

CONTENTS ENVELOPE 1523

TENEMENT: S.M.L. 494 - Island Lagoon.

TENEMENT HOLDER: Pacminex Pty. Ltd. And United Uranium N.L.

REPORT: Exploration And Investigation E.L. 494 For Period 5th
November 1970 To 4th February 1971.

Pgs. 3-4

CSR LIMITEDMT. GUNSON - STUART SHELF TENEMENTS

SML 96 (A)	SML 121 (A)
Env. 625, 674	Env. 674
39 sq. km.	508 sq. km.
1.12.65 - 30.11.66	1.8.66 - 30.11.66

└──────────────────┴──────────┘

SML 139 (A)
Env. 868, 906
629 sq. km.
1.12.66 - 30.11.68

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SML 139 A (A, M, P)
Env. 1101, 1399, 1490
699 sq. km.
1.12.68 - 30.11.70

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SML 494 (P, U)	SML 527 (P, U)
Env. 1523	Env. 1563
2461 sq. km.	699 sq. km.
5.11.70 - 4.11.71	3.12.70 - 2.12.71

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SML 641 (P)
Env. 1855
1067 sq. km.
4.11.71 - 3.11.72

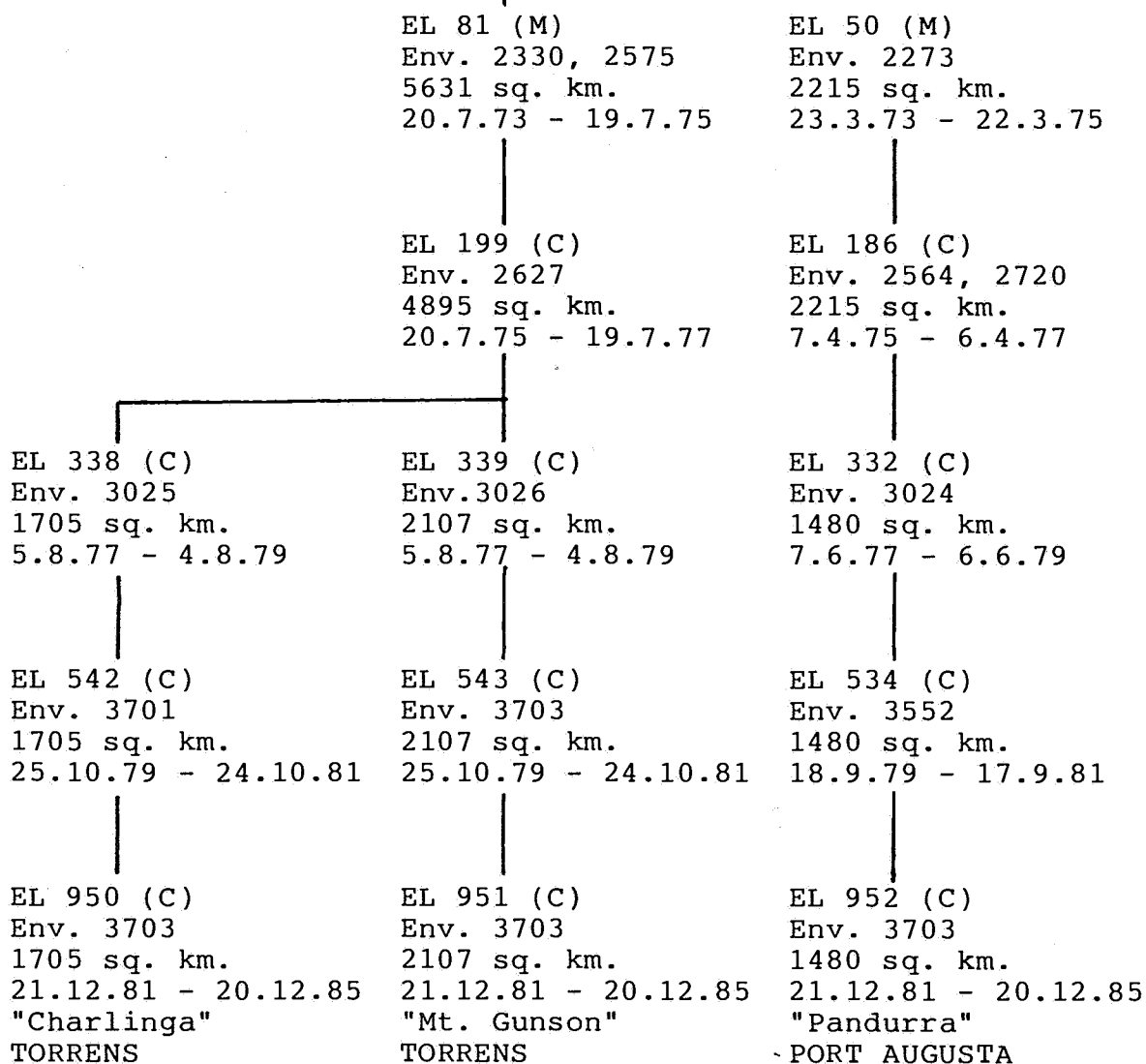
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EL 29 (P)
Env. 2187
1067 sq. km.
7.12.72 - 19.7.73

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EL 81 (Page 2)

EL 29 (Page 1)

Legend

1. Tenement No. (Company)
2. Env. No.
3. Area of tenement
4. Period of tenure
5. Tenement Name
6. 1:250 000 Sheet

Company abbreviations

- | | |
|---|------------------------------|
| A | Austminex Pty. Ltd. |
| P | Pacminex Pty. Ltd. |
| M | Mount Gunson Mines Pty. Ltd. |
| U | United Uranium N.L. |
| C | CSR Limited |

Data relating to exploration
described in this Envelope
may be included in some of
the Envelopes here listed.

DATA AND REPORTS

RECEIVED FROM

CSR LTD., 1986

- 'MT. GUNSON area'

- D.J. Flint

ENVELOPE	CLASSIFICATION	CONTENTS
6591	Open	Index (to be prepared)
6593	Open	Cattlegrid: Geology.
6594	"	" Drilling summary data & Drilling logs.
6595	"	" Plans. (Includes flotation tests and concentrate grades)
6596	"	" Mine Period Reports.
6597	"	" Mill " "
6598	"	" Shipping Data.
		Reports.
6604	Open	Lagoon: A) Reserves - East Lagoon & West Lagoon orebodies. B) Geophysical Surveys on East Lagoon orebody (Larson, 1970). C) Plans (face geology, geology, grade control, mining).
6605	"	MG14 Deposit: Metallurgy
6606	"	Main Open Cut: "
6607	"	Cattlegrid: Metallurgy & Mineragraphy (1973 & 1974 studies).
6608	"	" 1975 Mineragraphy of Mill products & feed.
6609	"	" Flotation testing of diamond drillholes.
6610	"	" Mineragraphy of mill products 1975-1983 by Pontifex & Associates.
6611	"	PETROGRAPHIC STUDIES: Includes Cattlegrid Main Open Cut Lagoon Workings Powerline Embayment Pandurra Formation MG14 Gully
6612	"	DRILL LOGS: Main Open Cut Sheet and Main Open Cut deposit A) ABC GRID SERIES B) BGC (Biogeochem) GRID SERIES C) 3-4-XD series (9 holes) 3-13-XP series (Plateau area) MX GRID SERIES

- D) Rod E. Jones XXX/XXX SERIES, 1981/1982.
- E) 3-4-XP SERIES, 1971/1972 where X=1 to 325.
- F) Notes/memos on exploration and drilling at Main Open Cut deposit.

6613

Open

DRILL LOGS:

- A) HOUSE SHEET: ABC GRID SERIES
'R' SERIES
MAIN OPEN CUT SHEET:
'N' to 'L' series
(AUSTMINEX, 1966)
- B) HOUSE SHEET: 3-3-XP SERIES.
(Mt. Gunson Mines Pty. Ltd., 1971/1972).
- C) BGC GRID SERIES for:
HOUSE SHEET, Lines 4S to 30S South of TOWNSHEET.
(Austminex, 1967).
- D) HOUSE SHEET - MN GRID
(Austminex, 1967/1968).
- E) HOUSE TO MAIN SHEETS, Rod E. Jones XXX/XXX SERIES
of 800-770
to 870-540 (1981/1982).
- F) MAIN OPEN CUT TO HOUSE SHEETS.
3-7-XP SERIES
(Mt. Gunson Mines, 1970-1972).
3-7-1P to
3-7-173P.

6614

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DRILL LOGS - GUNYOT SHEET.

- A) 1) Percussion drilling by Austminex, 1966-1967.
Millsite area.
2) ABC Grid (1966).
3) BGC Grid (1967) from lines 94N to 22N.
4) RAMSAY No. 1.
5) WATERHOLE No. 1.
- B) Percussion drilling by Mt. Gunson Mines, 1971-72.
3-5-XP series
where X=1 to 32.

6615

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GUNYAH LAKE SHEET:

- Vol. 1) Report: Geochemical Test Survey, Gunyah Lake
(PMR Report 7/73, K.J. Maiden 1973).
Plans : Location of drillholes & I.P.
traverses.
: Location of drillholes - East
Lagoon & eastern area.
: IP surveys: proposed program.
: Bedrock Lithology.

6616

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GUNYAH LAKE SHEET - DRILL LOGS:

- Vol. 1A) MYSTERY AREA (1971).
3-6-XD series where X=1 to 7.
- B) GUNYAH LAKE (1971-1972).
3-8-XD series where X=1 to 8.
- Vol. 2A) MYSTERY AREA (1970-1972).
3-6-XP series where X=1 to 65.
Note: Both GUNYAH Sheet & HOUSE Sheet.
- B) 3-12-XP series, (1971-1972)
where X=1 to 12.
South of HOUSE WORKINGS.

- 3
- 6617 Open EAST LAGOON - DRILL LOGS:
MT. GUNSON MINES PTY. LTD., 1970.
3-1-XP series where X=1 to 262.
- 6618 " WEST LAGOON - DRILL LOGS:
Mt. GUNSON MINES PTY. LTD., 1970-1972.
3-2-XP series where X=1 to 323.
- 6619 " LAGOON AREA - DRILL LOGS:
AUSTMINEX (1968) Diamond drillholes.
- 6620 " LAGOON AREA - DRILL LOGS:
AUSTMINEX (1966-1968) Auger drillholes.
On grid: 6,520,000 to 6,521,000 mN and
707,000 to 709,000 mE.
- 6621 " LAGOON AREA - DRILL LOGS:
AUSTMINEX (1968).
Vol. 1) Drilled on grid:
6,520,000 to 6,521,000 mN and all
eastings up to 707,000 mE.
Vol. 2) Drilled on grid:
6,521,000 to 6,522,000 mN and all
eastings.
- 6622 " LAGOON AREA - DRILL LOGS:
AUSTMINEX (1967).
Assorted drillholes.
- 6623 " MAGAZINE HILL CLAY DEPOSIT:
PACMINEX PTY. LTD., 1973-1974.
- 6624 " PERNATTY LAGOON - DRILL LOGS:
Western edge of Pernatty Lagoon.
Regional Scout drilling by Pacminex in 1972,
*5XX-XP series where * = F to L
5XX=505 to 520.
- 6625 " MANGANESE WORKINGS (PERNATTY LAGOON):
A) MT. GUNSON MINES PTY. LTD. memos of 1977.
B) PACMINEX (1971-1972) percussion drilling of
3-10-XP series where X=1 to 20.
- 6626 " WOOCALLA, IRONSTONE LAGOON, FAIR NELL MINE, SWEET
NELL MINE, MONALENA:
A) Geological plans and cross-sections.
B) Pacminex, 1970.
Drill logs - Sweet Nell Mine
Fair Nell Mine
3-9-XP series where X=1 to 22.
C) Pacminex, 1971.
Drill logs - Woocalla area.
3-11-XP series where X=1 to 9.
D) Pacminex, 1972.
Drill logs - Monalena area (Woocalla).
MONA XP series where X=1 to 16.

5

6634	Open	POWERLINE EMBAYMENT: A) 1975 Summary report of exploration. B) 1977 Geophysical logging of PL32.
6635	"	POWERLINE EMBAYMENT: Drill logs, PL SERIES, i.e. PL1 to PL47 inclusive.
6636	"	BOOKALOO-LAKE DUTTON: Geophysical logging of drillholes, LD series BK series.
6637	"	BOOKALOO-LAKE DUTTON-LAKE MACFARLANE: Drill logs: Bookaloo BK1-BK22 Lake Dutton LD8-LD38 Lake MacFarlane MF1-MF13.
6638	"	LY SERIES DRILLING: A) LY2 (Cattlegrid) 1974 Geophysical logs. B) LY4-LY11 and 83/108 (East of Cattlegrid), 1983 Geological logs.
6639	"	BIOGEOCHEMISTRY: A) CATTLEGRID & MG14 AREAS (Pacminex 1978). B) PERNATTY LAGOON (Austminex, 1966).
6640	"	GROUNDWATER GEOCHEMISTRY - Stuart Shelf: Pacminex (1978) - Report PMR90/78.
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6663	"	MT. WHYALLA BARITE DEPOSIT: Pacminex (1974) report - PMR 57/74.
6664	"	GEOLOGICAL MAPPING: Report: Elizabeth Creek area (Chisholm, 1974) Plans: Pernatty Lagoon Mt. Gunson Mines area Elizabeth Area Canegrass Dam area Wirrappa area.

6666 Open

DRILL LOGS - ELIZABETH CREEK & CANEGRASS AREAS:
EC23-EC54 (Elizabeth Creek)
TOC1-TOC4
SP1-SP19 (Snakepit)
3-14-19P to 3-14-41P (Canegrass Dam area)
3-14-1P to 3-14-46P (Canegrass field logs).

6667 "

DRILL LOGS-PANDURRA AREA (EL405):

Vol. 1. EX1-EX157

2. EX158-EX163 & YD1-YD15

3. EX164-EX184.

4. Area	1:100 000	Drillholes
	6332	J12-J24
Roopena	"	P1-P4
"	"	J1-J11
"	"	I1
Cultana	6432	Q1, Q2
Cariewerloo	6333	Y1-Y6
"	"	T1-T5
"	"	X1-X3

6668 "

DRILL LOGS-WATER BORES in the MT. GUNSON area.

6669 "

DRILLING SUMMARIES:
3-1-X to 3-14-X series.

6670 "

DRILL LOGS-LAKE TORRENS AREA:
(see also ENV. 3769)
BDH1-BDH4
SLT101-SLT107
YAD1.

6674 "

ELECTROMAGNETIC SURVEYS:

- A) Gonyah Lake, 1971 hand-held survey (1 plan only)
- B) Cattlegrid & MG14 areas, airborne EM INPUT Test Survey by Geoterrex, 1973.
- C) Winnie Pinnie area & Yudnapinna area, airborne electromagnetic survey, Barringer INPUT system, 1975. Geoterrex report 83-253 PMR Report 144/75.
- D) Stuart Shelf (EL186, EL199), airborne EM INPUT survey by Geoterrex, 1975.
- E) Mount Gunson Pulse Electromagnetic Test, 1977. (Ground Survey) PMR Report 58/77. Cattlegrid anomaly & Anomaly 'J' (margin of Pernatty Lagoon).
- F) Pandurra & Cariewerloo, airborne EM INPUT Survey by Geoterrex, 1977.

6675 "

REFRACTION SURVEYS:

- A) Austral Exploration (1967) Refraction Test Survey at Main Open Cut; West Lagoon; East Lagoon.
- B) Austral Exploration (1973) Reconnaissance Seismic Refraction Survey - Mt. Gunson area.

6676 Open

GRAVITY SURVEYS:

- A) Gravity survey - Pandurra area, EL186. Survey by Solo Geophysics, PMR114/77.
- B) Gravity anomaly 'A' - Site for drillhole LHL. Notes (1978).
- C) Magnetic & gravity survey with levelling at Illeroo Grid (Pandurra area, EL534. Report by Solo Geophysics (1979), PMR87/79.
- D) Gravity Survey with barometric levelling at Yudnapinna Reconnaissance Line, EL534. Report by Solo Geophysics (1979), PMR88/79.
- E) Interpretation of Geophysics, Illeroo area, EL534. Report by Langron (1980) PMR10/80.
- F) Gravity survey - Pernatty Lagoon area, EL543. Survey by Solo Geophysics (1980).
- G) Gravity survey - Mt. Gunson area, 'Blue Mag' anomaly 1981.

6677 "

AEROMAGNETIC SURVEYS:

- A) Report on stage 1 on the interpretation of results of airborne magnetometer survey covering SML139, 152.
- B) Report on an aeromagnetic interpretation, Torrens map sheet, S.A. PMR80/75.
- C) Plan, EL186, April 1977. Magnetic Profiles.
- D) Geoex (1978) Survey.
Plans of: Aeromagnetic total intensity : Profiles.
- E) Report on airborne magnetic surveys over an area East of Lake Dutton (Pernatty & Bookaloo 1:63 360 sheets). PMR10/78.

6678 "

RESISTIVITY SURVEYS:

- A) Resistivity Survey at Pandurra near Port Augusta for Pacminex Pty. Ltd. EL186. Report No. 265 by Murdoch Geophysics, 1977. PMR60/77.
- B) A resistivity survey at Mt. Gunson, S.A. for Pacminex. (Survey in June 1976) EL199. Report No. 266 by Murdoch Geophysics, 1977. PMR142/76.
- C) Evaluation of a resistivity survey at Mt. Gunson, June 1976. PMR173/76, EL199.
(Localities: Cattlegrid; Oakden Hills; MG14).
- D) Geophysical Survey at Cattlegrid, July 1973. Survey by CGG; PMR report 133/73.

6679 "

MISCELLANEOUS GEOPHYSICAL SURVEYS - MT. GUNSON AREA:

- A) Report on a combined Induced Polarisation, Seismic and EM survey in the Mt. Gunson area. MacPhar Geophysics (1973).
- B) Gravity and magnetic surveys on the North Pernatty Grid.
Lines 6,530,000N to 6,540,000N.
Solo Geophysics (1981).
- C) Magnetic surveys of 'Blind Dyke', 1982-1983. Un-compiled plans and notes. Includes data of Solo Geophysics (1982).

6680

8

GEOPHYSICAL LOGGING OF DRILLHOLES-STUART SHELF:

A) Geophysical Logging of Drillhole PL32, Gunson area (i.e. Powerline Embayment). PMR138/77.

B) Geophysical logging of drillholes in the Mt. Gunson and Pandurra areas. PMR59/78.

i.e. OK117-OK120

OK128-OK129

WPB2-WPB4

WPB6

WOB10-WOB13

LW34, LW38, LW40

PL34

MG-11-3

PANDURRA AREA:

J12, J15, J16, J20, J21.

C) Geophysical logging of percussion drillholes, June-August 1978. PMR89/78. (EL332,338,339),

i.e. EC5

PL40

LD31

BK10-BK12

EX158-EX163

D) Geophysical logging in the lake Windabout, Powerline and Oakden Hills areas, EL339,

i.e. LW61-LW75

PL42-PL44

OK132-OK135

PMR Report 36/79.

F) Gamma logs - assorted drillholes.

6681

INDUCED POLARISATION SURVEYS:

1) IP Survey by Geoscience (1965) for Austminex, SML55.

2) IP and test resistivity survey by MacPhar Geophysics (1967-1968) for Austminex.

3) IP survey by Austral Exploration, 1971-1972, at: Main Open Cut

Gunyah Lake

East Lagoon

West Lagoon

Mystery

Sweet Nell areas.

4) Multi-mode I.P. survey by McPhar Geophysics, 1974 at: - Cattlegrid

- Gunyah Lake

PMR report 75/74.

6682

INDUCED POLARISATION SURVEY:

by SOLO GEOPHYSICS, 1983.

CATTLEGRID - MAIN OPEN CUT AREAS,

Includes: 'Haul Road' anomaly

'Dyke' anomaly.

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6683	OPEN	'MOUNT GUNSON area' - regional plans and reports. Includes: A) Austminex (1966-1968) reports for SML 96, 121 and 139 - Pernatty Lagoon area. B) SADME articles on Mt. Gunson - extracted from Mining Reviews.
6714	"	MAIN OPEN CUT - plans
6715	"	CATTLEGRID - cross-sections.
6718	OPEN	HOUSE WORKINGS and GUNYOT workings. Plans only - sections, ore reserves, grade control and hole locations. Austminex Pty Ltd and Mount Gunson Mines Pty. Ltd.
6721	OPEN	CATTLEGRID: Surveying and engineering plans, pit development 1974-1986. Includes 1977 aerial survey.
6722	"	TOWN, CARAVAN ^Y PARK, SERVICES & TAILINGS DAM - surveying and engineering plans.
6723	"	CATTLEGRID - grade control for areas C2, C3 and Area IV. Predominantly plans - blasthole layout, top-of-ore, grade control plans and cross-sections.
6724	"	EAST LAGOON OREBODY - plans
6725	"	NORANDA AUSTRALIA Ltd (1967). Plans - Main Open Cut, House Workings, West Lagoon, East Lagoon, Mystery.
6726	OPEN	MAIN OPEN CUT - Cross-sections by Austminex Pty Ltd (1967-1968).
6727	"	WEST LAGOON - plans by Mount Gunson Mines and Austminex Pty Ltd. (Grade control, block plans, face geology, drillholes, cross-sections etc.)
6728	"	CATTLEGRID - Grade control plans for areas B2, B3 and B4 (east-northeast Cattlegrid). Plans of bottom-of-ore, top-of-ore, diamond drill-holes, diamond drilling influence areas as well as pit - and grade control - cross-sections.
6729	"	CATTLEGRID - End-of-period Survey Plans (1980-1982).

TOTAL: - 73 open file

REPORT OF EXPLORATION AND INVESTIGATION

IN SML NO. 494

ISLAND LAGOON AREA

5 NOVEMBER 1970 - 4 FEBRUARY 1971.

Dated at Mount Gunson
8 February, 1971.

Submitted by

L. J. Gunson

Mount Gunson Mines Pty. Limited.



The only exploration work within SML 494 has been limited to initial reconnaissance along the northern shores of Island Lagoon and Lake Windabout, and the area between "Old Oakden Hills" and South Oakden Hill.

Since Mount Gunson Mines holds SML 527 (late 139A) adjacent to SML 494, it is pursuing a policy of working the two leases as a single unit, for the following reasons. Firstly the two areas have very closely related geology, with the main sphere of interest being the contact between the Lower Tent Hill Formation sediments and the Pandurra Formation sediments. Secondly it would have been desirable to amalgamate the two SMLs, but the areal limit precluded this course.

During the past few months we have been drilling and sampling various parts of SML 527, in order to evaluate the potential of various rock units for a geochemical programme. The results of this initial investigation will be presented as soon as they are available. The rock units being tested include the Woocalla Dolomite, the Whyalla Sandstone and the Tregolana Shale. Depending on the results of the above investigation we will design a suitable programme for SML 494.

Transportation on the lagoon surfaces is a critical factor in any exploration programme, and we have spent some time on the evaluation of various techniques, including balloon tyres and hovercraft. In the immediate future a decision will be taken on the most suitable method.

Shortly we are having colour aerial photography carried out on SML 527. If the photos produced prove of great assistance in exploration, we may order a similar programme for SML 494. We have recently purchased copies of existing aerial photography and photo mosaics covering some of the area of SML 494.

At the present time we are interviewing applicants to increase our geological staff, which will enable us to devote more time to our exploration effort.