

AUSTRALIAN IRON & STEEL PTY. LTD.

COLLIERY LOCOMOTIVES AND PERSONNEL CARRIERS

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This material was first published in duplicated booklet form in 1983 and subsequently revised by the editor.

Many changes have occurred in these collieries since 1983, involving the closure of some mines and the dispersal of much rolling stock as well as some acquisitions. It would be appreciated if a reader could assist in bringing these details up-to-date.

Please contact John Browning at ceo8@rocknet.net.au if you would like to assist.

LIGHT RAILWAY RESEARCH SOCIETY OF AUSTRALIA, 1983

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AUSTRALIAN IRON & STEEL PTY. LTD. COLLIERIES.

Coal in what was to become known as the Illawarra coalfield was first discovered in 1797. Coal mining began in 1849, and by the First World War there were ten or more collieries being worked, mostly to supply the Sydney market, although some coal was utilised in the production of coke.

In 1916, G. & C. Hoskins Ltd. purchased the Wongawilli Colliery in order to produce coking coal to augment coke supplies at its Lithgow Iron & Steel Works. By 1925, Hoskins Iron & Steel Pty. Ltd., (as the company had become) took the decision to build a new steelworks at Port Kembla. In 1928, to finance the construction of the new plant, a new company, Australian Iron & Steel Pty. Ltd. was formed. Since October 1935, AI&S has been controlled by The Broken Hill Proprietary Co. Ltd.

The following collieries have been owned by AI&S and its predecessors, mostly to supply the Port Kembla steelworks, but coal has also been sent to the Newcastle steelworks, and in recent years exported.

WONGAWILLI

Opened in 1916 with rope haulage on 2'10" gauge. In 1933, the adjoining **SOUTH KEMBLA** Colliery was purchased and absorbed into Wongawilli. 3'6" gauge track was introduced in 1943 for track-mounted coal cutters. Battery electric locos and 10-ton cars were introduced in 1947. 26-ton Malcolm Moore diesel locos were introduced on main haulage in 1948. Trackless continuous mining equipment was introduced in 1952, and shuttle car haulage in 1957. Belts to convey the entire coal output were installed in 1960, but diesel locos were still on intermediate haulage with single engine loads up to 1961. The colliery was later named **ELOUERA**.

BULLI

Purchased in 1936 and originally had rope haulage on 2'0" gauge. When acquired, this colliery was operating under the contract mining system, which continued in some sectors until 1949. 3'6" gauge track was introduced in 1947 with 5-ton and 6.5-ton bottom dump cars. Tunnelling commenced on April 17th 1944 on the main haulage cross measure drift, 2.25 miles long on a grade of 1 in 139, using battery locos. On completion in June 1953, Malcolm Moore diesels and 10-ton cars were introduced on main coal haulage, two locos to 35 cars. Trackless continuous mining equipment was introduced in 1952 and shuttle car haulage in 1958.

MOUNT PLEASANT

Purchased in 1937 and originally had rope haulage on 2'10" gauge. Closed in 1939 but reopened in January 1951 using 3'6" gauge battery locos and 5-ton cars, finally closing in December 1955. (Coal from Mount Pleasant was never hauled out via the Kemira Tunnel, contrary to the statement of G.H.Eardley in "Transporting the Black Diamond".)

KEMIRA (MOUNT KEIRA)

Purchased as Osborne-Wallsend Colliery in 1937, this property had been worked since 1857 and had rope haulage on 2'0" gauge. Renamed Mount Keira by Al&S, 3'6" gauge track was introduced in 1942 for track mounted coal cutters and loaders together with two Jeffrey and three Atlas battery locomotives and 5-ton bottom dump cars. For man transport, a 10-ton Malcolm Moore diesel loco was introduced and claimed to be the first of its kind in Australia. Tunnelling commenced in January 1947 on the Kemira Tunnel, a main haulage cross measure drift 2.75 miles long on 1 in 375 grade, and this was completed in June 1954. Mount Keira was renamed Kemira Colliery in February 1955. Trackless continuous mining equipment was introduced in 1952 and shuttle car haulage in 1958. The Company's first longwall mining operation began here in 1965.

MOUNT KEMBLA

Purchased in 1946 to allow the development of Nebo Colliery. It originally had rope haulage on 2'0" gauge and closed in September 1970.

NEBO

Development and tunnelling commenced in November 1946 with 3'6" gauge battery locos and 6.5-ton bottom dump cars. It commenced operations as a fully mechanised mine in August 1949 with battery locos hauling double rakes of 10-ton cars. Due to adverse grades in the original access tunnel caused by faulting of the rock structure, a new 1500 foot main drift portal was driven, and opened in January 1950 enabling the use of Malcolm Moore diesels hauling 10-ton cars. Trackless continuous mining equipment was introduced in 1952 and shuttle car haulage in 1957.

PORT KEMBLA No.2

2'0" gauge skips and 3'6" gauge battery locos had been used in this mine, which was purchased in November 1964 and absorbed into Nebo.

APPIN

Colliery development and tunnelling commenced in November 1959 and rope haulage of coal in 5-ton bottom-dump 3'6" gauge cars began in June 1962 in the materials cross measure drift 6000 feet long at 1 in 3.5. Trackless continuous mining, and conveyor belt haulage in a second twin drift commenced in September 1963.

CORRIMAL

Purchased in 1964, and originally had rope haulage on 2'0" gauge. Haulage was re-routed in August 1967 by belt haulage via the Kemira Tunnel. At the same time, 3'6" gauge materials handling equipment was introduced together with trackless continuous mining equipment. This was the test mine for the introduction of shortwall mining in the Company's collieries.

METROPOLITAN

Purchased in 1965 and was equipped with trackless mining and haulage equipment loading onto a main conveyor reaching the surface via a drift 3600 feet long on a 1 in 3.17 grade.

TOM THUMB

Adjacent to Kemira and Nebo. Worked from 1967 to 1971. Details of rail system (if any) unknown.

CORRIMAL No.3

This winding and ventilation shaft is the first step out access to the southern mines, two miles north of the nearest Corrimal and Kemira holdings. Its purpose is to reduce underground haulage. Shaft sinking commenced in 1973 and coal winding in 15-ton 3'6" gauge cars began in July 1975.

TOWER

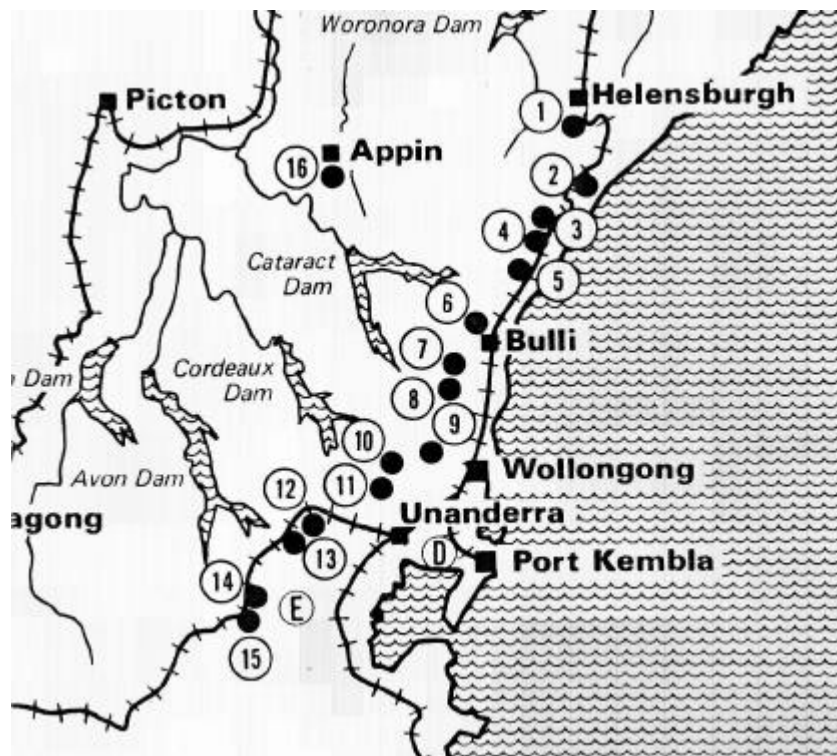
A step out 4 miles south-west of Appin Colliery. Shaft sinking commenced in 1974 and coal winding in 15-ton 3'6" gauge cars was deferred until November 1978 due to reduced demand for coal.

CORDEAUX

A second step out access in the Corrimal holding. Shaft sinking commenced in 1975 and coal winding in 15-ton 3'6" gauge cars was deferred until March 1979. The official opening of the mine took place on September 4th 1980.

ILLAWARRA DISTRICT COLLIERIES

(from National Development Quarterly Vol.2 No.1, September 1971)

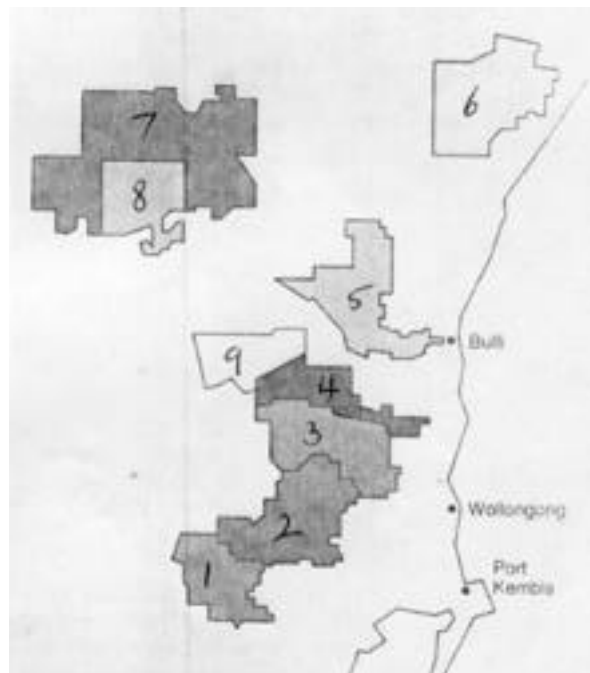


KEY
(AIS facilities in **BOLD** type)

- 1. **Metropolitan Colliery**
- 2. Coal Cliff Colliery
- 3. South Clifton Colliery
- 4. Bulli Main Colliery
- 5. North Bulli No.2 Colliery
- 6. **Bulli Colliery**
- 7. South Bulli Colliery
- 8. **Corrimal Colliery**
- 9. **Kemira Colliery**
- 10. **Tom Thumb Colliery**
- 11. **Nebo Colliery**
- 12. Yellow Rock Colliery
- 13. **Wongawilli Colliery**
- 14. Huntley Colliery
- 15. Avondale Colliery
- 16. **Appin Colliery**
- D. **AIS Central Washery**
- E. Huntley Washery

AUSTRALIAN IRON & STEEL COLLIERY HOLDINGS

(from BHP Journal February 1970)



KEY

- 1. Wongawilli
- 2. Nebo
- 3. Kemira
- 4. Corrimal
- 5. Bulli
- 6. Metropolitan
- 7. Appin
- 8. Tower
- 9. Cordeaux

EQUIPMENT MANUFACTURERS

Atlas	Atlas Locomotive & Manufacturing Co. Ltd., Cleveland, Ohio, U.S.A.
E.M.Baldwin	E.M.Baldwin & Sons Pty. Ltd., Castle Hill, Sydney, N.S.W.
BHP	The Broken Hill Proprietary Co. Ltd., Newcastle, N.S.W.
Drewry	Drewry Car Co. Ltd., London, England (suppliers only).
Fox	Fox Manufacturing Co. Pty. Ltd., Sydney, N.S.W.
Gibson Battle	Gibson Battle & Co. Pty. Ltd., Sydney, N.S.W.
Hudswell Clarke	Hudswell, Clarke & Co. Ltd., Leeds, England.
Hunslet Taylor Africa.	Hunslet Taylor Consolidated (Pty.) Ltd., Germiston, Transvaal, South
Jeffrey	Jeffrey Manufacturing Company, Columbus, Ohio, U.S.A.
Malcolm Moore	Malcolm Moore Pty. Ltd., Port Melbourne, Victoria.
Neil Moxon	Neil Moxon Pty. Ltd., Moss Vale, N.S.W.
Ruston & Hornsby	Ruston & Hornsby Ltd., Lincoln, England.
Titan	The Titan Manufacturing Co. Pty. Ltd., Newcastle, N.S.W.
Vernier	Vernier Engineering Pty. Ltd., Wollongong, N.S.W.

AUSTRALIAN IRON & STEEL PTY. LTD. COLLIERY DIESEL LOCOMOTIVES.

(Gauge 1067mm - 3'6" - unless otherwise stated)

	0-4-0DM	Malcolm Moore		1942	Mount Keira. Sold/scrapped.	(a)
D1	0-6-0DM	(Malcolm Moore 26-204 No.1 (Drewry 2211		1948 1947	Wongawilli.	(b)
D2	0-6-0DM	(Malcolm Moore 26-204 No.2 (Drewry 2212		1948 1947	Wongawilli.	
D3	0-6-0DM	(Malcolm Moore 26-204 No.3 (Drewry 2213		1948 1947	Nebo; Kemira; Nebo.	
D4	0-6-0DM	(Malcolm Moore 26-204 No.4 (Drewry 2214		1948 1947	Nebo; Bulli.	
D5	0-6-0DM	(Malcolm Moore 26-204 No.5 (Drewry 2215		1948 1947	Bulli. Scrapped.	
D6	0-6-0DM	(Malcolm Moore 26-204 No.6 (Drewry 2216		1948 1947	Bulli; Nebo.	
D7	0-6-0DM	(Malcolm Moore 26-204 No.7 (Drewry 2336		1951 1950	Bulli.	
D8	0-6-0DM	(Malcolm Moore 26-204 No.8 (Drewry 2337		1951 1950	Bulli.	
D9	0-6-0DM	(Malcolm Moore 26-204 No.9 (Drewry 2338		1951 1950	Bulli; Kemira.	
D10	0-6-0DM	(Malcolm Moore 26-204 No.10 (Drewry 2339		1951 1950	Bulli; Kemira. Scrapped.	
D11	0-6-0DM	(Malcolm Moore 26-204 No.11 (Drewry 2340		1951 1950	Nebo.	
D12	0-6-0DM	(Malcolm Moore 26-204 No.12 (Drewry 2341		1951 1950	Nebo.	
D13	0-6-0DM	(Malcolm Moore 26-204 No.13 (Drewry 2342		1951 1950	Kemira; Nebo.	
D14	0-6-0DM	(Malcolm Moore 26-204 No.14 (Drewry 2343		1951 1950	Kemira; Steelworks; Kemira.	
D15	0-6-0DM	(Malcolm Moore 26-204 No.15 (Drewry 2344		1951 1950	Kemira.	
D16	0-6-0DM	(Malcolm Moore 26-204 No.16 (Drewry 2390		1951 1950	Kemira.	
(17)	4wDM	Ruston & Hornsby 326064		1952	Metropolitan; Steelworks 1978. *	(c)
18	0-6-0DM	Hudswell Clarke one of D1005/D1006/D1007		1956	Corrimal (on loan from BHP, Stockton Borehole Colliery); Returned to Stockton Borehole.	(d)
19	B-B DH	E.M.Baldwin 7744-1-9-78		1978	Corrimal	(e)

NOTES ON DIESEL LOCOMOTIVE LIST

- * Surface use only. Taken over from Metropolitan Coal Co. Ltd. (with colliery) in 1965. Standard gauge (1435mm).
- (a) The first Malcolm Moore diesel was 10 tons and was fitted with a Gardner 5LW engine of 75hp.
- (b) Malcolm Moore/Drewry locomotives are 204hp 26-ton Model 25DDL 47. They are fitted with a Gardner 8L3 engine, derated to 184hp. Although built by Malcolm Moore in Melbourne, they incorporated power packs imported from England and supplied by the Drewry Car Company, whose builder's numbers were also allocated.
- (c) The Ruston & Hornsby is 88hp 20-ton, Model 88DS. It is fitted with a Ruston 4VPH engine. It was used to shunt surface sidings at the Metropolitan Colliery. After being offered for sale in 1977, it was transferred to the steelworks for use as a workshops shunter.
- (d) The Hudswell Clarke was one of three 102hp 15-ton locomotives supplied to BHP Ltd. It was fitted with a Gardner 6LW engine and carried the brand name "Huwood-Hudswell".
- (e) The E.M. Baldwin locomotive is 40 tonnes, Model DH40B.

There is considerable confusion regarding the disposition of the Malcolm Moore /Drewry diesels. For example, the first four locos were allocated to Bulli Colliery according to AI&S records. However, in fact it seems that the first two were sent to Wongawilli when new, followed by the next two to Nebo in 1950. The next six did not commence work at Bulli until 1953. The locos were delivered to the steelworks and were stored there until required.

An unidentified Malcolm Moore/Drewry loco was used at the steelworks from 1954 to 1958 propelling a standard gauge ingot car on mixed gauge track in the pit of the soaking pits at No.1 steelworks. Loco 14 was used from November 1963 to June 1968 on the same duty..

It is not clear if all the locos carried the "D" prefix to the number, and some appear to have lost their numbers at various times. It is unknown how many of these locos survive.

AUSTRALIAN IRON & STEEL PTY. LTD. COLLIERY BATTERY ELECTRIC LOCOMOTIVES

(Gauge 1067mm - 3'6"- unless otherwise stated)

	4wBE	Atlas		1936	Mount Kembla. Sold/scrapped.@	(a)
	4wBE	Atlas			Mount Kembla. Sold/scrapped.@	
	4wBE	Atlas			Mount Kembla. Sold/scrapped.@	
	4wBE	Atlas			Kemira. Sold to Mt.Lyell, Tasmania	(b)
	4wBE	Atlas			Kemira. Sold to Mt.Lyell, Tasmania	
	4wBE	Atlas			Kemira. Sold to Mt.Lyell, Tasmania	
	4wBE	Jeffrey			Kemira. Sold/scrapped.	(c)
	4wBE	Jeffrey			Kemira. Sold/scrapped.	
1	4wBE	BHP	(6)	1947	Nebo. Stored 1978.	(d)
2	4wBE	BHP	(7)	1947	Nebo; Wongawilli. Hired to The Bellambi Coal Co., South Bulli. Wongawilli; Appin. Scrapped 1968.	
3	4wBE	BHP	(8)	1947	Nebo; Wongawilli. Sold to Elcom Collieries Pty. Ltd., Awaba State Coal Mine, 1967.	
4	4wBE	BHP	(9)	1947	Nebo; Kemira; Appin. Scrapped 1976.	
5	4wBE	BHP	(10)	1947	Nebo; Appin; Mount Kembla; Corrimal.	
6	4wBE	BHP	(11)	1947	Nebo; Appin; Nebo. Stored.	
7	4wBE	BHP	(12)	1947	Kemira; Metropolitan.	
8	4wBE	BHP	(13)	1947	Kemira; Wongawilli.	
9	4wBE	BHP	(14)	1947	Kemira.	
10	4wBE	BHP	(15)	1947	Kemira; Corrimal.	
11	4wBE	BHP	(16)	1947	Kemira; Wongawilli; Appin.	
12	4wBE	BHP	(17)	1947	Kemira. Hired to The Bellambi Coal Co., South Bulli. Appin.	
13	4wBE	BHP	(18)	1947	Kemira; Metropolitan.	
14	4wBE	BHP	(19)	1947	Kemira; Wongawilli.	
15	4wBE	BHP	(20)	1947	Kemira; Metropolitan; Corrimal; Nebo; Kemira; Nebo; Appin;	Nebo.
16	4wBE	BHP	(21)	1947	Kemira; Appin.	
17	4wBE	BHP	(22)	1947	Kemira; Wongawilli. Hired to Clutha Development Pty. Ltd.,	1975.*
18	4wBE	BHP	(23)	1947	Kemira; Wongawilli; Nebo; Appin; Cordeaux. *	
19	4wBE	BHP	(24)	1947	Kemira; Corrimal.	
20	4wBE	BHP	(25)	1947	Kemira; Wongawilli; Tower.	
21	4wBE	BHP	(26)	1947	Kemira.	
22	4wBE	BHP	(27)	1947	Kemira; Appin; Kemira.	
23	4wBE	BHP	(28)	1947	Kemira; Nebo; Kemira. Hired to The Bellambi Co., South Bulli.	Nebo.
24	4wBE	BHP	(29)	1947	Kemira; Appin; Cordeaux.	
25	4wBE	BHP	(30)	1947	Kemira; Wongawilli; Kemira.	
26	4wBE	BHP	(31)	1947	Kemira.	
27	4wBE	BHP	(32)	1947	Kemira.	
28	4wBE	BHP	(33)	1947	Kemira.	
29	4wBE	BHP	(34)	1947	Kemira; Wongawilli.	
30	4wBE	BHP	(35)	1947	Kemira; Appin; Nebo. Stored.	
31	4wBE	BHP	(36)	1947	Kemira; Appin. Stored.	
32	4wBE	BHP	(37)	1947	Kemira; Appin.	
33	4wBE	BHP	(38)	1947	Nebo.	
34	4wBE	BHP	(39)	1947	Nebo; Wongawilli.	
35	4wBE	BHP	(40)	1947	Nebo.	
36	4wBE	BHP	(41)	1947	Nebo. To BHP Ltd., Stockton Borehole.	
37	4wBE	BHP	(42)	1947	Nebo. Stored	
38	4wBE	BHP	(43)	1947	Nebo; Appin.	
39	4wBE	BHP	(44)	1947	Nebo.	
40	4wBE	BHP	(45)	1947	Nebo.	
41	4wBE	BHP	(46)	1947	Nebo.	
42	4wBE	BHP	(47)	1947	Nebo.	
43	4wBE	BHP	(48)	1947	Nebo.	
44	4wBE	BHP	(49)	1947	Nebo.	

45	4wBE	BHP	(50)	1947	Nebo.
46	4wBE	BHP	(51)	1947	Nebo.
47	4wBE	BHP	(69)	1948	Nebo.
48	4wBE	BHP	(87)	1948	Nebo.
49	4wBE	BHP	(88)	1948	Nebo.
50	4wBE	BHP	(89)	1948	Nebo.
51	4wBE	BHP	(90)	1948	Bulli; Metropolitan.
52	4wBE	BHP	(91)	1948	Bulli; Corrimal; Nebo; Kemira; Corrimal.
53	4wBE	BHP	(92)	1948	Bulli.
54	4wBE	BHP	(93)	1948	Bulli; Corrimal.
55	4wBE	BHP	(94)	1948	Bulli; Appin; Bulli.
56	4wBE	BHP	(95)	1948	Bulli.
57	4wBE	BHP	(96)	1948	Bulli.
58	4wBE	BHP	(97)	1948	Bulli.
59	4wBE	BHP	(98)	1948	Bulli; Metropolitan.
60	4wBE	BHP	(99)	1948	Bulli.
61	4wBE	BHP	(100)	1948	Bulli; Corrimal.
62	4wBE	BHP	(101)	1948	Bulli.
63	4wBE	BHP	(102)	1948	Bulli.
64	4wBE	BHP	(103)	1948	Bulli.
65	4wBE	BHP	(104)	1948	Bulli.
66	4wBE	BHP	(105)	1948	Bulli.
67	4wBE	BHP	(106)	1948	Bulli.
68	4wBE	BHP	(107)	1948	Bulli; Appin.
69	4wBE	BHP	(108)	1948	Bulli; Metropolitan.
70	4wBE	BHP	(109)	1948	Wongawilli; Appin.
71	4wBE	BHP	(110)	1948	Wongawilli; Bulli; Appin.
72	4wBE	BHP	(111)	1948	Wongawilli.
73	4wBE	BHP	(112)	1948	Wongawilli. To Queensland Coal Mining, Leichhardt Colliery, 1976.
74	4wBE	BHP	(113)	1948	Wongawilli.
75	4wBE	BHP	(114)	1948	Wongawilli; Bulli; Wongawilli.
76	4wBE	BHP	(115)	1948	Wongawilli; Appin.
77	4wBE	BHP	(116)	1948	Wongawilli. Stored.
78	4wBE	BHP	(117)	1949	Bulli; Appin.
79	4wBE	BHP	(118)	1949	Bulli; Metropolitan.
80	4wBE	BHP	(119)	1949	Wongawilli; Appin.
81	4wBE	BHP	(120)	1949	Wongawilli.
82	4wBE	BHP	(121)	1949	Wongawilli. Hired to Huntley Colliery Pty. Ltd., Huntley Colliery. Wongawilli.
83	4wBE	BHP	(122)	1949	Wongawilli.
84	4wBE	BHP	(123)	1949	Wongawilli.
85	4wBE	BHP	(124)	1949	Wongawilli. Stored
86	4wBE	BHP	(125)	1949	Wongawilli; Appin.
87	4wBE	Jeffrey			Corrimal; Bulli. Sold to The Coal Cliff Collieries Pty. Ltd., 1971. (e)
88	4wBE	Jeffrey			Corrimal; Wongawilli. Hired to The Bellambi Coal Co., South Bulli. Wongawilli. Sold to Elcom Collieries Pty. Ltd., Wyee State Minengawilli.
120	4wDHR	Vernier		1981	Wongawilli.
121	4wDHR	Vernier		1981	Wongawilli.
122	4wDHR	E.M.Baldwin9077-1-12-80		1980	Appin. (d)
123	4wDHR	E.M.Baldwin 9077-2-3-81		1981	Appin.
124	4wDHR	Hunslet Taylor			Tower.
125	4wDHR	Hunslet Taylor			Tower.
126	4wDHR	Vernier			Cordeaux.
127	4wDHR	Vernier			Cordeaux.
128	4wDHR	Neil Moxon			Tower.
129	4wDHR	Neil Moxon			Tower.
130	4wDHR	Neil Moxon			Tower.
131	4wDHR	Neil Moxon			Tower.
132	4wDHR	Neil Moxon			Tower.

133	4wDHR	Neil Moxon	Tower.
134	4wDHR	Neil Moxon	Tower.
135	4wDHR	Neil Moxon	Tower.
136	4wDHR	Neil Moxon	Tower.
137	4wDHR	Vernier	Cordeaux.
138	4wDHR	Vernier	Cordeaux.
139	4wDHR	Vernier	Cordeaux.
140	4wDHR	Vernier	Cordeaux.
141	4wDHR	Vernier	Cordeaux.

NOTES ON PERSONNEL CARRIER LIST

- (a) E.M.Baldwin units 1 & 2 were Model 6DHS with Perkins 3-152 engine developing 39hp.
- (b) E.M.Baldwin numbers 22 to 35 and 43 are the slightly modified 6DHS Mk.3.
- (c) E.M.Baldwin numbers 66 to 71 are Model 11DH Mk.1 with a Perkins engine of 40hp.
- (d) E.M.Baldwin numbers 122 and 123 are Model 16DHS.
- (e) Fox Manufacturing Company units numbered 3 to 21 have Perkins 3-152 engines.
- (f) Fox units from number 36 have the Perkins 4-236 engine.
- (e) Titan Manufacturing Company battery electric cars have 22kw. motors and have a capacity of 14 men.
- (f) Vernier Engineering units have a capacity of 18 men in contrast to all other diesel units which accommodate 16 men. They are fitted with a Perkins 6-354 engine rated at 75hp.

Personnel cars were only introduced at Cordeaux and Tower Collieries when the headings had advanced beyond easy walking distance from the shaft.

Many early personnel cars have been scrapped or cannibalised for spare parts.