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**Merrywood Coal Company Pty. Ltd.**

**E.L. 21/91 - Mt. Rex**

**Annual Report**

**Year 4 (14/5/96 - 14/5/97)**

**MICROFILMED**  
FICHE No.014272-

MINERAL RECORDS  
EL21/91  
12 MAY 1997  
See folio 74

K.C. Morrison  
9 May 1997

## INTRODUCTION AND TENEMENT DETAILS

E.L. 21/91 is a 6 km<sup>2</sup> tenement in the Mt. Rex area, N.E. Tasmania (Figure 1). The licence was granted in 1993 and reduced from 16 km<sup>2</sup> to 6 km<sup>2</sup> in 1995. The 50 hectare enclosed lease 1008 P/M is excluded.

Merrywood Coal Company Pty Ltd holds 100% equity in the licence.

This report covers exploration completed in Year 4.

## REVIEW OF PREVIOUS WORK

The prospectivity of E.L. 21/91 for Merrywood Coal is based on the remaining unmined coal in the Stanhope-Mt. Christie coalfield and the potential to discover additional shallow reserves at sites where the coal measures may sub-crop below shallow depths of dolerite scree (Figure 2).

The Stanhope, New Stanhope and Mt. Christie mines are estimated to have produced some 400,000 tonnes of coal from 1923 to 1973 (Bacon, 1983) and in 1981 the Fenhope Colliery commenced as a small one-man underground operation on a 3.6 metre good quality seam. The Fenhope mine is currently held under lease 1008 P/M which covers some of the most prospective ground in the known coal field (Bacon, 1991).

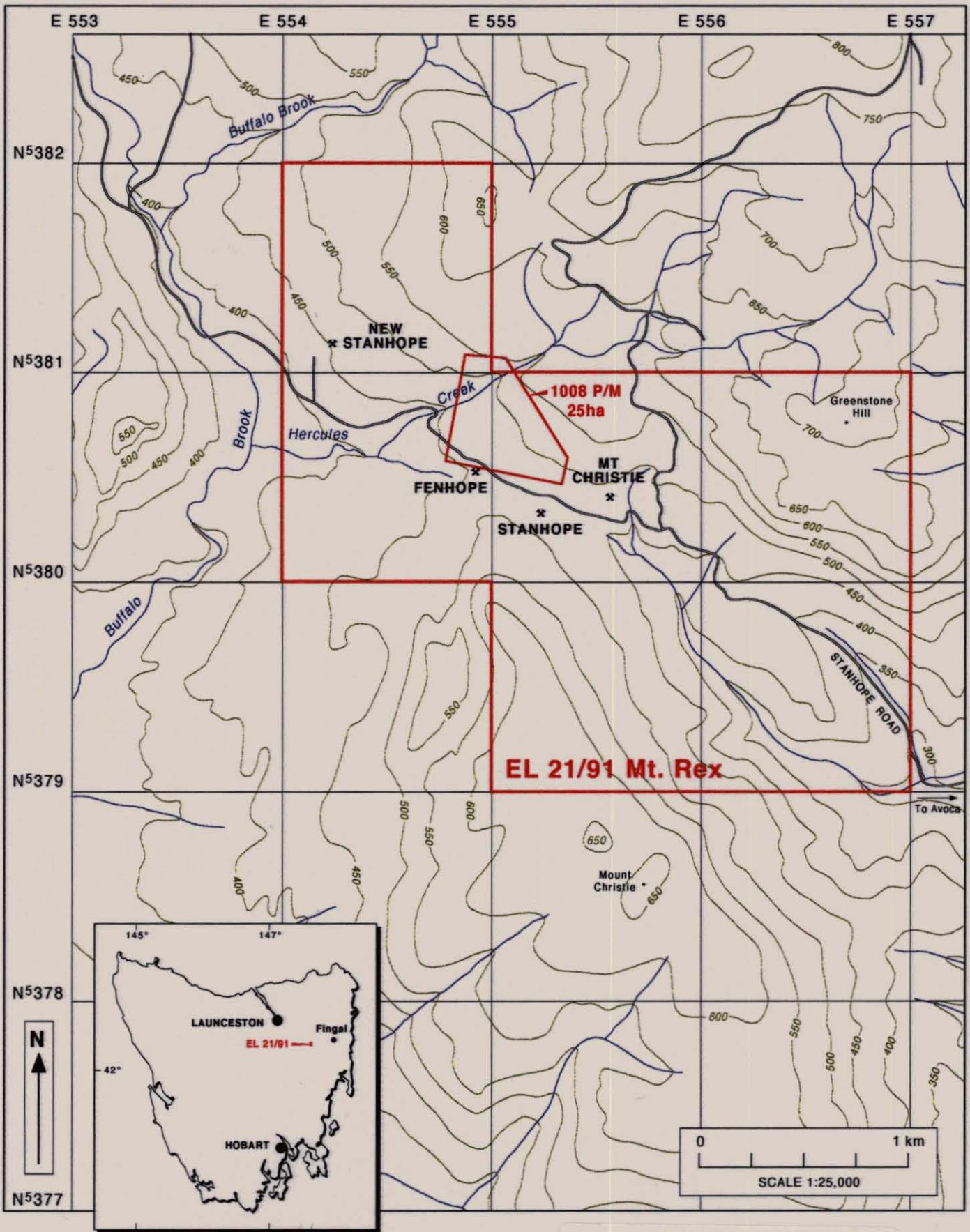
In 1985-86, Avoca Transport drilled 7 shallow holes (from 10 -26 metres) near the old Stanhope workings.

Two holes (ATS 57, 58) intersected + 2 metre seams. The drilling showed that the deposit is fault-bounded on the S.W. side of the workings, but good quality coal was intersected in the old pillars.

In 1987 Avoca Transport drilled one hole (ATS 56) near the New Stanhope mine and intersected a gross 3.82 metre coal seam. The Avoca Transport work is described by Nelson and Associates (1986).

During Licence Year 2, 10 x 30 kg grab samples of reject coal were collected from the New Stanhope waste rock dump. Qualitative washing tests at Merrywood indicated that the material contained too much high ash coal and non coal rock to produce a viable blending product. Consequently no analytical work was undertaken.

In April 1996 two open hole percussion droll holes (MS-1 and MS-2) confirmed that a panel of unmined coal exists to the south and west of the Stanhope underground workings. Coal seam intersections for 3.4 and 2.6 metres, under 22 metres and 13.8 metres of roof sandstones respectively were encountered. A third hole (MS-3) at New Stanhope was unsuccessful in penetrating dolerite talus in Hercules Creek, near the western boundary of 1008 P/M.

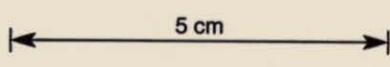
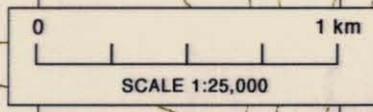
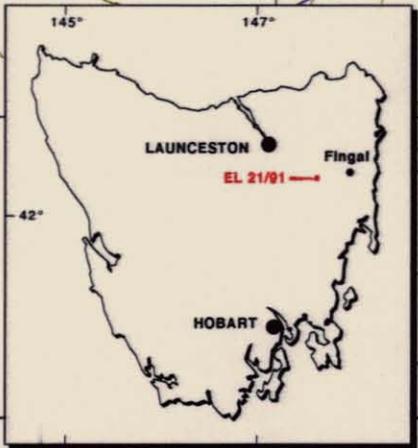
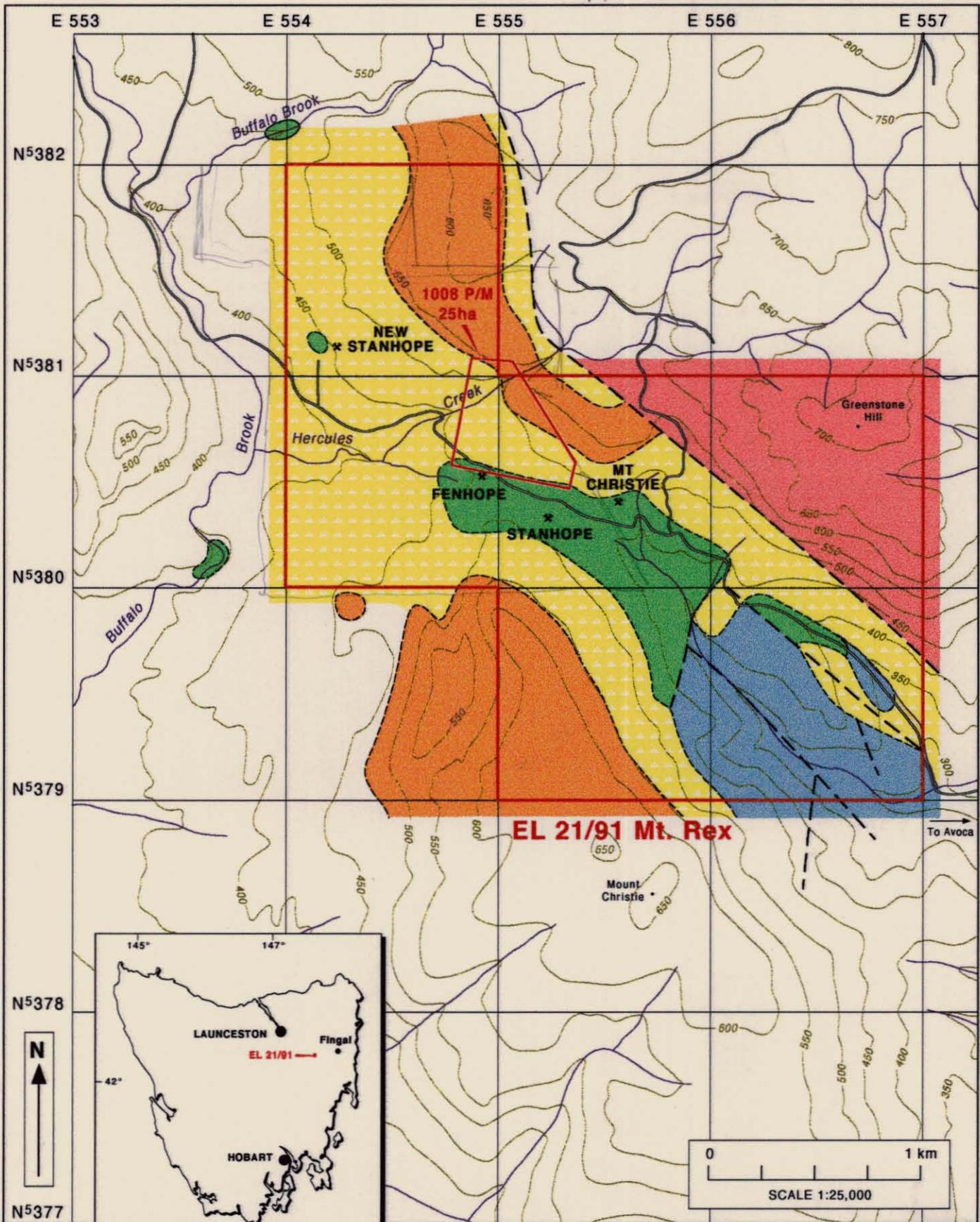


**Fig 1**

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<b>MERRYWOOD COAL COMPANY</b>		
EL 21/91 Mt. Rex Location Plan		
Author: K.C.Morrison	Drafting: R.Carroll	Date: 28.1.1997

ML 1640 PM 249ha



- Talus - Mainly Dolerite
- Jurassic Dolerite
- Upper Triassic - Coal Measures Rocks
- Permian - Triassic Sandstones, Lutites
- Devonian Granite
- Fault

**Fig 2**

<b>MERRYWOOD COAL COMPANY</b>		
<b>EL 21/91 Mt. Rex</b>		
<b>Simplified Geology</b>		
(from Ben Lomond 1:50,000 sheet)		
Author: K.C.Morrison	Drafting: R.Carroll	Date: 24.2.1997

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## YEAR 4 EXPLORATION

The Year 4 program focussed entirely on reserve definition and feasibility work on the Stanhope resource.

A 1500 tonne bulk sample was excavated from the western side of the resource (Figure 3) and processed through the Merrywood washery. Figure 4 shows that the seam mined correlated very closely with the Fenhope seam from the adjacent underground mine. Trial burns by Merrywood Coal Company customers were successfully completed, with Specific Energy analyses of the product ranging from 23 to 27 MJ/kg.

A program of air track percussion drilling is in progress to define depth to the main (Fenhope) coal seam and the positions of seam fault displacement. At the time of reporting, 40 holes (907 metres) have been drilled (Appendix 1) but collar surveys are available for only 19 (Figure 3).

Drilling to date indicates an upper and lower seam, above and below the main seam (Fenhope seam correlate) and drilling in Year 5 will assess the viability of additional seams at open cuttable depths below the base of weathering.

## FUTURE EXPLORATION

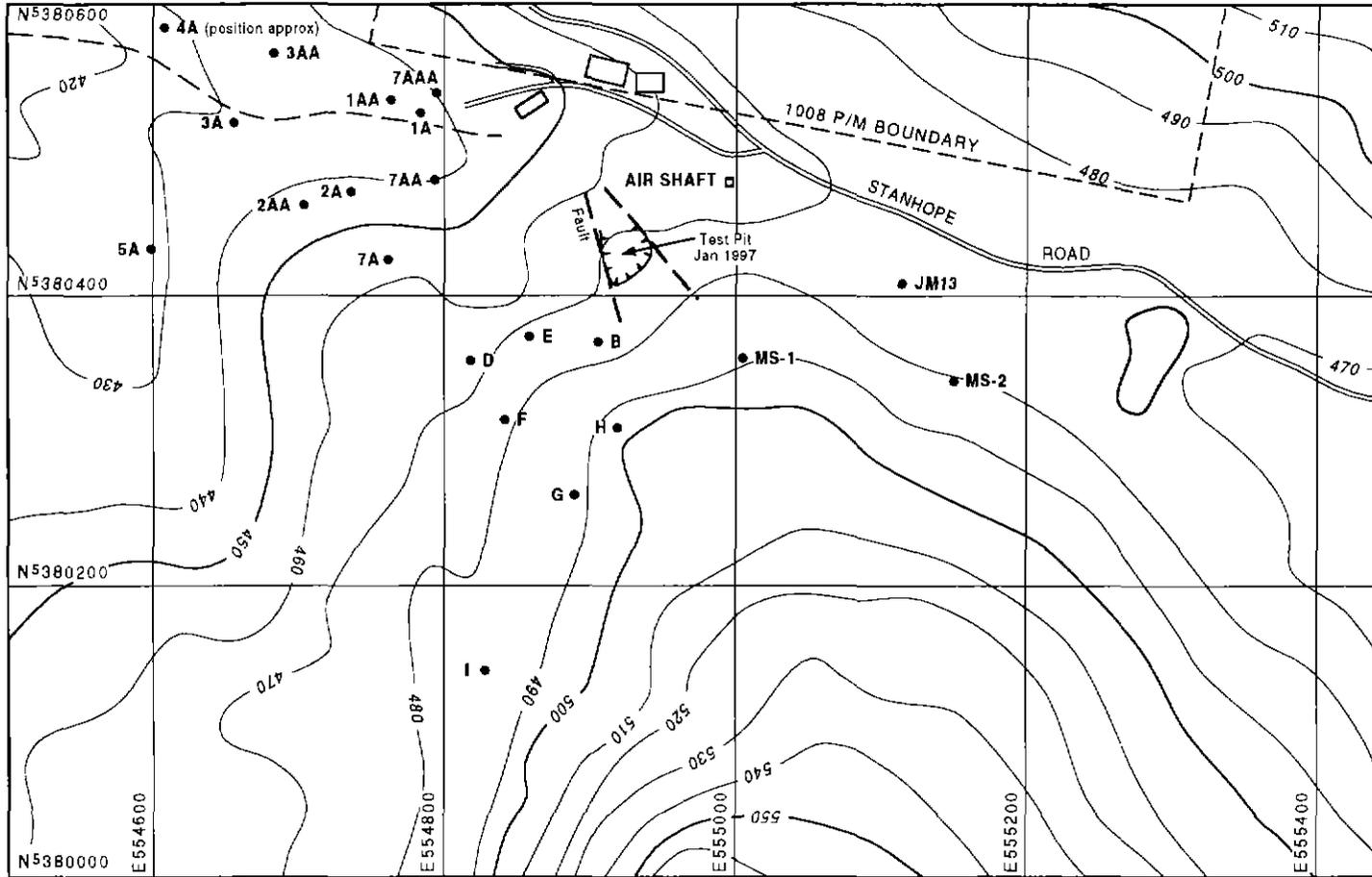
Year 5 exploration will be in part a combined Mining Lease and Exploration Licence in-fill drilling program to complete definition of the Stanhope resource, and in part a program of EL based mapping and exploration drilling at New Stanhope and in the area of the Mt Christie workings.

An approach has been made to Mr D. Fenton for an option agreement to explore Mining Lease 1008 P/M. If an agreement can be reached, exploration drilling will be undertaken in the northern half of the lease.

At the time of writing, open cut mine development is proceeding at the test pit site.

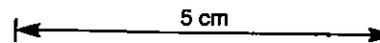
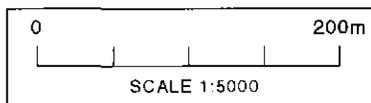
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- Bacon, C.A., 1983. The Mount Christie-Stanhope Coalfield, Dept. of Mines Tasmania Unpub. Report 1983/22
- Bacon, C.A., 1991. The coal resources of Tasmania, Bull. Geol. Surv. Tasmania, 64
- Morrison, K.C., 1996. Merrywood Coal Company Pty Ltd EL 21/91 Mt Rex Annual Report Year 3.
- Nelson, D. and Associates Pty. Ltd., 1986. Avoca Transport Company Pty. Ltd., E.L. 2/82 Stanhope Area Geological Report



Hole No.	Depth to Main Seam (m)	Seam Thickness (m)
7AA	18.5	2.5
7AAA	11.0	4.0
1A	17.5	3.0
7A	14.4	2.8
1AA	6.0	5.0
2A	11.0	4.0
2AA	11.5	3.0
3AA	-	
3A	-	
5A	-	
4A	-	
B	7.6	3.0
D	-	
E	-	
F	-	
G	18.0	3.0
H	11.5	3.5
I	-	
MS-1	22.0	3.4
Air Shaft	9.5	3.4
JM 13	11.5	3.4
MS-2	13.8	2.6

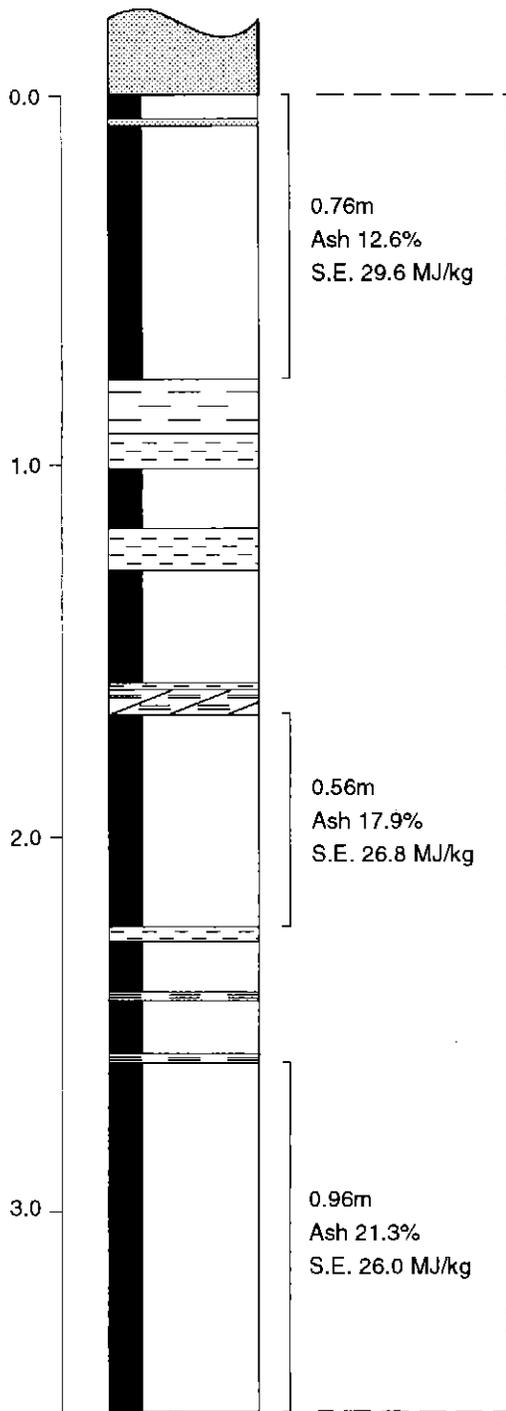
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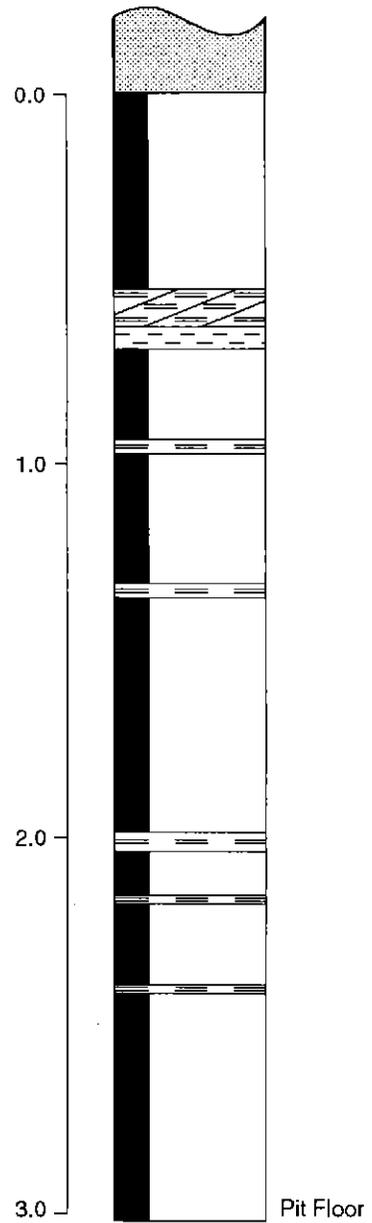
**Fig 3**

<b>MERRYWOOD COAL COMPANY</b>		
EL 21/91 Mt. Rex Drill Hole Locations		
Author: K.C Morrison	Drafting: R.Carroll	Date: 25.2.1997

382007



Whole Seam Analysis (A.D.)  
Ash 29.4%  
Volatiles 24.7%  
Fixed Carbon 42.8%  
Sulphur 0.4%  
Carbon Dioxide 0.53%  
Specific Energy 22.6% MJ/kg  
Ash Fusion Temp.  
Deformation 1200°C  
Flow +1500°C



Merrywood Stanhope Test Pit  
(December 1996)

Fenhope Seam - Fenhope Mine  
(after Bacon 1986, Bulletin 64)

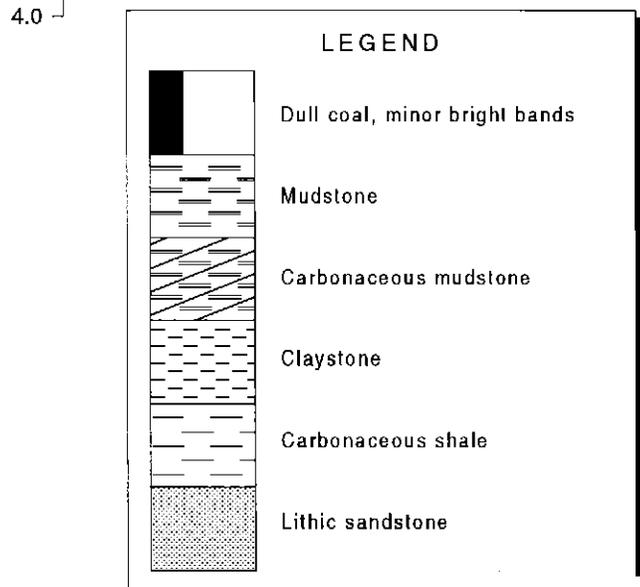


Fig 4

<b>MERRYWOOD COAL COMPANY</b>		
EL 21/91 Mt. Rex Fenhope-Stanhope Seam Correlation		
Author: K.C. Morrison	Drafting: R. Carroll	Date: 6.5.1997

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**APPENDIX 1**

**DRILL LOGS**

					?????									Fenhope
Location	Seam Mid	Seam Sth	7AA	7AAA	1A	7A	1AA	2A	2AA	3AA	3A	5A	4A	Addit
Collar RL "m"AGD	461.3	457.9	437.1	435.6	435.5	451.7	433.6	439.4	438.0	431.2	426.8	423.1	421.3	455.8
Depth to Seam	7	0	2.5	11	7	11	6	11	11.5	0	0	0	0	0
Roof	s/s	s/s	?	s/s	?	s/s	?	?	poor coal	clay	s/s	gravel	gravel	s/s
<b>Top Coal RL</b>	<b>454.3</b>	<b>457.9</b>	<b>434.6</b>	<b>424.6</b>	<b>428.5</b>	<b>440.7</b>	<b>427.6</b>	<b>428.4</b>	<b>426.5</b>			/sand	/sand	<b>455.8</b>
Coal Thickness	3.5	3.5	1	4	1.5	0.2	5	6	3			0	0	3.4
Floor	m/s	m/s	s/s	wet	?	s/s	m/s wet	m/s	m/s			0	0	m/s
Depth to Seam	13.5		15		9	3.2	0		0		0			
Roof	s/s wet		s/s		m/s									
<b>Top Coal RL</b>	<b>437.3</b>		<b>418.6</b>		<b>418.0</b>	<b>437.3</b>								
Coal Thickness	1.5		2.5		3	2.8			0		0			
Floor	s/s		m/s wet		s/s wet	s/s								
Depth to	7.5	0	0	0	12.4	5	8	8	10.5	4.5	22.5	11	11	0
End of Hole RL	428.3	454.4	416.1	420.6	402.6	429.5	414.6	416.4	413.0	426.7	404.3	412.1	410.3	452.4
Total Coal	5.0		3.5	4.0	4.5	3.0	5.0	4.0	3.0					
Total Overburden	20.5		17.5	11	16	14.2	6	11	11.5					
Ratio	4.1		5.0	2.8	3.6	4.7	1.2	2.8	3.8					

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													Air			West	Main
Location	Seam Mid	Seam Sth	B	D	E	F	G	H	I	South 1	South 2	MS1	Shaft	JM 13	MS2	Addit	Addit
Collar RL "m"AGD	461.3	457.9	471.5	462.9	464.7	469.4	481.3	487.4	479.1	435.6	421.4	482.4	463.8	471.3	478.1	477.7	474.0
Depth to Seam	7	0	7.6	0	14.5	0	18	11.5	3.6	0	0	22	9.5	11.5	13.8	0	0
Roof	s/s	s/s	s/s	clay	s/s	clay	s/s	s/s	Dol.	Dol.	Dol.	s/s	s/s	s/s	s/s		s/s
<b>Top Coal RL</b>	<b>454.3</b>	<b>457.9</b>	<b>463.9</b>		<b>450.2</b>		<b>463.3</b>	<b>475.9</b>			<b>0.0</b>	<b>460.4</b>	<b>454.3</b>	<b>459.8</b>	<b>464.3</b>	<b>477.7</b>	<b>474.0</b>
Coal Thickness	3.5	3.5	3	0	0.1	0	3	3.5	0	0	0	3.4	3.4	3.4	2.6	2.4	3.4
Floor	m/s	m/s	s/s		s/s		s/s	s/s	Gravel	Gravel	0	s/s	m/s		m/s		m/s
Depth to Seam	13.5				2.1	0	0	11.5	3.6	0	0	0	0	0			
Roof	s/s wet				s/s			s/s		Hard	Dol						
<b>Top Coal RL</b>	<b>437.3</b>				<b>448.0</b>	<b>0.0</b>		<b>460.9</b>		Gravel?	Gravel?						
Coal Thickness	1.5				0.1	0		2.5			0	0	0	0			
Floor	s/s				s/s wet			s/s									
Depth to	7.5	0	17.4	10.6	12.4	10.6	8	1		30	30	25.6	20	0	5.6	0	0
End of Hole RL	428.3	454.4	443.5	452.3	435.5	458.8	452.3	457.4	471.9	405.6	391.4	431.4	430.9	456.4	456.1	475.3	470.6
Total Coal			3.0				3.0	6.0				3.4	3.4	3.4	2.6		
Total Overburden			7.6				18	23				22	9.5	11.5	13.8		
Ratio			2.5				6.0	3.8				6.5	2.8	3.4	5.3		

382010

Location	Seam Mid	E1	E2	Redrill			
				3A	3AA1	7AAA1	7A1
Collar RL "m"AGD	461.3	<b>442.0</b>	<b>437.0</b>	426.8	<b>429.2</b>	<b>438.0</b>	<b>454.0</b>
Depth to Seam	7	6.6	12	5.4	0	0	8.4
Roof	s/s	clay	s s/s	s s/s	s s/s	s s/s	sand clay
<b>Top Coal RL</b>	<b>454.3</b>	<b>435.4</b>	<b>425.0</b>	<b>421.4</b>			<b>445.6</b>
Coal Thickness	3.5	0.6	2.4	3.6			1.8
Floor	m/s	m/s	m/s	coal poor		s/s	m/s
Depth to Seam	13.5	0	3.6	0			0
Roof	s/s wet	s/s	m/s	s/s			
<b>Top Coal RL</b>	<b>437.3</b>		<b>419.0</b>				
Coal Thickness	1.5		3				0
Floor	s/s	s/s wet	m/s-s/s wet	s/s	wet s/s	wet	s/s
Depth to	7.5	13.2	7.6	19	23.4	16.2	18.2
End of Hole RL	428.3	421.6	408.4	398.8	405.8	421.8	425.6
Total Coal	5.0	0.6	5.4	3.6			1.8
Total Overburden	20.5	6.6	15.6	5.4			8.4
Ratio	4.1	11.0	2.9	1.5			4.7

382011

	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	S11	S12	S13	S14	S15
Location															
Collar RL "m"AGD	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Depth to Seam	18.5	16.2	18	18	8	3.1	6.1	0.0	23.4	20.6	10.8	10	6.7	6.7	10
at 12.6	s/s dol chips			clay	clay	clay/dol		0.0	soft	m/s				dol	clay
Roof	s/s	s s/s	s s/s	s s/s	s s/s		s/s	0.0	s s/s	s/s	s/s	s/s	s s/s	s/s	s/s
Top Coal RL	-18.5	-16.2	-18.0	-18.0	-8.0	-3.1	-6.1	0.0	-23.4	-20.6	-10.8	-10.0	-6.7	-6.7	-10.0
Coal Thickness	3.4	3.8	1.4	0	4	3.6	0.1	0.0	0.1	1.1	0.1	3	2.3	0.1	0.5
Floor	m/s	m/s	m/s	s/s	s/s	s/s	s/s	0.0	s/s	s/s	s/s wet	m/s	s/s	s/s	m/s
Depth to Seam	3.3	5.2	7.6		14	8.1	4.1	0.0	4.3	5.3	?	9	11	10.2	8.5
Roof	wet/blocked		m/s	s/s	s/s	s/s	s/s	0.0	s/s	s/s	?	s/s	s/s	s/s	s/s
Top Coal RL					-26.0	-14.8	-10.3	0.0	-27.8		?	-22.0	-20.0	-17.0	-19.0
Coal Thickness					2.2	3.7	4.1	0.0	1		?	0.1	0.2	1	black
Floor	wet	s/s	m/s-s/s	m/s	m/s	m/s	s/s m/s	0.0	end in coal	s/s	?	s/s	s/s	m/s s/s	water
Depth to	7.5	2			2.8	9.2	14.3	0.0	0		?	4.9	4.8	6	?
End of Hole RL	-32.7	-27.2	-27.0		-31.0	-27.7	-28.7	0.0	-28.8	-27.0	?	-27.0	-25.0	-24.0	?
								0.0			?				?
Total Coal	3.4	3.8	1.4	0.0	6.2	7.3	4.2	0.0	1.1	1.1	?	3.1	2.5	1.1	?
Total Overburden	18.5	16.2	18	18	22	11.2	10.2	0.0		25.9	?	19	17.7	16.9	?
Ratio	5.4	4.3	12.9	#DIV/0!	3.5	1.5	2.4	0.0		23.5	?	6.1	7.1	15.4	?

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