

Simandou iron ore project update

6 December 2023

Rio Tinto is providing an update today at its Investor Seminar on the world class Simandou iron ore project in Guinea, which is being progressed in partnership with CIOH, a Chinalco-led consortium, Winning Consortium Simandou¹ (WCS), Baowu and the Republic of Guinea.

Simandou is the world's largest untapped high-grade iron ore deposit. The Simfer joint venture's² mine concession held an estimated Total Mineral Resource as at 31 December 2022 of 2.8 billion tonnes, of which Rio Tinto is today reporting the conversion of an estimated 1.5 billion tonnes to Ore Reserves that support a mine life of 26 years, with an average grade of 65.3% iron³ and low impurities. Rio Tinto is also reporting Mineral Resources exclusive of Ore Reserves of 1.4 billion tonnes at 66.1% Fe and low impurities.

Rio Tinto estimates that its initial⁴ share of capital expenditure to develop the Simfer mine and the co-developed rail and port infrastructure project is approximately \$6.2 billion⁵.

Rio Tinto Executive Committee lead for Guinea and Copper Chief Executive Bold Baatar said: "We are continuing to work closely with the Government of Guinea, Chinalco, Baowu and WCS towards full sanction of this world class project by all partners.

"Simandou will deliver a significant new source of high-grade iron ore that will strengthen Rio Tinto's portfolio for the decarbonisation of the steel industry, along with trans-Guinean rail and port infrastructure that can make a significant contribution to the country's economic development."

In what will be the largest greenfield integrated mine and infrastructure investment in Africa, more than 600 kilometres of new multi-use rail together with port facilities will be co-developed by the Republic of Guinea, Simfer and WCS. This will allow the export of up to 120 million tonnes per year of mined iron ore by Simfer and WCS from their respective Simandou mining concessions⁶ in the southeast of the country.⁷

¹ WCS is currently a consortium of Singaporean company, Winning International Group (50%), Weiqiao Aluminium (part of the China Hongqiao Group) (50%) and United Mining Supply Group (nominal shareholding). WCS is the holder of Simandou North Blocks 1 & 2 (with the Government of Guinea holding a 15% interest in the mining vehicle and WCS holding 85%) and associated infrastructure. Baowu Resources has entered into an agreement to acquire a 49% share of WCS mine and infrastructure projects through a Baowu-led consortium, subject to conditions including regulatory approvals. In the case of the mine, Baowu has an option to increase to 51% during operations.

² 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, on the date of this notice, a wholly-owned subsidiary of Simfer Jersey Limited, but will be co-owned by the Guinean State (15%) after closing of the co-development arrangements.

³ Refer to "Simandou Mineral Resources and Ore Reserves" section at page 4 below.

⁴ A true-up mechanism will apply between Simfer and WCS (as defined below) to equalise their out of pocket costs of constructing the co-developed rail and port infrastructure.

⁵ Estimated numbers, subject to approval by the Simfer board and government authorities.

⁶ WCS holds the mining concession for Blocks 1 and 2, while Simfer SA holds the mining concession for blocks 3 and 4. Simfer and WCS will independently develop their mines.

⁷ Co-development of the rail and port infrastructure remains subject to a number of conditions, including regulatory approvals in Guinea and China, the entry into a number of legal agreements, ratification of the investment framework for co-development by the Republic of Guinea, and agreement between Simfer, WCS and the Republic of Guinea regarding the budget for the rail and port infrastructure.

The co-developed infrastructure capacity and associated cost will be shared equally between Simfer, which will develop, own and operate a 60 million tonne per year⁸ mine in blocks 3 and 4 of the Simandou Project, and WCS, which is developing blocks 1 and 2.

Under the co-development arrangement, Simfer and WCS will deliver separate infrastructure scopes to leverage expertise⁹. Simfer will construct the approximately 70 kilometre Simfer spur rail line and a 60 million tonne per year transshipment vessel (TSV) port, while WCS will construct the dual track approximately 536 kilometre main rail line, the approximately 16 kilometre WCS spur rail line and a 60 million tonne per year barge wharf.

Once complete, all co-developed infrastructure and rolling stock will be transferred to and operated by the Compagnie du Transguinéen (CTG) joint venture, in which Simfer and WCS each hold a 42.5% equity stake and the Guinean State a 15% equity stake¹⁰.

First production from the Simfer mine is expected in 2025, ramping up over 30 months to an annualised capacity of 60 million tonnes per year (27 million tonnes Rio Tinto share). The mine will initially deliver a single fines product before transitioning to a dual fines product of blast furnace and direct reduction ready ore.

Simfer's initial capital funding requirement for the Simandou project is estimated to be approximately \$11.6 billion, of which Rio Tinto's share is approximately \$6.2 billion, broken down as follows⁵.

US dollars in billions (nominal terms)	Simfer capex ¹¹	Rio Tinto share
Mine and TSVs, owned and operated by Simfer		
Development of an initial 60Mt/a mine at Simandou South (blocks 3 & 4), to be constructed by Simfer	\$5.1	\$2.7
Co-developed infrastructure, owned and operated by CTG once complete		
Simfer scope (funded 100% by Simfer during construction)		
Rail: a 70 km rail-spur from Simfer mine to the mainline, including rolling stock Port: construction of a 60Mt/a TSV port	\$3.5	\$1.9
WCS scope (funded 34% by Simfer during construction)		
Port and rail infrastructure including an approximately 552 km trans-Guinean heavy haul rail system, comprised of a 536 km mainline and a 16 km WCS rail spur.	\$3.0	\$1.6

An IRR in the low double digits¹² is anticipated for the combined Simfer mine and the co-developed infrastructure through ownership of CTG.

Rio Tinto's share of capital investment remaining to be spent from 1 January 2024 is expected to be \$5.7 billion. Rio Tinto's expected funding requirements for 2024 and 2025, are included in its share of capital investment guidance for this period, with project funding expected to extend beyond this timeframe.

⁸ The estimated annualised capacity of approximately 60 million dry tonnes per annum iron ore for the life of mine schedule is underpinned as to 18% by Proved Ore Reserves and 82% by Probable Ore Reserves as set out in the Table 1 Release referred to in the footnote below. Rio Tinto confirms that all material assumptions underpinning the production target in the Table 1 Release continue to apply and have not materially changed.

⁹ Simfer will hold 34% of the WCS-Baowu InfraCo during construction.

¹⁰ The ownership of the rail and port infrastructure will transfer from CTG to the Guinean State after a 35 year Operations Period, with Simfer retaining access rights on a non-discriminatory basis and at least equivalent to all Third Party Users.

¹¹ Subject to adjustment as described in Footnote 1.

¹² 11 to 13% (post-tax, real basis). Based on Wood Mackenzie and CRU average pricing for iron ore (65% grade), with a premium applied for DR product.

Rio Tinto expects its full year expenditure for 2023 to be around \$0.9 billion to progress critical path works, including around \$0.4 billion to be funded by CIOH after receiving Chinese regulatory approvals.

Full sanction of the project by the Rio Tinto Board is subject to remaining conditions being met, including joint venture partner approvals and regulatory approvals from China and Guinea.

Further details on the Simandou project can be found in the 2023 Investor Seminar presentation at www.riotinto.com/invest.

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Simandou Mineral Resources and Ore Reserves¹³

Rio Tinto is reporting that the Proved Ore Reserves estimate for the Ouéléba deposit at Simandou contains 273 Mt at 66.4% Fe, 1.0% SiO₂, 1.2% Al₂O₃ and 0.07% P and the Probable Ore Reserves estimate contains 1,226 Mt at 65.0% Fe, 0.9% SiO₂, 1.8% Al₂O₃ and 0.10% P.

This Ore Reserves estimate has been made by the Competent Person and reported in accordance with the JORC Code as required by Simfer's Mining Convention. We note that, consistent with the JORC Code, some elements are at pre-feasibility level and work continues to refine all elements to feasibility level consistent with Rio Tinto's global practice.

Rio Tinto is also reporting Mineral Resources exclusive of Ore Reserves for the Ouéléba and Mineral Resources for Pic de Fon deposits at Simandou of 1,360 Mt at 66.1% Fe, 1.5% SiO₂, 1.5% Al₂O₃ and 0.06% P consisting of Measured Mineral Resources of 153 Mt at 67.0% Fe, Indicated Mineral Resources of 460 Mt at 66.2% Fe and Inferred Mineral Resources of 746 Mt at 65.8% Fe. The Mineral Resources cut-off for reporting is Fe greater than or equal to 58% and Al₂O₃ + SiO₂ less than or equal 8% and P less than or equal to 0.25%.

The declaration of the 1,499 Mt Ore Reserves estimate is as a result of the conversion of 1,469 Mt of undiluted Mineral Resources, inclusive of dilution, at Ouéléba.

Mineral Resources and Ore Reserves are quoted on a 100% basis. Rio Tinto ownership percentage is 45.05%.

¹³ These Mineral Resources and Ore Reserves have been reported in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, 2012 and the ASX Listing Rules in a release dated 6 December 2023 titled "Release of Mineral Resource and Ore Reserve Estimates for Simandou" (Table 1 Release) which is available on Rio Tinto's website at [resources & reserves \(riotinto.com\)](https://www.riotinto.com/resources-and-reserves). The Competent Person responsible for the information in that release that relates to Mineral Resources is Kaye Tindale, a Member of the Australasian Institute of Mining and Metallurgy (MAusIMM). The Competent Person responsible for the information in that release that relates to Ore Reserves is Michael Apfel, a Member of the Australasian Institute of Mining and Metallurgy (MAusIMM). 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.

Mineral Resources and Ore Reserves declaration

A tabulation of the update to the Mineral Resources at Simandou is provided in Table A. A tabulation of the new Ore Reserves at Simandou is provided in Table B.

Table A Simandou Mineral Resources as at 6 December 2023^{(b) (c)}

Likely mining method ^(a)	Measured Mineral Resources						Indicated Mineral Resources						Total Measured and Indicated Mineral Resources as at 6 December 2023					
	Tonnage			Grade			Tonnage			Grade			Tonnage			Grade		
	Mt	% Fe	% SiO ₂	% Al ₂ O ₃	% P	% LOI	Mt	% Fe	% SiO ₂	% Al ₂ O ₃	% P	% LOI	Mt	% Fe	% SiO ₂	% Al ₂ O ₃	% P	% LOI
O/P	153	67.0	1.9	1.1	0.04	1.1	460	66.2	1.8	1.5	0.05	1.9	613	66.4	1.8	1.4	0.05	1.7

Likely mining method ^(a)	Inferred Mineral Resources						Total Mineral Resources as at 6 December 2023						Rio Tinto Interest	Total Mineral Resources as at 31 December 2022					
	Tonnage			Grade			Tonnage			Grade				Tonnage			Grade		
	Mt	% Fe	% SiO ₂	% Al ₂ O ₃	% P	% LOI	Mt	% Fe	% SiO ₂	% Al ₂ O ₃	% P	% LOI		%	Mt	% Fe	% SiO ₂	% Al ₂ O ₃	% P
O/P	746	65.8	1.3	1.6	0.07	2.8	1,360	66.1	1.5	1.5	0.06	2.3	45.05	2,830	65.8	1.2	1.5	0.08	3.0

(a) Likely mining method: O/P = open pit

(b) Mineral Resources of iron ore are stated on a dry in situ weight basis

(c) Simandou Mineral Resources tonnes decreased due to conversion of Resources to Reserves following completion of the feasibility study for Ouéléba

Table B Simandou Ore Reserves as at 6 December 2023^{(b) (c)}

Type of mine ^(a)	Proved Ore Reserves						Probable Ore Reserves						Total Ore Reserves As at 6 December 2023 ^{(d) (e)}						Rio Tinto Interest	Rio Tinto Share Marketable product
	Tonnage			Grade			Tonnage			Grade			Tonnage			Grade				
	Mt	% Fe	% SiO ₂	% Al ₂ O ₃	% P	% LOI	Mt	% Fe	% SiO ₂	% Al ₂ O ₃	% P	% LOI	Mt	% Fe	% SiO ₂	% Al ₂ O ₃	% P	% LOI		
O/P	273	66.4	1.0	1.2	0.07	2.5	1,226	65.0	0.9	1.8	0.10	3.9	1,499	65.3	0.9	1.7	0.09	3.7	45.05	675

(a) Type of mine: O/P = open pit

(b) Reserves of iron ore are reported on a dry weight basis and shown as recoverable Reserves of marketable product after accounting for all mining and processing losses.

(c) Simandou iron ore Reserves tonnes are reported for the first time since 2016

(d) Only Measured and Indicated Resources have been considered in the conversion of Mineral Resources to Ore Reserves after the application of modifying factors

(e) Simandou Ore Reserves relates to the Ouéléba portion only of the Simfer mine (blocks 3 & 4)

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