



## Production and reserves

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# Broad project portfolio

Rio Tinto has a wide portfolio of projects that take us into new regions and diverse landscapes around the world

## Metals and minerals production

	Rio Tinto % share (b)	2008 Production (a)		2007 Production (a)		2006 Production (a)	
		Total	Rio Tinto share	Total	Rio Tinto share	Total	Rio Tinto share
<b>ALUMINA ('000 tonnes)</b>							
Eurallumina (Italy) (c)	—	—	—	—	—	914	513
Gardanne (France) (d)	100.0	38	38	21	21		
Gove (Australia) (d)	100.0	2,325	2,325	405	405		
Jonquière (Vaudreuil) (Canada) (d)	100.0	1,370	1,370	252	252		
Queensland Alumina (Australia) (d) (e)	80.0	3,842	3,074	3,816	1,766	3,871	1,494
São Luis (Alumar) (Brazil) (d)	10.0	1,504	150	288	29		
Yarwun (Australia) (d)	100.0	1,293	1,293	1,260	1,260	1,240	1,240
Specialty alumina plants (Canada/France/Germany) (d)	100.0	759	759	144	144		
<b>Rio Tinto total</b>			<b>9,009</b>		<b>3,877</b>		<b>3,247</b>
<b>ALUMINIUM (refined) ('000 tonnes)</b>							
Alma (Canada) (d)	100.0	424.1	424.1	80.1	80.1		
Alouette (Sept-Îles) (Canada) (d)	40.0	572.1	228.8	108.9	43.5		
Alucam (Edéa) (Cameroon) (d)	46.7	91.1	42.5	18.8	8.8		
Anglesey (UK) (f)	51.0	118.0	60.2	146.6	74.7	144.3	73.6
Arvida (Canada) (d)	100.0	172.2	172.2	31.8	31.8		
Beauharnois (Canada) (d)	100.0	49.6	49.6	9.8	9.8		
Bécancour (Canada) (d)	25.1	414.5	103.8	80.1	20.1		
Bell Bay (Australia) (f)	100.0	178.5	178.5	176.9	176.9	176.2	176.2
Boyne Island (Australia) (f)	59.4	556.4	330.5	547.6	325.3	546.5	324.5
Dunkerque (France) (d)	100.0	254.1	254.1	49.5	49.5		
Grande-Baie (Canada) (d)	100.0	212.1	212.1	39.7	39.7		
ISAL (Reykjavik) (Iceland) (d)	100.0	187.4	187.4	35.0	35.0		
Kitimat (Canada) (d)	100.0	247.3	247.3	46.8	46.8		
Lannemezan (France) (d)	100.0	5.2	5.2	5.0	5.0		
Laterrière (Canada) (d)	100.0	234.2	234.2	44.0	44.0		
Lochaber (UK) (d)	100.0	42.9	42.9	8.3	8.3		
Lynemouth (UK) (d)	100.0	164.6	164.6	33.3	33.3		
Ningxia (Qingtongxia) (China) (d) (g)	50.0	162.9	81.5	30.9	15.5		
Sebree (USA) (d)	100.0	197.4	197.4	36.8	36.8		
Shawinigan (Canada) (d)	100.0	100.1	100.1	18.3	18.3		
Sohar (Oman) (h)	20.0	48.8	9.8				
SORAL (Husnes) (Norway) (d)	50.0	171.3	85.7	32.0	16.0		
St-Jean-de-Maurienne (France) (d)	100.0	129.8	129.8	25.2	25.2		
Tiwai Point (New Zealand) (f)	79.4	315.5	250.4	351.1	278.7	335.3	266.1
Tomago (Australia) (d)	51.6	523.3	269.8	97.4	50.2		
<b>Rio Tinto total</b>			<b>4062.4</b>		<b>1473.2</b>		<b>840.4</b>
<b>BAUXITE ('000 tonnes)</b>							
Awaso (Ghana) (d) (i)	80.0	796	637	216	173		
Gove (Australia) (d)	100.0	6,245	6,245	985	985		
Porto Trombetas (MRN) (Brazil) (d)	12.0	18,063	2,168	3,392	407		
Sangaredi (Guinea) (d) (j)		13,181	5,932	2,502	1,126		
Weipa (Australia)	100.0	20,006	20,006	18,209	18,209	16,319	16,319
<b>Rio Tinto total</b>			<b>34,987</b>		<b>20,900</b>		<b>16,319</b>
<b>BORATES ('000 tonnes) (k)</b>							
Rio Tinto Minerals – Boron (US)	100.0	591	591	541	541	538	538
Rio Tinto Minerals – Argentina (Argentina)	100.0	19	19	19	19	15	15
<b>Rio Tinto total</b>			<b>610</b>		<b>560</b>		<b>553</b>
<b>COAL – HARD COKING ('000 tonnes)</b>							
<b>Rio Tinto Coal Australia</b>							
Hail Creek Coal (Australia)	82.0	6,049	4,960	5,012	4,110	4,544	3,726
Kestrel Coal (Australia)	80.0	3,089	2,471	2,586	2,069	2,729	2,183
<b>Rio Tinto total hard coking coal</b>			<b>7,431</b>		<b>6,179</b>		<b>5,909</b>

See notes on page 111

	Rio Tinto % share (b)	2008 Production (a)		2007 Production (a)		2006 Production (a)	
		Total	Rio Tinto share	Total	Rio Tinto share	Total	Rio Tinto share
<b>COAL – OTHER* ('000 tonnes)</b>							
<b>Rio Tinto Coal Australia</b>							
Bengalla (Australia)	30.3	5,357	1,622	5,155	1,561	5,544	1,679
Blair Athol (Australia)	71.2	10,194	7,262	7,924	5,645	10,190	7,259
Hunter Valley Operations (Australia)	75.7	10,751	8,139	10,094	7,642	12,024	9,104
Kestrel Coal (Australia)	80.0	929	744	1,035	828	863	691
Mount Thorley Operations (Australia)	60.6	2,949	1,786	2,924	1,771	3,895	2,359
Tarong Coal (Australia) (l)	–	262	262	4,510	4,510	6,979	6,979
Warkworth (Australia)	42.1	6,039	2,540	5,775	2,430	7,342	3,089
<b>Total Australian other coal</b>			<b>22,356</b>		<b>24,388</b>		<b>31,159</b>
<b>Rio Tinto Energy America</b>							
Antelope (US)	100.0	32,474	32,474	31,267	31,267	30,749	30,749
Colowyo (US)	(m)	4,446	4,446	5,077	5,077	5,754	5,754
Cordero Rojo (US)	100.0	36,318	36,318	36,712	36,712	36,094	36,094
Decker (US)	50.0	5,939	2,970	6,340	3,170	6,449	3,225
Jacobs Ranch (US)	100.0	38,206	38,206	34,565	34,565	36,258	36,258
Spring Creek (US)	100.0	16,341	16,341	14,291	14,291	13,181	13,181
Total US coal			<b>130,755</b>		<b>125,083</b>		<b>125,260</b>
<b>Rio Tinto total other coal</b>			<b>153,111</b>		<b>149,471</b>		<b>156,419</b>
<b>COPPER (mined) ('000 tonnes)</b>							
Bingham Canyon (US)	100.0	238.0	238.0	212.2	212.2	265.6	265.6
Escondida (Chile)	30.0	1,281.7	384.5	1,405.5	421.6	1,313.4	394.0
Grasberg – Joint Venture (Indonesia) (n)	40.0	521.2	7.1	569.4	28.4	115.5	46.2
Northparkes (Australia)	80.0	24.8	19.8	43.1	34.5	83.3	66.6
Palabora (South Africa) (o)	57.7	85.1	49.1	71.4	41.2	61.5	31.1
<b>Rio Tinto total</b>			<b>698.5</b>		<b>737.9</b>		<b>803.5</b>
<b>COPPER (refined) ('000 tonnes)</b>							
Escondida (Chile)	30.0	257.5	77.3	238.4	71.5	134.4	40.3
Kennecott Utah Copper (US)	100.0	200.6	200.6	265.6	265.6	217.9	217.9
Palabora (South Africa) (o)	57.7	75.9	43.8	91.7	52.9	81.2	40.9
<b>Rio Tinto total</b>			<b>321.6</b>		<b>390.0</b>		<b>299.2</b>
<b>DIAMONDS ('000 carats)</b>							
Argyle (Australia)	100.0	15,076	15,076	18,744	18,744	29,078	29,078
Diavik (Canada)	60.0	9,225	5,535	11,943	7,166	9,829	5,897
Murowa (Zimbabwe)	77.8	264	205	145	113	240	187
<b>Rio Tinto total</b>			<b>20,816</b>		<b>26,023</b>		<b>35,162</b>
<b>GOLD (mined) ('000 ounces)</b>							
Barneys Canyon (US)	100.0	5	5	11	11	15	15
Bingham Canyon (US)	100.0	368	368	397	397	523	523
Cortez/Pipeline (US) (p)	–	72	29	538	215	444	178
Escondida (Chile)	30.0	144	43	187	56	170	51
Grasberg – Joint Venture (Indonesia) (n)	40.0	–	–	2,689	423	238	95
Greens Creek (US) (q)	–	18	12	68	48	63	44
Northparkes (Australia)	80.0	32	26	79	63	95	76
Rawhide (US) (r)	100.0	18	9	19	10	26	13
Others	–	14	8	19	11	18	9
<b>Rio Tinto total</b>			<b>501</b>		<b>1,233</b>		<b>1,003</b>
<b>GOLD (refined) ('000 ounces)</b>							
Kennecott Utah Copper (US)	100.0	303	303	523	523	462	462

\* Coal – other includes thermal coal and semi-soft coking coal.  
See notes on page 111

## Metals and minerals production continued

	Rio Tinto % share (b)	2008 Production (a)		2007 Production (a)		2006 Production (a)	
		Total	Rio Tinto share	Total	Rio Tinto share	Total	Rio Tinto share
<b>IRON ORE ('000 tonnes)</b>							
Corumbá (Brazil) (t)	100.0	2,032	2,032	1,777	1,777	1,982	1,982
Hammersley Iron – six wholly owned mines (Australia)	100.0	95,553	95,553	94,567	94,567	79,208	79,208
Hammersley Iron – Channar (Australia)	60.0	10,382	6,229	10,549	6,330	9,798	5,879
Hammersley Iron – Eastern Range (Australia)	(s)	8,186	8,186	6,932	6,932	8,215	8,215
Hope Downs (Australia) (t)	50.0	10,936	5,468	64	32	–	–
Iron Ore Company of Canada (Canada)	58.7	15,830	9,295	13,229	7,768	16,080	9,442
Robe River (Australia)	53.0	50,246	26,631	51,512	27,301	52,932	28,054
<b>Rio Tinto total</b>			<b>153,394</b>		<b>144,707</b>		<b>132,780</b>
<b>LEAD ('000 tonnes)</b>							
Greens Creek (US) (q)	–	4.6	3.2	17.0	11.9	16.9	11.9
<b>MOLYBDENUM ('000 tonnes)</b>							
Bingham Canyon (US)	100.0	10.6	10.6	14.9	14.9	16.8	16.8
<b>PIG IRON ('000 tonnes)</b>							
Hlsmetl® (Australia)	60.0	144	87	115	69	89	53
<b>SALT ('000 tonnes)</b>							
Dampier Salt (Australia) (u)	68.4	8,974	6,135	7,827	5,242	8,323	5,405
<b>SILVER (mined) ('000 ounces)</b>							
Bingham Canyon (US)	100.0	3,414	3,414	3,487	3,487	4,214	4,214
Escondida (Chile)	30.0	6,167	1,850	7,870	2,361	6,646	1,994
Grasberg – Joint Venture (Indonesia) (n)	40.0	4,488	220	5,238	477	1,675	670
Greens Creek (US) (q)	–	1,815	1,275	8,646	6,075	8,866	6,230
Others	–	655	417	914	602	1,345	861
<b>Rio Tinto total</b>			<b>7,176</b>		<b>13,002</b>		<b>13,968</b>
<b>SILVER (refined) ('000 ounces)</b>							
Kennecott Utah Copper (US)	100.0	3,252	3,252	4,365	4,365	4,152	4,152
<b>TALC ('000 tonnes)</b>							
Rio Tinto Minerals – talc (Australia/Europe/North America) (v)	100.0	1,163	1,163	1,281	1,281	1,392	1,392
<b>TITANIUM DIOXIDE FEEDSTOCK ('000 tonnes)</b>							
Rio Tinto Iron & Titanium (Canada/South Africa) (w)	100.0	1,524	1,524	1,458	1,458	1,415	1,415
<b>URANIUM ('000 lbs U<sub>3</sub>O<sub>8</sub>)</b>							
Energy Resources of Australia (Australia)	68.4	11,773	8,052	11,713	8,011	10,370	7,092
Rössing (Namibia)	68.6	8,966	6,149	6,714	4,605	7,975	5,469
<b>Rio Tinto total</b>			<b>14,200</b>		<b>12,616</b>		<b>12,561</b>
<b>ZINC ('000 tonnes)</b>							
Greens Creek (US) (q)	–	13.9	9.8	50.8	35.7	47.5	33.4

See notes on page 111

### Production data notes

- (a) Mine production figures for metals refer to the total quantity of metal produced in concentrates or doré bullion irrespective of whether these products are then refined onsite, except for the data for iron ore and bauxite (beneficiated and calcined) which represent production of marketable quantities of ore.
- (b) Rio Tinto percentage share, shown above, is as at the end of 2008 and has applied over the period 2006–2008 except for those operations where the share has varied during the year and the weighted average for them is shown below. The Rio Tinto share varies at individual mines and refineries in the “others” category and thus no value is shown.

#### Rio Tinto share %

Operation	See note	2008	2007	2006
Queensland Alumina	(e)	<b>80.0</b>	46.3	38.6
Palabora	(o)	<b>57.7</b>	57.7	50.5
Dampier Salt Limited	(u)	<b>68.4</b>	67.0	64.9

- (c) Rio Tinto sold its 56.2 per cent share in Eurallumina with an effective date of 31 October 2006 and production data are shown up to that date.
- (d) Rio Tinto acquired the operating assets of Alcan with effect from 24 October 2007; production is shown as from that date. The Rio Tinto assets and the Alcan assets have been combined under the Rio Tinto Alcan name.
- (e) Rio Tinto held a 38.6 per cent share in QAL until 24 October 2007; this increased to 80.0 per cent following the Alcan acquisition.
- (f) Following a review of the basis for reporting aluminium smelter production tonnes, the data reported now reflect hot metal production rather than saleable product tonnes.

- (g) Rio Tinto sold its 50 per cent interest in the Ningxia aluminium smelter with an effective date of 26 January 2009.
- (h) Production at the Sohar smelter commenced in the third quarter of 2008.
- (i) Rio Tinto Alcan has an 80 per cent interest in the Awaso mine but purchases the additional 20 per cent of production.
- (j) Rio Tinto has a 22.95 per cent shareholding in the Sangaredi mine but receives 45.0 per cent of production under the partnership agreement. Data have been restated to reflect a moisture content adjustment.
- (k) Borate quantities are expressed as B<sub>2</sub>O<sub>3</sub>.
- (l) Rio Tinto sold its 100 per cent interest in Tarong Coal with an effective date of 31 January 2008; production data are shown up to that date.
- (m) In view of Rio Tinto Energy America's responsibilities under a management agreement for the operation of the Colowyo mine, all of Colowyo's output is included in Rio Tinto's share of production.
- (n) Through a joint venture agreement with Freeport-McMoRan Copper & Gold (FCX), Rio Tinto is entitled to 40 per cent of additional material mined as a consequence of expansions and developments of the Grasberg facilities since 1998.
- (o) Rio Tinto's shareholding in Palabora varied during 2006 due to the progressive conversion of debentures into ordinary shares.
- (p) Rio Tinto sold its 40 per cent interest in the Cortez/Pipeline joint venture on 5 March 2008, with an effective date end of February 2008. Production data are shown up to that date.
- (q) Rio Tinto sold its 70.3 per cent share in the Greens Creek joint venture with an effective date of 16 April 2008. Production data are shown up to that date.

- (r) On the 28 October 2008, Rio Tinto increased its shareholding in the Rawhide Joint Venture from 51 per cent to 100 per cent. The previous Joint Venture shareholder continued to be entitled to 49 per cent of production until 31 December 2008; thereafter Rio Tinto will be entitled to 100 per cent.
- (s) Rio Tinto's share of production includes 100 per cent of the production from the Eastern Range mine. Under the terms of the joint venture agreement (Rio Tinto 54 per cent), Hamersley Iron manages the operation and is obliged to purchase all mine production from the joint venture.
- (t) Hope Downs started production in the fourth quarter of 2007.
- (u) Rio Tinto increased its shareholding in Dampier Salt Limited to 68.4 per cent at the beginning of July 2007.
- (v) Talc production includes some products derived from purchased ores.
- (w) Quantities comprise 100 per cent of QIT and 50 per cent of Richards Bay Minerals' production.
- † In January 2009, Rio Tinto announced a definitive agreement to sell its 100 per cent interest in the Corumbá mine.

## Ore reserves

Ore reserves and mineral resources for Rio Tinto managed operations are reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, December 2004 (the JORC Code) as required by the Australian Securities Exchange (ASX). Codes or guidelines similar to JORC with only minor regional variations have been adopted in South Africa, Canada, US, Chile, Peru, the Philippines, UK, Ireland and Europe. Together these Codes represent current best practice for reporting ore reserves and mineral resources.

The JORC Code envisages the use of reasonable investment assumptions, including the use of projected long term commodity prices, in calculating reserve estimates. However, for US reporting, the US

Securities and Exchange Commission require historical price data to be used. For this reason, some reserves reported to the SEC in the Form 20-F may differ from those reported below.

Ore reserve and mineral resource information in the tables below is based on information compiled by Competent Persons (as defined by JORC), or 'recognised overseas mining professionals' as defined by the ASX, most of whom are full time employees of Rio Tinto or related companies. Each has had a minimum of five years relevant estimation experience and is a member of a recognised professional body whose members are bound by a professional code of ethics. Each Competent Person consents to the inclusion in this report of information they have provided in the form and context in which it

appears. A register of the names of the Competent Persons who are responsible for the estimates is maintained by the Company Secretaries in London and Melbourne and is available on request. Where operations are not managed by Rio Tinto the reserves are published as received from the managing company.

The ore reserve figures in the following tables are as of 31 December 2008. Summary data for year end 2007 are shown for comparison. Metric units are used throughout. The figures used to calculate Rio Tinto's share of reserves are often more precise than the rounded numbers shown in the tables, hence small differences might result if the calculations are repeated using the tabulated figures.

	Type of mine (a)	Proved ore reserves at end 2008				Probable ore reserves at end 2008				Total ore reserves 2008 compared with 2007				Rio Tinto share	
		Tonnage		Grade		Tonnage		Grade		Tonnage		Grade		Interest %	Recoverable mineral
		2008	2007	2008	2007	2008	2007	2008	2007						
<b>BAUXITE (b)</b>		millions of tonnes	%Al <sub>2</sub> O <sub>3</sub>	millions of tonnes	%Al <sub>2</sub> O <sub>3</sub>	millions of tonnes	millions of tonnes	%Al <sub>2</sub> O <sub>3</sub>	%Al <sub>2</sub> O <sub>3</sub>	millions of tonnes	millions of tonnes	%Al <sub>2</sub> O <sub>3</sub>	%Al <sub>2</sub> O <sub>3</sub>		millions of tonnes
<b>Reserves at operating mines</b>															
Gove (Australia) (c)	O/P	111	49.5	64	49.0	175	143	49.4	49.2	100.0					175
Porto Trombetas (MRN) (Brazil) (d)	O/P	147	50.8	59	50.1	205	166	50.6	51.2	12.0				25	
Sangaredi (Guinea) (e)	O/P			133	52.4	133	–	52.4	–	23.0				30	
Weipa (Australia) (f)	O/P	337	51.5	1,398	52.6	1,736	1,224	52.4	53.6	100.0				1,736	
<b>Total</b>															
<b>1,966</b>															
<b>BORATES (g)</b>															
<b>Reserves at operating mine</b>															
Rio Tinto Minerals – Boron (US)	O/P	14.2		7.1		21.3	21.5			100.0				21.3	
<b>COAL (h)</b>															
<b>Reserves at operating mines</b>															
<b>Rio Tinto Energy America (US)</b>															
Antelope (US)	O/C	SC	260	36	260	36	296	325	20.59	0.24	100	100.0		296	
Colowyo (US) (k)	O/C	SC	17	3	17	3	20	25	23.84	0.44	100	100.0		20	
Cordero Rojo (US) (l)	O/C	SC	300	65	300	65	365	241	19.54	0.30	100	100.0		365	
Decker (US)	O/C	SC	9		9		9	12	21.98	0.53	100	50.0		4	
Jacobs Ranch (US)	O/C	SC	299	47	299	47	346	383	20.35	0.43	100	100.0		346	
Spring Creek (US)	O/C	SC	238	49	238	49	287	295	21.75	0.33	100	100.0		287	
<b>Sub-total</b>															
<b>1,318</b>															

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	Type of mine (a)	Coal type (i)	Reserves		Marketable reserves		Marketable reserves		Marketable coal quality		Average % Yield to give marketable reserves	Interest %	Marketable reserves
			Proved at end 2008	Probable at end 2008	Proved at end 2008	Probable at end 2008	Total 2008	Total 2007	Calorific value MJ/kg (j)	Sulphur content % (j)			
<b>COAL (h) (continued)</b>													
			millions of tonnes	millions of tonnes	millions of tonnes	millions of tonnes	millions of tonnes	millions of tonnes	Calorific value MJ/kg	Sulphur content %			millions of tonnes
<b>Rio Tinto Coal Australia</b>													
Bengalla (Australia)	O/C	SC	94	81	70	62	<b>132</b>	137	<b>28.21</b>	<b>0.47</b>	75	30.3	<b>40</b>
Blair Athol (Australia)	O/C	SC	33	0.5	29	0.3	<b>29</b>	37	<b>26.17</b>	<b>0.31</b>	87	71.2	<b>21</b>
Hail Creek (Australia)	O/C	MC	145	102	93	73	<b>167</b>	174	<b>32.20</b>	<b>0.35</b>	68	82.0	<b>137</b>
Hunter Valley Operations (Australia) (m)	O/C	SC+MC	390	94	267	63	<b>330</b>	298	<b>28.78</b>	<b>0.57</b>	68	75.7	<b>250</b>
Kestrel Coal (Australia)	U/G	SC+MC	58	100	49	83	<b>131</b>	136	<b>31.60</b>	<b>0.59</b>	83	80.0	<b>105</b>
Mount Thorley Operations (Australia)	O/C	SC+MC	31	5	21	3	<b>24</b>	23	<b>29.41</b>	<b>0.43</b>	65	60.6	<b>14</b>
Warkworth (Australia) (n)	O/C	SC+MC	241	185	157	121	<b>278</b>	242	<b>30.67</b>	<b>0.44</b>	65	42.1	<b>117</b>
Sub-total												<b>684</b>	
<b>Total reserves at operating mines</b>												<b>2,002</b>	
<b>Other undeveloped reserves (o)</b>													
<b>Rio Tinto Coal Australia</b>													
Clermont (Australia)	O/C	SC	193	5	185	4	<b>189</b>	189	<b>27.90</b>	<b>0.33</b>	96	50.1	<b>95</b>
Mount Pleasant (Australia)	O/C	SC		459		350	<b>350</b>	350	<b>26.73</b>	<b>0.51</b>	76	75.7	<b>265</b>
<b>Total undeveloped reserves</b>												<b>360</b>	
<b>COPPER</b>													
<b>Reserves at operating mines</b>													
	Type of mine (a)		Proved ore reserves at end 2008	Probable ore reserves at end 2008	Total ore reserves 2008 compared with 2007				Average mill recovery %	Rio Tinto share			
			Tonnage	Grade	Tonnage	Grade	Tonnage	Grade		Recoverable metal			
			millions of tonnes	%Cu	millions of tonnes	%Cu	millions of tonnes	millions of tonnes	%Cu	%Cu			millions of tonnes
<b>Bingham Canyon (US)</b>													
	O/P		359	0.53	259	0.39	<b>618</b>	612	<b>0.47</b>	0.51	86	100.0	<b>2.525</b>
<b>Escondida (Chile)</b>													
– sulphide	O/P		732	1.16	958	1.05	<b>1,690</b>	1,704	<b>1.10</b>	1.14	85	30.0	<b>4.756</b>
– sulphide leach	O/P		717	0.55	1,486	0.54	<b>2,202</b>	2,399	<b>0.54</b>	0.55	33	30.0	<b>1.177</b>
– oxide (p)	O/P		88	0.87	48	1.07	<b>137</b>	158	<b>0.94</b>	0.88	68	30.0	<b>0.264</b>
<b>Grasberg (Indonesia)</b>													
	O/P+U/G		823	1.11	1,842	0.97	<b>2,665</b>	2,712	<b>1.01</b>	1.04	89	(q)	<b>7.201</b>
<b>Northparkes (Australia)</b>													
– open pit and stockpiles (r)	O/P		7.2	0.53	2.7	0.37	<b>9.8</b>	0.7	<b>0.48</b>	0.69	85	80.0	<b>0.032</b>
– underground (s)	U/G				81	0.83	<b>81</b>	47	<b>0.83</b>	0.97	89	80.0	<b>0.478</b>
<b>Palabora (South Africa) (t)</b>													
	U/G		91	0.62			<b>91</b>	104	<b>0.62</b>	0.62	88	57.7	<b>0.284</b>
<b>Total</b>												<b>16.718</b>	
<b>Reserves at development projects</b>													
<b>Eagle (US) (u)</b>													
	U/G				3.6	2.93	<b>3.6</b>	3.2	<b>2.93</b>	3.04	95	100.0	<b>0.102</b>
<b>Oyu Tolgoi (Mongolia)</b>													
– Southern Oyu	O/P		127	0.58	803	0.48	<b>930</b>	930	<b>0.50</b>	0.50	87	9.9	<b>0.399</b>
<b>Total</b>												<b>0.500</b>	
<b>DIAMONDS (b)</b>													
<b>Reserves at operating mines</b>													
			millions of tonnes	carats per tonne	millions of tonnes	carats per tonne	millions of tonnes	millions of tonnes	carats per tonne	carats per tonne			millions of carats
<b>Argyle (Australia)</b>													
	O/P+U/G		19	1.3	70	2.3	<b>89</b>	94	<b>2.1</b>	2.1	100.0		<b>188.6</b>
<b>Diavik (Canada) (v)</b>													
	O/P+U/G		7	2.7	13	3.4	<b>20</b>	22	<b>3.1</b>	3.5	60.0		<b>37.9</b>
<b>Murowa (Zimbabwe)</b>													
	O/P				21	0.7	<b>21</b>	21	<b>0.7</b>	0.7	77.8		<b>11.0</b>
<b>Total</b>												<b>237.6</b>	

See notes on page 116

## Ore reserves continued

	Type of mine (a)	Proved ore reserves at end 2008		Probable ore reserves at end 2008		Total ore reserves 2008 compared with 2007				Average mill recovery %	Rio Tinto share	
		Tonnage	Grade	Tonnage	Grade	Tonnage		Grade			Interest %	Recoverable metal
						2008	2007	2008	2007			
<b>GOLD</b>												
<b>Reserves at operating mines</b>												
Bingham Canyon (US)	O/P	359	0.30	259	0.23	618	612	0.27	0.29	64	100.0	3.396
Cortez/Pipeline (US) (w)	O/P+U/G					–	130	–	2.73	–		–
Grasberg (Indonesia)	O/P+U/G	823	1.11	1,842	0.79	2,665	2,712	0.89	0.90	70	(q)	13.785
Greens Creek (US) (x)	U/G					–	7.7	–	3.68	–		–
Northparkes (Australia)												
– open pit and stockpiles (r)	O/P	7.2	0.40	2.7	0.20	9.8	0.7	0.34	0.58	76	80.0	0.066
– underground (s)	U/G			81	0.31	81	47	0.31	0.40	73	80.0	0.470
<b>Total</b>												<b>17.717</b>
<b>Reserves at development project</b>												
Oyu Tolgoi (Mongolia)												
– Southern Oyu	O/P	127	0.93	803	0.27	930	930	0.36	0.36	71	9.9	0.753
<b>IRON ORE (b)</b>												
<b>Reserves at operating mines</b>												
Corumbá (Brazil) †	O/P	102	66.9	107	67.0	209	210	67.0	67.0	100.0		209
Hamersley Iron wholly owned (Australia)												
– Brockman 2 (Brockman ore) (y)	O/P	14	62.7	6	62.8	20	25	62.7	62.7	100.0		20
– Brockman 4 (Brockman ore)	O/P	366	62.2	255	61.9	621	570	62.0	62.3	100.0		621
– Marandoo (Marra Mamba ore) (z)	O/P	52	62.0	7	59.6	59	50	61.7	61.7	100.0		59
– Mt Tom Price (Brockman ore) (aa)	O/P	41	64.1	52	64.6	93	125	64.4	64.4	100.0		93
– Mt Tom Price (Marra Mamba ore)	O/P	31	61.4	3	59.4	34	33	61.2	61.2	100.0		34
– Nammuldi (Marra Mamba ore)	O/P	21	61.4	3	60.0	24	30	61.3	61.2	100.0		24
– Paraburdoo (Brockman ore) (bb)	O/P	10	63.6	4	62.9	14	28	63.4	63.9	100.0		14
– Paraburdoo (Marra Mamba ore)	O/P			0.9	63.1	0.9	0.8	63.1	63.3	100.0		0.9
– Western Turner Syncline (Brockman ore) (cc)	O/P	222	62.5	92	60.6	313	–	61.9	–	100.0		313
– Yandicoogina (Pisolite ore HG) (dd)	O/P	225	58.5	4	58.5	229	277	58.5	58.7	100.0		229
– Yandicoogina (Process Product) (ee)	O/P	146	58.2			146	119	58.2	58.5	100.0		146
Hamersley Iron – Channar (Australia)												
– Brockman ore (ff)	O/P	67	63.4	22	63.0	89	106	63.3	63.4	60.0		54
Hamersley Iron – Eastern Range (Australia)												
– Brockman ore (ff)	O/P	63	63.0	22	63.0	85	111	63.0	63.2	54.0		46
Hope Downs (Marra Mamba ore)	O/P	28	61.8	315	61.4	343	344	61.4	61.4	50.0		172
Iron Ore Company of Canada (Canada) (gg)	O/P	394	65.0	176	65.0	571	538	65.0	65.0	58.7		335
Robe River (Australia)												
– Pannawonica (Pisolite ore)	O/P	250	57.3	37	56.6	287	304	57.2	57.2	53.0		152
– West Angelas (Marra Mamba ore)	O/P	178	62.1	195	61.5	373	392	61.8	61.8	53.0		198
<b>Total</b>												<b>2,720</b>
<b>LEAD</b>												
<b>Reserves at operating mine</b>												
Greens Creek (US) (x)	U/G					–	7.7	–	3.79	–		–

See notes on page 116

	Type of mine (a)	Proved ore reserves at end 2008		Probable ore reserves at end 2008		Total ore reserves 2008 compared with 2007				Average mill recovery %	Rio Tinto share	
		Tonnage	Grade	Tonnage	Grade	Tonnage		Grade			Interest %	Recoverable metal
		2008	2007	2008	2007	2008	2007	2008	2007			
<b>MOLYBDENUM</b>		millions of tonnes	%Mo	millions of tonnes	%Mo	millions of tonnes	millions of tonnes	%Mo	%Mo			millions of tonnes
<b>Reserves at operating mine</b>												
Bingham Canyon (US) (hh)	O/P	359	0.044	259	0.044	<b>618</b>	612	<b>0.044</b>	0.045	67	100.0	<b>0.182</b>
<b>NICKEL</b>		millions of tonnes	%Ni	millions of tonnes	%Ni	millions of tonnes	millions of tonnes	%Ni	%Ni			millions of tonnes
<b>Reserves at development project</b>												
Eagle (US) (u)	U/G			3.6	3.47	<b>3.6</b>	3.2	<b>3.47</b>	3.9	84	100.0	<b>0.106</b>
<b>SILVER</b>		millions of tonnes	grammes per tonne	millions of tonnes	grammes per tonne	millions of tonnes	millions of tonnes	grammes per tonne	grammes per tonne			millions of ounces
<b>Reserves at operating mines</b>												
Bingham Canyon (US)	O/P	359	2.43	259	1.80	<b>618</b>	612	<b>2.16</b>	2.35	73	100.0	<b>31.576</b>
Grasberg (Indonesia)	O/P+U/G	823	4.30	1,842	4.25	<b>2,665</b>	2,712	<b>4.26</b>	4.11	70	(q)	<b>82.693</b>
Greens Creek (US) (x)	U/G					–	7.7	–	471	–		–
<b>Total</b>												<b>114.269</b>
												<b>Marketable product</b>
<b>TALC (g)</b>		millions of tonnes		millions of tonnes		millions of tonnes	millions of tonnes					millions of tonnes
<b>Reserves at operating mines</b>												
Rio Tinto Minerals – talc (ii) (Europe/North America/Australia)	O/P+U/G	24.3		6.2		<b>30.6</b>	33.5			100.0		<b>30.6</b>
<b>TITANIUM DIOXIDE FEEDSTOCK (g)</b>		millions of tonnes		millions of tonnes		millions of tonnes	millions of tonnes					millions of tonnes
<b>Reserves at operating mines</b>												
QIT (Canada)	O/P	28.6		23.5		<b>52.1</b>	53.5			100.0		<b>52.1</b>
QMM (Madagascar)	D/O	11.8		0.5		<b>12.2</b>	12.4			80.0		<b>9.8</b>
RBM (South Africa)	D/O	5.7		18.6		<b>24.3</b>	24.2			50.0		<b>12.1</b>
<b>Total</b>												<b>74.1</b>
												<b>Recoverable metal</b>
<b>URANIUM</b>		millions of tonnes	%U <sub>3</sub> O <sub>8</sub>	millions of tonnes	%U <sub>3</sub> O <sub>8</sub>	millions of tonnes	millions of tonnes	%U <sub>3</sub> O <sub>8</sub>	%U <sub>3</sub> O <sub>8</sub>			millions of tonnes
<b>Reserves at operating mines</b>												
Energy Resources of Australia (Australia) – Ranger #3	O/P	27.0	0.135	3.2	0.232	<b>30.2</b>	32.1	<b>0.146</b>	0.155	86.38	68.4	<b>0.026</b>
Rössing (Namibia) (jj)	O/P	34.2	0.035	156.1	0.034	<b>190.3</b>	150.2	<b>0.034</b>	0.037	85.00	68.6	<b>0.038</b>
<b>Total reserves at operating mines</b>												<b>0.064</b>
<b>ZINC</b>		millions of tonnes	%Zn	millions of tonnes	%Zn	millions of tonnes	millions of tonnes	%Zn	%Zn			millions of tonnes
<b>Reserves at operating mine</b>												
Greens Creek (US) (x)	U/G					–	7.7	–	10.18	–		–

See notes on page 116

## Notes

- (a) Type of mine: O/P = open pit, O/C = open cut, U/G = underground, D/O = dredging operation.
- (b) Reserves of iron ore, bauxite and diamonds are shown as recoverable reserves of marketable product after accounting for all mining and processing losses. Mill recoveries are therefore not shown.
- (c) Following completion of drilling, economic and technical studies at Gove, reserves have increased.
- (d) The increase in reserves at Porto Trombetas operations results from updated models incorporating additional drilling.
- (e) Following the completion of technical and economic studies Sangaredi reserves are presented for the first time.
- (f) Following economic and technical studies at Weipa, reserves have increased.
- (g) Reserves of industrial minerals are expressed in terms of marketable product, i.e. after all mining and processing losses. In the case of borates, the marketable product is  $B_2O_3$ .
- (h) For coal, the yield factors shown reflect the impact of further processing, where necessary, to provide marketable coal.
- (i) Coal type: SC = steam/thermal coal; MC = metallurgical/coking coal.
- (j) Analyses of coal from the US were undertaken according to 'American Standard Testing Methods' (ASTM) on an 'As Received' moisture basis whereas the coals from Australia have been analysed on an 'Air Dried' moisture basis according to Australian Standards (AS). MJ/kg = megajoules per kilogramme.
- (k) During 2008, Rio Tinto acquired a 100 per cent interest in the Colowyo mine, having previously held a partnership interest. The decrease in reserves follows production.
- (l) Reserves at Cordero Rojo have increased following the acquisition of a federal lease, drilling and technical studies.
- (m) Hunter Valley reserves increased commensurate with technical and economic studies, followed by pit redesigns.
- (n) Updated economic studies have led to an increase in reserves at Warkworth.
- (o) The term 'other undeveloped reserves' is used here to describe material that is economically viable on the basis of technical and economic studies but for which mining and processing permits may have yet to be requested or obtained. There is a reasonable, but not absolute, certainty that the necessary permits will be issued and that mining can proceed when required.
- (p) Changes in the Escondida reserves resulted from technical studies.
- (q) Under the terms of a joint venture agreement between Rio Tinto and FCX, Rio Tinto is entitled to a direct 40 per cent share in reserves discovered after 31 December 1994 and it is this entitlement that is shown.
- (r) Open pit reserves at Northparkes have increased as a result of upgrading of resources.
- (s) The increase in underground reserves at Northparkes results from updated models following additional drilling, technical studies and the application of new economic parameters.
- (t) Production, combined with technical updates have led to a reduction of reserves at Palabora.
- (u) Additional drilling, mine design changes and upgrade of resources have yielded further reserves at Eagle.
- (v) Production depletion and technical studies have resulted in a slight decrease in grade of the remaining reserve at Diavik.
- (w) On 5 March 2008, Rio Tinto completed the sale of its interest in the Cortez joint venture to its partner.
- (x) On 16 April 2008, Rio Tinto completed the sale of its interest in the Greens Creek joint venture to its partner.
- (y) Hamersley Iron – Brockman 2 reserves decreased commensurate with production and pit redesigns.
- (z) An increase in Marandoo reserves resulted from upgrade of resources, a new geological model and pit redesign.
- (aa) A model update followed by pit redesign led to decreased Mt Tom Price (Brockman ore) reserves.
- (bb) A decrease in Paraburdoo (Brockman ore) reserves followed from production depletion and a pit redesign.
- (cc) Following completion of technical and economic studies the reserve at Western Turner Syncline is reported for the first time.
- (dd) Yandicoogina (pisolite ore HG) reserves reduced as a result of production and technical studies.
- (ee) Remodelling and technical studies led to reserve increases for Yandicoogina (process product).
- (ff) Channar and Eastern Range reserve depletions result from production, technical studies and pit redesign.
- (gg) Reserves at Iron Ore Company of Canada (IOC) are reported as marketable product, using process upgrade factors derived from current IOC concentrating and pellet operations. The mined material equivalent is 1,393 million tonnes at 38 per cent iron.
- (hh) Molybdenum grades reflect reconciliation of model and plant grades.
- (ii) Rio Tinto Minerals – Talc reserves declined with production and mine redesigns.
- (jj) Reserves at Rössing have increased as a result of conversion of resources to reserves and the development of a new pit design incorporating a new resource model and results from additional drilling.
- † In January 2009, Rio Tinto announced that it had signed a definitive agreement to sell its 100 per cent interest in the Corumbá mine.

## Mineral resources

As required by the Australian Securities Exchange, the following tables contain details of other mineralisation that has a reasonable prospect of being economically extracted in the future but which is not yet classified as Proved or Probable Reserves. This material is defined as Mineral Resources under the JORC Code. Estimates of such material are based largely on geological information with only preliminary

consideration of mining, economic and other factors. While in the judgement of the Competent Person there are realistic expectations that all or part of the Mineral Resources will eventually become Proved or Probable Reserves, there is no guarantee that this will occur as the result depends on further technical and economic studies and prevailing economic conditions in the future.

Resources are stated as additional to the reserves reported earlier. Where operations are not managed by Rio Tinto the resources are published as received from the managing company. Where new project resources are reported for the first time, additional information about them can be viewed on the Rio Tinto web site, in the section titled 'what we produce'.

	Likely mining method (a)	Measured resources at end 2008		Indicated resources at end 2008		Inferred resources at end 2008		Total resources 2008 compared with 2007				Rio Tinto interest %	
		Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	2008		2007			
		millions of tonnes	% Al <sub>2</sub> O <sub>3</sub>	millions of tonnes	% Al <sub>2</sub> O <sub>3</sub>	millions of tonnes	% Al <sub>2</sub> O <sub>3</sub>	millions of tonnes	% Al <sub>2</sub> O <sub>3</sub>	millions of tonnes	% Al <sub>2</sub> O <sub>3</sub>		
<b>BAUXITE</b>													
Gove (Australia)	O/P	11	49.6	32	49.6	3	50.3	46	83	49.7	50.1	100.0	
Porto Trombetas (MRN) (Brazil)	O/P					401	50.0	401	444	50.0	50.0	12.0	
Sangaredi (Guinea) (b)	O/P	91	48.9	169	48.4	188	48.1	448	661	48.4	49.5	23.0	
Ducie-Wenlock (Australia) (c)	O/P					453	51.8	453	–	51.8	–	100.0	
Weipa (Australia) (c)	O/P	75	50.2	1,528	50.6			1,603	2,219	50.6	50.9	100.0	
<b>BORATES</b>													
Rio Tinto Minerals – Boron (US)	O/P	5.3				0.1		5.4	5.4			100.0	
Jadar (Serbia) (d)	U/G					9.0		9.0	–			100.0	
<b>COAL</b>													
		Coal type (e)	Coal resources at end 2008										
			Measured	Indicated	Inferred								
			millions of tonnes	millions of tonnes	millions of tonnes			millions of tonnes	millions of tonnes				
Chapudi (South Africa)	O/C	SC	90	220	730			1,040	1,040			59.1	
<b>Rio Tinto Coal Australia (Australia)</b>													
Bengalla	O/C+U/G	SC	30	81	59			170	170			30.3	
Blair Athol (f)	O/C	SC	7	0.5				7	–			71.2	
Clermont	O/C	SC	11		3.7			15	15			50.1	
Hail Creek (f)	O/C	MC		176	260			435	235			82.0	
Hunter Valley Operations	O/C+U/G	SC+MC	119	526	686			1,331	1,392			75.7	
Kestrel Coal	U/G	MC	9	0.1				9	9			80.0	
Kestrel West	U/G	SC+MC		153				153	153			80.0	
Lake Elphinstone	O/C	SC+MC		61	17			78	78			82.0	
Maules Creek (g)	O/C	SC+MC	57	218	123			398	680			75.7	
Mount Pleasant	O/C+U/G	SC+MC	200	218	281			699	699			75.7	
Mount Thorley Operations	U/G	SC+MC		48	65			113	115			60.6	
Oaklands	O/C	SC	480	800				1,280	1,280			75.7	
Valeria	O/C	SC	200	240				440	440			71.2	
Vickery	O/C+U/G	SC+MC	100	200				300	300			75.7	
Warkworth (h)	O/C+U/G	SC+MC	5	247	351			604	423			42.1	
Winchester South	O/C	SC+MC	90	7				97	97			75.0	
<b>Rio Tinto Energy America (US)</b>													
Antelope	O/C	SC	31	30	12			73	73			100.0	
Colowyo	O/C+U/G	SC	161	68	21			250	248			100.0	
Cordero Rojo (i)	O/C	SC	57	87				144	–			100.0	
Decker (j)	O/C	SC	39					39	43			50.0	

See notes on page 121

## Mineral resources continued

	Likely mining method (a)	Measured resources at end 2008		Indicated resources at end 2008		Inferred resources at end 2008		Total resources 2008 compared with 2007				Rio Tinto interest %
		Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	Tonnage		Grade		
								2008	2007	2008	2007	
<b>COPPER</b>												
		millions of tonnes	%Cu	millions of tonnes	%Cu	millions of tonnes	%Cu	millions of tonnes	millions of tonnes	%Cu	%Cu	
Bingham Canyon (US) (k)	O/P			173	0.55	476	0.44	<b>649</b>	9	<b>0.47</b>	0.34	100.0
Eagle (US) (l)	U/G			0.5	2.15	0.4	2.07	<b>0.9</b>	0.6	<b>2.12</b>	2.34	100.0
Escondida (Chile) (m)												
– sulphide	O/P	3.9	0.77	85	0.80	614	0.89	<b>703</b>	740	<b>0.88</b>	0.83	30.0
– sulphide leach	O/P	81	0.44	498	0.43	3,583	0.48	<b>4,162</b>	3,612	<b>0.47</b>	0.47	30.0
– oxide	O/P					31	0.81	<b>31</b>	39	<b>0.81</b>	0.86	30.0
Grasberg (Indonesia)	O/P+U/G	617	0.64	1,985	0.56	237	0.26	<b>2,838</b>	3,049	<b>0.56</b>	0.55	(n)
La Granja (Peru) (o)	O/P					2,770	0.51	<b>2,770</b>	–	<b>0.51</b>	–	100.0
Northparkes (Australia)												
– open pit (p)	O/P							–	12.0	–	0.49	80.0
– underground (q)	U/G	8.6	0.95	2.5	0.71			<b>11.1</b>	18	<b>0.90</b>	0.79	80.0
Oyu Tolgoi (Mongolia)												
– South Oyu	O/P			189	0.43	267	0.34	<b>456</b>	456	<b>0.38</b>	0.38	9.9
– Heruga (r)	U/G					760	0.48	<b>760</b>	–	<b>0.48</b>	–	13.5
– Hugo South	U/G					490	1.05	<b>490</b>	490	<b>1.05</b>	1.05	9.9
– Hugo North	U/G			703	1.82	723	0.97	<b>1,426</b>	1,426	<b>1.39</b>	1.39	9.9
– Hugo North Extension	U/G			117	1.80	96	1.15	<b>213</b>	213	<b>1.51</b>	1.51	13.5
Palabora (South Africa) (s)												
– stockpiles		7.1	0.29					<b>7.1</b>	7.9	<b>0.29</b>	0.31	57.7
Resolution (US) (t)	U/G					1,341	1.51	<b>1,341</b>	–	<b>1.51</b>	–	55.0
<b>DIAMONDS</b>												
		millions of tonnes	carats per tonne	millions of tonnes	carats per tonne	millions of tonnes	carats per tonne	millions of tonnes	millions of tonnes	carats per tonne	carats per tonne	
Argyle (Australia)												
– AK1 pipe	O/P+U/G	40	2.9	27	3.1	9	2.1	<b>77</b>	75	<b>2.9</b>	2.9	100.0
– Alluvials	O/P	11	0.2	8	0.2	9	0.2	<b>28</b>	28	<b>0.2</b>	0.2	100.0
Bunder (India) (u)	O/P					37	0.7	<b>37</b>	–	<b>0.7</b>	–	100.0
Diavik (Canada)	O/P+U/G			4.1	3.1	3.9	3.2	<b>8.1</b>	7.7	<b>3.1</b>	3.1	60.0
Murowa (Zimbabwe)	O/P					1.4	0.4	<b>1.4</b>	1.4	<b>0.4</b>	0.4	77.8
<b>GOLD</b>												
		millions of tonnes	grammes per tonne	millions of tonnes	grammes per tonne	millions of tonnes	grammes per tonne	millions of tonnes	millions of tonnes	grammes per tonne	grammes per tonne	
Bingham Canyon (US) (k)	O/P			173	0.22	476	0.17	<b>649</b>	9	<b>0.18</b>	0.28	100.0
Cortez/Pipeline (US) (v)	O/P+U/G							–	87	–	2.30	
Eagle (US) (l)	U/G			0.5	0.18	0.4	0.19	<b>0.9</b>	–	<b>0.19</b>	–	100.0
Grasberg (Indonesia)	O/P+U/G	617	0.55	1,985	0.51	237	0.24	<b>2,838</b>	3,049	<b>0.49</b>	0.49	(n)
Greens Creek (US) (w)	U/G							–	2.4	–	4.43	
Northparkes (Australia)												
– open pit (p)	O/P							–	12	–	0.35	80.0
– underground (q)	U/G	8.6	0.35	2.5	0.12			<b>11.1</b>	18	<b>0.29</b>	0.29	80.0
Oyu Tolgoi (Mongolia)												
– South Oyu	O/P			189	0.27	267	0.23	<b>456</b>	456	<b>0.25</b>	0.25	9.9
– Heruga (r)	U/G					760	0.55	<b>760</b>	–	<b>0.55</b>	–	13.5
– Hugo South	U/G					490	0.09	<b>490</b>	490	<b>0.09</b>	0.09	9.9
– Hugo North	U/G			703	0.39	723	0.30	<b>1,426</b>	1,426	<b>0.34</b>	0.34	9.9
– Hugo North Extension	U/G			117	0.61	96	0.31	<b>213</b>	213	<b>0.48</b>	0.48	13.5
Wabu (Indonesia)	O/P					43	2.56	<b>43</b>	43	<b>2.56</b>	2.56	(n)

See notes on page 121

	Likely mining method (a)	Measured resources at end 2008		Indicated resources at end 2008		Inferred resources at end 2008		Total resources 2008 compared with 2007				Rio Tinto interest
		Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	Tonnage		Grade		%
								2008	2007	2008	2007	
<b>IRON ORE</b>		millions of tonnes	%Fe	millions of tonnes	%Fe	millions of tonnes	%Fe	<b>millions of tonnes</b>	millions of tonnes	<b>%Fe</b>	%Fe	
Corumbá (Brazil) †	O/P	38	64.1	51	63.4	493	62.6	<b>583</b>	583	<b>62.7</b>	62.7	100.0
Hammersley Iron wholly owned (Australia)												
– Brockman 2	O/P	5	62.9			5	62.8	<b>10</b>	10	<b>62.9</b>	62.6	100.0
– Brockman 4	O/P	15	62.1	15	61.9	5	62.6	<b>35</b>	35	<b>62.1</b>	62.1	100.0
– Marandoo Marra Mamba (x)	O/P	225	62.8	55	62.5	125	62.9	<b>405</b>	560	<b>62.8</b>	62.4	100.0
– Mt Tom Price high grade (y)	O/P	35	63.2	85	63.6	10	64.4	<b>130</b>	100	<b>63.5</b>	63.9	100.0
– Mt Tom Price low grade	O/P	25	56.8	30	55.9	5	55.0	<b>60</b>	60	<b>56.2</b>	55.9	100.0
– Mt Tom Price Marra Mamba (z)	O/P	15	61.7	5	62.3			<b>20</b>	15	<b>61.9</b>	61.8	100.0
– Nammuldi Detrital	O/P	5	60.4	75	60.7			<b>80</b>	80	<b>60.7</b>	60.7	100.0
– Nammuldi Marra Mamba	O/P	155	62.8	120	62.6			<b>275</b>	275	<b>62.7</b>	62.8	100.0
– Paraborndoo Brockman (aa)	O/P	30	62.9	40	63.6	35	63.4	<b>105</b>	90	<b>63.3</b>	63.6	100.0
– Western Turner Syncline (bb)	O/P	40	62.4	15	62.0	5	61.8	<b>60</b>	–	<b>62.2</b>	–	100.0
– Yandicoogina	O/P	280	58.0	355	58.0	35	57.5	<b>670</b>	675	<b>58.0</b>	57.9	100.0
Hammersley Iron undeveloped resources (cc)												
– Brockman	O/P	40	62.6	1,190	62.5	2,420	62.5	<b>3,650</b>	3,780	<b>62.5</b>	62.5	(cc)
– Brockman Process ore (dd)	O/P	210	57.6	430	57.8	520	56.7	<b>1,160</b>	1,785	<b>57.3</b>	55.6	(cc)
– Marra Mamba	O/P			665	62.2	1,550	62.2	<b>2,215</b>	2,110	<b>62.2</b>	62.2	(cc)
– Channel Iron deposits	O/P					1,750	57.0	<b>1,750</b>	1,750	<b>57.0</b>	57.0	100.0
– Detrital deposits (ee)	O/P	5	63.4	120	61.7	40	61.9	<b>165</b>	195	<b>61.8</b>	61.8	100.0
Hammersley Iron – Channar (Australia) (ff)												
– Brockman	O/P	30	61.8	5	61.7			<b>35</b>	25	<b>61.8</b>	61.9	60.0
Hammersley Iron – Eastern Range (Australia)												
– Brockman	O/P	10	61.6	5	61.7	15	61.8	<b>30</b>	30	<b>61.7</b>	61.7	54.0
Hope Downs (Australia)												
– Hope Downs 1 Marra Mamba (gg)	O/P	5	61.7	80	61.9	20	60.2	<b>105</b>	95	<b>61.6</b>	61.4	50.0
– Hope Downs 1 Detritals (hh)	O/P			10	60.2	5	58.8	<b>15</b>	25	<b>59.7</b>	59.5	50.0
Hope Downs undeveloped resources												
– Brockman (ii)	O/P	95	62.6	85	61.6	295	62.1	<b>475</b>	385	<b>62.1</b>	62.2	50.0
– Brockman Process ore	O/P	60	57.0	5	57.2	120	57.7	<b>185</b>	195	<b>57.5</b>	56.8	50.0
– Marra Mamba and Detritals	O/P					220	61.1	<b>220</b>	220	<b>61.1</b>	61.1	50.0
Iron Ore Company of Canada (Canada) (jj)	O/P	169	65.0	448	65.0	624	65.0	<b>1,240</b>	1,449	<b>65.0</b>	65.0	58.7
Palabora (South Africa)	O/P			240	55.9			<b>240</b>	240	<b>55.9</b>	56	57.7
Robe River (Australia)												
– Marra Mamba	O/P	55	62.0	145	62.1			<b>200</b>	190	<b>62.1</b>	62.3	53.0
– Pisolite (kk)	O/P	85	56.9			20	56.8	<b>105</b>	135	<b>56.9</b>	56.4	53.0
Robe River undeveloped resources												
– Marra Mamba	O/P			290	61.3	165	59.5	<b>455</b>	445	<b>60.7</b>	60.6	53.0
– Pisolite	O/P	50	58.9	995	58.4	490	57.6	<b>1,535</b>	1,530	<b>58.2</b>	58.1	53.0
– Detritals (ll)	O/P					35	61.0	<b>35</b>	–	<b>61.0</b>	–	53.0
Simandou (Guinea) (mm)	O/P			1,300	66.0	955	65.9	<b>2,254</b>	–	<b>66.0</b>	–	95.0
<b>LEAD</b>		millions of tonnes	%Pb	millions of tonnes	%Pb	millions of tonnes	%Pb	<b>millions of tonnes</b>	millions of tonnes	<b>%Pb</b>	%Pb	
Greens Creek (US) (w)	U/G							–	2.4	–	3.92	
<b>LITHIUM</b>		millions of tonnes	%Li <sub>2</sub> O	millions of tonnes	%Li <sub>2</sub> O	millions of tonnes	%Li <sub>2</sub> O	<b>millions of tonnes</b>	millions of tonnes	<b>%Li<sub>2</sub>O</b>	%Li <sub>2</sub> O	
Jadar (Serbia) (d)	U/G					114.6	1.8	<b>114.6</b>	–	<b>1.8</b>	–	100.0
<b>MOLYBDENUM</b>		millions of tonnes	%Mo	millions of tonnes	%Mo	millions of tonnes	%Mo	<b>millions of tonnes</b>	millions of tonnes	<b>%Mo</b>	%Mo	
Bingham Canyon (US) (k)	O/P			173	0.036	476	0.033	<b>649</b>	9	<b>0.034</b>	0.039	100.0
Oyu Tolgoi (Mongolia)												
– Heruga (r)	U/G					760	0.015	<b>760</b>	–	<b>0.015</b>	–	13.5
Resolution (US) (t)	U/G					1,341	0.040	<b>1,341</b>	–	<b>0.040</b>	–	55.0

See notes on page 121

## Mineral resources continued

	Likely mining method (a)	Measured resources at end 2008		Indicated resources at end 2008		Inferred resources at end 2008		Total resources 2008 compared with 2007				Rio Tinto interest %
		Tonnage	Grade	Tonnage	Grade	Tonnage	Grade	Tonnage		Grade		
								2008	2007	2008	2007	
<b>NICKEL</b>												
		millions of tonnes	%Ni	millions of tonnes	%Ni	millions of tonnes	%Ni	millions of tonnes	millions of tonnes	%Ni	%Ni	
Eagle (US) (l)	U/G			0.5	3.16	0.4	2.28	<b>0.9</b>	0.6	<b>2.78</b>	2.65	100.0
Sulawesi (Indonesia) (nn)	O/P					162	1.62	<b>162</b>	–	<b>1.62</b>	–	100.0
<b>POTASH</b>												
		millions of tonnes	%KCl	millions of tonnes	%KCl	millions of tonnes	%KCl	millions of tonnes	millions of tonnes	%KCl	%KCl	
Potasio Rio Colorado (Argentina) (oo)†	S/M			361	34.2	665	30.8	<b>1,026</b>	1,037	<b>32.0</b>	32.1	100.0
<b>SILVER</b>												
		millions of tonnes	grammes per tonne	millions of tonnes	grammes per tonne	millions of tonnes	grammes per tonne	millions of tonnes	millions of tonnes	grammes per tonne	grammes per tonne	
Bingham Canyon (US) (k)	O/P			173	2.3	476	2.0	<b>649</b>	9	<b>2.1</b>	1.7	100.0
Grasberg (Indonesia)	O/P+U/G	617	3.4	1,985	3.3	237	1.3	<b>2,838</b>	3,049	<b>3.2</b>	3.2	(n)
Greens Creek (US) (w)	U/G							–	2.4	–	458	
Wabu (Indonesia)	O/P					43	2.5	<b>43</b>	43	<b>2.5</b>	2.5	(n)
<b>TALC</b>												
		millions of tonnes		millions of tonnes		millions of tonnes		millions of tonnes	millions of tonnes			
Rio Tinto Minerals – talc (Australia/Europe/N America)	O/P+U/G	20		29		32		<b>81</b>	80			100.0
<b>TITANIUM DIOXIDE FEEDSTOCK</b>												
		millions of tonnes		millions of tonnes		millions of tonnes		millions of tonnes	millions of tonnes			
QIT (Canada)	O/P	4.1						<b>4.1</b>	4.1			100.0
QMM (Madagascar)	D/O	0.2		35.9		1.8		<b>37.9</b>	38.8			80.0
RBM (South Africa) (pp)	D/O			1.2		0.1		<b>1.3</b>	3.0			50.0
<b>URANIUM</b>												
		millions of tonnes	%U <sub>3</sub> O <sub>8</sub>	millions of tonnes	%U <sub>3</sub> O <sub>8</sub>	millions of tonnes	%U <sub>3</sub> O <sub>8</sub>	millions of tonnes	millions of tonnes	%U <sub>3</sub> O <sub>8</sub>	%U <sub>3</sub> O <sub>8</sub>	
Energy Resources of Australia (Australia)												
– Jabiluka	U/G	1.2	0.887	13.9	0.520	10.0	0.545	<b>25.1</b>	25.1	<b>0.547</b>	0.547	68.4
– Ranger #3 (qq)	O/P	60.5	0.062	61.7	0.113	6.1	0.134	<b>128.3</b>	42.4	<b>0.090</b>	0.119	68.4
Rössing (Namibia) (rr)	O/P	8.7	0.022	92.9	0.021	12.9	0.023	<b>114.5</b>	191.3	<b>0.021</b>	0.023	68.6
<b>ZINC</b>												
		millions of tonnes	%Zn	millions of tonnes	%Zn	millions of tonnes	%Zn	millions of tonnes	millions of tonnes	%Zn	%Zn	
Greens Creek (US) (w)	U/G							–	2.4	–	10.12	
La Granja (Peru) (o)	O/P					2,770	0.10	<b>2,770</b>	–	<b>0.10</b>	–	100.0

See notes on page 121

## Notes

- (a) Likely mining method: O/P = open pit; O/C = open cut; U/G = underground; D/O = dredging operation; S/M = solution mining.
- (b) Following completion of technical and economic studies some resources at Sangaredi were upgraded to reserves.
- (c) Rio Tinto acquired the operating assets of Alcan with effect from 24 October 2007 and Ducie-Wenlock resources are presented here for the first time. The Weipa deposit includes the resource for Ely as the deposit is contiguous. Resources at Weipa decreased through conversion to reserves. Rio Tinto has an 80 per cent interest in the Awaso mine in Ghana but the resource estimate is still under review.
- (d) Following completion of technical and economic studies the resource at Jadar is reported for the first time. The borate resource tonnage is expressed in terms of marketable product, whereas the lithium resource is expressed as in situ tonnes.
- (e) Coal type: SC = steam/thermal coal, MC = metallurgical/coking coal.
- (f) Following completion of economic studies at Blair Athol and Hail Creek, coal resources have been increased.
- (g) Resources at Maules Creek have decreased as a result of economic studies.
- (h) Following completion of economic studies coal resources have been increased at Warkworth. Technical studies have led to a reclassification of resources.
- (i) Resources at Cordero Rojo have increased following the acquisition of a federal lease, drilling and technical studies.
- (j) Resources at Decker have decreased as a result of upgrading resources to reserves and technical studies.
- (k) Resources at Bingham Canyon have increased as a result of updates to the resource model with additional drilling and technical and economic studies. Molybdenum grades reflect reconciliation of model and plant grades.
- (l) Resources at Eagle have increased as a result of the development of a new resource model incorporating data from additional drilling.
- (m) Changes in inferred resources at Escondida resulted from technical and economic studies as well as additional drilling.
- (n) Under the terms of a joint venture agreement between Rio Tinto and FCX, Rio Tinto is entitled to a direct 40 per cent share in resources discovered after 31 December 1994.
- (o) Rio Tinto acquired La Granja during 2005 and resources are presented here for the first time following technical and economic studies. The timeline and options for development for this project are under review given the current global economic setting.
- (p) Open pit resources at Northparkes have decreased as a result of upgrading to reserves.
- (q) Underground resources at Northparkes have decreased as a result of upgrading resources to reserves and technical studies.
- (r) Following completion of technical and economic studies the resource at Heruga is reported for the first time.
- (s) Stockpiles at Palabora decreased as the material was transferred for processing.
- (t) Following completion of technical and economic studies the resource at Resolution is reported for the first time.
- (u) Following completion of technical and economic studies the resource at Bunder is reported for the first time.
- (v) On 5 March 2008, Rio Tinto completed the sale of its interest in the Cortez joint venture to its partner.
- (w) On 16 April 2008, Rio Tinto completed the sale of its interest in the Greens Creek joint venture to its partner.
- (x) Resources at Marandoo Marra Mamba have decreased following the development of new resource models incorporating additional drilling as well as conversion of resources to reserves.
- (y) Mt Tom Price high grade resources have increased due to new pit designs and resource model.
- (z) Mt Tom Price Marra Mamba resources have increased due to a new pit design and resource model.
- (aa) Paraburdoo Brockman resources have increased due to new pit designs and resource models.
- (bb) Following completion of technical and economic studies the resource at Western Turner Syncline is reported for the first time.
- (cc) Resources in this category consist of 32 deposits, 24 of which are wholly owned by Hamersley Iron. The Shovelanna resource (50 per cent Hamersley Iron) is not included as mining lease applications are currently awaiting grant.
- (dd) Hamersley Brockman process ore resources have decreased following technical studies.
- (ee) Detrital resources have decreased following geological re-evaluation.
- (ff) Channar resources have increased due to a new pit design and resource model.
- (gg) Hope Downs 1 Marra Mamba resources have increased due to remodelling and additional drilling data.
- (hh) Hope Downs 1 detritals resources have decreased due to remodelling.
- (ii) Hope Downs Brockman resources have increased as a result of the development of new resource models incorporating additional drilling and the reporting of new deposits for the first time.
- (jj) Resources at Iron Ore Company of Canada (IOC) have decreased following conversion of resources to reserves and technical and economic studies. Resources are reported as marketable product, using process upgrade factors derived from current IOC concentrating and pellet operations. The in situ material equivalent is 3,121 million tonnes at 38 per cent iron.
- (kk) Robe River pisolite resources were reduced following a boundary re-evaluation.
- (ll) Following completion of technical and economic studies, Robe River detrital resources are reported for the first time.
- (mm) Following completion of technical and economic studies the resource at Simandou is reported for the first time. The timeline and options for development for this project are under review given the current global economic setting.
- (nn) Following completion of technical and economic studies the resource at Sulawesi is reported for the first time. The timeline and options for development for this project are under review given the current global economic setting.
- (oo) The Potasio Rio Colorado resource is shown as estimated recoverable tonnes of potash.
- (pp) Resources at RBM have decreased following technical studies.
- (qq) Resources at Ranger have increased as a result of the development of a new resource model incorporating results from additional drilling as well as technical and economic studies.
- (rr) Resources at Rössing have decreased following conversion of resources to reserves and the development of a new pit design incorporating a new resource model and results from additional drilling.
- † In January 2009, Rio Tinto announced that it had signed definitive agreements to sell its 100 per cent interests in the Potasio Rio Colorado project and the Corumbá mine. The Potasio Rio Colorado sale was completed on 5 February 2009.

## Group mines

(Rio Tinto interest 100% unless otherwise shown)

Mine	Location	Access	Title/lease
<b>ALUMINIUM</b>			
<b>CBG Sangaredi</b> (23%)	Conakry, Guinea	Road and air	Lease expires in 2038
<b>Ely</b>	Weipa, Queensland, Australia	Road and air	Alcan Queensland Pty. Limited Agreement Act 1965 expires in 2048 with 21 year right of renewal with a two year notice period
<b>GBC Awaso</b> (80%)	Awaso, Ghana	Road	Lease expires in 2022, renewable in 25 year periods
<b>Gove</b>	Gove, Northern Territory, Australia	Road, air and port	100% Leasehold (held in trust by the Commonwealth on behalf of the Traditional Owners until end of mine life)
<b>MRN Porto Trombetas</b> (12%)	Porto Trombetas, Brazil	Air or port	Mineral rights granted for undetermined period
<b>Weipa</b>	Weipa, Queensland, Australia	Road, air and port	Queensland Government lease expires in 2041 with option of 21 year extension, then two years' notice of termination
<b>COPPER</b>			
<b>Escondida</b> (30%)	Atacama Desert, Chile	Pipeline and road to deep sea port at Coloso	Rights conferred by Government under Chilean Mining Code
<b>Grasberg joint venture</b> (40%)	Papua, Indonesia	Pipeline, road and port	Indonesian Government Contracts of Work expire in 2021 with option of two ten year extensions
<b>Kennecott Utah Copper</b> Bingham Canyon	Near Salt Lake City, Utah, US	Pipeline, road and rail	Owned
<b>Northparkes</b> (80%)	Goonumbla, New South Wales, Australia	Road and rail	State Government mining lease issued in 1991 for 21 years
<b>Palabora</b> (58%)	Phalaborwa, Limpopo Province, South Africa	Road and rail	Lease from South African Government until deposits depleted. Base metal claims owned by Palabora
<b>Argyle Diamonds</b>	Kimberley Ranges, Western Australia	Road and air	Mining tenement held under Diamond (Argyle Diamond Mines Joint Venture) Agreement Act 1981-1983; lease extended for 21 years from 2004

History	Type of mine	Power source
Bauxite mining commenced in 1973. Shareholders are 51% Halco and 49% Guinea. Rio Tinto Alcan holds 45% of Halco since 2004. Current annual capacity is 13 million tonnes	Open cut	On site generation (fuel oil)
Discovered in 1957; 100% secured in 1965. In 1997, Ely Bauxite Mining Project Agreement signed with local Aboriginal land owners. Bauxite Mining and Exchange Agreement signed in 1998 with Comalco to allow for extraction of ore by Comalco. Mining commenced 2006, first ore extracted 2007	Open cut	Supplied by Weipa
Bauxite mining commenced in 1940 (100% British Aluminium). From 1974 to 1997, Ghana held 55%, Alcan 45%; since 1998 Rio Tinto Alcan 80%, Ghana 20%. Annual capacity is one million tonnes, currently limited to 750,000 tonnes by rail infrastructure	Open cut	Electricity grid with on site generation back up
Bauxite mining commenced in 1970 feeding both the Gove refinery and export market capped at two million tonnes per annum. Bauxite export ceased in 2006 with feed intended for the expanded Gove refinery. Current production capacity about ten million tonnes per annum with mine life estimated to 2025	Open cut	Central power station located at the Gove refinery
Mineral extraction commenced in April 1979. Initial production capacity 3.4 million tonnes annually. From October 2003, production capacity up to 16.3 million tonnes per year. Capital structure currently: CVRD (40%), BHP Billiton (14.8%), Rio Tinto Alcan (12%), CBA (10%), Alcoa/Abalco (18.2%) and Norsk Hydro (5%). Production 18 million tonnes of wet and dry bauxite annually	Open cut	On site generation (heavy oil, diesel)
Bauxite mining commenced in 1961. Major upgrade completed in 1998. Rio Tinto interest increased from 72.4% to 100% in 2000. In 2004 a mine expansion was completed that has lifted annual capacity to 16.5 million tonnes. Mining commenced on the adjacent Ely mining lease in 2006, in accordance with the 1998 agreement with Alcan. A second shiploader that increases the shipping capability was commissioned in 2006	Open cut	On site generation; new power station commissioned in 2006
Production started in 1990 and expanded in phases to 2002 when new concentrator was completed; production from Norte started in 2005 and the sulphide leach produced the first cathode during 2006	Open pit	Supplied from SING grid under various contracts with Norgener, Gas Atacama and Edelnor
Joint venture interest acquired 1995. Capacity expanded to over 200,000 tonnes of ore per day in 1998 with addition of underground production of more than 35,000 tonnes per day in 2003 with an expansion to a sustained rate of 50,000 tonnes per day in mid 2007	Open pit and underground	Long term contract with US-Indonesian consortium operated purpose built coal fired generating station
Interest acquired in 1989. Modernisation includes smelter complex and expanded tailings dam	Open pit	On site generation supplemented by long term contracts with Utah Power and Light
Production started in 1995; interest acquired in 2000	Open pit and underground	Supplied from State grid
Development of 20 year underground mine commenced 1996 with open pit closure in 2003	Underground	Supplied by ESKOM via grid network
Interest increased from 59.7% following purchase of Ashton Mining in 2000. Underground mine project approved in 2005 to extend mine life to 2018	Open pit to underground in future	Long term contract with Ord Hydro Consortium and on site generation backup

## Group mines continued

Mine	Location	Access	Title/lease
<b>DIAMONDS CONTINUED</b>			
<b>Diavik</b> (60%)	Northwest Territories, Canada	Air, ice road in winter	Mining leases from Canadian federal government expiring in 2017 and 2018
<b>Murowa</b> (78%)	Zvishavane, Zimbabwe	Road and air	Claims and mining leases
<b>ENERGY</b>			
<b>Energy Resources of Australia</b> (68%) Ranger	Northern Territory, Australia	Road	Leases granted by State
<b>Rio Tinto Coal Australia</b> Bengalla (30%) Blair Athol (71%) Hail Creek (82%) Hunter Valley Operations (76%) Kestrel (80%) Mount Thorley Operations (61%) Warkworth (42%)	New South Wales and Queensland, Australia	Road, rail, conveyor and port	Leases granted by State
<b>Rio Tinto Energy America</b> Antelope Colowyo Cordero Rojo Decker (50%) Jacobs Ranch Spring Creek	Wyoming, Montana and Colorado, US	Rail and road	Leases from US and State Governments and private parties, with minimum coal production levels, and adherence to permit requirements and statutes
<b>Rössing Uranium</b> (69%)	Namib Desert, Namibia	Rail, road and port	Federal lease
<b>INDUSTRIAL MINERALS</b>			
<b>Rio Tinto Minerals – Boron</b>	California, US	Road, rail and port	Owned
<b>Rio Tinto Minerals – talc</b>	Trimouns, France (other smaller operations in Australia, Europe and North America)	Road and rail	Owner of ground (orebody) and long term lease agreement to 2012
<b>QIT-Fer et Titane Lac Tio</b>	Havre-Saint-Pierre, Quebec, Canada	Rail and port (St Lawrence River)	Mining covered by two concessions granted by State in 1949 and 1951 which, subject to certain Mining Act restrictions, confer rights and obligations of an owner
<b>QIT Madagascar Minerals</b> (80%)	Fort-Dauphin, Madagascar	Road and port	Mining lease
<b>Richards Bay Minerals</b> (50%)	Richards Bay, KwaZulu-Natal, South Africa	Rail, road and port	Long term renewable mineral leases; State lease for Reserve 4 initially runs to end 2022; Ingonyama Trust lease for Reserve 10 runs to 2022. Both mineral leases are required to be converted to new order mining rights by 30 April 2009 in terms of South African legislation. An application for conversion was made in 2006 for the Ingonyama Trust mineral lease, and an application was made in 2008 for the conversion of the State mineral lease

History	Type of mine	Power source
Deposits discovered 1994-1995. Construction approved 2000. Diamond production started 2003. Second dike closed off in 2005 for mining of additional orebody. The underground mine is expected to start production in late 2009, ramping up full production in 2012	Open pit to underground in future	On site diesel generators; installed capacity 27MW with an upgrade under way
Discovered in 1997. Small scale production started 2004	Open pit	Supplied by ZESA with diesel generator backup
Mining commenced 1981. Interest acquired through North in 2000. Life of mine extension to 2020 announced in 2007	Open pit	On site diesel/steam power generation
Peabody Australian interests acquired in 2001. Production started for export at Blair Athol and adjacent power station at Tarong in 1984. Kestrel acquired and recommissioned 1999. Hail Creek started in 2003	Open cut and underground (Kestrel)	State owned grid
Antelope, Spring Creek, Decker and Cordero acquired in 1993, Cordero Rojo in 1997, Colowyo in 1995, Jacobs Ranch in 1998, and West Antelope in 2004	Open cut	Supplied by IPPs and Cooperatives through national grid service
Production began in 1978. Life of mine extension to 2016 approved in 2005	Open pit	Namibian National Power
Deposit discovered in 1925 and acquired by Rio Tinto in 1967	Open pit	On site co-generation units
Production started in 1885; acquired in 1988. Australian mine acquired in 2001	Open pit	Supplied by Atel and on site generation units. Australian mine power supplied by Western Power
Production started 1950; interest acquired in 1989	Open pit	Long term contract with Hydro-Quebec
Began as exploration project 1980s; construction approved 2005; ilmenite production started end of 2008	Mineral sand dredging	On site diesel generators
Production started 1977; interest acquired 1989. Fifth dredge commissioned in 2000	Beach sand dredging	Contract with ESKOM

## Group mines continued

Mine	Location	Access	Title/lease
<b>IRON ORE</b>			
<b>Hammersley Iron</b> Brockman Marandoo Mount Tom Price Nammuldi Paraburdoo Yandicoogina Channar (60%) Eastern Range (54%)	Hammersley Ranges, Western Australia	Railway and port (owned by Hammersley Iron and operated by Pilbara Iron)	Agreements for life of mine with Government of Western Australia
<b>Hope Downs Joint Venture</b> (50% mine, 100% infrastructure) Hope Downs 1	Pilbara region, Western Australia	Railway owned and operated by Rio Tinto	Agreements for life of mine with Government of Western Australia
<b>Iron Ore Company of Canada</b> (59%)	Labrador City, Province of Newfoundland and Labrador	Railway and port facilities in Sept-Iles, Quebec (owned and operated by IOC)	Sublease with the Labrador Iron Ore Royalty Income Fund which has lease agreements with the Government of Newfoundland and Labrador that are due to be renewed in 2020 and 2022
<b>Rio Tinto Brasil</b> Corumbá	Matto Grosso do Sul, Brazil	Road, air and river	Government licence for undetermined period
<b>Robe River Iron Associates</b> (53%) Mesa J West Angelas	Pilbara region, Western Australia	Railway and port (owned by Robe River and operated by Pilbara Iron)	Agreements for life of mine with Government of Western Australia
<b>Dampier Salt</b> (68.4%)	Dampier, Lake MacLeod and Port Hedland, Western Australia	Road and port	State agreements (mining leases) expiring in 2013 at Dampier, 2018 at Port Hedland and 2021 at Lake MacLeod with options to renew in each case

## Group power stations

(Rio Tinto interest 100% unless otherwise shown)

Power station	Location	Title/lease	Plant type/product	Capacity as of 31 December 2008
<b>ALUMINIUM</b>				
<b>Gladstone Power Station</b> (42%)	Gladstone, Queensland, Australia	100% Freehold	Thermal power station	1,680 megawatts
<b>Highlands Power Stations</b>	Lochaber and Kinlochleven, UK	100% Freehold	Hydroelectric power	80 megawatts
<b>Lynemouth Power Station</b>	Lynemouth, UK	100% Freehold	Thermal power station	420 megawatts
<b>Kemano Power Plant</b>	Kemano, British Columbia, Canada	100% Freehold	Hydroelectric power	896 megawatts
<b>Quebec Power Stations</b>	Saguenay region, Quebec, Canada. (Chute-à-Caron, Chute- à-la-Savanne, Chute- des-Passes, Chute-du- Diable, Isle-Maligne, Shipshaw)	100% Freehold	Hydroelectric power	2,687 megawatts
<b>Vigeland Power Station</b>	Nr Kristiansand, Norway	100% Freehold	Hydroelectric power	26 megawatts

History	Type of mine	Power source
Annual capacity increased to 68 million tonnes during 1990s. Yandicoogina first ore shipped in 1999 and port capacity increased. Eastern Range started 2004. Total production in 2008 was 125 million tonnes including Hope Downs	Open pit	Supplied through the integrated Hamersley and Robe power network operated by Pilbara Iron
Joint venture between Rio Tinto and Hancock Prospecting Pty Limited. Construction of Stage 1 to 22 million tonnes per annum commenced April 2006 and first production occurred November 2007. Stage 2 to 30 million tonnes per annum has been approved and is forecast to be completed by Q1 2009	Open pit	Supplied through the integrated Hamersley and Robe power network operated by Pilbara Iron
Current operation began in 1962 and has processed over one billion tonnes of crude ore since. Annual capacity 17.5 million tonnes of concentrate of which 13.5 million tonnes can be pelletised	Open pit	Supplied by Newfoundland Hydro under long term contract
Iron ore production started in 1978; interest acquired in 1991	Open pit	Supplied by ENERSUL
First shipment in 1972. Annual sales reached 30 million tonnes in late 1990s. Interest acquired in 2000 through North. West Angelas first ore shipped in 2002 and mine expanded in 2005. Current sales now more than 50 million tonnes per year	Open pit	Supplied through the integrated Hamersley and Robe power network operated by Pilbara Iron
Construction of the Dampier field started in 1969; first shipment in 1972. Lake MacLeod was acquired in 1978 as an operating field. Port Hedland was acquired in 2001 as an operating field.	Solar evaporation of seawater (Dampier and Port Hedland) and underground brine (Lake MacLeod); dredging of gypsum from surface of Lake MacLeod	Dampier supply from Hamersley Iron Pty Ltd; Lake MacLeod from Western Power and on site generation units; Port Hedland from Western Power

## Group smelters and refineries

(Rio Tinto interest 100% unless otherwise shown)

Smelter/refinery	Location	Title/lease	Plant type/product	Capacity as of 31 December 2008
<b>ALUMINIUM GROUP</b>				
<b>Alma</b>	Alma, Quebec, Canada	100% Freehold	Aluminium smelter producing aluminium rod, t-foundry, sow, molten metal	423,000 tonnes per year aluminium
<b>Alouette (40%)</b>	Sept-Iles, Quebec, Canada	100% Freehold	Aluminium smelter producing aluminium ingot, sow	590,000 tonnes per year aluminium
<b>Alucam (47%)</b>	Edéa, Cameroon	100% Freehold	Aluminium smelter producing aluminium slab, ingot	100,000 tonnes per year aluminium
<b>Anglesey (51%)</b>	Anglesey, Wales, UK	100% Freehold	Aluminium smelter producing aluminium billet, block, sow	147,000 tonnes per year aluminium
<b>Arvida</b>	Saguenay, Quebec, Canada	100% Freehold	Aluminium smelter producing aluminium billet, molten metal	173,000 tonnes per year aluminium
<b>Beauharnois</b>	Beauharnois, Quebec, Canada	100% Freehold	Aluminium smelter producing aluminium ingot foundry	52,000 tonnes per year aluminium
<b>Bécancour (25%)</b>	Bécancour, Quebec, Canada	100% Freehold	Aluminium smelter producing aluminium billet, slab, t-foundry, t-bar	421,000 tonnes per year aluminium
<b>Bell Bay</b>	Bell Bay, Northern Tasmania, Australia	100% Freehold	Aluminium smelter producing aluminium ingot, block, t-bar	180,000 tonnes per year aluminium
<b>Boyne Smelters (59%)</b>	Boyne Island, Queensland, Australia	100% Freehold	Aluminium smelter producing aluminium ingot, billet, t-bar	557,000 tonnes per year aluminium
<b>Dunkerque</b>	Dunkerque, France	100% Freehold	Aluminium smelter producing aluminium slab, t-foundry, t-bar	261,000 tonnes per year aluminium
<b>Gardanne</b>	Gardanne, France	100% Freehold	Refinery producing specialty aluminas and smelter grade aluminas	635,000 tonnes per year specialty aluminas (including 133,000 tonnes of smelter grade aluminas)
<b>Gove</b>	Gove, Northern Territory, Australia	100% Leasehold. (Commonwealth land held in trust on behalf of Traditional Owners). Numerous lots with varying expiry dates starting 2011	Refinery producing alumina	2,325,000 tonnes per year alumina
<b>Jonquière (Vaudreuil)</b>	Jonquière, Quebec, Canada	100% Freehold	Refinery producing specialty aluminas and smelter grade aluminas	1,500,000 tonnes per year aluminas
<b>Grande-Baie</b>	Saguenay, Quebec, Canada	100% Freehold	Aluminium smelter producing aluminium slab, sow, molten metal	212,000 tonnes per year aluminium
<b>ISAL</b>	Reykjavik, Iceland	100% Freehold	Aluminium smelter producing aluminium slab, t-bar	188,000 tonnes per year aluminium
<b>Kitimat</b>	Kitimat, British Columbia, Canada	100% Freehold	Aluminium smelter producing aluminium billet, slab, ingot	252,000 tonnes per year aluminium
<b>Laterrière</b>	Saguenay, Quebec, Canada	100% Freehold	Aluminium smelter producing aluminium slab, t-bar, molten metal	234,000 tonnes per year aluminium
<b>Lochaber</b>	Fort William, Scotland, UK	100% Freehold	Aluminium smelter producing aluminium slab, t-bar	43,000 tonnes per year aluminium
<b>Lynemouth</b>	Lynemouth, Northumberland, UK	100% Freehold	Aluminium smelter producing aluminium slab, t-bar	178,000 tonnes per year aluminium

Smelter/refinery	Location	Title/lease	Plant type/product	Capacity as of 31 December 2008
<b>ALUMINIUM GROUP CONTINUED</b>				
<b>Queensland Alumina</b> (80%)	Gladstone, Queensland, Australia	73.3% Freehold. 26.7% Leasehold (of which more than 80% expires in 2026 and after)	Refinery producing alumina	3,953,000 tonnes per year alumina
<b>São Luis (Alumar)</b> (10%)	São Luis, Maranhao, Brazil	100% Freehold	Refinery producing alumina	1,400,000 tonnes per year of alumina which will increase to 3,500,000 tonnes per year after expansion in 2009
<b>St-Jean-de-Maurienne</b>	St-Jean-de-Maurienne, France	100% Freehold	Refinery producing alumina	138,000 tonnes per year aluminium
<b>Sebree</b>	Robards, Kentucky, US	100% Freehold	Aluminium smelter producing aluminium billet, ingot foundry, t-bar	196,000 tonnes per year aluminium
<b>Shawinigan</b>	Shawinigan, Quebec, Canada	100% Freehold	Aluminium smelter producing aluminium billet, sow	100,000 tonnes per year aluminium
<b>Sohar</b> (20%)	Sohar, Oman	100% leasehold expiring in 2035	Aluminium smelter producing small ingot and low profile sow products	230,000 tonnes per year aluminium
<b>SORAL</b> (50%)	Husnes, Norway	100% Freehold	Aluminium smelter producing aluminium billet	170,000 tonnes per year aluminium
<b>Tiwai Point (New Zealand Aluminium Smelters)</b> (79%)	Invercargill, Southland, New Zealand	19.6% Freehold 80.4% Leasehold (expiring in 2029 and use of certain Crown land)	Aluminium smelter producing aluminium ingot, billet, t-bar	365,000 tonnes per year aluminium
<b>Tomago</b> (52%)	Tomago, New South Wales, Australia	100% Freehold	Aluminium smelter producing aluminium billet, slab, ingot	527,000 tonnes per year aluminium
<b>Yarwun</b>	Gladstone, Queensland, Australia	97% Freehold 3% Leasehold (expiring in 2101 and after)	Refinery producing alumina	1,400,000 tonnes per year alumina
<b>COPPER GROUP</b>				
<b>Kennecott Utah Copper</b>	Magna, Salt Lake City, Utah, US	100% Freehold	Flash smelting furnace/Flash converter furnace copper refinery	335,000 tonnes per year refined copper
<b>Palabora</b> (58%)	Phalaborwa, South Africa	100% Freehold	Reverberatory Pierce Smith copper refinery	130,000 tonnes per year refined copper
<b>INDUSTRIAL MINERALS</b>				
<b>Boron</b>	California, US	100% Freehold	Borates refinery	565,000 tonnes per year boric oxide
<b>QIT-Fer et Titane Sorel Plant</b>	Sorel-Tracy, Quebec, Canada	100% Freehold	Ilmenite smelter	1,100,000 tonnes per year titanium dioxide slag, 900,000 tonnes per year iron
<b>Richards Bay Minerals</b> (50%)	Richards Bay, South Africa	100% Freehold	Ilmenite smelter	1,060,000 tonnes per year titanium dioxide slag
<b>IRON ORE GROUP</b>				
<b>HIs melt®</b> (60%)	Kwinana, Western Australia	100% Leasehold (expiring in 2010 with rights of renewal for further 25 year terms)	HIs melt® ironmaking plant producing pig iron	800,000 tonnes per year pig iron
<b>IOC Pellet Plant</b> (59%)	Labrador City, Newfoundland and Labrador, Canada	100% Leaseholds (expiring in 2020, 2022 and 2025 with rights of renewal for further terms of 30 years)	Pellet induration furnaces producing multiple iron ore pellet types	13,500,000 tonnes per year pellet