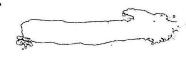
COMMONWEALTH OF AUSTRALIA.



DEPARTMENT OF NATIONAL DEVELOPMENT. BUREAU OF MINERAL RESOURCES GEOLOGY AND GEOPHYSICS.

RECORDS.

1959/24

EXPLANATORY NOTES ON TABLES OF
MANGANESE RESERVES OF WESTERN AUSTRALIA AS AT 30/9/58

by .

L. E. de la Hunty

EXPLANATORY NOTES ON TABLES OF

MANGANESE RESERVES OF WESTERN AUSTRALIA AS AT 30/9/58

(Rovised 11/2/59)

by L.E. de la Hunty, B.Sc., Geological Survey of Western Australia.

INTRODUCTION

As a result of applications from certain West Australian producers to export manganese ore, H.B. Owen, Senior Geologist of the Bureau of Mineral Resources, and the writer mapped and sampled some of the deposits in the North-West Division in 1952. From that year until 1957, several official estimates were made of various deposits by officers of both the Bureau of Mineral Resources and the Geological Survey of Western Australia.

In 1958, the writer led a Bureau party which mapped and sampled some of the main deposits in the Pilbara Goldfield - including those at Balfour Downs, Ripon Hills, Mt. Sydney and MC268 at Woodie Woodie. Other members of the party were Bureau Geologists J.B. Firman, A.T. Wells and D.J. Forman.

On 6/11/58, the writer issued tables of Manganese Reserves of Western Australia as at 30/9/58. Alterations to those figures, made as a result of assay data received, were also issued on 26/11/58. Both the initial tables, explanatory notes and alteration sheets are now superseded by this report, which incorporates previous alterations as well as further alterations occasioned by the receipt of the final batch of assay results.

RELIABILITY OF ESTIMATES

Many of the estimates made since 1952 have become superseded by later investigations, and the latest figures are included in the tables. The estimates used have been made by:

- K. Townley (B.M.R.) 1953.
- D. O'Driscoll (Asst. Chief Geologist, B.M.R.) 1956.
- D. O'Driscoll (B.M.R.) and L. de la Hunty (G.S.W.A.) 1956.

11 11 11 11 1957.

L. de la Hunty (G.S.W.A.) 1958.

Most of the deposits have been measured in area of surface outcrop (by plane-table, tape or pace) but the depths of the ore-bodies have been determined in very few cases. Although quite a number of scout samples have been taken (at least 300) by the various investigators, many of the grades shown have been estimated by eye. Most of the grade estimates made in 1958 were controlled by essay data.

COMPILATION OF TABLES

Table I shows the total manganese reserves of Western Australia on ground held under Mineral Claims. The items shown are sub-totals from Table II.

Table II shows the tonnages estimated by individual claims, which are grouped in localities under the main headings of the various claim holders. Claims shown as "Pending" in this table are held in reserve for the various holders, but cannot be mined until "Approved". All of the mineral claims for manganese held at the end of October 1958, are included.

As a result of the creation during 1958, by the Minister for Mines, of a Temporary Reserve for Manganese over a large portion of the manganese-producing areas of Western Australia, some 53 applications for mineral claims for manganese have been refused. These are listed in Table III.

SUMMARY

Table I shows that nearly 10,000 acres are held under claim for manganese in Western Australia - made up of 133 "Approved" claims and 193 "Pending" (Total 326).

The total ore above 40% Mn is 3.8 million tons, of which some 2.8 million tons occur at Ripon Hills.

A further 3.2 million tons of low grade (30-40% Mn) ore is available, of which nearly 1.7 million tons is contained in one deposit at Balfour Downs. This deposit is included in M.C.'s. 265^{L} , 266^{L} , 267^{L} , 268^{L} (see Table II).

L. de la Hunty, Geologist.

11/2/1959

TABLE I

MANGANESE RESERVES OF WESTERN AUSTRALIA as at 30/9/58

(Revised 11/2/59)

Claim Holder	Area	Numbe	r of Clai	ms •	I	onnages by	Grades (% M	in)	Total Ore
•	Pegged	Approved	Pending	Total	30-39.9%	40-44.9%	45-49.9%	50 + % Mn	above 40% lin
	Acres				Tons	Tons	Tons	Tons	Tons
1. Westralian Ores Pty. Ltd.	2,181	27	52	79	337,100	251,250	134,950	300	386,500
2. Broken Hill Pty. Co. Ltd.	451	22	-	22	-	13,000	52,100	_	65,100
3. Northern Mineral Syndicate	2,322	27	11	38	965,350	2,342,500	522,100	3,000	2,867,600
4. D.F.D. Rhodes	2,838	20	106	126	1,745,950	, 119,350	40,400	42,350	202,100
5. L.G. Hancock & E.A.M. Wright	992	23	23	46	2,500	27,900	56,950	138,000	222,850
6. H.V. Blackwell & J.M. Henderson	123	5	-	5.	9,200	26,550	5,550	-	32,100
7. Pindan & Sims	615	3	-	3	•	37,500	21,000	-	58,500
8. R.B. Synnott	306	2	-	2	16,800	-	4,000	-	4,000
9. Western Development Pty. Ltd.	108	3	-	3	159,000	-	, 	-	Nil
10. K. Grant & R. Larsen	15		1	1	- · · · · · · · · · · · · · · · · · · ·	-	· ••	-	539
11. M.J. Andrews	6	~ 1	-	1	-	-	· 📥	-	
							•	į	
STATE TOTALS	9,957	133	193	326	3,235,900	2,818,050	837,050	183,650	3,838,750

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TABLE II

1. WESTRALIAN ORES PTY. LTD. (BELL BROS).

Mineral	Area	Tenure		Tonnages by	Frades (% Mn)	•	Total Ore	_ Estimate	đ
Claim No.			30- 39°9%	40-44.9%	45-49.9%	50 + %	above 40% Mn	Ву	Year
	Acres		Tons	Tons	Tons	Tons	Tons		
PILBARA GO	LDFIELD				•				
Marble Bar				·	:				
	awine Gorge								
458	3 8	Approved		-		_	_	Not seen	
•	die Woodie	1				1			
₊ 37	24	Pending	_ `		11,400	 :	11,400	O'Driscoll	1950
1	on Hills						•		
504	6	Pending	1,100	800	_		800	de la Hunty	1358
505	10	11	4,000	1,200	-	-	1,200	11	11
506	20	11	2,500	700	-	••	700	11	11
Nullagine	District				•				
Sku	ll Springs				:	:			•
ı21 ^L ,	80	Approved	1,000	6,000	18,050	:	24,050	O'Driscoll &)	,136
			-	•			• -	de la Hunty)	
155 _T	- 8	17	-	=	1,550	-	1,550	H H	1956
.23 ^L	125	11	2,800	1,250	8,050	- :	9,300	17 19	17
L24 ^L	3	Pending		•••	250	•••	250	11	11
.25 ^L	80	10	ess	200	350		550	11 11	tt
756 _T	9	11		•••	1,500	-	1,500	11 11	11
.27 ^L	2	•	-	•••• •••• · · · · · · · · · · · · · · ·	100	-	100	11 11	11
.28 ^L	21	11	1,150	750	700	~~	1,450	11 11	11
129 ^L	6	11	- . į	100	150	-	250	11	1)
.30 ^L	37	. 11	-	200	550		750	1 1 H	17
131 ^L	40	11	-	700	3,6 00	•	4,300	17 17	1:
.32 ^L	40	tt j	•	••• · · · · · · · · · · · · · · · · · ·	•	-	Nil	11 11	11
133 ^L	3	11	••	1,600	•	-	1,600	H H	11
.34 ^L	8	u	- ;	-	800	-	800	11 11	11
.35 ^L	_1	II .	-	<u> </u>	900	•••	9 00	1f 1f	t)
136 ^L	2	11	-	400	2,400		2,300	17 17	!!
.37 ^L	2	н	-	250		•••	250	if If	11
.38 ^L	-51	11	-	Case Case Case Case Case Case Case Case	1,500	-	1,500	11 11	11
43 ^L	5	. "	-	100	-	•••	100	de la Hunty	11
44 ^L	20	11	1,000	-	-		Nil	4	11
45 ^L	88	11	-	150	-	-	150	11	tr
.46 ^L	60	17	-	-	-		N11	11	17
47 ^L	3	H	200	500	-		500	11	11
.48 ^L	8	- 11	- !	- ,	-	-	: 	Not seen	
49 ^L	8	. 11	-	50		-	50	de la Hunty	1956
.50 ^L	2	• 11	-		••	•	-	Not seen	
.51 ^L	1	. 	- · ·	50 <u>i</u>			50	de la Hunty	1956
.52 ^L	14	n i	••	100	; :	-	100	11	• •
.53 ^L	6	11	-	- !	-		••• .	Not seen	
.54 ^L	1	11	- 4	→	!	-	Nil	de la Hunty	1956
.55 ^L	12	H i	-	-	•	300,	300	11	11
.56 ^L	68	11	-	400	-	-	400	11	17
.57 ^L	120	11	500	950	100	_	1,050	11	H
213 ^L	4	the state of the	W	-	•		: 	Not seen	
15 ^L	3	11	-	**************************************	-	•		tf tt	
16 ^L	1		-	- !	-	- ;	- .	u u u	
31 ^L	4.1	11	_	-	· · · · · · · · · · · · · · · · · · ·	-		. 11	
Boor	ndamana Cre	ek		· •		•			
14 ^L	4 1	10	-		. • • • · · · · · · · · · · · · · · · ·	-	•	11 11	
				ě.					

WESTRALIAN ORES (Con'd).

Mineral	- Area	Tenure	To	onnages by G	rades (% Mn)		Total Ore	Estimat	ed
Claim No.	•	· ·	30-39.9%	40-44.9%	45-49.9%	50 + %	above 40% Mn	Ву	Year
*	Acres		Tons	Tons	Tons	Tons	Tons		1
241 ^L	It. Cooke	Approved	8,150	12,300	4,000	. i	16,300	O'Driscoll &)	1957
	120	Approved	0,100	12,000	4,000		10,000	de la Hunty	+301
275 _T	15	Pending	500	300	-	-	300	.11 * 11	11
2-13 ^L	20	18	=	1,000	_	-	1,000	11 11	tt .
244	160	Approved	17,300	36,050		-	36,050	11 11	11
245 ^L	20	W .	300	1,300	2,200	-	3,500	ti ti	11
5116 _T	20	Mr.	. 1,000	8,000	17,000		25,000	de la Hunty	1958
247 ^{1,}	120		500	1,450	100		1,550	0'Driscoll &) de la Hunty)	1957
248 ^L	120	Pending	8,500	2,700	-	-	2 , 700	11 11 11	11
249 ^L	15	ti i	-	200		-	200	H	11
250 ^L	8	11	quals	100	-	-	100	n n	10
251 ^L	F,	4		350			350	lu u v	18
252 ^L	17	12	200	550	-1. 		550 _.	11 11	•
	inday Hill		200	, J JO	-		<i>)</i>	!	1
53 ^L	; 4	Approved		600	200		800	11 10	11
.54 ^L	4	Approved		1,700	200		1,700	; } }	11
55 ^L	· 2	. Toricing		1,300			1,300	11 19	19
್ರಾರ ಚಿಕ್ಕರ ^L	5	18	1,000		500		,	11 11	11
207 ^L	,	11		3,500	- 900		\$ 4,000 m	Not seen	
288 ^L	÷ .	1 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	-	•		Case .	~	Mor seen	
	2			`			***		
	GOLDFIELD				}				i
26 [₽]))18680 6		105 000	. 179 000	. I.E. 000		187 000	de la Hunty	1058
. 24 06 ^P	143	Approved	125,000	138,000	45,000		183,000	de la nuncy	1958 "
26 ^P 32 ^P 33 ^P 63 ^P	*			21,000	14,000		35,000		
na J₁P	34 45	u l			-		-	Not seen	
クラ chP	4:	•	•••	: •••• :	(tade)	1	-	11 11	
	· · · · · · · · · · · · · · · · · · ·			. — !					
77 ^P	t. Fraser				. ?				
//- - 2P	2	IF :		-	:	-	-	H H	
78 ^P	2	1	-	•		- 1	•	11	
79 ^P 80 ^P 81 ^P 82 ^P 63 ^P	3	1 P	ans	SM	•	-	(ma)	11	
80°	1	11	 ·	-	-	-	•••	. 11	
81°	14	1	- 、		; ;	-	-	11	
821	ì	tt .	-	-	-	- 1	-	H H	
	5	11		-	-	-	·	!!	
Pe	eek Hill			All controls to the control of the c	*		•	1	
38 ^P	5	11	400	-		_	Nil	de la Hunty	1956
6.61 ^P	12	11	10,000	4,000	-	-	. 4 ,0 00	11	1958
4.62 ^P	48	11	• • • • • • • • • • • • • • • • • • •	400			400		11
	ET LAND DIVI	SION							
Ne H	endip		,						
463 ^H ·464 ^H	24	Approved)	150,000	40,000	•	-	40,000	Townley	1953
	24	")					-		
DUNDAS GO		1			•				
	remer Range			î	<u>.</u>				
41	60	Pending	-		_	-	-	Not seen	**************************************
TOTALS	į				: }				
Claims	ą.	Approved			:				
79	2,181	27	337,100	251,250	134,950	300	386,500		
1)	2,101	Pending	J) (9 ± 00	2)192)U	1)4+97JU				
		52							
		J =		1	1	t i de la companya d			and the second

TABLE II

2. BROKEN HILL PTY. CO. LTD.

Mineral	Area	Tenure		Tonnages by	Grądes (% Mn)	•	Total Ore	Estima	ted
Claim No.			30-39.9%	40-44.9%	45-49.9%	50 + %	above 40% Mn	Ву	Year
	Acres		Tons	Tons	Tons	Tons	Tons		
PILBARA GOI	DFIELD			· .	•		•	•	
Marble Bar	District	:		• · · · · · · · · · · · · · · · · · · ·					
	lie Woodie		× .		· • • • • • • • • • • • • • • • • • • •			1	•
247	24	Approved	-		23,000	-	23,000	O'Driscoll	1956
Nullagine I	istrict						25,000	O DITECOII	1950
Wood	lie Woodie					-	. •	1	•
110 ^L	11	Approved	-	-	4,600		4,600	de la Hunty	1958
111 ^L	6	11	-	€ 5	11,500	***	11,500	O'Driscoll	1956
Warr	ie Statio	n !				:	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		1),0
300 ^L	4	11	-		-			Not seen	
301 ^L	10	, H	• -	: : •••	- :	-	•	11 11	
302 ^T	13	"		-		-		[11 11	
303 ^L	10	11		-		-		·	
304 ^L	3	i tr	-	-	· -	: 	.	: 11 17	
305 ^L	160	11	-	, -	- !	- ;	•	, 11 11 .	
306 ^L	100	* # *** *** *** *** *** *** *** *** ***			•	-	•	u u u	
WEST PILBAR	•	1	,			: :		;	
Mari	llana Stat	tion	-	:	:				
100 ^{WP} :	8	Approved	-	-	-	-	-	17 17	
101 ^{MP}	3	l u		- :	-	-	-	u u ,	
102 ^{WP}	2			-	-	-	•	n u	
103 VP	9	11	-	-	- ;	-	• · · · · · · · · · · · · · · · · · · ·	11 11	
104 ^{WP}	12	11	-	-	-	-	. -	11 11	
105 ^{WP}	1	. 11	-	-		- ·	-	11 11	
PEAK HILL GO		2 1		1		* :		i i	•
Horse 28 ^P	shoe	<u>.</u>	:		: :			;	
28 ² 29 ^P	18			- £	-	-	→ .	11 11	
	12	11	-	-	·	**************************************	-	11 11	
Mt. I	Fraser	•	- - - -		1	7 7 1 1			
30 ^P 31 ^P	18	11		13,000	13,000	=	26,000	O'Driscoll	1956
1.64 ^P	8	11	•	-	- :	-	-	Not seen	
L.65 ^P	5		== : :	- :	-	•	865	11 11	
D•05	14	" 1	-	- !		-	-	19 99	
TOTALS			:					•	
TOTATIO	7		1	<u>.</u>			:	:	
Claims		Approved		:					
22	451	Approved 22	_	17 000	E0.300	:		~	
	マン* :	<u>د</u> د ا ا	-	13,000	52,100	-	. 65,100	* * * * * * * * * * * * * * * * * * * *	

TABLE II

3. NORTHERN MINERAL SYNDICATE

Mineral	Area	Tenure		Tonnages by	Grades (% Mn))	Total Ore	Estin	nated
Claim No.			30-39•9%	40-44.9%	45-49.9%	50 + %	above 40% Mn	By	Year
	Acres	•	Tons	Tons	Tons	Tons	Tons		
PILBARA GO	DLDFIELD						•		
Marble Bar	District			•	1		V		
	die Woodie								
268	24	Approved			7,000	3,,000	•		
269	24	11	-	10,000	15,000	-	25,000	,	
271	24	11	1,650	6,000	• :	• ·	6,000	O'Driscoll	1956
272	22	11	- ;	1,500		-	1,500	11	11
273	9	ır	· -	-	750	• · · · · · · · · · · · · · · · · · · ·	750		
274	6 .		0.1.00		700	-	700	de la Hunty	1958
276	6	11	2,400		·	-	Nil	O'Driscoll	1956
429	1	11	-	1,200		-	1,200	11	11
430	1	11	•	- 1. 000	700		700	11	"
431	22	11	-	4,000	3,200	- '	7,200	11	11
432	3	11	_		300	. —	3 00	11	17
433	4		-	-	850	-	850	11	17
434 . 435	5 10	11	-	2 250	600	-	600	**	11
	on Hills			2,850	1,000	- :	3,850		
473	10	Annagara		1.0.000	· •		10.500	3 - 3 - 114	305
64745	54	Approved	700.000	40,000	. =	_	40,300	de la Hunty	1958
478	18		100,000	167,000 7,300	50,000	_	217,000	**	11
479	10	11	_	49,000	3,000		10,700	11	12
497	12	Pending	_	15,000	45,000		94,000 15,000	17	11
509	20	II III		4,000	<u> </u>	_	4,000	tt.	17
49 554	102	Approved	57,000	323,000	134,000	_	457,000	tt.	. 11
5647	39	11 4	57,000	111,000	50,000		161,000	11	11
A)565/	129	Pending	171,000	13,000	9,000		22,000*		11
ECC !	125	Approved	84,000	52,000	*		9ú,000°	17	19
567	200	Pending	70,000	751,000	24,000	_	775,000	17	11
ੇ 568 ∕	50	11	70,000	50,000			50,000		17
569	220	17	17,000	257,000	-		257,000	11	17
570-G	35	11		- 17,000	_	-	17,000	,,	11
571	300	11	94,000	113,000	91,000		204,000	11	11
572	300	17	140,000	248,000	22,000	·	270,000		11
573	300	11	_	87,000	15,000		102,000	н	11
574	18	11	134,000	11,000			11,000	**	11
Nullagine		1			·		22,000		
	die Woodie			•			and the second second second second	and the second of the second o	
53 ^L •	155	Approved	13,700	<u> </u>	5,000	_	5,000	O'Driscoll	1956
54 ^L	50	11	9,000	1,500	••	••	1,500	11	11
56 ^L	2	11	1,600	-	 !	- ,	N11	ıı	11
114 ^L	2	11	•	150		-	150	i t	11
119 ^L	5	11	•	-	- :		•	Not seen '	
120 ^L	5	17	•		-			11 11	
TOTALS			k	***************************************		•		•	A
Claims		Approved				1			Britisms, myslain – slain Affligher sap, saylain / m
38	2,322	27 Pending	965,350	2,342,500	522,100	3,000	2,867,600		

TABLE II
4. D.F.D. RHODES

Tineral	Area	Tenure		Tonnages by	Grade (% Mn)		Total Ore	Estima	ted
Claim No.			30-39.9%	40-44.9%	45-49.9%	50 + %	above 40% lin	Ву	Yes
	Acres		Tons	Tons	Tons	Tons	Tons		·
PILEARA GO	LDFIELD								
Varble Bar	District				•			<u> </u>	· ·
Mt。	Sydney	;							
* 1	1	Pending		•	· cm	-	<u> </u>	Not seen	
452	3	11	-	-	_	53	_	11 11	
531	49	Approved		1,000	1,000	_	2 000	:	105
532	49	Approved	7 500		,	- .	2,000	de la Hunty	195
	į	**	3,500	4,000	12,000	-	16,000	· "	
533	49	11	100	-		-	Nil	11	11
534	49		1,200	600	· -	-	600	• • • • • • • • • • • • • • • • • • •	17.
535	49	11	-	700	2,400		3,100	11	17
÷36	7.			-	· -	•	-	Not seen	:
Car	awine Corg	re f	•						
430	13	Pending	_	-	• • ,	, 	••	tr tr	
481	1	11	-	_	-	-	•••	11 11	
482	2	11	-	-	-	-	,	11 11	
	eside	•	:					,	
485	9	**	-	_		_	·	11 19	
436	2	tr :					-	11 11	
		1	-	- .	-	-	-	· · · · · · · · · · · · · · · · · · ·	
Hullagine 1		1 3 3							
Ska.	ll Springs	1			· •				
1.39 ^L	j	11	-		200	- '	200	O'Driscoll &)	195
140 ^L	3	; 11	:		50	•		de la Hunty)	**
141 ^L		•	ta .		50	-	50		11
11;2 _T	30	i	100	-	-	-	Nil	11 11	' 11
745 T	3	4 1	-			-	Nil		t r
199 ^L	1	"	-	-	-		-	Not seen	
200 ^L	5	"	•••	-		-	-	11 11	
201 ^L	1	11	-		-	-	•	If tr	
Bee	H111								
158 ^L	5	11		•••	.	-	-	tt tt	
159 ^L	157	11	-	-	- ;	_	-	II tr	
160 ^L	2	f 11		-	_	- !	-	17 12	
161 ^L	45		_	-	_			11 11	
152 ^L	12	,,	_	_	-	_		. 11 11	
163 ^L	51	11	100	6 1,50		_	6 1.50		305
164 ^L	29		100	6,450 8,700	_	****	6,450	de la Hunty	195
165 ^L	i	Approved	-	3 , 300	•	- !	8,300		11
166 <u>1</u>	5	Fending "	- '	100	150	-	250	11 ,	195
167 ^L	13	•	- :	2,600	• :	-	2,600	. 11	195
10/	4	u u	-	800		••	800		17
168 ^L	3	11		400	- :	• · · · · · · · · · · · · · · · · · · ·	400		11
169 <mark>L</mark>	105 =	Approved	350	450	7,000		7,450	· · · · · · · · · · · · · · · · · · ·	11
170 ^L	34		1,000	7,650		-	7,650	11	17
171 <mark>.</mark>	13	1	- ;	1,000	- :	- !	1,000	11	11
172 ^L 173 ^L 174 ^L 175 ^L 176 ^L 177 ^L	13	Pending	- :	6,200			6,200	ıı	11
173 ^L	5	, ,		150	: :	•••	150	n	11
174 ^L	34	1 11	· ·	8,000	7,800		15,800	tt :	11
175 ^L	2	i te		_		— <u> </u>		n .	
176 ^L	1	11	 	-	-	` -	Nil	1	195
177L	<u> </u>	10	50	-		- A	Nil		11
L DOL	27		- ,	650	100	eme Tigoria	750	. 11	195
LIO	1	"		-	-	150	150	H	195
179 ^L	80	**************************************	1,950	2,500	-	-	2,500	· u	195
1.80 ^L	17	t:	100	200	-		200	11	. 11
ıeı ^L	5	16	-	400	50	-	450		11
								· · · · · · · · · · · · · · · · · · ·	
	}					į,			
	: 9	§ !							

D.F.D. RHODES (Con'd)

Mineral	Area	Tenure	•	Tonnages by G	rades (% Mn)		Total Ore	Estimat	ed '
Claim No.			30-39.9%	40-44.9%	45-49.9%	50 +%	above 40% Nn	By	Year
	Acres		Tons	Tons	Tons	Tons	Tons		
182 ^L	10	Approved	cap.	-	250	3,000	3,250	de la Hunty	1956
183 ^L	37	Pending	100	100	50	-	150	11	11
,184 ^L	3	17		•	400	-	400	11	11
. 185 ^L	1	11	-	100	; •	-	100	11	tf
186 ^L	20	Approved	•	1,200	-		1,200	11	1958
187 ^L	300	Pending	1,100	1,100	_		1,100	11	11
188 ^L	2	"	400	-	: :	•	Nil	11	11
189 ^L	3		-	_	•		-	Not seen	
190 ^L	9	18	300		: 	-	Nil	de la Hunty	195
202 ^L	1	1	100				Ni1	11	195
203 ^L	10	,,,		350	100		L:50	11	# _/_/
204 ^L	10	**		550	200	-	200		*,
205 ^L	10	tr .	250		200	- :		11	
205 206 ^L		11	250	7. 600		-	Nil	11	1950 "
206 207 ^L	17	u i	2,800	1,600	-	-	1,600	11	11
207 ^L	20 _r		250	600	-	· and	600		
217 ⁻ 218 ^L	6		850	700	. •••	-	700	"	**
218 ⁻	50	, "	2,400	1,350	-	onds .	1,350	11	11
219 ^L	4	11	200	-	•••		Nil	11	**
220 ^L	3	1 10	-	250	300	-	550	11 ,	**
221 ^L	4	11		1,700	•••	-	1,700	11	**
222 ^T	11	11	2,900	-	4. (ė.	Nil	11	17
223 ^L	4	19	•	200	-	-	500	11	195
224 ^L	20	•			700	-	700	17	295
225 ^L	5	ti	-	300	-	-	300	v	11
226 ^L	1	11	-	600	_	-	600	"	11
227 ^L	3	11	2,000	1,400	-	••	1,400	"	12
260 ^L	2	11	•	-	• · · · · · · · · · · · · · · · · · · ·	-	-	Not seen	
261 ^L	15	†R	•	-	-		· -	11 11	
263 ^L	2	11	-	_	-			11	
264 ^L	2	•	_	_	-	-	-	11 :1	
336 ^I ,	14	11	· ·	_		_	•••	t:	
337 ^L	12	11			ents	•	-	11 11	
338 ^L	7					eren ·	•••	11	
•	Cooke								
191 ^L	1	Pending	·· · · · ·	250	_	_	2150	de la Hunty	195
192 ^L	´ + 1 2	1 Glidling	_	i	150	4,850		11	エジン
193 ^L		11	_	300	100	,	5,300	. 11	12
194 ^L	1	<u> </u>	-	150	• • • • • • • • • • • • • • • • • • •	50	200	· · ·	
194 195 ^L	5	Approved	, -	24,000	100	28,000 ;	52,000	11	11
195 ^L	2	Pending	50	50	100	- :	150		11
196 197 ^L	4			2,000 -	700	1,000	3,000	ti .	11
19/	27		50	2,600	300	***	2,900		
198 ^L	10	1	-	-	1,000	***	1,000	11 .	11
208 ^L	13	!!	2,450	1,550	•		1,550	it.	11
209 ^L	6	1	2,300	700	• (•	700	11	17
210 ^L	2	1		-	600	-	600	11	17
211	2	11	1,150	-	-		Nil	19	11
212	1		4,000	3,000	-	-	3,000	u .	17
228	1	H .	350	-	-	-	Nil	11	1950
229 ¹	1 .	18.		300	350	-	650		19
230 ^L	1	•	600	700	-	÷ i	700	11	1958
231 ^L	3		300	300	-	-	300	11	11
212 ^L 228 ^L 229 ^L 230 ^L 231 ^L 232 ^L 233 ^L	2	18		-	-	2 , 900	2,900	11	1956
233 ^L	2			200	-		200	1 7	11
					ė. V	į.			

D.F.D. RHODES (Con'd)

Mineral	Area	Tenure .	T	onnages by Gra	des (% lin)		Total Ore	Estima	ted
Claim No.		•	30-3909%	40-44.9%	45-49.9%	50 + %	above 40% Mn	Ву	Date
	Acres		Tons	Tons	Tons	Tons	Tons		
234 ^L	2	Pending	50	-	50	_	50	de la Hunty	1956
235 ^L	13	11	1,200	1,450	3,350	_	4,800	11	11
236 ^L	3	H	-	_	150	_	150	11	11
237 ^L	2	12	_	-	1,400	_	1,400	11	1958
238 ^L	2	11	100	100	_	_	100	11	11
238 ^L 239 ^L	3	11	-	_	200		200	1	1956
240 ^L	4	н	•••	1 · 1 · 2		2,400	2,400	12	11
240 ^L 257 ^L	1	11		-	_	_		Not seen	: -
258 ^L	5	11		_			_	11 11	
259 ^L	2	**				_	<u>-</u>	11 11	
262 ^L	125	l tr		_			-	11 11	
	our Downs	i Station		_		-	•	" "	
265 ^L	176	_	30 000	6 000	•		6 222	7 7 1	7050
266 ^L		Approved	30,000	6,000	•	-	6,000	de la Hunty	1958
267 ^L	175	11	670,000	12,000	-	-	12,000	11	1f
268 ^L	148		723,000	_	-	-	Nil	11	12
	80	11	252,000		-	_	Nil	11	11
269 ^L	45	11	16,000	-	-	-	CNS)	11	Ħ
270 ^L	08	11	6,000	-	-	-	-	tt	I †
271 ^L	23	11	12,000	-	-	•==		t!	11
354 ^L	30	Pending	-	-	-	-		Not seen	
355 ^L	17	f tr	-	-	-	-	-		
Walg	un Statio	n			<u>}</u>				
272 ^L	80	Pending	2,250	-	-	-	N11	O'Driscoll &) de la Hunty	1957
275 ^L	, 6	11	_	-		_	-	Not seen	
· 276 ^L	10	11		-	-	_	-		
356 ^L	45	3 1 5	-	_	_	_	==	11 11	
Wobl	egun Hill	*		1 · · · · · · · · · · · · · · · · · · ·				1	
308 ^L	5	11	-	-	-	. -	,555	11 11	
Sadd	leback Hi	11		1				•	
333 ^L	1	Pending	-	-	c s	-		11 11	
334 ^L	1	11	_			_	, 	11 11	
334 ^L 339 ^L 340 ^L	3	11	_	-	-	_	_	1	
340 ^L	8	11	_	-	_		_	11	
341 ^L	3	11	_	_		_	-	11	
			_		1		-		
TOTALS		•	<u> </u>					· · · · · · · · · · · · · · · · · · ·	
Claims		Approved			-	· •		:	
126	2,838	20	1,745,950	119,350	40,400	42,350	202,100	i	
		Pending					,	•	
		106			Y			*	

TABLE II

5. L.G. HANCOCK AND E.A.M. WRIGHT

			5•		CK AND E.A.	M. WRIGHT		1	
Mineral	Area	Tenure		Tonnages by Gra	~		Total Cre	Estimat	
Claim No			30-39.9%	40-44.9%	45-49.9%	50 + %	above 40% Mn	By	Year
	Acres		Tons	Tons	Tons	Tons	Tons		
	HOLDFIELD								
	ar District podiadarrie	H1116	in the second se		1	- · ·		:	•
465	7	Approved	*	2,100	_	•	2,100	O'Driscoll &)	1957
			The state of the s	:				de la Hunty)	,
46 6	10	11	-	-		••• ·	-	Not seen	1 -
467	24	11	-	-	-	- ;	222		
468	10			400	400		800	O'Driscoll &) de la Tunty	1957
469	4	17	-	-	-	-		Not seen	
470	4	11	-	-	_	<u>.</u>	-	u u	
488	4	11	200	-	-	=	Nil	O'Driscoll %	1957
489	10	10		÷ -				de la Hunty)	
	District			<u>-</u>		-	-	Not seen	
	arrie Statio	n			10	· · · · · · · · · · · · · · · · · · ·			
285 ^L	10	Approved			-	-	 -	11 11	
. 291 ^L	24	11	-	-	_	- -		11 11	
	t. Fraser St	ation		:					
286 ^L	10	Approved	-	1,350	-	· •	1,350	de la Hunty	1958
289 ^L	10	H	-	1,000	3,000	• -	4,000	11	••
290 ^L	10	"	-	900	100		1,000	11	
292 ^L 293 ^L	24	11	-	-	30,000	39,000	69,000	11	4
294 ^L	24	'' !	-	1 200	6,500	99,000	105,500	••	*:
295 ^L	3	11		1 , 200 50	1	_	1,200 50		11
296 ^L	3	11	-	3,100	-		3,100	11	(i)
297 ^L	24	A II .	800	4,100	5,000		9,100	3)	14
. 298 ^L	24	11		1,150	-	: : -	1,150	11	.41
299 ^L	10	11	-	-	-	-	_	Not seen	
307 ^L	105	Pending	-	850	700	-	1,550	de la Hunty	1958
309 ^L	11	. 11	-	300	50	-	350	11	1)
310 ^L	12	11	-	-	9,500	.	9,500	11	11
311 ^L	15	11	-	-	900	- ;	900	11	11
312 ^L	20	11	-	•		-	Nil	Ir	it
313 ^L 314 ^L	24 24	11	<u> </u>	150	50	- :	200	!	1)
315 ^L	3			50	_	_	50 Nil		4
316 ^L	14	· ˈ ˈ m	-	50		_	50	rt .	11
317 ^L	35	11	Cosh	-	200	<u>-</u>	200	11	11
318 ^L	40	11	100	1,300			1,300	11	15
319 ^L 320 ^L	40	11	-	. 850	· • ·		850	:#	11
320 ^L	24	11	-	550	- ;	-	550	tt .	11
321 ²	12	it .	-	400	- :	-	400	19	†!
321 ^L 322 ^L 323 ^L	24	ts	-	750	350	- :	1,100	*1	11
- 301,L	40 40	11	1,000	2,850	- ;		2,350		11
325L	40 38	11		450	•	-	450	tt .	# VF
326 ^L	50	17	_	200		-	200 W11	11	
324 ^L 325 ^L 326 ^L 327 ^L 328 ^L 329 ^L 330 ^L	4	11	-	50	- ·	- : - :	N11 50	11	11
328 ^L	40	11 .	: •	1,400	-		1,400	4	••
329 ^L	24	u	-	1100	-	· · · · · · · · · · · · · · · · · · ·	400	u i	,,
330 ^L	60	11	<u></u>	1,300	•••		1,300	tf.	tr
		-			:	# #			

L.C. Hancock and E.A.M. Wright (Con'd)

Mineral	Area	Tenure		Tonnages by G	rade (% Mn)		Total Ore	Estin	nated
Claim No.		•	30-39.9%	40-44.5%	45-49.9%	50 + %	above 40% Mn	Ву	Year
	Acres		Tons	Tons	Tons	Tons	Tons		
WEST PILBAR	RA GOLDFIE	LD	1 1 1						
Mulg 93 ^{WP}	3a Downs S	Station Approved	400	500			500	O'Driscoll de la Hunt	&) 1957
	diner Poo	ol							
95 ^{VP}	10	Approved		150	200	-	350	11 11 11 11 11 11 11 11 11 11 11 11 11	
TOTALS				· · · · · · · · · · · · · · · · · · ·			-		
Claims 46	992	Approved	2,500	27,900	56,950	139,000	222,850		
		Pending 23	} 		9	: : :		Total	

TABLE II ...
6. H.V. BLACKWELL AND J.M. HENDERSON

	Mineral	Area	Tenure	Ţ	onnages by Gr	ades (% Mn)		Total Ore	Estim	ited
	Claim No.		1	30-39.9%	40-44.9%	45-49.9%	50 + %	above 40% Mn	В у	Year
,	PILBARA GO	Acres		Tons	Tons	Tons	Tons	Tons 7		
r V	Marble Bar									
	521	52	Approved	7,200	15,850	5,000		20,850	de la Hunty	1958
	522	37	17	2,000	5,650			5,650		
	523	23	11	-	3,150	-	-	3,150		1
	537	8	11		1,000	-		1,000		
	538	<i>3</i>	11	-	900	550	-	1,450		
	TOTALS									
	Claims		Approved							
	5	123	5	9,200	26,550	5,550	-	32,100		
	**************************************			7	o PINDAN AN	D SIMS				
	PILBARA GO	LDFIELD		•						
	Marble Bar	District								
	N1m	ingarra Sta	ation	,	•					
	. 517	300	Approved	Opens .	37,500	21,000	-	58,500	de la Hunty	1958
	518	300	tı	- !	-		-	Nil	11	
	519	15	•	-	-	_	=	Nil		
				. i	•					and the species of the part

21,000

58,500

37°500

TOTALS

Claims

3

Approved

3

615

8. R.B. SYMNOTT

Area	Tenure	<u> </u>	Tonnages by Gr	rade (% Mn)		Total Ore	Estimat	ted
		30 - 39•%	40-44.9%	45-49.9%	50 + %	above 40% Mn	Зу	Yea
Acres		Tons	Tons	Tons	Tons	Tons		
OLDFIELD			*		1		1	
llands Sta	tion	`			•			
300	Approved	14,800	-	-	-	N11	de la Hunty	195
	1							
6	Approved	2,000	-	4,000	-	4,000	O'Driscoll	1956
	,				•	• • • • • • • • • • • • • • • • • • •		
	Approved							· ····································
306	2	16,800	→	4,000	-	4,000		
		ter til er fler til er til						
		9.	Western Dev	ELOPMENT PTY	LTD.			
VER GOLDFI	ELD		· 기계 :			:		
garup	• •	•	: :					
80 ;	Approved	135,000	•		. , -	-	Sofoulis &)	1954
4) it						Noldart)	
ond .							;	
24	Approved	24,000	•	-	-	- -	de la Hunty	1958
	Approved	·						
108	4	159,000	-		_	èsa		
			1			Received the Marker shows a service standard concentration of the second		
		10.	·K. GRANT	AND R. LA	RSEN			
OLDFIELD	∜							
Florrie								
15	Pending		-			enca .	Not seen	
				· 				
•								
Pilating and the state of the s			11. M.J.	ANDREWS				
OLDF LELD								
	1					·		
6	Approved						· Not seen	
	Acres HOLDFIELD Hands Star 300 Ful Station 6 306 VER GOLDFI garup 80 4 Hond 24 108 OLDFIELD Florrie 15	Acres FOLDFIELD Riands Station 300 Approved Ful Station 6 Approved 306 2 VER GOLDFIELD Florie 15 Pending OLDFIELD Laboucherei	Acres Acres Tons HOLDFIELD Hands Station 300 Approved 14,800 Mapproved 306 2 16,800 Polymer GoldField Garup 80 Approved 4 " Hond 24 Approved 103 4 159,000 Approved 106. ColdField Florrie 15 Pending	Acres Acres Tons Tons FOLDFIELD Hands Station 300 Approved 14,800 - 14,800 - Approved 306 2 16,800 - 9. WESTERN DEV VER GOLDFIELD Igarup 80 Approved 24 Approved 24 Approved 108 4 159,000 - 10. K. GRAVT OLDFIELD Florrie 15 Pending - 11. K.J.	30-39.9% 40-44.9% 45-49.9% Acres	Acres Tone Tone Tone Tone Tone Tone Tone Tone	30-39.96 MC-D4.96 M5-49.96 50 + 5 Above 405 Mn	30-39.95

TABLE III MANGANESE ORE ON GROUND REFUSED BY MINISTER FOR MINES

Mineral	Area	Applicant	Tonnages by Grades (% Mn)				Total Ore	Estimated	
Claim No.			30-39.9%	40-44.9%	45-49.9%	50 + %	above 40% Mn	By	Year
	Acres		Tons	Tons	Tons	Tons	Tons		
PILBARA GOI	DETELD								
Marble Bar		:			: :	!			
	n Hills			•	;				
541	38	H.V. Blackwell & J.M. Henderson	-	1,000		→	1,000	de la Hunty	1958
542*	38	11 11 11	6,000	3,300		•	3,300	11	11
544	17	11 11 19	300	<u>-</u>	• • • • • • • • • • • • • • • • • • •	•	N11	u	11
545	17	7 7 11 11	200	. =	_	-	, Nil	· · · · · · · · · · · · · · · · · · ·	11
546	38	THE HE H	1,500	500			500	1 tr	11
547	231	$\frac{1}{2} \operatorname{tr} = -\frac{1}{2} \operatorname{tr} = -\frac{1}{2}$	85,000	11,000			11,000	· · · · · · · · · · · · · · · · · · ·	t f
548	38	The House to	7,000	2,000	; ;				
550	100	D.F.D. Rhodes	15,000			•	2,000	ir .	
551	80	11		,	;	••• · · · · · · · · · · · · · · · · · ·	NII	ii ii	**
555		11	60,000			•	Nil	H .	12
	1		5,000	1,900	, , , , , , , , , , , , , , , , , , ,	- ;	1,900	tt	11
556	1	"	***	2,300	-		2,800	t•	Ħ
557	1	11	1,600	300	-	- ;	300	11	17
558	60	!!	6,250	1,500	: • • • :	_	1,600	1	
559	80	If	14,900	12,000	· · · · · · · · · · · · · · · · · · ·	-	12,000	11	t)
560	14	U	-	5,700	; -		5,700	11	13
561	5	tt .	.	-	3.200			or in the second of the second	
562	4	ii e	1,900	600	3,200		3,200		11
563	7	11	-	000	-		600	11	17
575	12	11	-		-		- .	Not seen	
576	7	19	-	400	decay.	445	400	de la Hunty	H,
	/ -	•	200	50	-	•;	50	11	11
577	<u>5</u>	lf .	50	150	-	-	150	11	19
578 	10	11	-	1,200	6,500	-	7,700	11	**
581	5	11		-	• · · · · · · · · · · · · · · · · · · ·	- ;		Not seen	
583	240	P.R. Fletcher	23,000	7,000		_	7,000	de la Hunty	11
584	5	H.V. Blackwell & J.M. Henderson	- ·		• · · · · · · · · · · · · · · · · · · ·	- :	-	Not seen	
585	5	11 11 11	-	_	-	_	_ 4	11	
58 6	13	tt tt tt					· to		
Mt. S	Sydney			-		**	-	11 12	
539	7	D.F.D. Rhodes	, i	1					
	,	. Der • De Knodes	H5	-	•	- 1	-	it it	
540	20	<u>{</u>	-	•••		•••	-	н н	
149	6	11		••• ;	•	-		11 11	
	le Station	:		:					
5 43 Koong	300 Jalin	Pindan & Sims	1,500	1,500			1,500	đe la Hunty	1958
.e5	5	D.F.D. Rhodes	_	1	_ :	_			
552	3	.11	_	_	_ ,		•••	Not seen	
	igarra		•	_	•••	-	-		-
580	20	Pindan & Sims	•		i			:	
ullagine Di		Lindan & DINB	-	-	· · · · · · · · · · · · · · · · · · ·	-	••	11 11	
			; ;	· · · · · · · · · · · · · · · · · · ·	- - - -	1		· •	
%00a1	e Woodie	i i	4	· 5	i	•			
50 L	1	D.F.D. Rhodes	-	***	-	-	<u> </u>	tt tt	
57 ^L	60	P.R. Fletcher		-	-	550	550	de la Hunty	1958
Mt. C	ooke				, , , , , , , , , , , , , , , , , , ,	Ì			
48 4	2	D.F.D. Rhodes	-		-	_	•	Not seen	
43 ^L 49 ^L 58 ^L 59 ^L X	L	11		-	•		_	nor seeu	
58 ^L	1		:						
59 ^L x	30	n n	_	<u>-</u> .	- Same Control	. - }		11 11	•
	J-	4	-		-	- 1	•	(See M.C.194 ^L)	

Mineral	Area	Applicant	Tonnages by Grades (% Mn)				Total Ore	Estimated	
Claim No.			30-39.9%	40-44.9%	45-49.9%	50 + %	above 40% Mn	Ву	Year
	Acres		Tons	Tons	Tons	Tons	Tons		
360 ^L	2	D.F.D. Rhodes	-	· · · · · · · · · · · · · · · · · · ·		_			
Bal	four Downs		; ;	: · · · · · · · · · · · · · · · · · · ·			:	Not seen	
335 ^L	300	L.G. Hancock	,	· ·	•	-	· ·	77.4	
Mt.	Fraser Sta	tion		1			_	Not seen	
332 ^L	13	L.G. Hancock & E.A.M. Wright	-	300	-	•	300	de la Hunty	1958
343 ^L	20	11 11 11	i		: : ===================================	_	: : N11	11	
344 ^T	10	in in in	• •	: : •	-	_	Nil	11	"
345 ^L	29	u u u	-	_		_	Nil		
347 ^L	12	in n	•		:		Ňil	11	u,
Roy	Hill Static	on		:			IV I I		1#
346 ^I	10	L.G. Hancock & E.A.M. Wright	: ! 	-	Com	-	-	Not seen	
351 ^L	13	11 11 11	•		· · · · · · · · · · · · · · · · · · ·	_		11 11	
352 ^L	17	at it it	: · · · · · · · · · · · · · · · · · · ·	-	_		-	11 11	
353 ^L	30	u u an	<u>.</u> 1	-	-			:	
Warı	rie Station		•			-	: :	11 11	
342 ^L	24	L.G. Hancock & E.A.M. Wright	-		•			11 11	
PEAK HILL		4 •			4	•		\$ \$!	
Ilga	ararrie Stat	ion				:		*	
89 ^P	29	Broken Hill Pty. Co. Ltd.	-	-	•		÷	tt 11	
TOTALS					•			·	
Claims	:			,		·			and the second s
53	2,024		229,400	53,300	9,700	550	63,550		

^{*} Includes late MC524^L (withdrawn)

 $[\]star$ Includes MC194^L (conditionally surrendered)