



7 September 2021

# High-Grade Copper-Silver Mineralisation Intersected in Step-Out Drilling at A4 Dome

Standout intersection of 45m @ 2.2% copper (including 2.1m @ 8.25% Cu) returned 1.2km south-west of the recently upgraded A4 Mineral Resource

# **Highlights**

- High-grade vein-hosted copper-silver intersection returned from diamond drilling at the A4 Dome, located 8km west of the Motheo Copper Mine in Botswana:
  - 45m @ 2.20% Cu and 42.6g/t Ag from 439m in MO-A4-207D, including:
    - 6.78m @ 3.59% Cu & 68.5 g/t Ag from 441.2m; and
    - 2.1m @ 8.25% Cu & 158 g/t Ag from 456.78m; and
    - 7.12m @ 3.13% Cu and 66 g/t Ag from 462.6m.
- Intercept is ~1.2km south-west of the existing A4 Mineral Resource envelope (9.8Mt at 1.4% Cu and 21g/t Ag for 134,000t of contained copper and 6.6Moz of contained silver).
- MO-A4-207D is the first hole to effectively test the axis of the A4 periclinal anticline ("A4 Dome") interpreted from Airborne Electromagnetic (AEM) data to the west of the current Mineral Resource.
- Interpretation of AEM and airborne magnetic data has highlighted a distinctive structure that potentially continues for 5km along the axis of the A4 Dome, which may link the intersection in MO-A4-207D with similar high-grade vein-hosted mineralisation previously reported up to 1.9km to the east.
- Drilling is continuing, with two rigs testing the true width of the mineralisation and the potential for extensions below MO-A4-207D and a third rig expected to arrive at A4 in mid-September.
- A4 Deposit continuing to develop as a key potential source of satellite feed for the Motheo Copper Mine, where full-scale construction and development is now underway following the award of the Mining Licence on 7 July 2021.
- Pre-Feasibility Study to support a maiden Ore Reserve for A4 on track to be completed during the quarter as the foundation for a final Feasibility Study targeted in the March 2022 Quarter. This will provide a development pathway for the integration of A4 into the proposed 5.2Mtpa Motheo Production Hub.

Sandfire Resources Ltd (ASX: SFR; **Sandfire** or **the Company**) is pleased to advise that step-out drilling at the A4 Dome, located 8km west of the Company's Motheo Copper Mine in Botswana, has returned an outstanding high-grade vein-hosted copper-silver intersection some 1.2km to the southwest of the current A4 Deposit Mineral Resource envelope.

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the recently updated A4 Mineral Resource:

The new intercept, in diamond hole MO-A4-207D, is located on an interpreted structure with minimal previous drilling which potentially opens up an exciting new area for exploration in close proximity to

# MO-A4-207D

- 45m @ 2.20% Cu and 42.6g/t Ag from 441.2m including (down hole widths):
  - o 6.78m @ 3.59% Cu & 68.5 g/t Ag from 441.2m; and
  - o 2.1m @ 8.25% Cu & 158 g/t Ag from 456.78m; and
  - 7.12m @ 3.13% Cu and 66 g/t Ag from 462.6m.

MO-A4-207D is located approximately 1.2km south-west of the western end of the A4 Mineral Resource (Figure 1). A revised Mineral Resource for the A4 deposit was announced on 21 July 2021 comprising 9.8Mt at 1.4% Cu and 21g/t Ag for 134,000t of contained copper and 6.6Moz of contained silver (using a 0.5% Cu cut-off). Work is well progressed on a Pre-Feasibility Study and maiden Ore Reserve estimate, due for completion in the September quarter 2021, and a Feasibility Study for an open pit mine development is expected in the March quarter 2022.

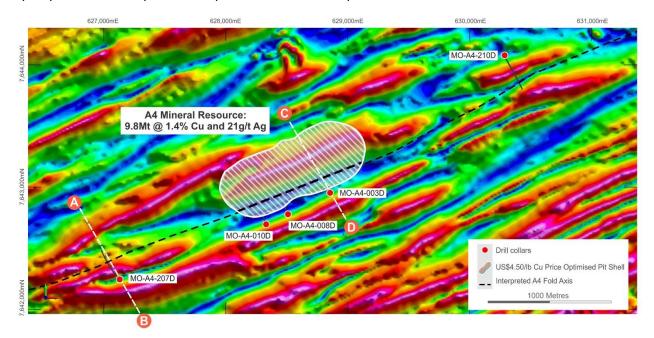


Figure 1: Magnetic image of the A4 Dome showing MO-A4-207D, MO-A4-210D, MO-A4-003D, MO-A4-008D, MO-A4-010D, the interpreted A4 Dome fold axis and the A4 Resource pit shell (Magnetic data - RTP\_TDR).

The mineralisation in MO-A4-207D occurs as coarse to semi-massive, bornite and chalcopyrite within multiple brecciated quartz-carbonate veins, with additional copper sulphides disseminated along bedding planes. The intersection is hosted by a sequence of sandstone and siltstone units within the Lower D'Kar Formation, approximately 250m above the Ngwako Pan Formation (NPF) contact (Figure 2).

Importantly, MO-A4-207D is the first hole to effectively test the axis of the A4 periclinal anticline (A4 Dome) interpreted from AEM data to the southwest of the current Mineral Resource. Similar vein-hosted copper-silver mineralisation was reported by MOD Resources in 2018 up to 1.9km northeast of MO-A4-207D and approximately 100m south of the A4 Mineral Resource.



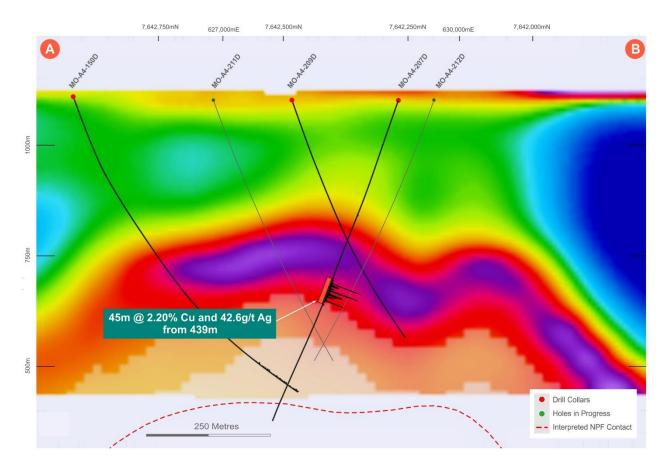


Figure 2: AEM cross-section across the A4 Dome showing the reported intersection of MO-A4-207D and the interpreted Ngwako Pan Formation (NPF) contact in red.

Interpretation of AEM and airborne magnetic data has highlighted a distinctive structure that potentially continues for 5km along the axis of the A4 Dome, which may link the intersection in MO-A4-207D with intersections from previously-reported MOD holes listed below (Figure 1):

MO-A4-003D – 1.9km east of MO-A4-207D (announced by MOD Resources, 6 August 2018):

- 52m @ 1.5% Cu & 14g/t Ag from 232.2m, including:
  - 15.5m @ 2.9% Cu & 42g/t Ag from 268.8m; and
  - 4.4m @ 5.3% Cu & 90g/t Ag from 279.9m.

# MO-A4-008D – 1.5km east of MO-A4-207D (announced by MOD Resources, 4 October 2018):

- 42.9m @ 1.0% Cu & 19g/t Ag from 257.5m, including:
  - 9.8m @ 1.4% Cu & 26g/t Ag from 264.8m; and
  - 9.1m @ 1.5% Cu & 31g/t Ag from 281.9m; and
  - 3.4m @ 2.4% Cu & 41g/t Ag from 297.0m.

MO-A4-010D – 1.3km east of MO-A4-207D (announced by MOD Resources, 20 December 2018):

27m @ 1.1% Cu & 20g/t Ag from 394m, including:
 9m @ 2.1% Cu & 39g/t Ag from 412m

Drilling is continuing, with two rigs testing the true width of the mineralisation and the potential for extensions below MO-A4-207D. A third rig is expected to arrive at A4 in mid-September 2021.



Unlike the Mineral Resources defined at T3 and A4, which are both located near-surface at the centre of large periclinal anticlines (the T3 Dome and the A4 Dome), the high-grade mineralisation intersected in MO-A4-207D is located down-plunge of the A4 Dome's fold hinge, in an area that has had minimal prior drilling.

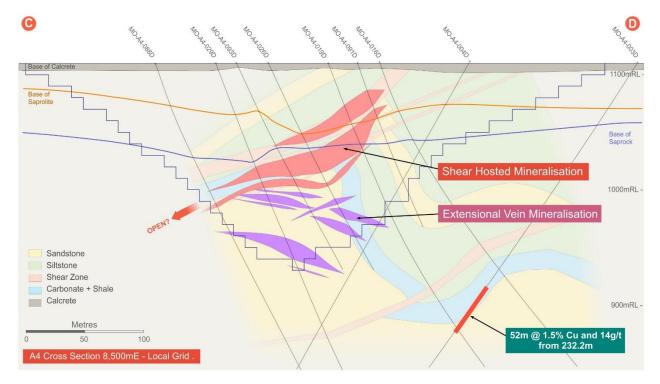


Figure 3: Schematic cross-section showing high-grade intersection in drill hole MO-A4-003D, interpreted geology and the mineralisation styles across the A4 Deposit. US\$4.50/lb Cu pit shell shown in blue outline (Sandfire 21 July 2021).

The majority of previous deeper drilling at both the T3 and A4 Domes has targeted the Ngwako Pan Formation (NPF) contact mineralisation, which sits approximately 250m below the vein-hosted intersection in MO-A4-207D. The NPF contact hosts approximately 6.9 million tonnes of contained copper in mineral resources in the eastern part of the Kalahari Copper Belt resources (source: Khoemacau Copper Mining's website www.khoemacau.com) . The NPF contact is an important exploration target for Sandfire both below the A4 Dome and elsewhere across the Company's expansive tenement holding.

The intersection in MO-A4-207D also has regional significance in that it confirms the potential for high-grade vein-hosted mineralisation in similar structural settings along other domes identified within Sandfire's exploration tenements, notably the A1 Dome, located ~25km north-east directly along strike from the A4 Dome.

Two diamond rigs will continue targeting high-grade vein-hosted mineralisation between the intersection in MO-A4-207D and significant intersections in previous MOD drilling up to 1.9km east. A third rig is expected in mid-September to follow up encouraging widths of disseminated copper mineralisation in MO-A4-210D ~1.5km north-east of the A4 Mineral Resource (Figure 1).

Regional exploration is continuing with three drill rigs targeting extensions to known mineralisation in the T4-T23 area ~80km west of the Motheo Hub, and at the T5, T14 and T45 targets ~60km north of the Motheo Hub.



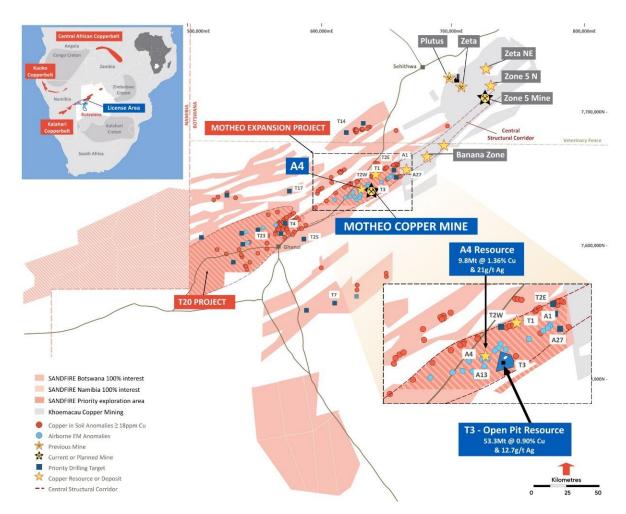


Figure 4: Regional Location Plan with Kalahari licence holdings (as of August 1<sup>st</sup>) showing the Motheo Copper Mine, including the T3 Open Pit, A4 Deposit, multiple exploration targets, the neighbouring Khoemacau Copper Mining licences and deposits (source: Khoemacau Copper Mining's website www.khoemacau.com) and the Company's extensive groundposition in Botswana and Namibia.

# Management Comment

Sandfire Managing Director and CEO, Karl Simich, said the exciting new drilling results from the A4 Project highlighted the exceptional opportunity to make significant new high-grade discoveries across the Kalahari Copper Belt.

"With construction of the Motheo Copper Mine now well underway, our exploration effort is beginning to accelerate – and it has received an immediate and significant boost with this remarkable new intercept just 1.2km south-west of the A4 Deposit."

"This was the first hole drilled to test one of the many anticline or Dome structures interpreted from airborne EM data across our land-holding, and it has delivered very encouraging results that would not look out of place at our high-grade DeGrussa mine in Western Australia."

"Importantly, it is located in a completely undrilled area which remains wide open for follow-up drilling to further evaluate its size and orientation, and potentially define additional resources in close proximity to the mine infrastructure that we plan to establish at the Motheo Mine."

"It also confirms the potential to discover high-grade vein-hosted mineralisation in other domes within the Motheo Hub, notably the A1 Dome, 25km to the north-east."



"We now have two diamond rigs operating to further evaluate this area with a third rig expected by mid-September. In the meantime, our regional exploration effort is also gathering momentum with three rigs targeting extensions to known mineralisation in the T4-T23 area, approximately 80km west of the Motheo Hub, and systematically working through other targets such as T5, T14 and T45."

"This is an exciting time for our team in Botswana as we ramp-up exploration in parallel with mine construction activities at Motheo. We already have a clear growth pathway via the A4 satellite deposit, and we are now beginning to demonstrate that there is huge potential for further stepchanges in our growth trajectory as we systematically evaluate the exploration potential of this vast and largely untapped region."

### ENDS

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

#### **Competent Person's Statement**

#### T3 and A4 Mineral Resource

The information in this release 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 was 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 this release of the matters based on his information in the form and context in which it appears.

The information in this release that relates to the A4 Mineral Resource is based on and fairly represents information and supporting documentation prepared by Mr Mark Zammit who is a Member of the Australian Institute of Geoscientists. Mr Zammit is a full time employee of Cube Consulting Pty Ltd. Mr Zammit has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity that he is undertaking to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Minerals Resources and Ore Reserves'. Mr Zammit consents to the inclusion in this release of the matters based on the information in the form and context in which it appears.

#### **Motheo Expansion Case**

The Expansion Case to 5.2Mtpa referred to in this release, where it relates to A4 and other prospects, is based on resource drilling and preliminary technical and economic assessments. 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.

#### **Exploration Results**

The information in this release that relates to Exploration Results, 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 this release 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 delineating and reporting additional Mineral Resources, there has been insufficient exploration to estimate and report new Mineral Resources. It is uncertain if further exploration will result in the estimation and reporting of Mineral Resources in addition to the current Mineral Resource inventory.



#### 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 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

Assays Confirm Outstanding Intersection at A4 Dome - MOD Resources Ltd (6 August 2018).

A4 Dome Potential to Support T3 Expansion Strategy – MOD Resources Ltd (4 October 2018).

A4 Assays Confirm Expansion Potential for T3 Copper Project – Mod Resources Ltd (20 December 2018).

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



# **APPENDIX 1: DRILL HOLE COLLAR INFORMATION**

Hole ID	Hole Type	EOH Depth	NAT East	NAT North	NAT RL	NAT Azimuth	Dip
MO-A4-003D	DD	613.88	628852	7642949	1108.9	330	-60
MO-A4-008D	DD	610.55	628511	7642775	1108.8	330	-60
MO-A4-010D	DD	604.5	628329	7642692	1108.8	330	-60
MO-A4-207D	DD	779.75	627132	7642241	1101.0	320	-70
MO-A4-210D	DD	600	630283	7644072	1105.0	150	-65

Hole ID	Depth From	Depth To	Interval (m)	Cu %	Ag g/t
MO-A4-207D	439	439.7	0.7	1.0	22.2
MO-A4-207D	439.7	440	0.4	0.1	3.0
MO-A4-207D	440	440.8	0.8	0.5	11.8
MO-A4-207D	440.8	441.22	0.5	0.8	21.3
MO-A4-207D	441.2	442.1	0.9	14.5	267.0
MO-A4-207D	442.1	443.0	0.9	0.1	5.6
MO-A4-207D	443.0	444.0	1.0	0.7	14.0
MO-A4-207D	444.0	445.0	1.0	0.4	11.7
MO-A4-207D	445.0	445.6	0.6	4.2	96.3
MO-A4-207D	445.6	446.3	0.6	2.0	51.9
MO-A4-207D	446.3	447.0	0.7	2.7	46.7
MO-A4-207D	447.0	448.0	1.0	3.9	60.2
MO-A4-207D	448.0	449.0	1.0	1.0	16.7
MO-A4-207D	449.0	450.0	1.0	0.8	10.0
MO-A4-207D	450.0	451.0	1.0	0.4	6.3
MO-A4-207D	451.0	451.5	0.5	0.3	7.0
MO-A4-207D	451.5	452.0	0.5	0.7	13.9
MO-A4-207D	452.0	453.0	1.0	2.3	41.6
MO-A4-207D	453.0	453.6	0.6	2.4	41.4
MO-A4-207D	453.6	454.1	0.5	2.1	37.3
MO-A4-207D	454.1	455.0	0.9	0.8	13.1
MO-A4-207D	455.0	456.0	1.0	0.6	8.9
MO-A4-207D	456.0	456.8	0.8	0.8	19.8
MO-A4-207D	456.8	457.3	0.5	14.3	190.0
MO-A4-207D	457.3	457.7	0.4	0.7	17.6
MO-A4-207D	457.7	458.3	0.7	9.9	243.0



Hole ID	Depth From	Depth To	Interval (m)	Cu %	Ag g/t
MO-A4-207D	458.3	458.9	0.6	6.7	135.0
MO-A4-207D	458.9	459.5	0.6	0.4	8.3
MO-A4-207D	459.5	460.0	0.5	0.3	6.2
MO-A4-207D	460.0	461.0	1.0	0.5	12.6
MO-A4-207D	461.0	462.0	1.0	1.0	29.8
MO-A4-207D	462.0	462.6	0.6	0.7	12.6
MO-A4-207D	462.6	463.0	0.4	1.6	35.6
MO-A4-207D	463.0	464.0	1.0	1.1	48.7
MO-A4-207D	464.0	464.4	0.4	1.0	17.7
MO-A4-207D	464.4	465.2	0.7	0.6	11.8
MO-A4-207D	465.2	466.0	0.8	7.1	127.0
MO-A4-207D	466.0	466.5	0.5	7.2	124.0
MO-A4-207D	466.5	467.0	0.5	3.4	50.2
MO-A4-207D	467.0	467.7	0.7	7.2	150.0
MO-A4-207D	467.7	468.4	0.8	1.0	23.3
MO-A4-207D	468.4	469.3	0.9	1.0	17.4
MO-A4-207D	469.3	469.7	0.4	5.0	157.0
MO-A4-207D	469.7	470.5	0.8	0.6	11.7
MO-A4-207D	470.5	471.0	0.5	0.6	18.7
MO-A4-207D	471.0	472.0	1.0	0.5	10.2
MO-A4-207D	472.0	472.5	0.5	3.9	68.4
MO-A4-207D	472.5	473.0	0.6	1.5	26.4
MO-A4-207D	473.0	474.0	1.0	2.6	46.0
MO-A4-207D	474.0	475.0	1.0	1.0	15.6
MO-A4-207D	475.0	476.0	1.0	0.4	6.4
MO-A4-207D	476.0	477.0	1.0	0.4	6.1
MO-A4-207D	477.0	478.0	1.0	0.2	0.3
MO-A4-207D	478.0	479.0	1.0	1.0	20.6
MO-A4-207D	479.0	480.0	1.0	0.4	7.5
MO-A4-207D	480.0	481.0	1.0	0.8	14.5
MO-A4-207D	481.0	482.0	1.0	0.8	15.8
MO-A4-207D	482.0	483.0	1.0	8.9	165.0
MO-A4-207D	483.0	484.0	1.0	1.3	19.6

**ASX: SFR** 



# **APPENDIX 2: JORC 2012 CODE**

# Section 1: Sampling Techniques and Data

Criteria	JORC Code Explanation	Commentary
Sampling techniques	Nature and quality of sampling (e.g. cut channels, random chips, or specific specialised industry standard measurement tools appropriate to the minerals under investigation, such as downhole gamma sondes, or handheld XRF instruments, etc.). These examples should not be taken as limiting the broad meaning of sampling.	Sampling boundaries of diamond drill core are geologically defined and commonly one metre in length unless a significant geological feature warrants a change from this standard unit.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Sampling of diamond drill core is completed using Sandfire sampling protocols and QAQC procedures as per industry standard. Diamond drill core is considered to provide representative samples.
	Aspects of the determination of mineralisation that are Material to the Public Report. In cases where 'industry standard' work has been done this would be relatively simple (e.g. 'reverse circulation drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay'). In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling problems. Unusual commodities or mineralisation types (e.g. submarine nodules) may warrant disclosure of detailed information.	The determination of mineralisation is based on observed sulphides and lithological differences. Diamond drill core samples were taken from HQ and NQ diamond drill core and cut longitudinally in half using a diamond drill core saw. Drill core is pulverised via LM2 to nominal 85% passing -75µm. Pulp charges of 0.25g are prepared using a four-acid digest and an ICP-AAS finish. Non-sulphide Cu is analysed via method AA05, utilising a sulphuric acid leach with an ICP-AAS finish
Drilling techniques	Drill type (e.g. core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc.) and details (e.g. core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is oriented and if so, by what method, etc.).	Surface diamond drillholes used HQ3 (63.5mm) and NQ (47.6mm) core size (standard tubes). Core orientation is completed when possible, using the Boart Longyear TrueCore Tool.
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	Diamond drillhole recoveries were quantitatively recorded using length measurements of core recoveries per-run. Core recoveries routinely exceeded 95%.
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Core is meter marked and orientated to check against the driller's blocks, ensuring that all core loss is considered.
	Whether a relationship exists between sample recovery and grade and whether sample bias may have occurred due to preferential loss/gain of fine/coarse material.	No sample recovery issues are believed to have impacted on potential sample bias.



Criteria	JORC Code Explanation	Commentary
Logging	Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support appropriate Mineral Resource estimation, mining studies and metallurgical studies.	Geological logging is completed for all holes. The major rock unit (colour, grain size, texture), weathering, alteration (style and intensity), mineralisation (type), structural (type & orientation), interpreted origin of mineralisation, estimation of % sulphides/oxides, and veining (type, style, origin, intensity) are logged following Sandfire standard procedures. Data is originally recorded on paper (hard copies) and then transferred to Excel logging sheets. Once
		validated the data is imported to the central database.
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.) photography.	Logging is both qualitative and quantitative depending on the data being logged.
		All cores are photographed.
	The total length and percentage of the relevant intersections logged.	All drill holes are fully logged.
	If core, whether cut or sawn and whether quarter, half or all core taken.	Longitudinally cut half core samples are produced using a core saw.
	If non-core, whether riffled, tube sampled, rotary split, etc. and whether sampled wet or dry.	No non-core samples are reported.
Sub-sampling techniques and sample preparation	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Samples were submitted to the Botswana on-site preparation facility managed by ALS. Samples are first crushed in their entirety to 70% <2 mm using a jaw crusher. The entire samples are then milled to 85% passing 75 µm.
		The procedure is considered to represent industry standard practices and are considered appropriate for the style of mineralisation.
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	For sample preparation, every 20th sample prepared at both the coarse crush, and milling stages is screened for consistency. Any failure triggers the re-crush/mill of the previous three samples. If any one of those samples should also fail, then the entire submitted batch is re-crushed/milled. Between each batch the coarse crushing equipment is cleaned using blank quartz material. LM2 ring mills are cleaned with acetone and compressed air between each sample.
	Measures taken to ensure that the sampling is representative of the in-situ material collected, including for instance results for field duplicate/second-half sampling.	Duplicate analysis of pulp samples has been completed and identified no issues with sampling representatively with assays showing a high level of correlation.
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The sample size is considered appropriate for the mineralisation style.



Criteria	JORC Code Explanation	Commentary
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	Samples analysed by ALS Laboratories were also assayed for total and non-sulphide Cu, Ag, As, Bi, Mo, Pb, S and Zn. Prepared and analysed using ALS method ME-ICP61 for total Cu other elements, with an over-range trigger to ME-OG62 for high-grade Cu samples. Pulp charges of 0.25g are prepared using a four-acid digest and an ICP-AAS finish. Non-sulphide Cu is analysed via method AA05, utilising a sulphuric acid leach with an ICP-AAS finish. The non-sulphide method is considered partial and is conducted for the purposes of determining the
		acid-soluble Cu component of the sample.
	For geophysical tools, spectrometers, handheld XRF instruments etc., the parameters used in determining the analysis including instrument make and model, reading times, calibrations factors applied and their derivation, etc.	No geophysical tools were used to analyse the drilling products.
	Nature of quality control procedures adopted (e.g. standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (i.e. lack of bias) and precision have been established.	Precision and accuracy were monitored throughout their sample chain of custody through the use of pulp duplicates, and the insertion of certified reference materials (CRMs) and blanks into the sample stream.
		CRMs are sourced from Ore Research Laboratories in Australia, and except for blank material, span a range of Cu grades appropriate to the A4 project mineralisation.
		Analysis of duplicate samples shows acceptable repeatability and no significant bias.
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	Significant intersections have been verified by alternative company personnel.
	The use of twinned holes.	There are no twinned holes drilled
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Logging data (including geotechnical parameters) are first recorded on paper, then scanned to preserve a digital image. Original documents are filed in hardcopy. Data logged to paper is also entered into a Microsoft Excel spreadsheet template which has been specifically designed for the capture of A4 deposit logging data. The data is then imported into Sandfire Resources SQL database. The SQL server database is configured for optimal validation through constraints, library tables, triggers and stored procedures. Data that fails these rules on import is rejected or quarantined until it is corrected.
	Discuss any adjustment to assay data.	The primary data is always kept and is never replaced by adjusted or interpreted data.
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down-hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	Drillholes are initially set-out prior to drilling using a handheld global positioning system (GPS). Subsequent to completion, holes are capped and marked with a marker peg.
		Periodically, collar locations are surveyed by Afrogeodata Surveys Pty Ltd, a commercial contract land surveyor using Leica VIVA GNSS GPS system instrumentation, which provides sub-decimetre accuracy. Downhole surveying is completed on all diamond drillholes via north-seeking gyroscopic survey tools.



Criteria	JORC Code Explanation	Commentary
	Specification of the grid system used.	Collars are marked out and picked up in the Botswanan National Grid in UTM format.
	Quality and adequacy of topographic control	Topographic control is provided by the GPS survey system used for collar pickup. The topography of the A4 deposit area is very flat, and significant variations in topography within the project are not apparent. The topographic control is considered fit for purpose.
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Systematic grid drilling has not been conducted at this stage of exploration.
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied.	No mineral resource or ore reserve estimations have been reported.
	Whether sample compositing has been applied.	No sample compositing is applied during the sampling process.
Orientation of data in relation to geological structure	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	The orientation of structures related to mineralisation have yet to be confirmed. Follow up drilling is underway which will provide additional control on structural orientations.
	If the relationship between the drilling orientation and the orientation of key mineralised structures is considered to have introduced a sampling bias, this should be assessed and reported if material.	No significant sampling bias is believed to occur based on the available structural data. All reported mineralised intervals are downhole intervals not true widths.
Sample security	The measures taken to ensure sample security.	Samples are collected at the end of each shift by Tshukudu staff and driven directly from the drill rig to the storage and logging facility in Ghanzi. This facility is a secure compound.
		Samples are prepared to pulp stage on-site at the core logging and storage facility, within a purpose built commercially operated facility (ALS Laboratories). Sample security is not considered to be a significant risk to the A4 project.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	The sampling techniques and data collection processes are of industry standard and have been subjected to internal reviews by Sandfire personal.



# Section 2: Reporting of Exploration Results

Criteria	JORC Code Explanation	Commentary
Mineral tenement and land tenure status	Type, reference name/number, location and ownership including agreements or material issues with third parties such as joint ventures, partnerships, overriding royalties, native title interests, historical sites, wilderness or national park and environmental settings.	Sandfire, through their 100% ownership of Botswanan company Tshukudu Metals Botswana (Pty) Ltd, hold prospecting license PL190/2008 as part of a larger tenement package. This licence, on which A4 occurs, was renewed on 1st October 2020 and is valid till 30th September 2022. UK-listed company Metal Tiger Plc. holds a US\$2.0 million capped Net Smelter Royalty over the Company's T3 Copper Project in Botswana. Metal Tiger Plc also holds an uncapped 2% Net Smelter Royalty over 8,000km <sup>2</sup> of the Company's Botswana exploration license holding in the Kalahari Copper Belt. This uncapped royalty covers the area subject to the historical Tshukudu joint venture with MOD Resources Ltd and includes PL190/2008, which hosts the A4 resource area.
	The security of the tenure held at the time of reporting along with any known impediments to obtaining a licence to operate in the area.	There are no known impediments to obtaining a license to operate in the area.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	Limited previous exploration in the area of the drilling reported in this announcement, apart from widely spaced soil sampling conducted by Discovery Mines, and 20 diamond drill holes completed by Tshukudu Exploration on behalf of MOD Resources Ltd during 2018 and 2019.
Geology	Deposit type, geological setting and style of mineralisation.	<ul> <li>The A4 project occurs within the Ghanzi-Chobe belt in Western Botswana. The stratigraphy in this belt comprises the basal Kgwebe Formation meta-volcanic lithofacies unconformably overlain by the Ghanzi Group sedimentary lithofacies.</li> <li>The Ghanzi Group is a dominantly siliciclastic marine sedimentary group comprising (in successively higher stratigraphic order), the Kuke, N'gwako Pan, D'Kar and Mamuno Formation sedimentary lithofacies. The Ghanzi Group is an overall fining-upwards succession of sedimentary lithofacies, with sandstone and conglomerates of the Kuke Formation overlain by arkose, siltstone, shale and limestone of the N'Gwako Pan, D'Kar and Mamuno Formation, shale and limestone of the N'Gwako Pan, D'Kar and Mamuno Formations.</li> <li>A4 occupies a similar structural and stratigraphic position to that of the T3-Motheo project in that it occurs within a NE-SW trending periclinal anticline with a core of N'Gwako Pan Formation, overlain by a succession of D'Kar Formation sediments.</li> <li>Second order (parasitic) upright to overturned folds are developed within the axial region of the periclinal anticline. The second order folds are cross-cut and displaced by moderately north-west dipping brittle-ductile, thrust sense shear zones. These shear zones have been recognised along which different sedimentary lithofacies which have been juxtaposed by brittle displacement.</li> <li>Flat lying to shallow dipping zones of extensional fracture and veining are developed in the footwall of the shear zone. These extensional zones are interpreted to have formed as shear related extensional structures during thrust movement. The extensional structures are preferentially developed within a sandstone dominated package but do penetrate into the overlying carbonate and siltstone dominated units.</li> </ul>



Criteria	JORC Code Explanation	Commentary
		Cu-Ag mineralisation that forms the focus of A4 is developed along both the shear zones and the extensional zones. Within the shear zones copper sulphides (bornite, chalcocite, chalcopyrite) are associated with quartz-carbonate veins developed sub-parallel to the shear foliation. Within the extensional zones copper sulphides are associated with either quartz-carbonate veins or as sulphide fill to in-situ fragmentation zones (breccias) within the host sediments.
Drillhole information	<ul> <li>A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drillholes:</li> <li>Easting and northing of the drillhole collar</li> <li>Elevation or RL (Reduced Level – elevation above sea level in metres) of the drillhole collar</li> <li>Dip and azimuth of the hole</li> <li>Downhole length and interception depth</li> <li>Hole length.</li> </ul>	Information relating to the collar parameters of the diamond drill holes described in this announcement are listed in Appendix 1 of the announcement. A summary of all material information and the results of the completed holes described in this announcement are included in this announcement.
Data aggregation methods	In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (e.g. cutting of high grades) and cut-off grades are usually Material and should be stated. Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low-grade results, the procedure used for such aggregation should be stated and some typical examples of such aggregations should be shown in detail. The assumptions used for any reporting of metal equivalent values should be clearly stated.	Significant copper and silver intersections are compiled by Sandfire when assay results are received from the laboratory using a weighted average to account for varying sample lengths. The intersection reported for MO-A4-207D was calculated using a cut-off grade of 0.7% Cu with 3m of consecutive downhole dilution. The vein-hosted style of Cu/Ag mineralisation intersected in drill holes reported in this announcement, commonly include high-grade vein hosted mineralisation and surrounding low-grade disseminated sulphide mineralisation. Assay results for Cu and Ag for intersections in hole MO-A4-207D, MO-A4-003D, MO-A4-008D and MO-A4-010D listed in this announcement are included in Appendix 1.
Relationship between mineralisation widths and intercept lengths	<ul> <li>These relationships are particularly important in the reporting of Exploration Results.</li> <li>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</li> </ul>	All intersections are reported as down-hole widths. True widths are currently not known and additional drilling will allow true widths to be estimated as geological knowledge of the mineralisation develops.



Criteria	JORC Code Explanation	Commentary
	If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (e.g. 'down hole length, true width not known').	
Diagrams	Appropriate maps and sections (with scales) and tabulations of intercepts should be included for any significant discovery being reported These should include, but not be limited to a plan view of drill hole collar locations and appropriate sectional views.	Relevant maps and diagrams are included in the body of the report.
Balanced reporting	Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.	The accompanying document is considered to be a balanced report.
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	All substantive data is reported.
Further work	<ul> <li>The nature and scale of planned further work (e.g. tests for lateral extensions or depth extensions or large-scale step-out drilling).</li> <li>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</li> </ul>	Any further work on A4 Dome and PL190/2008 will be dependent on results from diamond drilling programs along strike and down dip from the current A4 drilling.