

Rio Tinto releases third quarter production results

16 October 2024

Rio Tinto Chief Executive Jakob Stausholm said: “We continue to strengthen our operations, with the roll-out of the Safe Production System delivering consistent production at our Pilbara iron ore business and a step change from our Australian bauxite mines. We are building on this, with more work to do across our global portfolio.

“We progressed our major projects to deliver profitable organic growth. We are on track for first production from our Simandou high-grade iron ore project next year and first lithium from the Rincon starter plant by the end of this year. Meanwhile the ramp-up of copper production continues at the Oyu Tolgoi underground mine.

“We announced the acquisition of Arcadium Lithium, bringing a world-class lithium business alongside our leading aluminium and copper operations to supply materials needed for the energy transition. This is aligned with our strategy and our disciplined capital allocation framework, increasing our exposure to a high-growth, attractive market at the right point in the cycle.

“The decarbonisation of our business remains a priority and is progressing well. We took another important step in securing a long-term future for the Boyne Smelter, announcing a partnership with the Queensland Government to support investment in renewable energy projects.

“Our long-term pathway to deliver profitable growth and create shareholder value remains clear, as we progress our business in line with our four objectives.”

Production ¹		Q3 2024	vs Q3 2023	vs Q2 2024	9 MTHS 2024	vs 9 MTHS 2023
Pilbara iron ore shipments (100% basis)	Mt	84.5	+1%	+5%	242.9	-1%
Pilbara iron ore production (100% basis)	Mt	84.1	+1%	+6%	241.5	-1%
Bauxite	Mt	15.1	+8%	+3%	43.2	+9%
Aluminium ²	kt	809	-2%	-2%	2,459	+1%
Mined copper (consolidated basis)	kt	168	-1%	-2%	495	+8%
Titanium dioxide slag	kt	263	+7%	+11%	755	-10%
IOC ³ iron ore pellets and concentrate	Mt	2.1	-11%	-3%	6.9	-1%

¹ Rio Tinto share unless otherwise stated.

² Includes primary aluminium only.

³ Iron Ore Company of Canada.

Q3 2024 operational highlights and other key announcements

- Our all injury frequency rate (AIFR) for the third quarter was 0.40, an increase from the second quarter of this year (0.31) and the third quarter of 2023 (0.35). We continue to prioritise learning from safety incidents to improve the effectiveness of our critical controls. The health, safety and wellbeing of our people and partners remains at the heart of everything we do.
- We are on track to deliver our ambition to grow overall copper equivalent production (based on long-term consensus pricing) by around 3% of compound annual growth from 2024 to 2028 from our existing portfolio and projects already in execution.
- In the Pilbara, we produced 84.1 million tonnes (Rio Tinto share 71.0 million tonnes) in the third quarter, 1% higher than the corresponding period of 2023. Productivity gains continue to offset ore depletion. Shipments of 84.5 million tonnes (Rio Tinto share 72.5 million tonnes) were also 1% higher than the third quarter of 2023.
- Bauxite production of 15.1 million tonnes was 8% higher than the third quarter of 2023. The improvement continues to be driven by higher plant availability and utilisation rates owing to the implementation of the Safe Production System, especially at our Amrun mine at Weipa, which is operating above nameplate capacity.
- Aluminium production of 0.8 million tonnes was 2% lower than the third quarter of 2023. Production at our New Zealand Aluminium Smelter (NZAS) was impacted by a call from Meridian Energy to reduce its electricity usage by 185 MW from early August. The call for reduced usage, for which we are compensated, has now ended and the smelter ramp-up commenced in late September. The ramp-up is expected to run through to the second quarter of 2025.

- For personal use only
- Mined copper production of 168 thousand tonnes (consolidated basis) was 1% lower than the third quarter of 2023.
 - Kennecott was 44% lower than the third quarter of 2023. As we identified in our second quarter operations review, highwall movement was monitored along two major faults during that period. This movement has limited our ability to access the primary ore face on the south wall and is increasing the need to supplement feed to the concentrator with lower grade stockpile ore, impacting mined copper production by approximately 50 thousand tonnes in 2024. A group of experts, both internal and external, reworked Kennecott's mine plan and the results were assessed during the quarter. The highwall movement will continue to restrict ore deliveries from the primary ore face and impact mined copper production in 2025 and 2026. We are working through this change in mining sequence and will provide a further update at our Investor Seminar in December.
 - Escondida was 15% higher than the third quarter of 2023 due to higher ore grades being fed to the concentrators (1.00% versus 0.85%) in line with the mining sequence, together with increased recovery.
 - Oyu Tolgoi was 19% higher than the third quarter of 2023 due to the ramp-up in production and higher grade from the underground mine. However, production was 5% lower than the previous quarter mainly due to planned maintenance at the concentrator and adverse weather impacting open pit operations. Production from the underground mine was marginally impacted by a minor delay to the start of commissioning of the conveyor to surface, with first ore on belt now expected in the second half of October. The underground mine delivered a copper head grade of 2.05% (vs 1.73% in the third quarter of 2023) with an overall copper head grade of 0.67% (vs 0.52%).
 - Titanium dioxide slag production was 7% higher than the third quarter of 2023 due to improved smelter stability and performance. A furnace reconstruction continues at our RTIT Quebec Operations, and we continue to operate six out of nine furnaces in Quebec and three out of four at Richards Bay Minerals (RBM).
 - IOC production was 11% lower than the third quarter of 2023 due to an 11-day site-wide shutdown following forest fires in mid-July. This resulted in a revised mine plan and maintenance schedule, leading to a reduction in our full year iron ore pellets and concentrate production guidance to 9.1 to 9.6 million tonnes (previously 9.8 to 11.5 million tonnes).
 - In the third quarter, deployment of the Safe Production System (SPS) continued, now reaching 28 sites (an increase of two from the second quarter). We continue to deepen the maturity of SPS and are on track to deliver a 5 million tonne year-on-year production uplift at Pilbara Iron Ore.
 - On 17 July, we [announced](#) the appointment of Katie Jackson to lead the Copper business, succeeding Bold Baatar, who as of 1 September, has moved to the role of Chief Commercial Officer.
 - We [hosted](#) a site visit for the financial community to our Aluminium and Iron & Titanium operations in Quebec, Canada during September. In the management [presentation](#), we set out a clear pathway to raise both the EBITDA margin and Return on Capital Employed (ROCE) for our Aluminium business by five percentage points by 2030. We also set out a targeted increase in ROCE at our Iron & Titanium business of nine percentage points by 2030 and a pathway to reach concentrate capacity of 23 million tonnes (100% basis) of high-grade iron ore at IOC. Presentations by management also covered technology, decarbonisation and markets.
 - Subsequent to the end of the quarter, we [announced](#) a definitive agreement to acquire Arcadium Lithium plc (Arcadium) in an all-cash transaction for US\$5.85 per share. This transaction will bring Arcadium's world-class, complementary lithium business into our portfolio, establishing a global leader in energy transition commodities. Subject to satisfaction of the outstanding conditions, the transaction is expected to close in mid-2025.

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.

2024 guidance

Rio Tinto production share, unless otherwise stated	2023 Actuals	2024 Sept YTD	2024 Previous	2024 Current
Pilbara iron ore (shipments, 100% basis) (Mt)	331.8	242.9	323 to 338	Unchanged
Bauxite (Mt)	54.6	43.2	53 to 56 ¹	Unchanged
Alumina (Mt)	7.5	5.3	7.0 to 7.3	Unchanged
Aluminium (Mt)	3.3	2.5	3.2 to 3.4	Unchanged
Mined copper (consolidated basis) (kt)	620	494.7	660 to 720 ²	Unchanged
Refined copper (kt)	175	179.6	230 to 260	Unchanged
Titanium dioxide slag (Mt)	1.1	0.8	0.9 to 1.1	Unchanged
IOC ³ iron ore pellets and concentrate (Mt)	9.7	6.9	9.8 to 11.5	9.1 to 9.6
Boric oxide equivalent (Mt)	0.5	0.4	~0.5	Unchanged

¹ Around the top end.

² Around the bottom end.

³ Iron Ore Company of Canada continues to be reported at Rio Tinto share.

- Guidance for 2024 IOC iron ore pellets and concentrate production has been reduced to 9.1 to 9.6 million tonnes (previously 9.8 to 11.5 million tonnes) following an 11 day site-wide shutdown due to forest fires in mid-July.
- Expectations for Pilbara iron ore shipments in 2024 remain at 323 to 338 million tonnes. SP10 levels are expected to remain elevated until replacement projects are delivered. This guidance remains subject to the timing of approvals for planned mining areas and heritage clearances.
- Iron ore shipments and bauxite production guidance remain subject to weather impacts.

Operating costs

- 2024 Pilbara iron ore unit cash costs are expected to be in the upper half of our \$21.75 to \$23.50 per tonne guidance (based on an average A\$:US\$ exchange rate of 0.66). This is due to inflation being at the higher end of our expectations.
- Guidance for 2024 copper C1 unit costs is unchanged at 140 to 160 US cents/lb.

Investments, growth and development projects

- Pre-tax and pre-divestment expenditure on exploration and evaluation charged to the profit and loss account in the first nine months of 2024 was \$692 million, compared with \$613 million in the first nine months of 2023 (excluding Simandou). Approximately 24% of the spend was by central exploration, 30% by Minerals (with the majority focusing on lithium), 31% by Copper, 14% by Iron Ore and 1% by Aluminium. In 2024, all qualifying expenditure relating to Simandou is being capitalised. Qualifying expenditure on the Rincon project has been capitalised since 1 July 2024.

Pilbara projects

- Construction of our Western Range mine is now 80% complete. During the quarter, we finalised commissioning of the autonomous haul trucks and completed the Paraburdoo upgrade works. We continue to focus on construction of the greenfield crushing and screening plant and Paraburdoo plant tie-in, with first ore from that new system on plan for 2025.
- We continue to advance our next tranche of Pilbara mine replacement studies including Hope Downs (Hope Downs 2 and Bedded Hilltop), Brockman 4 (Brockman Syncline 1), Greater Nammuldi and West Angelas projects. During the quarter, funding approval for full execution was obtained for the Hope Downs replacement project and the environmental and heritage approvals are progressing. Project timelines remain subject to timing of approvals and heritage clearances with the Greater Nammuldi project remaining divergent from the original development schedule.
- The Rhodes Ridge pre-feasibility study, which is targeting an initial capacity of up to 40 million tonnes per year, subject to relevant approvals, remains on track to be completed in 2025. First ore is expected by the end of the decade.
- Early works at our Coastal Water desalination project have commenced, with mobilisation of the earthworks contractor. The \$395 million plant will provide water to our port operations in Dampier. At full capacity, it will produce approximately 4GL/year to reduce draw from the Bungaroo aquifer to sustainable levels. We are assessing a further phase of the project.
- We are progressing engineering works for the replacement of all three of the bucketwheel reclaimers and associated infrastructure within the Parker Point Stockyard at our Dampier Port. Commissioning of all replacement reclaimers is planned to be completed by the first half of 2029.

Oyu Tolgoi underground project

- Ventilation Shafts 3 and 4 were commissioned during the quarter with fresh air now being drawn into the underground mine.
- Construction work on the conveyor to surface was 98% complete at the end of the quarter and, after a minor delay to the start of the commissioning, we expect first ore on the belt in the second half of October.
- Construction works for the concentrator conversion is ongoing. Commissioning is expected to be progressively completed from the fourth quarter of 2024 through to the second quarter of 2025.
- Construction of primary crusher 2 is progressing to plan and remains on track to be completed by the end of 2025.

Simandou iron ore project

- As we reported in our Second Quarter Operations Review, all conditions for Rio Tinto's investment to develop the Simandou high-grade iron ore deposit in Guinea were [satisfied](#), with the transaction closing in July.
- The Simfer mine¹ is on track to deliver first production in 2025, ramping up over 30 months to an annualised capacity of 60 million tonnes per year² (27 million tonnes per year Rio Tinto share).
- For the Simfer mine, progress continues on plan, despite productivity being impacted by wet weather during the quarter. Mine process plant installation early works and non-process infrastructure contracts were awarded during the period. First blasting activities on our mining concession also took place. The two initial crushers required to produce first ore for commissioning have arrived in Guinea.

- During the third quarter, a number of the critical milestones for 2024 have been achieved for the Simfer infrastructure scope. The laying of sleepers and track has commenced, with progress expected to accelerate next quarter with the arrival of track laying locomotives. For the bridge construction works, we have completed the piers and commenced laying bridge platforms. Tunnel excavation activity is now more than 50% complete and activities at the port have advanced, with transshipment vessel (TSV) wharf construction and car dumper excavation commencing.
- The current total workforce across all the Simfer scope of mine, rail and port is 10,800 with 85% national Guinean participation.

Other key projects and exploration and evaluation

- At Complexe Jonquière in Quebec, the AP60 expansion project remains on schedule. Construction activities progressed, with assembly of the gas treatment centre commencing during the quarter. Once completed, the project will add 96 new AP60 pots, increasing AP60 capacity by 160,000 tonnes of primary aluminium per year by the end of 2026. This new capacity, in addition to 30,000 tonnes of new recycling capacity at Arvida expected to open in the fourth quarter of 2025, will offset the 170,000 tonnes of capacity lost through the gradual closure of potrooms at the Arvida smelter from 2024.
- At Kennecott, activities continued on the North Rim Skarn (NRS) underground development and infrastructure. Production from NRS is forecast to commence in mid-2025, delivering around 250,000 tonnes through to 2033³.
- At the Resolution Copper project in Arizona, the Apache Stronghold filed a petition to the U.S. Supreme Court requesting to hear its case to stop the land exchange between Resolution Copper and the federal government. The San Carlos Apache Tribe also filed a second petition with the U.S. Supreme Court, asking the Court to review a decision by the Arizona Supreme Court regarding a water discharge permit issued to Resolution Copper by the State of Arizona. We continue to progress the Final Environmental Impact Statement with the United States Forest Service, but they have yet to advise on the date of re-publication. We also advanced partnership discussions with federally-recognised Native American Tribes. While there is significant local support for the project, we respect the views of groups who oppose it and will continue our efforts to address and mitigate concerns.
- We continue to work with the Traditional Owners to progress the Winu copper-gold project, which remains subject to all of the required approvals. Drilling, studies and fieldwork to advance the key environmental permitting and Project Agreement negotiations with Nyangumarta and the Martu remain our priority.
- Nuton, our copper heap leaching technology venture, continues to develop its path towards deployment with ten partnerships in five countries: United States, Mexico, Chile, Peru and Argentina.
- At the Rincon lithium project in Argentina, development of the 3,000 tonne per year lithium carbonate starter plant continues to progress, with construction activities now over 70% complete. Commissioning of medium and low voltage substations has commenced and we continue to expect first production from the starter plant by the end of 2024. The feasibility study for full-scale operation is nearing completion, with a final investment decision expected in the fourth quarter of 2024. We continue to engage with communities, the province of Salta and the Government of Argentina to ensure an open and transparent dialogue with stakeholders about the works underway.
- We continue to believe that the Jadar project has the potential to be a world-class lithium-borates asset that could act as a catalyst for the development of other industries and thousands of jobs for current and future generations in Serbia. The decision that allowed the reinstatement of the spatial plan for the Jadar project by Serbia's Constitutional Court in July has been followed by the application process for obtaining the Exploitation Field Licence (EFL) being initiated, with a submission planned for December 2024. The EFL is essential for commencing fieldwork, including detailed geotechnical investigations, while cultural heritage and environmental surveys have resumed. The Environmental Impact Assessment process has also begun, with scoping and content for the mine currently under public consultation. This step formalises discussions through legally mandated consultations, which the project supports, to encourage an open, fact-based dialogue.

¹ Simfer Jersey Limited is a joint venture between the Rio Tinto Group (53%) and Chalco Iron Ore Holdings Ltd (CIOH) (47%), a Chinalco-led joint venture of leading Chinese SOEs (Chinalco (75%), Baowu (20%), China Rail Construction Corporation (2.5%) and China Harbour Engineering Company (2.5%)). Simfer S.A. is the holder of the mining concession covering Simandou Blocks 3 & 4, and is owned by the Guinean State (15%) and Simfer Jersey Limited (85%). Simfer Infracore Guinée S.A.U. will deliver Simfer's scope of the co-developed rail and port infrastructure, and is co-owned by Simfer Jersey (85%) and the Guinean State (15%). Simfer Jersey will ultimately own 42.5% of Compagnie du Transguinéen, which will own and operate the co-developed infrastructure during operations.

² The estimated annualised capacity of approximately 60 million dry tonnes per annum iron ore for the Simandou life of mine schedule was previously reported in a release to the ASX dated 6 December 2023 titled "Investor Seminar 2023". Rio Tinto confirms that all material assumptions underpinning that production target and those production profiles continue to apply and have not materially changed.

³ The NRS production target of around 250 thousand tonnes of additional mined copper over ten years (2023 to 2033) at Kennecott was previously reported in a release to the Australian Securities Exchange (ASX) dated 20 June 2023 titled "Rio Tinto invests to strengthen copper supply in US". Rio Tinto confirms that all material assumptions underpinning the production targets continue to apply and have not materially changed.

Sustainability highlights

During the third quarter, we continued to work on implementation of the remaining Everyday Respect recommendations. Aligned to the final recommendation, Elizabeth Broderick & Co conducted their independent progress review, visiting our sites and obtaining insight into the daily experience of our people through facilitated listening groups and surveys. We now await their final report and will make this publicly available during the fourth quarter of 2024. Their findings will enable us to understand where we have made progress in our cultural journey and where we need to focus to continue our momentum in creating a safe, respectful and inclusive workplace.

As part of our commitment to contributing to nature positive outcomes globally and supporting the energy transition, we published an updated position statement on reform to Australia's Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). We believe reform should deliver improved outcomes for Australia's national environmental and culturally significant places and species, and more efficient and effective approvals processes. The full position statement can be found [here](#).

Communities & Social Performance (CSP)

Rio Tinto assets undertook a range of community and social investment activities focused on advancing community health and wellbeing, and conserving and celebrating cultural heritage. Key highlights from the third quarter include:

[1 July 2024 | Rio Tinto partners with PinkDrive to bring health screening to communities](#)

[3 July 2024 | Rio Tinto builds 10 hectares of park in the heart of the capital city of Mongolia](#)

[9 July 2024 | Launch and celebration of the AIATSIS Centre for Australian Languages](#)

[10 July 2024 | Rio Tinto contributes A\\$40 million towards Paraburdoo and Tom Price Hospitals](#)

[19 July 2024 | Rio Tinto IOC donates CAN\\$200,000 to support the people and communities of Labrador West](#)

[30 Aug 2024 | Rio Tinto IOC celebrates 70 years in the Labrador Trough](#)

[16 Sept 2024 | Pilbara Aboriginal artists share cultural stories for the 19th Colours of our Country exhibition](#)

Climate change, product stewardship and our value chain

On 15 August, we [announced](#) that we will work with the Queensland Government to safeguard a pillar of the State's heavy industrial manufacturing base around Gladstone under a partnership to support investment in renewable energy projects. The agreement represents an important step towards securing a long-term future for Australia's second-largest aluminium smelter, Boyne Smelters Limited (BSL), and thousands of jobs in central Queensland supported by the operations. We continue to engage with the Federal Government on supportive industrial policy to help sustain Australia's green aluminium sector for the future.

This quarter, we also [shared](#) our project to develop Pongamia seed farms as part of a new biofuels pilot. The pilot aims to determine if Pongamia seed oil can contribute to our renewable diesel needs while potentially contributing to the growth of a new biofuel sector in Australia. We are in the final stages of acquiring approximately 3,000 hectares of cleared land near Townsville in northern Queensland to establish farms to study growth conditions and measure seed oil yields.

Further detail on these developments, and others during the quarter, is provided in the links below:

[2 July 2024 | Rio Tinto completes construction of its solar plant at Diavik Diamond Mine](#)

[3 July 2024 | Two new solar farms for Gove Peninsula as Rio Tinto works to secure more sustainable power](#)

[15 July 2024 | Ngarluma and Rio Tinto to progress renewable energy project](#)

[17 July 2024 | Rio Tinto and Alteo sign agreement for the remediation of the Gardanne and Mange-Garri sites](#)

[25 July 2024 | Rio Tinto and Aymium to establish biocarbon joint venture in Québec](#)

[15 Aug 2024 | Queensland Government and Rio Tinto partnership to support Gladstone's Boyne Smelters](#)

[9 Sept 2024 | Rio Tinto Kennecott partners with Janet Quinney Lawson Institute for Land, Water, and Air to strengthen Utah's environment](#)

[18 Sept 2024 | Rio Tinto launches biofuel crop farming trial for renewable diesel production in Australia](#)

Our markets

The global economy is expected to grow moderately this year, similar to last year, while industrial production is still on a gradual recovery. Market sentiment improved in late September given a deeper-than-expected interest rate cut by the US Federal Reserve, followed by the announcement of monetary stimulus measures in China that signalled a reprioritisation on economic growth. Geopolitical tensions and trade barriers remain near-term global economic risks.

- China's economic recovery has been uneven, prompting more government support to sustain growth. Manufacturing and exports have outperformed, while the property market downturn continues, amidst concerns over local government debt and low consumer confidence. As the economy transitions from the property sector to new growth areas, future commodity demand will turn more reliant on advanced manufacturing, including electric vehicles, and power infrastructure (generation, transmission and distribution, and storage).
- The US economy is settling into a sustainable pace of growth. The labour market indicated that pay and job growth are slowing but strong household balance sheets are providing support to consumer spending. Manufacturing and housing activity was depressed but could benefit from the onset of the Federal Reserve's interest rate cut cycle.
- The eurozone outlook continues to be uncertain, with uneven growth across countries and consumption remaining subdued. The manufacturing PMI during the quarter indicated that the recovery of the industrial sector is slow, while sentiment indicators point to similar weakness, amidst cooling wage growth and persistent services inflation.
- Iron ore prices increased by 1% over the quarter, while the average monthly price in the third quarter of \$99/dmt (Platts CFR 62% Fe index) was 11% lower than the second quarter. In response to lower prices for most of the period, supply from higher cost suppliers declined compared to the previous quarter. There were headwinds to iron ore demand in the major steel producing regions at the start of the quarter; however, Chinese demand improved in September following completion of maintenance at steel mills. Iron ore inventories at Chinese ports were flat, while China's steel exports fell slightly during the quarter, but remained higher than a year ago.
- The LME aluminium price increased by 5% over the quarter, while the average price decreased by 5% from the second quarter, to \$2,382/t. Ex-China, aluminium semi-fabricated shipments were broadly stable into the third quarter. However, extrusions demand remained weak on low activity in the construction sector. Firm demand for aluminium in the packaging sector supported shipments of rolled aluminium products. Chinese aluminium production rates are close to the capacity cap of ~45 million tonnes, while production rates ex-China were lowered at the start of the third quarter. Overall, the global market remained broadly balanced in the third quarter with inventories at a low level compared to historical norms. Alumina prices were elevated over the quarter given refinery disruptions ex-China, with the price trading at a high ratio to the LME aluminium price. Sustained bauxite tightness supported strong seaborne bauxite prices to China.
- The LME copper price increased by 3% over the quarter, while the average price was down 6% quarter-on-quarter to \$4.18/lb. Pent up demand in China returned in the third quarter, as fabricators held back from buying amid high prices in the previous quarter. Demand in the rest of world was mixed, with strong performance in developed Asia offset by weakness in Europe. Globally, exchange inventories remain up year-to-date but have started declining since August, thanks to improved demand. Rate cuts in the US and announced stimulus in China towards the end of the quarter helped boost sentiment and led to a price rally. The copper concentrate market remains tight as growth in smelting capacity significantly exceeds concentrate supply growth, which is keeping spot treatment and refining charges (TCRCs) low.
- Lithium demand continues to grow with electric vehicle (EV) sales rising 20% year on year over the first eight months despite slower-than-expected uptake from Europe and the US. On the supply side, projects continue to develop, while some closures in Australia and China have also been announced given soft prices, which continued to fall over the third quarter. Market fundamentals for lithium remain attractive over the longer term, given increasing EV penetration rates driven by the energy transition.
- Underlying demand for titanium feedstock has stabilised with paint and coatings producers reporting flat to slightly rising sales volumes. Mid-stream utilisation rates have risen which is increasing consumption of feedstock, however this demand is currently being met from inventory built during 2023.

- The borates market has been stable during the third quarter. Demand has improved in South American agriculture and industrial-related applications (textile, fibreglass). Demand from the US construction sector continues to be robust, while demand from China's construction sector remains weak.

For personal use only

Iron Ore

Rio Tinto share of production (Million tonnes)	Q3 2024	vs Q3 2023	vs Q2 2024	9 MTHS 2024	vs 9 MTHS 2023
Pilbara Blend and SP10 Lump ¹	22.5	+5%	+8%	63.2	+2%
Pilbara Blend and SP10 Fines ¹	33.3	+5%	+7%	94.4	0%
Robe Valley Lump	1.5	-11%	-4%	4.6	+6%
Robe Valley Fines	2.4	-3%	-11%	7.7	+13%
Yandicoogina Fines (HIY)	11.4	-16%	+2%	34.8	-11%
Total Pilbara production	71.0	0%	+5%	204.7	-1%
Total Pilbara production (100% basis)	84.1	+1%	+6%	241.5	-1%

Rio Tinto share of shipments (Million tonnes)	Q3 2024	vs Q3 2023	vs Q2 2024	9 MTHS 2024	vs 9 MTHS 2023
Pilbara Blend Lump	14.2	-4%	+14%	39.5	-12%
Pilbara Blend Fines	26.6	+5%	+8%	74.5	-8%
Robe Valley Lump	1.2	-10%	-13%	3.7	+6%
Robe Valley Fines	2.6	-5%	-17%	8.6	+15%
Yandicoogina Fines (HIY)	11.8	-14%	+4%	35.4	-11%
SP10 Lump ¹	5.7	+37%	+13%	15.3	+103%
SP10 Fines ¹	10.4	+7%	+26%	27.8	+20%
Total Pilbara shipments ²	72.5	+1%	+9%	204.8	-2%
Total Pilbara shipments (100% basis) ²	84.5	+1%	+5%	242.9	-1%
Total Pilbara Shipments (consolidated basis) ^{2,3}	74.2	+1%	+9%	210.4	-1%

Production figures are sometimes more precise than the rounded numbers shown, hence small rounding differences may appear.

¹ SP10 includes other lower grade products.

² Shipments includes material shipped from the Pilbara to our portside trading facility in China which may not be sold onwards by the group in the same period.

³ While Rio Tinto has a 53% net beneficial interest in Robe River Iron Associates, it recognises 65% of the assets, liabilities, sales revenues and expenses in its accounts (as 30% is held through a 60% owned subsidiary and 35% is held through a 100% owned subsidiary). The consolidated basis sales reported here include Robe River Iron Associates on a 65% basis to enable comparison with revenue reported in the financial statements.

Pilbara operations

We produced 84.1 million tonnes (Rio Tinto share 71.0 million tonnes) in the third quarter, 1% higher than the corresponding period of 2023. Productivity gains continue to offset ore depletion.

Shipments of 84.5 million tonnes (Rio Tinto share 72.5 million tonnes) were 1% higher than the third quarter of 2023. SP10 volumes accounted for 19%¹ of shipments in the third quarter, slightly higher than the first half of 2024 (17%). SP10 levels are expected to remain elevated until replacement projects are delivered. We are reviewing our future product strategy, having regard to customer requirements and available ore grades.

Approximately 11% of sales in the first nine months of 2024 were priced with reference to the prior quarter's average index lagged by one month. The remainder was sold either on current quarter average, current month average, average of two months, forward month or on the spot market. Approximately 26% of sales in the nine months to September 2024 were made on a free on board (FOB) basis, with the remainder sold including freight.

On 19 July, we [celebrated](#) the shipment of 4 billion tonnes of iron ore from the Pilbara to China. The shipment was loaded at Dampier Port, bound for China Baowu Steel Group, the world's top steel producer. This milestone comes 51 years after the first shipment from Dampier Port to China's Shanghai No.1 Steel Mill, which has since become part of China Baowu.

China Portside Trading

Our iron ore portside sales in China were 20.4 million tonnes in the first nine months of 2024 (17.5 million tonnes of sales in the first nine months of 2023). At the end of September, inventory levels are 8.1 million tonnes, including 5.6 million tonnes of Pilbara product. In the first nine months of 2024 approximately 90% of our portside sales were either screened or blended in Chinese ports (87% in the first nine months of 2023).

¹ Based on total Pilbara shipments on a 100% basis.

For personal use only

Aluminium

Rio Tinto share of production ('000 tonnes)	Q3 2024	vs Q3 2023	vs Q2 2024	9 MTHS 2024	vs 9 MTHS 2023
Bauxite	15,100	+8%	+3%	43,242	+9%
Bauxite third party shipments	11,120	+16%	+4%	30,307	+14%
Alumina	1,770	-7%	+6%	5,310	-5%
Aluminium	809	-2%	-2%	2,459	+1%
Recycled aluminium	62	n/a	-10%	206	n/a

Bauxite

Bauxite production of 15.1 million tonnes was 8% higher than the third quarter of 2023. The improvement continues to be driven by higher plant availability and utilisation rates owing to the implementation of the Safe Production System, especially at our Amrun mine at Weipa, which is operating above nameplate capacity.

We shipped 11.1 million tonnes of bauxite to third parties in the third quarter, 16% higher than the same period of 2023.

Alumina

Alumina production of 1.8 million tonnes was 7% lower than the third quarter of 2023 as production at our Gladstone operations continues to be impacted by the breakage of the third-party operated Queensland Gas Pipeline in March. Gas supplies are currently meeting ~95% of our requirements and are expected to return to normal levels by the end of 2024.

As the result of sanction measures by the Australian Government, Rio Tinto has taken on 100% of capacity of Queensland Alumina Limited (QAL) for as long as the sanctions continue. This results in use of Rusal's 20% share of capacity by Rio Tinto under the tolling arrangement with QAL. This additional output is excluded from the production tables in this report as QAL remains 80% owned by Rio Tinto and 20% owned by Rusal.

Aluminium

Aluminium production of 0.8 million tonnes was 2% lower than the third quarter of 2023. Production at our New Zealand Aluminium Smelter (NZAS) was impacted by a call from Meridian Energy to reduce its electricity usage by 185 MW from early August. The call for reduced usage, for which we are compensated, has now ended and the smelter ramp-up commenced in late September. The ramp-up is expected to run through to the second quarter of 2025.

Rio Tinto's previously announced [acquisition](#) of Mitsubishi Corporation's 11.65% interest in Boyne Smelters Limited (BSL) [completed](#) on 30 September 2024. Rio Tinto's interest in BSL is now 71.04%.

Previously announced [acquisitions](#) by Rio Tinto of Sumitomo Chemical Company's (SCC) 2.46% stake in BSL, and SCC's 20.64% interest in NZAS, continue to progress through various conditions precedent.

Recycled aluminium

Rio Tinto's share of production from Matalco was 62 thousand tonnes in the third quarter (125 thousand tonnes on a 100% basis), as production was impacted by market conditions in North America. Full year 2023 production from Matalco was 582 thousand tonnes (on a 100% basis) of recycled aluminium products.

Copper

Rio Tinto share of production ('000 tonnes)	Q3 2024	vs Q3 2023	vs Q2 2024	9 MTHS 2024	vs 9 MTHS 2023
Mined copper					
Kennecott	27.4	-44%	-15%	92.1	-11%
Escondida	90.4	+15%	+5%	253.9	+11%
Oyu Tolgoi (66% basis)	33.0	+19%	-5%	98.1	+17%
Total mined copper production	150.8	-3%	-2%	444.2	+7%
Total mined copper production (consolidated basis ¹)	167.8	-1%	-2%	494.7	+8%
Refined copper					
Kennecott	42.5	+129%	-11%	137.8	+80%
Escondida	11.8	-24%	-22%	41.8	-21%

¹ Includes Oyu Tolgoi and Kennecott on a 100% consolidated basis, and Escondida on an equity share basis.

Kennecott

Mined copper production was 44% lower than the third quarter of 2023. As we identified in our second quarter operations review, highwall movement was monitored along two major faults during that period. This movement has limited our ability to access the primary ore face on the south wall and is increasing the need to supplement feed to the concentrator with lower grade stockpile ore, impacting mined copper production by approximately 50 thousand tonnes in 2024. A group of experts, both internal and external, reworked Kennecott's mine plan and the results were assessed during the quarter. The highwall movement will continue to restrict ore deliveries from the primary ore face and impact mined copper production in 2025 and 2026. We are working through this change in mining sequence and will provide a further update at our Investor Seminar in December.

Refined copper production was 129% higher than the third quarter of 2023, following the rebuild of the smelter and refinery in the prior period, and 11% lower than the second quarter, due to the annual planned shutdown of the concentrator and smelter in July.

Escondida

Mined copper production was 15% higher than the third quarter of 2023 due to higher ore grades being fed to the concentrators (1.00% versus 0.85%) in line with the mining sequence, together with increased recovery. Refined copper production was 24% lower than the same quarter of last year, given lower oxide leach performance due to lower grades being stacked during 2024, and 22% lower than the second quarter due to the installation and upgrading of infrastructure related to the Full SaL enhanced recovery project.

During August, Escondida successfully concluded wage negotiations with Union 1 at the operation.

Oyu Tolgoi

Mined copper production increased 19% from the third quarter of 2023 due to the ramp-up in production, and higher grade, at the underground mine. However, production was 5% lower than the previous quarter mainly due to planned maintenance at the concentrator and adverse weather impacting open pit operations. Production from the underground mine was marginally impacted by a minor delay to the start of commissioning of the conveyor to surface, with first ore on the belt now expected in the second half of October. We have opened a total of 120 drawbells from Panel 0 of the underground mine, including six during the quarter. During the quarter, we delivered 1.5 million tonnes of milled ore from the underground mine at an average copper head grade of 2.05% and 7.4 million tonnes from the open pit with an average grade of 0.39%. The ramp-up remains on track to reach 500 thousand tonnes of copper per year (100% basis and stated as recoverable metal) for the underground and open pit mines for the years 2028 to 2036¹.

During the third quarter, we entered negotiations on a new Collective Labour Agreement. Our current agreement expires in April 2025.

¹ The 500 thousand tonnes per annum copper production target (stated as recoverable metal) for the Oyu Tolgoi underground and open pit mines for the years 2028 to 2036 was previously reported in a release to the ASX dated 11 July 2023 "[Investor site visit to Oyu Tolgoi copper mine, Mongolia](#)". All material assumptions underpinning that production target and those production profiles continue to apply and have not materially changed.

Minerals

Rio Tinto share of production (million tonnes)	Q3 2024	vs Q3 2023	vs Q2 2024	9 MTHS 2024	vs 9 MTHS 2023
Iron ore pellets and concentrate					
IOC	2.1	-11%	-3%	6.9	-1%
Rio Tinto share of production ('000 tonnes)					
Minerals					
Borates - B ₂ O ₃ content	126	-1%	+1%	372	-3%
Titanium dioxide slag	263	+7%	+11%	755	-10%
Rio Tinto share of production ('000 carats)					
Diavik	542	-28%	-23%	1,984	-26%

Iron Ore Company of Canada (IOC)

Iron ore production was 11% lower than the third quarter of 2023 due to an 11 day site-wide shutdown driven by forest fires in mid-July. This resulted in a revised mine plan and maintenance schedule, leading to a reduction in our full year iron ore pellets and concentrate production guidance to 9.1 to 9.6 million tonnes (previously 9.8 to 11.5 million tonnes).

Shipments were 4% higher than the third quarter of 2023 driven by inventory movements.

Borates

Borates production in the third quarter was 1% lower than the corresponding period of 2023 due to planned maintenance at the refinery in August 2024.

Iron and Titanium

Titanium dioxide slag production was 7% higher than the third quarter of 2023 due to improved smelter stability and performance. A furnace reconstruction continues at our RTIT Quebec Operations, and we continue to operate six out of nine furnaces in Quebec and three out of four at Richards Bay Minerals (RBM).

Diamonds

At Diavik, carat production was 28% lower than the third quarter of 2023. Production was impacted by a subsidence event in July that limited underground ore deliveries.

Subsequent to the end of the quarter, we [announced](#) that the Diavik mine has safely completed the development and construction of Phase 1 of the A21 underground, with the mine moving into commercial production. We expect to complete Phase 2 and fully mine the A21 underground before closure in 2026.

In early October, we [launched](#) the 2024 Beyond Rare™ Tender with a special collection of rare pink, red, violet and yellow diamonds.

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 2024 was \$692 million, compared with \$613 million in the first nine months of 2023 (excluding Simandou). Approximately 24% of the spend was by central exploration, 30% by Minerals (with the majority focusing on lithium), 31% by Copper, 14% by Iron Ore and 1% by Aluminium. In 2024, all qualifying expenditure relating to Simandou is being capitalised. Qualifying expenditure on the Rincon project has been capitalised since 1 July 2024.

Exploration highlights

Rio Tinto has a strong portfolio of projects with activity in 18 countries across eight commodities in early exploration and studies stages. The bulk of the exploration expenditure in the third quarter focused on copper in Chile, Peru, Kazakhstan, Australia, Colombia and the US, nickel in Brazil and Canada, lithium in Canada, the US, Chile, Rwanda, Kazakhstan, Brazil and Australia, potash in Canada, diamonds in Angola, heavy mineral sands (HMS) in South Africa and rutile-graphite in Malawi. The Rio Tinto operated Nuevo Cobre joint venture copper project in Chile continues to make good progress with ongoing geological field programs, environmental studies and community engagement. Mine-lease exploration continued at Rio Tinto managed businesses including Bingham Canyon in the US and Pilbara Iron Ore in Australia.

A summary of activity for the quarter is as follows:

Commodities	Studies Stage	Advanced projects	Greenfield/ Brownfield programs
Bauxite			Cape York, Australia
	Lithium: Rincon, Argentina Lithium borates: Jadar, Serbia Nickel: Tamarack, US (3rd party operated)		Nickel Greenfield: Australia, Brazil, Canada, Finland Lithium Greenfield: Australia, Brazil, Canada, Chile, China, Finland, Kazakhstan, Rwanda, US
Battery Materials			Copper Greenfield: Angola, Australia, Brazil, Canada, Chile, China, Colombia, Kazakhstan, Laos, Peru, Papua New Guinea, Serbia, US, Zambia
Copper	Copper/molybdenum: Resolution, US Copper/gold: Winu, Australia	Copper: La Granja, Peru (3rd party operated)	Copper Brownfield: US (Bingham), Australia (Winu)
Diamonds		Chiri, Angola	
Iron Ore	Pilbara, Australia	Pilbara, Australia	Greenfield and Brownfield: Pilbara, Australia
Minerals	Potash: KL262 (3rd party operated), Canada HMS: Mutamba, Mozambique	Potash: Texas, Canada. HMS: Kamiesberg, South Africa (3rd party operated). Rutile-graphite: Kasiya, Malawi (3rd party operated)	

Forward-looking statement

This announcement includes “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. All statements other than statements of historical facts included in this report, including, without limitation, those regarding Rio Tinto’s financial position, business strategy, plans and objectives of management for future operations (including development plans and objectives relating to Rio Tinto’s products, production forecasts 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” or similar expressions, commonly identify such forward-looking statement.

Such forward-looking statements involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of Rio Tinto, or industry results, to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements, particularly in light of the current economic climate and the significant volatility, uncertainty and disruption arising in connection with the Ukraine conflict. Such forward-looking statements are based on numerous assumptions regarding Rio Tinto’s present and future business strategies and the environment in which Rio Tinto will operate in the future. Among the important factors that could cause Rio Tinto’s actual results, performance or achievements to differ materially from those in the forward-looking statements include, but are not limited to: an inability to live up to Rio Tinto’s values and any resultant damage to its reputation; the impacts of geopolitics on trade and investment; the impacts of climate change and the transition to a low-carbon future; an inability to successfully execute and/or realise value from acquisitions and divestments; the level of new ore resources, including the results of exploration programs and/or acquisitions; disruption to strategic partnerships that play a material role in delivering growth, production, cash or market positioning; damage to Rio Tinto’s relationships with communities and governments; an inability to attract and retain requisite skilled people; declines in commodity prices and adverse exchange rate movements; an inability to raise sufficient funds for capital investment; inadequate estimates of ore resources and reserves; delays or overruns of large and complex projects; changes in tax regulation; safety incidents or major hazard events; cyber breaches; physical impacts from climate change; the impacts of water scarcity; natural disasters; an inability to successfully manage the closure, reclamation and rehabilitation of sites; the impacts of civil unrest; the impacts of the Ukraine conflict; breaches of Rio Tinto’s policies, standard and procedures, laws or regulations; trade tensions between the world’s major economies; increasing societal and investor expectations, in particular with regard to environmental, social and governance considerations; the impacts of technological advancements; and such other risks 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 report. Rio Tinto expressly disclaims any obligation or undertaking (except as required by applicable law, the UK Listing Rules, the Disclosure Guidance 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. Past performance cannot be relied on as a guide to future performance.

Contacts

Please direct all enquiries to
media.enquiries@riotinto.com

Media Relations, United Kingdom

Matthew Klar
M +44 7796 630 637

David Outhwaite
M +44 7787 597 493

Investor Relations, United Kingdom

David Ovington
M +44 7920 010 978

Laura Brooks
M +44 7826 942 797

Weiwei Hu
M +44 7825 907 230

Rio Tinto plc

6 St James's Square
London SW1Y 4AD
United Kingdom
T +44 20 7781 2000

Registered in England
No. 719885

Media Relations, Australia

Matt Chambers
M +61 433 525 739

Jesse Riseborough
M +61 436 653 412

Michelle Lee
M +61 458 609 322

Rachel Pupazzoni
M +61 438 875 469

Investor Relations, Australia

Tom Gallop
M +61 439 353 948

Amar Jambaa
M +61 472 865 948

Rio Tinto Limited

Level 43, 120 Collins Street
Melbourne 3000
Australia
T +61 3 9283 3333

Registered in Australia
ABN 96 004 458 404

Media Relations, Americas

Simon Letendre
M +1 514 796 4973

Malika Cherry
M +1 418 592 7293

Vanessa Damha
M +1 514 715 2152

This announcement is authorised for release to the market by Andy Hodges, Rio Tinto's Group Company Secretary.

riotinto.com

LEI: 213800YOE050Q72G2R82

Classification: 3.1 Additional regulated information required to be disclosed under the laws of a Member State

Rio Tinto production summary

Rio Tinto share of production

		Quarter			9 Months		% change		9 MTHS 2024 vs 9 MTHS
		2023 Q3	2024 Q2	2024 Q3	2023 9 MTHS	2024 9 MTHS	Q3 24 vs Q3 23	Q3 24 vs Q2 24	
Principal commodities									
Alumina	('000 t)	1,897	1,676	1,770	5,618	5,310	-7%	+6%	-5%
Aluminium (Primary)	('000 t)	828	824	809	2,427	2,459	-2%	-2%	+1%
Bauxite	('000 t)	13,940	14,723	15,100	39,521	43,242	+8%	+3%	+9%
Borates	('000 t)	127	125	126	384	372	-1%	+1%	-3%
Copper - mined (consolidated)	('000 t)	169.4	171.2	167.8	459.6	494.7	-1%	-2%	+8%
Copper - refined	('000 t)	34.1	62.7	54.3	129.2	179.6	+59%	-13%	+39%
Iron Ore	('000 t)	73,241	69,712	73,160	213,657	211,574	0%	+5%	-1%
Titanium dioxide slag	('000 t)	247	238	263	835	755	+7%	+11%	-10%
Other Metals & Minerals									
Diamonds	('000 cts)	757	702	542	2,681	1,984	-28%	-23%	-26%
Gold - mined	('000 oz)	80.2	67.1	69.4	205.9	203.0	-14%	+3%	-1%
Gold - refined	('000 oz)	12.4	39.7	25.7	53.6	100.7	+108%	-35%	+88%
Molybdenum	('000 t)	0.6	0.6	0.5	1.1	1.8	-24%	-25%	+71%
Salt	('000 t)	1,434	1,540	1,511	4,535	4,476	+5%	-2%	-1%
Silver - mined	('000 oz)	1,001	1,072	1,046	2,711	3,092	+5%	-2%	+14%
Silver - refined	('000 oz)	240	606	392	1,001	1,548	+63%	-35%	+55%

Throughout this report, figures in italics indicate adjustments made since the figure was previously quoted on the equivalent page or reported for the first time. 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 interest	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	9 MTHS 2023	9 MTHS 2024
ALUMINA								
Production ('000 tonnes)								
Jonqui�re (Vaudreuil)	100 %	325	349	352	328	323	1,042	1,003
Jonqui�re (Vaudreuil) specialty Alumina plant	100 %	28	29	27	30	28	79	85
Queensland Alumina	80 %	720	664	675	602	693	2,029	1,970
S�o Luis (Alumar)	10 %	88	90	87	93	93	248	272
Yarwun	100 %	736	786	722	624	634	2,219	1,980
Rio Tinto total alumina production		1,897	1,919	1,864	1,676	1,770	5,618	5,310

ALUMINIUM								
Primary production ('000 tonnes)								
Australia - Bell Bay	100 %	47	47	47	47	47	139	140
Australia - Boyne Island (a)	71 %	76	76	75	75	76	218	225
Australia - Tomago	52 %	77	77	73	75	77	227	226
Canada - six wholly owned	100 %	398	410	405	399	395	1,154	1,199
Canada - Alouette (Sept-�les)	40 %	64	64	63	63	63	189	189
Canada - B�cancour	25 %	28	30	29	30	30	87	89
Iceland - ISAL (Reykjavik)	100 %	52	54	49	50	52	155	152
New Zealand - Tiwai Point	79 %	66	67	66	65	49	198	180
Oman - Sohar	20 %	20	20	20	20	20	60	60
Rio Tinto total primary aluminium production		828	846	826	824	809	2,427	2,459
Recycled production ('000 tonnes)								
Matalco	50 %	—	—	74	70	62	—	206
Rio Tinto total recycled aluminium production		—	—	74	70	62	—	206

(a) On 30 September 2024, Rio Tinto's ownership interest in Boyne Smelters Limited (BSL) increased from 59.39% to 71.04%. Production will be reported including this change from 1 October 2024.

BAUXITE								
Production ('000 tonnes) (a)								
Gove	100 %	3,015	3,234	3,104	3,172	3,073	8,332	9,349
Porto Trombetas (b)	22 %	391	509	508	667	737	992	1,912
Sangaredi	(c)	1,524	1,544	1,583	1,622	1,544	4,882	4,749
Weipa	100 %	9,010	9,811	8,224	9,262	9,747	25,315	27,232
Rio Tinto total bauxite production		13,940	15,098	13,418	14,723	15,100	39,521	43,242

(a) Mine production figures for metals refer to the total quantity of metal produced in concentrates, leach liquor or dor  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) On 30 November 2023, Rio Tinto's ownership interest in Porto Trombetas increased from 12% to 22%. Production is reported including this change from 1 December 2023.

(c) 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 interest	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	9 MTHS 2023	9 MTHS 2024
BORATES								
Production ('000 tonnes B₂O₃ content)								
Rio Tinto Borates - borates	100 %	127	111	121	125	126	384	372
COPPER								
Mine production ('000 tonnes) (a)								
Bingham Canyon	100 %	48.8	47.8	32.5	32.3	27.4	103.8	92.1
Escondida	30 %	78.6	71.6	77.2	86.4	90.4	228.3	253.9
Oyu Tolgoi	66 %	27.7	26.8	30.4	34.7	33.0	84.1	98.1
Rio Tinto total mine production		155.1	146.2	140.1	153.3	150.8	416.2	444.2
Rio Tinto total mine production - consolidated basis		169.4	160.0	155.8	171.2	167.8	459.6	494.7
Refined production ('000 tonnes)								
Escondida	30 %	15.6	14.1	14.7	15.2	11.8	52.6	41.8
Kennecott (b)	100 %	18.5	32.0	47.8	47.5	42.5	76.6	137.8
Rio Tinto total refined production		34.1	46.1	62.5	62.7	54.3	129.2	179.6

(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) We continue to process third party concentrate to optimise smelter utilisation, including 3.1 thousand tonnes of cathode produced from purchased concentrate in 2024 year-to-date. Purchased and tolled copper concentrates are excluded from reported production figures and production guidance. Sales of cathodes produced from purchased concentrate are included in reported revenues.

DIAMONDS

Production ('000 carats)

Diavik	100 %	757	659	740	702	542	2,681	1,984
--------	-------	-----	-----	-----	-----	-----	-------	-------

GOLD

Mine production ('000 ounces) (a)

Bingham Canyon	100 %	32.0	33.5	26.7	22.5	22.1	71.3	71.2
Escondida	30 %	14.4	14.6	11.7	13.6	14.1	45.2	39.4
Oyu Tolgoi	66 %	33.8	27.5	28.2	30.9	33.3	89.5	92.4
Rio Tinto total mine production		80.2	75.6	66.6	67.1	69.4	205.9	203.0

Refined production ('000 ounces)

Kennecott (b)	100 %	12.4	20.6	35.3	39.7	25.7	53.6	100.7
---------------	-------	------	------	------	------	------	------	-------

(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) We continue to process third party concentrate to optimise smelter utilisation, including 3.1 thousand tonnes of cathode produced from purchased concentrate in 2024 year-to-date. Purchased and tolled copper concentrates are excluded from reported production figures and production guidance. Sales of cathodes produced from purchased concentrate are included in reported revenues.

Rio Tinto share of production

	Rio Tinto interest	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	9 MTHS 2023	9 MTHS 2024
IRON ORE								
Production ('000 tonnes) (a)								
Hamersley mines	(b)	57,322	59,138	53,373	54,691	57,096	166,760	165,160
Hope Downs	50 %	5,519	6,074	5,081	5,044	5,753	17,167	15,878
Iron Ore Company of Canada	59 %	2,384	2,703	2,613	2,185	2,116	6,973	6,914
Robe River - Pannawonica (Mesas J and A)	53 %	4,106	4,330	4,245	4,186	3,844	11,126	12,274
Robe River - West Angelas	53 %	3,910	4,269	3,388	3,607	4,352	11,631	11,347
Rio Tinto iron ore production ('000 tonnes)		73,241	76,514	68,701	69,712	73,160	213,657	211,574
Breakdown of Production:								
Pilbara Blend and SP10 Lump (c)		21,418	22,228	19,885	20,828	22,460	62,073	63,173
Pilbara Blend and SP10 Fines (c)		31,700	33,485	29,836	31,277	33,320	94,301	94,434
Robe Valley Lump		1,665	1,592	1,534	1,546	1,488	4,290	4,567
Robe Valley Fines		2,441	2,739	2,711	2,640	2,356	6,836	7,707
Yandicoogina Fines (HIY)		13,633	13,768	12,122	11,235	11,421	39,185	34,779
Pilbara iron ore production ('000 tonnes)		70,857	73,811	66,088	67,527	71,045	206,683	204,660
IOC Concentrate		1,137	1,298	1,130	930	842	3,498	2,902
IOC Pellets		1,247	1,405	1,483	1,255	1,274	3,475	4,012
IOC iron ore production ('000 tonnes)		2,384	2,703	2,613	2,185	2,116	6,973	6,914
Breakdown of Shipments:								
Pilbara Blend Lump		14,812	14,533	12,844	12,463	14,240	45,192	39,547
Pilbara Blend Fines		25,375	23,706	23,168	24,702	26,626	81,377	74,496
Robe Valley Lump		1,297	1,506	1,223	1,337	1,166	3,499	3,726
Robe Valley Fines		2,706	3,054	2,943	3,095	2,565	7,457	8,602
Yandicoogina Fines (HIY)		13,669	13,628	12,228	11,364	11,794	39,916	35,386
SP10 Lump (c)		4,180	4,620	4,474	5,071	5,715	7,518	15,259
SP10 Fines (c)		9,699	12,208	9,221	8,218	10,366	23,145	27,804
Pilbara iron ore shipments ('000 tonnes) (d)		71,736	73,255	66,100	66,250	72,471	208,103	204,821
Pilbara iron ore shipments - consolidated basis ('000 tonnes) (d) (f)		73,553	75,058	67,910	68,281	74,211	213,380	210,402
IOC Concentrate		1,232	1,196	1,162	986	1,228	3,463	3,375
IOC Pellets		1,066	1,369	1,493	1,438	1,157	3,560	4,088
IOC Iron ore shipments ('000 tonnes) (d)		2,298	2,565	2,654	2,423	2,385	7,023	7,462
Rio Tinto iron ore shipments ('000 tonnes) (d)		74,034	75,820	68,755	68,673	74,856	215,127	212,283
Rio Tinto iron ore sales ('000 tonnes) (e)		74,488	76,269	69,356	71,920	74,078	220,439	215,354

(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, Western Turner Syncline, Marandoo, Yandicoogina, Brockman, Nammuldi, Silvergrass, Channar, Gudai-Darri, Eastern Range and Western Range mines. Whilst Rio Tinto owns 54% of the Eastern Range and the Western Range mines, 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) SP10 includes other lower grade products.

(d) Shipments includes material shipped to our portside trading facility in China which may not be sold onwards in the same period.

(e) Represents the difference between amounts shipped to portside trading and onward sales from portside trading, and third party volumes sold.

(f) While Rio Tinto has a 53% net beneficial interest in Robe River Iron Associates, it recognises 65% of the assets, liabilities, sales revenues and expenses in its accounts (as 30% is held through a 60% owned subsidiary and 35% is held through a 100% owned subsidiary). The consolidated basis sales reported here include Robe River Iron Associates on a 65% basis to enable comparison with revenue reported in the financial statements.

Rio Tinto share of production

	Rio Tinto interest	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	9 MTHS 2023	9 MTHS 2024
MOLYBDENUM								
Mine production ('000 tonnes) (a)								
Bingham Canyon	100 %	0.6	0.8	0.7	0.6	0.5	1.1	1.8

(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.

SALT								
Production ('000 tonnes)								
Dampier Salt	68 %	1,434	1,438	1,425	1,540	1,511	4,535	4,476

SILVER								
Mine production ('000 ounces) (a)								
Bingham Canyon	100 %	462	504	370	368	368	1,114	1,106
Escondida	30 %	350	420	398	465	464	1,056	1,327
Oyu Tolgoi	66 %	189	176	205	239	214	541	659
Rio Tinto total mine production		1,001	1,100	973	1,072	1,046	2,711	3,092
Refined production ('000 ounces)								
Kennecott (b)	100 %	240	406	550	606	392	1,001	1,548

(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) We continue to process third party concentrate to optimise smelter utilisation, including 3.1 thousand tonnes of cathode produced from purchased concentrate in 2024 year-to-date. Purchased and tolled copper concentrates are excluded from reported production figures and production guidance. Sales of cathodes produced from purchased concentrate are included in reported revenues.

TITANIUM DIOXIDE SLAG								
Production ('000 tonnes)								
Rio Tinto Iron & Titanium (a)	100 %	247	275	254	238	263	835	755

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

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 percentage interest shown above is at 30 September 2024.

Rio Tinto operational data

	Rio Tinto interest	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	9 MTHS 2023	9 MTHS 2024
ALUMINA								
Smelter Grade Alumina - Aluminium Group								
Alumina production ('000 tonnes)								
<i>Australia</i>								
Queensland Alumina Refinery - Queensland	80 %	900	830	844	752	866	2,536	2,463
Yarwun refinery - Queensland	100 %	736	786	722	624	634	2,219	1,980
<i>Brazil</i>								
São Luis (Alumar) refinery	10 %	883	899	867	926	927	2,476	2,720
<i>Canada</i>								
Jonquière (Vaudreuil) refinery - Quebec (a)	100 %	325	349	352	328	323	1,042	1,003
<i>(a) Jonquière's (Vaudreuil's) production shows smelter grade alumina only and excludes hydrate produced and used for specialty alumina.</i>								
Speciality Alumina - Aluminium Group								
Speciality alumina production ('000 tonnes)								
<i>Canada</i>								
Jonquière (Vaudreuil) plant – Quebec	100 %	28	29	27	30	28	79	85

Rio Tinto percentage interest shown above is at 30 September 2024. The data represents production and sales on a 100% basis unless otherwise stated.

Rio Tinto operational data

	Rio Tinto interest	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	9 MTHS 2023	9 MTHS 2024
ALUMINIUM								
Primary Aluminium								
Primary aluminium production ('000 tonnes)								
<i>Australia</i>								
Bell Bay smelter - Tasmania	100 %	47	47	47	47	47	139	140
Boyne Island smelter - Queensland (a)	71 %	127	128	126	126	127	367	379
Tomago smelter - New South Wales	52 %	149	149	142	146	150	441	438
<i>Canada</i>								
Alma smelter - Quebec	100 %	121	123	121	119	120	361	361
Alouette (Sept-Îles) smelter - Quebec	40 %	159	160	157	158	158	474	473
Arvida smelter - Quebec	100 %	43	43	43	37	36	129	116
Arvida AP60 smelter - Quebec	100 %	15	15	15	15	15	43	46
Bécancour smelter - Quebec	25 %	114	119	116	119	119	346	353
Grande-Baie smelter - Quebec	100 %	58	58	57	57	57	171	171
Kitimat smelter - British Columbia	100 %	103	109	107	107	103	268	317
Laterrière smelter - Quebec	100 %	59	62	61	63	64	182	188
<i>Iceland</i>								
ISAL (Reykjavik) smelter	100 %	52	54	49	50	52	155	152
<i>New Zealand</i>								
Tiwai Point smelter	79 %	83	85	83	82	62	249	227
<i>Oman</i>								
Sohar smelter	20 %	100	100	99	99	100	298	299
Recycled Aluminium								
Recycled aluminium production ('000 tonnes)								
Matalco	50 %	—	—	148	139	125	—	413

(a) On 30 September 2024, Rio Tinto's ownership interest in Boyne Smelters Limited (BSL) increased from 59.39% to 71.04%. Production will be reported including this change from 1 October 2024.

Rio Tinto percentage interest shown above is at 30 September 2024. The data represents production and sales on a 100% basis unless otherwise stated.

Rio Tinto operational data

	Rio Tinto interest	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	9 MTHS 2023	9 MTHS 2024
BAUXITE								
Bauxite production ('000 tonnes)								
<i>Australia</i>								
Gove mine - Northern Territory	100 %	3,015	3,234	3,104	3,172	3,073	8,332	9,349
Weipa mine - Queensland	100 %	9,010	9,811	8,224	9,262	9,747	25,315	27,232
<i>Brazil</i>								
Porto Trombetas (MRN) mine	22 %	3,258	3,202	2,310	3,034	3,348	8,271	8,692
<i>Guinea</i>								
Sangaredi mine (a)	23 %	3,387	3,430	3,517	3,604	3,432	10,848	10,552
Rio Tinto share of bauxite shipments								
Share of total bauxite shipments ('000 tonnes)		13,954	15,513	12,715	15,177	15,511	39,821	43,403
Share of third party bauxite shipments ('000 tonnes)		9,550	10,749	8,496	10,691	11,120	26,588	30,307
(a) Rio Tinto has a 22.95% shareholding in the Sangaredi mine but benefits from 45.0% of production.								

	Rio Tinto interest	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	9 MTHS 2023	9 MTHS 2024
BORATES								
Rio Tinto Borates - borates	100 %							
<i>US</i>								
Borates ('000 tonnes) (a)		127	111	121	125	126	384	372
(a) Production is expressed as B ₂ O ₃ content.								

	Rio Tinto interest	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	9 MTHS 2023	9 MTHS 2024
COPPER & GOLD								
Escondida	30 %							
<i>Chile</i>								
Sulphide ore to concentrator ('000 tonnes)		33,332	34,752	31,653	34,377	32,488	97,390	98,518
Average copper grade (%)		0.85	0.77	0.92	0.99	1.00	0.85	0.97
Mill production (metals in concentrates):								
Contained copper ('000 tonnes)		225.7	217.6	238.6	279.5	269.9	664.6	788.1
Contained gold ('000 ounces)		48.1	48.6	39.0	45.4	47.0	150.5	131.3
Contained silver ('000 ounces)		1,168	1,401	1,328	1,549	1,546	3,521	4,423
Recoverable copper in ore stacked for leaching ('000 tonnes) (a)		36.4	21.0	18.6	8.4	31.4	96.6	58.4
Refined production from leach plants:								
Copper cathode production ('000 tonnes)		52.0	46.9	49.0	50.7	39.4	175.2	139.2
(a) The calculation of copper in material mined for leaching is based on ore stacked at the leach pad.								

Rio Tinto percentage interest shown above is at 30 September 2024. The data represents production and sales on a 100% basis unless otherwise stated.

Rio Tinto operational data

	Rio Tinto interest	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	9 MTHS 2023	9 MTHS 2024
COPPER & GOLD (continued)								
Kennecott								
Bingham Canyon mine	100 %							
<i>Utah, US</i>								
Ore treated ('000 tonnes)		9,804	10,579	8,271	10,257	9,149	22,548	27,677
Average ore grade:								
Copper (%)		0.56	0.50	0.43	0.36	0.36	0.52	0.38
Gold (g/t)		0.16	0.14	0.14	0.11	0.12	0.15	0.12
Silver (g/t)		2.10	2.10	1.97	1.79	2.02	2.18	1.92
Molybdenum (%)		0.018	0.019	0.021	0.020	0.019	0.016	0.020
Copper concentrates produced ('000 tonnes)		180	191	127	135	121	388	383
Average concentrate grade (% Cu)		26.8	25.0	25.6	23.9	22.0	26.6	23.9
Production of metals in copper concentrates:								
Copper ('000 tonnes) (a)		48.8	47.8	32.5	32.3	27.4	103.8	92.1
Gold ('000 ounces)		32.0	33.5	26.7	22.5	22.1	71.3	71.2
Silver ('000 ounces)		462	504	370	368	368	1,114	1,106
Molybdenum concentrates produced ('000 tonnes):								
Molybdenum in concentrates ('000 tonnes)		1.4	1.6	1.6	1.6	1.1	2.1	4.3
		0.6	0.8	0.7	0.6	0.5	1.1	1.8
Kennecott smelter & refinery								
	100 %							
Copper concentrates smelted ('000 tonnes)		59	187	171	227	156	299	554
Copper anodes produced ('000 tonnes) (b)		1.4	44.1	56.7	54.4	42.8	74.8	154.0
Production of refined metal:								
Copper ('000 tonnes) (c)		18.5	32.0	47.8	47.5	42.5	76.6	137.8
Gold ('000 ounces) (d)		12.4	20.6	35.3	39.7	25.7	53.6	100.7
Silver ('000 ounces) (d)		240	406	550	606	392	1,001	1,548

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

(b) New metal excluding recycled material.

(c) We continue to process third party concentrate to optimise smelter utilisation, including 3.1 thousand tonnes of cathode produced from purchased concentrate in 2024 year-to-date. Purchased and tolled copper concentrates are excluded from reported production figures and production guidance. Sales of cathodes produced from purchased concentrate are included in reported revenues.

(d) Includes gold and silver in intermediate products.

Rio Tinto percentage interest shown above is at 30 September 2024. The data represents production and sales on a 100% basis unless otherwise stated.

Rio Tinto operational data

	Rio Tinto interest	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	9 MTHS 2023	9 MTHS 2024
COPPER & GOLD (continued)								
Oyu Tolgoi mine	66 %							
<i>Mongolia</i>								
Ore Treated ('000 tonnes) - Open Pit		8,789	8,714	9,011	9,284	7,352	27,210	25,647
Ore Treated ('000 tonnes) - Underground		900	888	1,313	1,533	1,521	2,475	4,366
Ore Treated ('000 tonnes) - Total		9,689	9,602	10,323	10,817	8,873	29,685	30,013
Average mill head grades:								
Open Pit								
Copper (%)		0.39	0.42	0.39	0.37	0.39	0.41	0.38
Gold (g/t)		0.25	0.22	0.19	0.17	0.22	0.22	0.19
Silver (g/t)		1.19	1.24	1.25	1.12	0.97	1.15	1.12
Underground								
Copper (%)		1.73	1.59	1.67	2.02	2.05	1.57	1.92
Gold (g/t)		0.37	0.37	0.42	0.62	0.61	0.37	0.56
Silver (g/t)		3.94	3.42	3.28	4.75	4.76	3.66	4.31
Total								
Copper (%)		0.52	0.53	0.55	0.61	0.67	0.51	0.61
Gold (g/t)		0.26	0.23	0.22	0.24	0.28	0.23	0.25
Silver (g/t)		1.44	1.44	1.50	1.64	1.62	1.36	1.59
Copper concentrates produced ('000 tonnes)		197.6	196.0	208.5	246.2	232.0	599.7	686.7
Average concentrate grade (% Cu)		21.3	20.8	22.1	21.3	21.6	21.2	21.6
Production of metals in concentrates:								
Copper in concentrates ('000 tonnes)		42.0	40.7	46.1	52.5	50.0	127.4	148.7
Gold in concentrates ('000 ounces)		51.2	41.7	42.8	46.9	50.4	135.6	140.0
Silver in concentrates ('000 ounces)		287	266	311	363	325	820	998
Sales of metals in concentrates:								
Copper in concentrates ('000 tonnes)		42.7	38.4	43.7	48.3	43.6	127.3	135.6
Gold in concentrates ('000 ounces)		48.7	41.5	41.5	43.3	42.1	133.1	126.9
Silver in concentrates ('000 ounces)		269	240	272	317	273	768	861

	Rio Tinto interest	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	9 MTHS 2023	9 MTHS 2024
DIAMONDS								
Diavik Diamonds	100 %							
<i>Northwest Territories, Canada</i>								
Ore processed ('000 tonnes)		427	388	343	361	232	1,300	937
Diamonds recovered ('000 carats)		757	659	740	702	542	2,681	1,984

Rio Tinto percentage interest shown above is at 30 September 2024. The data represents production and sales on a 100% basis unless otherwise stated.

Rio Tinto operational data

	Rio Tinto interest	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	9 MTHS 2023	9 MTHS 2024
IRON ORE								
Rio Tinto Iron Ore								
<i>Western Australia</i>								
Pilbara Operations								
Saleable iron ore production ('000 tonnes)								
Hamersley mines	(a)	57,322	59,138	53,373	54,691	57,096	166,760	165,160
Hope Downs	50 %	11,037	12,148	10,163	10,087	11,507	34,335	31,757
Robe River - Pannawonica (Mesas J and A)	53 %	7,747	8,171	8,009	7,898	7,252	20,992	23,159
Robe River - West Angelas	53 %	7,377	8,054	6,393	6,805	8,211	21,945	21,409
Total production ('000 tonnes)		83,484	87,511	77,938	79,481	84,066	244,031	241,486
Breakdown of total production:								
Pilbara Blend and SP10 Lump (b)		25,268	26,308	23,386	24,416	26,604	73,374	74,406
Pilbara Blend and SP10 Fines (b)		36,836	39,264	34,422	35,932	38,788	110,481	109,142
Robe Valley Lump		3,142	3,004	2,894	2,916	2,807	8,094	8,617
Robe Valley Fines		4,605	5,167	5,115	4,982	4,445	12,898	14,542
Yandicoogina Fines (HIY)		13,633	13,768	12,122	11,235	11,421	39,185	34,779
Breakdown of total shipments:								
Pilbara Blend Lump		17,785	17,355	15,635	15,832	17,498	54,274	48,965
Pilbara Blend Fines		31,008	29,840	28,475	31,336	31,870	100,026	91,681
Robe Valley Lump		2,447	2,842	2,308	2,522	2,200	6,603	7,031
Robe Valley Fines		5,105	5,762	5,553	5,839	4,839	14,070	16,231
Yandicoogina Fines (HIY)		13,669	13,628	12,228	11,364	11,794	39,916	35,386
SP10 Lump (b)		4,180	4,620	4,612	5,141	5,790	7,518	15,543
SP10 Fines (b)		9,699	12,208	9,221	8,275	10,559	23,145	28,055
Total shipments ('000 tonnes) (c)		83,892	86,255	78,033	80,309	84,550	245,550	242,892
Iron Ore Company of Canada								
	59 %							
<i>Newfoundland & Labrador and Quebec in Canada</i>								
Saleable iron ore production:								
Concentrates ('000 tonnes)		1,936	2,210	1,924	1,584	1,434	5,957	4,941
Pellets ('000 tonnes)		2,124	2,393	2,526	2,137	2,169	5,918	6,833
IOC Total production ('000 tonnes)		4,060	4,603	4,450	3,721	3,603	11,875	11,774
Shipments:								
Concentrates ('000 tonnes)		2,098	2,037	1,978	1,678	2,090	5,897	5,747
Pellets ('000 tonnes)		1,815	2,331	2,542	2,449	1,971	6,063	6,961
IOC Total Shipments ('000 tonnes) (c)		3,913	4,368	4,520	4,127	4,061	11,961	12,708
Global Iron Ore Totals								
Iron Ore Production ('000 tonnes)		87,543	92,114	82,388	83,203	87,669	255,906	253,260
Iron Ore Shipments ('000 tonnes)		87,805	90,623	82,553	84,436	88,611	257,511	255,600
Iron Ore Sales ('000 tonnes) (d)		88,030	91,072	82,790	87,479	87,349	262,121	257,618

(a) Includes 100% of production from Paraburdoo, Mt Tom Price, Western Turner Syncline, Marandoo, Yandicoogina, Brockman, Nammuldi, Silvergrass, Channar, Gudai-Darri, Eastern Range and Western Range mines. Whilst Rio Tinto owns 54% of the Eastern Range and the Western Range mines, 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) SP10 includes other lower grade products.

(c) Shipments includes material shipped to our portside trading facility in China which may not be sold onwards in the same period.

(d) Include Pilbara and IOC sales adjusted for portside trading movements and third party volumes sold.

Rio Tinto percentage interest shown above is at 30 September 2024. The data represents production and sales on a 100% basis unless otherwise stated.

Rio Tinto operational data

	Rio Tinto interest	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024	9 MTHS 2023	9 MTHS 2024
SALT								
Dampier Salt	68 %							
<i>Western Australia</i>								
Salt production ('000 tonnes)		2,097	2,103	2,085	2,253	2,211	6,634	6,548
TITANIUM DIOXIDE SLAG								
Rio Tinto Iron & Titanium	100 %							
<i>Canada and South Africa</i>								
(Rio Tinto share) (a)								
Titanium dioxide slag ('000 tonnes)		247	275	254	238	263	835	755

(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.

Rio Tinto percentage interest shown above is at 30 September 2024. The data represents production and sales on a 100% basis unless otherwise stated.