the first track etch cups were placed towards the end of month in the Ifould Lake area NE of Tallacootra Lake. The results will not be known for several weeks.

A drilling programme is scheduled to start around the 25th September and will be carried out by Northbridge Pty. Ltd.

../..2.

010

Personnel

C. Valsardieu	Exploration Manager (part-time)
L. Geidans	Project Manager
D. Harrop	Exploration Geologist
Four Field Assistants	(Pegging, Placing of cups)
One Cook	

Office studies	19 man-days
Preparation for field	13 "
Field work	55 "

II. Expenditure

	June to August 75
General Administration	$ 107.47
Staffing Costs	$ 2.888.75
Travelling & Accommodation	$ 1.301.35
Contract Services & Processing	$ 438.80
Lease Fees	$ -
Field Office	$ 1.800.00
Exploration Materials	$ 464.93
Total	$ 7.001.30

Yours faithfully,
Pechiney (Australia) Exploration Pty.Ltd.

f.o. C. Valsardieu

C. Valsardieu
Exploration Manager

PECHINEY

(AUSTRALIA) EXPLORATION PTY. LIMITED

151 MACQUARIE STREET SYDNEY AUSTRALIA ★ TELEX AA20624 ★ TELEPHONE: 27 9469-27 3262

BOX 4473, G.P.O., SYDNEY. 2001

011

The Director of Mines,
Department of Mines of South Australia,
P.O. Box 151,

EASTWOOD S.A. 5063

YOUR REF.
OUR REF. CH/cg/15-76

Sydney 13th January 1976.

Dear Sir,

Re : Exploration Licence 164 (Ifould Lake)

We acknowledge receipt of your letter of 9th January. With reference to our letter CH:gg/1748-1644 of 19th December, we now submit the statement of expenditure incurred during the period September to November 1975.

General Administration	1.420.55
Staffing Costs	6.040.86
Travelling and Accommodation	4.221.97
Contract Services & Processing	3.353.70
Lease Fees	591.50
Field Office	4.407.75
Exploration Materials	6.117.78
Total	$ 26.154.11

Approximately $2.500 will be expended in finalizing our annual reports during the month of December 1975.

Yours faithfully,
Pechiney (Australia) Exploration Pty. Ltd.

RECEIVED
19 JAN 1976
DEPT. OF MINES
SECURITY
2504

C. Herbreteau
Administration Manager

I.- DESCRIPTION OF OPERATIONS CARRIED OUT DURING THE FOURTH QUARTER OF OCCUPANCY

During the above period the operations consisted of:

a) Office Studies:

- correlation of obtained geological data with information gained and reported by previous investigators;
- preparation of geological sketches and maps;
- preparation of the drill hole logs;
- periodic reporting;
- discussions with AMDEL about assaying and detailed analyses of selected diagnostic samples;
- analysis of assay and Track Etch cup results.

b) Field Studies:

- geological investigations of radiometric anomalies and the lithofacies in the proximity of the former;
- geological reconnaissance of exposures near Lakes Ifould and Tallacootra;
- radiometric survey of anomalous areas;
- surface and sub-surface (pits and drill holes) soil, rock and water sampling;
- recovery of Track Etch cups placed during the previous quarter of occupancy;
- drilling and associated radiometric and lithological logging;
- bulldozing of drill hole sites

II. PERSONNEL

C. Valsardieu	-	Exploration Manager (part-time)
L. Geidans	-	Project Manager
D. Harrop	-	Exploration Geologist
J. Biro	-	Logging Technician (part-time)
S. Peck	-	Drilling Supervisor (part-time)
P. Reidy	-	Field Assistant (part-time)
J. Flint	-	Field Assistant (part-time)
K. McIntosh	-	Field Assistant (part-time)
B. Hansen	-	Field Assistant (part-time)
M. Garrod	-	Cook (part-time)

Contractors: Drilling - Northbridge Pty. Ltd.
Bulldozing - Brambles (S.A.) Pty. Ltd.

III. STATISTICS

013

Total man-days spent on project	:	50
Track Etch cups placed - Lake Ifould	:	92
- Lake Tallacootra	:	60
- Lake Tallacootra (North)	:	126
Total Number of holes drilled by contractor	:	9
Total Meterage drilled by contractor	:	311
Total Number of samples submitted for analysis	:	21
Total line miles gridded	:	59
Total line miles drilled for T.E. cups and radiometrically surveyed	:	57

IV. BRIEF RESULTS OF GEOLOGICAL INVESTIGATIONS AND CONCLUSIONS

4.1. SURFACE GEOLOGY

The basement consists of banded acid, intermediate and basic gneisses and schist, and occasionally of granitic rocks, all cut by pegmatites and acid veins. It is exposed along the north-western shore of Lake Ifould, sometimes within the Lake and rarely on the south-eastern shore. There is also a large exposure immediately north-west of Lake Tallacootra.

The overlaying Pidinga Formation is exposed in parts along the north-western shore of Lake Ifould where it consists of limestone, two ferruginous (occasionally leached) sandstones, crystalline gypsum and sandy clay horizons. The lower-most members of this Formation - lignitic material and sands - however occur only in the lower-most parts of Lake Ifould.

Quarternary kopae occur near the lake shores and the sand (dunes) and calcareous soil form the present surface away from the lakes.

4.2. RADIOMETRY

The radiometric readings over basement rocks are low, ranging from 50 c/s to 150 c/s (SPP2), the highest readings being associated with pegmatitic veins (maximum 1000 c/s). The radiometric readings of the exposed Pidinga Formation are also very low, ranging from 25 c/s to 75 c/s.

A large radiometric anomaly occurs in the northern part of Lake Ifould, close to the western shore, with maximum readings of 3500 c/s. It appears to be associated with surface "salt" deposits, suggested to contain radium sulphate.

The salt lake water from the anomalous area is also radioactive, but the intensity of same rapidly decreases over a period of several days, suggesting radon as its source.

The results of the Track Etch cups placed in Lake Ifould only confirm the validity of surface radiometric survey observations and deductions. The results of the Track Etch cup programme north of Lake Tallacootra are inconclusive, revealing only one anomalous value in a small salt lake and several very small and apparently insignificant isolated anomalies in other localities.

4.3. DRILLING

A line PIN R86-PIN R91 was placed east-west at 800 m spacings north of Lake Tallacootra to test the possible structure and stratigraphy in this region.

Two holes PIN R94 and PIN R95 were placed on the northern shore of Lake Ifould to test the possible presence of a north-east south-west trending fault through anomaly IPi.

Two holes were also drilled to the south-west of Lake Ifould to test for this same structure. The holes were drilled using the reverse circulation technique because of the unconsolidated nature of the Pidinga Formation, the cavernous nature of the Nullabor Limestone, and the lack of water for conventional mud drilling tecnhiques.

All the holes were logged using the ELR 10 of the SAPHYMO SRAT and the total count gamma ray probe STS 33 of the C.E.A.

A small anomaly was recorded at the top of the lignitic sequence at 30.5 m in PIN R93.

The drilling has given added stratigraphic information about the area, however, the structure was not adequately defined.

All holes were drilled through the Pidinga Formation to the basement.

V. EXPENDITURE

General Administration
Staffing Costs
Travelling and Accommodation
Contract Services & Processing
Lease Fees
Field Office
Exploration Materials

ENCLOSURES

Plate No.		Scale	Plan No.
	Ifould Lake Area		
1	- Base map; geology; geochemistry and location of drill holes;	1:10,000	628-213
2	- Track Etch Results - 1975;	1:10,000	628-209
3	- Surface radiometrics;	1:10,000	628-214
4	- Track Etch Results 1975 and Assay Data;	1:2,000	628-210
5	- Radiometric Observations made at time of Track Etch Placement;	1:2,000	628-221
6	- Surface Radiometric Contours;	1:2,000	628-215

ENCLOSURES (Cont)

015

Plate No.		Scale	Plan No.
	Tallacootra Lake Area		
7	- Geology, geochemistry and Location of drill holes;	1:62,992	628-216
8	- Track Etch Results - 1975;	1:62,992	628-211
9	- Surface Radiometrics observed at the time of Track Etch placement;	1:62,992	628-222
	- Assay Results		
24,25	- Drill Hole Logs and Sections		
28	- Location Plan of Drill Holes and Sections	1:250,000	628-223

PIDINGA SAMPLES

L.1

PECHINEY (AUSTRALIA) EXPLORATION PTY. LTD.

GEOCHEMICAL RESULTS (Metal content in ppm, water in ppb)

LAB SHEEN

SAMPLE TYPE
W Water sample
S Soil sample
SS Stream sediment sample
O Overburden sample
R Surface rock sample
C Cutting rock sample
CC Core rock sample
CH Channel

METHOD OF ANALYSIS
AAS Atomic absorbtion spectrophotometry
Col Colorimetric geochemical analysis
F Fluorometric chemical analysis
W Wet chemical assay
O Other method
S Spectrophotometric assay
T Titrometric assay
E Extraction
XRF X-Ray Fluorescence
GS Gamma Spectrometry

Sample No	Location (Co ords; photos,)	Sample Type	Rock Type	U	TR	Cu	Pb	Zn							SPP2
5467	LAKE IFOULD NO1 1017E RECON	C	Lignite & clays	<4											
5468	N°2 "	C	Lignite	<4											
5469	N°3 "	C	"	<4											
5470	N°4 "	C	"	<4											
5471	LAKE IFOULD NORTHERN BANK. NORTH OF IP.	R	Biotite granite gneiss	<4	440										
5472	N162000 E406200	W	Water sample												
5473	" "	SS	Sediment from above.	<4	6										
5487	PinR 86 17m-18m	C	basement	<4	25										
5488	PinR 88 27m-28m	C	"	<4	<4										
5489	PinR 89 33m-34m	C	"	<4	<4										
5490	PinR 90 41m-42m	C	"	<4	<4										
5491	PinR 91 38m-39m	C	"	<4	<4										
5492	PinR 92 23m-24m	C	"	<4	10										
5493	PinR 92 50m-51m	C	Lignite	5	...										
5494	PinR 93 70m-71m	C	Basement	<4	<4										
5495	PinR 96 39m-40m	C	Basement	5	25										
9920	LAKE IFOULD - PIDINGA	R	Pink fold-qtz pegmatite in gneiss	<4	7	10	55	20							125
9921	" " "	R	" " " " "	15	7	19	70	11							70
			Limit of detection												
			Method of analysis												

1 : 250,000 sheet FOWLER / BARTON

Other type

SML or EL No. 164

Mineral Claim No.

Project No. 6285-6

State S A

L.1

PECHINEY (AUSTRALIA) EXPLORATION PTY. LTD.

GEOCHEMICAL RESULTS (Metal content in ppm, water in ppb)

PAGE 2

LAB ANDEL

Sample No	Location (Co ords; photos,)	Sample Type	Rock Type	U	Th	SO_4 %	NaCl					U in powder	pH		SPP2
5404	LAKE TALLACOOTRA	W	ppm.	5	-							<4	—		15000+
5422	" "	S	Yellow stained clay + grit.	<5	-										15000+
5423	" "	R	Yellow water impregnated sandst.	<5	-										15000+
5424	" "	S	Lignite.	24	10.5										750
5433	LAKE WOULD 937N 897SE	S	Lignitic clay (1)	10	18										
5434	" " " "	S	Lignitic material (2)	7	<3.5										
5435	" " " "	S	" " (3)	10	3.5										
5436	" " " "	S	" " (4)	19	<3.5										
5437	" " " "	W	ppb	5	-										
			Limit of detection												
			Method of analysis												

SAMPLE TYPE

W Water sample
S Soil sample
SS Stream sediment sample
O Overburden sample
R Surface rock sample
C Cutting rock sample
CC Core rock sample
CH Channel

METHOD OF ANALYSIS

AAS Atomic absorbtion spectrophotometry
Col Colorimetric geochemical analysis
F Fluorometric chemical analysis
W Wet chemical assay
O Other method
S Spectrophotometric assay
T Titrometric assay
E Extraction
XRF X-Ray Fluorescence
&S Gamma Spectrometry

1 : 250,000 sheet FOWLER / BARTON

Other type

SML or EL No. 164

Mineral Claim No.

Project No. 6285-6

State S.A.

TRUE NORTH

TO OOLDEA

Sample no	U	Th
5433	8	18
34	5	<4
35	8	4
36	16	<4
37		

<4/7

15/7

SH

R 94
BG only
1

R 95
BG. only
22

Small Salt Lake

SEE PLAN 628-210
AT 1:2000

16.00 N
15.00 N
14.00 N
13.00 N
12.00 N
11.00 N
10.00 N
5.00 N
10400
9600 E
9200 E
9000 E
8400 E
8000 E
7200 E
6400 E
5600 E
4800 E
4000 E
3200 E
2400 E
1600 E
800 E
1000 N
500 N
00 N/S
00 E/W

LAKE IFOULD

TO COLONA STATION

LOCATION

LEGEND

POSSIBLE FAULT

BASEMENT

LIMESTONE

DRILL HOLE LOCATION (PREFIX PIN.) ⊕

ACCUMULATION FACTOR → 0.9 R95 ⊕ 240 at 16 → DEPTH IN METRES
HOLE NUMBER
RADIOACTIVITY
32 → TOTAL DEPTH OF HOLE

URANIUM AND THORIUM ASSAY RESULTS IN ppm U 7/15 Th

SCALE 1:10,000

m 200 0 500 1000 m

PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA PROJECT (S.A.) - E.L.164
IFOULD LAKE AREA

BASE MAP

GEOLOGY, GEOCHEMISTRY AND LOCATION OF DRILLHOLES

DRAWN: L.G. SCALE: 1:10,000 DRAWING NO.
TRACED: YHM DATE: OCT 1975 628-213

ENV. 2504 II – 1

PLATE 1

TRUE NORTH

SEE PLAN 628-210 AT 1:2000 SCALE

50040

46284 6 85 x 86 6 87 4 88 9

46278 7 79 3 80 x 81 14 82 1 83 6

46272 29 73 10 74 2 75 1 76 4 77 1

46266 8 45 69 10 70 18 71 1

46258 16 59 18 60 7 61 15 62 10 63 15 64 1 65 2

46349 14 69 33 52 16 53 19 54 3 55 1 56 14 57 2

46343 5 44 6 45 4 46 9 47 8 68 2

46338 3 39 3 40 16 41 3 42 9

46334 6 35 16 36 11 37 1

46327 4 28 15 29 10 30 38 31 14 32 4 33 3

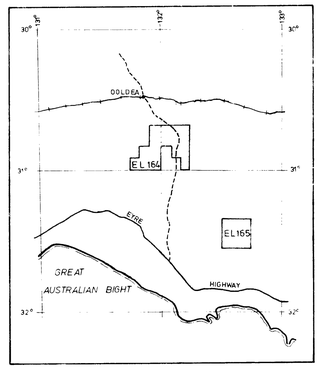
46321 11 22 1 33 10 34 25 8 25 2

50032 47 34 14 35 26 36 31 37 11 38 31 39 5

50032 16 31 8 30 47 29 9 28 27 26 5 25 5 24 23 23 3

1600 N
1500 N
1400 N
1300 N
1200 N
1100 N
1000 N
500 N
1000 N/S

7200 E
8000 E
8400 E
9000 E
9200 E
9600 E
6400 E
5600 E
4800 E
4000 E
3200 E
2400 E
1600 E
800 E
00 E/W



LOCATION

LEGEND

CUP NUMBER 50032
LOCATION OF CUP •
VALUE OF CUP IN TRACK ETCH PER mm² 125

DAMAGED CUP x

0	25
25	50
50	100
100	150
150	200
200	250
500	500
>	500

CONTOUR INTERVALS IN T/mm²

SCALE 1:10,000

m 200 0 500 1000 m

PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA PROJECT (S.A.)

IFOULD LAKE AREA — E.L. 164

TRACK ETCH RESULTS 1975

PREPARED BY L.G. SCALE 1:10,000 PLAN No.
DRAWN BY DATE SEP. 1975 628-209

ENV. 2504-II — 2

PLATE 2

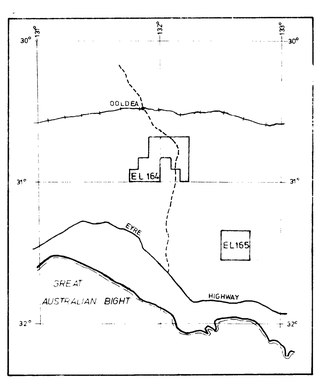
TRUE NORTH

SEE PLAN 628-221 AT 1:2000

1600 N
1500 N
1400 N
1300 N
1200 N
1100 N
1000 N
500 N
00 N/S

00 E/W
800 E
1600 E
2400 E
3200 E
4000 E
4800 E
5600 E
6400 E
7200 E
8000 E
8400 E
9000 E
9200 E
9600 E
10000

LOCATION



LEGEND

SPP 2 (S.N. 12/886) VALUES IN COUNTS PER SECOND

0	50
50	100
100	150
150	200

SCALE 1:10,000

m 200 0 500 1000 m

PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA PROJECT (S.A.)

IFOULD LAKE AREA — E.L. 164

SURFACE RADIOMETRICS

PREPARED BY L.G.	SCALE 1:10,000	PLAN No.
DRAWN BY [illegible]	DATE OCT. 1975	628-214

EAN. 2504 II – 3

PLATE 3

TRUE NORTH

Approx position of shore line

Approx. axis of drainage channel (bifurcated)

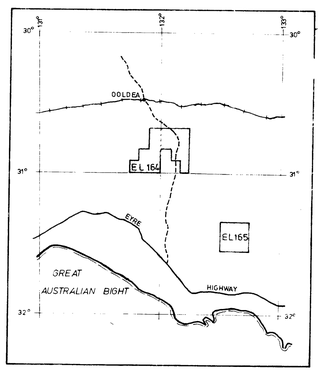
ANOMALY 1 PI

IFOULD LAKE

Approx. shore line

SAMPLES		
	U	Th ppm
5433	8	18
5434	8	<4
5435	8	<4
5436	16	<4
5437		

1300 N
1200 N
1100 N
1000 N
900 N
800 N
700 N
600 N
500 N
9400 E
9300 E
9200 E
9100 E
9000 E
8900 E
8800 E
8700 E
8600 E
8500 E
8400 E
8300 E
8200 E



LOCATION DIAGRAM

LEGEND

CUP NUMBER 50,022
LOCATION OF CUP
VALUE OF CUP IN TRACK ETCH PER mm² CUP DAMAGED 125

Track etch values:

- 0 - 25 T/mm²
- 25 - 50 "
- 50 - 100 "
- 100 - 150 "
- 150 - 200 "
- 200 - 250 "
- 250 - 500 "
- > 500 "

SCALE 1 : 2000

m 40 20 0 40 80 120 160 200m

PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA PROJECT (S.A.)
TRACK ETCH RESULTS - 1975 AND ASSAY DATA

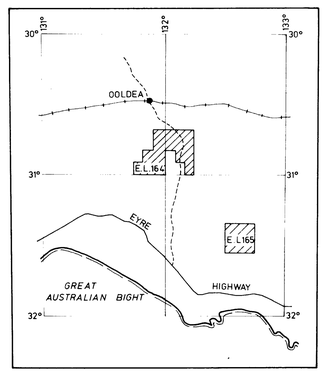
PREPARED BY LG	SCALE 1 : 2,000	PLAN No
DRAWN BY YWM	DATE OCTOBER, 1975.	628-210

ENV. 2504 — 4

PLATE 4

TRUE NORTH

LOCATION DIAGRAM



LEGEND

SPP_2 (SN:12/886) Counts per second

- 0 - 100
- 100 - 200
- 200 - 400
- 400 - 800
- 800 - 1600
- 1600 - 3200
- 3200 - 6400
- > 6400

SCALE 1 2000

m 40 20 0 40 80 120 160 200m

PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA PROJECT (S.A.) - E.L. 164

ANOMALY 1 PI - IFOULD LAKE AREA

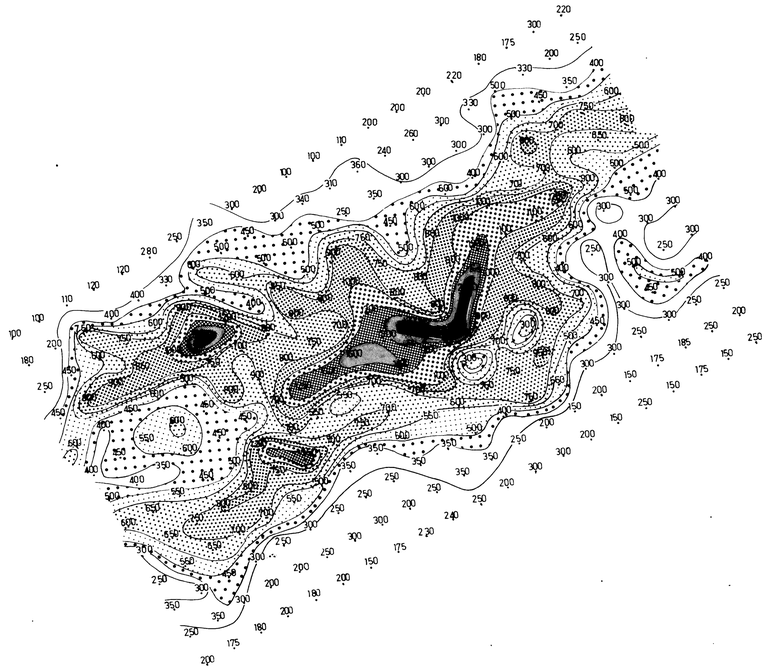
RADIOMETRIC OBSERVATIONS MADE AT TIME OF TRACK-ETCH PLACEMENT

PREPARED BY D.W.H.	SCALE 1 : 2,000	PLAN No
DRAWN BY [illegible]	DATE OCTOBER, 1975.	628-221

ENV 2504 II — 5

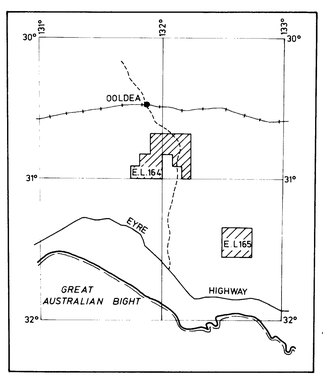
PLATE 5

TRUE NORTH



1300 N
1200 N
1100 N
1000 N
900 N
800 N
700 N
600 N
500 N
8200 E
8300 E
8400 E
8500 E
8600 E
8700 E
8800 E
8900 E
9000 E
9100 E
9200 E
9300 E
9400 E

LOCATION DIAGRAM



LEGEND

SPP2 SN VALUES IN COUTS PER SECOND

0	300
300	400
400	500
500	600
600	700
700	800
800	1000
1000	1200
1200	1400
1400	1600
	> 1600

SCALE 1 2000

m 40 20 0 40 80 120 160 200m

PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA PROJECT (S.A.) - E.L. 164

ANOMALY 1 PI - IFOULD LAKE AREA

RADIOMETRIC SURVEY ON 25METRE GRID

SURFACE RADIOMETRIC CONTOURS

PREPARED BY LG	SCALE 1 2,000	PLAN No
DRAWN BY YMM	DATE OCT 1975	628-215

ENV. 2504 II — 6

PLATE 6

LEGEND

- Drainage pattern (creeks and lakes)
- Outcrops of basement
- Faults or photo lineaments
- Approx. boundary of Nullabor limestone
- R.81 — Drill hole Number
- Drill hole Location
- 54 — Drill hole Depth (in metres)

ROTARY DRILL → R.93
ACCUMULATION → 0.25 / 72 → 135 at 30·5 (RA / DEPTH)
TOTAL DEPTH

264,000 N
256,000 N
248,000 N
240,000 N
232,000 N
224,000 E

318,400 E
320,000 E
328,000 E
336,000 E
344,000 E
352,000 E
360,000 E
368,000 E

131° 45
30° 45
131° 50
30° 50
131° 55
30° 55
132° 00
132° 05
30° 50
132° 10
132° 15
31° 00

Approximate location of Nullabor limestone

R41 600 ppb (Water sample)

R43 45 ppb (Water sample)

1 PI

R94 BG only 80 ppm in hand specimen

R95 BG only 22

For detail see IFOULD LAKE 1:100,000

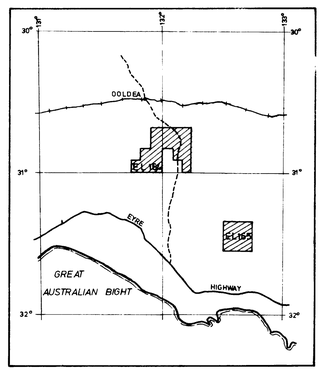
LAKE IFOULD

R93 135 at 30.5 / 72

R92 BG / 25

R86 BG / 18 — R87 BG / 26 — R88 BG / 34 — R89 BG / 34 — R90 BG / 42 — R 91 BG / 39

N



SCALE 1:62992 OR 1 INCH = 1600 m

0 1.6 3.2 4.8 6.4 8 km
0 1 2 3 4 5 6 7 8

PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

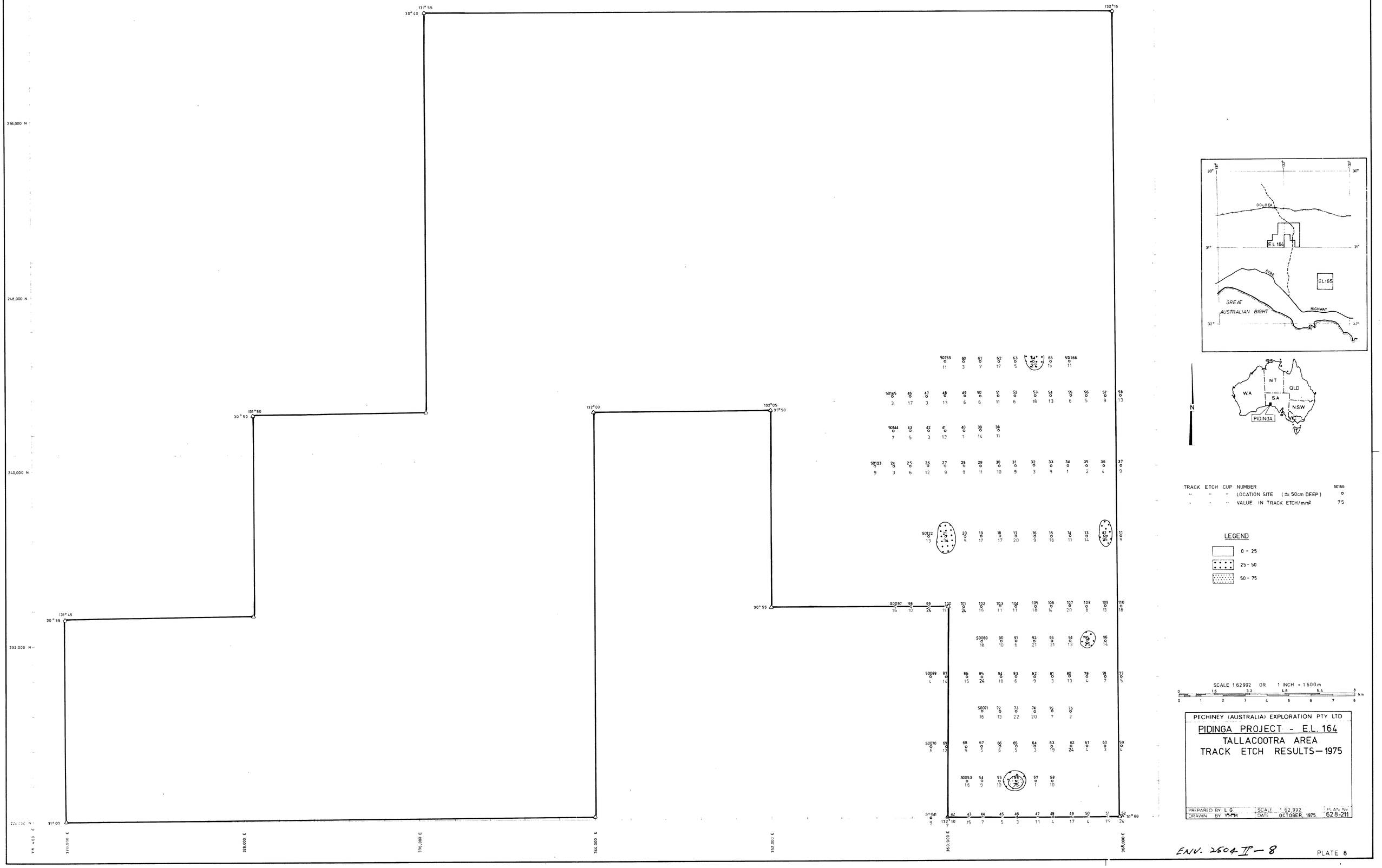
PIDINGA PROJECT - E.L. 164
TALLACOOTRA AREA

GEOLOGY, GEOCHEMISTRY AND LOCATION OF DRILLHOLES

PREPARED BY LG DH	SCALE 1:62,992	PLAN No. 628-216
DRAWN BY YHM	DATE OCTOBER, 1975	

ENV 2804 II – 7

PLATE 7



TRACK ETCH CUP NUMBER 50166
" " " LOCATION SITE (≃ 50cm DEEP) o
" " " VALUE IN TRACK ETCH/mm² 75

LEGEND

0 - 25

25 - 50

50 - 75

SCALE 1:62992 OR 1 INCH = 1600m

0 1.6 3.2 4.8 6.4 8 km
0 1 2 3 4 5 6 7 8

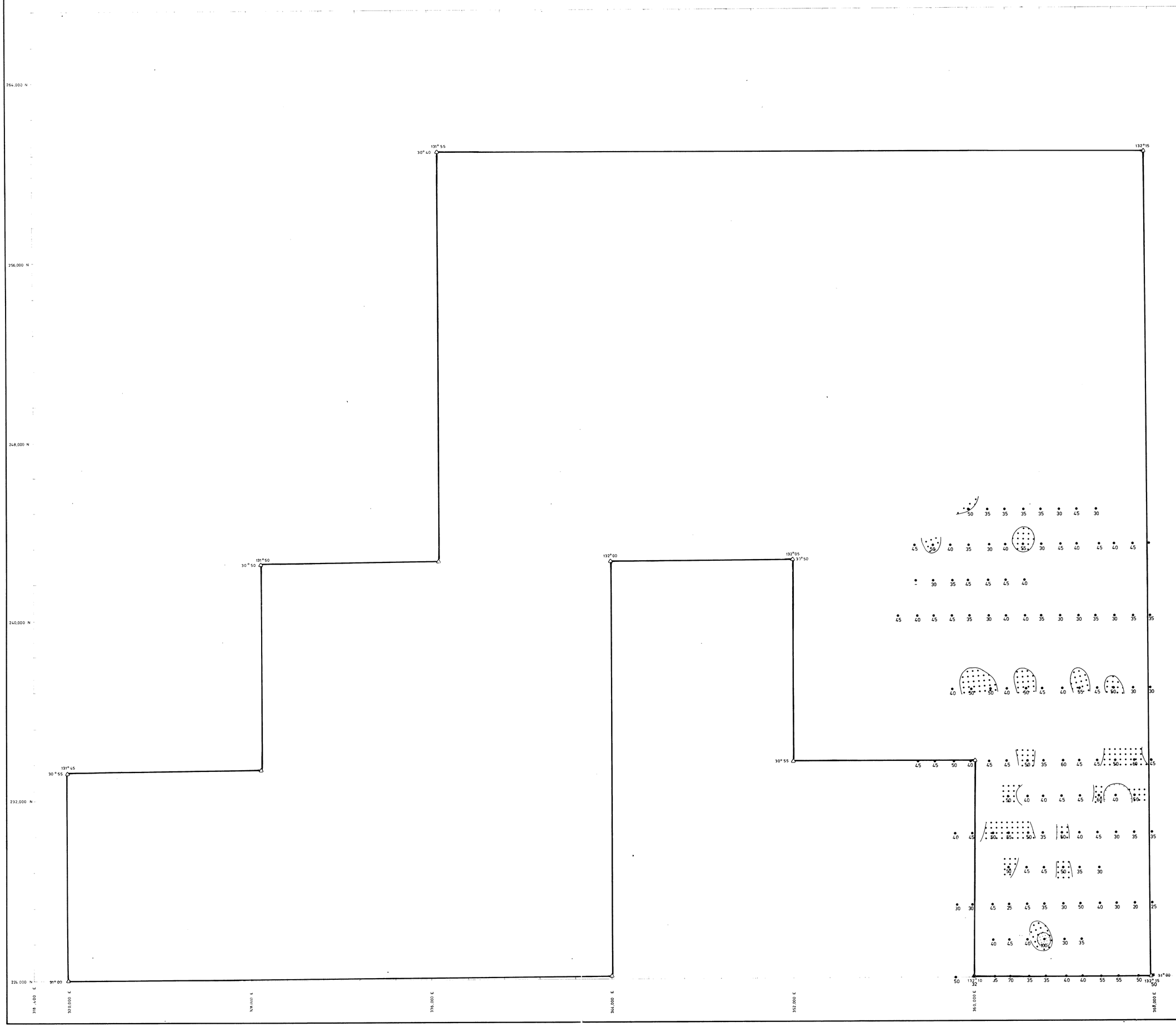
PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA PROJECT - E.L. 164
TALLACOOTRA AREA
TRACK ETCH RESULTS — 1975

PREPARED BY L.G	SCALE 1:62,992	PLAN No.
DRAWN BY Y.H.M	DATE OCTOBER, 1975	628-211

ENV. 2504 II — 8

PLATE 8



LEGEND

SPP_2 (SN⁻¹) Values in counts per second

- 0 - 50 c/s
- 50 - 100 c/s
- 100 - 150 c/s
- >150 c/s

SCALE 1:62992 (1" = NOM = 1.600m)

0 1.6 3.2 4.8 6.4 8 km
0 1 2 3 5 6 7 8

PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA PROJECT - E.L. 164

SURFACE RADIOMETRICS OBSERVED AT THE TIME OF TRACK-ETCH PLACEMENT

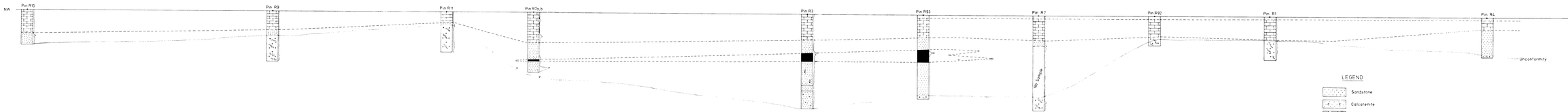
PREPARED BY L.G.	SCALE 1:62,992	PLAN No.	
DRAWN BY PJB	DATE OCTOBER, 1975	628-222	

ENV. 2504 II - 9

PLATE 9

NORTH WEST

SOUTH EAST



LEGEND

- Sandstone
- Calcarenite
- Limestone
- Lignitic sand
- Lignite
- Kaolinitic sandstone
- Granite gneiss

HORIZONTAL SCALE 1 10,000
VERTICAL SCALE 1 = 1 10m
RADIOMETRIC SCALE 1cm = 300 c/s

PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA PROJECT - E.L.164

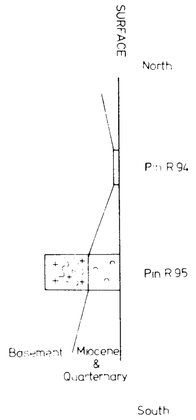
GEOLOGICAL CROSS SECTIONS E-W
HOLES PIN R4, PIN R1, PIN R92,
PIN R2, PIN R93, PIN R3, PIN R7a, b,
PIN R11, PIN R9, PIN R10.

DRAWN/CHKD BY	D.W.H.	SCALE	PLAN No.
TRACED BY	P.B.	DATE	DWG. 274

NOVEMBER 1975

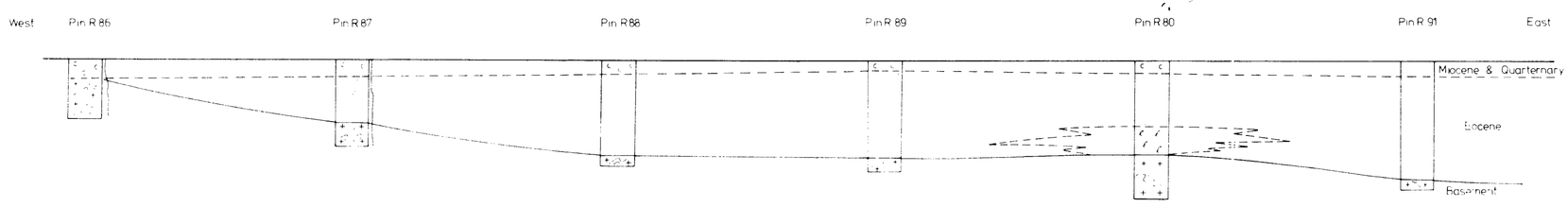
ENV. 2504I-9

PLATE 24



SECTION A

SECTION B



LEGEND

- Sandstone
- Calcarenite
- Lignitic sand
- Granite Gneiss
- Radiometric anomaly

Scale Horizontal 1 10,000
Vertical 1 1,000

Radiometrics 1 cm = 300 c/s

PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA PROJECT E.L.164

GEOLOGICAL CROSS SECTION THROUGH DRILL HOLES Pin R 86-91, 94, 95.

PREPARED BY D.W.F	SCALE see above	PLAN No
DRAWN BY R.C	DATE [illegible] 1975	629 226

ENV. 2504 I-10

Plate 25

PECHINEY

(AUSTRALIA) EXPLORATION PTY. LIMITED

151 MACQUARIE STREET SYDNEY AUSTRALIA ★ TELEX AA20624 ★ TELEPHONE: 27 9469-27 3262

BOX 4473, G.P.O., SYDNEY. 2001

018/V

The Director of Mines,
Department of Mines of South Australia,
P.O. Box 151,

EASTWOOD S. A. 5063

YOUR REF.
OUR REF. CH/cg/157-76

Sydney 24th March, 1976.

Dear Sir,

Re : Exploration Licence 164 (Ifould Lake) - Quarterly Report : December 1975 to February 1976

I. Description of operations carried out during the 1st quarter of the second year of occupancy

Due to the field crew being on leave, the activities were limited to some office studies and finalizing the annual report of operations carried out during 1975.

Statistics on Personnel

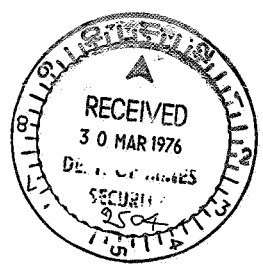
- Geologists	5	man-days
- Geotechnicians	4	"
- Geologist Assistants	½	"
- Draftsmen	5	"

II. Expenditure

General Administration	$	168.90
Staffing Costs		902.40
Travel & Accommodation		246.07
Contract Services & Processing		356.86
Lease & Agreement Costs		-
Field Office		150.00
Exploration Materials		307.89
Total	$	2.132.12

Yours faithfully,
Pechiney (Australia) Exploration Pty. Ltd.

C. Herbreteau
Administrative Manager



PECHINEY

(AUSTRALIA) EXPLORATION PTY. LIMITED

151 MACQUARIE STREET SYDNEY AUSTRALIA ★ TELEX AA20624 ★ TELEPHONE: 27 9469-27 3262

BOX 4473, G.P.O., SYDNEY. 2001

019

The Director of Mines,
Department of Mines of South Australia,
P.O. Box 51,
EASTWOOD. S.A. 5063.

YOUR REF.
OUR REF. CH/bak/311-76

Sydney 17th June, 1976.

Dear Sir,

Re : Exploration Licence 164(Ifould Lake)
Quarterly Report : March to May, 1976.

During this second quarter of the second year of occupancy, a further geological review and compilation of the results previously obtained in the area did not lead to the definition of new targets and/or methods. Therefore, it is now this Company's intention to discontinue the investigations, and surrender the Exploration Licence.

Pechiney (Australia) Exploration Pty. Ltd. will submit its official letter of relinquishment and a complete technical report covering all operations carried out in the area of the Licence within the next two months.

Expenditure

General Administration	$ 48.55
Staffing Costs	383.75
Travel & Accommodation	62.60
Contract Services & Processing	-
Lease & Agreement Costs	-
Field office	120.00
Exploration Materials	(55.00)
Total	$ 559.90

Yours faithfully,
Pechiney (Aust) Exploration Pty. Ltd.

C. VALSARDIEU.
Exploration Manager.

RECEIVED
28 JUN 1976
DEPT. OF MINES
SECURITY
3504-11

PECHINEY

(AUSTRALIA) EXPLORATION PTY. LIMITED

151 MACQUARIE STREET SYDNEY AUSTRALIA ★ TELEX AA20624 ★ TELEPHONE 27 9469-27 3262

BOX 4473, G.P.O., SYDNEY. 2001

020

The Director of Mines,
P.O. Box 151,
EASTWOOD. S.A. 5063

YOUR REF.
OUR REF. CB/kr - 0804

Sydney 14th July, 1976

Dear Sir,

I reply to your circular letter of 29th June, concerning exploration expenditure during the second quarter of 1976, our company has spent only a nominal amount of approximately $100.00 on mapping and stationery.

Yours faithfully,

M. A. BUTLER

PECHINEY (AUSTRALIA) EXPLORATION PTY. LTD.

021

FINAL REPORT EXPLORATION LICENCE No. 164 (IFOULD LAKE, SOUTH AUSTRALIA)

R/76-21.U

D. Cocquio
July, 1976

TABLE OF CONTENTS

022

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	2b) " " ; Surface Radiometrics Observed at Time of Track-Etch Cup Placement.	"
3.	Tallacootra Area; Base Map for Isopach-Isobath Overlays.	1:125,000
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	3b) " " ; Isobath of Top of Eocene.	"
	3c) " " ; Isopachs of Limestones.	"
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5.	Ifould Lake Area; Base Map - Geology, Geochemistry and Location of Drill Holes.	1: 10,000
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	5b) " " ; Surface Radiometry.	"
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	Profile 7c) Cross-section through Holes PIN R-86 to PIN R-91.	"

FINAL REPORT EXPLORATION LICENCE No. 164
(IFOULD LAKE, SOUTH AUSTRALIA)

I. MINING TITLE

1.1. Status of Exploration Licence 164

Exploration Licence No. 164 (Ifould Lake) covers the reduced part of E.L. No. 10, and was officially granted to Pechiney (Australia) Exploration Pty. Ltd. for a period of 12 months commencing on 29th November 1974 (reference letter from the Mining Registrar E.L. 164 - JJ:TB dated 27.11.74).

The Exploration Licence was renewed for a further term of 12 months commencing on 29th November 1975 (reference letter DM164 ICG:PAL dated 30.10.75).

The E.L. covers exploration for all minerals other than precious stones and extractive minerals, but the principal interest of Pechiney (Australia) Exploration is uranium.

The area involved is approximately 1200 Km2, and covers the flat country of the Nullabor Plain around Ifould Lake.

The area was held by Pechiney (Australia) Exploration until July 7th, 1976, when it was decided to relinquish the title (reference : letter to Director of Mines CH:gg 381-76).

1.2. Location and limits

Exploration Licence No. 164 covers 1179 Km2 in the Ooldea and Barton 1:250,000 topographic sheet, approximately 40 km south of Ooldea. Description of the E.L. limits is as follows :

Commencing at a point being the intersection of latitude 30°40'S and longitude 131°55'E thence east to longitude 132°15'E south to latitude 31°00'S west to longitude 132°10'E, north to latitude 30°55'S, west to longitude 132°05'E, north to latitude 30°50'S, west to longitude 132°00'E, south to longitude 131°50'E, north to latitude 30°50'S, east to longitude 131°55'E, and north to the point of commencement.

II. GEOLOGICAL SETTING

The E.L. area is on the eastern margin of the Nullabor Plan. Westwards, it is generally flat with sparse vegetation other than saltbush. To the east, however, there are abundant sand dunes and it is more densely vegetated. There is little fresh water available except from the shed tanks along the vermin proof fence and the Colona-Maralinga Road.

There are numerous salt lakes which proved hazardous for vehicles after the rains.

The climate is relatively harsh although abnormally high rain was encountered this season.

../..2.

The area investigated is at the eastern margin of the Nullabor Limestone and the western margin of the Gawler Block. The Nullabor Limestone appears to wedge out against the increasing thickness of the sand sequence towards the east, being in places only represented by a calc-arenite. The treeless nature of the Nullabor Plain is due to the Nullabor Limestone.

Within the E.L. area, the Basement appears to form a number of depressions and ridges which have subsequently been filled with Cainczoic sediments, at least some of which have been marine. The deepest portions of these depressions generally have a lignite rich sequence as part of the Pidinga Formation. This is generally pyrite rich and represents the only reducing zone in the sequence. It was noted that there is often a slight increase in the radiometry at the top of this unit.

The Basement in this area is generally a biotite rich granite gneiss intruded in places by a coarse grained pegmatite.

2.1. Stratigraphy

2.1.1. Stratigraphic Table

Cainozoic	Quaternary Pleistocene Lower Miocene	Roe Calcarenite Nullabor Limestone Abrakurrie Limestone
Cainozoic	Middle Upper Eocene Middle Eocene	Wilson Bluff Limestone Hampton Sandstone Pidinga Formation
Mesozoic	Lower Upper Cretaceous Lower Cretaceous	Madura Formation Loongana Sandstone
	Precambrian	Undifferentiated Crystalline Basement Gneiss

2.1.2. Quaternary - Recent Sands

The Quaternary Soil cover in this area is generally rather thin consisting of a medium to fine grained poorly sorted sand. East of the Nullabor limestone exposure it is generally thicker and in places forms dunes. In the salt lakes the unit appears to be represented by only a few centimetres of gypsiferous silt and a halite crust.

The limit of the Quaternary Sediments is hard to define because of its similarity to the underlying Miocene particularly in the eastern part.

../..3.

This unit is generally non-radioactive except for within the salt lakes, where the top few centimetres or less apparently contain a radioactive evaporate ($RaSO_4$). This is responsible for much of the anomalous radiometry noted on the salt lakes.

2.1.3. Limestones

There are two Tertiary limestone units : The Wilson Bluff Limestone and the Nullabor Limestone. It appears that the limestone encountered is the younger and harder marine Nullabor Limestone, which is white-grey, fossiliferous, and has suffered minor silica alteration. It has an immature Karst topography development which probably commenced after exposure and has been hindered by the subsequent arid climatic conditions.

The basal section of the limestone consists of calcareous grits - micro-conglomerates below which in places there is a crystalline gypsum horizon.

To the east it appears as if this unit grades into a calc-arenite either formed from the weathering of the limestone beds or it is the coastal equivalent of the otherwise marine limestone unit.

2.1.4. Pidinga Formation

This sequence consists of multicoloured sand and clay, lignite rich sand and clay, and kaolin rich sand. These are described separately below.

(a) The Multicoloured Sand and Clay Sequence

This is generally an oxidized, fine grained, fairly well sorted, friable sand with minor clay horizons. These sands vary considerably in colour from white through shades of yellow, red, oragne, green, blue, lilac to brown. The colouration appears to be due to the clay matrix and the percentage iron content, as the coarser grained portions are generally grey or brown.

Towards the base there is sometimes a chocolate brown muscovite rich bed, with abundant clay. This bed varies in thickness and in some drill holes is completely absent. It is generally wet and puggy causing sampling difficulites. It generally contains minor lignite and may therefore represent slight reworking of the underlying sediments.

There is generally a small-radiometrically anomalous zone immediately above the lignite zone. This may be due to the reduction of uranium bearing groundwaters by the pyrite and lignite, and hence an accumulation by accretion at the oxidized and reduced interface.

In places, a hematite rich bed was noted above the lignite rich beds. This was evident to some extent in most holes but in PIN R90 the hematite was of almost ore grade. This unit is partially silicified at the surface and in places appears to act as an aquifer for the groundwater movement. At depth it is however a friable sand unit. This sand unit extends over most of the E.L. area whereas the underlying lignitic sequence is more limited.

(b) The Lignitic Sequence

027

The lignite beds apparently occur in the deepest parts of the Basement depressions, that is in a quiet reducing environment. The lignite beds are not continuous and are interbedded with lignitic sands and clays (Sapropel).

Much of the plant structure has been preserved in the lignite, however, most was destroyed by the drilling technique. It is strongly pyritized and in places has a sulphurous odour.

The consistent radiometric anomaly at the top of the lignitic horizons and within the overlying clayey beds was confirmed by the recent drilling, however, it was noted that the lignite itself was relatively low in radioactivity. Uranium values obtained from these anomalies indicate that the uranium is probably being transported in the groundwater system.

The lignitic zone appears the only truly unoxidized zone in the whole sedimentary sequence and is probably marine.

(c) The Sands Below the Lignitic Horizon

The sands below the lignitic horizons are, in part at least, derived directly from the weathered Basement (i.e. saprolitic clays). The include kaolin rich sandstone with abundant mica (both biotite and muscovite) and much of the biotite has been altered to chlorite. This was initially suspected to be the weathered Basement, but because of the apparent conformity between it and the lignitic horizons it is now considered to be a sediment. It varies in thickness from Om-30m and in places it has been oxidized (limonite staining) as well as altered to kaolin.

Several small anomalies have been recorded in this zone.

In places there are minor horizons of quartzitic sand and gravels, some of which contain weathered felspar grains, and which directly overlie the weathered Basement. These are considered to be basal units.

2.1.5. Basement

The Basement in this area consists chiefly of a series of biotite gneisses with intrusions ? of coarse grained pegmatite and acid veins. These have been suggested as being Middle Pre-Cambrian age.

The Basement outcrops in the NW of E.L. 165.

Outcrops of a coarse grained to porphyritic non-foliate granite occur to the east of E.L. 165, near the Mitcherie Rock Hole, Eucla Well and Yangoonaby Rock Hole.

Drill hole information suggests that the Basement is weathered to varying depths. There is abundant chlorite after biotite in the weathered portions-saprolite.

Pyrite was noted within the unaltered granitic Basement. The radiometric readings in the drill holes within this unit were low - 15 cps SPP3 average. Generally the ground radiometrics over the Basement outcrops were also low - around 30 cps - 50 cps SPP2. An anomalous value was recorded of 1000 cps SPP2 at the contact of the strongly foliated biotite gneiss and a coarse grained granite pegmatite. The analysed sample gave a value of 4 ppm U and 440 ppm Th.

Some of the intrusive pegmatite veins gave slightly higher values of Uranium, although very few were sampled for any real conclusions to be drawn.

2.2. Structure

The area investigated has very little outcrop and the structure is mostly inferred from photo lineaments and the drill hole sections. There is very little surface evidence of faulting. From the Basement isobaths however it is evident that there are a number of ridges and troughs which may have been formed by faulting.

From the photo lineaments it appears that in the area there are two predominant directions : north east-south west and north west-south east.

The drilling in this area has failed to show any definite faulting effect except for a slight trough through PIN R93 and a ridge throught PIN R92. The east west section PIN R86 - PIN R91 also gave inconclusive evidence of a fault structure although from the photo lineaments one appears to be present between holes PIN R88 and PIN R89.

The Tertiary sedimentary sequences appear to be flat lying. These include the Miocene limestone which appears to thicken towards the west, i.e. palaeo seawards. Towards the east it appears as a calcareous arenite rather than a limestone.

The Eocene sediments tend to fill the depressions in the Basement and are therefore generally discontinuous, whereas the limestone forms a blanket like deposit over the top. The Quaternary is generally structureless and flat lying. It appears as if the salt lakes have been formed in Basement depressions.

The limestone unite has an immature karst development caused by groundwater percolation.

III. WORK COMPLETED

During the period of occupancy of the Exploration Licence, the following work was carried out :

i) Office Studies :

- geological review, compilation and correlation of previously obtained data.
- preparation of sketches and maps.
- definition of targets and exploration methods.
- contacts with earth-moving and drilling contractors.
- preparation of the drill hole logs.
- periodic reporting.

- discussions with AMDEL about assaying and detailed analyses of selected diagnostic samples.
- analysis of assay and Track Etch cup results.

ii) Field studies :

- positioning of personnel in the field and setting-up camp.
- geological investigations of radiometric anomalies and of nearby lithofacies.
- geological reconnaissance of exposures near Lake Ifould and Lake Tallacootra.
- radiometric survey of anomalous areas.
- surface and sub-surface (pits and drill holes) soil, rock and water sampling.
- radon survey by Track Etch method.
- bulldozing of drill hole sites.
- drilling and associated radiometric and lithological logging.

The field work commenced on the 14th August and was completed on the 2nd November 1975. The drilling programme commenced on the 6th of October and was completed on the 10th October.

IV. PERSONNEL AND STATISTICS

4.1. Personnel

. Geological control : Pechiney (Australia) Exploration Pty. L

1 Exploration Manager (part-time)	C. Valsardieu
1 Project Manager	L. Geidans
1 Exploration Geologist	D. Harrop
1 Logging Technician (part-time)	J. Biro
1 Drilling Supervisor (part-time)	S. Peck
5 Field Assistant (each part-time)	P. Reidy
	J. Flint
	K. McIntosh
	B. Hansen
	W. McCluskey
1 Cook	M. Garrod

. Contractors

Drilling	Northbridge Pty. Ltd.
Bulldozing	Brambles (S.A.) Pty. Ltd.

4.2. Statistics

Total man-days spent on project	151
Track Etch cups placed - Lake Ifould	190
- Lake Tallacootra	60
- Lake Tallacootra (north)	126
Total number of holes drilled by contractor	10
Total meterage drilled by contractor	311
Total number of samples submitted for analysis	21
Total line miles gridded	59
Total line miles drilled for T.E. cups and radiometrically surveyed	57

4.3. Maps and aerial photographs available and used

1:250,000	Ooldea	Topographic
1:250,000	Barton	Topographic
1:69,950	Photomosaics	
1:250,000	Geological maps	

4.4. Logistics

A base camp was set up in both the Pidinga area and the Chundie area (E.L. 165) whenever work was done there. This involved moving the camp several times. The camp consisted essentially of a kitchen caravan, an office caravan, water tanker, a number of individual tents, two 12' x 12' tents, two generators and four (4) four-wheel-drive vehicles. The drilling contractors had a separate camp nearby consisting essentially of a caravan and a generator.

Supplies were obtained from Ceduna and Penong.

Penong was used as a point for communication via telephone and for mail. Telegraphic contact was maintained via the Royal Flying Doctor radio base at Port Augusta, South Australia. A total of 16 km of bulldozing drill pads and tracks was done by Brambles from Ceduna.

V. RESULTS OBTAINED

5.1. Surface geology

The Basement consists of banded acid, intermediate and basic gneisses and schist, and occasionally of granitic rocks, all cut by pegmatites and acid veins. It is exposed along the north-western shore of Lake Ifould, sometimes within the Lake and rarely on the south-estern shore. There is also a large exposure immediately north-west of Lake Tallacootra.

The overlaying Pidinga Formation is exposed in parts along the north-western shore of Lake Ifould where it consists of limestone, two ferruginous (occasionally leached) sandstones, crystalline gypsum and sandy clay horizons. The lower-most members of this Formation - lignitic material and sands - however occur only in the lower-most parts of Lake Ifould.

Quarternary kopi occurs near the lake shores and the sand (dunes) and calcareous soil form the present surface away from the lakes.

5.2. Radiometry

The radiometric readings over Basement rocks are low, ranging from 50 c/s to 150 c/s (SPP2), the highest readings being associated with pegmatitic veins (maximum 1000 c/s). The radiometric readings of the exposed Pidinga Formation are also very low, ranging from 25 c/s to 75 c/s.

A large radiometric anomaly occurs in the northern part of Lake Ifould, close to the western shore, with maximum readings of 3500 c/s. It appears to be associated with surface "salt" deposits, suggested to contain radium sulphate.

The salt lake water from the anomalous area is also radioactive, but the intensity of same rapidly decreases over a period of several days, suggesting radon as its source.

5.3. Track Etch

Track Etch films are only sensitive to α - particle emission, and hence measure the average radon concentration in the soil gas during the sampling period (three weeks). The method is designed to detect emission that is not readily detectable by conventional surface radiometry, due to radon dispersion by the overlying sediments. However, as there is so much radon and radium emitting - particles at the surface of the lakes, any effect from buried deposits would be obscured. The method is therefore of dubious value over the salt lakes.

A total of 376 cups were placed over inferred structural features to test for mineralization at or within these structures.

Three separate grids were used :

i) - over Lake Ifould, which is considered to have been formed along a north east-south west fault. This grid was spaced at 800 x 100 metres and reduced over anomaly 1Pi to 100 x 100 metres.

ii) over the area north of Lake Tallacootra at variable spacings but generally 800 x 1600 metres.

iii) over Lake Tallacootra at 25 x 100 metres spacing.

These grids and the results of the Track Etch programme have been plotted on the 1:62,992 maps and on the 1:1,000 maps of Lake Ifould area.

The grid was placed as off-set from a baseline by back sighting, and a peg was placed at each Track Etch cup site. A small hole approximately 50 cm deep was then drilled with a Toyota mounted auger rig (Winkie) ; a sample and a SPP2 reading were taken. The Track Etch cup was placed at the bottom of the hole. A 'shot hole' cover was placed at the top of the hole for protection from water and soil. These cups remained in the ground for three weeks, when they were recovered and sent to the U.S.A. for processing. It was noted that many of the covers and some of the cups were disturbed and removed by animals.

In places it was not possible to place the cup in a hole because of the high water table or rock outcrop. At these sites the cup was placed on the surface with the shot hole cover buried under a small amount of soil. Any irregularity in either the placement or recovery of the cups was noted. Several cups were lost when the lake flooded after unseasonal rain.

Track Etch anomalies over the salt lakes coincide with the radiometric total count anomalies, as was expected. There were very few high readings outside the salt lake system and the contours produced from these readings were of little value.

5.4. Drilling

The drilling was contracted to Northbridge Pty. Ltd. of Adelaide, who used a Schramm T64 HB 697 rig which has a depth capacity of about 200 metres and a 425/250 PSI compressor. This rig was fitted for reverse circulation dual pipe drilling, which was considered to be more suitable than conventional mud drilling, to drill the unconsolidated sand and cavernous limestone. The sample was returned through the drill

stem and rotary head into a cyclone and collected in a bucket. There was very little contamination of the sample, however the puggy nature of the clay horizons proved difficult to drill as they packed against the drill stem stopping the rotation. This proved to be the only drilling difficulty. The samples were generally dry, which aided in their description.

The Nullabor Limestone unit was drilled using percussion methods because it was too hard for the rotary reverse circulation method. No cavities were encountered.

A sample was taken every metre, and placed in rows near the hole.

A small representative sample was immediately taken and placed in a plastic bag, labelled and retained. Scintillometer readings were taken with the SPP2 of each sample pile.

Within one hour of completion of each hole it was logged through the drill stem, using the ELR 10 unit and the scintillometric probe STS 33 of the C.E.A.

The hole was logged for lithology by examination of the cuttings.

The logs were drawn up and sections made using previous data as well as that obtained from the 1975 drilling programme.

A line PIN R86-PIN R91 was placed east-west at 800 m spacings north of Lake Tallacootra to test the possible structure and stratigraphy in this region.

Two holes PIN R94 and PIN R95 were placed on the northern shore of Lake Ifould to test the possible presence of a north-east south-west trending fault through anomaly IPi.

Two holes were also drilled to the south-west of Lake Ifould to test for this same structure. The holes were drilled using the reverse circulation technique because of the unconsolidated nature of the Pidinga Formation, the cavernous nature of the Nullabor Limestone, and the lack of water for conventional mud drilling techniques.

A small anomaly was recorded at the top of the lignitic sequence at 30.5 m in PIN R93.

The drilling has given added stratigraphic information about the area, however, the structure was not adequately defined. All holes were drilled through the Pidinga Formation to the Basement.

5.4.1. Drilling Statistics

(a) Timing

Started	6.10.75
Completed	10.10.75
Duration	5 days
Days of production	5 days
Days of stoppages	nil

(b) Meterage

No. of holes	10	
Drilled depth	311	metres
- rotary	277	metres
- percussion	34	metres

033

(c) Progress

Average depth of holes	31.10 metres
Progress	62.20 metre/days

VI. CONCLUSIONS

Neither drilling nor Track Etch surveys gave encouraging results. Though more information was gathered on the stratigraphy of the area, inconclusive results were obtained with regard to structure.

Surface radiometric anomalies are attributable to radium and/or radon in the ground-waters, or to concentrations of uranium daughter-products in the evaporites on the surface of the lakes.

It is considered improbable that uranium concentrations of economic size exist within the boundaries of E. L. 164, hence the decision of relinquishing the licence.

VII. EXPENDITURE

General Administration	$ 1.890.57
Staffing Costs	11.035.31
Travel and Accommodation	5.836.74
Contract Services and Processing	4.149.36
Lease and Agreements Costs	1.051.00
Field Office	6.672.75
Exploration Materials	6.956.17
TOTAL	$ 37.591.90

PECHINEY (AUSTRALIA) EXPLORATION PTY. LTD.

D.2

DRILLING STATISTICS

PROJECT..Pidinga. 6.2.86.
STATE...South. Australia.

WEEK : from..... to.....
MONTH:..October..... 1975.

HOLE NO.	LOCATION	DATE START	DATE END	DEPTH TOTAL DEPTH	DEPTH &RAY DEPTH	DEPTH CUTTINGS AIR	DEPTH CUTTINGS MUD	DEPTH CORING CORED	DEPTH CORING RECOV.	DEPTH CORING %	DEPTH CASING REC.	DEPTH CASING LOST	DEPTH BITS USED R.B.	DEPTH BITS USED BLA.	DEPTH BITS USED HAM.	TOTAL HOURS	TIMING CUTTINGS AIR	TIMING CUTTINGS MUD	TIMING CORING	TIMING	TIMING HOURS LOGGING INVOICED	TIMING HOURS LOST	OBSERVATIONS
PIN R86		6-10-75	6-10-75	18	16	18							18			9 00	1 15				—	7 45	
PIN R87		6-10-75	6-10-75	26	23	26							26			2 40	1 15				0 15	1 25	
PIN R88		6-10-75	6-10-75	32	28	32							32			3 25	2 20				0 25	1 05	
PIN R89		7-10-75	7-10-75	34	30	34							34			3 30	2 00				0 15	1 30	
PIN R90		7-10-75	7-10-75	42	41	42							42			6 30	3 30				0 15	3 00	
PIN R91		8-10-75	8-10-75	39	35	39							39			3 15	1 30				0 20	1 45	
PIN R92		8-10-75	8-10-75	25	23	25							9		16	6 25	2 15				0 25	4 10	
PIN R93		9-10-75	10-10-75	72	70	72							54		18	14 45	8 40				1 25	6 05	
PIN R94		10-10-75	10-10-75	1	—	1							1			1 40	0 15				—	1 25	
PIN R95		10-10-75	10-10-75	22	17	22							22			2 40	1 10				0 15	1 30	
				311		311							277		34								

TOTAL CONSUMPTION

WATER.....
FUEL.....
CEMENT.....
BENTONITE.....
ADDITIVE.....

TOTAL MILEAGE

RIG.....
DRILLER S VEHICLE.....
WATER TRUCK.....
.....
P.A.E. VEHICLE.....

App. 2 164

PECHINEY (AUSTRALIA) EXPLORATION PTY LTD D.3

STRATIGRAPHIC AND RADIOMETRIC DRILLING DATA 035

WEEK From..... to..... 19... MONTH Sept-Oct 19 75 PROJECT 6286 STATE SA E.L. ~~EP~~ EP 164

HOLE No	TOTAL DEPTH	X RAY DEPTH	GROUND LEVEL	STRATIGRAPHY									RADIOMETRY					WATER LEVEL DEPTH
				Quaternary		Miocene		Eocene					DEPTH LEVEL	RA MAXI				
				BASE	THICK-NESS	BASE	THICK-NESS	BASE	THICK-NESS	BASE	THICK-NESS			STS 33	N× BG	ST 22-2T	C/S AVP	
PINR 86	18	16				5.5	5.5	—	—				—	—	—	—	—	—
PINR 87	26	23				5	5	18	13				—	—	—	—	—	—
PINR 88	32	28				4	4	29	25				—	—	—	—	—	—
PINR 89	34	30				3	3	30	27				—	—	—	—	—	—
PINR 90	42	41				4	4	29	25				—	—	—	—	—	—
PINR 91	39	35				5	5	37	32				—	—	—	—	—	—
PINR 92	25	23		2	2	17	15	19.3	2.3				—	—	—	—	—	—
PINR 93	72	70				18	18	69	51				30.5	135	9	—	—	—
PINR 94	1	—		0.5	0.5								—	—	—	—	—	—
PINR 95	22	17				8.5	8.5						—	—	—	—	—	—
TOTAL																		

L.1

PECHINEY (AUSTRALIA) EXPLORATION PTY. LTD.

GEOCHEMICAL RESULTS (Metal content in ppm, water in ppb)

PAGE 1

LAB SHEEN & AMDEL

SAMPLE TYPE
W Water sample
S Soil sample
SS Stream sediment sample
O Overburden sample
R Surface rock sample
C Cutting rock sample
CC Core rock sample
CH Channel

METHOD OF ANALYSIS
AAS Atomic absorption spectrophotometry
Col Colorimetric geochemical analysis
F Fluorometric chemical analysis
W Wet chemical assay
O Other method
S Spectrophotometric assay
T Titrometric assay
E Extraction
XRF X-Ray Fluorescence
γS Gamma Spectrometry

Sample No	Location (Coords; photos,)	Sample Type	Rock Type	U	Th	Cu	Pb	Zn	%K	Cl	SO4	HCO3			
5467	Lake Tfould 1017E N of 5800N	C	Lignite + clay	<4											
5468	No 2.	C	Lignite	<4											
5469	No 3	C	Lignite	<4											
5470	No 4	C	Lignite	<4											
5471	Lake Tfould North of 1Pi	R	Dioritic granite gneiss	<4	440				2.6						
5472	N162000 E406200	W	Water sample							30100	3562	<5			
5473	N162000 E406200	SS	Sediment sample	<4	6										
9920	Lake Tfould	R	Pink feldspar-quartz pegmatite	<4	7	10	55	20							
9921	Lake Tfould	R	"	15	7	19	70	11							
5487	PNR 86 17-18	C	Basement	<4	25										
5488	PNR 88 27-28	C	Basement	<4	<4										
5489	PNR 89 33-34	C	Basement	<4	<4										
5490	PNR 90 41-42	C	Basement	<4	<4										
5491	PNR 91 38-39	C	Basement	<4	<4										
5492	PNR 92 23-24	C	Basement	<4	10										
5493	PNR 92 50-51	C	Lignite.	5											
			Limit of detection												
			Method of analysis												

1 : 250,000 sheet

Other type

SML or EL No. 164

Mineral Claim No.

Project No. 6255 - 6256

State S.A.

L.1

PECHINEY (AUSTRALIA) EXPLORATION PTY. LTD.

GEOCHEMICAL RESULTS
(Metal content in ppm, water in ppb)

LAB SHEEN
& AMDEL

SAMPLE TYPE

W Water sample
S Soil sample
SS Stream sediment sample
O Overburden sample
R Surface rock sample
C Cutting rock sample
CC Core rock sample
CH Channel

METHOD OF ANALYSIS

AAS Atomic absorption spectrophotometry
Col Colorimetric geochemical analysis
F Fluorometric chemical analysis
W Wet chemical assay
O Other method
S Spectrophotometric assay
T Titrometric assay
E Extraction
XRF X-Ray Fluorescence
GS Gamma Spectrometry

Sample No	Location (Co ords; photos,)	Sample Type	Rock Type	U	Th										
5433	Lake Hauser 937N 897E	S	Lignite clay (1)	10	18										
5434	"	S	Lignite material (2)	7	<3.5										
5435	"	S	Lignite material (3)	10	3.5										
5436	"	S	Lignite material (4)	19	<3.5										
5437	"	W	ppb	5											
	Limit of detection														
	Method of analysis														

Worksheet

SML or EL No. [illegible]

Project No. [illegible]

038

October 21, 1975
Dr. Claude Valsardieu

6285 Lake Area – Lamm Found

The 185 readings for this program range from 1.1 to 839 T/sq.mm and the mean of the background distribution for the area is 8.8 T/sq.mm. The standard deviation of the background distribution is 5.8 T/sq.mm or 66%. This background is remarkably low and is representative of the different location of "background" from high points. A statistical analysis shows some 65% of the total points in a well defined lower population with 35% in a well defined higher population.

The high end of the ranking looks as follows:

Range of Z	No. of Points	Range of T/sq.mm	Range of Ratio to Background
2 - 3	6	20.6 - 26.1	2.3 - 3.0
3 - 4	5	29.5 - 30.8	3.4 - 3.5
4 - 5	2	32.9 - 35.2	3.7 - 4.0
over 5	63	38.6 - 839	4.4 - 95.3

In this survey 70 points have a Z greater than 3, approximately 38% of the total. This high percentage reflects the background comments above. We also wonder whether the shallow planting depth (5 cm) of most of the high ranking cups could amplify the effect of surface evaporite background uranium. Gamma readings or a few soil analyses may answer this question. Enhanced.

6285 Lake Map: 2000

A localized 99 cup sub-set of the 6285 Lake Survey above was separately analysed and a contour map prepared. Please note that these 99 points are included in the 185 cup 6285 Lake readings. Two copies of the ranked 99 cup data are also included.

For the 99 cup sub-set the background mean is 9.7 T/sq.mm and the standard deviation of the mean is 6.1 T/sq.mm or 63%. Of the 99 readings, 54 or about 55% had Z values greater than 3. This high value is in full agreement with the localized placement of these cups over an area of mineralization. The background statistics are in good agreement with those of the total 6285 Lake population of which they are a part.

A Track Etch radon contour map is also enclosed for the 6285 Lake Map: 2000 set of readings. The map has a contour interval of 10 T/sq.mm and uses a 6 point average smoothing routine. Contouring was cut off above a contour of 200 T/sq.mm; all "peaks" above the 200 T/sq.mm contour can be considered "black". The map shows both the localized mineralization associated with the central close-spaced sampling and some mineralization outside the close spaced area.

039

October 21, 1975
Dr. Claude Valsardieu

It has been a pleasure to serve you on these programs and we look forward to receiving the remainder of your cups outstanding.

Sincerely,

H. Ward Alter
President

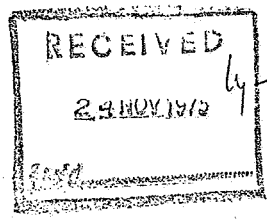
HWA/ssh
Enclosures
cc:Mr. L. Geidans

Terradex Corporation
1900 Olympic Boulevard
Walnut Creek, California 94596
Phone: (415) 938-2545 Telex: 33-7793

040

App A
164

TERRADEX



November 17, 1975

Dr. Claude Valsardieu
Manager, Uranium Department
Pechiney (Australia) Exploration Pty., Ltd.
151 Macquarie Street
Sydney, N.S.W. 2000
Australia

Dear Dr. Valsardieu:

I am enclosing two sets of final tabulated data from your recent 60 cup Track Etch Survey of the Lake Tallacootra Area. The Track Etch readings are reported in units of tracks per square millimeter (T/sq.mm) and they are normalized to equivalent 30 day exposures. The data from the films have been tabulated in two different ways for easy use; firstly by ascending film serial numbers and secondly, by ascending Track Etch readings. The readings ranged from 1.2 to 408 T/sq.mm and the mean of the background distribution for the area is 5.1 T/sq.mm. The standard deviation of the background distribution was 3.9 T/sq.mm or 76%.

The high values in the ranking can be expressed in terms of "Z" values based on the background statistics. The value of Z is the number of standard deviations above the mean. Expressed in this way the high end of the ranking looks as follows:

Range of Z	# of Points	Range of T/sq.mm	Range of Ratio to Background
2 - 3	4	14.2 - 15.4	2.8 - 3.0
3 - 4	1	19.0	3.7
4 - 5	1	21.3	4.2
over 5	4	47.4 - 407.9	9.3 - 80.0

From rudimentary statistics, it is highly improbable that points with Z greater than 3 are part of the background distribution, hence they are almost certainly anomalous. In this survey 6 points have a Z greater than 3, 10% of the total. This, in our experience, is indicative of excellent potential for mineralization, particularly with the highest points at 60 - 80 times background!

041

November 17, 1975
Dr. Claude Valsardieu

Although a contour map was not requested, we observe an excellent trend of anomalous points, trending from the north east corner in a south westerly direction.

We thank you for this opportunity to serve you.

Sincerely,

H. Ward Alter (sig)
President

HWA/ssh
Enclosures

PECHINEY 6285 LAKE

042

FILM SERIAL NUMBER	TRACK DENSITY (T/SQ.MM.)	FIELD NOTES AND DATA
46251	32.889	400E 700H 50 I D AB ON SIDE
46252	15.877	400E 600H 50 I D DB
46253	19.280	400E 500H 50 I D SOB
46254	3.402	400E 400H 50 I D S
46255	1.134	400E 300H 50 L W A
46256	13.609	400E 200H 50 L W A
46257	2.268	400E 100H 50 B D S
46258	15.877	480E 1000H 50 B D G
46259	18.146	480E 900H 50 L D AOB EXP
46260	6.804	480E 800H 40 L D AOB
46261	14.743	480E 700H 40 L W A
46262	10.207	480E 600H 50 L W A
46263	14.743	480E 500H 40 L W A
46264	1.134	480E 400H 30 L D A
46265	2.268	480E 300H 50 B D S
46266	7.938	560E 900H 50 B D S
46267	74.852	560E 800H 50 L W A
46268	79.389	560E 700H 40 L W A
46269	10.207	560E 600H 50 L D A
46270	18.146	560E 500H 50 L D A
46271	1.134	560E 400H 50 B D S
46272	29.487	640E 1000H 50 B D S EXP
46273	7.938	640E 900H 50 L W A
46274	2.268	640E 800H 45 L F A
46275	107.742	640E 700H 20 L W A
46276	4.536	640E 600H 40 L W A
46277	1.134	640E 500H 50 B D S
46278	6.804	720E 1100H 50 B D S
46279	3.402	720E 1000H 10 L W A
46280		720E 910H 00 L - A MIXX
46281	13.609	720E 800H 05 L W A
46282	1.134	720E 700H 30 L W A
46283	5.670	720E 600H 50 B D S
46284	5.670	800E 900H 50 B D S
46285		800E 800H -- L - A MIXX
46286	5.670	800E 700H 50 L W AOB
46287	4.536	800E 600H 50 L W A OTURN
46288	9.073	800E 500H 50 B D S
46289	3.260	840E 900H 05 B D S OTURN
46290	43.475	840E 800H 35 L W A ON SIDE
46291	21.737	840E 700H 05 L D AOB
46292	3.260	850E 700H 05 L D A
46293	139.120	850E 800H 05 L W A
46294	20.650	850E 900H 05 L W A
46295	9.781	850E 1000H 10 L D FE
46296	4.347	850E 1100H 10 B W S

PECHINEY 6285 LAKE

FILM SERIAL NUMBER	TRACK DENSITY (T/SQ.MM.)	FIELD NOTES AND DATA
46297	3.260	840E 1100H 10 B D COB
46298	3.260	840E 100'U 0- D C
46299	81.515	860E 1100H 10 L W A ON SIDE
46300	30.432	860E 100'U 06 W A
46301		860E 900H -- L - A MISS
46302	82.602	860E 800H 35 L W A
46303	15.216	860E 700H 05 L D A
46304	3.260	870E 700H 05 L W A
46305	17.390	870E 800H 05 L W A
46306	116.295	870E 900H 05 L W A
46307	304.325	870E 100'/ 56 W A
46308	3.260	870E 1100H 10 L W A
46309	6.521	880E 1200H 10 L W A
46310	10.868	880E 1100H 10 L W A
46311	282.587	880E 1000H 05 L W A
46312	7.608	880E 975H 05 L W A
46313	41.301	880E 950H 05 L W A
46314		880E 925H -- L - A MISS
46315	227.156	880E 900H 05 L W A
46316	20.650	880E 800H 05 L W A
46317	2.173	880E 700H 05 L W A
46318	3.260	880E 600H 40 B D S
46319	52.170	8825E 900H 05 L W A
46320	839.256	8825E 925H 05 L W A
46321	11.341	00E 800N 20 B D C
46322	1.134	00E 700N 20 L W A
46323	10.207	00E 600N 20 L W A
46324	52.170	00E 500N 20 L W A
46325	7.938	00E 400N 20 L W A
46326	2.268	00E 300N 20 B D S
46327	4.536	80E 800H 20 B D S
46328	14.743	80E 700H 20 L W A
46329	7.938	80E 600H 20 L W A
46330	38.560	80E 500H 20 L W A
46331	13.609	80E 400H 20 L W A
46332	4.536	80E 300H 20 L W A
46333	3.402	80E 200H 20 B D S
46334	5.670	160E 600H 20 B D C
46335	15.877	160E 500H 20 L W A
46336	11.341	160E 400H 25 L W A
46337	1.134	160E 300H 25 B D S
46338	3.402	240E 500H 55 B D SOB
46339	3.402	240E 400H 50 B D S
46340	14.743	240E 300H 25 L W A
46341	3.402	240E 200H 50 B D S
46342	9.073	240E 100H 50 B D SOB
46343	14.743	320E 700H 50 B D COB
46344	5.670	320E 600H 50 B D SOB
46345	4.536	320E 500H 50 L W A
46346	9.073	320E 400H 50 L W A

PECHINEY 6285 LAKE

FILM SERIAL NUMBER	TRACK DENSITY (T/SQ.MM.)	FIELD NOTES AND DATA
46347	7.938	320E 300H 50 L W A
46348	2.268	320E 200H 50 B D SGB
46349	13.609	400E 900H -- B W DBB
46350	69.181	400E 800N 50 L W DB ON SIDE
49951	47.633	8825E 950H 05 L W A
49952	362.921	8825E 975H 05 L W A
49953	12.475	8825E 100'/ 56 W A
49954	5.670	8850E 100'/ 56 W A
49955	35.158	8850E 975H 05 L W A
49956	30.621	8850E 950H 05 L W A
49957	63.511	8850E 925H 05 L W A
49958	138.363	8850E 900H 05 L W A
49959	90.730	8875E 900H 05 L W A
49960	14.743	8875E 925H 05 L W A
49961	45.365	8875E 950H 05 L W A
49962	82.791	8875E 975H 05 L W A
49963	158.778	8875E 1000H 10 L W A
49964	5.670	8900E 1100H 10 L W A
49965	3.402	8900E 1000H 05 L W A
49966	45.365	8900E 975H 05 L W A
49967	12.475	8900E 950H 05 L W A
49968	19.280	8900E 925H 05 L W A
49969	229.094	8900E 900H 05 L W A
49970	98.669	8900E 800H 05 L W A
49971	6.804	8900E 700H 05 L W S
49972	90.730	8925E 900H 05 L W A
49973	100.937	8925E 925H 05 L W A
49974	5.670	8925E 950H 05 L W A ON SIDE
49975	79.389	8925E 975H 05 L W A
49976	46.499	8925E 1000H 05 L W A
49977	6.804	8950E 1000H 05 L W A
49978	281.264	8950E 975H 05 L W A
49979	185.997	8950E 950H 05 L W A
49980	77.120	8950E 925H 05 L W A
49981	10.207	8950E 900H 05 L W A
49982	209.814	8975E 900H 05 L W A
49983		8975E 925H -- L - A MISS
49984	238.167	8975E 950H 05 L W A
49985	231.362	8975E 975H 05 L W A
49986	7.938	8975E 1000H 05 L W A
49987	3.402	9000E 1100H 10 L W A
49988	60.108	9000E 1000H 05 L W A
49989	548.919	9000E 975H 05 L W A
49990	231.362	9000E 950H 05 L W A
49991	72.584	9000E 925H 05 L W A
49992	79.389	9000E 900H 05 L W A
49993	14.743	9000E 800H 05 L W A ON SIDE
49994	17.011	9000E 700H 05 L W S
49995	151.973	9025E 900H 05 L W A
49996	18.146	9025E 925H 05 L W A

PECHINEY 6285 LAKE

FILM SERIAL NUMBER	TRACK DENSITY (T/SQ.MM.)	FIELD NOTES AND DATA
49997	112.278	9025E 950H 05 L W A
49998	129.290	9025E 975H 05 L W A
49999	104.340	9025E 1000H 05 L W A
50000	499.017	9050E 1000H 05 L W A
50001	182.595	9050E 975H 05 L W A
50002	86.193	9050E 950H 05 L W A
50003	64.645	9050E 925H 05 L W A
50004	6.804	9050E 900H 05 L W A
50005	22.682	9075E 900H 05 L W A
50006	9.073	9075E 925H 05 L W A
50007	41.962	9075E 950H 05 L W A
50008	46.499	9075E 975H 05 L W A
50009	99.803	9075E 1000H 05 L W A
50010	12.475	9100E 1100H 10 L W A
50011	114.547	9100E 1000H 05 L W A
50012	56.706	9100E 975H 05 L W A
50013	10.207	9100E 950H 05 L W A
50014	53.304	9100E 925H 05 L E A
50015	3.402	9100E 900H 05 L W A
50016	7.938	9100E 800H 05 L W A
50017	17.011	9100E 700H 05 L W A
50018	13.609	9200E 700H 05 L W A
50019	2.268	9200E 800H 05 L W A
50020	7.938	9200E 900H 05 L W A
50021	54.438	9200E 1000H 05 L W A
50022	2.268	9200E 1100H 10 L W A ON SID
50023	3.557	9600E 600H 50 B D S
50024	23.713	9600E 700H 40 L D A
50025	4.742	9600E 800H 35 L W A
50026	4.742	9600E 900H 50 L D A
50027	69.955	9600E 100'J 06 W A
50028	9.485	9600E 1100H 10 L W A
50029	81.812	9600E 1200H 10 L W A ON SIDE
50030	47.427	9600E 1300H 50 I D S
50031	8.299	9600E 1400H 40 L W A ON SIDE
50032	16.599	9600E 1500H 40 L W A EXP
50033	47.427	1040E 1600H 50 L W A
50034	139.910	1040E 1500H 50 L W A
50035	26.085	1040E 1400H 50 L W A
50036	30.827	1040E 1300H 50 L W A ON SIDE
50037	10.671	1040E 1200H 25 L W A ON SIDE
50038	30.827	1040E 1100H 45 L W A
50039	4.742	1040E 1000H 45 L W A
50040	10.207	9600E 300H 50 L D S

PECHINEY 6285 NW

FILM SERIAL NUMBER	TRACK DENSITY (T/SQ.MM.)	FIELD NOTES AND DATA
50041	9.485	2240H 3592E 50 S D EXP
50042	7.114	2240H 3600E 50 S D EXP
50043	15.413	2240H 3608E 50 S D EXP
50044	7.114	2240H 3616E 30 S BR EXP
50045	5.928	2240H 3624E 50 S D
50046	3.557	2240N 3632E 50 S D
50047	11.856	2240N 3640E 50 C D
50048	4.742	2240N 3648E 50 C D EXP
50049	17.785	2240H 3656E 50 C D EXP
50050	4.742	2240H 3664E 50 C D EXP
50051	15.413	2240H 3672E 50 C D EXP
50052	24.899	2240H 3680E 50 C D
50053	16.599	2256H 3608E 50 C D EXP
50054	9.485	2256H 3616E 50 C D EXP
50055	10.671	2256H 3624E 50 C D
50056	74.697	2256H 3632E 50 L W
50057	1.185	2256H 3640E 50 C D
50058	10.671	2256H 3648E 50 C D
50059	4.536	2272H 3680E 50 S D EXP
50060	3.402	2272H 3672E 50 S D
50061	4.536	2272H 3664E 50 C D
50062	23.816	2272H 3656E 50 C D
50063	19.280	2272H 3648E 50 C D EXP
50064	3.402	2272H 3640E 50 C D
50065	5.670	2272H 3632E 50 C D
50066	6.804	2272H 3624E 50 C D
50067	5.670	2272H 3616E 50 C D
50068	9.073	2272H 3608E 50 C D
50069	12.475	2272H 3600E 50 C D
50070	6.804	2272H 3592E 50 C D CAV
50071	18.146	2288H 3616E 50 C D
50072	13.609	2288H 3624E 50 C D
50073	22.682	2288H 3632E 50 C D EXP
50074	20.414	2288H 3640E 50 C D
50075	7.938	2288H 3648E 50 C D EXP
50076	2.268	2288H 3656E 50 C D EXP
50077	5.670	2304H 3680E 50 S D
50078	7.938	2304H 3672E 50 S D EXP
50079	4.536	2304H 3664E 50 C D EXP
50080	13.609	2304H 3656E 50 C D EXP
50081	3.402	2304H 3648E 50 C D
50082	9.073	2304H 3640E 50 C D
50083	6.804	2304H 3632E 50 C D EXP
50084	18.146	2304H 3624E 50 C D EXP
50085	23.816	2304H 3616E 50 C D
50086	15.877	2304H 3608E 50 C D

PECHINEY 6285 NW

FILM SERIAL NUMBER	TRACK DENSITY (T/SQ.MM.)	FIELD NOTES AND DATA
50087	14.743	2304H 3600E 50 C D EXP
50088	4.536	2304H 3592E 50 C D EXP
50089	18.146	2320H 3616E 50 C D
50090	10.207	2320H 3624E 50 C D
50091	6.804	2320H 3632E 50 C D EXP
50092	21.548	2320H 3640E 50 C D
50093	21.548	2320H 3648E 50 C D
50094	13.609	2320H 3656E 50 C D
50095	24.950	2320H 3664E 50 C D
50096	14.743	2320H 3672E 50 C D EXP
50097	16.599	2336H 3576E 50 C D EXP
50098	10.671	2336H 3584E 50 C D EXP
50099	23.713	2336H 3592E 50 C D EXP
50100	11.856	2336H 3600E 50 C D
50101	23.713	2336H 3608E 50 C D
50102	16.599	2336H 3616E 50 C D
50103	11.856	2336H 3624E 50 C D
50104	11.856	2336H 3632E 50 C D
50105	18.970	2336H 3640E 50 C D
50106	14.228	2336H 3648E 50 C D
50107	20.156	2336H 3656E 50 C D
50108	8.299	2336H 3664E 50 C D
50109	13.042	2336H 3672E 50 C D EXP
50110	18.970	2336H 3680E 50 C D
50111	9.485	2368H 3680E 50 S D
50112	24.899	2368H 3672E 50 C D
50113	14.228	2368H 3664E 50 C D
50114	11.856	2368H 3656E 50 C D CAV
50115	18.970	2368H 3648E 50 C D
50116	9.485	2368H 3640E 50 C D
50117	20.156	2368H 3632E 50 C D
50118	17.785	2368H 3624E 50 C D
50119	17.785	2368H 3616E 50 C D
50120	9.485	2368H 3608E 50 C D
50121	34.384	2368H 3600E 50 C D
50122	13.042	2368H 3592E 50 C D
50123	9.073	2400H 3568E 50 C D
50124	3.402	2400H 3576E 10 C D
50125	6.804	2400H 3584E 50 S D EXP
50126	12.475	2400H 3592E 50 C D EXP
50127	9.073	2400H 3600E 50 C D
50128	9.073	2400H 3608E 50 S D
50129	11.856	2400H 3616E 50 C D
50130	10.671	2400H 3624E 50 C D
50131	9.485	2400H 3632E 50 C D
50132	3.557	2400H 3640E 30 S D CAV
50133	9.485	2400H 3648E 50 S D
50134	1.185	2400H 3656E 50 S D
50135	2.371	2400H 3664E 30 S D
50136	4.742	2400H 3672E 50 S D

PECHINEY 6285 NW

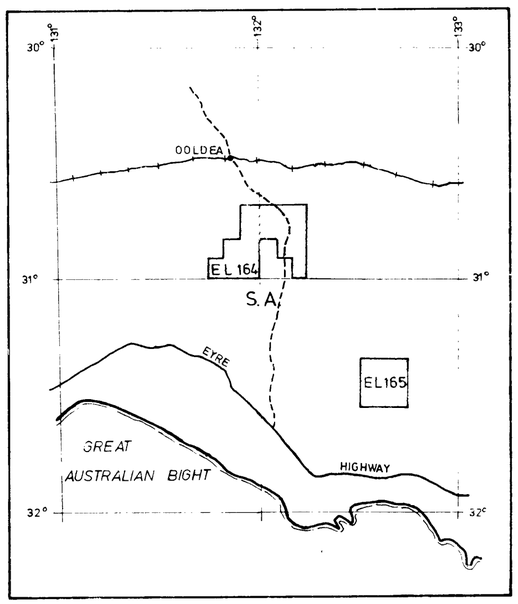
FILM SERIAL NUMBER	TRACK DENSITY (T/SQ.MM.)	FIELD NOTES AND DATA
50137	9.485	2400H 3680E 30 S D CAV
50138	11.856	2416H 3624E 50 C D EXP
50139	14.228	2416H 3616E 50 C D EXP
50140	1.185	2416H 3608E 25 C D R
50141	13.042	2416H 3600E 50 C D EXP
50142	3.557	2416H 3592E 10 C D
50143	5.928	2416H 3584E 25 S D EXP CAV
50144	7.114	2416H 3576E 10 C D
50145	3.557	2432H 3576E 10 S D
50146	17.785	2432H 3584E 50 C D
50147	3.402	2432H 3592E 40 S D
50148	13.609	2432H 3600E 50 S D
50149	6.804	2432H 3608E 40 S D
50150	6.804	2432H 3616E 50 C D
50151	11.341	2432H 3624E 50 C D
50152	6.804	2432H 3632E 50 S D
50153	18.146	2432H 3640E 50 C D
50154	13.609	2432H 3648E 50 C D
50155	6.804	2432H 3656E 50 C D EXP
50156	5.670	2432H 3664E 50 C D
50157	9.073	2432H 3672E 50 C D
50158	13.609	2432H 3680E 50 C D
50159	11.341	2448H 3600E 50 C D
50160	3.402	2448H 3608E 50 C D
50161	7.938	2448H 3616E 40 C D
50162	17.011	2448H 3624E 50 C D
50163	5.670	2448H 3632E 50 C D
50164	27.219	2448H 3640E 50 C D
50165	15.877	2448H 3648E 50 C D
50166	11.341	2448H 3656E 50 S D

PECHINEY LAKE TALLACOOTRA

FILM SERIAL NUMBER	TRACK DENSITY (T/SQ.MM.)	FIELD NOTES AND DATA
50391	7.114	N2224 00E361600
50392	2.371	N2224 00E361650
50393	7.114	N2224 00E361700
50394	7.114	N2224 00E361750
50395	5.928	N2224 00E361800
50396	1.185	N2224 00E361850
50397	5.928	N2224 00E361900
50398	1.185	N2224 00E361950
50399	3.557	N2224 00E362000
50400	10.671	N2224 00E362050 CUP ON SIDE
50401	3.557	N2224 00E362100 CUP ON SIDE
50402	3.557	N2224 00E362150
50403	3.557	N2224 00E362200 CUP ON SIDE
50404	4.742	N2224 00E362250
50405	1.185	N2224 00E362300 ON SURFACE
50406	407.874	N2224 00E362350
50407	10.671	N2224 00E362400
50408	18.970	N2224 00E362450
50409	8.299	N2224 00E362500
50410	15.413	N2224 00E362550
50411	7.114	N2222 00E361600
50412	4.742	N2222 00E361650
50413	5.928	N2222 00E361700
50414	9.485	N2222 00E361750
50415	9.485	N2222 00E361800
50416	4.742	N2222 00E361850
50417	2.371	N2222 00E361900
50418	7.114	N2222 00E361950
50419	4.742	N2222 00E362000 CUP ON SIDE
50420	14.228	N2222 00E362050 ON SURFACE
50421	7.114	N2226 00E361600
50422	3.557	N2226 00E361650
50423	4.742	N2226 00E361700
50424	3.557	N2226 00E361750
50425	3.557	N2226 00E361800
50426	4.742	N2226 00E361850
50427	2.371	N2226 00E361900
50428	2.371	N2226 00E361950
50429	7.114	N2226 00E362000
50430	313.020	N2226 00E362050
50431	15.413	N2226 00E362100
50432	3.557	N2226 00E362150
50433	4.742	N2226 00E362200
50434	1.185	N2226 00E362250
50435	5.928	N2226 00E362300
50436	2.371	N2226 00E362350 ON SURFACE

PECHINEY LAKE TALLACOOTRA

FILM SERIAL NUMBER	TRACK DENSITY (T/SQ.MM.)	FIELD NOTES AND DATA
50437	3.557	N2226 00E362400
50438	47.427	N2226 00E362450
50439	21.342	N2226 00E362500
50440	8.299	N2226 00E362550 ON SURFACE
50441	2.371	N2222 00E362100 ON SURFACE
50442	1.185	N2222 00E362150 CUP ON SIDE
50443	3.557	N2222 00E362200
50444	68.769	N2222 00E362250
50445	4.742	N2222 00E362300
50446	2.371	N2222 00E362350
50447	4.742	N2222 00E362400
50448	2.371	N2222 00E362450
50449	14.228	N2222 00E362500
50450	4.742	N2222 00E362550



LEGEND

- 25a — Section through drill holes
- EL boundaries
- ●70 — 1973 drill hole locations
- ●85 — 1975 drill hole locations
- Boundary of previous E.L.'s

PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA PROJECT - E.L.164 & E.L.165

LOCATION, PLAN OF DRILLHOLES AND SECTIONS

PREPARED BY R.R.	SCALE 1:250,000	PLAN No
DRAWN BY: R.C.	DATE: DEC. '75	628 223

ENV 2504 II — 10

LEGEND

- Drainage pattern (creeks and lakes)
- Outcrops of basement
- Photo lineaments or possible faults
- Approx. boundary of Nullabor limestone
- PIN – R.81 — Drill hole Number
- Drill hole Location
- 54 — Drill hole Depth (in metres)
- ROTARY DRILL – R.93 — 0.25 — 135 at 30.5 — ACCUMULATION — 72 — RA — DEPTH — TOTAL DEPTH
- Nullabor limestone
- B.G. Radiometric background

264,000 N
256,000 N
248,000 N
240,000 N
232,000 N
224,000 N
318,400 E
320,000 E
328,000 E
336,000 E
344,000 E
352,000 E
360,000 E
368,000 E

131° 45
30° 45
131° 50
30° 50
131° 55
30° 55
132° 00
132° 05
33' 50
132° 10
132° 15
31° 00

Approximate boundary of Nullabor limestone

R41 600ppb (Water sample)

R42 45 ppb (Water sample)

1 PI

R94 BG only 80-90m N of hand specimen

R95 BG only

FOR DETAIL SEE ANOMALY 1PI 1:2,000 PLAN N° 628-213

For detail see IFOULD LAKE 1:10,000 PLAN N° 628-213

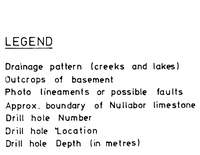
LAKE FOULD

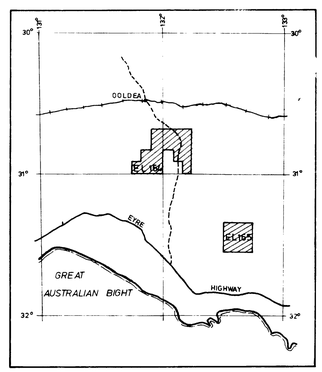
R93 135 at 30.5 / 72

R92 BG / 25

R86 BG / 18 — R87 BG / 28 — R88 BG / 32 — R89 BG / 34 — R90 BG / 42 — R 91 BG / 39

N





SCALE 1:62992 OR 1 INCH = 1600 m

0 1.6 3.2 4.8 6.4 8 km
0 1 2 3 4 5 6 7 8

PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

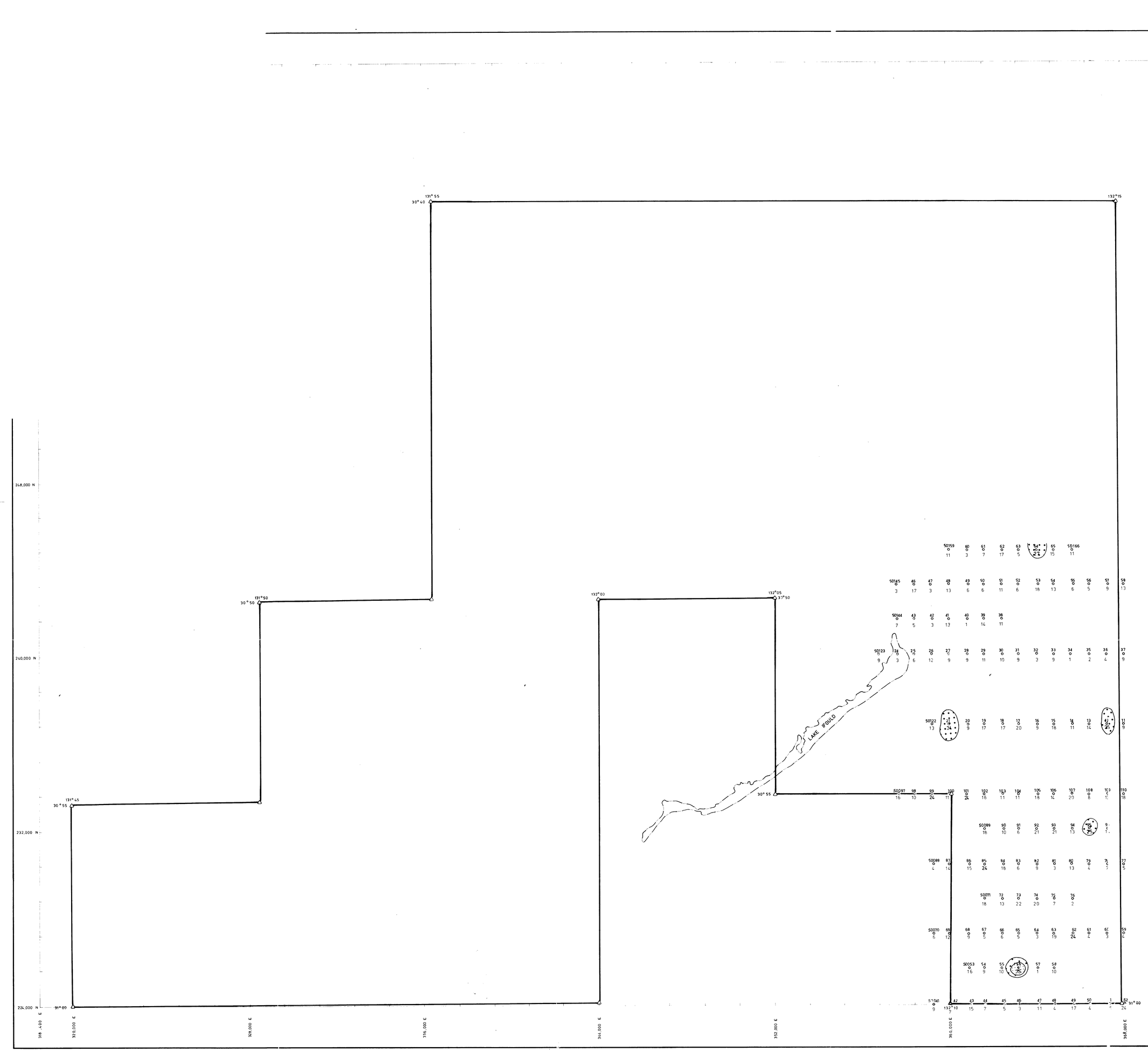
PIDINGA PROJECT - E.L. 164
TALLACOOTRA AREA

GEOLOGY, GEOCHEMISTRY AND LOCATION OF DRILLHOLES

PREPARED BY	J.D.H.	SCALE	1:62,992
DRAWN BY	T.M.R.	DATE	OCTOBER, 1975.
		PLAN No.	628-216

ENV. 2904 III - 1

PLATE 2



PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA PROJECT - E.L. 164

TALLACOOTRA AREA

TRACK ETCH RESULTS — 1975

RECEIVED
2 3 AUG 1976
DEPT. OF MINES
SECURITY

PREPARED BY L.G.	SCALE 1:62,992	PLAN No
DRAWN BY Y.H.M	DATE OCTOBER, 1975.	628-211

ENV 2504 I-1

PLATE 2a

264,000 N

256,000 N

248,000 N

240,000 N

232,000 N

224,000 N

318,400 E

320,000 E

328,000 E

336,000 E

344,000 E

352,000 E

360,000 E

368,000 E

131° 55
30° 40

132° 15

131° 50
30° 50

132° 00

132° 05
31° 50

131° 45
30° 55

30° 55

31° 00

132° 10
32

132° 15
50

LAKE FOULD

50 35 35 35 35 30 45 30
45 50 40 35 30 40 55 30 45 40 45 40 45
30 35 45 45 45 40
45 40 45 45 35 30 40 40 35 30 30 35 30 35 35
40 50 50 40 50 45 40 55 45 50 30 30
45 45 50 40 45 45 50 35 60 45 45 50 60 45
50 40 40 45 60 40 50
40 45 50 65 50 35 60 40 45 30 35 35
50 45 45 50 35 30
30 30 45 25 45 35 30 50 40 30 20 25
40 45 40 100 30 35

N

NT
QLD
WA
SA
NSW
VIC
PIDINGA

OOLDEA
E.L.164
EYRE
E.L.165
GREAT AUSTRALIAN BIGHT
HIGHWAY

SCALE 1:62992 1 INCH = 1600m

0 1.6 3.2 4.8 6.4 8 km
0 1 2 3 5 6 7 8

LEGEND

SPP_2 (SN⁻¹) Values in counts per second

- 0 - 50 c/s
- 50 - 100 c/s
- 100 - 150 c/s
- >150 c/s

RECEIVED
23 AUG 1976
DEPT. OF MINES
SECURITY
Area 15

PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA PROJECT - E.L. 164

TALLACOOTRA AREA

SURFACE RADIOMETRICS OBSERVED AT THE TIME OF TRACK-ETCH PLACEMENT

PREPARED BY L.G. | SCALE 1:62,992 | PLAN No. 628-220
DRAWN BY PJB | DATE OCTOBER, 1975.

ENV. 2504 I - 2

PLATE 2b

30°40'

30°45'

DEPTH OF BASEMENT (Metres)

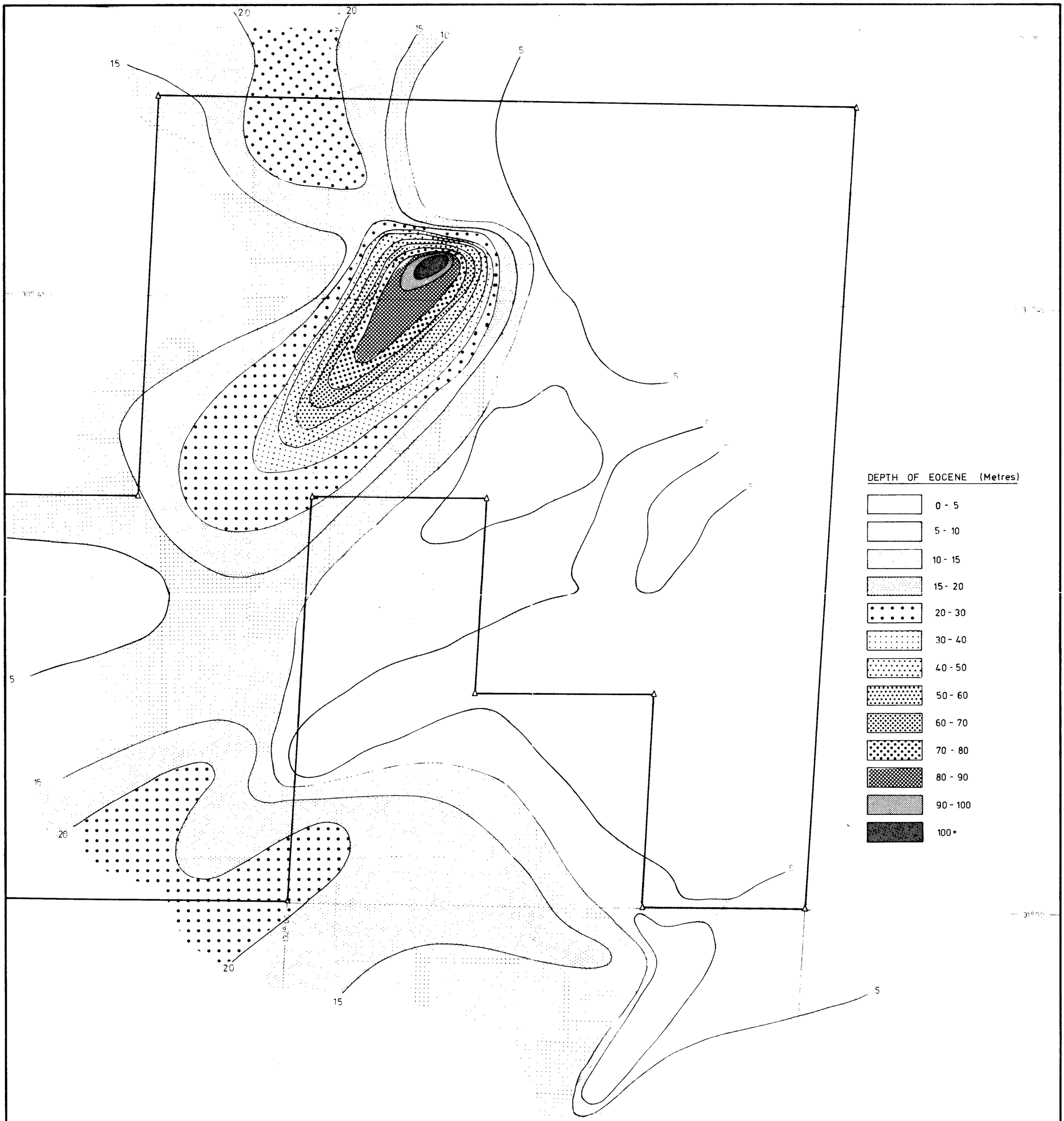
- 0 - 10
- 10 - 20
- 20 - 30
- 30 - 40
- 40 - 50
- 50 - 60
- 60 - 70
- 70 - 80
- 80 - 90
- 90+

SCALE

PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA PROJECT (S.A.) E.L.164
TALLACOOTRA LAKES AREA
ISOBATH OF BASEMENT

PREPARED BY DWH | SCALE 1:125,000 | PLAN No. 628-235 | PLATE 3a



PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA PROJECT (S.A.) E.L.164
TALLACOOTRA LAKES AREA
ISOBATH OF TOP OF EOCENE

PREPARED BY DW H
DRAWN BY
SCALE
DATE JAN. 76
PLAN No. 628-233

PLATE 3b

30° 30'

30° 45'

31° 00'

132° 00'

132° 15'

THICKNESS OF LIMESTONE

5 - 10

10 20

20+

SCALE 1 125,000

m 2500 0 5 10 km

PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA PROJECT (S.A.) E.L.164
TALLACOOTRA LAKES AREA

ISOPACHS OF LIMESTONES

PREPARED BY DW H	SCALE 1:125,000	PLAN No
DRAWN BY	DATE JAN 76	628-236

2504 I - 5

PLATE 3 c

30° 35′

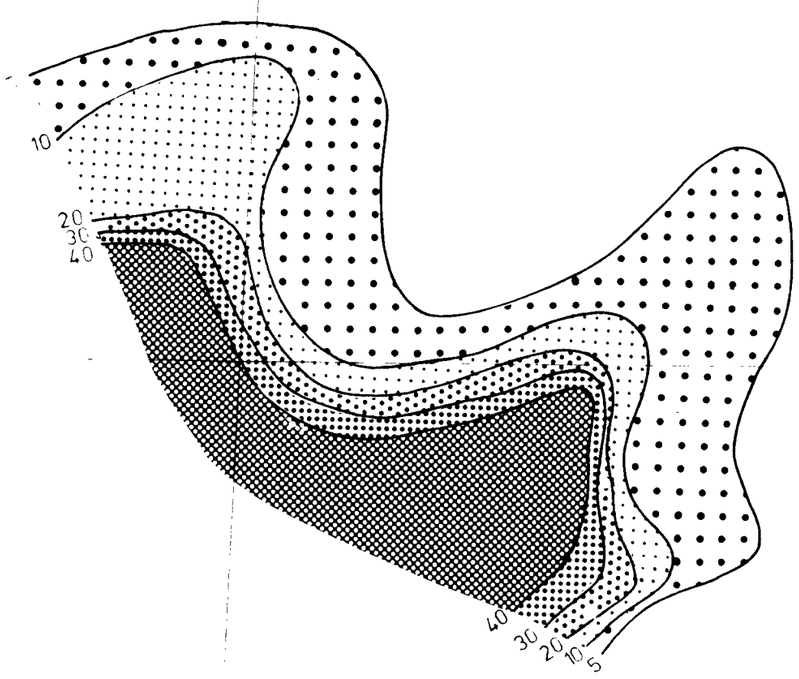
30° 40′

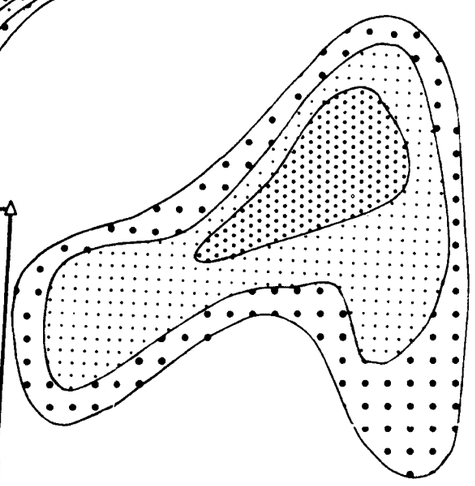
30° 45′

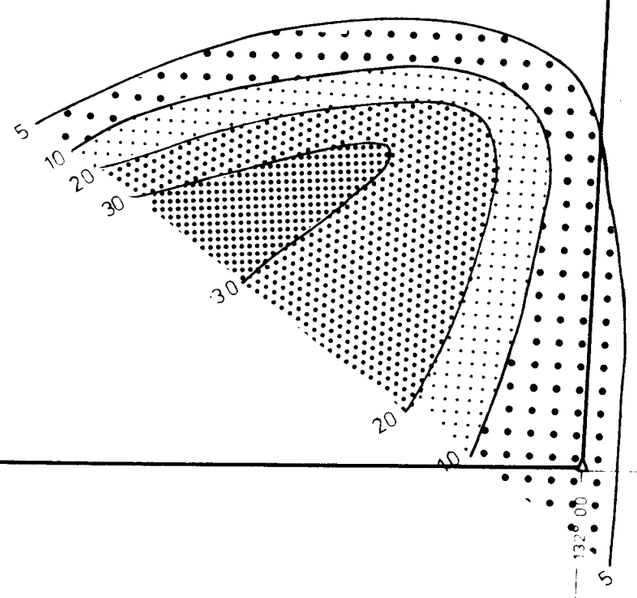
132° 30′

132° 00′

31° 00′

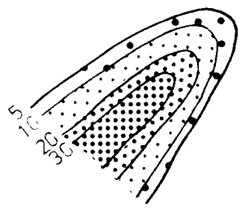


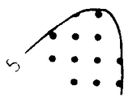




THICKNESS OF LIGNITIC SEQ.

- 5 - 10
- 10 20
- 20 30
- 30 40
- 40 +





PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA PROJECT (S.A.) E.L.164
TALLACOOTRA LAKES AREA
ISOPACH OF LIGNITIC SEQUENCE

PREPARED BY DW H
DRAWN BY
DATE JAN 76
PLAN No. 628-234

ENV. 2504 I-6

PLATE 3d

30° 40′

E.L. 164

NULLARBOR PLAIN

E - BOUNDARY

LAKE TALLACOOTRA

LEGEND

PREVIOUS DRILL HOLES ○

1975 DRILL HOLES ●

PE HINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA PROJECT - E.L.164

TALLACOOTRA LAKES AREA

BASE MAP

FOR ISOPACH-ISOBATH OVERLAYS

DWH | SCALE 1:25,000 | 628-227 | PLATE 3

YHM | DATE JAN 1976

ENV 2504 I - 7

LEGEND FOR 1973 DATA

- S.P. — Spring surface water
- 5 — Salt covered surface
- 1 — Minor salt on red sand surface
- 2 — Red sand surface on salt lake surface
- Cr — Surface crust (recent?)
- 3 — Red sand in dunes around
- 4 — Tertiary sandstone
- Pre-cambrian gneisses basement (very altered) } Basement
- Quartz veins
- Creek
- Lake shoreline
- Marker pegs in the ground
- Radiometric anomaly (McPhar TV-1) > 80,000 counts / minute

TV-1 counts/minute

- >30,000 c/min
- >10,000 c/min

N

Line of section

Edge of lake

Track

Lake Tallacootra

Approximate edge

APPROXIMATE POSITION AND SHAPE OF ISLAND

BAK

BAK 22 ppm U

Lake Shore

1973 DATA / 1975 DATA

NOTE: RELATIVE POSITION OF 1973 WORK AND 1975 T.E. SURVEY IS APPROX.

222600N — 222400N — 222200N

LEGEND FOR 1975 DATA

- 0 - 50 T/min²
- 50 - 100 "
- 100 - 200 "
- 200 - 300 "
- >300 "

VALUES IN TRACKS PER SQUARE mm

45 CUP NUMBER
• T.E. CUP POSITION
5 T.E. VALUE

20 0 50 100 m

PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA — LAKE TALLACOOTRA

ANOMALY 4Pi

1975 TRACK ETCH SURVEY AND 1973 GEOLOGY & RADIOMETRICS

PREPARED BY D.W.H	SCALE 1:1,000	PLAN No.
DRAWN BY P.J.B.	DATE NOVEMBER, 1975	628-220

ENV. 2504-I-8

PLATE 4

TRUE NORTH

TO GOULDEA

16 00 N
15 00 N
14 00 N
13 00 N
12 00 N
11 00 N
10 00 N
5 00 N
10400

Sample no	U	Th	
5433	8	18	p.p.m.
34	6	<4	p.p.m.
35	8	4	p.p.m.
36	16	<4	p.p.m.
37W			p.p.b.

<4/7 15/7 <4/440

ANOMALY 1 PI.

R 94 ⊕BG only 1

R 95 ⊕BG. only 22

Small Salt Lake

SEE PLAN 628-210 AT 1 2000

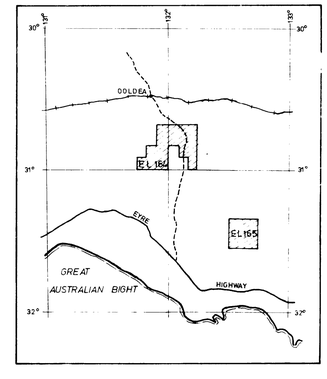
9600 E
9200 E
8800 E
8400 E
7200 E
6400 E
5600 E
4800 E
4000 E
3200 E
2400 E
1600 E
800 E
00 N/S

1000 N
500 N

LAKE IFOULD

TO COLONA STATION

LOCATION



LEGEND

POSSIBLE FAULT

BASEMENT

LIMESTONE

DRILL HOLE LOCATION (PREFIX PIN.) ⊕BG only — BACKGROUND RADIOACTIVITY

ACCUMULATION FACTOR — 0.9 ⊕ R95 — HOLE NUMBER; 240 at 16 — DEPTH IN METRES; 32 — RADIOACTIVITY; TOTAL DEPTH OF HOLE

URANIUM AND THORIUM ASSAY RESULTS IN p.p.m. U 7 / Th 15

URANIUM ASSAY RESULT IN WATER (IN p.p.b) 5437 W

SCALE 1:10,000

m 400 0 500 1000 m

PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA PROJECT (S.A.) - E.L.164

IFOULD LAKE AREA

BASE MAP

GEOLOGY, GEOCHEMISTRY AND LOCATION OF DRILLHOLES

L.G. 1:10,000 OCT 1975 628-213

RECEIVED 23 AUG 1976 DEPT. OF MINES SECURITY 3504

EN 2504 III – 2

PLATE 5

TRUE NORTH

ANOMALY 1 PI.

SEE PLAN 628-210 AT 1:2000 SCALE

1600 N
1500 N
1400 N
1300 N
1200 N
1100 N
1000 N
500 N
10400
9600 E
9200 E
9000 E
8400 E
8000 E
7200 E
6400 E
5600 E
4800 E
4000 E
3200 E
2400 E
1600 E
800 E
00 N/S
1000 N
500 N

50033 50032 50040 46284 46278 46272 46266 46258 46349 46343 46338 46334 46327 46321

LEGEND

CUP NUMBER 50032
LOCATION OF CUP .
VALUE OF CUP IN TRACK ETCH PER mm² 125

DAMAGED CUP x

CONTOUR LINE

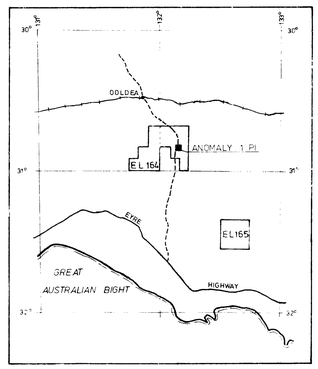
0	25
25	50
50	100
100	150
150	200
200	250
500	500
	> 500

CONTOUR INTERVALS IN T/mm²

SCALE 1:10,000

m 200 0 500 1000 m

LOCATION



PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA PROJECT (S.A.)

IFOULD LAKE AREA — E.L. 164

TRACK ETCH RESULTS 1975

DRAWN BY: S.G. SCALE: 1:10,000, PLAN No.
TRACED BY: YMM SEP 1975 628-209

RECEIVED 23 AUG 1976 DEPT. OF MINES SECURITY

ENV. 2504-III — 3

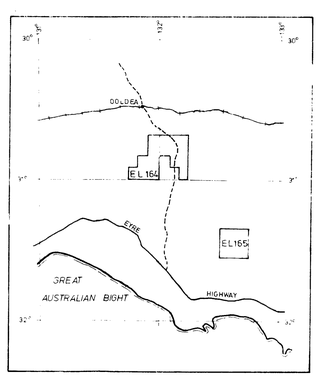
PLATE 5a

TRUE NORTH

ANOMALY 1 PL

SEE PLAN 628-221 AT 1:2000

1600 N
1500 N
1400 N
1300 N
1200 N
1100 N
1000 N
500 N
1000 E
9600 E
9200 E
9000 E
8400 E
8000 E
7200 E
6400 E
5600 E
4800 E
4000 E
3200 E
2400 E
1600 E
800 E
00 N/S
100 N
500 N



LOCATION

LEGEND

SPP 2 (S.N. 12/886) VALUES IN COUNTS PER SECOND

0	50
50	100
100	150
150	200

RADIOMETRIC CONTOUR LINE

RADIOMETRIC VALUE TROUGH

SCALE 1 10,000

m 200 0 500 1000 m

PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA PROJECT (S.A.)

IFOULD LAKE AREA — E.L. 164

SURFACE RADIOMETRICS

PREPARED BY L.G. SCALE 1:10,000 PLAN No.

DRAWN BY YMH DATE OCT 1975 628-214

ENV 2504-III-4

PLATE 5b

TRUE NORTH

Approx. position of shore line

Approx. axis of drainage channel (bifurcated)

ANOMALY 1 PI

IFOULD LAKE

SAMPLES	U	Th	ppm
5433	8	18	
5434	6	<4	
5435	8	4	
5436	16	<4	
5437 W	5	-	ppb

1300 N
1200 N
1100 N
1000 N
900 N
800 N
700 N
600 N
500 N

8200 E
8300 E
8400 E
8500 E
8600 E
8700 E
8800 E
8900 E
9000 E
9100 E
9200 E
9076 E

Approx. position of shore line

LEGEND

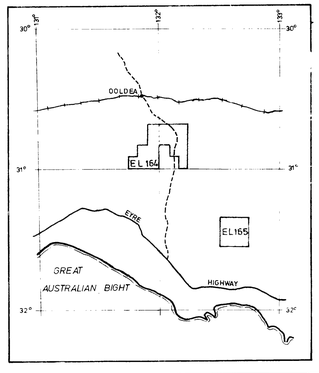
CUP NUMBER 50,022
LOCATION OF CUP
VALUE OF CUP IN TRACK ETCH PER mm² 125
CUP DAMAGED ×
CONTOUR LINE 25 — 25
LOW VALUE TROUGH

- 0 - 25 T/mm²
- 25-50 "
- 50-100 "
- 100-150 "
- 150-200 "
- 200-250 "
- 250-500 "
- >500 "

GRANITE / GNEISS

SCALE 1 2000

m 40 20 0 40 80 120 160 200m



LOCATION DIAGRAM

PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA PROJECT E.L.164

ANOMALY 1 PI — IFOULD LAKE AREA

TRACK-ETCH RESULT 1975 AND ASSAY DATA

PREPARED BY L.G. SCALE 1 2,000 PLAN No.
DRAWN BY YWM DATE OCTOBER 1975. 526-210

ENV 2504 II - 5

PLATE 6

TRUE NORTH

LOCATION DIAGRAM

LEGEND

SPP_2 (SN:12/886) Counts per second

- 0 - 100
- 100 - 200
- 200 - 400
- 400 - 800
- 800 - 1600
- 1600 - 3200
- 3200 - 6400
- > 6400

Radiometric contour 25 ——— 25

SCALE 1 2000

m 40 20 0 40 80 120 160 200m

PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA PROJECT (S.A.) - E.L. 164

ANOMALY 1 PI - IFOULD LAKE AREA

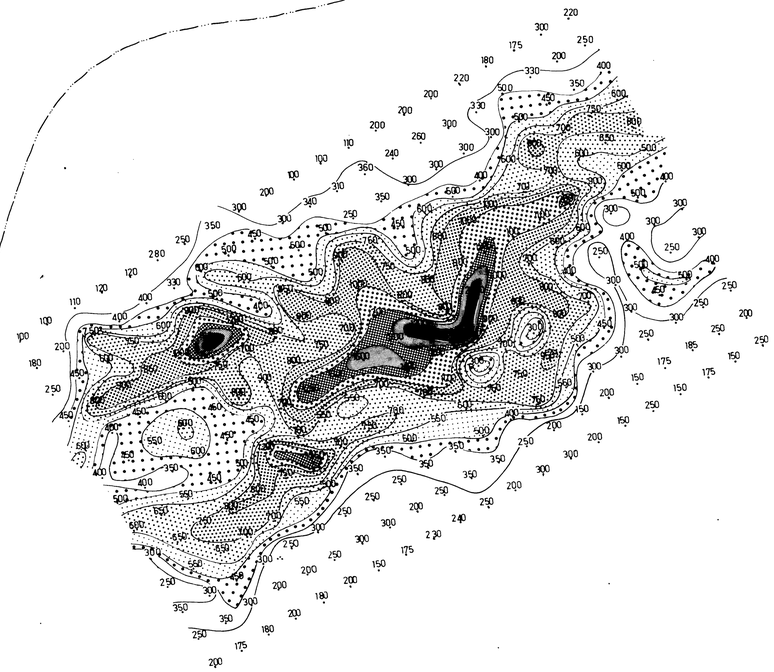
RADIOMETRIC OBSERVATIONS MADE AT TIME OF TRACK-ETCH PLACEMENT

PREPARED BY D.W.H.	SCALE 1 : 2,000	PLAN No 528-221
DRAWN BY [illegible]	DATE OCTOBER, 1975.	

ENV. 2504 III - 6

PLATE 6a

TRUE NORTH

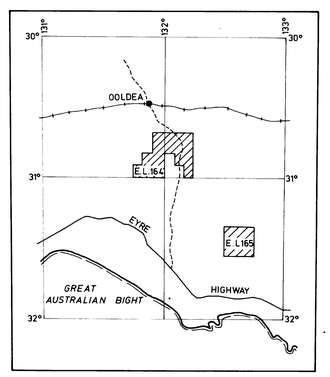


1300 N
1200 N
1100 N
1000 N
900 N
800 N
700 N
600 N
500 N
9400 E
9300 E
9200 E
9100 E
9000 E
8900 E
8800 E
8700 E
8600 E
8500 E
8400 E
8300 E
8200 E

Approx. position of shore line

Approx. position of shore line

LOCATION DIAGRAM



LEGEND

SPP2 SN — VALUES IN COUTS PER SECOND

0	300
300	400
400	500
500	600
600	700
700	800
800	1000
1000	1200
1200	1400
1400	1600
	> 1600

Radiometric contour line

SCALE 1 : 2000

m 40 20 0 40 80 120 160 200m

PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA PROJECT (S.A.) - E.L. 164

ANOMALY 1 PI - IFOULD LAKE AREA

RADIOMETRIC SURVEY ON 25 METRE GRID

SURFACE RADIOMETRIC CONTOURS

PREPARED BY L.G.	SCALE 1 : 2,000	PLAN No 628-215
DRAWN BY Y.H.M.	DATE OCT. 1975	

ENV. 2504 III - 7

PLATE 6b

PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA PROJECT (S.A.) E.L.164
ANOMALY 1 Pl. - LAKE 'IFOULD

TERRADEX
TRACK ETCH COMPUTER CONTOURS

PREPARED BY	SCALE 1 : 2000	PLAN No
DRAWN BY:	DATE : OCT 1975	628-228

ENV 2504-III — 8

PLATE 6c

NORTH WEST

SOUTH EAST

LEGEND

- Sandstone
- Calcarenite
- Limestone
- Lignitic sand
- Lignite
- Kaolinitic sandstone
- Granite gneiss

HORIZONTAL SCALE 1:10,000
VERTICAL SCALE 1:1,000
RADIOMETRIC SCALE 1cm = 300 c/s

PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

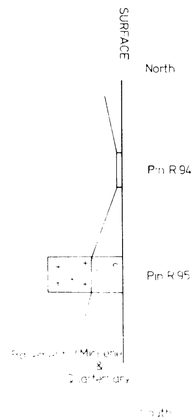
PIDINGA PROJECT - E.L.164

GEOLOGICAL CROSS SECTIONS E-W HOLES PIN R4, PIN R1, PIN R92, PIN R2, PIN R93, PIN R3, PIN R7a,b, PIN R11, PIN R9, PIN R10

SCALE
DATE
PLAN No. 628-224

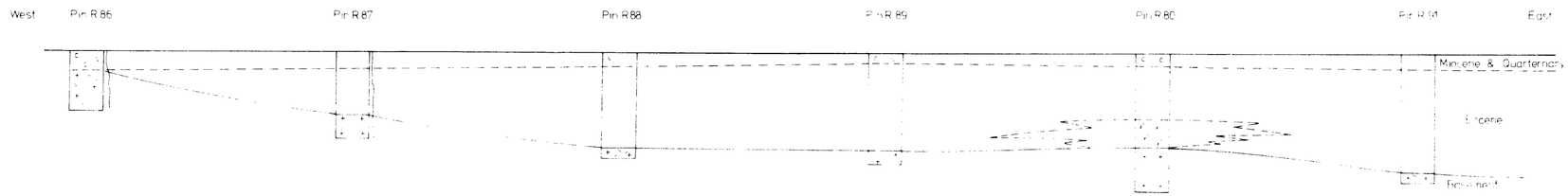
ENV. 2504 III - 9

PLATE 7a



SECTION A

SECTION B



LEGEND

- Sandstone
- Calcarenite
- Lignitic sand
- Granite Gneiss
- Radiometric 'anomaly'

Scale Horizontal 1 10,000
Vertical 1 1,000

Radiometrics 1 cm = 300 c/s

PECHINEY (AUSTRALIA) EXPLORATION PTY LTD

PIDINGA PROJECT E.L.164

GEOLOGICAL CROSS SECTION THROUGH DRILL HOLES Pin R 86-91, 94, 95.

PREPARED BY D.W.F.	SCALE See above	PLAN No
DRAWN BY R.C.	DATE [illegible] '76	F25 226

ENV. 2504 III — 10

Plates 7b, 7c

PECHINEY (AUST) EXPLORATION PTY LTD

ENV. 2504 I – 11

D.6

DRILL NoPIN-R86.

VERTICAL SCALE 1 : 100

DRILLING CONTRACTOR NORTHBRIDGE PTY. LTD. ADELAIDE, S.A.

START OF OPERATION 6.10.75.

END OF OPERATION 6.10.75.

DEPTH 18 m

DIAMETER from 0 m to 18 m : 3⅞"
from to :
from to :

AIR from 0 m to 18 m

MUD from to

CASING SHOE DEPTH

TYPE FLUID IN HOLE

REMARKS K.C. DRILLEY.

LOGGING CONTRACTOR PECHINEY (AUST.) EXPLORATION. 151 MACQUARIE ST, SYDNEY, N.S.W.

S.P. RESISTIVITY EQUIPMENT.

OPERATOR JOSEPH BIRO

DATE 6.10.75.

GAMMA RAY LOG DEPTH 16 M.

LOGGING SPEED gamma ray 3 m/mn
S.P Resistivity m/mn

RESISTIVITY SCALE ohms/m for cm (on the chart)

S.P. SCALE mv for cm

E L R 10

	1st RUN	RUN	RUN	RUN	RUN	RUN
INTEGRATING TIME CONSTANT	0,4 sec	sec	sec	sec	sec	sec
S P P 3 SENSITIVITY	1500 c/s	c/s	c/s	c/s	c/s	c/s
E T P 3 SENSITIVITY	10 mv	mv	mv	mv	mv	mv
SCALE (FULL DEVIATION)	500 c/s					
PROBE NO. 211-SR TYPE. STS 33 ONLY						

E L No 164

STATE S.A.

LOCALITY YIYINGA

CO-ORDINATES X = 224800 N.
Y = 360800 E
Z =

AZIMUT =

ANGLE OF DIP = VERTICAL

STRATIGRAPHIC UNIT	LITHOLOGIC DESCRIPTION & MINERALIZATION	DEPTH (in meters)	STRATIGRAPHIC LOG (use symbols)	ZERO	P.S., RESISTIVITY, AND GAMMA RAY LOG (copper on right, Drill Steel)	RECOVERY (%)	SAMPLE NO P.D/MD	SAMPLE NO ASSAYS	ASSAY U ppm	Th ppm	C ppm	Pb ppm	Zn ppm	Ni ppm
	Brown sandy alluvium poorly sorted.	1		30										
	Mottled brown fine limestone chips in a poorly sorted calcareous sand.	2												
	As above with an increase in limestone chips	3												
	As above	4		30										
	As above	5		25										
	As above. With some fresh feldspar	6		25										
	Khaki weathered granite with quartz feldspar muscovite and minor biotite.	7		35										
	As above	8												
	As above	9												
		10		35										
		1												
		2		35										
	Pink feldspar granite with minor scattering.	3		30										
		4		30										
		5		40										
		6		40										
		7		40										
		8		40										
		9												
		20												
		21												
		22												
		23												
		24												
		25												
		26												

5487 <4 25

PECHINEY (AUST) EXPLORATION PTY LTD

ENV. 2504 I -12

DRILL NoPIN-R87.

VERTICAL SCALE 1 : 100

DRILLING CONTRACTOR NORTHBRIDGE PTY.LTD.
ADELAIDE, S.A.

START OF OPERATION 6.10.75.

END OF OPERATION 6.10.75.

DEPTH 26 M.

DIAMETER from -0 M to 26 M. : 3⅞"
from to :
from to :

AIR from 0 M to 26 M.

MUD from to /

CASING SHOE DEPTH /

TYPE FLUID IN HOLE /

REMARKS Rod DRIVER.

LOGGING CONTRACTOR PECHINEY (AUST.) EXPLORATION.
151 MACQUARIE ST, SYDNEY, N.S.W.

S.P RESISTIVITY EQUIPMENT /

OPERATOR JOSEPH BIRO

DATE 6.10.75

GAMMA RAY LOG DEPTH 23 M

LOGGING SPEED gamma ray 3. m/m.n
S P Resistivity / m/m n

RESISTIVITY SCALE / ohms/m for / cm (on the chart)

S.P SCALE / mv for / cm

E.L R 10

	1st RUN	RUN	RUN	RUN	RUN	RUN
INTEGRATING TIME CONSTANT	0.4 sec	sec	sec	sec	sec	sec
S P P 3 SENSITIVITY	1500 c/s	c/s	c/s	c/s	c/s	c/s
E T P 3 SENSITIVITY	1.0 mv	mv	mv	mv	mv	mv
SCALE (FULL DEVIATION)	300 c/s					

PROBE NO 211-SR TYPE STS 33 ONLY

E.L. No 164

STATE S.A.

LOCALITY PIDINGA.

CO-ORDINATES X = 224800 N
Y = 361600 E
Z =

AZIMUT =

ANGLE OF DIP = VERTICAL

STRATIGRAPHIC UNIT	LITHOLOGIC DESCRIPTION & MINERALIZATION	DEPTH (In meters)	STRATIGRAPHIC LOG (use symbols)	SPP-2 ZERO	P.S., RESISTIVITY, AND GAMMA RAY LOG	RECOVERY (%)	SAMPLE NO PD/MD	SAMPLE NO ASSAYS	ASSAYS U ppm	Th ppm	Cu ppm	Pb ppm	Zn ppm	V ppm
MIOCENE &	Very light brown poorly sorted sandy limestone - fine medium grained.	1		30										
	Fawn limestone as above	2												
	As above	3												
	As above	4												
	Fawn - light brown coarse grained sand with some $CaCO_3$ as cement.	5		30										
	Pale fawn - white fine grained fairly well sorted sand.	6												
	white as above	7												
	Fawn - white as above.	8												
	As above.	9												
	White - yellow brown as above. Iron stained in part. Green chlorite rich very fine grained rock with minor biotite.	10		30										
	As above.	1												
		2												
		3												
EOCENE		4												
		5		30										
		6												
		7												
		8												
	Chlorite rich weathered granite gneiss?	9	+											
		20	+	30										
	Weathered granite gneiss with pink felspar iron stained quartz minor biotite abundant chlorite.	1	+											
	As above with an increase in chlorite.	2	+											
		3	+	30										
PRE-EOCENE		4		40										
	Weathered granite gneiss biotite pink felspar ironstained quartz minor chlorite and magnetite.	5	+	45										
		6	+	40										

PECHINEY (AUST) EXPLORATION PTY LTD

ENV. 2504 I – 13

DRILL NoPIN-R88.

VERTICAL SCALE 1 : 100

DRILLING CONTRACTOR NORTHBRIDGE PTY. LTD. ADELAIDE . S.A.

START OF OPERATION 6.10.75.

END OF OPERATION 6.10.75.

DEPTH 32 M.

DIAMETER from 0 M to 32 M : 3⅞"
from to :
from to :

AIR from 0 M to 32 M.

MUD from to /

CASING SHOE DEPTH /

TYPE FLUID IN HOLE /

REMARKS RC. DRILLED.

LOGGING CONTRACTOR PECHINEY (AUST.) EXPLORATION 151 MACQUHRIE ST, SYDNEY, N.S.W.

S.P RESISTIVITY EQUIPMENT /

OPERATOR JOSEPH BIRO

DATE 6.10.75.

GAMMA RAY LOG DEPTH 28 M.

LOGGING SPEED gamma ray 3 m/m.n
S P Resistivity / m/m n

RESISTIVITY SCALE / ohms/m for / cm (on the chart)

S.P. SCALE / mv for / cm

E.L R IO

	1st RUN	RUN	RUN	RUN	RUN	RUN
INTEGRATING TIME CONSTANT	0.4 sec	sec	sec	sec	sec	sec
S P P 3 SENSITIVITY	1500 c/s	c/s	c/s	c/s	c/s	c/s
E T P 3 SENSITIVITY	10 mv	mv	mv	mv	mv	mv
SCALE (FULL DEVIATION)	300 c/s					

PROBE NO. 217-SR TYPE . S.T.S. 33 ONLY

E.L No 164

STATE S.A.

LOCALITY PIDINGA .

CO-ORDINATES X = 224800 N.
Y = 362400 E.
Z =

AZIMUT =

ANGLE OF DIP = VERTICAL.

STRATIGRAPHIC UNIT	LITHOLOGIC DESCRIPTION & MINERALIZATION	DEPTH (in meters)	STRATIGRAPHIC LOG (use symbols)	SPP-2 ZERO	P.S., RESISTIVITY, AND GAMMA RAY LOG	RECOVERY (%)	SAMPLE NO P D/MD	SAMPLE NO ASSAYS	ASSAYS U ppm	Th ppm	Cu ppm	Pb ppm	Zn ppm	V ppm
MIDDLE	Light brown calcareous sandy alluvium poorly sorted medium grained.	1		25										
	As above	2												
	As above	3												
	As above	4												
	Pale green poorly sorted medium-fine grained chlorite rich sand with minor Fe staining.	5												
	As above	6		25										
	Grey green as above.	7		30										
	As above.	8												
	Pale grey green chlorite rich sand poorly sorted fine-medium grained.	9												
	Dark grey green as above.	10		30										
	Pale yellow green grey poorly sorted sand clear – white.	1												
	White cream as above with minor mica.	2												
	As above.	3		30										
	White fine grained poorly sorted sand abundant mica	4												
	As above	5												
	White coarse grained very poorly sorted sandstone with mica (muscovite).	6												
	White as above.	7		30										
	Fine grained white sandstone with muscovite.	8		40										
	Coarse grained poorly sorted sandstone grey – off white.	9		40										
	As above.	20		30										
	Cream - grey fine grained sandstone. with muscovite.	1												
	Fawn - light brown coarse poorly sorted sand.	2												
	As above.	3		30										
	Cream fine - medium grained as above	4												
	Cream - white fine - medium grained as above	5												
	Yellow fine - medium grained poorly sorted sandstone with minor mica and clays. Fe stained.	6												
	Coarse yellow sandstone limonite stained matrix.	7		30										
	As above pale yellow.	8												
	Buff coloured as above.	9						5488	<4		<4			
BASEMENT	Grey weathered basement.	30	+ + +											
	Granite fresh felspar mica	1	+ + +											
		2	+ + +	30										

PECHINEY (AUST) EXPLORATION PTY LTD

ENV. 2504 I – 14

D.6

DRILL NoPIN-R89.

VERTICAL SCALE 1 : 100

DRILLING CONTRACTOR NORTHBRIDGE P/L LTD. ADELAIDE, S.A.

START OF OPERATION 7.10.75.

END OF OPERATION 7.10.75.

DEPTH 34 M.

DIAMETER from 0 M to 34 M. : 3⅞"
from to :
from to :

AIR from 0 M to 34 M

MUD from to /

CASING SHOE DEPTH /

TYPE FLUID IN HOLE /

REMARKS K.C. KILLEY.

LOGGING CONTRACTOR PECHINEY (AUST.) EXPLORATION, 151 MACQUARIE ST, SYDNEY, N.S.W.

S.P. RESISTIVITY EQUIPMENT /

OPERATOR JOSEPH BIRO

DATE 7.10.75.

GAMMA RAY LOG DEPTH 30 M

LOGGING SPEED gamma ray 3 m/mn
S P Resistivity / m/mn

RESISTIVITY SCALE / ohms/m for / cm (on the chart)

S.P. SCALE / mv for / cm

ELR 10

	1st RUN	RUN	RUN	RUN	RUN	RUN
INTEGRATING TIME CONSTANT	0.4 sec	sec	sec	sec	sec	sec
SPP3 SENSITIVITY	1500 c/s	c/s	c/s	c/s	c/s	c/s
ETP3 SENSITIVITY	10 mv	mv	mv	mv	mv	mv
SCALE (FULL DEVIATION)	300 c/s					

PROBE NO. 217-SR TYPE. STS 33 ONLY

EL No 164.

STATE S.A.

LOCALITY PIDINGA

CO-ORDINATES X = 224800 M.
Y = 6632000 M.
Z =

AZIMUT =

ANGLE OF DIP = VERTICAL.

STRATIGRAPHIC UNIT	LITHOLOGIC DESCRIPTION & MINERALIZATION	DEPTH (in meters)	STRATIGRAPHIC LOG (use symbols)	SPP-2 ZERO	P.S., RESISTIVITY, AND GAMMA RAY LOG	RECOVERY (%)	SAMPLE NO PD/MD	SAMPLE NO ASSAYS	ASSAYS U ppm	Th ppm	Cu ppm	Pb ppm	Zn ppm	V ppm
MIOCENE	Brown fine grained well sorted calcareous sand	1		25										
	As above	2												
	As above	3												
	Hematite red coarse grained poorly sorted sand angular - sub angular quartz grains with abundant Fe staining.	4												
	Red brown as above.	5												
	Light coloured fine grained medium - well sorted sand.	6												
	As above.	7												
	Yellow brown as above.	8												
	As above with some hematite staining	9												
	As above.	10		25										
	Lilac brown as above.	1												
	Cream coloured as above. Coarse grained	2												
	Cream as above with some hematite staining.	3												
	As above	4												
	Coarse grained poorly sorted sand Cream.	5												
	As above micro conglomerate	6												
	As above	7												
	As above with an increase in clay	8												
	As above.	9												
PLIOCENE?	Grey micro conglomerate poorly sorted with minor clays.	20		25										
	As above.	1												
	As above with an increase in grey clay.	2												
	As above.	3												
	As above.	4												
	No sample.	5												
	Fine - medium grained white poorly sorted sandstone with abundant fine grained white sandstone. Fine grained white sandstone white clay.	6												
	As above.	7												
	As above	8												
	As above with lilac coloured clay and minor weathered biotite granite gneiss.	9												
	Weathered biotite granite gneiss	30		25										
	As above	1	+											
		2												
		3	+											
PRECAMBRIAN BASEMENT		4	+	25				5489	<4	<4				

PECHINEY (AUST) EXPLORATION PTY LTD

ENV. 2504 I-15

D.6

DRILL NoPIN·R90.

VERTICAL SCALE 1 : 100

DRILLING CONTRACTOR NORTHBRIDGE PTY.LTD. ADELAIDE . S.A.

START OF OPERATION 7.10.75.

END OF OPERATION 7.10.75.

DEPTH 42 M

DIAMETER from 0M to 42M : 5⅞"
from to :
from to :

AIR from 0M to 42M

MUD from to /

CASING SHOE DEPTH /

TYPE FLUID IN HOLE /

REMARKS RC, DRILLED

LOGGING CONTRACTOR PECHINEY (AUST.) EXPLORATION 151 MACQUARIE ST, SYDNEY. N.S.W.

S.P RESISTIVITY EQUIPMENT. /

OPERATOR Joseph Bird

DATE 7.10.75.

GAMMA RAY LOG DEPTH 41M

LOGGING SPEED gamma ray 3 m/mn
S.P Resistivity / m/mn

RESISTIVITY SCALE / ohms/m for / cm (on the chart)

S.P SCALE / mv for / cm

E L R IO

	1st RUN	RUN	RUN	RUN	RUN	RUN
INTEGRATING TIME CONSTANT	0.4 sec	sec	sec	sec	sec	sec
S.P.P.3 SENSITIVITY	1500 c/s	c/s	c/s	c/s	c/s	c/s
E.T.P.3 SENSITIVITY	10 mv	mv	mv	mv	mv	mv
SCALE (FULL DEVIATION)	500 c/s					

PROBE NO 217-GR TYPE . S.T.S 33 ONLY

E L No 164

STATE S.A.

LOCALITY PIDINGA.

CO-ORDINATES X = 224800 N.
Y = 364000 E
Z =

AZIMUT =

ANGLE OF DIP = VERTICAL.

STRATIGRAPHIC UNIT	LITHOLOGIC DESCRIPTION & MINERALIZATION	DEPTH (in meters)	STRATIGRAPHIC LOG (use symbols)	SPP-2 ZERO	P.S., RESISTIVITY, AND GAMMA RAY LOG	RECOVERY (%)	SAMPLE NO P.D/MD	SAMPLE NO ASSAYS	ASSAYS U ppm	Th ppm	Cu ppm	Pb ppm	Zn ppm	V ppm
MIOCENE Q.	Brown fine grained poorly sorted slightly calcareous sandy alluvium.	1		25										
	Fine - medium grained light brown calcareous sand with minor limestone chips	2												
	Brown - white mottled sandy limestone poorly sorted.	3												
	Fine - medium grained poorly sorted calcareous sand and minor limestone fragments.	4												
	Fine poorly sorted light orange brown sand	5		25										
	Light green orange as above	6												
	Apricot as above. poorly sorted.	7												
	Hematitic sand with nodules of hematite generally fine grained	8												
	As above.	9												
	As above high grade hematite.	10		25										
	As above	1		25										
	Bluish red hematite minor sand.	2		20										
	As above.	3												
EOCENE	Hematite red sand poorly sorted abundant nodules of hematite.	4												
	Dark red as above.	5		20										
	Brick red hematite rich sand poor - medium sorting medium - fine grained.	6												
	As above with an increase in hematite.	7												
	As above.	8		20										
TERTIARY	Grey coarse - medium grained sand fairly well sorted. minor hematite.	9		25										
	As above.	20		25										
	Dark grey - black lignitic coarse grained sand fairly well sorted H_2S smell	1		30										
	As above with minor pyrite.	2		30										
	As above with an increase in lignite.	3		30										
	No sample.	4												
		5		25										
	As above with a decrease in lignite	6												
	Chocolate coarse - medium grained sand well sorted with minor lignite.	7												
	Very coarse grained poorly sorted indurated almost micro conglomerate angular - subangular quartz chips minor clay.	8												
	As above.	9												
BASEMENT	Brown weathered basement minor pink felspar muscovite quartz abundant kaolin.	30		25										
	As above	1												
	As above.	2												
	Lilac - purple weathered basement.	3												
	Khaki coloured as above with abundant chlorite after biotite.	4		25										
	Khaki - brown as above.	5												
		6												
		7												
	Biotite (chlorite) granite gneiss pink felspar angular quartz magnetite.	8		25										
		9		30										
		40		30										
		1		30				5430	<4	<4				
		2		30										

PECHINEY (AUST) EXPLORATION PTY LTD

ENV. 2504 I - 16

D.6

DRILL NoPIN·R91.

VERTICAL SCALE 1 : 100

DRILLING CONTRACTOR NORTHBRIDGE PTY.LTD. ADELAIDE, S.A.

LOGGING CONTRACTOR PECHINEY (AUST.) EXPLORATION 151 MACQUARIE ST. SYDNEY. N.S.W.

E.L. No 164.

STATE S.A.

LOCALITY PIDINGA

START OF OPERATION 2.10.75.

END OF OPERATION 8.10.75

DEPTH 39 M.

DIAMETER from 0 M to 39 M. : 3⅞"
from to :
from to :

AIR from 0 M to 39 M.

MUD from to /

CASING SHOE DEPTH /

TYPE FLUID IN HOLE /

REMARKS RC, DRILLEX,

S.P RESISTIVITY EQUIPMENT /

OPERATOR JOSEPH BIRO

DATE 8.10.75.

GAMMA RAY LOG DEPTH 35 M.

LOGGING SPEED gamma ray 3 m/mn
S.P Resistivity / m/mn

RESISTIVITY SCALE / ohms/m for / cm (on the chart)

S.P SCALE / mv for / cm

CO-ORDINATES X= 224800 N
Y= 364800 E
Z=

AZIMUT =

ANGLE OF DIP = VERTICAL

E.L.R.IO

	1st RUN	RUN	RUN	RUN	RUN	RUN
INTEGRATING TIME CONSTANT	0.4 sec	sec	sec	sec	sec	sec
S.P.P.3 SENSITIVITY	1500 c/s	c/s	c/s	c/s	c/s	c/s
E.T.P.3 SENSITIVITY	10 mv	mv	mv	mv	mv	mv
SCALE (FULL DEVIATION)	300 c/s					

PROBE NO 217-SR TYPE STS 33 ONLY

STRATIGRAPHIC UNIT	LITHOLOGIC DESCRIPTION & MINERALIZATION	DEPTH (in meters)	STRATIGRAPHIC LOG (use symbols)	ZERO	P.S., RESISTIVITY, AND GAMMA RAY LOG	RECOVERY (%)	SAMPLE NO P.D/MD	SAMPLE NO ASSAYS	ASSAYS U ppm	Th ppm	Cu ppm	Pb ppm	Zn ppm	V ppm
QT	Red brown sandy alluvium poorly sorted.	1		25										
	Light brown calcareous sand with minor limestone fragments poorly sorted fine grained	2												
	As above.	3												
MINTRE VS	Dark red brown indurated sand with minor calcareous fragments coarse - medium grained poorly sorted.	4												
	As above.	5		25										
	Khaki yellow brown poorly sorted sandstone medium fine grained abundant limonite rich clays.	6												
	Khaki - limonite coloured generally fine grained sand.	7												
	As above	8												
	As above.	9												
	Yellow purple as above.	10		25										
	As above.	1												
	Yellow - red brown as above.	2												
	As above	3												
	White pink as above.	4												
	White yellow pink as above very poorly sorted	5		25										
	White - off white fine grained poorly sorted sand clay.	6												
	White - cream as above.	7												
	Cream as above	8												
	Yellow limonite stained as above.	9												
	As above yellow brown.	20		25										
	Cream as above with abundant clay.	1												
TERTIARY - EOCENE	White - off white with abundant clay.	2												
	Cream abundant clay.	3												
	Apricot with abundant clay.	4												
	Apricot as above.	5		25										
	Off white as above.	6												
	As above.	7												
	Pale brown as above	8												
	White grey clay with minor sand, very poorly sorted.	9												
	As above.	30		25										
	White as above.	1												
	Cream as above.	2												
	As above.	3												
	Brown clay with minor sand.	4												
	As above Khaki.	5		25										
	Yellow brown as above - Khaki	6												
	Grey - yellow clay with minor sand.	7												
BASEMENT	Basement pink felspar quartz biotite	8	+ +											
	Biotite granite gneiss basement	9	+ +	25				SHAL	<4		<4			

D.6

PECHINEY (AUST) EXPLORATION PTY LTD

ENV. 2504 I-17

DRILL NoPIN-R92.

VERTICAL SCALE 1 : 100

DRILLING CONTRACTOR NORTHBRIDGE PTY. LTY
- ADELAIDE, S.A.

START OF OPERATION 8.10.75.

END OF OPERATION 8.10.75.

DEPTH 55 M

DIAMETER from 0 M to 55 M : 5 7/8"
from to :
from to :

AIR from 0 M to 55 M

MUD from to /

CASING SHOE DEPTH /

TYPE FLUID IN HOLE /

REMARKS Re, DRILLED

LOGGING CONTRACTOR PECHINEY (AUST, EXPLORATION.
151 MACQUARIE ST, SYDNEY, N.S.W.

S.P RESISTIVITY EQUIPMENT. /

OPERATOR Joseph BIRO

DATE 8.10.75.

GAMMA RAY LOG DEPTH 23 m.

LOGGING SPEED gamma ray 5 m/mn
S P Resistivity / m/mn

RESISTIVITY SCALE / ohms/m for / cm (on the chart)

S.P SCALE / mv for / cm

E L. No 164

STATE S.A.

LOCALITY PIDINGA

CO-ORDINATES X = 243000 m
Y = 3504000 m
Z =

AZIMUT =

ANGLE OF DIP = VERTICAL

E L. R 10

	1st RUN	RUN	RUN	RUN	RUN	RUN
INTEGRATING TIME CONSTANT	0,4 sec	sec	sec	sec	sec	sec
S P P 3 SENSITIVITY	1500 c/s	c/s	c/s	c/s	c/s	c/s
E T P 3 SENSITIVITY	10 mv	mv	mv	mv	mv	mv
SCALE (FULL DEVIATION)	500 c/s					

PROBE NO 217-SR TYPE . STS 33 ONLY

STRATIGRAPHIC UNIT	LITHOLOGIC DESCRIPTION & MINERALIZATION	DEPTH (in meters)	STRATIGRAPHIC LOG (use symbols)	SPP.2 ZERO	P.S., RESISTIVITY, AND GAMMA RAY LOG	RECOVERY (%)	SAMPLE NO P D/MD	SAMPLE NO ASSAYS	ASSAYS U ppm	Th ppm	Cu ppm	Pb ppm	Zn ppm	V ppm
QUATERNARY	Brown red sandy calcareous alluvium poorly sorted coarse - medium grained.	1	c	25										
	Fine - medium grained as above.	2	c											
	Pale fawn - brown fine grained calcareous sand.	3	c											
	White - off white fossiliferous limestone with minor fine grained slightly Fe stained sand.	4												
	As above.	5		25										
		6												
		7												
		8												
		9												
MIOCENE	As above buff coloured with an increase in sand.	10		25										
	As above.	1												
	Off white sandy limestone	2												
	As above.	3												
	Red white hematite stained sand with limestone interbeds?	4												
	Buff fine grained sandy limestone	5		7,5										
	Poorly sorted buff sandy limestone.	6												
	Brown as above with an increase in sand.	7												
EOCENE	Hematite red sand, poorly sorted fine grained with minor mica.	8												
	Buff - pale red fine grained sand as above with minor hematite staining.	9												
	Grey green chloritic weathered basement	20		25										
	Green as above with minor biotite and quartz.	1	+											
	As above	2	+											
	As above	3	+											
CRETACEOUS	As above	4	+					5492	<4	10				
		5	+	25										

PECHINEY (AUST) EXPLORATION PTY LTD

ENV. 2504I-18

D. 6

DRILL No PIN-R93.

VERTICAL SCALE 1 : 100

DRILLING CONTRACTOR NORTHBRIDGE PTY. LTD. ADELAIDE, S. A.

START OF OPERATION 9.10.75.

END OF OPERATION 9.10.75.

DEPTH 72 M.

DIAMETER from 0 M to 72 M : 5⅞"
from to :
from to :

AIR from 0 M to 72 M.

MUD from to /

CASING SHOE DEPTH /

TYPE FLUID IN HOLE /

REMARKS RC. DRILLED.

LOGGING CONTRACTOR PECHINEY (AUST.) EXPLORATION. 151 MACQUARIE ST, SYDNEY. N.S.W.

S.P. RESISTIVITY EQUIPMENT /

OPERATOR JOSEPH BIRO

DATE 9.10.75.

GAMMA RAY LOG DEPTH 70 M

LOGGING SPEED gamma ray 3 m/mn
S.P. Resistivity / m/mn

RESISTIVITY SCALE / ohms/m for / cm (on the chart)

S.P. SCALE / mv for / cm

E.L. No 164

STATE S.A.

LOCALITY PIPINGA

CO-ORDINATES X = 228400 N.
Y = 3442000 E
Z =

AZIMUT =

ANGLE OF DIP = VERTICAL.

E.L. R 10	1st RUN	RUN	RUN	RUN	RUN	RUN
INTEGRATING TIME CONSTANT	0.1 sec	sec	sec	sec	sec	sec
S.P.3 SENSITIVITY	1500 c/s	c/s	c/s	c/s	c/s	c/s
E.T.P.3 SENSITIVITY	10 mv	mv	mv	mv	mv	mv
SCALE (FULL DEVIATION)	300 c/s					
PROBE NO. 211-5R TYPE: STS 33 ONLY						

STRATIGRAPHIC UNIT	LITHOLOGIC DESCRIPTION & MINERALIZATION	DEPTH (in. meters)	STRATIGRAPHIC LOG (USE SYMBOLS)	ZERO	P.S., RESISTIVITY, AND GAMMA RAY LOG	RECOVERY (%)	SAMPLE NO P.D/MD	SAMPLE NO ASSAYS	ASSAYS U ppm	ASSAYS Th ppm	ASSAYS Cu ppm	ASSAYS Pb ppm	ASSAYS Zn ppm	ASSAYS V ppm
	Light red brown sandy alluvium with casts of white - off white limestone.	1		25										
	White - off white limestone with some sandy horizons.	2												
	As above	3												
		4												
		5		25										
		6												
		7												
		8												
		9												
		10		25										
MIOCENE		1												
	Buff coloured limestone as above with some sandy beds poorly sorted	2												
	As above.	3												
		4												
	As above with a decrease in sand	5		25										
	White - off white limestone.	6												
	As above.	7												
	As above with some grey sand beds poorly sorted fine - medium grained.	8												
	Mustard - khaki coloured poorly sorted sand with minor muscovite.	9												
	Grey as above with some biotite.	10		25										
	Khaki - mustard coloured fine - medium grained medium sorted sand	1												
	Grey as above.	2												
	Buff as above	3												
	As above	4												
	Dark grey as above.	5		25										
	Yellow brown as above.	6												
	Brown as above.	7												
	Red - pink as above.	8												
	Dark - medium brown clay and poorly sorted sandstone	9		45										
	No sample.	30												
	Lignite black fine grained with minor pyrite.	1												
	Lignite black as above.	2		30										
	No sample.	3												
	Clays pinky lignite rich clay.	4												
	As above.	5		30										
	Dark brown - black lignite rich sand fine grained well sorted.	6												
	As above.	7												
	Dark brown - black lignite rich sand poorly sorted medium - fine grained	8												
	Fine grained lignite black with minor sand.	9												
	Dark brown fine grained lignitic sand well sorted with minor mica.	40		30										
	Dark brown as above with some light chocolate sandy beds	1												
	As above.	4												
	As above with some lignite clay.	5												
	As above.	4												
	Grey brown lignitic fine grained well sorted sand.	5		30										
	Dark grey fine grained well sorted sand with minor mica.	6												
	As above.	7												
	Dark brown - black lignitic sand and clay with very little mica	8												
	As above.	9												
EOCENE	Lignite dark brown - black fine grained well sorted.	50		30										
		1												
	As above.	2												
		3												
		4												
TERTIARY	Fawn - grey fine grained well sorted sand.	5		30										
	Grey fine grained sand and clay poorly sorted.	6												
	Off white very fine grained sand. well sorted.	7												
	Grey well sorted fine grained sand with minor clay.	8												
	Grey well sorted fine grained sand with minor biotite.	9												
	As above	60		30										
		1												
		2		30										
		3		40										
		4		40										
		5		40										
		6		30										
		7												
		8												
		9		30										

PECHINEY (AUST) EXPLORATION PTY LTD

ENV. 2504 I - 19

D.6

DRILL NoPIN-R95.

VERTICAL SCALE 1 : 100

DRILLING CONTRACTOR NORTHBRIDGE PTY. LTD. ADELAIDE, S.A.

START OF OPERATION 9.10.75.

END OF OPERATION 9.10.75.

DEPTH 22 M

DIAMETER from 0 M to 22 M : 3⅞"
from to :
from to :

AIR from 0 M to 22 M

MUD from to /

CASING SHOE DEPTH /

TYPE FLUID IN HOLE /

REMARKS RC, DRILLED.

LOGGING CONTRACTOR PECHINEY (AUST.) Exploration, 151 MACQUARIE ST. SYDNEY, N.S.W.

S.P. RESISTIVITY EQUIPMENT: /

OPERATOR Joseph Biro

DATE 9.10.75.

GAMMA RAY LOG DEPTH 17 M

LOGGING SPEED gamma ray 3 m/m.n

S P Resistivity / m/m n

RESISTIVITY SCALE / ohms/m for / cm (on the chart)

S.P. SCALE / mv for / cm

E.L. R 10

	1st RUN	RUN	RUN	RUN	RUN	RUN
INTEGRATING TIME CONSTANT	0.4 sec	sec	sec	sec	sec	sec
S P P 3 SENSITIVITY	1500 c/s	c/s	c/s	c/s	c/s	c/s
E T P 3 SENSITIVITY	10 mv	mv	mv	mv	mv	mv
SCALE (FULL DEVIATION)	300 c/s					
PROBE NO. 217-SR TYPE: STS 33 ONLY						

E.L. No 164.

STATE S.A.

LOCALITY PIVINGA

CO-ORDINATES X = 238400N
Y = 356000E.
Z =

AZIMUT =

ANGLE OF DIP = VERTICAL.

STRATIGRAPHIC UNIT	LITHOLOGIC DESCRIPTION & MINERALIZATION	DEPTH (in meters)	STRATIGRAPHIC LOG (use symbols)	ZERO	P.S., RESISTIVITY, AND GAMMA RAY LOG	RECOVERY (%)	SAMPLE NO P D/MD	SAMPLE NO ASSAYS	ASSAYS U ppm	Th ppm	Cu ppm	Pb ppm	Zn ppm	V ppm
MIOCENE & QUATERNARY SEDIMENT	Fine grained slightly calcareous sandy alluvium pale brown.	1		30										
	As above.	2												
	No sample	3												
	No sample.	4												
	No sample.	5		30										
	Coarse grained poorly sorted sand with minor clay. Brown.	6												
	No sample.	7												
	Pale grey brown poorly sorted medium grained sand. Lignite	8												
	Blue grey weathered granite	9												
	Blue grey weathered granite abundant kaolin minor quartz biotite chlorite.	10		30										
	As above	1		25										
		2												
		3												
		4		25										
		5												
		6												
		7		25										
		8		30										
		9												
		20		40										
	Fresh biotite granite gneiss	1												
		2		30										