

## Rio Tinto releases third quarter production results

16 October 2019

Rio Tinto chief executive J-S Jacques said “We have delivered improved production across the majority of our products in the third quarter, with a solid result at our Pilbara mines driving increased sales of iron ore into robust markets. Our strong value over volume approach, coupled with our focus on operational performance and disciplined allocation of capital, will continue to deliver superior returns to shareholders over the short, medium and long term.”

|                                          |    | Q3 2019 | vs Q3 2018 | vs Q2 2019 | 9 mths 2019 | vs 9mths 2018 |
|------------------------------------------|----|---------|------------|------------|-------------|---------------|
| Pilbara iron ore shipments (100% basis)  | Mt | 86.1    | +5%        | +1%        | 240.6       | -4%           |
| Pilbara iron ore production (100% basis) | Mt | 87.3    | +6%        | +10%       | 243.1       | -3%           |
| Bauxite                                  | Mt | 13.8    | +9%        | +3%        | 40.0        | +3%           |
| Aluminium                                | kt | 789     | -3%        | -2%        | 2,388       | -1%           |
| Mined copper                             | kt | 157.8   | -1%        | +15%       | 437.6       | -4%           |
| Titanium dioxide slag                    | kt | 321     | +8%        | +6%        | 920         | +12%          |
| IOC iron ore pellets and concentrate     | Mt | 3.0     | +3%        | +17%       | 8.0         | +30%          |

### Operational update

- Pilbara iron ore shipments of 86.1 million tonnes (100% basis) in the third quarter were 5% higher than the third quarter of 2018. Pilbara iron ore production of 87.3 million tonnes (100% basis) was 6% higher than the third quarter of 2018 and 10% higher than the previous quarter, reflecting a good recovery from the operational and weather challenges experienced earlier in the year.
- Third quarter bauxite production and shipments to third parties were 9% and 23% higher, respectively, than the same period of 2018. Bauxite production from non-managed Joint Ventures was lower than planned year to date.
- Aluminium production of 0.8 million tonnes was 3% lower than the third quarter of 2018, primarily reflecting a preventive safety shutdown at one of the three pot-lines at ISAL in Iceland and earlier than planned pot relining at Kitimat in British Columbia, Canada.
- Mined copper production of 158 thousand tonnes was 1% lower than the third quarter of 2018, but 15% higher than the second quarter, reflecting higher grades at Kennecott and improved throughput at Escondida.
- At the Oyu Tolgoi underground project, the primary production shaft (shaft 2) remains on track for commissioning this month. Since July 2019, we have completed key infrastructure, including the central heating plant, the shaft 2 jaw crusher system and the surface discharge conveyor. Work continues on the mine re-design.
- Titanium dioxide slag production of 321 thousand tonnes was 8% higher than the third quarter of 2018, reflecting a continued improvement in operational performance and the restart of furnaces in 2019.
- Third quarter production at Iron Ore Company of Canada was 3% higher than the corresponding quarter of 2018 and 17% higher than the previous quarter, reflecting a return to normal operating conditions following the flooding incident which impacted June.
- Guidance is unchanged, with the exception of bauxite production, which has been revised to around 54 million tonnes (previously 56 to 59 million tonnes), and alumina production, which has been revised to around 7.7 million tonnes (previously 8.1 to 8.4 million tonnes).

- On 25 September 2019, Rio Tinto announced the signing of a Memorandum of Understanding with China Baowu Steel Group and Tsinghua University to develop and implement new methods to reduce carbon emissions and improve environmental performance across the steel value chain.
- Third quarter exploration and evaluation spend was \$177 million, 62% higher than the same period of 2018, primarily reflecting increased activity on advanced projects.

*All figures in this report are unaudited. All currency figures in this report are US dollars, and comments refer to Rio Tinto's share of production, unless otherwise stated. To allow production numbers to be compared on a like-for-like basis, production from asset divestments completed in 2018 is excluded from Rio Tinto share of production data.*

## IRON ORE

### Rio Tinto share of production (million tonnes)

|                                                 | Q3 2019     | vs Q3 2018 | vs Q2 2019  | 9 mths 2019  | vs 9mths 2018 |
|-------------------------------------------------|-------------|------------|-------------|--------------|---------------|
| Pilbara Blend Lump                              | 21.0        | +2%        | +6%         | 60.8         | -4%           |
| Pilbara Blend Fines                             | 31.7        | +6%        | +11%        | 89.0         | -2%           |
| Robe Valley Lump                                | 1.6         | +12%       | +37%        | 3.5          | -22%          |
| Robe Valley Fines                               | 3.1         | +12%       | +44%        | 6.4          | -24%          |
| Yandicoogina Fines (HIY)                        | 14.7        | +2%        | +5%         | 42.2         | -1%           |
| <b>Total Pilbara production</b>                 | <b>72.2</b> | <b>+4%</b> | <b>+10%</b> | <b>201.9</b> | <b>-4%</b>    |
| <b>Total Pilbara production</b> (100% basis)    | <b>87.3</b> | <b>+6%</b> | <b>+10%</b> | <b>243.1</b> | <b>-3%</b>    |
| <b>Total Pilbara shipments</b> (a) (100% basis) | <b>86.1</b> | <b>+5%</b> | <b>+1%</b>  | <b>240.6</b> | <b>-4%</b>    |

(a) Pilbara Blend sales include 6.7 million tonnes of alternate products in Q3 2019 and 10.7 million tonnes in the first nine months of 2019

### Pilbara operations

Third quarter production of 87.3 million tonnes (Rio Tinto share 72.2 million tonnes) was 6% higher than the same quarter of 2018 and 10% higher than the previous quarter. This reflects a solid performance in the mines, with actions progressing as planned. Our increased focus on waste material movement and pit development will continue over 2019 and 2020 to improve mine performance and pit sequencing. Our cost guidance (below) reflects these additional mining activities.

A planned rail maintenance shut was executed late in the third quarter, starting on 25 September and completed on 6 October. Our cost and shipments guidance take into account the impact of this activity.

Third quarter sales of 86.1 million tonnes (Rio Tinto share 71.6 million tonnes) were 5% above the third quarter of 2018 and 1% higher than the previous quarter.

We sold 6.7 million tonnes of alternate products in the third quarter. These are included in the above sales figures. We expect to make additional sales of these products in the fourth quarter.

The majority of our iron ore shipments are priced by reference to the average index price for the month of shipment. We priced approximately 16% of sales in the first nine months of 2019 by reference to the prior quarter's average index lagged by one month, with the remainder sold either on current quarter average, current month average or on the spot market.

### Pilbara projects

The Koodaideri iron ore mine is progressing to plan with engineering, procurement and construction activities on schedule. Preparatory works have commenced. We expect to produce first ore from Koodaideri in late 2021, consistent with previous guidance.

First ore from the Robe River Joint Venture sustaining production projects (West Angelas C&D and Mesa B, C and H at Robe Valley) is also anticipated in 2021, consistent with previous guidance. West Angelas received all regulatory approvals in early October 2019, and project construction has commenced. The Robe Valley projects continue to progress through the environmental and heritage approval processes. We are experiencing some delays for Mesa H environmental approvals.

### 2019 guidance

Our 2019 Pilbara shipments guidance is unchanged at between 320 and 330 million tonnes (100% basis), subject to weather.

Our iron ore unit cost guidance in 2019 remains at \$14 - \$15 per tonne.

## ALUMINIUM

### Rio Tinto share of production ('000 tonnes)

|                               | Q3 2019 | vs Q3 2018 | vs Q2 2019 | 9 mths 2019 | vs 9mths 2018 |
|-------------------------------|---------|------------|------------|-------------|---------------|
| <b>Rio Tinto Aluminium</b>    |         |            |            |             |               |
| Bauxite                       | 13,796  | +9%        | +3%        | 39,967      | +3%           |
| Bauxite third party shipments | 10,361  | +23%       | +9%        | 28,680      | +13%          |
| Alumina                       | 1,826   | -7%        | -3%        | 5,713       | -4%           |
| Aluminium                     | 789     | -3%        | -2%        | 2,388       | -1%           |

#### **Bauxite**

Third quarter bauxite production was 9% higher than the same period of 2018, with increased production across all sites.

We shipped 10.4 million tonnes of bauxite to third parties in the third quarter, 23% higher than the same period of 2018.

#### **Alumina**

Third quarter alumina production was 7% below the same period of 2018. Production at Yarwun was lower due to an extended 35-day shutdown, which included a planned five-year maintenance service of the cogeneration plant. Normal production has since resumed at Yarwun. Production at the Queensland Alumina non-managed JV was impacted by maintenance activities, with the site expected to ramp back to full capacity during the fourth quarter.

A project using industry-leading filter press technology to move to bauxite residue dry stacking and extend the life of the Vaudreuil refinery in Quebec is being commissioned in October. The project commenced in February 2018 and will be commissioned six weeks ahead of plan and under its budget of \$188 million (C\$250 million).

#### **Aluminium**

Third quarter aluminium production of 0.8 million tonnes was 3% lower than the same period of 2018, reflecting reduced production at ISAL in Iceland and Kitimat in British Columbia, Canada. Our Quebec and Pacific smelters continue to perform well, with third quarter and year to date production 1% higher than the same periods last year. This excludes the non-managed Becancour JV where the restart is progressing well, following a lock-out, with full ramp-up expected by mid-2020.

Production at ISAL was impacted by the preventive, safety driven shutdown of one of the three potlines due to process instability. This issue has been resolved and will result in an estimated 21 thousand tonnes production loss compared to last year, of which 17 thousand tonnes was in the third quarter.

Third quarter production at Kitimat was 15 thousand tonnes lower than the same period last year due to earlier than planned pot-lining replacement. We are accelerating work to minimise further production impacts. The estimated impact on fourth quarter production is reflected in our guidance below, with the 2020 impact to be determined by pot relining needs.

The aluminium industry continues to face challenging conditions in global markets and policy uncertainty, reflected in declining prices. We are focusing on enhancing the competitiveness of our smelters, including discussions with our Pacific stakeholders on energy pricing, to ensure the sustainability and global competitiveness of our Pacific smelters.

#### **Kemano**

At the Kemano hydro-power facility at Kitimat, tunnel boring continues to progress with a total of 1,753 metres excavated as at 30 September 2019.

**2019 guidance**

We now expect our share of bauxite production to be around 54 million tonnes (previously 56 to 59 million tonnes), reflecting weather related events in the first quarter, downtime to address commissioning items on new mines and lower production from the Pacific refineries.

We now expect our share of alumina production to be around 7.7 million tonnes (previously 8.1 to 8.4 million tonnes) due primarily to maintenance activities in the Pacific refineries.

We expect our share of aluminium production to be at the lower end of guidance (3.2 to 3.4 million tonnes), primarily reflecting lower than planned volumes at the ISAL, Kitimat and non-managed Becancour smelters.

## COPPER & DIAMONDS

### Rio Tinto share of production ('000 tonnes)

|                               | Q3 2019 | vs Q3 2018 | vs Q2 2019 | 9 mths 2019 | vs 9mths 2018 |
|-------------------------------|---------|------------|------------|-------------|---------------|
| <b>Mined copper</b>           |         |            |            |             |               |
| Rio Tinto Kennecott           | 57.8    | -2%        | +40%       | 151.4       | +4%           |
| Escondida                     | 90.5    | +4%        | +9%        | 248.1       | -8%           |
| Oyu Tolgoi                    | 9.5     | -28%       | -27%       | 38.0        | -4%           |
| <b>Refined copper</b>         |         |            |            |             |               |
| Rio Tinto Kennecott           | 40.3    | -26%       | -36%       | 133.2       | +2%           |
| Escondida                     | 16.8    | +1%        | -12%       | 54.5        | -7%           |
| <b>Diamonds ('000 carats)</b> |         |            |            |             |               |
| Argyle                        | 3,558   | -7%        | +8%        | 9,636       | -11%          |
| Diavik                        | 994     | -7%        | -16%       | 3,191       | -3%           |

#### ***Rio Tinto Kennecott***

Third quarter mined copper production was 2% lower than the same period of 2018, but 40% higher than the previous quarter, as mining activity moved to an area of higher grades following the low grades experienced in the second quarter.

Refined copper production was lower than comparable prior periods, reflecting reduced copper concentrate availability from the previous quarter, a planned smelter shut-down in July and additional unplanned maintenance which reduced furnace online time.

Rio Tinto Kennecott continues to toll and purchase third party concentrate to optimise smelter utilisation, with 11.9 thousand tonnes of concentrate received for processing in the third quarter of 2019, compared with 6.3 thousand tonnes in the third quarter of 2018. Purchased and tolled copper concentrate are excluded from reported production figures.

Higher molybdenum grades were sustained in the third quarter, with production of 2.1 thousand tonnes, compared with 1.4 thousand tonnes in the same quarter in 2018.

#### ***Escondida***

Third quarter mined copper production at Escondida was 4% higher than the same period of 2018, mainly due to higher concentrator throughput and an increase in recoverable copper in ore stacked for leaching.

#### ***Oyu Tolgoi***

Mined copper production from the open pit in the third quarter of 2019 was 28% lower than the same period in 2018 and 27% lower than the prior quarter as mining activity moved to lower grade areas of the pit, as planned.

#### ***Oyu Tolgoi Underground Project***

Commissioning milestones for the primary production shaft (shaft 2) remain on target for completion in October. Rope-up of the service and production hoists was completed as planned, and testing of the braking system has also been completed.

Since July 2019, we have also completed key infrastructure, including the central heating plant, the shaft 2 jaw crusher system and the surface discharge conveyor.

As previously announced on 16 July 2019, enhanced geotechnical information and data modelling suggests there may be some stability risks with the Feasibility Study 2016 mine design and so a number of mine design options are under consideration. Work is focusing on evaluating design options, including the impact of relocation or removal of some of the planned underground infrastructure, such as the mid-access drives and the ore handling system and options for panel sequencing.

Work on the final design of the first panel of mining, Panel 0, is still anticipated to continue until early 2020 and the Definitive Estimate, which will include the final estimate of cost and schedule for the remaining underground project, is still expected to be delivered in the second half of 2020.

### ***Resolution Copper***

On 9 August 2019, Rio Tinto announced that the Resolution Copper project in the US had achieved a major permitting milestone with the release of an independently prepared Draft Environmental Impact Statement for the project. The rigorous review, conducted by the US Forest Service over a six year period, included broad public engagement.

### ***Diamonds***

At Argyle, carat production in the third quarter of 2019 was 7% lower than the same period in 2018 due to lower recovered grade, partially offset by stronger mining and processing rates.

At Diavik, carats recovered in the third quarter were 7% lower than the third quarter of 2018 due to lower ore availability from both the underground and the A21 open pit.

### ***2019 guidance***

Our 2019 guidance (Rio Tinto share) is unchanged, with mined copper production of between 550 and 600 thousand tonnes, subject to grade availability, refined copper production of between 220 and 250 thousand tonnes and diamond production of between 15 and 17 million carats.

## ENERGY & MINERALS

### Rio Tinto share of production

|                                                          | Q3 2019 | vs Q3 2018 | vs Q2 2019 | 9 mths 2019 | vs 9mths 2018 |
|----------------------------------------------------------|---------|------------|------------|-------------|---------------|
| <b>Iron ore pellets and concentrate (million tonnes)</b> |         |            |            |             |               |
| IOC                                                      | 3.0     | +3%        | +17%       | 8.0         | +30%          |
| <b>Minerals ('000 tonnes)</b>                            |         |            |            |             |               |
| Borates – B <sub>2</sub> O <sub>3</sub> content          | 138     | +1%        | +0%        | 391         | -1%           |
| Titanium dioxide slag                                    | 321     | +8%        | +6%        | 920         | +12%          |
| <b>Uranium ('000 lbs)</b>                                |         |            |            |             |               |
| Energy Resources of Australia                            | 585     | -29%       | -6%        | 1,998       | -4%           |
| Rössing                                                  | 170     | -83%       | -85%       | 2,114       | -24%          |

#### **Iron Ore Company of Canada (IOC)**

Third quarter production available for sale at IOC was 3% higher than the corresponding period of 2018. It was 17% higher than the prior quarter, when production was impacted by a flooding incident in June.

#### **Borates**

Both the sodium borate and non-sodium borate refineries operated below capacity during the third quarter, aligned with market conditions. We will base any decision to increase refinery utilisation rates on maximising value over volume.

#### **Iron and Titanium**

Titanium dioxide feedstock production in the third quarter was 8% higher than the same period of 2018, reflecting improved operational performance and the restart of furnaces.

Eight of nine furnaces at Rio Tinto Fer et Titane (RTFT) are currently in operation, with three of four furnaces currently in operation at Richards Bay Minerals (RBM). This compares with six out of nine furnaces in operation at RTFT and three out of four at RBM in the third quarter of 2018. We will base our decision to re-start the remaining idled furnaces on maximising value over volume.

#### **Zulti South project**

Construction of the \$463 million Zulti South project at RBM in South Africa, which was forecast to commence in June, has been delayed due to ongoing negotiations with local communities.

#### **Uranium**

Energy Resources of Australia continues to process existing stockpiles. Third quarter production was 29% lower than the same period of 2018, reflecting lower grades.

Production from Rössing Uranium is reported up to the date of completion of divestment on 16 July 2019.

#### **2019 guidance**

Our 2019 guidance (Rio Tinto share) is unchanged, with iron ore pellets and concentrate production of between 10.7 and 11.3 million tonnes, titanium dioxide slag production of between 1.2 and 1.4 million tonnes and boric oxide equivalent production of 0.5 million tonnes.



## EXPLORATION AND EVALUATION

Pre-tax and pre-divestment expenditure on exploration and evaluation charged to the profit and loss account in the first nine months of 2019 was \$464 million, compared with \$341 million in the first nine months of 2018, with increased spend at Resolution Copper and on central exploration Order of Magnitude studies in Australia and North America. Approximately 53% of this expenditure was incurred by central exploration, 35% by Copper & Diamonds, 7% by Energy & Minerals and the remainder by Iron Ore and Aluminium.

There were no significant divestments of central exploration properties in the third quarter of 2019.

### **Exploration highlights**

Rio Tinto has a strong portfolio of projects with activity in 18 countries across some seven commodities. The bulk of the exploration expenditure in this quarter was focused on copper in Australia, Canada, Chile, Kazakhstan, Mongolia, Papua New Guinea, Namibia, Peru, Serbia, United States, Zambia and diamonds projects in Canada. Mine-lease exploration continued at a number of Rio Tinto managed businesses including Pilbara Iron in Australia, Oyu Tolgoi in Mongolia, Diavik in Canada, as well as Resolution and Boron in the US. A summary of activity for the quarter is as follows:

| Commodities       | Studies Stage                                                                                       | Advanced projects                                                                               | Greenfield/ Brownfield programmes                                                                                                                                                                                                                                                                      |
|-------------------|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Aluminium         | Cape York, Australia                                                                                | Amargosa, Brazil<br>Sanxai, Laos                                                                | Cape York, Australia                                                                                                                                                                                                                                                                                   |
| Copper & Diamonds | Copper/molybdenum: Resolution, US                                                                   | Copper: Winu, Australia,<br>La Granja, Peru<br>Nickel: Tamarack, US<br>Diamonds: Falcon, Canada | Copper Greenfield: Australia, Chile, China, Kazakhstan, Mongolia, Namibia, Papua New Guinea, Peru, Serbia, US, Zambia<br>Copper Brownfield: Resolution, US<br>Oyu Tolgoi, Mongolia<br>Nickel Greenfield: Canada, Finland, Uganda<br>Diamonds Greenfield: Canada<br>Diamonds Brownfield: Diavik, Canada |
| Energy & Minerals | Lithium borates: Jadar, Serbia<br>Potash: KP405, Canada<br>Heavy mineral sands: Mutamba, Mozambique | Uranium: Roughrider, Canada                                                                     | Heavy mineral sands: Tanzania<br>Industrial Minerals: Serbia                                                                                                                                                                                                                                           |
| Iron Ore          | Pilbara, Australia                                                                                  | Pilbara, Australia                                                                              | Brownfield: Pilbara, Australia                                                                                                                                                                                                                                                                         |

## **Forward-looking statements**

This announcement may include "forward-looking statements" within the meaning of the US Private Securities Litigation Reform Act of 1995. All statements other than statements of historical facts included in this announcement, including, without limitation, those regarding Rio Tinto's production forecast or guidance, financial position, business strategy, plans and objectives of management for future operations (including development plans and objectives relating to Rio Tinto's products and reserve and resource positions), are forward-looking statements. The words "intend", "aim", "project", "anticipate", "estimate", "plan", "believes", "expects", "may", "should", "will", "target", "set to", "assumes" or similar expressions, commonly identify such forward looking statements.

Such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual production, performance or results of Rio Tinto to be materially different from any future production, performance or results expressed or implied by such forward-looking statements. Such forward-looking statements could be influenced by such risk factors as identified in Rio Tinto's most recent Annual Report and Accounts in Australia and the United Kingdom and the most recent Annual Report on Form 20-F filed with the United States Securities and Exchange Commission (the "SEC") or Form 6-Ks furnished to, or filed with, the SEC. Forward-looking statements should, therefore, be construed in light of such risk factors and undue reliance should not be placed on forward-looking statements. These forward-looking statements speak only as of the date of this announcement. Rio Tinto expressly disclaims any obligation or undertaking (except as required by applicable law, the UK Listing Rules, the Disclosure and Transparency Rules of the Financial Conduct Authority and the Listing Rules of the Australian Securities Exchange) to release publicly any updates or revisions to any forward-looking statement contained herein to reflect any change in Rio Tinto's expectations with regard thereto or any change in events, conditions or circumstances on which any such statement is based.

Nothing in this announcement should be interpreted to mean that future earnings per share of Rio Tinto plc or Rio Tinto Limited will necessarily match or exceed its historical published earnings per share.

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# Rio Tinto production summary

## Rio Tinto share of production

|                                    |            | Quarter    |            |               | 9 Months       |                | % Change             |                      |                              |
|------------------------------------|------------|------------|------------|---------------|----------------|----------------|----------------------|----------------------|------------------------------|
|                                    |            | 2018<br>Q3 | 2019<br>Q2 | 2019<br>Q3    | 2018<br>9 MTHS | 2019<br>9 MTHS | Q3 19<br>vs<br>Q3 18 | Q3 19<br>vs<br>Q2 19 | 9 MTHS 19<br>vs<br>9 MTHS 18 |
| <b>Principal Commodities</b>       |            |            |            |               |                |                |                      |                      |                              |
| Alumina                            | ('000 t)   | 1,972      | 1,878      | <b>1,826</b>  | 5,960          | <b>5,713</b>   | -7%                  | -3%                  | -4%                          |
| Aluminium                          | ('000 t)   | 814        | 803        | <b>789</b>    | 2,414          | <b>2,388</b>   | -3%                  | -2%                  | -1%                          |
| Bauxite                            | ('000 t)   | 12,700     | 13,407     | <b>13,796</b> | 38,631         | <b>39,967</b>  | 9%                   | 3%                   | 3%                           |
| Borates                            | ('000 t)   | 137        | 138        | <b>138</b>    | 394            | <b>391</b>     | 1%                   | 0%                   | -1%                          |
| Copper - mined                     | ('000 t)   | 159.7      | 137.1      | <b>157.8</b>  | 455.8          | <b>437.6</b>   | -1%                  | 15%                  | -4%                          |
| Copper - refined                   | ('000 t)   | 70.8       | 82.3       | <b>57.1</b>   | 188.6          | <b>187.7</b>   | -19%                 | -31%                 | 0%                           |
| Diamonds                           | ('000 cts) | 4,896      | 4,481      | <b>4,551</b>  | 14,137         | <b>12,828</b>  | -7%                  | 2%                   | -9%                          |
| Iron Ore                           | ('000 t)   | 72,010     | 68,141     | <b>75,117</b> | 215,782        | <b>209,839</b> | 4%                   | 10%                  | -3%                          |
| Titanium dioxide slag              | ('000 t)   | 297        | 303        | <b>321</b>    | 822            | <b>920</b>     | 8%                   | 6%                   | 12%                          |
| Uranium                            | ('000 lbs) | 1,814      | 1,762      | <b>755</b>    | 4,860          | <b>4,111</b>   | -58%                 | -57%                 | -15%                         |
| <b>Other Metals &amp; Minerals</b> |            |            |            |               |                |                |                      |                      |                              |
| Gold - mined                       | ('000 oz)  | 101.4      | 111.6      | <b>87.8</b>   | 253.7          | <b>314.8</b>   | -13%                 | -21%                 | 24%                          |
| Gold - refined                     | ('000 oz)  | 50.3       | 52.9       | <b>60.8</b>   | 139.5          | <b>155.4</b>   | 21%                  | 15%                  | 11%                          |
| Molybdenum                         | ('000 t)   | 1.4        | 2.6        | <b>2.1</b>    | 3.5            | <b>6.6</b>     | 56%                  | -18%                 | 86%                          |
| Salt                               | ('000 t)   | 1,481      | 1,269      | <b>1,392</b>  | 4,657          | <b>3,972</b>   | -6%                  | 10%                  | -15%                         |
| Silver - mined                     | ('000 oz)  | 1,384      | 1,403      | <b>1,320</b>  | 4,070          | <b>4,203</b>   | -5%                  | -6%                  | 3%                           |
| Silver - refined                   | ('000 oz)  | 730        | 734        | <b>664</b>    | 2,058          | <b>2,014</b>   | -9%                  | -10%                 | -2%                          |

Throughout this report, figures in *italics* indicate adjustments made since the figure was previously quoted on the equivalent page. Production figures are sometimes more precise than the rounded numbers shown, hence small differences may result between the total of the quarter figures and the year to date figures.

# Rio Tinto share of production

|                                               | Rio Tinto<br>interest | Q3<br>2018 | Q4<br>2018 | Q1<br>2019 | Q2<br>2019 | Q3<br>2019 | 9 MTHS<br>2018 | 9 MTHS<br>2019 |
|-----------------------------------------------|-----------------------|------------|------------|------------|------------|------------|----------------|----------------|
| <b>ALUMINA</b>                                |                       |            |            |            |            |            |                |                |
| <b>Production ('000 tonnes)</b>               |                       |            |            |            |            |            |                |                |
| Jonquière (Vaudreuil)                         | 100%                  | 363        | 354        | 373        | 336        | 360        | 1,090          | 1,069          |
| Jonquière (Vaudreuil) specialty Alumina plant | 100%                  | 31         | 29         | 25         | 31         | 28         | 95             | 85             |
| Queensland Alumina                            | 80%                   | 748        | 742        | 711        | 668        | 669        | 2,216          | 2,047          |
| São Luis (Alumar)                             | 10%                   | 85         | 92         | 86         | 86         | 99         | 259            | 271            |
| Yarwun                                        | 100%                  | 744        | 803        | 813        | 757        | 671        | 2,300          | 2,241          |
| Rio Tinto total alumina production            |                       | 1,972      | 2,020      | 2,008      | 1,878      | 1,826      | 5,960          | 5,713          |
| <b>ALUMINIUM</b>                              |                       |            |            |            |            |            |                |                |
| <b>Production ('000 tonnes)</b>               |                       |            |            |            |            |            |                |                |
| Australia - Bell Bay                          | 100%                  | 48         | 48         | 45         | 47         | 48         | 141            | 141            |
| Australia - Boyne Island                      | 59%                   | 75         | 74         | 73         | 75         | 75         | 221            | 222            |
| Australia - Tomago                            | 52%                   | 78         | 77         | 74         | 76         | 77         | 228            | 227            |
| Canada - six wholly owned                     | 100%                  | 407        | 408        | 400        | 400        | 399        | 1,208          | 1,198          |
| Canada - Alouette (Sept-Îles)                 | 40%                   | 59         | 58         | 58         | 60         | 61         | 175            | 179            |
| Canada - Bécancour                            | 25%                   | 8          | 8          | 4          | 4          | 4          | 26             | 12             |
| Iceland - ISAL (Reykjavik)                    | 100%                  | 53         | 54         | 52         | 52         | 36         | 158            | 141            |
| New Zealand - Tiwai Point                     | 79%                   | 68         | 70         | 71         | 69         | 70         | 200            | 210            |
| Oman - Sohar                                  | 20%                   | 20         | 20         | 19         | 19         | 20         | 56             | 58             |
| Rio Tinto total aluminium production          |                       | 814        | 817        | 796        | 803        | 789        | 2,414          | 2,388          |
| <b>BAUXITE</b>                                |                       |            |            |            |            |            |                |                |
| <b>Production ('000 tonnes) (a)</b>           |                       |            |            |            |            |            |                |                |
| Gove                                          | 100%                  | 2,893      | 3,250      | 3,004      | 2,957      | 2,968      | 9,290          | 8,929          |
| Porto Trombetas                               | 12%                   | 342        | 489        | 285        | 287        | 385        | 1,087          | 956            |
| Sangaredi                                     | (b)                   | 1,261      | 1,204      | 1,558      | 1,630      | 1,749      | 4,664          | 4,938          |
| Weipa                                         | 100%                  | 8,204      | 6,847      | 7,917      | 8,533      | 8,695      | 23,590         | 25,144         |
| Rio Tinto total bauxite production            |                       | 12,700     | 11,790     | 12,763     | 13,407     | 13,796     | 38,631         | 39,967         |

(a) 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 plus concentrates and pellets.

(b) Rio Tinto has a 22.95% shareholding in the Sangaredi mine but benefits from 45.0% of production.

# Rio Tinto share of production

|                                                                    | Rio Tinto<br>interest | Q3<br>2018 | Q4<br>2018 | Q1<br>2019 | Q2<br>2019 | Q3<br>2019 | 9 MTHS<br>2018 | 9 MTHS<br>2019 |
|--------------------------------------------------------------------|-----------------------|------------|------------|------------|------------|------------|----------------|----------------|
| <b>BORATES</b>                                                     |                       |            |            |            |            |            |                |                |
| <b>Production ('000 tonnes B<sub>2</sub>O<sub>3</sub> content)</b> |                       |            |            |            |            |            |                |                |
| Rio Tinto Borates - borates                                        | 100%                  | 137        | 118        | 115        | 138        | 138        | 394            | 391            |
| <b>COPPER</b>                                                      |                       |            |            |            |            |            |                |                |
| <b>Mine production ('000 tonnes) (a)</b>                           |                       |            |            |            |            |            |                |                |
| Bingham Canyon                                                     | 100%                  | 59.1       | 58.3       | 52.5       | 41.1       | 57.8       | 145.7          | 151.4          |
| Escondida                                                          | 30%                   | 87.4       | 79.7       | 74.8       | 82.9       | 90.5       | 270.7          | 248.1          |
| Oyu Tolgoi (b)                                                     | 34%                   | 13.2       | 13.9       | 15.4       | 13.1       | 9.5        | 39.4           | 38.0           |
| Rio Tinto total mine production                                    |                       | 159.7      | 151.9      | 142.7      | 137.1      | 157.8      | 455.8          | 437.6          |
| <b>Refined production ('000 tonnes)</b>                            |                       |            |            |            |            |            |                |                |
| Escondida                                                          | 30%                   | 16.6       | 21.6       | 18.7       | 19.0       | 16.8       | 58.5           | 54.5           |
| Rio Tinto Kennecott                                                | 100%                  | 54.2       | 64.6       | 29.6       | 63.3       | 40.3       | 130.2          | 133.2          |
| Rio Tinto total refined production                                 |                       | 70.8       | 86.1       | 48.3       | 82.3       | 57.1       | 188.6          | 187.7          |

(a) 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 plus concentrates and pellets.

(b) Rio Tinto owns a 33.52% indirect interest in Oyu Tolgoi through its 50.79% interest in Turquoise Hill Resources Ltd.

|                                          |      |       |       |       |       |       |        |        |
|------------------------------------------|------|-------|-------|-------|-------|-------|--------|--------|
| <b>DIAMONDS</b>                          |      |       |       |       |       |       |        |        |
| <b>Production ('000 carats)</b>          |      |       |       |       |       |       |        |        |
| Argyle                                   | 100% | 3,830 | 3,211 | 2,786 | 3,292 | 3,558 | 10,857 | 9,636  |
| Diavik                                   | 60%  | 1,066 | 1,078 | 1,010 | 1,188 | 994   | 3,280  | 3,191  |
| Rio Tinto total diamond production       |      | 4,896 | 4,290 | 3,796 | 4,481 | 4,551 | 14,137 | 12,828 |
| <b>GOLD</b>                              |      |       |       |       |       |       |        |        |
| <b>Mine production ('000 ounces) (a)</b> |      |       |       |       |       |       |        |        |
| Bingham Canyon                           | 100% | 56.6  | 57.1  | 53.0  | 65.1  | 64.6  | 139.6  | 182.6  |
| Escondida                                | 30%  | 19.1  | 22.1  | 22.2  | 22.4  | 14.6  | 57.6   | 59.3   |
| Oyu Tolgoi (b)                           | 34%  | 25.8  | 39.1  | 40.2  | 24.1  | 8.6   | 56.6   | 72.9   |
| Rio Tinto total mine production          |      | 101.4 | 118.4 | 115.4 | 111.6 | 87.8  | 253.7  | 314.8  |
| <b>Refined production ('000 ounces)</b>  |      |       |       |       |       |       |        |        |
| Rio Tinto Kennecott                      | 100% | 50.3  | 58.6  | 41.7  | 52.9  | 60.8  | 139.5  | 155.4  |

(a) 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 plus concentrates and pellets.

(b) Rio Tinto owns a 33.52% indirect interest in Oyu Tolgoi through its 50.79% interest in Turquoise Hill Resources Ltd.

# Rio Tinto share of production

|                                             | Rio Tinto<br>interest | Q3<br>2018    | Q4<br>2018    | Q1<br>2019    | Q2<br>2019    | Q3<br>2019    | 9 MTHS<br>2018 | 9 MTHS<br>2019 |
|---------------------------------------------|-----------------------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|
| <b>IRON ORE</b>                             |                       |               |               |               |               |               |                |                |
| <b>Production ('000 tonnes) (a)</b>         |                       |               |               |               |               |               |                |                |
| Hamersley mines                             | (b)                   | 54,583        | 56,364        | 51,218        | 50,087        | <b>55,567</b> | 164,248        | <b>156,871</b> |
| Hamersley - Channar                         | 60%                   | 604           | 1,337         | 931           | 1,451         | <b>947</b>    | 2,967          | <b>3,330</b>   |
| Hope Downs                                  | 50%                   | 5,713         | 5,845         | 5,957         | 6,051         | <b>6,077</b>  | 16,839         | <b>18,085</b>  |
| Iron Ore Company of Canada                  | 59%                   | 2,880         | 2,836         | 2,481         | 2,532         | <b>2,960</b>  | 6,116          | <b>7,972</b>   |
| Robe River - Pannawonica (Mesas J and A)    | 53%                   | 4,208         | 4,004         | 1,870         | 3,329         | <b>4,725</b>  | 12,928         | <b>9,924</b>   |
| Robe River - West Angelas                   | 53%                   | 4,021         | 4,631         | 4,125         | 4,692         | <b>4,840</b>  | 12,685         | <b>13,657</b>  |
| Rio Tinto iron ore production ('000 tonnes) |                       | <b>72,010</b> | <b>75,018</b> | <b>66,581</b> | <b>68,141</b> | <b>75,117</b> | <b>215,782</b> | <b>209,839</b> |
| Breakdown of Production:                    |                       |               |               |               |               |               |                |                |
| Pilbara Blend Lump                          |                       | 20,554        | 21,674        | 19,978        | 19,842        | <b>21,015</b> | 63,169         | <b>60,836</b>  |
| Pilbara Blend Fines                         |                       | 29,921        | 31,652        | 28,779        | 28,463        | <b>31,713</b> | 90,930         | <b>88,955</b>  |
| Robe Valley Lump                            |                       | 1,470         | 1,409         | 635           | 1,201         | <b>1,650</b>  | 4,488          | <b>3,486</b>   |
| Robe Valley Fines                           |                       | 2,738         | 2,595         | 1,235         | 2,128         | <b>3,075</b>  | 8,441          | <b>6,438</b>   |
| Yandicoogina Fines (HIY)                    |                       | 14,446        | 14,852        | 13,473        | 13,975        | <b>14,704</b> | 42,639         | <b>42,151</b>  |
| Pilbara iron ore production ('000 tonnes)   |                       | <b>69,129</b> | <b>72,182</b> | <b>64,101</b> | <b>65,610</b> | <b>72,156</b> | <b>209,666</b> | <b>201,867</b> |
| IOC Concentrate                             |                       | 1,131         | 1,433         | 890           | 1,193         | <b>1,400</b>  | 2,501          | <b>3,483</b>   |
| IOC Pellets                                 |                       | 1,750         | 1,403         | 1,590         | 1,339         | <b>1,560</b>  | 3,615          | <b>4,489</b>   |
| IOC iron ore production ('000 tonnes)       |                       | <b>2,880</b>  | <b>2,836</b>  | <b>2,481</b>  | <b>2,532</b>  | <b>2,960</b>  | <b>6,116</b>   | <b>7,972</b>   |
| Breakdown of Sales:                         |                       |               |               |               |               |               |                |                |
| Pilbara Blend Lump                          |                       | 17,967        | 18,439        | 15,772        | 18,644        | <b>18,633</b> | 55,453         | <b>53,049</b>  |
| Pilbara Blend Fines                         |                       | 31,432        | 35,205        | 28,406        | 33,912        | <b>34,088</b> | 97,336         | <b>96,406</b>  |
| Robe Valley Lump                            |                       | 1,174         | 1,219         | 457           | 1,037         | <b>1,290</b>  | 3,661          | <b>2,784</b>   |
| Robe Valley Fines                           |                       | 2,839         | 2,996         | 1,308         | 2,577         | <b>3,349</b>  | 9,089          | <b>7,234</b>   |
| Yandicoogina Fines (HIY)                    |                       | 14,583        | 14,831        | 12,294        | 15,212        | <b>14,286</b> | 42,549         | <b>41,791</b>  |
| Pilbara iron ore sales ('000 tonnes) (c)    |                       | <b>67,995</b> | <b>72,690</b> | <b>58,236</b> | <b>71,382</b> | <b>71,646</b> | <b>208,088</b> | <b>201,264</b> |
| IOC Concentrate                             |                       | 1,521         | 1,558         | 516           | 1,315         | <b>1,425</b>  | 2,329          | <b>3,256</b>   |
| IOC Pellets                                 |                       | 1,659         | 1,516         | 1,576         | 1,423         | <b>1,229</b>  | 3,435          | <b>4,228</b>   |
| IOC Iron ore sales ('000 tonnes)            |                       | <b>3,180</b>  | <b>3,073</b>  | <b>2,092</b>  | <b>2,738</b>  | <b>2,654</b>  | <b>5,763</b>   | <b>7,484</b>   |
| Rio Tinto iron ore sales ('000 tonnes)      |                       | <b>71,175</b> | <b>75,763</b> | <b>60,328</b> | <b>74,119</b> | <b>74,300</b> | <b>213,851</b> | <b>208,748</b> |

(a) 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 plus concentrates and pellets.

(b) Includes 100% of production from Paraburdoo, Mt Tom Price, Marandoo, Yandicoogina, Brockman, Nammuldi, Silvergrass and the Eastern Range mines. Whilst Rio Tinto owns 54% of the Eastern Range mine, under the terms of the joint venture agreement, Hamersley Iron manages the operation and is obliged to purchase all mine production from the joint venture and therefore all of the production is included in Rio Tinto's share of production.

(c) Pilbara Blend sales include 6.7 million tonnes of alternate products in Q3 2019 and 10.7 million tonnes in YTD 2019

# Rio Tinto share of production

|                                          | Rio Tinto<br>interest | Q3<br>2018 | Q4<br>2018 | Q1<br>2019 | Q2<br>2019 | Q3<br>2019 | 9 MTHS<br>2018 | 9 MTHS<br>2019 |
|------------------------------------------|-----------------------|------------|------------|------------|------------|------------|----------------|----------------|
| <b>MOLYBDENUM</b>                        |                       |            |            |            |            |            |                |                |
| <b>Mine production ('000 tonnes) (a)</b> |                       |            |            |            |            |            |                |                |
| Bingham Canyon                           | 100%                  | 1.4        | 2.2        | 1.9        | 2.6        | 2.1        | 3.5            | 6.6            |

(a) 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 plus concentrates and pellets.

|                                 |     |       |       |       |       |       |       |       |
|---------------------------------|-----|-------|-------|-------|-------|-------|-------|-------|
| <b>SALT</b>                     |     |       |       |       |       |       |       |       |
| <b>Production ('000 tonnes)</b> |     |       |       |       |       |       |       |       |
| Dampier Salt                    | 68% | 1,481 | 1,496 | 1,310 | 1,269 | 1,392 | 4,657 | 3,972 |

|                                          |      |       |       |       |       |       |       |       |
|------------------------------------------|------|-------|-------|-------|-------|-------|-------|-------|
| <b>SILVER</b>                            |      |       |       |       |       |       |       |       |
| <b>Mine production ('000 ounces) (a)</b> |      |       |       |       |       |       |       |       |
| Bingham Canyon                           | 100% | 708   | 736   | 741   | 700   | 768   | 1,784 | 2,210 |
| Escondida                                | 30%  | 599   | 771   | 657   | 622   | 488   | 2,059 | 1,767 |
| Oyu Tolgoi (b)                           | 34%  | 77    | 80    | 83    | 80    | 64    | 227   | 227   |
| Rio Tinto total mine production          |      | 1,384 | 1,586 | 1,481 | 1,403 | 1,320 | 4,070 | 4,203 |

## Refined production ('000 ounces)

|                     |      |     |     |     |     |     |       |       |
|---------------------|------|-----|-----|-----|-----|-----|-------|-------|
| Rio Tinto Kennecott | 100% | 730 | 807 | 617 | 734 | 664 | 2,058 | 2,014 |
|---------------------|------|-----|-----|-----|-----|-----|-------|-------|

(a) 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 plus concentrates and pellets.

(b) Rio Tinto owns a 33.52% indirect interest in Oyu Tolgoi through its 50.79% interest in Turquoise Hill Resources Ltd.

|                                 |      |     |     |     |     |     |     |     |
|---------------------------------|------|-----|-----|-----|-----|-----|-----|-----|
| <b>TITANIUM DIOXIDE SLAG</b>    |      |     |     |     |     |     |     |     |
| <b>Production ('000 tonnes)</b> |      |     |     |     |     |     |     |     |
| Rio Tinto Iron & Titanium (a)   | 100% | 297 | 294 | 296 | 303 | 321 | 822 | 920 |

(a) Quantities comprise 100% of Rio Tinto Fer et Titane and Rio Tinto's 74% interest in Richards Bay Minerals (RBM).

|                                                             |     |       |       |       |       |     |       |       |
|-------------------------------------------------------------|-----|-------|-------|-------|-------|-----|-------|-------|
| <b>URANIUM</b>                                              |     |       |       |       |       |     |       |       |
| <b>Production ('000 lbs U<sub>3</sub>O<sub>8</sub>) (a)</b> |     |       |       |       |       |     |       |       |
| Energy Resources of Australia                               | 68% | 820   | 924   | 793   | 620   | 585 | 2,090 | 1,998 |
| Rössing (b)                                                 | 0%  | 994   | 979   | 802   | 1,142 | 170 | 2,771 | 2,114 |
| Rio Tinto total uranium production                          |     | 1,814 | 1,904 | 1,595 | 1,762 | 755 | 4,860 | 4,111 |

(a) ERA and Rössing production reported are drummed U<sub>3</sub>O<sub>8</sub>.

(b) On 16 July 2019, Rio Tinto completed the sale of its entire 68.62% interest in the Rössing mine in Namibia to China National Uranium Corporation Limited. Production is reported up to the date of completion.

Production figures are sometimes more precise than the rounded numbers shown, hence small differences may result between the total of the quarter figures and the year to date figures.

The Rio Tinto percentage shown above is at 30 September 2019.

Rio Tinto's interest in the Kestrel, Hail Creek, Dunkerque and Grasberg operations were sold in 2018. No data for these operations are included in the Share of production table.



## Rio Tinto operational data

|                                                                                                                                                                 | Rio Tinto<br>interest | Q3<br>2018 | Q4<br>2018 | Q1<br>2019 | Q2<br>2019 | Q3<br>2019 | 9 MTHS<br>2018 | 9 MTHS<br>2019 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------|------------|------------|------------|------------|----------------|----------------|
| <b>ALUMINA</b>                                                                                                                                                  |                       |            |            |            |            |            |                |                |
| <b>Smelter Grade Alumina - Aluminium Group</b>                                                                                                                  |                       |            |            |            |            |            |                |                |
| Alumina production ('000 tonnes)                                                                                                                                |                       |            |            |            |            |            |                |                |
| <i>Australia</i>                                                                                                                                                |                       |            |            |            |            |            |                |                |
| Queensland Alumina Refinery - Queensland                                                                                                                        | 80.0%                 | 935        | 927        | 888        | 834        | 836        | 2,770          | 2,559          |
| Yarwun refinery - Queensland                                                                                                                                    | 100.0%                | 744        | 803        | 813        | 757        | 671        | 2,300          | 2,241          |
| <i>Brazil</i>                                                                                                                                                   |                       |            |            |            |            |            |                |                |
| São Luis (Alumar) refinery                                                                                                                                      | 10.0%                 | 851        | 918        | 859        | 864        | 989        | 2,592          | 2,713          |
| <i>Canada</i>                                                                                                                                                   |                       |            |            |            |            |            |                |                |
| Jonquière (Vaudreuil) refinery - Quebec (a)                                                                                                                     | 100.0%                | 363        | 354        | 373        | 336        | 360        | 1,090          | 1,069          |
| <i>(a) Jonquière's (Vaudreuil's) production shows smelter grade alumina only and excludes hydrate produced and used for specialty alumina.</i>                  |                       |            |            |            |            |            |                |                |
| <b>Specialty Alumina - Aluminium Group</b>                                                                                                                      |                       |            |            |            |            |            |                |                |
| Specialty alumina production ('000 tonnes)                                                                                                                      |                       |            |            |            |            |            |                |                |
| <i>Canada</i>                                                                                                                                                   |                       |            |            |            |            |            |                |                |
| Jonquière (Vaudreuil) plant – Quebec                                                                                                                            | 100.0%                | 31         | 29         | 25         | 31         | 28         | 95             | 85             |
| <b>Rio Tinto percentage interest shown above is at 30 September 2019. The data represent full production and sales on a 100% basis unless otherwise stated.</b> |                       |            |            |            |            |            |                |                |

# Rio Tinto operational data

|                                            | Rio Tinto<br>interest | Q3<br>2018 | Q4<br>2018 | Q1<br>2019 | Q2<br>2019 | Q3<br>2019 | 9 MTHS<br>2018 | 9 MTHS<br>2019 |
|--------------------------------------------|-----------------------|------------|------------|------------|------------|------------|----------------|----------------|
| <b>ALUMINIUM</b>                           |                       |            |            |            |            |            |                |                |
| <b>Primary Aluminium</b>                   |                       |            |            |            |            |            |                |                |
| Primary aluminium production ('000 tonnes) |                       |            |            |            |            |            |                |                |
| <i>Australia</i>                           |                       |            |            |            |            |            |                |                |
| Bell Bay smelter - Tasmania                | 100.0%                | 48         | 48         | 45         | 47         | 48         | 141            | 141            |
| Boyne Island smelter - Queensland          | 59.4%                 | 126        | 125        | 122        | 126        | 125        | 371            | 374            |
| Tomago smelter - New South Wales           | 51.6%                 | 151        | 149        | 144        | 147        | 149        | 443            | 440            |
| <i>Canada</i>                              |                       |            |            |            |            |            |                |                |
| Alma smelter - Quebec                      | 100.0%                | 117        | 118        | 115        | 118        | 119        | 347            | 352            |
| Alouette (Sept-Îles) smelter - Quebec      | 40.0%                 | 148        | 146        | 144        | 150        | 153        | 438            | 447            |
| Arvida smelter - Quebec                    | 100.0%                | 43         | 44         | 43         | 44         | 45         | 129            | 131            |
| Arvida AP60 smelter - Quebec               | 100.0%                | 13         | 13         | 14         | 15         | 15         | 39             | 44             |
| Bécancour smelter - Quebec                 | 25.1%                 | 32         | 30         | 17         | 16         | 16         | 105            | 49             |
| Grande-Baie smelter - Quebec               | 100.0%                | 59         | 59         | 58         | 58         | 59         | 174            | 174            |
| Kitimat smelter - British Columbia         | 100.0%                | 110        | 109        | 106        | 102        | 96         | 327            | 304            |
| Laterrière smelter - Quebec                | 100.0%                | 65         | 65         | 64         | 64         | 65         | 191            | 193            |
| <i>France</i>                              |                       |            |            |            |            |            |                |                |
| Dunkerque smelter (a)                      | 0%                    | 66         | 57         | -          | -          | -          | 170            | -              |
| <i>Iceland</i>                             |                       |            |            |            |            |            |                |                |
| ISAL (Reykjavik) smelter                   | 100.0%                | 53         | 54         | 52         | 52         | 36         | 158            | 141            |
| <i>New Zealand</i>                         |                       |            |            |            |            |            |                |                |
| Tiwai Point smelter                        | 79.4%                 | 85         | 88         | 89         | 87         | 88         | 252            | 264            |
| <i>Oman</i>                                |                       |            |            |            |            |            |                |                |
| Sohar smelter                              | 20.0%                 | 98         | 99         | 97         | 97         | 98         | 281            | 292            |

(a) On 14 December 2018, Rio Tinto completed the sale of its 100% interest in the Dunkerque smelter. Production is reported up to the date of completion.

**Rio Tinto percentage interest shown above is at 30 September 2019. The data represent full production and sales on a 100% basis unless otherwise stated.**

## Rio Tinto operational data

|                                                      | Rio Tinto<br>interest | Q3<br>2018 | Q4<br>2018 | Q1<br>2019 | Q2<br>2019 | Q3<br>2019 | 9 MTHS<br>2018 | 9 MTHS<br>2019 |
|------------------------------------------------------|-----------------------|------------|------------|------------|------------|------------|----------------|----------------|
| <b>BAUXITE</b>                                       |                       |            |            |            |            |            |                |                |
| Bauxite production ('000 tonnes)                     |                       |            |            |            |            |            |                |                |
| <i>Australia</i>                                     |                       |            |            |            |            |            |                |                |
| Gove mine - Northern Territory                       | 100.0%                | 2,893      | 3,250      | 3,004      | 2,957      | 2,968      | 9,290          | 8,929          |
| Weipa mine - Queensland                              | 100.0%                | 8,204      | 6,847      | 7,917      | 8,533      | 8,695      | 23,590         | 25,144         |
| <i>Brazil</i>                                        |                       |            |            |            |            |            |                |                |
| Porto Trombetas (MRN) mine                           | 12.0%                 | 2,848      | 4,073      | 2,372      | 2,393      | 3,205      | 9,061          | 7,970          |
| <i>Guinea</i>                                        |                       |            |            |            |            |            |                |                |
| Sangaredi mine (a)                                   | 23.0%                 | 2,803      | 2,675      | 3,463      | 3,623      | 3,887      | 10,364         | 10,973         |
| <b>Rio Tinto share of bauxite shipments</b>          |                       |            |            |            |            |            |                |                |
| Share of total bauxite shipments ('000 tonnes)       |                       | 12,427     | 11,622     | 12,725     | 13,122     | 13,912     | 37,914         | 39,758         |
| Share of third party bauxite shipments ('000 tonnes) |                       | 8,441      | 7,387      | 8,842      | 9,477      | 10,361     | 25,427         | 28,680         |

(a) Rio Tinto has a 22.95% shareholding in the Sangaredi mine but benefits from 45.0% of production.

**Rio Tinto percentage interest shown above is at 30 September 2019. The data represent full production and sales on a 100% basis unless otherwise stated.**

## Rio Tinto operational data

|                                                                           | Rio Tinto<br>interest | Q3<br>2018 | Q4<br>2018 | Q1<br>2019 | Q2<br>2019 | Q3<br>2019 | 9 MTHS<br>2018 | 9 MTHS<br>2019 |
|---------------------------------------------------------------------------|-----------------------|------------|------------|------------|------------|------------|----------------|----------------|
| <b>BORATES</b>                                                            |                       |            |            |            |            |            |                |                |
| <b>Rio Tinto Borates - borates</b>                                        | 100.0%                |            |            |            |            |            |                |                |
| <i>US</i>                                                                 |                       |            |            |            |            |            |                |                |
| Borates ('000 tonnes) (a)                                                 |                       | 137        | 118        | 115        | 138        | 138        | 394            | 391            |
| <i>(a) Production is expressed as B<sub>2</sub>O<sub>3</sub> content.</i> |                       |            |            |            |            |            |                |                |
| <b>COAL</b>                                                               |                       |            |            |            |            |            |                |                |
| <b>Rio Tinto Coal Australia</b>                                           |                       |            |            |            |            |            |                |                |
| <b>Hail Creek Coal mine (a)</b>                                           | 0.0%                  |            |            |            |            |            |                |                |
| <i>Queensland</i>                                                         |                       |            |            |            |            |            |                |                |
| Hard coking coal ('000 tonnes)                                            |                       | 396        | -          | -          | -          | -          | 2,700          | -              |
| Thermal coal ('000 tonnes)                                                |                       | 449        | -          | -          | -          | -          | 2,760          | -              |
| <b>Kestrel Coal mine (b)</b>                                              | 0.0%                  |            |            |            |            |            |                |                |
| <i>Queensland</i>                                                         |                       |            |            |            |            |            |                |                |
| Hard coking coal ('000 tonnes)                                            |                       | 484        | -          | -          | -          | -          | 2,217          | -              |
| Thermal coal ('000 tonnes)                                                |                       | 35         | -          | -          | -          | -          | 329            | -              |
| Total hard coking coal production ('000 tonnes)                           |                       | 880        | -          | -          | -          | -          | 4,917          | -              |
| Total thermal coal production ('000 tonnes)                               |                       | 485        | -          | -          | -          | -          | 3,089          | -              |
| Total coal production ('000 tonnes)                                       |                       | 1,365      | -          | -          | -          | -          | 8,007          | -              |
| Total coal sales ('000 tonnes)                                            |                       | 1,725      | -          | -          | -          | -          | 8,492          | -              |
| <b>Rio Tinto Coal Australia share (c)</b>                                 |                       |            |            |            |            |            |                |                |
| Share of hard coking coal sales ('000 tonnes)                             |                       | 650        | -          | -          | -          | -          | 4,246          | -              |
| Share of thermal coal sales ('000 tonnes) (d)                             |                       | 754        | -          | -          | -          | -          | 2,664          | -              |

(a) On 1 August 2018, Rio Tinto completed the sale of its 82% interest in the Hail Creek mine. Production is reported up to the date of completion.

(b) On 1 August 2018, Rio Tinto completed the sale of its 80% interest in the Kestrel mine. Production is reported up to the date of completion.

(c) Kestrel and Hail Creek produce hard coking coal and thermal coal through their mining operations. Both mines may blend coal types at ports.

(d) Sales relate only to coal mined by the operations and exclude traded coal.

**Rio Tinto percentage interest shown above is at 30 September 2019. The data represent full production and sales on a 100% basis unless otherwise stated.**

# Rio Tinto operational data

|                                                                                                        | Rio Tinto<br>interest | Q3<br>2018 | Q4<br>2018 | Q1<br>2019 | Q2<br>2019 | Q3<br>2019 | 9 MTHS<br>2018 | 9 MTHS<br>2019 |
|--------------------------------------------------------------------------------------------------------|-----------------------|------------|------------|------------|------------|------------|----------------|----------------|
| <b>COPPER &amp; GOLD</b>                                                                               |                       |            |            |            |            |            |                |                |
| <b>Escondida</b>                                                                                       | 30.0%                 |            |            |            |            |            |                |                |
| <i>Chile</i>                                                                                           |                       |            |            |            |            |            |                |                |
| Sulphide ore to concentrator ('000 tonnes)                                                             |                       | 30,513     | 30,507     | 32,027     | 32,519     | 33,956     | 94,449         | 98,502         |
| Average copper grade (%)                                                                               |                       | 0.94       | 0.87       | 0.82       | 0.86       | 0.86       | 0.95           | 0.85           |
| Mill production (metals in concentrates):                                                              |                       |            |            |            |            |            |                |                |
| Contained copper ('000 tonnes)                                                                         |                       | 241.9      | 219.9      | 212.4      | 231.7      | 245.1      | 748.1          | 689.2          |
| Contained gold ('000 ounces)                                                                           |                       | 64         | 74         | 74         | 75         | 49         | 192            | 198            |
| Contained silver ('000 ounces)                                                                         |                       | 1,997      | 2,570      | 2,189      | 2,074      | 1,626      | 6,863          | 5,889          |
| Recoverable copper in ore stacked for leaching ('000 tonnes) (a)                                       |                       | 49.4       | 45.7       | 36.8       | 44.5       | 56.7       | 154.2          | 137.9          |
| Refined production from leach plants:                                                                  |                       |            |            |            |            |            |                |                |
| Copper cathode production ('000 tonnes)                                                                |                       | 55.4       | 71.9       | 62.4       | 63.5       | 55.9       | 194.9          | 181.8          |
| (a) The calculation of copper in material mined for leaching is based on ore stacked at the leach pad. |                       |            |            |            |            |            |                |                |
| <b>Freeport-McMoRan</b>                                                                                |                       |            |            |            |            |            |                |                |
| <b>Grasberg mine (a)</b>                                                                               | 0.0% (b)              |            |            |            |            |            |                |                |
| <i>Papua, Indonesia</i>                                                                                |                       |            |            |            |            |            |                |                |
| Ore treated ('000 tonnes)                                                                              |                       | 17,535     | 14,049     | -          | -          | -          | 50,261         | -              |
| Average mill head grades:                                                                              |                       |            |            |            |            |            |                |                |
| Copper (%)                                                                                             |                       | 1.00       | 0.73       | -          | -          | -          | 1.06           | -              |
| Gold (g/t)                                                                                             |                       | 1.77       | 1.08       | -          | -          | -          | 1.73           | -              |
| Silver (g/t)                                                                                           |                       | 4.49       | 2.09       | -          | -          | -          | 4.75           | -              |
| Production of metals in concentrates:                                                                  |                       |            |            |            |            |            |                |                |
| Copper in concentrates ('000 tonnes)                                                                   |                       | 158.7      | 85.4       | -          | -          | -          | 484.3          | -              |
| Gold in concentrates ('000 ounces)                                                                     |                       | 842        | 402        | -          | -          | -          | 2,377          | -              |
| Silver in concentrates ('000 ounces)                                                                   |                       | 1,439      | 545        | -          | -          | -          | 4,500          | -              |
| Sales of payable metals in concentrates: (c)                                                           |                       |            |            |            |            |            |                |                |
| Copper in concentrates ('000 tonnes)                                                                   |                       | 170.6      | 82.7       | -          | -          | -          | 473.3          | -              |
| Gold in concentrates ('000 ounces)                                                                     |                       | 903        | 399        | -          | -          | -          | 2,320          | -              |
| Silver in concentrates ('000 ounces)                                                                   |                       | 1,221      | 426        | -          | -          | -          | 3,502          | -              |

(a) Through a joint venture agreement with Freeport-McMoRan (FCX), Rio Tinto is entitled to 40% of additional material mined as a consequence of expansions and developments of the Grasberg facilities since 1998. The Q4 2018 results show the forecast from FCX's most recent five-year plan. On 21 December 2018, Rio Tinto completed the sale of its entire interest in the Grasberg mine in Indonesia to PT Indonesia Asahan Aluminium (Persero) (Inalum). Production is reported up to the date of completion.

(b) Rio Tinto share of Grasberg production is 40% of the expansion.

(c) Net of smelter deduction

**Rio Tinto percentage interest shown above is at 30 September 2019. The data represent full production and sales on a 100% basis unless otherwise stated.**

# Rio Tinto operational data

|                                                 | Rio Tinto<br>interest | Q3<br>2018 | Q4<br>2018 | Q1<br>2019 | Q2<br>2019 | Q3<br>2019    | 9 MTHS<br>2018 | 9 MTHS<br>2019 |
|-------------------------------------------------|-----------------------|------------|------------|------------|------------|---------------|----------------|----------------|
| <b>COPPER &amp; GOLD (continued)</b>            |                       |            |            |            |            |               |                |                |
| <b>Rio Tinto Kennecott</b>                      |                       |            |            |            |            |               |                |                |
| <b>Bingham Canyon mine</b>                      | 100.0%                |            |            |            |            |               |                |                |
| <i>Utah, US</i>                                 |                       |            |            |            |            |               |                |                |
| Ore treated ('000 tonnes)                       |                       | 11,173     | 10,853     | 10,685     | 10,123     | <b>10,084</b> | 29,407         | <b>30,892</b>  |
| Average ore grade:                              |                       |            |            |            |            |               |                |                |
| Copper (%)                                      |                       | 0.58       | 0.59       | 0.55       | 0.46       | <b>0.64</b>   | 0.55           | <b>0.55</b>    |
| Gold (g/t)                                      |                       | 0.26       | 0.26       | 0.25       | 0.33       | <b>0.30</b>   | 0.25           | <b>0.29</b>    |
| Silver (g/t)                                    |                       | 2.62       | 2.76       | 2.76       | 2.84       | <b>2.74</b>   | 2.53           | <b>2.78</b>    |
| Molybdenum (%)                                  |                       | 0.030      | 0.032      | 0.032      | 0.039      | <b>0.039</b>  | 0.027          | <b>0.037</b>   |
| Copper concentrates produced ('000 tonnes)      |                       | 233        | 222        | 207        | 161        | <b>207</b>    | 598            | <b>575</b>     |
| Average concentrate grade (% Cu)                |                       | 25.3       | 26.0       | 25.3       | 25.5       | <b>27.8</b>   | 24.3           | <b>26.3</b>    |
| Production of metals in copper concentrates:    |                       |            |            |            |            |               |                |                |
| Copper ('000 tonnes) (a)                        |                       | 59.1       | 58.3       | 52.5       | 41.1       | <b>57.8</b>   | 145.7          | <b>151.4</b>   |
| Gold ('000 ounces)                              |                       | 57         | 57         | 53         | 65         | <b>65</b>     | 140            | <b>183</b>     |
| Silver ('000 ounces)                            |                       | 708        | 736        | 741        | 700        | <b>768</b>    | 1,784          | <b>2,210</b>   |
| Molybdenum concentrates produced ('000 tonnes): |                       | 2.8        | 4.5        | 3.8        | 5.0        | <b>4.3</b>    | 7.0            | <b>13.0</b>    |
| Molybdenum in concentrates ('000 tonnes)        |                       | 1.4        | 2.2        | 1.9        | 2.6        | <b>2.1</b>    | 3.5            | <b>6.6</b>     |
| <b>Kennecott smelter &amp; refinery</b>         |                       |            |            |            |            |               |                |                |
|                                                 | 100.0%                |            |            |            |            |               |                |                |
| Copper concentrates smelted ('000 tonnes)       |                       | 246        | 262        | 204        | 207        | <b>160</b>    | 670            | <b>571</b>     |
| Copper anodes produced ('000 tonnes) (b)        |                       | 58.1       | 62.4       | 33.3       | 60.3       | <b>39.3</b>   | 144.9          | <b>132.9</b>   |
| Production of refined metal:                    |                       |            |            |            |            |               |                |                |
| Copper ('000 tonnes)                            |                       | 54.2       | 64.6       | 29.6       | 63.3       | <b>40.3</b>   | 130.2          | <b>133.2</b>   |
| Gold ('000 ounces) (c)                          |                       | 50.3       | 58.6       | 41.7       | 52.9       | <b>60.8</b>   | 139.5          | <b>155.4</b>   |
| Silver ('000 ounces) (c)                        |                       | 730        | 807        | 617        | 734        | <b>664</b>    | 2,058          | <b>2,014</b>   |

(a) Includes a small amount of copper in precipitates.

(b) New metal excluding recycled material.

(c) Includes gold and silver in intermediate products.

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# Rio Tinto operational data

|                                                                                                                      | Rio Tinto<br>interest | Q3<br>2018 | Q4<br>2018 | Q1<br>2019 | Q2<br>2019 | Q3<br>2019 | 9 MTHS<br>2018 | 9 MTHS<br>2019 |
|----------------------------------------------------------------------------------------------------------------------|-----------------------|------------|------------|------------|------------|------------|----------------|----------------|
| <b>COPPER &amp; GOLD (continued)</b>                                                                                 |                       |            |            |            |            |            |                |                |
| <b>Turquoise Hill Resources</b>                                                                                      |                       |            |            |            |            |            |                |                |
| <b>Oyu Tolgoi mine (a)</b>                                                                                           | 33.5%                 |            |            |            |            |            |                |                |
| <i>Mongolia</i>                                                                                                      |                       |            |            |            |            |            |                |                |
| Ore Treated ('000 tonnes)                                                                                            |                       | 9,652      | 9,361      | 9,255      | 10,394     | 10,040     | 29,377         | 29,689         |
| Average mill head grades:                                                                                            |                       |            |            |            |            |            |                |                |
| Copper (%)                                                                                                           |                       | 0.51       | 0.55       | 0.57       | 0.46       | 0.37       | 0.50           | 0.46           |
| Gold (g/t)                                                                                                           |                       | 0.38       | 0.56       | 0.58       | 0.31       | 0.14       | 0.29           | 0.34           |
| Silver (g/t)                                                                                                         |                       | 1.19       | 1.22       | 1.25       | 1.20       | 1.03       | 1.22           | 1.16           |
| Copper concentrates produced ('000 tonnes)                                                                           |                       | 179.8      | 189.0      | 210.1      | 180.6      | 131.3      | 535.9          | 522.1          |
| Average concentrate grade (% Cu)                                                                                     |                       | 21.9       | 21.9       | 21.8       | 21.7       | 21.7       | 21.9           | 21.7           |
| Production of metals in concentrates:                                                                                |                       |            |            |            |            |            |                |                |
| Copper in concentrates ('000 tonnes)                                                                                 |                       | 39.4       | 41.5       | 45.8       | 39.2       | 28.4       | 117.6          | 113.4          |
| Gold in concentrates ('000 ounces)                                                                                   |                       | 77.0       | 116.7      | 120.1      | 71.8       | 25.6       | 168.8          | 217.5          |
| Silver in concentrates ('000 ounces)                                                                                 |                       | 230        | 238        | 247        | 239        | 191        | 676            | 677            |
| Sales of metals in concentrates:                                                                                     |                       |            |            |            |            |            |                |                |
| Copper in concentrates ('000 tonnes)                                                                                 |                       | 36.0       | 40.2       | 38.5       | 46.6       | 32.5       | 116.4          | 117.6          |
| Gold in concentrates ('000 ounces)                                                                                   |                       | 55         | 111        | 98         | 116        | 35         | 137            | 249            |
| Silver in concentrates ('000 ounces)                                                                                 |                       | 201        | 216        | 200        | 245        | 207        | 657            | 652            |
| (a) Rio Tinto owns a 33.52% indirect interest in Oyu Tolgoi through its 50.79% interest in Turquoise Hill Resources. |                       |            |            |            |            |            |                |                |
| <b>DIAMONDS</b>                                                                                                      |                       |            |            |            |            |            |                |                |
| <b>Argyle Diamonds</b>                                                                                               | 100.0%                |            |            |            |            |            |                |                |
| <i>Western Australia</i>                                                                                             |                       |            |            |            |            |            |                |                |
| AK1 ore processed ('000 tonnes)                                                                                      |                       | 1,465      | 1,292      | 1,248      | 1,427      | 1,716      | 4,153          | 4,390          |
| AK1 diamonds produced ('000 carats)                                                                                  |                       | 3,830      | 3,211      | 2,786      | 3,292      | 3,558      | 10,857         | 9,636          |
| <b>Diavik Diamonds</b>                                                                                               | 60.0%                 |            |            |            |            |            |                |                |
| <i>Northwest Territories, Canada</i>                                                                                 |                       |            |            |            |            |            |                |                |
| Ore processed ('000 tonnes)                                                                                          |                       | 670        | 651        | 620        | 671        | 628        | 1,879          | 1,919          |
| Diamonds recovered ('000 carats)                                                                                     |                       | 1,776      | 1,797      | 1,683      | 1,980      | 1,656      | 5,467          | 5,319          |

**Rio Tinto percentage interest shown above is at 30 September 2019. The data represent full production and sales on a 100% basis unless otherwise stated.**

# Rio Tinto operational data

|                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Rio Tinto<br>interest | Q3<br>2018 | Q4<br>2018 | Q1<br>2019 | Q2<br>2019 | Q3<br>2019 | 9 MTHS<br>2018 | 9 MTHS<br>2019 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|------------|------------|------------|------------|------------|----------------|----------------|
| <b>IRON ORE</b>                                                                                                                                                                                                                                                                                                                                                                                                                                         |                       |            |            |            |            |            |                |                |
| <b>Rio Tinto Iron Ore</b>                                                                                                                                                                                                                                                                                                                                                                                                                               |                       |            |            |            |            |            |                |                |
| <i>Western Australia</i>                                                                                                                                                                                                                                                                                                                                                                                                                                |                       |            |            |            |            |            |                |                |
| <b>Pilbara Operations</b>                                                                                                                                                                                                                                                                                                                                                                                                                               |                       |            |            |            |            |            |                |                |
| Saleable iron ore production ('000 tonnes)                                                                                                                                                                                                                                                                                                                                                                                                              |                       |            |            |            |            |            |                |                |
| Hamersley mines                                                                                                                                                                                                                                                                                                                                                                                                                                         | (a)                   | 54,583     | 56,364     | 51,218     | 50,087     | 55,567     | 164,248        | 156,871        |
| Hamersley - Channar                                                                                                                                                                                                                                                                                                                                                                                                                                     | 60.0%                 | 1,007      | 2,228      | 1,552      | 2,419      | 1,579      | 4,945          | 5,549          |
| Hope Downs                                                                                                                                                                                                                                                                                                                                                                                                                                              | 50.0%                 | 11,426     | 11,691     | 11,913     | 12,101     | 12,155     | 33,677         | 36,169         |
| Robe River - Pannawonica (Mesas J and A)                                                                                                                                                                                                                                                                                                                                                                                                                | 53.0%                 | 7,940      | 7,555      | 3,529      | 6,282      | 8,914      | 24,393         | 18,725         |
| Robe River - West Angelas                                                                                                                                                                                                                                                                                                                                                                                                                               | 53.0%                 | 7,587      | 8,738      | 7,783      | 8,853      | 9,133      | 23,933         | 25,768         |
| Total production ('000 tonnes)                                                                                                                                                                                                                                                                                                                                                                                                                          |                       | 82,542     | 86,576     | 75,995     | 79,741     | 87,347     | 251,196        | 243,083        |
| Breakdown of total production:                                                                                                                                                                                                                                                                                                                                                                                                                          |                       |            |            |            |            |            |                |                |
| Pilbara Blend Lump                                                                                                                                                                                                                                                                                                                                                                                                                                      |                       | 24,461     | 26,084     | 24,068     | 24,291     | 25,434     | 75,545         | 73,793         |
| Pilbara Blend Fines                                                                                                                                                                                                                                                                                                                                                                                                                                     |                       | 35,696     | 38,085     | 34,924     | 35,194     | 38,296     | 108,620        | 108,413        |
| Robe Valley Lump                                                                                                                                                                                                                                                                                                                                                                                                                                        |                       | 2,774      | 2,659      | 1,198      | 2,266      | 3,113      | 8,467          | 6,578          |
| Robe Valley Fines                                                                                                                                                                                                                                                                                                                                                                                                                                       |                       | 5,166      | 4,896      | 2,331      | 4,015      | 5,802      | 15,926         | 12,148         |
| Yandicoogina Fines (HIY)                                                                                                                                                                                                                                                                                                                                                                                                                                |                       | 14,446     | 14,852     | 13,473     | 13,975     | 14,704     | 42,639         | 42,151         |
| Breakdown of total sales:                                                                                                                                                                                                                                                                                                                                                                                                                               |                       |            |            |            |            |            |                |                |
| Pilbara Blend Lump                                                                                                                                                                                                                                                                                                                                                                                                                                      |                       | 21,644     | 22,161     | 18,968     | 22,287     | 22,014     | 66,054         | 63,269         |
| Pilbara Blend Fines                                                                                                                                                                                                                                                                                                                                                                                                                                     |                       | 38,100     | 42,497     | 34,558     | 41,105     | 41,004     | 118,058        | 116,667        |
| Robe Valley Lump                                                                                                                                                                                                                                                                                                                                                                                                                                        |                       | 2,215      | 2,301      | 863        | 1,957      | 2,433      | 6,908          | 5,253          |
| Robe Valley Fines                                                                                                                                                                                                                                                                                                                                                                                                                                       |                       | 5,356      | 5,652      | 2,468      | 4,862      | 6,318      | 17,149         | 13,648         |
| Yandicoogina Fines (HIY)                                                                                                                                                                                                                                                                                                                                                                                                                                |                       | 14,583     | 14,831     | 12,294     | 15,212     | 14,286     | 42,549         | 41,791         |
| Total sales ('000 tonnes) (b) (c)                                                                                                                                                                                                                                                                                                                                                                                                                       |                       | 81,898     | 87,442     | 69,150     | 85,423     | 86,055     | 250,718        | 240,628        |
| (a) Includes 100% of production from Paraburdoo, Mt Tom Price, Marandoo, Yandicoogina, Brockman, Nammuldi, Silvergrass and the Eastern Range mines. Whilst Rio Tinto owns 54% of the Eastern Range mine, under the terms of the joint venture agreement, Hamersley Iron manages the operation and is obliged to purchase all mine production from the joint venture and therefore all of the production is included in Rio Tinto's share of production. |                       |            |            |            |            |            |                |                |
| (b) Pilbara Blend sales include 6.7 million tonnes of alternate products in Q3 2019 and 10.7 million tonnes in the first nine months of 2019.                                                                                                                                                                                                                                                                                                           |                       |            |            |            |            |            |                |                |
| (c) Sales represent iron ore exported from Western Australian ports.                                                                                                                                                                                                                                                                                                                                                                                    |                       |            |            |            |            |            |                |                |
| <b>Iron Ore Company of Canada</b>                                                                                                                                                                                                                                                                                                                                                                                                                       | 58.7%                 |            |            |            |            |            |                |                |
| <i>Newfoundland &amp; Labrador and Quebec in Canada</i>                                                                                                                                                                                                                                                                                                                                                                                                 |                       |            |            |            |            |            |                |                |
| Saleable iron ore production:                                                                                                                                                                                                                                                                                                                                                                                                                           |                       |            |            |            |            |            |                |                |
| Concentrates ('000 tonnes)                                                                                                                                                                                                                                                                                                                                                                                                                              |                       | 1,926      | 2,441      | 1,516      | 2,031      | 2,384      | 4,260          | 5,932          |
| Pellets ('000 tonnes)                                                                                                                                                                                                                                                                                                                                                                                                                                   |                       | 2,979      | 2,389      | 2,709      | 2,280      | 2,657      | 6,156          | 7,646          |
| IOC Total production ('000 tonnes)                                                                                                                                                                                                                                                                                                                                                                                                                      |                       | 4,905      | 4,830      | 4,225      | 4,311      | 5,041      | 10,416         | 13,577         |
| Sales:                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                       |            |            |            |            |            |                |                |
| Concentrates ('000 tonnes)                                                                                                                                                                                                                                                                                                                                                                                                                              |                       | 2,590      | 2,653      | 878        | 2,239      | 2,427      | 3,966          | 5,544          |
| Pellets ('000 tonnes)                                                                                                                                                                                                                                                                                                                                                                                                                                   |                       | 2,825      | 2,581      | 2,684      | 2,424      | 2,093      | 5,849          | 7,201          |
| IOC Total Sales ('000 tonnes)                                                                                                                                                                                                                                                                                                                                                                                                                           |                       | 5,415      | 5,234      | 3,562      | 4,663      | 4,520      | 9,815          | 12,745         |
| <b>Global Iron Ore Totals</b>                                                                                                                                                                                                                                                                                                                                                                                                                           |                       |            |            |            |            |            |                |                |
| Iron Ore Production ('000 tonnes)                                                                                                                                                                                                                                                                                                                                                                                                                       |                       | 87,448     | 91,406     | 80,219     | 84,052     | 92,389     | 261,612        | 256,660        |
| Iron Ore Sales ('000 tonnes)                                                                                                                                                                                                                                                                                                                                                                                                                            |                       | 87,314     | 92,676     | 72,712     | 90,085     | 90,576     | 260,533        | 253,373        |

**Rio Tinto percentage interest shown above is at 30 September 2019. The data represent full production and sales on a 100% basis unless otherwise stated.**



## Rio Tinto operational data

|                                      | Rio Tinto<br>interest | Q3<br>2018 | Q4<br>2018 | Q1<br>2019 | Q2<br>2019 | Q3<br>2019 | 9 MTHS<br>2018 | 9 MTHS<br>2019 |
|--------------------------------------|-----------------------|------------|------------|------------|------------|------------|----------------|----------------|
| <b>SALT</b>                          |                       |            |            |            |            |            |                |                |
| <b>Dampier Salt</b>                  | 68.4%                 |            |            |            |            |            |                |                |
| <i>Western Australia</i>             |                       |            |            |            |            |            |                |                |
| Salt production ('000 tonnes)        |                       | 2,167      | 2,188      | 1,917      | 1,856      | 2,036      | 6,813          | 5,810          |
| <b>TITANIUM DIOXIDE SLAG</b>         |                       |            |            |            |            |            |                |                |
| <b>Rio Tinto Iron &amp; Titanium</b> | 100.0%                |            |            |            |            |            |                |                |
| <i>Canada and South Africa</i>       |                       |            |            |            |            |            |                |                |
| <i>(Rio Tinto share) (a)</i>         |                       |            |            |            |            |            |                |                |
| Titanium dioxide slag ('000 tonnes)  |                       | 297        | 294        | 296        | 303        | 321        | 822            | 920            |

(a) Quantities comprise 100% of Rio Tinto Fer et Titane and Rio Tinto's 74% interest in Richards Bay Minerals' production. Ilmenite mined in Madagascar is being processed in Canada.

|                                                                        |       |       |       |       |       |     |       |       |
|------------------------------------------------------------------------|-------|-------|-------|-------|-------|-----|-------|-------|
| <b>URANIUM</b>                                                         |       |       |       |       |       |     |       |       |
| <b>Energy Resources of Australia Ltd</b>                               |       |       |       |       |       |     |       |       |
| <b>Ranger mine (a)</b>                                                 | 68.4% |       |       |       |       |     |       |       |
| <i>Northern Territory, Australia</i>                                   |       |       |       |       |       |     |       |       |
| U <sub>3</sub> O <sub>8</sub> Production ('000 lbs)                    |       | 1,199 | 1,351 | 1,160 | 906   | 855 | 3,056 | 2,921 |
| <i>(a) ERA production data are drummed U<sub>3</sub>O<sub>8</sub>.</i> |       |       |       |       |       |     |       |       |
| <b>Rössing Uranium Ltd (a) (b)</b>                                     | 0.0%  |       |       |       |       |     |       |       |
| <i>Namibia</i>                                                         |       |       |       |       |       |     |       |       |
| U <sub>3</sub> O <sub>8</sub> Production ('000 lbs)                    |       | 1,449 | 1,427 | 1,168 | 1,665 | 247 | 4,038 | 3,080 |

(a) Rössing production data are drummed U<sub>3</sub>O<sub>8</sub>.

(b) On 16 July 2019, Rio Tinto completed the sale of its entire 68.62% interest in the Rossing mine in Namibia to China National Uranium Corporation Limited. Production is reported up to the date of completion.

**Rio Tinto percentage interest shown above is at 30 September 2019. The data represent full production and sales on a 100% basis unless otherwise stated.**