

Open File Envelope

No. 8126

OEL 20 AND OEL 21, PEL 5 AND PEL 6

REGIONAL GEOLOGICAL STUDIES

TECHNICAL REPORTS AND DATA

Submitted by

Delhi International Oil Corp., Delhi Petroleum Pty Ltd and Santos Ltd
1993

© 31/3/94

This report was supplied as part of the requirement to hold a mineral or petroleum exploration tenement in the State of South Australia.
PIRSA accepts no responsibility for statements made, or conclusions drawn, in the report or for the quality of text or drawings.
This report is subject to copyright. Apart from fair dealing for the purposes of study, research, criticism or review as permitted under the Copyright Act, no part may be reproduced without written permission of the Chief Executive of Primary Industries and Resources South Australia, GPO Box 1671, Adelaide, SA 5001.

Enquiries: Customer Services
Ground Floor
101 Grenfell Street, Adelaide 5000

Telephone: (08) 8463 3000
Facsimile: (08) 8204 1880



**PRIMARY INDUSTRIES
AND RESOURCES SA**

ENVELOPE 8126

TENEMENT: OELs 20 and 21; PELs 5 and 6

TENEMENT HOLDER: Delhi International Oil Corp., Delhi Petroleum Pty Ltd and Santos Ltd (operators)

CONTENTS OF VOLUME ONE

				MESA NO.	
REPORTS:		Hollingsworth, R.J.S., 1976. Summary report on hydrocarbon potential of South Australian and Queensland licence areas (Delhi International Oil Corp., 14/10/76).		8126 R 1	[22 pages]
		Kuang, K.S., 1986. The structural framework of the Cooper/Eromanga Basins (Delhi Petroleum Pty Ltd, May 1986).		8126 R 2	[14 pages]
PLANS		Scale	Company plan no.		
Fig. 1	Top Toolachee (Formation) depth structure map with Toolachee isopach values of wells plotted.	1:750 000		Missing	
Fig. 2	Hydrocarbon distribution map of Toolachee Formation.			Missing	
Fig. 3	Hydrocarbon distribution map of Nappamerri Formation.			Missing	
Fig. 4	Isopach map of Roseneath Shale.	1:750 000		8126-1	A2
Fig. 5	Hydrocarbon distribution map of Patchawarra Formation.			Missing	
Fig. 6	Hydrocarbon distribution map of Tirrawarra Sandstone.			Missing	
Fig. 7	Major lineaments and structural trends map.			Missing	
Map 1	Regional top Toolachee (Formation) fault definition.	1:750 000	86XG-7355 S	8126-2	A1
Map 2	Regional top Patchawarra (Formation) fault definition.	1:750 000	86XG-7354 S	8126-3	A1
Map 3	Top Toolachee Formation depth structure map.	1:750 000	86XG-6718 AS / 85XP-4535 BS	8126-4	A1
Map 4	[Note: map version is August 1985]. Top Nappamerri Formation (southern Cooper Basin area only) depth structure map.	1:750 000	86XG-7367 S	8126-5	A2
Map 5	[Note: map version is August 1985]. Top Daralingie Formation (southern Cooper Basin area only) depth structure map.	1:750 000	86XG-7368 S	8126-6	A2
Map 6	'V'-Horizon (top Patchawarra Formation) depth structure.	1:750 000	85XP-4665 S	8126-7	A1
Map 7	[Note: map version is August 1985]. Top Tirrawarra (Sandstone) and base Patchawarra (Formation) depth structure map.	1:750 000	86XG-7376 S	8126-8	A2
Map 8	Cooper Sector of PELs 5 and 6, and ATP 259P. Major lineaments and structural trends map.	1:750 000	86XG-7395 S	8126-9	B1

CONTENTS OF VOLUME TWO

REPORT:	Piper, A.J., 1986. Notes to accompany the surface-to-basement geothermal gradient maps of PELs 5 and 6 and ATP 259P (Delhi Petroleum Pty Ltd, December 1986). [Note: Pedirka Sector data added in May 1987].	MESA NO. 8126 R 3 [224 pages]
APPENDIX 1:	Table of geothermal gradients and ancillary data.	
APPENDIX 2:	Corrections to bottomhole temperatures in selected wells, and BHT estimates for some recent wells.	
APPENDIX 3:	Predicting bottomhole temperatures.	
PLANS	Scale	Company plan no.
Encl. 1	Northern Cooper Basin surface to basement geothermal gradients.	1:250 000 86XG-8618 8126-10 >A0
Encl. 2	Southern Cooper Basin surface to basement geothermal gradients.	1:250 000 86XG-8619 8126-11 >A0
Encl. 3/4	PELs 5 and 6 (Cooper Sector) and ATP 259P geothermal gradients.	1:500 000 86XG-8618 R 8126-12 A0
Encl. 5	PELs 5 and 6 (Pedirka Sector) fields, prospects and leads showing geothermal gradients.	1:500 000 86XG-8619 R 87XG-9049 8126-13 A0

CONTENTS OF VOLUME THREE

REPORT:	Piper, A.J., 1986. Notes on the regional play maps for the Cooper Sector [of PELs 5 and 6] and ATP 259P (Delhi Petroleum Pty Ltd, June 1987). Sources of data.	8126 R 4 [11 pages]
APPENDIX 1:		
PLANS	Scale	Company plan no.
	Cooper Sector, PELs 5 and 6, and ATP 259P play maps:	
Encl. 1	Tirrawarra (Sandstone) play.	1:500 000 87XG-8845 8126-14 >A0
Encl. 2	Patchawarra (Formation) play.	1:500 000 87XG-8849 8126-15 >A0
Encl. 3	Toolachee (Formation) play.	1:500 000 87XG-8846 8126-16 >A0
Encl. 4	Hutton (Sandstone) play, Jurassic source.	1:500 000 87XG-8848 8126-17 >A0
Encl. 5	Hutton (Sandstone) play, Permian source.	1:500 000 87XG-8847 8126-18 >A0
	Pedirka Sector, PELs 5 and 6, Pedirka Sector play concepts:	
Encl. 6	Cretaceous plays:	1:500 000 85XG-5984 8126-19 >A0
	[Note: map version is March 1985].	
Encl. 7	Jurassic/Cretaceous and Jurassic plays.	1:500 000 85XG-5985 8126-20 >A0
	[Note: map version is August 1985].	
Encl. 8	Middle Permian plays.	1:500 000 85XG-5986 8126-21 >A0
	[Note: map version is August 1985].	
Encl. 9	Early Permian plays.	1:500 000 85XG-5987 8126-22 >A0
	[Note: map version is August 1985].	
REPORT:	Kuang, K.S., 1985. History and style of Cooper/Eromanga Basin structures. <i>In: 4th ASEG Conference, Sydney, September 1985. Extended Abstracts. Australian Society of Exploration Geophysicists. Exploration Geophysics (Bulletin), 16:245-248.</i>	Refer to publication

ADDENDUM:	Kuang, K.S., Castro, C.H. and Ariesen, F.H., 1985. Text of oral presentation (of the above paper) given to 4th ASEG Conference, Sydney, September 1985 [by the senior author] (Delhi Petroleum Pty Ltd). [Note: includes 26 coloured slide diagrams not published as figures in the extended abstract].	MESA NO. 8126 R 5 [33 pages]
------------------	---	--

CONTENTS OF VOLUME FOUR

REPORT:	Butler, G. and Lim, S., 1990. An aquifer study of the south-eastern Cooper Basin in South Australia - Toolachee and Nappacoongee [farmout] Blocks (Santos Ltd Petroleum Development Geology Group 1, January 1990).	8126 R 6 [67 pages]
APPENDIX A:	Sand summary report for packages.	
APPENDIX B:	OGIP for each package.	
APPENDIX C:	Pore volumes for each package.	
PLANS	Scale	Company plan no.
Encl. 1	Aquifer project study area and location of cross-sections.	COOPER 186
	Stratigraphic cross-sections:	
Encl. 2	A - A' (Mina 1 to Pooraka 1).	8126-24
Encl. 3	B - B' (Tilparee-A1 to Kerna 2A).	8126-25
Encl. 4	C - C' (Nappacoongee 1 to Tilparee-A 1).	8126-26
Encl. 5	D - D' (Burke 5 to Azolla 1).	8126-27
Encl. 6	E - E' (Mudera 1 to Maraku 1).	8126-28
Encl. 7	F - F' (Della 14 to Brumby 1).	8126-29
Encl. 8	Top Toolachee Formation depth structure contour map (A package top porosity).	COOPER 193
Encl. 9	Depth structure contour map (B package top porosity).	COOPER 194
Encl. 10	Depth structure contour map (C package top porosity).	COOPER 195
Encl. 11	Top Patchawarra Formation depth structure contour map (D package top porosity).	COOPER 196
Encl. 12	Depth structure contour map (E package top porosity).	COOPER 197
Encl. 13	Depth structure contour map (F package top porosity).	COOPER 198
Encl. 14	Depth structure contour map (G package top porosity).	COOPER 199
Encl. 15	A package net sand isopach map.	COOPER 200
Encl. 16	B package net sand isopach map.	COOPER 201
Encl. 17	C package net sand isopach map.	COOPER 202
Encl. 18	D package net sand isopach map.	COOPER 203
Encl. 19	E package net sand isopach map.	COOPER 204
Encl. 20	F package net sand isopach map.	COOPER 205
Encl. 21	G package net sand isopach map.	COOPER 206
Encl. 22	A package sand porosity map.	COOPER 207
Encl. 23	B package sand porosity map.	COOPER 208
Encl. 24	C package sand porosity map.	COOPER 209
Encl. 25	D package sand porosity map.	COOPER 210
Encl. 26	E package sand porosity map.	COOPER 211
Encl. 27	F package sand porosity map.	COOPER 212
Encl. 28	G package sand porosity map.	COOPER 213

CONTENTS OF VOLUME FIVE

REPORT:	Fairb�rn, W.A. and Duckett, A.K., 1990. Poolowanna Formation Study report (SAGASCO Resources Ltd, January 1990).	8126 R 7 [108 pages]	
APPENDIX 1:	Interpreted formation tops.		
APPENDIX 2:	Selected subsea formation tops.		
APPENDIX 3:	Selected formation isopach data.		
APPENDIX 4:	Poolowanna Formation data.		
APPENDIX 5:	Vitrinite reflectance data.		
APPENDIX 6:	Poolowanna Formation cores.		
APPENDIX 7:	Poolowanna Formation DST results.		
APPENDIX 8:	Basal Jurassic palynological results.		
APPENDIX 9:	Wells not interpreted during study.		
PLANS	Scale	Company plan no.	
	Regional Poolowanna Formation correlation [cross-sections]:		
Encl. 1	Wanara 1 - Strzelecki 25.	CP000.7250	8126-51
Encl. 2	Tarwonga 2 - Kobari 1.	CP000.7251	8126-52
Encl. 3	Kurunda 3 - Kujani 1.	CP000.7252	8126-53
Encl. 4	Jack Lake 1 - Kenny 1.	CP000.7253	8126-54
Encl. 5	Cowralli 1 - Cuttapirrie 1.	CP000.7254	8126-55
Encl. 6	Mawson 1 - Turban 1.	CP000.7255	8126-56
Encl. 7	Spencer West 1 - Big Lake 24.	CP000.7256	8126-57
Encl. 8	Nappamerri Group isopach map.	1:250 000 PAB00.7282	8126-58
Encl. 9	Depth structure map of the Basal Jurassic unconformity.	1:250 000 PAB00.7279	8126-59
Encl. 10	Top Hutton Sandstone to base of Jurassic isopach map.	1:250 000 PAB00.7276	8126-60
Encl. 11	Poolowanna Formation isopach map.	1:250 000 PAB00.7275	8126-61
Encl. 12	Top Murta Member to base of Jurassic isopach map.	1:250 000 PAB00.7280	8126-62
Encl. 13	Top Murta Member depth structure map.	1:250 000 PAB00.7277	8126-63
Encl. 14	Hutton Sandstone isopach map.	1:250 000 PAB00.7278	8126-64
Encl. 15	Present day Basal Jurassic maturity, based on vitrinite reflectance data.	1:500 000 PAB00.7283	8126-65
Encl. 16	Poolowanna Formation gross sand isolith map.	1:250 000 PAB00.7339	8126-66
Encl. 17	Gross sand percentage map.	1:250 000 PAB00.7274	8126-67
Encl. 18	Poolowanna Formation seal isopach map.	1:250 000 PAB00.7340	8126-68
Encl. 19	Top Poolowanna Formation depth structure map.	1:250 000 PAB00.7341	8126-69
Encl. 20	Poolowanna Formation prospectivity map.	1:250 000 PAB00.7386	8126-70

CONTENTS OF VOLUME SIX

REPORT:	Spencer, L.K., 1991. Nappamerri Group Study report (SAGASCO Resources Ltd consultant's report for Santos Ltd, January 1991).	MESA NO. 8126 R 8 [131 pages]
PLANS	Scale	Company plan no.
	Nappamerri Group regional stratigraphic cross-sections:	
Fig. 7	Section A - A'.	NAP00.7852 8126-71
Fig. 8	Section B - B'.	NAP00.7853 8126-72
Fig. 9	Section C - C'.	NAP00.7854 8126-73
Fig. 10	Section D - D'.	NAP00.7855 8126-74
Fig. 11	Section E - E'.	NAP00.7856 8126-75
Fig. 12	Section F - F'.	NAP00.7857 8126-76
Fig. 13	Section G - G'.	NAP00.7858 8126-77
Encl. 1	Nappamerri Group isopach and shows map.	1:250 000 NAP00.7876 8126-78
Encl. 2	Callamurra Formation isopach and shows map.	1:250 000 NAP00.7877 8126-79
Encl. 3	Arrabury Formation : Paning Member, isopach and shows map.	1:250 000 NAP00.7878 8126-80
Encl. 4	Arrabury Formation : Wimma Sandstone Member, isopach and shows map.	1:250 000 NAP00.7879 8126-81
Encl. 5	Tinchoo Formation isopach and shows map.	1:250 000 NAP00.7880 8126-82
	Vitrinite reflectance maps:	
Encl. 6	Base Patchawarra [Formation].	1:250 000 NAP00.7881 8126-83
Encl. 7	Base Nappamerri Group.	1:250 000 NAP00.7882 8126-84
Encl. 8	Top Nappamerri Group.	1:250 000 NAP00.7883 8126-85
	Gross reservoir quality assessment maps:	
Encl. 9	Callamurra Formation.	1:250 000 NAP00.7884 8126-86
Encl. 10	Arrabury Formation : Paning Member.	1:250 000 NAP00.7885 8126-87
Encl. 11	Arrabury Formation : Wimma Sandstone Member.	1:250 000 NAP00.7886 8126-88
Encl. 12	Base Nappamerri Group 'P'-Horizon structure map.	1:250 000 NAP00.7887 8126-89
Encl. 13	Hydrocarbon drainage cell map, based on 'P'-Horizon structure.	1:250 000 NAP00.7888 8126-90
Encl. 14	Tectonic elements, western flank of the Patchawarra Trough.	1:200 000 WB000.6905 8126-91
Encl. 15	Nappamerri Group zero edge map.	1:250 000 NAP00.7889 8126-92
Encl. 16	Nappamerri Group prospectivity summary.	1:250 000 NAP00.7890 8126-93

CONTENTS OF VOLUME SEVEN

REPORT:	Ambrose, G.J., 1990. Reservoir development of the Tirrawarra Sandstone and Patchawarra Formation in the central Patchawarra Trough [Oil Project 89-10] (Santos Ltd, March 1990). Volume 1 of 2 - text and enclosures 1-11.	8126 R 9 [59 pages]
APPENDIX 1:	Patchawarra Formation prospect and lead ranking, central Patchawarra Trough.	

PLANS		Scale	Company plan no.	MESA NO.
Encl. 1	Tirrawarra Sandstone formation isopach map.	1:100 000	PATCEN 052	8126-94
Encl. 2	Tirrawarra Sandstone gross sand isopach map.	1:100 000	PATCEN 053	8126-95
Encl. 3	Tirrawarra Sandstone net sand isopach map.	1:100 000	PATCEN 054	8126-96
Encl. 4	Unit P1 formation isopach map.	1:100 000	PATCEN 055	8126-97
Encl. 5	Unit P1 palaeogeography.	1:100 000	PATCEN 056	8126-98
Encl. 6	Unit P1 gross sand isopach map.	1:100 000	PATCEN 057	8126-99
Encl. 7	Unit P1 net sand isopach map.	1:100 000	PATCEN 058	8126-100
Encl. 8	Unit P2 formation isopach map.	1:100 000	PATCEN 059	8126-101
Encl. 9	Unit P2 palaeogeography.	1:100 000	PATCEN 060	8126-102
Encl. 10	Unit P2 gross sand isopach map.	1:100 000	PATCEN 061	8126-103
Encl. 11	Unit P2 net sand isopach map.	1:100 000	PATCEN 062	8126-104

CONTENTS OF VOLUME EIGHT

REPORT (cont'd)	Volume 2 of 2 - enclosures 12-27.			[1 page]
PLANS		Scale	Company plan no.	
Encl. 12	Unit P3 formation isopach map.	1:100 000	PATCEN 063	8126-105
Encl. 13	Unit P3 palaeogeography.	1:100 000	PATCEN 064	8126-106
Encl. 14	Unit P3 gross sand isopach map.	1:100 000	PATCEN 065	8126-107
Encl. 15	Unit P3 net sand isopach map.	1:100 000	PATCEN 066	8126-108
Encl. 16	Unit P4 formation isopach map.	1:100 000	PATCEN 067	8126-109
Encl. 17	Unit P4 palaeogeography.	1:100 000	PATCEN 068	8126-110
Encl. 18	Unit P4 gross sand isopach map.	1:100 000	PATCEN 069	8126-111
Encl. 19	Unit P4 net sand isopach map.	1:100 000	PATCEN 070	8126-112
Encl. 20	Unit P5 formation isopach map.	1:100 000	PATCEN 071	8126-113
Encl. 21	Unit P5 palaeogeography.	1:100 000	PATCEN 072	8126-114
Encl. 22	Unit P5 gross sand isopach map.	1:100 000	PATCEN 073	8126-115
Encl. 23	Unit P5 net sand isopach map.	1:100 000	PATCEN 074	8126-116
Encl. 24	Permian prospects and strong leads.	1:100 000	PEL5&6 165	8126-117
Encl. 25	Patchawarra Formation potential stratigraphic plays (including total net sand counts).	1:100 000	PEL5&6 173	8126-118
Encl. 26	Patchawarra Central Block stratigraphic cross section, Gooranie 1 - Coonatie 3.		PATCEN 041	8126-119
Encl. 27	Patchawarra South-West Block stratigraphic cross section, Nulla 1 - Narie 1.		PATSWT 027	8126-120

CONTENTS OF VOLUME NINE

REPORT:	Price, G., 1993. Unconventional plays: Permian fault and stratigraphic plays, Cooper Basin, Australia (Santos Ltd SA Exploration and Development Team 1, December 1993).	8126 R 10 [178 pages]
APPENDIX 1:	Dry-hole analysis summary tables, Permian fault and stratigraphic plays.	

				MESA NO.
APPENDIX 2:	Details of implications of past drilling of Permian fault and stratigraphic plays.			
APPENDIX 3:	Extracts from 1992 Budget re. 5 Permian fault and stratigraphic plays.			
PLANS		Scale	Company plan no.	
Encl. 1	Composite of seven most important specific play types.	1:750 000	5&6QLD 009	8126-121
Encl. 2	Patchawarra [Formation depositional] basin margin map [showing] variation in structural setting / specific play types present around margin.	1:750 000	5&6QLD 007	8126-122
Encl. 3	Toolachee [Formation depositional] basin margin map [showing] variation in structural setting / specific play types present around margin.	1:750 000	5&6QLD 008	8126-123

CONTENTS OF VOLUME TEN

REPORT:	Ambrose, G.J., 1990. A review of Birkhead Formation oil fields in PELs 5 & 6 and ATP 259P (Santos Ltd, 18/3/86).	8126 R 11 [152 pages]
APPENDIX 1:	Birkhead oil fields - summaries.	
APPENDIX 2:	Birkhead oil fields - geological settings.	
REPORT:	Hamilton, N.J., 1992. Report on log anomalies and DST results (Santos Ltd, 22/5/92).	8126 R 12 [130 pages]

END OF CONTENTS

OPEN FILE
(To be passed by hand)

OPEN FILE
(To be passed by hand)

NAPPAMERRI GROUP STUDY

REPORT

January 1991

L K Spencer

A consultancy report prepared by SAGASCO Resources Ltd for SANTOS Ltd.

Mines & Energy SA

R95/01480



00122305

IMPORTANT NOTICE

This document was prepared by SAGASCO Resources Limited ("the Company") and its provision to the recipient is strictly subject to and conditional upon the terms of the disclaimer set forth below.

The Company declares and the recipient accepts:-

- (1) That this document is provided for the personal use of the recipient only and may not be provided to any third party without the consent in writing of the Company and without that third party being informed that the Company accepts no legal liability whatsoever whether in contract or negligence or otherwise towards that third party and without the terms of this disclaimer being drawn to the attention of such third party.
- (2) That whilst the Company believes that, save as is stated to the contrary, information contained in this document is accurate, it does come from a variety of primary and secondary sources. Further, whilst it believes that the conclusions and recommendations contained in it are reasonably and soundly based, no warranty is given as to the correctness of any such information and no reliance should be placed on the same or on any such conclusions or recommendations as no liability is accepted by the Company for any statement, opinion, error or omission contained herein or implied hereby whether the result of negligence or mistake or any other cause whatsoever. Any party (including but not limited to the recipient) in any way contemplating action based upon or related to the contents of this document should, beforehand, seek complete and objective professional and/or technical information analyses and assessments in relation thereto and should proceed with any such action specifically on the basis of such analyses and assessments rather than on the basis of the contents of this document.
- (3) This disclaimer excludes all warranties and liabilities imposed upon the Company with regard to the provision of this document by any statute or rule of law to the extent that such statutes and rules of law are legally excludable, but to the extent that they are non-excludable and are repugnant to this disclaimer this disclaimer is overridden to the extent of such repugnancy and no further and any Court or tribunal interpreting such statutes and rules of law is empowered to read down or sever this disclaimer so as to preserve for it the widest possible operation consistent with any such overriding legislation.

SUMMARY

This report summarises the results of the 1990 SAGASCO Resources consultancy project for SANTOS on the Triassic Nappamerri Group in South Australia. The Nappamerri Group has significant exploration potential in areas where faults act to connect deeper mature early Permian source rocks to reservoirs within this succession. In the absence of such conduits the Nappamerri Group appears to be unprospective.

Sixteen areas of fair to good Nappamerri Group prospectivity are recognised in the South Australian sector of the Cooper Basin. Of these at least five have the potential to provide near term drilling targets.

The northern Patchawarra Trough area around Wimmera and Cuttapiirrie has the best overall perceived prospectivity as this is where reservoir, seal, source and migration factors appear to be optimal. Potential prospects in the area are related to faulting and stratigraphic trapping mechanisms. The area has many of the prospectivity factors associated with proven discoveries along the GMI trend and Lake Hope Block.

The western margin of the Patchawarra Trough is an area of significant stratigraphic uncertainty and is not a short term target. But the area could have significant stratigraphic trapping potential. There is evidence for wrench movement at the end of Nappamerri Group deposition. Wrench faults may have provided migration pathways for hydrocarbons into the western flank of the area.

Six major play types have been recognised. These are:

- * Crestal Plays
- * Low Side Fault Plays
- * Wrench Fault Related Plays
- * Regional Truncation Plays
- * Onlap Plays
- * Updip Porosity Pinch-out Plays

The Nappamerri Group was deposited in a regime of increasing episodic tectonic instability, accentuated on the major highs. The final tectonic event resulted in major northward tilting of the basin accompanied by probable right lateral movement along the Cooper Wrench Zone. This event ended Cooper Basin deposition.

The Nappamerri Group subdivisions established by Channon and Wood (1990) for the northern Patchawarra Trough have been extended to most of the South Australian Cooper Basin. Although only the four units established by Channon and Wood (1990) have been mapped, at least six regional sedimentary packages are discernible.

In addition to the primary work of stratigraphic subdivision of the Nappamerri Group and documentation of potential play types, emphasis has been given to defining mature source rock areas underlying the Nappamerri, identifying primary migration conduits and potential migration routes and describing feasible models of faulting which impact on prospectivity.

This report contains seven regional cross-sections which document the stratigraphic subdivisions and illustrate the play types, source-maturity maps, gross reservoir quality maps, structure/hydrocarbon drainage cell maps, and a prospectivity summary map.

RECOMMENDATIONS

Prospect Mapping

Of the sixteen high-graded areas four are recommended for further work in the short term as they to have a good chance of adding significant Nappamerri Group reserves, as follows:

- (i) A reinterpretation and mapping project of the Cooper Wrench zone should be carried out. Initial emphasis should be on the seismic recognition of a significant slip component along this fault zone in the Nappamerri Group and older sediments.
- (ii) Detailed mapping of Nappamerri Formation (Paning & Callamurra) sand trends over the Big Lake Field and adjacent area is warranted. The field has numerous shows throughout the Nappamerri Group, has Birkhead-Hutton production and is adjacent to a major known fault migration pathway. The aim is to define stratigraphic trapping potential over or off the structure.
- (iii) Detail the low side fault play south of the Toolachee Field. There are indications of reservoir improvement within the Nappamerri Group adjacent to the Toolachee Field spill point.
- (iv) The Kirby structure requires appraisal. Significant flows of gas/condensate were obtained from the basal Callamurra Unit in Kirby 1. Reservoir quality possibly improves to the north and there is a possible fault connection to deeper source rocks.

Source Rock Evaluation

A Tinchoo Formation Source Rock Study is recommended particularly on wells in the northern Patchawarra Trough where vitrinite reflectance levels indicate the sequence is in the oil window. Cuttings or SWCs from Paning 1 could be sent for Rock Evaluation and maceral and vitrinite reflectance measurements. If positive results are recorded other wells should be considered for similar work.

Palynological Studies

Further palynological work is required to confirm the age of the presumed Triassic sections of Coongie 1 and Daer 1. The aim is to resolve the subcrop geometry in this area.

A palynological study of the Tinchoo Formation section in the Tirrawarra Field is also recommended as it may be Cuddapan Formation equivalent. If it is, then the possibility of a wrench fault existing to the north of the field is enhanced.

Core Analysis

It is recommended that a core based reservoir quality and depositional environment study of the Nappamerri Group is undertaken. There is a lack of core from the Nappamerri Group except in the area of the Merrimelia Field. Future exploration wells should consider obtaining cores and dipmeter data over selected intervals of the Nappamerri Group. Palaeoenvironmental, log analysis, permeability, source rock and diagenetic studies should be carried out to increase the level of understanding of the Nappamerri Group.

Cores or cuttings from the basal Tinchoo Formation shale should be examined to see if this unit constitutes a regional seal over the Wimma Member.

Seismic Studies

It is recommended that high resolution regional seismic lines be acquired across the western margin between key wells eg Charo 1 to Mingana 1, Daer 1 to Moolion 1 and Coongie 1 to Cuttapirrie 1. These could assist in defining intra Nappamerri Group zero edge relationships along this margin.

Stratigraphic Mapping

An isopach map of the Poolowanna or Cuddapan Formation shaly seal facies is recommended for compilation where this facies rests directly over the Nappamerri Group unconformity. This would assist in high-grading areas of potentially sealed Nappamerri Group regional truncation traps.

Stratigraphic correlation work is recommended to be extended to generate facies maps of all the units particularly in the Patchawarra Trough area. These maps would be valuable for fault plane mapping along the GMI trend and may form a basis for ranking low side fault plays in this area.

CONTENTS

Summary
Recommendations

1.0 INTRODUCTION

- 1.1 Background
- 1.2 Project accomplishments

2.0 TRIASSIC STRATIGRAPHIC FRAMEWORK OF SOUTHERN COOPER BASIN

- 2.1 Introduction
- 2.2 Seismic Interpretation to Aid Stratigraphic Correlation
- 2.3 Log Correlation & Regional Cross-Sections
- 2.4 Problems Defining the Top Nappamerri Group: Cuddapan, Tinchoo & Poolowanna Formations.
- 2.5 Zero Edge Location.
- 2.6 Nappamerri Group General Geological Interpretation
- 2.7 Correlation Summary

3.0 PROSPECTIVITY ANALYSIS OF THE NAPPAMERRI GROUP

- 3.1 Introduction
- 3.2 Source Factors
- 3.3 Structural Style of the Southern Cooper Basin
- 3.4 Major Play Types
- 3.5 Prospective Areas

4.0 NAPPAMERRI GROUP SUBDIVISIONS SUMMARY

- 4.1 Nappamerri Group
- 4.2 Callamurra Formation
- 4.3 Arrabury Formation-Paning Member
- 4.4 Arrabury Formation-Wimma Member
- 4.5 Tinchoo Formation

5.0 REFERENCES

LIST OF FIGURES

No	TITLE	Drawing No
1	NAPPAMERRI GROUP-STUDY AREA	NAP00 7846
2	LOCATION MAP: REGIONAL STRATIGRAPHIC CROSS-SECTIONS	NAP00 7847
3	PERMO-TRIASSIC PALYNOSTRATIGRAPHY	NAP00 7848
4	POSSIBLE STRATIGRAPHIC RELATIONSHIPS ALONG WESTERN MARGINS	NAP00 7849
5	DAER-COONGIE AREA TRIASSIC PALYNOLOGY	NAP00 7850
6	THREE POSSIBLE CORRELATIONS OF THE 'TRIASSIC' SECTION AT THE DAER-COONGIE AREA	NAP00 7851
7	REGIONAL CROSS-SECTION A-A'	NAP00 7852
8	REGIONAL CROSS-SECTION B-B'	NAP00 7853
9	REGIONAL CROSS-SECTION C-C'	NAP00 7854
10	REGIONAL CROSS-SECTION D-D'	NAP00 7855
11	REGIONAL CROSS-SECTION E-E'	NAP00 7856
12	REGIONAL CROSS-SECTION F-F'	NAP00 7857
13	REGIONAL CROSS-SECTION G-G'	NAP00 7858
14	VITRINITE REFLECTANCE (VR)-BASE PATCHAWARRA	NAP00 7859
15	VITRINITE REFLECTANCE (VR)-BASE NAPPAMERRI GROUP	NAP00 7860
16	VITRINITE REFLECTANCE (VR)-TOP NAPPAMERRI GROUP	NAP00 7861
17	HYDROCARBON DRAINAGE CELL MAP BASED ON 'P' HORIZON STRUCTURE	NAP00 7862
18	TOP PATCHAWARRA FM. STRUCTURE MAP	NAP00 7863
19	ALTERNATE FAULT OFFSET FOR INTERPRETATION OF NAPPAMERRI GROUP ALONG WESTERN FLANK	NAP00 7864
20	HINGED WRENCH TECTONIC MODEL	NAP00 7865
21	DERAMOOKOO 1 - WELL SUMMARY	NAP00 7866

22	NAPPAMERRI GROUP - ISOPACH & SHOWS MAP	NAP00 7867
23	CALLAMURRA FORMATION - ISOPACH & SHOWS MAP	NAP00 7868
24	CALLAMURRA FORMATION - GROSS RESERVOIR QUALITY ASSESSMENT	NAP00 7869
25	ARRABURY FORMATION - Paning Member - ISOPACH & SHOWS MAP	NAP00 7870
26	ARRABURY FORMATION - Paning Member - GROSS RESERVOIR QUALITY ASSESSMENT	NAP00 7871
27	ARRABURY FORMATION - Wimmera Member - ISOPACH & SHOWS MAP	NAP00 7872
28	ARRABURY FORMATION - Wimmera Member - GROSS RESERVOIR QUALITY ASSESSMENT	NAP00 7873
29	TINCHOO FORMATION - ISOPACH & SHOWS MAP	NAP00 7874
30	JAMES 1: NAPPAMERRI GROUP PAY AND SHOWS	NAP00 7875

LIST OF TABLES

- I LIST OF WELLS WITH PALYNOLOGICAL CONTROL IN STUDY AREA
- II LIST OF HYDROCARBON DRAINAGE CELLS & ASSOCIATED NAPPAMERRI GROUP PROSPECTIVITY
- III NAPPAMERRI GROUP - Tops & Thickness in Feet & Metres
- IV CALLAMURRA FORMATION - Tops & Thickness in Feet & Metres
- V ARRABURY FORMATION: Paning Member - Tops & Thickness in Feet & Metres
- VI ARRABURY FORMATION: Wimma Member - Tops & Thickness in Feet & Metres
- VII TINCHOO FORMATION - Tops & Thickness in Feet & Metres
- VIII NAPPAMERRI GROUP FORMATION TOPS (feet KB)
- IX NAPPAMERRI GROUP THICKNESS (feet)

LIST OF ENCLOSURES

No	TITLE	Drawing No
1	NAPPAMERRI GROUP - ISOPACH & SHOWS MAP	NAP00 7876
2	CALLAMURRA FORMATION - ISOPACH & SHOWS MAP	NAP00 7877
3	ARRABURY FORMATION-Paning Member - ISOPACH & SHOWS MAP	NAP00 7878
4	ARRABURY FORMATION-Wimma Member - ISOPACH & SHOWS MAP	NAP00 7879
5	TINCHOO FORMATION - ISOPACH & SHOWS MAP	NAP00 7880
6	VITRINITE REFLECTANCE(VR)- BASE PATCHAWARRA FORMATION	NAP00 7881
7	VITRINITE REFLECTANCE(VR)- BASE NAPPAMERRI GROUP	NAP00 7882
8	VITRINITE REFLECTANCE(VR)- TOP NAPPAMERRI GROUP	NAP00 7883
9	CALLAMURRA FORMATION - GROSS RESERVOIR QUALITY ASSESSMENT	NAP00 7884
10	ARRABURY FORMATION-Paning Member - GROSS RESERVOIR QUALITY ASSESSMENT	NAP00 7885
11	ARRABURY FORMATION-Wimma Member - GROSS RESERVOIR QUALITY ASSESSMENT	NAP00 7886
12	BASE NAPPAMERRI GROUP STRUCTURE ('P' HORIZON) MAP	NAP00 7887
13	HYDROCARBON DRAINAGE CELL MAP BASED ON 'P' HORIZON STRUCTURE	NAP00 7888
14	TECTONIC ELEMENTS WESTERN FLANK OF THE PATCHAWARRA TROUGH	WB000 6905
15	NAPPAMERRI GROUP ZERO EDGE MAP	NAP00 7889
16	NAPPAMERRI GROUP PROSPECTIVITY SUMMARY	NAP00 7890

1.0 INTRODUCTION

1.1 Purpose of Study

Geochemical studies suggest hydrocarbons trapped in the Jurassic Eromanga Basin reservoirs were generated by Permian Cooper Basin source rocks. In most instances this requires vertical migration via faults through the Triassic Nappamerri Group and therefore potential for intraformational traps exists. To date Nappamerri Group exploration plays have only been actively pursued in the northern Cooper Basin area where the stratigraphy has been defined. The purpose of this study is to extend the Nappamerri Group stratigraphy to the southern area and to review the prospectivity of the interval throughout the basin. The study area is shown in Figure 1.

1.2 Previous Work

The stratigraphy of the Nappamerri Group has been discussed by previous workers including Papalia (1969), Youngs & Boothby (1985) & Powis (1990), Channon & Wood (1990). The four fold stratigraphic subdivision of the Nappamerri Group recommended by Channon and Wood (1990) has been adhered to with minor modifications. The study has resulted in a different interpretation of the geology of the Nappamerri Group and consequently there have been some nomenclature changes. These are discussed under the individual unit headings and summarised in Figure 3 and Section 4. The nomenclature shown in Figure 3 is that used throughout the remainder of this report.

1.3 Project Accomplishments

This project has confirmed the broad stratigraphic breakdown of the Nappamerri Group and has extended the scheme to the southern part of the basin. The major results are:

- Eight regional cross-sections through key wells were compiled with correlations and stratigraphic subdivisions made using wireline logs, aided by seismic interpretation, core, dipmeter and the palynological framework established for the Nappamerri Group by Channon & Wood (1990). This resulted in the confirmation of four main subdivisions of the Group and the recognition that finer regional correlations are possible.
- Combined isopach and hydrocarbon show maps for each of the four subdivisions, as well as a composite Nappamerri Group isopach and show map.
- The prospectivity of the Nappamerri Group has been emphasised. A preliminary prospectivity analysis describes the play types recognised, outlines migration and source factors, discusses structural models and ranks subareas of the study area according to perceived prospectivity.

2.0 TRIASSIC STRATIGRAPHIC FRAMEWORK OF SOUTHERN COOPER BASIN

2.1 Introduction

Seven regional stratigraphic Cross-Sections were generated to summarise the correlations, subdivisions and plays of the Nappamerri Group. Their location is shown in Figure 2 and Cross-Sections A-A' to G-G' in Figures 7 to 13. The Cross-Sections utilised wells with palynological control or where this was not possible, nearby wells with palynological control (Table I).

Palynological control of the main subdivisions of the Nappamerri Group is good in the Patchawarra Trough (Table I and Channon & Wood, 1990). However, limited palynological control, due to poor preservation of spores and pollen, is the major problem in establishing reliable correlation in areas east of the Gidgealpa-Merrimellia-Innaminka (GMI) trend.

East of the GMI trend the subdivision relies on wireline log correlation aided by seismic and some dipmeter data. Wireline log based subdivisions of the Nappamerri Group in this area are not difficult to establish. The problem is linking the correlation established east of the GMI trend with the established subdivisions west of the GMI trend. The following discusses how this was done.

2.2 Seismic Interpretation to Aid Stratigraphic Correlation

Selected lines were examined as an aid to stratigraphic correlation. The lines extend from areas of good well control on the GMI ridge to key wells in the Nappamerri Trough (eg Burley 1, Kirby 1, McLeod 1) or to wells on the Moomba High. Seismic resolution is insufficient to determine the precise stratigraphic relationships between Nappamerri Group units identifiable on logs. Resolution was not significantly improved by examination of compressed sections or by selective re-processing. However, some features did emerge which aided in well correlation:

- (i) angular unconformities within the Nappamerri Group were recognised in some compressed sections (Fig 4.3).
- (ii) simple regional truncation patterns from the Nappamerri Trough onto the Moomba High were observed (Fig 4.4).
- (iii) onlap of the basal Callamurra Formation on the flanks of the GMI trend and also towards the Moomba High (Fig 4.1).

TABLE 1: LIST OF WELLS WITH PALYNOLOGICAL CONTROL IN THE STUDY AREA

<u>WELLNAME</u>	<u>CROSS-SECTION</u>	<u>SUBSTITUTE WELL</u>
BEANBUSH 1	E-E'	NONE
COONATIE 1	NOT USED	COONATIE 3
COOPERS CREEK 1	NOT USED	YAROWINNIE 1
CUTTAPIRRIE 1	A-A'	NONE
DELIN 1	E-E'	NONE
FLY LAKE 2	C-C'	NONE
INNAMINCKA 4	F-F' & G-G'	NONE
JACK LAKE 1	D-D'	NONE
KANOWANA 1	NOT USED	YAROWINNIE 1
KENNY 1	NOT USED	NOT USED
LAKE MACMILLAN 1	NOT USED	LAKE MACMILLAN 2
LAMDINA 1	A-A' & E-E''	NONE
MOOLION 1	B-B'	NONE
MOORARI 3	NOT USED	MOORARI 6
PACKSADDLE 1	NOT USED	PONDRINIE 2
PANING 1	E-E' & G-G'	NONE
PONDRINIE 1	NOT USED	PONDRINIE 2
PONDRINIE 3	NOT USED	PONDRINIE 2
TAYLOR SOUTH 1	A-A'	NONE
TIRRAWARRA 1	NOT USED	TIRRAWARRA 36
TOONMAN 1	E-E'	NONE
TURBAN 1	G-G'	NONE
WALKILLIE 1	NOT USED	NOT USED
WELCOME LAKE 1	D-D' & E-E'	NONE
WIMMA 1	A-A' & E-E'	NONE
YANPURRA 1	G-G'	NONE

2.3 Log Correlation & Regional Cross-Sections

Cross-Section G-G' shows that a shaly Wimma Member can be correlated from the Patchawarra Trough at Paning 1 into the Nappamerri Trough at Kirby 1. This shaly section has previously been interpreted as the Paning Member (Channon and Wood 1990, their Fig 4). Cross-Section C-C' shows that the log signature for the Wimma Member in Narie 1, in the Patchawarra Trough, is very similar to the signature seen in Swan Lake 1 in the Nappamerri Trough. It is on the basis of these observations and correlatable intervals in Three Queens 1 (Cross-Section B-B') and Strathmount 1 (Cross-Section G-G') that the Wimma Member is thought to be extensively developed within the Nappamerri Trough.

In the Patchawarra Trough the boundary between the Paning Member and Callamurra Formation is marked by a major lithological change; the basal Paning Member Unit being a well developed regional sandstone interval approximately 100 feet thick (Cross-Section G-G'). This boundary can be correlated into the Nappamerri Trough via Cross-Sections C-C' and G-G'. However, the sandstone facies becomes

progressively shallier towards the east and in places it becomes difficult to use this criterion. In such areas it is possible to constrain the location of the Callamurra/Paning boundary on the following basis. Within the Callamurra Formation a basal Callamurra unit can be regionally distinguished (Refer to Section 4 for a detailed discussion). The top of this unit places a lower limit on the position of the Callamurra Formation-Paning Member boundary within the stratigraphic section. The interpreted boundary was then placed at the first indication of a sandier section above this interval.

Within the Nappamerri Trough area (eg: Burley, McLeod, Kirby) the Callamurra/Paning boundary is a compromise pick based on a seismic interpretation which suggests that the major erosional event is associated with the top Callamurra Formation rather than the top Paning Member.

2.4 Problems Defining the Location of the Unconformity between the Nappamerri Group and the Cuddapan, Tinchoo, and/or Poolowanna Formations.

This project used the database of tops established for the Jurassic unconformity by the 1989 Poolowanna Formation Study as a starting point to define the top Nappamerri Group unconformity (Fairburn & Duckett 1990). This database of tops was established from the good palynological control available for the Poolowanna Formation over the entire Cooper Basin.

Nevertheless in many places it remains equivocal where the Jurassic unconformity is placed. The importance of this boundary is related to a potential Triassic regional truncation play which would be sealed by the overlying unit. Unfortunately the Tinchoo and Poolowanna Formations have very similar log signatures and cannot be distinguished on wireline log criteria alone.

The problem is compounded by the existence of Late Triassic age (PT5) Cuddapan Formation. This unit also has a wireline log signature very similar to the Tinchoo and Poolowanna Formations and so is difficult to distinguish on logs. Cuddapan Formation age sediments have only been found within the northern Patchawarra Trough areas and are possibly restricted to this region of the study area. The Cuddapan Formation has been interpreted as representing thin veneers of isolated fill on the post Nappamerri Group unconformity surface. However, its distribution and relationship to potential wrench faults suggests that it may represent alluvial fan deposits of reworked Tinchoo Formation (Enclosure 5).

Because the Cuddapan Formation is thin, its lateral extent is uncertain and it is often difficult to be sure of its precise thickness in any given well. The Cuddapan Formation has been combined with the Tinchoo Formation for purposes of isopach and show mapping.

The Tirrawarra Field has dense well control and correlation within the Nappamerri Group units is comparatively straightforward. However, the Tinchoo Formation proved difficult to correlate. The Tinchoo Formation

is not palynologically recognised in this area but correlation into the area is possible (Cross-Section E-E'). The correlation problems may simply be a result of the close proximity to the zero edge of the Tinchoo Formation south of the field, compounded by erosional effects, or it may be that it is a post Nappamerri Group unit ie either the Cuddapan Formation and/or Poolowanna Formation.

2.5 Zero Edge Location

The zero edge of the Callamurra Formation is constrained by well control along the southern boundary of the Cooper Basin. The Paning Member zero edge is likewise constrained by well control along this margin, given that it is difficult to define its top in the first place. The Wimma Member zero edge in the Nappamerri Trough is poorly defined by limited seismic control, with poor well control to the north and south.

The zero edges of the four units along the western flank of the Patchawarra Trough are not constrained by well control and edge relationships are therefore highly interpretive.

Seismic helped to define the location of the edges south of the Patchawarra Trough where simple erosional truncation is interpreted. Results at Lake Hope 1 and Malgoona 1 support this interpretation (Figure 4.4). In the far north, however, an onlap interpretation appears valid, but again there is no well control in critical areas (Figure 4.1).

The lack of palynological control of the probable Triassic section in two key flank wells, Daer 1 and Coongie 1 where Nappamerri Group sediments are believed to occur, compounds the difficulties of zero edge definition along the western flank of the Patchawarra Trough. There is good log correlation of the probable Triassic section between Daer 1 and Coongie 1, but correlation to adjacent, palynologically controlled wells, such as Cuttapirrie 1 or Koonchera 1, is poor. Figures 5 & 6 illustrate various stratigraphic correlations which can be made, and impact on potential hydrocarbon trapping mechanisms.

In addition, the correct tectonic model to apply to the seismic interpretation of this margin also influences how the zero edges are mapped. The problems and implications of various tectonic models are discussed in Section 3, and Figure 19 & Enclosure 15 illustrate some of the possible interpretations of the Nappamerri Group edge.

The zero edge relationships in the area remain to be defined reliably. The zero edges shown on the maps in this report are based on current seismic interpretations of the margin supplied by SANTOS, with some additional interpretation of possible fault displacements.

A transitional region, between the erosional truncation pattern found in the south and the onlap stratigraphy interpreted for the northern part of the western margin occurs in the vicinity of Titan and Yanta wells. A transition of this nature can be the result of either simple erosion, different depositional edges for the subdivisions, faulting or

a combination of all these. The pattern shown on the accompanying maps implies erosion. The detailed geometry of the transition area is unknown and for the sake of simplicity has been shown to occur at a single point (Enclosure 15).

There is some evidence that the Tinchoo Formation is fault bounded by an east-west offset in the area of the Moorari Field (discussed in Section 4). This offset could also serve as a boundary for the transitional region discussed above.

2.6 Nappamerri Group General Geological Interpretation

The study suggests that the units are unconformable with respect to one another at least on the flanks of the basin and over structural highs. Both the flanks and the high areas were tectonically active throughout the deposition of the Nappamerri Group, with the present subdivision essentially recording the major episodic events.

The resulting unconformable relationships particularly on the flanks could generate stratigraphic trapping configurations within the Nappamerri Group units.

Interpretation of the limited data suggests that the Nappamerri Group units were deposited by progressive depositional overstepping of each underlying unit. Following or during deposition of the Tinchoo Formation, tectonic activity culminated in major uplift and tilting of the Cooper Basin to the north, possibly accompanied by wrench tectonics (Figure 3). Erosion would result in subcrop relationships as shown (Enclosure 15). The Cuddapan Formation could represent alluvial outwash fan deposits along fault scarps.

2.7 Correlation Summary

Other correlations of the Nappamerri Group between the Nappamerri Trough and the Patchawarra Trough are possible. The one adopted here, on which all further interpretations of prospectivity are based, is believed to be the most consistent with the available information.

3.0 PROSPECTIVITY ANALYSIS OF THE NAPPAMERRI GROUP

3.1 Introduction

The Nappamerri Group is not thought to have significant hydrocarbon source potential. Prospectivity is therefore dependent on charge from mature source areas deeper in the section. It is necessary to identify potential hydrocarbon migration routes through or within the Group and this requires an understanding of:

- underlying Permian source area and maturity
- vertical migration pathways along faults from this source and through the Nappamerri Group
- lateral migration pathways through the Nappamerri Group
- timing of migration
- structural style as it affects the interpretation of fault migration paths

The following sections discuss these factors and the conclusions that can be drawn based on present knowledge.

3.2 Source Factors

Source Rock Development and Maturity

Oil generative source rocks occur in the basal Cooper Basin sequence in the Patchawarra Trough. The Patchawarra Formation is the source of most of the oil and gas found in both Cooper and Eromanga Basin reservoirs.

Oil prone source rocks in the Patchawarra Formation are believed to extend the length of the Patchawarra Trough as shown by Permian sourced oil recoveries in the Lake Hope Block, to the south, in James 1 (Figure 30), to the north, in Cuttapirrie 1 to the west, and along the GMI trend from Gidgealpa to Packsaddle. Oil recoveries from the basal Patchawarra Formation in Bagundi 1 in the Toolachee Block show that the potential to generate oil from this sequence is likely to be basin wide.

The Nappamerri Trough may have had early Permian oil generative source rocks similar in quality and quantity to those found in the Patchawarra Trough. However, because of the significantly higher maturity attained, they are largely gas prone (Figure 14).

There is some possibility of the Tinchoo Formation having source rock potential (see Section 4, Tinchoo Formation for discussion).

Hydrocarbon Drainage Cells

A hydrocarbon drainage area map was prepared from a structure map on the 'P' horizon (Enclosures 12 & 13 and Figure 17). This map is not an accurate reflection of structural configuration at the Patchawarra Formation level but is believed to be sufficiently similar that it illustrates most of the salient points of the migration problem. The 'P' map also serves the dual purpose of showing the approximate structure at the base Nappamerri Group level.

The map shows there are numerous drainage cells, many of which have an indicated spill point for hydrocarbons generated within them (Table II). The spill point can also be seen as the flushing point, where the early generated oil phase will be flushed from a cell ahead of the later generated gas/condensate phase. Once hydrocarbons have been concentrated at a spill point they will generally migrate along only one route and successively fill traps along this route. Hence the focus points act to concentrate the hydrocarbons generated over a large area and counter migration losses compared to the unfocussed drainage cells.

TABLE II: List of Drainage Cells & Associated
Nappamerri Group Prospectivity

<u>DRAINAGE CELL</u>	<u>COMMENTS</u>
BOOKABOURDIE	Thick mature source on lowside of GMI fault. Bookabourdie, Packsaddle and Yanpurra have pay or shows. Spill point into adjacent Innamincka Block. Wimma and Paning reservoirs form possible low side fault plays against the GMI trend. <u>Good additional prospectivity.</u>
CANDRA	Adjacent to thick mature source and on wrench fault trend with possible fault traps. Small drainage area but thickest source interval with potential fault plane migration pathways. <u>Fair prospectivity but underexplored.</u>
COONGIE	Mature thin diffuse source area, no major fault migration pathways from Patchawarra Formation source rocks. Two structures untested adjacent to small fault with some migration potential. <u>Fair prospectivity.</u>
CUTTAPIRRIE	Spill point from Wimma cell. Oil recovered in Poolowanna Formation in Cuttapiirrie indicating migration distances of 20km are possible. The area is adjacent to Cooper Wrench Zone. <u>Good prospectivity, but underexplored.</u>
DARALINGIE	Mature but diffuse source in Wooloo Trough. Thin Nappamerri Group and poor reservoir quality. No major fault migration pathways to drain a significant area. <u>Poor prospectivity.</u>
DELLA	Mature thick source. Untested possible closure adjacent to major fault with migration potential. Poor reservoir quality is likely in Paning & Callamurra Units, but may intersect Wimma Member in the area. <u>Fair prospectivity.</u>
DULLINGARI	Drainage of mature thick source into Della Nappacoongie area. Major faulting present. Poor reservoirs but there is a possible stratigraphic play down dip of Della Field. Some sands at Della have flowed gas/condensate. <u>Fair prospectivity in selected areas.</u>
FLY LAKE	Spill point near Fly Lake Field which drains towards Callabonna 1. However there is no obvious faulting which can connect source to Nappamerri Group reservoirs. <u>Poor prospectivity.</u>

INNAMINCKA Innamincka dome is the focus of a very large drainage area from the Patchawarra & Nappamerri Trough and also has spill point from Bookabourdie Cell. Good shows occur in the Innamincka wells and a significant Callamurra Formation gas flow occurred in Kirby 1. Sand quality appears to improve to the north. Fault connection to source in north and possibly south within the cell. Good prospectivity but underexplored.

JACK LAKE Diffuse unfocussed migration. No major faulting which will connect the source beds to the Nappamerri Group reservoirs. Poor prospectivity.

LAKE HOPE Major Permian sourced fields occur to the south eg Tanna. Major faults along eastern margin of cell could provide source to reservoir connection. Fair prospectivity for unconformity truncation plays sealed by shaly Poolo-wanna Formation.

LAMDINA Mature source area. Spill Point near Moolion into Patchawarra cell. Good shows, but no major faulting to provide source-reservoir connection. Poor prospectivity.

MERRIMELIA Culminates in Gidgealpa Field Hutton Sandstone accumulation. Good proven area with additional prospectivity.

MOOMBA Drainage spill point into Allunga Trough and Della Fault area, with established fault migration area north of Big Lake field. Good shows at Big Lake and indications of good reservoir in Paning/Callamurra. Fair to good prospectivity in selected areas.

NULLA Mature thin diffuse source area. No major faulting to connect source rocks to reservoir. Poor prospectivity.

PANING Paning structure not connected to source by faulting. Poor prospectivity.

PATCHAWARRA Diffuse migration of submature source. Spill point from Lamdina cell in north east of area. No major faulting connecting source rocks to Nappamerri Group. Poor to Fair prospectivity.

TOOLACHEE There is a drainage cell spill point south of the Toolachee Field. Other cells drain out of area into Queensland. Fault play in area but reservoir quality a risk. Fair prospectivity.

WIMMA Thick mature source. Wimmera 1 & Beanbush 1 possibly not closed at Nappamerri level and hence invalid tests. No obvious fault conduits from source into Nappamerri Group. Spills into Cuttapiirrie cell. Minor faulting adjacent to untested closure. Fair prospectivity.

3.3 Structural Style of the Southern Cooper Basin

Introduction

Three major tectonic models have been proposed. These are discussed below to explain the tectonic evolution of the Cooper Basin.

Extensional Tectonic Model

The most common interpretation assumes the Cooper Basin to be an intracontinental rift basin, characterised by extensional block faulting with superimposed drape flexure. Deposition commenced in the Early Permian. The major periods of tectonism are:

Early Permian - major normal faulting continuing through to the Early Triassic

Tertiary - minor reactivation

The GMI ridge is an asymmetric tilted fault block with the thickest sediment occurring in the lowside half graben west of the GMI trend. A similar pattern is probable for the Nappacoongie-Murteree ridge.

In this model the broad play concepts for the Nappamerri Group are separable into

- a crestal play, sourced via the western side faults, eg proven accumulations at Strzelecki
- stratigraphic onlap plays on the dip slope side of the half graben, ie to the east, which due to the lack of faulting will have low probability of being in communication with source rocks.
- lowside fault plays on the downthrown western side of the half graben, sourced directly via fault connection to the source rocks.

Compressional Tectonic Model (Figure 18)

Most of the southern Cooper Basin can be interpreted as having compressional and related wrench features. Under this scenario the majority of faults would be high angle reverse to low angle thrust (Kuang 1986). It has been suggested that compressional faults have better seal potential than normal dip-slip faults due to the more likely development of cataclastic gouge material in the fault plane (Harding & Tuminas, 1988). The general area of the fault play prospects is the same in the compression model as in the extensional and no additional play areas are generated by the model as compared to the extensional model. Prospects would only differ in detail of how they were mapped.

Wrench Tectonic Model (Figure 19 & Enclosure 14)

The best evidence for a wrench model is based on seismic interpretation of the Cambro-Ordovician Warburton Basin and extrapolation of the results into the overlying Cooper Basin (Figure 19). The assumption is that the tectonic grain for the Cooper Basin was established by the pre-Permian structures and subsequent tectonic events reactivated these structures.

Along the western flank of the Patchawarra Trough good Warburton Basin reflectors show that up to 10 kilometres of right lateral offset may have occurred (Enclosure 14). The wrench faults are often expressed as flower structures in the overlying sediments or as zones of poor data quality. The loss of the reflectors underneath the Cooper Basin limits the mappability of the wrench zones away from the western flank of the Patchawarra Trough. Pre-Permian thrust sheets with up to 5 kilometres of overthrust have been interpreted in the Lake Hope area (Roberts 1989 & SAGASCO 1989).

This interpretation explains the major tectonic grain of the Cooper Basin as a reflection of the large scale thrusting which occurred in the Warburton Basin during the Late Ordovician. The GMI trend would then be interpreted as being the apex of the leading edge of a reactivated thrust sheet flanked to the west by a major high angle reverse fault which at depth becomes a thrust fault plane.

The most dominant feature associated with the wrench model is the Cooper Wrench Zone (CWZ) which has right lateral offset (Figures 18 & 20). Smit & Suttill (1987) expanded on the simple wrench model for the southern Cooper Basin. The critical aspect is that right lateral wrench movement along the CWZ would, if hinged to the south, effectively have imparted a left lateral stress field over the southern half of the Cooper Basin. The effect of this is to impart extensional features over the Southern Cooper Basin (Figure 20).

The tectonic history is summarised in the following:

- Late Ordovician orogeny and thrusting by east west compression establishes basement grain
- Mid Carboniferous compression reactivates or generates Cooper Wrench Zone
- Pre Toolachee compression reactivates the GMI and Nappacoongee-Murteree trends and with increasing intensity culminates in the early Late-Triassic with regional tilting of the entire basin to the north west around a hinge which is approximately coincident with the Cooper Wrench Zone. Left lateral movement ceased following this event. The wrench zone was subsequently peneplained and buried by younger sediments
- Tertiary reactivation occurs with two main phases of activity occurring during the late Tertiary (Miocene to recent):

- (i) Oligocene uplift
- (ii) Miocene collision of Timor with Australian Plate, imparting a compressive left lateral stress field.

Faults as Hydrocarbon Migration Pathways

It is important to identify which faults have acted as migration conduits. There is no evidence that there is a simple pattern to this. The faults of the GMI trend appear to have acted as both conduit (Merri-melia Field) and seal (Mudrangie field low side fault trap sealed against basement). It is assumed that fault sealing capacity varies in a poorly predictable manner both laterally and vertically along the fault plane.

There is evidence that major right lateral movement on the Cooper Wrench Zone occurred during late Nappamerri Group deposition or immediately post Nappamerri Group deposition (approximately 230 MMYBP). At this time Nappamerri Group sediments were likely to be comparatively unconsolidated and unlikely to have been deformed by brittle fracture.

The emphasis therefore should be on identifying later faults as these are more likely to have cut through the Nappamerri Group and connect with deeper Permian source beds.

Using the above rationale the faults most likely to be conduits for migration of hydrocarbons through the Permian into the Nappamerri Group are those basement faults which strike north west and which were re-activated during the Tertiary. Faults of this orientation are seen in the basement along the western flank (Figure 19).

Structural Styles Summary

The CWZ is one of the major structural features of the basin. It shows characteristics of wrench movement. The existence of such a feature implies that a related tectonic grain is developed in the basement. There is evidence that a wrench zone parallel to the CWZ passes through Moorari. The possible existence of these wrench zones is important as it enhances the probability that unrecognised faults, which connect the deeper source beds of the Patchawarra Formation to the Nappamerri Group conduit beds could occur along the western margin. As wrench movement ceased at the end of Nappamerri Group deposition, the recognition of any wrench features buried at depth may be difficult.

3.4 Major Play Types

Introduction

Six main plays have been recognised in the Nappamerri Group. These are discussed below and illustrated on the regional Cross-Sections (Figures

7 to 13). Sixteen areas, where the prospectivity of the Nappamerri Group appears to be enhanced, are also documented (Enclosures 15 & 16). Plays specific to individual units are discussed under the unit heading in Section 4.

Crestal Plays

Oil and gas are found reservoired within the Nappamerri Group along the crest of the GMI trend; these accumulations are interpreted to have been sourced by early Permian sediments and have migrated along the faults onto the highs.

Reservoirs are well developed, particularly in the basal Paning Member, with reliable top seal provided by the upper Paning shaly section. The Callamurra Formation is generally shaly but also has less predictable thick reservoirs in this area. Both the Wimma Member and the Tinchoo Formation are prospective. North of latitude 27°30'00"S the basal Tinchoo Formation is a thick shale which acts as a regional top seal to good reservoirs of the Wimma Member. Most of the anticlinal traps, particularly along the GMI trend, have been tested by drilling, with considerable success in finding oil and gas.

Low Side Fault Plays

This is a major play type along the western margin of the GMI trend and is high-graded by the fact that these are downdip of the crestal plays discussed above, with the faults intersecting the major hydrocarbon migration routes.

Examples of this play are illustrated on regional Cross-Sections:-

A-A': Taylor South - Pondrinie
B-B': Balcaminga - Pirraminta
C-C': Narie - Merrimelia
D-D': Tindilpie - Mawson

Other areas where this play has some prospectivity are:

- (i) the eastern flank of the GMI trend where there are several down to the east faults. Connection to a good early Permian source rock is not as reliable as for the western margin but other factors are similar (Enclosure 16).
- (ii) the Big Lake - Della fault area, which is different in several respects to the GMI trend. The Moomba drainage cell which feeds towards the fault is focused at the Big Lake field (Figure 17 & Enclosure 13). The Della Fault drainage cell adjacent to the fault has never been tested. Any closure in this cell, adjacent to the Della Field, warrants a test as the area appears to be the drainage focus of the cell. Reservoirs of the Callamurra Formation and Paning Member are of poor quality in most of the area, although towards the south there appears to be an improvement in

quality and quantity. The Wimma Member is also a target along the northern half of the this fault plane. Examples of this play are shown on regional Cross-Sections:-

B-B': Three Queens
C-C': Mudera - Marabooka
D-D': Pinna

- (iii) the Toolachee Field has a drainage cell, which has its spill point to the south. Although the area has generally poor quality reservoirs the improvement in Callamurra Formation reservoir quality as seen in Maraku 1 is encouraging. This play is illustrated on the regional Cross-Section:-

C-C': Maraku - Coobowie

Mapping prospects that address this play requires interpretation of the detailed fault patterns, generation of fault plane maps, and ranking and assessment of the lateral fault plane seal integrity.

Wrench Fault Related Plays

The probable existence of right lateral wrench zone along an east west line through the Candra High (CWZ) has been discussed earlier in this Section. However, the area has never been mapped to reflect the wrench fault style. Wrench offset plays are possible, where reservoirs are juxtaposed against basement or other sealing facies. Specific leads for such plays are not recognised but favourable areas include north of the Wimma/Beanbush drainage cell and in the vicinity of Candra high where wrench offset fault blocks may be present (Enclosure 16).

There are indications of an additional wrench zone to the south of, and parallel to the main Cooper Wrench Zone. This wrench zone is extrapolated to run through Moorari Field.

Wrenches are believed to represent reactivated deep seated pre-Cooper Basin faults. As such they propagate from the basement upwards. Structural relief tends to decrease and the apex of the structure is progressively offset with decreasing depth. This feature of wrench structuring coupled with unconformity thinning means that mapped 'P' crests will most likely not be vertically coincident with the top Wimma Member crest. Hence the closure at top Wimma Member must be mapped based on seismic reflectors associated with this level.

A possible wrench fault play exists south of Deramookoo 1 (Enclosure 16). This play is high graded by the good shows in the Paning Member and Callamurra Formation seen in Deramookoo 1 (Figure 21).

Unconformity Truncation Plays

This is the most difficult play to define but is recommended to be pursued as it has large upside potential. The play hinges on sealing the Nappamerri by the overlying unit, either the Cuddapan Formation or

Poolowanna Formation. Section 3 discusses the stratigraphic correlation problems inherent in this play. Figures 4, 5 & 6 illustrate the possible unconformity edge relationships. The best area for this play is in the southern area of the Patchawarra Trough where most wells appear to have a thick basal Poolowanna seal unconformably overlying the Nappamerri Group (Enclosures 15 & 16). The main problem is to identify a migration pathway into the area and wrench faults if present, may provide conduits.

Onlap Plays

Stratigraphic interpretations (Figure 4) suggest that onlap plays may be present along the western flank of the Patchawarra Trough and the western and southern margins of the Nappamerri Trough.

The Patchawarra Trough north of latitude 27°30'00"S has the most prospective section. Here the Nappamerri Group units are interpreted to onlap up the western flank progressively. The Tinchoo Formation has an interpreted thick upper shaly package which could provide a top seal to the underlying reservoirs in the Wimma Member. Basal seal is provided by Warburton Basin sediments. Good oil shows in Deramookoo 1 in the Paning/Callamurra sections, and the Poolowanna Formation oil discovery at Cuttapiirrie 1 indicate that oil migration has occurred through this area. Defining a prospect based on this play concept is difficult because of the uncertainties in mapping the zero edge on seismic.

In the Nappamerri Trough evidence for onlap of the basal Callamurra Unit upflank is seen on seismic. Interpretation is, however, difficult as only 100 - 150 feet of section is involved. The eastern flank of the GMI trend is prospective with lateral closure being more likely in embayment areas.

Uplap Porosity Pinch-out Plays

Facies changes within the Nappamerri Group units suggest that pinch-out plays may be present, particularly along the trough margins.

The Callamurra Formation has such a high shale to sand ratio that it may be possible to map out individual sand trends and create useful exploration facies maps. The upper Paning possesses similar characteristics. The Wimma Member has a major facies change in the vicinity of Innamincka. Few of these pinch-outs can provide drilling targets without further seismic.

3.5 Prospective Areas

Introduction

Sixteen areas consisting of various play types have been high graded as a result of this study:

Low Side Fault Plays

- 1 Yalchirrie Area: Downdip of established production, updip of known source and adjacent to fault migration pathway. The Tinchoo Formation regional shaly seal on the top Wimma Member is present in this area.
- 2 Merrimelia-Mudrangie Area: Downdip of established production, updip of known source and adjacent to fault migration pathway.
- 3 Downdip Pelican: The lead is updip of Gooranie area and adjacent to the spill point of the Merrimelia/Leleptian drainage cell (Figure 17). The fault offset should seal the basal Paning Unit against the Callamurra Formation. As well there is a potential fault seal of good basal Callamurra Formation reservoirs or reservoir pinch-out between Gooranie and Narie (See Cross-Section C-C').
- 4 Burrunga Area: There is a possible improvement of reservoir quality in the basal Callamurra unit in this area. (See Cross-Section C-C' Maraku 1). The lead is adjacent to a spill point from the Toolachee Field. Top seal is shaly Callamurra Formation and lateral seal provided by the Warburton Basin sediments. The fault has some wrench characteristics.
- 5 Big Lake Fault Area: In an area of potentially improved Paning Member reservoir quality adjacent to Moomba cell spill point and fault migration pathway. Reservoir quality is the main risk.

Possible Wrench Fault Related Plays

- 6 Cuttapirrie - Deramookoo Area: This area has characteristics of wrench style geometry. The major wrench movement along the Cooper Wrench Zone appears to have occurred at the end of Tinchoo Formation deposition. This margin is updip of the spill point from the Wimma Drainage cell, downdip of the oil recovery in the Poolowanna Formation at Cuttapirrie 1 and adjacent to good shows in the Paning Member and Callamurra Formation at Deramookoo 1. The Tinchoo Formation basal shaly seal on the Wimma Member is probably developed south of the fault zone. (See Cross-Sections A-A' & E-E'). The entire fault zone is considered prospective.
- 7 Candra Area: This area has probable wrench related structures. The drainage area is small but the source unit should be thickest along the western flank of the GMI trend. Good fault connection to source rocks appears probable and trap door type fault splays are recognised.

Closed Structures

- 8 Kirby Area: Kirby is a large structure. A subcommercial gas flow with condensate recovery was made in the basal Callamurra Formation from what appears to be poor quality reservoirs. The

Paning Member had good shows. Both these units appear to improve in reservoir quality towards the north. It may lie adjacent to a right lateral wrench zone and is located along a migration pathway from the Innamincka Drainage Cell. An appraisal well is warranted. (See Cross-Sections A-A', F-F' & G-G' and Enclosure 13)

- 9 Near Wimmera Area: Neither Wimmera 1 or Beanbush 1 appear to have tested closure at the Nappamerri level. This structure is updip of both these wells and there is a fault adjacent to closure which could provide a migration pathway from deeper source rocks. The Wimmera Member is sealed by good basal Tinchoo Formation shales in this area. (See Cross-Section E-E').
- 10 West of Lamdina Area: There is a small closure adjacent to a possible fault migration pathway. Tinchoo Formation shaly basal unit forms a seal on Wimmera Member.
- 11 Della Fault Area: Possible closed structure or low side fault play at the drainage focus of the untested Della Fault drainage cell. There is a possibility of good reservoir in basal Callamurra Unit, and reservoir quality in Paning Member appears to improve to the south of Three Queens 1 (See Cross-Section B-B').

Stratigraphic Traps

- 12 Big Lake Field - Allunga Trough Area: An improvement in reservoir quality is seen in several wells in Big Lake Field, which also recorded significant shows. There is evidence of a pinch-out of reservoir facies towards Mina 1. The Big Lake Field is near a spill point for the large Moomba drainage cell and adjacent to the Big Lake fault which is an established migration pathway (eg for the Permian gas reservoir in the Namur Sandstone in the Namur Field). Detailed mapping of the Nappamerri Group sands at Big Lake field and adjacent Allunga Trough is warranted as there is a potential for larger stratigraphic traps in the area.
- 13 Innamincka - Packsaddle Area: The Wimmera Member changes from being highly sandy to shaly in this area. The area is flanked by major faults connected to deeper source rocks. The area is the focus of several spill points and may be on the northern edge of an east west wrench zone.
- 14 Merrimelia Eastern Flank: The Callamurra Formation has probable good quality and laterally extensive reworked thin transgressive sands in the Nappamerri Trough. These sands either pinch-out or are erosionally truncated down dip of the GMI trend. Faults are present which can provide a mechanism for migration of Nappamerri Trough generated hydrocarbons. The most favourable areas are structural embayments against the eastern GMI trend.
- 15 Lake Hope - PSW Flank Area: A major lead is the unconformity truncation play. The potential top seal is the shaly Poolowanna Formation (See Cross-Sections D-D' & E-E'). A migration pathway

from proven source via Gidgealpa Field flank fault is proposed. On this basis the probability of hydrocarbon entrapment will decrease with increasing distance from this fault. Reservoir quality is fair to poor in the area. This is the best recognised area for this type of play.

- 16 Area North of Deramookoo: The seismic interpretation indicates that the basal shaly Tinchoo Formation onlaps the Wimmera Sandstone although at Deramookoo 1 this basal seal is thin. The upper Paning may seal the lower Paning sandstone unit. Good source rock exists to the east and the area is adjacent to a major fault zone. Hydrocarbons have migrated through the area as recoveries at James 1 have shown.

4.0 NAPPAMERRI GROUP SUBDIVISIONS SUMMARY

4.1 Nappamerri Group

Introduction

Hydrocarbon shows have been recorded on a unit by unit basis and summarised for the Nappamerri Group. The following four chapters summarise the geology of the units whilst the gross Nappamerri Group data is summarised here (see Figure 22, Table III & Enclosure 1).

Shows

The recording of shows during drilling is a subjective procedure, and not necessarily rigorous, particularly as at the time of drilling of the earlier wells the Nappamerri Group was not considered as a serious reservoir objective. More recent wells have been logged more meticulously. Given this range in attention it was decided to take an optimistic approach and rank any indication of hydrocarbons as a show. In practice this means that some gas peaks normally not considered of significance have been included as gas shows rather than no show. The show classification was kept simple (Enclosures 1 to 5) with only eight show categories.

Isopachs

The isopach maps were contoured at 100 foot intervals; accuracy better than this is outside the limit of data control in all but a few locations. Contours based only on well data would tend to produce a map of minimum thickness as most of the wells are located on structural highs; allowance has been made for this effect. Various seismic interpretations of the gross isochron for the Nappamerri Group were used to aid contouring. The isopach maps for the individual horizons were contoured using the gross Nappamerri Group Isopach map as a form guide (Enclosures 1 to 5).

Gross Reservoir Quality Assessment

Gross reservoir quality can be used to high grade areas. In this study three of the units, the Callamurra Formation, the Paning Member and the Wimma Member were subjectively examined for reservoir quality by approximating the percentage of the unit which was of low gamma (clean reservoir). Not all wells were examined. This resulted in only a broad scale assessment of regional reservoir variations adequate for preliminary prospectivity analysis (Figures 24, 26, 28 & Enclosures 9, 10 & 11).

4.2 Callamurra Formation (Callamurra Member)

Prospectivity Summary

588 wells have been drilled through the Callamurra Formation in the study area. The maximum recorded thickness is 851 feet (259m) in the type section encountered in Kirby 1.

The Callamurra Formation is prospective for wet gas/condensate, with a large number of shows recorded, in comparison with the other units of the Nappamerri Group. The basal Callamurra unit has had good gas/condensate flows in several wells eg Burke 3 and Coongie 1. The good prospectivity is a function of this unit being first in the path of any vertically migrating hydrocarbons generated by underlying Permian source rocks.

The Callamurra Formation is believed to be a continuation of the low energy deltaic/lacustrine depositional system seen in the upper Toolachee Formation, but without coals. Narrow (less than a kilometre wide) elongate distributary channels appear to be the best reservoirs of this environment, but beach sands, mouth bar sands and thin but extensive reworked sheet sands could also be potential reservoirs.

Age

Late Permian-Early Triassic (Figure 3).

Palynological Zones PP6 to PT1.

Approximately 245.5 to 250.0 MMYBP (4.5 MMY).

Stratigraphy and Correlation

The Callamurra Formation,

- (i) conformably overlies the Toolachee Formation except on the western flank of the Patchawarra Trough where it may unconformably overlie the Daralingie Unconformity.
- (ii) is unconformably overlain by either the
 - (a) Paning Member - Early Triassic
 - or
 - (b) Cuddapan Formation - Late Triassic to Early Jurassic
 - (c) Poolowanna Formation - Early Jurassic
 - or
 - (d) Hutton Sandstone - Early to Mid Jurassic

On the GMI trend and in the Patchawarra Trough a sandy basal Paning Unit consistently overlies the Callamurra Formation. On the GMI trend dipmeter evidence and erosional thinning show that the contact between the Paning Member and the Callamurra Formation is unconformable. In the

Nappamerri Trough, the lithological distinction is not clear cut and the pick is more subjective (see Section 2).

In the Toolachee/Nappacoongie-Murteree Block the boundary between the Callamurra Formation and Paning Member is not clear. Lack of any palynological control in this area means that tops have been picked by correlation with areas of better control in the Nappamerri Trough and the Moomba Field using log signature criteria.

A basal Callamurra unit, which is conformable on the top Toolachee Formation coal (the 'P' seismic horizon) is widely distributed.

The criteria used to pick the top of the basal Callamurra unit on logs were:

- (i) a bulk shift to lower baseline resistivity values in the overlying section
- (ii) a more subdued sonic response
- (iii) the top is often coincident with a thin clean sand defined by a lower gamma response

The basal Callamurra unit is marked on cross-sections A-A' to G-G', but has not been picked in any other wells. This unit contains most of the production found in the Callamurra Formation to date. The boundary is thought to reflect a depositional hiatus (Figure 3).

Over most of the area there is no marked thinning of the basal Callamurra unit towards the present zero edge, although along the western flank of the Patchawarra Trough some thinning is inferred.

Type-section

Kirby 1 from 7852-8703 feet (851 feet (259m) thick).
Regional Cross-Sections A-A', F-F' and G-G'.
Burley 2 from 8130-8770 feet (640 feet (195.1m) thick).

Core Data

13 cores have been taken in wells mainly along the GMI trend.

Stratigraphic Nomenclature

The Callamurra Formation was previously considered as a member of the Arrabury Formation (Channon & Wood 1990). As discussed above, the unit is conformable with the Toolachee Formation and, at least over large areas of the Patchawarra Trough and probably elsewhere, it is unconformably overlain by the Paning Member. This is the most clearly recognised Nappamerri Group unconformity. This criterion separates the Callamurra sedimentologically from the Paning Member and as such warrants elevation to formation status.

Lithology

Dominantly an organically lean mudstone, with minor interbedded siltstone and sandstone.

Reservoir Quality (See Figure 24 & Enclosure 9)

East of the GMI trend:

The basal Callamurra unit tends to be the more sand prone unit of the Callamurra Formation. However, visual estimates establish that good sandstone facies form less than 5% of the total section over most of the study area. Channel sands, are identifiable from upward fining log signatures. These sand bodies are thin and likely to be only a few kilometres in width. Rare cleaner blocky sands also occur, eg Burke 3, and thin 2-5 feet sands which appear to be correlatable over larger distances are also present within the main Nappamerri Trough.

Along the southern margin of the Nappamerri Trough, in the vicinity of the Dullingari and Moomba fields there are thin, clean and possibly laterally extensive sands. These could represent reworked sands associated with a rising or falling lake margin. The rare thick clean sand seen at Burke 3 may be a barrier sand built up at a shoreface or fault escarpment.

West of the GMI trend: The Patchawarra Trough

In the Patchawarra Trough the sandstone percentage varies from 20-50%, in the vicinity of the Patchawarra Central Block, but drops to 10-20% north and south of this area.

Depositional Environment

The top Toolachee Formation coal appears to be deposited synchronously across the entire southern Cooper Basin. It marks an interval of low clastic input and extremely slow subsidence. The Callamurra Formation is conformable on this coal.

The depositional environment of the Callamurra Formation is interpreted as prodelta to shallow lacustrine being essentially a continuation of the depositional style of the upper Toolachee Formation as documented by Williams (1982). The cessation of coal deposition, which is coincident with the onset of Callamurra Formation deposition, is possibly due to an increase in subsidence rate for the basin and a consequent rise in the water table making conditions unsuitable for plant growth or peat preservation, or a change in climate to more arid conditions.

The sand distribution map suggests a major source area to the west of

the present western Patchawarra Flank, with a possible secondary but more distant source to the south east (Figure 24 & Enclosure 9). The GMI trend appears to have acted as a barrier to sand influx to the Nappamerri Trough, although the edge of significant sand development could be further east of that interpreted as reasonable sand development is seen in Kirby 1 in the basal Callamurra unit (Figure 24).

The southern Cooper Basin was much more extensive during Callamurra Formation deposition than shown by the present zero edge of this unit. A lacustrine environment is inferred for deposition with the depocentre probably in Queensland, east of Innamincka. Flanking and draining into this lacustrine system were a series of delta systems, a major one occurring to the west where the sand percentage increases as shown on Figure 24. The sands deposited on the delta plain tend to be of low sinuosity. Reservoir quality is generally poor due to the fine grained nature of the sands. Because of differential compaction of the underlying Permian, the delta system can be expected to be more concentrated in the trough areas between the main Permian structural highs. Rising or falling lake levels would result in extensive reworking and development of thin beach deposits. The top basal Callamurra unit is interpreted as being coincident in many areas with a thin but clean sand perhaps the product of reworking.

This interpretation differs from that given by Youngs and Boothby (1985, p379) who interpreted the Callamurra Formation (their Unit 1) as having a fluvial origin.

Source Rock Quality

The Callamurra Formation is not considered to have source potential though parts of the basal Callamurra unit are described as carbonaceous.

Structural History

The Callamurra Formation would be interpreted as the last phase of a regressive depositional cycle following Basal Daralingie Formation unconformity uplift. The initial high energy fluvial system of the basal Toolachee Formation was followed by the coal basin deltaic system of the upper Toolachee and in turn by the low energy deltaic/lacustrine system of the Callamurra Formation. The boundary between basal Callamurra unit and the overlying Callamurra Formation may represent a regional hiatus caused by renewed basin wide tectonic activity, which culminated in the Paning unconformity.

Prospectivity Factors and Plays Unique to the Unit

For the Callamurra Formation to contain oil it is necessary for a reservoir sand to be intersected by a fault, and for the fault also to

be a hydrocarbon migration pathway. Because it lacks laterally continuous sands the probability of oil entering this unit is lowered compared to the overlying units. Until more detailed mapping of sand trends is undertaken discoveries within this unit will be fortuitous.

A possible play unique to this unit but not clearly apparent on the cross sections is discussed below.

PLAY TYPE: Regional reworked sand

EXAMPLES : CROSS SECTION A-A': Cuttapirrie 1 - Lamdina 1

CROSS SECTION C-C': Swan Lake 1 - Merrimelia 18

COMMENTS: A good clean sand occurs at the top of the basal Callamurra unit. Its lateral continuity depends on the validity of the correlation, but if the correlation is correct, this thin sand probably represents a reworked sand associated with lacustrine shoreline advance or retreat. There is a fair probability that such sands will pinch-out onto the flanks of highs in a zone which mimics the palaeoshoreline. Small fault offsets could provide trapping situations additional to pinch-out.

4.3 Arrabury Formation: Paning Member

Prospectivity Summary

429 wells have been drilled through the Paning Member. The thickest section occurs in McLeod 1 where 443 feet (135 metres) of section was encountered.

The Paning Member is considered the most prospective unit of the Nappamerri Group in the Patchawarra Trough-GMI trend area. This is because the basal Paning Unit is the first regional reservoir to occur above the Toolachee Formation, and hence the first regional reservoir intersected by any deep seated fault which may be acting as migration conduits. Shales at the base of the overlying upper Paning Member act as a thick regional seal.

Age

Early Triassic: PT2.1: approximately 242.0 to 245.5 MMYBP (3.5 MMY) (Figure 3).

Stratigraphy and Correlation

The Paning Member

- (i) unconformably overlies the Callamurra Formation on the highs but is possibly conformable in the deeper trough areas.

(ii) is probably unconformably overlain by the

- (a) Wimma Member: Middle Triassic
or
- (b) Cuddapan Formation: Late Triassic-Early Jurassic
or
- (c) Poolowanna Formation: Early Jurassic
or
- (d) Hutton Sandstone: Early-Mid Jurassic

The top Paning Member is the best defined log pick within the Nappamerri Group, being a sharp break between the shaly Paning Member and the sandy Wimma Member over most of the Patchawarra Trough. In places where this lithological distinction is not clear, as in the Nappamerri Trough, significant character difference still exists.

The base of the Paning Member is easily defined on logs west of, and on, the GMI trend as the sandy basal Paning Member always overlies the Callamurra Formation. In areas where this lithological distinction is not clear cut, as in the Nappamerri Trough, the pick is more subjective (see Section 2).

Type-section

Paning 1 from 8549-8909 feet (360 feet thick)
Regional Cross-Sections E-E' and G-G'

Derivation of Name

Paning 1 well, which also has the type section.

Core Data

12 cores have been taken within this unit.

Lithology

The Paning Member is lithological similar to the Callamurra Formation but is coarser grained. It is predominantly an organically lean siltstone with interbedded mudstone and sandstone.

Reservoir Quality (Figure 26 & Enclosure 10)

The Paning Member has a good basal sand in the Patchawarra Trough. The sand is up to 150 feet thick and is the main reservoir of the Nappamerri Group along the GMI trend. This sand does not extend into the Nappamerri Trough suggesting that the GMI trend acted as a barrier to sand influx. The upper part of the Paning west of the GMI trend is also characterised by thick clean sand development though the percentage of shale/siltstone is markedly increased and these sands probably lack

regional continuity. Where sand development is poorer, the log signature of the Paning has deltaic attributes.

Depositional Environment

Within the Patchawarra Trough the basal Paning Unit is predominantly fluviatile. The deterioration of reservoir quality to the southeast suggests a source entry from the northwest in the Callabonna-Yanta area. The upper part of the Paning Member has a similar pattern but represents fluvial deposition on a more subdued flood plain. The GMI trend was a positive feature through Paning deposition.

Source Rock Quality

The Paning Member is not a source facies.

Structural History

The Paning Member regionally overlies the Callamurra Formation unconformably. The unconformity is most pronounced on the GMI trend and in the Patchawarra Trough.

The unconformity marks the onset of tectonic activity which culminated in the northward tilting of the entire Cooper Basin at the end of Paning Member time.

Prospectivity Factors and Plays Unique to the Unit

The Paning Member contains the bulk of reservoired hydrocarbons discovered to date. Most of the hydrocarbons have been found along the GMI trend. This is due to the regional nature of the basal Paning Sandstone Unit which intersects any fault migrating hydrocarbons and directs them to the structural culminations. The basal Paning unit can be a primary target in all areas of the Patchawarra Trough which have fault connection with underlying source rocks. The upper Paning is less prospective due to the lack of lateral continuity of sands.

4.4 Arrabury Formation: Wimma Member (Wimma Sandstone Member; Un-named Triassic)

Prospectivity Summary

185 wells have penetrated Wimma Member sediments. The maximum recorded thickness is 382 feet (116.4metres) in the type section well Wimma 1.

The Wimma Member is an excellent reservoir but to date no major hydrocarbon discoveries have been made within this unit although significant shows have been recorded in the Pondrinie-Packsaddle area. Over a large area of the northern Patchawarra Trough the Wimma Member is sealed by a

thick shaly basal Tinchoo Formation. This good top seal makes the Wimma Member an attractive target for structural and low side fault plays provided migration pathways into the Member exist. There is a facies change in the Pondrinie-Innaminka area which may provide an updip pinch-out play.

Age

Early Triassic: PT2.2: approximately 239.5 to 242.0 MMYBP (3.5 MMY).

Stratigraphy and Correlation

The Wimma Member

- (i) appears to unconformably overly the Paning Member on the highs but is possibly conformable on the Paning Member in the troughs.
- (ii) is unconformably overlain by the
 - (a) Tinchoo Formation: Middle Triassic
 - or
 - (b) Cuddapan Formation: Late Triassic-Early Jurassic
 - or
 - (c) Poolowanna Formation: Early Jurassic
 - or
 - (d) Hutton Sandstone: Early to Mid Jurassic

Because of the sandy nature of the Wimma Member palynological control is generally poor. The Wimma Member is regionally correlatable because of its very sandy nature over most of the study area.

The boundary between the Wimma Member and the Paning Member is the best defined log subdivision within the Nappamerri Group. Even in the Nappamerri Trough where this lithological distinction is not as clear, significant log character differences allow the boundary to be picked with confidence.

Across most of the northern Patchawarra Trough the top of the Wimma Member is a reliable pick as there is a distinct lithological change from good clean sand to a shale which defines the Tinchoo Formation-Wimma Member boundary. In other areas there tends to be a bulk shift in the sonic log at the boundary between the Wimma Member and the Tinchoo Formation (see Cross Section A-A' Strathmount).

Cross sections A-A' and B-B' show the Wimma Member as being present at Daer 1 and Coongie 1. This interpretation is based on log character alone. Other interpretations are possible as discussed in Section 2. The Wimma Member is also interpreted to be developed in Three Queens 1 and Strathmount 1 but it is possible that these sections are Paning Member.

Type-section

Wimma 1 from 9100-9482 feet (382 feet thick)
Regional Cross-Section E-E'.

Core Data

Only 1 core has been taken, in the Innamincka 1 well.

Lithology

The Wimma Member is a clean blocky sandstone over most of the study area. In places it becomes a sequence of interbedded sandstones and siltstones.

Reservoir Quality (See Figure 28 & Enclosure 11)

The Wimma Member, particularly in the northern part of the study area has good to excellent reservoir qualities. Flow rates of up to 300 barrels of oil per day have been recorded from the basal Wimma sandstone in the Pondrinie-Packsaddle area.

Depositional Environment

The clean blocky sandstones are interpreted as braided stream deposits. The facies pattern suggests a sediment source area to the southwest. The palaeoenvironmental interpretation suggested by Youngs & Boothby (1985, partly their unit 3) is supported. The GMI trend acted to keep the axis of the braided channel system within the Patchawarra Trough area.

Source Rock Quality

The Wimma Member does not have significant source rock potential due to its sandy nature.

Structural History

An abrupt change in the depositional style between the Paning and Wimma Members suggests a significant change in sediment source area or depositional slope, with the latter thought to be more likely. The increase in slope is interpreted to be associated with tectonic tilting, resulting in an unconformity between the Paning and Wimma Members. This tectonic event may reflect the commencement of regional tilting of the Cooper Basin depocentre to the north (Figure 3).

Prospectivity Factors and Plays Unique to the Unit

The Wimma Member prospectivity is primarily dependent on the existence of the overlying basal shaly Tinchoo Formation seal over most of the northern Patchawarra Trough. If this unit is not an effective seal then all of the potential Wimma Member plays are invalid. Fault connection to the underlying early Permian source rocks is a prerequisite for play success, except on the western flank where migration through the underlying Paning and Callamurra Formations could occur (Figure 4).

4.5 Tinchoo Formation

(Lamdina Fm, Un-named Triassic)

Prospectivity Summary

The Tinchoo Formation is limited in distribution to the Patchawarra Trough where it has been intersected in 122 wells. The maximum recorded thickness is 438 feet (133.5 metres) in Kenny 1.

Fifteen well have recorded minor fluorescence and gas kicks. Significant oil recoveries occur in James 1, outside the study area, but no commercial production has yet occurred. Initial flow rates of 1800 & 1400 BOPD of 40 API oil at James 1, reduced to 25-50 BOPD on production testing. Poor permeability is thought to be the major cause of low productivity.

Over areas north of latitude 27°30'00"S the Tinchoo Formation has a thick basal shaly section which may act as a seal on the Wimma Member.

Age (See Figure 3)

Middle Triassic: PT3-Lower PT4 : approximately 229.5 to 239.5 MMYBP (10.0 MMY).

Stratigraphy and Correlation

The Tinchoo Formation is:

- (i) thought to be unconformable on the underlying Wimma Member over most of the study area. Thinning of the Wimma Member on the flanks and in some locations on the highs shows that in places the Tinchoo Formation is definitely unconformable on the Wimma Member. The Tinchoo Formation has been mapped as unconformable on the Wimma Member in the northern Cooper Basin (Powis, 1989 p 271).
- (ii) unconformably overlain by either the
 - (a) Cuddapan Formation: Late Triassic - Early Jurassic
 - or

- (b) Poolowanna Formation: Early Jurassic
or
- (c) Hutton Sandstone: Early to Mid Jurassic

The top of the Tinchoo Formation is often difficult to pick as the log signatures of the Tinchoo Formation and overlying Cuddapan or Poolowanna Formations are similar. The problem is compounded where palynological control is poor or absent. The details of the correlation problems are discussed in Section 2.

The base of the Tinchoo Formation is a shaly unit which is correlatable over a large area. Where it is absent it is possible to see the lateral facies transition and the boundary is often marked by a bulk shift in the sonic log (Cross Section E-E', Lake McMillan 2)

Powis (1990) subdivided the Tinchoo Formation into the Doonmulla and Gilpeppe Members. This subdivision has not been pursued here although finer subdivisions of the Tinchoo Formation are possible.

Type-section

Beanbush 1 from 8898-9222 feet (427 feet (130.2m) thick).

See Regional Cross-Section E-E'.

Tinchoo 1 from 7438-7946 feet (508 feet (154.8m) thick).

Derivation of Name

Tinchoo 1 well reference section in Queensland (see Powis 1990, p272).

Core Data

None taken as of October 1990.

Lithology and Depositional Environment

The Tinchoo Formation is a sequence of siltstones and interbedded clean sandstones. The environment is interpreted as being fluvial, the sands being channel, point bar or crevasse splay deposits and the siltstones and shales overbank and flood basin deposits.

Reservoir Quality

The Tinchoo Formation log signature is characterised by an abundance of good clean blocky reservoirs, with upward fining log signatures. The sand thicknesses average 30-50 feet and clean sections in excess of 100 feet are common. Good porosity is calculated from sonic logs. However, at James 1 initial good flow rates rapidly declined on production testing probably due to poor permeability.

Source Rock Quality and Maturity

The Tinchoo Formation may have source rock potential. In Paning 1, it was noted that the "cuticular material in (the) siltstone has a moderately bright orange fluorescence with a very slow streaming white crush cut" (Paning 1 Well Completion Report). No analyses have been undertaken to determine the source rock potential of the Tinchoo Formation. The above observation suggests that more work is warranted (See Below)*.

If the Tinchoo Formation was proven to have source potential, and significant oil generation occurs in the vitrinite reflectance interval Rv 0.75 to 1.00 then a large area of the northern Patchawarra Trough may be generative (Figures 15 & 16).

Structural History

Seismic and stratigraphic correlation studies show that each successive depositional package of the Tinchoo Formation oversteps the preceding unit in a northerly direction, indicating a successive shift in depocentre towards the north. This is interpreted to be a function of major northward tilting of the entire Cooper Basin at the end of Wimmera Member time (Powis 1990, p 273 and Figure 3).

The major post Nappamerri Group faulting and basin tilting occurred in the interval between the youngest Tinchoo Formation and the oldest Poolowanna Formation (upper PT4 - PT5 age; 227MMYBP to 205MMYBP). It also coincides with wrench faulting on the Cooper Wrench Zone and associated features. The Cuddapan Formation post dates the major faulting and tilting episode and narrows the timing of this event to the upper PT4 interval (227MMYBP to 221MMYBP).

*SANTOS' Comment

The interval of cuticular material in Paning No. 1 is possibly derived from the organic rich Cuddapan Formation which is present above 7810 ft; the section which in the SAGASCO report is considered with the Tinchoo Formation. Palynological studies of the more complete Tinchoo Formation sequences in Queensland indicate that although there is greater preservation of organic matter in this upper Nappamerri Member, the levels are still relatively low and that this formation consists of quite extensively oxidised sequences with occasional organic rich layers. It is unlikely that the Tinchoo Formation would constitute a major source of liquid hydrocarbons.

Prospectivity Factors and Plays Unique to the Unit

Although the unit is considered prospective, influx migration into and through this unit has not been established.

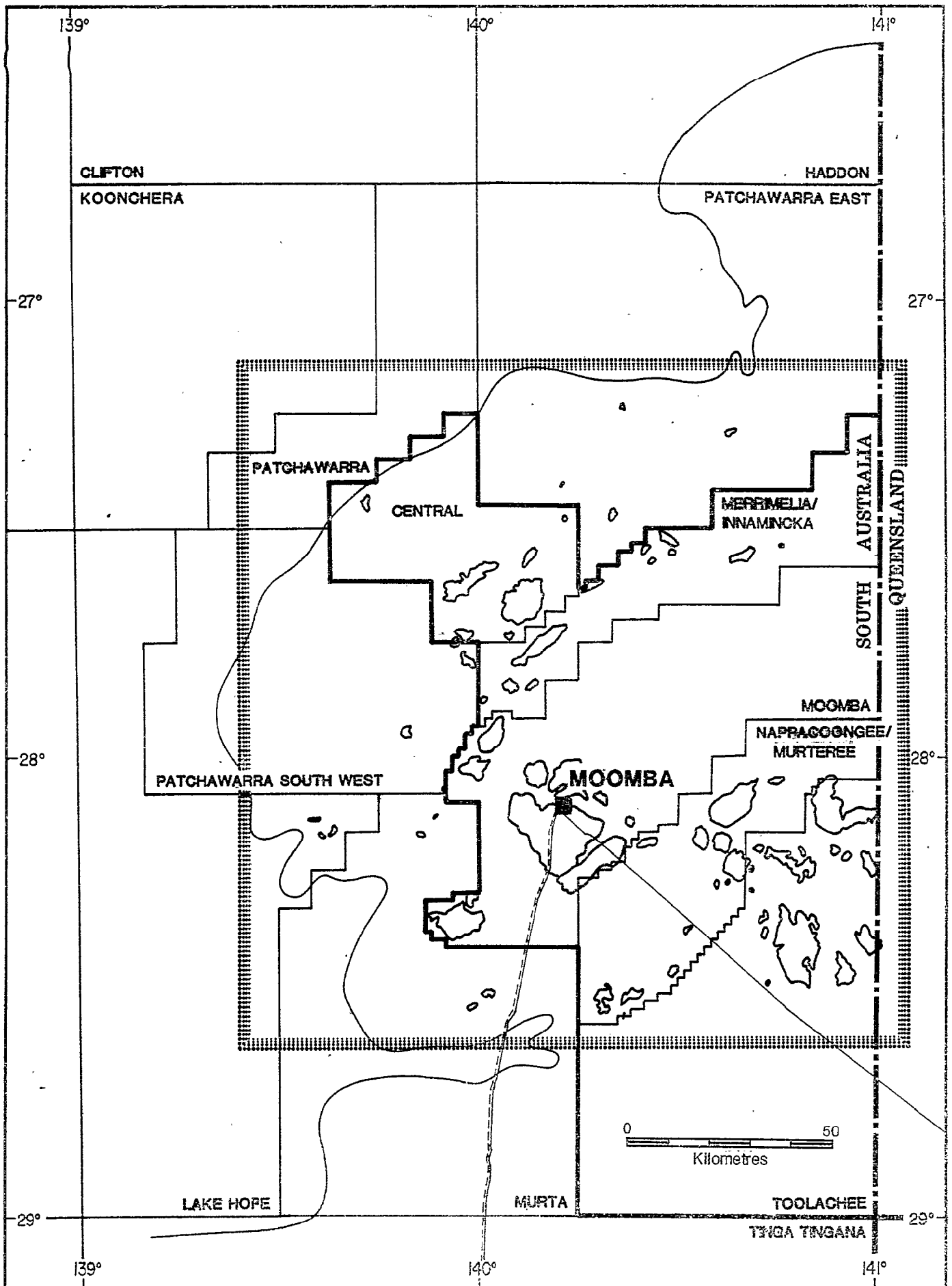
Additional subdivision and facies interpretation of the Tinchoo Formation with the aim of defining potential pinch-out traps and migration pathways should be attempted. Mapping of the overlying units for seal to define truncation plays on the Tinchoo Formation unconformity surface would also assist in highgrading leads. Importantly the Tinchoo Formation acts as a seal on the underlying Wimma Member.

The poor permeability of the productive sand in James 1 is cause for concern. Further work is needed to establish whether the poor permeability is a function of drilling induced reservoir damage or diagenesis. If it is the latter, the prospectivity of the unit would be severely downgraded and if the diagenetic effects were regional, it may also affect reservoir quality of the Wimma Member.

REFERENCES

- Anon 1980 Paning 1 Well Completion Report
- Anon 1990 "Oil Prone" Environments in Australian Basins. Oil & Gas Australia p31
- Burckhardt, D.M., 1990 Iso-Maturity Maps of the Cooper-Eromanga Basin " SANTOS unpublished report.
- Channon, G.J. & Wood, G.R. 1989. Stratigraphy and Hydrocarbon Prospectivity of Triassic Sediments in the Northern Cooper Basin. Unpubl Santos report.
- Fairburn, W. & Duckett, A. 1990 Poolowanna Formation Study Report Unpublished SAGASCO Resources.
- Gatehouse, C.G. 1972. Formations of the Gidgealpa Group in the Cooper Basin. Australasian Oil and Gas Review, 18 (2).
- Harding, T.P., & Tuminas, A.P. 1988 Interpretation of Footwall(Lowside) Fault Traps Sealed by Reverse Faults and Convergent Wrench Faults. AAPG Bulletin v.72,n.6,p738-757
- Harding, T.P. 1990. Identification of Wrench Faults using Subsurface Structural Data: Criteria & Pitfalls. AAPG Bulletin v.74,n.10,p1590-1609
- Helby, R., Morgan, R. & Partridge, A.D. 1987. A palynological zonation of the Australian Mesozoic. Memoirs of the Association of the Australian Palaeontologists 4, 1-94.
- Moore, P.S. 1986. Jurassic and Triassic stratigraphy and hydrocarbon potential of the Poolowanna Trough (Simpson Desert region) northern South Australia. contributions to the geology and hydrocarbon potential of the Eromanga Basin. Geological Society of Australia Special Publication No. 12, 39-51.
- Papalia, N. 1969. The Nappamerri Formation. APEA Journal, 108-110.
- Price, P.L., Filatoff, J., Williams, A.J., Pickering, S.A. & Wood, G.R. 1985. Late Palaeozoic and Mesozoic Palynostratigraphical Units. CSR Palynology Report No. 274/75 (Unpubl).
- Roberts, D. & Sayers, J. 1989. Kalladeina Formation Propectivity, Warburton Basin SAGASCO Resources Unpublished SANTOS report p24
- SAOGC. 1988. Prospectivity Evaluation: Tirrawarra Sandstone and Patchawarra Formation of the Patchawarra Central Block Unpublished SANTOS report
- Selley, R.C. 1986. Ancient Sedimentary Environments. Chapman and Hall, London.
- Smit, R. & Suttill, R.J. 1987. Hydrocarbon Prospectivity of Southwest Queensland Unpublished Confidential SAGASCO Report
- White, M. 1986. Greening of Gondawana. Reed Books, Sydney.

- Williams, B.P.J. 1982. Facies Analysis of Gidgealpa Group Reservoir Rocks Southern Cooper Basin South Australia. SAOGC Unpublished
- Wiltshire, M. 1982. Revision of Eromanga Basin Limits. The Eromanga Basin Symposium, Abstracts. Geological Society of Australia Abstracts No. 5, 15-16.
- Wopfner, H. 1985. Some thoughts on the post-orogenic development of northeastern South Australia and adjoining regions. Stratigraphy, Palaeontology, Malacology, South Australian Department of Mines and Energy Special Publication No. 5.
- Youngs, B.C. & Boothby, P.G. 1985. The Nappamerri Formation in the Cooper Basin, South Australia and southwest Queensland. Special Publications of the South Australian Department of Mines and Energy, 5. 373-386.



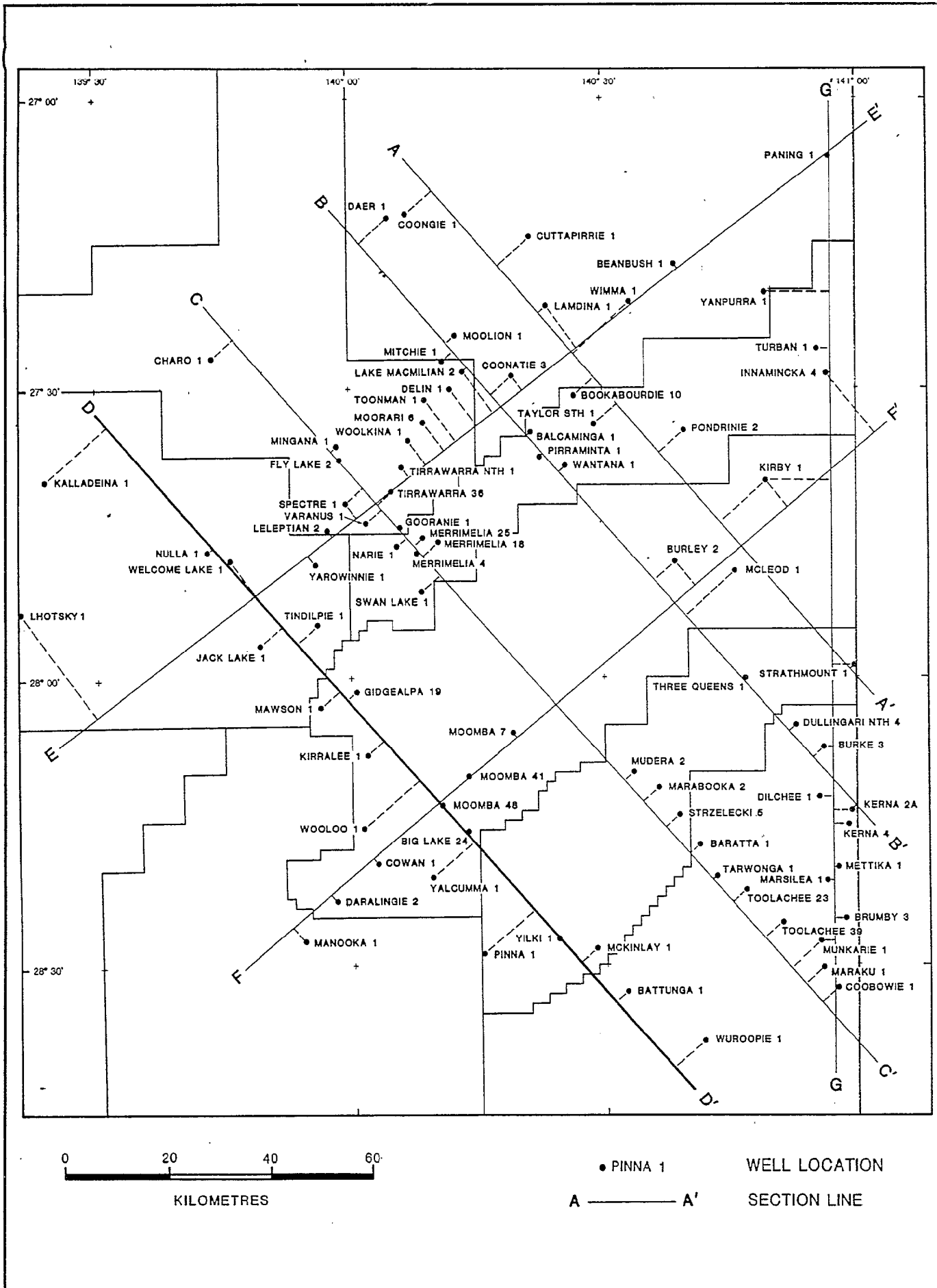


SAGSCO Resources Ltd.

COOPER BASIN - SOUTH AUSTRALIA

NAPPAMERRI GROUP - STUDY AREA

AUTHOR: L.Spencer	DRAWN: C.Kay	DATE: Dec 90	SCALE: As Shown	No.: NAP 00 7846	FIG: 1
-------------------	--------------	--------------	-----------------	------------------	--------



SAGASCO Resources Ltd.
COOPER BASIN - SOUTH AUSTRALIA
 NAPPAMERRI GROUP

LOCATION MAP: REGIONAL STRATIGRAPHIC CROSS-SECTIONS

AUTHOR: LKS

DRAWN: JMD

DATE: Dec 90

SCALE: As shown

No.: NAP 00 7847

FIG: 2

AGE MMYBP	AGE	SPORE POLLEN ZONES (Helby 1988)		ZONE CODE	STRATIGRAPHY	
					SANTOS	This Report
210	JURASSIC					
		<i>P.crenulatus</i>	PT5		CUDDAPAN FM	CUDDAPAN FM
220	TRIASSIC					
		<i>C.rotundus</i>	PT4			
230		<i>A.parvispinosus</i>	PT3	NAPPAMERRI GROUP	TINCHOO FM	TINCHOO FM
240		<i>A.tenuispinosus</i>	PT2.2		ARRABURY FM WIMMA SST MBR PANING MBR CALLAMURRA MBR	WIMMA MBR
	EARLY	<i>P.samoilovichi</i>	PT2.1			PANING MBR
		<i>L.pellucidus</i>	PT1			basal Paning Unit
250	PERMIAN	<i>P.microcorpus</i>	PP6			CALLAMURRA FM
			PP5	GIDGEALPA GROUP	TOOLACHEE FM	TOOLACHEE FM
260						

- * CB = Cooper Basin
- * CWZ = Cooper Wrench Zone
- * GMI = Gidgealpa Merrimelia Trend
- * NMH = Nappacoongie-Murteree Horst

TECTONICS

Major tilting and erosion of CB & significant right lateral movement of CWZ & uplift of NMH.

Additional northward tilting of CB
Northward tilting of CB commences
Significant uplift on GMI & on NMH
Minor regional uplift of CB

Significant uplift on GMI & on NMH

ARRABURY FORMATION ?

basal Paning Unit

basal Callamurra Unit

P. HORIZON

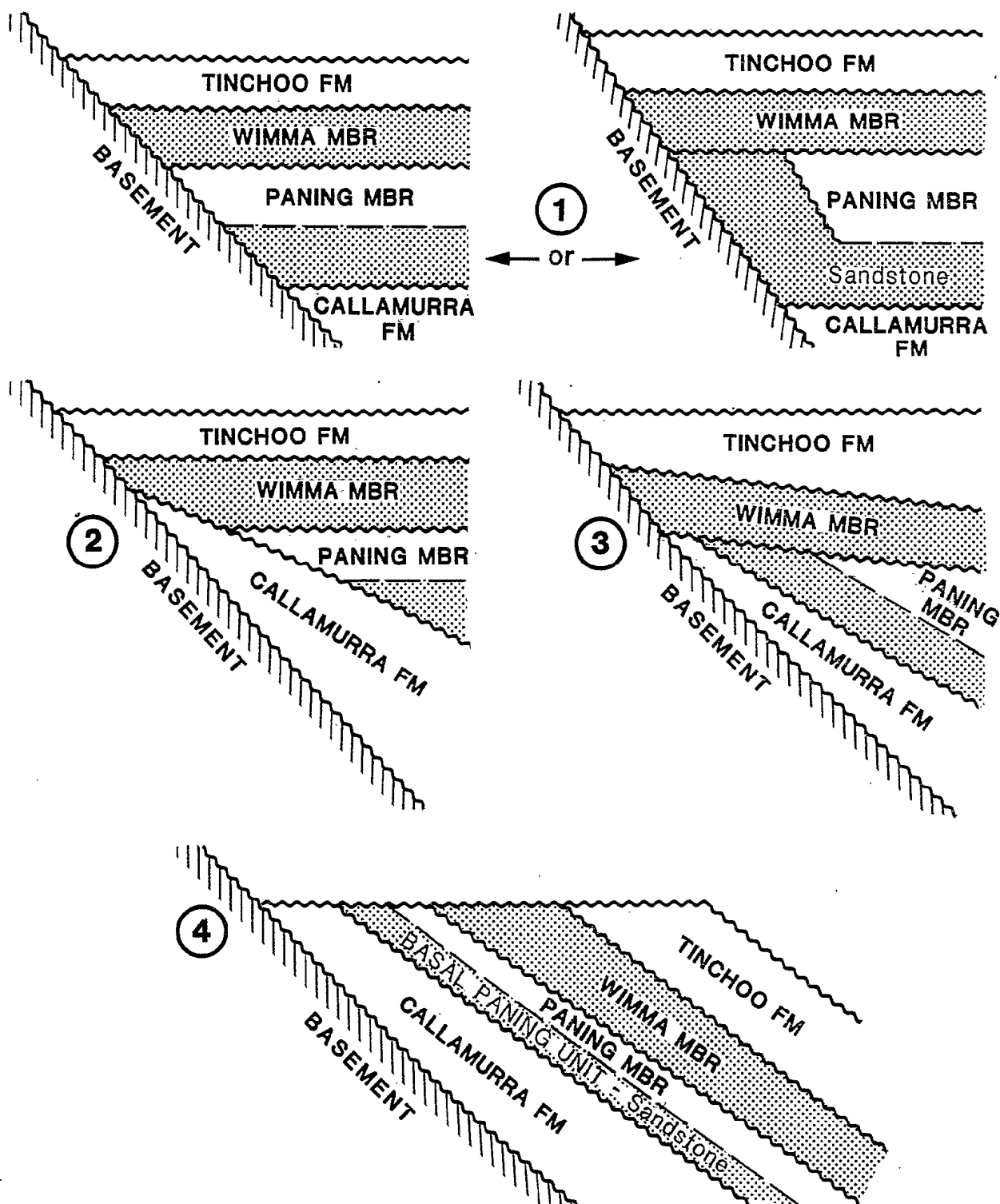


SAGASCO Resources Ltd.

COOPER BASIN - SOUTH AUSTRALIA
NAPPAMERRI GROUP

PERMO-TRIASSIC PALYNOSTRATIGRAPHY

AUT: LKS | DATE: Dec90 | No.: NAP 00 7848 | FIG: 3



①

OCCURS NORTH OF THE COOPER WRENCH ZONE

④

OCCURS SOUTH NEAR NULLA-CALLABONNA



SAGASCO Resources Ltd.
COOPER BASIN - SOUTH AUSTRALIA
NAPPAMERRI GROUP

POSSIBLE STRATIGRAPHIC RELATIONSHIPS ALONG WESTERN MARGIN

AUTHOR: LKS

DRAWN: JMD

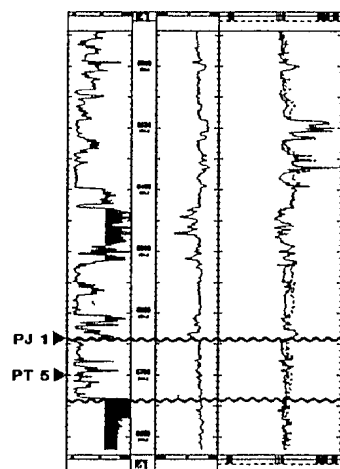
DATE: Dec 90

SCALE: As shown

No.: NAP 00 7849

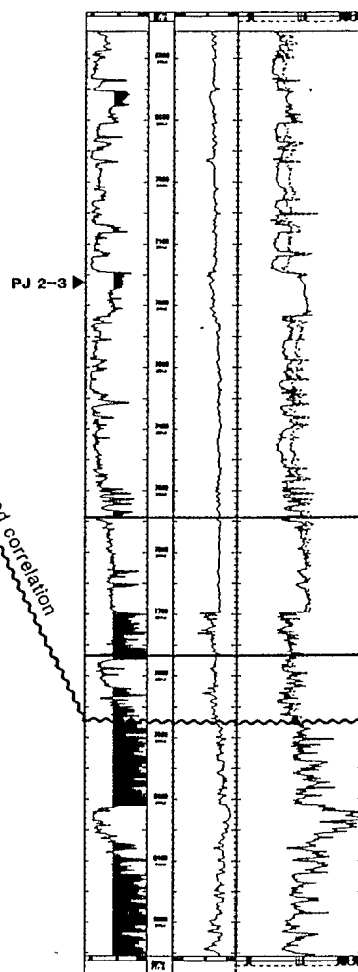
FIG: 4

KOONCHERA 1



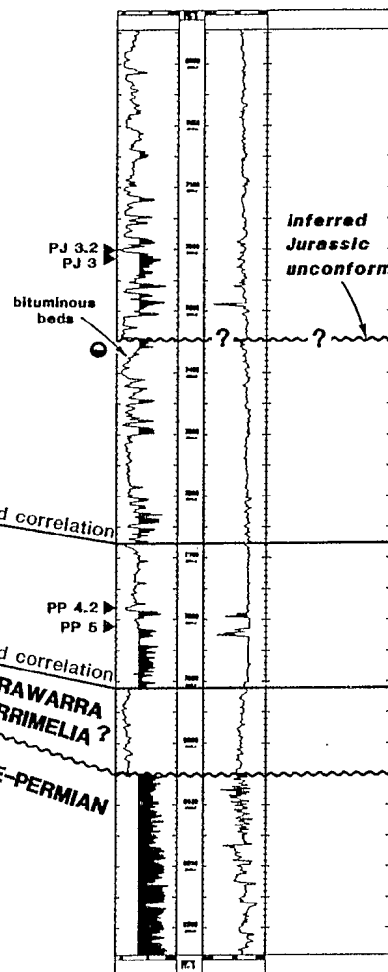
PRE-PERMIAN DIPS
To 60°

DAER 1



Good correlation

COONGIE 1



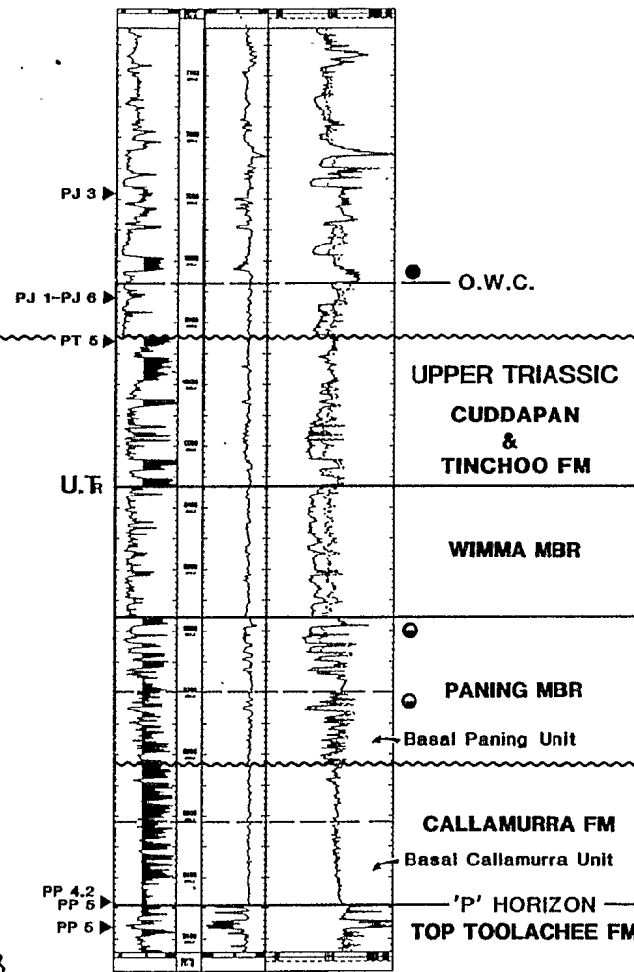
Good correlation

Good correlation

TIRRAWARRA
MERRIMELIA ?

PRE-PERMIAN

CUTTAPIRRIE 1



PJ 3

PJ 1-PJ 6

PT 5

U.T.

PP 4.2

PP 5

O.W.C.

UPPER TRIASSIC
CUDDAPAN
&
TINCHOO FM

WIMMA MBR

PANING MBR

Basal Paning Unit

CALLAMURRA FM

Basal Callamurra Unit

'P' HORIZON
TOP TOOLACHEE FM

CUTTAPIRRIE Correlated
from regional cross-section A-A



SAGASCO Resources Ltd.

COOPER BASIN - SOUTH AUSTRALIA

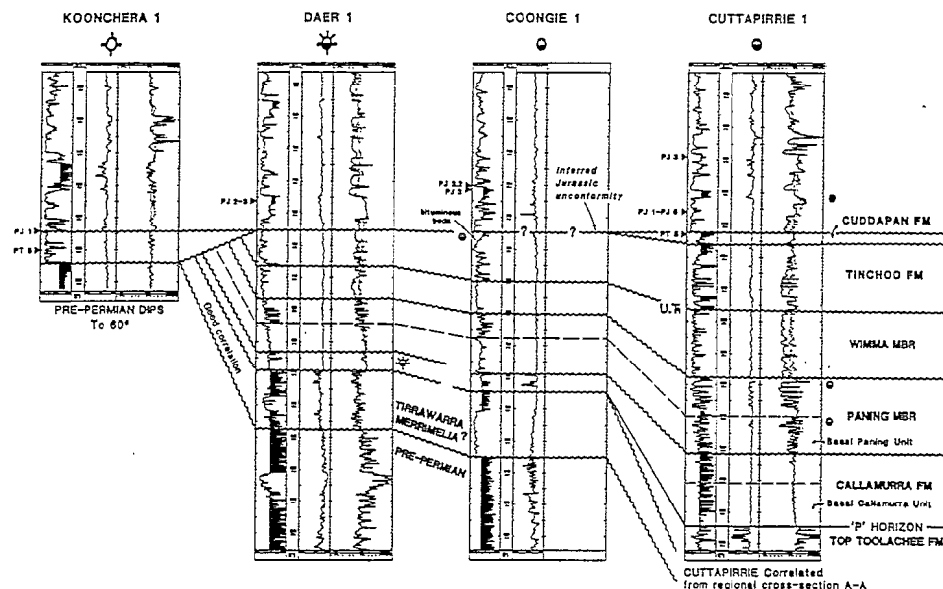
DAER COONGIE AREA

TRIASSIC PALYNOLOGY

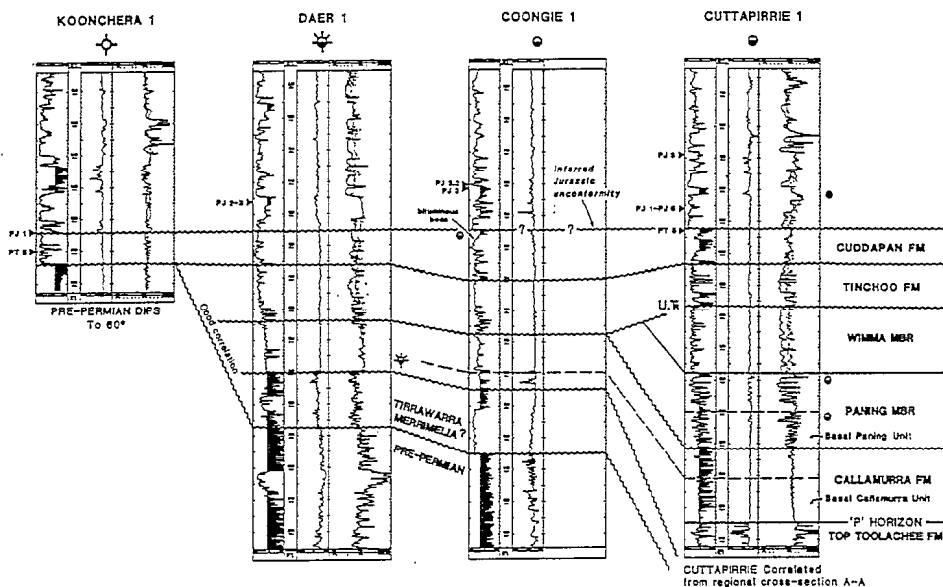
AUT: LKS DATED: Dec 90 No.: NAP 00 7850 FIG: 5

ILLUSTRATES BASIC PALYNOLOGY AND DEFINITE BOUNDARY
PICKS AND SHOWS

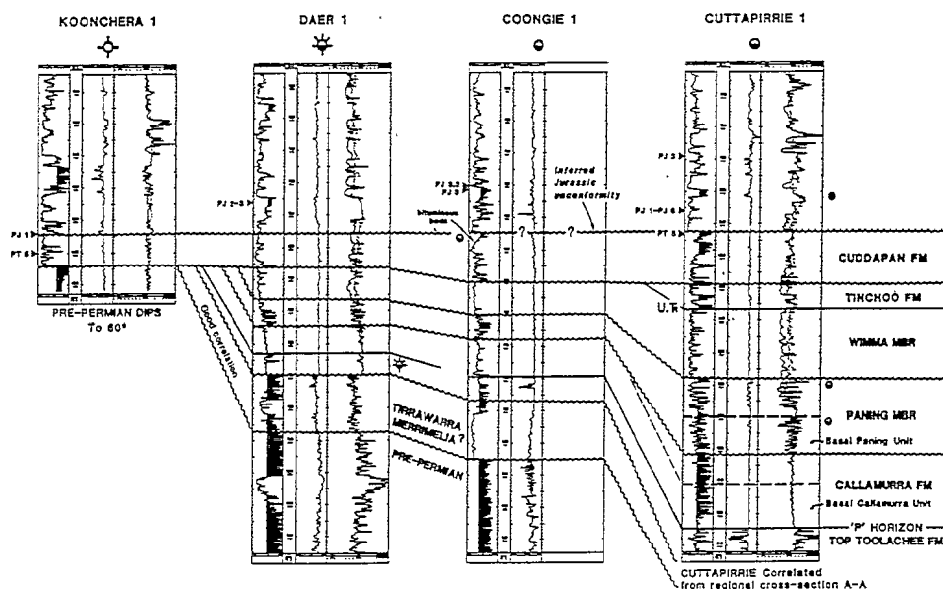
1



2



3

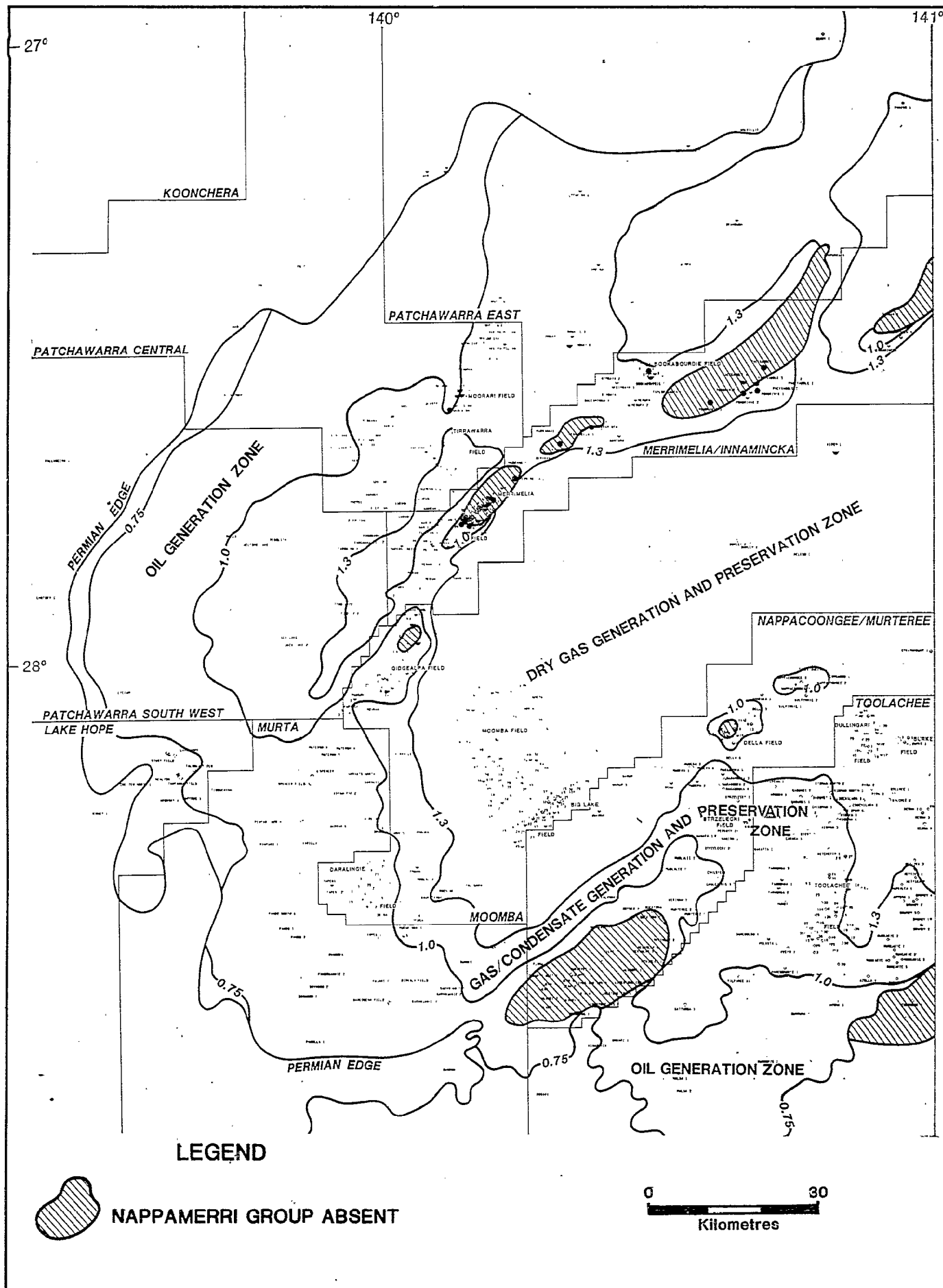


SAGASCO Resources Ltd.
COOPER BASIN - SOUTH AUSTRALIA
NAPPAMERRI GROUP

THREE POSSIBLE CORRELATIONS OF THE 'TRIASSIC' SECTION AT THE DAER-COONGIE AREA

AUTHOR: LKS DRAWN: JMD DATE: Dec 90 SCALE: As shown

No.: NAP 00 7851 FIG: 6



SAGASCO Resources Ltd.
COOPER BASIN - SOUTH AUSTRALIA

VITRINITE REFLECTANCE (V_R) - BASE PATCHAWARRA (From D.Buckhardt, 1990)

AUTHOR: L.Spencer

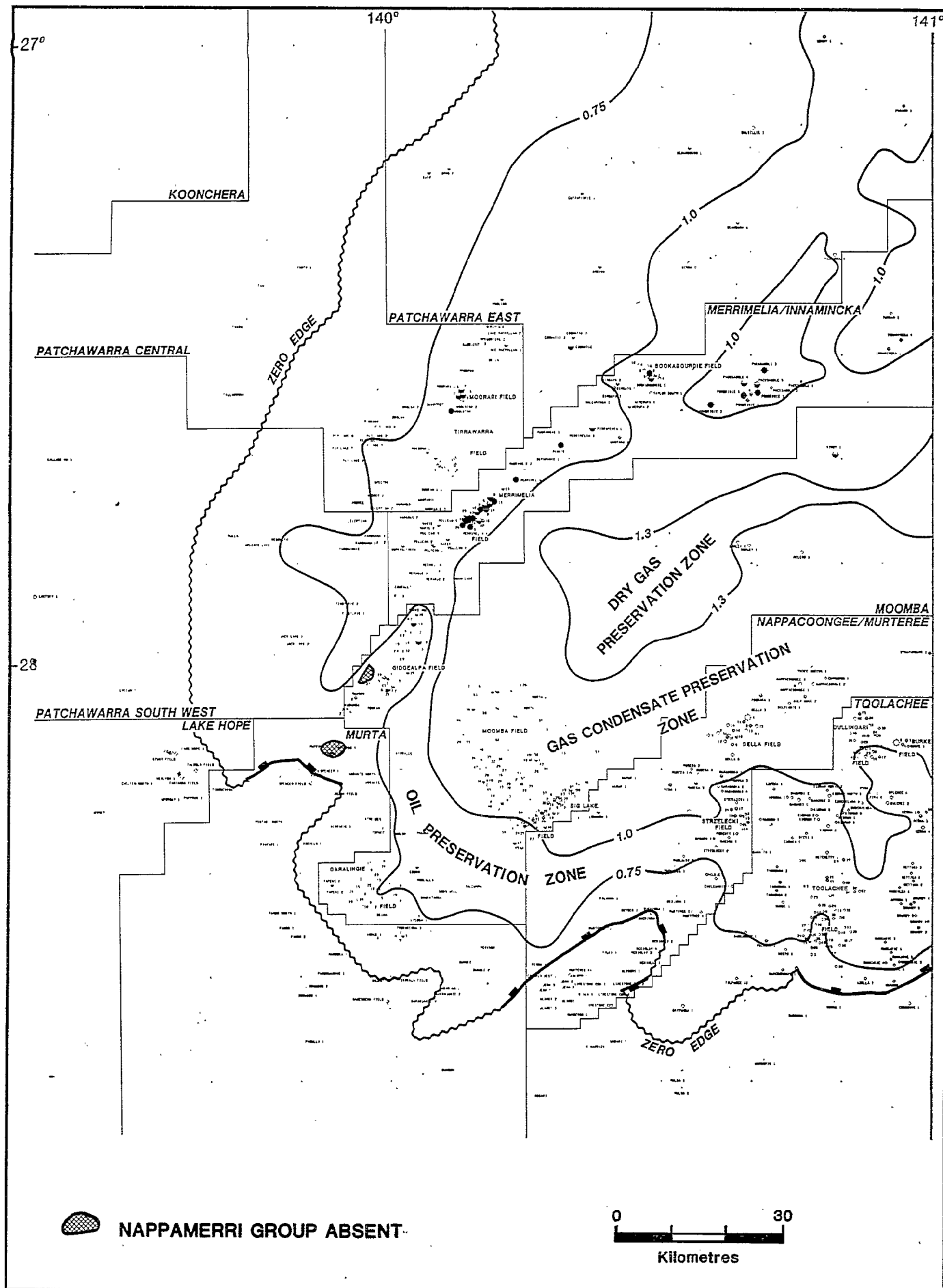
DRAWN: P.Oldham

DATE: Nov.1990

SCALE: As shown

No.: NAP 00 7659

FIG: 14





SAGASCO Resources Ltd.

COOPER BASIN - SOUTH AUSTRALIA

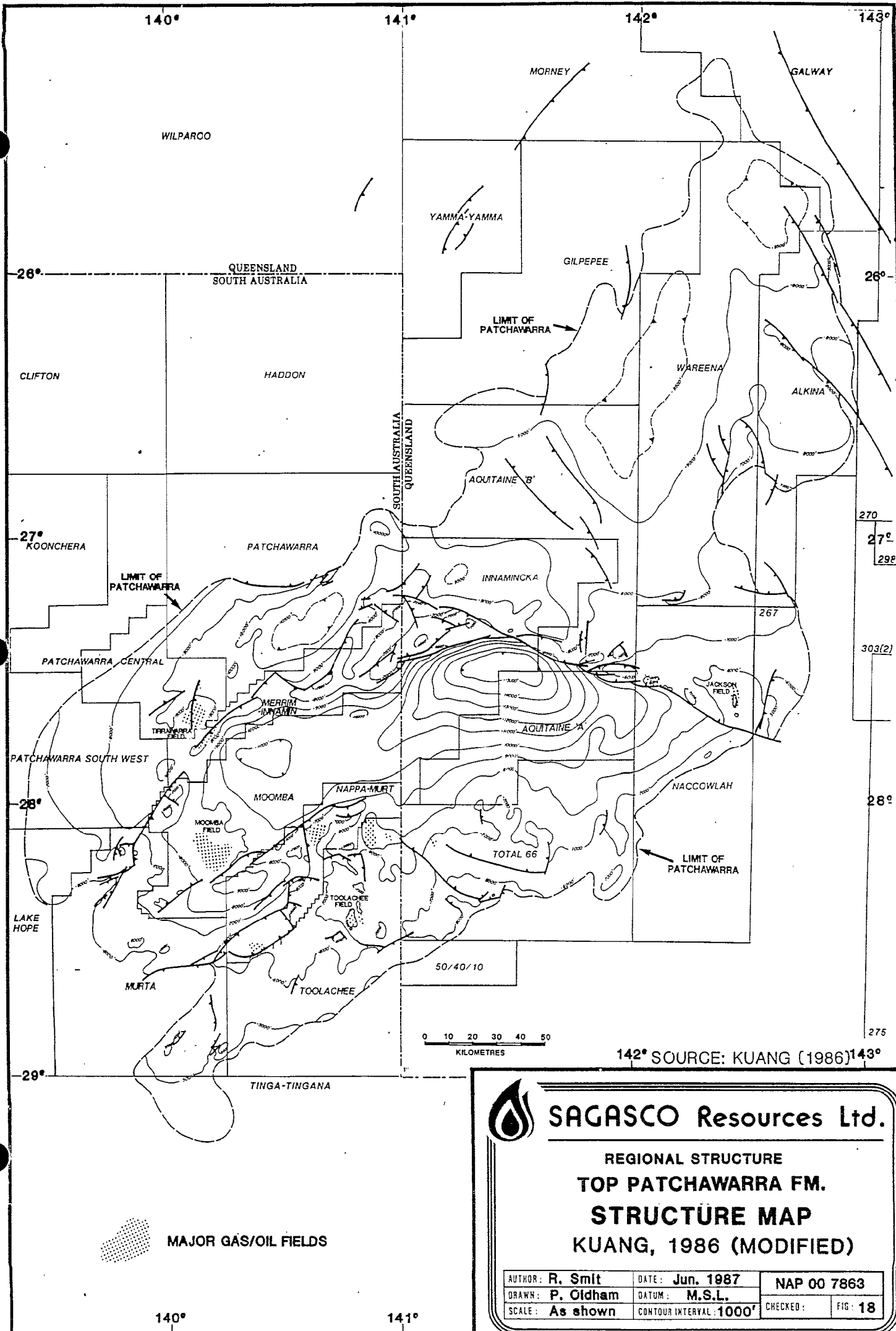
VITRINITE REFLECTANCE (V_R) - BASE NAPPAMERRI GROUP

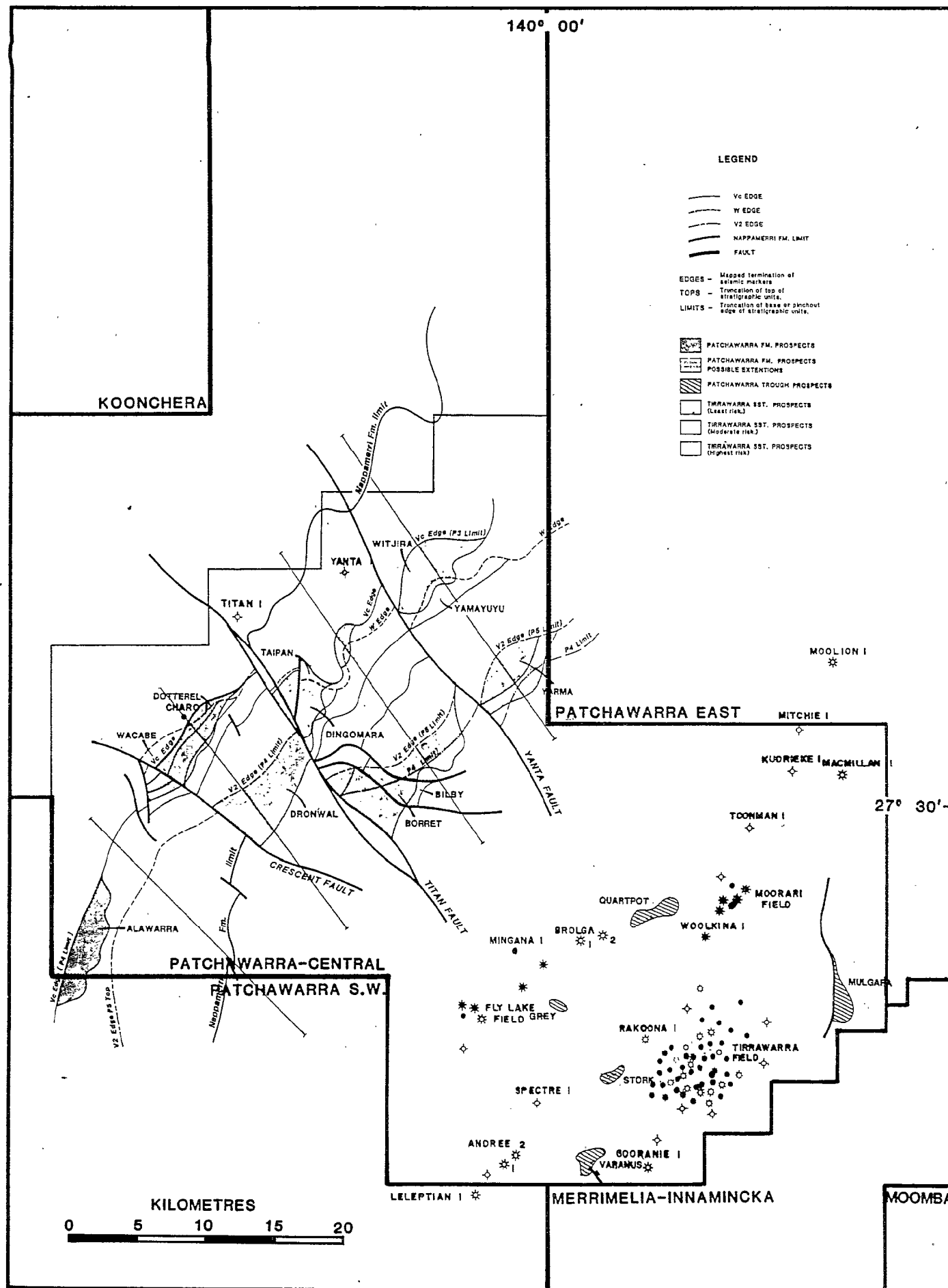
(From D.Buckhardt, 1990)

AUTHOR: L.Spencer	DRAWN: J.Dutkiewicz	DATE: Nov.1990	SCALE: As shown
No.: NAP 00 7830			FIG: 15



FIG: 17





SAGASCO Resources Ltd.
 COOPER BASIN - SOUTH AUSTRALIA

ALTERNATE FAULT OFFSET FOR INTERPRETATION OF NAPPAMERRI GROUP ALONG WESTERN FLANK

AUTHOR: D.Roberts

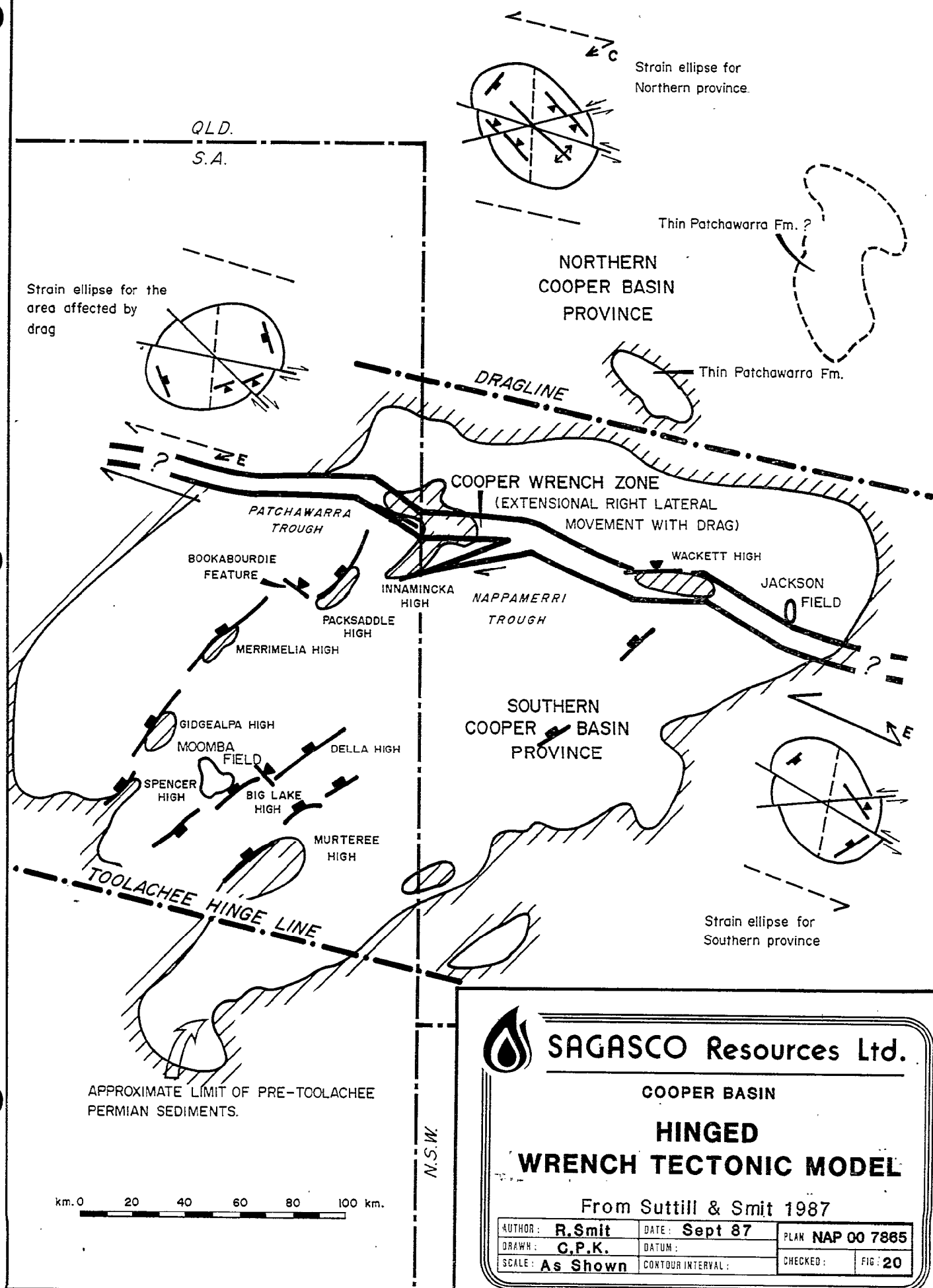
DRAWN: CPK/BDW

DATE: April 88

SCALE: 1:375 000

No.: NAP 03 7664

FIG: 19



SAGASCO Resources Ltd.

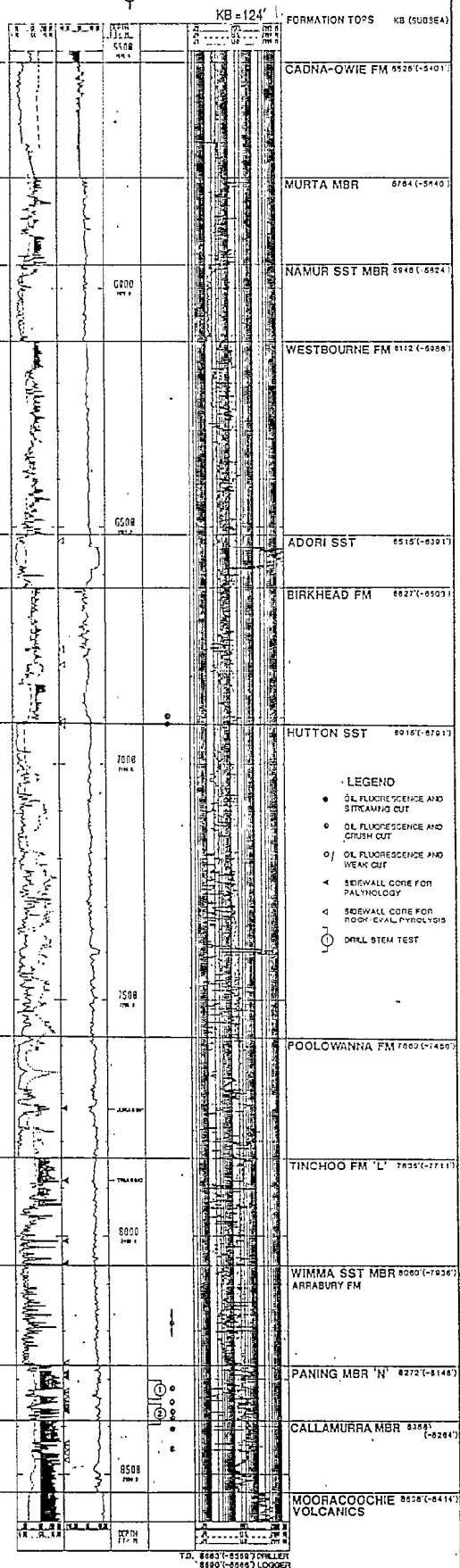
COOPER BASIN

HINGED WRENCH TECTONIC MODEL

From Suttill & Smit 1987

AUTHOR: R.Smit	DATE: Sept 87	PLAN NAP 00 7885
DRAWN: C.P.K.	DATUM:	CHECKED:
SCALE: As Shown	CONTOUR INTERVAL:	FIG: 20

DERAMOOKOO 1



DST 1: HFTS: Rec. 180' Water out mud, 802' formation water & Waste
DST 2: HFTS: Rec. 1897' Formation water, 177' annular mud.



SAGASCO Resources Ltd.
COOPER BASIN - SOUTH AUSTRALIA
PATCHAWARRA EAST BLOCK
DERAMOOKOO 1 - WELL SUMMARY

AUTHOR: W. Fairburn

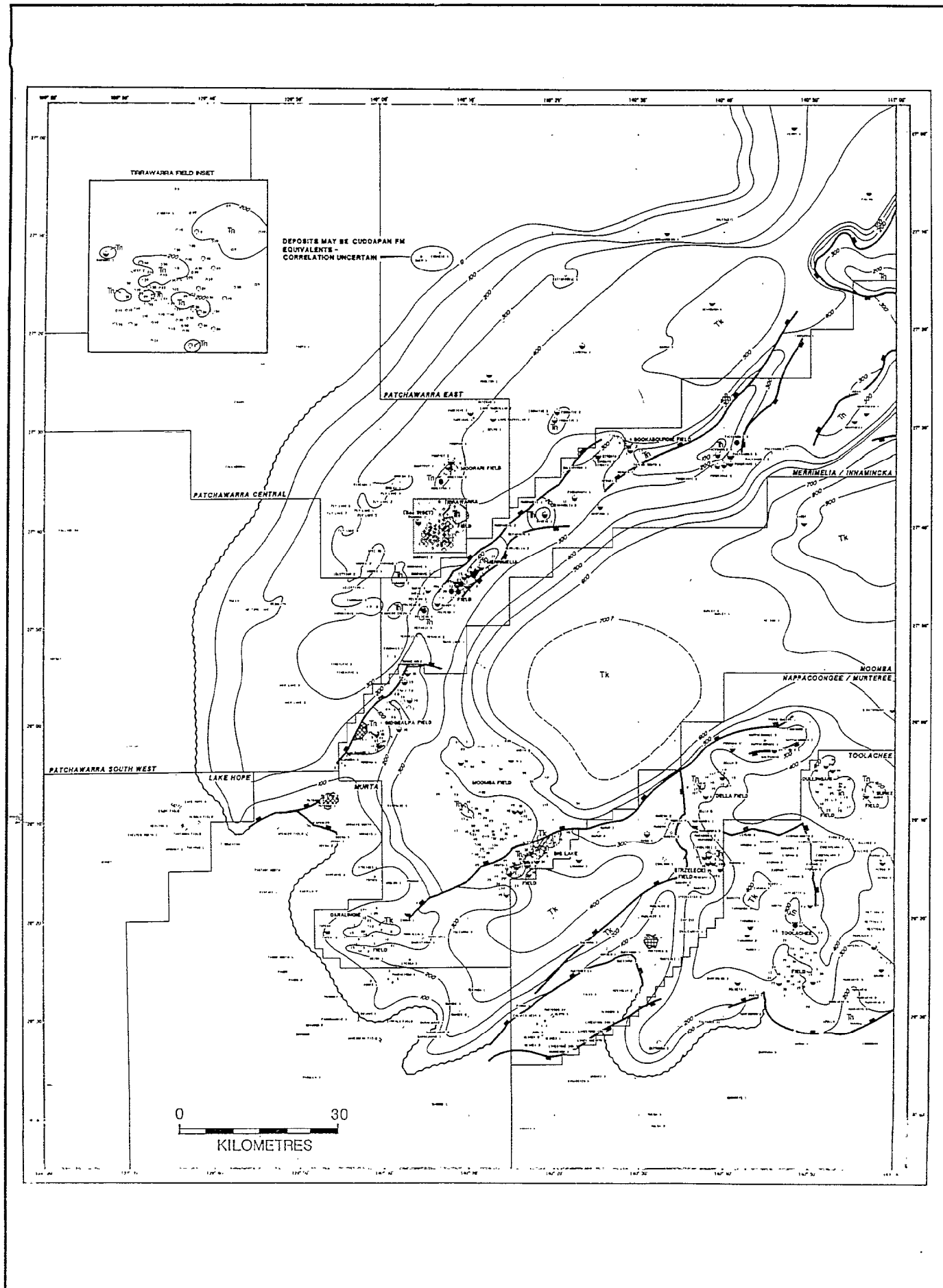
DRAWN: P. Oldham

DATE: Dec 90

SCALE: As shown

No.: NAP 00 7866

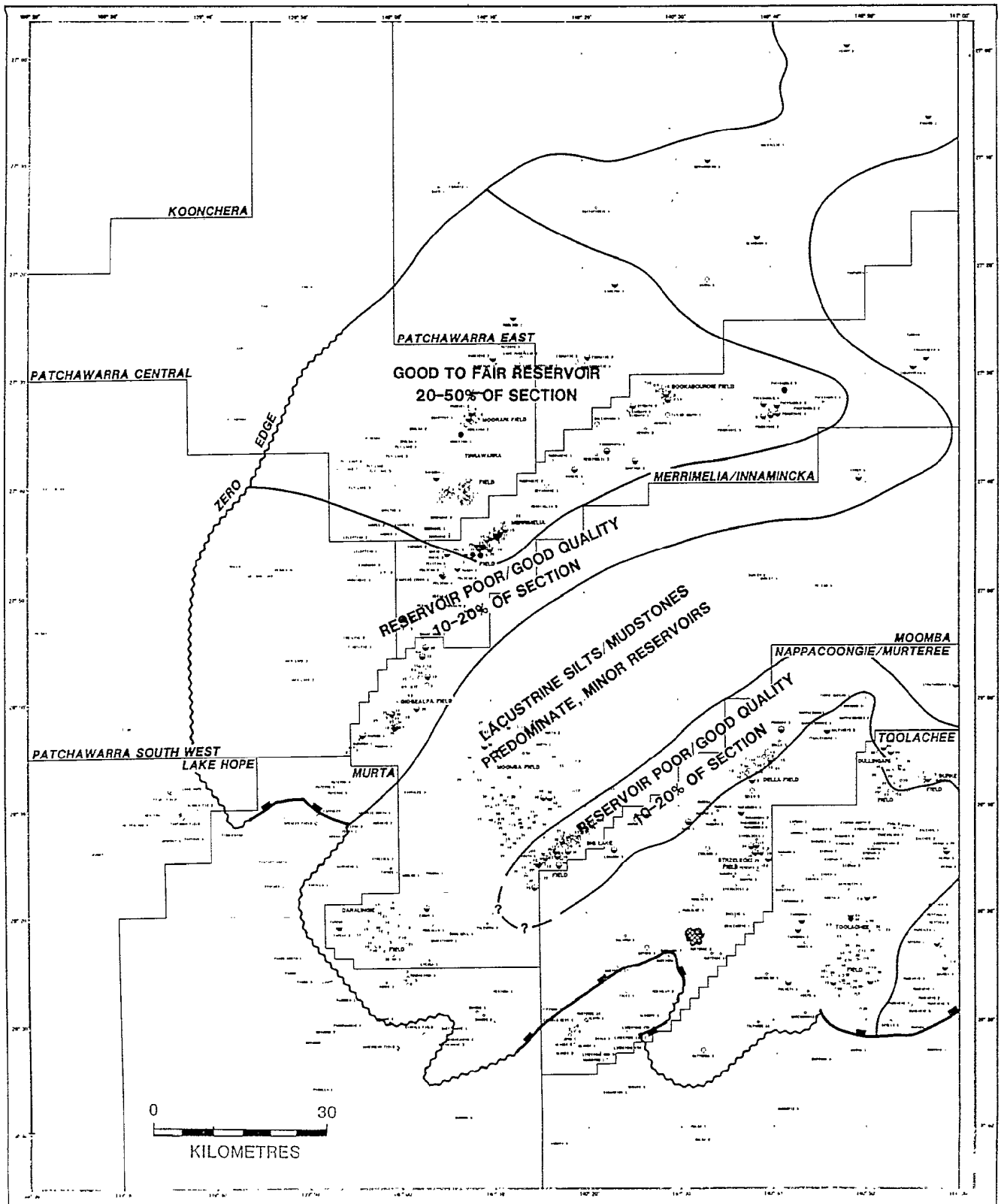
FIG: 21



SAGASCO Resources Ltd.
COOPER BASIN - SOUTH AUSTRALIA
NAPPAMERRI GROUP
CALLAMURRA FORMATION
ISOPACH & SHOWS MAP

AUTHOR: L. Spencer DRAWN: C.P.K. DATE: Dec 90 SCALE: As shown

No.: NAP 00 7868 FIG: 23



SAGASCO Resources Ltd.
COOPER BASIN - SOUTH AUSTRALIA
NAPPAMERRI GROUP
CALLAMURRA FORMATION
GROSS RESERVOIR QUALITY ASSESSMENT

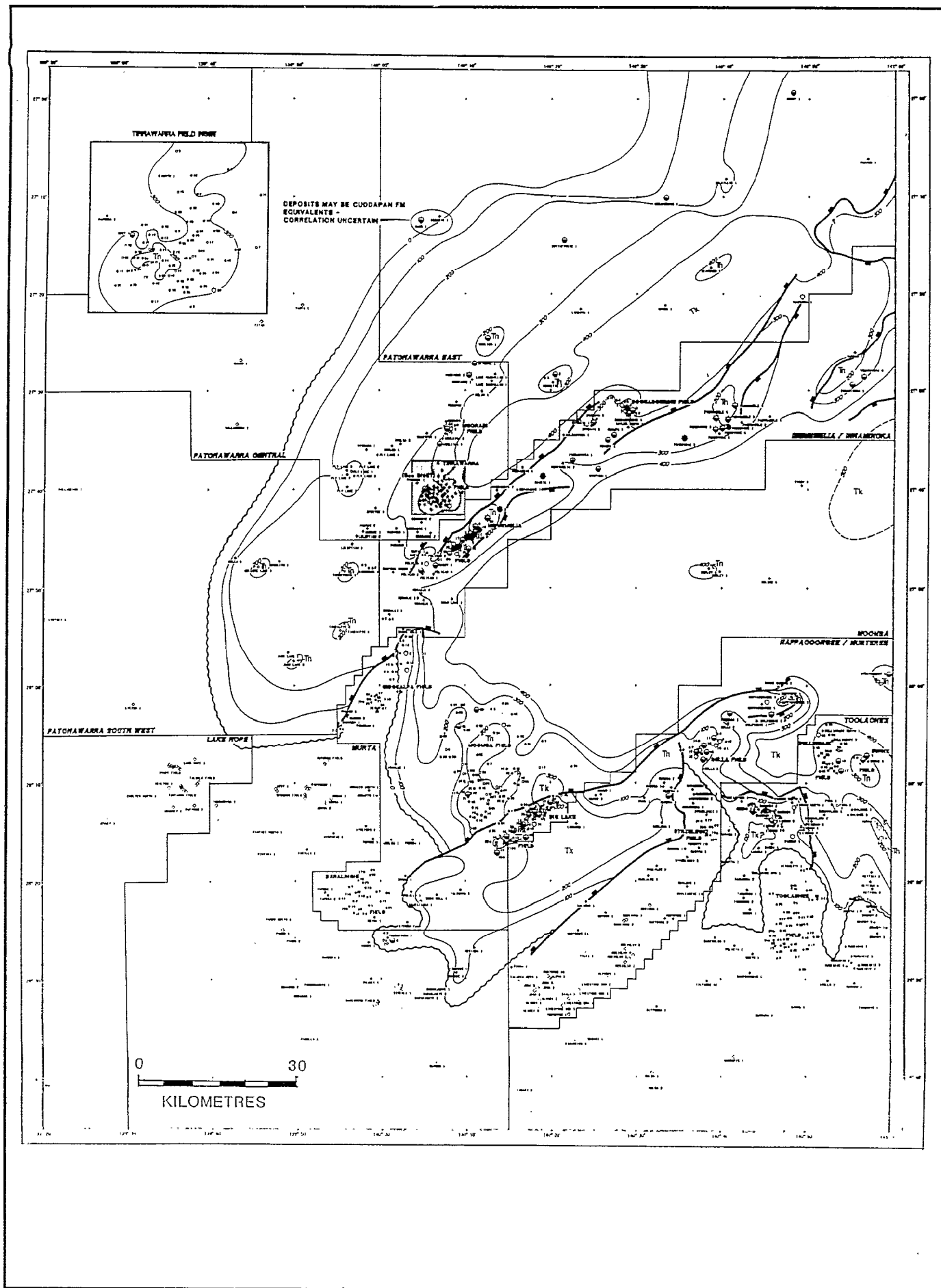
AUTHOR: L. Spencer DRAWN: J.M.D.

DATE: Dec 90

SCALE: As shown

No.: NAP 00 7869

FIG: 24



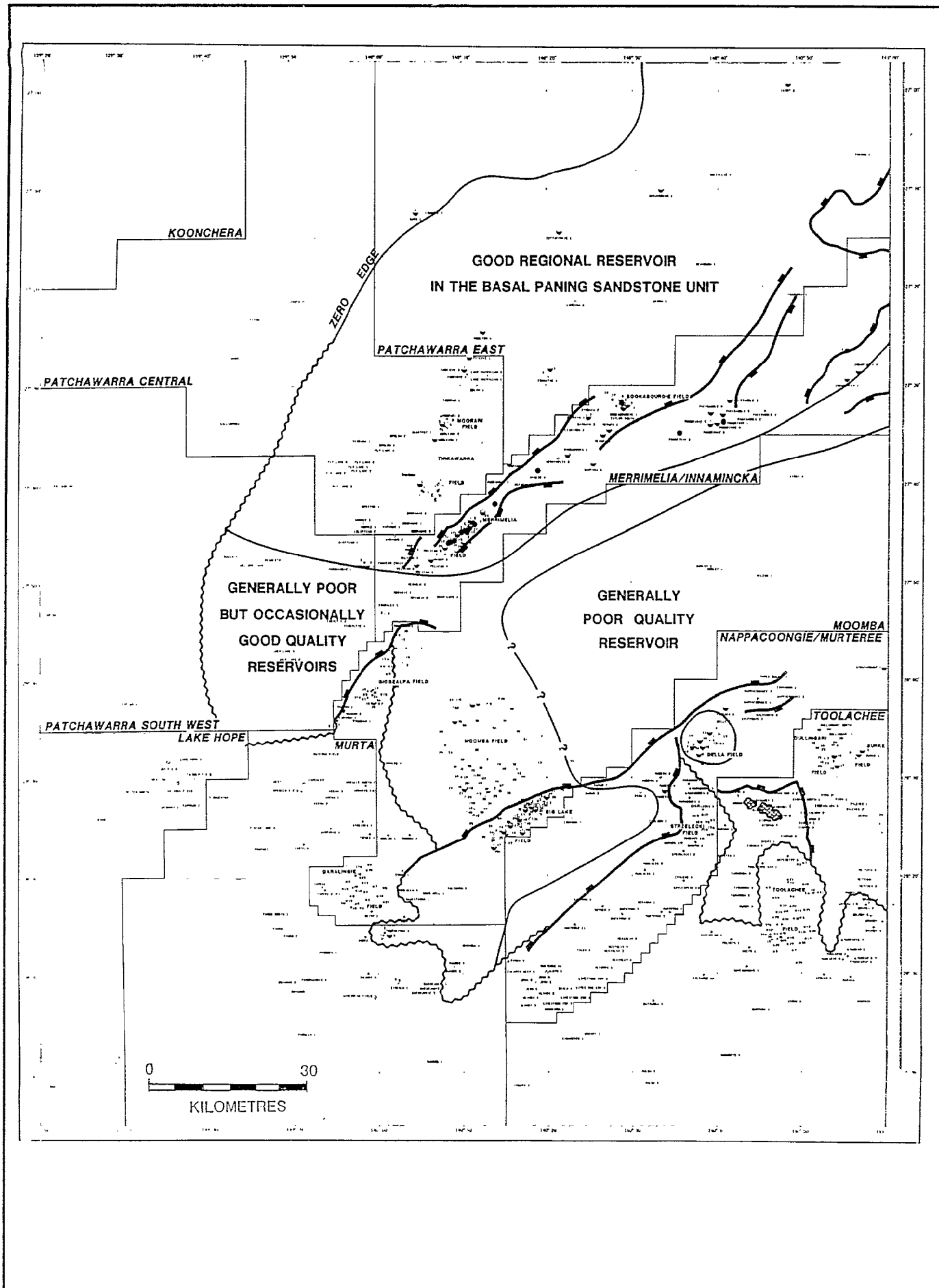
SAGASCO Resources Ltd.
COOPER BASIN - SOUTH AUSTRALIA
NAPPAMERRI GROUP

ARRABURY FORMATION - PANING MEMBER
ISOPACH & SHOWS MAP

AUTHOR: L. Spencer DRAWN: C.P.K.

DATE: Dec 90 SCALE: As shown

No.: NAP 00 7870 FIG: 25



SAGASCO Resources Ltd.
COOPER BASIN - SOUTH AUSTRALIA
NAPPAMERRI GROUP

ARRABURY FORMATION - PANING MEMBER
GROSS RESERVOIR QUALITY ASSESSMENT

AUTHOR: L. Spencer

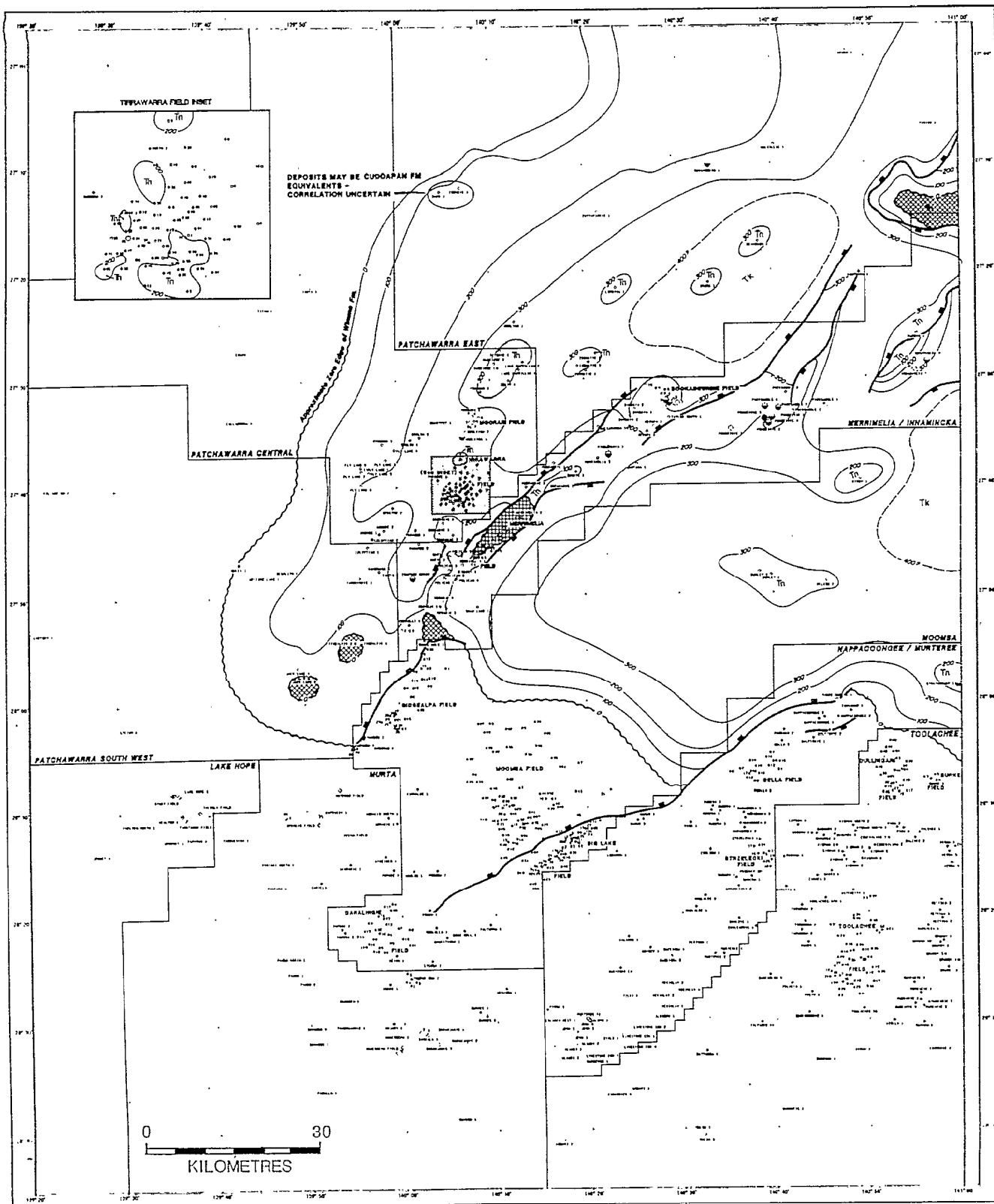
DRAWN: J.M.D.

DATE: Dec 90

SCALE: As shown

No.: NAP 00 7871

FIG: 26



SAGASCO Resources Ltd.
COOPER BASIN - SOUTH AUSTRALIA
NAPPAMERRI GROUP

**ARRABURY FORMATION - WIMMA MEMBER
ISOPACH & SHOWS MAP**

AUTHOR: L. Spencer

DRAWN: C.P.K.

DATE: Dec 90

SCALE: As shown

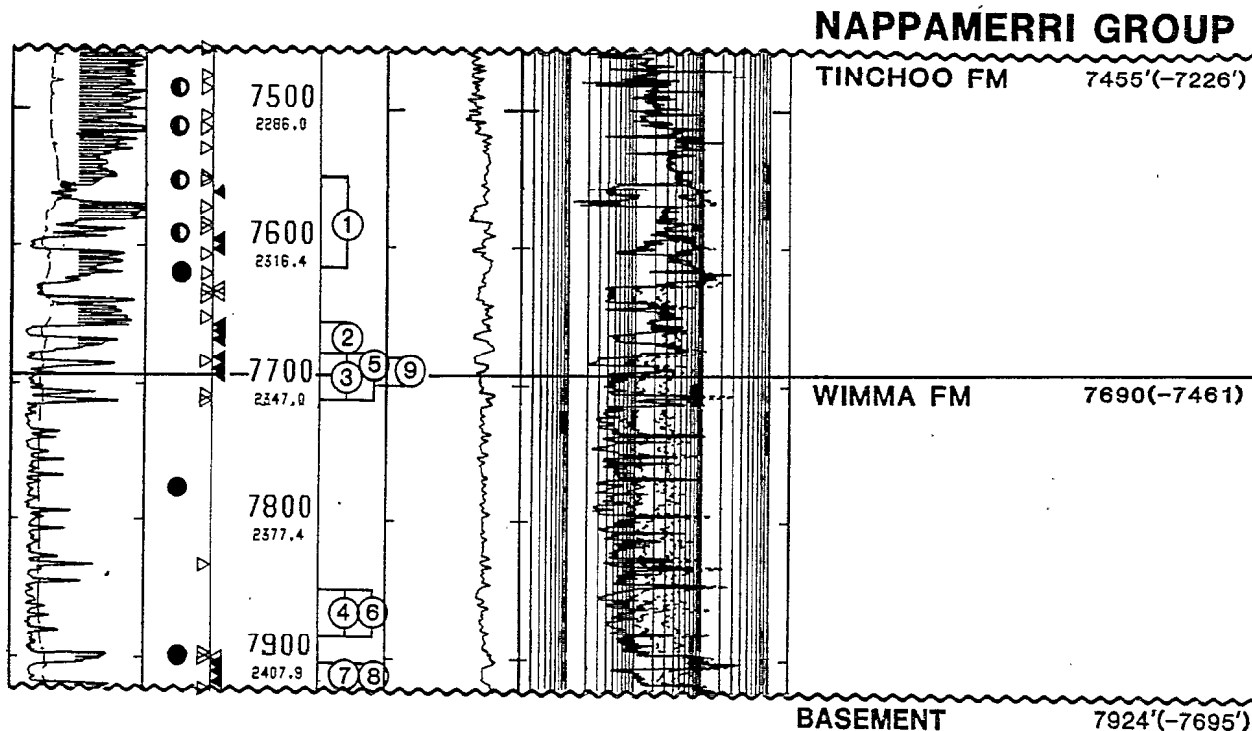
No.: NAP 00 7872

FIG: 27



ARRABURY FORMATION - WIMMA MEMBER GROSS RESERVOIR QUALITY ASSESSMENT

FIG: 28



DST 1: (7550'-7616') OTS in 36 mins @ 1400 BOPD; rec. 6345' oil, 1146' formation water

DST 2: (7656'-7676') OTS in 36 mins @ 1810 BOPD; rec. full string oil and <1 bbl water

DST 3: (7676'-7711') MISRUN; packer seat failed

DST 4: (7850'-7885') MISRUN; packer seat failed

DST 5: (7676'-7711') Retest of DST 3; MISRUN; packer seat failed

DST 6: (7850'-7885') Retest of DST 4; WTS in 77 mins @ 80 BWPD; rec. full string water

DST 7: (7905'-7925') MISRUN; punctured packer

DST 8: (7905'-7925') Retest of DST 7; MISRUN; pump plugged

DST 9: (7680'-7700') MISRUN; pump plugged

LEGEND:

- FLUORESCENCE WITH NO CUT
- ① FLUORESCENCE WITH WEAK CRUSH CUT
- FLUORESCENCE WITH SLOW STREAMING CUT
- ② DST INTERVAL AND NUMBER
- ◁ SIDE WALL CORE
- ◄ SIDE WALL CORE WITH FLUORESCENCE

(After D.Coelho, 1988)



SAGASCO Resources Ltd.
COOPER BASIN - SOUTH AUSTRALIA
NAPPAMERRI GROUP

JAMES 1: NAPPAMERRI GROUP PAY AND SHOWS

AUTHOR LKS DRAWN: JMD DATE: Dec 90 SCALE: As shown

No.: NAP 00 7875 FIG: 30

TABLE III: NAPPAMERRI GROUP
Tops (in feet and meters KB) & Thickness in Feet & Meters(m)

<u>WELLNAME</u>	<u>TOP (meters)</u>	<u>BASE(meters)</u>	<u>Thickness(m)</u>
AMYEMA 1	5867 (1788.3)	6156 (1876.4)	289 (88.1)
ANDREE 1	7978 (2431.7)	8605 (2622.8)	627 (191.1)
ANDREE 2	8030 (2447.5)	8681 (2646.0)	651 (198.4)
AROONA 1	6029 (1837.6)	6469 (1971.8)	440 (134.1)
ARRAKIS 1	6864 (2092.2)	6954 (2119.6)	90 (27.4)
ARRAKIS NORTH 1	6900 (2103.1)	6968 (2123.9)	68 (20.7)
ATREIDES 1	6456 (1967.8)	6640 (2023.9)	184 (56.1)
AZOLLA 1	5708 (1739.8)	5970 (1819.7)	262 (79.9)
BAGUNDI 1	6089 (1855.9)	6423 (1957.7)	334 (101.8)
BAGUNDI 2	6108 (1861.7)	6518 (1986.7)	410 (125.0)
BAGUNDI 3	6107 (1861.4)	6507 (1983.3)	400 (121.9)
BALCAMINGA 1	8191 (2496.6)	9310 (2837.7)	1119 (341.1)
BARATTA 1	6130 (1868.4)	6489 (1977.9)	359 (109.4)
BARCOOLOO 1	5817 (1773.0)	6080 (1853.2)	263 (80.2)
BATTUNGA 1	5826 (1775.8)	6055 (1845.6)	229 (69.8)
BEANBUSH 1	8795 (2680.7)	10505 (3201.9)	1710 (521.2)
BIG LAKE 1	6950 (2118.4)	7525 (2293.6)	575 (175.3)
BIG LAKE 2	6930 (2112.3)	7392 (2253.1)	462 (140.8)
BIG LAKE 3	7023 (2140.6)	7613 (2320.4)	590 (179.8)
BIG LAKE 4	7007 (2135.7)	7510 (2289.1)	503 (153.3)
BIG LAKE 5	6911 (2106.5)	7486 (2281.7)	575 (175.3)
BIG LAKE 6	7012 (2137.3)	7519 (2291.8)	507 (154.5)
BIG LAKE 7	7058 (2151.3)	7513 (2290.0)	455 (138.7)
BIG LAKE 8	6912 (2106.8)	7464 (2275.0)	552 (168.2)
BIG LAKE 9	6936 (2114.1)	7475 (2278.4)	539 (164.3)
BIG LAKE 10	7009 (2136.3)	7569 (2307.0)	560 (170.7)
BIG LAKE 11	6948 (2117.8)	7490 (2283.0)	542 (165.2)
BIG LAKE 12	6937 (2114.4)	7483 (2280.8)	546 (166.4)
BIG LAKE 13	7125 (2171.7)	7600 (2316.5)	475 (144.8)
BIG LAKE 14	7002 (2134.2)	7515 (2290.6)	513 (156.4)
BIG LAKE 15	6921 (2109.5)	7490 (2283.0)	569 (173.4)
BIG LAKE 16	6891 (2100.4)	7422 (2262.2)	531 (161.8)
BIG LAKE 17	7026 (2141.5)	7532 (2295.8)	506 (154.2)
BIG LAKE 18	6934 (2113.5)	7498 (2285.4)	564 (171.9)
BIG LAKE 19A	6953 (2119.3)	7508 (2288.4)	555 (169.2)
BIG LAKE 20	6940 (2115.3)	7526 (2293.9)	586 (178.6)
BIG LAKE 21	7048 (2148.2)	7540 (2298.2)	492 (150.0)
BIG LAKE 22	7034 (2144.0)	7541 (2298.5)	507 (154.5)
BIG LAKE 23	7140 (2176.3)	7586 (2312.2)	446 (135.9)
BIG LAKE 24	6986 (2129.3)	7567 (2306.4)	581 (177.1)
BIG LAKE 25	7006 (2135.4)	7530 (2295.1)	524 (159.7)
BIG LAKE 26	6900 (2103.1)	7387 (2251.6)	487 (148.4)
BIG LAKE 27	6938 (2114.7)	7504 (2287.2)	566 (172.5)
BIG LAKE 29	7019 (2139.4)	7450 (2270.8)	431 (131.4)
BIG LAKE 30	6989 (2130.3)	7523 (2293.0)	534 (162.8)
BIG LAKE 31	7030 (2142.7)	7592 (2314.0)	562 (171.3)
BIG LAKE 32	6945 (2116.8)	7481 (2280.2)	536 (163.4)
BIG LAKE 33	7053 (2149.8)	7582 (2311.0)	529 (161.2)
BIG LAKE 34	6964 (2122.6)	7495 (2284.5)	531 (161.8)
BIG LAKE 35	6970 (2124.5)	7536 (2297.0)	566 (172.5)
BIG LAKE 41	7005 (2135.1)	7586 (2312.2)	581 (177.1)
BIG LAKE 43	7018 (2139.1)	7512 (2289.7)	494 (150.6)
BIG LAKE 44	7034 (2144.0)	7529 (2294.8)	495 (150.9)
BIG LAKE 45	7190 (2191.5)	7636 (2327.5)	446 (135.9)

<u>WELLNAME</u>	<u>TOP (meters)</u>		<u>BASE(meters)</u>		<u>Thickness(m)</u>	
BIG LAKE 46	7030	(2142.7)	7610	(2319.5)	580	(176.8)
BIG LAKE 47	7182	(2189.1)	7609	(2319.2)	427	(130.1)
BIG LAKE 48	7053	(2149.8)	7694	(2345.1)	641	(195.4)
BIMBAYA 1	7700	(2347.0)	8644	(2634.7)	944	(287.7)
BIMBAYA 2	7735	(2357.6)	8762	(2670.7)	1027	(313.0)
BIMBAYA 3	7738	(2358.5)	8750	(2667.0)	1012	(308.5)
BOBS WELL 1	6797	(2071.7)	7240	(2206.8)	443	(135.0)
BOOKABOURDIE 1	7710	(2350.0)	8723	(2658.8)	1013	(308.8)
BOOKABOURDIE 2	7752	(2362.8)	8760	(2670.1)	1008	(307.2)
BOOKABOURDIE 3	7754	(2363.4)	8822	(2689.0)	1068	(325.5)
BOOKABOURDIE 4	7966	(2428.0)	8926	(2720.7)	960	(292.6)
BOOKABOURDIE 6	7945	(2421.6)	9071	(2764.8)	1126	(343.2)
BOOKABOURDIE 7	7795	(2375.9)	8906	(2714.6)	1111	(338.6)
BOOKABOURDIE 8	7744	(2360.4)	8736	(2662.7)	992	(302.4)
BOOKABOURDIE 9	7714	(2351.2)	8720	(2657.9)	1006	(306.6)
BOOKABOURDIE 10	8170	(2490.2)	9184	(2799.3)	1014	(309.1)
BROLGA 1	7905	(2409.4)	8693	(2649.6)	788	(240.2)
BROLGA 2	7928	(2416.5)	8692	(2649.3)	764	(232.9)
BRUMBY 1	5713	(1741.3)	5978	(1822.1)	265	(80.8)
BRUMBY 2	5782	(1762.4)	6090	(1856.2)	308	(93.9)
BRUMBY 3	5765	(1757.2)	6045	(1842.5)	280	(85.3)
BRUMBY 4	5768	(1758.1)	6070	(1850.1)	302	(92.0)
BRUMBY 5	5766	(1757.5)	6050	(1844.0)	284	(86.6)
BUNGEE 1	5930	(1807.5)	6211	(1893.1)	281	(85.6)
BUNGEE 2	5878	(1791.6)	6233	(1899.8)	355	(108.2)
BURKE 1	6268	(1910.5)	6940	(2115.3)	672	(204.8)
BURKE 3	6336	(1931.2)	7006	(2135.4)	670	(204.2)
BURKE 4	6254	(1906.2)	6934	(2113.5)	680	(207.3)
BURKE 5	6310	(1923.3)	7014	(2137.9)	704	(214.6)
BURLEY 1	7480	(2279.9)	8737	(2663.0)	1257	(383.1)
BURLEY 2	7483	(2280.8)	8770	(2673.1)	1287	(392.3)
CARAKA 1	6223	(1896.8)	6669	(2032.7)	446	(135.9)
CHILCARRIE 1	5932	(1808.1)	6256	(1906.8)	324	(98.8)
CHILDIE 1	5796	(1766.6)	6018	(1834.3)	222	(67.7)
COOCHILARA 1	6238	(1901.3)	6868	(2093.4)	630	(192.0)
COOCHILARA 2	6239	(1901.7)	6857	(2090.0)	618	(188.4)
COOLOON 1	6308	(1922.7)	6852	(2088.5)	544	(165.8)
COONATIE 1	8228	(2507.9)	9398	(2864.5)	1170	(356.6)
COONATIE 2	8146	(2482.9)	9230	(2813.3)	1084	(330.4)
COONATIE 3	8289	(2526.5)	9523	(2902.6)	1234	(376.1)
COONGIE 1	7344	(2238.5)	7785	(2372.9)	441	(134.4)
COOPERS CREEK 1	7649	(2331.4)	8364	(2549.4)	715	(217.9)
CORKWOOD 1	5866	(1788.0)	6243	(1902.9)	377	(114.9)
COWAN 1	6371	(1941.9)	6491	(1978.5)	120	(36.6)
COWRALLI 1	7655	(2333.2)	8320	(2535.9)	665	(202.7)
COWRALLI 2	7690	(2343.9)	8362	(2548.7)	672	(204.8)
COWRALLI 3	7674	(2339.0)	8331	(2539.3)	657	(200.3)
CUTTAPIRRIE 1	8122	(2475.6)	9045	(2756.9)	923	(281.3)
DAER 1	7255	(2211.3)	7628	(2325.0)	373	(113.7)
DARALINGIE 1	6142	(1872.1)	6317	(1925.4)	175	(53.3)
DARALINGIE 2	6136	(1870.3)	6397	(1949.8)	261	(79.6)
DARALINGIE 3	6260	(1908.1)	6416	(1955.6)	156	(47.5)
DARALINGIE 4	6418	(1956.2)	6582	(2006.2)	164	(50.0)
DARALINGIE 5	6050	(1844.0)	6194	(1887.9)	144	(43.9)
DARALINGIE 6	6220	(1895.9)	6400	(1950.7)	180	(54.9)
DARALINGIE 7	6236	(1900.7)	6450	(1996.0)	214	(65.2)
DARALINGIE 8	6223	(1896.8)	6429	(1959.6)	206	(62.8)

<u>WELLNAME</u>	<u>TOP (meters)</u>	<u>BASE(meters)</u>	<u>Thickness(m)</u>
DARALINGIE 9	6176 (1882.4)	6392 (1948.3)	216 (65.8)
DARALINGIE 10	6192 (1887.3)	6370 (1941.6)	178 (54.3)
DARALINGIE 11	6203 (1890.7)	6380 (1944.6)	177 (53.9)
DARALINGIE 12	6313 (1924.2)	6520 (1987.3)	207 (63.1)
DARALINGIE 13	6254 (1906.2)	6477 (1974.2)	23 (68.0)
DARALINGIE 14	6176 (1882.4)	6366 (1940.4)	10 (57.9)
DARALINGIE 15	6278 (1913.5)	6496 (1980.0)	21 (66.4)
DARALINGIE 16	6301 (1920.5)	6481 (1975.4)	180 (54.9)
DARALINGIE 17	6471 (1972.4)	6622 (2018.4)	151 (46.0)
DARALINGIE 18	6241 (1902.3)	6486 (1976.9)	245 (4.7)
DARALINGIE 19	6223 (1896.8)	6458 (1968.4)	235 (7.6)
DARALINGIE 20	6429 (1959.6)	6612 (2015.3)	183 (55.8)
DARALINGIE 21	6225 (1897.4)	6478 (1974.5)	253 (77.1)
DARALINGIE 22	6313 (1924.2)	6557 (1998.6)	244 (74.4)
DARALINGIE 23	6301 (1920.5)	6559 (1999.2)	258 (78.6)
DEINA 1	6188 (1886.1)	6432 (1960.5)	244 (74.4)
DELIN 1	8286 (2525.6)	9470 (2886.5)	1184 (360.9)
DELLA 1	5975 (1821.2)	6409 (1953.5)	434 (132.3)
DELLA 2	6176 (1882.4)	6491 (1978.5)	315 (96.0)
DELLA 3	6078 (1852.6)	6595 (2010.2)	517 (157.6)
DELLA 4	5954 (1814.8)	6416 (1955.6)	462 (140.8)
DELLA 5A	5881 (1792.5)	6205 (1891.3)	324 (98.8)
DELLA 6	6040 (1841.0)	6470 (1972.1)	430 (131.1)
DELLA 7	6027 (1837.0)	6323 (1927.3)	296 (90.2)
DELLA 8	5950 (1813.6)	6339 (1932.1)	389 (118.6)
DELLA 9	5928 (1806.9)	6274 (1912.3)	346 (105.5)
DELLA 10	5947 (1812.6)	6310 (1923.3)	363 (110.6)
DELLA 11	5936 (1809.3)	6308 (1922.7)	372 (113.4)
DELLA 12	5975 (1821.2)	6306 (1922.1)	331 (100.9)
DELLA 13	5948 (1813.0)	6335 (1930.9)	387 (118.0)
DELLA 14	6020 (1834.9)	6358 (1937.9)	338 (103.0)
DELLA 15	5950 (1813.6)	6378 (1944.0)	428 (130.5)
DELLA 16	6008 (1831.2)	6401 (1951.0)	393 (119.8)
DELLA 17	5939 (1810.2)	6265 (1909.6)	326 (99.4)
DEPARANIE 1	7284 (2220.2)	7891 (2405.2)	607 (185.0)
DERAMOOKOO 1	7835 (2388.1)	8538 (2602.4)	703 (214.3)
DIERI 1	6101 (1859.6)	6570 (2002.5)	469 (143.0)
DILCHEE 1	6304 (1921.5)	7006 (2135.4)	702 (214.0)
DILCHEE 2	6310 (1923.3)	6953 (2119.3)	643 (196.0)
DULLINGARI 1	6183 (1884.6)	6854 (2089.1)	671 (204.5)
DULLINGARI 2	6178 (1883.1)	6853 (2088.8)	675 (205.7)
DULLINGARI 3	6293 (1918.1)	7077 (2157.1)	784 (239.0)
DULLINGARI 4	6267 (1910.2)	6956 (2120.2)	689 (210.0)
DULLINGARI 16	6142 (1872.1)	6816 (2077.5)	674 (205.4)
DULLINGARI 17	6234 (1900.1)	6918 (2108.6)	684 (208.5)
DULLINGARI 18	6134 (1869.6)	6792 (2070.2)	658 (200.6)
DULLINGARI 19	6244 (1903.2)	6936 (2114.1)	692 (210.9)
DULLINGARI 22	6146 (1873.3)	6816 (2077.5)	670 (204.2)
DULLINGARI 23	6120 (1865.4)	6802 (2073.3)	682 (207.9)
DULLINGARI 24	6250 (1905.0)	6953 (2119.3)	703 (214.3)
DULLINGARI 25	6187 (1885.8)	6898 (2102.5)	711 (216.7)
DULLINGARI 26	6236 (1900.7)	6964 (2122.6)	728 (221.9)
DULLINGARI 39	6362 (1939.1)	7064 (2153.1)	702 (214.0)
DULLINGARI 44	6288 (1916.6)	7002 (2134.2)	714 (217.6)
DULLINGARI 45	6257 (1907.1)	6984 (2128.7)	727 (221.6)
DULLINGARI 46	6226 (1897.7)	6990 (2130.6)	764 (232.9)
DULLINGARI NORTH 1	6277 (1913.2)	7026 (2141.5)	749 (228.3)

<u>WELLNAME</u>	<u>TOP (meters)</u>	<u>BASE(meters)</u>	<u>Thickness(m)</u>
DULLINGARI NORTH 2	6292 (1917.8)	7063 (2152.8)	771 (235.0)
DULLINGARI NORTH 3	6304 (1921.5)	7068 (2154.3)	764 (232.9)
DULLINGARI NORTH 4	6310 (1923.3)	7075 (2156.5)	765 (233.2)
FLY LAKE 1	7876 (2400.6)	8415 (2564.9)	539 (164.3)
FLY LAKE 2	8038 (2450.0)	8640 (2633.5)	602 (183.5)
FLY LAKE 3	7875 (2400.3)	8514 (2595.1)	639 (194.8)
FLY LAKE 4	7910 (2411.0)	8567 (2611.2)	657 (200.3)
FLY LAKE 5	7918 (2413.4)	8476 (2583.5)	558 (170.1)
FLY LAKE 6	7897 (2407.0)	8449 (2575.3)	552 (168.2)
FLY LAKE 7	7908 (2410.4)	8455 (2577.1)	547 (166.7)
GIDGEALPA 1	7210 (2197.6)	7694 (2345.1)	484 (147.5)
GIDGEALPA 2	6564 (2000.7)	6751 (2057.7)	187 (57.0)
GIDGEALPA 3	6841 (2085.1)	7088 (2160.4)	247 (75.3)
GIDGEALPA 4	6734 (2052.5)	6866 (2092.8)	132 (40.2)
GIDGEALPA 5	6823 (2079.7)	6879 (2097.0)	57 (17.4)
GIDGEALPA 6	6991 (2130.9)	7079 (2157.7)	88 (26.8)
GIDGEALPA 7	6791 (2069.9)	6852 (2088.5)	61 (18.6)
GIDGEALPA 8	6735 (2052.8)	6896 (2101.9)	161 (49.1)
GIDGEALPA 9	6740 (2054.4)	6926 (2111.0)	186 (56.7)
GIDGEALPA 10	6670 (2033.0)	6903 (2204.0)	233 (71.0)
GIDGEALPA 11	6633 (2021.7)	6744 (2055.6)	111 (33.8)
GIDGEALPA 12	6610 (2014.7)	6767 (2062.6)	157 (47.9)
GIDGEALPA 13	6710 (2045.2)	6906 (2105.0)	196 (59.7)
GIDGEALPA 14	6548 (1995.8)	6708 (2044.6)	160 (48.8)
GIDGEALPA 15	6602 (2012.3)	6863 (2091.8)	261 (79.6)
GIDGEALPA 16	6798 (2072.0)	6852 (2088.5)	54 (16.5)
GIDGEALPA 17	6779 (2066.2)	6862 (2091.5)	83 (25.3)
GIDGEALPA 19	6797 (2071.7)	6863 (2091.8)	66 (20.1)
GIDGEALPA 21	6813 (2076.6)	6855 (2089.4)	42 (12.8)
GIDGEALPA 23	6845 (2086.4)	6899 (2102.8)	54 (16.5)
GIDGEALPA 27	6862 (2091.5)	6882 (2097.6)	20 (6.1)
GIDGEALPA 29	6786 (2068.4)	6873 (2094.9)	87 (26.5)
GIDGEALPA 33	6780 (2066.5)	6827 (2080.9)	47 (14.3)
GIDGEALPA 34	6773 (2064.4)	6828 (2081.2)	55 (16.8)
GIDGEALPA 35	6758 (2059.8)	6958 (2120.8)	200 (61.0)
GIDGEALPA 36	6787 (2068.7)	6884 (2098.2)	97 (29.6)
GIDGEALPA 38	6826 (2080.6)	7034 (2144.0)	208 (63.4)
GOORANIE 1	7672 (2338.4)	8478 (2584.1)	806 (245.7)
GOORANIE 2	7695 (2345.4)	8506 (2592.6)	811 (247.2)
GOORANIE 3	7710 (2350.0)	8520 (2596.9)	810 (246.9)
GOYDER 1	5850 (1783.1)	6042 (1841.6)	192 (58.5)
INAMINCKA 1	5908 (1800.8)	6789 (2069.3)	881 (268.5)
INNAMINCKA 4	5893 (1796.2)	6783 (2067.5)	890 (271.3)
JACK LAKE 1	7532 (2295.8)	8016 (2443.3)	484 (147.5)
JACK LAKE 2	7593 (2314.4)	8034 (2448.8)	441 (134.4)
KALANNA 1	6312 (1923.9)	6717 (2047.3)	405 (123.4)
KANOWANA 1	7675 (2339.3)	8340 (2542.0)	665 (202.7)
KANOWANA 2	7715 (2351.5)	8386 (2556.1)	671 (204.5)
KANOWANA 3	7819 (2383.2)	8409 (2563.1)	590 (179.8)
KARILLA 1	6090 (1856.2)	6148 (1873.9)	58 (17.7)
KEETO 1	5850 (1783.1)	6138 (1870.9)	288 (87.8)
KENNY 1	8040 (2450.6)	9303 (2835.6)	1263 (385.0)
KERNA 1	6330 (1929.4)	6882 (2097.6)	552 (168.2)
KERNA 2A	6346 (1934.3)	6951 (2118.7)	605 (184.4)
KERNA 3	6341 (1932.7)	6831 (2082.1)	490 (149.4)
KERNA 4	6315 (1924.8)	6854 (2089.1)	539 (164.3)
KIDMAN 1	5930 (1807.5)	6367 (1940.7)	437 (133.2)

<u>WELLNAME</u>	<u>TOP (meters)</u>		<u>BASE(meters)</u>		<u>Thickness(m)</u>	
KIDMAN 2	6039	(1840.7)	6422	(1957.4)	383	(116.7)
KIDMAN 3	5976	(1821.5)	6374	(1942.8)	398	(121.3)
KIDMAN 4	5962	(1817.2)	6438	(1962.3)	476	(145.1)
KIDMAN 5	6035	(1839.5)	6378	(1944.0)	343	(104.5)
KIDMAN 6	6018	(1834.3)	6536	(1992.2)	518	(157.9)
KIDMAN 7	5978	(1822.1)	6358	(1937.9)	380	(115.8)
KIDMAN NORTH 1	6074	(1851.4)	6484	(1976.3)	410	(125.0)
KIDMAN NORTH 2	6080	(1853.2)	6528	(1989.7)	448	(136.6)
KIRBY 1	7246	(2208.6)	8703	(2652.7)	1457	(444.1)
KIRRALEE 1	7382	(2250.0)	7864	(2397.0)	482	(146.9)
KOREE 1	6290	(1917.2)	6314	(1924.5)	24	(7.3)
KUDRIEKE 1	8209	(2502.1)	9297	(2833.7)	1088	(331.6)
KUDRIEKE 2	8161	(2487.5)	9204	(2805.4)	1043	(317.9)
KUJANI 1	5761	(1756.0)	5828	(1776.4)	67	(20.4)
KURUNDA 1	7093	(2162.0)	7242	(2207.4)	149	(45.4)
KURUNDA 2	6990	(2130.6)	7222	(2201.3)	232	(70.7)
KURUNDA 3	7043	(2146.7)	7206	(2196.4)	163	(49.7)
KURUNDA 4	7089	(2160.7)	7232	(2204.3)	143	(43.6)
LAKE MACMILLAN 1	8177	(2492.4)	9407	(2867.3)	1230	(374.9)
LAKE MACMILLAN 2	8216	(2504.2)	9412	(2868.8)	1196	(364.5)
LAMDINA 1	8424	(2567.6)	9758	(2974.2)	1334	(406.6)
LELEPTIAN 1	7964	(2427.4)	8553	(2607.0)	589	(179.5)
LELEPTIAN 2	8004	(2439.6)	8618	(2626.8)	614	(187.1)
LEPENA 1	6096	(1858.1)	6510	(1984.3)	414	(126.2)
LOWANNA 1	6965	(2122.9)	7536	(2297.0)	571	(174.0)
LYCOSA 1	6494	(1979.4)	6782	(2067.2)	288	(87.8)
MARABOOKA 1	6100	(1859.3)	6326	(1928.2)	226	(68.9)
MARABOOKA 2	6097	(1858.4)	6350	(1935.5)	253	(77.1)
MARABOOKA 3	6130	(1868.4)	6319	(1926.0)	189	(57.6)
MARABOOKA 4	6102	(1859.9)	6367	(1940.7)	265	(80.8)
MARAKU 1	5577	(1699.9)	5735	(1748.0)	158	(48.2)
MARANA 1	5910	(1801.4)	6170	(1880.6)	260	(79.2)
MARSILEA 1	5919	(1804.1)	6343	(1933.4)	424	(129.2)
MASSY 1	7247	(2208.9)	7742	(2359.8)	495	(150.9)
MAWSON 1	7179	(2188.2)	7269	(2215.6)	90	(27.4)
MAWSON 2	7156	(2181.2)	7269	(2215.6)	113	(34.4)
MCLEOD 1	7298	(2224.4)	8685	(2647.2)	1387	(422.8)
MERANJI 1	7393	(2253.4)	7901	(2408.2)	508	(154.8)
MERANJI 2	7457	(2272.9)	8085	(2464.3)	628	(191.4)
MERANJI 4	7490	(2283.0)	8091	(2466.1)	601	(183.2)
MERINDA 1	6108	(1861.7)	6504	(1982.4)	396	(120.7)
MERRIMELIA 1	7305	(2226.6)	7798	(2376.8)	493	(150.3)
MERRIMELIA 2	7128	(2172.6)	7496	(2284.8)	368	(112.2)
MERRIMELIA 3	7121	(2170.5)	7789	(2374.1)	668	(203.6)
MERRIMELIA 4	7138	(2175.7)	7545	(2299.7)	407	(124.1)
MERRIMELIA 5	7022	(2140.3)	7440	(2267.7)	418	(127.4)
MERRIMELIA 6	6873	(2094.9)	7130	(2173.2)	257	(78.3)
MERRIMELIA 7	6950	(2118.4)	7363	(2244.2)	413	(125.9)
MERRIMELIA 8	6927	(2111.4)	7188	(2190.9)	261	(79.5)
MERRIMELIA 9	6960	(2121.4)	7278	(2218.3)	318	(96.9)
MERRIMELIA 10	6926	(2111.0)	7194	(2192.7)	268	(81.7)
MERRIMELIA 11	6873	(2094.9)	7145	(2177.8)	272	(82.9)
MERRIMELIA 13	6990	(2130.6)	7342	(2237.8)	352	(107.3)
MERRIMELIA 14	6982	(2128.1)	7325	(2232.7)	343	(104.5)
MERRIMELIA 15	6951	(2118.7)	7211	(2197.9)	260	(79.2)
MERRIMELIA 17	6978	(2126.9)	7298	(2224.4)	320	(97.5)
MERRIMELIA 18	7198	(2194.0)	7760	(2365.3)	562	(171.3)

<u>WELLNAME</u>	<u>TOP (meters)</u>	<u>BASE(meters)</u>	<u>Thickness(m)</u>
MERRIMELIA 20	7018 (2139.1)	7431 (2265.0)	413 (125.9)
MERRIMELIA 22	7167 (2184.5)	7550 (2301.2)	383 (116.7)
MERRIMELIA 23	7030 (2142.7)	7216 (2199.4)	186 (56.7)
MERRIMELIA 25	7045 (2147.3)	7426 (2263.4)	381 (116.1)
MERUPA 1	7558 (2303.7)	8490 (2587.8)	932 (284.1)
MERUPA 2	7593 (2314.4)	8548 (2605.4)	955 (291.1)
METTIKA 1	6036 (1839.8)	6476 (1973.9)	440 (134.1)
METTIKA 2	6012 (1832.5)	6462 (1969.6)	450 (137.2)
METTIKA 3	6125 (1866.9)	6582 (2006.2)	457 (139.3)
MINA 1	6333 (1930.3)	6713 (2046.1)	380 (115.8)
MINGANA 1	7996 (2437.2)	8632 (2631.0)	636 (193.9)
MINKIE 1	7035 (2144.3)	7408 (2258.0)	373 (113.7)
MITCHIE 1	8204 (2500.6)	9216 (2809.0)	1012 (308.5)
MOOLALLA 1	6522 (1987.9)	6803 (2073.6)	281 (85.6)
MOOLION 1	8111 (2472.2)	9133 (2783.7)	1022 (311.5)
MOOMBA 1	7033 (2143.7)	7602 (2317.1)	569 (173.4)
MOOMBA 2	6928 (2111.7)	7432 (2265.3)	504 (153.6)
MOOMBA 3	7169 (2185.1)	7753 (2363.1)	584 (178.0)
MOOMBA 4	7167 (2184.5)	7709 (2349.7)	542 (165.2)
MOOMBA 5	7221 (2201.0)	7939 (2419.8)	718 (218.8)
MOOMBA 6	7365 (2244.9)	8012 (2442.1)	647 (197.2)
MOOMBA 7	7143 (2177.2)	7912 (2411.6)	769 (234.4)
MOOMBA 8	7129 (2172.9)	7641 (2329.0)	512 (156.1)
MOOMBA 9	7134 (2174.4)	7630 (2325.6)	496 (151.2)
MOOMBA 10	7068 (2154.3)	7581 (2310.7)	513 (156.4)
MOOMBA 11	7181 (2188.8)	7735 (2357.6)	554 (168.9)
MOOMBA 12	7117 (2169.3)	7628 (2325.0)	511 (155.8)
MOOMBA 13	7134 (2174.4)	7840 (2389.6)	706 (215.2)
MOOMBA 14	6966 (2123.2)	7503 (2286.9)	537 (163.7)
MOOMBA 15	7110 (2167.1)	7684 (2342.1)	574 (175.0)
MOOMBA 16	7080 (2158.0)	7578 (2309.8)	498 (151.8)
MOOMBA 17	7174 (2186.6)	7677 (2340.0)	503 (153.3)
MOOMBA 18	7178 (2187.9)	7715 (2351.5)	537 (163.7)
MOOMBA 19	7154 (2180.5)	7654 (2332.9)	500 (152.4)
MOOMBA 20	7108 (2166.5)	7605 (2318.0)	497 (151.5)
MOOMBA 21	7116 (2169.0)	7617 (2321.7)	501 (152.7)
MOOMBA 22	7146 (2178.1)	7686 (2342.7)	540 (164.6)
MOOMBA 23	7220 (2200.7)	7723 (2354.0)	503 (153.3)
MOOMBA 24	7064 (2153.1)	7594 (2314.7)	530 (161.5)
MOOMBA 25	7024 (2140.9)	7518 (2291.5)	494 (150.6)
MOOMBA 26	7203 (2195.5)	7970 (2429.3)	767 (233.8)
MOOMBA 27	7398 (2254.9)	8088 (2465.2)	690 (210.3)
MOOMBA 28	7109 (2166.8)	7632 (2326.2)	523 (159.4)
MOOMBA 29	7117 (2169.3)	7660 (2334.8)	543 (165.5)
MOOMBA 30	7090 (2161.0)	7620 (2322.6)	530 (161.5)
MOOMBA 31	7086 (2159.8)	7654 (2332.9)	568 (173.1)
MOOMBA 32	7124 (2171.4)	7650 (2331.7)	526 (160.3)
MOOMBA 33	7047 (2147.9)	7611 (2319.8)	564 (171.9)
MOOMBA 34	7130 (2173.2)	7643 (2329.6)	513 (156.4)
MOOMBA 35	7134 (2174.4)	7628 (2325.0)	494 (150.6)
MOOMBA 36	7034 (2144.0)	7545 (2299.7)	511 (155.8)
MOOMBA 37	7092 (2161.6)	7614 (2320.8)	522 (159.1)
MOOMBA 38	7075 (2156.5)	7690 (2343.9)	615 (187.5)
MOOMBA 39	7014 (2137.9)	7548 (2300.6)	534 (162.8)
MOOMBA 40	7146 (2178.1)	7661 (2335.1)	515 (157.0)
MOOMBA 41	6970 (2124.5)	7563 (2305.2)	593 (180.7)
MOOMBA 42	6970 (2124.5)	7540 (2298.2)	570 (173.7)

<u>WELLNAME</u>	<u>TOP (meters)</u>	<u>BASE(meters)</u>	<u>Thickness(m)</u>
MOOMBA 43	7020 (2139.7)	7564 (2305.5)	544 (165.8)
MOOMBA 44	7050 (2148.8)	7600 (2316.5)	550 (167.6)
MOOMBA 45	7118 (2169.6)	7676 (2339.6)	558 (170.1)
MOOMBA 46	7094 (2162.3)	7600 (2316.5)	506 (154.2)
MOOMBA 47	7198 (2194.0)	7747 (2361.3)	549 (167.3)
MOOMBA 48	7200 (2194.6)	7780 (2371.3)	580 (176.8)
MOOMBA 49	7010 (2136.7)	7610 (2319.5)	600 (182.9)
MOOMBA 50	7347 (2239.4)	8014 (2442.7)	667 (203.3)
MOOMBA 51	7231 (2204.0)	8111 (2472.2)	880 (268.2)
MOOMBA 52	7085 (2159.5)	7677 (2340.0)	592 (180.4)
MOOMBA 53	7157 (2181.5)	7686 (2342.7)	529 (161.2)
MOOMBA 54	7298 (2224.4)	7960 (2426.2)	662 (201.8)
MOOMBA 55	7254 (2211.0)	8017 (2443.6)	763 (232.6)
MOOMBA 56	7435 (2266.2)	8128 (2477.4)	693 (211.2)
MOOMBA 57	7168 (2184.8)	7712 (2350.6)	544 (165.8)
MOOMBA 58	7313 (2229.0)	8073 (2460.7)	760 (231.6)
MOOMBA 59	7255 (2211.3)	7800 (2377.4)	545 (166.1)
MOOMBA 60	7446 (2269.5)	8174 (2491.4)	728 (221.9)
MOOMBA 61	7253 (2210.7)	8063 (2457.6)	810 (246.9)
MOOMBA 62	7161 (2182.7)	7753 (2363.1)	592 (180.4)
MOOMBA 63	7318 (2230.5)	7910 (2411.0)	592 (180.4)
MOOMBA 64	7095 (2162.6)	7607 (2318.6)	512 (156.1)
MOOMBA 65	7229 (2203.4)	7738 (2358.5)	509 (155.1)
MOOMBA 67	6999 (2133.3)	7532 (2295.8)	533 (162.5)
MOOMBA NORTH 1	7306 (2226.9)	8024 (2445.7)	718 (218.8)
MOOMBA NORTH 2	7286 (2220.8)	8010 (2441.5)	724 (220.7)
MOOMBA SOUTH 1	7184 (2189.7)	7663 (2335.7)	479 (146.0)
MOORAN 1	7077 (2157.1)	7212 (2198.2)	135 (41.1)
MOORARI 1	7936 (2418.9)	8833 (2692.3)	897 (273.4)
MOORARI 2	8072 (2460.4)	9066 (2763.3)	994 (303.0)
MOORARI 3	7908 (2410.4)	8786 (2678.0)	878 (267.6)
MOORARI 4	7900 (2407.9)	8784 (2677.4)	884 (269.4)
MOORARI 5	7888 (2404.3)	8786 (2678.0)	898 (273.7)
MOORARI 6	7997 (2437.5)	8924 (2720.0)	927 (282.6)
MOORARI 7	7966 (2428.0)	8883 (2707.5)	917 (279.5)
MUDERA 1	6220 (1895.9)	6632 (2021.4)	412 (125.6)
MUDERA 2	6210 (1892.8)	6668 (2032.4)	458 (139.6)
MUDERA 3	6178 (1883.1)	6638 (2023.3)	460 (140.2)
MUDERA 4	6263 (1909.0)	6750 (2057.4)	487 (148.4)
MUDLALEE 1	5753 (1753.5)	5863 (1787.0)	110 (33.5)
MUDLALEE 2	5679 (1731.0)	5730 (1746.5)	51 (15.5)
MUDRANGIE 1	7925 (2415.5)	8926 (2720.7)	1001 (305.1)
MUDRANGIE 2	7920 (2414.0)	8822 (2689.0)	902 (274.9)
MUNDI 1	6019 (1834.6)	6414 (1955.0)	395 (120.4)
MUNKARIE 1	5678 (1730.7)	5853 (1784.0)	75 (53.3)
MUNKARIE 2	5650 (1722.1)	5812 (1771.5)	12 (49.4)
MUNKARIE 3	5706 (1739.2)	5963 (1817.5)	25 (78.3)
MUNKARIE 4	5631 (1716.3)	5792 (1765.4)	161 (49.1)
MUNKARIE 5	5667 (1727.3)	5902 (1798.9)	235 (71.6)
MUNKARIE 6	5631 (1716.3)	5814 (1772.1)	183 (55.8)
MURTEREE 1	5745 (1751.1)	5910 (1801.4)	165 (50.3)
MURTEREE 2	5840 (1780.0)	5879 (1791.9)	39 (11.9)
MURTEREE C1	5893 (1796.2)	6021 (1835.2)	128 (39.0)
NAMUR 1	6645 (2025.4)	6927 (2111.4)	282 (86.0)
NAMUR 3	6600 (2011.7)	6852 (2088.5)	252 (76.8)
NANIMA 1	6010 (1831.9)	6175 (1882.1)	165 (50.3)
NAPPACOONGEE 1	5780 (1761.7)	6163 (1878.5)	383 (116.7)

<u>WELLNAME</u>	<u>TOP (meters)</u>		<u>BASE(meters)</u>		<u>Thickness(m)</u>	
NAPPACOONGEE 2	5750	(1752.6)	6090	(1856.2)	340	(103.6)
NAPPACOONGEE 3	5724	(1744.7)	6122	(1866.0)	398	(121.3)
NARCOONOWIE 1	5478	(1669.7)	5522	(1683.1)	44	(13.4)
NARIE 1	7391	(2252.8)	7952	(2423.8)	561	(171.0)
NARIE 2	7403	(2256.4)	8002	(2439.0)	599	(182.6)
NULLA 1	7447	(2269.9)	7760	(2365.3)	313	(95.4)
PACKSADDLE 1	7160	(2182.4)	8278	(2523.1)	1118	(340.8)
PACKSADDLE 2	6938	(2114.7)	7716	(2351.8)	778	(237.1)
PACKSADDLE 3	6544	(1994.6)	7212	(2198.2)	668	(203.6)
PACKSADDLE 4	6460	(1969.0)	6915	(2107.7)	455	(138.7)
PACKSADDLE 5	6479	(1974.8)	7141	(2176.6)	662	(201.8)
PANING 1	7781	(2371.7)	9353	(2850.8)	1572	(479.1)
PELICAN 1	7316	(2229.9)	7807	(2379.6)	491	(149.7)
PELICAN 2	7338	(2236.6)	7786	(2373.2)	448	(136.6)
PELICAN 3	7302	(2225.7)	7904	(2409.1)	602	(183.5)
PELICAN 4	7353	(2241.2)	7939	(2419.8)	586	(178.6)
PELICAN 5	7322	(2231.7)	7923	(2414.9)	601	(183.2)
PELKETA 1	5760	(1755.7)	6024	(1836.1)	264	(80.5)
PERENTY 1	6152	(1875.1)	6272	(1911.7)	120	(36.6)
PINNA 1	5812	(1771.5)	5953	(1814.5)	141	(43.0)
PIRA 1	6270	(1911.1)	6957	(2120.5)	687	(209.4)
PIRA 2	6301	(1920.5)	6959	(2121.1)	658	(200.6)
PIRRAMINTA 1	7135	(2174.8)	7788	(2373.8)	653	(199.0)
POGONA 1	6941	(2115.6)	7057	(2151.0)	116	(35.4)
PONDRINIE 1	6605	(2013.2)	7347	(2239.4)	742	(226.2)
PONDRINIE 2	6711	(2045.5)	7489	(2282.7)	778	(237.1)
PONDRINIE 3	6634	(2022.0)	7151	(2179.6)	517	(157.6)
PONDRINIE 4	6534	(1991.6)	7218	(2200.1)	684	(208.5)
PONDRINIE 5	6524	(1988.5)	7279	(2218.6)	755	(230.1)
POORAKA 1	6087	(1855.3)	6605	(2013.2)	518	(157.9)
QUARTPOT 1	8112	(2472.5)	8992	(2740.8)	880	(268.2)
RAKOONA 1	7886	(2403.7)	8728	(2660.3)	842	(256.6)
REGOLITH 1	7590	(2313.4)	8024	(2445.7)	434	(132.3)
SNAKE HOLE 1	7190	(2191.5)	7623	(2323.5)	433	(132.0)
SPECTRE 1	8085	(2464.3)	8765	(2671.6)	680	(207.3)
SPENCER 1	6121	(1865.7)	6143	(1872.4)	22	(6.7)
STRATHMOUNT 1	6777	(2065.6)	7916	(2412.8)	1139	(347.2)
STRZELECKI 1	5940	(1810.5)	6228	(1898.3)	288	(87.8)
STRZELECKI 2	5895	(1796.8)	6103	(1860.2)	208	(63.4)
STRZELECKI 3	5830	(1777.0)	5994	(1827.0)	164	(50.0)
STRZELECKI 5	5830	(1777.0)	5990	(1825.8)	160	(48.8)
STRZELECKI 10	5974	(1820.9)	6185	(1885.2)	211	(64.3)
STRZELECKI 15	5869	(1788.9)	6078	(1852.6)	209	(63.7)
STRZELECKI 16	5964	(1817.8)	6096	(1858.1)	132	(40.2)
STRZELECKI 17	5799	(1767.5)	5956	(1815.4)	157	(47.9)
STRZELECKI 24	5937	(1809.6)	6235	(1900.4)	298	(90.8)
STRZELECKI 25	5900	(1798.3)	6128	(1867.8)	228	(69.5)
SWAN LAKE 1	7562	(2304.9)	8302	(2530.5)	740	(225.6)
TARWONGA 1	6110	(1862.3)	6493	(1979.1)	383	(116.7)
TARWONGA 2	6114	(1863.6)	6514	(1985.5)	400	(121.9)
TARWONGA 3	6132	(1869.0)	6579	(2005.3)	447	(136.2)
TAYLOR SOUTH 1	7666	(2336.6)	8678	(2645.1)	1012	(308.5)
THREE QUEENS 1	6365	(1940.1)	7382	(2250.0)	1017	(310.0)
THURAKINNA 1	6278	(1913.5)	6394	(1948.9)	116	(35.4)
THURAKINNA 2	6221	(1896.2)	6424	(1958.0)	203	(61.9)
THURAKINNA 3	6260	(1908.1)	6431	(1960.2)	171	(52.1)
THURAKINNA 4	6204	(1891.0)	6410	(1953.8)	206	(62.8)

<u>WELLNAME</u>	<u>TOP (meters)</u>		<u>BASE(meters)</u>		<u>Thickness(m)</u>	
THURAKINNA 5	6230	(1898.9)	6457	(1968.1)	227	(69.2)
TILPAREE A1	5647	(1721.2)	5819	(1773.6)	172	(52.4)
TINDILPIE 1	7855	(2394.2)	8402	(2560.9)	547	(166.7)
TINDILPIE 2	7850	(2392.7)	8347	(2544.2)	497	(151.5)
TIRRAWARRA 1	7595	(2315.0)	8446	(2574.3)	851	(259.4)
TIRRAWARRA 2	7639	(2328.4)	8472	(2582.3)	833	(253.9)
TIRRAWARRA 3	7803	(2378.4)	8667	(2641.7)	864	(263.3)
TIRRAWARRA 4	7680	(2340.9)	8547	(2605.1)	867	(264.3)
TIRRAWARRA 5	7720	(2353.1)	8575	(2613.7)	855	(260.6)
TIRRAWARRA 6	7728	(2355.5)	8612	(2624.9)	884	(269.4)
TIRRAWARRA 7	7710	(2350.0)	8630	(2630.4)	920	(280.4)
TIRRAWARRA 8	7617	(2321.7)	8462	(2579.2)	845	(257.6)
TIRRAWARRA 9	7650	(2331.7)	8531	(2600.3)	881	(268.5)
TIRRAWARRA 10	7710	(2350.0)	8672	(2643.2)	962	(293.2)
TIRRAWARRA 11	7645	(2330.2)	8522	(2597.5)	877	(267.3)
TIRRAWARRA 12	7741	(2359.5)	8609	(2624.0)	868	(264.6)
TIRRAWARRA 13	7643	(2329.6)	8504	(2592.0)	861	(262.4)
TIRRAWARRA 14	7609	(2319.2)	8427	(2568.6)	818	(249.3)
TIRRAWARRA 15	7626	(2324.4)	8433	(2570.4)	807	(246.0)
TIRRAWARRA 16	7734	(2357.3)	8608	(2623.7)	874	(266.4)
TIRRAWARRA 17	7640	(2328.7)	8498	(2590.2)	858	(261.5)
TIRRAWARRA 18	7648	(2331.1)	8516	(2595.7)	868	(264.6)
TIRRAWARRA 19	7701	(2347.3)	8556	(2607.9)	855	(260.6)
TIRRAWARRA 20	7626	(2324.4)	8456	(2577.4)	830	(253.0)
TIRRAWARRA 21	7637	(2327.8)	8466	(2580.4)	829	(252.7)
TIRRAWARRA 22	7685	(2342.4)	8606	(2623.1)	921	(280.7)
TIRRAWARRA 23	7621	(2322.9)	8454	(2576.8)	833	(253.9)
TIRRAWARRA 24	7634	(2326.8)	8510	(2593.9)	876	(267.0)
TIRRAWARRA 25	7624	(2323.8)	8461	(2578.9)	837	(255.1)
TIRRAWARRA 26	7690	(2343.9)	8563	(2610.0)	873	(266.1)
TIRRAWARRA 27	7703	(2347.9)	8575	(2613.7)	872	(265.8)
TIRRAWARRA 28	7622	(2323.2)	8495	(2589.3)	873	(266.1)
TIRRAWARRA 29	7632	(2326.2)	8465	(2580.1)	833	(253.9)
TIRRAWARRA 30	7630	(2325.6)	8441	(2572.8)	811	(247.2)
TIRRAWARRA 31	7635	(2327.2)	8448	(2575.0)	813	(247.8)
TIRRAWARRA 32	7662	(2335.4)	8494	(2589.0)	832	(253.6)
TIRRAWARRA 33	7620	(2322.6)	8488	(2587.1)	868	(264.6)
TIRRAWARRA 34	7652	(2332.3)	8452	(2576.2)	800	(243.8)
TIRRAWARRA 35	7594	(2314.7)	8458	(2578.0)	864	(263.3)
TIRRAWARRA 36	7710	(2350.0)	8572	(2612.8)	862	(262.7)
TIRRAWARRA 37	7695	(2345.4)	8545	(2604.5)	850	(259.1)
TIRRAWARRA 38	7665	(2336.3)	8526	(2598.7)	861	(262.4)
TIRRAWARRA 39	7660	(2334.8)	8485	(2586.2)	825	(251.5)
TIRRAWARRA 40	7678	(2340.3)	8500	(2590.8)	822	(250.5)
TIRRAWARRA 41	7710	(2350.0)	8560	(2609.1)	850	(259.1)
TIRRAWARRA 42	7640	(2328.7)	8482	(2585.3)	842	(256.6)
TIRRAWARRA 43	7716	(2351.8)	8547	(2605.1)	831	(253.3)
TIRRAWARRA 44	7754	(2363.4)	8655	(2638.0)	901	(274.6)
TIRRAWARRA 45	7650	(2331.7)	8538	(2602.4)	888	(270.7)
TIRRAWARRA 46	7682	(2341.5)	8574	(2613.4)	892	(271.9)
TIRRAWARRA 47	7656	(2333.6)	8497	(2589.9)	841	(256.3)
TIRRAWARRA 48	7669	(2337.5)	8544	(2604.2)	875	(266.7)
TIRRAWARRA 49	7596	(2315.3)	8416	(2565.2)	820	(249.9)
TIRRAWARRA 50	7598	(2315.9)	8418	(2565.8)	820	(249.9)
TIRRAWARRA 51	7632	(2326.2)	8498	(2590.2)	866	(264.0)
TIRRAWARRA 52	7758	(2364.6)	8618	(2626.8)	860	(262.1)
TIRRAWARRA 53	7660	(2334.8)	8463	(2579.5)	803	(244.8)

<u>WELLNAME</u>	<u>TOP (meters)</u>	<u>BASE(meters)</u>	<u>Thickness(m)</u>
TIRRAWARRA 54	7672 (2338.4)	8523 (2597.8)	851 (259.4)
TIRRAWARRA 55	7716 (2351.8)	8561 (2609.4)	845 (257.6)
TIRRAWARRA 56	7732 (2356.7)	8594 (2619.5)	862 (262.7)
TIRRAWARRA 57	7650 (2331.7)	8509 (2593.5)	859 (261.8)
TIRRAWARRA 58	7646 (2330.5)	8450 (2575.6)	804 (245.1)
TIRRAWARRA 59	7748 (2361.6)	8609 (2624.0)	861 (262.4)
TIRRAWARRA 60	7646 (2330.5)	8548 (2605.4)	902 (274.9)
TIRRAWARRA 61	7588 (2312.8)	8447 (2574.7)	859 (261.8)
TIRRAWARRA 62	7646 (2330.5)	8556 (2607.9)	910 (277.4)
TIRRAWARRA 63	7654 (2332.9)	8529 (2599.6)	875 (266.7)
TIRRAWARRA 64	7701 (2347.3)	8566 (2610.9)	865 (263.7)
TIRRAWARRA 65	7616 (2321.4)	8520 (2596.9)	904 (275.5)
TIRRAWARRA NORTH 1	7880 (2401.8)	8800 (2682.2)	920 (280.4)
TIRRAWARRA WEST 1	7775 (2369.8)	8643 (2634.4)	868 (264.6)
TOOLACHEE 1	5702 (1738.0)	5877 (1791.3)	175 (53.3)
TOOLACHEE 2	5689 (1734.0)	6042 (1841.6)	353 (107.6)
TOOLACHEE 3	5788 (1764.2)	6037 (1840.1)	249 (75.9)
TOOLACHEE 4	5802 (1768.5)	6109 (1862.0)	307 (93.6)
TOOLACHEE 5	5904 (1799.5)	6240 (1902.0)	336 (102.4)
TOOLACHEE 6	5803 (1768.8)	6120 (1865.4)	317 (96.6)
TOOLACHEE 7	5914 (1802.6)	6082 (1853.8)	168 (51.2)
TOOLACHEE 8	5794 (1766.0)	6150 (1874.5)	356 (108.5)
TOOLACHEE 9	5862 (1786.7)	6127 (1867.5)	265 (80.8)
TOOLACHEE 10	5762 (1756.3)	6032 (1838.6)	270 (82.3)
TOOLACHEE 11	5759 (1755.3)	6091 (1856.5)	332 (101.2)
TOOLACHEE 12	5781 (1762.1)	6107 (1861.4)	326 (99.4)
TOOLACHEE 13	5784 (1763.0)	6082 (1853.8)	298 (90.8)
TOOLACHEE 14	5813 (1771.8)	6092 (1856.8)	279 (85.0)
TOOLACHEE 15	5800 (1767.8)	6014 (1833.1)	214 (65.2)
TOOLACHEE 16	5697 (1736.4)	5899 (1798.0)	202 (61.6)
TOOLACHEE 17	5788 (1764.2)	6094 (1857.5)	306 (93.3)
TOOLACHEE 18	5795 (1766.3)	6022 (1835.5)	227 (69.2)
TOOLACHEE 19	5808 (1770.3)	6131 (1868.7)	323 (98.5)
TOOLACHEE 20	5820 (1773.9)	6088 (1855.6)	268 (81.7)
TOOLACHEE 21	5940 (1810.5)	6213 (1893.7)	273 (83.2)
TOOLACHEE 23	5870 (1789.2)	6211 (1893.1)	341 (103.9)
TOOLACHEE 24	5800 (1767.8)	6140 (1871.5)	340 (103.6)
TOOLACHEE 25	5788 (1764.2)	6068 (1849.5)	280 (85.3)
TOOLACHEE 26	5750 (1752.6)	6050 (1844.0)	300 (91.4)
TOOLACHEE 27	5810 (1770.9)	6070 (1850.1)	260 (79.2)
TOOLACHEE 28	5764 (1756.9)	6024 (1836.1)	260 (79.2)
TOOLACHEE 29	5796 (1766.6)	6023 (1835.8)	227 (69.2)
TOOLACHEE 30	5802 (1768.5)	6136 (1870.3)	334 (101.8)
TOOLACHEE 31	5792 (1765.4)	6127 (1867.5)	335 (102.1)
TOOLACHEE 32	5723 (1744.4)	5981 (1823.0)	258 (78.6)
TOOLACHEE 33	5773 (1759.6)	6058 (1846.5)	285 (86.9)
TOOLACHEE 34	5772 (1759.3)	6052 (1844.7)	280 (85.3)
TOOLACHEE 35	5820 (1773.9)	6164 (1878.8)	344 (104.9)
TOOLACHEE 36	5743 (1750.5)	5895 (1796.8)	152 (46.3)
TOOLACHEE 37	5819 (1773.6)	6193 (1887.6)	374 (114.0)
TOOLACHEE 38	5760 (1755.7)	6061 (1847.4)	301 (91.7)
TOOLACHEE 39	5860 (1786.1)	6190 (1886.7)	330 (100.6)
TOOLACHEE 40	5856 (1784.9)	6193 (1887.6)	337 (102.7)
TOOLACHEE 41	5763 (1756.6)	6130 (1868.4)	367 (111.9)
TOOLACHEE EAST 1	5941 (1810.8)	6306 (1922.1)	365 (111.3)
TOOLACHEE EAST 2	5933 (1808.4)	6284 (1915.4)	351 (107.0)
TOOLACHEE NORTH 1	6083 (1854.1)	6399 (1950.4)	316 (96.3)

<u>WELLNAME</u>	<u>TOP (meters)</u>	<u>BASE(meters)</u>	<u>Thickness(m)</u>
TOONMAN 1	8225 (2507.0)	9286 (2830.4)	1061 (323.4)
TOPWEE 1	6437 (1962.0)	6514 (1985.5)	77 (23.5)
TURBAN 1	6565 (2001.0)	7420 (2261.6)	855 (260.6)
VARANUS 1	7796 (2376.2)	8566 (2610.9)	770 (234.7)
VARANUS 2	7738 (2358.5)	8536 (2601.8)	798 (243.2)
WALKILLIE 1	8006 (2440.2)	8901 (2713.0)	895 (272.8)
WANARA 1	5876 (1791.0)	6018 (1834.3)	142 (43.3)
WANTANA 1	7393 (2253.4)	8274 (2521.9)	881 (268.5)
WAUKATANNA 1	6607 (2013.8)	6904 (2104.3)	297 (90.5)
WELCOME LAKE 1	7513 (2290.0)	7942 (2420.7)	429 (130.8)
WILPINNIE 1	6204 (1891.0)	6664 (2031.2)	460 (140.2)
WILPINNIE 2	6055 (1845.6)	6492 (1978.8)	437 (133.2)
WIMMA 1	8689 (2648.4)	10397 (3169.0)	1708 (520.6)
WIRRARIE 1	6222 (1896.5)	6263 (1909.0)	41 (12.5)
WITCHETTY 1	5832 (1777.6)	6132 (1869.0)	300 (91.4)
WOOLKINA 1	8006 (2440.2)	8902 (2713.3)	896 (273.1)
WOOLKINA 2	7992 (2436.0)	8926 (2720.7)	934 (284.7)
WOOLOO 1	6684 (2037.3)	6738 (2053.7)	54 (16.5)
YALCUMMA 1	6818 (2078.1)	7318 (2230.5)	500 (152.4)
YANPURRA 1	7782 (2372.0)	8985 (2738.6)	1203 (366.7)
YAPENI 1	6147 (1873.6)	6292 (1917.8)	145 (44.2)
YAPENI 2	6230 (1898.9)	6414 (1955.0)	184 (56.1)
YAROWINNIE 1	7808 (2379.9)	8308 (2532.3)	500 (152.4)

TABLE IV: CALLAMURRA FORMATION

Tops (in feet and meters KB) & Thickness in Feet & Meters(m)

<u>WELLNAME</u>	<u>TOP (meters)</u>	<u>BASE(meters)</u>	<u>Thickness(m)</u>
AMYEMA 1	5867 (1788.3)	6156 (1876.4)	289 (88.1)
ANDREE 1	8317 (2535.0)	8605 (2622.8)	288 (87.8)
ANDREE 2	8392 (2557.9)	8681 (2646.0)	289 (88.1)
AROONA 1	6125 (1866.9)	6469 (1971.8)	344 (104.9)
ARRAKIS 1	6872 (2094.6)	6954 (2119.6)	82 (25.0)
ARRAKIS NORTH 1	6900 (2103.1)	6968 (2123.9)	68 (20.7)
ATREIDES 1	6456 (1967.8)	6640 (2023.9)	184 (56.1)
AZOLLA 1	5708 (1739.8)	5970 (1819.7)	262 (79.9)
BAGUNDI 1	6089 (1855.9)	6423 (1957.7)	334 (101.8)
BAGUNDI 2	6173 (1881.5)	6518 (1986.7)	345 (105.2)
BAGUNDI 3	6166 (1879.4)	6507 (1983.3)	341 (103.9)
BALCAMINGA 1	8950 (2728.0)	9310 (2837.7)	360 (109.7)
BARATTA 1	6149 (1874.2)	6489 (1977.9)	340 (103.6)
BARCOOLOO 1	5817 (1773.0)	6080 (1853.2)	263 (80.2)
BATTUNGA 1	5826 (1775.8)	6055 (1845.6)	229 (69.8)
BEANBUSH 1	9942 (3030.3)	10505 (3201.9)	563 (171.6)
BIG LAKE 1	7234 (2204.9)	7525 (2293.6)	291 (88.7)
BIG LAKE 2	7150 (2179.3)	7392 (2253.1)	242 (73.8)
BIG LAKE 3	7300 (2225.0)	7613 (2320.4)	313 (95.4)
BIG LAKE 4	7159 (2182.1)	7510 (2289.1)	351 (107.0)
BIG LAKE 5	7224 (2201.9)	7486 (2281.7)	262 (79.9)
BIG LAKE 6	7198 (2194.0)	7519 (2291.8)	321 (97.8)
BIG LAKE 7	7239 (2206.5)	7513 (2290.0)	274 (83.5)
BIG LAKE 8	7061 (2152.2)	7464 (2275.0)	403 (122.8)
BIG LAKE 9	7204 (2195.8)	7475 (2278.4)	271 (82.6)
BIG LAKE 10	7208 (2197.0)	7569 (2307.0)	361 (110.0)
BIG LAKE 11	7204 (2195.8)	7490 (2283.0)	286 (87.2)
BIG LAKE 12	7142 (2176.9)	7483 (2280.8)	341 (103.9)
BIG LAKE 13	7313 (2229.0)	7600 (2316.5)	287 (87.5)
BIG LAKE 14	7211 (2197.9)	7515 (2290.6)	304 (92.7)
BIG LAKE 15	7233 (2204.6)	7490 (2283.0)	257 (78.3)
BIG LAKE 16	7138 (2175.7)	7422 (2262.2)	284 (86.6)
BIG LAKE 17	7217 (2199.7)	7532 (2295.8)	315 (96.0)
BIG LAKE 18	7179 (2188.2)	7498 (2285.4)	319 (97.2)
BIG LAKE 19A	7247 (2208.9)	7508 (2288.4)	261 (79.6)
BIG LAKE 20	7270 (2215.9)	7526 (2293.9)	256 (78.0)
BIG LAKE 21	7253 (2210.7)	7540 (2298.2)	287 (87.5)
BIG LAKE 22	7284 (2220.2)	7541 (2298.5)	257 (78.3)
BIG LAKE 23	7274 (2217.1)	7586 (2312.2)	312 (95.1)
BIG LAKE 24	7189 (2191.2)	7567 (2306.4)	378 (115.2)
BIG LAKE 25	7166 (2184.2)	7530 (2295.1)	364 (110.9)
BIG LAKE 26	7140 (2176.3)	7387 (2251.6)	247 (75.3)
BIG LAKE 27	7248 (2209.2)	7504 (2287.2)	256 (78.0)
BIG LAKE 29	7180 (2188.5)	7450 (2270.8)	270 (82.3)
BIG LAKE 30	7212 (2198.2)	7523 (2293.0)	311 (94.8)
BIG LAKE 31	7270 (2215.9)	7592 (2314.0)	322 (98.1)
BIG LAKE 32	7194 (2192.7)	7481 (2280.2)	287 (87.5)
BIG LAKE 33	7246 (2208.6)	7582 (2311.0)	336 (102.4)
BIG LAKE 34	7197 (2193.6)	7495 (2284.5)	298 (90.8)
BIG LAKE 35	7237 (2205.8)	7536 (2297.0)	299 (91.1)
BIG LAKE 41	7325 (2232.7)	7586 (2312.2)	261 (79.6)
BIG LAKE 43	7197 (2193.6)	7512 (2289.7)	315 (96.0)
BIG LAKE 44	7220 (2200.7)	7529 (2294.8)	309 (94.2)
BIG LAKE 45	7353 (2241.2)	7636 (2327.5)	283 (86.3)

<u>WELLNAME</u>	<u>TOP (meters)</u>		<u>BASE(meters)</u>		<u>Thickness(m)</u>	
BIG LAKE 46	7298	(2224.4)	7610	(2319.5)	312	(95.1)
BIG LAKE 47	7329	(2233.9)	7609	(2319.2)	280	(85.3)
BIG LAKE 48	7278	(2218.3)	7694	(2345.1)	416	(126.8)
BIMBAYA 1	8414	(2564.6)	8644	(2634.7)	230	(70.1)
BIMBAYA 2	8487	(2586.8)	8762	(2670.7)	275	(83.8)
BIMBAYA 3	8484	(2585.9)	8750	(2667.0)	266	(81.1)
BOBS WELL 1	6958	(2120.8)	7240	(2206.8)	282	(86.0)
BOOKABOURDIE 1	8404	(2561.5)	8723	(2658.8)	319	(97.2)
BOOKABOURDIE 2	8436	(2571.3)	8760	(2670.1)	324	(98.8)
BOOKABOURDIE 3	8487	(2586.8)	8822	(2689.0)	335	(102.1)
BOOKABOURDIE 4	8683	(2646.6)	8926	(2720.7)	243	(74.1)
BOOKABOURDIE 6	8640	(2633.5)	9071	(2764.8)	431	(131.4)
BOOKABOURDIE 7	8686	(2647.5)	8906	(2714.6)	220	(67.1)
BOOKABOURDIE 8	8462	(2579.2)	8736	(2662.7)	274	(83.5)
BOOKABOURDIE 9	8398	(2559.7)	8720	(2657.9)	322	(98.1)
BOOKABOURDIE 10	8874	(2704.8)	9184	(2799.3)	310	(94.5)
BROLGA 1	8400	(2560.3)	8693	(2649.6)	293	(89.3)
BROLGA 2	8403	(2561.2)	8692	(2649.3)	289	(88.1)
BRUMBY 1	5713	(1741.3)	5978	(1822.1)	265	(80.8)
BRUMBY 2	5782	(1762.4)	6090	(1856.2)	308	(93.9)
BRUMBY 3	5765	(1757.2)	6045	(1842.5)	280	(85.3)
BRUMBY 4	5768	(1758.1)	6070	(1850.1)	302	(92.0)
BRUMBY 5	5766	(1757.5)	6050	(1844.0)	284	(86.6)
BUNGEE 1	5982	(1823.3)	6211	(1893.1)	229	(69.8)
BUNGEE 2	5999	(1828.5)	6233	(1899.8)	234	(71.3)
BURKE 1	6558	(1998.9)	6940	(2115.3)	382	(116.4)
BURKE 3	6565	(2001.0)	7006	(2135.4)	441	(134.4)
BURKE 4	6530	(1990.3)	6934	(2113.5)	404	(123.1)
BURKE 5	6620	(2017.8)	7014	(2137.9)	394	(120.1)
BURLEY 1	8156	(2486.0)	8737	(2663.0)	581	(177.1)
BURLEY 2	8130	(2478.0)	8770	(2673.1)	640	(195.1)
CARAKA 1	6240	(1902.0)	6669	(2032.7)	429	(130.8)
CHILCARRIE 1	5932	(1808.1)	6256	(1906.8)	324	(98.8)
CHILDIE 1	5796	(1766.6)	6018	(1834.3)	222	(67.7)
COOCHILARA 1	6488	(1977.5)	6868	(2093.4)	380	(115.8)
COOCHILARA 2	6490	(1978.2)	6857	(2090.0)	367	(111.9)
COOLOON 1	6515	(1985.8)	6852	(2088.5)	337	(102.7)
COONATIE 1	9048	(2757.8)	9398	(2864.5)	350	(106.7)
COONATIE 2	8920	(2718.8)	9230	(2813.3)	310	(94.5)
COONATIE 3	9087	(2769.7)	9523	(2902.6)	436	(132.9)
COOPERS CREEK 1	8082	(2463.4)	8364	(2549.4)	282	(86.0)
CORKWOOD 1	5966	(1818.4)	6243	(1902.9)	277	(84.4)
COWAN 1	6371	(1941.9)	6491	(1978.5)	120	(36.6)
COWRALLI 1	8006	(2440.2)	8320	(2535.9)	314	(95.7)
COWRALLI 2	8031	(2447.9)	8362	(2548.7)	331	(100.9)
COWRALLI 3	8027	(2446.6)	8331	(2539.3)	304	(92.7)
CUTTAPIRRIE 1	8817	(2687.4)	9045	(2756.9)	228	(69.5)
DARALINGIE 1	6142	(1872.1)	6317	(1925.4)	175	(53.3)
DARALINGIE 2	6136	(1870.3)	6397	(1949.8)	261	(79.6)
DARALINGIE 3	6260	(1908.1)	6416	(1955.6)	156	(47.5)
DARALINGIE 4	6418	(1956.2)	6582	(2006.2)	164	(50.0)
DARALINGIE 5	6050	(1844.0)	6194	(1887.9)	144	(43.9)
DARALINGIE 6	6220	(1895.9)	6400	(1950.7)	180	(54.9)
DARALINGIE 7	6236	(1900.7)	6450	(1966.0)	214	(65.2)
DARALINGIE 8	6223	(1896.8)	6429	(1959.6)	206	(62.8)
DARALINGIE 9	6176	(1882.4)	6392	(1948.3)	216	(65.8)

<u>WELLNAME</u>	<u>TOP (meters)</u>		<u>BASE(meters)</u>		<u>Thickness(m)</u>	
DARALINGIE 10	6192	(1887.3)	6370	(1941.6)	178	(54.3)
DARALINGIE 11	6203	(1890.7)	6380	(1944.6)	177	(53.9)
DARALINGIE 12	6313	(1924.2)	6520	(1987.3)	207	(63.1)
DARALINGIE 13	6254	(1906.2)	6477	(1974.2)	223	(68.0)
DARALINGIE 14	6176	(1882.4)	6366	(1940.4)	190	(57.9)
DARALINGIE 15	6278	(1913.5)	6496	(1980.0)	218	(66.4)
DARALINGIE 16	6301	(1920.5)	6481	(1975.4)	180	(54.9)
DARALINGIE 17	6471	(1972.4)	6622	(2018.4)	151	(46.0)
DARALINGIE 18	6241	(1902.3)	6486	(1976.9)	245	(74.7)
DARALINGIE 19	6223	(1896.8)	6458	(1968.4)	235	(71.6)
DARALINGIE 20	6429	(1959.6)	6612	(2015.3)	183	(55.8)
DARALINGIE 21	6225	(1897.4)	6478	(1974.5)	253	(77.1)
DARALINGIE 22	6313	(1924.2)	6557	(1998.6)	244	(74.4)
DARALINGIE 23	6301	(1920.5)	6559	(1999.2)	258	(78.6)
DEINA 1	6188	(1886.1)	6432	(1960.5)	244	(74.4)
DELIN 1	9030	(2752.3)	9470	(2886.5)	440	(134.1)
DELLA 1	6147	(1873.6)	6409	(1953.5)	262	(79.9)
DELLA 2	6246	(1903.8)	6491	(1978.5)	245	(74.7)
DELLA 3	6278	(1913.5)	6595	(2010.2)	317	(96.6)
DELLA 4	6110	(1862.3)	6416	(1955.6)	306	(93.3)
DELLA 5A	6036	(1839.8)	6205	(1891.3)	169	(51.5)
DELLA 6	6158	(1877.0)	6470	(1972.1)	312	(95.1)
DELLA 7	6105	(1860.8)	6323	(1927.3)	218	(66.4)
DELLA 8	6058	(1846.5)	6339	(1932.1)	281	(85.6)
DELLA 9	5996	(1827.6)	6274	(1912.3)	278	(84.7)
DELLA 10	6069	(1849.8)	6310	(1923.3)	241	(73.5)
DELLA 11	6023	(1835.8)	6308	(1922.7)	285	(86.9)
DELLA 12	6053	(1845.0)	6306	(1922.1)	253	(77.1)
DELLA 13	6036	(1839.8)	6335	(1930.9)	299	(91.1)
DELLA 14	6112	(1862.9)	6358	(1937.9)	246	(75.0)
DELLA 15	6016	(1833.7)	6378	(1944.0)	362	(110.3)
DELLA 16	6104	(1860.5)	6401	(1951.0)	297	(90.5)
DELLA 17	6010	(1831.9)	6265	(1909.6)	255	(77.7)
DEPARANIE 1	7665	(2336.3)	7891	(2405.2)	226	(68.9)
DERAMOOKOO 1	8388	(2556.7)	8538	(2602.4)	150	(45.7)
DIERI 1	6190	(1886.7)	6570	(2002.5)	380	(115.8)
DILCHEE 1	6585	(2007.1)	7006	(2135.4)	421	(128.3)
DILCHEE 2	6578	(2005.0)	6953	(2119.3)	375	(114.3)
DULLINGARI 1	6509	(1983.9)	6854	(2089.1)	345	(105.2)
DULLINGARI 2	6522	(1987.9)	6853	(2088.8)	331	(100.9)
DULLINGARI 3	6676	(2034.8)	7077	(2157.1)	401	(122.2)
DULLINGARI 4	6611	(2015.0)	6956	(2120.2)	345	(105.2)
DULLINGARI 16	6468	(1971.5)	6816	(2077.5)	348	(106.1)
DULLINGARI 17	6598	(2011.1)	6918	(2108.6)	320	(97.5)
DULLINGARI 18	6460	(1969.0)	6792	(2070.2)	332	(101.2)
DULLINGARI 19	6614	(2016.0)	6936	(2114.1)	322	(98.1)
DULLINGARI 22	6484	(1976.3)	6816	(2077.5)	332	(101.2)
DULLINGARI 23	6459	(1968.7)	6802	(2073.3)	343	(104.5)
DULLINGARI 24	6602	(2012.3)	6953	(2119.3)	351	(107.0)
DULLINGARI 25	6538	(1992.8)	6898	(2102.5)	360	(109.7)
DULLINGARI 26	6600	(2011.7)	6964	(2122.6)	364	(110.9)
DULLINGARI 39	6702	(2042.8)	7064	(2153.1)	362	(110.3)
DULLINGARI 44	6673	(2033.9)	7002	(2134.2)	329	(100.3)
DULLINGARI 45	6629	(2020.5)	6984	(2128.7)	355	(108.2)
DULLINGARI 46	6631	(2021.1)	6990	(2130.6)	359	(109.4)
DULLINGARI NORTH 1	6645	(2025.4)	7026	(2141.5)	381	(116.1)

<u>WELLNAME</u>	<u>TOP (meters)</u>	<u>BASE(meters)</u>	<u>Thickness(m)</u>
DULLINGARI NORTH 2	6680 (2036.1)	7063 (2152.8)	383 (116.7)
DULLINGARI NORTH 3	6692 (2039.7)	7068 (2154.3)	376 (114.6)
DULLINGARI NORTH 4	6673 (2033.9)	7075 (2156.5)	402 (122.5)
FLY LAKE 1	8173 (2491.1)	8415 (2564.9)	242 (73.7)
FLY LAKE 2	8415 (2564.9)	8640 (2633.5)	225 (68.6)
FLY LAKE 3	8270 (2520.7)	8514 (2595.1)	244 (74.4)
FLY LAKE 4	8313 (2533.8)	8567 (2611.2)	254 (77.4)
FLY LAKE 5	8240 (2511.6)	8476 (2583.5)	236 (71.9)
FLY LAKE 6	8205 (2500.9)	8449 (2575.3)	244 (74.4)
FLY LAKE 7	8205 (2500.9)	8455 (2577.1)	250 (76.2)
GIDGEALPA 1	7514 (2290.3)	7694 (2345.1)	180 (54.9)
GIDGEALPA 2	6586 (2007.4)	6751 (2057.7)	165 (50.3)
GIDGEALPA 3	6936 (2114.1)	7088 (2160.4)	152 (46.3)
GIDGEALPA 4	6734 (2052.5)	6866 (2092.8)	132 (40.2)
GIDGEALPA 5	6823 (2079.7)	6880 (2097.0)	57 (17.4)
GIDGEALPA 6	6991 (2130.9)	7079 (2157.7)	88 (26.8)
GIDGEALPA 7	6791 (2069.9)	6852 (2088.5)	61 (18.6)
GIDGEALPA 8	6735 (2052.8)	6896 (2101.9)	161 (49.1)
GIDGEALPA 9	6740 (2054.4)	6926 (2111.0)	186 (56.7)
GIDGEALPA 10	6750 (2057.4)	6903 (2104.0)	153 (46.6)
GIDGEALPA 11	6633 (2021.7)	6744 (2055.6)	111 (33.8)
GIDGEALPA 12	6610 (2014.7)	6767 (2062.6)	157 (47.9)
GIDGEALPA 13	6756 (2059.2)	6906 (2105.0)	150 (45.7)
GIDGEALPA 14	6579 (2005.3)	6708 (2044.6)	129 (39.3)
GIDGEALPA 15	6602 (2012.3)	6863 (2091.8)	261 (79.6)
GIDGEALPA 16	6798 (2072.0)	6852 (2088.5)	54 (16.5)
GIDGEALPA 17	6779 (2066.2)	6862 (2091.5)	83 (25.3)
GIDGEALPA 19	6797 (2071.7)	6863 (2091.8)	66 (20.1)
GIDGEALPA 21	6813 (2076.6)	6855 (2089.4)	42 (12.8)
GIDGEALPA 23	6845 (2086.4)	6899 (2102.8)	54 (16.5)
GIDGEALPA 27	6862 (2091.5)	6882 (2097.6)	20 (6.1)
GIDGEALPA 29	6786 (2068.4)	6873 (2094.9)	87 (26.5)
GIDGEALPA 33	6780 (2066.5)	6827 (2080.9)	47 (14.3)
GIDGEALPA 34	6773 (2064.4)	6828 (2081.2)	55 (16.8)
GIDGEALPA 35	6758 (2059.8)	6958 (2120.8)	200 (61.0)
GIDGEALPA 36	6787 (2068.7)	6884 (2098.2)	97 (29.6)
GIDGEALPA 38	6877 (2096.1)	7034 (2144.0)	157 (47.9)
GOORANIE 1	8169 (2489.9)	8478 (2584.1)	309 (94.2)
GOORANIE 2	8190 (2496.3)	8506 (2592.6)	316 (96.3)
GOORANIE 3	8209 (2502.1)	8520 (2596.9)	311 (94.8)
GOYDER 1	5850 (1783.1)	6042 (1841.6)	192 (58.5)
INNAMINCKA 1	6470 (1972.1)	6789 (2069.3)	319 (97.2)
INNAMINCKA 4	6437 (1962.0)	6783 (2067.5)	346 (105.5)
JACK LAKE 1	7763 (2366.2)	8016 (2443.3)	253 (77.1)
JACK LAKE 2	7767 (2367.4)	8034 (2448.8)	267 (81.4)
KALANNA 1	6393 (1948.6)	6717 (2047.3)	324 (98.8)
KANOWANA 1	8053 (2454.6)	8340 (2542.0)	287 (87.5)
KANOWANA 2	8131 (2478.3)	8386 (2556.1)	255 (77.7)
KANOWANA 3	8155 (2485.6)	8409 (2563.1)	254 (77.4)
KARILLA 1	6090 (1856.2)	6148 (1873.9)	58 (17.7)
KEETO 1	5850 (1783.1)	6138 (1870.9)	288 (87.8)
KENNY 1	9009 (2745.9)	9303 (2835.6)	294 (89.6)
KERNA 1	6508 (1983.6)	6882 (2097.6)	374 (114.0)
KERNA 2A	6579 (2005.3)	6951 (2118.7)	372 (113.4)
KERNA 3	6474 (1973.3)	6831 (2082.1)	357 (108.8)
KERNA 4	6503 (1982.1)	6854 (2089.1)	351 (107.0)

<u>WELLNAME</u>	<u>TOP (meters)</u>		<u>BASE(meters)</u>		<u>Thickness(m)</u>	
KIDMAN 1	6000	(1828.8)	6367	(1940.7)	367	(111.9)
KIDMAN 2	6067	(1849.2)	6422	(1957.4)	355	(108.2)
KIDMAN 3	6003	(1829.7)	6374	(1942.8)	371	(113.1)
KIDMAN 4	6081	(1853.5)	6438	(1962.3)	357	(108.8)
KIDMAN 5	6035	(1839.5)	6378	(1944.0)	343	(104.5)
KIDMAN 6	6175	(1882.1)	6536	(1992.2)	361	(110.0)
KIDMAN 7	5999	(1828.5)	6358	(1937.9)	359	(109.4)
KIDMAN NORTH 1	6131	(1868.7)	6484	(1976.3)	353	(107.6)
KIDMAN NORTH 2	6155	(1876.0)	6528	(1989.7)	373	(113.7)
KIRBY 1	7852	(2393.3)	8703	(2652.7)	851	(259.4)
KIRRALEE 1	7500	(2286.0)	7864	(2397.0)	364	(110.9)
KOREE 1	6290	(1917.2)	6314	(1924.5)	24	(7.3)
KUDRIEKE 1	8930	(2721.9)	9297	(2833.7)	367	(111.9)
KUDRIEKE 2	8877	(2705.7)	9204	(2805.4)	327	(99.7)
KUJANI 1	5761	(1756.0)	5828	(1776.4)	67	(20.4)
KURUNDA 1	7093	(2162.0)	7242	(2207.4)	149	(45.4)
KURUNDA 2	7057	(2151.0)	7222	(2201.3)	165	(50.3)
KURUNDA 3	7043	(2146.7)	7206	(2196.4)	163	(49.7)
KURUNDA 4	7089	(2160.7)	7232	(2204.3)	143	(43.6)
LAKE MACMILLAN 1	8991	(2740.5)	9407	(2867.3)	416	(126.8)
LAKE MACMILLAN 2	8967	(2733.1)	9412	(2868.8)	445	(135.6)
LAMDINA 1	9346	(2848.7)	9758	(2974.2)	412	(125.6)
LELEPTIAN 1	8260	(2517.7)	8553	(2607.0)	293	(89.3)
LELEPTIAN 2	8306	(2531.7)	8618	(2626.8)	312	(95.1)
LEPENA 1	6189	(1886.4)	6510	(1984.3)	321	(97.8)
LOWANNA 1	7208	(2197.0)	7536	(2297.0)	328	(100.0)
LYCOSA 1	6494	(1979.4)	6782	(2067.2)	288	(87.8)
MARABOOKA 1	6100	(1859.3)	6326	(1928.2)	226	(68.9)
MARABOOKA 2	6096	(1858.1)	6350	(1935.5)	254	(77.4)
MARABOOKA 3	6130	(1868.4)	6319	(1926.0)	189	(57.6)
MARABOOKA 4	6102	(1859.9)	6367	(1940.7)	265	(80.8)
MARAKU 1	5577	(1699.9)	5735	(1748.0)	158	(48.2)
MARANA 1	5910	(1801.4)	6170	(1880.6)	260	(79.2)
MARSILEA 1	6029	(1837.6)	6343	(1933.4)	314	(95.7)
MASSY 1	7560	(2304.3)	7742	(2359.8)	182	(55.5)
MAWSON 1	7179	(2188.2)	7269	(2215.6)	90	(27.4)
MAWSON 2	7156	(2181.2)	7269	(2215.6)	113	(34.4)
MCLEOD 1	8015	(2443.0)	8685	(2647.2)	670	(204.2)
MERANJI 1	7778	(2370.7)	7901	(2408.2)	123	(37.5)
MERANJI 2	7864	(2397.0)	8085	(2464.3)	221	(67.4)
MERANJI 4	7872	(2399.4)	8091	(2466.1)	219	(66.8)
MERINDA 1	6198	(1889.2)	6504	(1982.4)	306	(93.3)
MERRIMELIA 1	7600	(2316.5)	7798	(2376.8)	198	(60.4)
MERRIMELIA 2	7352	(2240.9)	7496	(2284.8)	144	(43.9)
MERRIMELIA 3	7568	(2306.7)	7789	(2374.1)	221	(67.4)
MERRIMELIA 4	7372	(2247.0)	7545	(2299.7)	173	(52.7)
MERRIMELIA 5	7278	(2218.3)	7440	(2267.7)	162	(49.4)
MERRIMELIA 6	7035	(2144.3)	7130	(2173.2)	95	(29.0)
MERRIMELIA 7	7229	(2203.4)	7363	(2244.2)	134	(40.8)
MERRIMELIA 8	7117	(2169.3)	7188	(2190.9)	71	(21.6)
MERRIMELIA 9	7110	(2167.1)	7278	(2218.3)	168	(51.2)
MERRIMELIA 10	7066	(2153.7)	7194	(2192.7)	128	(39.0)
MERRIMELIA 11	7060	(2151.9)	7145	(2177.8)	85	(25.9)
MERRIMELIA 13	7200	(2194.6)	7342	(2237.8)	142	(43.3)
MERRIMELIA 14	7185	(2190.0)	7325	(2232.7)	140	(42.7)
MERRIMELIA 15	7143	(2177.2)	7211	(2197.9)	68	(20.7)

<u>WELLNAME</u>	<u>TOP (meters)</u>		<u>BASE(meters)</u>		<u>Thickness(m)</u>	
MERRIMELIA 17	7162	(2183.0)	7298	(2224.4)	136	(41.5)
MERRIMELIA 18	7528	(2294.5)	7760	(2365.3)	232	(70.7)
MERRIMELIA 20	7266	(2214.7)	7431	(2265.0)	165	(50.3)
MERRIMELIA 22	7404	(2256.7)	7550	(2301.2)	146	(44.5)
MERRIMELIA 23	7176	(2187.2)	7216	(2199.4)	40	(12.2)
MERRIMELIA 25	7266	(2214.7)	7426	(2263.4)	160	(48.8)
MERUPA 1	8174	(2491.4)	8490	(2587.8)	316	(96.3)
MERUPA 2	8224	(2506.7)	8548	(2605.4)	324	(98.8)
METTIKA 1	6145	(1873.0)	6476	(1973.9)	331	(100.9)
METTIKA 2	6123	(1866.3)	6462	(1969.6)	339	(103.3)
METTIKA 3	6247	(1904.1)	6582	(2006.2)	335	(102.1)
MINA 1	6442	(1963.5)	6713	(2046.1)	271	(82.6)
MINGANA 1	8360	(2548.1)	8632	(2631.0)	272	(82.9)
MINKIE 1	7324	(2232.4)	7408	(2258.0)	84	(25.6)
MITCHIE 1	8856	(2699.3)	9216	(2809.0)	360	(109.7)
MOOLALLA 1	6609	(2014.4)	6803	(2073.6)	194	(59.1)
MOOLION 1	8800	(2682.2)	9133	(2783.7)	333	(101.5)
MOOMBA 1	7232	(2204.3)	7602	(2317.1)	370	(112.8)
MOOMBA 2	7086	(2159.8)	7432	(2265.3)	346	(105.5)
MOOMBA 3	7383	(2250.3)	7753	(2363.1)	370	(112.8)
MOOMBA 4	7398	(2254.9)	7709	(2349.7)	311	(94.8)
MOOMBA 5	7471	(2277.2)	7939	(2419.8)	468	(142.6)
MOOMBA 6	7617	(2321.7)	8012	(2442.1)	395	(120.4)
MOOMBA 7	7405	(2257.0)	7912	(2411.6)	507	(154.5)
MOOMBA 8	7303	(2226.0)	7641	(2329.0)	338	(103.0)
MOOMBA 9	7350	(2240.3)	7630	(2325.6)	280	(85.3)
MOOMBA 10	7226	(2202.5)	7581	(2310.7)	355	(108.2)
MOOMBA 11	7386	(2251.3)	7735	(2357.6)	349	(106.4)
MOOMBA 12	7263	(2213.8)	7628	(2325.0)	365	(111.3)
MOOMBA 13	7414	(2259.8)	7840	(2389.6)	426	(129.8)
MOOMBA 14	7153	(2180.2)	7503	(2286.9)	350	(106.7)
MOOMBA 15	7306	(2226.9)	7684	(2342.1)	378	(115.2)
MOOMBA 16	7228	(2203.1)	7578	(2309.8)	350	(106.7)
MOOMBA 17	7332	(2234.8)	7677	(2340.0)	345	(105.2)
MOOMBA 18	7334	(2235.4)	7715	(2351.5)	381	(116.1)
MOOMBA 19	7326	(2233.0)	7654	(2332.9)	328	(100.0)
MOOMBA 20	7210	(2197.6)	7605	(2318.0)	395	(120.4)
MOOMBA 21	7266	(2214.7)	7617	(2321.7)	351	(107.0)
MOOMBA 22	7334	(2235.4)	7686	(2342.7)	352	(107.3)
MOOMBA 23	7376	(2248.2)	7723	(2354.0)	347	(105.8)
MOOMBA 24	7245	(2208.3)	7594	(2314.7)	349	(106.4)
MOOMBA 25	7198	(2194.0)	7518	(2291.5)	320	(97.5)
MOOMBA 26	7482	(2280.5)	7970	(2429.3)	488	(148.7)
MOOMBA 27	7631	(2325.9)	8088	(2465.2)	457	(139.3)
MOOMBA 28	7294	(2223.2)	7632	(2326.2)	338	(103.0)
MOOMBA 29	7309	(2227.8)	7660	(2334.8)	351	(107.0)
MOOMBA 30	7258	(2212.2)	7620	(2322.6)	362	(110.3)
MOOMBA 31	7279	(2218.6)	7654	(2332.9)	375	(114.3)
MOOMBA 32	7287	(2221.1)	7650	(2331.7)	363	(110.6)
MOOMBA 33	7255	(2211.3)	7611	(2319.8)	356	(108.5)
MOOMBA 34	7298	(2224.4)	7643	(2329.6)	345	(105.2)
MOOMBA 35	7285	(2220.5)	7628	(2325.0)	343	(104.5)
MOOMBA 36	7199	(2194.3)	7545	(2299.7)	346	(105.5)
MOOMBA 37	7257	(2211.9)	7614	(2320.8)	357	(108.8)
MOOMBA 38	7300	(2225.0)	7690	(2343.9)	390	(118.9)
MOOMBA 39	7208	(2197.0)	7548	(2300.6)	340	(103.6)

<u>WELLNAME</u>	<u>TOP (meters)</u>		<u>BASE(meters)</u>		<u>Thickness(m)</u>	
MOOMBA 40	7354	(2241.5)	7661	(2335.1)	307	(93.6)
MOOMBA 41	7224	(2201.9)	7563	(2305.2)	339	(103.3)
MOOMBA 42	7184	(2189.7)	7540	(2298.2)	356	(108.5)
MOOMBA 43	7237	(2205.8)	7564	(2305.5)	327	(99.7)
MOOMBA 44	7258	(2212.2)	7600	(2316.5)	342	(104.2)
MOOMBA 45	7295	(2223.5)	7676	(2339.6)	381	(116.1)
MOOMBA 46	7258	(2212.2)	7600	(2316.5)	342	(104.2)
MOOMBA 47	7443	(2268.6)	7747	(2361.3)	304	(92.7)
MOOMBA 48	7392	(2253.1)	7780	(2371.3)	388	(118.3)
MOOMBA 49	7214	(2198.8)	7610	(2319.5)	396	(120.7)
MOOMBA 50	7586	(2312.2)	8014	(2442.7)	428	(130.5)
MOOMBA 51	7504	(2287.2)	8111	(2472.2)	607	(185.0)
MOOMBA 52	7300	(2225.0)	7677	(2340.0)	377	(114.9)
MOOMBA 53	7331	(2234.5)	7686	(2342.7)	355	(108.2)
MOOMBA 54	7480	(2279.9)	7960	(2426.2)	480	(146.3)
MOOMBA 55	7528	(2294.5)	8017	(2443.6)	489	(149.0)
MOOMBA 56	7685	(2342.4)	8128	(2477.4)	443	(135.0)
MOOMBA 57	7374	(2247.6)	7712	(2350.6)	338	(103.0)
MOOMBA 58	7603	(2317.4)	8073	(2460.7)	470	(143.3)
MOOMBA 59	7463	(2274.7)	7800	(2377.4)	337	(102.7)
MOOMBA 60	7715	(2351.5)	8174	(2491.4)	459	(139.9)
MOOMBA 61	7565	(2305.8)	8063	(2457.6)	498	(151.8)
MOOMBA 62	7344	(2238.5)	7753	(2363.1)	409	(124.7)
MOOMBA 63	7488	(2282.3)	7910	(2411.0)	422	(128.6)
MOOMBA 64	7294	(2223.2)	7607	(2318.6)	313	(95.4)
MOOMBA 65	7386	(2251.3)	7738	(2358.5)	352	(107.3)
MOOMBA 67	7178	(2187.9)	7532	(2295.8)	354	(107.9)
MOOMBA NORTH 1	7539	(2297.9)	8024	(2445.7)	485	(147.8)
MOOMBA NORTH 2	7516	(2290.9)	8010	(2441.5)	494	(150.6)
MOOMBA SOUTH 1	7296	(2223.8)	7663	(2335.7)	367	(111.9)
MOORAN 1	7077	(2157.1)	7212	(2198.2)	135	(41.1)
MOORARI 1	8561	(2609.4)	8833	(2692.3)	272	(82.9)
MOORARI 2	8744	(2665.2)	9066	(2763.3)	322	(98.1)
MOORARI 3	8550	(2606.0)	8786	(2678.0)	236	(71.9)
MOORARI 4	8555	(2607.6)	8784	(2677.4)	229	(69.8)
MOORARI 5	8558	(2608.5)	8786	(2678.0)	228	(69.5)
MOORARI 6	8618	(2626.8)	8924	(2720.0)	306	(93.3)
MOORARI 7	8600	(2621.3)	8883	(2707.5)	283	(86.3)
MUDERA 1	6350	(1935.5)	6632	(2021.4)	282	(86.0)
MUDERA 2	6387	(1946.8)	6668	(2032.4)	281	(85.6)
MUDERA 3	6300	(1920.2)	6638	(2023.3)	338	(103.0)
MUDERA 4	6405	(1952.2)	6750	(2057.4)	345	(105.2)
MUDLALEE 1	5753	(1753.5)	5863	(1787.0)	110	(33.5)
MUDLALEE 2	5679	(1731.0)	5730	(1746.5)	51	(15.5)
MUDRANGIE 1	8590	(2618.2)	8926	(2720.7)	336	(102.4)
MUDRANGIE 2	8505	(2592.3)	8822	(2689.0)	317	(96.6)
MUNDI 1	6042	(1841.6)	6414	(1955.0)	372	(113.4)
MUNKARIE 1	5678	(1730.7)	5853	(1784.0)	175	(53.3)
MUNKARIE 2	5650	(1722.1)	5812	(1771.5)	162	(49.4)
MUNKARIE 3	5706	(1739.2)	5963	(1817.5)	257	(78.3)
MUNKARIE 4	5631	(1716.3)	5792	(1765.4)	161	(49.1)
MUNKARIE 5	5667	(1727.3)	5902	(1798.9)	235	(71.6)
MUNKARIE 6	5631	(1716.3)	5814	(1772.1)	183	(55.8)
MURTEREE 1	5745	(1751.1)	5910	(1801.4)	165	(50.3)
MURTEREE 2	5840	(1780.0)	5879	(1791.9)	39	(11.9)
MURTEREE C1	5893	(1796.2)	6021	(1835.2)	128	(39.0)

<u>WELLNAME</u>	<u>TOP (meters)</u>		<u>BASE(meters)</u>		<u>Thickness(m)</u>	
NAMUR 1	6703	(2043.1)	6927	(2111.4)	224	(68.3)
NAMUR 3	6640	(2023.9)	6852	(2088.5)	212	(64.6)
NANIMA 1	6010	(1831.9)	6175	(1882.1)	165	(50.3)
NAPPACOONGEE 1	5926	(1806.2)	6163	(1878.5)	237	(72.2)
NAPPACOONGEE 2	5846	(1781.9)	6090	(1856.2)	244	(74.4)
NAPPACOONGEE 3	5882	(1792.8)	6122	(1866.0)	240	(73.2)
NARCOONOWIE 1	5478	(1669.7)	5522	(1683.1)	44	(13.4)
NARIE 1	7740	(2359.2)	7952	(2423.8)	212	(64.6)
NARIE 2	7778	(2370.7)	8002	(2439.0)	224	(68.3)
NULLA 1	7653	(2332.6)	7760	(2365.3)	107	(32.6)
PACKSADDLE 1	7878	(2401.2)	8278	(2523.1)	400	(121.9)
PACKSADDLE 2	7335	(2235.7)	7716	(2351.8)	381	(116.1)
PACKSADDLE 3	6937	(2114.4)	7212	(2198.2)	275	(83.8)
PACKSADDLE 4	6805	(2074.2)	6915	(2107.7)	110	(33.5)
PACKSADDLE 5	6841	(2085.1)	7141	(2176.6)	300	(91.4)
PANING 1	8909	(2715.5)	9353	(2850.8)	444	(135.3)
PELICAN 1	7618	(2322.0)	7807	(2379.6)	189	(57.6)
PELICAN 2	7618	(2322.0)	7786	(2373.2)	168	(51.2)
PELICAN 3	7695	(2345.4)	7904	(2409.1)	209	(63.7)
PELICAN 4	7718	(2352.5)	7939	(2419.8)	221	(67.4)
PELICAN 5	7804	(2378.7)	7923	(2414.9)	119	(36.3)
PELKETA 1	5760	(1755.7)	6024	(1836.1)	264	(80.5)
PERENTY 1	6152	(1875.1)	6272	(1911.7)	120	(36.6)
PINNA 1	5812	(1771.5)	5953	(1814.5)	141	(43.0)
PIRA 1	6576	(2004.4)	6957	(2120.5)	381	(116.1)
PIRA 2	6581	(2005.9)	6959	(2121.1)	378	(115.2)
PIRRAMINTA 1	7540	(2298.2)	7788	(2373.8)	248	(75.6)
POGONA 1	6941	(2115.6)	7057	(2151.0)	116	(35.4)
PONDRINIE 1	7022	(2140.3)	7347	(2239.4)	325	(99.1)
PONDRINIE 2	7150	(2179.3)	7489	(2282.7)	339	(103.3)
PONDRINIE 3	6912	(2106.8)	7151	(2179.6)	239	(72.8)
PONDRINIE 4	6920	(2109.2)	7218	(2200.1)	298	(90.8)
PONDRINIE 5	6970	(2124.5)	7279	(2218.6)	309	(94.2)
POORAKA 1	6326	(1928.2)	6605	(2013.2)	279	(85.0)
QUARTPOT 1	8652	(2637.1)	8992	(2740.8)	340	(103.6)
RAKOONA 1	8488	(2587.1)	8728	(2660.3)	240	(73.2)
REGOLITH 1	7892	(2405.5)	8024	(2445.7)	132	(40.2)
SNAKE HOLE 1	7436	(2266.5)	7623	(2323.5)	187	(57.0)
SPECTRE 1	8508	(2593.2)	8765	(2671.6)	257	(78.3)
SPENCER 1	6121	(1865.7)	6143	(1872.4)	22	(6.7)
STRATHMOUNT 1	7287	(2221.1)	7916	(2412.8)	629	(191.7)
STRZELECKI 1	5940	(1810.5)	6228	(1898.3)	288	(87.8)
STRZELECKI 2	5895	(1796.8)	6103	(1860.2)	208	(63.4)
STRZELECKI 3	5830	(1777.0)	5994	(1827.0)	164	(50.0)
STRZELECKI 5	5830	(1777.0)	5990	(1825.8)	160	(48.8)
STRZELECKI 10	5975	(1821.2)	6185	(1885.2)	210	(64.0)
STRZELECKI 15	5869	(1788.9)	6078	(1852.6)	209	(63.7)
STRZELECKI 16	5964	(1817.8)	6096	(1858.1)	132	(40.2)
STRZELECKI 17	5799	(1767.5)	5956	(1815.4)	157	(47.9)
STRZELECKI 24	5937	(1809.6)	6235	(1900.4)	298	(90.8)
STRZELECKI 25	5900	(1798.3)	6128	(1867.8)	228	(69.5)
SWAN LAKE 1	8084	(2464.0)	8302	(2530.5)	218	(66.4)
TARWONGA 1	6131	(1868.7)	6493	(1979.1)	362	(110.3)
TARWONGA 2	6133	(1869.3)	6514	(1985.5)	381	(116.1)
TARWONGA 3	6204	(1891.0)	6579	(2005.3)	375	(114.3)
TAYLOR SOUTH 1	8322	(2536.6)	8678	(2645.1)	356	(108.5)

<u>WELLNAME</u>	<u>TOP (meters)</u>		<u>BASE(meters)</u>		<u>Thickness(m)</u>	
THREE QUEENS 1	6938	(2114.7)	7382	(2250.0)	444	(135.3)
THURAKINNA 1	6278	(1913.5)	6394	(1948.9)	116	(35.4)
THURAKINNA 2	6292	(1917.8)	6424	(1958.0)	132	(40.2)
THURAKINNA 3	6303	(1921.2)	6431	(1960.2)	128	(39.0)
THURAKINNA 4	6275	(1912.6)	6410	(1953.8)	135	(41.1)
THURAKINNA 5	6307	(1922.4)	6457	(1968.1)	150	(45.7)
TILPAREE A1	5647	(1721.2)	5819	(1773.6)	172	(52.4)
TINDILPIE 1	8074	(2461.0)	8402	(2560.9)	328	(100.0)
TINDILPIE 2	8024	(2445.7)	8347	(2544.2)	323	(98.5)
TIRRAWARRA 1	8132	(2478.6)	8446	(2574.3)	314	(95.7)
TIRRAWARRA 2	8152	(2484.7)	8472	(2582.3)	320	(97.5)
TIRRAWARRA 3	8362	(2548.7)	8667	(2641.7)	305	(93.0)
TIRRAWARRA 4	8343	(2543.0)	8547	(2605.1)	204	(62.2)
TIRRAWARRA 5	8285	(2525.3)	8575	(2613.7)	290	(88.4)
TIRRAWARRA 6	8315	(2534.4)	8612	(2624.9)	297	(90.5)
TIRRAWARRA 7	8310	(2532.9)	8630	(2630.4)	320	(97.5)
TIRRAWARRA 8	8227	(2507.6)	8462	(2579.2)	235	(71.6)
TIRRAWARRA 9	8242	(2512.2)	8531	(2600.3)	289	(88.1)
TIRRAWARRA 10	8443	(2573.4)	8672	(2643.2)	229	(69.8)
TIRRAWARRA 11	8195	(2497.8)	8522	(2597.5)	327	(99.7)
TIRRAWARRA 12	8284	(2525.0)	8609	(2624.0)	325	(99.1)
TIRRAWARRA 13	8240	(2511.6)	8504	(2592.0)	264	(80.5)
TIRRAWARRA 14	8121	(2475.3)	8427	(2568.6)	306	(93.3)
TIRRAWARRA 15	8128	(2477.4)	8433	(2570.4)	305	(93.0)
TIRRAWARRA 16	8298	(2529.2)	8608	(2623.7)	310	(94.5)
TIRRAWARRA 17	8196	(2498.1)	8498	(2590.2)	302	(92.0)
TIRRAWARRA 18	8202	(2500.0)	8516	(2595.7)	314	(95.7)
TIRRAWARRA 19	8250	(2514.6)	8556	(2607.9)	306	(93.3)
TIRRAWARRA 20	8154	(2485.3)	8456	(2577.4)	302	(92.0)
TIRRAWARRA 21	8152	(2484.7)	8466	(2580.4)	314	(95.7)
TIRRAWARRA 22	8296	(2528.6)	8606	(2623.1)	310	(94.5)
TIRRAWARRA 23	8152	(2484.7)	8454	(2576.8)	302	(92.0)
TIRRAWARRA 24	8184	(2494.5)	8510	(2593.9)	326	(99.4)
TIRRAWARRA 25	8152	(2484.7)	8461	(2578.9)	309	(94.2)
TIRRAWARRA 26	8246	(2513.4)	8563	(2610.0)	317	(96.6)
TIRRAWARRA 27	8310	(2532.9)	8575	(2613.7)	265	(80.8)
TIRRAWARRA 28	8180	(2493.3)	8495	(2589.3)	315	(96.0)
TIRRAWARRA 29	8158	(2486.6)	8465	(2580.1)	307	(93.6)
TIRRAWARRA 30	8127	(2477.1)	8441	(2572.8)	314	(95.7)
TIRRAWARRA 31	8146	(2482.9)	8448	(2575.0)	302	(92.0)
TIRRAWARRA 32	8178	(2492.7)	8494	(2589.0)	316	(96.3)
TIRRAWARRA 33	8170	(2490.2)	8488	(2587.1)	318	(96.9)
TIRRAWARRA 34	8154	(2485.3)	8452	(2576.2)	298	(90.8)
TIRRAWARRA 35	8140	(2481.1)	8458	(2578.0)	318	(96.9)
TIRRAWARRA 36	8286	(2525.6)	8572	(2612.8)	286	(87.2)
TIRRAWARRA 37	8222	(2506.1)	8545	(2604.5)	323	(98.5)
TIRRAWARRA 38	8210	(2502.4)	8526	(2598.7)	316	(96.3)
TIRRAWARRA 39	8159	(2486.9)	8485	(2586.2)	326	(99.4)
TIRRAWARRA 40	8198	(2498.8)	8500	(2590.8)	302	(92.0)
TIRRAWARRA 41	8248	(2514.0)	8560	(2609.1)	312	(95.1)
TIRRAWARRA 42	8160	(2487.2)	8482	(2585.3)	322	(98.1)
TIRRAWARRA 43	8230	(2508.5)	8547	(2605.1)	317	(96.6)
TIRRAWARRA 44	8395	(2558.8)	8655	(2638.0)	260	(79.2)
TIRRAWARRA 45	8216	(2504.2)	8538	(2602.4)	322	(98.1)
TIRRAWARRA 46	8250	(2514.6)	8574	(2613.4)	324	(98.8)
TIRRAWARRA 47	8167	(2489.3)	8497	(2589.9)	330	(100.6)

<u>WELLNAME</u>	<u>TOP (meters)</u>		<u>BASE(meters)</u>		<u>Thickness(m)</u>	
TIRRAWARRA 48	8236	(2510.3)	8544	(2604.2)	308	(93.9)
TIRRAWARRA 49	8118	(2474.4)	8416	(2565.2)	298	(90.8)
TIRRAWARRA 50	8114	(2473.2)	8418	(2565.8)	304	(92.7)
TIRRAWARRA 51	8185	(2494.8)	8498	(2590.2)	313	(95.4)
TIRRAWARRA 52	8254	(2515.8)	8618	(2626.8)	364	(110.9)
TIRRAWARRA 53	8158	(2486.6)	8463	(2579.5)	305	(93.0)
TIRRAWARRA 54	8191	(2496.6)	8523	(2597.8)	332	(101.2)
TIRRAWARRA 55	8236	(2510.3)	8561	(2609.4)	325	(99.1)
TIRRAWARRA 56	8282	(2524.4)	8594	(2619.5)	312	(95.1)
TIRRAWARRA 57	8190	(2496.3)	8509	(2593.5)	319	(97.2)
TIRRAWARRA 58	8148	(2483.5)	8450	(2575.6)	302	(92.0)
TIRRAWARRA 59	8350	(2545.1)	8609	(2624.0)	259	(78.9)
TIRRAWARRA 60	8220	(2505.5)	8548	(2605.4)	328	(100.0)
TIRRAWARRA 61	8140	(2481.1)	8447	(2574.7)	307	(93.6)
TIRRAWARRA 62	8226	(2507.3)	8556	(2607.9)	330	(100.6)
TIRRAWARRA 63	8200	(2499.4)	8529	(2599.6)	329	(100.3)
TIRRAWARRA 64	8245	(2513.1)	8566	(2610.9)	321	(97.8)
TIRRAWARRA 65	8192	(2496.9)	8520	(2596.9)	328	(100.0)
TIRRAWARRA NORTH 1	8465	(2580.1)	8800	(2682.2)	335	(102.1)
TIRRAWARRA WEST 1	8306	(2531.7)	8643	(2634.4)	337	(102.7)
TOOLACHEE 1	5702	(1738.0)	5877	(1791.3)	175	(53.3)
TOOLACHEE 2	5689	(1734.0)	6042	(1841.6)	353	(107.6)
TOOLACHEE 3	5788	(1764.2)	6037	(1840.1)	249	(75.9)
TOOLACHEE 4	5802	(1768.5)	6109	(1862.0)	307	(93.6)
TOOLACHEE 5	5904	(1799.5)	6240	(1902.0)	336	(102.4)
TOOLACHEE 6	5803	(1768.8)	6120	(1865.4)	317	(96.6)
TOOLACHEE 7	5914	(1802.6)	6082	(1853.8)	168	(51.2)
TOOLACHEE 8	5794	(1766.0)	6150	(1874.5)	356	(108.5)
TOOLACHEE 9	5862	(1786.7)	6127	(1867.5)	265	(80.8)
TOOLACHEE 10	5762	(1756.3)	6032	(1838.6)	270	(82.3)
TOOLACHEE 11	5759	(1755.3)	6091	(1856.5)	332	(101.2)
TOOLACHEE 12	5781	(1762.1)	6107	(1861.4)	326	(99.4)
TOOLACHEE 13	5784	(1763.0)	6082	(1853.8)	298	(90.8)
TOOLACHEE 14	5813	(1771.8)	6092	(1856.8)	279	(85.0)
TOOLACHEE 15	5800	(1767.8)	6014	(1833.1)	214	(65.2)
TOOLACHEE 16	5697	(1736.4)	5899	(1798.0)	202	(61.6)
TOOLACHEE 17	5788	(1764.2)	6094	(1857.5)	306	(93.3)
TOOLACHEE 18	5795	(1766.3)	6022	(1835.5)	227	(69.2)
TOOLACHEE 19	5808	(1770.3)	6131	(1868.7)	323	(98.5)
TOOLACHEE 20	5820	(1773.9)	6088	(1855.6)	268	(81.7)
TOOLACHEE 21	5940	(1810.5)	6213	(1893.7)	273	(83.2)
TOOLACHEE 23	5870	(1789.2)	6211	(1893.1)	341	(103.9)
TOOLACHEE 24	5800	(1767.8)	6140	(1871.5)	340	(103.6)
TOOLACHEE 25	5788	(1764.2)	6068	(1849.5)	280	(85.3)
TOOLACHEE 26	5750	(1752.6)	6050	(1844.0)	300	(91.4)
TOOLACHEE 27	5810	(1770.9)	6070	(1850.1)	260	(79.2)
TOOLACHEE 28	5764	(1756.9)	6024	(1836.1)	260	(79.2)
TOOLACHEE 29	5796	(1766.6)	6023	(1835.8)	227	(69.2)
TOOLACHEE 30	5802	(1768.5)	6136	(1870.3)	334	(101.8)
TOOLACHEE 31	5792	(1765.4)	6127	(1867.5)	335	(102.1)
TOOLACHEE 32	5723	(1744.4)	5981	(1823.0)	258	(78.6)
TOOLACHEE 33	5773	(1759.6)	6058	(1846.5)	285	(86.9)
TOOLACHEE 34	5772	(1759.3)	6052	(1844.7)	280	(85.3)
TOOLACHEE 35	5820	(1773.9)	6164	(1878.8)	344	(104.9)
TOOLACHEE 36	5743	(1750.5)	5895	(1796.8)	152	(46.3)
TOOLACHEE 37	5819	(1773.6)	6193	(1887.6)	374	(114.0)

<u>WELLNAME</u>	<u>TOP (meters)</u>	<u>BASE(meters)</u>	<u>Thickness(m)</u>
TOOLACHEE 38	5760 (1755.7)	6061 (1847.4)	301 (91.7)
TOOLACHEE 39	5860 (1786.1)	6190 (1886.7)	330 (100.6)
TOOLACHEE 40	5856 (1784.9)	6193 (1887.6)	337 (102.7)
TOOLACHEE 41	5764 (1756.9)	6130 (1868.4)	366 (111.6)
TOOLACHEE EAST 1	5941 (1810.8)	6306 (1922.1)	365 (111.3)
TOOLACHEE EAST 2	5933 (1808.4)	6284 (1915.4)	351 (107.0)
TOOLACHEE NORTH 1	6083 (1854.1)	6399 (1950.4)	316 (96.3)
TOONMAN 1	8895 (2711.2)	9286 (2830.4)	391 (119.2)
TOPWEE 1	6437 (1962.0)	6514 (1985.5)	77 (23.5)
TURBAN 1	7134 (2174.4)	7420 (2261.6)	286 (87.2)
VARANUS 1	8271 (2521.0)	8566 (2610.9)	295 (89.9)
VARANUS 2	8240 (2511.6)	8536 (2601.8)	296 (90.2)
WALKILLIE 1	8705 (2653.3)	8901 (2713.0)	196 (59.7)
WANARA 1	5875 (1790.7)	6018 (1834.3)	143 (43.6)
WANTANA 1	7942 (2420.7)	8274 (2521.9)	332 (101.2)
WAUKATANNA 1	6764 (2061.7)	6904 (2104.3)	140 (42.7)
WELCOME LAKE 1	7772 (2368.9)	7942 (2420.7)	170 (51.8)
WILPINNIE 1	6399 (1950.4)	6664 (2031.2)	265 (80.8)
WILPINNIE 2	6250 (1905.0)	6492 (1978.8)	242 (73.8)
WIMMA 1	9901 (3017.8)	10397 (3169.0)	496 (151.2)
WIRRARIE 1	6222 (1896.5)	6263 (1909.0)	41 (12.5)
WITCHETTY 1	5832 (1777.6)	6132 (1869.0)	300 (91.4)
WOOLKINA 1	8620 (2627.4)	8902 (2713.3)	282 (86.0)
WOOLKINA 2	8646 (2635.3)	8926 (2720.7)	280 (85.3)
WOOLOO 1	6684 (2037.3)	6738 (2053.7)	54 (16.5)
YALCUMMA 1	6955 (2119.9)	7318 (2230.5)	363 (110.6)
YANPURRA 1	8603 (2622.2)	8985 (2738.6)	382 (116.4)
YAPENI 1	6147 (1873.6)	6292 (1917.8)	145 (44.2)
YAPENI 2	6230 (1898.9)	6414 (1955.0)	184 (56.1)
YAROWINNIE 1	8094 (2467.1)	8308 (2532.3)	214 (65.2)

TABLE V: ARRABURY FORMATION: PANING MEMBER
TOPS (in Feet & Meters()) KB) & THICKNESS (in Feet & Meters())

<u>WELLNAME</u>	<u>TOP(meters)</u>	<u>BASE(meters)</u>	<u>Thickness(m)</u>
ANDREE 1	8095 (2467.4)	8317 (2535.0)	222 (67.7)
ANDREE 2	8150 (2484.1)	8392 (2557.9)	242 (73.8)
BAGUNDI 2	6108 (1861.7)	6173 (1881.5)	65 (19.8)
BAGUNDI 3	6107 (1861.4)	6166 (1879.4)	59 (18.0)
BALCAMINGA 1	8602 (2621.9)	8950 (2728.0)	348 (106.1)
BARATTA 1	6130 (1868.4)	6149 (1874.2)	19 (5.8)
BEANBUSH 1	9597 (2925.2)	9942 (3030.3)	345 (105.2)
BIG LAKE 1	6950 (2118.4)	7234 (2204.9)	284 (86.6)
BIG LAKE 2	6930 (2112.3)	7150 (2179.3)	220 (67.1)
BIG LAKE 3	7023 (2140.6)	7300 (2225.0)	277 (84.4)
BIG LAKE 4	7007 (2135.7)	7159 (2182.1)	152 (46.3)
BIG LAKE 5	6911 (2106.5)	7224 (2201.9)	313 (95.4)
BIG LAKE 6	7012 (2137.3)	7198 (2194.0)	186 (56.7)
BIG LAKE 7	7058 (2151.3)	7239 (2206.5)	181 (55.2)
BIG LAKE 8	6912 (2106.8)	7061 (2152.2)	149 (45.4)
BIG LAKE 9	6936 (2114.1)	7204 (2195.8)	268 (81.7)
BIG LAKE 10	7009 (2136.3)	7208 (2197.0)	199 (60.7)
BIG LAKE 11	6948 (2117.8)	7204 (2195.8)	256 (78.0)
BIG LAKE 12	6937 (2114.4)	7142 (2176.9)	205 (62.5)
BIG LAKE 13	7125 (2171.7)	7313 (2229.0)	188 (57.3)
BIG LAKE 14	7002 (2134.2)	7211 (2197.9)	209 (63.7)
BIG LAKE 15	6921 (2109.5)	7233 (2204.6)	312 (95.1)
BIG LAKE 16	6891 (2100.4)	7138 (2175.7)	247 (75.3)
BIG LAKE 17	7026 (2141.5)	7217 (2199.7)	191 (58.2)
BIG LAKE 18	6934 (2113.5)	7179 (2188.2)	245 (74.7)
BIG LAKE 19A	6953 (2119.3)	7247 (2208.9)	294 (89.6)
BIG LAKE 20	6940 (2115.3)	7270 (2215.9)	330 (100.6)
BIG LAKE 21	7048 (2148.2)	7253 (2210.7)	205 (62.5)
BIG LAKE 22	7034 (2144.0)	7284 (2220.2)	250 (76.2)
BIG LAKE 23	7140 (2176.3)	7274 (2217.1)	134 (40.8)
BIG LAKE 24	6986 (2129.3)	7189 (2191.2)	203 (61.9)
BIG LAKE 25	7006 (2135.4)	7166 (2184.2)	160 (48.8)
BIG LAKE 26	6900 (2103.1)	7140 (2176.3)	240 (73.2)
BIG LAKE 27	6938 (2114.7)	7248 (2209.2)	310 (94.5)
BIG LAKE 29	7019 (2139.4)	7180 (2188.5)	161 (49.1)
BIG LAKE 30	6989 (2130.3)	7212 (2198.2)	223 (68.0)
BIG LAKE 31	7030 (2142.7)	7270 (2215.9)	240 (73.2)
BIG LAKE 32	6945 (2116.8)	7194 (2192.7)	249 (75.9)
BIG LAKE 33	7053 (2149.8)	7246 (2208.6)	193 (58.8)
BIG LAKE 34	6964 (2122.6)	7197 (2193.6)	233 (71.0)
BIG LAKE 35	6970 (2124.5)	7237 (2205.8)	267 (81.4)
BIG LAKE 41	7005 (2135.1)	7325 (2232.7)	320 (97.5)
BIG LAKE 43	7018 (2139.1)	7197 (2193.6)	179 (54.6)
BIG LAKE 44	7034 (2144.0)	7220 (2200.7)	186 (56.7)
BIG LAKE 45	7190 (2191.5)	7353 (2241.2)	163 (49.7)
BIG LAKE 46	7030 (2142.7)	7298 (2224.4)	268 (81.7)
BIG LAKE 47	7182 (2189.1)	7329 (2233.9)	147 (44.8)
BIG LAKE 48	7053 (2149.8)	7278 (2218.3)	225 (68.6)
BIMBAYA 1	8138 (2480.5)	8414 (2564.6)	276 (84.1)
BIMBAYA 2	8198 (2498.8)	8487 (2586.8)	289 (88.1)
BIMBAYA 3	8187 (2495.4)	8484 (2585.9)	297 (90.5)
BOBS WELL 1	6797 (2071.7)	6958 (2120.8)	161 (49.1)
BOOKABOURDIE 1	8107 (2471.0)	8404 (2561.5)	297 (90.5)
BOOKABOURDIE 2	8139 (2480.8)	8436 (2571.3)	297 (90.5)

<u>WELLNAME</u>	<u>TOP (meters)</u>		<u>BASE(meters)</u>		<u>Thickness(m)</u>	
BOOKABOURDIE 3	8180	(2493.3)	8487	(2586.8)	307	(93.6)
BOOKABOURDIE 4	8360	(2548.1)	8683	(2646.6)	323	(98.5)
BOOKABOURDIE 6	8408	(2562.8)	8640	(2633.5)	232	(70.7)
BOOKABOURDIE 7	8255	(2516.1)	8686	(2647.5)	431	(131.4)
BOOKABOURDIE 8	8178	(2492.7)	8462	(2579.2)	284	(86.6)
BOOKABOURDIE 9	8106	(2470.7)	8398	(2559.7)	292	(89.0)
BOOKABOURDIE 1	8622	(2628.0)	8874	(2704.8)	252	(76.8)
BROLGA 1	8178	(2492.7)	8400	(2560.3)	222	(67.7)
BROLGA 2	8196	(2498.1)	8403	(2561.2)	207	(63.1)
BUNGEE 1	5930	(1807.5)	5982	(1823.3)	52	(15.8)
BUNGEE 2	5878	(1791.6)	5999	(1828.5)	121	(36.9)
BURKE 1	6268	(1910.5)	6558	(1998.9)	290	(88.4)
BURKE 3	6336	(1931.2)	6565	(2001.0)	229	(69.8)
BURKE 4	6254	(1906.2)	6530	(1990.3)	276	(84.1)
BURKE 5	6310	(1923.3)	6620	(2017.8)	310	(94.5)
BURLEY 1	7746	(2361.0)	8156	(2486.0)	410	(125.0)
BURLEY 2	7736	(2357.9)	8130	(2478.0)	394	(120.1)
CARAKA 1	6223	(1896.8)	6240	(1902.0)	17	(5.2)
COOCHILARA 1	6238	(1901.3)	6488	(1977.5)	250	(76.2)
COOCHILARA 2	6239	(1901.7)	6490	(1978.2)	251	(76.5)
COOLOON 1	6308	(1922.7)	6515	(1985.8)	207	(63.1)
COONATIE 1	8777	(2675.2)	9048	(2757.8)	271	(82.6)
COONATIE 2	8644	(2634.7)	8920	(2718.8)	276	(84.1)
COONATIE 3	8805	(2683.8)	9087	(2769.7)	282	(86.0)
COOPERS CREEK 1	7859	(2395.4)	8082	(2463.4)	223	(68.0)
CORKWOOD 1	5866	(1788.0)	5966	(1818.4)	100	(30.5)
COWRALLI 1	7730	(2356.1)	8006	(2440.2)	276	(84.1)
COWRALLI 2	7754	(2363.4)	8031	(2447.9)	277	(84.4)
COWRALLI 3	7732	(2356.7)	8027	(2446.6)	295	(89.9)
CUTTAPIRRIE 1	8578	(2614.6)	8817	(2687.4)	239	(72.8)
DELIN 1	8788	(2678.6)	9030	(2752.3)	242	(73.8)
DELLA 1	5975	(1821.2)	6147	(1873.6)	172	(52.4)
DELLA 2	6176	(1882.4)	6246	(1903.8)	70	(21.3)
DELLA 3	6078	(1852.6)	6278	(1913.5)	200	(61.0)
DELLA 4	5954	(1814.8)	6110	(1862.3)	156	(47.5)
DELLA 5A	5881	(1792.5)	6036	(1839.8)	155	(47.2)
DELLA 6	6040	(1841.0)	6158	(1877.0)	118	(36.0)
DELLA 7	6027	(1837.0)	6105	(1860.8)	78	(23.8)
DELLA 8	5950	(1813.6)	6058	(1846.5)	108	(32.9)
DELLA 9	5928	(1806.9)	5996	(1827.6)	68	(20.7)
DELLA 10	5947	(1812.6)	6069	(1849.8)	122	(37.2)
DELLA 11	5936	(1809.3)	6023	(1835.8)	87	(26.5)
DELLA 12	5975	(1821.2)	6053	(1845.0)	78	(23.8)
DELLA 13	5948	(1813.0)	6036	(1839.8)	88	(26.8)
DELLA 14	6020	(1834.9)	6112	(1862.9)	92	(28.0)
DELLA 15	5950	(1813.6)	6016	(1833.7)	66	(20.1)
DELLA 16	6008	(1831.2)	6104	(1860.5)	96	(29.3)
DELLA 17	5939	(1810.2)	6010	(1831.9)	71	(21.6)
DEPARANIE 1	7411	(2258.9)	7665	(2336.3)	254	(77.4)
DERAMOOKOO 1	8272	(2521.3)	8388	(2556.7)	116	(35.4)
DIERI 1	6101	(1859.6)	6190	(1886.7)	89	(27.1)
DILCHEE 1	6304	(1921.5)	6585	(2007.1)	281	(85.6)
DILCHEE 2	6310	(1923.3)	6578	(2005.0)	268	(81.7)
DULLINGARI 1	6183	(1884.6)	6509	(1983.9)	326	(99.4)
DULLINGARI 2	6178	(1883.1)	6522	(1987.9)	344	(104.9)
DULLINGARI 3	6293	(1918.1)	6676	(2034.8)	383	(116.7)

<u>WELLNAME</u>	<u>TOP (meters)</u>		<u>BASE(meters)</u>		<u>Thickness(m)</u>	
DULLINGARI 4	6267	(1910.2)	6611	(2015.0)	344	(104.9)
DULLINGARI 16	6142	(1872.1)	6468	(1971.5)	326	(99.4)
DULLINGARI 17	6234	(1900.1)	6598	(2011.1)	364	(110.9)
DULLINGARI 18	6134	(1869.6)	6460	(1969.0)	326	(99.4)
DULLINGARI 19	6244	(1903.2)	6614	(2016.0)	370	(112.8)
DULLINGARI 22	6146	(1873.3)	6484	(1976.3)	338	(103.0)
DULLINGARI 23	6120	(1865.4)	6459	(1968.7)	339	(103.3)
DULLINGARI 24	6250	(1905.0)	6602	(2012.3)	352	(107.3)
DULLINGARI 25	6187	(1885.8)	6538	(1992.8)	351	(107.0)
DULLINGARI 26	6236	(1900.7)	6600	(2011.7)	364	(110.9)
DULLINGARI 39	6362	(1939.1)	6702	(2042.8)	340	(103.6)
DULLINGARI 44	6288	(1916.6)	6673	(2033.9)	385	(117.3)
DULLINGARI 45	6257	(1907.1)	6629	(2020.5)	372	(113.4)
DULLINGARI 46	6226	(1897.7)	6631	(2021.1)	405	(123.4)
DULLINGARI NORTH 1	6277	(1913.2)	6645	(2025.4)	368	(112.2)
DULLINGARI NORTH 2	6292	(1917.8)	6680	(2036.1)	388	(118.3)
DULLINGARI NORTH 3	6304	(1921.5)	6692	(2039.7)	388	(118.3)
DULLINGARI NORTH 4	6310	(1923.3)	6673	(2033.9)	363	(110.6)
FLY LAKE 1	8000	(2438.4)	8173	(2491.1)	173	(52.7)
FLY LAKE 2	8173	(2491.1)	8415	(2564.9)	242	(73.8)
FLY LAKE 3	8078	(2462.2)	8270	(2520.7)	192	(58.5)
FLY LAKE 4	8085	(2464.3)	8313	(2533.8)	228	(69.5)
FLY LAKE 5	8062	(2457.3)	8240	(2511.6)	178	(54.3)
FLY LAKE 6	8040	(2450.6)	8205	(2500.9)	165	(50.3)
FLY LAKE 7	8030	(2447.5)	8205	(2500.9)	175	(53.3)
GIDGEALPA 1	7210	(2197.6)	7514	(2290.3)	304	(92.7)
GIDGEALPA 2	6564	(2000.7)	6586	(2007.4)	22	(6.7)
GIDGEALPA 3	6841	(2085.1)	6936	(2114.1)	95	(29.0)
GIDGEALPA 10	6670	(2033.0)	6750	(2057.4)	80	(24.4)
GIDGEALPA 13	6710	(2045.2)	6756	(2059.2)	46	(14.0)
GIDGEALPA 14	6548	(1995.8)	6579	(2005.3)	31	(9.4)
GIDGEALPA 38	6826	(2080.6)	6877	(2096.1)	51	(15.5)
GOORANIE 1	7861	(2396.0)	8169	(2489.9)	308	(93.9)
GOORANIE 2	7877	(2400.9)	8190	(2496.3)	313	(95.4)
GOORANIE 3	7887	(2404.0)	8209	(2502.1)	322	(98.1)
INNAMINCKA 1	6177	(1882.8)	6470	(1972.1)	293	(89.3)
INNAMINCKA 4	6153	(1875.4)	6437	(1962.0)	284	(86.6)
JACK LAKE 1	7560	(2304.3)	7763	(2366.2)	203	(61.9)
JACK LAKE 2	7593	(2314.4)	7767	(2367.4)	174	(53.0)
KALANNA 1	6312	(1923.9)	6393	(1948.6)	81	(24.7)
KANOWANA 1	7812	(2381.1)	8053	(2454.6)	241	(73.5)
KANOWANA 2	7918	(2413.4)	8131	(2478.3)	213	(64.9)
KANOWANA 3	7950	(2423.2)	8155	(2485.6)	205	(62.5)
KENNY 1	8690	(2648.7)	9009	(2745.9)	319	(97.2)
KERNA 1	6330	(1929.4)	6508	(1983.6)	178	(54.3)
KERNA 2A	6346	(1934.3)	6579	(2005.3)	233	(71.0)
KERNA 3	6341	(1932.7)	6474	(1973.3)	133	(40.5)
KERNA 4	6315	(1924.8)	6503	(1982.1)	188	(57.3)
KIDMAN 1	5930	(1807.5)	6000	(1828.8)	70	(21.3)
KIDMAN 2	6039	(1840.7)	6067	(1849.2)	28	(8.5)
KIDMAN 3	5976	(1821.5)	6003	(1829.7)	27	(8.2)
KIDMAN 4	5962	(1817.2)	6081	(1853.5)	119	(36.3)
KIDMAN 6	6018	(1834.3)	6175	(1882.1)	157	(47.9)
KIDMAN 7	5978	(1822.1)	5999	(1828.5)	21	(6.4)
KIDMAN NORTH 1	6074	(1851.4)	6131	(1868.7)	57	(17.4)
KIDMAN NORTH 2	6080	(1853.2)	6155	(1876.0)	75	(22.9)

<u>WELLNAME</u>	<u>TOP (meters)</u>		<u>BASE(meters)</u>		<u>Thickness(m)</u>	
KIRBY 1	7441	(2268.0)	7852	(2393.3)	411	(125.3)
KIRRALEE 1	7382	(2250.0)	7500	(2286.0)	118	(36.0)
KUDRIEKE 1	8695	(2650.2)	8930	(2721.9)	235	(71.6)
KUDRIEKE 2	8613	(2625.2)	8877	(2705.7)	264	(80.5)
KURUNDA 2	6990	(2130.6)	7057	(2151.0)	67	(20.4)
LAKE MACMILLAN 1	8740	(2664.0)	8991	(2740.5)	251	(76.5)
LAKE MACMILLAN 2	8742	(2664.6)	8967	(2733.1)	225	(68.6)
LAMDINA 1	9046	(2757.2)	9346	(2848.7)	300	(91.4)
LELEPTIAN 1	8025	(2446.0)	8260	(2517.7)	235	(71.6)
LELEPTIAN 2	8081	(2463.1)	8306	(2531.7)	225	(68.6)
LEPENA 1	6096	(1858.1)	6189	(1886.4)	93	(28.3)
LOWANNA 1	6965	(2122.9)	7208	(2197.0)	243	(74.1)
MARSILEA 1	5919	(1804.1)	6029	(1837.6)	110	(33.5)
MASSY 1	7318	(2230.5)	7560	(2304.3)	242	(73.8)
MCLEOD 1	7572	(2308.0)	8015	(2443.0)	443	(135.0)
MERANJI 1	7482	(2280.5)	7778	(2370.7)	296	(90.2)
MERANJI 2	7583	(2311.3)	7864	(2397.0)	281	(85.6)
MERANJI 4	7542	(2298.8)	7872	(2399.4)	330	(100.6)
MERINDA 1	6108	(1861.7)	6198	(1889.2)	90	(27.4)
MERRIMELIA 1	7349	(2240.0)	7600	(2316.5)	251	(76.5)
MERRIMELIA 2	7128	(2172.6)	7352	(2240.9)	224	(68.3)
MERRIMELIA 3	7251	(2210.1)	7568	(2306.7)	317	(96.6)
MERRIMELIA 4	7138	(2175.7)	7372	(2247.0)	234	(71.3)
MERRIMELIA 5	7022	(2140.3)	7278	(2218.3)	256	(78.0)
MERRIMELIA 6	6873	(2094.9)	7035	(2144.3)	162	(49.4)
MERRIMELIA 7	6950	(2118.4)	7229	(2203.4)	279	(85.0)
MERRIMELIA 8	6927	(2111.4)	7117	(2169.3)	190	(57.9)
MERRIMELIA 9	6960	(2121.4)	7110	(2167.1)	150	(45.7)
MERRIMELIA 10	6926	(2111.0)	7066	(2153.7)	140	(42.7)
MERRIMELIA 11	6873	(2094.9)	7060	(2151.9)	187	(57.0)
MERRIMELIA 12	6966	(2123.2)	7144	(2177.5)	178	(54.3)
MERRIMELIA 13	6990	(2130.6)	7200	(2194.6)	210	(64.0)
MERRIMELIA 14	6982	(2128.1)	7185	(2190.0)	203	(61.9)
MERRIMELIA 15	6951	(2118.7)	7143	(2177.2)	192	(58.5)
MERRIMELIA 17	6978	(2126.9)	7162	(2183.0)	184	(56.1)
MERRIMELIA 18	7282	(2219.6)	7528	(2294.5)	246	(75.0)
MERRIMELIA 20	7018	(2139.1)	7266	(2214.7)	248	(75.6)
MERRIMELIA 22	7167	(2184.5)	7404	(2256.7)	237	(72.2)
MERRIMELIA 23	7030	(2142.7)	7176	(2187.2)	146	(44.5)
MERRIMELIA 25	7045	(2147.3)	7266	(2214.7)	221	(67.4)
MERUPA 1	7922	(2414.6)	8174	(2491.4)	252	(76.8)
MERUPA 2	7953	(2424.1)	8224	(2506.7)	271	(82.6)
METTIKA 1	6036	(1839.8)	6145	(1873.0)	109	(33.2)
METTIKA 2	6012	(1832.5)	6123	(1866.3)	111	(33.8)
METTIKA 3	6125	(1866.9)	6247	(1904.1)	122	(37.2)
MINA 1	6333	(1930.3)	6442	(1963.5)	109	(33.2)
MINGANA 1	8136	(2479.9)	8360	(2548.1)	224	(68.3)
MINKIE 1	7114	(2168.4)	7324	(2232.4)	210	(64.0)
MITCHIE 1	8622	(2628.0)	8856	(2699.3)	234	(71.3)
MOOLALLA 1	6522	(1987.9)	6609	(2014.4)	87	(26.5)
MOOLION 1	8604	(2622.5)	8800	(2682.2)	196	(59.7)
MOOMBA 1	7033	(2143.7)	7232	(2204.3)	199	(60.7)
MOOMBA 2	6928	(2111.7)	7086	(2159.8)	158	(48.2)
MOOMBA 3	7169	(2185.1)	7383	(2250.3)	214	(65.2)
MOOMBA 4	7167	(2184.5)	7398	(2254.9)	231	(70.4)
MOOMBA 5	7221	(2201.0)	7471	(2277.2)	250	(76.2)

<u>WELLNAME</u>	<u>TOP (meters)</u>		<u>BASE(meters)</u>		<u>Thickness(m)</u>	
MOOMBA 6	7365	(2244.9)	7617	(2321.7)	252	(76.8)
MOOMBA 7	7143	(2177.2)	7405	(2257.0)	262	(79.9)
MOOMBA 8	7129	(2172.9)	7303	(2226.0)	174	(53.0)
MOOMBA 9	7134	(2174.4)	7350	(2240.3)	216	(65.8)
MOOMBA 10	7068	(2154.3)	7226	(2202.5)	158	(48.2)
MOOMBA 11	7181	(2188.8)	7386	(2251.3)	205	(62.5)
MOOMBA 12	7117	(2169.3)	7263	(2213.8)	146	(44.5)
MOOMBA 13	7134	(2174.4)	7414	(2259.8)	280	(85.3)
MOOMBA 14	6966	(2123.2)	7153	(2180.2)	187	(57.0)
MOOMBA 15	7110	(2167.1)	7306	(2226.9)	196	(59.7)
MOOMBA 16	7080	(2158.0)	7228	(2203.1)	148	(45.1)
MOOMBA 17	7174	(2186.6)	7332	(2234.8)	158	(48.2)
MOOMBA 18	7178	(2187.9)	7334	(2235.4)	156	(47.5)
MOOMBA 19	7154	(2180.5)	7326	(2233.0)	172	(52.4)
MOOMBA 20	7108	(2166.5)	7210	(2197.6)	102	(31.1)
MOOMBA 21	7116	(2169.0)	7266	(2214.7)	150	(45.7)
MOOMBA 22	7146	(2178.1)	7334	(2235.4)	188	(57.3)
MOOMBA 23	7220	(2200.7)	7376	(2248.2)	156	(47.5)
MOOMBA 24	7064	(2153.1)	7245	(2208.3)	181	(55.2)
MOOMBA 25	7024	(2140.9)	7198	(2194.0)	174	(53.0)
MOOMBA 26	7203	(2195.5)	7482	(2280.5)	279	(85.0)
MOOMBA 27	7398	(2254.9)	7631	(2325.9)	233	(71.0)
MOOMBA 28	7109	(2166.8)	7294	(2223.2)	185	(56.4)
MOOMBA 29	7117	(2169.3)	7309	(2227.8)	192	(58.5)
MOOMBA 30	7090	(2161.0)	7258	(2212.2)	168	(51.2)
MOOMBA 31	7086	(2159.8)	7279	(2218.6)	193	(58.8)
MOOMBA 32	7124	(2171.4)	7287	(2221.1)	163	(49.7)
MOOMBA 33	7047	(2147.9)	7255	(2211.3)	208	(63.4)
MOOMBA 34	7130	(2173.2)	7298	(2224.4)	168	(51.2)
MOOMBA 35	7134	(2174.4)	7285	(2220.5)	151	(46.0)
MOOMBA 36	7034	(2144.0)	7199	(2194.3)	165	(50.3)
MOOMBA 37	7092	(2161.6)	7257	(2211.9)	165	(50.3)
MOOMBA 38	7075	(2156.5)	7300	(2225.0)	225	(68.6)
MOOMBA 39	7014	(2137.9)	7208	(2197.0)	194	(59.1)
MOOMBA 40	7146	(2178.1)	7354	(2241.5)	208	(63.4)
MOOMBA 41	6970	(2124.5)	7224	(2201.9)	254	(77.4)
MOOMBA 42	6970	(2124.5)	7184	(2189.7)	214	(65.2)
MOOMBA 43	7020	(2139.7)	7237	(2205.8)	217	(66.1)
MOOMBA 44	7050	(2148.8)	7258	(2212.2)	208	(63.4)
MOOMBA 45	7118	(2169.6)	7295	(2223.5)	177	(53.9)
MOOMBA 46	7094	(2162.3)	7258	(2212.2)	164	(50.0)
MOOMBA 47	7198	(2194.0)	7443	(2268.6)	245	(74.7)
MOOMBA 48	7200	(2194.6)	7392	(2253.1)	192	(58.5)
MOOMBA 49	7010	(2136.7)	7214	(2198.8)	204	(62.2)
MOOMBA 50	7347	(2239.4)	7586	(2312.2)	239	(72.8)
MOOMBA 51	7231	(2204.0)	7504	(2287.2)	273	(83.2)
MOOMBA 52	7085	(2159.5)	7300	(2225.0)	215	(65.5)
MOOMBA 53	7157	(2181.5)	7331	(2234.5)	174	(53.0)
MOOMBA 54	7298	(2224.4)	7480	(2279.9)	182	(55.5)
MOOMBA 55	7254	(2211.0)	7528	(2294.5)	274	(83.5)
MOOMBA 56	7435	(2266.2)	7685	(2342.4)	250	(76.2)
MOOMBA 57	7168	(2184.8)	7374	(2247.6)	206	(62.8)
MOOMBA 58	7313	(2229.0)	7603	(2317.4)	290	(88.4)
MOOMBA 59	7255	(2211.3)	7463	(2274.7)	208	(63.4)
MOOMBA 60	7446	(2269.5)	7715	(2351.5)	269	(82.0)
MOOMBA 61	7253	(2210.7)	7565	(2305.8)	312	(95.1)

<u>WELLNAME</u>	<u>TOP (meters)</u>		<u>BASE(meters)</u>		<u>Thickness(m)</u>	
MOOMBA 62	7161	(2182.7)	7344	(2238.5)	183	(55.8)
MOOMBA 63	7318	(2230.5)	7488	(2282.3)	170	(51.8)
MOOMBA 64	7095	(2162.6)	7294	(2223.2)	199	(60.7)
MOOMBA 65	7229	(2203.4)	7386	(2251.3)	157	(47.9)
MOOMBA 67	6999	(2133.3)	7178	(2187.9)	179	(54.6)
MOOMBA NORTH 1	7306	(2226.9)	7539	(2297.9)	233	(71.0)
MOOMBA NORTH 2	7286	(2220.8)	7516	(2290.9)	230	(70.1)
MOOMBA SOUTH 1	7184	(2189.7)	7296	(2223.8)	112	(34.1)
MOORARI 1	8278	(2523.1)	8561	(2609.4)	283	(86.3)
MOORARI 2	8461	(2578.9)	8744	(2665.2)	283	(86.3)
MOORARI 3	8233	(2509.4)	8550	(2606.0)	317	(96.6)
MOORARI 4	8237	(2510.6)	8555	(2607.6)	318	(96.9)
MOORARI 5	8240	(2511.6)	8558	(2608.5)	318	(96.9)
MOORARI 6	8338	(2541.4)	8618	(2626.8)	280	(85.3)
MOORARI 7	8314	(2534.1)	8600	(2621.3)	286	(87.2)
MUDERA 1	6220	(1895.9)	6350	(1935.5)	130	(39.6)
MUDERA 2	6210	(1892.8)	6387	(1946.8)	177	(53.9)
MUDERA 3	6178	(1883.1)	6300	(1920.2)	122	(37.2)
MUDERA 4	6263	(1909.0)	6405	(1952.2)	142	(43.3)
MUDRANGIE 1	8250	(2514.6)	8590	(2618.2)	340	(103.6)
MUDRANGIE 2	8188	(2495.7)	8505	(2592.3)	317	(96.6)
MUNDI 1	6019	(1834.6)	6042	(1841.6)	23	(7.0)
NAMUR 1	6645	(2025.4)	6703	(2043.1)	58	(17.7)
NAMUR 3	6600	(2011.7)	6640	(2023.9)	40	(12.2)
NAPPACOONGEE 1	5780	(1761.7)	5926	(1806.2)	146	(44.5)
NAPPACOONGEE 2	5750	(1752.6)	5846	(1781.9)	96	(29.3)
NAPPACOONGEE 3	5724	(1744.7)	5882	(1792.8)	158	(48.2)
NARIE 1	7490	(2283.0)	7740	(2359.2)	250	(76.2)
NARIE 2	7530	(2295.1)	7778	(2370.7)	248	(75.6)
NULLA 1	7447	(2269.9)	7653	(2332.6)	206	(62.8)
PACKSADDLE 1	7511	(2289.4)	7878	(2401.2)	367	(111.9)
PACKSADDLE 2	7114	(2168.4)	7335	(2235.7)	221	(67.4)
PACKSADDLE 3	6738	(2053.7)	6937	(2114.4)	199	(60.7)
PACKSADDLE 4	6585	(2007.1)	6805	(2074.2)	220	(67.1)
PACKSADDLE 5	6660	(2030.0)	6841	(2085.1)	181	(55.2)
PANING 1	8549	(2605.7)	8909	(2715.5)	360	(109.7)
PELICAN 1	7390	(2252.5)	7618	(2322.0)	228	(69.5)
PELICAN 2	7390	(2252.5)	7618	(2322.0)	228	(69.5)
PELICAN 3	7490	(2283.0)	7695	(2345.4)	205	(62.5)
PELICAN 4	7486	(2281.7)	7718	(2352.5)	232	(70.7)
PELICAN 5	7484	(2281.1)	7804	(2378.7)	320	(97.5)
PIRA 1	6270	(1911.1)	6576	(2004.4)	306	(93.3)
PIRA 2	6301	(1920.5)	6581	(2005.9)	280	(85.3)
PIRRAMINTA 1	7300	(2225.0)	7540	(2298.2)	240	(73.2)
PONDRINIE 1	6742	(2055.0)	7022	(2140.3)	280	(85.3)
PONDRINIE 2	6854	(2089.1)	7150	(2179.3)	296	(90.2)
PONDRINIE 3	6667	(2032.1)	6912	(2106.8)	245	(74.7)
PONDRINIE 4	6640	(2023.9)	6920	(2109.2)	280	(85.3)
PONDRINIE 5	6732	(2051.9)	6970	(2124.5)	238	(72.5)
POORAKA 1	6087	(1855.3)	6326	(1928.2)	239	(72.8)
QUARTPOT 1	8425	(2567.9)	8652	(2637.1)	227	(69.2)
RAKOONA 1	8151	(2484.4)	8488	(2587.1)	337	(102.7)
REGOLITH 1	7645	(2330.2)	7892	(2405.5)	247	(75.3)
SNAKE HOLE 1	7190	(2191.5)	7436	(2266.5)	246	(75.0)
SPECTRE 1	8226	(2507.3)	8508	(2593.2)	282	(86.0)
STRATHMOUNT 1	6888	(2099.5)	7287	(2221.1)	399	(121.6)

<u>WELLNAME</u>	<u>TOP (meters)</u>		<u>BASE(meters)</u>		<u>Thickness(m)</u>	
SWAN LAKE 1	7727	(2355.2)	8084	(2464.0)	357	(108.8)
TARWONGA 1	6110	(1862.3)	6131	(1868.7)	21	(6.4)
TARWONGA 2	6114	(1863.6)	6133	(1869.3)	19	(5.8)
TARWONGA 3	6132	(1869.0)	6204	(1891.0)	72	(21.9)
TAYLOR SOUTH 1	8064	(2457.9)	8322	(2536.6)	258	(78.6)
THREE QUEENS 1	6505	(1982.7)	6938	(2114.7)	433	(132.0)
THURAKINNA 2	6221	(1896.2)	6292	(1917.8)	71	(21.6)
THURAKINNA 3	6260	(1908.1)	6303	(1921.2)	43	(13.1)
THURAKINNA 4	6204	(1891.0)	6275	(1912.6)	71	(21.6)
THURAKINNA 5	6230	(1898.9)	6307	(1922.4)	77	(23.5)
TINDILPIE 1	7855	(2394.2)	8074	(2461.0)	219	(66.8)
TINDILPIE 2	7850	(2392.7)	8024	(2445.7)	174	(53.0)
TIRRAWARRA 1	7860	(2395.7)	8132	(2478.6)	272	(82.9)
TIRRAWARRA 2	7880	(2401.8)	8152	(2484.7)	272	(82.9)
TIRRAWARRA 3	8090	(2465.8)	8362	(2548.7)	272	(82.9)
TIRRAWARRA 4	7960	(2426.2)	8343	(2543.0)	383	(116.7)
TIRRAWARRA 5	7940	(2420.1)	8285	(2525.3)	345	(105.2)
TIRRAWARRA 6	8020	(2444.5)	8315	(2534.4)	295	(89.9)
TIRRAWARRA 7	8007	(2440.5)	8310	(2532.9)	303	(92.4)
TIRRAWARRA 8	7886	(2403.7)	8227	(2507.6)	341	(103.9)
TIRRAWARRA 9	7940	(2420.1)	8242	(2512.2)	302	(92.0)
TIRRAWARRA 10	8032	(2448.2)	8443	(2573.4)	411	(125.3)
TIRRAWARRA 11	7900	(2407.9)	8195	(2497.8)	295	(89.9)
TIRRAWARRA 12	8010	(2441.5)	8284	(2525.0)	274	(83.5)
TIRRAWARRA 13	7926	(2415.8)	8240	(2511.6)	314	(95.7)
TIRRAWARRA 14	7866	(2397.6)	8121	(2475.3)	255	(77.7)
TIRRAWARRA 15	7856	(2394.5)	8128	(2477.4)	272	(82.9)
TIRRAWARRA 16	8016	(2443.3)	8298	(2529.2)	282	(86.0)
TIRRAWARRA 17	7920	(2414.0)	8196	(2498.1)	276	(84.1)
TIRRAWARRA 18	7936	(2418.9)	8202	(2500.0)	266	(81.1)
TIRRAWARRA 19	7970	(2429.3)	8250	(2514.6)	280	(85.3)
TIRRAWARRA 20	7872	(2399.4)	8154	(2485.3)	282	(86.0)
TIRRAWARRA 21	7913	(2411.9)	8152	(2484.7)	239	(72.8)
TIRRAWARRA 22	8018	(2443.9)	8296	(2528.6)	278	(84.7)
TIRRAWARRA 23	7910	(2411.0)	8152	(2484.7)	242	(73.8)
TIRRAWARRA 24	7933	(2418.0)	8184	(2494.5)	251	(76.5)
TIRRAWARRA 25	7906	(2409.8)	8152	(2484.7)	246	(75.0)
TIRRAWARRA 26	7970	(2429.3)	8246	(2513.4)	276	(84.1)
TIRRAWARRA 27	7980	(2432.3)	8310	(2532.9)	330	(100.6)
TIRRAWARRA 28	7902	(2408.5)	8180	(2493.3)	278	(84.7)
TIRRAWARRA 29	7910	(2411.0)	8158	(2486.6)	248	(75.6)
TIRRAWARRA 30	7859	(2395.4)	8127	(2477.1)	268	(81.7)
TIRRAWARRA 31	7866	(2397.6)	8146	(2482.9)	280	(85.3)
TIRRAWARRA 32	7916	(2412.8)	8178	(2492.7)	262	(79.9)
TIRRAWARRA 33	7914	(2412.2)	8170	(2490.2)	256	(78.0)
TIRRAWARRA 34	7872	(2399.4)	8154	(2485.3)	282	(86.0)
TIRRAWARRA 35	7866	(2397.6)	8140	(2481.1)	274	(83.5)
TIRRAWARRA 36	8004	(2439.6)	8286	(2525.6)	282	(86.0)
TIRRAWARRA 37	7952	(2423.8)	8222	(2506.1)	270	(82.3)
TIRRAWARRA 38	7954	(2424.4)	8210	(2502.4)	256	(78.0)
TIRRAWARRA 39	7886	(2403.7)	8159	(2486.9)	273	(83.2)
TIRRAWARRA 40	7940	(2420.1)	8198	(2498.8)	258	(78.6)
TIRRAWARRA 41	7986	(2434.1)	8248	(2514.0)	262	(79.9)
TIRRAWARRA 42	7908	(2410.4)	8160	(2487.2)	252	(76.8)
TIRRAWARRA 43	7950	(2423.2)	8230	(2508.5)	280	(85.3)
TIRRAWARRA 44	8060	(2456.7)	8395	(2558.8)	335	(102.1)

<u>WELLNAME</u>	<u>TOP (meters)</u>	<u>BASE(meters)</u>	<u>Thickness(m)</u>
TIRRAWARRA 45	7926 (2415.8)	8216 (2504.2)	290 (88.4)
TIRRAWARRA 46	7966 (2428.0)	8250 (2514.6)	284 (86.6)
TIRRAWARRA 47	7914 (2412.2)	8167 (2489.3)	253 (77.1)
TIRRAWARRA 48	7945 (2421.6)	8236 (2510.3)	291 (88.7)
TIRRAWARRA 49	7842 (2390.2)	8118 (2474.4)	276 (84.1)
TIRRAWARRA 50	7840 (2389.6)	8114 (2473.2)	274 (83.5)
TIRRAWARRA 51	7904 (2409.1)	8185 (2494.8)	281 (85.6)
TIRRAWARRA 52	8018 (2443.9)	8254 (2515.8)	236 (71.9)
TIRRAWARRA 53	7872 (2399.4)	8158 (2486.6)	286 (87.2)
TIRRAWARRA 54	7906 (2409.8)	8191 (2496.6)	285 (86.9)
TIRRAWARRA 55	7955 (2424.7)	8236 (2510.3)	281 (85.6)
TIRRAWARRA 56	7990 (2435.4)	8282 (2524.4)	292 (89.0)
TIRRAWARRA 57	7930 (2417.1)	8190 (2496.3)	260 (79.2)
TIRRAWARRA 58	7870 (2398.8)	8148 (2483.5)	278 (84.7)
TIRRAWARRA 59	8014 (2442.7)	8350 (2545.1)	336 (102.4)
TIRRAWARRA 60	7938 (2419.5)	8220 (2505.5)	282 (86.0)
TIRRAWARRA 61	7858 (2395.1)	8140 (2481.1)	282 (86.0)
TIRRAWARRA 62	7929 (2416.8)	8226 (2507.3)	297 (90.5)
TIRRAWARRA 63	7929 (2416.8)	8200 (2499.4)	271 (82.6)
TIRRAWARRA 64	7948 (2422.6)	8245 (2513.1)	297 (90.5)
TIRRAWARRA 65	7946 (2421.9)	8192 (2496.9)	246 (75.0)
TIRRAWARRA NORTH 1	8180 (2493.3)	8465 (2580.1)	285 (86.9)
TIRRAWARRA WEST 1	8036 (2449.4)	8306 (2531.7)	270 (82.3)
TOONMAN 1	8653 (2637.4)	8895 (2711.2)	242 (73.8)
TURBAN 1	6822 (2079.3)	7134 (2174.4)	312 (95.1)
VARANUS 1	8020 (2444.5)	8271 (2521.0)	251 (76.5)
VARANUS 2	7955 (2424.7)	8240 (2511.6)	285 (86.9)
WALKILLIE 1	8516 (2595.7)	8705 (2653.3)	189 (57.6)
WANTANA 1	7628 (2325.0)	7942 (2420.7)	314 (95.7)
WAUKATANNA 1	6607 (2013.8)	6764 (2061.7)	157 (47.9)
WELCOME LAKE 1	7590 (2313.4)	7772 (2368.9)	182 (55.5)
WILPINNIE 1	6204 (1891.0)	6399 (1950.4)	195 (59.4)
WILPINNIE 2	6055 (1845.6)	6250 (1905.0)	195 (59.4)
WIMMA 1	9482 (2890.1)	9901 (3017.8)	419 (127.7)
WOOLKINA 1	8328 (2538.4)	8620 (2627.4)	292 (89.0)
WOOLKINA 2	8357 (2547.2)	8646 (2635.3)	289 (88.1)
YALCUMMA 1	6818 (2078.1)	6955 (2119.9)	137 (41.8)
YANPURRA 1	8260 (2517.7)	8603 (2622.2)	343 (104.5)
YAROWINNIE 1	7909 (2410.7)	8094 (2467.1)	185 (56.4)

TABLE VI: ARRABURY FORMATION: WIMMA MEMBER
TOPS (in feet & meters()) KB) & THICKNESS (in Feet & Meters())

<u>WELLNAME</u>	<u>TOP</u>	<u>(meters)</u>	<u>BASE</u>	<u>(meters)</u>	<u>Thickness(m)</u>
ANDREE 1	7978	(2431.7)	8095	(2467.4)	117 (35.7)
ANDREE 2	8030	(2447.5)	8150	(2484.1)	120 (36.6)
BALCAMINGA 1	8342	(2542.6)	8602	(2621.9)	260 (79.2)
BEANBUSH 1	9222	(2810.9)	9597	(2925.2)	375 (114.3)
BIMBAYA 1	7840	(2389.6)	8138	(2480.5)	298 (90.8)
BIMBAYA 2	7918	(2413.4)	8198	(2498.8)	280 (85.3)
BIMBAYA 3	7853	(2393.6)	8187	(2495.4)	334 (101.8)
BOOKABOURDIE 1	7798	(2376.8)	8107	(2471.0)	309 (94.2)
BOOKABOURDIE 2	7877	(2400.9)	8139	(2480.8)	262 (79.9)
BOOKABOURDIE 3	7927	(2416.2)	8180	(2493.3)	253 (77.1)
BOOKABOURDIE 4	8112	(2472.5)	8360	(2548.1)	248 (75.6)
BOOKABOURDIE 6	8140	(2481.1)	8408	(2562.8)	268 (81.7)
BOOKABOURDIE 7	7974	(2430.5)	8255	(2516.1)	281 (85.6)
BOOKABOURDIE 8	7922	(2414.6)	8178	(2492.7)	256 (78.0)
BOOKABOURDIE 9	7850	(2392.7)	8106	(2470.7)	256 (78.0)
BOOKABOURDIE 10	8344	(2543.3)	8622	(2628.0)	278 (84.7)
BROLGA 1	7959	(2425.9)	8178	(2492.7)	219 (66.8)
BROLGA 2	7990	(2435.4)	8196	(2498.1)	206 (62.8)
BURLEY 1	7480	(2279.9)	7746	(2361.0)	266 (81.1)
BURLEY 2	7483	(2280.8)	7736	(2357.9)	253 (77.1)
COONATIE 1	8410	(2563.4)	8777	(2675.2)	367 (111.9)
COONATIE 2	8366	(2550.0)	8644	(2634.7)	278 (84.7)
COONATIE 3	8542	(2603.6)	8805	(2683.8)	263 (80.2)
COONGIE 1	7500	(2286.0)	7603	(2317.4)	103 (31.4)
COOPERS CREEK 1	7649	(2331.4)	7859	(2395.4)	210 (64.0)
COWRALLI 1	7655	(2333.2)	7730	(2356.1)	75 (22.9)
COWRALLI 2	7690	(2343.9)	7754	(2363.4)	64 (19.5)
COWRALLI 3	7674	(2339.0)	7732	(2356.7)	58 (17.7)
CUTTAPIRRIE 1	8362	(2548.7)	8578	(2614.6)	216 (65.8)
DAER 1	7358	(2242.7)	7496	(2284.8)	138 (42.1)
DELIN 1	8512	(2594.5)	8788	(2678.6)	276 (84.1)
DEPARANIE 1	7284	(2220.2)	7411	(2258.9)	127 (38.7)
DERAMOOKOO 1	8060	(2456.7)	8272	(2521.3)	212 (64.6)
FLY LAKE 1	7876	(2400.6)	8000	(2438.4)	124 (37.8)
FLY LAKE 2	8038	(2450.0)	8173	(2491.1)	135 (41.1)
FLY LAKE 3	7875	(2400.3)	8078	(2462.2)	203 (61.9)
FLY LAKE 4	7910	(2411.0)	8085	(2464.3)	175 (53.3)
FLY LAKE 5	7918	(2413.4)	8062	(2457.3)	144 (43.9)
FLY LAKE 6	7897	(2407.0)	8040	(2450.6)	143 (43.6)
FLY LAKE 7	7908	(2410.4)	8030	(2447.5)	122 (37.2)
GOORANIE 1	7672	(2338.4)	7861	(2396.0)	189 (57.6)
GOORANIE 2	7695	(2345.4)	7877	(2400.9)	182 (55.5)
GOORANIE 3	7710	(2350.0)	7887	(2404.0)	177 (53.9)
INAMINCKA 1	5908	(1800.8)	6177	(1882.8)	269 (82.0)
INNAMINCKA 4	5893	(1796.2)	6153	(1875.4)	260 (79.2)
JACK LAKE 1	7532	(2295.8)	7560	(2304.3)	28 (8.5)
KANOWANA 1	7675	(2339.3)	7812	(2381.1)	137 (41.8)
KANOWANA 2	7715	(2351.5)	7918	(2413.4)	203 (61.9)
KANOWANA 3	7819	(2383.2)	7950	(2423.2)	131 (39.9)
KENNY 1	8478	(2584.1)	8690	(2648.7)	212 (64.6)
KIRBY 1	7246	(2208.6)	7441	(2268.0)	195 (59.4)
KUDRIEKE 1	8413	(2564.3)	8695	(2650.2)	282 (86.0)
KUDRIEKE 2	8340	(2542.0)	8613	(2625.2)	273 (83.2)
LAKE MACMILLAN 1	8374	(2552.4)	8740	(2664.0)	366 (111.6)

<u>WELLNAME</u>	<u>TOP</u>	<u>(meters)</u>	<u>BASE</u>	<u>(meters)</u>	<u>Thickness(m)</u>	
LAKE MACMILLAN 2	8446	(2574.3)	8742	(2664.6)	296	(90.2)
LAMDINA 1	8781	(2676.5)	9046	(2757.2)	265	(80.8)
LELEPTIAN 1	7965	(2427.7)	8025	(2446.0)	60	(18.3)
LELEPTIAN 2	8004	(2439.6)	8081	(2463.1)	77	(23.5)
MASSY 1	7248	(2209.2)	7318	(2230.5)	70	(21.3)
MCLEOD 1	7298	(2224.4)	7572	(2308.0)	274	(83.5)
MERANJI 1	7393	(2253.4)	7482	(2280.5)	89	(27.1)
MERANJI 2	7458	(2273.2)	7583	(2311.3)	125	(38.1)
MERANJI 4	7490	(2283.0)	7542	(2298.8)	52	(15.8)
MERRIMELIA 1	7305	(2226.6)	7349	(2240.0)	44	(13.4)
MERRIMELIA 3	7121	(2170.5)	7251	(2210.1)	130	(39.6)
MERRIMELIA 18	7198	(2194.0)	7282	(2219.6)	84	(25.6)
MERUPA 1	7642	(2329.3)	7922	(2414.6)	280	(85.3)
MERUPA 2	7682	(2341.5)	7953	(2424.1)	271	(82.6)
MINGANA 1	7996	(2437.2)	8136	(2479.9)	140	(42.7)
MINKIE 1	7031	(2143.1)	7114	(2168.4)	83	(25.3)
MITCHIE 1	8373	(2552.1)	8622	(2628.0)	249	(75.9)
MOOLION 1	8304	(2531.1)	8604	(2622.5)	300	(91.4)
MOORARI 1	8044	(2451.8)	8278	(2523.1)	234	(71.3)
MOORARI 2	8178	(2492.7)	8461	(2578.9)	283	(86.3)
MOORARI 3	8024	(2445.7)	8233	(2509.4)	209	(63.7)
MOORARI 4	8000	(2438.4)	8237	(2510.6)	237	(72.2)
MOORARI 5	7984	(2433.5)	8240	(2511.6)	256	(78.0)
MOORARI 6	8068	(2459.1)	8338	(2541.4)	270	(82.3)
MOORARI 7	8071	(2460.0)	8314	(2534.1)	243	(74.1)
MUDRANGIE 1	7985	(2433.8)	8250	(2514.6)	265	(80.8)
MUDRANGIE 2	7960	(2426.2)	8188	(2495.7)	228	(69.5)
NARIE 1	7391	(2252.8)	7490	(2283.0)	99	(30.2)
NARIE 2	7404	(2256.7)	7530	(2295.1)	126	(38.4)
PACKSADDLE 1	7160	(2182.4)	7511	(2289.4)	351	(107.0)
PACKSADDLE 2	6938	(2114.7)	7114	(2168.4)	176	(53.6)
PACKSADDLE 3	6544	(1994.6)	6738	(2053.7)	194	(59.1)
PACKSADDLE 4	6460	(1969.0)	6585	(2007.1)	125	(38.1)
PACKSADDLE 5	6479	(1974.8)	6660	(2030.0)	181	(55.2)
PANING 1	8207	(2501.5)	8549	(2605.7)	342	(104.2)
PELICAN 1	7317	(2230.2)	7390	(2252.5)	73	(22.3)
PELICAN 2	7338	(2236.6)	7390	(2252.5)	52	(15.8)
PELICAN 3	7302	(2225.7)	7490	(2283.0)	188	(57.3)
PELICAN 4	7353	(2241.2)	7486	(2281.7)	133	(40.5)
PELICAN 5	7322	(2231.7)	7484	(2281.1)	162	(49.4)
PIRRAMINTA 1	7135	(2174.8)	7300	(2225.0)	165	(50.3)
PONDRINIE 1	6589	(2008.3)	6742	(2055.0)	153	(46.6)
PONDRINIE 2	6708	(2044.6)	6854	(2089.1)	146	(44.5)
PONDRINIE 3	6527	(1989.4)	6667	(2032.1)	140	(42.7)
PONDRINIE 4	6484	(1976.3)	6640	(2023.9)	156	(47.5)
PONDRINIE 5	6524	(1988.5)	6732	(2051.9)	208	(63.4)
QUARTPOT 1	8170	(2490.2)	8425	(2567.9)	255	(77.7)
RAKOONA 1	7920	(2414.0)	8151	(2484.4)	231	(70.4)
REGOLITH 1	7590	(2313.4)	7645	(2330.2)	55	(16.8)
SPECTRE 1	8085	(2464.3)	8226	(2507.3)	141	(43.0)
STRATHMOUNT 1	6777	(2065.6)	6888	(2099.5)	111	(33.8)
SWAN LAKE 1	7562	(2304.9)	7727	(2355.2)	165	(50.3)
TAYLOR SOUTH 1	7805	(2379.0)	8064	(2457.9)	259	(78.9)
THREE QUEENS 1	6365	(1940.1)	6505	(1982.7)	140	(42.7)
TIRRAWARRA 1	7640	(2328.7)	7860	(2395.7)	220	(67.1)
TIRRAWARRA 2	7669	(2337.5)	7880	(2401.8)	211	(64.3)

<u>WELLNAME</u>	<u>TOP</u>	<u>(meters)</u>	<u>BASE</u>	<u>(meters)</u>	<u>Thickness(m)</u>	
TIRRAWARRA 3	7896	(2406.7)	8090	(2465.8)	194	(59.1)
TIRRAWARRA 4	7730	(2356.1)	7960	(2426.2)	230	(70.1)
TIRRAWARRA 5	7770	(2368.3)	7940	(2420.1)	170	(51.8)
TIRRAWARRA 6	7795	(2375.9)	8020	(2444.5)	225	(68.6)
TIRRAWARRA 7	7765	(2366.8)	8007	(2440.5)	242	(73.8)
TIRRAWARRA 8	7677	(2340.0)	7886	(2403.7)	209	(63.7)
TIRRAWARRA 9	7738	(2358.5)	7940	(2420.1)	202	(61.6)
TIRRAWARRA 10	7782	(2372.0)	8032	(2448.2)	250	(76.2)
TIRRAWARRA 11	7700	(2347.0)	7900	(2407.9)	200	(61.0)
TIRRAWARRA 12	7800	(2377.4)	8010	(2441.5)	210	(64.0)
TIRRAWARRA 13	7714	(2351.2)	7926	(2415.8)	212	(64.6)
TIRRAWARRA 14	7666	(2336.6)	7866	(2397.6)	200	(61.0)
TIRRAWARRA 15	7654	(2332.9)	7856	(2394.5)	202	(61.6)
TIRRAWARRA 16	7800	(2377.4)	8016	(2443.3)	216	(65.8)
TIRRAWARRA 17	7702	(2347.6)	7920	(2414.0)	218	(66.4)
TIRRAWARRA 18	7722	(2353.7)	7936	(2418.9)	214	(65.2)
TIRRAWARRA 19	7725	(2354.6)	7970	(2429.3)	245	(74.7)
TIRRAWARRA 20	7661	(2335.1)	7872	(2399.4)	211	(64.3)
TIRRAWARRA 21	7678	(2340.3)	7913	(2411.9)	235	(71.6)
TIRRAWARRA 22	7784	(2372.6)	8018	(2443.9)	234	(71.3)
TIRRAWARRA 23	7683	(2341.8)	7910	(2411.0)	227	(69.2)
TIRRAWARRA 24	7726	(2354.9)	7933	(2418.0)	207	(63.1)
TIRRAWARRA 25	7652	(2332.3)	7906	(2409.8)	254	(77.4)
TIRRAWARRA 26	7766	(2367.1)	7970	(2429.3)	204	(62.2)
TIRRAWARRA 27	7772	(2368.9)	7980	(2432.3)	208	(63.4)
TIRRAWARRA 28	7682	(2341.5)	7902	(2408.5)	220	(67.1)
TIRRAWARRA 29	7680	(2340.9)	7910	(2411.0)	230	(70.1)
TIRRAWARRA 30	7655	(2333.2)	7859	(2395.4)	204	(62.2)
TIRRAWARRA 31	7664	(2336.0)	7866	(2397.6)	202	(61.6)
TIRRAWARRA 32	7700	(2347.0)	7916	(2412.8)	216	(65.8)
TIRRAWARRA 33	7700	(2347.0)	7914	(2412.2)	214	(65.2)
TIRRAWARRA 34	7676	(2339.6)	7872	(2399.4)	196	(59.7)
TIRRAWARRA 35	7650	(2331.7)	7866	(2397.6)	216	(65.8)
TIRRAWARRA 36	7772	(2368.9)	8004	(2439.6)	232	(70.7)
TIRRAWARRA 37	7752	(2362.8)	7952	(2423.8)	200	(61.0)
TIRRAWARRA 38	7724	(2354.3)	7954	(2424.4)	230	(70.1)
TIRRAWARRA 39	7716	(2351.8)	7886	(2403.7)	170	(51.8)
TIRRAWARRA 40	7713	(2350.9)	7940	(2420.1)	227	(69.2)
TIRRAWARRA 41	7778	(2370.7)	7986	(2434.1)	208	(63.4)
TIRRAWARRA 42	7710	(2350.0)	7908	(2410.4)	198	(60.4)
TIRRAWARRA 43	7773	(2369.2)	7950	(2423.2)	177	(53.9)
TIRRAWARRA 44	7825	(2385.1)	8060	(2456.7)	235	(71.6)
TIRRAWARRA 45	7700	(2347.0)	7926	(2415.8)	226	(68.9)
TIRRAWARRA 46	7734	(2357.3)	7966	(2428.0)	232	(70.7)
TIRRAWARRA 47	7713	(2350.9)	7914	(2412.2)	201	(61.3)
TIRRAWARRA 48	7706	(2348.8)	7945	(2421.6)	239	(72.8)
TIRRAWARRA 49	7646	(2330.5)	7842	(2390.2)	196	(59.7)
TIRRAWARRA 50	7649	(2331.4)	7840	(2389.6)	191	(58.2)
TIRRAWARRA 51	7694	(2345.1)	7904	(2409.1)	210	(64.0)
TIRRAWARRA 52	7802	(2378.1)	8018	(2443.9)	216	(65.8)
TIRRAWARRA 53	7701	(2347.3)	7872	(2399.4)	171	(52.1)
TIRRAWARRA 54	7703	(2347.9)	7906	(2409.8)	203	(61.9)
TIRRAWARRA 55	7768	(2367.7)	7955	(2424.7)	187	(57.0)
TIRRAWARRA 56	7785	(2372.9)	7990	(2435.4)	205	(62.5)
TIRRAWARRA 57	7716	(2351.8)	7930	(2417.1)	214	(65.2)
TIRRAWARRA 58	7670	(2337.8)	7870	(2398.8)	200	(61.0)

<u>WELLNAME</u>	<u>TOP</u>	<u>(meters)</u>	<u>BASE</u>	<u>(meters)</u>	<u>Thickness(m)</u>	
TIRRAWARRA 59	7815	(2382.0)	8014	(2442.7)	199	(60.7)
TIRRAWARRA 60	7704	(2348.2)	7938	(2419.5)	234	(71.3)
TIRRAWARRA 61	7645	(2330.2)	7858	(2395.1)	213	(64.9)
TIRRAWARRA 62	7701	(2347.3)	7929	(2416.8)	228	(69.5)
TIRRAWARRA 63	7728	(2355.5)	7929	(2416.8)	201	(61.3)
TIRRAWARRA 64	7726	(2354.9)	7948	(2422.6)	222	(67.7)
TIRRAWARRA 65	7682	(2341.5)	7946	(2421.9)	264	(80.5)
TIRRAWARRA NORTH 1	7954	(2424.4)	8180	(2493.3)	226	(68.9)
TIRRAWARRA WEST 1	7836	(2388.4)	8036	(2449.4)	200	(61.0)
TOONMAN 1	8422	(2567.0)	8653	(2637.4)	231	(70.4)
TURBAN 1	6565	(2001.0)	6822	(2079.3)	257	(78.3)
VARANUS 1	7796	(2376.2)	8020	(2444.5)	224	(68.3)
VARANUS 2	7737	(2358.2)	7955	(2424.7)	218	(66.4)
WALKILLIE 1	8312	(2533.5)	8516	(2595.7)	204	(62.2)
WANTANA 1	7393	(2253.4)	7628	(2325.0)	235	(71.6)
WELCOME LAKE 1	7513	(2290.0)	7590	(2313.4)	77	(23.5)
WIMMA 1	9100	(2773.7)	9482	(2890.1)	382	(116.4)
WOOLKINA 1	8081	(2463.1)	8328	(2538.4)	247	(75.3)
WOOLKINA 2	8109	(2471.6)	8357	(2547.2)	248	(75.6)
YANPURRA 1	7956	(2425.0)	8260	(2517.7)	304	(92.7)
YAROWINNIE 1	7808	(2379.9)	7909	(2410.7)	101	(30.8)

TABLE VII: TINCHOO FORMATION
TOPS (in feet & meters() KB) & THICKNESS (in feet & meters)

<u>WELLNAME</u>	<u>TOP</u>	<u>(meters)</u>	<u>BASE</u>	<u>(meters)</u>	<u>Thickness(m)</u>
BALCAMINGA 1	8191	(2496.6)	8342	(2542.6)	151 (46.0)
BEANBUSH 1	8795	(2680.7)	9222	(2810.9)	427 (130.1)
BIMBAYA 1	7700	(2347.0)	7840	(2389.6)	140 (42.7)
BIMBAYA 2	7735	(2357.6)	7918	(2413.4)	183 (55.8)
BIMBAYA 3	7738	(2358.5)	7853	(2393.6)	115 (35.1)
BOOKABOURDIE 1	7710	(2350.0)	7798	(2376.8)	88 (26.8)
BOOKABOURDIE 2	7752	(2362.8)	7877	(2400.9)	125 (38.1)
BOOKABOURDIE 3	7754	(2363.4)	7927	(2416.2)	173 (52.7)
BOOKABOURDIE 4	7966	(2428.0)	8112	(2472.5)	146 (44.5)
BOOKABOURDIE 6	7945	(2421.6)	8140	(2481.1)	195 (59.4)
BOOKABOURDIE 7	7795	(2375.9)	7974	(2430.5)	179 (54.6)
BOOKABOURDIE 8	7744	(2360.4)	7922	(2414.6)	178 (54.3)
BOOKABOURDIE 9	7714	(2351.2)	7850	(2392.7)	136 (41.5)
BOOKABOURDIE 1	8170	(2490.2)	8344	(2543.3)	174 (53.0)
BROLGA 1	7905	(2409.4)	7959	(2425.9)	54 (16.5)
BROLGA 2	7928	(2416.5)	7990	(2435.4)	62 (18.9)
COONATIE 1	8228	(2507.9)	8410	(2563.4)	182 (55.5)
COONATIE 2	8146	(2482.9)	8366	(2550.0)	220 (67.1)
COONATIE 3	8289	(2526.5)	8542	(2603.6)	253 (77.1)
COONGIE 1	7344	(2238.5)	7500	(2286.0)	156 (47.5)
CUTTAPIRRIE 1	8122	(2475.6)	8362	(2548.7)	240 (73.2)
DAER 1	7255	(2211.3)	7358	(2242.7)	103 (31.4)
DELIN 1	8286	(2525.6)	8512	(2594.5)	226 (68.9)
DERAMOOKOO 1	7835	(2388.1)	8060	(2456.7)	225 (68.6)
JAMES 1	7455	(2272.3)	7714	(2351.2)	259 (78.9)
KENNY 1	8040	(2450.6)	8478	(2584.1)	438 (133.5)
KUDRIEKE 1	8209	(2502.1)	8413	(2564.3)	204 (62.2)
KUDRIEKE 2	8161	(2487.5)	8340	(2542.0)	179 (54.6)
LAKE MACMILLAN 1	8177	(2492.4)	8374	(2552.4)	197 (60.0)
LAKE MACMILLAN 2	8216	(2504.2)	8446	(2574.3)	230 (70.1)
LAMDINA 1	8424	(2567.6)	8781	(2676.5)	357 (108.8)
MERUPA 1	7558	(2303.7)	7642	(2329.3)	84 (25.6)
MERUPA 2	7593	(2314.4)	7682	(2341.5)	89 (27.1)
MITCHIE 1	8204	(2500.6)	8373	(2552.1)	169 (51.5)
MOOLION 1	8111	(2472.2)	8304	(2531.1)	193 (58.8)
MOORARI 1	7936	(2418.9)	8044	(2451.8)	108 (32.9)
MOORARI 2	8072	(2460.4)	8178	(2492.7)	106 (32.3)
MOORARI 3	7908	(2410.4)	8024	(2445.7)	116 (35.4)
MOORARI 4	7900	(2407.9)	8000	(2438.4)	100 (30.5)
MOORARI 5	7888	(2404.3)	7984	(2433.5)	96 (29.3)
MOORARI 6	7997	(2437.5)	8068	(2459.1)	71 (21.6)
MOORARI 7	7966	(2428.0)	8071	(2460.0)	105 (32.0)
MUDRANGIE 1	7925	(2415.5)	7985	(2433.8)	60 (18.3)
MUDRANGIE 2	7920	(2414.0)	7960	(2426.2)	40 (12.2)
PANING 1	7781	(2371.7)	8207	(2501.5)	426 (129.8)
POTIRON 1	6509	(1983.9)	6750	(1001.0)	241 (73.5)
QUARTPOT 1	8112	(2472.5)	8170	(2490.2)	58 (17.7)
RAKOONA 1	7886	(2403.7)	7920	(2414.0)	34 (10.4)
TAYLOR SOUTH 1	7666	(2336.6)	7805	(2379.0)	139 (42.4)
TIRRAWARRA 1	7595	(2315.0)	7640	(2328.7)	45 (13.7)
TIRRAWARRA 2	7639	(2328.4)	7669	(2337.5)	30 (9.1)
TIRRAWARRA 3	7803	(2378.4)	7896	(2406.7)	93 (28.3)

<u>WELLNAME</u>	<u>TOP</u>	<u>(meters)</u>	<u>BASE</u>	<u>(meters)</u>	<u>Thickness(m)</u>	
TIRRAWARRA 4	7680	(2340.9)	7730	(2356.1)	50	(15.2)
TIRRAWARRA 5	7720	(2353.1)	7770	(2368.3)	50	(15.2)
TIRRAWARRA 6	7728	(2355.5)	7795	(2375.9)	67	(20.4)
TIRRAWARRA 7	7710	(2350.0)	7765	(2366.8)	55	(16.8)
TIRRAWARRA 8	7617	(2321.7)	7677	(2340.0)	60	(18.3)
TIRRAWARRA 9	7650	(2331.7)	7738	(2358.5)	88	(26.8)
TIRRAWARRA 10	7710	(2350.0)	7782	(2372.0)	72	(21.9)
TIRRAWARRA 11	7645	(2330.2)	7700	(2347.0)	55	(16.8)
TIRRAWARRA 12	7741	(2359.5)	7800	(2377.4)	59	(18.0)
TIRRAWARRA 13	7643	(2329.6)	7714	(2351.2)	71	(21.6)
TIRRAWARRA 14	7609	(2319.2)	7666	(2336.6)	57	(17.4)
TIRRAWARRA 15	7626	(2324.4)	7654	(2332.9)	28	(8.5)
TIRRAWARRA 16	7734	(2357.3)	7800	(2377.4)	66	(20.1)
TIRRAWARRA 17	7640	(2328.7)	7702	(2347.6)	62	(18.9)
TIRRAWARRA 18	7648	(2331.1)	7722	(2353.7)	74	(22.6)
TIRRAWARRA 19	7701	(2347.3)	7725	(2354.6)	24	(7.3)
TIRRAWARRA 20	7626	(2324.4)	7661	(2335.1)	35	(10.7)
TIRRAWARRA 21	7637	(2327.8)	7678	(2340.3)	41	(12.5)
TIRRAWARRA 22	7685	(2342.4)	7784	(2372.6)	99	(30.2)
TIRRAWARRA 23	7621	(2322.9)	7683	(2341.8)	62	(18.9)
TIRRAWARRA 24	7634	(2326.8)	7726	(2354.9)	92	(28.0)
TIRRAWARRA 25	7624	(2323.8)	7652	(2332.3)	28	(8.5)
TIRRAWARRA 26	7690	(2343.9)	7766	(2367.1)	76	(23.2)
TIRRAWARRA 27	7703	(2347.9)	7772	(2368.9)	69	(21.0)
TIRRAWARRA 28	7622	(2323.2)	7682	(2341.5)	60	(18.3)
TIRRAWARRA 29	7632	(2326.2)	7680	(2340.9)	48	(14.6)
TIRRAWARRA 30	7630	(2325.6)	7655	(2333.2)	25	(7.6)
TIRRAWARRA 31	7635	(2327.2)	7664	(2336.0)	29	(8.8)
TIRRAWARRA 32	7662	(2335.4)	7700	(2347.0)	38	(11.6)
TIRRAWARRA 33	7620	(2322.6)	7700	(2347.0)	80	(24.4)
TIRRAWARRA 34	7652	(2332.3)	7676	(2339.6)	24	(7.3)
TIRRAWARRA 35	7594	(2314.7)	7650	(2331.7)	56	(17.1)
TIRRAWARRA 36	7710	(2350.0)	7772	(2368.9)	62	(18.9)
TIRRAWARRA 37	7695	(2345.4)	7752	(2362.8)	57	(17.4)
TIRRAWARRA 38	7665	(2336.3)	7724	(2354.3)	59	(18.0)
TIRRAWARRA 39	7660	(2334.8)	7716	(2351.8)	56	(17.1)
TIRRAWARRA 40	7678	(2340.3)	7713	(2350.9)	35	(10.7)
TIRRAWARRA 41	7710	(2350.0)	7778	(2370.7)	68	(20.7)
TIRRAWARRA 42	7640	(2328.7)	7710	(2350.0)	70	(21.3)
TIRRAWARRA 43	7716	(2351.8)	7773	(2369.2)	57	(17.4)
TIRRAWARRA 44	7754	(2363.4)	7825	(2385.1)	71	(21.6)
TIRRAWARRA 45	7650	(2331.7)	7700	(2347.0)	50	(15.2)
TIRRAWARRA 46	7682	(2341.5)	7734	(2357.3)	52	(15.8)
TIRRAWARRA 47	7656	(2333.6)	7713	(2350.9)	57	(17.4)
TIRRAWARRA 48	7669	(2337.5)	7706	(2348.8)	37	(11.3)
TIRRAWARRA 49	7596	(2315.3)	7646	(2330.5)	50	(15.2)
TIRRAWARRA 50	7598	(2315.9)	7649	(2331.4)	51	(15.5)
TIRRAWARRA 51	7632	(2326.2)	7694	(2345.1)	62	(18.9)
TIRRAWARRA 52	7758	(2364.6)	7802	(2378.1)	44	(13.4)
TIRRAWARRA 53	7660	(2334.8)	7701	(2347.3)	41	(12.5)
TIRRAWARRA 54	7672	(2338.4)	7703	(2347.9)	31	(9.4)
TIRRAWARRA 55	7716	(2351.8)	7768	(2367.7)	52	(15.8)
TIRRAWARRA 56	7732	(2356.7)	7785	(2372.9)	53	(16.2)
TIRRAWARRA 57	7650	(2331.7)	7716	(2351.8)	66	(20.1)
TIRRAWARRA 58	7646	(2330.5)	7670	(2337.8)	24	(7.3)
TIRRAWARRA 59	7748	(2361.6)	7815	(2382.0)	67	(20.4)

<u>WELLNAME</u>	<u>TOP</u>	<u>(meters)</u>	<u>BASE</u>	<u>(meters)</u>	<u>Thickness(m)</u>
TIRRAWARRA 60	7646	(2330.5)	7704	(2348.2)	58 (17.7)
TIRRAWARRA 61	7588	(2312.8)	7645	(2330.2)	57 (17.4)
TIRRAWARRA 62	7646	(2330.5)	7701	(2347.3)	55 (16.8)
TIRRAWARRA 63	7654	(2332.9)	7728	(2355.5)	74 (22.6)
TIRRAWARRA 64	7701	(2347.3)	7726	(2354.9)	25 (7.6)
TIRRAWARRA 65	7616	(2321.4)	7682	(2341.5)	66 (20.1)
TIRRAWARRA NORTH 1	7880	(2401.8)	7954	(2424.4)	74 (22.6)
TIRRAWARRA WEST 1	7775	(2369.8)	7836	(2388.4)	61 (18.6)
TOONMAN 1	8225	(2507.0)	8422	(2567.0)	197 (60.0)
WALKILLIE 1	8006	(2440.2)	8312	(2533.5)	306 (93.3)
WIMMA 1	8689	(2648.4)	9100	(2773.7)	411 (125.3)
WOOLKINA 1	8006	(2440.2)	8081	(2463.1)	75 (22.9)
WOOLKINA 2	7992	(2436.0)	8109	(2471.6)	117 (35.7)
YANPURRA 1	7782	(2372.0)	7956	(2425.0)	174 (53.0)

TABLE VIII: NAPPAMERRI GROUP FORMATION TOPS
(Depths in feet KB)

<u>WELLNAME</u>	<u>Uncon</u>	<u>Tinchoo</u>	<u>Wimma</u>	<u>Paning</u>	<u>Call</u>	<u>Base</u>
ALKOOMI 1	5165	Absent	Absent	Absent	Absent	5165
ALWYN 1	5114	Absent	Absent	Absent	Absent	5114
AMYEMA 1	5867	Absent	Absent	Absent	5867	6156
ANDREE 1	7978	Absent	7978	8095	8317	8605
ANDREE 2	8030	Absent	8030	8150	8392	8681
AROONA 1	6029	Absent	Absent	Absent	6125	6469
ARRAKIS 1	6864	Absent	Absent	Absent	6872	6954
ARRAKIS NORTH 1	6900	Absent	Absent	Absent	6900	6968
ATREIDES 1	6456	Absent	Absent	Absent	6456	6640
AZOLLA 1	5708	Absent	Absent	Absent	5708	5970
BAGUNDI 1	6089	Absent	Absent	Absent	6089	6423
BAGUNDI 2	6108	Absent	Absent	6108	6173	6518
BAGUNDI 3	6107	Absent	Absent	6107	6166	6507
BALCAMINGA 1	8191	8191	8342	8602	8950	9310
BARATTA 1	6130	Absent	Absent	6130	6149	6489
BARCOOLOO 1	5817	Absent	Absent	Absent	5817	6080
BATTUNGA 1	5826	Absent	Absent	Absent	5826	6055
BEANBUSH 1	8795	8795	9222	9597	9942	10505
BIALA 1	5134	Absent	Absent	Absent	Absent	5134
BIG LAKE 1	6950	Absent	Absent	6950	7234	7525
BIG LAKE 2	6930	Absent	Absent	6930	7150	7392
BIG LAKE 3	7023	Absent	Absent	7023	7300	7613
BIG LAKE 4	7007	Absent	Absent	7007	7159	7510
BIG LAKE 5	6911	Absent	Absent	6911	7224	7486
BIG LAKE 6	7012	Absent	Absent	7012	7198	7519
BIG LAKE 7	7058	Absent	Absent	7058	7239	7513
BIG LAKE 8	6912	Absent	Absent	6912	7061	7464
BIG LAKE 9	6936	Absent	Absent	6936	7204	7475
BIG LAKE 10	7009	Absent	Absent	7009	7208	7569
BIG LAKE 11	6948	Absent	Absent	6948	7204	7490
BIG LAKE 12	6937	Absent	Absent	6937	7142	7483
BIG LAKE 13	7125	Absent	Absent	7125	7313	7600
BIG LAKE 14	7002	Absent	Absent	7002	7211	7515
BIG LAKE 15	6921	Absent	Absent	6921	7233	7490
BIG LAKE 16	6891	Absent	Absent	6891	7138	7422
BIG LAKE 17	7026	Absent	Absent	7026	7217	7532
BIG LAKE 18	6934	Absent	Absent	6934	7179	7498
BIG LAKE 19A	6953	Absent	Absent	6953	7247	7508
BIG LAKE 20	6940	Absent	Absent	6940	7270	7526
BIG LAKE 21	7048	Absent	Absent	7048	7253	7540
BIG LAKE 22	7034	Absent	Absent	7034	7284	7541
BIG LAKE 23	7140	Absent	Absent	7140	7274	7586
BIG LAKE 24	6986	Absent	Absent	6986	7189	7567
BIG LAKE 25	7006	Absent	Absent	7006	7166	7530
BIG LAKE 26	6900	Absent	Absent	6900	7140	7387
BIG LAKE 27	6938	Absent	Absent	6938	7248	7504
BIG LAKE 29	7019	Absent	Absent	7019	7180	7450
BIG LAKE 30	6989	Absent	Absent	6989	7212	7523
BIG LAKE 31	7030	Absent	Absent	7030	7270	7592
BIG LAKE 32	6945	Absent	Absent	6945	7194	7481
BIG LAKE 33	7053	Absent	Absent	7053	7246	7582
BIG LAKE 34	6964	Absent	Absent	6964	7197	7495
BIG LAKE 35	6970	Absent	Absent	6970	7237	7536

BIG LAKE 41	7005	Absent	Absent	7005	7325	7586
BIG LAKE 43	7018	Absent	Absent	7018	7197	7512
BIG LAKE 44	7034	Absent	Absent	7034	7220	7529
BIG LAKE 45	7190	Absent	Absent	7190	7353	7636
BIG LAKE 46	7030	Absent	Absent	7030	7298	7610
BIG LAKE 47	7182	Absent	Absent	7182	7329	7609
BIG LAKE 48	7053	Absent	Absent	7053	7278	7694
BIMBAYA 1	7700	7700	7840	8138	8414	8644
BIMBAYA 2	7735	7735	7918	8198	8487	8762
BIMBAYA 3	7738	7738	7853	8187	8484	8750
BOBS WELL 1	6797	Absent	Absent	6797	6958	7240
BOOKABOURDIE 1	7710	7710	7798	8107	8404	8723
BOOKABOURDIE 2	7752	7752	7877	8139	8436	8760
BOOKABOURDIE 3	7754	7754	7927	8180	8487	8822
BOOKABOURDIE 4	7966	7966	8112	8360	8683	8926
BOOKABOURDIE 6	7945	7945	8140	8408	8640	9071
BOOKABOURDIE 7	7795	7795	7974	8255	8686	8906
BOOKABOURDIE 8	7744	7744	7922	8178	8462	8736
BOOKABOURDIE 9	7714	7714	7850	8106	8398	8720
BOOKABOURDIE 10	8170	8170	8344	8622	8874	9184
BOXWOOD 1	5621	Absent	Absent	Absent	Absent	5621
BOXWOOD 2	5544	Absent	Absent	Absent	Absent	5544
BROLGA 1	7905	7905	7959	8178	8400	8693
BROLGA 2	7928	7928	7990	8196	8403	8692
BRUMBY 1	5713	Absent	Absent	Absent	5713	5978
BRUMBY 2	5782	Absent	Absent	Absent	5782	6090
BRUMBY 3	5765	Absent	Absent	Absent	5765	6045
BRUMBY 4	5768	Absent	Absent	Absent	5768	6070
BRUMBY 5	5766	Absent	Absent	Absent	5766	6050
BUCKINNA 1	5312	Absent	Absent	Absent	Absent	5312
BUCKINNA 2	5287	Absent	Absent	Absent	Absent	5287
BUNGEE 1	5930	Absent	Absent	5930	5982	6211
BUNGEE 2	5878	Absent	Absent	5878	5999	6233
BURKE 1	6268	Absent	Absent	6268	6558	6940
BURKE 3	6336	Absent	Absent	6336	6565	7006
BURKE 4	6254	Absent	Absent	6254	6530	6934
BURKE 5	6310	Absent	Absent	6310	6620	7014
BURLEY 1	7480	Absent	7480	7746	8156	8737
BURLEY 2	7483	Absent	7483	7736	8130	8770
BURRUNA 1	5300	Absent	Absent	Absent	Absent	5300
CALAMIA WEST 1	5152	Absent	Absent	Absent	Absent	5152
CALLABONNA 1	7191	Absent	Absent	Absent	Absent	7191
CARAKA 1	6223	Absent	Absent	6223	6240	6669
CHARO 1	7009	Absent	Absent	Absent	Absent	7009
CHELTEN NORTH 1	5664	Absent	Absent	Absent	Absent	5664
CHERRI 1	4498	Absent	Absent	Absent	Absent	4498
CHILCARRIE 1	5932	Absent	Absent	Absent	5932	6256
CHILDIE 1	5796	Absent	Absent	Absent	5796	6018
COOBOWIE 1	4778	Absent	Absent	Absent	Absent	4778
COOCHILARA 1	6238	Absent	Absent	6238	6488	6868
COOCHILARA 2	6239	Absent	Absent	6239	6490	6857
COOLOON 1	6308	Absent	Absent	6308	6515	6852
COONATIE 1	8228	8228	8410	8777	9048	9398
COONATIE 2	8146	8146	8366	8644	8920	9230
COONATIE 3	8289	8289	8542	8805	9087	9523
COONGIE 1	7344	7344	7500	7603	Absent	7785
COOPERS CREEK 1	7649	Absent	7649	7859	8082	8364
CORKWOOD 1	5866	Absent	Absent	5866	5966	6243

COWAN 1	6371	Absent	Absent	Absent	6371	6491
COWRALLI 1	7655	Absent	7655	7730	8006	8320
COWRALLI 2	7690	Absent	7690	7754	8031	8362
COWRALLI 3	7674	Absent	7674	7732	8027	8331
CUTTAPIRRIE 1	8122	8122	8362	8578	8817	9045
DAER 1	7255	7255	7358	7496	Absent	7628
DARALINGIE 1	6142	Absent	Absent	Absent	6142	6317
DARALINGIE 2	6136	Absent	Absent	Absent	6136	6397
DARALINGIE 3	6260	Absent	Absent	Absent	6260	6416
DARALINGIE 4	6418	Absent	Absent	Absent	6418	6582
DARALINGIE 5	6050	Absent	Absent	Absent	6050	6194
DARALINGIE 6	6220	Absent	Absent	Absent	6220	6400
DARALINGIE 7	6236	Absent	Absent	Absent	6236	6450
DARALINGIE 8	6223	Absent	Absent	Absent	6223	6429
DARALINGIE 9	6176	Absent	Absent	Absent	6176	6392
DARALINGIE 10	6192	Absent	Absent	Absent	6192	6370
DARALINGIE 11	6203	Absent	Absent	Absent	6203	6380
DARALINGIE 12	6313	Absent	Absent	Absent	6313	6520
DARALINGIE 13	6254	Absent	Absent	Absent	6254	6477
DARALINGIE 14	6176	Absent	Absent	Absent	6176	6366
DARALINGIE 15	6278	Absent	Absent	Absent	6278	6496
DARALINGIE 16	6301	Absent	Absent	Absent	6301	6481
DARALINGIE 17	6471	Absent	Absent	Absent	6471	6622
DARALINGIE 18	6241	Absent	Absent	Absent	6241	6486
DARALINGIE 19	6223	Absent	Absent	Absent	6223	6458
DARALINGIE 20	6429	Absent	Absent	Absent	6429	6612
DARALINGIE 21	6225	Absent	Absent	Absent	6225	6478
DARALINGIE 22	6313	Absent	Absent	Absent	6313	6557
DARALINGIE 23	6301	Absent	Absent	Absent	6301	6559
DEINA 1	6188	Absent	Absent	Absent	6188	6432
DELIN 1	8286	8286	8512	8788	9030	9470
DELLA 1	5975	Absent	Absent	5975	6147	6409
DELLA 2	6176	Absent	Absent	6176	6246	6491
DELLA 3	6078	Absent	Absent	6078	6278	6595
DELLA 4	5954	Absent	Absent	5954	6110	6416
DELLA 5A	5881	Absent	Absent	5881	6036	6205
DELLA 6	6040	Absent	Absent	6040	6158	6470
DELLA 7	6027	Absent	Absent	6027	6105	6323
DELLA 8	5950	Absent	Absent	5950	6058	6339
DELLA 9	5928	Absent	Absent	5928	5996	6274
DELLA 10	5947	Absent	Absent	5947	6069	6310
DELLA 11	5936	Absent	Absent	5936	6023	6308
DELLA 12	5975	Absent	Absent	5975	6053	6306
DELLA 13	5948	Absent	Absent	5948	6036	6335
DELLA 14	6020	Absent	Absent	6020	6112	6358
DELLA 15	5950	Absent	Absent	5950	6016	6378
DELLA 16	6008	Absent	Absent	6008	6104	6401
DELLA 17	5939	Absent	Absent	5939	6010	6265
DEPARANIE 1	7284	Absent	7284	7411	7665	7891
DERAMOOKOO 1	7835	7835	8060	8272	8388	8538
DIERI 1	6101	Absent	Absent	6101	6190	6570
DILCHEE 1	6304	Absent	Absent	6304	6585	7006
DILCHEE 2	6310	Absent	Absent	6310	6578	6953
DIRKALA 1	5664	Absent	Absent	Absent	Absent	5664
DIRKALA 2	5726	Absent	Absent	Absent	Absent	5726
DIRKALA 3	5672	Absent	Absent	Absent	Absent	5672
DULLINGARI 1	6183	Absent	Absent	6183	6509	6854
DULLINGARI 2	6178	Absent	Absent	6178	6522	6853

DULLINGARI 3	6293	Absent	Absent	6293	6676	7077
DULLINGARI 4	6267	Absent	Absent	6267	6611	6956
DULLINGARI 16	6142	Absent	Absent	6142	6468	6816
DULLINGARI 17	6234	Absent	Absent	6234	6598	6918
DULLINGARI 18	6134	Absent	Absent	6134	6460	6792
DULLINGARI 19	6244	Absent	Absent	6244	6614	6936
DULLINGARI 22	6146	Absent	Absent	6146	6484	6816
DULLINGARI 23	6120	Absent	Absent	6120	6459	6802
DULLINGARI 24	6250	Absent	Absent	6250	6602	6953
DULLINGARI 25	6187	Absent	Absent	6187	6538	6898
DULLINGARI 26	6236	Absent	Absent	6236	6600	6964
DULLINGARI 39	6362	Absent	Absent	6362	6702	7064
DULLINGARI 44	6288	Absent	Absent	6288	6673	7002
DULLINGARI 45	6257	Absent	Absent	6257	6629	6984
DULLINGARI 46	6226	Absent	Absent	6226	6631	6990
DULLINGARI NORTH 1	6277	Absent	Absent	6277	6645	7026
DULLINGARI NORTH 2	6292	Absent	Absent	6292	6680	7063
DULLINGARI NORTH 3	6304	Absent	Absent	6304	6692	7068
DULLINGARI NORTH 4	6310	Absent	Absent	6310	6673	7075
DUNOON 1	4733	Absent	Absent	Absent	Absent	4733
FLY LAKE 1	7876	Absent	7876	8000	8173	8415
FLY LAKE 2	8038	Absent	8038	8173	8415	8640
FLY LAKE 3	7875	Absent	7875	8078	8270	8514
FLY LAKE 4	7910	Absent	7910	8085	8313	8567
FLY LAKE 5	7918	Absent	7918	8062	8240	8476
FLY LAKE 6	7897	Absent	7897	8040	8205	8449
FLY LAKE 7	7908	Absent	7908	8030	8205	8455
GARANJANIE 1	5685	Absent	Absent	Absent	Absent	5685
GARANJANIE 2	5709	Absent	Absent	Absent	Absent	5709
GARANJANIE 3	5745	Absent	Absent	Absent	Absent	5745
GIDGEALPA 1	7210	Absent	Absent	7210	7514	7694
GIDGEALPA 2	6564	Absent	Absent	6564	6586	6751
GIDGEALPA 3	6841	Absent	Absent	6841	6936	7088
GIDGEALPA 4	6734	Absent	Absent	Absent	6734	6866
GIDGEALPA 5	6823	Absent	Absent	Absent	6823	6880
GIDGEALPA 6	6991	Absent	Absent	Absent	6991	7079
GIDGEALPA 7	6791	Absent	Absent	Absent	6791	6852
GIDGEALPA 8	6735	Absent	Absent	Absent	6735	6896
GIDGEALPA 9	6740	Absent	Absent	Absent	6740	6926
GIDGEALPA 10	6670	Absent	Absent	6670	6750	6903
GIDGEALPA 11	6633	Absent	Absent	Absent	6633	6744
GIDGEALPA 12	6610	Absent	Absent	Absent	6610	6767
GIDGEALPA 13	6710	Absent	Absent	6710	6756	6906
GIDGEALPA 14	6548	Absent	Absent	6548	6579	6708
GIDGEALPA 15	6602	Absent	Absent	Absent	6602	6863
GIDGEALPA 16	6798	Absent	Absent	Absent	6798	6852
GIDGEALPA 17	6779	Absent	Absent	Absent	6779	6862
GIDGEALPA 19	6797	Absent	Absent	Absent	6797	6863
GIDGEALPA 21	6813	Absent	Absent	Absent	6813	6855
GIDGEALPA 23	6845	Absent	Absent	Absent	6845	6899
GIDGEALPA 27	6862	Absent	Absent	Absent	6862	6882
GIDGEALPA 29	6786	Absent	Absent	Absent	6786	6873
GIDGEALPA 33	6780	Absent	Absent	Absent	6780	6827
GIDGEALPA 34	6773	Absent	Absent	Absent	6773	6828
GIDGEALPA 35	6758	Absent	Absent	Absent	6758	6958
GIDGEALPA 36	6787	Absent	Absent	Absent	6787	6884
GIDGEALPA 38	6826	Absent	Absent	6826	6877	7034
GOORANIE 1	7672	Absent	7672	7861	8169	8478

GOORANIE 2	7695	Absent	7695	7877	8190	8506
GOORANIE 3	7710	Absent	7710	7887	8209	8520
GOYDER 1	5850	Absent	Absent	Absent	5850	6042
INNAMINCKA 1	5908	Absent	5908	6177	6470	6789
INNAMINCKA 4	5893	Absent	5893	6153	6437	6783
JACK LAKE 1	7532	Absent	7532	7560	7763	8016
JACK LAKE 2	7593	Absent	Absent	7593	7767	8034
JENA 1	5152	Absent	Absent	Absent	Absent	5152
JENA 2	5082	Absent	Absent	Absent	Absent	5082
JENA 5	5065	Absent	Absent	Absent	Absent	5065
JENA 6	5112	Absent	Absent	Absent	Absent	5112
JENNET 1	5436	Absent	Absent	Absent	Absent	5436
KALANNA 1	6312	Absent	Absent	6312	6393	6717
KALLADEINA 1	6420	Absent	Absent	Absent	Absent	6420
KANOWANA 1	7675	Absent	7675	7812	8053	8340
KANOWANA 2	7715	Absent	7715	7918	8131	8386
KANOWANA 3	7819	Absent	7819	7950	8155	8409
KARILLA 1	6090	Absent	Absent	Absent	6090	6148
KEENA 1	6156	Absent	Absent	Absent	Absent	6156
KEENA 2	6200	Absent	Absent	Absent	Absent	6200
KEENA 3	6138	Absent	Absent	Absent	Absent	6138
KEETO 1	5850	Absent	Absent	Absent	5850	6138
KENNY 1	8040	8040	8478	8690	9009	9303
KERINNA 1	5520	Absent	Absent	Absent	Absent	5520
KERNA 1	6330	Absent	Absent	6330	6508	6882
KERNA 2A	6346	Absent	Absent	6346	6579	6951
KERNA 3	6341	Absent	Absent	6341	6474	6831
KERNA 4	6315	Absent	Absent	6315	6503	6854
KIDMAN 1	5930	Absent	Absent	5930	6000	6367
KIDMAN 2	6039	Absent	Absent	6039	6067	6422
KIDMAN 3	5976	Absent	Absent	5976	6003	6374
KIDMAN 4	5962	Absent	Absent	5962	6081	6438
KIDMAN 5	6035	Absent	Absent	Absent	6035	6378
KIDMAN 6	6018	Absent	Absent	6018	6175	6536
KIDMAN 7	5978	Absent	Absent	5978	5999	6358
KIDMAN NORTH 1	6074	Absent	Absent	6074	6131	6484
KIDMAN NORTH 2	6080	Absent	Absent	6080	6155	6528
KIRBY 1	7246	Absent	7246	7441	7852	8703
KIRRALEE 1	7382	Absent	Absent	7382	7500	7864
KIWARRICK 1	5360	Absent	Absent	Absent	Absent	5360
KOBARI 1	5175	Absent	Absent	Absent	Absent	5175
KOREE 1	6290	Absent	Absent	Absent	6290	6314
KUDRIEKE 1	8209	8209	8413	8695	8930	9297
KUDRIEKE 2	8161	8161	8340	8613	8877	9204
KUJANI 1	5761	Absent	Absent	Absent	5761	5828
KUMBARIE 1	4545	Absent	Absent	Absent	Absent	4545
KURUNDA 1	7093	Absent	Absent	Absent	7093	7242
KURUNDA 2	6990	Absent	Absent	6990	7057	7222
KURUNDA 3	7043	Absent	Absent	Absent	7043	7206
KURUNDA 4	7089	Absent	Absent	Absent	7089	7232
LAKE HOPE 1	6652	Absent	Absent	Absent	Absent	6652
LAKE MACMILLAN 1	8177	8177	8374	8740	8991	9407
LAKE MACMILLAN 2	8216	8216	8446	8742	8967	9412
LAMDINA 1	8424	8424	8781	9046	9346	9758
LELEPTIAN 1	7964	Absent	7965	8025	8260	8553
LELEPTIAN 2	8004	Absent	8004	8081	8306	8618
LEPENA 1	6096	Absent	Absent	6096	6189	6510
LHOTSKY 1	6172	Absent	Absent	Absent	Absent	6172

LIMESTONE CREEK 1	5099	Absent	Absent	Absent	Absent	5099
LIMESTONE CREEK 2	5092	Absent	Absent	Absent	Absent	5092
LIMESTONE CREEK 4	5120	Absent	Absent	Absent	Absent	5120
LIMESTONE CREEK 5	5245	Absent	Absent	Absent	Absent	5245
LOWANNA 1	6965	Absent	Absent	6965	7208	7536
LYCIUM 1	6537	Absent	Absent	Absent	Absent	6537
LYCOSA 1	6494	Absent	Absent	Absent	6494	6782
MANOOKA 1	5810	Absent	Absent	Absent	Absent	5810
MARABOOKA 1	6100	Absent	Absent	Absent	6100	6326
MARABOOKA 2	6097	Absent	Absent	Absent	6096	6350
MARABOOKA 3	6130	Absent	Absent	Absent	6130	6319
MARABOOKA 4	6102	Absent	Absent	Absent	6102	6367
MARAKU 1	5577	Absent	Absent	Absent	5577	5735
MARANA 1	5910	Absent	Absent	Absent	5910	6170
MARSILEA 1	5919	Absent	Absent	5919	6029	6343
MASSY 1	7247	Absent	7248	7318	7560	7742
MAWSON 1	7179	Absent	Absent	Absent	7179	7269
MAWSON 2	7156	Absent	Absent	Absent	7156	7269
MCKINLAY 1	5000	Absent	Absent	Absent	Absent	5000
MCKINLAY 2	5113	Absent	Absent	Absent	Absent	5113
MCKINLAY 3	5011	Absent	Absent	Absent	Absent	5011
MCKINLAY 4	5048	Absent	Absent	Absent	Absent	5048
MCLEOD 1	7298	Absent	7298	7572	8015	8685
MERANJI 1	7393	Absent	7393	7482	7778	7901
MERANJI 2	7457	Absent	7458	7583	7864	8085
MERANJI 4	7490	Absent	7490	7542	7872	8091
MERINDA 1	6108	Absent	Absent	6108	6198	6504
MERRIMELIA 1	7305	Absent	7305	7349	7600	7798
MERRIMELIA 2	7128	Absent	Absent	7128	7352	7496
MERRIMELIA 3	7121	Absent	7121	7251	7568	7789
MERRIMELIA 4	7138	Absent	Absent	7138	7372	7545
MERRIMELIA 5	7022	Absent	Absent	7022	7278	7440
MERRIMELIA 6	6873	Absent	Absent	6873	7035	7130
MERRIMELIA 7	6950	Absent	Absent	6950	7229	7363
MERRIMELIA 8	6927	Absent	Absent	6927	7117	7188
MERRIMELIA 9	6960	Absent	Absent	6960	7110	7278
MERRIMELIA 10	6926	Absent	Absent	6926	7066	7194
MERRIMELIA 11	6873	Absent	Absent	6873	7060	7145
MERRIMELIA 12	6966	Absent	Absent	6966	7144	TDed
MERRIMELIA 13	6990	Absent	Absent	6990	7200	7342
MERRIMELIA 14	6982	Absent	Absent	6982	7185	7325
MERRIMELIA 15	6951	Absent	Absent	6951	7143	7211
MERRIMELIA 17	6978	Absent	Absent	6978	7162	7298
MERRIMELIA 18	7198	Absent	7198	7282	7528	7760
MERRIMELIA 20	7018	Absent	Absent	7018	7266	7431
MERRIMELIA 22	7167	Absent	Absent	7167	7404	7550
MERRIMELIA 23	7030	Absent	Absent	7030	7176	7216
MERRIMELIA 25	7045	Absent	Absent	7045	7266	7426
MERUPA 1	7558	7558	7642	7922	8174	8490
MERUPA 2	7593	7593	7682	7953	8224	8548
METTIKA 1	6036	Absent	Absent	6036	6145	6476
METTIKA 2	6012	Absent	Absent	6012	6123	6462
METTIKA 3	6125	Absent	Absent	6125	6247	6582
MINA 1	6333	Absent	Absent	6333	6442	6713
MINGANA 1	7996	Absent	7996	8136	8360	8632
MINKIE 1	7035	Absent	7031	7114	7324	7408
MITCHIE 1	8204	8204	8373	8622	8856	9216
MOOLALLA 1	6522	Absent	Absent	6522	6609	6803

MOOLION 1	8111	8111	8304	8604	8800	9133
MOOMBA 1	7033	Absent	Absent	7033	7232	7602
MOOMBA 2	6928	Absent	Absent	6928	7086	7432
MOOMBA 3	7169	Absent	Absent	7169	7383	7753
MOOMBA 4	7167	Absent	Absent	7167	7398	7709
MOOMBA 5	7221	Absent	Absent	7221	7471	7939
MOOMBA 6	7365	Absent	Absent	7365	7617	8012
MOOMBA 7	7143	Absent	Absent	7143	7405	7912
MOOMBA 8	7129	Absent	Absent	7129	7303	7641
MOOMBA 9	7134	Absent	Absent	7134	7350	7630
MOOMBA 10	7068	Absent	Absent	7068	7226	7581
MOOMBA 11	7181	Absent	Absent	7181	7386	7735
MOOMBA 12	7117	Absent	Absent	7117	7263	7628
MOOMBA 13	7134	Absent	Absent	7134	7414	7840
MOOMBA 14	6966	Absent	Absent	6966	7153	7503
MOOMBA 15	7110	Absent	Absent	7110	7306	7684
MOOMBA 16	7080	Absent	Absent	7080	7228	7578
MOOMBA 17	7174	Absent	Absent	7174	7332	7677
MOOMBA 18	7178	Absent	Absent	7178	7334	7715
MOOMBA 19	7154	Absent	Absent	7154	7326	7654
MOOMBA 20	7108	Absent	Absent	7108	7210	7605
MOOMBA 21	7116	Absent	Absent	7116	7266	7617
MOOMBA 22	7146	Absent	Absent	7146	7334	7686
MOOMBA 23	7220	Absent	Absent	7220	7376	7723
MOOMBA 24	7064	Absent	Absent	7064	7245	7594
MOOMBA 25	7024	Absent	Absent	7024	7198	7518
MOOMBA 26	7203	Absent	Absent	7203	7482	7970
MOOMBA 27	7398	Absent	Absent	7398	7631	8088
MOOMBA 28	7109	Absent	Absent	7109	7294	7632
MOOMBA 29	7117	Absent	Absent	7117	7309	7660
MOOMBA 30	7090	Absent	Absent	7090	7258	7620
MOOMBA 31	7086	Absent	Absent	7086	7279	7654
MOOMBA 32	7124	Absent	Absent	7124	7287	7650
MOOMBA 33	7047	Absent	Absent	7047	7255	7611
MOOMBA 34	7130	Absent	Absent	7130	7298	7643
MOOMBA 35	7134	Absent	Absent	7134	7285	7628
MOOMBA 36	7034	Absent	Absent	7034	7199	7545
MOOMBA 37	7092	Absent	Absent	7092	7257	7614
MOOMBA 38	7075	Absent	Absent	7075	7300	7690
MOOMBA 39	7014	Absent	Absent	7014	7208	7548
MOOMBA 40	7146	Absent	Absent	7146	7354	7661
MOOMBA 41	6970	Absent	Absent	6970	7224	7563
MOOMBA 42	6970	Absent	Absent	6970	7184	7540
MOOMBA 43	7020	Absent	Absent	7020	7237	7564
MOOMBA 44	7050	Absent	Absent	7050	7258	7600
MOOMBA 45	7118	Absent	Absent	7118	7295	7676
MOOMBA 46	7094	Absent	Absent	7094	7258	7600
MOOMBA 47	7198	Absent	Absent	7198	7443	7747
MOOMBA 48	7200	Absent	Absent	7200	7392	7780
MOOMBA 49	7010	Absent	Absent	7010	7214	7610
MOOMBA 50	7347	Absent	Absent	7347	7586	8014
MOOMBA 51	7231	Absent	Absent	7231	7504	8111
MOOMBA 52	7085	Absent	Absent	7085	7300	7677
MOOMBA 53	7157	Absent	Absent	7157	7331	7686
MOOMBA 54	7298	Absent	Absent	7298	7480	7960
MOOMBA 55	7254	Absent	Absent	7254	7528	8017
MOOMBA 56	7435	Absent	Absent	7435	7685	8128
MOOMBA 57	7168	Absent	Absent	7168	7374	7712

MOOMBA 58	7313	Absent	Absent	7313	7603	8073
MOOMBA 59	7255	Absent	Absent	7255	7463	7800
MOOMBA 60	7446	Absent	Absent	7446	7715	8174
MOOMBA 61	7253	Absent	Absent	7253	7565	8063
MOOMBA 62	7161	Absent	Absent	7161	7344	7753
MOOMBA 63	7318	Absent	Absent	7318	7488	7910
MOOMBA 64	7095	Absent	Absent	7095	7294	7607
MOOMBA 65	7229	Absent	Absent	7229	7386	7738
MOOMBA 67	6999	Absent	Absent	6999	7178	7532
MOOMBA NORTH 1	7306	Absent	Absent	7306	7539	8024
MOOMBA NORTH 2	7286	Absent	Absent	7286	7516	8010
MOOMBA SOUTH 1	7184	Absent	Absent	7184	7296	7663
MOORAN 1	7077	Absent	Absent	Absent	7077	7212
MOORARI 1	7936	7936	8044	8278	8561	8833
MOORARI 2	8072	8072	8178	8461	8744	9066
MOORARI 3	7908	7908	8024	8233	8550	8786
MOORARI 4	7900	7900	8000	8237	8555	8784
MOORARI 5	7888	7888	7984	8240	8558	8786
MOORARI 6	7997	7997	8068	8338	8618	8924
MOORARI 7	7966	7966	8071	8314	8600	8883
MUDERA 1	6220	Absent	Absent	6220	6350	6632
MUDERA 2	6210	Absent	Absent	6210	6387	6668
MUDERA 3	6178	Absent	Absent	6178	6300	6638
MUDERA 4	6263	Absent	Absent	6263	6405	6750
MUDLALEE 1	5753	Absent	Absent	Absent	5753	5863
MUDLALEE 2	5679	Absent	Absent	Absent	5679	5730
MUDRANGIE 1	7925	7925	7985	8250	8590	8926
MUDRANGIE 2	7920	7920	7960	8188	8505	8822
MULGA 1	5320	Absent	Absent	Absent	Absent	5320
MULGA 2	5271	Absent	Absent	Absent	Absent	5271
MUNDI 1	6019	Absent	Absent	6019	6042	6414
MUNKARIE 1	5678	Absent	Absent	Absent	5678	5853
MUNKARIE 2	5650	Absent	Absent	Absent	5650	5812
MUNKARIE 3	5706	Absent	Absent	Absent	5706	5963
MUNKARIE 4	5631	Absent	Absent	Absent	5631	5792
MUNKARIE 5	5667	Absent	Absent	Absent	5667	5902
MUNKARIE 6	5631	Absent	Absent	Absent	5631	5814
MURTEREE 1	5745	Absent	Absent	Absent	5745	5910
MURTEREE 2	5840	Absent	Absent	Absent	5840	5879
MURTEREE A1	5105	Absent	Absent	Absent	Absent	5105
MURTEREE C1	5893	Absent	Absent	Absent	5893	6021
MUTEROO 1	6234	Absent	Absent	Absent	Absent	6234
MUTEROO 4	6164	Absent	Absent	Absent	Absent	6164
MUTEROO 5	6245	Absent	Absent	Absent	Absent	6245
NAMUR 1	6645	Absent	Absent	6645	6703	6927
NAMUR 3	6600	Absent	Absent	6600	6640	6852
NANIMA 1	6010	Absent	Absent	Absent	6010	6175
NAPPACOONGEE 1	5780	Absent	Absent	5780	5926	6163
NAPPACOONGEE 2	5750	Absent	Absent	5750	5846	6090
NAPPACOONGEE 3	5724	Absent	Absent	5724	5882	6122
NARCOONOWIE 1	5478	Absent	Absent	Absent	5478	5522
NARIE 1	7391	Absent	7391	7490	7740	7952
NARIE 2	7403	Absent	7404	7530	7778	8002
NEALYON 1	5928	Absent	Absent	Absent	Absent	5928
NULLA 1	7447	Absent	Absent	7447	7653	7760
NUNGEROO 1	5311	Absent	Absent	Absent	Absent	5311
PACKSADDLE 1	7160	Absent	7160	7511	7878	8278
PACKSADDLE 2	6938	Absent	6938	7114	7335	7716

PACKSADDLE 3	6544	Absent	6544	6738	6937	7212
PACKSADDLE 4	6460	Absent	6460	6585	6805	6915
PACKSADDLE 5	6479	Absent	6479	6660	6841	7141
PADULLA 1	4862	Absent	Absent	Absent	Absent	4862
PANDO 1	5590	Absent	Absent	Absent	Absent	5590
PANDO 2	5670	Absent	Absent	Absent	Absent	5670
PANDO NORTH 1	5903	Absent	Absent	Absent	Absent	5903
PANDRUANNIE 1	5580	Absent	Absent	Absent	Absent	5580
PANING 1	7781	7781	8207	8549	8909	9353
PAPYRUS 1	6390	Absent	Absent	Absent	Absent	6390
PAXTON 1	3484	Absent	Absent	Absent	Absent	3484
PELICAN 1	7316	Absent	7317	7390	7618	7807
PELICAN 2	7338	Absent	7338	7390	7618	7786
PELICAN 3	7302	Absent	7302	7490	7695	7904
PELICAN 4	7353	Absent	7353	7486	7718	7939
PELICAN 5	7322	Absent	7322	7484	7804	7923
PELKETA 1	5760	Absent	Absent	Absent	5760	6024
PERENTY 1	6152	Absent	Absent	Absent	6152	6272
PINNA 1	5812	Absent	Absent	Absent	5812	5953
PINTARI 1	5670	Absent	Absent	Absent	Absent	5670
PINTARI NORTH 1	5910	Absent	Absent	Absent	Absent	5910
PIRA 1	6270	Absent	Absent	6270	6576	6957
PIRA 2	6301	Absent	Absent	6301	6581	6959
PIRRAMINTA 1	7135	Absent	7135	7300	7540	7788
POGONA 1	6941	Absent	Absent	Absent	6941	7057
PONDRINIE 1	6605	Absent	6589	6742	7022	7347
PONDRINIE 2	6711	Absent	6708	6854	7150	7489
PONDRINIE 3	6634	Absent	6527	6667	6912	7151
PONDRINIE 4	6534	Absent	6484	6640	6920	7218
PONDRINIE 5	6524	Absent	6524	6732	6970	7279
POORAKA 1	6087	Absent	Absent	6087	6326	6605
QUARTPOT 1	8112	8112	8170	8425	8652	8992
RAKOONA 1	7886	7886	7920	8151	8488	8728
REGOLITH 1	7590	Absent	7590	7645	7892	8024
SNAKE HOLE 1	7190	Absent	Absent	7190	7436	7623
SPECTRE 1	8085	Absent	8085	8226	8508	8765
SPENCER 1	6121	Absent	Absent	Absent	6121	6143
SPENCER 2	5863	Absent	Absent	Absent	Absent	5863
SPENCER 3	5989	Absent	Absent	Absent	Absent	5989
SPENCER 4	6156	Absent	Absent	Absent	Absent	6156
SPENCER 5	5976	Absent	Absent	Absent	Absent	5976
SPENCER 6	6008	Absent	Absent	Absent	Absent	6008
SPENCER 7	5968	Absent	Absent	Absent	Absent	5968
SPENCER 8	6047	Absent	Absent	Absent	Absent	6047
SPENCER 10	6118	Absent	Absent	Absent	Absent	6118
SPENCER WEST 1	5902	Absent	Absent	Absent	Absent	5902
STRATHMOUNT 1	6777	Absent	6777	6888	7287	7916
STRZELECKI 1	5940	Absent	Absent	Absent	5940	6228
STRZELECKI 2	5895	Absent	Absent	Absent	5895	6103
STRZELECKI 3	5830	Absent	Absent	Absent	5830	5994
STRZELECKI 5	5830	Absent	Absent	Absent	5830	5990
STRZELECKI 10	5974	Absent	Absent	Absent	5975	6185
STRZELECKI 15	5869	Absent	Absent	Absent	5869	6078
STRZELECKI 16	5964	Absent	Absent	Absent	5964	6096
STRZELECKI 17	5799	Absent	Absent	Absent	5799	5956
STRZELECKI 24	5937	Absent	Absent	Absent	5937	6235
STRZELECKI 25	5900	Absent	Absent	Absent	5900	6128
STURT 1	6179	Absent	Absent	Absent	Absent	6179

STURT 2	6123	Absent	Absent	Absent	Absent	6123
STURT 3	6116	Absent	Absent	Absent	Absent	6116
STURT 4	6185	Absent	Absent	Absent	Absent	6185
STURT 5	6108	Absent	Absent	Absent	Absent	6108
STURT 6	6120	Absent	Absent	Absent	Absent	6120
STURT EAST 1	6114	Absent	Absent	Absent	Absent	6114
STURT EAST 2	6072	Absent	Absent	Absent	Absent	6072
STURT EAST 3	6167	Absent	Absent	Absent	Absent	6167
STURT EAST 4	6115	Absent	Absent	Absent	Absent	6115
SWAN LAKE 1	7562	Absent	7562	7727	8084	8302
TALoola 1	6026	Absent	Absent	Absent	Absent	6026
TALoola 2	6052	Absent	Absent	Absent	Absent	6052
TALoola 3	6109	Absent	Absent	Absent	Absent	6109
TANTANNA 1	5949	Absent	Absent	Absent	Absent	5949
TANTANNA 2	5967	Absent	Absent	Absent	Absent	5967
TANTANNA 3	5970	Absent	Absent	Absent	Absent	5970
TANTANNA 4	5949	Absent	Absent	Absent	Absent	5949
TANTANNA 5	5975	Absent	Absent	Absent	Absent	5975
TANTANNA 6	6048	Absent	Absent	Absent	Absent	6048
TARWONGA 1	6110	Absent	Absent	6110	6131	6493
TARWONGA 2	6114	Absent	Absent	6114	6133	6514
TARWONGA 3	6132	Absent	Absent	6132	6204	6579
TAYLOR SOUTH 1	7666	7666	7805	8064	8322	8678
THREE QUEENS 1	6365	Absent	6365	6505	6938	7382
THURAKINNA 1	6278	Absent	Absent	Absent	6278	6394
THURAKINNA 2	6221	Absent	Absent	6221	6292	6424
THURAKINNA 3	6260	Absent	Absent	6260	6303	6431
THURAKINNA 4	6204	Absent	Absent	6204	6275	6410
THURAKINNA 5	6230	Absent	Absent	6230	6307	6457
TIBOUCHINA 1	6576	Absent	Absent	Absent	Absent	6576
TILPAREE A1	5647	Absent	Absent	Absent	5647	5819
TINDILPIE 1	7855	Absent	Absent	7855	8074	8402
TINDILPIE 2	7850	Absent	Absent	7850	8024	8347
TIRRAWARRA 1	7595	7595	7640	7860	8132	8446
TIRRAWARRA 2	7639	7639	7669	7880	8152	8472
TIRRAWARRA 3	7803	7803	7896	8090	8362	8667
TIRRAWARRA 4	7680	7680	7730	7960	8343	8547
TIRRAWARRA 5	7720	7720	7770	7940	8285	8575
TIRRAWARRA 6	7728	7728	7795	8020	8315	8612
TIRRAWARRA 7	7710	7710	7765	8007	8310	8630
TIRRAWARRA 8	7617	7617	7677	7886	8227	8462
TIRRAWARRA 9	7650	7650	7738	7940	8242	8531
TIRRAWARRA 10	7710	7710	7782	8032	8443	8672
TIRRAWARRA 11	7645	7645	7700	7900	8195	8522
TIRRAWARRA 12	7741	7741	7800	8010	8284	8609
TIRRAWARRA 13	7643	7643	7714	7926	8240	8504
TIRRAWARRA 14	7609	7609	7666	7866	8121	8427
TIRRAWARRA 15	7626	7626	7654	7856	8128	8433
TIRRAWARRA 16	7734	7734	7800	8016	8298	8608
TIRRAWARRA 17	7640	7640	7702	7920	8196	8498
TIRRAWARRA 18	7648	7648	7722	7936	8202	8516
TIRRAWARRA 19	7701	7701	7725	7970	8250	8556
TIRRAWARRA 20	7626	7626	7661	7872	8154	8456
TIRRAWARRA 21	7637	7637	7678	7913	8152	8466
TIRRAWARRA 22	7685	7685	7784	8018	8296	8606
TIRRAWARRA 23	7621	7621	7683	7910	8152	8454
TIRRAWARRA 24	7634	7634	7726	7933	8184	8510
TIRRAWARRA 25	7624	7624	7652	7906	8152	8461

TIRRAWARRA 26	7690	7690	7766	7970	8246	8563
TIRRAWARRA 27	7703	7703	7772	7980	8310	8575
TIRRAWARRA 28	7622	7622	7682	7902	8180	8495
TIRRAWARRA 29	7632	7632	7680	7910	8158	8465
TIRRAWARRA 30	7630	7630	7655	7859	8127	8441
TIRRAWARRA 31	7635	7635	7664	7866	8146	8448
TIRRAWARRA 32	7662	7662	7700	7916	8178	8494
TIRRAWARRA 33	7620	7620	7700	7914	8170	8488
TIRRAWARRA 34	7652	7652	7676	7872	8154	8452
TIRRAWARRA 35	7594	7594	7650	7866	8140	8458
TIRRAWARRA 36	7710	7710	7772	8004	8286	8572
TIRRAWARRA 37	7695	7695	7752	7952	8222	8545
TIRRAWARRA 38	7665	7665	7724	7954	8210	8526
TIRRAWARRA 39	7660	7660	7716	7886	8159	8485
TIRRAWARRA 40	7678	7678	7713	7940	8198	8500
TIRRAWARRA 41	7710	7710	7778	7986	8248	8560
TIRRAWARRA 42	7640	7640	7710	7908	8160	8482
TIRRAWARRA 43	7716	7716	7773	7950	8230	8547
TIRRAWARRA 44	7754	7754	7825	8060	8395	8655
TIRRAWARRA 45	7650	7650	7700	7926	8216	8538
TIRRAWARRA 46	7682	7682	7734	7966	8250	8574
TIRRAWARRA 47	7656	7656	7713	7914	8167	8497
TIRRAWARRA 48	7669	7669	7706	7945	8236	8544
TIRRAWARRA 49	7596	7596	7646	7842	8118	8416
TIRRAWARRA 50	7598	7598	7649	7840	8114	8418
TIRRAWARRA 51	7632	7632	7694	7904	8185	8498
TIRRAWARRA 52	7758	7758	7802	8018	8254	8618
TIRRAWARRA 53	7660	7660	7701	7872	8158	8463
TIRRAWARRA 54	7672	7672	7703	7906	8191	8523
TIRRAWARRA 55	7716	7716	7768	7955	8236	8561
TIRRAWARRA 56	7732	7732	7785	7990	8282	8594
TIRRAWARRA 57	7650	7650	7716	7930	8190	8509
TIRRAWARRA 58	7646	7646	7670	7870	8148	8450
TIRRAWARRA 59	7748	7748	7815	8014	8350	8609
TIRRAWARRA 60	7646	7646	7704	7938	8220	8548
TIRRAWARRA 61	7588	7588	7645	7858	8140	8447
TIRRAWARRA 62	7646	7646	7701	7929	8226	8556
TIRRAWARRA 63	7654	7654	7728	7929	8200	8529
TIRRAWARRA 64	7701	7701	7726	7948	8245	8566
TIRRAWARRA 65	7616	7616	7682	7946	8192	8520
TIRRAWARRA NORTH 1	7880	7880	7954	8180	8465	8800
TIRRAWARRA WEST 1	7775	7775	7836	8036	8306	8643
TITAN 1	6930	Absent	Absent	Absent	Absent	6930
TOOLACHEE 1	5702	Absent	Absent	Absent	5702	5877
TOOLACHEE 2	5689	Absent	Absent	Absent	5689	6042
TOOLACHEE 3	5788	Absent	Absent	Absent	5788	6037
TOOLACHEE 4	5802	Absent	Absent	Absent	5802	6109
TOOLACHEE 5	5904	Absent	Absent	Absent	5904	6240
TOOLACHEE 6	5803	Absent	Absent	Absent	5803	6120
TOOLACHEE 7	5914	Absent	Absent	Absent	5914	6082
TOOLACHEE 8	5794	Absent	Absent	Absent	5794	6150
TOOLACHEE 9	5862	Absent	Absent	Absent	5862	6127
TOOLACHEE 10	5762	Absent	Absent	Absent	5762	6032
TOOLACHEE 11	5759	Absent	Absent	Absent	5759	6091
TOOLACHEE 12	5781	Absent	Absent	Absent	5781	6107
TOOLACHEE 13	5784	Absent	Absent	Absent	5784	6082
TOOLACHEE 14	5813	Absent	Absent	Absent	5813	6092
TOOLACHEE 15	5800	Absent	Absent	Absent	5800	6014

TOOLACHEE 16	5697	Absent	Absent	Absent	5697	5899
TOOLACHEE 17	5788	Absent	Absent	Absent	5788	6094
TOOLACHEE 18	5795	Absent	Absent	Absent	5795	6022
TOOLACHEE 19	5808	Absent	Absent	Absent	5808	6131
TOOLACHEE 20	5820	Absent	Absent	Absent	5820	6088
TOOLACHEE 21	5940	Absent	Absent	Absent	5940	6213
TOOLACHEE 23	5870	Absent	Absent	Absent	5870	6211
TOOLACHEE 24	5800	Absent	Absent	Absent	5800	6140
TOOLACHEE 25	5788	Absent	Absent	Absent	5788	6068
TOOLACHEE 26	5750	Absent	Absent	Absent	5750	6050
TOOLACHEE 27	5810	Absent	Absent	Absent	5810	6070
TOOLACHEE 28	5764	Absent	Absent	Absent	5764	6024
TOOLACHEE 29	5796	Absent	Absent	Absent	5796	6023
TOOLACHEE 30	5802	Absent	Absent	Absent	5802	6136
TOOLACHEE 31	5792	Absent	Absent	Absent	5792	6127
TOOLACHEE 32	5723	Absent	Absent	Absent	5723	5981
TOOLACHEE 33	5773	Absent	Absent	Absent	5773	6058
TOOLACHEE 34	5772	Absent	Absent	Absent	5772	6052
TOOLACHEE 35	5820	Absent	Absent	Absent	5820	6164
TOOLACHEE 36	5743	Absent	Absent	Absent	5743	5895
TOOLACHEE 37	5819	Absent	Absent	Absent	5819	6193
TOOLACHEE 38	5760	Absent	Absent	Absent	5760	6061
TOOLACHEE 39	5860	Absent	Absent	Absent	5860	6190
TOOLACHEE 40	5856	Absent	Absent	Absent	5856	6193
TOOLACHEE 41	5763	Absent	Absent	Absent	5764	6130
TOOLACHEE EAST 1	5941	Absent	Absent	Absent	5941	6306
TOOLACHEE EAST 2	5933	Absent	Absent	Absent	5933	6284
TOOLACHEE NORTH 1	6083	Absent	Absent	Absent	6083	6399
TOONMAN 1	8225	8225	8422	8653	8895	9286
TOPWEE 1	6437	Absent	Absent	Absent	6437	6514
TURBAN 1	6565	Absent	6565	6822	7134	7420
ULANDI 1	5165	Absent	Absent	Absent	Absent	5165
ULANDI 2	5168	Absent	Absent	Absent	Absent	5168
ULANDI 3	5057	Absent	Absent	Absent	Absent	5057
UNGARI 1	5397	Absent	Absent	Absent	Absent	5397
VARANUS 1	7796	Absent	7796	8020	8271	8566
VARANUS 2	7738	Absent	7737	7955	8240	8536
WALKILLIE 1	8006	8006	8312	8516	8705	8901
WANARA 1	5876	Absent	Absent	Absent	5875	6018
WANCOOCHA 1	5613	Absent	Absent	Absent	Absent	5613
WANCOOCHA 2	5487	Absent	Absent	Absent	Absent	5487
WANCOOCHA 3	5519	Absent	Absent	Absent	Absent	5519
WANCOOCHA 4	5515	Absent	Absent	Absent	Absent	5515
WANCOOCHA 5	5525	Absent	Absent	Absent	Absent	5525
WANCOOCHA 6	5536	Absent	Absent	Absent	Absent	5536
WANCOOCHA 7	5526	Absent	Absent	Absent	Absent	5526
WANTANA 1	7393	Absent	7393	7628	7942	8274
WAUKATANNA 1	6607	Absent	Absent	6607	6764	6904
WEENA 1	4284	Absent	Absent	Absent	Absent	4284
WELCOME LAKE 1	7513	Absent	7513	7590	7772	7942
WILPINNIE 1	6204	Absent	Absent	6204	6399	6664
WILPINNIE 2	6055	Absent	Absent	6055	6250	6492
WIMMA 1	8689	8689	9100	9482	9901	10397
WIRHA 1	5336	Absent	Absent	Absent	Absent	5336
WIRRARIE 1	6222	Absent	Absent	Absent	6222	6263
WITCHETTY 1	5832	Absent	Absent	Absent	5832	6132
WOOLKINA 1	8006	8006	8081	8328	8620	8902
WOOLKINA 2	7992	7992	8109	8357	8646	8926

WOOLOO 1	6684	Absent	Absent	Absent	6684	6738
WRONSKY 1	6068	Absent	Absent	Absent	Absent	6068
WUROOPIE 1	5351	Absent	Absent	Absent	Absent	5351
YALCUMMA 1	6818	Absent	Absent	6818	6955	7318
YANPURRA 1	7782	7782	7956	8260	8603	8985
YANTA 1	7124	Absent	Absent	Absent	Absent	7124
YAPENI 1	6147	Absent	Absent	Absent	6147	6292
YAPENI 2	6230	Absent	Absent	Absent	6230	6414
YAROWINNIE 1	7808	Absent	7808	7909	8094	8308
YILKI 1	5166	Absent	Absent	Absent	Absent	5166

TABLE IX: NAPPAMERRI GROUP THICKNESSES
(Thicknesses in Feet)

<u>Wellname</u>	<u>Tinchoo</u>	<u>Wimma</u>	<u>Paning</u>	<u>Call.</u>	<u>NAPPAMERRI Gp</u>
ALKOOMI 1	Absent	Absent	Absent	Absent	Absent
ALWYN 1	Absent	Absent	Absent	Absent	Absent
AMYEMA 1	Absent	Absent	Absent	289	289
ANDREE 1	Absent	117	222	288	627
ANDREE 2	Absent	120	242	289	651
AROONA 1	Absent	Absent	Absent	344	440
ARRAKIS 1	Absent	Absent	Absent	82	90
ARRAKIS NORTH 1	Absent	Absent	Absent	68	68
ATREIDES 1	Absent	Absent	Absent	184	184
AZOLLA 1	Absent	Absent	Absent	262	262
BAGUNDI 1	Absent	Absent	Absent	334	334
BAGUNDI 2	Absent	Absent	65	345	410
BAGUNDI 3	Absent	Absent	59	341	400
BALCAMINGA 1	151 260	348	360	1119	
BARATTA 1	Absent	Absent	19	340	359
BARCOOLOO 1	Absent	Absent	Absent	263	263
BATTUNGA 1	Absent	Absent	Absent	229	229
BEANBUSH 1	427 375	345	563	1710	
BIALA 1	Absent	Absent	Absent	Absent	Absent
BIG LAKE 1	Absent	Absent	284	291	575
BIG LAKE 2	Absent	Absent	220	242	462
BIG LAKE 3	Absent	Absent	277	313	590
BIG LAKE 4	Absent	Absent	152	351	503
BIG LAKE 5	Absent	Absent	313	262	575
BIG LAKE 6	Absent	Absent	186	321	507
BIG LAKE 7	Absent	Absent	181	274	455
BIG LAKE 8	Absent	Absent	149	403	552
BIG LAKE 9	Absent	Absent	268	271	539
BIG LAKE 10	Absent	Absent	199	361	560
BIG LAKE 11	Absent	Absent	256	286	542
BIG LAKE 12	Absent	Absent	205	341	546
BIG LAKE 13	Absent	Absent	188	287	475
BIG LAKE 14	Absent	Absent	209	304	513
BIG LAKE 15	Absent	Absent	312	257	569
BIG LAKE 16	Absent	Absent	247	284	531
BIG LAKE 17	Absent	Absent	191	315	506
BIG LAKE 18	Absent	Absent	245	319	564
BIG LAKE 19A	Absent	Absent	294	261	555
BIG LAKE 20	Absent	Absent	330	256	586
BIG LAKE 21	Absent	Absent	205	287	492
BIG LAKE 22	Absent	Absent	250	257	507
BIG LAKE 23	Absent	Absent	134	312	446
BIG LAKE 24	Absent	Absent	203	378	581
BIG LAKE 25	Absent	Absent	160	364	524
BIG LAKE 26	Absent	Absent	240	247	487
BIG LAKE 27	Absent	Absent	310	256	566
BIG LAKE 29	Absent	Absent	161	270	431
BIG LAKE 30	Absent	Absent	223	311	534
BIG LAKE 31	Absent	Absent	240	322	562
BIG LAKE 32	Absent	Absent	249	287	536
BIG LAKE 33	Absent	Absent	193	336	529
BIG LAKE 34	Absent	Absent	233	298	531
BIG LAKE 35	Absent	Absent	267	299	566
BIG LAKE 41	Absent	Absent	320	261	581

BIG LAKE 43	Absent	Absent	179	315	494
BIG LAKE 44	Absent	Absent	186	309	495
BIG LAKE 45	Absent	Absent	163	283	446
BIG LAKE 46	Absent	Absent	268	312	580
BIG LAKE 47	Absent	Absent	147	280	427
BIG LAKE 48	Absent	Absent	225	416	641
BIMBAYA 1	140 298	276	230	944	
BIMBAYA 2	183 280	289	275	1027	
BIMBAYA 3	115 334	297	266	1012	
BOBS WELL 1	Absent	Absent	161	282	443
BOOKABOURDIE 1	88 309	297	319	1013	
BOOKABOURDIE 2	125 262	297	324	1008	
BOOKABOURDIE 3	173 253	307	335	1068	
BOOKABOURDIE 4	146 248	323	243	960	
BOOKABOURDIE 6	195 268	232	431	1126	
BOOKABOURDIE 7	179 281	431	220	1111	
BOOKABOURDIE 8	178 256	284	274	992	
BOOKABOURDIE 9	136 256	292	322	1006	
BOOKABOURDIE 10	174 278	252	310	1014	
BOXWOOD 1	Absent	Absent	Absent	Absent	Absent
BOXWOOD 2	Absent	Absent	Absent	Absent	Absent
BROLGA 1	54 219	222	293	788	
BROLGA 2	62 206	207	289	764	
BRUMBY 1	Absent	Absent	Absent	265	265
BRUMBY 2	Absent	Absent	Absent	308	308
BRUMBY 3	Absent	Absent	Absent	280	280
BRUMBY 4	Absent	Absent	Absent	302	302
BRUMBY 5	Absent	Absent	Absent	284	284
BUCKINNA 1	Absent	Absent	Absent	Absent	Absent
BUCKINNA 2	Absent	Absent	Absent	Absent	Absent
BUNGEE 1	Absent	Absent	52	229	281
BUNGEE 2	Absent	Absent	121	234	355
BURKE 1	Absent	Absent	290	382	672
BURKE 3	Absent	Absent	229	441	670
BURKE 4	Absent	Absent	276	404	680
BURKE 5	Absent	Absent	310	394	704
BURLEY 1	Absent	266	410	581	1257
BURLEY 2	Absent	253	394	640	1287
BURRUNA 1	Absent	Absent	Absent	Absent	Absent
CALAMIA WEST 1	Absent	Absent	Absent	Absent	Absent
CALLABONNA 1	Absent	Absent	Absent	Absent	Absent
CARAKA 1	Absent	Absent	17	429	446
CHARO 1	Absent	Absent	Absent	Absent	Absent
CHELTEN NORTH 1	Absent	Absent	Absent	Absent	Absent
CHERRI 1	Absent	Absent	Absent	Absent	Absent
CHILCARRIE 1	Absent	Absent	Absent	324	324
CHILDIE 1	Absent	Absent	Absent	222	222
COOBOWIE 1	Absent	Absent	Absent	Absent	Absent
COOCHILARA 1	Absent	Absent	250	380	630
COOCHILARA 2	Absent	Absent	251	367	618
COOLOON 1	Absent	Absent	207	337	544
COONATIE 1	182 367	271	350	1170	
COONATIE 2	220 278	276	310	1084	
COONATIE 3	253 263	282	436	1234	
COONGIE 1	156 103	Absent	Absent	441	
COOPERS CREEK 1	Absent	210	223	282	715
CORKWOOD 1	Absent	Absent	100	277	377
COWAN 1	Absent	Absent	Absent	120	120

COWRALLI 1	Absent	75	276	314	665
COWRALLI 2	Absent	64	277	331	672
COWRALLI 3	Absent	58	295	304	657
CUTTAPIRRIE 1	240 216	239	228	923	
DAER 1	103 138	Absent	Absent	373	
DARALINGIE 1	Absent	Absent	Absent	175	175
DARALINGIE 2	Absent	Absent	Absent	261	261
DARALINGIE 3	Absent	Absent	Absent	156	156
DARALINGIE 4	Absent	Absent	Absent	164	164
DARALINGIE 5	Absent	Absent	Absent	144	144
DARALINGIE 6	Absent	Absent	Absent	180	180
DARALINGIE 7	Absent	Absent	Absent	214	214
DARALINGIE 8	Absent	Absent	Absent	206	206
DARALINGIE 9	Absent	Absent	Absent	216	216
DARALINGIE 10	Absent	Absent	Absent	178	178
DARALINGIE 11	Absent	Absent	Absent	177	177
DARALINGIE 12	Absent	Absent	Absent	207	207
DARALINGIE 13	Absent	Absent	Absent	223	223
DARALINGIE 14	Absent	Absent	Absent	190	190
DARALINGIE 15	Absent	Absent	Absent	218	218
DARALINGIE 16	Absent	Absent	Absent	180	180
DARALINGIE 17	Absent	Absent	Absent	151	151
DARALINGIE 18	Absent	Absent	Absent	245	245
DARALINGIE 19	Absent	Absent	Absent	235	235
DARALINGIE 20	Absent	Absent	Absent	183	183
DARALINGIE 21	Absent	Absent	Absent	253	253
DARALINGIE 22	Absent	Absent	Absent	244	244
DARALINGIE 23	Absent	Absent	Absent	258	258
DEINA 1	Absent	Absent	Absent	244	244
DELIN 1	226 276	242	440	1184	
DELLA 1	Absent	Absent	172	262	434
DELLA 2	Absent	Absent	70	245	315
DELLA 3	Absent	Absent	200	317	517
DELLA 4	Absent	Absent	156	306	462
DELLA 5A	Absent	Absent	155	169	324
DELLA 6	Absent	Absent	118	312	430
DELLA 7	Absent	Absent	78	218	296
DELLA 8	Absent	Absent	108	281	389
DELLA 9	Absent	Absent	68	278	346
DELLA 10	Absent	Absent	122	241	363
DELLA 11	Absent	Absent	87	285	372
DELLA 12	Absent	Absent	78	253	331
DELLA 13	Absent	Absent	88	299	387
DELLA 14	Absent	Absent	92	246	338
DELLA 15	Absent	Absent	66	362	428
DELLA 16	Absent	Absent	96	297	393
DELLA 17	Absent	Absent	71	255	326
DEPARANIE 1	Absent	127	254	226	607
DERAMOOKOO 1	225 212	116	150	703	
DIERI 1	Absent	Absent	89	380	469
DILCHEE 1	Absent	Absent	281	421	702
DILCHEE 2	Absent	Absent	268	375	643
DIRKALA 1	Absent	Absent	Absent	Absent	Absent
DIRKALA 2	Absent	Absent	Absent	Absent	Absent
DIRKALA 3	Absent	Absent	Absent	Absent	Absent
DULLINGARI 1	Absent	Absent	326	345	671
DULLINGARI 2	Absent	Absent	344	331	675
DULLINGARI 3	Absent	Absent	383	401	784

DULLINGARI 4	Absent	Absent	344	345	689
DULLINGARI 16	Absent	Absent	326	348	674
DULLINGARI 17	Absent	Absent	364	320	684
DULLINGARI 18	Absent	Absent	326	332	658
DULLINGARI 19	Absent	Absent	370	322	692
DULLINGARI 22	Absent	Absent	338	332	670
DULLINGARI 23	Absent	Absent	339	343	682
DULLINGARI 24	Absent	Absent	352	351	703
DULLINGARI 25	Absent	Absent	351	360	711
DULLINGARI 26	Absent	Absent	364	364	728
DULLINGARI 39	Absent	Absent	340	362	702
DULLINGARI 44	Absent	Absent	385	329	714
DULLINGARI 45	Absent	Absent	372	355	727
DULLINGARI 46	Absent	Absent	405	359	764
DULLINGARI NORTH 1	Absent	Absent	368	381	749
DULLINGARI NORTH 2	Absent	Absent	388	383	771
DULLINGARI NORTH 3	Absent	Absent	388	376	764
DULLINGARI NORTH 4	Absent	Absent	363	402	765
DUNOON 1	Absent	Absent	Absent	Absent	Absent
FLY LAKE 1	Absent	124	173	242	539
FLY LAKE 2	Absent	135	242	225	602
FLY LAKE 3	Absent	203	192	244	639
FLY LAKE 4	Absent	175	228	254	657
FLY LAKE 5	Absent	144	178	236	558
FLY LAKE 6	Absent	143	165	244	552
FLY LAKE 7	Absent	122	175	250	547
GARANJANIE 1	Absent	Absent	Absent	Absent	Absent
GARANJANIE 2	Absent	Absent	Absent	Absent	Absent
GARANJANIE 3	Absent	Absent	Absent	Absent	Absent
GIDGEALPA 1	Absent	Absent	304	180	484
GIDGEALPA 2	Absent	Absent	22	165	187
GIDGEALPA 3	Absent	Absent	95	152	247
GIDGEALPA 4	Absent	Absent	Absent	132	132
GIDGEALPA 5	Absent	Absent	Absent	57	57
GIDGEALPA 6	Absent	Absent	Absent	88	88
GIDGEALPA 7	Absent	Absent	Absent	61	61
GIDGEALPA 8	Absent	Absent	Absent	161	161
GIDGEALPA 9	Absent	Absent	Absent	186	186
GIDGEALPA 10	Absent	Absent	80	153	233
GIDGEALPA 11	Absent	Absent	Absent	111	111
GIDGEALPA 12	Absent	Absent	Absent	157	157
GIDGEALPA 13	Absent	Absent	46	150	196
GIDGEALPA 14	Absent	Absent	31	129	160
GIDGEALPA 15	Absent	Absent	Absent	261	261
GIDGEALPA 16	Absent	Absent	Absent	54	54
GIDGEALPA 17	Absent	Absent	Absent	83	83
GIDGEALPA 19	Absent	Absent	Absent	66	66
GIDGEALPA 21	Absent	Absent	Absent	42	42
GIDGEALPA 23	Absent	Absent	Absent	54	54
GIDGEALPA 27	Absent	Absent	Absent	20	20
GIDGEALPA 29	Absent	Absent	Absent	87	87
GIDGEALPA 33	Absent	Absent	Absent	47	47
GIDGEALPA 34	Absent	Absent	Absent	55	55
GIDGEALPA 35	Absent	Absent	Absent	200	200
GIDGEALPA 36	Absent	Absent	Absent	97	97
GIDGEALPA 38	Absent	Absent	51	157	208
GOORANIE 1	Absent	189	308	309	806
GOORANIE 2	Absent	182	313	316	811

GOORANIE 3	Absent	177	322	311	810
GOYDER 1	Absent	Absent	Absent	192	192
INNAMINCKA 1	Absent	269	293	319	881
INNAMINCKA 4	Absent	260	284	346	890
JACK LAKE 1	Absent	28	203	253	484
JACK LAKE 2	Absent	Absent	174	267	441
JENA 1	Absent	Absent	Absent	Absent	Absent
JENA 2	Absent	Absent	Absent	Absent	Absent
JENA 5	Absent	Absent	Absent	Absent	Absent
JENA 6	Absent	Absent	Absent	Absent	Absent
JENNET 1	Absent	Absent	Absent	Absent	Absent
KALANNA 1	Absent	Absent	81	324	405
KALLADEINA 1	Absent	Absent	Absent	Absent	Absent
KANOWANA 1	Absent	137	241	287	665
KANOWANA 2	Absent	203	213	255	671
KANOWANA 3	Absent	131	205	254	590
KARILLA 1	Absent	Absent	Absent	58	58
KEENA 1	Absent	Absent	Absent	Absent	Absent
KEENA 2	Absent	Absent	Absent	Absent	Absent
KEENA 3	Absent	Absent	Absent	Absent	Absent
KEETO 1	Absent	Absent	Absent	288	288
KENNY 1	438 212	319	294	1263	
KERINNA 1	Absent	Absent	Absent	Absent	Absent
KERNA 1	Absent	Absent	178	374	552
KERNA 2A	Absent	Absent	233	372	605
KERNA 3	Absent	Absent	133	357	490
KERNA 4	Absent	Absent	188	351	539
KIDMAN 1	Absent	Absent	70	367	437
KIDMAN 2	Absent	Absent	28	355	383
KIDMAN 3	Absent	Absent	27	371	398
KIDMAN 4	Absent	Absent	119	357	476
KIDMAN 5	Absent	Absent	Absent	343	343
KIDMAN 6	Absent	Absent	157	361	518
KIDMAN 7	Absent	Absent	21	359	380
KIDMAN NORTH 1	Absent	Absent	57	353	410
KIDMAN NORTH 2	Absent	Absent	75	373	448
KIRBY 1	Absent	195	411	851	1457
KIRRALEE 1.	Absent	Absent	118	364	482
KIWARRICK 1	Absent	Absent	Absent	Absent	Absent
KOBARI 1	Absent	Absent	Absent	Absent	Absent
KOREE 1	Absent	Absent	Absent	24	24
KUDRIEKE 1	204 282	235	367	1088	
KUDRIEKE 2	179 273	264	327	1043	
KUJANI 1	Absent	Absent	Absent	67	67
KUMBARIE 1	Absent	Absent	Absent	Absent	Absent
KURUNDA 1	Absent	Absent	Absent	149	149
KURUNDA 2	Absent	Absent	67	165	232
KURUNDA 3	Absent	Absent	Absent	163	163
KURUNDA 4	Absent	Absent	Absent	143	143
LAKE HOPE 1	Absent	Absent	Absent	Absent	Absent
LAKE MACMILLAN 1	197 366	251	416	1230	
LAKE MACMILLAN 2	230 296	225	445	1196	
LAMDINA 1	357 265	300	412	1334	
LELEPTIAN 1	Absent	60	235	293	589
LELEPTIAN 2	Absent	77	225	312	614
LEPENA 1	Absent	Absent	93	321	414
LHOTSKY 1	Absent	Absent	Absent	Absent	Absent
LIMESTONE CREEK 1	Absent	Absent	Absent	Absent	Absent

LIMESTONE CREEK 2	Absent	Absent	Absent	Absent	Absent
LIMESTONE CREEK 4	Absent	Absent	Absent	Absent	Absent
LIMESTONE CREEK 5	Absent	Absent	Absent	Absent	Absent
LOWANNA 1	Absent	Absent	243	328	571
LYCIUM 1	Absent	Absent	Absent	Absent	Absent
LYCOSA 1	Absent	Absent	Absent	288	288
MANOOKA 1	Absent	Absent	Absent	Absent	Absent
MARABOOKA 1	Absent	Absent	Absent	226	226
MARABOOKA 2	Absent	Absent	Absent	254	253
MARABOOKA 3	Absent	Absent	Absent	189	189
MARABOOKA 4	Absent	Absent	Absent	265	265
MARAKU 1	Absent	Absent	Absent	158	158
MARANA 1	Absent	Absent	Absent	260	260
MARSILEA 1	Absent	Absent	110	314	424
MASSY 1	Absent	70	242	182	495
MAWSON 1	Absent	Absent	Absent	90	90
MAWSON 2	Absent	Absent	Absent	113	113
MCKINLAY 1	Absent	Absent	Absent	Absent	Absent
MCKINLAY 2	Absent	Absent	Absent	Absent	Absent
MCKINLAY 3	Absent	Absent	Absent	Absent	Absent
MCKINLAY 4	Absent	Absent	Absent	Absent	Absent
MCLEOD 1	Absent	274	443	670	1387
MERANJI 1	Absent	89	296	123	508
MERANJI 2	Absent	125	281	221	628
MERANJI 4	Absent	52	330	219	601
MERINDA 1	Absent	Absent	90	306	396
MERRIMELIA 1	Absent	44	251	198	493
MERRIMELIA 2	Absent	Absent	224	144	368
MERRIMELIA 3	Absent	130	317	221	668
MERRIMELIA 4	Absent	Absent	234	173	407
MERRIMELIA 5	Absent	Absent	256	162	418
MERRIMELIA 6	Absent	Absent	162	95	257
MERRIMELIA 7	Absent	Absent	279	134	413
MERRIMELIA 8	Absent	Absent	190	71	261
MERRIMELIA 9	Absent	Absent	150	168	318
MERRIMELIA 10	Absent	Absent	140	128	268
MERRIMELIA 11	Absent	Absent	187	85	272
MERRIMELIA 12	Absent	Absent	178	7142	TDed
MERRIMELIA 13	Absent	Absent	210	142	352
MERRIMELIA 14	Absent	Absent	203	140	343
MERRIMELIA 15	Absent	Absent	192	68	260
MERRIMELIA 17	Absent	Absent	184	136	320
MERRIMELIA 18	Absent	84	246	232	562
MERRIMELIA 20	Absent	Absent	248	165	413
MERRIMELIA 22	Absent	Absent	237	146	383
MERRIMELIA 23	Absent	Absent	146	40	186
MERRIMELIA 25	Absent	Absent	221	160	381
MERUPA 1	84 280	252	316	932	
MERUPA 2	89 271	271	324	955	
METTIKA 1	Absent	Absent	109	331	440
METTIKA 2	Absent	Absent	111	339	450
METTIKA 3	Absent	Absent	122	335	457
MINA 1	Absent	Absent	109	271	380
MINGANA 1	Absent	140	224	272	636
MINKIE 1	Absent	83	210	84	373
MITCHIE 1	169 249	234	360	1012	
MOOLALLA 1	Absent	Absent	87	194	281
MOOLION 1	193 300	196	333	1022	

MOOMBA 1	Absent	Absent	199	370	569
MOOMBA 2	Absent	Absent	158	346	504
MOOMBA 3	Absent	Absent	214	370	584
MOOMBA 4	Absent	Absent	231	311	542
MOOMBA 5	Absent	Absent	250	468	718
MOOMBA 6	Absent	Absent	252	395	647
MOOMBA 7	Absent	Absent	262	507	769
MOOMBA 8	Absent	Absent	174	338	512
MOOMBA 9	Absent	Absent	216	280	496
MOOMBA 10	Absent	Absent	158	355	513
MOOMBA 11	Absent	Absent	205	349	554
MOOMBA 12	Absent	Absent	146	365	511
MOOMBA 13	Absent	Absent	280	426	706
MOOMBA 14	Absent	Absent	187	350	537
MOOMBA 15	Absent	Absent	196	378	574
MOOMBA 16	Absent	Absent	148	350	498
MOOMBA 17	Absent	Absent	158	345	503
MOOMBA 18	Absent	Absent	156	381	537
MOOMBA 19	Absent	Absent	172	328	500
MOOMBA 20	Absent	Absent	102	395	497
MOOMBA 21	Absent	Absent	150	351	501
MOOMBA 22	Absent	Absent	188	352	540
MOOMBA 23	Absent	Absent	156	347	503
MOOMBA 24	Absent	Absent	181	349	530
MOOMBA 25	Absent	Absent	174	320	494
MOOMBA 26	Absent	Absent	279	488	767
MOOMBA 27	Absent	Absent	233	457	690
MOOMBA 28	Absent	Absent	185	338	523
MOOMBA 29	Absent	Absent	192	351	543
MOOMBA 30	Absent	Absent	168	362	530
MOOMBA 31	Absent	Absent	193	375	568
MOOMBA 32	Absent	Absent	163	363	526
MOOMBA 33	Absent	Absent	208	356	564
MOOMBA 34	Absent	Absent	168	345	513
MOOMBA 35	Absent	Absent	151	343	494
MOOMBA 36	Absent	Absent	165	346	511
MOOMBA 37	Absent	Absent	165	357	522
MOOMBA 38	Absent	Absent	225	390	615
MOOMBA 39	Absent	Absent	194	340	534
MOOMBA 40	Absent	Absent	208	307	515
MOOMBA 41	Absent	Absent	254	339	593
MOOMBA 42	Absent	Absent	214	356	570
MOOMBA 43	Absent	Absent	217	327	544
MOOMBA 44	Absent	Absent	208	342	550
MOOMBA 45	Absent	Absent	177	381	558
MOOMBA 46	Absent	Absent	164	342	506
MOOMBA 47	Absent	Absent	245	304	549
MOOMBA 48	Absent	Absent	192	388	580
MOOMBA 49	Absent	Absent	204	396	600
MOOMBA 50	Absent	Absent	239	428	667
MOOMBA 51	Absent	Absent	273	607	880
MOOMBA 52	Absent	Absent	215	377	592
MOOMBA 53	Absent	Absent	174	355	529
MOOMBA 54	Absent	Absent	182	480	662
MOOMBA 55	Absent	Absent	274	489	763
MOOMBA 56	Absent	Absent	250	443	693
MOOMBA 57	Absent	Absent	206	338	544
MOOMBA 58	Absent	Absent	290	470	760

MOOMBA 59	Absent	Absent	208	337	545
MOOMBA 60	Absent	Absent	269	459	728
MOOMBA 61	Absent	Absent	312	498	810
MOOMBA 62	Absent	Absent	183	409	592
MOOMBA 63	Absent	Absent	170	422	592
MOOMBA 64	Absent	Absent	199	313	512
MOOMBA 65	Absent	Absent	157	352	509
MOOMBA 67	Absent	Absent	179	354	533
MOOMBA NORTH 1	Absent	Absent	233	485	718
MOOMBA NORTH 2	Absent	Absent	230	494	724
MOOMBA SOUTH 1	Absent	Absent	112	367	479
MOORAN 1	Absent	Absent	Absent	135	135
MOORARI 1	108 234	283 272	897		
MOORARI 2	106 283	283 322	994		
MOORARI 3	116 209	317 236	878		
MOORARI 4	100 237	318 229	884		
MOORARI 5	96 256	318 228	898		
MOORARI 6	71 270	280 306	927		
MOORARI 7	105 243	286 283	917		
MUDERA 1	Absent	Absent	130	282	412
MUDERA 2	Absent	Absent	177	281	458
MUDERA 3	Absent	Absent	122	338	460
MUDERA 4	Absent	Absent	142	345	487
MUDLALEE 1	Absent	Absent	Absent	110	110
MUDLALEE 2	Absent	Absent	Absent	51	51
MUDRANGIE 1	60 265	340 336	1001		
MUDRANGIE 2	40 228	317 317	902		
MULGA 1	Absent	Absent	Absent	Absent	Absent
MULGA 2	Absent	Absent	Absent	Absent	Absent
MUNDI 1	Absent	Absent	23	372	395
MUNKARIE 1	Absent	Absent	Absent	175	175
MUNKARIE 2	Absent	Absent	Absent	162	162
MUNKARIE 3	Absent	Absent	Absent	257	257
MUNKARIE 4	Absent	Absent	Absent	161	161
MUNKARIE 5	Absent	Absent	Absent	235	235
MUNKARIE 6	Absent	Absent	Absent	183	183
MURTEREE 1	Absent	Absent	Absent	165	165
MURTEREE 2	Absent	Absent	Absent	39	39
MURTEREE A1	Absent	Absent	Absent	Absent	Absent
MURTEREE C1	Absent	Absent	Absent	128	128
MUTEROO 1	Absent	Absent	Absent	Absent	Absent
MUTEROO 4	Absent	Absent	Absent	Absent	Absent
MUTEROO 5	Absent	Absent	Absent	Absent	Absent
NAMUR 1	Absent	Absent	58	224	282
NAMUR 3	Absent	Absent	40	212	252
NANIMA 1	Absent	Absent	Absent	165	165
NAPPACOONGEE 1	Absent	Absent	146	237	383
NAPPACOONGEE 2	Absent	Absent	96	244	340
NAPPACOONGEE 3	Absent	Absent	158	240	398
NARCOONOWIE 1	Absent	Absent	Absent	44	44
NARIE 1	Absent	99	250	212	561
NARIE 2	Absent	126	248	224	599
NEALYON 1	Absent	Absent	Absent	Absent	Absent
NULLA 1	Absent	Absent	206	107	313
NUNGEROO 1	Absent	Absent	Absent	Absent	Absent
PACKSADDLE 1	Absent	351	367	400	1118
PACKSADDLE 2	Absent	176	221	381	778
PACKSADDLE 3	Absent	194	199	275	668

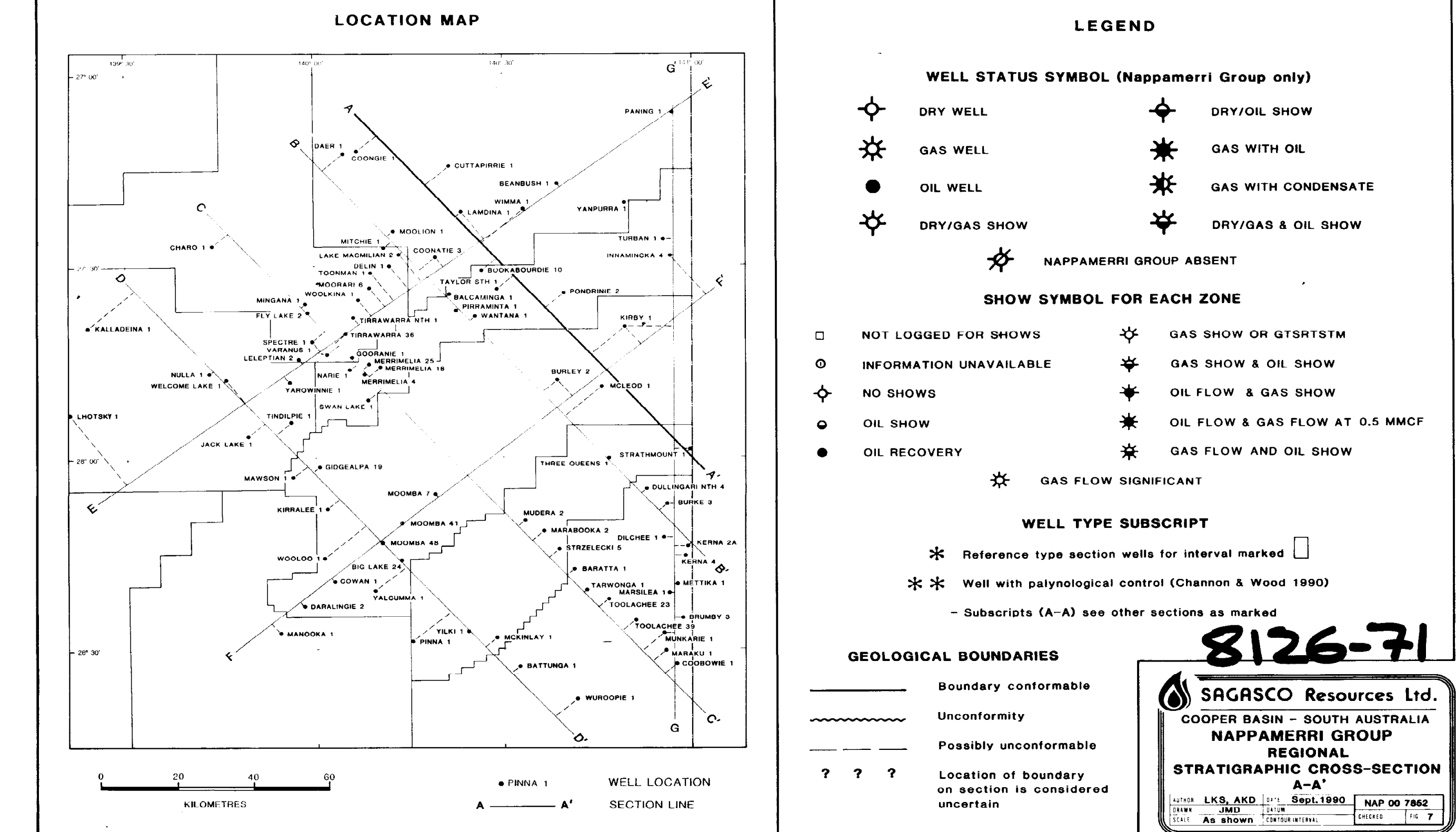
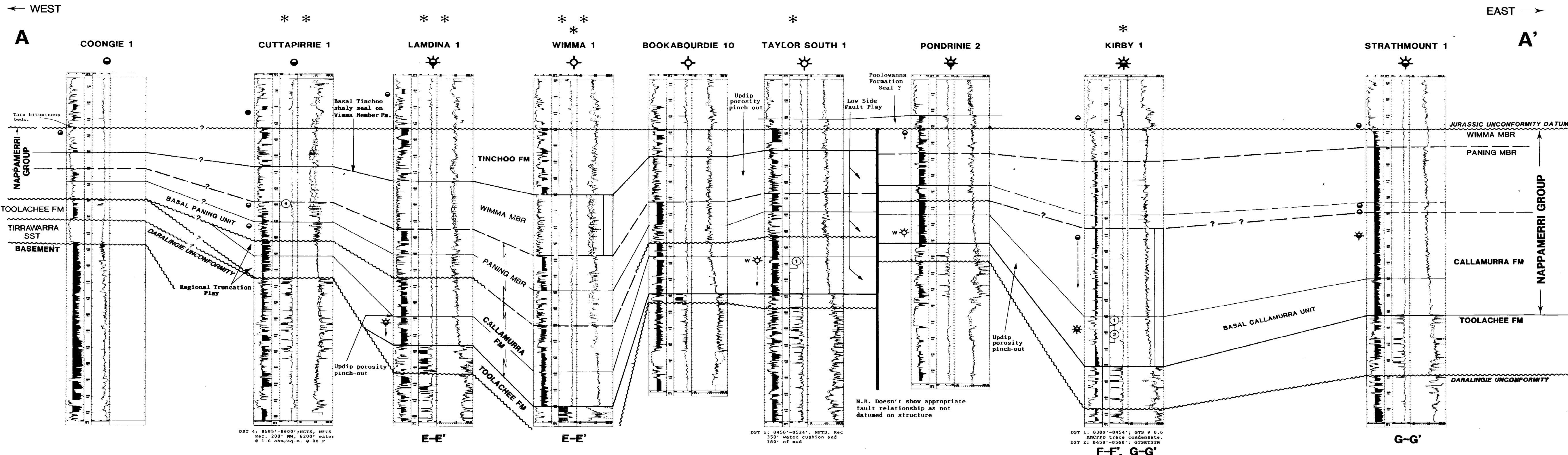
PACKSADDLE 4	Absent	125	220	110	455
PACKSADDLE 5	Absent	181	181	300	662
PADULLA 1	Absent	Absent	Absent	Absent	Absent
PANDO 1	Absent	Absent	Absent	Absent	Absent
PANDO 2	Absent	Absent	Absent	Absent	Absent
PANDO NORTH 1	Absent	Absent	Absent	Absent	Absent
PANDRUANNIE 1	Absent	Absent	Absent	Absent	Absent
PANING 1	426 342	360	444	1572	
PAPYRUS 1	Absent	Absent	Absent	Absent	Absent
PAXTON 1	Absent	Absent	Absent	Absent	Absent
PELICAN 1	Absent	73	228	189	491
PELICAN 2	Absent	52	228	168	448
PELICAN 3	Absent	188	205	209	602
PELICAN 4	Absent	133	232	221	586
PELICAN 5	Absent	162	320	119	601
PELKETA 1	Absent	Absent	Absent	264	264
PERENTY 1	Absent	Absent	Absent	120	120
PINNA 1	Absent	Absent	Absent	141	141
PINTARI 1	Absent	Absent	Absent	Absent	Absent
PINTARI NORTH 1	Absent	Absent	Absent	Absent	Absent
PIRA 1	Absent	Absent	306	381	687
PIRA 2	Absent	Absent	280	378	658
PIRRAMINTA 1	Absent	165	240	248	653
POGONA 1	Absent	Absent	Absent	116	116
PONDRINIE 1	Absent	153	280	325	742
PONDRINIE 2	Absent	146	296	339	778
PONDRINIE 3	Absent	140	245	239	517
PONDRINIE 4	Absent	156	280	298	684
PONDRINIE 5	Absent	208	238	309	755
POORAKA 1	Absent	Absent	239	279	518
QUARTPOT 1	58 255	227	340	880	
RAKOONA 1	34 231	337	240	842	
REGOLITH 1	Absent	55	247	132	434
SNAKE HOLE 1	Absent	Absent	246	187	433
SPECTRE 1	Absent	141	282	257	680
SPENCER 1	Absent	Absent	Absent	22	22
SPENCER 2	Absent	Absent	Absent	Absent	Absent
SPENCER 3	Absent	Absent	Absent	Absent	Absent
SPENCER 4	Absent	Absent	Absent	Absent	Absent
SPENCER 5	Absent	Absent	Absent	Absent	Absent
SPENCER 6	Absent	Absent	Absent	Absent	Absent
SPENCER 7	Absent	Absent	Absent	Absent	Absent
SPENCER 8	Absent	Absent	Absent	Absent	Absent
SPENCER 10	Absent	Absent	Absent	Absent	Absent
SPENCER WEST 1	Absent	Absent	Absent	Absent	Absent
STRATHMOUNT 1	Absent	111	399	629	1139
STRZELECKI 1	Absent	Absent	Absent	288	288
STRZELECKI 2	Absent	Absent	Absent	208	208
STRZELECKI 3	Absent	Absent	Absent	164	164
STRZELECKI 5	Absent	Absent	Absent	160	160
STRZELECKI 10	Absent	Absent	Absent	210	211
STRZELECKI 15	Absent	Absent	Absent	209	209
STRZELECKI 16	Absent	Absent	Absent	132	132
STRZELECKI 17	Absent	Absent	Absent	157	157
STRZELECKI 24	Absent	Absent	Absent	298	298
STRZELECKI 25	Absent	Absent	Absent	228	228
STURT 1	Absent	Absent	Absent	Absent	Absent
STURT 2	Absent	Absent	Absent	Absent	Absent

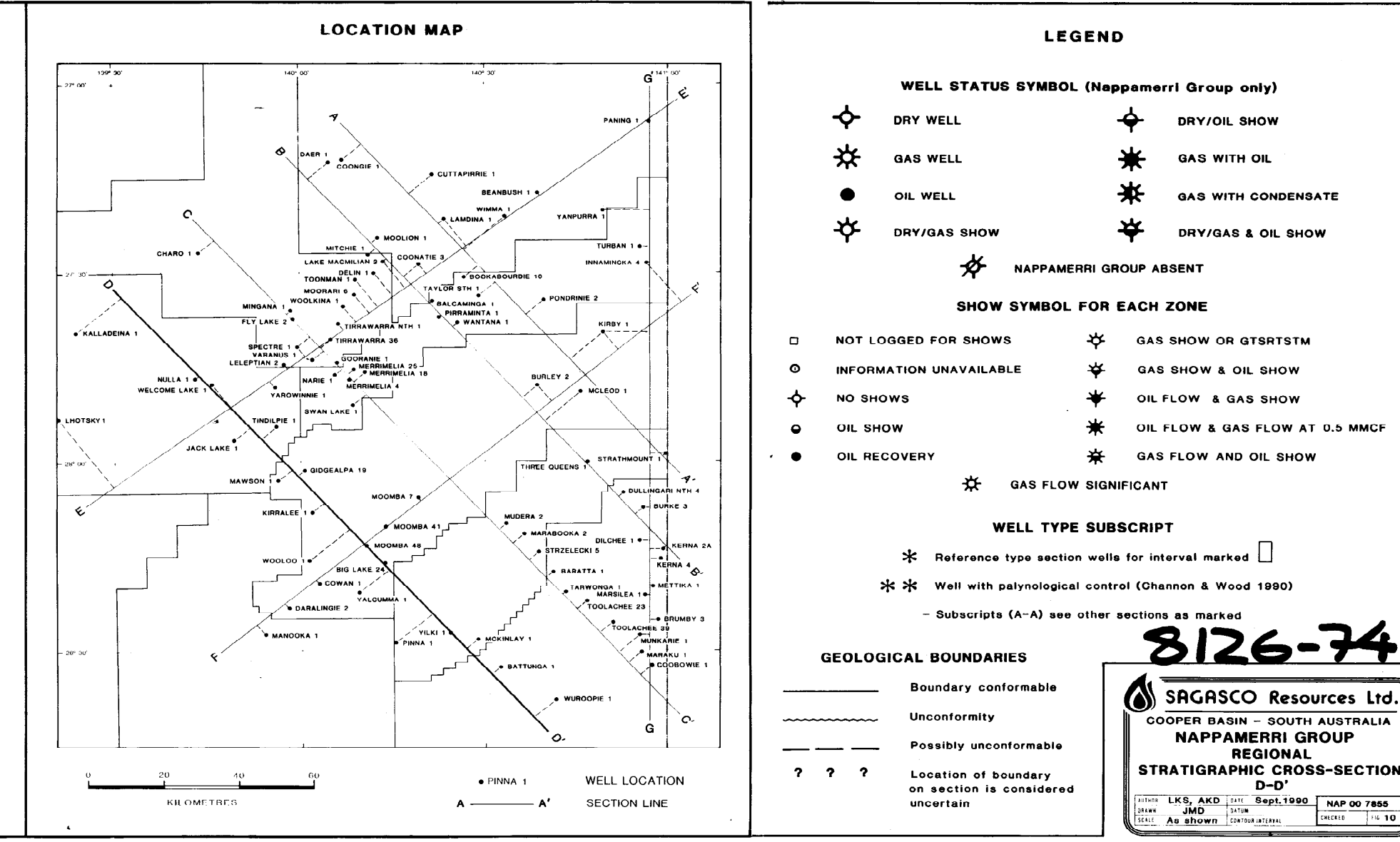
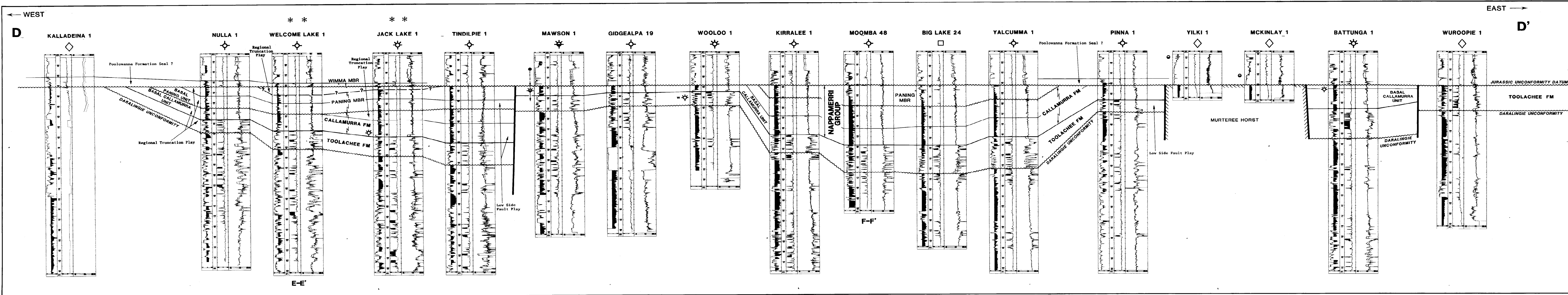
STURT 3	Absent	Absent	Absent	Absent	Absent
STURT 4	Absent	Absent	Absent	Absent	Absent
STURT 5	Absent	Absent	Absent	Absent	Absent
STURT 6	Absent	Absent	Absent	Absent	Absent
STURT EAST 1	Absent	Absent	Absent	Absent	Absent
STURT EAST 2	Absent	Absent	Absent	Absent	Absent
STURT EAST 3	Absent	Absent	Absent	Absent	Absent
STURT EAST 4	Absent	Absent	Absent	Absent	Absent
SWAN LAKE 1	Absent	165	357	218	740
TALOOKA 1	Absent	Absent	Absent	Absent	Absent
TALOOKA 2	Absent	Absent	Absent	Absent	Absent
TALOOKA 3	Absent	Absent	Absent	Absent	Absent
TANTANNA 1	Absent	Absent	Absent	Absent	Absent
TANTANNA 2	Absent	Absent	Absent	Absent	Absent
TANTANNA 3	Absent	Absent	Absent	Absent	Absent
TANTANNA 4	Absent	Absent	Absent	Absent	Absent
TANTANNA 5	Absent	Absent	Absent	Absent	Absent
TANTANNA 6	Absent	Absent	Absent	Absent	Absent
TARWONGA 1	Absent	Absent	21	362	383
TARWONGA 2	Absent	Absent	19	381	400
TARWONGA 3	Absent	Absent	72	375	447
TAYLOR SOUTH 1	139 259	258	356	1012	
THREE QUEENS 1	Absent	140	433	444	1017
THURAKINNA 1	Absent	Absent	Absent	116	116
THURAKINNA 2	Absent	Absent	71	132	203
THURAKINNA 3	Absent	Absent	43	128	171
THURAKINNA 4	Absent	Absent	71	135	206
THURAKINNA 5	Absent	Absent	77	150	227
TIBOUCHINA 1	Absent	Absent	Absent	Absent	Absent
TILPAREE A1	Absent	Absent	Absent	172	172
TINDILPIE 1	Absent	Absent	219	328	547
TINDILPIE 2	Absent	Absent	174	323	497
TIRRAWARRA 1	45 220	272	314	851	
TIRRAWARRA 2	30 211	272	320	833	
TIRRAWARRA 3	93 194	272	305	864	
TIRRAWARRA 4	50 230	383	204	867	
TIRRAWARRA 5	50 170	345	290	855	
TIRRAWARRA 6	67 225	295	297	884	
TIRRAWARRA 7	55 242	303	320	920	
TIRRAWARRA 8	60 209	341	235	845	
TIRRAWARRA 9	88 202	302	289	881	
TIRRAWARRA 10	72 250	411	229	962	
TIRRAWARRA 11	55 200	295	327	877	
TIRRAWARRA 12	59 210	274	325	868	
TIRRAWARRA 13	71 212	314	264	861	
TIRRAWARRA 14	57 200	255	306	818	
TIRRAWARRA 15	28 202	272	305	807	
TIRRAWARRA 16	66 216	282	310	874	
TIRRAWARRA 17	62 218	276	302	858	
TIRRAWARRA 18	74 214	266	314	868	
TIRRAWARRA 19	24 245	280	306	855	
TIRRAWARRA 20	35 211	282	302	830	
TIRRAWARRA 21	41 235	239	314	829	
TIRRAWARRA 22	99 234	278	310	921	
TIRRAWARRA 23	62 227	242	302	833	
TIRRAWARRA 24	92 207	251	326	876	
TIRRAWARRA 25	28 254	246	309	837	
TIRRAWARRA 26	76 204	276	317	873	

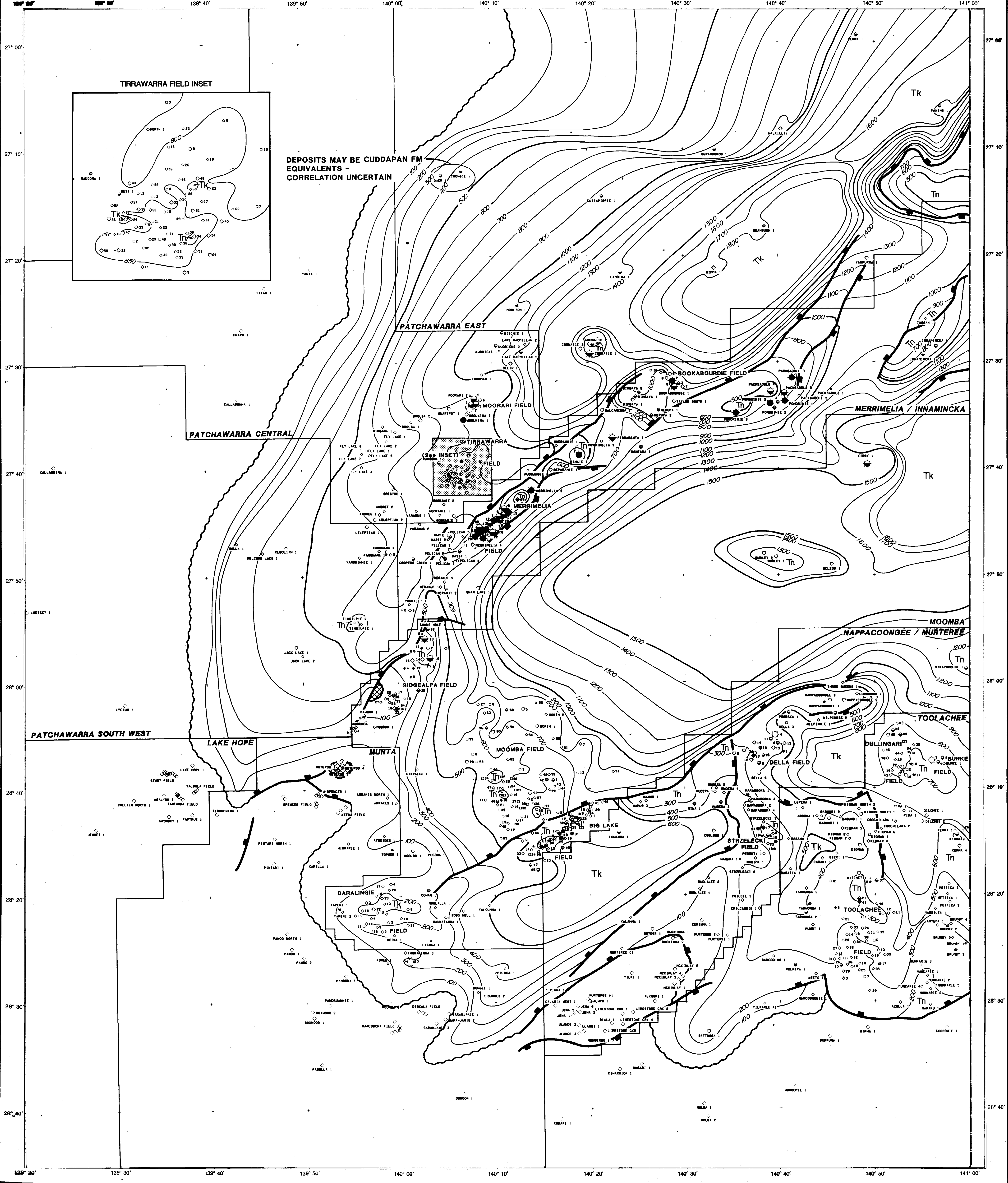
TIRRAWARRA 27	69	208	330	265	872	
TIRRAWARRA 28	60	220	278	315	873	
TIRRAWARRA 29	48	230	248	307	833	
TIRRAWARRA 30	25	204	268	314	811	
TIRRAWARRA 31	29	202	280	302	813	
TIRRAWARRA 32	38	216	262	316	832	
TIRRAWARRA 33	80	214	256	318	868	
TIRRAWARRA 34	24	196	282	298	800	
TIRRAWARRA 35	56	216	274	318	864	
TIRRAWARRA 36	62	232	282	286	862	
TIRRAWARRA 37	57	200	270	323	850	
TIRRAWARRA 38	59	230	256	316	861	
TIRRAWARRA 39	56	170	273	326	825	
TIRRAWARRA 40	35	227	258	302	822	
TIRRAWARRA 41	68	208	262	312	850	
TIRRAWARRA 42	70	198	252	322	842	
TIRRAWARRA 43	57	177	280	317	831	
TIRRAWARRA 44	71	235	335	260	901	
TIRRAWARRA 45	50	226	290	322	888	
TIRRAWARRA 46	52	232	284	324	892	
TIRRAWARRA 47	57	201	253	330	841	
TIRRAWARRA 48	37	239	291	308	875	
TIRRAWARRA 49	50	196	276	298	820	
TIRRAWARRA 50	51	191	274	304	820	
TIRRAWARRA 51	62	210	281	313	866	
TIRRAWARRA 52	44	216	236	364	860	
TIRRAWARRA 53	41	171	286	305	803	
TIRRAWARRA 54	31	203	285	332	851	
TIRRAWARRA 55	52	187	281	325	845	
TIRRAWARRA 56	53	205	292	312	862	
TIRRAWARRA 57	66	214	260	319	859	
TIRRAWARRA 58	24	200	278	302	804	
TIRRAWARRA 59	67	199	336	259	861	
TIRRAWARRA 60	58	234	282	328	902	
TIRRAWARRA 61	57	213	282	307	859	
TIRRAWARRA 62	55	228	297	330	910	
TIRRAWARRA 63	74	201	271	329	875	
TIRRAWARRA 64	25	222	297	321	865	
TIRRAWARRA 65	66	264	246	328	904	
TIRRAWARRA NORTH 1	74	226	285	335	920	
TIRRAWARRA WEST 1	61	200	270	337	868	
TITAN 1	Absent		Absent	Absent	Absent	Absent
TOOLACHEE 1	Absent		Absent	Absent	175	175
TOOLACHEE 2	Absent		Absent	Absent	353	353
TOOLACHEE 3	Absent		Absent	Absent	249	249
TOOLACHEE 4	Absent		Absent	Absent	307	307
TOOLACHEE 5	Absent		Absent	Absent	336	336
TOOLACHEE 6	Absent		Absent	Absent	317	317
TOOLACHEE 7	Absent		Absent	Absent	168	168
TOOLACHEE 8	Absent		Absent	Absent	356	356
TOOLACHEE 9	Absent		Absent	Absent	265	265
TOOLACHEE 10	Absent		Absent	Absent	270	270
TOOLACHEE 11	Absent		Absent	Absent	332	332
TOOLACHEE 12	Absent		Absent	Absent	326	326
TOOLACHEE 13	Absent		Absent	Absent	298	298
TOOLACHEE 14	Absent		Absent	Absent	279	279
TOOLACHEE 15	Absent		Absent	Absent	214	214
TOOLACHEE 16	Absent		Absent	Absent	202	202

TOOLACHEE 17	Absent	Absent	Absent	306	306
TOOLACHEE 18	Absent	Absent	Absent	227	227
TOOLACHEE 19	Absent	Absent	Absent	323	323
TOOLACHEE 20	Absent	Absent	Absent	268	268
TOOLACHEE 21	Absent	Absent	Absent	273	273
TOOLACHEE 23	Absent	Absent	Absent	341	341
TOOLACHEE 24	Absent	Absent	Absent	340	340
TOOLACHEE 25	Absent	Absent	Absent	280	280
TOOLACHEE 26	Absent	Absent	Absent	300	300
TOOLACHEE 27	Absent	Absent	Absent	260	260
TOOLACHEE 28	Absent	Absent	Absent	260	260
TOOLACHEE 29	Absent	Absent	Absent	227	227
TOOLACHEE 30	Absent	Absent	Absent	334	334
TOOLACHEE 31	Absent	Absent	Absent	335	335
TOOLACHEE 32	Absent	Absent	Absent	258	258
TOOLACHEE 33	Absent	Absent	Absent	285	285
TOOLACHEE 34	Absent	Absent	Absent	280	280
TOOLACHEE 35	Absent	Absent	Absent	344	344
TOOLACHEE 36	Absent	Absent	Absent	152	152
TOOLACHEE 37	Absent	Absent	Absent	374	374
TOOLACHEE 38	Absent	Absent	Absent	301	301
TOOLACHEE 39	Absent	Absent	Absent	330	330
TOOLACHEE 40	Absent	Absent	Absent	337	337
TOOLACHEE 41	Absent	Absent	Absent	366	367
TOOLACHEE EAST 1	Absent	Absent	Absent	365	365
TOOLACHEE EAST 2	Absent	Absent	Absent	351	351
TOOLACHEE NORTH 1	Absent	Absent	Absent	316	316
TOONMAN 1	197 231	242	391	1061	
TOPWEE 1	Absent	Absent	Absent	77	77
TURBAN 1	Absent	257	312	286	855
ULANDI 1	Absent	Absent	Absent	Absent	Absent
ULANDI 2	Absent	Absent	Absent	Absent	Absent
ULANDI 3	Absent	Absent	Absent	Absent	Absent
UNGARI 1	Absent	Absent	Absent	Absent	Absent
VARANUS 1	Absent	224	251	295	770
VARANUS 2	Absent	218	285	296	798
WALKILLIE 1	306 204	189	196	895	
WANARA 1	Absent	Absent	Absent	143	142
WANCOOCHA 1	Absent	Absent	Absent	Absent	Absent
WANCOOCHA 2	Absent	Absent	Absent	Absent	Absent
WANCOOCHA 3	Absent	Absent	Absent	Absent	Absent
WANCOOCHA 4	Absent	Absent	Absent	Absent	Absent
WANCOOCHA 5	Absent	Absent	Absent	Absent	Absent
WANCOOCHA 6	Absent	Absent	Absent	Absent	Absent
WANCOOCHA 7	Absent	Absent	Absent	Absent	Absent
WANTANA 1	Absent	235	314	332	881
WAUKATANNA 1	Absent	Absent	157	140	297
WEENA 1	Absent	Absent	Absent	Absent	Absent
WELCOME LAKE 1	Absent	77	182	170	429
WILPINNIE 1	Absent	Absent	195	265	460
WILPINNIE 2	Absent	Absent	195	242	437
WIMMA 1	411 382	419	496	1708	
WIRHA 1	Absent	Absent	Absent	Absent	Absent
WIRRARIE 1	Absent	Absent	Absent	41	41
WITCHETTY 1	Absent	Absent	Absent	300	300
WOOLKINA 1	75 247	292	282	896	
WOOLKINA 2	117 248	289	280	934	
WOOLOO 1	Absent	Absent	Absent	54	54

WRONSKY 1	Absent	Absent	Absent	Absent	Absent
WUROOPIE 1	Absent	Absent	Absent	Absent	Absent
YALCUMMA 1	Absent	Absent	137	363	500
YANPURRA 1	174 304	343	382	1203	
YANTA 1	Absent	Absent	Absent	Absent	Absent
YAPENI 1	Absent	Absent	Absent	145	145
YAPENI 2	Absent	Absent	Absent	184	184
YAROWINNIE 1	Absent	101	185	214	500
YILKI 1	Absent	Absent	Absent	Absent	Absent







NAPPAMERRI FORMATION

Tops (depths KB feet) & Thickness in Feet

Well	Top	Thickness	Well	Top	Thickness
ANKER 1	1061	285	ANKER 2	1061	285
ANKER 3	1061	285	ANKER 4	1061	285
ANKER 5	1061	285	ANKER 6	1061	285
ANKER 7	1061	285	ANKER 8	1061	285
ANKER 9	1061	285	ANKER 10	1061	285
ANKER 11	1061	285	ANKER 12	1061	285
ANKER 13	1061	285	ANKER 14	1061	285
ANKER 15	1061	285	ANKER 16	1061	285
ANKER 17	1061	285	ANKER 18	1061	285
ANKER 19	1061	285	ANKER 20	1061	285
ANKER 21	1061	285	ANKER 22	1061	285
ANKER 23	1061	285	ANKER 24	1061	285
ANKER 25	1061	285	ANKER 26	1061	285
ANKER 27	1061	285	ANKER 28	1061	285
ANKER 29	1061	285	ANKER 30	1061	285
ANKER 31	1061	285	ANKER 32	1061	285
ANKER 33	1061	285	ANKER 34	1061	285
ANKER 35	1061	285	ANKER 36	1061	285
ANKER 37	1061	285	ANKER 38	1061	285
ANKER 39	1061	285	ANKER 40	1061	285
ANKER 41	1061	285	ANKER 42	1061	285
ANKER 43	1061	285	ANKER 44	1061	285
ANKER 45	1061	285	ANKER 46	1061	285
ANKER 47	1061	285	ANKER 48	1061	285
ANKER 49	1061	285	ANKER 50	1061	285
ANKER 51	1061	285	ANKER 52	1061	285
ANKER 53	1061	285	ANKER 54	1061	285
ANKER 55	1061	285	ANKER 56	1061	285
ANKER 57	1061	285	ANKER 58	1061	285
ANKER 59	1061	285	ANKER 60	1061	285
ANKER 61	1061	285	ANKER 62	1061	285
ANKER 63	1061	285	ANKER 64	1061	285
ANKER 65	1061	285	ANKER 66	1061	285
ANKER 67	1061	285	ANKER 68	1061	285
ANKER 69	1061	285	ANKER 70	1061	285
ANKER 71	1061	285	ANKER 72	1061	285
ANKER 73	1061	285	ANKER 74	1061	285
ANKER 75	1061	285	ANKER 76	1061	285
ANKER 77	1061	285	ANKER 78	1061	285
ANKER 79	1061	285	ANKER 80	1061	285
ANKER 81	1061	285	ANKER 82	1061	285
ANKER 83	1061	285	ANKER 84	1061	285
ANKER 85	1061	285	ANKER 86	1061	285
ANKER 87	1061	285	ANKER 88	1061	285
ANKER 89	1061	285	ANKER 90	1061	285
ANKER 91	1061	285	ANKER 92	1061	285
ANKER 93	1061	285	ANKER 94	1061	285
ANKER 95	1061	285	ANKER 96	1061	285
ANKER 97	1061	285	ANKER 98	1061	285
ANKER 99	1061	285	ANKER 100	1061	285

SHOW SYMBOL LEGEND

- Well Symbol
- Symbol size shown on map
- Unit Not Encountered
- Oil Show (fluorescence)
- Well T'd in rocks older than Triassic. No Nappamerri Group Present
- Gas Show & Oil Show (as above)
- Not logged for shows eg. Gas detector malfunction/diesel contamination
- Gas Flow (significant)
- Information unavailable or ambiguous eg. no well logs or WCR
- Gas Flow (as above) & Oil Show
- No Shows
- Oil Recovery (In pipe or flowed)
- Gas Show or GTSRTSTM
- Oil or Condensate Flow & Gas Show
- Oil Flow & significant Gas Flow

0 30 Kilometres

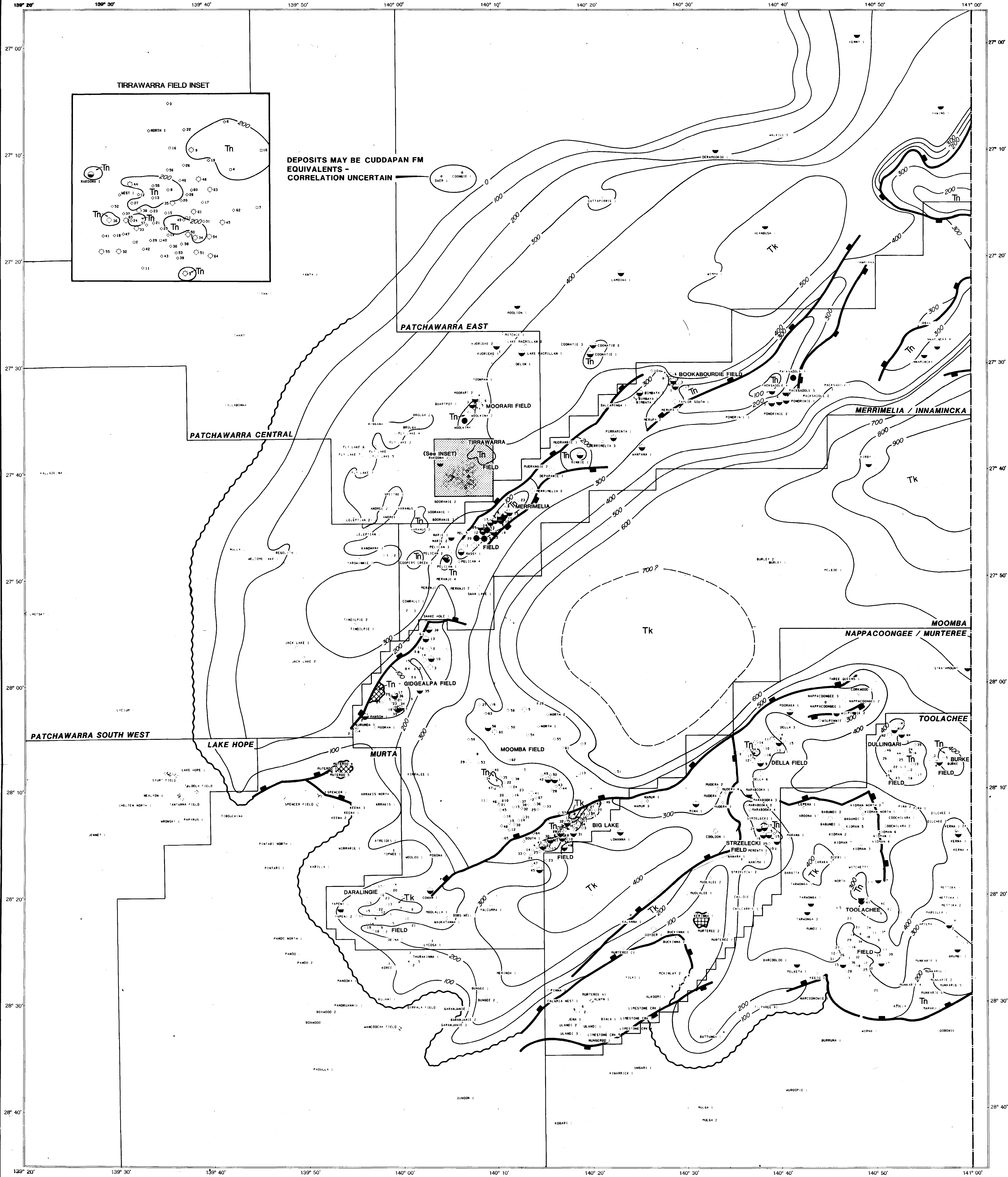
8126-78

SAGASCO Resources Ltd.

COOPER BASIN - SOUTH AUSTRALIA

NAPPAMERRI GROUP ISOPACH & SHOWS MAP

AUTHOR: L.Spencer	DATE: DEC 90	PLAN No: NAP 00 7876
DRAWN: C.Kay	DATUM:	
SCALE: 1:250,000	CONTOUR INTERVAL:	CHECKED: Encl. 1



CALLAMURRA FORMATION
Tops (depths KB feet) & Thickness in Feet

WELL	TOP	THICKNESS	WELL	TOP	THICKNESS	WELL	TOP	THICKNESS	WELL	TOP	THICKNESS
ADAM 1	8000	100	ADAM 2	8000	100	ADAM 3	8000	100	ADAM 4	8000	100
ADAM 5	8000	100	ADAM 6	8000	100	ADAM 7	8000	100	ADAM 8	8000	100
ADAM 9	8000	100	ADAM 10	8000	100	ADAM 11	8000	100	ADAM 12	8000	100
ADAM 13	8000	100	ADAM 14	8000	100	ADAM 15	8000	100	ADAM 16	8000	100
ADAM 17	8000	100	ADAM 18	8000	100	ADAM 19	8000	100	ADAM 20	8000	100
ADAM 21	8000	100	ADAM 22	8000	100	ADAM 23	8000	100	ADAM 24	8000	100
ADAM 25	8000	100	ADAM 26	8000	100	ADAM 27	8000	100	ADAM 28	8000	100
ADAM 29	8000	100	ADAM 30	8000	100	ADAM 31	8000	100	ADAM 32	8000	100
ADAM 33	8000	100	ADAM 34	8000	100	ADAM 35	8000	100	ADAM 36	8000	100
ADAM 37	8000	100	ADAM 38	8000	100	ADAM 39	8000	100	ADAM 40	8000	100
ADAM 41	8000	100	ADAM 42	8000	100	ADAM 43	8000	100	ADAM 44	8000	100
ADAM 45	8000	100	ADAM 46	8000	100	ADAM 47	8000	100	ADAM 48	8000	100
ADAM 49	8000	100	ADAM 50	8000	100	ADAM 51	8000	100	ADAM 52	8000	100
ADAM 53	8000	100	ADAM 54	8000	100	ADAM 55	8000	100	ADAM 56	8000	100
ADAM 57	8000	100	ADAM 58	8000	100	ADAM 59	8000	100	ADAM 60	8000	100
ADAM 61	8000	100	ADAM 62	8000	100	ADAM 63	8000	100	ADAM 64	8000	100
ADAM 65	8000	100	ADAM 66	8000	100	ADAM 67	8000	100	ADAM 68	8000	100
ADAM 69	8000	100	ADAM 70	8000	100	ADAM 71	8000	100	ADAM 72	8000	100
ADAM 73	8000	100	ADAM 74	8000	100	ADAM 75	8000	100	ADAM 76	8000	100
ADAM 77	8000	100	ADAM 78	8000	100	ADAM 79	8000	100	ADAM 80	8000	100
ADAM 81	8000	100	ADAM 82	8000	100	ADAM 83	8000	100	ADAM 84	8000	100
ADAM 85	8000	100	ADAM 86	8000	100	ADAM 87	8000	100	ADAM 88	8000	100
ADAM 89	8000	100	ADAM 90	8000	100	ADAM 91	8000	100	ADAM 92	8000	100
ADAM 93	8000	100	ADAM 94	8000	100	ADAM 95	8000	100	ADAM 96	8000	100
ADAM 97	8000	100	ADAM 98	8000	100	ADAM 99	8000	100	ADAM 100	8000	100

- SHOW SYMBOL LEGEND -

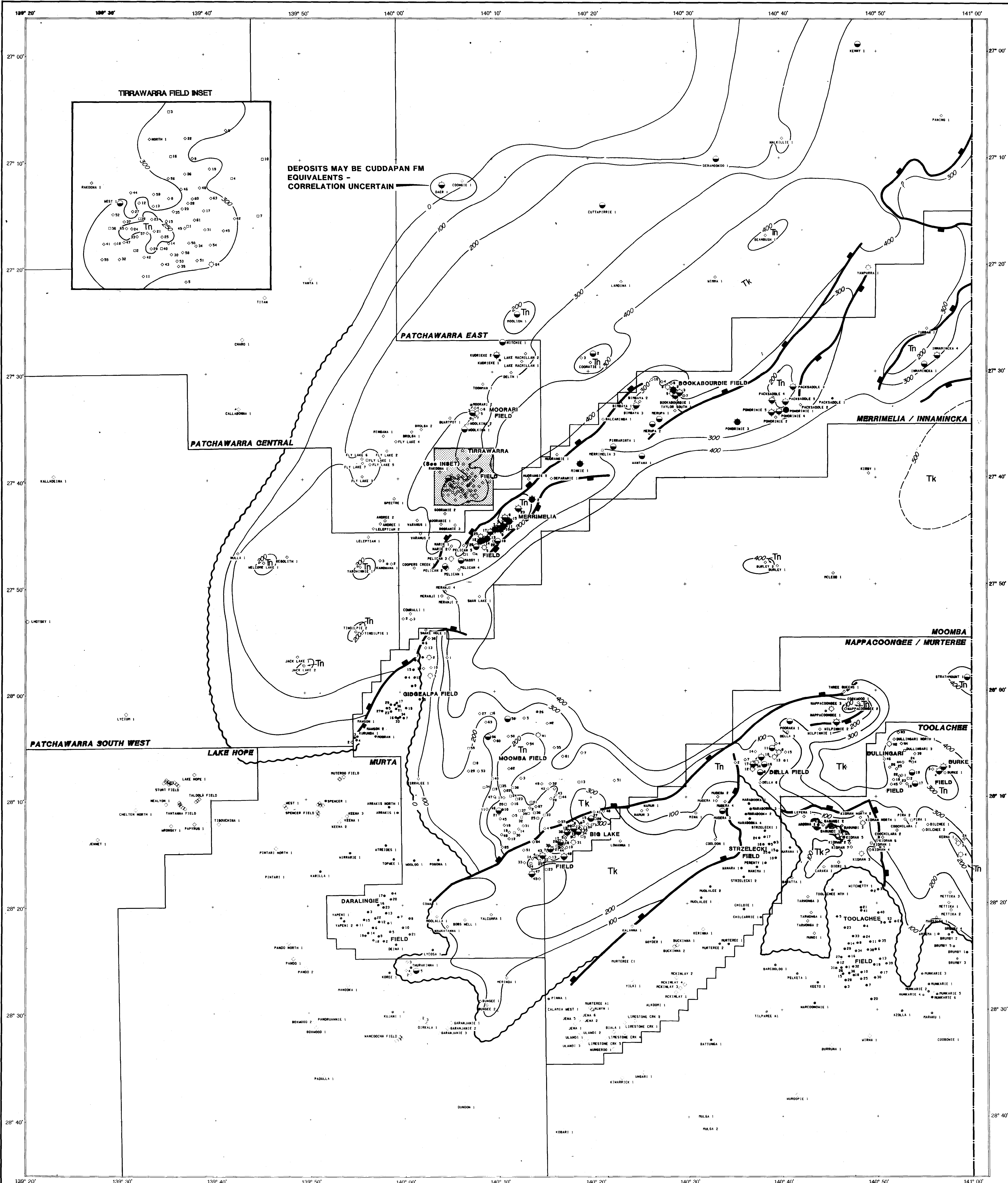
- Well Symbol
- Symbol size shown on map
- Unit Not Encountered
- Oil Show (fluorescence)
- Well TD'd in rocks older than Triassic. No Nappamerri Group Present
- Gas Show & Oil Show (as above)
- Not logged for shows eg. Gas detector malfunction/diesel contamination
- Gas Flow (significant)
- Information unavailable or ambiguous eg. no well logs or WCR.
- Gas Flow (as above) & Oil Show
- No Shows
- Oil Recovery (in pipe or flowed)
- Gas Show or GTSRTSTM
- Oil or Condensate Flow & Gas Show
- Oil Flow & significant Gas Flow

0 30
Kilometres

8126-79

SAGASCO Resources Ltd.
COOPER BASIN - SOUTH AUSTRALIA
NAPPAMERRI GROUP
CALLAMURRA FM
ISOPACH & SHOWS MAP

AUTHOR: L.Spencer	DATE: DEC 90	PLAN No: NAP 00 7877
DRAWN: C.Kay	DATUM:	
SCALE: 1:250,000	CONTOUR INTERVAL: 100	CHECKED: Encl. 2



ARRABURY FORMATION - PANING MEMBER

Tops (depths KB feet) & Thickness in Feet

WELL	TOP	DATE	THICKNESS	WELL	TOP	DATE	THICKNESS
WELL 1	8125	8/12	242	WELL 1	8024	8/12	196
WELL 2	8125	8/12	242	WELL 2	8024	8/12	196
WELL 3	8125	8/12	242	WELL 3	8024	8/12	196
WELL 4	8125	8/12	242	WELL 4	8024	8/12	196
WELL 5	8125	8/12	242	WELL 5	8024	8/12	196
WELL 6	8125	8/12	242	WELL 6	8024	8/12	196
WELL 7	8125	8/12	242	WELL 7	8024	8/12	196
WELL 8	8125	8/12	242	WELL 8	8024	8/12	196
WELL 9	8125	8/12	242	WELL 9	8024	8/12	196
WELL 10	8125	8/12	242	WELL 10	8024	8/12	196
WELL 11	8125	8/12	242	WELL 11	8024	8/12	196
WELL 12	8125	8/12	242	WELL 12	8024	8/12	196
WELL 13	8125	8/12	242	WELL 13	8024	8/12	196
WELL 14	8125	8/12	242	WELL 14	8024	8/12	196
WELL 15	8125	8/12	242	WELL 15	8024	8/12	196
WELL 16	8125	8/12	242	WELL 16	8024	8/12	196
WELL 17	8125	8/12	242	WELL 17	8024	8/12	196
WELL 18	8125	8/12	242	WELL 18	8024	8/12	196
WELL 19	8125	8/12	242	WELL 19	8024	8/12	196
WELL 20	8125	8/12	242	WELL 20	8024	8/12	196
WELL 21	8125	8/12	242	WELL 21	8024	8/12	196
WELL 22	8125	8/12	242	WELL 22	8024	8/12	196
WELL 23	8125	8/12	242	WELL 23	8024	8/12	196
WELL 24	8125	8/12	242	WELL 24	8024	8/12	196
WELL 25	8125	8/12	242	WELL 25	8024	8/12	196
WELL 26	8125	8/12	242	WELL 26	8024	8/12	196
WELL 27	8125	8/12	242	WELL 27	8024	8/12	196
WELL 28	8125	8/12	242	WELL 28	8024	8/12	196
WELL 29	8125	8/12	242	WELL 29	8024	8/12	196
WELL 30	8125	8/12	242	WELL 30	8024	8/12	196
WELL 31	8125	8/12	242	WELL 31	8024	8/12	196
WELL 32	8125	8/12	242	WELL 32	8024	8/12	196
WELL 33	8125	8/12	242	WELL 33	8024	8/12	196
WELL 34	8125	8/12	242	WELL 34	8024	8/12	196
WELL 35	8125	8/12	242	WELL 35	8024	8/12	196
WELL 36	8125	8/12	242	WELL 36	8024	8/12	196
WELL 37	8125	8/12	242	WELL 37	8024	8/12	196
WELL 38	8125	8/12	242	WELL 38	8024	8/12	196
WELL 39	8125	8/12	242	WELL 39	8024	8/12	196
WELL 40	8125	8/12	242	WELL 40	8024	8/12	196
WELL 41	8125	8/12	242	WELL 41	8024	8/12	196
WELL 42	8125	8/12	242	WELL 42	8024	8/12	196
WELL 43	8125	8/12	242	WELL 43	8024	8/12	196
WELL 44	8125	8/12	242	WELL 44	8024	8/12	196
WELL 45	8125	8/12	242	WELL 45	8024	8/12	196
WELL 46	8125	8/12	242	WELL 46	8024	8/12	196
WELL 47	8125	8/12	242	WELL 47	8024	8/12	196
WELL 48	8125	8/12	242	WELL 48	8024	8/12	196
WELL 49	8125	8/12	242	WELL 49	8024	8/12	196
WELL 50	8125	8/12	242	WELL 50	8024	8/12	196
WELL 51	8125	8/12	242	WELL 51	8024	8/12	196
WELL 52	8125	8/12	242	WELL 52	8024	8/12	196
WELL 53	8125	8/12	242	WELL 53	8024	8/12	196
WELL 54	8125	8/12	242	WELL 54	8024	8/12	196
WELL 55	8125	8/12	242	WELL 55	8024	8/12	196
WELL 56	8125	8/12	242	WELL 56	8024	8/12	196
WELL 57	8125	8/12	242	WELL 57	8024	8/12	196
WELL 58	8125	8/12	242	WELL 58	8024	8/12	196
WELL 59	8125	8/12	242	WELL 59	8024	8/12	196
WELL 60	8125	8/12	242	WELL 60	8024	8/12	196
WELL 61	8125	8/12	242	WELL 61	8024	8/12	196
WELL 62	8125	8/12	242	WELL 62	8024	8/12	196
WELL 63	8125	8/12	242	WELL 63	8024	8/12	196
WELL 64	8125	8/12	242	WELL 64	8024	8/12	196
WELL 65	8125	8/12	242	WELL 65	8024	8/12	196
WELL 66	8125	8/12	242	WELL 66	8024	8/12	196
WELL 67	8125	8/12	242	WELL 67	8024	8/12	196
WELL 68	8125	8/12	242	WELL 68	8024	8/12	196
WELL 69	8125	8/12	242	WELL 69	8024	8/12	196
WELL 70	8125	8/12	242	WELL 70	8024	8/12	196
WELL 71	8125	8/12	242	WELL 71	8024	8/12	196
WELL 72	8125	8/12	242	WELL 72	8024	8/12	196
WELL 73	8125	8/12	242	WELL 73	8024	8/12	196
WELL 74	8125	8/12	242	WELL 74	8024	8/12	196
WELL 75	8125	8/12	242	WELL 75	8024	8/12	196
WELL 76	8125	8/12	242	WELL 76	8024	8/12	196
WELL 77	8125	8/12	242	WELL 77	8024	8/12	196
WELL 78	8125	8/12	242	WELL 78	8024	8/12	196
WELL 79	8125	8/12	242	WELL 79	8024	8/12	196
WELL 80	8125	8/12	242	WELL 80	8024	8/12	196
WELL 81	8125	8/12	242	WELL 81	8024	8/12	196
WELL 82	8125	8/12	242	WELL 82	8024	8/12	196
WELL 83	8125	8/12	242	WELL 83	8024	8/12	196
WELL 84	8125	8/12	242	WELL 84	8024	8/12	196
WELL 85	8125	8/12	242	WELL 85	8024	8/12	196
WELL 86	8125	8/12	242	WELL 86	8024	8/12	196
WELL 87	8125	8/12	242	WELL 87	8024	8/12	196
WELL 88	8125	8/12	242	WELL 88	8024	8/12	196
WELL 89	8125	8/12	242	WELL 89	8024	8/12	196
WELL 90	8125	8/12	242	WELL 90	8024	8/12	196
WELL 91	8125	8/12	242	WELL 91	8024	8/12	196
WELL 92	8125	8/12	242	WELL 92	8024	8/12	196
WELL 93	8125	8/12	242	WELL 93	8024	8/12	196
WELL 94	8125	8/12	242	WELL 94	8024	8/12	196
WELL 95	8125	8/12	242	WELL 95	8024	8/12	196
WELL 96	8125	8/12	242	WELL 96	8024	8/12	196
WELL 97	8125	8/12	242	WELL 97	8024	8/12	196
WELL 98	8125	8/12	242	WELL 98	8024	8/12	196
WELL 99	8125	8/12	242	WELL 99	8024	8/12	196
WELL 100	8125	8/12	242	WELL 100	8024	8/12	196

- SHOW SYMBOL LEGEND -

- Unit Not Encountered
- Well TD'ed in rocks older than Triassic, No Nappamerrri Group Present
- Not logged for shows eg. Gas detector malfunction/diesel contamination
- Information unavailable or ambiguous eg. no well logs or WCR.
- No Shows
- Gas Show or GTSRTSTM
- Oil Show (fluorescence)
- Gas Show & Oil Show (as above)
- Gas Flow (significant)
- Gas Flow (as above) & Oil Show
- Oil Recovery (In pipe or flowed)
- Oil or Condensate Flow & Gas Show
- Oil Flow & significant Gas Flow

0 30 Kilometres

8126-80

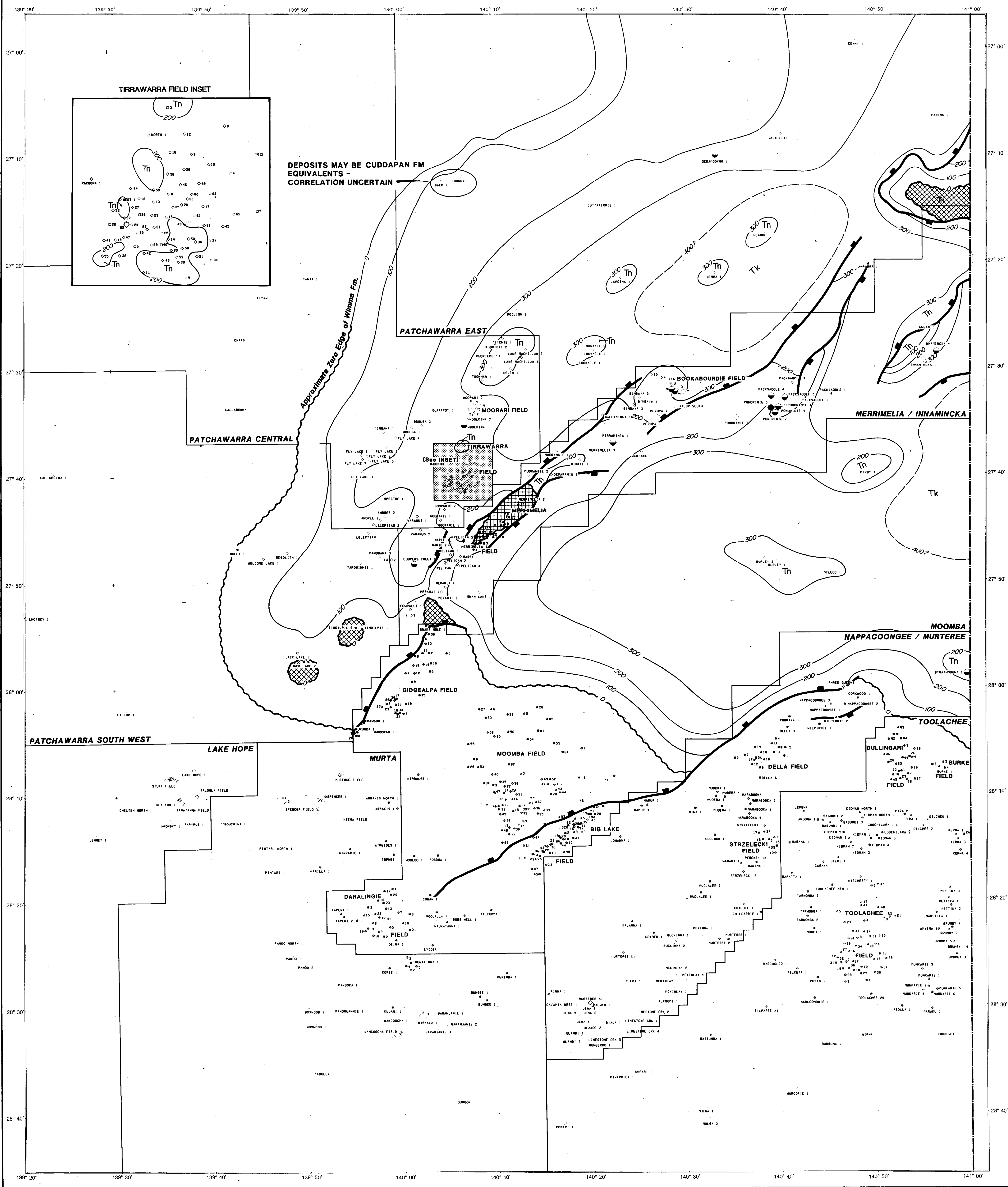
COOPER BASIN - SOUTH AUSTRALIA

NAPPAMERRRI GROUP

ARRABURY FM - PANING MBR

ISOPACH & SHOWS MAP

AUTHOR: L.Spencer	DATE: DEC 90	PLAN No: NAP 00 7878
DRAWN: C.Kay	DATUM:	
SCALE: 1:250,000	CONTOUR INTERVAL:	CHECKED: Encl. 3



ARRABURY FORMATION : WIMMA MEMBER
Tops (depths KB feet) & Thickness in Feet

Well Name	Top (KB feet)	Thickness (Feet)
ARRABURY 1	8010	120
ARRABURY 2	8010	120
ARRABURY 3	8010	120
ARRABURY 4	8010	120
ARRABURY 5	8010	120
ARRABURY 6	8010	120
ARRABURY 7	8010	120
ARRABURY 8	8010	120
ARRABURY 9	8010	120
ARRABURY 10	8010	120
ARRABURY 11	8010	120
ARRABURY 12	8010	120
ARRABURY 13	8010	120
ARRABURY 14	8010	120
ARRABURY 15	8010	120
ARRABURY 16	8010	120
ARRABURY 17	8010	120
ARRABURY 18	8010	120
ARRABURY 19	8010	120
ARRABURY 20	8010	120
ARRABURY 21	8010	120
ARRABURY 22	8010	120
ARRABURY 23	8010	120
ARRABURY 24	8010	120
ARRABURY 25	8010	120
ARRABURY 26	8010	120
ARRABURY 27	8010	120
ARRABURY 28	8010	120
ARRABURY 29	8010	120
ARRABURY 30	8010	120
ARRABURY 31	8010	120
ARRABURY 32	8010	120
ARRABURY 33	8010	120
ARRABURY 34	8010	120
ARRABURY 35	8010	120
ARRABURY 36	8010	120
ARRABURY 37	8010	120
ARRABURY 38	8010	120
ARRABURY 39	8010	120
ARRABURY 40	8010	120
ARRABURY 41	8010	120
ARRABURY 42	8010	120
ARRABURY 43	8010	120
ARRABURY 44	8010	120
ARRABURY 45	8010	120
ARRABURY 46	8010	120
ARRABURY 47	8010	120
ARRABURY 48	8010	120
ARRABURY 49	8010	120
ARRABURY 50	8010	120
ARRABURY 51	8010	120
ARRABURY 52	8010	120
ARRABURY 53	8010	120
ARRABURY 54	8010	120
ARRABURY 55	8010	120
ARRABURY 56	8010	120
ARRABURY 57	8010	120
ARRABURY 58	8010	120
ARRABURY 59	8010	120
ARRABURY 60	8010	120
ARRABURY 61	8010	120
ARRABURY 62	8010	120
ARRABURY 63	8010	120
ARRABURY 64	8010	120
ARRABURY 65	8010	120
ARRABURY 66	8010	120
ARRABURY 67	8010	120
ARRABURY 68	8010	120
ARRABURY 69	8010	120
ARRABURY 70	8010	120
ARRABURY 71	8010	120
ARRABURY 72	8010	120
ARRABURY 73	8010	120
ARRABURY 74	8010	120
ARRABURY 75	8010	120
ARRABURY 76	8010	120
ARRABURY 77	8010	120
ARRABURY 78	8010	120
ARRABURY 79	8010	120
ARRABURY 80	8010	120
ARRABURY 81	8010	120
ARRABURY 82	8010	120
ARRABURY 83	8010	120
ARRABURY 84	8010	120
ARRABURY 85	8010	120
ARRABURY 86	8010	120
ARRABURY 87	8010	120
ARRABURY 88	8010	120
ARRABURY 89	8010	120
ARRABURY 90	8010	120
ARRABURY 91	8010	120
ARRABURY 92	8010	120
ARRABURY 93	8010	120
ARRABURY 94	8010	120
ARRABURY 95	8010	120
ARRABURY 96	8010	120
ARRABURY 97	8010	120
ARRABURY 98	8010	120
ARRABURY 99	8010	120
ARRABURY 100	8010	120

- SHOW SYMBOL LEGEND -

- Well Symbol
- Unit Not Encountered
- Well TD'ed in rocks older than Triassic. No Nappamerri Group Present
- Not logged for shows eg. Gas detector malfunction/diesel contamination
- Information unavailable or ambiguous eg. no well logs or WCR.
- No Shows
- Gas Show or GTSRTSTM
- Oil Show (fluorescence)
- Gas Show & Oil Show (as above)
- Gas Flow (significant)
- Gas Flow (as above) & Oil Show
- Oil Recovery (In pipe or flowed)
- Oil or Condensate Flow & Gas Show
- Oil Flow & significant Gas Flow



8126-81

SAGASCO Resources Ltd.

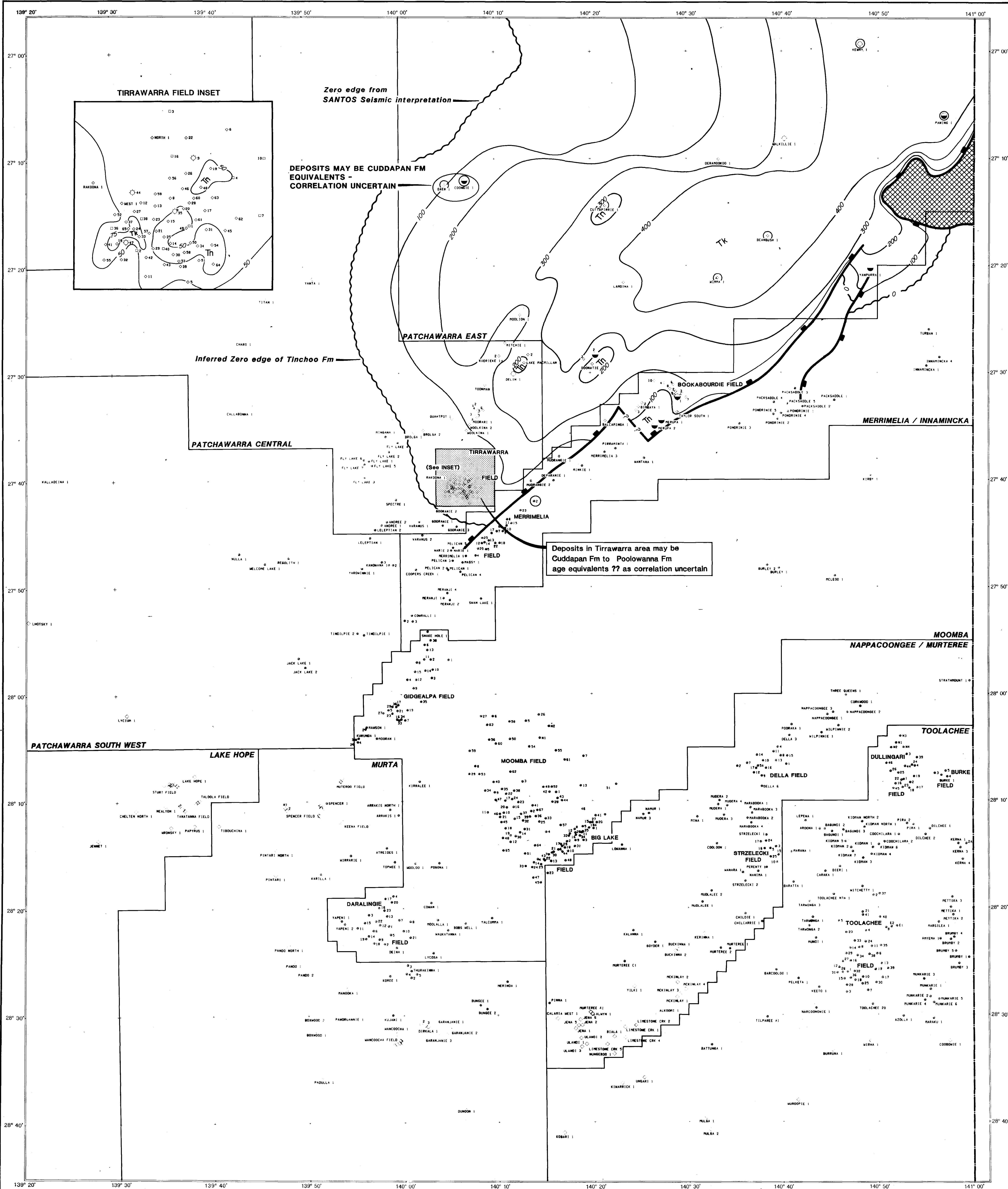
COOPER BASIN - SOUTH AUSTRALIA

NAPPAMERRI GROUP

ARRABURY FM - WIMMA MBR

ISOPACH & SHOWS MAP

AUTHOR: L.Spencer	DATE: DEC 90	PLAN No: NAP 00 7879
DRAWN: C.Kay	DATUM:	CHECKED: Encl. 4
SCALE: 1:250,000	CONTOUR INTERVAL:	



TINCHOO FORMATION

Tops (depths KB feet) & Thickness in Feet

TELEPHONE	TOP	RECORDS	TELEPHONE
TELEPHONE 1	855	8372	131
TELEPHONE 2	855	8372	132
TELEPHONE 3	855	8372	133
TELEPHONE 4	855	8372	134
TELEPHONE 5	855	8372	135
TELEPHONE 6	855	8372	136
TELEPHONE 7	855	8372	137
TELEPHONE 8	855	8372	138
TELEPHONE 9	855	8372	139
TELEPHONE 10	855	8372	140
TELEPHONE 11	855	8372	141
TELEPHONE 12	855	8372	142
TELEPHONE 13	855	8372	143
TELEPHONE 14	855	8372	144
TELEPHONE 15	855	8372	145
TELEPHONE 16	855	8372	146
TELEPHONE 17	855	8372	147
TELEPHONE 18	855	8372	148
TELEPHONE 19	855	8372	149
TELEPHONE 20	855	8372	150
TELEPHONE 21	855	8372	151
TELEPHONE 22	855	8372	152
TELEPHONE 23	855	8372	153
TELEPHONE 24	855	8372	154
TELEPHONE 25	855	8372	155
TELEPHONE 26	855	8372	156
TELEPHONE 27	855	8372	157
TELEPHONE 28	855	8372	158
TELEPHONE 29	855	8372	159
TELEPHONE 30	855	8372	160
TELEPHONE 31	855	8372	161
TELEPHONE 32	855	8372	162
TELEPHONE 33	855	8372	163
TELEPHONE 34	855	8372	164
TELEPHONE 35	855	8372	165
TELEPHONE 36	855	8372	166
TELEPHONE 37	855	8372	167
TELEPHONE 38	855	8372	168
TELEPHONE 39	855	8372	169
TELEPHONE 40	855	8372	170
TELEPHONE 41	855	8372	171
TELEPHONE 42	855	8372	172
TELEPHONE 43	855	8372	173
TELEPHONE 44	855	8372	174
TELEPHONE 45	855	8372	175
TELEPHONE 46	855	8372	176
TELEPHONE 47	855	8372	177
TELEPHONE 48	855	8372	178
TELEPHONE 49	855	8372	179
TELEPHONE 50	855	8372	180
TELEPHONE 51	855	8372	181
TELEPHONE 52	855	8372	182
TELEPHONE 53	855	8372	183
TELEPHONE 54	855	8372	184
TELEPHONE 55	855	8372	185
TELEPHONE 56	855	8372	186
TELEPHONE 57	855	8372	187
TELEPHONE 58	855	8372	188
TELEPHONE 59	855	8372	189
TELEPHONE 60	855	8372	190
TELEPHONE 61	855	8372	191
TELEPHONE 62	855	8372	192
TELEPHONE 63	855	8372	193
TELEPHONE 64	855	8372	194
TELEPHONE 65	855	8372	195
TELEPHONE 66	855	8372	196
TELEPHONE 67	855	8372	197
TELEPHONE 68	855	8372	198
TELEPHONE 69	855	8372	199
TELEPHONE 70	855	8372	200
TELEPHONE 71	855	8372	201
TELEPHONE 72	855	8372	202
TELEPHONE 73	855	8372	203
TELEPHONE 74	855	8372	204
TELEPHONE 75	855	8372	205
TELEPHONE 76	855	8372	206
TELEPHONE 77	855	8372	207
TELEPHONE 78	855	8372	208
TELEPHONE 79	855	8372	209
TELEPHONE 80	855	8372	210
TELEPHONE 81	855	8372	211
TELEPHONE 82	855	8372	212
TELEPHONE 83	855	8372	213
TELEPHONE 84	855	8372	214
TELEPHONE 85	855	8372	215
TELEPHONE 86	855	8372	216
TELEPHONE 87	855	8372	217
TELEPHONE 88	855	8372	218
TELEPHONE 89	855	8372	219
TELEPHONE 90	855	8372	220
TELEPHONE 91	855	8372	221
TELEPHONE 92	855	8372	222
TELEPHONE 93	855	8372	223
TELEPHONE 94	855	8372	224
TELEPHONE 95	855	8372	225
TELEPHONE 96	855	8372	226
TELEPHONE 97	855	8372	227
TELEPHONE 98	855	8372	228
TELEPHONE 99	855	8372	229

⊠ Wells with possible Cuddapan sediments

- SHOW SYMBOL LEGEND -

W

  Symbol size shown on map

 Oil Show (fluorescence)

 Gas Show & Oil Show (as above)

 Gas Flow (significant)

 Day Five (continued) at Oil Grove

© 2006 The Authors
Journal compilation © 2006 Blackwell Publishing Ltd

Oil Flow & significant Gas Flow

8126-82

**SAGASCO Resources Ltd.**

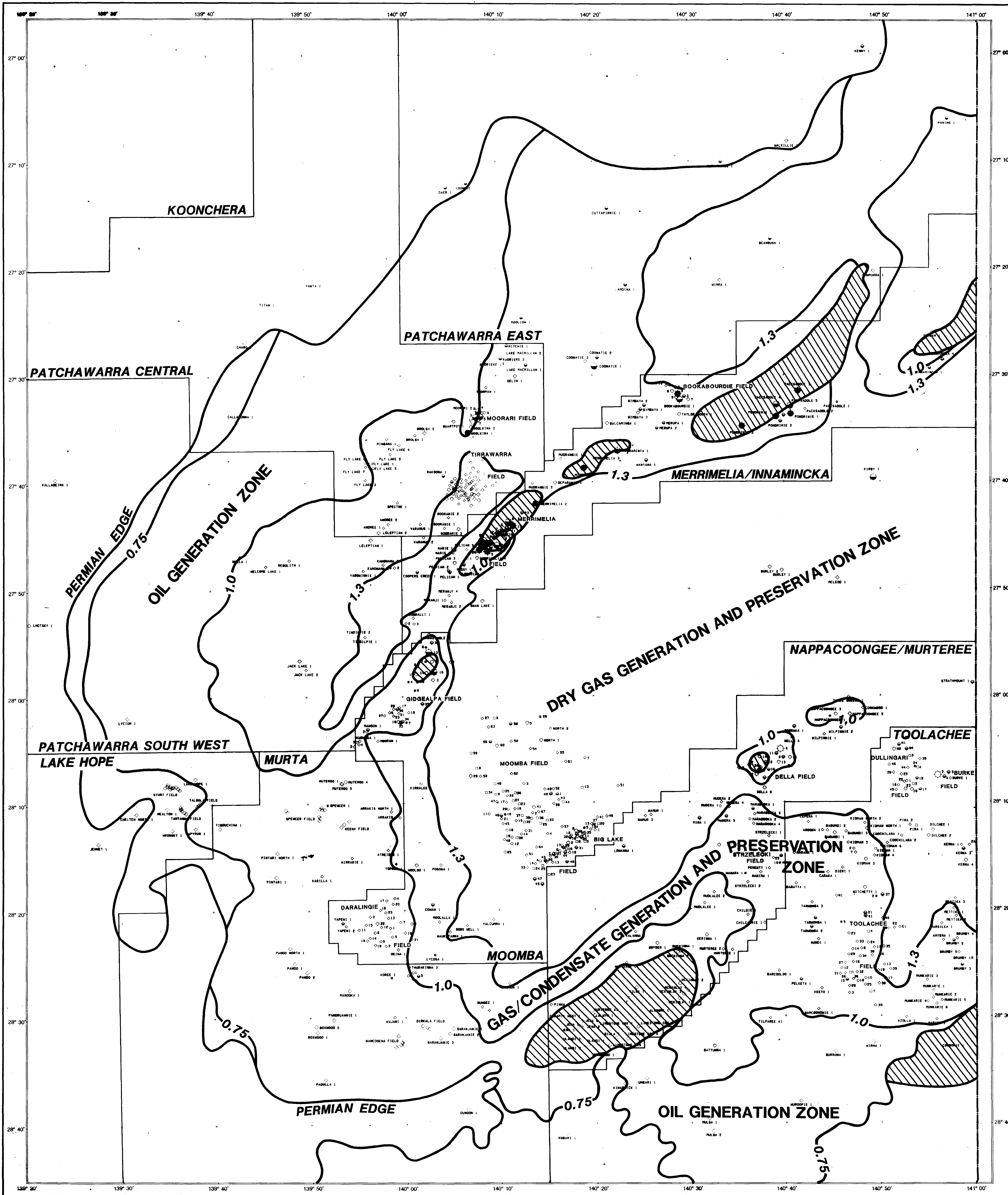
COOPER BASIN - SOUTH AUSTRALIA

NAPPAMERRI GROUP

TINCHOO EM

ISOPACH & SHOWS MAP

AUTHOR: L.Spencer	DATE: DEC 90	PLAN No: NAP 00 7880	
DRAWN: C.Kay	DATUM:	CHECKED:	Encl. 5
SCALE: 1:250 000	CONTOUR INTERVAL:		



LEGEND

NAPPAMERRI GROUP ABSENT

- SHOW SYMBOL LEGEND -**
- Well Symbol
 - Symbol size shown on map
 - Unit Not Encountered
 - Well TD'ed in rocks older than Triassic. No Nappamerri Group Present
 - Not logged for shows eg. Gas detector malfunction/diesel contamination
 - Information unavailable or ambiguous eg. no well logs or WCR.
 - No Shows
 - Gas Show or GTSRTSTM
 - Oil Show (fluorescence)
 - Gas Show & Oil Show (as above)
 - Gas Flow (significant)
 - Gas Flow (as above) & Oil Show
 - Oil Recovery (in pipe or flowed)
 - Oil or Condensate Flow & Gas Show
 - Oil Flow & significant Gas Flow



8126-83

SAGASCO Resources Ltd.

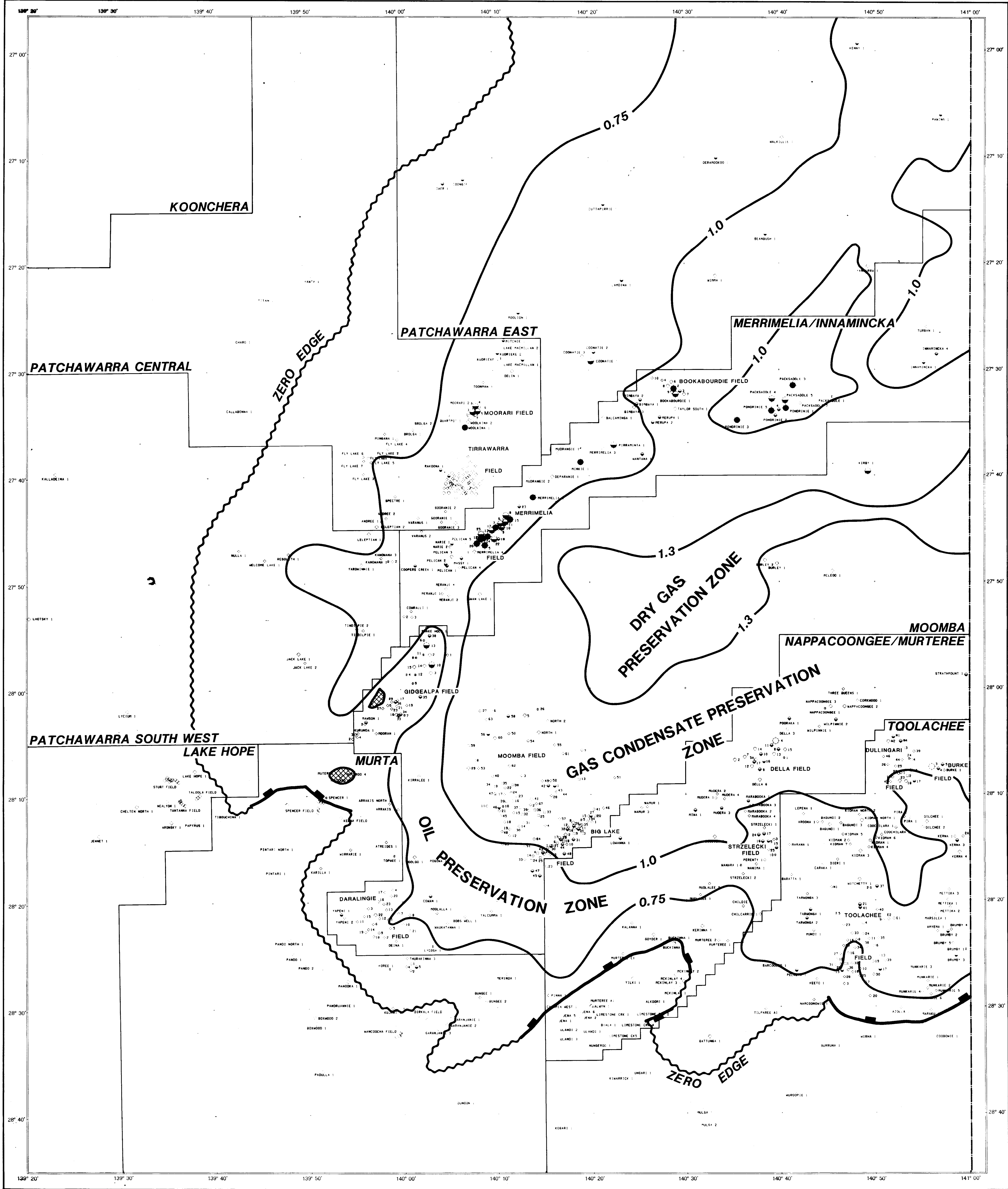
COOPER BASIN - SOUTH AUSTRALIA

VITRINITE REFLECTANCE (V_R)

BASE PATCHAWARRA

(From D.Burckhardt, 1990)

AUTHOR: L. Spencer	DATE: Nov 1990	PLAN No: NAP 00 7881
DRAWN: P. Oldham	DATUM:	CHECKED: Encl. 6
SCALE: 1:250,000	CONTOUR INTERVAL:	



LEGEND

NAPPAMERRI GROUP ABSENT

- SHOW SYMBOL LEGEND -

Well Symbol

Symbol size shown on map

0 30 Kilometres

8126-84

SAGASCO Resources Ltd.

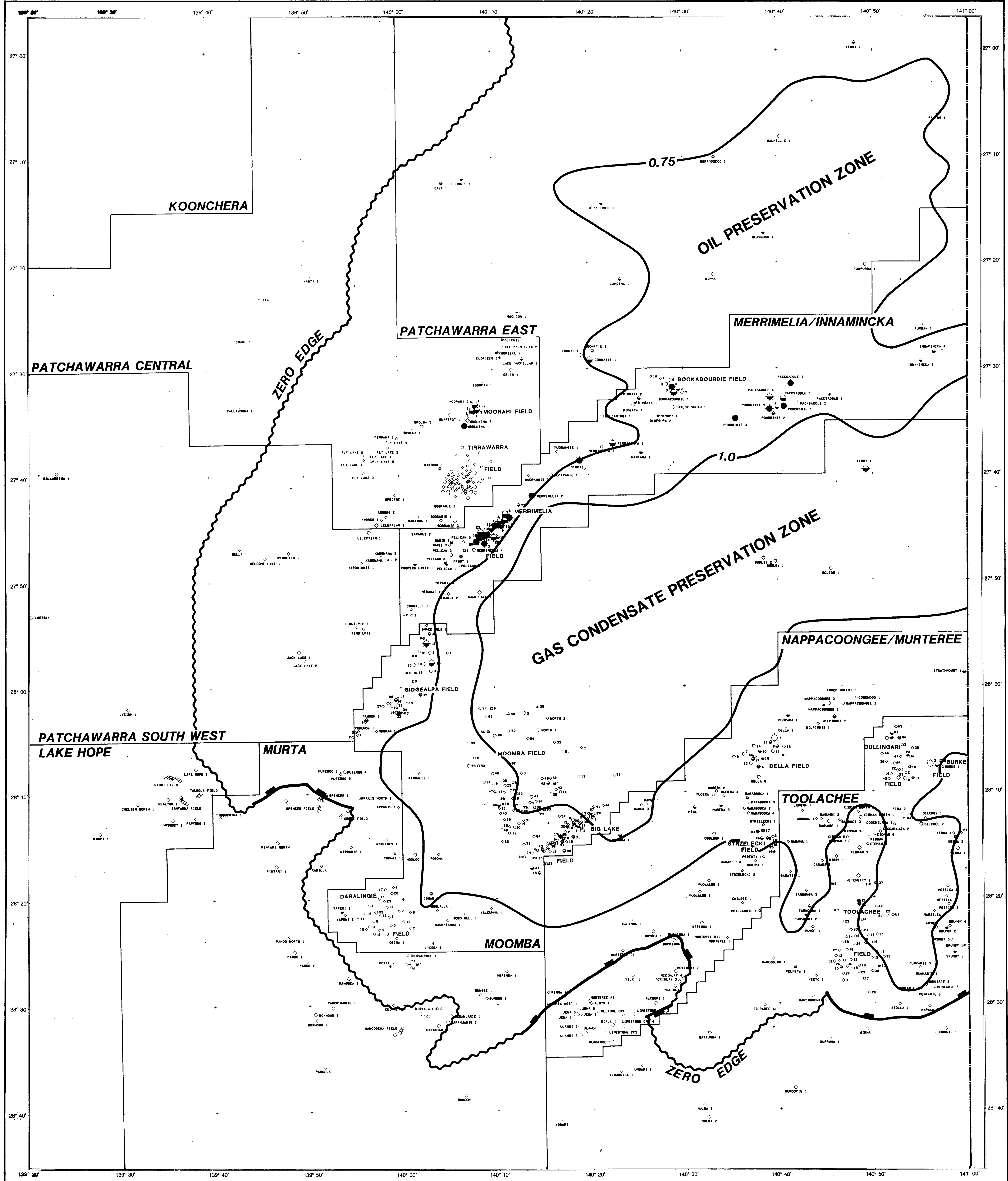
COOPER BASIN - SOUTH AUSTRALIA

VITRINITE REFLECTANCE (V_R)

BASE NAPPAMERRI GROUP

(From D.Burckhardt, 1990)

AUTHOR: L. Spencer	DATE: Nov 1990	PLAN No: NAP 00 7882
DRAWN: J. Dutkiewicz	DATUM:	CHECKED: Encl. 7
SCALE: 1:250,000	CONTOUR INTERVAL:	



- SHOW SYMBOL LEGEND -

Well Symbol

Symbol size shown on map

○ Unit Not Encountered	● Oil Show (fluorescence)
◇ Well TD'd in rocks older than Triassic. No Nappamerri Group Present	⊙ Gas Show & Oil Show (as above)
□ Not logged for shows	⊕ Gas Flow (significant)
○ eg. Gas detector malfunction/diesel contamination	⊕ Gas Flow (as above) & Oil Show
① Information unavailable or ambiguous eg. no well logs or WCR	● Oil Recovery (In pipe or flowed)
○ No Shows	⊕ Oil or Condensate Flow & Gas Show
⊕ Gas Show or GTSRTSTM	

0 30 Kilometres

8126-85

SAGASCO Resources Ltd.

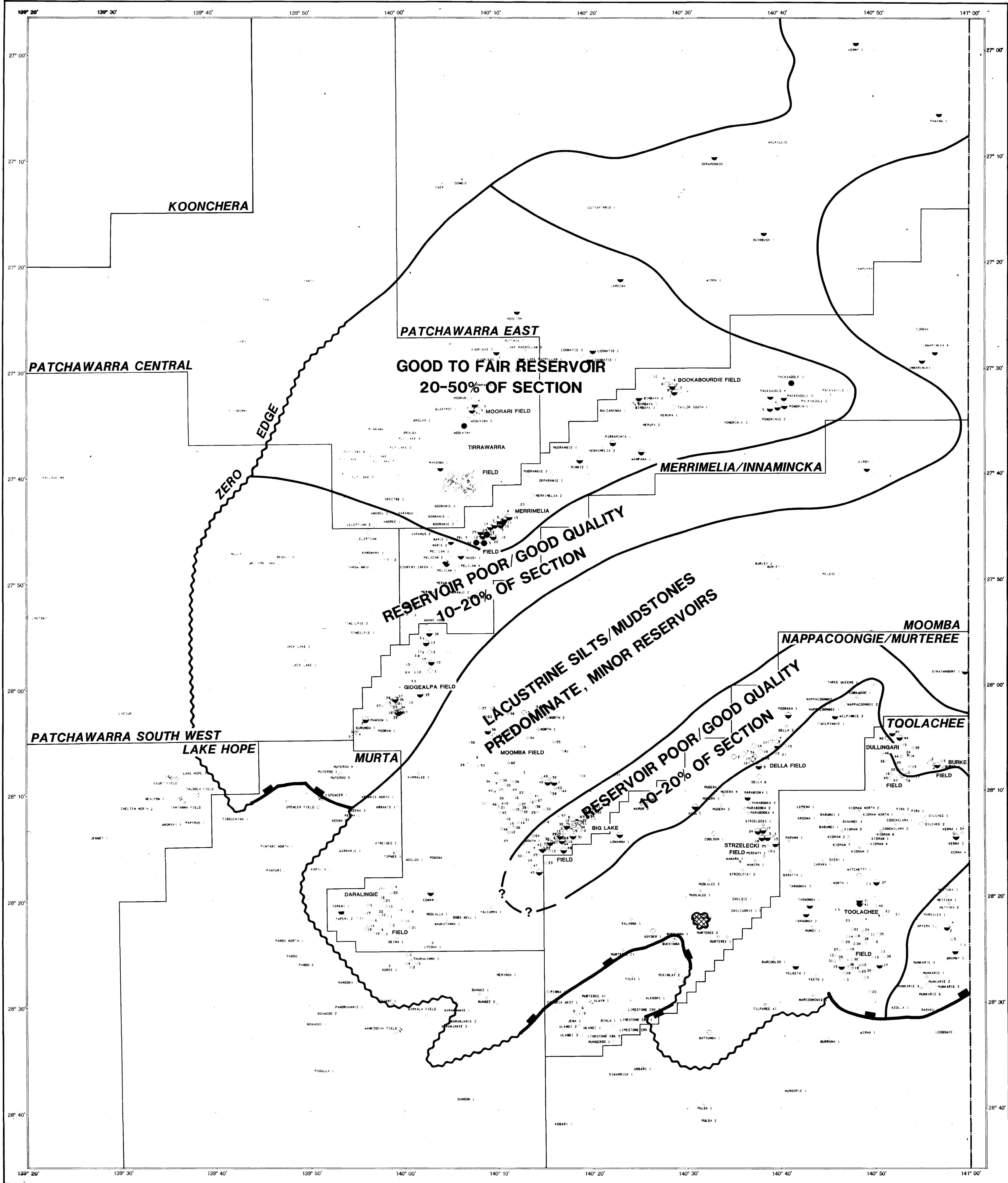
COOPER BASIN - SOUTH AUSTRALIA

VITRINITE REFLECTANCE (V_R)

TOP NAPPAMERRI GROUP

(From D.Burckhardt, 1990)

AUTHOR: L. Spencer	DATE: Nov 1990	PLAN No: NAP 00 7883
DRAWN: P. Oldham	DATUM:	CHECKED: Encl. 8
SCALE: 1:250,000	CONTOUR INTERVAL:	



- SHOW SYMBOL LEGEND -

- Well Symbol
- Symbol size shown on map
- Unit Not Encountered
- Oil Show (fluorescence)
- Well TD'ed in rocks older than Triassic. No Nappamerri Group Present
- Gas Show & Oil Show (as above)
- Not logged for shows eg. Gas detector malfunction/diesel contamination
- Gas Flow (significant)
- Information unavailable or ambiguous eg. no well logs or WCR.
- Gas Flow (as above) & Oil Show
- No Shows
- Oil Recovery (in pipe or flowed)
- Gas Show or GTSRTSTM
- Oil or Condensate Flow & Gas Flow
- Oil Flow & significant Gas Flow

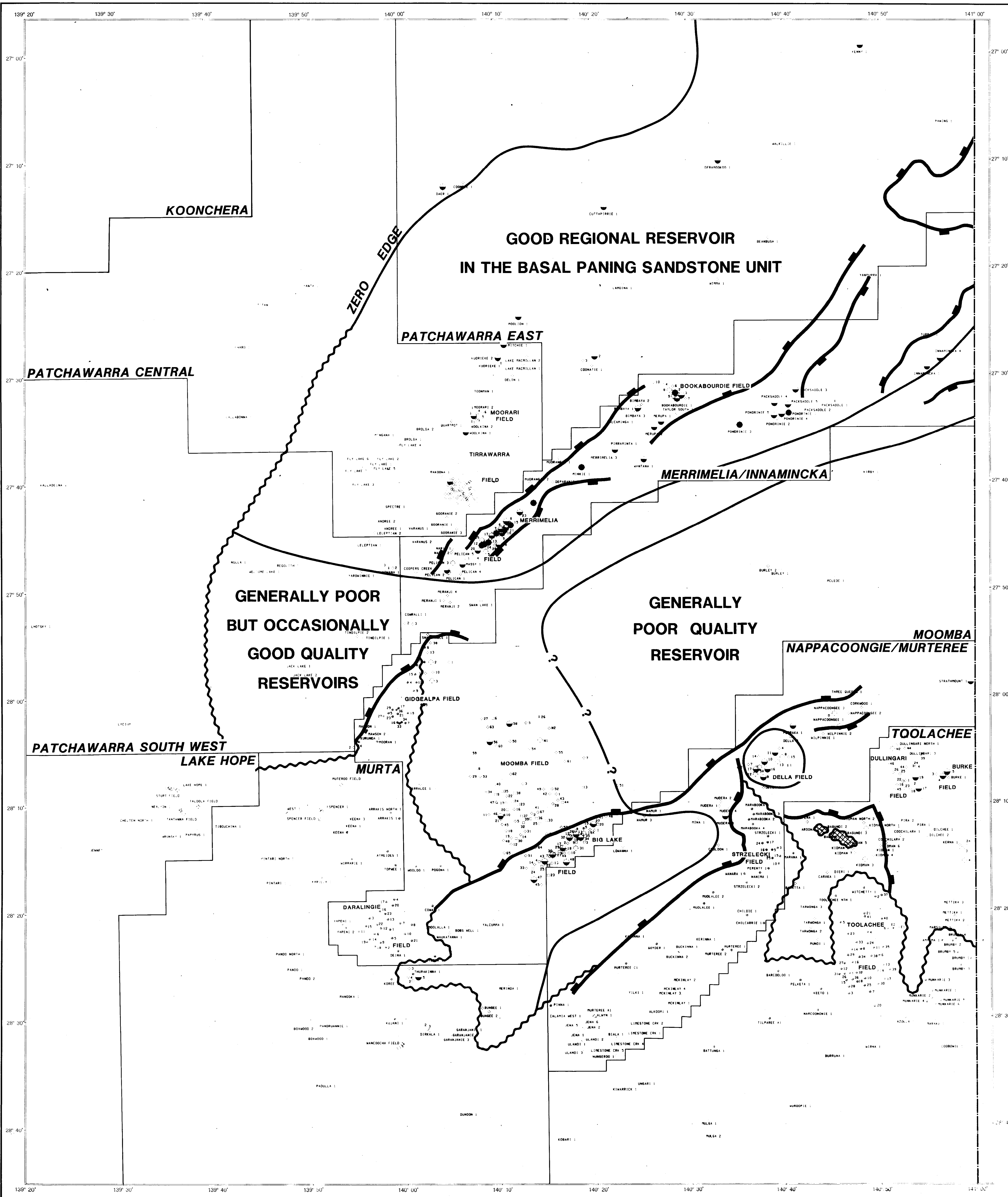


8126-86

SAGASCO Resources Ltd.

COOPER BASIN - SOUTH AUSTRALIA
NAPPAMERRI GROUP
CALLAMURRA FORMATION
GROSS RESERVOIR QUALITY
ASSESSMENT

AUTHOR: L. Spencer	DATE: Dec 1990	PLAN No: NAP 00 7884
DRAWN: J. Dutkiewicz	DATUM:	CHECKED: Encl. 9
SCALE: 1:250,000	CONTOUR INTERVAL:	



- SHOW SYMBOL LEGEND -

- Well Symbol
- Symbol size shown on map
- Unit Not Encountered
- Well TD'ed in rocks older than Triassic, No Nappamerrri Group Present
- Not logged for shows eg. Gas detector malfunction/diesel contamination
- Information unavailable or ambiguous eg. no well logs or WCR.
- No Shows
- Gas Show or GTSRTSTM
- Oil Show (fluorescence)
- Gas Show & Oil Show (as above)
- Gas Flow (significant)
- Gas Flow (as above) & Oil Show
- Oil Recovery (In pipe or flowed)
- Oil or Condensate Flow & Gas Show
- Oil Flow & significant Gas Flow

0 30
Kilometres

8126-87



SAGASCO Resources Ltd.

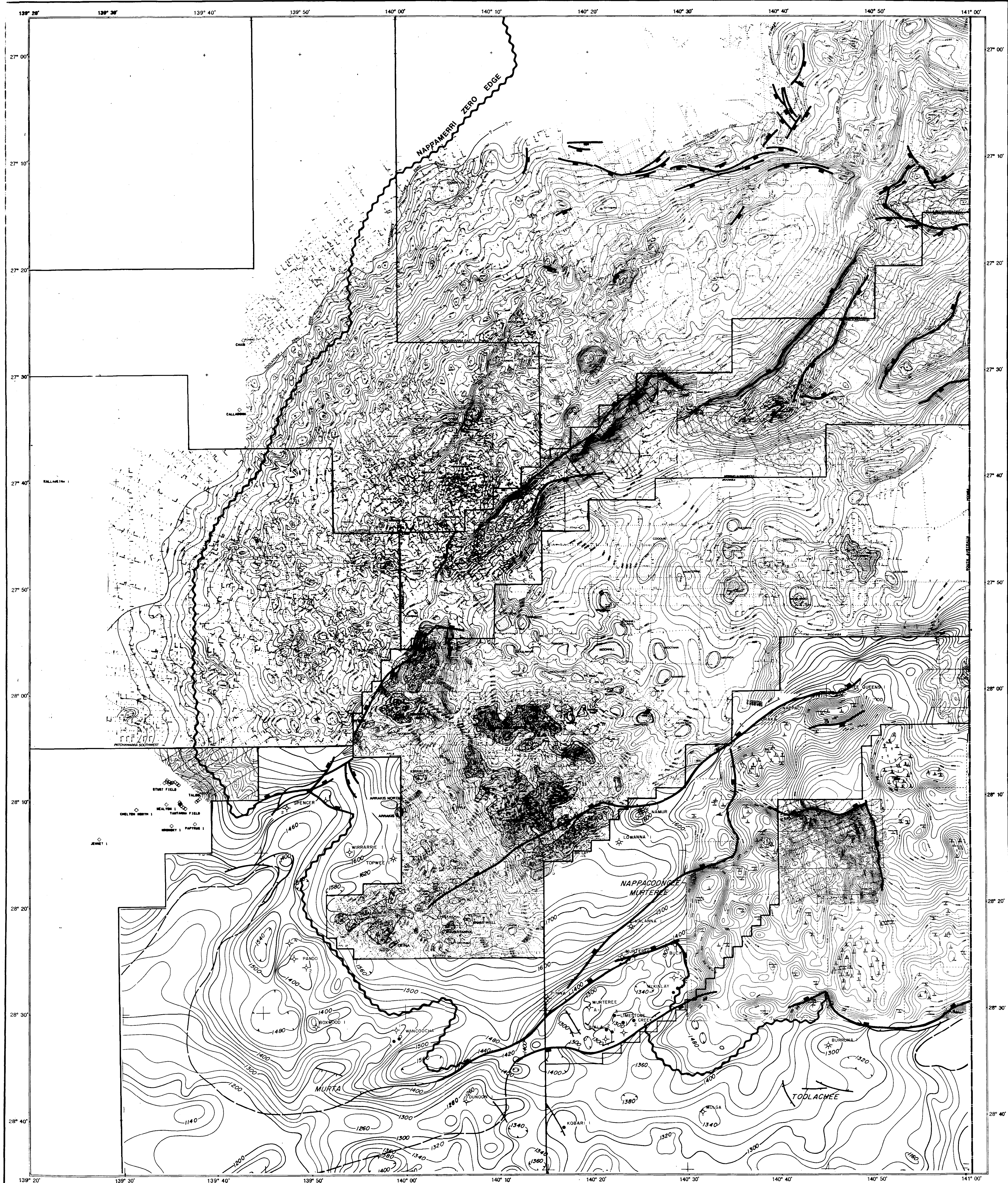
COOPER BASIN - SOUTH AUSTRALIA

NAPPAMERRI GROUP

ARRABURY FORMATION - Paning Member

**GROSS RESERVOIR QUALITY
ASSESSMENT**

AUTHOR	L. Spencer	DATE	Dec 1990	PLAN No	NAP 00 7885
DRAWN	J. Dutkiewicz	DATUM		CHECKED	Encl. 10
SCALE	1:250,000	CONTOUR INTERVAL			



N.B. THIS MAP IS A COMPOSITE OF THE MOST RECENTLY AVAILABLE DATA WHICH HAVE BEEN PHOTOCOPY REDUCED TO THE APPROXIMATE SCALE OF 1:250000. THE MAP IS THEREFORE NOT PARTICULARLY ACCURATE. AS WELL IT COMBINES SECTIONS OF DEPTH AND OF TIME. THE PURPOSE OF THE MAP IS TO GIVE A REGIONAL OVERVIEW OF STRUCTURE AND A REGIONAL INTERPRETATION OF SOURCE AREA DRAINAGE PATTERNS. FOR THESE PURPOSES IT IS ADEQUATE.



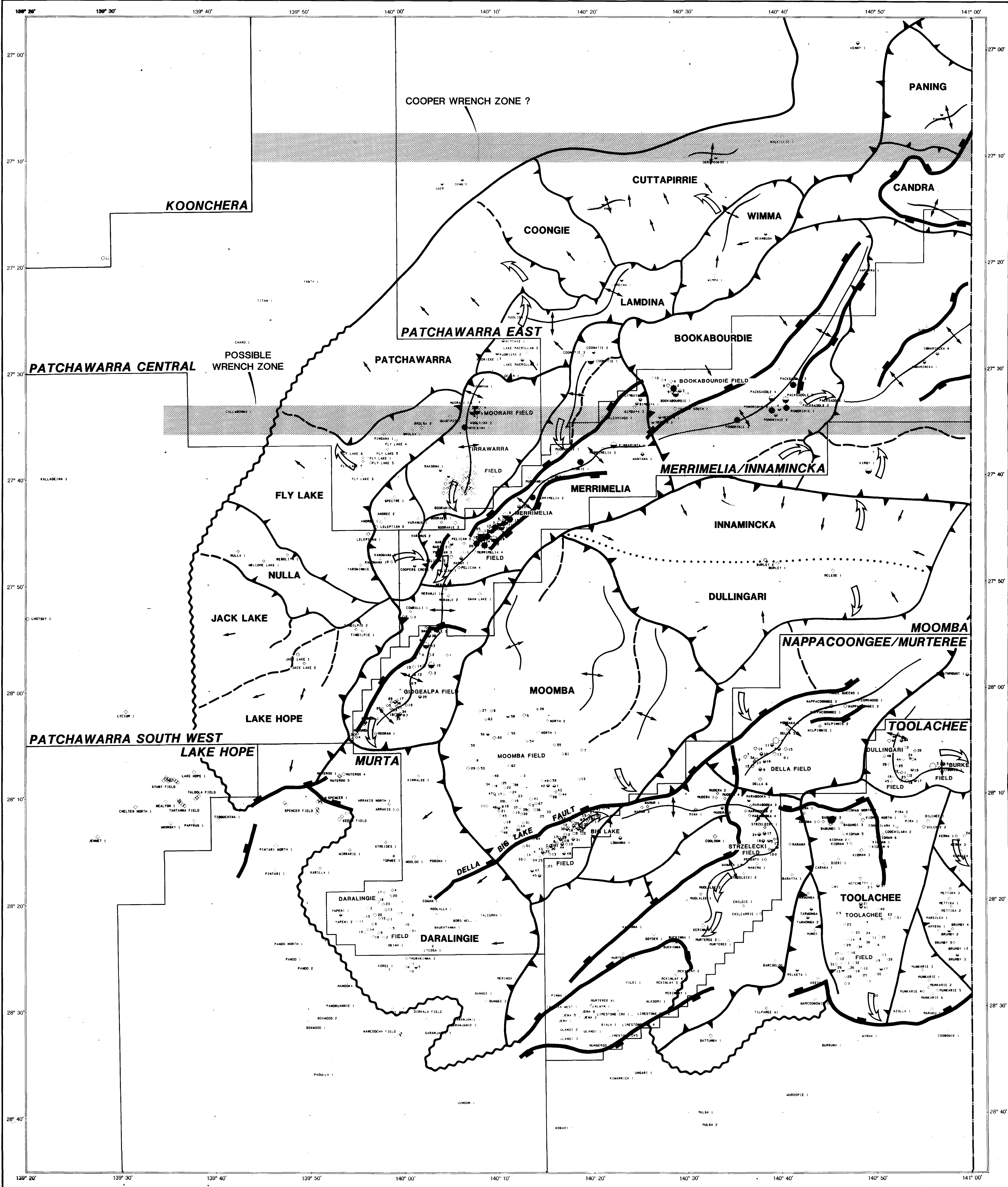
8126-89

SAGASCO Resources Ltd.

COOPER BASIN - SOUTH AUSTRALIA

**BASE NAPPAMERRI GROUP STRUCTURE
('P' HORIZON) MAP**

AUTHOR: L. Spencer	DATE: Dec 1990	PLAN No: NAP 00 7887
DRAWN: J. Dutkiewicz	DATUM:	CHECKED: Encl. 12
SCALE: 1:250,000	CONTOUR INTERVAL:	



LIST OF DRAINAGE CELLS & ASSOCIATED NAPPAMERRI GROUP PROSPECTIVITY

DRAINAGE CELL	COMMENTS
BOOKABOURDIE	Thick mature source on lowside of CHI fault. Bookabourdie, Packardie, Tangara all have pay or shows. Spill point into adjacent Innamincka Block. Vima and Paning reservoirs form possible low side fault play against the CHI trend. Good additional prospectivity.
CANDRA	Adjacent to thick mature source and on wrench fault trend with possible fault traps. Small drainage area but thickest source interval with potential fault plane migration pathways. Fair prospectivity but underexplored.
COONGIE	Mature thin diffuse source area, no major fault migration pathways from Patchawarra Formation source rocks. Two structures untested adjacent to small fault, with some migration potential. Fair prospectivity.
CUTTAPIIRRIE	Spill point from Vima cell. Oil recovered in Poolvanna Formation in Cuttapiirrie indicating migration distances of 20km are possible. The area is adjacent to Cooper Wrench Zone. Good prospectivity, but underexplored.
DARALINGIE	Mature thin diffuse source in Wooloo Trough. Thin Nappamerri Group and poor reservoir quality. No major fault migration pathways drain a significant area. Poor prospectivity.
DELLA FAULT	Mature thick source. Untested possible closure adjacent to major fault with migration potential. Poor reservoir quality is likely in Paning & Callamurra Units, but may intersect Vima Member in the area. Fair prospectivity.
DULLIGARI	Drainage of mature thick source into Della Nappacoongee area. Major faulting present. Poor reservoirs but there is a possible stratigraphic play down dip of Della Field. Some sands at Della have flowed gas/condensate. Fair prospectivity in selected areas.
FLY LAKE	Spill point near Fly Lake Field which drains towards Callabonna 1. However there is no obvious faulting which can connect source to Nappamerri Group reservoirs. Poor prospectivity.
INNAMINCKA	Innamincka dome is the focus of a very large drainage area from the Patchawarra & Nappamerri Trough and also has spill point from Bookabourdie Cell. Good shows occur in the Innamincka wells and a significant Callamurra Formation gas flow occurred in Kirby 1. Sand quality appears to improve to the north. Fault connection to source in north and possibly south within the cell. Good prospectivity but underexplored.
JACK LAKE	Diffuse unfocused migration. No major faulting which will connect the source beds to the Nappamerri Group reservoirs. Poor prospectivity.
LAKE HOPE	Major Persian sourced fields occur to the south e.g. Tantanarra. Major faults along eastern margin of cell could provide source to reservoir connection. Fair prospectivity for unconformity truncation plays related by shallow Poolvanna Formation.
LANDINA	Mature source area. Spill Point near Moollon into Patchawarra cell. Good shows, but no major faulting to provide source-reservoir connection. Poor prospectivity.
MERRIMELIA	Culminates in Gidgealpa Field Button Sandstone accumulation. Good proven area with additional prospectivity.
MOOMBA	Drainage spill point into Allunga Trough and Della Fault area, with established fault migration area north of Big Lake field. Good shows at Big Lake and indications of good reservoir in Paning/Callamurra. Fair to good prospectivity in selected areas.
NULLA	Mature thin diffuse source area. No major faulting to connect source rocks to reservoir. Poor prospectivity.
PANING	Panling structure not connected to source by faulting. Good source area spills into Queensland. Poor prospectivity.
PATCHAWARRA	Diffuse migration of submature source. Spill point from Landina cell in north east of area. No major faulting connecting source rocks to Nappamerri Group. Poor to Fair prospectivity.
TOOLACHEE	There is a drainage cell spill point south of the Toolachee Field. Other cells drain out of area into Queensland. Fault play in area but reservoir quality a risk. Fair prospectivity.
VIMA	Thick mature source. Vima 1 & Beambush 1 possibly not closed at Nappamerri level and hence invalid tests. No major fault conduits from source into Nappamerri Group are obvious. Spills into Cuttapiirrie cell. Minor faulting adjacent to untested closure. Fair prospectivity.

SHOW SYMBOL LEGEND

- Spill Point of cell
- Axis of Antiform
- Normal Fault
- Drainage Area Boundary
- Drainage direction
- Well Symbol
- Symbol size shown on map
- Unit Not Encountered
- Oil Show (fluorescence)
- Gas Show & Oil Show (as above)
- Gas Flow (significant)
- Gas Flow (as above) & Oil Show
- Oil Recovery (in pipe or flowed)
- Oil or Condensate Flow & Gas Show
- Oil Flow & significant Gas Flow
- Well TD'ed in rocks older than Triassic. No Nappamerri Group Present
- Not logged for shows eg. Gas detector malfunction/diesel contamination
- Information unavailable or ambiguous eg. no well logs or WCR.
- No Shows
- Gas Show or GTSRTSTM

0 30 Kilometres

8126-90

SAGASCO Resources Ltd.

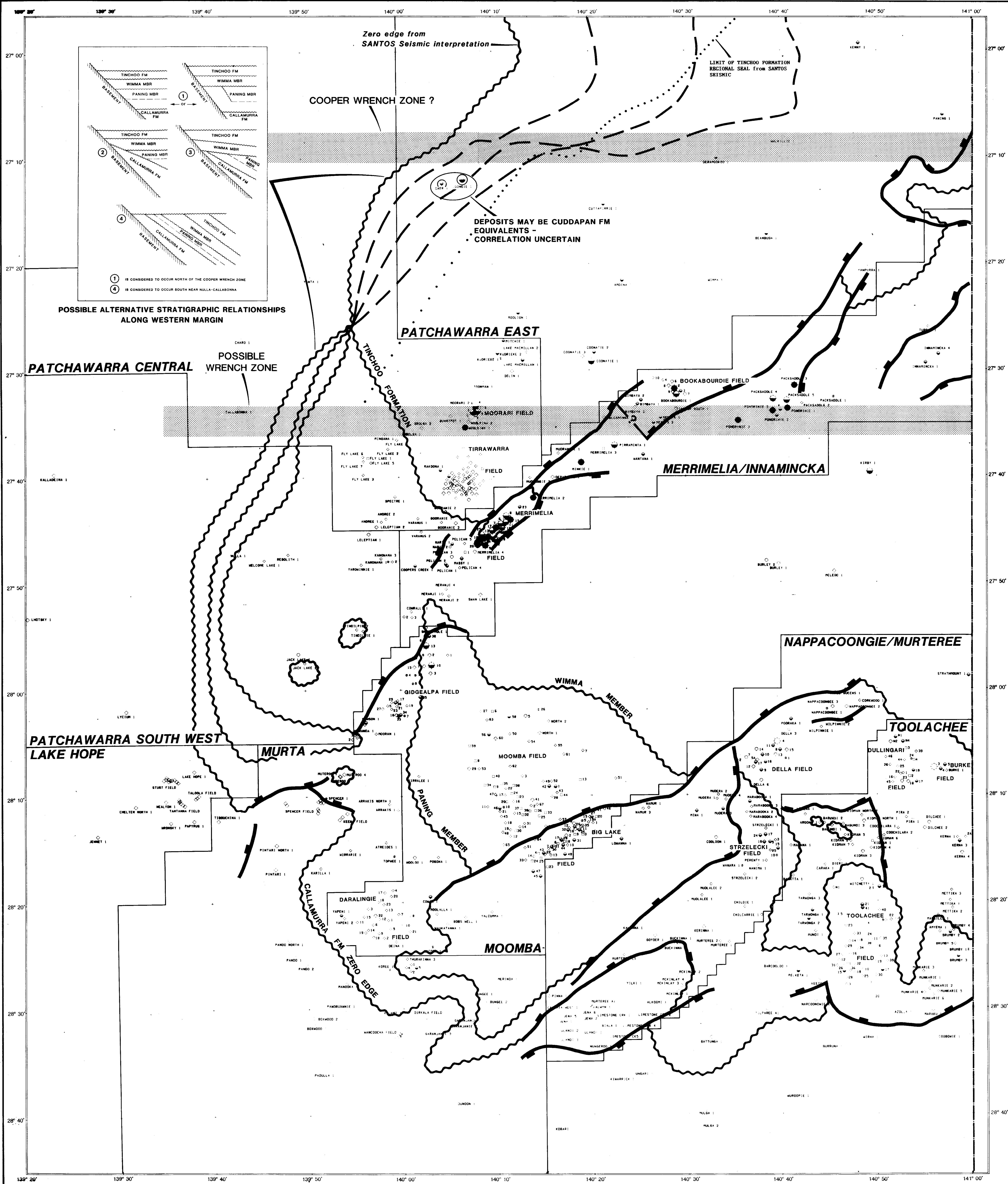
COOPER BASIN - SOUTH AUSTRALIA

NAPPAMERRI GROUP

HYDROCARBON DRAINAGE CELL MAP

BASED ON 'P' HORIZON STRUCTURE

AUTHOR: L. Spencer	DATE: Dec 1990	PLAN No: NAP 00 7888
DRAWN: J. Dutkiewicz	DATUM:	CHECKED: Encl. 13
SCALE: 1:250,000	CONTOUR INTERVAL:	



- SHOW SYMBOL LEGEND -

- Well Symbol
- Symbol size shown on map
- Unit Not Encountered
- Well TD'd in rocks older than Triassic. No Nappamerri Group Present
- Not logged for shows eg. Gas detector malfunction/diesel contamination
- Information unavailable or ambiguous eg. no well logs or WCR.
- No Shows
- Gas Show or GTSRTSTM
- Oil Show (fluorescence)
- Gas Show & Oil Show (as above) Present
- Gas Flow (significant)
- Gas Flow (as above) & Oil Show
- Oil Recovery (In pipe or flowed)
- Oil or Condensate Flow & Gas Show
- Oil Flow & significant Gas Flow

0 30 Kilometres

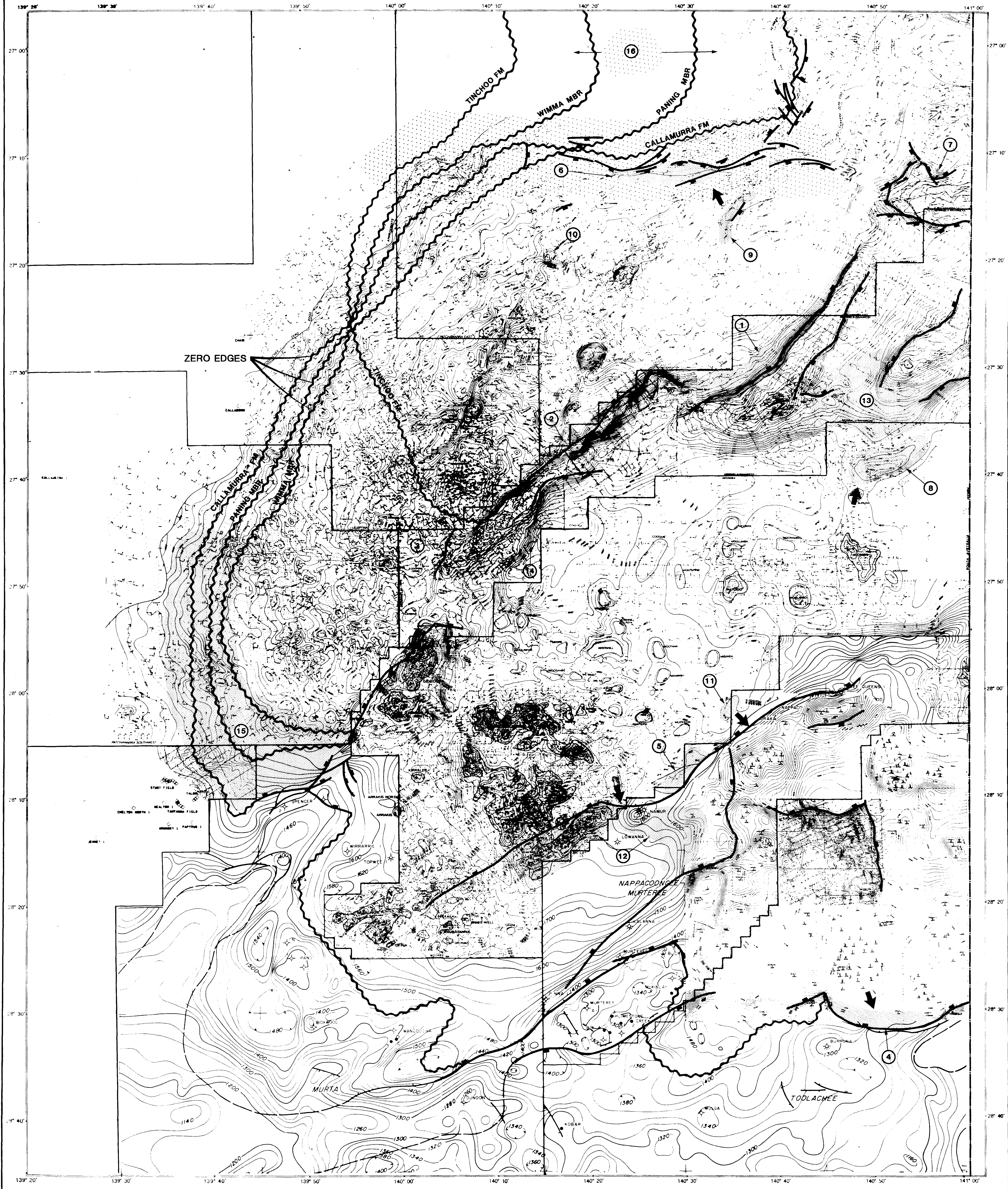
8126-92

**SAGASCO Resources Ltd.**

COOPER BASIN - SOUTH AUSTRALIA

**NAPPAMERRI GROUP
ZERO EDGE MAP**

AUTHOR: L. Spencer	DATE: Dec 1990	PLAN No: NAP 00 7889
DRAWN: J. Dutkiewicz	DATUM:	CHECKED: Encl. 15
SCALE: 1:250,000	CONTOUR INTERVAL:	



PROSPECTIVITY SUMMARY MAP

LOW SIDE FAULT PLAYS

- 1 Yalchirrie Area: Downdip of established production, updip of known source and adjacent to fault migration pathway. The Tinchoo Formation regional shaly seal on the top Wimma Member is present in this area.
- 2 Merrimella Mudrange Area: Downdip of established production, updip of known source and adjacent to fault migration pathway.
- 3 Downdip Pelican: The lead is updip of Goornie area and adjacent to the spill point of the Merrimella/Leleptian drainage cell. The fault offset should seal the basal Paning Unit against the Callamurra Formation. As well there is a potential fault seal of good basal Callamurra Formation reservoirs or reservoir pinchout between Goornie and Marie (See Cross-Section C-C'). Requires backfill of hydrocarbons to source trap.
- 4 Burrunga Area: There is a possible improvement of reservoir quality in the basal Callamurra unit in this area. (See Cross-Section C-C' Maraku 1). The lead is adjacent to a spill point from the Toolachee Field. Top seal is shaly Callamurra Formation and lateral seal is the Warburton Basin sediments. The fault has some wrench characteristics.
- 5 Big Lake Fault Area: In an area of potentially improved Paning Member reservoir quality adjacent to Moomba cell spill point and fault migration pathway. Reservoir quality is the main risk.

POSSIBLE WRENCH ASSOCIATED PLAYS

- 6 Cuttapiirrie - Deramookoo Area: This area has characteristics of wrench style geometry. The major wrench movement along the Cooper Wrench Zone appears to have occurred at the end of Tinchoo Formation deposition. This margin is updip of the spill point from the Wimma Drainage cell, downdip of the oil recovery in the Poolovanna Formation at Cuttapiirrie 1 and adjacent to good shows in the Paning Member & Callamurra Formation at Deramookoo 1. The Tinchoo Formation basal shaly seal on the Wimma Member is probably developed south of the fault (See Cross-Sections A-A' & E-E'). The entire fault zone is considered prospective.
- 7 Candra Area: This area has probable wrench related structures. The drainage area is small but the unit should be thickest along the western flank of the GMI trend. Good fault connection to source rocks appears probable and trap door type fault plays are recognised.

CLOSED STRUCTURES

- 8 Kirby Area: Kirby is a large structure. A subcommercial gas flow with condensate recovery was made in the basal Callamurra Formation from what appears to be poor quality reservoirs. The Paning Member had good shows. Both these units appear to improve in reservoir quality towards the north. It may lie adjacent to a right lateral wrench zone and is located along a migration pathway from the Innamincka Drainage Cell. An appraisal well is warranted. (See Cross-Sections A-A', F-F' & G-G' and Enclosure 13)
- 9 Near Wimma Area: Neither Wimma 1 or Beanbush 1 appear to have tested closure at the Nappamerri level. This structure is updip of both these wells and there is a fault adjacent to closure which could provide a migration pathway from deeper source rocks. The Wimma Member is sealed by good basal Tinchoo Formation shales in this area. (See Cross-Section E-E').
- 10 West of Landina Area: This is a small closure adjacent to a possible fault migration pathway. Tinchoo Formation shaly basal unit forms a seal on Wimma Member.
- 11 Della Fault Area: Possible closed structure or low side fault play at the drainage focus of the untested Della Fault drainage cell. There is a possibility of good reservoir in basal Callamurra Unit, and reservoir quality in Paning Member appears to improve to the south of Three Queens 1 (See Cross-Section B-B').

STRATIGRAPHIC TRAPS

- 12 Big Lake Field - Allunga Trough Area: An improvement in reservoir quality is seen in this area in several wells in Big Lake Field, which has also recorded significant shows. There is evidence of a pinchout of reservoir facies towards Mina 1. The Big Lake Field is near a spill point for the large Moomba drainage cell and adjacent to the Big Lake fault which is an established migration pathway (e.g. for the Permian gas reservoir in the Nauru Sandstone in the Nauru Field). Detailed mapping of the Nappamerri Group sands at Big Lake field and adjacent Allunga Trough is warranted as there is a potential for large stratigraphic trap plays in the area.
- 13 Innamincka - Packaddle Area: The Wimma Member changes from being highly sandy to shaly in this area. The area is flanked by major faults connected to deeper source rocks. The area is the focus of several spill points and may be on the northern edge of an east west wrench zone.
- 14 Merrimella Eastern Flank: The Callamurra Formation has probable good quality and laterally extensive reworked thin transgressive sands in the Nappamerri Trough. These sands either pinchout or are erosional truncated down dip of the GMI trend. Faults are present which can provide a mechanism for migration of Nappamerri Trough generated hydrocarbons. The most favourable areas are structural embayments against the eastern GMI trend.
- 15 Lake Hope - PSW Flank Area: A major lead is the unconformity truncation play. The potential top seal is the shaly Poolovanna Formation (See Cross-Sections D-D' & E-E'). A migration pathway from proven source via Gidgaspa Field flank fault is proposed. On this basis the probability of hydrocarbon entrapment will decrease with increasing distance from this fault. Reservoir quality is fair to poor in the area. This is the best recognised area for this type of play.
- 16 Area North of Deramookoo: The seismic interpretation indicates that the basal shaly Tinchoo Formation overlies the Wimma Sandstone although at Deramookoo 1 this basal seal is thin. The upper Paning may seal the lower Paning sandstone unit. Good source rock exists to the east and the area is adjacent to a major fault zone. Hydrocarbons have migrated through the area as recoveries at James 1 have shown.

- LEGEND -

- Hydrocarbon Migration Pathways
- Play area

N.B. THIS MAP IS A COMPOSITE OF THE MOST RECENTLY AVAILABLE DATA WHICH HAVE BEEN PHOTOCOPIED REDUCED TO THE APPROXIMATE SCALE OF 1:250,000. THE MAP IS THEREFORE NOT PARTICULARLY ACCURATE. IT COMBINES SECTIONS OF DEPTH AND OF TIME. THE PURPOSE OF THE MAP IS TO GIVE A REGIONAL OVERVIEW OF STRUCTURE AND A REGIONAL INTERPRETATION OF SOURCE AREA DRAINAGE PATTERNS. FOR THESE PURPOSES IT IS ADEQUATE.

0 30
Kilometres

8126-93



SAGASCO Resources Ltd.

COOPER BASIN - SOUTH AUSTRALIA

NAPPAMERRI GROUP PROSPECTIVITY SUMMARY

AUTHOR: L. Spencer	DATE: Dec 1990	PLAN NO: NAP 00 7890
DRAWN: J. Dutkiewicz	DATUM:	CHECKED: Encl. 16
SCALE: 1:250,000	CONTOUR INTERVAL:	