Sandfire

ASX:SFR

20/09/2024

SANDFIRE PORTUGAL EXPLORATION UPDATE

DRILLING EXTENDS HIGH-GRADE POLYMETALLIC ZONE AT THE SESMARIAS PROSPECT, PORTUGAL

Highlights

- Further polymetallic mineralisation intersected at the Sesmarias prospect, part of the Alvalade Joint Venture.
- Drillhole **SES24-054** intersected 41.2m at 1.59% Cu, 3.36% Zn, 1.71% Pb, 54.90 ppm Ag from 377.2 – 418.4m downhole.
    - Includes a higher-grade zone of 11.0m at 2.16% Cu, 7.90% Zn, 3.96% Pb and 113.24ppm Ag from 385.8 – 396.8m.
- The target stratigraphic zone is interpreted to be over 1km in strike length.
- The 2024 seven-hole program is designed to test mineralisation along strike and down dip from hole **SES23-047**, which returned high grade copper and zinc mineralisation.

Sandfire Resources Limited (**Sandfire** or **the Company**) notes new assay results released by its joint venture partner, TSX-listed Avrupa Minerals Limited (**Avrupa**), from diamond drilling at the Sesmarias massive sulphide prospect within the Alvalade Joint Venture in Portugal (**Alvalade JV**).

Results released recently by Avrupa include follow-up holes **SES24-054 and SES024-053,** 150m to the SE and a 50m down dip extension from **SES23-047**, respectively, that intersected:

- SES24-054 - 41.2m at 1.59% Cu, 3.36% Zn, 1.71% Pb, 54.90 ppm Ag from 377.2m depth including a higher grade zone of 11m at 2.16% Cu, 7.90% Zn, 3.96% Pb and 113.24ppm Ag from 385.8m.
- SES24-053 – 9.2m at 0.40% Cu, 4.02% Zn, 2.09% Pb, 50.51 ppm Ag from 439.7m.

Management Comment

Sandfire Chief Executive Officer and Managing Director, Brendan Harris, said:

''These are encouraging drilling results from the Sesmarias prospect, and we plan to conduct further drilling to test the extent and continuity of the mineralisation.

"Our exploration team in Portugal and our JV partner, Avrupa continue to execute a high-quality exploration program which is indicating the potential for a significant mineralised system at Sesmarias while also enhancing our deep knowledge of the Iberian Pyrite Belt (IPB). The IPB has been a prolific producer of metal with mining dating back to at least ~3000BCE and we believe it remains prospective for new discoveries. Sandfire has a substantial portfolio of exploration tenure throughout the IPB in both Portugal and Spain."

- ENDS -

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This announcement is authorised for release by Sandfire's Chief Executive Officer and Managing Director, Brendan Harris.

Sandfire Resources Ltd.
(ABN 55 105 154 185)

INTRODUCTION

The Sesmarias prospect is in the western part of the Iberian Pyrite Belt (**IPB**), within a license covering about 115km^2 held under the Alvalade JV, about 6km and 16km SE of the historical Lousal and Caveira mines respectively, and about 80km southeast of Setúbal (Figure 1). Sandfire's wholly owned subsidiary, Sandfire Mineira Portugal (formerly Emisurmin), entered an option deal with Avrupa in 2019, whereby an interest of up to 85% can be earned in the project in a staged process. Sandfire currently holds an indirect 51% interest in PorMining Lda. (the Alvalade JV company).

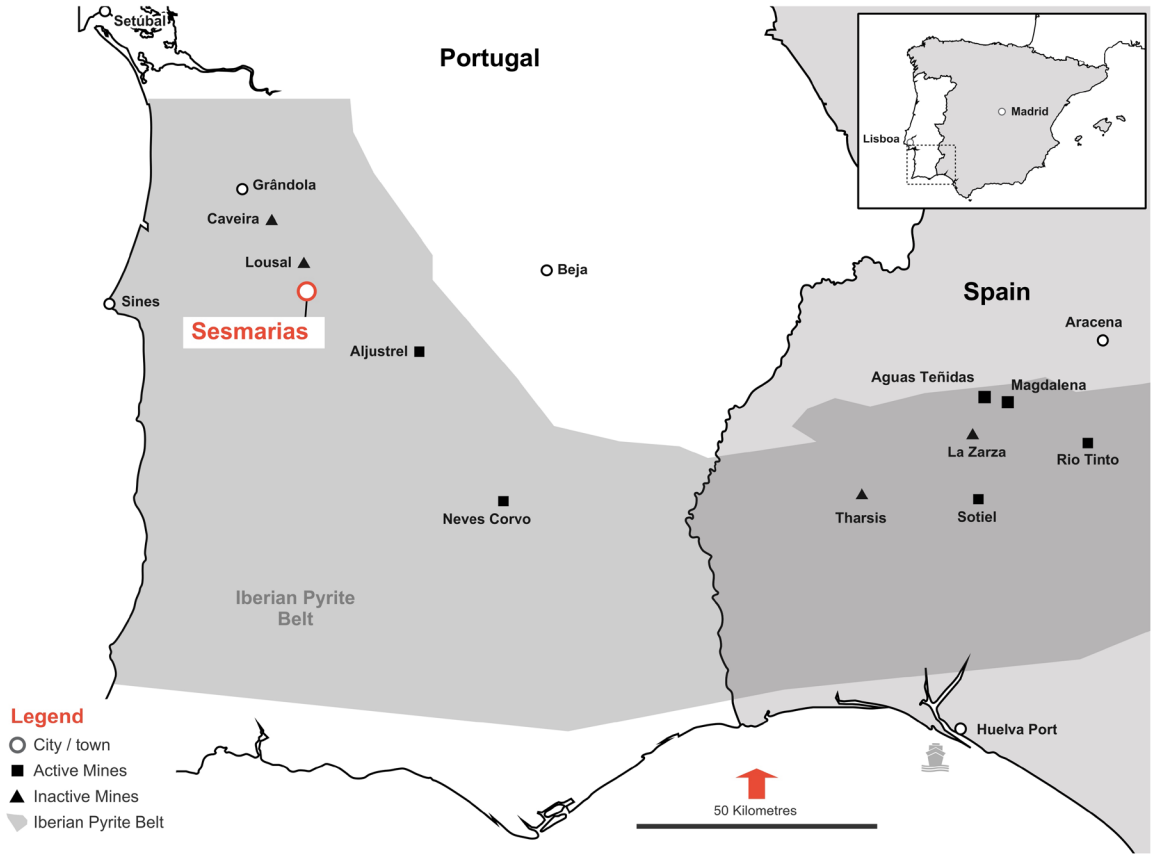

Figure 1: Location of the Sesmarias prospect within the IPB in the south of Portugal and Spain.

Drilling to date has shown that the Volcanogenic Massive Sulphide (**VMS**) mineralisation at Sesmarias exists discontinuously over a strike extent of at least 1,000m. Exploration at Sesmarias by others prior to Emisurmin had outlined mineralisation in areas termed the northern, central, and southern zones. Further drilling between the currently outlined sections is required to test if the mineralisation is continuous along the trend between the interpreted zones.

Avrupa is undertaking a drill program to follow up Sesmarias SES23-047 which was drilled in 2023 and intersected 43.4m at 1.51% Cu, 4.78% Zn, 2.15% Pb and 64.1ppm Ag from 392.8 – 436.2m downhole (See ASX Release Sandfire Portugal Exploration Update dated 13 June 2023).

Drill hole SES23-053 was planned to test approximately 50m down-dip of the mineralisation intersected in drill hole SES23-47, with results announced on 13 June 2023. Drill holes SES23-048 and SES23-054 are located approximately 150m south of the SES23-047 intersection in the central zone of Sesmarias (Figure 2).

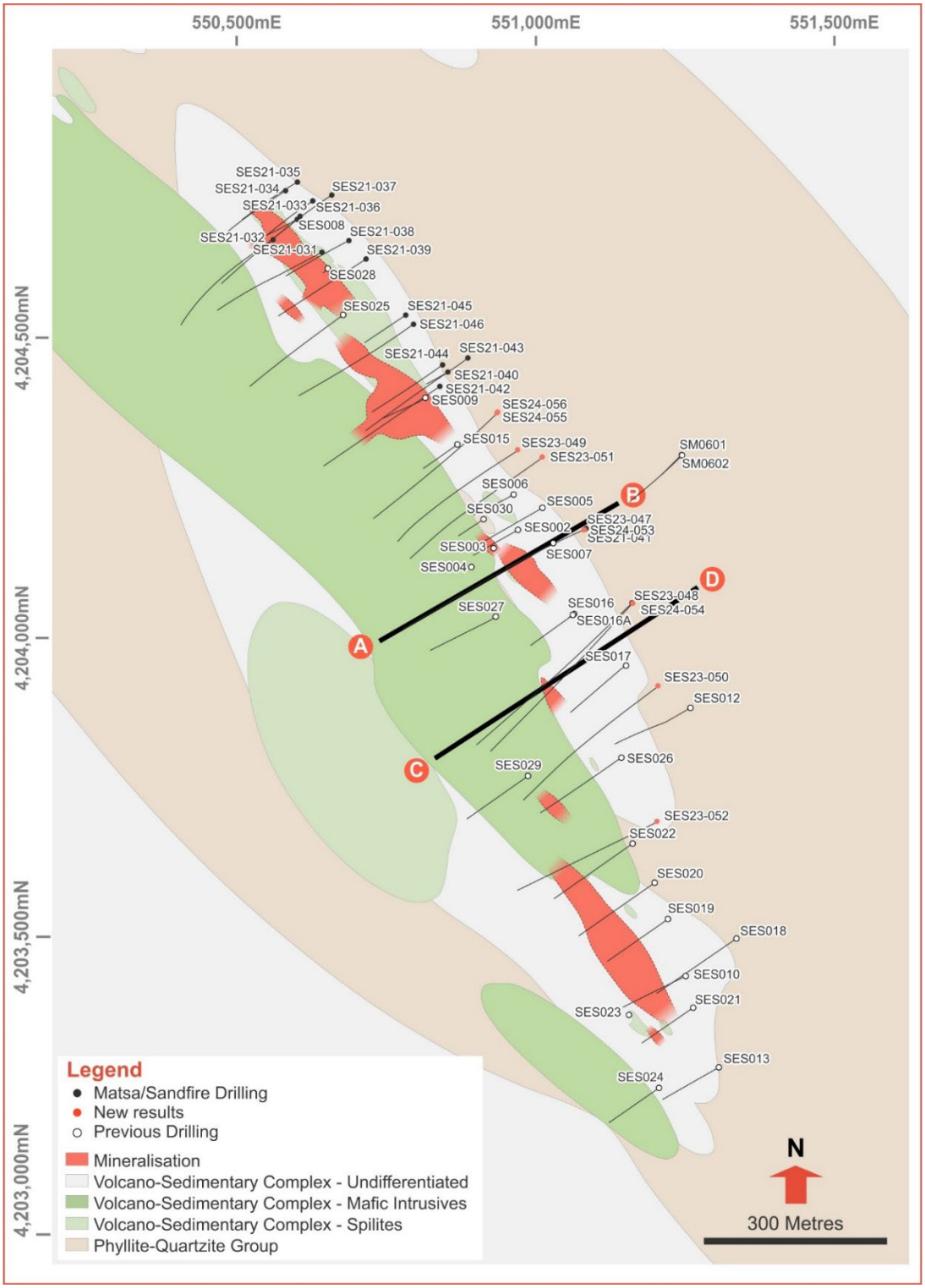

Figure 2: Drill Location Plan at -130m RL of the Sesmarias prospect area over simplified interpreted basement geology. Historical drill collars in white; drill holes from the current Sandfire Mineira Portugal - Avrupa work are shown in black / red. Plan outlines of the mineralisation intersected to date are also shown.

See Appendix A and B for details of the new drilling to date at Sesmarias.

SESMARIAS GEOLOGY

At Sesmarias the target IPB geological units are covered by younger Tertiary rocks usually of about 70-110m thickness (Figure 3). The Sesmarias host rocks and mineralisation are interpreted to be folded in a syncline. The target sequence consists of black shales and felsic volcanics of the Volcanic Sedimentary Complex (**VSC**). At Sesmarias the VSC sequence comprises thick intervals of shales, felsic volcanics and basalt. The syncline core of VSC rocks is surrounded by the older Phyllite and Quartzite Group (**PQ Group**). The current target is on the eastern limb of the syncline, which mostly has a steep (60-80°) dip to the north-east.

The high-grade intersection at drill hole SES24-054 follows ongoing geological modelling and re-interpretation work conducted by the Sandfire Mineira Portugal geology team. This work is planned to continue in FY25 to test the extent of Sesmarias mineralisation and possibly other targets.

A plan view of Sesmarias and two geological cross sections are provided as Figures 2, 3 and 4 respectively.

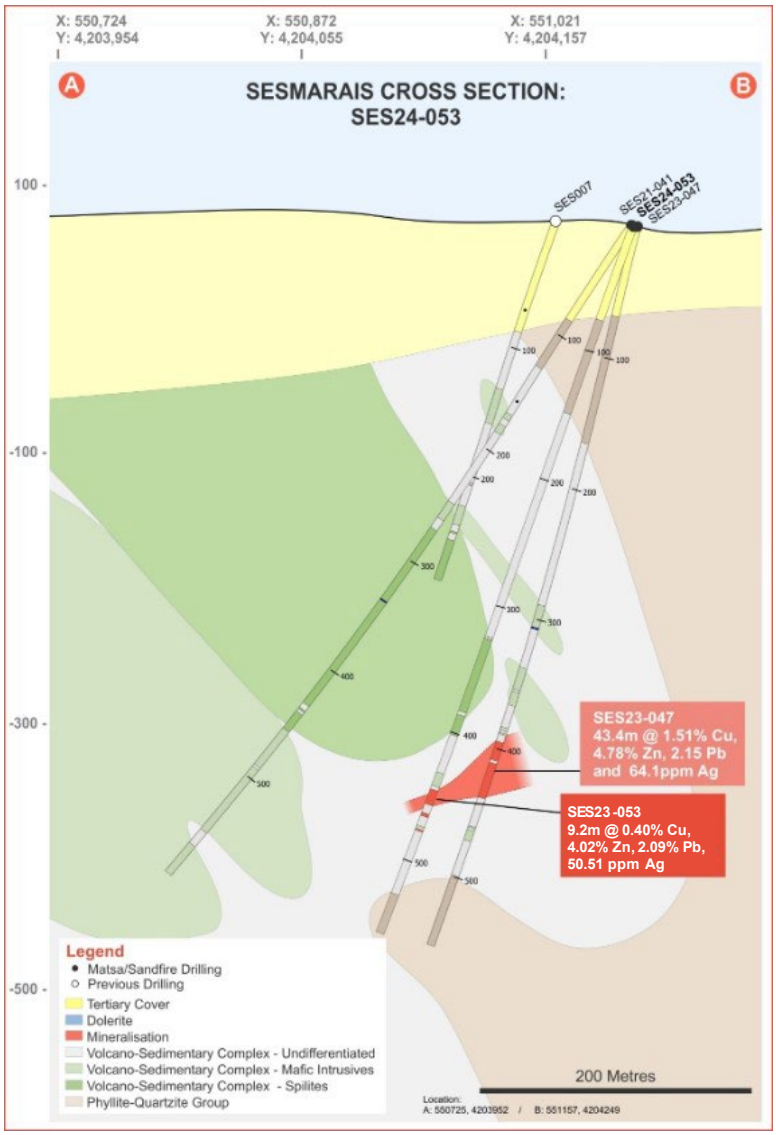

Figure 3: Geological cross section of Sesmarias intersection in DH SES24-053 looking to the north-west. The location of the section is shown in Figure 2.

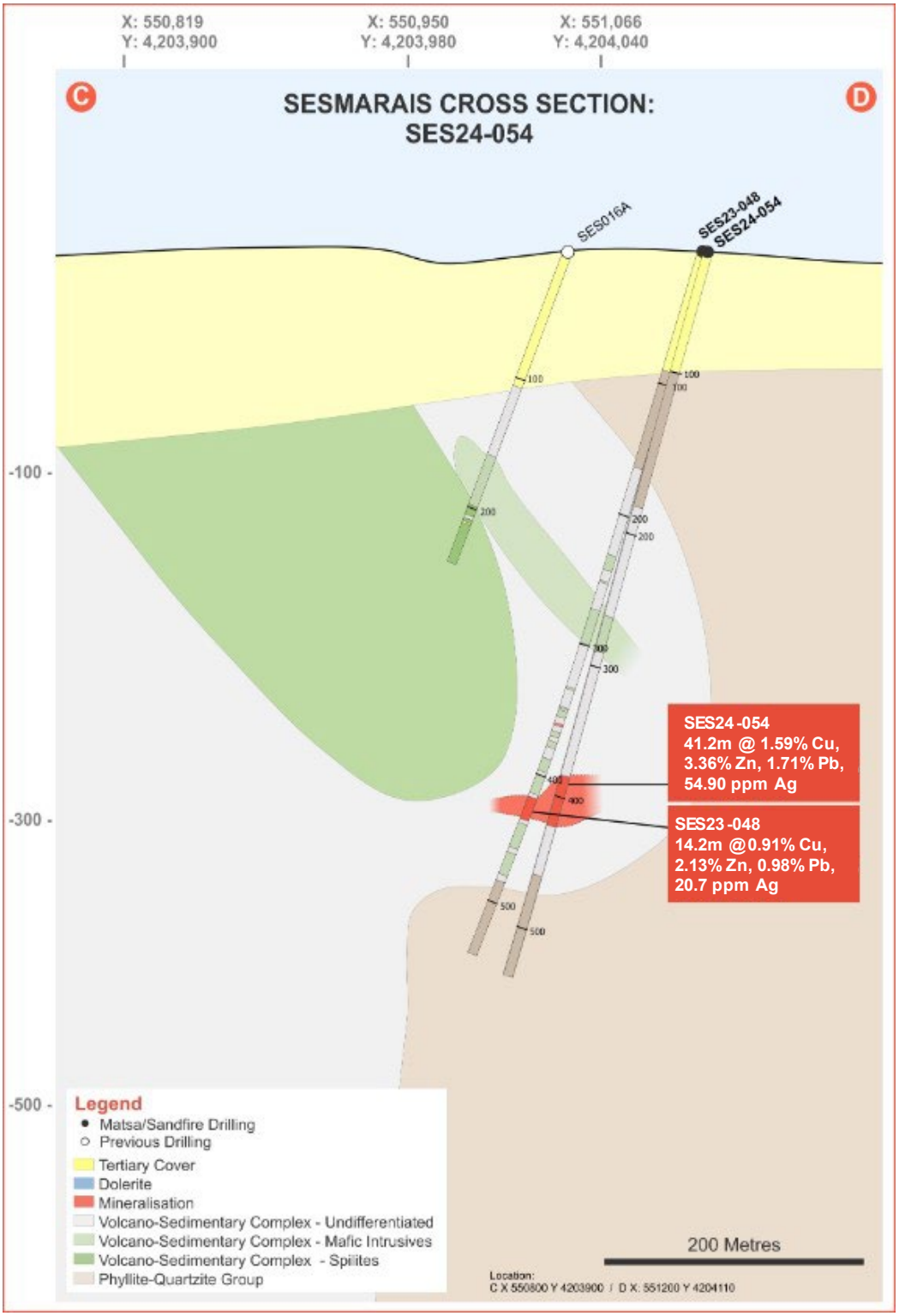

Figure 4: Geological cross section of Sesmarias intersection in DH SES24-054 looking to the north-west. The location of the section is shown in Figure 2.

SESMARIAS MINERALISATION

The central zone of the Sesmarias mineralisation extends for at least 600m along-strike in the overturned limb of a syncline, with the potential to be extended further along strike and down-dip around the syncline as it remains open to the NW and SE. Mineralisation intersected to date is zinc- dominated but also contains appreciable levels of copper, silver, lead and minor gold, and is interpreted as typical VMS mineralisation of the IPB.

Appendix B presents new assays available to date based on a >0.3% Cu cut-off grade. Mineralisation intersected to date consists of massive sulphides, semi-massive sulphides and stringer styles.

ONGOING ACTIVITIES

Drilling is continuing with the objective of further testing the extent of the Sesmarias mineralisation and possibly other targets. Current activities include drill testing the along-strike and down-dip extent of the higher-grade zone intersected in SES23-047 and SES24-054.

Figure 5 shows the strike extent of the zone which is currently being assessed.

SES24-055 and SES24-056 are being drilled to test 240m along-strike to the north-west from the SES23-047 intersection. Present geological understanding suggests a potential 1,000m strike length of the poorly tested prospective horizon.

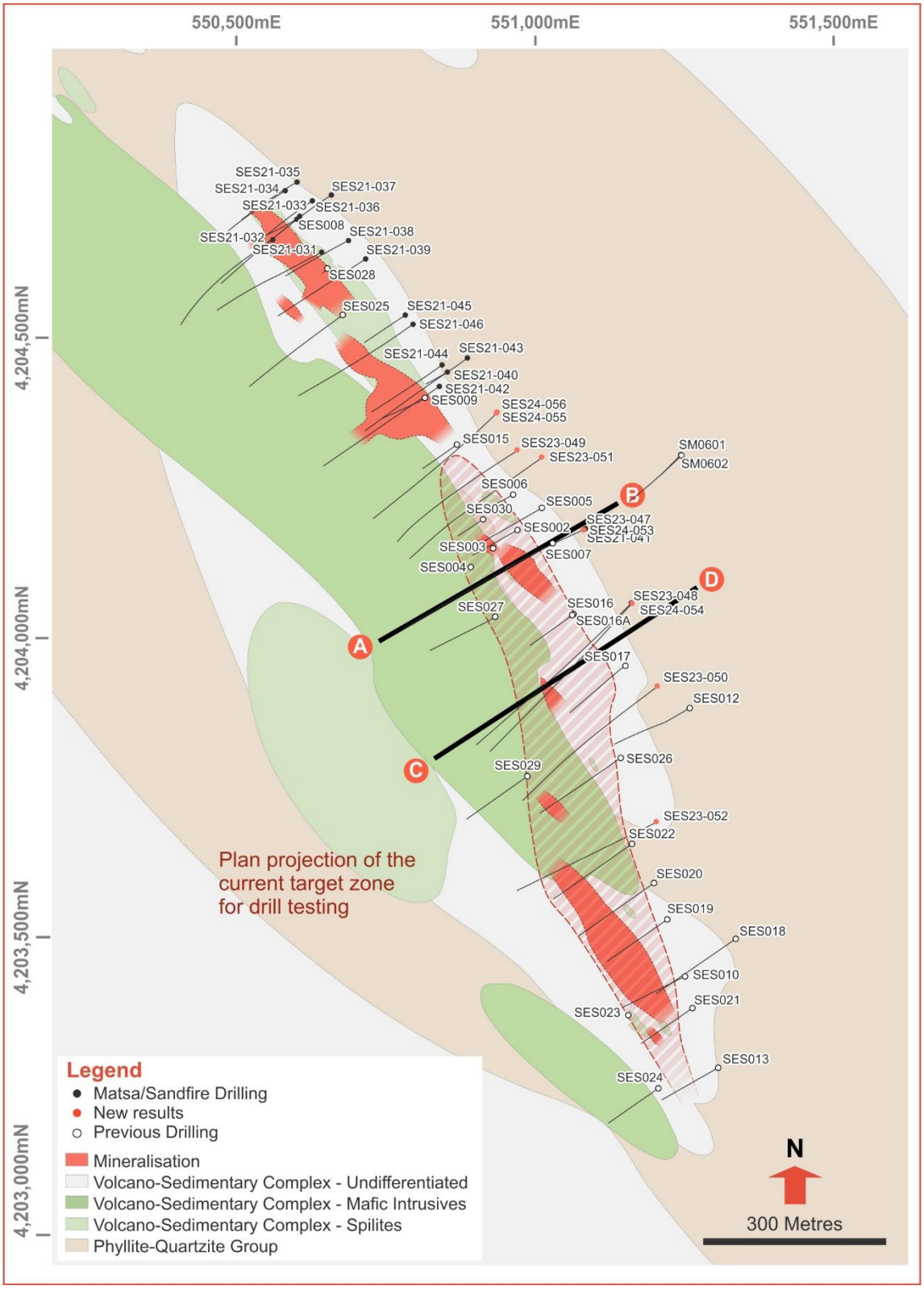

Figure 5: Plan view of current target zone at the Sesmarias prospect.

COMPETENT PERSON'S STATEMENT

Exploration Results

The information in this announcement that relates to Exploration Results at the Sesmarias prospect, is based on, and fairly represents, information and supporting documentation compiled under the supervision of Mr Richard Holmes who is a Fellow of The Australasian Institute of Mining and Metallurgy. Mr Holmes 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 Holmes consents to the inclusion in the announcement of the matters based on his information in the form and context in which it appears.

The information in this announcement that relates to previous Exploration Results at the Sesmarias prospect are extracted from the market announcement titled 'Sandfire Portugal Exploration Update' released to the ASX on 13 June 2023. Sandfire confirms that it is not aware of any new information or data that materially affects the information included in that market announcement.

Forward-Looking Statements

Certain statements made within or in connection with this release contain or comprise certain forward-looking statements regarding exploration and project development operations, and the Sesmarais Prospect. Forward-looking statements can generally be identified by the use of forward-looking words such as 'expect', 'anticipate', 'may', 'likely', 'should', 'could', predict', 'propose', 'will', 'believe', 'estimate', 'target', 'guidance' and other similar expressions.

You are cautioned not to place undue reliance on forward-looking statements. Forward-looking statements are provided as a general guide only and should not be relied upon as an indication or guarantee of future performance. 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.

Unless otherwise stated, the forward-looking statements are current as at the date of this announcement. Except as required by law or regulation, 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.

APPENDIX A – Drill Collar Information of the Current Drilling, Grid ED50 / UTM 29N

Hole ID	Depth m	Dip	Azimuth	Easting	Northing	RL	Hole Status
SES23-048	542.2	-72	235	551,162	4,204,059	84	Completed
SES23-049	556.6	-77	235	550,970	4,204,315	80	Completed
SES23-050	508.8	-75	240	551,204	4,203,920	80	Completed
SES23-051	550.6	-77	235	551,011	4,204,303	76	Completed
SES23-052	608.0	-70	235	551,203	4,203,694	72	Completed
SES24-053	555.3	-71	240	551,081	4,204,181	70	Completed
SES24-054	538.0	-75	245	551,162	4,204,059	72	Completed
SES24-055	622.1	-76	235	550,936	4,204,377	76	Awaiting assays
SES24-056	Ongoing	-82	235	550,936	4,204,377	76	Ongoing

APPENDIX B – Assay Results (0.3% Cu cut-off, 4m Maximum Consecutive Internal Dilution)

Drill hole ID	From m	To m	Width m	Cu %	Zn %	Pb %	Ag ppm	Au ppm
SES23-048	419.1	433.3	14.2	0.91	2.13	0.98	20.70	0.46
including	424.1	428.3	4.2	1.27	1.01	0.30	14.40	0.38
SES23-049				no significant assays				
SES23-050				no significant assays				
SES23-051				no significant assays				
SES23-052	358.6	364.2	5.6	0.45	0.02	0.14	12.27	0.33
SES24-053	439.7	448.9	9.2	0.40	4.02	2.09	50.51	0.23
SES24-054	377.2	418.4	41.2	1.59	3.36	1.71	54.90	0.21
including	385.8	396.8	11.0	2.16	7.90	3.96	113.24	0.15

APPENDIX C – JORC 2012 CODE

JORC 2012 MINERAL RESOURCE PARAMETERS

Sandfire Mineira Portugal

JORC Code Assessment Criteria	Comment
Section 1 Sampling Techniques and Data	
Sampling Techniques	• Drilling undertaken by PorMining complies with the industry best practices and the resultant sampling pattern is sufficiently dense to interpret the geometry, boundaries, and different styles of the sulphide mineralisation at Sesmarias with a high level of confidence within well drilled areas. • All core samples were taken from diamond drill cores drilled from the surface. • Diamond drill holes were generally sampled through intervals of visual mineralisation and into visually barren material above and below the mineralised rocks and also from several different units for geochemical characterization. • Sampling intervals are then marked by a geologist to ensure representativity of the sampling, and the length of the samples are typically between 1 and 2m intervals, although this can be reduced depending on • the geology and mineralisation in the core. The most common sample lengths in the assay database are 1 and 2m. • Samples were cut longitudinally in half using a manual operated diamond core saw, or in quarter core when routine duplicate samples where included. • The core is then sampled by hand, avoiding any possible contamination from adjacent sampling intervals, it's double bagged to prevent contamination, tagged with barcoded ticket and sealed.
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. *Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.* *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.*	

JORC Code Assessment Criteria	Comment
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.).*	• All drilling conducted has been diamond drilling ('DDH') – from surface collar locations. • Core is orientated in HQ and NQ drilling diameters with COREMASTER from Stockholm Precision Tools (SPT). The core is placed in a "v" shaped tray, and then oriented and marked before reading and recording the angles to core axis of the geological structures. Each structure recorded is classified according to its nature. The information is then recorded in database (Excel file). • Drilling has been carried out by external third-party contractor. • The diamond drilling has been conducted using several drilling machines and is usually undertaken using wireline double tube tools. • The drillholes start in PQ to penetrate the Tertiary rocks and into the first meters of the Palaeozoic rocks. These are then reduced to HQ and can be reduced to NQ size depending on technical problems.
Drill Sample Recovery *Method of recording and assessing core and chip sample recoveries and results assessed.* *Measures taken to maximise sample recovery and ensure representative nature of the samples.* *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.*	• The drill core is transported from the drilling rigs to the Core Shed where it is sorted and stored before being processed. Core intervals are measured against the drillers recorded measurements and then the core recovery is determined by the geologists and by trained technicians supervised by the geologists. • Diamond core recovery is logged and captured in the database. The drillers also record the length on every run. Both records are compared. • Recovery is generally over 90%. • When low recovery is captured, the specific sampling interval is noted to avoid bias in over or under reporting.
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.* *Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc.), photography.* *The total length and percentage of the relevant intersections logged.*	• The drill core is laid out on a flat logging rack with natural lights and water supply. The logging includes lithological coding as well as assigning an overall geological unit. Logging is captured on tablets using Micromine Geobank for Field Teams software. The lithological coding system comprises 47 individual rock types. These individual rock types are grouped into an overall geological unit code, or main rock type depending on its nature. Logging also includes a visual rock alteration log according to its type (sericite, chlorite, silica) and intensity. Geological structure characterisation is logged in a separate table with its nature and length. Structural readings are also registered to aid with the structural knowledge. Mineralisation logging includes only visible mineralisation aspects with its occurrence and visible mineralogy. Trained technicians measure and record RQD in the core and density of the rocks.

JORC Code Assessment Criteria	Comment
	• The core logging is qualitative in nature whereas the sampling and results are quantitative. All drill cores are photographed and catalogued appropriately. • All drill holes are fully logged.

Sub-sampling Techniques and Sample Preparation
If core, whether cut or sawn and whether quarter, half or all core taken.
 	
If non-core, whether riffled, tube sampled, rotary split, etc., and whether sampled wet or dry.
 	
For all sample types, the nature, quality and appropriateness of the sample preparation technique.
	• For all intersections with logged presence of sulphides and adjacent rocks, cores are marked for sampling and cut into two equal halves. The core is placed in a "v" shaped tray and oriented prior to being placed in the core cutting tray machine, the core is then cut. One half of the core is selected for sample preparation and assay analysis, whilst the other is retained as a reference sample. When routine duplicates are present, the half core cut is then cut into a quarter for a duplicate sample.
	• Core sample preparation at the used commercial laboratory (ALS) is completed as follows:
	  ○ LOG-22 - Samples are weighted and logged in.
	  ○ Samples are prepared with the preparation package PREP-31BY that consists of the following:
	  • The entire sample is run through a crusher which reduces 70% of the particles to less than 2 mm in size.
	  • A rotary splitter then splits out a 1kg subsample.
	  • The 1kg subsample is then pulverised to > 85% passing 75 microns.

Quality control procedures adopted for all sub-sampling stages to maximise representativity of samples. *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.* *Whether sample sizes are appropriate to the grain size of the material being sampled.*	• Control samples, including field duplicates, field blanks, and certified reference materials (CRMs), are inserted at a frequency of 1 in 10 samples. The CRMs cover a range of low and high base metal concentrations, and blanks are inserted periodically to ensure the accuracy of the assay process. This rotation ensures that each batch contains appropriate controls for both precision and accuracy, with occasional use of additional blank samples as necessary. • Pulp samples are randomly selected for duplicate analysis. Re-assaying of these pulp samples is used to identify issues with non-representative sampling. The pulp re-assays typically display a high level of correlation. • As of to date no lab duplicates have been sent to an independent third-party laboratory for external verification. • The sample size is considered appropriate for the mineralisation style.
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 are assayed using four acid digestion with ICP-MS finish (ME-MS61) with a suite of 48 elements. Samples are fire-assayed for Au using the laboratory method Au-AA23 and also analysed for Sn using the ME-XRF05. • Selected historical core was also assayed using the same methods as for new core.

JORC Code Assessment Criteria	Comment
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. *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.*	• A portable magnetic susceptibility meter (SM30-ZH Instruments) was used to record point data on a 2-3m intervals over all lithological units. • QAQC samples (blanks, certified reference material and duplicates) are inserted into the sample stream prior to these being sent to the laboratory for assay analysis. • Blank samples comprise local sedimentary country rock and have been included in the sample stream of the project since 2020. The results of the blank analysis demonstrate that the sample preparation process employed at ALS limits contamination to acceptable levels. • Pulverised certified blank samples were used when pulps were sent for re-assay due to the nature of the sample. The assay results of the pulverised blank analysis are within acceptable limits. • Twin duplicate samples are quarter core field duplicate samples which have been included in the sample stream on a regular basis. These duplicate results show reasonably good repeatability as well as good correlation between the original and duplicate samples. • The company has used four different CRM across all the projects. The CRM are used to monitor Cu, Zn, Pb, Mo and Au grades. The CRMs used have been purchased from certified commercial laboratories (Geostats Pty Ltd).
Verification of Sampling and Assaying *The verification of significant intersections by either independent or alternative company personnel.* *The use of twinned holes.* *Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.* *Discuss any adjustment to assay data.*	• Significant intervals documented have not been verified by independent or alternative company personnel. • The mineralisation appears to be reasonably laterally continuous and has been intersected in fence-style drilling programmes. Separation between drill holes is usually between 25 to more than 100m. • Data entry is completed after core logging and surveying mineralised intervals. Documentation of sampling is undertaken on assay tags provided by *ALS Minerals* and within a digital assay database (Excel file). • Sampling documentation is then added on *ALS Minerals* sample submittal form. Lithological information about the sampled interval is later added in the assay database. • Once assay results are received, the digital assay database is updated. • All values under the lower detection limit are transformed to half of the lower detection limit value and all values above the higher detection limit are added '+1'. Copper, Lead, Zinc and Silver values above maximum detection limits are re-processed with ore grade methods based on ALS protocols.

JORC Code Assessment Criteria	Comment
Location of Data Points *Accuracy and quality of surveys used to locate drill holes (collar and downhole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.* *Specification of the grid system used. Quality and adequacy of topographic control.*	• Drillhole collars are marked by the geology personnel in LEAPFROG and/or QGIS, using ED50 UTM Zone 29N format and then verified in the field using a GARMIN gps with the same coordinate system, which has an accuracy of 3m in the X, Y and Z coordinates. • The drilling company typically uses a REFLEX single shot tool for all of its downhole surveys, with the measurements routinely taken every 25m.
Data Spacing and Distribution *Data spacing for reporting of Exploration Results.* *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.* *Whether sample compositing has been applied.*	• Planned drilling programs are typically aimed to intersect mineralisation perpendicular to strike and also in fan-style distribution for depth continuity verification. • Drill spacing can vary from 25m to more than 100m, based on the geological model and location of the bodies of mineralisation. • 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.* *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.*	• Deposit type implies that the mineralization is typically stratiform. Drilling programs are aimed to intersect mineralisation perpendicular to strike and also in 'fan style' distribution for depth continuity verification. However, high average unit dips and local aspects may constrain drill hole collar positioning. • No significant sampling bias occurs in the data due to the orientation of drilling with regards tomineralisation. • Drilling undertaken by Sandfire Mineira Portugal/PORMINING conforms to industry best practices and the resulting sampling pattern is sufficiently dense to interpret the geometry, boundaries, and different styles of the sulphide mineralisation. Confidence in the geological interpretation decreases in areas of reduced sample coverage and is reflected in the classification of mineral resources. •
Sample Security *The measures taken to ensure sample security.*	• All drill core is delivered to the core shed, usually via flatbed trucks, for photography, core recovery calculations, geological and geotechnical logging, and sampling.

JORC Code Assessment Criteria	Comment
	• The core shed, sample preparation facilities and laboratory are all confined within secure boundaries, with controlled access points, where only authorised personnel are allowed entry.
Audits and Reviews *The results of any audits or reviews of sampling techniques and data.*	• No audits or reviews have been completed.
Section 2 Reporting of Exploration Results	
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.* *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.*	• Sandfire Mineira Portugal currently holds 4 exploration permits (Ermidas, Cercal, Ourique and Santiago) and an experimental exploitation licence (Alvalade) in joint venture with Avrupa, all in the IPB, which amounts to a total of approximately 1615km^2. • All drilling in this announcement is within the Alvalade experimental exploitation Licence. The Licence is held by PorMining, a subsidiary of Avrupa Mining Ltd. Sandfire Mineira Portugal has an option agreement with Avrupa whereby Sandfire may earn up to an 85% interest in the Licence via a series of stages.
Exploration done by Other parties *Acknowledgment and appraisal of exploration by other parties.*	• Mining in the IPB has occurred for over 2,500 years. Activity can be dated to prehistorical times and to Phoenician and Roman periods. Significant interest in IPB did not re-emerge until the 1800s following the successful extraction of Cu, resulting in over 60 mines operating by 1900. The Rio Tinto Company was formed in 1873 to operate some of these mines. The discovery of the Neves Corvo deposit in 1977, renewed exploration interest in the region, which ultimately led to the discovery of the mineralisation associated with the Aguas Teñidas mine and re-opening of the Sotiel Mine in 1983. • The 'Alvalade' experimental exploitation licence holds 2 VMS historical mine sites, Caveira and Lousal. The most recent exploration works developed in this area, from the past century up to 2019, include projects developed by Avrupa Minerals Ltd. with several joint venture partners (Antofagasta and Colt Resources), Riofinex plc, Billiton, SAPEC and Serviço de Fomento Mineiro (Portuguese Geological Survey).
Geology *Deposit type, geological setting and style of mineralisation.*	• The mineral deposit at Sesmarias is interpreted to be volcanogenic massive sulphide (VMS) hosted by volcanic and sedimentary units. VMS deposits are predominantly stratiform

JORC Code Assessment Criteria	Comment
	accumulations of sulphide minerals that precipitate from upwelling hydrothermal fluids associated with magmatism on or below the seafloor in a wide range of geological settings. • Work is underway to characterise the Sesmarias deposit, which is hosted by felsic volcanic rocks and black shales.
Drill Hole Information *A summary of all information material to the understanding of the exploration results including a tabulation of the following information for all Material drill holes:* • *Easting and northing of the drill hole collar* • *Elevation or rl (reduced level – elevation above sea level in metres) of the drill hole collar* • *Dip and azimuth of the hole* • *Downhole length and interception depth* • *Hole length.* *If the exclusion of this information is justified on the basis that the information is not Material and this exclusion does not detract from the understanding of the report, the Competent Person should clearly explain why this is the case.*	• Refer to Appendix A and B of this accompanying document.
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.*	• Appendix B shows intercepts that are based on a >0.3% Cu COG and may include up to a maximum of 4m consecutive intervals of included waste. • Minimum and maximum DDH sample intervals used for intersection calculation are 0.5m and 2m respectively, and are subject to geological boundaries. • No metal equivalents are used in the intersection calculation.

JORC Code Assessment Criteria	Comment
The assumptions used for any reporting of metal equivalent values should be clearly stated.	
Relationship Between Mineralisation Widths and Intercept Lengths *These relationships are particularly important in the reporting of Exploration Results.* *If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.* *If it is not known and only the downhole lengths are reported, there should be a clear statement to this effect (e.g., 'downhole length, true width not known').*	• All drillhole intercepts are reported in downhole thickness. • The drill holes are interpreted to be approximately perpendicular, or at a high angle to the strike and dip of mineralisation. Secondary folds may influence the cross-cutting angle. • True thickness is estimated to be approximately 50% of downhole thickness reported. Further drilling and work are required to confidently establish that thickness.
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.*	• Appropriate maps and sections are included within the body of the accompanying document.
Balance 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 represent a balanced report. Reporting of grades is undertaken in a consistent manner.
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*	• Other exploration data collected is not considered as material to this document at this stage. Further data collection will be reviewed and reported when considered material.

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density, groundwater, geotechnical and rock characteristics, potential deleterious or contaminating substances.	
Further Work	• Step-out drilling along-strike and down-dip extensions of mineralisation continue subject to geological interpretation and observations.
The nature and scale of planned further work (e.g., tests for lateral extensions or depth extensions or large-scale step-out drilling). *Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.*	