RIO TINTO PLC
Form 20-F
May 27, 2010

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**SECURITIES AND EXCHANGE COMMISSION**
**WASHINGTON, DC 20549**
**FORM 20-F**

(Mark One)

o Registration statement pursuant to Section 12 (b) or 12(g) of the Securities Exchange Act of 1934
or

x **Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**
**For the financial year ended: 31 December 2009**
or

o Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the transition period from: _____ to _____
or

o Shell company report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
Date of event requiring this shell company report _____

Commission file number: 1-10533

**Rio Tinto plc**

(Exact name of Registrant as specified in its charter)

**England and Wales**
(Jurisdiction of incorporation or organisation)

**2 Eastbourne Terrace**
**London, W2 6LG, United Kingdom**
(Address of principal executive offices)

Commission file number: 0-20122

**Rio Tinto Limited**
**ABN 96 004 458 404**
(Exact name of Registrant as specified in its charter)

**Victoria, Australia**
(Jurisdiction of incorporation or organisation)

**Level 33, 120 Collins Street**
**Melbourne, Victoria 3000, Australia**
(Address of principal executive offices)

Julie Parent, T: 514-848-8519, E: julie.parent@riotinto.com
(Name, Telephone, E-mail and/or Facsimile number and Address of Company Contact Person)

**Securities registered or to be registered pursuant to Section 12(b) of the Act:**

| **Title of each class** | **Name of each exchange on which registered** | **Name of each exchange on which registered** | **Title of each class** |
|---|---|---|---|
| American Depositary Shares* | New York Stock Exchange | | |
| Ordinary Shares of 10p each** | New York Stock Exchange | | |
| 7.125% Notes due 2013 | New York Stock Exchange | New York Stock Exchange | 7.125% Notes due 2013 |
| 5.875% Notes due 2013 | New York Stock Exchange | New York Stock Exchange | 5.875% Notes due 2013 |

| | | | |
|---|---|---|---|
| 6.500% Notes due 2018 | New York Stock Exchange | New York Stock Exchange | 6.500% Notes due 2018 |
| 7.125% Notes due 2028 | New York Stock Exchange | New York Stock Exchange | 7.125% Notes due 2028 |
| 8.900% Notes due 2014 | New York Stock Exchange | New York Stock Exchange | 8.900% Notes due 2014 |
| 9.250% Notes due 2019 | New York Stock Exchange | New York Stock Exchange | 9.250% Notes due 2019 |

* Evidenced by American Depositary Receipts. Each American Depositary Share Represents one Rio Tinto plc Ordinary Shares of 10p each.

** Not for trading, but only in connection with the listing of American Depositary Shares, pursuant to the requirements of the Securities and Exchange Commission

**Securities registered or to be registered pursuant to Section 12(g) of the Act:**

| **Title of each class** | **Title of each class** |
|---|---|
| None | Shares |

**Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:**

None None

**Indicate the number of outstanding shares of each of the Issuer s classes of capital or common stock as of the close of the period covered by the annual report:**

| **Title of each class** | **Number** | **Number** | **Title of each class** |
|---|---|---|---|
| Ordinary Shares of 10p each | 1,529,003,871 | 606,831,240 | Shares |
| DLC Dividend Share of 10p | 1 | 1 | DLC Dividend Share |
| Special Voting Share of 10p | 1 | 1 | Special Voting Share |

Indicate by check mark if the registrants are well-known seasoned issuers, as defined in rule 405 of the Securities Act.

Yes x No o

If this report is an annual or transition report, indicate by check mark if the registrants are not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.

Yes o No x

Note Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.

Indicate by check mark whether the registrants: (1) have filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrants were required to file such reports), and (2) have been subject to such filing requirements for the past 90 days:

Yes x No o

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).* Yes x No o

* This requirement does not apply to the registrant until its fiscal year ending December 31, 2011.

Indicate by check mark whether the registrants are large accelerated filers, accelerated filers, or non-accelerated filers. See definition of accelerated filer and large accelerated filer in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer x Accelerated filer o Non-accelerated filer o Smaller reporting companyo

(Do not check if a smaller reporting company)

Indicate by check mark which basis of accounting the registrants have used to prepare the financial statements included in this filing:

US GAAP o International Financial Reporting Standards as issued by the International Accounting Standards Board x Other o

If Other has been checked in response to the previous question, indicate by check mark which financial statement item the registrants have elected to follow:

Item 17 o Item 18 o

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes o No x

**EXPLANATORY NOTE**

The Rio Tinto Group is a leading international mining group, combining Rio Tinto plc and Rio Tinto Limited in a dual listed companies ( DLC ) merger which was designed to place the shareholders of both Companies in substantially the same position as if they held shares in a single enterprise owning all of the assets of both Companies. This annual report on Form 20-F, including the financial statements, is presented on a combined basis for the Rio Tinto Group.

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**Rio Tinto**
**PART I**

## Item 1. Identity of Directors, Senior Management and Advisers

Not applicable.

## Item 2. Offer Statistics and Expected Timetable

Not applicable.

## Item 3. Key Information

**SELECTED FINANCIAL DATA**

The selected consolidated financial data below has been derived from the historical audited consolidated financial statements of the Rio Tinto Group. The selected consolidated financial data should be read in conjunction with, and qualified in their entirety by reference to, the *2009 Financial statements* and notes thereto. The financial statements as included on pages A-1 to A-82 have been prepared in accordance with International Financial Reporting Standards both as adopted by the EU ( EU IFRS ) and as issued by the International Accounting Standards Board ( IFRS ).

**RIO TINTO GROUP**

**Income Statement Data**

| **For the years ending 31 December** | **2009** | 2008 | 2007 | 2006 | 2005 |
|---|---|---|---|---|---|
| **Amounts in accordance with IFRS** | **US$m** | US$m | US$m | US$m | US$m |
| Consolidated revenue | **41,825** | 54,264 | 29,700 | 22,465 | 19,033 |
| Group operating profit (a) | **7,506** | 10,194 | 8,571 | 8,974 | 6,922 |
| Profit for the year from continuing operations | **5,784** | 5,436 | 7,746 | 7,867 | 5,498 |
| Loss after tax from discontinued operations | **(449)** | (827) | | | |
| Profit for the year | **5,335** | 4,609 | 7,746 | 7,867 | 5,498 |
| Basic earnings per share (b) | | | | | |
| Profit from continuing operations (US cents) | **301.7** | 286.8 | 464.9 | 456.2 | 312.6 |
| Loss after tax from discontinued operations (US cents) | **(25.5)** | (52.7) | | | |
| Profit for the year per share (US cents) | **276.2** | 234.1 | 464.9 | 456.2 | 312.6 |
| Diluted earnings per share (b) | | | | | |
| Profit from continuing operations (US cents) | **300.7** | 285.5 | 462.9 | 454.3 | 311.6 |
| Loss after tax from discontinued operations (US cents) | **(25.4)** | (52.4) | | | |
| Profit for the year per share (US cents) | **275.3** | 233.1 | 462.9 | 454.3 | 311.6 |

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| **Dividends per share** | **2009** | 2008 | 2007 | 2006 | 2005 |
|---|---|---|---|---|---|
| Dividends declared during the year (b) | | | | | |
| US cents | | | | | |
| interim | | 55.6 | 42.5 | 32.7 | 31.5 |
| final and special | **45.0** | 55.6 | 68.7 | 52.3 | 124.0 |
| UK pence | | | | | |
| interim | | 29.6 | 20.9 | 17.5 | 17.8 |
| final and special | **28.8** | 37.9 | 35.3 | 26.7 | 69.8 |
| Australian cents | | | | | |
| interim | | 63.3 | 49.6 | 42.9 | 41.4 |
| final and special | **51.6** | 83.0 | 76.1 | 67.8 | 163.9 |
| Dividends paid during the year (US cents) (b) | | | | | |
| ordinary and special | **55.6** | 124.3 | 94.8 | 156.7 | 68.3 |
| Weighted average number of shares basic (millions) (b) | **1,763.6** | 1,570.1 | 1,572.9 | 1,630.5 | 1,668.2 |
| Weighted average number of shares diluted (millions) (b) | **1,769.6** | 1,577.3 | 1,579.6 | 1,637.1 | 1,673.9 |

| **Statement of Financial Position Data at 31 December Amounts in accordance with IFRS** | **2009 US$m** | 2008 US$m | Restated (c) 2007 US$m | 2006 US$m | 2005 US$m |
|---|---|---|---|---|---|
| Total assets | **97,236** | 89,616 | 101,091 | 34,494 | 29,803 |
| Share capital / premium | **9,344** | 5,826 | 3,323 | 3,190 | 3,079 |
| Total equity / Net assets | **45,925** | 22,461 | 26,293 | 19,385 | 15,739 |
| Equity attributable to Rio Tinto shareholders | **43,831** | 20,638 | 24,772 | 18,232 | 14,948 |

**Notes**

(a) Group operating profit under IFRS includes the effects of charges and reversals resulting from impairments and profit and loss on disposals of interests in businesses. Group operating profit amounts shown above exclude equity accounted operations,

finance items, tax and discontinued operations.

(b) The rights issues were at a discount to the then market price. Accordingly, earnings per share and dividends per share for all periods up to the date on which the shares were issued have been adjusted for the bonus element of the issue. The bonus factor for Rio Tinto plc was 1.2105 and for Rio Tinto Limited was 1.2679.

(c) The 31 December 2007 balance sheet has been restated for the revisions to Alcan s fair value accounting which were finalised in 2008.

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**Principal risks and uncertainties**

The following describes some of the material risks that could affect Rio Tinto. There may be additional risks unknown to Rio Tinto and other risks, currently believed to be immaterial, which could turn out to be material. These risks, whether they materialise individually or simultaneously, could significantly affect the Group s business and financial results. It also outlines the exposure to risk without explaining the detail of how each is managed and mitigated, or how some risks could result in either a positive (upside) or negative (downside) impact. They should also be considered in connection with any forward looking statements in this document and the cautionary statement on page 10.

**External**

**Commodity prices and global demand for the Group s products are expected to remain uncertain, which could have a positive or negative impact on the Group s business.**

Commodity prices and demand for the Group s products are cyclical and strongly influenced by world economic growth. This is particularly so for our key customers, especially in the US and Asia (notably China). There is potential volatility in short to medium term commodity prices as various national stimulus packages are reduced. Muted consumer spending may result from concerns over unemployment. The Group s normal policy is to sell its products at prevailing market prices and not to enter into price hedging arrangements. The recent improvement in commodity prices and demand for the Group s products may not remain as strong, which would have an impact on Group revenues, earnings, cash flows, asset values and growth.

**Continued growth in demand for the Group s products in China could be affected by future developments in that country.**

The Group s iron ore is sold to Chinese customers predominantly at fixed prices rather than at spot rates. The 2009 benchmark prices were never officially agreed. Failure to agree on prices remains a source of tension between China and all the major iron ore suppliers.

The slowdown of China s economy in 2009 contributed to a contraction in demand for aluminium and lower aluminium prices. If Chinese customers demand for the Group s products fails to continue to recover or Chinese customers source such products from elsewhere, the Group s business, financial condition and prospects could be affected.

**Rio Tinto is exposed to fluctuations in exchange rates that could have an adverse impact on its overall business results.**

The Group uses US dollars to denominate most of its sales, hold surplus cash, finance its operations, and present its external and internal results. Although many costs are incurred in US dollars, significant costs are influenced by the local currencies of the countries where the Group operates, principally the Australian dollar, Canadian dollar and Euro. The Group s normal policy is to avoid hedging arrangements relating to changes in foreign exchange rates. Appreciation in the value of these currencies against the US dollar or prolonged periods of exchange rate volatility may adversely affect the Group s business results.

**Political, legal and commercial instability or community disputes in the countries and territories in which the Group operates could affect the viability of its operations.**

The Group has operations in jurisdictions with varying degrees of political, legal and commercial stability. Commercial instability can be influenced by bribery and corruption in their various guises. Administrative change, policy reform, and changes in law or governmental regulations can result in civil unrest, increased regulation and potentially expropriation, or nationalisation. Renegotiation or nullification of existing agreements, leases and permits, changes in fiscal policies (including increased tax or royalty rates) or currency restrictions as well as significantly increased costs or impediments to operation are all possible consequences. Such instability could have an adverse effect on the profitability, the ability to finance or, in extreme cases, the viability of an operation.

Some of the Group s current and potential operations are located in or near communities that may regard the operation as being detrimental to their environmental, economic or social circumstances. Community reaction could have an adverse impact on the cost, profitability, ability to finance or even the viability of an operation. Such events could lead to disputes with national or local governments or with local communities and give rise to reputational damage. If the Group s operations are delayed or shut down as a result of political and community instability, its

revenue growth may be constrained and the long term value of its business could be adversely impacted.

**The Group s land and resource tenure could be disputed resulting in disruption to the operation or development of a resource.**

The Group operates in several countries where title to land and rights in respect of land and resources (including indigenous title) may be unclear and may lead to disputes over resource development. Such disputes could disrupt or delay relevant mining projects, impede the Group s ability to develop new mining properties, and may have an adverse effect on the Group s results of operations or its prospects.

**Changes in the cost and/or interruptions in the supply of energy, water, fuel or other key inputs could adversely affect the economic viability of the Group s operations.**

The Group s operations are resource intensive and, as a result, its costs and net earnings may be adversely affected by the availability or cost of energy, water, fuel or other key inputs. If the prices of key inputs rise significantly more than expected, or if the Group experiences interruptions in, or constraints on, its supply of key inputs, the Group s costs could increase and its results could be adversely affected.

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**Strategic**

**Failure of the Group to make or successfully integrate acquisitions could have an adverse effect on the business and results of operations.**

Business combinations entail a number of risks including the effective integration of acquisitions (including the realisation of synergies), significant one time write-offs or restructuring charges, and unanticipated costs and liabilities. All of these may be exacerbated by the diversion of management s attention away from other ongoing business concerns. The Group may also be liable for the past acts, omissions or liabilities of companies or businesses or properties it has acquired, which may be unforeseen or greater than anticipated.

**The Group s business and growth prospects may be negatively affected by reductions in its capital expenditure programme.**

The Group requires substantial capital to invest in greenfield and brownfield projects, and to extend the life and capacity of its existing operations. Reductions in capital expenditure (including sustaining capital) have resulted in the cancellation, slowing or deferral of projects until market conditions and commodity prices recover, and sufficient cash is available for investment. If significant variations in commodity prices or demand for our products occurs, the Group may reduce its capital expenditure further, which may negatively impact the timing of its growth and future prospects.

With the volatility of the commodity markets, the Group s ability to take advantage of improvements may be constrained by earlier capital expenditure restrictions and the long term value of its business could be adversely impacted.

**The Group s exploration and development of new projects might be unsuccessful, expenditures may not be fully recovered and depleted ore reserves may not be replaced.**

The Group develops new mining properties and expands its existing operations as a means of generating shareholder value. The Group seeks to identify new orebodies and mining properties through its exploration programme and has also undertaken the development or expansion of other major operations. There is a high degree of competition for opportunities to develop such orebodies. Certain competitors, such as state run interests, have access to significant resources and may be motivated by political or other non economic factors. The Group may be unable to find willing and suitable joint venture partners to share the cost of developing large projects. There is no assurance, therefore, that the Group s investment in exploration and project development will be recouped, or that depleted ore reserves will be replaced.

**The Group s proposed iron ore production joint venture with BHP Billiton in Western Australia may not yield the synergies anticipated, or may fail to be completed as currently envisaged.**

Rio Tinto and BHP Billiton have proposed a production joint venture covering the entirety of both companies Western Australian iron ore assets. The binding agreements on the proposed joint venture were signed on 5 December 2009, and cover all aspects of how the joint venture would operate and be governed. The estimated US$10 billion net present value of the synergies may not be realised or may take longer to realise than expected. The proposed production joint venture requires regulatory approvals in a number of jurisdictions which may not be secured. Regulators may require the Group to relinquish ownership or control over certain assets prior to approving the production joint venture. Any or all of these could reduce the value anticipated from forming the production joint venture or result in a failure to implement the venture as currently envisaged.

**Financial**

**The Group s reported results could be adversely affected by the impairment of assets and goodwill.**

An asset impairment charge may result from the occurrence of unexpected adverse events that impact the Group s expected performances. In accordance with IFRS, the Group does not amortise goodwill but rather tests it annually for impairment: such impairments cannot be reversed.

The Group will continue to test goodwill and may, in the future, record additional impairment charges. This could result in the recognition of impairment provisions (which are non cash items) that could be significant and could have an adverse effect on the Group s reported results.

**The Group s net earnings are sensitive to the assumptions used for valuing defined benefit pension plans and post retirement healthcare plans.**

Certain of the Group s businesses sponsor defined benefit pension plans. The pension expense reported for these plans is sensitive to the assumptions used to value the pension obligations, and also to the underlying economic conditions that influence the assumptions. The sensitivity of earnings to key assumptions is described in more detail in the Financial review on pages 87 to 93. Changing economic conditions, particularly poor pension investment returns, may require the Group to make substantial cash contributions to its pension plans.

Actual investment returns achieved compared to the amounts assumed within the Group s reported pension expense are reported in the table below (amounts for prior years have been adjusted to exclude defined contribution assets as explained in note 50 to the *2009 Financial statements*).

As at 31 December 2009, the Group had estimated pension liabilities (on an IAS19 accounting basis) of US$16.2 billion and assets of US$12.4 billion. After excluding those pension arrangements deliberately operated as unfunded arrangements, representing liabilities of US$1.1 billion, the global funding level for pension liabilities (on an IAS19 basis) was approximately 82 per cent. If the funding level materially deteriorates further, cash contributions from the Group may be needed, subject to local requirements.

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**Pension plan investment returns**

| US$ millions | **2009** | 2008 | 2007 | 2006 | 2005 |
|---|---|---|---|---|---|
| Expected return on plan assets | **581** | 857 | 438 | 261 | 249 |
| Actual return on plan assets | **1,472** | (2,451) | 309 | 517 | 365 |
| Difference between the expected and actual return on plan assets (loss)/gain (US$ million) | **891** | (3,308) | (129) | 256 | 116 |
| Difference as a percentage of plan assets | **7%** | (36%) | (1%) | 5% | 3% |

Note 50 to the 2009 Financial statements provides detailed information on the financial impact of these plans, including the expected return on assets as used for financial reporting purposes; how actual returns have compared to the expected rate historically; and the level of contributions expected during the year after the statement of financial position date.

The total provision for post-retirement costs is set out in note 27 to the *2009 Financial statements*.

**Operational**

**Estimates of ore reserves are based on many assumptions and changes in the assumptions could lead to reported ore reserves being restated.**

There are numerous uncertainties inherent in estimating ore reserves including subjective judgements and determinations based on available geological, technical, contract and economic information. Assumptions that are valid at the time of estimation may change significantly when new information becomes available. Changes in the forecast prices of commodities, exchange rates, production costs or recovery rates may result in the reserves ceasing to be economically viable. Ultimately this may result in the reserves needing to be restated. Such changes in reserves could also affect depreciation and amortisation rates, asset carrying values, deferred stripping calculations and provisions for close down, restoration and environmental clean up costs.

**Labour disputes could lead to lost production and/or increased costs.**

Some of the Group s employees, including employees in non managed operations, are represented by labour unions under various collective labour agreements. The Group may not be able satisfactorily to renegotiate agreements when they expire and may face tougher negotiations or higher wage demands. In addition, existing labour agreements may not prevent a strike or work stoppage, which could have an adverse effect on the Group s earnings and financial condition.

**Some of the Group s technologies are unproven and failures could adversely impact costs and/or productivity.**

The Group has invested in and implemented information systems and operational initiatives including new technologies. Some aspects of these technologies are unproven and the eventual operational outcome or viability cannot be assessed with certainty. The costs, productivity, value in securing business opportunities and other benefits from these initiatives, and the consequent effects on the Group s future earnings and financial results may vary from expectations. If the Group s technology systems fail to realise the anticipated benefits, there is no assurance that this will not result in increased costs, interruptions to supply continuity, failure of the Group to realise its production or growth plans or some other adverse effect on operational performance.

**The Group s mining operations are vulnerable to natural disasters, operating difficulties and infrastructure constraints, not all of which are covered by insurance, which could have an impact on its productivity.**

Mining operations are vulnerable to natural events, including earthquakes, drought, floods, fire, storms and the possible effects of climate change. Operating difficulties such as unexpected geological variations that could result in significant failure, could affect the costs and viability of operations for indeterminate periods, including smelting and refining.

The Group requires reliable roads, rail networks, ports, power sources and power transmission facilities, water supplies and IT systems to access and conduct its operations. The availability and cost of infrastructure affects capital and operating costs, and the maintenance of planned levels of production and sales. In particular, the Group transports

a large proportion of its products by sea. Limitations, or interruptions in, rail or shipping capacity at any port, including as a result of third parties gaining access to the Group s integrated infrastructure, could impede the Group s ability to deliver its products on time. This could have an adverse effect on the Group s business and results of operations.

The Group uses an extensive information technology system and infrastructure. A significant failure of major parts of the system or malicious actions could result in significant interruption that could affect the Group s reputation and operating results.

The Group s insurance does not cover every potential risk associated with its operations. Adequate coverage at reasonable rates is not always obtainable. In addition, the Group s insurance may not fully cover its liability or the consequences of any business interruptions such as equipment failure or labour dispute. The occurrence of a significant event not fully covered by insurance could have an adverse effect on the Group s business, results of operations, financial condition and prospects.

**Joint ventures and other strategic partnerships may not be successful and non managed projects and operations may not comply with the Group s standards, which may adversely affect its reputation and the value of such projects and operations.**

The Group participates in several joint venture arrangements and it may enter into further joint ventures. Although the Group has sought to protect its interests, existing and future joint ventures necessarily involve special risks. Whether or not the Group holds majority interests or maintains operational control in its joint ventures, its partners may:

have economic or business interests or goals that are inconsistent with, or opposed to, those of the Group

exercise veto rights to block actions that the Group believes are in its or the joint venture s best interests;

take action contrary to the Group s policies or objectives with respect to its investments; or

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be unable or unwilling to fulfil their obligations under the joint venture or other agreements, such as contributing capital to expansion or maintenance projects.

Where projects and operations are controlled and managed by the Group s partners, the Group may provide expertise and advice but it has limited control with respect to compliance with its standards and objectives. Improper management or ineffective policies, procedures or controls could adversely affect the value of related non managed projects and operations and, by association, damage the Group s reputation thereby harming the Group s other operations and access to new assets.

**The Group may be exposed to major failures in the supply chain for specialist equipment and materials.**

Rio Tinto operates within a complex supply chain depending on suppliers of raw materials, services, equipment and infrastructure to ensure its mines and process plants can operate, and on providers of logistics to ensure products are delivered. Failure of significant components of this supply chain due to strategic factors such as business failure or serious operational factors, could have an adverse effect on the Group s business and results of operations.

**Sustainable development**

**Increased regulation of greenhouse gas emissions could adversely affect the Group s cost of operations.**

Rio Tinto s operations are energy intensive and depend heavily on fossil fuels. There is increasing regulation of greenhouse gas emissions, progressive introduction of carbon emissions trading mechanisms and tighter emission reduction targets, in numerous jurisdictions in which the Group operates. These are likely to raise energy and production costs to a material degree over the next decade. Regulation of greenhouse gas emissions in the jurisdictions of the Group s major customers and suppliers as well as in relation to international shipping could also have an adverse effect on the demand for the Group s products.

**The Group depends on the continued services of key personnel.**

The Group s ability to maintain its competitive position and to implement its business strategy is dependent on the services of key engineering, managerial, financial, commercial, marketing and processing people. Loss or diminution in the services of key employees, particularly as a result of an inability to attract and retain staff, or the Group not maintaining a competitive remuneration structure, could have an adverse effect on the Group s business, financial condition, results of operations and prospects.

Competition for experienced people with international engineering, mining, metallurgy and geological expertise is high, due to a small pool of individuals against medium to high demand. This may affect the Group s ability to retain its existing senior management, marketing and technical personnel and to attract qualified personnel on appropriate terms. Similar competition may be felt by the Group s key contractors and equipment suppliers that, in turn, could affect the Group s expansion plans.

**The Group s costs of close down, restoration, and rehabilitation could be higher than expected due to unforeseen changes in legislation, standards and techniques, or underestimated costs.**

Close down and restoration costs include the dismantling and demolition of infrastructure and the remediation of land disturbed during the life of mining and operations. Estimated costs are provided for over the life of each operation and updated annually but the provisions might prove to be inadequate due to changes in legislation, standards and the emergence of new restoration techniques. Furthermore the expected timing of expenditure could change significantly due to changes in commodity prices that might curtail the life of an operation. Total provisions at 31 December 2009 amounted to US$6,916 million (2008 restated: US$6,011 million) as set out in note 27 to the *2009 Financial statements*. These provisions could prove insufficient compared to the actual cost of restoration, or the cost of remediating or compensating for damage beyond the site boundary. Any underestimated or unidentified close down, restoration and environmental rehabilitation costs could have an adverse effect on the Group s reputation as well as its asset values, earnings and cash flows.

**Health, safety, environment and other regulations, standards and expectations evolve over time and unforeseen changes could have an adverse effect on the Group s earnings and cash flows.**

Rio Tinto operates in an industry that is subject to numerous health, safety and environmental laws, regulations and standards as well as community and stakeholder expectations. The Group is subject to extensive governmental regulations in all jurisdictions in which it operates. Operations are subject to general and specific regulations governing mining and processing, land tenure and use, environmental requirements (including site specific

environmental licences, permits and statutory authorisations), workplace health and safety, social impacts, trade and export, corporations, competition, access to infrastructure, foreign investment and taxation. Some operations are conducted under specific agreements with respective governments and associated acts of parliament but unilateral variations could diminish or even remove such rights. Evolving regulatory standards and expectations can result in increased litigation and/or increased costs, all of which can have an adverse effect on earnings and cash flows.

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**Cautionary statement about forward looking statements**

This document contains certain forward looking statements with respect to the financial condition, results of operations and business of the Rio Tinto Group. The words intend , aim , project , anticipate , estimate , plan , b expects , may , should , will , or similar expressions, commonly identify such forward looking statements.

Examples of forward looking statements in this *Annual report* include those regarding estimated ore reserves, anticipated production or construction dates, costs, outputs and productive lives of assets or similar factors. Forward looking statements involve known and unknown risks, uncertainties, assumptions and other factors set forth in this document that are beyond the Group s control. For example, future ore reserves will be based in part on market prices that may vary significantly from current levels. These may materially affect the timing and feasibility of particular developments. Other factors include the ability to produce and transport products profitably, demand for our products, the effect of foreign currency exchange rates on market prices and operating costs, and activities by governmental authorities, such as changes in taxation or regulation, and political uncertainty.

In light of these risks, uncertainties and assumptions, actual results could be materially different from projected future results expressed or implied by these forward looking statements which speak only as to the date of this report. Except as required by applicable regulations or by law, the Group does not undertake any obligation to publicly update or revise any forward looking statements, whether as a result of new information or future events. The Group cannot guarantee that its forward looking statements will not differ materially from actual results.

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## Item 4. Information on the Company

### INTRODUCTION

**Rio Tinto**

Rio Tinto is a leading international business involved in each stage of metal and mineral production. The worldwide Group produces aluminium, copper, diamonds, coal, iron ore, uranium, gold and industrial minerals (borates, titanium dioxide, salt, talc and zircon). With production mainly from Australia and North America, we operate in more than 50 countries. We employ about 102,000 people whose health and safety is a key priority and integral part of placing sustainable development at the heart of every activity. We operate as a global organisation with one set of standards and values, sharing best practices across the Group.

The Rio Tinto Group combines Rio Tinto plc, which is listed on the London Stock Exchange and headquartered in London, and Rio Tinto Limited, which is listed on the Australian Securities Exchange and has executive offices in Melbourne.

Businesses include open pit and underground mines, mills, refineries and smelters as well as a number of research and service facilities. The Group consists of wholly and partly owned subsidiaries, jointly controlled assets, jointly controlled entities and associated companies, the principal entities being listed in notes 37 to 40 of the *2009 Financial Statements.*

**Operational structure**

The Group consists of a number of wholly and partly owned subsidiaries, joint ventures and associated companies. Rio Tinto s management structure is designed to facilitate a clear focus on business performance and is structured into five product groups and two global support groups:

Aluminium

Copper

Diamonds & Minerals

Energy

Iron Ore

Exploration

Technology & Innovation

The chief executive of each product group and the global head of each business support group report to the chief executive of Rio Tinto.

**Nomenclature and financial data**

Rio Tinto plc and Rio Tinto Limited operate as one business organisation, referred to in this report as Rio Tinto, the Rio Tinto Group or, more simply, the Group. These collective expressions are used for convenience only, since both Companies, and the individual companies in which they directly or indirectly own investments, are separate and distinct legal entities.

Limited , plc , Pty , Inc , Limitada , L.L.C. , A.S. or SA have generally been omitted from Group compa names,except to distinguish between Rio Tinto plc and Rio Tinto Limited. Financial data in United States dollars (US$) is derived from, and should be read in conjunction with, the *2009 Financial statements*. In general, financial data in pounds sterling (£) and Australian dollars (A$) have been translated from the consolidated financial statements and have been provided solely for convenience; exceptions arise where data can be extracted directly from source records. Certain key information has been provided in all three currencies in the *2009 Financial statements*.

Rio Tinto Group sales revenue, profit before finance items and tax, net earnings and operating assets for 2008 and 2009 attributable to the product groups and geographical areas are shown in notes 31 and 32 to the *2009 Financial statements*. In the Performance section, operating assets and sales revenue for 2008 and 2009 are consistent with the

financial information by business unit in the *2009 Financial statements*.

The tables on pages 25 to 28 show production for 2007, 2008 and 2009 and include estimates of proven and probable ore reserves. Words and phrases, often technical, have been used which have particular meanings; definitions of these terms are in the Glossary on pages 164 to 165. The weights and measures used are mainly metric units; conversions into other units are shown on page 165.

**History**

Rio Tinto s predecessor companies were formed in 1873 and 1905. The Rio Tinto Company was formed by investors in 1873 to mine ancient copper workings at Rio Tinto, near Seville in southern Spain. The Consolidated Zinc Corporation was incorporated in 1905 to treat zinc bearing mine waste at Broken Hill, New South Wales, Australia.

The RTZ Corporation (formerly The Rio Tinto-Zinc Corporation) was formed in 1962 by the merger of The Rio Tinto Company and The Consolidated Zinc Corporation.

CRA Limited (formerly Conzinc Riotinto of Australia Limited) was formed at the same time by a merger of the Australian interests of The Consolidated Zinc Corporation and The Rio Tinto Company.

Between 1962 and 1995, both RTZ and CRA discovered important mineral deposits, developed major mining projects and also grew through acquisition.

RTZ and CRA were unified in 1995 through a dual listed companies structure. This means the Group, with its common board of directors, is designed to place the shareholders of both Companies in substantially the same position as if they held shares in a single enterprise owning all of the assets of both Companies.

In 1997, the RTZ Corporation became Rio Tinto plc and CRA Limited became Rio Tinto Limited, together known as the Rio Tinto Group. Over the past decade, the Group has continued to invest in developments and acquisitions in keeping with its strategy.

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In 2007, Rio Tinto completed an agreed takeover of the Canadian aluminium producer Alcan Inc. in a US$38 billion transaction that transformed the Group s aluminium product group into a global leader in aluminium. With copper and iron ore, this gave the Group a major role in the production of the three key metals associated with the growth and urbanisation of China and other developing countries.

In 2009, the Group completed rights issues that were fully underwritten. The net proceeds from the rights issues of US$14.8 billion were used to pay down Group borrowings.

**Contact details**

Rio Tinto plc is registered in England and Wales under company number 719885 with its registered office at 2 Eastbourne Terrace, London, W2 6LG (telephone: +44 20 7781 2000). Rio Tinto Limited is registered in Victoria, Australia under ABN 96 004 458 404 with its registered office at Level 33, 120 Collins Street, Melbourne, Victoria 3000 (telephone: +61 3 9283 3333). Rio Tinto s agent for service in the US is Shannon Crompton, secretary of Rio Tinto s US holding companies, who may be contacted at Rio Tinto Services Inc., 80 State Street, Albany, New York, 12207-2543.

**Strategy**

**Summary**

Rio Tinto s vision is to be the global mining leader.

Our vision shapes our core objective, which is to maximise total shareholder return by sustainably finding, developing, mining and processing natural resources.

To deliver this objective, the Group follows a strategy of investing in and operating large, long term, cost competitive mines and businesses, driven not by choice of commodity but rather by the quality of each opportunity. We have five business priorities for 2010 to enable us to deliver our strategy and improve our long term financial performance:

Focus on operational delivery

Pursue our growth path

Complete the iron ore production joint venture

Prudent balance sheet management

Strengthen our relationship with China

Given our geographical reach, strong assets and reputation we believe we are well positioned for success.

**Vision**

Our vision of being the global mining leader means maintaining or achieving sector leadership, including operational excellence, sustainable development, exploration and innovation.

We are well placed to achieve this vision through our ownership of some of the world s best assets. We focus on the development of Tier 1 orebodies those that will give us large scale, long term and cost competitive operations. This will safeguard our future cash flow and ensure we can operate profitably at every stage of the commodity cycle.

The global reach of our operations and projects gives us the ability to respond to rising demand for metals and minerals from developed and emerging economies. We will use the advantages that our assets bring to deliver options for future growth.

Our diverse portfolio, high quality assets, and expertise in technology and marketing give us the capability to supply a wide spectrum of customers and markets. We can supply the raw materials needed for basic infrastructure and the high performance mineral grades needed for high tech applications. This gives us exposure to markets worldwide at various stages of the development cycle. By understanding what our customers value, we develop offerings which meet their needs and generate superior returns for Rio Tinto.

Effective supply chain integration with our operations and Rio Tinto Marine ensures that we meet customer needs and create value for ourselves by supplying the right products and services at the right time to the right place.

Rio Tinto has a strong reputation for operational excellence and sustainable development. This reputation gives us our licence to operate, and it is essential that we uphold it and build upon it.

Long term sustainable development is at the heart of everything we do. We must build upon recent improvements in our safety performance, and we must also continue, and extend, our leadership in areas such as community and government engagement; biodiversity; and land, carbon, water and energy management.

Our assets and reputation give us the capabilities to operate and grow our business on a global scale. And as we do so, we also have the scope and expertise to bring long term benefits to our local communities and host countries.

**Priorities for 2010**

The Group is focusing on five business priorities, which are the pathway to delivering our strategy and achieving our vision.

**Focus on operational delivery**

We will pursue cost reductions and productivity improvements in order to strengthen our focus on operational delivery.

A key activity will be the continued transformation of the Aluminium business. Rio Tinto Alcan is now sharing common safety, internal compliance and human resource systems. As we complete the financial integration of Alcan, we expect to exceed US$1.1 billion per year in synergies.

Our capacity for innovation is an important driver of operational delivery improvements. We will continue to capitalise on our leading technologies and develop our capabilities in areas such as automation.

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The delivery of capacity improvements along the supply chain is also a key part of this priority. This includes the mining, processing and shipping of our commodities.

**Pursue our growth path**

Our second priority is to grow our business through disciplined capital expenditure. The improved strength of our balance sheet in 2009 positions us well for growth. We have confidence in the projected increase in long term demand for our products, particularly from emerging markets, which will be the driver of this growth.

The growth opportunities that we focus on are aligned with our strategy, and so we will make investment decisions based on the quality of each opportunity rather than the choice of commodity. This may mean considering new commodities, as well as capitalising on the expansion potential that is held within our existing assets.

**Complete the iron ore production joint venture**

A key achievement this year would be the completion of the proposed Western Australian Iron Ore production joint venture with BHP Billiton. After signing the binding agreements in December 2009, covering all aspects of how the joint venture will operate and be governed, we are now addressing the approvals required and integration planning. This transaction would enable us to deliver substantial synergies and unlock the true value of our significant assets in the Pilbara.

**Prudent balance sheet management**

We will focus on prudent management of our balance sheet, building on the successful measures we undertook to alleviate our debt position in 2009. We will continue with our operating and capital cost reduction initiatives as well as our asset divestment programme in order to optimise our financial position. Our objective in this area is towards achieving a single A credit rating. This priority links closely to the pursuit of growth through disciplined capital expenditure.

Strengthen our relationship with China

We will seek to strengthen our relationship with China: our largest trading partner, the home of our largest shareholder, and a market that will be one of the major drivers of future demand. China is strategically important to Rio Tinto and it is essential that we build durable and ongoing relationships there.

Key performance indicators

Rio Tinto s core objective and strategy dictate key performance indicators (KPIs) that the Group monitors, targets and measures. These KPIs fulfil three roles:

To give senior management a means to evaluate the Group s overall performance from an operational, growth and sustainable development perspective.

To provide managers and their teams with clarity and focus on the areas that are critical for the successful achievement of the Group s goals.

To give guidance to the *Remuneration committee* in framing the Group s remuneration policy.

*Notes*

(a) The accounting information in these charts is drawn up in accordance with IFRS.

(b) Underlying earnings is the key financial performance indicator which

management uses internally to assess performance. It is presented here as an additional measure of earnings to provide greater understanding of the underlying business performance of the Group s operations. Items excluded from net earnings to arrive at underlying earnings are explained in note 2 to the 2009 *Financial statements*. Both net earnings and underlying earnings deal with amounts attributable to equity shareholders of Rio Tinto. However, IFRS requires that the profit for the year reported in the income statement should also include earnings attributable to outside shareholders in subsidiaries.

**All injury frequence rate (AIFR)**

Rio Tinto s continuous focus on safety in the workplace means that the AIFR is one of the Group s most important non financial KPIs.

It is calculated based on the number of injuries per 200,000 hours worked. This includes medical treatment cases, restricted work day and lost day injuries for employees and contractors.

| All injury frequency rate | Per 200,000 hours worked |
|---|---|
| 2005 | 1.35 |
| 2006 | 1.10 |
| 2007 | 1.21[1] |
| 2008 | 0.98 |
| 2009 | 0.82 |

(1) Rio Tinto including former Alcan

At the end of 2009 our AIFR was 0.82, an improvement of 16 per cent from 2008.

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**Underlying earnings**

Underlying earnings is the key financial performance indicator used across the Group. It is a measure of earnings that provides insight into the underlying business performance of the Group s operations. Items excluded from net earnings to arrive at underlying earnings are explained in note 2 of the *2009 Financial statements*.

| **Underlying earnings [a] [b]** | **US$ m** |
|---|---|
| 2005 | 4,955 |
| 2006 | 7,338 |
| 2007 | 7,443 |
| 2008 | 10,303 |
| 2009 | 6,298 |

Underlying earnings in 2009 of US$6,298 million were US$4,005 million below the comparable measure for 2008. This was largely due to a US$6,879 million decrease due to price movements on all major commodities, partially offset by a US$484 million increase due to favourable movements in foreign exchange rates; a US$652 million increase from greater iron ore, copper and gold volumes; a US$742 million increase due to a reduction in cash costs; and an US$890 million increase from the reduction of exploration and evaluation expenditure.

**Total shareholder return**

TSR measures the Group s performance in terms of shareholder wealth generation through dividends and the share price. Rio Tinto s TSR is calculated by an independent third party. The Group s TSR performance compared to the FTSE 100 Index, the ASX All Ordinaries Index and the HSBC Global Mining Index, as well as the relationship between TSR and executive remuneration, is shown on pages 111.

| **Total shareholder return (TSR)** | **%** |
|---|---|
| 2005 | 78.5 |
| 2006 | 7.5 |
| 2007 | 92.7 |
| 2008 | (71.5) |
| 2009 | 172.5 |

Due to the rights issues in 2009, the adjusted share prices of Rio Tinto plc and Rio Tinto Ltd have changed, so the TSR values in the 2009 *Annual report* do not match up to the TSR values in the 2008 *Annual report*. At the end of 2009, the Group s TSR was an increase of 172.5%, compared with a decrease of 71.5% for 2008.

**Net debt**

In December 2008, Rio Tinto announced its commitment to reduce net debt by US$10 billion in 2009.

Net debt is calculated as: the net total of borrowings, cash and cash equivalents, other liquid resources and derivatives related to net debt.

| **Net debt [a]** | **US$ m** |
|---|---|
| 2005 | 1,313 |
| 2006 | 2,437 |
| 2007 | 45,191 |
| 2008 | 38,672 |
| 2009 | 18,861 |

During 2009, net debt decreased from US$38.7 billion to US$18.9 billion following the proceeds from the divestment programme, strong operating cash flows and net proceeds of US$14.8 billion from the rights issues. Net debt to total capital was significantly reduced to 29.1 per cent at 31 December 2009, compared with 63.3 per cent at 31 December 2008.

**Capital expenditure**

Capital expenditure tracks new and continuing investment in value adding sustaining and growth projects.

The Group s capital projects are listed on page 22 in the Capital projects section.

| **Capital expenditure** [(a)] | **US$ m** |
|---|---|
| 2005 | 2,554 |
| 2006 | 3,988 |
| 2007 | 4,968 |
| 2008 | 8,488 |
| 2009 | 5,356 |

Capital expenditure was US$5,356 million in 2009, a decrease of US$3,132 million over 2008. Capital expenditure included the Brockman 4 and Mesa A iron ore mine developments in Western Australia, the expansion of the Yarwun alumina refinery, the construction of the Clermont thermal coal mine, the expansion of the Kestrel coking coal mine, the development of the underground diamond mines at Diavik and Argyle and the completion of the Madagascar ilmenite mine.

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**Operating cash flows**

Operating cash flows were introduced as a key element of the short term incentive plan in 2009. This measure is the same as that in the consolidated cash flow statement.

| Operating cash flows [a] | US$ m |
|---|---|
| 2005 | 8,031 |
| 2006 | 10,923 |
| 2007 | 12,569 |
| 2008 | 20,668 |
| 2009 | 13,834 |

Operating cash flows, including dividends from equity accounted units, was US$13,834 million, 33 per cent lower than 2008, primarily as a consequence of lower commodity prices.

**Greenhouse gas emissions intensity**

Rio Tinto accepts the urgent need for climate change action. Improvement in intensity is a reduction in total greenhouse gas emissions per unit of commodity production over time. Broadly consistent with the WBCSD/ WRI Greenhouse Gas Protocol, we calculate total greenhouse gas emissions as direct emissions (Scope 1) plus emissions from imports of electricity (Scope 2) minus electricity and steam exports and net carbon credits voluntarily purchased from, or sold to, recognised sources. We index our performance relative to 2008 as the base year.

**Greenhouse gas emissions intensity**

| Indexed relative to 2008 | Group intensity |
|---|---|
| 2005 | 109.4 |
| 2006 | 110.8 |
| 2007 | 110.2 |
| 2008 | 113.1[1] |
| | 100.0[2] |
| 2009 | 92.5[2] |

(1) Excluding former Alcan

(2) Including former Alcan

During 2009 we achieved a 7.5 per cent reduction in total greenhouse gas emissions intensity. This was largely as a result of divesting the Ningxia aluminium smelter in China, which is powered by coal based electricity, and reduced production at a number of operations with a higher than average emissions intensity.

**Group overview**

We have major operations in Australia and North America which account for approximately 85 per cent of the value of our assets, as well as significant businesses in South America, Europe, southern Africa and Asia.

All injury frequency rate reduced to 0.82 from 0.98

Set iron ore production and sales records

Progressed transformation of our aluminium business

Exceeded targeted controllable operating cost savings

*Notes*

(1) This is the average Rio Tinto share of employees for managed businesses, excluding contractors and employees in businesses classified as assets held for sale during 2009.

**Aluminium**

Rio Tinto Alcan is a global leader in the aluminium industry. It mines high quality bauxite, refines alumina for both primary aluminium production and specialty alumina markets, and produces primary aluminium at some of the lowest cost, most technologically advanced smelters in the industry. The group is renowned for its technology leadership as well as its advantaged renewable energy assets.

Number of employees: 22,919 (1)

**Products**

Bauxite, Alumina, Specialty aluminas, Aluminium

**Key facts**

Integration synergies expected to exceed US$1.1 billion in 2010

Achieved rapid cost reductions and production curtailments

Business being transformed in readiness for the economic recovery

During the course of the year, aluminium prices plummeted by as much as 70 per cent from 2008

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Contribution to gross sales revenue: 27%

**Copper**

The Copper group is one of the world s largest producers of copper, with valuable by-products of gold and molybdenum. A diverse mix of operations and projects are located in North and South America, Africa, Asia and Australia. In addition to interests in some of the world s largest copper mines, it is taking the lead in the development of three of the world s largest new copper projects.

Number of employees: 7,612 (1)

**Products**

Copper, Gold, Molybdenum, Silver, Nickel

**Key facts**

Strong operating performance in 2009 supported by recovering market

Kennecott Utah Copper production up 37 per cent from 2008

Copper industry faces future supply challenges

Breakthrough agreement for development of major Mongolian copper-gold mine

Contribution to gross sales revenue: 14%

**Diamonds & Minerals**

The group comprises Rio Tinto Diamonds (RTD), Rio Tinto Minerals (RTM) and Rio Tinto Iron & Titanium (RTIT). RTD accounts for about six per cent of the world s production of rough diamonds by value. RTM is a global leader in borates and talc supply and of the science behind their use, and RTIT is a market leader in titanium dioxide feedstock, used in the manufacture of pigments for paints and plastics.

Number of employees: 7,375 (1)

**Products**

Diamonds, Borates, Titanium dioxide feedstocks, Talc, High purity iron, Metal powders, Zircon, Rutile

**Key facts**

Businesses oriented to OECD demand hence difficult conditions

Businesses showing signs of recovery, particularly in Asian markets

Diavik Diamonds underground mine starts production in 2010

Commencement of ramp up of Madagascar mineral sands mine

Contribution to gross sales revenue: 6%

**Energy**

Rio Tinto is a leading supplier of thermal and coking coal to the Asian seaborne market as well as being one of the world s largest uranium producers supplying uranium oxide to electric power utilities worldwide. Rio Tinto Coal Australia manages eight coal mines in Queensland and New South Wales. In the US, the group operates the Colowyo coal mine and has a 48 per cent interest in Cloud Peak Energy.

Number of employees: 7,613 (1)

**Products**

Thermal coal, Coking coal, Uranium

**Key facts**

More robust seaborne coal markets emerging

De-bottlenecking of Australian coal export ports under way

New Clermont mine and Kestrel mine expansion on track

Nuclear power comeback spells promise for uranium

Contribution to gross sales revenue: 15%

**Iron Ore**

Rio Tinto Iron Ore is the second largest supplier to the world s seaborne iron ore trade and produces direct saleable lump and fines ore, pellets and concentrates. It has a global supply capacity to serve both the Pacific and Atlantic markets, operating an integrated platform of mines, rail and port infrastructure including development projects designed to respond rapidly to changes in demand. It operates Dampier Salt located near its iron ore mines in Australia as well as Rio Tinto Marine.

Number of employees: 11,375 (1)

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**Products**
Iron ore and Salt
**Key facts**
Operated at full run rate of 220 million tonnes capacity in second half of 2009

Developing plans to produce 330 million tonnes per year

Uses automated mining technologies including driverless haul trucks
Contribution to gross sales revenue: 29%
**Global functions**
**Activities that support our businesses**
**Exploration**
The role of the Exploration group is to add value to Rio Tinto by discovering or acquiring resources that can increase future cash flows. It is organised into regional multi-commodity teams, with head offices in the UK, the US and Australia, supported by commodity and commercial specialists. Programmes are prioritised on a global basis, with investment decisions driven not by location or choice of commodity but rather by the quality of each opportunity.
**Technology & Innovation**
Technology & Innovation has offices in Australia, Canada, the UK and the US. Its role is to identify, develop and promote best operational technology practice across the Group and to pursue step change innovation of strategic importance to ore bodies of the future.
**Product overview**
No one can spend a day without using a metal or mineral. In the production and supply of metals and minerals, Rio Tinto is one of the world s most diversified companies. Major products are aluminium, iron ore, copper, molybdenum, coal, uranium, diamonds, gold, borates, titanium dioxide, salt and talc.
Segmental analyses of sales revenue by product and by destination have been included in Note 32 to the *2009 Financial statements*.
**Bauxite, alumina, aluminium**
In a closely integrated value chain, the mineral bauxite is refined into alumina which is smelted into aluminium metal. Aluminium is one of the most widely used metals from tennis racquets to aircraft. Rio Tinto is a leading global supplier of bauxite, alumina and primary aluminium.
**Silver**
Silver is a good conductor of electricity and does not corrode. It is used in many electrical and electronic applications and is the principal ingredient of photographic and x-ray film. Silver is also a metal of beauty, used to make lasting products for the home and person. Rio Tinto produces silver as a by-product of its copper production.
**Molybdenum**
Molybdenum is a metallic element frequently used in alloys with stainless steel and other metals. It enhances the metal s toughness, high temperature strength and corrosion resistance. We produce molybdenum as a by-product from the Kennecott Utah Copper operations.
**Gold**
Gold has enjoyed a mystique and value unrivalled by other metals. Most gold that is not stored as bullion for investment purposes goes into jewellery. Gold s conductivity and non corrosive properties make it a vital fabrication material in technology, electronics, space exploration and dentistry. We produce gold as a by-product from our copper mines.
**Coal**
Coal is plentiful, relatively inexpensive, and safe and easy to transport. We are one of the world s largest producers of thermal coal, used for electricity generation in power stations. We also produce higher value coking, or metallurgical, coal which, when treated into coke, is used in furnaces with iron ore to produce steel.
**Uranium**

Uranium is one of the most powerful natural energy sources known, used in the production of clean, stable, base load electricity. After uranium ore is mined, it is milled into uranium oxide, the mine product that is sent away for further processing into fuel rods for nuclear power stations.

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**Iron ore**
Iron is the key ingredient in the production of steel, one of the most fundamental and durable products for modern day living, from railways to paperclips. Our mines are located in Australia and Canada.

**Copper**
About two thirds of copper production is used in electrical applications due to its high conductivity. It helps power our lives, in homes and factories, cars, computers, phones and equipment. Further major uses are in air conditioning and refrigeration, plumbing and roofing.

**Borates**
Mineral borates are used in hundreds of products and processes. They are a vital ingredient of many home and automotive applications, and are essential nutrients for crops. They are commonly used in vitreous applications such as fibreglass products, ceramics, LCD television screens, pharmaceutical and heat resistant glass.

**Diamonds**
Gem diamonds share the role with gold as a luxury commodity in jewellery. Rio Tinto offers diamond products across a wide range, from the pink, champagne and cognac stones from Argyle in Australia, to the spectacular whites of Diavik in Canada and Murowa in Zimbabwe.

**Salt**
Salt is one of the basic raw materials for the chemicals industry and is indispensable to a wide array of automotive, construction and electronic products, as well as for water treatment, food and healthcare.

**Talc**
Talc is hydrated magnesium silicate and is the softest rock in the world. It is an important ingredient in the manufacture of paper, paints, moulded plastics for cars and other familiar products. Rio Tinto produces various grades of talc for niche markets.

**Gypsum**
Gypsum is a key ingredient in wallboard, plaster, cement and is used in agriculture markets. Rio Tinto s Dampier Salt operations at Lake MacLeod, Australia, provide high quality natural gypsum to the markets in Africa, Asia and Australia.

**Titanium dioxide**
The minerals ilmenite and rutile, together with titanium slag, can be transformed into a white titanium dioxide pigment or titanium metal. The white pigment is a key component in paints, plastics, paper, inks, textiles, food, sunscreen and cosmetics. Titanium metal s key properties of lightweight, chemical inertness and high strength make it ideal for use in medical applications and in the aerospace industry.

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## Market review

### Competitive environment

Rio Tinto is a major producer in all of the metals and minerals markets in which it operates. It is generally among the top five global producers by volume in each such market. It has market shares for different commodities ranging from five per cent to 40 per cent. Rio Tinto s activities are spread across the globe. Most of Rio Tinto s competitors are private sector companies which are publicly quoted. Several are, like Rio Tinto, diversified in terms of commodity exposure, but others are focused on particular commodities.

High quality, long life mineral resources, the basis of attractive financial returns, are relatively scarce. Nevertheless, Rio Tinto holds interests in some of the world s largest deposits. Rio Tinto expects world production volumes to grow in line with global economic growth. In addition, higher demand from China and potentially India, as a result of high rates of economic growth and urbanisation trends in those countries, could contribute further to increases in world production volumes in the long term.

### Economic overview

#### Global economy

Following more than four years of rapid expansion the global economy started to deteriorate rapidly during the third quarter of 2008 as financial markets became increasingly unstable. The bankruptcy of Lehman Brothers became the defining moment of this period sparking significant increases in risk premiums and a sharp contraction in availability of finance. Governments around the world took action to restore confidence in financial markets but a decline in global economic growth became unavoidable with most major developed economies moving into recession by the end of 2008.

The deterioration in global economic activity continued into 2009, leading to the greatest contraction in industrial production for over 30 years. Global trade ground to a halt, consumer confidence collapsed with rising fears about unemployment, and businesses responded to the credit crunch by cutting spending and reducing output in order to pare back high inventory levels. However, the introduction of large fiscal and monetary stimuli by governments around the world started to take effect towards the middle of the year, averting a second Great Depression.

Global trade started to recover during the second half of 2009, led by activity in Asia. Major developed economies gradually stabilised with most experiencing renewed GDP growth by the third quarter of 2009.

Most OECD economies are now in the early stages of recovery initially driven by inventory rebuilding, government spending and in some cases net trade. The normal pattern of recovery is that the process of inventory rebuilding and economic stimulus would generate job growth, increase business confidence, and create the basis for increased consumption. However at this stage there remain risks that the pace of recovery may not be sustained. This is mainly because consumer confidence has been so heavily weighed upon by high unemployment rates, the loss in wealth and the prospect of increased taxes to fund the current stimulus.

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**China**

The collapse in global trade affected many developing economies including China. The lagged impact of policy tightening by the Chinese government in early 2008 and a correction in a slightly overheating property market contributed to the slowdown in the pace of economic growth in China during the second half of 2008. By the first quarter of 2009 the annualised pace of GDP growth had fallen to nearly six per cent, a sharp contrast to the double digit growth that the Chinese economy had become accustomed to over the previous four years.

The Chinese Government reacted strongly and rapidly to the economic slowdown, announcing a Rmb 4 trillion stimulus package, equivalent to about 12 per cent of GDP, to be spent over two years. The Government also introduced a set of measures aimed at supporting demand in key sectors and boosting consumption in rural areas. The stimulus was accompanied by a massive surge in bank lending during the first half of 2009 with significant investment going into the development of infrastructure projects. All these measures were successful in boosting economic growth as early as the second quarter of 2009.

The growth momentum continued to build up during the second half of the year with activity in the property sector also starting to bounce back strongly. All of these developments bode well for the strength of China s economy in 2010.

**Commodity markets**

The sharp fall in global economic activity has had a significant impact on the demand for metals and minerals. Contractions in end-use consumption have been amplified by heavy destocking at all stages of the supply chains. Metals such as aluminium, which tend to be more exposed to the construction and transport sectors of developed economies, have been affected most strongly leading to very rapid increases in excess stocks. Prices, which in many cases were trading well in excess of the marginal costs of production prior to the economic downturn, reacted quickly to falling demand and rising inventories. The price falls were especially steep for exchange traded commodities as the turbulence in the financial sector forced investors out of these markets.

Aluminium and copper experienced a peak- to-trough variation of about 60 per cent and 70 per cent respectively within just a couple of quarters. Meanwhile the iron ore contract price settled with Japanese customers in the second quarter of 2009 was about one third lower than the previous benchmark. The hard coking coal contract price also fell substantially by close to 60 per cent, whilst spot thermal coal prices fell 65 per cent between July 2008 and the end of the first quarter of 2009. Such price declines put significant pressure on mining companies, with, for some commodities, significant portions of the industry showing negative margins. This led to a shift in focus from maximising output to capital management, production curtailment and cost saving. These recent developments reinforced Rio Tinto s strategy of investing in Tier 1 assets, which are generally able to generate positive margins over the whole of the economic cycle. The sharp price falls and credit restrictions also led to the cancellation or postponement of many mining projects.

The start of a stabilisation in the global economy from the second quarter of 2009 and more importantly the rapid turnaround of the Chinese economy triggered a sharp bounce back in commodity prices. Chinese imports of metals and minerals soared to new highs as a result of recovering underlying demand, restocking, closure of high cost domestic capacity and some speculative activity facilitated by rising liquidity. Falls in scrap supplies as a result of slower industrial activity and lower prices also created a need for Chinese consumers to use and import a higher proportion of primary metals. This was especially acute in the case of copper throughout the first half of 2009. These high levels of Chinese imports absorbed some of the surpluses building up outside China, keeping some markets relatively tight.

Copper experienced one of the strongest rebounds with prices rising 140 per cent between the start and the end of the year, moving to within less than 20 per cent of the pre-crisis 2008 peak. Meanwhile, spot iron ore prices almost doubled over the second half of 2009 and aluminium recovered from a low of near US$1,300 per tonne during the first quarter of 2009 to just over US$2,200 per tonne by year end despite historically high visible stock levels. Movements in coal prices were more subdued during 2009 but started to trend up again towards the very end of the year.

**Outlook for 2010**

Forecasters have become progressively more optimistic about economic growth in 2010. The IMF is predicting global growth of nearly four per cent and Chinese GDP is expected to grow at between nine and ten per cent. Economy wide

inventory rebuilding in the OECD should provide a short term boost to activity. Such growth acceleration would have positive implications for metals and minerals markets. Although it is still unclear whether a sustainable recovery in private sector confidence and economic activity will emerge as the fiscal and monetary stimulus wanes or is removed over time.

Some risks to the outlook include the possibility of an aggressive tightening of monetary policies in Asian economies in response to concerns about consumer and/or asset price inflation. Also it is possible that consumer spending in the OECD will remain constrained due to concerns about employment prospects, housing wealth and increased tax burdens. Economic data releases and news flow will affect investors perceptions about the likelihood of such risks compared with the strength of the more positive forces on the markets. This will lead to negative and positive swings in sentiment affecting commodity prices through speculation.

**Marketing channels**

All sales and marketing activity is conducted by Rio Tinto s Product Groups who utilise a range of sales and marketing channels to interact with customers. These channels include direct sales, sales via distributors and sales via agents. No customer facing sales and marketing activity is handled outside of the Product Groups.

**Governmental regulation**

Rio Tinto is subject to extensive governmental regulations affecting all aspects of its operations and consistently seeks to apply best practice in all of its activities. Due to Rio Tinto s product and geographical spread, there is unlikely to be any single governmental regulation that could have a material effect on the Group s business.

Rio Tinto s operations in Australia and New Zealand are subject to state and federal regulations of general application governing mining and processing, land tenure and use, environmental requirements, including site specific environmental

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licences, permits and statutory authorisations, workplace health and safety, trade and export, corporations, competition, access to infrastructure, foreign investment and taxation. Some operations are conducted under specific agreements with the respective governments and associated acts of parliament.

In addition, Rio Tinto s uranium operations in the Northern Territory, Australia and Namibia are subject to specific regulation in relation to mining and the export of uranium.

US and Canada based operations are subject to local, state, provincial and national regulations governing land tenure and use, environmental aspects of operations, product and workplace health and safety, trade and export administration, corporations, competition, securities and taxation. In relation to hydro electric power generation in Canada, water rentals and royalties, as well as surplus power sales, are regulated by the Quebec and British Columbia provincial governments.

Rio Tinto s South African based operations are subject to black economic empowerment legislation which includes the requirement to transfer (for fair value) 26 per cent of the Group s South African mining assets to historically disadvantaged South Africans by 2014.

**Environmental regulation**

Rio Tinto measures its performance against environmental regulation by rating incidents on a low, moderate, high, or critical scale of likelihood and consequence of impacting the environment. High and critical ratings are reported to the executive management team and the Committee on social and environmental accountability, including progress with remedial actions. Prosecutions and other breaches are also used to gauge Rio Tinto s performance.

In 2009, there were 12 high or critical environment incidents at Rio Tinto managed operations compared with 17 in 2008.

These incidents were of a nature to impact the environment or may have concerned local communities. Of these, eight resulted from water discharge and four were spills. Examples of these include:

Spillage of caustic soda on to soil and into the adjacent river following overflow from a truck at port facilities in Saguenay, Canada.

Release of untreated water from the treatment plant to a lake at Diavik, Canada.

Discharge of water from a dam into a local creek in excess of licence conditions at Hail Creek, Australia.

Hydrocarbon leakage to soil and groundwater at Havre St Pierre, Canada.

Overflow of a storm water tank releasing leachate and surface run off into the surrounding environment at Alucam, Cameroon.

Processing liquor releases to a sea water channel at Gove, Australia.

Loss of lubrication oil into the local river following a valve failure on a generator at Kemano, Canada.

Overflow of process water containing red mud from a holding pond into a local stream at Gardanne, France.

**Trend information**

Demand for the Group s products is closely aligned with levels of, and changes in, global GDP. Changes in the GDP of developing countries will generally have a greater impact on demand for commodities such as iron ore and coking coal, which are significant inputs in the development and improvement of infrastructure. Conversely, changes in the GDP of developed countries will have a greater impact on industrial minerals, which have many applications in consumer products. Aluminium and copper are used in a wide range of applications from infrastructure to consumer products and demand for these metals has tended to grow in line with or slightly faster than global GDP. Trends in production of the Group s minerals and metals, gross sales revenue and underlying earnings are set out in the Performance reviews starting on page 51.

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## Capital projects

### Capital and major evaluation projects

Capital expenditure for 2010 is expected to be at least US$5 billion with potential for a further US$1 billion for new investments. The focus for 2010 will be on the following capital projects:

| Capital project Rio Tinto share 100% unless stated<br>US$ billion | **Approved project funding**<br>**US$bn** | **Estimated capital spend in 2010**<br>**US$bn** | **Status/milestones** |
|---|---|---|---|
| **Iron ore** sustaining and expansion of Pilbara iron ore mines and infrastructure capacity beyond 220mtpa | 3.6 | 1.1 | Expansion of Hope Downs from 22mtpa to 30mtpa (US$350 million on 100% basis Rio Tinto share is 50%) was completed during the first half of 2009. Work progressed on or ahead of schedule on the Mesa A and Brockman 4 mines. Mesa A came onstream in early February 2010 and Brockman 4 is expected to commence production in the second quarter of 2010. |
| **Alumina** expansion of Yarwun alumina refinery from 1.4 to 3.4mtpa | 1.8 | 0.3 | Work has been slowed in response to market demand. The change to the construction schedule will result in a completion date in the fourth quarter of 2012. |
| **Aluminium** construction of a new 225MW turbine at the Shipshaw power station in Saguenay, Quebec, Canada | 0.2 | 0.1 | Approved in October 2008, the project remains on budget and on schedule to be completed in December 2012. |
| **Aluminium** modernisation of the Kitimat smelter in British Columbia, Canada | 0.5 | 0.1 | The project timing has been slowed. Intensive value improvement exercise exploring all options for reducing cost, and optimising project capital expenditures and returns. |

| | | | |
|---|---|---|---|
| **Aluminium** AP50 pilot plant in Saguenay, Quebec, Canada | 0.4 | 0.1 | The project has been slowed. Construction of the electrical substation to be completed along with site preparation for potrooms and foundation of the busbars room. |
| **Coking coal** Kestrel (Rio Tinto share 80%) extension and expansion | 1.0 | 0.4 | The project continues to target scheduled production of coal in 2012. |
| **Thermal coal** Clermont (Rio Tinto 50.1%) replacement of Blair Athol | 1.3 | 0.2 | The project remains on track with first coal expected in the first half of 2010, ramping up to full capacity of 12.2mtpa by 2013. |
| **Diamonds** Argyle underground development, extending life to 2018 | 1.5 | 0.1 | The project has been slowed to critical development activities. The project continues through 2010 and is being reviewed to determine the appropriate ramp-up timing. |
| **Diamonds** Diavik (Rio Tinto 60%) underground development | 0.8 | | The project has been largely completed with first production expected in the first half of 2010 |

Sustaining capital expenditure for 2010 is estimated to be US$2.1 billion (Rio Tinto funded). In addition to these capital projects, the Group will continue to fund a number of major evaluation projects in 2010. Studies will continue into the step change expansion of iron ore production capacity in the Pilbara to 330 million tonnes per annum by 2015. Detailed design and engineering work of the Cape Lambert port expansion are scheduled to be completed by the end of 2010. Other major evaluation projects include the Simandou iron ore project and the La Granja and Resolution copper projects.

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## Capital projects

| Completed in 2009 | Capital Expenditure US$ million (100% basis) | |
|---|---|---|
| **Diamonds** Diavik underground development (Rio Tinto 60%) | 787 | Capital investment of $563 million was approved in November 2007 in addition to $224 million invested in 2006-2007 for the feasibility studies and related capital projects. The underground mine produced its first ore in the first quarter of 2010. |
| **Iron ore** expansion of Hope Downs mine from 22 million tonnes per annum to 30 million tonnes per annum (Rio Tinto 50%). | 350 | Approved in August 2007, the expansion work was completed during the first half of 2009. |
| **Iron ore** construction of the Mesa A mine in the Pilbara region of Western Australia (Rio Tinto 53%). The mine is expected to have an initial production of 20 million tonnes per annum, increasing to 25 million tonnes by 2011. | 901 | Approved in November 2007, first production took place in the first quarter of 2010. |
| **Completed in 2008** | | |
| **Aluminium** Development of the 360,000 tonne per annum greenfield Sohar smelter in Oman (Rio Tinto 20%). | 1,700 | Approved in February 2005, first hot metal was produced in June 2008. |
| **Aluminium** Aluminium Spent potlining recycling plant in Quebec (Rio Tinto 100%) | 225 | Approved in September 2006, the plant commenced operations in June 2008. |
| **Titanium dioxide** Construction by QMM (Rio Tinto 80%) of a greenfield ilmenite operation in Madagascar and associated upgrade of processing facilities at QIT in Canada. | 1,000 | Construction is substantially complete. First production of ilmenite took place at the end of 2008. |
| | 952 | |

| | | |
|---|---|---|
| **Iron ore** Cape Lambert port expansion (Rio Tinto 53%) from 55 to 80 million tones per annum and additional rolling stock and infrastructure. | | Approved in January 2007, the project was completed at the end of 2008, ahead of time and within budget. |

**Completed in 2007**

| | | |
|---|---|---|
| **Iron ore** Expansion of Hamersley s (Rio Tinto share 100%) Mount Tom Price mine to 28 million tonnes per annum capacity. | 226 | Project completed in March 2007. |
| **Iron ore** Brownfields mine expansion of Hamersley s (Rio Tinto 100%) Yandicoogina mine from 36 million tonnes per annum to 52 million tonnes per annum. | 530 | First ore was produced in May 2007, with the project completed at the end of the third quarter of 2007 on time and on budget. |
| **Iron ore** Expansion of Hamersley s (Rio Tinto 100%) Dampier port (Phase B) from 116 million tonnes per annum to 140 million tonnes per annum capacity and additional rolling stock and infrastructure. | 803 | This project was completed at the end of 2007 on schedule and on budget. |
| **Iron ore** Hope Downs development (Rio Tinto share: 50% of mine and 100% of infrastructure). Construction of 22 million tonnes per annum mine and related infrastructure. | 980 | First production occurred in November 2007, three months ahead of schedule. The first train load took place in December 2007. |

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## Acquisitions and divestments

During 2009 Rio Tinto acquired an additional interest in Ivanhoe Mines, owner of the Oyu Tolgoi copper-gold project in Mongolia. The Group announced asset sales totalling US$7.2 billion of which US$3.7 billion completed in 2009. Since February 2008, Rio Tinto has announced agreed asset sales of US$10.3 billion.

## Acquisitions

| Asset | | Cost US$m | Status |
|---|---|---|---|
| **Acquired in 2009** | | | |
| **Copper** | Ivanhoe Mines | 388 | The purchase of an additional 9.8% interest increasing the Group s total holding to 19.7% |
| **Acquired in 2008** | | | |
| None | | | |
| **Acquired in 2007** | | | |
| **Aluminium** | Alcan Inc. | 38,652 | Acquisition of Alcan Inc announced in July 2007 and completed in October 2007 |
| **Energy** | Hydrogen Energy (Rio Tinto: 50%) | 35 | Joint venture with BP |
| **Iron Ore** | Dampier Salt (Rio Tinto: 3%) | 19 | The purchase of a 3% interest in Dampier Salt from a minority shareholder that increased the Group s total interest to 68.4% |

## Divestments

| Asset | Proceeds US$m | Status |
|---|---|---|
| **Divested in 2009** | | |

| | | | |
|---|---|---|---|
| **Energy** | Jacobs Ranch | 764 | Sold to Arch Coal, Inc |
| **Iron Ore** | Corumbá mine | 814 | Sold to Vale |
| **Diamonds & Minerals** | Exploration projects in Argentina and Canada | 850 | Sold to Vale |
| **Aluminium** | Ningxia smelter (Rio Tinto: 50%) | 125 | Sold to Qingtongxia Aluminium Group |
| **Exploration** | sundry assets | 68 | Sold to multiple parties |
| **Energy** | Cloud Peak | 741 | IPO and connected debt offering |
| **Alcan Engineered Products** | composites | 349 | Sold to Schweiter Technologies |
| **Divested in 2008** | | | |
| **Energy** | Kintyre project | 495 | Sold to a joint venture |
| **Copper** | Greens Creek mine (Rio Tinto: 70%) | 750 | Sale completed to Hecla Mining, the Group s minority partner |
| **Copper** | Cortez Joint Venture (Rio Tinto: 40%) | 1,695 | Sold to Barrick Gold, the Group s majority partner, for cash plus a deferred bonus payment and contingent royalty interest |
| **Exploration** | sundry assets | 134 | Sold to multiple parties |
| **Divested in 2007** | | | |
| **Diamonds & Minerals** | Lassing and Ennsdorf | 6 | Rio Tinto Minerals disposed of its operations at Lassing and Ennsdorf in Austria |

During the first quarter of 2010, Rio Tinto completed a further $3.5 billion of divestments comprising the sale of the majority of the Alcan Packaging businesses to Amcor for $1.95 billion, the sale of Alcan Packaging Food

Americas to Bemis Company, Inc for $1.2 billion and the sale of two undeveloped coal properties in Australia for $0.3 billion.

In March 2010 Rio Tinto acquired an additional 15 million shares in Ivanhoe Mines Ltd, increasing its ownership in Ivanhoe Mines by 2.7 per cent to 22.4 per cent. The total consideration for this acquisition was US$241 million.

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## Metals and minerals production

| | Rio Tinto % share (a) | 2009 Production Total | 2009 Production Rio Tinto share | 2008 Production Total | 2008 Production Rio Tinto share | 2007 Production Total | 2007 Production Rio Tinto share |
|---|---|---|---|---|---|---|---|
| **ALUMINA ( 000 tonnes)** | | | | | | | |
| Gardanne (France) (b) (c) | 100.0 | | | 38 | 38 | 21 | 21 |
| Gove (Australia) (b) | 100.0 | **2,519** | **2,519** | 2,325 | 2,325 | 405 | 405 |
| Jonquière (Vaudreuil) (Canada) (b) | 100.0 | **1,125** | **1,125** | 1,370 | 1,370 | 252 | 252 |
| Queensland Alumina (Australia) (b) (d) | 80.0 | **3,959** | **3,167** | 3,842 | 3,074 | 3,816 | 1,766 |
| São Luis (Alumar) (Brazil) (b) | 10.0 | **1,657** | **166** | 1,504 | 150 | 288 | 29 |
| Yarwun (Australia) | 100.0 | **1,347** | **1,347** | 1,293 | 1,293 | 1,260 | 1,260 |
| Specialty Plants (Canada/France/Germany) (b) (c) | 100.0 | **492** | **492** | 758 | 758 | 144 | 144 |
| **Rio Tinto total** | | | **8,815** | | 9,008 | | 3,877 |
| **ALUMINIUM ( 000 tonnes)** | | | | | | | |
| Alma (Canada) (b) | 100.0 | **435** | **435** | 424 | 424 | 80 | 80 |
| Alouette (Sept-Îles) (Canada) (b) | 40.0 | **573** | **229** | 572 | 229 | 109 | 44 |
| Alucam (Edéa) (Cameroon) (b) | 46.7 | **73** | **34** | 91 | 43 | 19 | 9 |
| Anglesey (UK) (e) | 51.0 | **106** | **54** | 118 | 60 | 147 | 75 |
| Arvida (Canada) (b) | 100.0 | **171** | **171** | 172 | 172 | 32 | 32 |
| Beauharnois (Canada) (b) (f) | 100.0 | **11** | **11** | 50 | 50 | 10 | 10 |
| Bécancour (Canada) (b) | 25.1 | **420** | **105** | 415 | 104 | 80 | 20 |
| Bell Bay (Australia) | 100.0 | **177** | **177** | 178 | 178 | 177 | 177 |
| Boyne Island (Australia) | 59.4 | **556** | **331** | 556 | 330 | 548 | 325 |
| Dunkerque (France) (b) | 100.0 | **244** | **244** | 254 | 254 | 49 | 49 |
| Grande-Baie (Canada) (b) | 100.0 | **215** | **215** | 212 | 212 | 40 | 40 |
| ISAL (Reykjavik) (Iceland) (b) | 100.0 | **190** | **190** | 187 | 187 | 35 | 35 |
| Kitimat (Canada) (b) | 100.0 | **224** | **224** | 247 | 247 | 47 | 47 |
| Lannemezan (France) (b) (g) | 100.0 | | | 5 | 5 | 5 | 5 |
| Laterrière (Canada) (b) | 100.0 | **235** | **235** | 234 | 234 | 44 | 44 |
| Lochaber (UK) (b) | 100.0 | **38** | **38** | 43 | 43 | 8 | 8 |
| Lynemouth (UK) (b) | 100.0 | **109** | **109** | 165 | 165 | 33 | 33 |
| Ningxia (Qingtongxia) (China) (b) (h) | | **10** | **5** | 163 | 81 | 31 | 15 |
| Sebree (US) (b) | 100.0 | **193** | **193** | 197 | 197 | 37 | 37 |
| Shawinigan (Canada) (b) | 100.0 | **99** | **99** | 100 | 100 | 18 | 18 |
| Sohar (Oman) (i) | 20.0 | **351** | **70** | 49 | 10 | | |
| SORAL (Husnes) (Norway) (b) | 50.0 | **98** | **49** | 171 | 86 | 32 | 16 |
| Saint-Jean-de-Maurienne (France) (b) | 100.0 | **101** | **101** | 130 | 130 | 25 | 25 |
| Tiwai Point (New Zealand) | 79.4 | **271** | **215** | 316 | 250 | 351 | 279 |
| Tomago (Australia) (b) | 51.6 | **528** | **272** | 523 | 270 | 97 | 50 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Rio Tinto total** | | | **3,808** | | 4,062 | | 1,473 |
| **BAUXITE ( 000 tonnes)** | | | | | | | |
| Awaso (Ghana) (b) (j) | 80.0 | **440** | **352** | 796 | 637 | 216 | 173 |
| Gove (Australia) (b) | 100.0 | **7,185** | **7,185** | 6,245 | 6,245 | 985 | 985 |
| Porto Trombetas (MRN) (Brazil) (b) | 12.0 | **15,645** | **1,877** | 18,063 | 2,168 | 3,392 | 407 |
| Sangaredi (Guinea) (b) | (k) | **11,216** | **5,047** | 13,181 | 5,931 | 2,502 | 1,126 |
| Weipa (Australia) | 100.0 | **16,235** | **16,235** | 20,006 | 20,006 | 18,209 | 18,209 |
| **Rio Tinto total** | | | **30,696** | | 34,987 | | 20,900 |
| **BORATES ( 000 tonnes) (l)** | | | | | | | |
| Rio Tinto Minerals Boron (US) | 100.0 | **411** | **411** | 591 | 591 | 541 | 541 |
| Rio Tinto Minerals Tincalayu (Argentina) | 100.0 | **13** | **13** | 19 | 19 | 19 | 19 |
| **Rio Tinto total** | | | **424** | | 610 | | 560 |
| **COAL HARD COKING ( 000 tonnes)** | | | | | | | |
| Rio Tinto Coal Australia | | | | | | | |
| Hail Creek Coal (Australia) | 82.0 | **6,308** | **5,173** | 6,049 | 4,960 | 5,012 | 4,110 |
| Kestrel Coal (Australia) | 80.0 | **2,868** | **2,294** | 3,089 | 2,471 | 2,586 | 2,069 |
| **Rio Tinto total hard coking coal** | | | **7,467** | | 7,431 | | 6,179 |

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## Metals and minerals production (continued)

| | Rio Tinto % share (a) | 2009 Production Total | 2009 Production Rio Tinto share | 2008 Production Total | 2008 Production Rio Tinto share | 2007 Production Total | 2007 Production Rio Tinto share |
|---|---|---|---|---|---|---|---|
| **COAL OTHER* ( 000 tonnes)** | | | | | | | |
| Rio Tinto Coal Australia | | | | | | | |
| Bengalla (Australia) | 30.3 | **5,466** | **1,655** | 5,357 | 1,622 | 5,155 | 1,561 |
| Blair Athol (Australia) | 71.2 | **11,325** | **8,068** | 10,194 | 7,262 | 7,924 | 5,645 |
| Hunter Valley Operations (Australia) | 75.7 | **11,232** | **8,504** | 10,751 | 8,139 | 10,094 | 7,642 |
| Kestrel Coal (Australia) | 80.0 | **849** | **679** | 929 | 744 | 1,035 | 828 |
| Mount Thorley Operations (Australia) | 60.6 | **3,342** | **2,024** | 2,949 | 1,786 | 2,924 | 1,771 |
| Tarong Coal (Australia) (m) | | | | 262 | 262 | 4,510 | 4,510 |
| Warkworth (Australia) | 42.1 | **5,162** | **2,172** | 6,039 | 2,540 | 5,775 | 2,430 |
| Total Australian other coal | | | **23,103** | | 22,356 | | 24,388 |
| **US Coal** | | | | | | | |
| Antelope (US) (n) | 48.3 | **30,865** | **29,031** | 32,474 | 32,474 | 31,267 | 31,267 |
| Colowyo (US) (o) | 100.0 | **3,214** | **3,214** | 4,446 | 4,446 | 5,077 | 5,077 |
| Cordero Rojo (US) (n) | 48.3 | **35,687** | **33,361** | 36,318 | 36,318 | 36,712 | 36,712 |
| Decker (US) (n) | 24.1 | **4,161** | **2,017** | 5,939 | 2,970 | 6,340 | 3,170 |
| Jacobs Ranch (US) (p) | | **26,537** | **26,537** | 38,206 | 38,206 | 34,565 | 34,565 |
| Spring Creek (US) (n) | 48.3 | **16,035** | **15,360** | 16,341 | 16,341 | 14,291 | 14,291 |
| Total US coal | | | **109,520** | | 130,755 | | 125,083 |
| **Rio Tinto total other coal** | | | **132,623** | | 153,111 | | 149,471 |
| **COPPER (mined) ( 000 tonnes)** | | | | | | | |
| Bingham Canyon (US) | 100.0 | **303.5** | **303.5** | 238.0 | 238.0 | 212.2 | 212.2 |
| Escondida (Chile) | 30.0 | **1,061.2** | **318.3** | 1,281.7 | 384.5 | 1,405.5 | 421.6 |
| Grasberg Joint Venture (Indonesia) (q) | 40.0 | **269.3** | **107.7** | 17.8 | 7.1 | 70.9 | 28.4 |
| Northparkes (Australia) | 80.0 | **34.3** | **27.4** | 24.8 | 19.8 | 43.1 | 34.5 |
| Palabora (South Africa) | 57.7 | **82.6** | **47.6** | 85.1 | 49.1 | 71.4 | 41.2 |
| **Rio Tinto total** | | | **804.7** | | 698.5 | | 737.9 |
| **COPPER (refined) ( 000 tonnes)** | | | | | | | |
| Escondida (Chile) | 30.0 | **327.2** | **98.2** | 257.5 | 77.3 | 238.4 | 71.5 |
| Kennecott Utah Copper (US) | 100.0 | **274.2** | **274.2** | 200.6 | 200.6 | 265.6 | 265.6 |
| Palabora (South Africa) | 57.7 | **69.4** | **40.0** | 75.9 | 43.8 | 91.7 | 52.9 |
| **Rio Tinto total** | | | **412.4** | | 321.6 | | 390.0 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **DIAMONDS ( 000 carats)** | | | | | | | |
| Argyle (Australia) | 100.0 | **10,591** | **10,591** | 15,076 | 15,076 | 18,744 | 18,744 |
| Diavik (Canada) | 60.0 | **5,565** | **3,339** | 9,225 | 5,535 | 11,943 | 7,166 |
| Murowa (Zimbabwe) | 77.8 | **124** | **97** | 264 | 205 | 145 | 113 |
| **Rio Tinto total** | | | **14,026** | | 20,816 | | 26,023 |
| **GOLD (mined) ( 000 ounces)** | | | | | | | |
| Barneys Canyon (US) | 100.0 | **2** | **2** | 5 | 5 | 11 | 11 |
| Bingham Canyon (US) | 100.0 | **582** | **582** | 368 | 368 | 397 | 397 |
| Cortez/ Pipeline (US) (r) | | | | 72 | 29 | 538 | 215 |
| Escondida (Chile) | 30.0 | **144** | **43** | 144 | 43 | 187 | 56 |
| Grasberg Joint Venture (Indonesia) (q) | 40.0 | **1,072** | **429** | | | 1,058 | 423 |
| Greens Creek (US) (s) | | | | 18 | 12 | 68 | 48 |
| Northparkes (Australia) | 80.0 | **34** | **27** | 32 | 26 | 79 | 63 |
| Rawhide (US) (t) | 100.0 | **19** | **19** | 18 | 9 | 19 | 10 |
| Others | | **13** | **8** | 14 | 8 | 19 | 11 |
| **Rio Tinto total** | | | **1,111** | | 501 | | 1,233 |
| **GOLD (refined) ( 000 ounces)** | | | | | | | |
| Kennecott Utah Copper (US) | 100.0 | **479** | **479** | 303 | 303 | 523 | 523 |

* Coal other includes thermal coal and semi-soft coking coal.

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## Metals and minerals production (continued)

| | Rio Tinto % share (a) | **2009 Production Total** | **2009 Production Rio Tinto share** | 2008 Production Total | 2008 Production Rio Tinto share | 2007 Production Total | 2007 Production Rio Tinto share |
|---|---|---|---|---|---|---|---|
| **IRON ORE ( 000 tonnes)** | | | | | | | |
| Corumbá (Brazil) (u) | | **1,509** | **1,509** | 2,032 | 2,032 | 1,777 | 1,777 |
| Hamersley Iron six wholly owned mines (Australia) | 100.0 | **106,808** | **106,808** | 95,553 | 95,553 | 94,567 | 94,567 |
| Hamersley Channar (Australia) | 60.0 | **11,041** | **6,625** | 10,382 | 6,229 | 10,549 | 6,330 |
| Hamersley Eastern Range (Australia) | (v) | **9,318** | **9,318** | 8,186 | 8,186 | 6,932 | 6,932 |
| Hope Downs (Australia) (w) | 50.0 | **20,634** | **10,317** | 10,936 | 5,468 | 64 | 32 |
| Iron Ore Company of Canada (Canada) | 58.7 | **13,844** | **8,129** | 15,830 | 9,295 | 13,229 | 7,768 |
| Robe River (Australia) | 53.0 | **54,417** | **28,841** | 50,246 | 26,631 | 51,512 | 27,301 |
| **Rio Tinto total** | | | **171,547** | | 153,394 | | 144,707 |
| **LEAD ( 000 tonnes)** | | | | | | | |
| Greens Creek (US) (s) | | | | 4.6 | 3.2 | 17.0 | 11.9 |
| **MOLYBDENUM ( 000 tonnes)** | | | | | | | |
| Bingham Canyon (US) | 100.0 | **11.3** | **11.3** | 10.6 | 10.6 | 14.9 | 14.9 |
| **PIG IRON ( 000 tonnes)** | | | | | | | |
| HIsmelt® (Australia) | 60.0 | | | 144 | 87 | 115 | 69 |
| **SALT ( 000 tonnes)** | | | | | | | |
| Dampier Salt (Australia) (x) | 68.4 | **8,555** | **5,848** | 8,974 | 6,135 | 7,827 | 5,242 |
| **SILVER (mined) ( 000 ounces)** | | | | | | | |
| Bingham Canyon (US) | 100.0 | **4,871** | **4,871** | 3,414 | 3,414 | 3,487 | 3,487 |
| Escondida (Chile) | 30.0 | **5,424** | **1,627** | 6,167 | 1,850 | 7,870 | 2,361 |
| Grasberg Joint Venture (Indonesia) (q) | 40.0 | **3,685** | **1,474** | 549 | 220 | 1,193 | 477 |
| Greens Creek (US) (s) | | | | 1,815 | 1,275 | 8,646 | 6,075 |
| Others | | **757** | **596** | 655 | 417 | 914 | 602 |
| **Rio Tinto total** | | | **8,569** | | 7,176 | | 13,002 |
| **SILVER (refined) ( 000 ounces)** | | | | | | | |
| Kennecott Utah Copper (US) | 100.0 | **4,050** | **4,050** | 3,252 | 3,252 | 4,365 | 4,365 |
| **TALC ( 000 tonnes)** | | | | | | | |
| Rio Tinto Minerals talc (Australia/Europe/North America) (y) | 100.0 | **888** | **888** | 1,163 | 1,163 | 1,281 | 1,281 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **TITANIUM DIOXIDE FEEDSTOCK ( 000 tonnes)** | | | | | | | |
| Rio Tinto Iron & Titanium (Canada/South Africa) (z) (aa) | 100.0 | **1,147** | **1,147** | 1,524 | 1,524 | 1,458 | 1,458 |
| **URANIUM ( 000 lbs $U_3O_8$)** | | | | | | | |
| Energy Resources of Australia (Australia) | 68.4 | **11,500** | **7,865** | 11,773 | 8,052 | 11,713 | 8,011 |
| Rössing (Namibia) | 68.6 | **9,150** | **6,275** | 8,966 | 6,149 | 6,714 | 4,605 |
| **Rio Tinto total** | | | **14,140** | | 14,200 | | 12,616 |
| **ZINC ( 000 tonnes)** | | | | | | | |
| Greens Creek (US) (s) | | | | 13.9 | 9.8 | 50.8 | 35.7 |

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## Metals and minerals production (continued)

**Production data notes:**

Mine production figures for metals refer to the total quantity of metal produced in concentrates, leach liquor or doré bullion irrespective of whether these products are then refined onsite, except for the data for bauxite and iron ore which represent production of marketable quantities of ore.

(a) Rio Tinto percentage share, shown above, is as at the end of 2009 and has applied over the period 2007 2009 except for those operations where the Rio Tinto ownership has varied during the year; the weighted average ownership for each year 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 | **2009** | 2008 | 2007 |
|---|---|---|---|---|
| Queensland Alumina | (d) | **80.0** | 80.0 | 46.3 |
| Antelope | (n) | **94.0** | 100.0 | 100.0 |
| Cordero Rojo | (n) | **94.0** | 100.0 | 100.0 |
| Decker | (n) | **47.0** | 50.0 | 50.0 |
| Spring Creek | (n) | **94.0** | 100.0 | 100.0 |
| Dampier Salt Limited | (x) | **68.4** | 68.4 | 67.0 |

(b) 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.

(c) Production of smelter grade alumina at Gardanne ceased at the end of 2008. Production continues from the Gardanne specialty alumina plant.

(d) Rio Tinto held a 38.6 per cent share in Queensland Alumina until 24 October 2007; this increased to 80.0 per cent following the Alcan acquisition.

(e) The Anglesey smelter ceased smelting operations at the end of the third quarter of 2009.

(f) The Beauharnois smelter ceased smelting operations in the second quarter of 2009.

(g) The Lannemezan smelter closed in the first quarter of 2008.

(h) Rio Tinto sold its 50 per cent interest in the Ningxia aluminium smelter with an effective date of 26 January 2009.

(i)

Production at the Sohar smelter commenced in the third quarter of 2008.

(j) Rio Tinto Alcan had an 80 per cent interest in the Awaso mine but purchased the additional 20 per cent of production. Rio Tinto Alcan sold its interest in Ghana Bauxite Company, owner of the Awaso mine, with an effective date 1 February 2010.

(k) 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.

(l) Borate numbers refer to $B_2O_3$ quantities in thousands of tonnes.

(m) 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.

(n) As a result of the initial public offering of Cloud Peak Energy Inc. on 20 November 2009,

Rio Tinto now holds a 48.3 per cent interest in the Antelope, Cordero Rojo and Spring Creek mines and a 24.1 per cent interest in the Decker mine. These interests were formerly reported under Rio Tinto Energy America but are now managed by Cloud Peak Energy.

(o) During 2008, Rio Tinto acquired a 100 per cent interest in the Colowyo mine, having previously held a partnership interest. All of Colowyo s production was already included in Rio Tinto s share of production.

(p) Rio Tinto sold its 100 per cent interest in the Jacobs Ranch mine with an effective date of 1 October 2009. Production data are shown up to that date.

(q) 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. Total production reflects the total quantities attributable to the joint venture.

(r) Rio Tinto sold its 40 per cent interest in the Cortez/Pipeline joint venture with an effective date of end of February 2008. Production data are shown up to that date.

(s) 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.

(t) On 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 has been entitled to 100 per cent.

(u) Rio Tinto sold its 100 per cent interest in the Corumbá mine with an effective date of 18 September 2009. Production data are

shown up to that date.

(v) 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.

(w) Hope Downs started production in the fourth quarter of 2007.

(x) Rio Tinto increased its shareholding in Dampier Salt Limited to 68.4 per cent at the beginning of July 2007.

(y) Talc production includes some products derived from purchased ores.

(z) Quantities comprise 100 per cent of Rio Tinto Fer et Titane and 50 per cent of Richards Bay Minerals (RBM) production until late 2009 when RBM concluded a Broad Based Black Economic Empowerment transaction. Rio

Tinto Iron & Titanium s share of RBM production reflects a decrease from 50 to 37 per cent with effect from 9 December 2009.

(aa) Ilmenite mined in Madagascar is being processed in Canada with effect from June 2009.

Production figures are sometimes more precise than the rounded numbers shown, hence an apparent small difference may result where the Rio Tinto share is totalled.

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**Ore reserves (under Industry Guide 7)**

For the purposes of this combined Annual report on Form 20-F estimates of ore reserves have been prepared in accordance with the SEC s Industry Guide 7 under the United States Securities Act of 1933 and the following definitions:

An Ore Reserve means that part of a mineral deposit that can be economically and legally extracted or produced at the time of the reserves determination. To establish this, studies appropriate to the type of mineral deposit involved have been carried out to estimate the quantity, grade and value of the ore mineral(s) present. In addition, technical studies have been completed to determine realistic assumptions for the extraction of the minerals including estimates of mining, processing, economic, marketing, legal, environmental, social and governmental factors. The degree of these studies is sufficient to demonstrate the technical and economic feasibility of the project and depends on whether or not the project is an extension of an existing project or operation. The estimates of minerals to be produced include allowances for ore losses and the treatment of unmineralised materials which may occur as part of the mining and processing activities. Ore Reserves are sub-divided in order of increasing confidence into Probable Ore Reserves and Proven Ore Reserves as defined below.

The term economically , as used in the definition of reserves, implies that profitable extraction or production under defined investment assumptions has been established through the creation of a mining plan, processing plan and cash flow model. The assumptions made must be reasonable, including costs and operating conditions that will prevail during the life of the project.

Ore reserves presented in accordance with SEC Industry Guide 7 do not exceed the quantities that, it is estimated, could be extracted economically if future prices were to be in line with the average of historical prices for the three years to 30 June 2009, or contracted prices where applicable. For this purpose, contracted prices are applied only to future sales volumes for which the price is predetermined by an existing contract; and the average of historical prices is applied to expected sales volumes in excess of such amounts. Moreover, reported ore reserve estimates have not been increased above the levels expected to be economic based on Rio Tinto s own long term price assumptions.

The term legally , as used in the definition of reserves, does not imply that all permits needed for mining and processing have been obtained or that other legal issues have been completely resolved. However, for reserves to exist, there is reasonable assurance of the issuance of these permits or resolution of legal issues. Reasonable assurance means that, based on applicable laws and regulations, the issuance of permits or resolution of legal issues necessary for mining and processing at a particular deposit will be accomplished in the ordinary course and in a timeframe consistent with the Company s current mine plans.

The term proven reserves means reserves for which (a) quantity is computed from dimensions revealed in outcrops, trenches, workings or drill holes; grade and/or quality are computed from the results of detailed sampling; and (b) the sites for inspection, sampling and measurement are spaced so closely and the geologic character is so well defined that size, shape, depth and mineral content of reserves are well established. Proven reserves represent that part of an orebody for which there exists the highest level of confidence in data regarding its geology, physical characteristics, chemical composition and probable processing requirements.

The term probable reserves means reserves for which quantity and grade and/or quality are computed from information similar to that used for proven reserves, but the sites for inspection, sampling and measurement are farther apart or are otherwise less adequately spaced. The degree of assurance, although lower than that for proven reserves, is high enough to assume continuity between points of observation. This means that probable reserves generally have a wider drill hole spacing than for proven reserves.

The amount of proven and probable reserves shown below does not necessarily represent the amount of material currently scheduled for extraction, because the amount scheduled for extraction may be derived from a life of mine plan predicated on prices and other assumptions which are different to those used in the life of mine plan prepared in accordance with Industry Guide 7.

The estimated ore reserve figures in the following tables are as of 31 December 2009. 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. Commodity price information is given in footnote (a).
Where operations are not managed by Rio Tinto the reserves are published as received from the managing company.

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**Ore reserves (under Industry Guide 7)**

| | Type of mine (b) | Total ore reserves at end 2009 Tonnage | Grade | Interest % | Rio Tinto share |
|---|---|---|---|---|---|
| **BAUXITE** (c) | | millions of tonnes | % $Al_2O_3$ | | Recoverable mineral millions of tonnes |
| **Reserves at operating mines** | | | | | |
| Gove (Australia) | O/P | 186 | 49.4 | 100.0 | 186 |
| Porto Trombetas (Brazil) | O/P | 214 | 49.6 | 12.0 | 26 |
| Sangaredi (Guinea) | O/P | 130 | 52.4 | 23.0 | 30 |
| Weipa (Australia) | O/P | 1,699 | 52.7 | 100.0 | 1,699 |
| **Rio Tinto total** | | | | | **1,941** |

| | | | | | Marketable product millions of tonnes |
|---|---|---|---|---|---|
| **BORATES** (d) | | | millions of tonnes | | |
| **Reserves at operating mine** | | | | | |
| Rio Tinto Minerals - Boron (US) (e) | | | | | |
| mine | | O/P | **22.3** | 100.0 | 22.3 |
| stockpiles (f) | | S/P | **2.3** | 100.0 | 2.3 |
| **Rio Tinto total** | | | | | **24.6** |

| | | Coal type (h) | Marketable reserves | Marketable coal quality (i) | (i) | | |
|---|---|---|---|---|---|---|---|
| **COAL** (g) | | | millions of tonnes | Calorific value MJ/kg | Sulphur content % | | Marketable reserves millions of tonnes |
| **Reserves at operating mines** | | | | | | | |
| **Rio Tinto Coal Australia** | | | | | | | |
| Bengalla (Australia) | O/C | SC | 126 | 28.21 | 0.47 | 30.3 | 38 |
| Blair Athol (Australia) (j) | O/C | SC | 18 | 26.17 | 0.31 | 71.2 | 13 |
| Hail Creek (Australia) (k) | O/C | MC | 209 | 32.20 | 0.35 | 82.0 | 172 |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Hunter Valley Operations (Australia) (l) | O/C | SC + MC | 278 | 28.99 | 0.54 | 75.7 | 210 |
| Kestrel (Australia) | U/G | SC + MC | 128 | 31.60 | 0.59 | 80.0 | 102 |
| Mount Thorley Operations (Australia) | O/C | SC + MC | 24 | 29.41 | 0.43 | 60.6 | 14 |
| Warkworth (Australia) | O/C | SC + MC | 270 | 30.68 | 0.44 | 42.1 | 114 |
| **Total Australian coal** | | | | | | | **663** |
| | | | | | | | |
| **US Coal** | | | | | | | |
| Antelope (US) (m) (n) | O/C | SC | 265 | 20.59 | 0.24 | 48.3 | 128 |
| Colowyo (US) (o) | O/C | SC | 17 | 23.92 | 0.44 | 100.0 | 17 |
| Cordero Rojo (US) (m) | O/C | SC | 372 | 19.54 | 0.29 | 48.3 | 180 |
| Decker (US) (m) (p) | O/C | SC | 2 | 21.87 | 0.40 | 24.1 | 1 |
| Spring Creek (US) (m) | O/C | SC | 272 | 21.75 | 0.33 | 48.3 | 131 |
| **Total US coal** | | | | | | | 456 |
| | | | | | | | |
| **Rio Tinto total reserves at operating mines** | | | | | | | 1,119 |
| | | | | | | | |
| **Undeveloped reserves** (q) | | | | | | | |
| **Rio Tinto Coal Australia** | | | | | | | |
| Clermont (Australia) | O/C | SC | 189 | 27.90 | 0.33 | 50.1 | 95 |
| Mount Pleasant (Australia) | O/C | SC | 350 | 26.73 | 0.51 | 75.7 | 265 |
| | | | | | | | |
| **Rio Tinto total undeveloped reserves** | | | | | | | **360** |

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**Ore reserves (under Industry Guide 7)**

| | Type of mine (b) | Total ore reserves at end 2009 Tonnage | Grade | Average mill recovery % | Interest % | Rio Tinto share |
|---|---|---|---|---|---|---|
| **COPPER** | | **Millions of tonnes** | **% Cu** | | | **Recoverable metal millions of tonnes** |
| **Reserves at operating mines** | | | | | | |
| Bingham Canyon (US) (r) | | | | | | |
| mine | O/P | 484 | 0.48 | 85 | 100.0 | 1.992 |
| stockpiles (f) | S/P | 40 | 0.33 | 85 | 100.0 | 0.113 |
| Escondida (Chile) | | | | | | |
| sulphide mine | O/P | 1,652 | 1.07 | 82 | 30.0 | 4.352 |
| sulphide leach mine | O/P | 2,289 | 0.53 | 33 | 30.0 | 1.198 |
| oxide mine (s) | O/P | 73 | 0.94 | 68 | 30.0 | 0.140 |
| sulphide stockpiles (f) | S/P | 7 | 1.26 | 82 | 30.0 | 0.023 |
| sulphide leach stockpiles (f) | S/P | 88 | 0.88 | 33 | 30.0 | 0.076 |
| oxide stockpiles (f) | S/P | 49 | 0.62 | 68 | 30.0 | 0.062 |
| Grasberg (Indonesia) | O/P+ U/G | 2,590 | 1.00 | 89 | (t) | 7.061 |
| Northparkes (Australia) (u) | | | | | | |
| mine | O/P+ U/G | 74 | 0.87 | 89 | 80.0 | 0.460 |
| stockpiles (f) | S/P | 6 | 0.36 | 85 | 80.0 | 0.014 |
| Palabora (South Africa) (v) | U/G | 75 | 0.60 | 88 | 57.7 | 0.228 |
| **Rio Tinto total reserves at operating mines** | | | | | | **15.719** |
| **Undeveloped reserves** (q) | | | | | | |
| Eagle (US) | U/G | 4 | 2.93 | 95 | 100.0 | 0.102 |
| Oyu Tolgoi (Mongolia) (w) | O/P | 930 | 0.50 | 87 | 19.7 | 0.794 |
| **Rio Tinto total undeveloped reserves** | | | | | | **0.896** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **DIAMONDS** (c) | | **Millions of tonnes** | **carats per tonne** | | | **Recoverable diamonds millions of carats** |
| **Reserves at operating mines** | | | | | | |
| Argyle (Australia) | | | | | | |
| AK1 pipe mine | O/P+ U/G | 83 | 2.1 | | 100.0 | 174.9 |
| AK1 pipe stockpiles (f) | S/P | 2 | 1.6 | | 100.0 | 3.2 |

| | | | | | | |
|---|---|---|---|---|---|---|
| Diavik (Canada) | O/P+ U/G | 20 | 3.0 | | 60.0 | 35.8 |
| Murowa (Zimbabwe) | | | | | | |
| mine | O/P | 20 | 0.7 | | 77.8 | 10.8 |
| stockpiles (f) | S/P | 0.02 | 1.2 | | 77.8 | 0.02 |
| **Rio Tinto total** | | | | | | **224.7** |

**GOLD**

| | | **millions of tonnes** | **grammes per tonne** | | | **Recoverable metal millions of ounces** |
|---|---|---|---|---|---|---|
| **Reserves at operating mines** | | | | | | |
| Bingham Canyon (US) (r) | | | | | | |
| mine | O/P | 484 | 0.25 | 62 | 100.0 | 2.471 |
| stockpiles (f) | S/P | 40 | 0.20 | 62 | 100.0 | 0.159 |
| Grasberg (Indonesia) | O/P+ U/G | 2,590 | 0.86 | 69 | (t) | 13.006 |
| Northparkes (Australia) (u) | | | | | | |
| mine | U/G | 74 | 0.35 | 74 | 80.0 | 0.489 |
| stockpiles (f) | S/P | 5.9 | 0.20 | 76 | 80.0 | 0.023 |
| **Rio Tinto total reserves at operating mines** | | | | | | **16.149** |
| **Undeveloped reserves (q)** | | | | | | |
| Eagle (US) (x) | U/G | 4 | 0.29 | 73 | 100.0 | 0.025 |
| Oyu Tolgoi (Mongolia) (w) | U/G | 930 | 0.36 | 71 | 19.7 | 1.497 |
| **Rio Tinto undeveloped reserves** | | | | | | **1.522** |

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**Ore reserves (under Industry Guide 7)**

| | Type of mine (b) | Total ore reserves at end 2009 Tonnage | Grade | Average mill recovery % | Interest % | Rio Tinto share |
|---|---|---|---|---|---|---|
| **IRON ORE** (c) | | **Millions of tonnes** | **%Fe** | | | **Marketable product millions of tonnes** |
| **Reserves at operating mines** | | | | | | |
| Hamersley wholly owned (Australia) | | | | | | |
| Brockman 2 (Brockman ore) (y) | O/P | 15 | 62.7 | | 100.0 | 15 |
| Brockman 4 (Brockman ore) | O/P | 621 | 62.0 | | 100.0 | 621 |
| Marandoo (Marra Mamba ore) (z) | O/P | 49 | 61.5 | | 100.0 | 49 |
| Mt Tom Price (Brockman ore) | O/P | | | | | |
| mine | | 76 | 63.7 | | 100.0 | 76 |
| stockpiles (f) | S/P | 17 | 63.0 | | 100.0 | 17 |
| Mt Tom Price (Marra Mamba ore) (aa) | O/P | 23 | 61.1 | | 100.0 | 23 |
| Nammuldi (Marra Mamba ore) (bb) | O/P | 18 | 61.2 | | 100.0 | 18 |
| Paraburdoo (Brockman ore) | O/P | 15 | 63.1 | | 100.0 | 15 |
| Turee Syncline Central (Brockman Ore (cc) | O/P | 74 | 61.9 | | 100.0 | 74 |
| Western Turner Syncline (Brockman ore) | O/P | 314 | 61.9 | | 100.0 | 314 |
| Yandicoogina (Pisolite ore HG) | | | | | | |
| mine | O/P | 206 | 58.5 | | 100.0 | 206 |
| stockpiles (f) | S/P | 3 | 58.5 | | 100.0 | 3 |
| Yandicoogina (Process product) (dd) | O/P | 102 | 58.9 | | 100.0 | 102 |
| Hamersley Channar (Australia) | | | | | | |
| Brockman ore | O/P | 81 | 63.0 | | 60.0 | 48 |
| Hamersley Eastern Range (Australia) | | | | | | |
| Brockman ore (ee) | O/P | 71 | 62.8 | | 54.0 | 38 |
| Hope Downs 1 (Australia) | | | | | | |
| Marra Mamba ore (ff) | O/P | 353 | 61.4 | | 50.0 | 176 |
| Iron Ore Company of Canada (Canada) (gg) | O/P | 584 | 65.0 | | 58.7 | 343 |
| Robe River (Australia) | | | | | | |
| Pannawonica (Pisolite ore) | | | | | | |
| mine | O/P | 246 | 57.3 | | 53.0 | 130 |
| stockpiles (f) | S/P | 21 | 56.8 | | 53.0 | 11 |
| West Angelas (Marra Mamba Ore) | | | | | | |
| mine | O/P | 340 | 61.8 | | 53.0 | 180 |
| stockpiles (f) | S/P | 7 | 58.3 | | 53.0 | 4 |
| **Rio Tinto total** | | **614** | | | | **2,464** |

MOLYBDENUM

**Recoverable metal**