



29 January 2021

ASX Limited  
Level 40, Central Park  
152-158 St George's Terrace  
Perth WA 6000

## **Lodgement of December 2020 Quarterly Report and Presentation Investor Conference Call and Webcast Details**

I am pleased to attach the following items for immediate release to the market:

1. December 2020 Quarterly Report; and
2. December 2020 Quarterly Report Presentation.

In addition, a teleconference and live webcast on the December 2020 Quarterly Report will be held for the investment community at 10.00am (AWST) / 1.00pm (AEST) today.

The December Quarterly Report and accompanying slide presentation will be available via the ASX Company Announcements Platform (ASX Code: SFR) and Sandfire's website at [www.sandfire.com.au](http://www.sandfire.com.au).

A live webcast of the teleconference and synchronised slide presentation will also be available by [clicking here](#).

Yours sincerely

**Matthew Fitzgerald**  
Chief Financial Officer  
and Company Secretary

29 January 2021

## December 2020 Quarterly Report

### Highlights

#### DeGrussa Operations

Contained metal production	September 2020 Quarter	December 2020 Quarter	December 2020 Half Year	FY 2021 Guidance
<b>Copper (t)</b>	19,400	<b>16,390</b>	<b>35,790</b>	67,000 – 70,000
<b>Gold (oz)</b>	11,683	<b>9,660</b>	<b>21,343</b>	36,000 – 40,000
<b>C1 cost (US\$/lb)</b>	0.53	<b>0.89</b>	<b>0.72</b>	0.85 – 0.90

- Strong mine production and milling rates maintained.
- Record 23,000 wet metric tonnes (wmt) shipment of copper concentrate valued at more than A\$52 million completed to Europe.
- FY2021 guidance: upper end of 67-70kt Cu and 36-40koz Au; C1 costs US\$0.85-\$0.90/lb.
- Sandfire continues to maintain appropriate protocols to minimise the potential transmission of COVID-19, with no significant disruption to the Company's operations to date.
- Multi-pronged exploration programs continuing across Sandfire's Doolgunna Province. Deep diamond hole targeting interpreted structural offset of C4/5 deposits set to commence on the Red Bore tenement in the March 2021 Quarter.
- Maiden Mineral Resource estimate for Old Highway Gold Prospect on-track for delivery in the June 2021 Quarter following successful drilling programs. This will underpin a Scoping Study on the Company's gold transition strategy at DeGrussa, leveraging existing infrastructure.

#### Tshukudu

- Final Investment Decision (FID) for US\$259 million development of the T3 Motheo Copper-Silver Project following the completion of a positive Definitive Feasibility Study (DFS) on a base case 3.2Mtpa operation with clear visibility to expand rapidly to 5.2Mtpa.
- Strong project economics at 3.2Mtpa with key highlights including US\$2.45 billion life-of-mine revenue, US\$987 million EBITDA (using a forecast long-term copper price of US\$3.16/lb), pre-tax NPV<sub>7%</sub> of US\$316 million and all-in sustaining costs of US\$1.76/lb for the first 10 years of operations.
- Maiden 100,000t Cu Inferred Mineral Resource estimate for the A4 deposit, 8km west of T3, with strong growth potential highlighted by new high-grade intercepts up to 16% Cu.

#### Black Butte

- Enhancement of the Feasibility Study for the 85%-owned Black Butte Johnny Lee Copper Project in Montana, USA being progressed.
- Exploration underway within the Mining Lease targeting potential extensions and near-mine opportunities.

## Corporate and Financial

- Highly experienced mining and corporate governance executives Jennifer Morris OAM and John Richards appointed as independent Non-Executive Directors, effective from 1 January 2021.
- Farm-in Agreement signed with CBH Resources Ltd giving Sandfire the right to earn up to a 100% interest in the Endeavor base metal mine and surrounding exploration tenements, located near Cobar in NSW.
- Acquisition of an 85% joint venture interest in the Red Bore Copper Project (ML52/597), located adjacent to the DeGrussa Copper-Gold Mine in Western Australia.
- Group cash on hand at 31 December 2020 of \$335.8 million and no debt (subject to auditor review, excluding lease liabilities).

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## 1 MANAGEMENT OVERVIEW

Sandfire Managing Director and CEO, Karl Simich, said: “The December Quarter marked the beginning of an exciting new era for Sandfire. We articulated our vision for the Company’s next decade of growth in a wide-ranging presentation to the market on 2 December, underpinned by the five key elements of our strategic plan: executing delivery, achieving sustainable production, accelerate discovery, align and empower our people and optimising our capital structure.

“The key highlight of the Quarter was the announcement of board approval for the commercial development of the US\$259 million T3 Motheo Copper-Silver Project in Botswana, which we expect to form the cornerstone of our dominant position in a new long-term copper province in the Kalahari Copper Belt. While the Base Case 3.2Mtpa operation delivers impressive economics over an initial 12.5-year life using conservative copper pricing, we anticipate expanding quickly to establish a 5.2Mtpa operation – our Motheo Copper-Silver Production Hub – fed initially by the T3 and rapidly growing A4 satellite deposit.

“With construction commencing this quarter at T3, we are looking forward to a transformational year in Botswana in 2021 as we build a major new long-term copper mine. At the same time, our recent exploration success at the A4 deposit has revealed the potential for exceptionally high grades of up to 16% copper in the Kalahari Copper Belt – an exciting and significant development given that this is just the second of a vast number of targets we have tested so far within our 26,650km<sup>2</sup> ground position in Botswana and Namibia.

“In the meantime, our strong production performance and low cost profile has allowed us to continue to benefit from the copper price, which recently hit an 8-year high of over US\$8,000 a tonne. A record shipment of 23,000 wet metric tonnes of copper concentrate in December capped another outstanding quarterly performance by the DeGrussa Operations, which is ideally placed to capitalise on the outlook for copper.

“The copper price is trading some 26 per cent higher than this time last year and 72 per cent above its low in March 2020, during the onset of the COVID-19 pandemic. The consensus for copper amongst most of the world’s major investment banks is for a positive outlook – traditionally a bellwether for the global economy.

“This view is supported by the potential for synchronised global growth as post-pandemic stimulus packages kick in and the world embarks on a decarbonisation push which in turn will drive an increase in demand for copper and other industrial commodities required to facilitate global investment in electric vehicles and renewable energy.”

## 2 COVID-19 BUSINESS RESPONSE

The health and well-being of our people, contractors and stakeholders is of paramount importance to us, with the Company continuing to maintain strict protocols across our operations to minimise the potential transmission of COVID-19.

While the global COVID-19 pandemic has required the Company to adjust some of its usual operating procedures, the direct impact to date has been limited to social distancing and additional risk mitigation strategies. The impact on operating costs has also been minimal, with C1 cost guidance for FY2021 assuming continued minimal impact on production and costs levels.

### 3 SAFETY PERFORMANCE

The Total Recordable Injury Frequency Rate (TRIFR) for the Group at the end of the December Quarter was 3.1 (September 2020 Quarter: 5.5). Recordable injuries include those that result in any days away from work (Lost Time Injuries), those where an employee or contractor cannot perform all or any part of their normal shift (Restricted Duty Injuries), as well as any injury that requires services that only a medical practitioner can provide (Medical Treatment Injuries).

Safety system developments continue to focus on the prevention of incidents and principal hazard management, with programs to assist in managing and improving the safety culture and the management of risk for both employees and contractors.

## 4 DEGRUSSA OPERATIONS, WESTERN AUSTRALIA

### 4.1 Overview

December 2020 Quarter – Production Statistics		Tonnes	Grade (% Cu)	Grade (g/t Au)	Contained Copper (t)	Contained Gold (oz)
<b>Concentrator</b>	Mined – DeGrussa	277,094	4.0	1.7	10,997	15,465
	Mined – Monty	112,352	5.9	1.6	6,668	5,686
	Mined – Total	389,446	4.6	1.7	17,665	21,151
	Milled	383,978	4.6	1.7	17,603	20,820
	Production	70,262	23.3	4.3	16,390	9,660
	Sales	74,250	23.3	4.3	17,300	9,956

**Note:** Mining and production statistics are rounded to the nearest 0.1% Cu grade and 0.1 g/t Au grade. Errors may occur due to rounding. Production statistics are subject to change following reconciliation and finalisation subsequent to the end of the Quarter.

### 4.2 Underground Mining

During the Quarter, production was sourced from the DeGrussa and Monty Mines with the mine remaining in balance between production and back-fill.

Mine production rates from DeGrussa were slightly lower than planned during the Quarter due to reduced contractor manning in December. Monty mine production rates continued to exceed forecast. This combined performance resulted in a total of 389,446 tonnes mined for the Quarter.

### 4.3 Processing

Processed ore tonnes of 383,978 tonnes for the Quarter continued to be in line with plan and was supported by strong plant utilisation late in the Quarter. Mill throughput rates remained on target with strong copper recovery of 93.1%.

### 4.4 Guidance – FY2021

FY2021 production guidance is expected to be at the upper end of 67-70,000 tonnes of contained copper and 36-40,000 ounces of contained gold. Headline C1 cash operating cost guidance to lower end of US\$0.85-\$0.90/lb.

Remaining FY2021 quarterly production is broadly expected to range between 16,000-19,000 tonnes of contained copper and 9,000-10,000 ounces of contained gold. Based on the current mining sequence, copper

and gold production is expected to be at or around the upper end of these ranges in the June 2021 Quarter and at or around the lower end of these ranges for the March 2021 Quarter.

Refer to Sandfire's December 2020 Quarterly Report Presentation (released today, 29 January 2021) for further detail and guidance on operating parameters, unit costs and capital expenditure for FY2021.

## 5 TSHUKUDU, BOTSWANA

### 5.1 T3 Motheo Copper-Silver Project Feasibility Study Optimisation

Sandfire's Board approved the commercial development of the T3 Motheo Copper-Silver Project during the Quarter, marking a key step in its international growth and diversification strategy. The Final Investment Decision (FID) is based on the positive results of a Definitive Feasibility Study (DFS) on an initial Base Case 3.2Mtpa processing capacity and open pit development of the T3 Deposit.

The DFS outlined a robust initial 12.5-year operation, underpinned by an updated Ore Reserve of 39.9Mt at 0.9% Cu and 12.2g/t Ag for 360,000t of contained copper and 15.6Moz of contained silver, producing on average ~30kt of contained copper and 1.2Moz of contained silver per annum over the first 10 years of operations, with relatively low capital intensity and robust operating margins.

Based on a forecast copper price of US\$3.16/lb (reflecting current long-term consensus pricing) the Base Case 3.2Mtpa project is forecast to generate US\$664 million (\$A948 million) in pre-tax free cash-flow and US\$987 million (A\$1,410 million) in EBITDA, at a forecast all-in sustaining cost of US\$1.76/lb over its first 10 years of operations.

The capital expenditure estimate of US\$259 million (A\$371 million) includes mining pre-strip, process plant construction, site infrastructure development, tailings storage, owner's costs and contingency.

Reflecting its confidence in the future long-term growth of the Project, Sandfire's Board has also approved an additional upfront investment of US\$20 million (A\$28 million) to be made as part of the 3.2Mtpa Base Case development. This will facilitate the installation of additional processing capacity and infrastructure (including larger front-end crushing capacity, additional flotation and thickening capacity and an expanded accommodation facility), providing a clear pathway to rapidly expand the processing facility to a planned 5.2Mtpa production rate for the Motheo Production Hub to accommodate other ore sources.

The immediate and most advanced expansion opportunity for the expanded 5.2Mtpa Motheo Production Hub is the A4 deposit, located 8km west from T3. Sandfire announced a maiden Inferred Mineral Resource of 6.5Mt at 1.5% Cu for 100,000t of contained copper for this strategic deposit during the Quarter with both in-fill and step-out drilling underway to upgrade the Inferred Mineral Resource to Indicated status and underpin the completion of Pre-Feasibility and Engineering Studies.

The 5.2Mtpa Expansion Case referred to in this and other associated releases, where it relates to A4 and other prospects, is based on preliminary Resource drilling, technical and economic assessments. Resource drilling and associated study work at A4 is currently insufficient to support estimation of Ore Reserves or to provide assurance of an economic Expansion Case for the Motheo Production Hub.

#### 5.1.1 DFS Outcomes

##### Key Outcomes

Life-of-Mine (Processing)	12.5 years
Ore Tonnes Mined	39.9Mt
Waste: Ore ratio (including pre-strip)	6.0
Copper Grade	0.9%
Silver Grade	12.2g/t
Processing Plant Capacity (Base Case)	3.2Mtpa

**Key Outcomes (continued)**

Metallurgical Recovery Cu – LOM (%)	92.15%
Metallurgical Recovery Ag – LOM (%)	87.38%
Copper-in-concentrate – LOM	331,727t
Copper-in-concentrate – LOM	731Mlb

**Life-of-Mine Financial Economics**

Copper Price (US\$/lb)	3.16
Revenue (US\$M)	2,448
C1 Cash Costs <sup>1</sup> (US\$/lb)	1.65
All-in Sustaining Costs <sup>2</sup> (US\$/lb)	1.84
EBITDA (US\$M)	987
Net Cash Flow (pre-tax) (US\$M)	664
Undiscounted Cash Breakeven Copper Price (US\$/lb)	2.19
Pre-tax NPV (7% real) (US\$M)	316
IRR (pre-tax)	25%
Capital Payback Period - from first production (years)	3.8

Operating Costs (LOM)	US\$/t milled	US\$/lb
Mining	17.4	0.99
Processing	6.9	0.39
General and Administrative	2.4	0.14
Logistics	4.6	0.26
Treatment and Refining	3.6	0.20
By-Product Credit (Silver)	(5.7)	(0.32)
Operating Costs (C1 Cash Costs)	29.2	1.65
Sustaining Capital	0.84	0.05
Closure	0.75	0.04
Royalties	1.70	0.10
All-in Sustaining Costs	32.5	1.84

Capital Expenditure	US\$M
Construction Overheads	17.2
Mining Pre-Strip	73.0
Process Plant	46.4
Site Infrastructure	35.3
Tailings Storage (including surface water management)	15.0
Engineering, Procurement and Construction Management (EPCM)	11.7
Owner's Project and Operating Costs	36.2
Contingency	24.5
Total Base Case – 3.2Mtpa	259.3

<sup>1</sup> Includes operating cash costs comprising mining, processing, geology, OHSE, site G&A, concentrate transport, TC and RC costs, less by-product credits, divided by payable copper in concentrate produced.

<sup>2</sup> All-in sustaining cash costs are cash operating costs (C1 cash costs plus royalties, sustaining capital and closure costs).

### 5.1.2 Funding

From a funding perspective the Company is well placed to fund the development of T3 from its cash holdings, and future cash-flow generation from its high-grade DeGrussa Operations in Western Australia.

Given Sandfire's strong financial position the FID is not subject to finalisation of project debt funding. However, with the finalisation of the DFS, Sandfire is progressing consideration of a project financing facility for approximately 50 per cent of the estimated development costs and working capital requirements (around US\$150 million (A\$214 million)), as part of its broader capital management strategy. The Company is well advanced in discussions for this project debt funding with a range of financing partners.

### 5.1.3 Next Steps

- Complete the land acquisition required for the mine and infrastructure.
- Submit the DFS to the Government of Botswana (refer to 5.2 below).
- Complete final permitting and secure the grant of the Mining Licence for the T3 Project.
- Progress project debt funding.
- Complete in-fill drilling at the A4 deposit as the basis for Pre-Feasibility and Engineering Studies.
- Advance exploration within the T3 Expansion Project targeting potential new deposits and further additional ore feed.

Details of the DFS were provided in the Company's ASX Announcement, dated 1 December 2020, titled "Sandfire Approves Development of New Long-life Copper Mine in Botswana".

## 5.2 T3 Copper-Silver Project Permitting

The DFS will now be submitted to the Government of Botswana, with the Government as part of the Mining Licence approval process having a right to acquire up to a 15% fully contributing interest in the T3 Project. The Government of Botswana's ownership decision will then pave the way for a Mining Licence for the T3 Project to be granted.

The grant of a Mining Licence represents the last major permitting milestone required for development of the T3 Project to commence.

## 5.3 A4 Mineral Resource Estimate

Sandfire reported a maiden JORC 2012 compliant Inferred Mineral Resource of **6.5 million tonnes grading 1.5% copper and 24g/t Ag** for the A4 Copper-Silver deposit in Botswana, located at shallow depth on the large A4 Dome structure identified from Airborne Electro Magnetic Survey (AEM) data.

The maiden A4 Mineral Resource – which is estimated to contain **100,000 tonnes of copper metal and 4.9 million ounces of silver** – is the first deposit to be delineated outside of the substantial T3 Copper-Silver Project within the highly prospective 1,000km<sup>2</sup> T3 Expansion Area.

Given its location from the planned processing plant and infrastructure at T3, the A4 deposit has potential to become an important source of satellite ore for the Motheo Production Hub supporting the expansion from the Base case of 3.2Mtpa to 5.2Mtpa.

The maiden A4 Mineral Resource was based on the results of the initial 99 diamond drill holes, of which 79 intersected the deposit and informed the Mineral Resource. This drilling was completed on a nominal 50mE x 50mN spacing, providing sufficient confidence to allow the Company to commence a scoping study.

The Inferred Mineral Resource (summarised in Table 1 below) is reported at a 0.5% Cu cut-off, constrained within a US\$4.50/lb Cu price optimised pit shell, and is reported on a block cut-off basis.

**Table 1 - Maiden A4 Mineral Resource**

Cu% Cut-off	Mineral Resource Category	Weathering	Tonnes (Mt)	Grade Cu (%)	Contained Cu (kt)	Contained Ag (g/t)	Contained Ag (Moz)
0.50%	Inferred	Saprolite	0.4	1.2	5	9	0.1
		Saprock	0.9	1.4	12	14	0.4
		Fresh	5.2	1.6	83	26	4.4
		<b>Total</b>	<b>6.5</b>	<b>1.5</b>	<b>100</b>	<b>24</b>	<b>4.9</b>

Notes:

Calculations have been rounded to the nearest: 100kt; 0.1% Cu grade; 1kt Cu metal; 1g/t Ag grade; and 100koz Ag metal. Differences may occur due to rounding.

Details of the A4 Mineral Resource were provided in the Company's ASX Announcement, dated 1 December 2020, titled "Maiden Mineral Resource for A4 Copper-Silver Deposit Highlights Growth Potential of Motheo".

## 5.4 Tshukudu Exploration

*The Company holds a dominant landholding of approximately 26,650km<sup>2</sup> of highly prospective licences in the Kalahari Copper Belt of Botswana and Namibian. Sandfire's 100% owned licences represent a rare belt-scale exploration opportunity globally, comprising an extensive and strategic position extending more than 300km along the centre of a major emerging sediment-hosted copper belt.*

Sandfire through its 100% owned subsidiary, Tshukudu Exploration (Pty) Ltd, has an expanded exploration program underway in the Kalahari Copper Belt, aimed at:

- Targeting high-grade satellite discoveries within the T3 Expansion Project area with the potential to increase the scale of T3;
- Delineating additional Resources with the potential to extend mine life; and
- Targeting major new regional discoveries to unlock the copper belt's broader potential.

### 5.4.1 A4 Dome and Regional Drilling Programs

Following completion of the Phase 1 resource drilling program, Sandfire continued with a Phase 2 program of in-fill and extensional drilling designed to upgrade the maiden Inferred Mineral Resource estimate outlined above to a higher confidence Indicated Mineral Resource and also to test for extensions to the Resource.

The Phase 2 program is ongoing with up to six diamond core drill rigs having completed approximately 50 additional holes on a nominal 25m by 25m drill pattern within the Resource area and testing for potential extensions along strike and down-dip from the Maiden Resource Estimate (refer Figure 1).

This drilling has intersected very high-grade copper and silver mineralisation which is not included in the Maiden Mineral Resource Estimate. This high-grade mineralisation is interpreted to occur in localised zones associated with extensional veins situated below the shear-hosted mineralisation (refer Figure 2).

Notably, hole MO-A4-122D intersected **33.0m @ 4.6% Cu and 74.3 g/t Ag** from 109m down-hole depth, including **22.0m @ 6.0% Cu and 98.2g/t Ag** from 120m down-hole depth, including **9.5m @ 11.7% Cu and 188g/t Ag** from 130.5m down-hole in the Upper Zone.

MO-A4-122D also intersected **13.15m @ 10.2% Cu and 142.6g/t Ag** from 169.0m down-hole including **7.15m @ 16.0% Cu, 222.0g/t Ag and 2.9% Mo** from 175.0m down-hole in the Lower Zone.



Hole MO-A4-138D located 50m east of MO-A4-122D intersected **35.70m @ 7.1% Cu and 116g/t Ag** from 128.5m down-hole, including **12.40m @ 13.3% Cu and 232.8g/t Ag**, from 131.6m down-hole associated with sulphide veins and breccia zones.

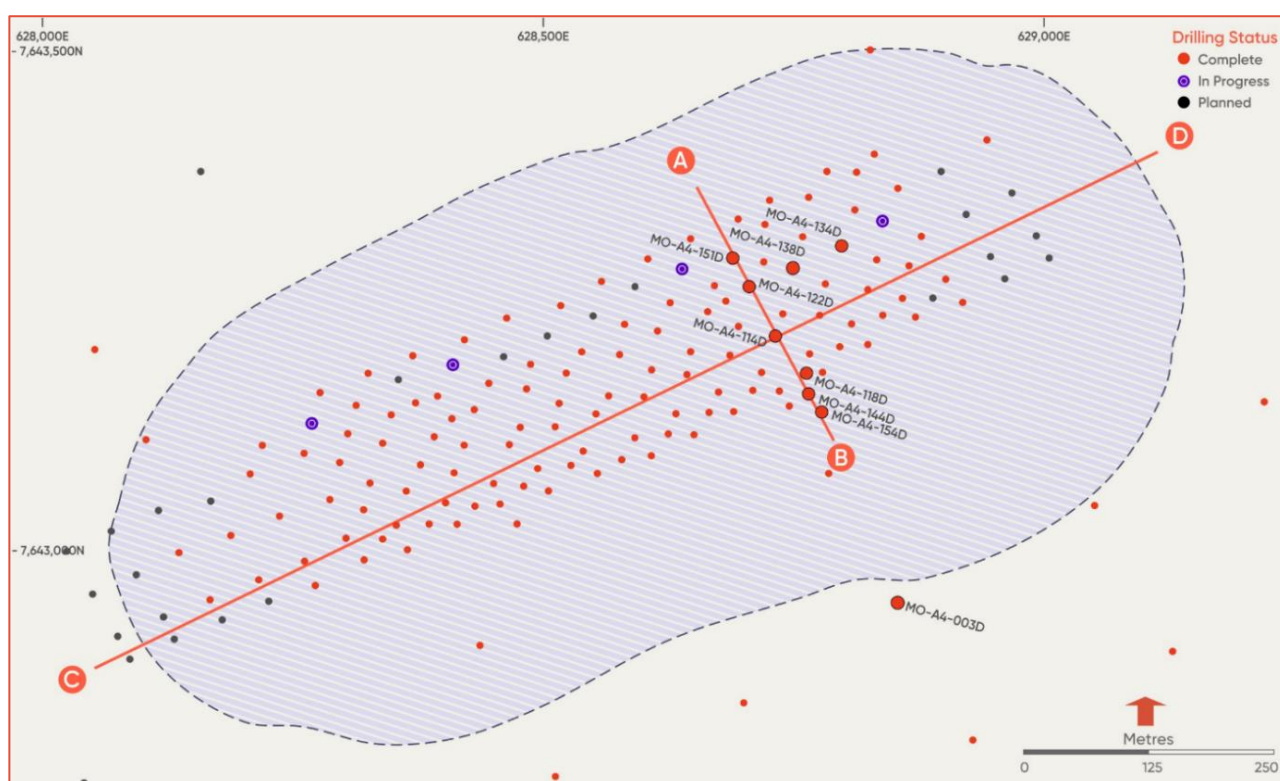
The intersections in MO-A4-122D and MO-A4-138D represent the highest-grade intersections Sandfire has reported in the Kalahari Copper Belt to date.

Hole MO-A4-134D, located 100m east of MO-A4-122D, intersected **6.48m @ 5.8% Cu and 80.9g/t Ag** from 135.52m down-hole. The association with locally high-grade molybdenum is also an unusual feature of these latest high-grade intersections at A4.

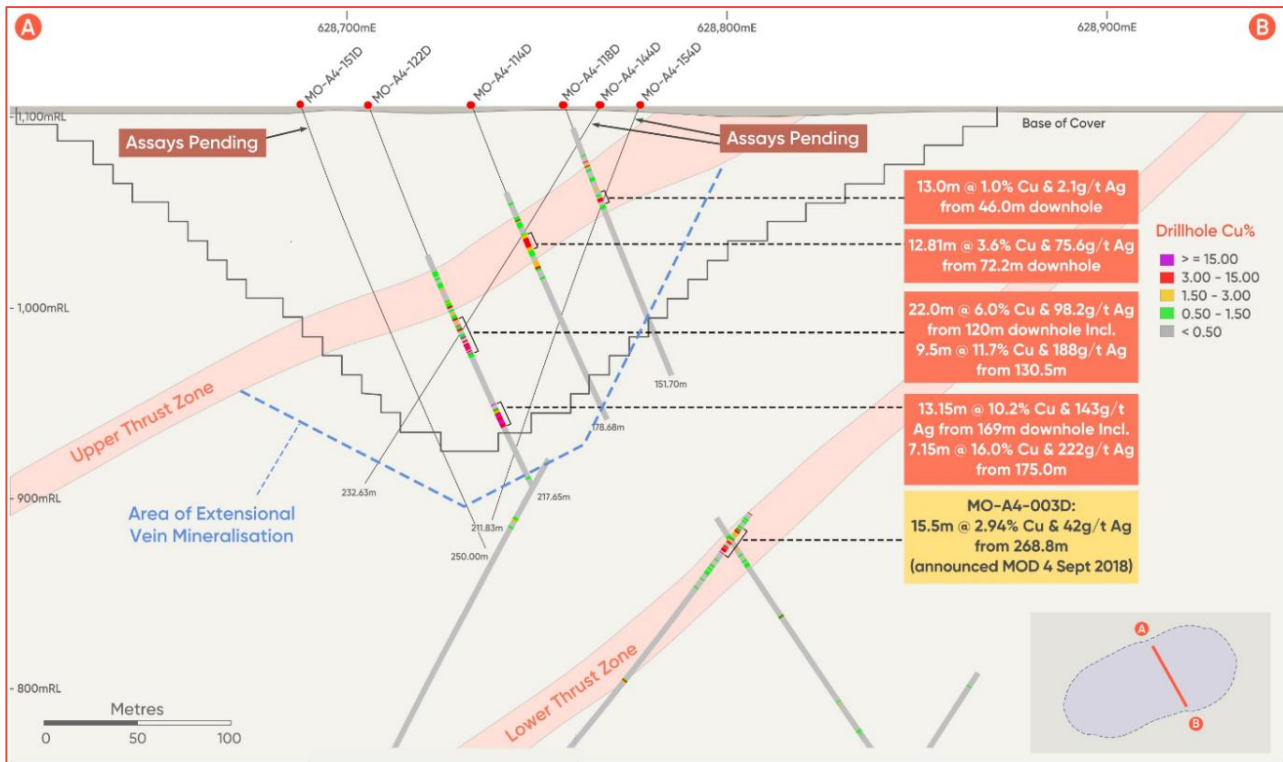
Full details of the assay results were provided in the Company's ASX Announcement dated 1 December 2020, titled "Outstanding High-grade Copper-Silver Intersections in Latest Drilling at A4".

Closely spaced in-fill drilling is in progress to follow up the high-grade intersections in MO-A4-122D and MO-A4-138D, and results from this drilling are awaited before an interpretation of the significance of the very high-grade vein intersections can be made. The results also demonstrate the potential for further high-grade mineralisation elsewhere along the A4 Dome and in other untested targets in the T3 Expansion Area.

Apart from the high-grade intersections reported in this announcement, results for other holes in the Phase 2 drilling broadly support the geological model and confidence in the Maiden A4 Mineral Resource estimate.



**Figure 1: A4 Plan view of resource area showing collar locations of holes used to inform the Maiden Mineral Resource, outline of optimised pit shell used to report the Maiden Mineral Resource and recent holes (numbered) described in this announcement. Also shows location of section lines for Figures 2 and 3.**



**Figure 2: A4 interpreted cross section, looking east, showing significant recent high-grade intersections and main geological features associated with mineralisation. Individual assay results from high grade intersections in MO-A4-122D and MO-A4-138D are listed in Appendix 1 of the Company's ASX Announcement, dated 1 December 2020.**

**Table 2: A4 Significant intersections >1.0% Cu for exploration holes.**

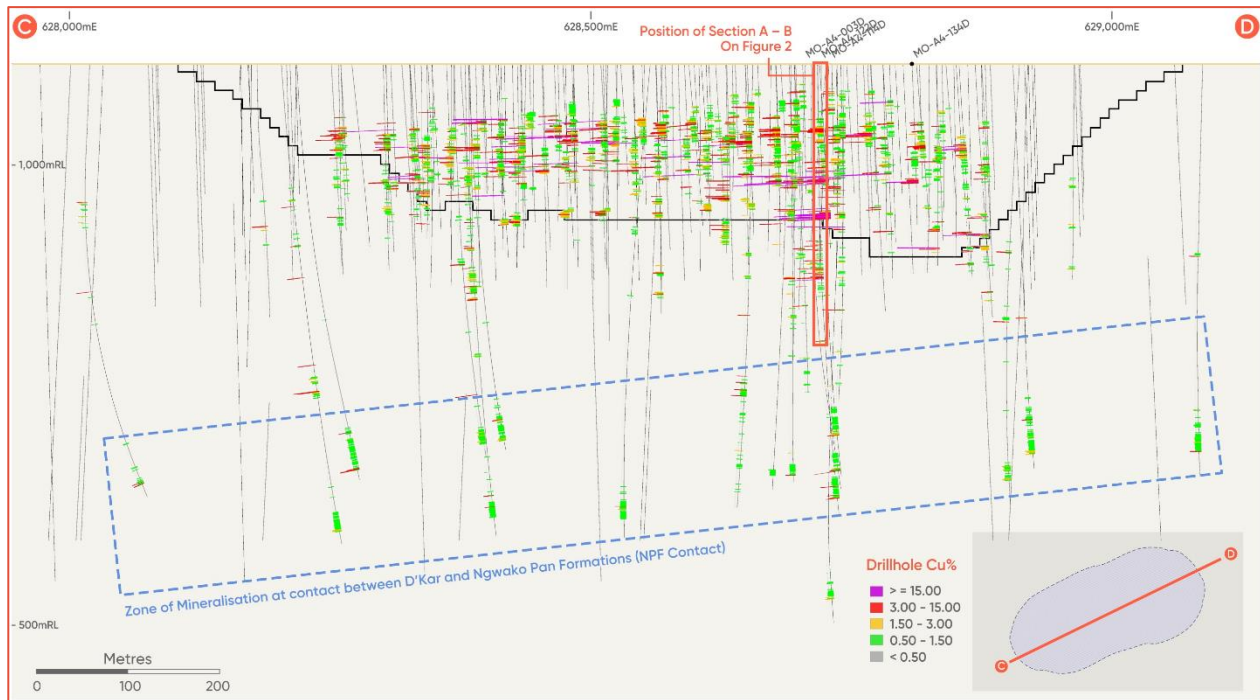
A4 Significant HG intersections for holes described in this report ****						
HOLE_ID	From (m)	To (m)	Interval (m) *	Cu% No Top Cut	Cu% 15% Top Cut	Ag (g/t)
<b>MO-A4-003D **</b>	232.20	284.20	<b>52.00</b>	<b>1.5</b>	<b>1.5</b>	<b>14.0</b>
Incl.	268.8	284.20	<b>15.45</b>	<b>2.9</b>	<b>2.9</b>	<b>42.0</b>
<b>MO-A4-114D</b>	62.00	98.00	<b>36.00</b>	<b>1.8</b>	<b>1.8</b>	<b>30.3</b>
Incl.	72.19	85.00	<b>12.81</b>	<b>3.6</b>	<b>3.6</b>	<b>75.6</b>
<b>MO-A4-118D</b>	46.00	59.00	<b>13.00</b>	<b>1.0</b>	<b>1.0</b>	<b>2.1</b>
<b>MO-A4-122D</b>	109.00	142.00	<b>33.00</b>	<b>4.6 #</b>	<b>3.2</b>	<b>74.3</b>
incl.	120.00	142.00	<b>22.00</b>	<b>6.0 #</b>	<b>3.9</b>	<b>98.2</b>
incl.	130.50	140.00	<b>9.50</b>	<b>11.7 #</b>	<b>6.8</b>	<b>188.0</b>
and:	169.00	182.15	<b>13.15</b>	<b>10.2 #</b>	<b>8.4</b>	<b>142.6</b>
incl.	175.00	182.15	<b>7.15</b>	<b>16.0 #</b>	<b>12.8</b>	<b>222.0</b>
<b>MO-A4-134D</b>	135.52	142.00	<b>6.48</b>	<b>5.8 #</b>	<b>5.7</b>	<b>80.9</b>
<b>MO-A4-138D ***</b>	128.50	164.20	<b>35.70</b>	<b>7.1 #</b>	<b>4.7</b>	<b>116.0</b>
incl:	131.60	144.00	<b>12.40</b>	<b>13.3 #</b>	<b>7.5</b>	<b>232.8</b>

Notes:

\* Down hole width intervals, true width unknown. \*\* MO-A4-003D results announced by MOD Resources Ltd on 4 September 2018. \*\*\* MO-A4-138D assays incomplete – awaiting assays from 166m to end of hole. \*\*\*\* Data aggregation method: intersections aggregated with individual weighted grades >0.3% Cu and up to a maximum 3m of internal dilution included for intersections described in this announcement. # includes >15% Cu assay results – refer Table A and Table B of the Company's ASX Announcement, dated 1 December 2020, for details.

In addition to the ongoing A4 resource in-fill and extensional drilling program, drilling has also commenced to test for extensions to an area which includes encouraging intersections of disseminated and vein-hosted mineralisation along the Ngwako Pan Formation (NPF) geological contact at A4. NPF contact mineralisation

has been intersected approximately 200m below the A4 Maiden Mineral Resource estimate in many of the deeper drill holes.



**Figure 3: A4 Longitudinal projection looking north showing optimised pit shell for the A4 Mineral Resource and copper grades represented as histograms for holes where assays have been received. Deeper intersections within the blue rectangle are related to NPF contact mineralisation.**

#### 5.4.2 Airborne Electromagnetic (AEM) Survey

A major regional AEM survey covering approximately 13,450km<sup>2</sup> and extending from the Namibian border to the eastern limit of Sandfire's licence holdings, commenced during the December Quarter and is expected to be completed in early 2021. First data from the survey has been received and initial processing is expected to commence soon.

The objective of the AEM survey is to identify new targets within large, previously unexplored areas of Sandfire's extensive licence holdings and further enhance the regional geological and structural understanding of the Kalahari Copper Belt.

A previous AEM survey led to the discovery of A4 in 2018 (Figure 4). AEM data which is processed and interpreted to a high technical standard has proven to be a breakthrough in defining many drilling targets in the T3 Expansion Area and Sandfire is optimistic that the current survey will generate new targets.



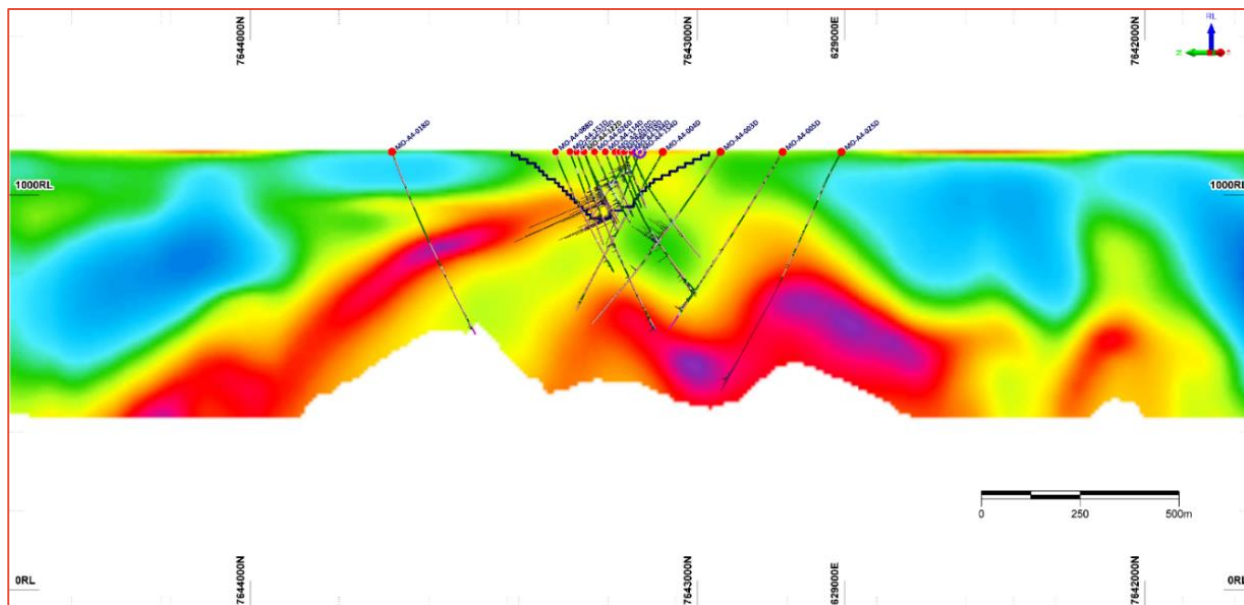


Figure 4: AEM data presented as a cross-section across the A4 Dome to approximately 600m depth showing the optimised pit shell used for the A4 Mineral Resource estimate and significant drill-hole intersections with copper represented as histograms.

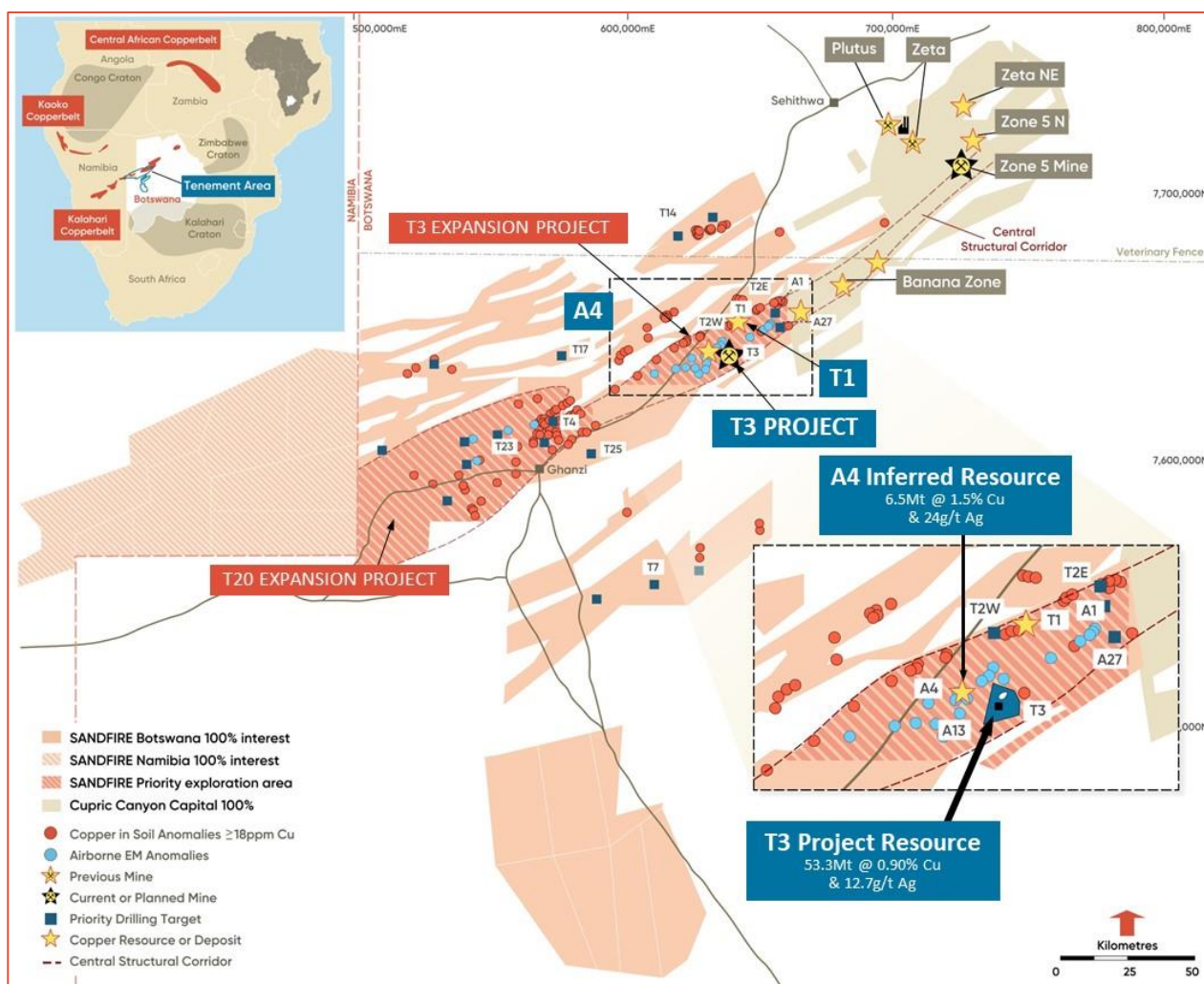


Figure 5: Regional Location Plan of Sandfire's 26,650km² licence holdings in Botswana and Namibia showing the T3 Project, A4 Deposit, multiple exploration targets, the neighbouring Cupric Canyon licences and deposits (source: Cupric Canyon Capital's website [www.khoemacau.com](http://www.khoemacau.com)).

## **6 BLACK BUTTE COPPER PROJECT, MONTANA, USA**

*Sandfire holds an 85% interest, via North American-listed company Sandfire Resources America Inc. (TSX-V: SFR), in the premier, high-grade Black Butte Copper Project, located in central Montana in the United States. This high-quality project, which is one of the world's highest-grade undeveloped copper projects, has completed the final stage of permitting.*

*Located on privately-owned ranch land close to existing road, grid power and rail infrastructure with the ability to access a residential workforce located nearby, the project is being developed as a wholly-underground mine with minimal surface footprint. The planned mine development will utilise best-practice technology and modern mining techniques to extract the high-grade copper mineralisation while minimising environmental impact, protecting all water resources and setting mining best-practice standards in addressing Montana's strict "non-degradation" water standards.*

### **6.1 Feasibility Study and maiden Ore Reserve**

During the Quarter, the Feasibility Study for the Black Butte Johnny Lee Copper Project in Montana, USA was completed by the Company's 85%-owned North American subsidiary, Sandfire Resources America Inc. (Sandfire America).

The Feasibility Study outlines a maiden Ore Reserve for the cornerstone Johnny Lee Deposit which underpins an 8-year mine life at a mine production rate of 1.2Mtpa.

Sandfire America has also completed an updated Mineral Resource for the nearby Lowry Deposit, located 3km south-east of the Johnny Lee Deposit.

Full details of the Feasibility Study, maiden Ore Reserve for the Johnny Lee Deposit and updated Mineral Resource for the Lowry Deposit are contained in Sandfire's ASX announcement, dated 28 October 2020, titled "USA and Botswana Development Projects Update".

## **7 AUSTRALIAN EXPLORATION**

### **7.1 Doolgunna Province Exploration, Western Australia**

Sandfire continues to progress a tightly focused, multi-disciplinary exploration campaign across the Doolgunna Province (see Figure 6) to test for extensions to the known cluster of Volcanogenic Massive Sulphide (VMS) deposits at DeGrussa and Monty, and to unlock the broader potential of the Doolgunna region for additional VMS and structurally-hosted copper deposits.

Key components of the Company's exploration activities during the December Quarter are listed below.

- Diamond and Reverse Circulation (RC) drilling at the Doolgunna Project to underpin resource definition and Scoping Studies for the Old Highway Gold Project, RC drilling to undertake surface water and groundwater assessments and Aircore (AC) drilling to test for structural repeats of the Old Highway resource definition drill area.
- AC drilling at the Morck Well Project to delineate stratigraphy and provide high-quality litho-geochemical data across the Bitter Well, Frenchy's and Cuba prospect areas.
- In-fill AC drilling at the Springfield Project to test anomalous VMS geochemistry identified from previous in-fill drilling and determine the potential for follow-up RC drilling.
- AC drilling at the Peak Hill Project to test prospective stratigraphy in the Bullgullan Bore prospect area and provide high-quality litho-geochemical data.

- Diamond drilling at the Enterprise Project to test geophysical targets at the Ruby Well Prospect and Vulcan West areas.

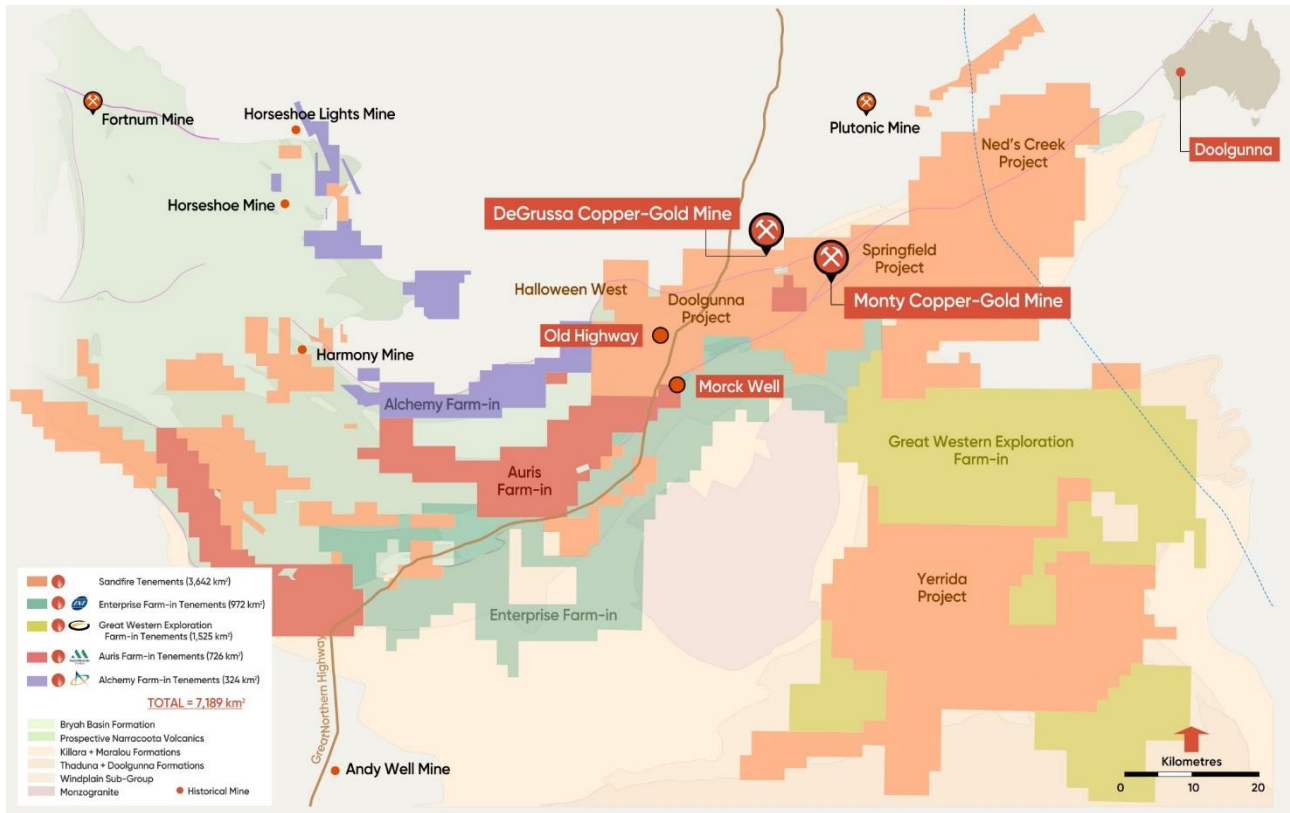


Figure 6: Sandfire's tenement holding in the Doolgunna-Bryah Basin region.

### 7.1.1 Greater Doolgunna Project

*The Greater Doolgunna Project, which includes 100% Sandfire tenure, Joint Venture and Farm in projects, covers an aggregate contiguous exploration area of 7,189km<sup>2</sup> (see Figure 6). This includes over 90km of strike extent in host VMS lithologies. Much of this stratigraphy is obscured beneath transported cover and requires targeted AC drilling to test the bedrock geochemistry and identify prospective areas.*

#### Doolgunna Project

A key focus of exploration activity during the Quarter was ongoing resource drilling at the Old Highway Gold Prospect, located 22km south-east of DeGrussa, as part of the Company's previously announced Gold Transition Strategy. Work is now well advanced towards completing a maiden JORC Mineral Resource Estimate for the Old Highway Gold Project, which is scheduled for release in the June 2021 Quarter.

During the Quarter, seven diamond holes (OHST0005 – OHST0010 & OHSG0001) were completed for a total of 2,326.4m, with all holes designed to provide additional information to inform the Scoping Study for Old Highway. One specific gravity hole was completed to provide additional density information. All structural holes were completed to provide additional geological information to aid structural interpretation.

A total of 280 RC holes including 15 hydrology holes (OHRC0183 – OHRC0430, OHRC0451 – OHRC0460, OHRC0501 – OHRC0506, OHRC0551, OHMB0001 – OHMB0005, OHWB0002 – OHWB0011) were completed for a total of 30,856m.

The hydrology holes (OHMB & OHWB) are part of the surface water and groundwater assessments for the Old Highway Gold Project. The OHRC holes are all part of the resource definition drilling program, designed to test areas proximal to existing gold mineralisation hosted in quartz-carbonate veining through Cow Hole Bore

Member sediments. The majority of holes intersected quartz-carbonate veining with associated sericite alteration selvages and cubic pyrite.

A total of 118 AC holes (DGAC5920 – DGAC6038) were completed during the Quarter for a total of 15,798m. These holes are part of a pattern designed to test for structural repeats to the north of the main Old Highway Resource Definition drill area and to sterilise the area for infrastructure planning.

All holes drilled during the Quarter intersected Cow Hole Bore Member sediments consisting of siltstones, wackes, arenites and minor conglomerates. A majority of the holes intersected intervals of quartz-carbonate veining, some of which contain coarse-grained cubic pyrite and are associated with sericite alteration selvages.

The integration of completed drilling and assay intersections into the existing geological modelling is continuing to underpin a maiden JORC Mineral Resource Estimate for the Old Highway Gold Project.

### **DeGrussa and Red Bore**

A review of historical geophysical data at Red Bore is underway and is being completed in conjunction with the moving-loop electromagnetic (MLEM) survey. A deep diamond drill-hole targeting the interpreted structural offset position of the C4/C5 deposits, the conceptual “C6 target” (north of Red Bore), is scheduled to commence during the March 2021 Quarter.

### **Springfield Project**

A total of 20 AC holes were completed (TLAC3578 – TLAC3597) for a total of 1,372m during the Quarter within the Southern Volcanics prospect area. These holes are part of a small 200m x 50m in-fill pattern designed to test anomalous VMS geochemistry identified from previous in-fill drilling and to determine the potential for follow-up RC drilling.

Geological units identified in this programme were dolerite, siltstone and quartz and lithic wacke in the DeGrussa Member of the Karalundi Formation. RC drilling to potentially follow-up any anomalous geochemistry identified in the AC holes will be planned once assays are returned.

### **Ruby Well**

A second diamond hole (EFDD0011) was completed at Ruby Well during the Quarter to test a 250x250m geophysical plate derived from an anomalous response identified in MLEM surveying. The hole identified minor exhalative siltstone and wacke followed by a thick interval of Upper Narracoota Formation, mafic and ultramafic derived conglomerates and breccia's with hyaloclastite basalt.

While no conductive responses were observed in initial down-hole EM (DHEM) surveys for EFDD0011, DHEM work is planned during the March 2021 Quarter to provide further definition and understanding of the area.

### **Vulcan West**

One diamond hole, EDFF0012 was completed during the Quarter to test a 300m x 300m geophysical plate at the southern end of an extensive 1.1km series of geophysical plates derived from an anomalous response identified in MELM surveying through the Vulcan West prospect area. The hole intersected an interval of structurally hosted graphite.

Drilling identified folded DeGrussa Member and Magazine Member sediments and mafic volcanics with minor Narracoota dolerite. Multiple graphite-bearing brittle-ductile zones were identified at 544.1m-546.2m, 593.2m-595.1m and 649.3m-650m. These graphitic structures are interpreted to be the source of the conductive response identified in the DHEM surveys conducted on EFDD0012.



**Peak Hill Project (Alchemy Resources Ltd JV)**

A total of 118 AC holes (HSAC0001 – HSAC0115) were completed for a total of 8,843m. All of these holes formed part of an initial 800m x 100m pattern to test prospective stratigraphy in the Bullgullan Bore prospect area along strike to the south-east of Bryah Resources' Windalah Prospect, which is associated with a chert horizon along the Ravelstone-Narracoota contact.

The drilling is designed to assist in delineating stratigraphy and provide high-quality litho-geochemical data. Geological interpretation is continuing and approximately 900 AC holes remain to be drilled in the March 2021 Quarter, paving the way for RC drilling to follow-up some of the geochemical anomalism.

**Cheroona Project (Auris Minerals Ltd and Northern Star Resources Ltd)**

No drilling was completed during the Quarter. Approximately 200 holes remain in the first-pass 1,600m x 100m pattern through the Mick Well and Lefeuve Well prospect areas. However, due to the lack of Karalundi Formation stratigraphy, these holes will not be completed at this time.

A further 1,000 holes are designed to test for any continuation of Karalundi Formation stratigraphy through Mount Fraser and Beatty Pool prospects, with clearances requires for 400 of these holes.

Geological interpretation at the Cheroona Project has begun and will continue as drilling is completed and assay results are returned. Planning of follow-up RC holes to test anomalous geochemistry in the Orient and East Orient prospect areas is currently ongoing.

**Morck Well Project (Auris Minerals Ltd JV)**

A total of 51 AC holes (MWAC3507 – MWAC3542 & MWAC3601 – MWAC3625) were completed during the Quarter for a total of 3,617m.

36 of these holes were part of the 1,600m x 100m spaced first-pass pattern through the Bitter Well prospect of the Morck Well tenure within the JJAC native title claim. Another 15 holes were part of a series of extensions to original drill lines in the No. 11 Well prospect area, north of Frenchy's Prospect. The final 10 holes were part of a 400m x 100m in-fill program through the Cuba prospect area. These programs are designed to help with delineating stratigraphy and provide high quality litho-geochemical data.

Approximately 550 AC holes remaining to be drilled as part of the in-fill 800m x 100m spaced program across the No. 11 Well, Bitter Well and McLean Well prospects.

Geological interpretation thought the Morck Well project area is currently ongoing.

A 140-hole program has been planned across the Cuba prospect to in-fill sections of the Central Volcanics that have previously been inconsistently tested with shallow AC and RAB drilling. The aim of this upcoming program will be to more accurately define the interpreted Karalundi Formation and Narracoota Formation stratigraphy.

**Yerrida Project (100% Sandfire and Great Western Exploration JV)**

Mapping of the Yerrida and Bryah basin took place in late August 2020 until late September 2020. This mapping included the collection of sixty-eight samples for whole-rock geochemical analysis, eight samples for multi-element analysis and twenty-six samples for thin section analysis. A report on the mapping was prepared in October 2020 and will be finalised when results from the geochemical assays and thin-sections are returned.

Information from the mapping completed has been used to assist in planning a lag sampling program at the Yerrida Project. A 1km x 1km spaced pattern over the Killara formation volcanics has been planned for the June Quarter of 2021, with infill of further lag or soil sampling as required.



## 7.2 Eastern Australian Exploration

*Sandfire has a number of exploration interests and joint ventures around Australia exploring for base and precious metals. The exploration programs are focused on prospective terranes with the potential for discovery of a significant new deposit that can be developed.*



**Figure 7: Sandfire's Eastern Australian Projects.**

### 7.2.1 New South Wales Projects

*A number of 100%-owned project areas are held in the Lachlan Fold Belt of New South Wales which are prospective for porphyry copper-gold mineralisation as found at Northparkes (China Moly), Cadia (Newcrest) and Cobar (Evolution). New 100%-owned tenements have been granted in the Cobar district.*

Exploration at the Endeavor joint venture in the Cobar district consisted of diamond drilling to provide DHEM survey platforms targeting extensions to the Endeavor mine resources. Results of the survey are currently being reviewed in conjunction with historical drilling, geochemistry and geophysics. Ground-based exploration will re-commence in the Cobar district in the second half of FY2021.

## 8 CORPORATE AND FINANCIAL

### 8.1 Board Appointments

Sandfire appointed highly experienced mining and corporate governance executives Jennifer Morris OAM and John Richards as independent Non-Executive Directors, effective from 1 January 2021.

The appointments mark an important step in Sandfire's previously announced Board Succession Plan, which ensures Sandfire has a strong, well-credentialed board in place to oversee its new era of growth as an international and sustainable mining company.

### 8.2 Farm-in Agreement over Endeavor Base Metal Mine

Sandfire entered into a Farm-in Agreement with CBH Resources Ltd (CBH) during the Quarter giving it the right to earn up to a 100% interest in the Endeavor Base Metal Mine and surrounding exploration tenements (the Tenements), located near Cobar in NSW.

The Farm-in represents a complementary strategic addition to Sandfire's East Coast base metal exploration initiative, which already includes a large ground position in the Lachlan Fold Belt and Cobar Basin in NSW and an extensive portfolio in the Mt Isa region in Queensland.

Full details are included in the Company's ASX Announcement, dated 27 October 2020, titled "Sandfire Enters Farm-In Over Endeavor Base Metal Mine and Exploration Package – Cobar, NSW".

### **8.3 Acquisition of 85% interest in Red Bore Project**

Sandfire entered into agreements to acquire an 85% joint venture interest in the Red Bore Copper Project (ML52/597), located adjacent to its DeGrussa Copper-Gold Mine in Western Australia. The Red Bore Project comprises a 2km<sup>2</sup> granted Mining Licence, ML52/597, located approximately 1km east of the DeGrussa Copper-Gold Mine.

Full details are included in the Company's ASX Announcement, dated 30 October 2020, titled "Acquisition of 85% Interest in Red Bore Project".

### **8.4 Cash position**

Group cash on hand as at 31 December 2020 totalled \$335.8 million (subject to auditor review).

### **8.5 Finance Facility**

ANZ continues to hold security via a fixed and floating charge over the Company's assets. Aside from minor borrowings under a bonding facility there is no other debt drawn under financing facilities and no amounts available to be drawn.

### **8.6 Investor Call and Webcast**

A teleconference on the Quarterly results will be held for the investment community on Friday 29<sup>th</sup> January commencing at 10.00am (AWST) / 1.00pm (AEDT).

#### **Participant Access Link:**

Investors, brokers, analysts and media can join the teleconference and webcast by clicking on the following link: <http://redback.events/ir-2d11e5>.

The December Quarterly Report and accompanying slide presentation will be available via the ASX Company Announcements Platform (ASX Code: SFR) and Sandfire's website at [www.sandfire.com.au](http://www.sandfire.com.au).

### **ENDS**

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

**This Quarterly Report should be read in conjunction with the December 2020 Quarterly Report Presentation released today.**

#### **T3 Ore Reserve**

The information in this report that relates to Open Pit Ore Reserves, is based on information compiled by Mr Jake Fitzsimons who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Fitzsimons is employed by Orelogy Consulting Pty Ltd and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Fitzsimons consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

**T3 and A4 Mineral Resource**

The information in this report that relates to Mineral Resources is based on information compiled by Mr Callum Browne who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Browne is a permanent employee of Sandfire and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Browne consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

**Exploration Results – Doolgunna**

The information in this report that relates to Exploration Results at Doolgunna is based on information compiled by Mr Shannan Bamforth who is a Member of the Australasian Institute of Mining and Metallurgy. Mr Bamforth is a permanent employee of Sandfire and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Bamforth consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

**Exploration Results – Tshukudu**

The information in this report that relates to Exploration Results at the Tshukudu Exploration Project, is based on information compiled by Mr Julian Hanna who is a Member of The Australasian Institute of Mining and Metallurgy. Mr Hanna is a permanent employee of Sandfire and has sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Hanna consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

**Exploration and Resource Targets**

Any discussion in relation to the potential quantity and grade of Exploration Targets is only conceptual in nature. While Sandfire is continuing exploration programs aimed at reporting additional JORC compliant resources for the Company's Projects, there has been insufficient exploration to define mineral resources in addition to the current JORC compliant Mineral Resource inventory and it is uncertain if further exploration will result in the determination of additional JORC compliant Mineral Resources.

**Forward-Looking Statements**

Certain statements made during or in connection with this report 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 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.