

30 August 2022

## Motheo Copper Project Expansion DFS

5.2Mtpa Motheo Copper Project Expansion to drive peak copper production to 55ktpa.

### Highlights

- Positive Definitive Feasibility Study (DFS) completed for the 5.2Mtpa Motheo Copper Project expansion, inclusive of the A4 Deposit Ore Reserve.
- Combined Total Ore Reserve for both the **A4 Deposit**, located 8km west of the Motheo Copper Mine, and the **T3 Deposit**:
  - **49.6Mt at 1.0% Cu and 14g/t Ag for 474kt of contained copper and 21.3Moz of contained silver<sup>1</sup>**
- DFS shows outstanding project economics from an expanded 5.2Mtpa processing operation, mining both the T3 and A4 Deposits, compared to the 3.2Mtpa development scenario currently in progress:
  - **Pre-tax NPV<sub>7%</sub> of US\$548 million and IRR of 29%** using consensus metal prices of **Cu US\$3.57/lb, Ag US\$20/oz**
  - Mine life of **10 years, peak production of 55ktpa** copper-in-concentrate, strip ratio of 6.2 waste to ore
  - LOM production: **440kt Cu and 18.4Moz Ag**
  - LOM **all-in sustaining costs of US\$1.79/lb**
- Total development capital for the Motheo Copper Project expansion case estimated at US\$397M, incorporating development costs for the A4 Open Pit and 5.2Mtpa plant expansion of US\$47.9M.
- Outstanding potential for further Resource and Reserve growth, with drilling continuing across an exceptional target pipeline within Sandfire's extensive landholding in the Kalahari Copper Belt.

Sandfire Resources Ltd (**Sandfire** or **the Company**) is pleased to confirm the planned expansion of its Motheo Copper Mine in Botswana from 3.2Mtpa to 5.2Mtpa following the completion of a positive Definitive Feasibility Study (DFS) including the A4 Deposit and an expanded processing plant.

The total combined T3 and A4 JORC 2012 Probable Ore Reserve estimate comprises **49.6Mt at 1.0% Cu and 14g/t Ag for 474kt of contained copper metal and 21.3Moz of contained silver<sup>1</sup>**.

**Table 1: Motheo Copper Project Open Pit Ore Reserve**

Ore Reserve Category	Tonnes (Mt)	Grade Cu (%)	Contained Cu (kt)	Grade Ag (g/t)	Contained Ag (Moz)
Probable - T3 and A4 Deposit	49.6	0.96	474	13.6	21.3
<b>Total Ore Reserve</b>	<b>49.6</b>	<b>0.96</b>	<b>474</b>	<b>13.6</b>	<b>21.3</b>

<sup>1</sup> Refer to the Company's ASX announcements titled, 'A4 Ore Reserve and Motheo Expansion PFS' (22 September 2022) and 'Sandfire Approves Development of new Long-life Copper Mine' (1 December 2020) for details.

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**Motheo Copper Project 5.2Mtpa Expansion Case Definitive Feasibility Study**

Sandfire has completed a DFS for the Motheo expansion, including development of the A4 Deposit and an expansion of the Motheo Processing Plant. The DFS has confirmed the strong business case for development of the A4 Deposit, the first satellite deposit to the Motheo Copper Mine, as part of an expanded 5.2Mtpa Motheo Production Hub strategy.

In completing the DFS, Sandfire has been able to leverage off the work currently underway for the development and construction of the 3.2Mtpa Motheo Copper Mine and the prior work completed on the 3.2Mtpa DFS.

The expansion case DFS incorporates A4 and expanding plant production from 3.2Mtpa to 5.2Mtpa. The planned overall project layout is shown in Figure 1.

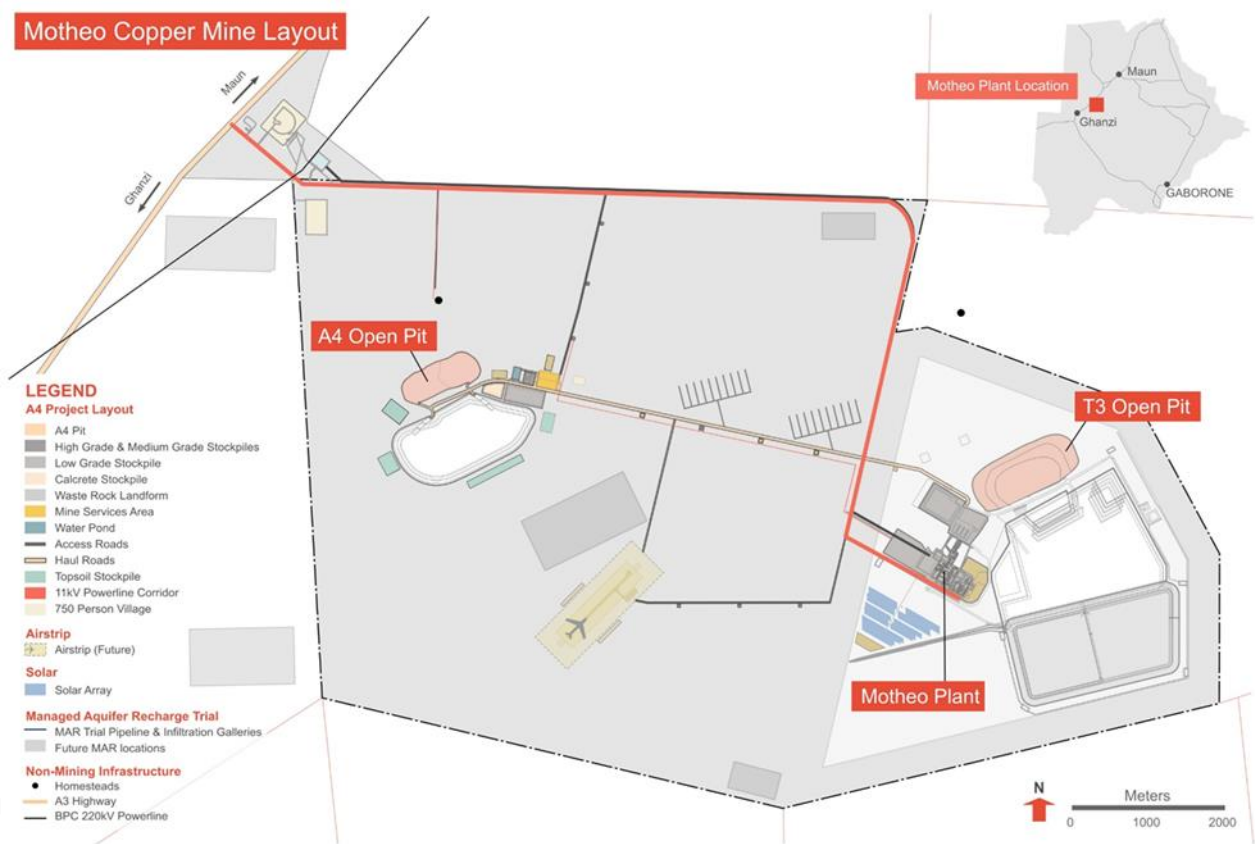


Figure 1: Motheo - planned site layout

Mine facilities include surface mining operations at the A4 Deposit, expansion of the processing plant and supporting infrastructure. The recently completed Motheo mining accommodation facility at 752 rooms requires no expansion to accommodate additional manning numbers associated with mining at A4. New infrastructure for A4 includes a light vehicle access road from the already constructed access road, a dual lane HV haul road to be constructed from A4 to the Motheo Processing Plant, workshops, fuel, crib and office facilities, electrical and water supplies.

Planning is well advanced for a 22MW Photo Voltaic (PV) and Battery Energy Storage System (BESS). The PV plant would be located next to the process plant, with the potential to supply up to 34% of the project’s future energy needs and will reduce its CO<sub>2</sub> emissions by 475,000 tonnes over the LOM. The capital for the PV plant is currently not included in the LOM capital as firm pricing submissions are being sought.

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Subject to the timing of the award of contracts, site construction activities for the process plant expansion are scheduled to commence in the March Quarter of FY2023. Design work for the plant expansion has commenced and the delivery to site of the 4.5MW Ball Mill has also commenced. No other long-lead delivery equipment is required for the plant expansion. Following process plant expansion construction and commissioning works, increased plant throughput at 5.2Mtpa is expected to commence in the March Quarter of FY2024.

Ore feed for the expanded plant will be from additional T3 Deposit stockpiles until first ore deliveries from A4 commence in the December Quarter of FY2025.

Mining pre-strip at A4 is anticipated to commence in the December/March Quarter of FY2024, subject to the approval of the Environmental-Social Impact Assessment (ESIA) and granting of the Mining Licence for A4. Formal submission of the ESIA to the Department of Environmental Affairs (DEA) is planned for the December Quarter of FY2023, with approvals anticipated in the June Quarter of FY2023.

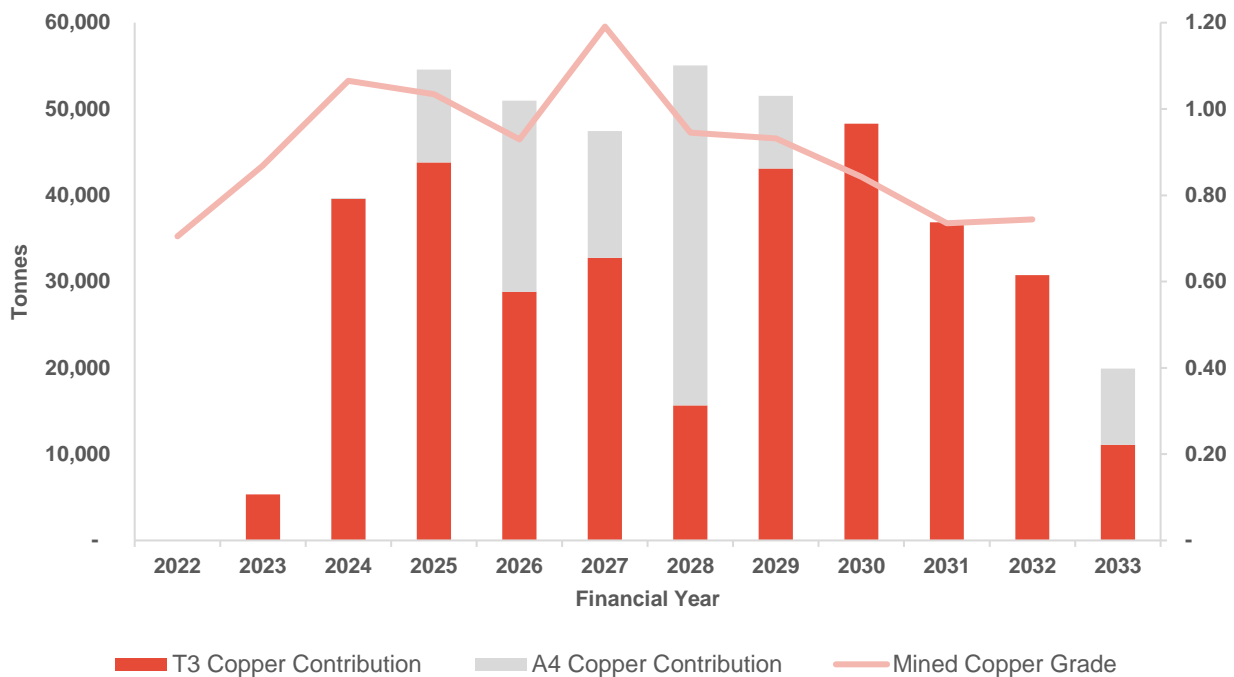


Figure 2: Motheo – Indicative Production profile

The project's economics are robust and have withstood the significant increases currently seen in input pricing for mining costs, diesel supply, reagents, grinding media and labour.

The estimated operating cost for the combined 5.2Mtpa T3 and A4 operation varies throughout the life of mine as changes occur in the cost to mine and process the deposits. The average operating cash cost (C1) over the life-of-mine, on a payable copper basis, is estimated to be approximately US\$1.47/lb of copper. C1 consists of US\$0.84/lb mining costs, US\$0.56/lb processing cost inclusive of power, site administration and offsite logistics costs of US\$0.23/lb, US\$0.19/lb treatment and refining charges, and a silver by-product credit of US\$0.35/lb copper. The estimated All-in Sustaining Cost (AISC), which includes C1 plus sustaining capital, is US\$1.79/lb.

A summary of key DFS parameters and comparison to the 5.2 Mtpa PFS released in September 2021 (adjusted to reflect current consensus metals pricing) are presented in Table 2 below.

**Table 2: Motheo Study – Key Outcomes<sup>1</sup>**

Key drivers	Unit	5.2Mtpa DFS	5.2Mtpa PFS	Variance (%)
<b>Physicals</b>				
Life of Mine (processing)	Years	10.0	10.5	(5%)
Waste : Ore (inc. pre-strip)		6.2	6.5	(5%)
Cu grade	%	0.94	0.96	(2%)
Ag grade	g/t	13.1	13.4	(2%)
Cu recovery	%	92.9	92.3	0.6%
Ag recovery	%	86.4	88.2	(2%)
Cu in concentrate	kt	440	437	1%
<b>Economic</b>				
Cu price (LOM average) <sup>1</sup>	US\$/lb	3.57	3.49	2%
Ag price (LOM average)	US\$/oz	20.00	21.51	(7%)
LOM Revenue	US\$'B	3.7	3.6	3%
Capex: Development & Pre-strip	US\$'M	397	366	(8%)
Capex: LOM	US\$'M	499	454	(10%)
Net cash flow (pre-tax)	US\$'M	1,071	1,241	(14%)
NPV (pre-tax, real, 7.0%)	US\$'M	548	682	(20%)
NPV (post-tax, real, 7.0%)	US\$'M	339	417	(19%)
IRR (pre-tax, real)	%	29.0	36.2	(20%)
Capital payback (from 1st production)	Years	3.3	2.9	(15%)
C1: LOM	US\$/lb	1.47	1.32	(11%)
AISC: LOM	US\$/lb	1.79	1.56	(15%)

**Notes:**

- Financial outcomes from the 5.2Mtpa PFS released on 22 September 2021 have been updated using an assumed copper price of US\$3.57/lb (compared with US\$3.49/lb used in the 22 September 2021 ASX announcement), reflecting long-term consensus forecasts, and bringing them in-line with the assumptions used in the Expansion Case 5.2Mtpa DFS reported in this announcement.

Total development capital estimated at **US\$397.4 million** incorporates future development costs for the A4 Open Pit and 5.2Mtpa plant expansion of US\$47.9 million and the US\$29.5 million increase in capital cost forecast for the 3.2Mtpa project disclosed in the Company's June 2022 Quarterly Report. LOM Capital is estimated at US\$499 million. As at 31 July 2022, the Company had invested US\$185.4 million (47%) of the US\$397.4 million development capital.

Sandfire intends to fund the development of the 5.2Mtpa expansion through a combination of cash and project debt. The Company has obtained credit approval for a US\$140.0M project debt facility from a syndicate of banks.

**Table 3: Capital Expenditure Update**

Capital Expenditure	US\$M
3.2Mtpa PFS estimate – September 2021	296.0
3.2Mtpa cost inflation	29.5
A4 development and plant expansion to 5.2Mtpa (inclusive of pre-approved US\$24m)	71.9
<b>Total Capital</b>	<b>397.4</b>

The Government of Botswana has a right to acquire up to a 15% fully contributing interest in the A4 Deposit executed at the granting of the Mining Licence. The Government of Botswana did not take up the interest in the initial 3.2Mtpa T3 development.

Planning for the work programs to support the 5.2Mtpa Motheo expansion implementation phase are well underway, with significant work already progressed on areas such as environmental approvals, process plant design, dewatering bore drilling and 4.5MW ball mill manufacture and delivery.

Key critical path items for the 5.2Mtpa expansion have been identified as the ESIA and Mining Licence approvals, with both of these items being actively progressed. The DEA has recently approved the Environmental scoping document and the terms of reference allowing the full ESIA to be submitted in the coming weeks.

### **Motheo Copper Mine Development Update**

Site activities are progressing well with the 752-person permanent village complete, 9,200m<sup>3</sup> (95%) of process plant structural concrete poured, 950 tonnes (72%) of structural steel erected and the 132kV transmission line nearing completion. Earthworks and lining of the Tailing Storage Facility (TSF) is progressing and all site construction contracts for the 3.2Mtpa development have been awarded.



**Figure 3: Motheo accommodation village – 752 rooms completed**

**Management Comment**

Sandfire's Managing Director and CEO, Karl Simich, said the decision to commit to an expansion of the Motheo Copper Mine following completion of the 5.2Mtpa Expansion Case DFS marked another important milestone in the Company's plans to establish a major new long-term copper mining hub in the Kalahari Copper Belt.

'The DFS has confirmed the robust economics of the expanded project and provides a clear pathway for us to move ahead with an immediate expansion of the 3.2Mtpa project.

'With construction activity well advanced, the 3.2Mtpa project is on schedule for completion in the March Quarter of FY2023, with first concentrate expected in the June Quarter of FY2023, allowing the expansion project to ramp up immediately following receipt of environmental and mining approvals.

'The international team that is delivering the 3.2Mtpa project will seamlessly transition across to the 5.2Mtpa development project, including A4 mining development and process plant expansion.

'In parallel with this development, we are also continuing a major exploration campaign both in the near-mine area as well as across our extensive landholding in the Kalahari Copper Belt aimed at defining additional ore sources that can feed into our expanded processing hub at Motheo or support the development of new production centres across the region.'

**ENDS****For further information, please contact:**

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**This announcement is authorised for release by Sandfire's Managing Director and CEO, Karl Simich.**

**Forward-Looking Statements**

Certain statements made during or in connection with this release contain or comprise certain forward-looking statements regarding Sandfire's Mineral Resources and Reserves, exploration and project development operations, production rates, life of mine, projected cash flow, capital expenditure, operating costs and other economic performance and financial condition as well as general market outlook. Although Sandfire believes that the expectations reflected in such forward-looking statements are reasonable, such expectations are only predictions and are subject to inherent risks and uncertainties which could cause actual values, results, performance or achievements to differ materially from those expressed, implied or projected in any forward looking statements and no assurance can be given that such expectations will prove to have been correct.

There is also continuing uncertainty as to the full impact of COVID-19 on Sandfire's business, the Australian economy, share markets and the economies in which Sandfire conducts business. Given the high degree of uncertainty surrounding the extent and duration of the COVID-19 pandemic, it is not currently possible to assess the full impact of COVID-19 on Sandfire's business or the price of Sandfire securities.

Accordingly, results could differ materially from those set out in the forward-looking statements as a result of, among other factors, changes in economic and market conditions, delays or changes in project development, success of business and operating initiatives, changes in the regulatory environment and other government actions, fluctuations in metals prices and exchange rates and business and operational risk management.

Except for statutory liability which cannot be excluded, each of Sandfire, its officers, employees and advisors expressly disclaim any responsibility for the accuracy or completeness of the material contained in these forward-looking statements and excludes all liability whatsoever (including in negligence) for any loss or damage which may be suffered by any person as a consequence of any information in forward-looking statements or any error or omission. Sandfire undertakes no obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after today's date or to reflect the occurrence of unanticipated events other than required by the Corporations Act and ASX Listing Rules. Accordingly, you should not place undue reliance on any forward-looking statement.

**ASX releases referred to in this announcement:**

Maiden Ore Reserve for A4 Deposit and PFS confirms 5.2 Mtpa Motheo Copper Project – Sandfire Resources Ltd (22 September 2021)

Sandfire delivers 34% increase in contained copper at satellite A4 Copper-Silver Deposit at Motheo – Sandfire Resources Ltd (21 July 2021).

Sandfire approves development of new long-life copper mine in Botswana - Sandfire Resources Ltd (1 December 2020).

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