

DEPARTMENT OF MINES AND ENERGY
SOUTH AUSTRALIA

CONFIDENTIAL REPORT 833
INDEX ON ARCKARINGA COALFIELD
E.L.s 587/982, 591/983, 681/1096,
686/1095, 786/1114, 8651/1087,
904/1201, 961 and 1160.
ENV. 5910

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6.1 Power Generation

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Table 1: Tenement data Arckaringa Coalfield

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Figure 1: Exploration Licences held by Meekatharra Minerals (Australia) Pty.Ltd. & Balhoil Nominees Pty. Ltd.

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PREFACE

Tenement History

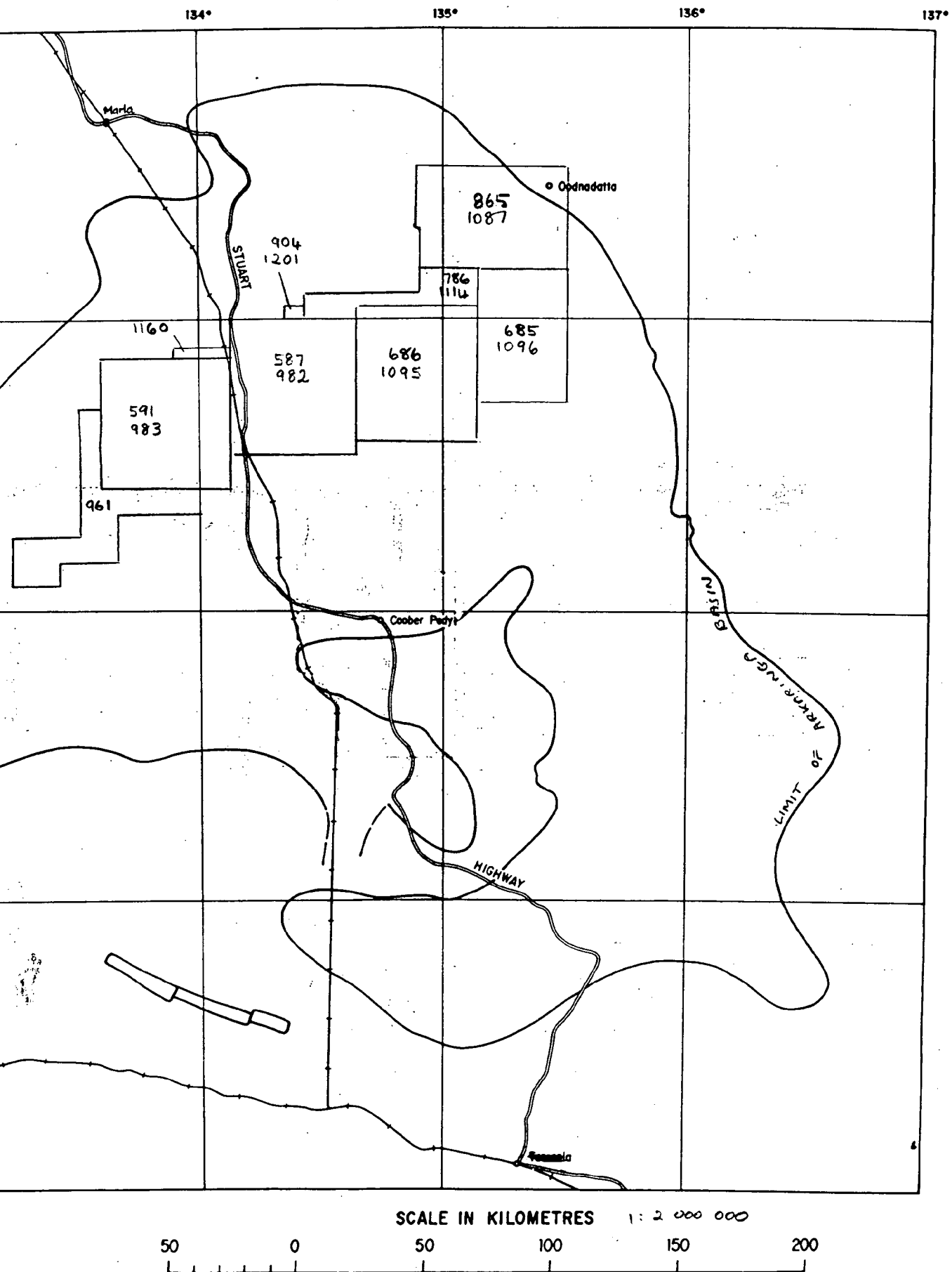
Meekatharra Minerals Ltd (MM) has held 12 tenements and Balhoil Nominees Pty Ltd (BN) 4 tenements in northern Arckaringa Basin since February 1980. Tenement history is summarized in Table 1 and illustrated in Figure 1.

Table 1: Tenement Data Arckaringa Coalfield

Exploration Licence	Company	Expiry/ Relinquishment Date	Period Years	Area km ²	Comments
587	M.M.	19.02.82	2	2 622	Renewed as E.L.982
591	M.M.	19.02.82	2	2 526	" " 983
685	B.N.	10.08.82	2	1 798	" " 1096
686	B.N.	10.08.82	2	2 448	" " 1095
786	M.M.	11.02.83	2	1 425	" " 1114
865	M.M.	02.08.82	1	2 512	" " 1087
904	M.M.	18.10.82	1	45	" " 1201
961	M.M.	08.02.83	1	1 447	Relinquished. Report in S.A.D.M.E. env. 5071, 4653.
982	M.M.	28.03.86	4	2 622	
983	M.M.	28.03.86	4	2 526	
1087	M.M.	28.11.85	3	2 512	
1095	B.N.	19.12.85	3	2 448	
1096	B.N.	19.12.85	3	1 798	
1114	M.M.	24.02.86	3	1 425	
1160	M.M.	23.06.84	1	85	Relinquished. Report in S.A.D.M.E. env. 522.
1201	M.M.	07.12.85	2	45	

Index Organization

Section 1 records quarterly reports by MM and BN. They are chronologically ordered by Exploration Licence Number. Geological reports form sections 2 to 5. Arrangement is chronological by report type: 2. drilling exploration reports, 3. analytical reports, 4. lithological logs, and 5. geophysical logs. Sections 4 and 5 do not represent all drillholes since some have no available logs. Section 6 lists feasibility/evaluation reports ordered on the basis of report subject and date. There are 4 subject categories: 6.1 power generation, 6.2 hydrogeological and geotechnical, 6.3 environmental, and 6.4 general.



ARCKARINGA BASIN

EXPLORATION LICENCES HELD BY MEEKATHARRA MINERALS
(AUSTRALIA) PTY LTD & BALHOUL NOMINEES PTY LTD

	Env. No.
1. QUARTERLY REPORTS	5910-1 to 3
1.1 E.L. 587/982 reports from 19 February 1980.	5910-1
1.2 E.L. 591/83 reports from 19 February 1980.	5910-1
1.3 E.L. 685/1096 reports from 10 August 1980.	5910-2
1.4 E.L. 686/1095 reports from 10 August 1980.	5910-2
1.5 E.L. 786/1114 reports from 11 February 1981.	5910-3
1.6 E.L. 865/1087 reports from 2 August 1981.	5910-3
1.7 E.L. 904/1204 reports from 17 October 1981.	5910-3
1.8 E.L. 961 reports from 8 February 1982 to 8 November 1983.	5910-3
1.9 E.L. 1160 reports from 22 June 1983 to 23 March 1984.	5910-3

2. **DRILLING EXPLORATION REPORTS** 5910-4 to 25
- Lithological logs, geophysical logs and coal analyses were presented with drilling exploration reports. Lithological and geophysical logs have been removed and stored in borehole numerical order, refer to sections 5 and 6. Analytical reports, indexed in section 4, are still stored with the drilling exploration reports.
- 2.1 Cogar Mining Consultants Pty Ltd, 1980. 5910-4
Report on E.L.s 587 and 591 Arckaringa Basin, South Australia. Cogar Mining Consultants Pty Ltd report (unpublished).
- 2.2 Brennan, E. and Coleman, A., 1980. 5910-4
Interim report 1980 programme Coal Exploration-Arckaringa S.A. E.L. 587 and E.L. 591. Brennan & Associates report (unpublished).
- 2.3 Lees, R., 1981. 1981 coal exploration results Wintinna coalfield E.L. 786 5910-5 to 6
Arckaringa Basin, S.A. Brennan & Associates report No. 30 (unpublished).
- 2.4 Lees, R. and Coleman, A., 1982. 1981 5910-7
coal exploration results Wintinna coalfield E.L. 686 Arckaringa Basin, S.A. Brennan & Associates Report No. 32 (unpublished).
- 2.5 Lees, R., 1982. 1981 coal exploration results Murloocoppie coalfield E.L. 587, 5910-8
E.L. 786 and E.L. 904 Arckaringa Basin, S.A. Brennan & Associates Report No. 36 (unpublished).
- 2.6 Holland, R.A. and Kennedy, N.L., 1982. 5910-9
In situ raw coal reserve estimates E.L. 786, Wintinna coalfield Arckaringa Basin, S.A. Rank Geological Services Report No. 201 (unpublished).
- 2.7 Holland, R.A. and Kennedy, N.L., 1982. 5910-10
In situ raw coal reserve estimates E.L. 686, Wintinna Coalfield Arckaringa Basin, S.A. Rank Geological Services Report No. 202 (unpublished).
- 2.8 Holland, R.A. and Kennedy, N.L., 1982. 5910-11
In situ raw coal reserve estimates E.L.s 785, 865 and E.L. A 303/82 East Wintinna Coalfield Arckaringa Basin, S.A. Rank Geological Services Report No. 203 (unpublished).
- 2.9 Holland, R.A. and Kennedy, N.L., 1983. 5910-12
1982 coal exploration report E.L. 685 East Wintinna Coalfield Arckaringa Basin, S.A. Rank Geological Services Report No. 204 (unpublished).

- | | | |
|------|---|---------------|
| 2.10 | Holland, R.A. and Kennedy, N.L., 1983.
1982 coal exploration report E.L.s
685, 786, 865 East Wintinna Coalfield
Arckaringa Basin, S.A. Rank Geological
Services Report No. 205 (unpublished). | 5910-13 to 14 |
| 2.11 | Holland, R.A. and Kennedy, N.L., 1983.
1982 coal exploration report E.L. 786,
Wintinna Coalfield Arckaringa Basin,
S.A. Rank Geological Services Report
No. 206 (unpublished). | 5910-15 to 16 |
| 2.12 | Holland, R.A. and Kennedy, N.L., 1983.
1982 coal exploration report E.L. 686
Wintinna Coalfield Arckaringa Basin,
S.A. Rank Geological Services Report
No. 207 (unpublished). | 5910-17 |
| 2.13 | Holland, R.A. and Kennedy, N.L., 1983.
1982 coal exploration report E.L. 961
and E.L. 983, Arckaringa Basin, S.A.
Rank Geological Services Report No.
209 (unpublished). | 5910-18 |
| 2.14 | Holland, R.A. and Kennedy, N.L., 1983.
Relinquishment report E.L. 961 Arckaringa
Basin, S.A. Rank Geological Services
Report No. 210 (unpublished). | 5910-19 |
| 2.15 | Holland, R.A. and Kennedy, 1984. 1983
coal exploration report E.L. 1095
Wintinna deposit Arckaringa Coalfield,
S.A. Rank Geological Services Report
No. 211 (unpublished). | 5910-20 |
| 2.16 | Holland, R.A. and Kennedy, N.L., 1984.
1983 coal exploration report E.L. 1114
Wintinna deposit Arckaringa Coalfield,
S.A. Rank Geological Services Report
No. 212 (unpublished). | 5910-21 |
| 2.17 | Holland, R.A. and Kennedy, N.L., 1984.
1983 coal exploration report E.L. 904
Murloocoppie deposit Arckaringa
Coalfield, S.A. Rank Geological Services
Report No. 213 (unpublished). | 5910-22 |
| 2.18 | Holland, R.A. and Kennedy, N.L., 1984.
Relinquishment report E.L. 961
Arckaringa Coalfield, South Australia.
Rank Geological Services, Report No. 214
(unpublished). | 5910-22 |
| 2.19 | Holland, R.A. and Kennedy, N.L., 1984.
1983 coal exploration report E.L. 983
Arckaringa Coalfield, S.A. Rank
Geological Services Report No. 215
(unpublished). | 5910-23 |

- 2.20 Holland, R.A. and Kennedy, N.L., 1984. 5910-23
1983 coal exploration report E.L. 1096
East Wintinna deposit Arckaringa
Coalfield, S.A. Rank Geological
Services Report No. 216 (unpublished).
- 2.21 Holland, R.A. and Kennedy, N.L., 1984. 5910-24
1983 coal exploration report E.L. 1087
and E.L. 1114 East Wintinna deposit
Arckaringa Coalfield, S.A. Rank
Geological Services Report No. 217
(unpublished).
- 2.22 Holland, R.A. and Kennedy, N.L., 1984. 5910-25
1984 exploration data report E.L. 1095
& E.L. 1114 Wintinna coal deposit
Arckaringa Coalfield, S.A. Rank
Geological Services Report No. 222
(unpublished).

3. ANALYTICAL REPORTS

The following analytical reports were submitted as appendices to drilling exploration and are still filed with them. Boreholes are listed in numerical sequence and the analyses referenced to the relevant drilling exploration report.

	<u>Analytical Laboratory</u>	<u>Drilling Expln. Rpt.</u>	<u>Env. No.</u>
MCR 6-7	S.G.S. Australia Pty. Ltd.	2.1	5910-4
MCR 7-8	"	2.5	5910-8
MCR 55-59	"	2.3	5910-6
MCR 70-74B	"	2.5	5910-8
MCR 76-77	"	2.3	5910-6
MC 95-97	Australian Laboratory Services	2.11	5910-16
MC 98	"	2.10	5910-14
MC 101	"	2.11	5910-16
"	"	2.16	5910-21
MC 106	"	2.10	5910-14
MC 116	"	2.11	5910-16
MC 122	"	2.21	5910-24
MC 123, MCL 123	"	2.16	5910-21
MC 126	"	2.22	5910-25
MC 128-129	"	2.16	5910-21
MC 130	"	2.17	5910-22
MCL 136, 142-143	"	2.22	5910-25
MCA	"	2.16	5910-21
BCR 11-13	S.G.S. Australia Pty Ltd	2.4	5910-7
BC 28	A.C.I.R.L. Ltd	2.12	5910-17
BC 34	Australian Laboratory Services	2.9	5910-12
		2.10	5910-14
BC 37-38	"	2.16	5910-21
BCA 46-49	"	2.22	5910-25
Pearce, J.S. and Gates, J.L., 1984. The drying of Wintinna coal in the Adelaide dryer. Adelaide & Wallaroo Fertilizers Ltd. -R & D Division, classification No. 4 -granulation - fluid bed systems report no. 26.		2.22	5910-25

Env. No.

4. LITHOLOGICAL LOGS

Test Hole, SM Bore and boreholes prefixed M were drilled for Meekatharra Minerals Ltd. Boreholes prefixed B were drilled for Balhoil Nominees Pty Ltd. Boreholes are listed in sequential order.

SM Bore	5910-26
Test Hole	5910-27
MR 1 to 7	not available
MCR 8 to 10	5910-26
MR 11 to 13	not available
MCR 14 to 16	5910-26
MR 17 to 23	not available
MR 24 to 30	5910-26
MR 31 to 41	5910-27
MR 42 to 47	5910-26
MR 48 to 51	5910-27
MR 52 to 54	not available
MR 55 to 59	5910-27
MR 60 to 67	not available
MR 68 to 75	5910-26
MCR 76 to 77	5910-27
MR 78 to 82	5910-28
MR 83	5910-29
MR 84 to 90	not available
MR 91 to 92	5910-28
MR 93	5910-29
MR 94	5910-28
MR 95 to 97	5910-29
MR 98	5910-28
MR 99 to 102	5910-29
MR 103 to 106	5910-28
MR 107 to 114	5910-33
MR 115 to 116	5910-29
MR 117 to 119	5910-28
MR 120 to 123	5910-30
MR 123 to 129	5910-31
MR 130 to 132	5910-33
MR 133 to 141	5910-31
MC 142 to 157	5910-32
MCA, MPT, MP 1 to 2	5910-31
BR 1	not available
BR 2 to 15	5910-34
BR 16 to 17	5910-33
BR 18 to 29	5910-35
BR 30 to 36	5910-33
BC 37 to 41	5910-36
BR 42 to 49	5910-37
BP, T, BP 1 to 2	5910-35

5. GEOPHYSICAL LOGS

* Principal logs include lithological descriptions, drilling details etc.

Composite logs show only geophysical logs.

Borehole	Logs Run		Vertical Scale	Comments*	Env.
	D density DD dual den. C caliper G gamma	N neutron R resistivity SR spont.pot. S sonic			
MPT, MP1	DD C G N	R SP	1:200	field	5910-38
MP 2	DD C G N	R	1:200	field	5910-38
MCR 1A to 2	D C G N	SP	1:200	principal	5910-38
MR 3				not available	
MC 4	D C G		1:200	principal	5910-38
MCR 4A to 5	D C G N	R SP	1:200	principal	5910-38
MCR 6 to 8	D G	R SP	1:200	principal	5910-38
MR 9	D		1:200	principal	5910-38
MR 10	D G	R SP	1:200	principal	5910-38
MR 11	D		1:200	principal	5910-38
MR 12 to 16	D G	R SP	1:200	principal	5910-38
MR 17				not available	
MR 18	G		1:200	principal	5910-38
MR 19				not available	
MR 20	D G	R SP	1:200	principal	5910-38
MR 21 to 22A	D G	SP	1:200	principal	5910-38
MR 23	D G	R SP	1:200	principal	5910-38
MR 24 to 30				not available	
MR 31 to 32	D G N	R SP	1:100	field	5910-38
MR 33	D		1:100	field	5910-38
MR 34	D C G N	R SP	1:100	field	5910-38
MR 35 to 37	DD C G N		1:100	field	5910-39
MR 38 to 39	DD C G N	R SP	1:100	field	5910-39
MR 40 to 41	DD C G N		1:100	field	5910-39
MR 42 to 47				not available	
MR 48 to 51	DD C G N		1:100	field	5910-39
MR 52 to 54				not available	
MCR 55 to 59	DD C G N		1:100	field	5910-39
MR 60 to 75				not available	
MCR 76 to 77	DD C G N		1:100	field	5910-39
MR 78				not available	
MR 79 to 81	DD C G N		1:200	composite	5910-40
MR 82				not available	
MR 83 to 86	DD C G N		1:200	composite	5910-40
MR 87A to 89	DD C G N		1:200	composite	5910-40
MR 87A to 89	DD C G N		1:100	field	5910-40
MR 90 to 101	DD C G N		1:200	composite	5910-41
MR 102				not available	
MR 103 to 110	DD C G N		1:200	composite	5910-42
MR 111 to 112	G N		1:200	composite	5910-42
MR 113	DD C G N		1:200	composite	5910-42
MR 114A	G N		1:200	composite	5910-42

Borehole

Logs Run

		D density DD dual den. C caliper G gamma	N neutron R resistivity SR spont.pot. S sonic	Vertical Scale	Comments*	Env.
MR 115 to 118	DD C G N			1:200	composite	5910-43
MR 119					not available	
MR 120 to 123	DD C G N			1:200	field	5910-43
MC 123	DD C G N	R SP S		1:200	field	5910-43
MCL 123 to 130	DD C G N	R SP		1:200	field	5910-43
MR 131					not available	
MR 132	G N			1:200	field	5910-44
MR 133 to 141	DD C G N	R SP		1:200	field	5910-44
MC 142 to 148	DD C G N			1:200	field	5910-44
MR 149				1:200	field	5910-44
MR 150 to 157	DD C G N			1:200	field	5910-44
BPT, BP1	DD C G N	R SP		1:200	field	5910-45
BP 2	DD C	R SP		1:200	field	5910-45
BR 1 to 2	D G	R SP		1:200	composite	5910-45
BR 3 to 10	D G N	R SP		1:100	field	5910-45
BCR 11 to 12	DD C G N			1:100	field	5910-45
BCR 13	DD G N			1:100	field	5910-45
BR 14 to 15	DD C G N			1:100	field	5910-45
BR 16 to 17	G N			1:200	composite	5910-45
BR 18 to 21	DD C G N			1:100	field	5910-46
BR 18 to 21	DD C G N			1:200	composite	5910-46
BR 22	DD C			1:100	field	5910-46
BR 22	DD C			1:200	composite	5910-46
BR 23	DD C G N			1:100	field	5910-46
BR 23	DD C G N			1:200	composite	5910-46
BR 24 to 27	DD C G N			1:100	field	5910-46
BR 25 to 27	DD C G N			1:200	composite	5910-46
BR 28 to 34	DD C G N			1:200	composite	5910-47
BR 35 to 36	DD C G N			1:200	field	5910-47
BC 37	DD C G N	R SP		1:200	field	5910-47
BC 38 to 39	DD C G N	R SP S		1:200	field	5910-47
BR 40 to 41	DD C G N	R SP		1:200	field	5910-47
BR 42 to 48	DD C G N			1:200	field	5910-47
BC 49	DD C			1:200	field	5910-47

Transparency as well as paper copies of the following logs exist:
MCR 1A to 2, MCR 4A to 15, MR 16, MR 18 and MR 20 to 23

5910/1

Env. No.

6. FEASIBILITY/EVALUATION REPORTS**6.1 POWER GENERATION**

Preece Cardew International Pty Limited, 1982. Proposal for the supply of thermal coal for power generation. (unpublished) 5910-48

Sturts Mining Ltd, 1982. Coal from Wintinna coalfield for power generation in South Australia. (unpublished) 5910-49

6.2 HYDROGEOLOGICAL/GEOTECHNICAL

Coffey & Partners Pty Ltd, 1983. Wintinna coalfield hydrogeological study. (unpublished) 5910-50

Coffey & Partners Pty Ltd, 1983. Wintinna coalfield hydrogeological & geotechnical study. 2 volumes (unpublished). 5910-51

6.3 ENVIRONMENTAL

Kinhill Stearns, 1984. Arckaringa coalfield (Wintinna project). Environmental studies Stage 1 report and Notice of Intent (NOI). (unpublished) 5910-52

6.4 GENERAL

Fluor Australia Pty Limited. Preliminary feasibility study for the Wintinna Coal project. (unpublished) 5910-52

Meekatharra Minerals Ltd, 1984. Proposal to the Government of South Australia for the Utilisation of the Wintinna Coal Deposit. 12 volumes (unpublished). 5910-53 to 65

Volume 1	Executive summary	5910-53
2	Geological report	5910-54
3A	Reserves statement	5910-55
3B	Geological plans	5910-56
4	Geotechnical and hydrogeological report	5910-57
5A	Open cut mining	5910-58
5B	Open cut mining cost tables	5910-59
6	Coal preparation and coal handling	5910-60
7	Infrastructure	5910-61
8	Environmental report	5910-62
9	Project description, summary cost estimates and construction tables	5910-63

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- 10 Market potential for Wintinna coal 5910-64
- 11 Commercial proposal (Not available) 5910-65
- 12 Mine site power station (1000MW) 5910-66

Additional submissions in response to 5910-67
coal quality queries made by coal
review group, F.E.A.C.

F.E.A.C. Coal Review Group, 1985. 5910-68
Coalfield selection for the next major
power station - Wintinna deposit
extracts. (unpublished).