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EL 116

MOUNT OGILVIE

FIRST PARTIAL SURRENDER REPORT FOR THE PERIOD 14/12/1973 TO 13/12/1974

Submitted by
Bridge Minerals Pty Ltd
1974

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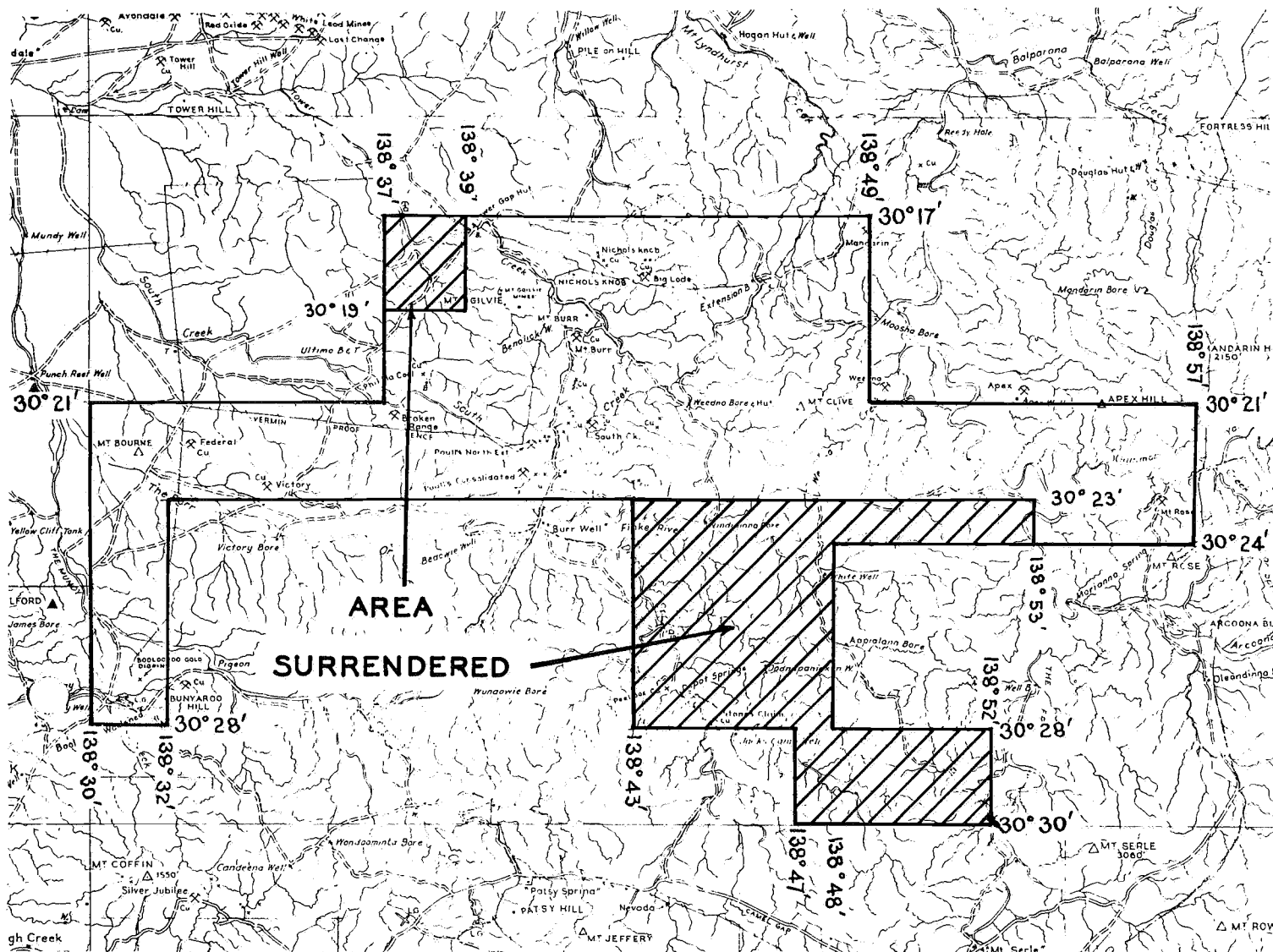
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101 Grenfell Street, Adelaide 5000

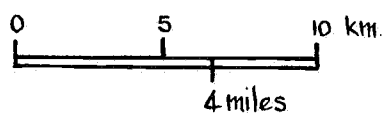
Telephone: (08) 8463 3000
Facsimile: (08) 8204 1880



Government of South Australia
Primary Industries and Resources SA



SCALE 1:250000



BRIDGE MINERALS PTY. LTD.
 SOCKET DM 936/73 AREA 463 km²
 1250000 N.A.M. COPLEY 332 km²

LOCALITY MT. OGILVIE — APPROX. 10 km N.E. OF LEIGH CREEK.

EL 116

EXPIRY DATE 13-12-74

EXPLORATION REPORT

RELINQUISHED AREA WITHIN
EXPLORATION LICENCE NO.116

LEIGH CREEK DISTRICT
SOUTH AUSTRALIA

BRIDGE MINERALS PTY. LIMITED

OCTOBER, 1974



D. J. Wright
J. S. Shirley
G. J. Dewar

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01 004

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I. INTRODUCTION

Exploration Licence No. 116 near Mt. Ogilvie in the North Flinders Ranges, South Australia, approximately 560 km due north of Adelaide, occupies an area of 463 sq.km. This area was granted by the Minister of Development and Mines on 14 December, 1973 for a period of one year.

An exploration program involving airborne reconnaissance, geological mapping, geophysical surveying and auger drilling was carried out over a number of prospects within the E.L. from January, 1974 to August, 1974. As a result of this work, a number of areas of interest were outlined and an application for renewal of E.L.'s to cover these areas has been lodged with the South Australian Mines Department. The remainder of the E.L. is to be relinquished and this report is a summary of the work carried out by Bridge Minerals Pty. Limited on this area.

Text Fig. 1 shows those areas to be retained and that to be relinquished.

006

II. TITLE SEARCH

Dr. G. Dewar carried out a title search of all relevant mineral claims within the Copley area. Appendix I contains a summary of the leasing data.

III. AIRBORNE RECONNAISSANCE

Geologists, G. Dewar, D. Wright and J. Shirley carried out an airborne survey of the exploration licence area to locate prospective areas for follow-up ground reconnaissance.

As a result of this survey, the following were selected for subsequent examination on the ground.

Nichols Nob	South Creek
Mt. Burr	Mount Rose
Broken Range	Victory
Dead Finish	Federal
Boolooroo	

IV. REPORT APPRAISAL

Information was collected from the South Australian Department of Mines on expired E.L. and S.M.L. areas in the Copley region. This information was collected and analysed before a field program was initiated as a means of following up the prospects located by the aerial reconnaissance. Appendix II contains a list of the relevant reports and a brief summary of salient points contained within.

V. FIELD WORK

The greater part of the field work was carried out within those parts of the E.L. which are to be retained. This work is detailed in the "Exploration Report - Exploration Licence No. 116", which has been submitted to the South Australian Department of Mines. However, the following prospects were investigated on the ground within the relinquished area.

a) Peal Box

The Peal Box copper prospect is situated approximately 100 metres west of Depot Spring. Malachite is exposed in a 5 metre long by 1 metre deep cut and several shallow prospecting pits. The 15 metre long weakly mineralised zone strikes 105° and dips at 55° south, that is parallel to the host siltstone. Malachite and azurite are smeared over the joint and cleavage planes of the silt over a maximum width of 1 metre. Prospecting in the area failed to locate any significant strike extensions to the lode although traces of malachite were observed in a creek some 20 metres north of the exposed lode. The prospect was thought to have limited potential, and did not warrant further investigation.

b) Big Lode (Mont Pele)

007

The Big Lode Copper Mine is situated approximately three miles north-east of Mt. Burr and 1 mile east of Nichol's Nob Mines. No record of mine production from the workings was available.

The prospect is located in very steep rugged terrain accessible only by four-wheel drive vehicles. Malachite and azurite occur within a 10 ft. wide breccia or shear zone which has been strongly silicified and ferruginised. The east-west shear is mineralised weakly over a strike length of 50 metres.

The shear dips vertically and runs perpendicular to the strike of the sequence of silts with dolomite bands which form a large raft within the Mt. Burr Diapir.

As a result of the reconnaissance investigation no further work was recommended.

VI CONCLUSION

After carrying out the first years exploration, it was decided to split the E.L. into the two most prospective areas (Text Fig. 1) and relinquish the central area. It was concluded that the relinquished area did not warrant a more detailed investigation after a literature search and airborne reconnaissance survey followed up by groundwork on a number of small mineral exposures, which did not yield significant results.

APPENDIX I

008

SCHEDULE OF MINERAL CLAIMS

COPLEY 1:250,000

LEGEND

Plain numbers - areas held under legal title

009

X - holdings shown as lapsed on Department maps

X - holdings lapsed but not so marked on Department maps

• - multiple holdings partly lapsed, usually not so shown on Department maps.

SCHEDULE OF MINERALS CLAIMS - 1-MILE MAPS IN COPLEY 1:250,000

MAP	MAP NO.	MINERAL CLAIMS	COMMENTS	MINERAL LEASES	COMMENTS
adnurst lication rect)	790	74 - 75 98 - 100 X 5377-86 X 6172-87 X 6194-95 X 6196 X 6197-99 X 6200-06 X 6243-45 X 6246-51 X 6254-55 • 6502-11 6519-20 X 6582-84 X 6722 X 6724 X 7259-66 X 7359-60 • 7387-7401 X 7503 7651-56 7671 7680 X 7681-86	Susp. to 14/7/73 Susp. to 15/12/73 6505,06; 6509-11 Lease applied Lease applied for 7387-89,7394-96,7399 Lease applied for Optioned to Cultus Pacific & lease applied for. Optioned to Cultus Pacific & lease applied for. Lease applied for	4051	

MAP	MAP NO.	MINERAL CLAIMS	COMMENTS	MINERAL LEASES	COMMENTS
1e	793	X 1349	Area 3	2999	Area 1
		X 1367	Area 3	X3372-73	Area 2
		X 1395	Area 3 extended	X3480	Area 3
		X 2102-03	Area 1		
		X 4439			
		X 5047-48	Area 3		
		X 5226			
		X 5267-68	Area 3 extended		
		X 5301-02	Area 2 Mt. Rose		
		X 5362			
		X 5516-17	Area 1 Federal		
		X 5591-92	Area 1		
		X 5888-90	Area 3 extended		
		X 5891	Area 3		
		X 6009-11	Area 1		
		X 6038-39	Area 3		
		X 6040-41	Area 1		
		X 6111	Area 1		
		X 6113	Area 1		
		X 6117-18	Area 1 - Victory		
		X 6338-42	Area 1 - Federal		
		X 6526-27	Area 2		
		X 6528-29	Area 1		
		X 6531	Area 1		
		X 6532-35	Area 1 extended		
		X 6536-39	Area 1		
		X 6540-44	Area 2		
		X 6585-86	Boolooroo		
		6737-40	Area 1 Lease applied for		
		X 6821			
		X 7049	Area 1		
		X 7204-09	Area 3		
		X 7218-19	Area 1		
		X 7220-23	Area 1		
		X 7224-28	Area 1		
		X 7305			
		X 7360-61			
	794	95	Area 7 <u>no susp.</u>		
		112-114	No mines <u>no susp.</u>		
		122	No mines <u>no susp.</u>		

MAP	MAP NO.	MINERAL CLAIMS	COMMENTS	MINERAL LEASES	COMMENTS
ana (continued)	794	X 7155-56 X 7158-64 ● 7646-47	Area 7 Area 7 Area 7 7646 Lease applied for		
ley	795	X 5350 X 5363 X 5364 X 5511 X 6530 X 6553-74 X 6758-60 X 7010-12 X 7323-43	Assim. in E.L.1? Mt. of Light, assim. Mt. of Light, assim. Mt. of Light, assim. Mt. of Light, assim. Mt. of Light, assim. Mt. of Light, assim. Area 4 Mt. of Light, assim.	X 1984 X2813-20	Assim. in E.L. 1?
epena	796	1 - 19 5463-64 X 5816-19 X 6157-59 X 6813 X 6816-19 X 6908-27 ● 7023-34 X 7321-22 OGC 7435 7496 7497-98	Elsie Adair Lease applied for Lease applied for Area 3 Area 6 7030-lease applied for Area 6 Lease applied for Area 6 Lease applied for	X 2932	Area 6
owie (application effect)	803	151-52 1807 X 5441	<u>Susp. to 9/6/73</u> Lease applied for		
roona (application effect)	804	X 5257 X 5273 X 6067-72		3793-99	

MAP	MAP NO.	MINERAL CLAIMS	COMMENTS	MINERAL LEASES	COMMENTS
ratana applica- n effect)	805	X 5373 X 5665 X 5729-31 X 5803-15 X 6309-17	E.L. 71 SML 704 SML 704 SML 704 SML 704		
ratana applica- n effect)	806	X 5204 X 5217 X 5258-59 X 5283 X 5284-85 X 5286 X 5568 X 5845	E.L. 71 SML 703 SML 703 SML 703 SML 703 SML 703 E.L. 71 SML 703	4059-67	SML 703
e	810	X 5470 X 7508-11	Lease applied for	3068-71	check out
a applica- n effect)	811	6012 X 6947-49 X 6950-53 X 6954 X 6955 X 6997-7006	Lease applied for		Check show out
a	816	146-150 X 5076 X 5243-45 X 5473-75 X 6263 X 6434 X 6525 X 6578-81 X 6779 X 6896 X 7210 7497-98	Area 9 <u>Susp. to 9/6/73</u> Area 8 Area 6 Area 6 Area 6 Area 6 6578 - Lease applied for Area 6 Area 6 Area 6 Area 6 Lease applied for		

LEASE NO.	ON MAP	REGISTERED OWNER	AREA (ha)	VALID TO	SUSPENSION	COMMENTS
9	796	Boolooroo Mining Company, Box 61, St. Peters, S.A. 5069	229 Lease	10/7/73 applied for	14/7/73	Elsie Adair
75	790	Frank Rieck, 583 Goodwood Rd., Col. Light Gardens, S.A. 5041	40	3/10/73	15/12/73	
	794	Herbert Starr, Fifth St., Quorn	20	22/10/73	None	Area 7 - Plaint
100	790	Frank Rieck	56	30/10/73	15/12/73	
-114	794	Herbert Starr	?	19/11/73	None	
	794	Henry Heppner, Tanunda, S.A. 5352	203	17/12/73	None	No Mine
5-152	816	Bruce Burstem, 19 Gladstone Road, Nth. Brighton S.A. 5048	109.9	21/3/74	9/6/73	Area 9 - Plaint
	803					
49	793					Area 3
57	793					Area 3
5	793					Area 3 - Extended
07	803	James Herbert Coad, Box 54, Hawker, S.A. 5434 (app. 20/1/53)	15 ac.	Lease applied for		Barytes
12-03	793					Area 1
39	793					
7-48	793					Area 3 No Mines
76	816			Lapsed		EL 71
77	806					SML 703
76	793					
3-45	816					Area 8
7	804					
8-59	806					SML 703
7-68	793					Area 3 Extended
3	804					
3	806					SML 703
4-85	806	5284 - Geoffrey Hugh Stewart, 19 Gladstone Rd., Brighton, S.A. 5048 (LAPSED)	40 ac.	Lapsed		
		5285 - B.J. Burslem (LAPSED)	40 ac.	Lapsed		SML 703
6	806					SML 703
1-02	793					Area 2 Mt. Rose
	795					EL 1 (EZ)
2	793	D.J. Paltridge, Box 12, Birdwood R.O. Sickerdick, Lyndock	20 ac.	Lapsed		

LEASE NO.	ON MAP	REGISTERED OWNER	AREA (ha)	VALID TO	SUSP- ENSION	COMMENTS
63	795	D.J. Paltridge, Box 12, BIRDWOOD	40 ac.	Lapsed		Mt. Light assim.
64	795	R.O. Sickerdick, Lyndock " " "	20 ac.	Lapsed		Mt. Light assim.
73	805					
77-86	790					
41	803					
63-64	796	Tapley Mining Co., c/o Rare Earth Corp. P.O. Box 760D, Adelaide, S.A. 5001	80 ac.	LEASE APPLIED FOR		Elsie Adair
70	810					
73-75	816	LAPSED				
11	795	Rosmann Syndicate	38 ac.	Lapsed		Mt. Light assim.
16-17	793	" "	76 ac.	Lapsed		Area 1 - Federal
68	806					EL 71
91-92	793					Area 1 - Broken Ra.
65	805					
29-31	805					
808-15	805					
16-19	796					Area 3
45	806					SML 703
88-90	793	Australian Copper Co. P/L Box 857, Kentown 5067	120 ac.	Lapsed		Area 3 Extended
91	793	" " "		Lapsed		Area 3
09-11	793					Area 1
2	811	F.H. Faulding & Co. Ltd. 13 James Place, Adelaide Magnesite	37 ac.	Lease Applied For		
38-39	793	Aust. Copper	40 ac.	Lapsed		Area 3 No mines
40-41	793	Aust. Copper	80 ac.	Lapsed		Area 1 MtQglivie
57-72	804	D. Miller & T. Agnew c/o Box 1, Leigh Creek SA	232 ac.	Lapsed		
11	793	Aust. Copper Co.	40 ac.	Lapsed		Area 1 Mt. Burr.
13	793					Area 1 Mt. Burr.
17-18	793	Aust. Copper Co.	80 ac.	Lapsed		
57-59	796					Area 3
72-87	790					
94-95						
96						
97-99	790					
00-06	790					

LEASE D.S.	ON MAP	REGISTERED OWNER	AREA (ha)	VALID TO	SUSP- ENSION	COMMENTS
43-45 46-51 54-55 63	790 790 790 816	A.C. Lively & C.L. Lawrence, c/o Angepina Station via Copley	40 ac.	Lapsed		Area 6
09-17 38-42	805 793					Area 1
44 34	816	W. Hissey, Blinman, S.A. 5730	78 ac.	Lapsed		
02-11	790	6502-04 & 07 L.R. Jarrett - Lapsed, 6505-06 LRJ Box 18 Bridgewater 5165. Lease Applied. 6508 lapsed 6509-11 F.W.C. Rieck - Lease Applied	200 ac. current	6505,06, 09-11 Lease Applied.		
2-20	790	H.A. Schoof, Glebe Road, Balhannah, S.A. 5242	80 ac.	Lease Applied For		
25	816	Chrysoprase Gems (Aust.) P/L, 89 Spring Street, Bondi Junction 2022	38 ac.	Lapsed		Area 6

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CASE NOS.	ON MAP	REGISTERED OWNER	AREA (ha)	VALID TO	SUSP-ENSION	COMMENTS
26-27 8-29	793 793	RMC Minerals P/L 82 East Tce., Adelaide	160 ac.	LAPSED		Area 2 Area 1 Mandarin
0	795	Fox Mining & Expl P/L 57 Maesbury St., Kensington	40 ac.	LAPSED		Mt. Light, assim.
1	796	RMC Minerals P/L	40 ac.	LAPSED		Area 3 Ape
2-35	793	RMC Minerals P/L	160 ac.	LAPSED		Area 1
6-39	793	"	160 ac.	LAPSED		Weedna Area 1
0-44 3-74	793 795	RMC Minerals P/L 6553-56 Paltridge & Sick- erdick; 6557-74 Rossman	200 ac.	LAPSED		
81	816	Lawrence C.L. & Lively A.C. c/- Angepina Station via Copley S.A. Lapsed except 6578 for which lease app- lied.	40 ac. current	LAPSED LEASE APPLIED FOR (6578)		Mt. Light, assim. Area 6
2-84	790	6582-83 L.R. Jarrett 6584 F.W.C. Rieck	120 ac.	LAPSED		
5-86 2	793 795 790	P. Hayes 80 Seaford Rd., Seaford	37 ac.	LAPSED		Boolooroo Mt. Light
7-40	793	Ellen Mary Nichols, Box 857 G.P.O. Adelaide	160 ac.	LEASE APPLIED FOR		Area -1 Paull's
60	816	Fox Mining	114 ac.	LAPSED		Area 6
18	796 796 793 816	J. Van Santen, Flat 11, 3 1st Drive, Ascot Park " J.P. Henderson, 17 Currie St., Adelaide 5000 C. L. Lawrence & A.C. Lively	38 ac. 114 ac. 40 ac. 40 ac.	CANCELLED CANCELLED CANCELLED CANCELLED		No mines No mines No mines Area 6
27	796	6908-13, 6917, 6924, 6926-27 J. Van Santen, remainder W. G. Raines, Tuesner Ave Morphett Vale				
49	811	USAM Exploration P/L 208 Franklin St., Adelaide	120 ac.	CANCELLED CANCELLED		No mines
53	811 811 811					
7006 12	811 795	L. Katona, 35 Devon St., Goodwood 5034	120 ac.	CANCELLED		Area 4
34	796	A.C. Lively & C.L. Lawrence Cancelled except 7030, for which lease applied	40 ac.	LEASE APPLIED FOR (7030)		Area 6

LEASE NOS.	ON MAP	REGISTERED OWNER	AREA (ha)	VALID TO	SUSPENSION	COMMENTS
49	793	R.O. Sickerdick	39 ac.	LAPSED		Area 1 Plaint Mt. Burr
55-56	794	C.V. Fielding, 61 Leabrook Drive, Rostrevor 5073	80 ac.	CANCELLED		Area 7
58-64	794	C.V. Fielding, 61 Leabrook Drive, Rostrevor, 5073	280 ac.	CANCELLED		Area 7
04-09	793	N.B. Oliphant, 18 Leonard Tce., Torrens Park 5062	234 ac.	CANCELLED		Area 3 no mines
10	816	Chrysoprase Gems (Aust) P/L	38 ac.	CANCELLED		Area 6
19	793	Australian Aquitaine P/L c/- 18 Turners Dve. Coromandel Valley 5051	80 ac.	CANCELLED		Area 1
20-23	793			CANCELLED		
24-28	793	Australian Aquitaine P/L	200 ac.	CANCELLED		
29-66	790	P.E. Rieck, 583 Goodwood Rd., Col. Light Gardens (7259-60 & 65) & L.R. Jarrett (7261-64) & F.W. Rieck (7266)	320 ac.	CANCELLED		
05	793	F.W.C. Rieck	40 ac.	CANCELLED		No mines
21-22	796	7321 W.G. Raines				No mines Mt. Light
		7322 J. Van Santen	76 ac.	CANCELLED		
28-43	795	Fox Mining		CANCELLED		
59	790	P.E. Rieck	40 ac.	CANCELLED		
60	790/793	E.W. Jarrett 5155				No mines No mines
		P.O. Box 18 Bridgewater	40 ac.	CANCELLED		
	793	F.W.C. Rieck	40 ac.	CANCELLED		LEASE APPLIED FOR 7387,88,94-96,99
7-7401	790	7387-88,7393-94,7398-7400				
		P. E. & F.W.C. Rieck, remainder E.W. & L. R. Jarrett. 7387,88,94-96,99)	169 ac.			Area 6
		Leases applied for	current			
C 7435	796	C.L. Lawrence c/- Angepina Stn. Via Copley	4 ac.	LEASE APPLIED		Area 6
96	796	C.L. LAWRENCE	114 ac.	LEASE APPLIED		Area 6
7-98	816					
3	790	A.T. Johnson, 37 Waratah Pde., Narraweenah 2099	37 ac.	CANCELLED		
08-11	810	F. H. Faulding & Co. Ltd. Winwood St., Thebarton 5031	136 ac.	LEASE APPLIED FOR		
46-47	794	7646 V. Vidic, 286 Hindley St., Adelaide	40 ac.	LEASE APPLIED FOR		
		7547 J. Roufos, 139 Hindley St. Adelaide	40 ac.	CANCELLED		Area 7
1-56	790	S. Kennett, 27 Burns St., Hamilton Vic. Optioned to Cultus Pacific	240 ac.	LEASE APPLIED FOR		

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LEASE NOS.	ON MAP	REGISTERED OWNER	AREA (ha)	VALID TO	SUSP-ENSION	COMMENTS
571	790	F.W.C. Rieck Optioned to Cultus Pacific	40 ac.	LEASE APPLIED FOR		
580	790	F.W.C. Rieck	40 ac.	LEASE APPLIED FOR		
581-86	790	7681 P.E. Rieck; 7682-83 F.W.C. Rieck; 7684 L.R. Jarrett; 7685-86 E.W. Jarrett	240 ac.	CANCELLED		
SCHEDULE OF MINERALS LEASES - COPLEY 1:250,000 SHEET						
4	795	CANCELLED				Assim.in E.L. 1?
3-20	795	CANCELLED				
2	796	CANCELLED				
99	793	A.J. & E.A. Fels Mern Merna via Hawker (copper)	40 ac.	30/6/74	not current	Area 1
8-71	810	F.H. Faulding & Co. Ltd., G.P.O. Box 1415H, Adelaide (Magnesite)	160 ac.	30/6/81	none	
2-73	793	CANCELLED				
30	793	V. Vidic, S.M. Kristoff, K.A. Walters & E. Shelley of Andamooka Opal-fields		EXPIRED		
3-99	804	H.A. Schoof, Glebe Rd., Balhannah, S.A. 5242	120 ac.	30/6/73	11/8/73	
	790	Cultus Pacific N.L. Manhattan Centre, 107 Walker St., Nth. Sydney	8 ha.	20/12/79	12/5/73	
9-67	806	BHP Co.Ltd., 41-47 Currie St., Adelaide	125 ha	8/2/73	7/2/80	

APPENDIX II

019

REVIEW OF REPORTS TO THE S.A. MINES DEPARTMENT ON
EXPIRED E.L. AND S.M.L. AREAS IN THE COPLEY REGION

- * Env.1509 (Vols 1 & 2) - * extended summary in Section B - SML 481 - Mt. Burr - Aust. Aquitaine
Tested Umberatana sediments below Tindelpina Member -
Cu to 0.2% and anomalous in this horizon (tillite) -
copper partly detritic and partly epigenetic. Infer climate unsuitable however Paull Consolidated on red beds.

Good structural regional map and detail Mt. Burr to Paull Consolidated. Rather fine drill-log sheets.

Env.1526 - SML 429 - Mt. Burr - Andromeda
Geochem sampling only, for negligible results

Env.1329 - SML 391 - Mt. Burr - Andromeda
Geochem sampling only - negligible results

- * Env.927 - SML 170 - Beltana - Mt. Isa Mines
Beltana Diapir possibly host block with peripheral conglomerate (outwash). Maps of Black Feather & Red Range workings.

- * Env.1162 - SML - Beltana - Mt. Isa
Continuation of Env.927. Discussion of Beltana Diapir. Well-considered geochemical sampling programme. Drilling of Red Range & Black Feather prospects, with results.

Env.1912 - SML 656 - Mt. Coffin - Southern Cross
Negligible

Env.660 - SML 115/129 - Lake Torrens Area - MEPL
Very ambitious exploration of over 14,000 sq. miles for Pb-Zn in basal Cambrian carbonate rocks. Encouraging initial results.

Env.961 - SML 178- Sliding Rock - EZ
Geochemical stream & grid sampling. Sliding Rock vicinity only area with potential.

- * Env.1308 - SML 196 - Beltana - Carpentaria
Follow-up of SML 170 (Env.1162)
Copper Queen and Black Feather drilled out.

Env.1785 - SML 609 - Mt. Bayley - Aquitaine
Mt. Bayley gossan assays Zn 951, Cu 589, Ni 179, Co 373 ppm.
+ Notes mapping round Mt. Bayley by Anaconda.
Cu background 10 ppm but creek below workings contains 4300 ppm persisting to 680 ppm 3,000 ft. below workings. Creeks draining dolerite also contain anomalous values.

Anaconda sampled Mt. Bayley dolerite & got 230 to 1370 ppm Cu. Mt. Bayley production 75 tons concentrate (from 175 tons ore) with 7-17% Cu. Seven shafts 20 - 132 ft. deep over 400 ft. length, in vertical formation 30 ft. wide. Copper as modules of malachite & azurite said to occupy a mylonitised zone on the edge of the archaeocyathed limestone Cambrian Parachilna Formation contacting diapir to east). Note useful geological map of Mt. Bayley area and syncline to east as far as Donkey Well.

Env. 766 - SML 1-2, 133; Mt. Rose - Helmut Oppermant
Geological mapping by William Johnson
Geochem by McPhar, IP by McPhar (good anomalies)
No informative reporting
Anomalies strong (often no reading) and at 200-300' depth
in many cases.

021

Env. 1339 - SML 385 - Mt. Serle - Southern Cross
Geochem by McPhar only
Nothing markedly interesting
Covers Stones Claim, Ordnapanickan Well etc.

Env. 1130 - SML 283 - Sliding Rock - EZ
Good stream-sediment anomaly in lead-zinc on stratified
Cambrian Parachilna Formation and basal dolomitic members
of the Archacocyathed Limestone. These formation are rich
in surface manganese and iron oxides which absorbed zinc
to cause the anomaly.

Chip sampling of another favourable area at Black Range
Spring showed lead and zinc in diapiric breccias and
adjacent Oraparrina Shale and Parara Limestone. Environment
not suitable for base-metal mineralisation so area relinquished.

Env. 623, 664, 732, 773 - SML's 113, 136, 142 - Copley Regional
- Anaconda

Env. 623 - Very regional geochem, Good drainage map.
Env. 664 - Puttapa zinc defined. (Purple) shale of Bungereo
formation carries copper but formation thin except at
Muckatoona where up to 24 ft. recorded and grade low.
Large block of pyritic dolomite near Mt. Bayley mine too
low grade (copper). Block of pyritic Sturtian tillite
in Muchatoona Diapir also too low grade (copper).

Puttapa zinc considered to be solution-redeposited from
original low concentration in adjacent Ajax Limestone.

Bungereo Formation: syngenetic copper is persistent in
thin bands of green shale & dolomite in the predominantly
purple shale of the Bungereo Formation - e.g. at Mt. Friday
Well shale sample 52 thin dolomite band 1.2%, but combined
thickness below 2 ft. & this interrupted by many bands of
barren shale. However, Cu - bearing horizon increases to
15-20 ft. over 1 mile at Muckatoona, where grey shale is
extensively weathered & chip samples contain only 23-41
ppm Cu; limonitic-gossan samples recorded 240, 220 & 5500
ppm Cu. * Follow this up - copper could have concentrated
at depth.

Tindelpina Shale Member contains syngenetic copper but
grade universally low.

Diapiric blocks: NW of old Mt. Bayley mine a block of
pyritic dolomite ca 2000 x 650 ft. contains disseminated
Cu sulphide & carbonate and calcite veins cutting it con-
tain sulphides. Chip samples however returned only 230-
1370 ppm Cu.

East of Muckatoona, a block 300 x 450 ft. of Sturtian
tillite contains traces of Cu sulphide & carbonate but a
relatively fresh sample returned only 0.09% Cu.

Calcite veins on the northern boundary of a small diapir
SW of Patchawarra Gap contain traces of oxidised Cu-
bearing sulphide but most veins are barren.

Old Nuccaleena: lode 12-15 ft. wide diminishing downwards, Ch py & py assoc. with coarse siderite occurs in a series of veins along faulted contact between Tapleys Hill Shale to the south & west and Marinoan shales, limestones & dolomites to the north. Limonitic gossan east of the open cut extends for about $\frac{1}{2}$ a mile but chip-samples return only 3-9 ppm Cu.

Env.937 - SML 184A - Angepina - EZ

Monsterous geochemical programme.

Env.1547 - SML 428 - Beltana/Mt. Bayley - Exoil/Transoil

Large geochemical programme.

* Env.1701 - SML 525 - Beltana - Carpentaria

Final checking on Red Range area, 1 percussion hole but no good results.

Env.928 - SML 175 - Angepina, Muckatoona - Carpentaria

Bungaroo Formation at Muckatoona changes thickness across penecontemporaneous faults - penecontemporaneous syngenetic exhalative mineralisation? Mines area and gossan shedding gold at Angepina Goldfield extensively sampled, then drilled but results completely negative - max. Cu assay at Muckatoona 0.26%. All holes reached target, though most did not reach water-table; however, drilling considered efficient.

Env.1289 - SML 359 - Angepina/Muckatoona - Carpentaria

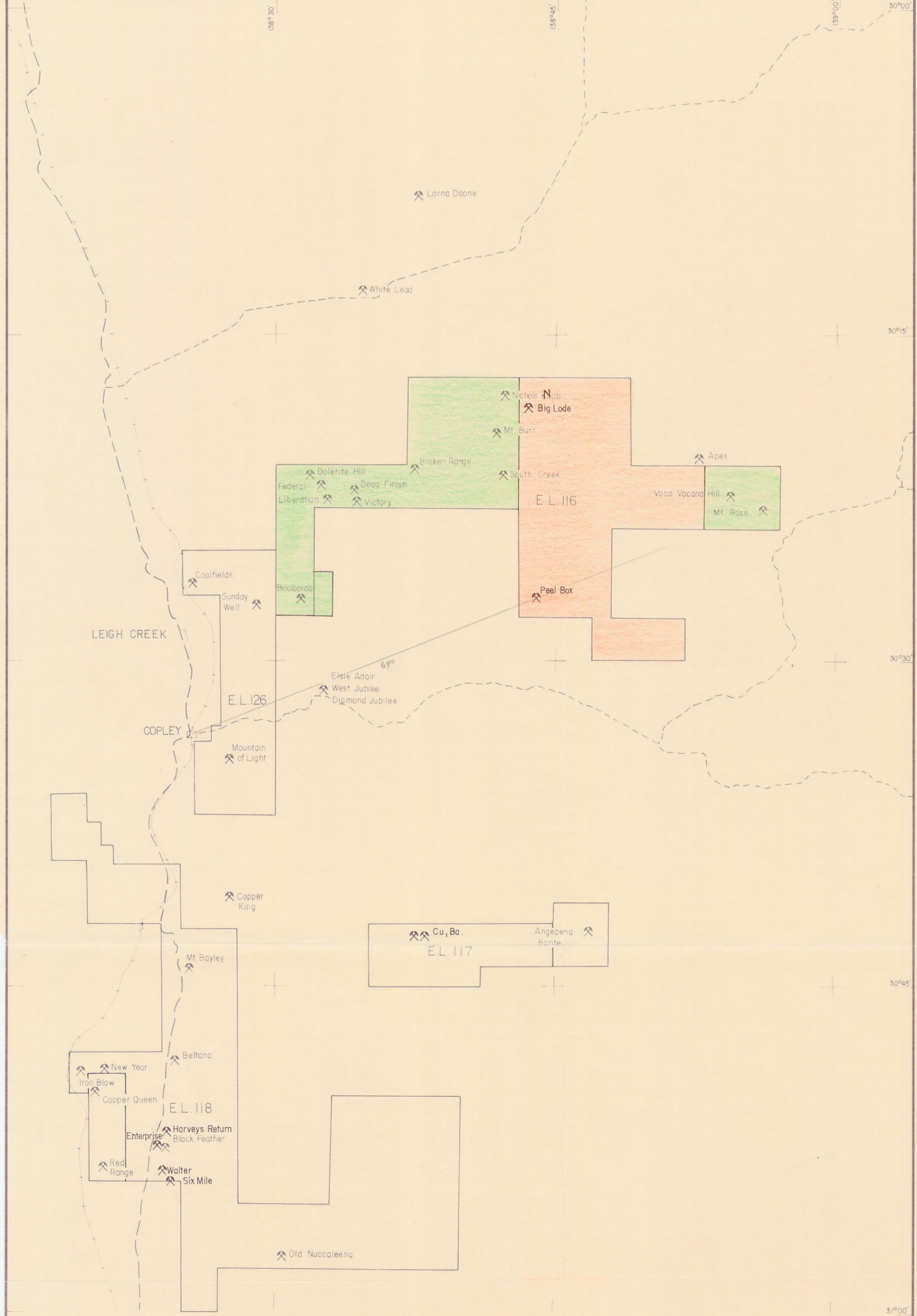
Deep drilling below the Angepina ironstone showed lode thinning, but still limonitic 560 ft. below surface. Area relinquished.

Env.1650 - SML 563 - Alioota - SA Barytes

Mapping & trenching of Bungaroo Formation by Robertson Research. First time I have seen consultants recommend that an area be dropped.

Env.1129 - SML 312 - Mt. Bayley - EZ

Geochemical programme not successful.



- New E.L. Application
- Relinquished Area

1:250,000
0 4 8 12 Miles

2450-1

BRIDGE MINERALS PTY. LTD.

RELINQUISHED AREAS
E.L.'s 116, 117 & 118
LEIGH CREEK DISTRICT
SOUTH AUSTRALIA

GEOLOGIST: D.J.W.	DRAWN: G.J.G.
DATE: 22-10-74	DRWG. NO.: SA/38

TEXT FIG. I.