

22 February 2023

Changes to Ore Reserves and Mineral Resources

Rio Tinto has today announced to the Australian Securities Exchange (ASX) changes in Mineral Resources and Ore Reserves to support its 2022 annual reporting¹, including:

- Increased Ore Reserves at the Rio Tinto Kennecott (RTK) copper operations Bingham Canyon deposit in Utah.
- Increased Mineral Resources at the Winu copper project in Western Australia.
- Revised resource classification for the Mineral Resources at the QIT Madagascar Minerals (QMM) Petriky mineral sands deposit in Madagascar.
- Revised classification for the Ore Reserves at the Richards Bay Minerals (RBM) Zulti South mineral sands deposit in South Africa.

Supporting information relating to the changes of Mineral Resources and Ore Reserves is set out in the Table 1 Release and its appendices. This release provides a summary of those changes. Mineral Resources and Ore Reserves are quoted in this release on a 100 percent basis. Mineral Resources are reported in addition to Ore Reserves. The figures used to calculate Mineral Resources and Ore Reserve are often more precise than the rounded numbers shown in the tables, hence small differences may result if the calculations are repeated using the tabulated figures.

These changes will be included in Rio Tinto's 2022 Annual Report, to be released to the market on 22 February 2023 (London time) / 23 February 2023 (Melbourne time), which will set out in full Rio Tinto's Mineral Resources and Ore Reserves position as at 31 December 2022, and Rio Tinto's interests.

Rio Tinto Kennecott

Mineral Resources and Ore Reserves for the RTK Bingham Canyon open pit are presented in Table A and Table B². Ore Reserves tonnes have increased by 70% as a result of the completion of a pre-feasibility study for the Apex pit wall pushback which has enabled the conversion of Mineral Resources plus previously unclassified mineralisation to Ore Reserves. Mineral Resources have decreased as a result of this conversion.

Winu

Mineral Resources for the Winu copper project are presented in Table C³. This updated Mineral Resource represents a 19% increase in tonnage, no change in copper grade, a 12% increase in gold grade, a 19% increase in contained copper metal and a 33% increase in contained gold metal. The updated Mineral Resource is supported by the advancement of mining and processing studies and additional drilling information acquired since the release of the Indicated and Inferred Mineral Resource published in the 2021 Rio Tinto Annual Report. There are no Ore Reserves reported for Winu.

Winu continues to advance agreement making with host Traditional Owners, the Martu and Nyangumarta. Planned drilling, fieldwork and study activities continue to strengthen the development pathway ahead of applications for regulatory and other required approvals.

¹ These Mineral Resources and Ore Reserves were reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, 2012 (JORC Code) and the ASX Listing Rules in a release to the ASX dated 22 February 2023 titled "Ore Reserve and Mineral Resource updates: supporting information and Table 1 checklists" (Table 1 Release). Rio Tinto confirms that it is not aware of any new information or data that materially affects the information included in the Table 1 Release, that all material assumptions and technical parameters underpinning the estimates in the Table 1 Release continue to apply and have not materially changed, and that the form and context in which the Competent Persons' findings are presented have not been materially modified.

² The Competent Persons responsible for the information in the Table 1 Release that relates to Rio Tinto Kennecott Mineral Resources were Kim Schroeder and Pancho Rodriguez, who are Members of the Australasian Institute of Mining and Metallurgy (MAusIMM). The Competent Person responsible for the information in the Table 1 Release that relates to Rio Tinto Kennecott Ore Reserves is Brady Pett (MAusIMM).

³ The Competent Person responsible for the information in the Table 1 Release that relates to Winu Mineral Resources was James Pocoe (MAusIMM).

QIT Madagascar Minerals

The Petriky Mineral Resources form part of the QMM Mineral Resources which are presented in Table D⁴. The previously reported Petriky Mineral Resource was classified as Indicated however it was re-classified to Inferred for the 2022 reporting period. The rationale to down-grade Petriky resources from Indicated to Inferred was a combination of development risk and delays in obtaining sufficient mineralogy and geotechnical data. Government permitting to recommence drilling in the Petriky sector has been delayed, increasing the risk of future resource development of Petriky, which has been identified as one of the alternatives to replace Mandena once depleted. There are no Ore Reserves reported for Petriky; Ore Reserves for QMM are for the Mandena deposit and are presented in the Rio Tinto 2022 Annual Report.

Richards Bay Minerals

The Zulti South Ore Reserves form part of the RBM Ore Reserves which are presented in Table E⁵. RBM Ore Reserve tonnes for 2022 include a change in classification for the Zulti South project from Proven Reserves to Probable Reserves. The change results from increased uncertainty in the modifying factors as a result of schedule delays, due to ongoing community and security challenges. The original project timelines have been affected. The project remains on full suspension. Any restart of project activities is dependent on the receipt of internal approvals, after which the classification for the Zulti South Ore Reserves would be reviewed. All Mineral Resources at Zulti South have been converted to Ore Reserves, thus there are no additional Mineral Resources reported.

⁴ The Competent Person responsible for the information in the Table 1 Release that relates to QIT Madagascar Minerals Mineral Resources was Adriaan Louw, who is a Member of the South African Council for Natural Scientific Professionals (SACNASP).

⁵ The Competent Person responsible for the information in the Table 1 Release that relates to Richards Bay Minerals Mineral Resources was Anton Cawthorn-Blazeby (MAusIMM). The Competent Person responsible for the information in the Table 1 Release that relates to Richards Bay Minerals Ore Reserves is Sinetemba Mnunu (MAusIMM).

Table A Rio Tinto Kennecott Copper Bingham Canyon Open Pit Mineral Resources as at 31 December 2022

	Likely mining method ⁽¹⁾	Measured Mineral Resources as at 31 December 2022					Indicated Mineral Resources as at 31 December 2022					Total Measured and Indicated Mineral Resources as at 31 December 2022					
		Tonnage	Grade				Tonnage	Grade				Tonnage	Grade				
Copper⁽²⁾		Mt	% Cu	g/t Au	g/t Ag	% Mo	Mt	% Cu	g/t Au	g/t Ag	% Mo	Mt	% Cu	g/t Au	g/t Ag	% Mo	
Bingham Canyon (US)																	
- Bingham Open Pit ⁽³⁾	O/P	49	0.50	0.15	2.42	0.019	30	0.42	0.15	2.44	0.015	79	0.47	0.15	2.43	0.018	
		Inferred Mineral Resources as at 31 December 2022					Total Mineral Resources as at 31 December 2022					Rio Tinto interest	Total Mineral Resources as at 31 December 2021				
		Tonnage	Grade				Tonnage	Grade					Grade				
Copper⁽²⁾		Mt	% Cu	g/t Au	g/t Ag	% Mo	Mt	% Cu	g/t Au	g/t Ag	% Mo	%	Mt	% Cu	g/t Au	g/t Ag	% Mo
Bingham Canyon (US)																	
- Bingham Open Pit ⁽³⁾	14	0.21	0.16	1.19	0.006		93	0.43	0.15	2.24	0.016	100.0	256	0.39	0.20	1.75	0.017

1. Likely mining method: O/P = open pit/surface.
2. Copper Mineral Resources are reported on a dry in situ weight basis.
3. Bingham Canyon Open Pit Mineral Resource molybdenum grades interpolated from exploration drilling assays have been factored based on a long reconciliation history to blast hole and mill samples.

Table B Rio Tinto Kennecott Copper Bingham Canyon Ore Reserves as at 31 December 2022

	Type of mine ⁽¹⁾	Proved Ore Reserves as at 31 December 2022					Probable Ore Reserves as at 31 December 2022					Total Ore Reserves as at 31 December 2022				
		Tonnage	Grade				Tonnage	Grade				Tonnage	Grade			
Copper⁽²⁾		Mt	% Cu	g/t Au	g/t Ag	% Mo	Mt	% Cu	g/t Au	g/t Ag	% Mo	Mt	% Cu	g/t Au	g/t Ag	% Mo
Bingham Canyon (US)																
- Bingham Open Pit ⁽³⁾	O/P	484	0.40	0.18	2.10	0.037	395	0.35	0.17	1.82	0.029	880	0.38	0.18	1.97	0.033
		Average mill recovery %				Rio Tinto interest	Rio Tinto share recoverable metal				Total Ore Reserves as at 31 December 2021					
		Cu	Au	Ag	Mo		Mt Cu	Moz Au	Moz Ag	Mt Mo	Tonnage	Grade				
Copper⁽²⁾						%					Mt	% Cu	g/t Au	g/t Ag	% Mo	
Bingham Canyon (US)																
- Bingham Open Pit ⁽³⁾		87	69	72	59	100.0	2.890	3.406	40.386	0.172	541	0.44	0.17	2.22	0.029	

1. Type of Mine: O/P = open pit/surface.
2. Copper Ore Reserves are reported as dry mill feed tonnes.
3. Bingham Canyon Open Pit Ore Reserve molybdenum grades interpolated from exploration drilling assays have been factored based on a long reconciliation history to blast hole and mill samples.

Table C Winu Mineral Resources as at 31 December 2022

	Likely mining method ⁽¹⁾	Measured Mineral Resources as at 31 December 2022				Indicated Mineral Resources as at 31 December 2022				Total Measured and Indicated Mineral Resources as at 31 December 2022			
		Tonnage	Grade	g/t Au	g/t Ag	Tonnage	Grade	g/t Au	g/t Ag	Tonnage	Grade	g/t Au	g/t Ag
Copper⁽²⁾		Mt	% Cu			Mt	% Cu			Mt	% Cu		
Winu (Australia)	O/P	-	-	-	-	222	0.45	0.35	2.73	222	0.45	0.35	2.73

	Likely mining method ⁽¹⁾	Inferred Mineral Resources as at 31 December 2022				Total Mineral Resources as at 31 December 2022				Rio Tinto interest	Total Mineral Resources as at 31 December 2021			
		Tonnage	Grade	g/t Au	g/t Ag	Tonnage	Grade	g/t Au	g/t Ag		Tonnage	Grade	g/t Au	g/t Ag
Copper⁽²⁾		Mt	% Cu			Mt	% Cu			%	Mt	% Cu		
Winu (Australia)		499	0.38	0.33	1.98	721	0.40	0.34	2.21	100.0	608	0.40	0.30	2.26

1. Likely mining method: O/P = open pit/surface.
2. Copper Mineral Resources are reported on a dry in situ weight basis.

Table D QIT Madagascar Minerals Mineral Resources as at 31 December 2022

	Likely mining method ⁽¹⁾	Measured Mineral Resources as at 31 December 2022			Indicated Mineral Resources as at 31 December 2022			Total Measured and Indicated Mineral Resources as at 31 December 2022		
		Tonnage	Grade	% Zircon	Tonnage	Grade	% Zircon	Tonnage	Grade	% Zircon
Titanium dioxide feedstock⁽²⁾		Mt	% Ti Minerals		Mt	% Ti Minerals		Mt	% Ti Minerals	% Zircon
QMM (Madagascar)	O/P	445	4.3	0.2	398	4.0	0.2	843	4.2	0.2

	Likely mining method ⁽¹⁾	Inferred Mineral Resources as at 31 December 2022			Total Mineral Resources as at 31 December 2022			Rio Tinto interest	Total Mineral Resources as at 31 December 2021		
		Tonnage	Grade	% Zircon	Tonnage	Grade	% Zircon		Tonnage	Grade	% Zircon
Titanium dioxide feedstock⁽²⁾		Mt	% Ti Minerals		Mt	% Ti Minerals	% Zircon	%	Mt	% Ti Minerals	% Zircon
QMM (Madagascar)		596	3.9	0.2	1,439	4.1	0.2	80.0	1,470	4.1	0.2

1. Likely mining method: O/P = open pit/surface.
2. Titanium dioxide feedstock Mineral Resources are reported as dry in situ tonnes.

Table E Richards Bay Minerals Ore Reserves as at 31 December 2022

	Type of mine ⁽¹⁾	Proved Ore reserves as at 31 December 2022			Probable Ore Reserves as at 31 December 2022			Total Ore Reserves as at 31 December 2022		
		Tonnage	Grade		Tonnage	Grade		Tonnage	Grade	
Titanium dioxide feedstock⁽²⁾		Mt	% Ti Minerals	% Zircon	Mt	% Ti Minerals	% Zircon	Mt	% Ti Minerals	% Zircon
RBM (South Africa)	O/P	552	1.6	0.2	732	3.1	0.4	1,284	2.4	0.3

	Rio Tinto interest	Rio Tinto share Marketable product		Total Ore Reserves as at 31 December 2021		
				Tonnage	Grade	
Titanium dioxide feedstock⁽²⁾	%	Mt Titanium Dioxide Feedstock	Mt Zircon	Mt	% Ti Minerals	% Zircon
RBM (South Africa)	74.0	10.4	2.5	1,393	2.3	0.3

1. Type of Mine: O/P = open pit/surface.

2. The marketable product (zircon at RBM and zirsil at QMM) is shown after all mining and processing losses. Titanium dioxide feedstock Ore Reserves are reported as dry in situ tonnes.

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

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