

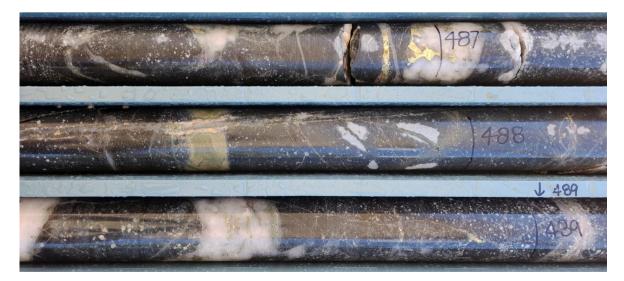


# **Briggs Copper Project, Queensland**

# Second drillhole confirms potential for a large copper deposit at the Northern Porphyry

**Summary:** 

- Core drilling continues at the Briggs Copper Project in Central Queensland, testing large scale targets along strike from Briggs Central inferred resource (143Mt at 0.29% Cu).
- The second hole (22BRD0014) testing the Northern Porphyry target was successfully completed at a depth of 536.5m and intersected multiple mineralized porphyritic intrusions:
  - A broad interval (~140m) of well mineralized porphyritic intrusives and associated volcanic-sediment contact zone is seen in the lower portion of the hole (Figure 1).
  - this interval does not outcrop at surface, and its discovery significantly enhances the potential of the Briggs Copper Project.
  - 22BRD0014 is 150m further north than 22BRD0013, which intersected 441.5m @
     0.21% copper from 8m down-hole depth.
  - Assays are expected in early Q2, 2023.
- Drilling of the next hole, to test the Briggs Central targets is underway.
- Alma can earn up to a 70% joint venture interest in the Briggs Copper Project.



*Figure 1.* Mineralised drill core from 22BRD0014 between 486.5m and 489.0m down-hole depth. Note multiple phases of quartzchalcopyrite+/-anhydrite+/-K-feldspar veining cutting weakly porphyritic volcanic-sediments/fragmental rocks.



### **2023 Briggs Drilling Progress**

**Alma Metals Limited** (ASX: ALM, "the Company" or "Alma") is pleased to provide an update on drilling at the Briggs Copper Project in Queensland (for location refer to Figure 2). Exploration is being funded by Alma under an Earn-In Joint Venture agreement where Alma can earn up to a 70% interest from owner Canterbury Resources Limited (ASX: CBY) via a staged earn-in.

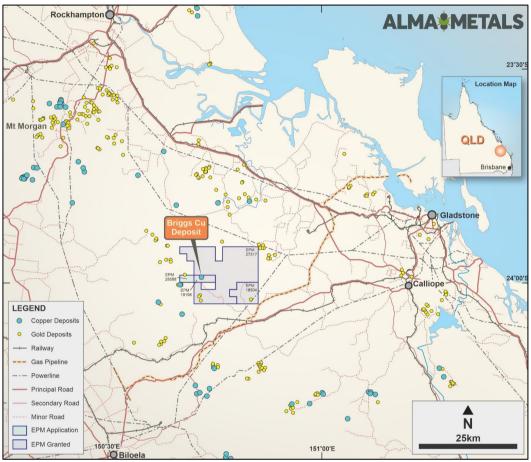


Figure 2. Regional Location Plan

The Project includes the Briggs Central copper deposit, where an Inferred Resource of 143Mt at 0.29% Cu has been defined (ALM release 18 August 2021). The current program is testing Exploration Targets (Table 1 and Figure 3) outlined at the adjoining Northern and Central Porphyry areas (ALM release 4 July 2022).

Table 1 Exploration	Target Ranges for the	Briggs Copper Project
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Target	Exploration Target Ranges
Northern Porphyry	110Mt - 205Mt at 0.20% to 0.35% Cu
Briggs Central	260Mt - 490Mt at 0.20% to 0.35% Cu
Southern Porphyry	85Mt - 155Mt at 0.20% to 0.35% Cu
Total	455Mt - 850Mt at 0.20% to 0.35% Cu

**NOTE:** The potential tonnage and grade ranges of the Exploration Targets in Table 1 are conceptual in nature and there has been insufficient exploration to estimate a Mineral Resource. It is uncertain if further exploration will result in an increase in the Mineral Resource Estimate. The Exploration Target for Briggs Central excludes the current Inferred Resource estimate (143Mt at 0.29% Cu).

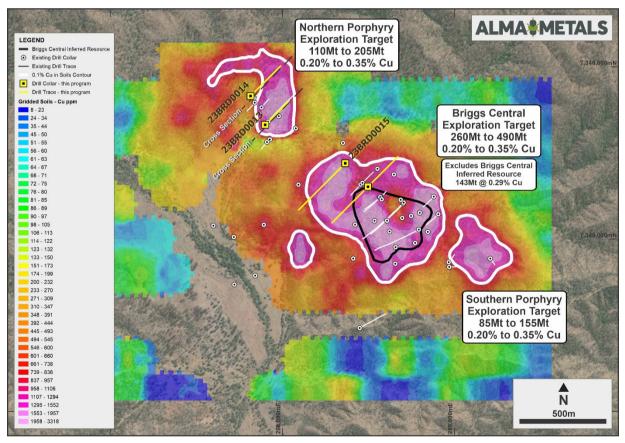
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Up to six deep diamond core holes, for ~3,000m, are planned in the current program; four to test extensions of the Inferred Resource and evaluate the Exploration Target at Briggs Central, and two to evaluate the Exploration Target at the Northern Porphyry (refer Table 2 and Figure 3 below). The program is expected to continue into Q2 2023.

Target	Hole ID	Easting	Northing	RL	Azimuth	Dip	Planned Depth
Northern Porphyry	22BRD0013	267900	7345663	172m	055	-60	449.5m*
Northern Porphyry	22BRD0014	267815	7345830	185m	055	-60	536.5m*
<b>Central Porphyry</b>	Z_CP2201	268497	7345304	191m	225	-60	600m
Central Porphyry	Z_CP2202	268497	7345304	191m	045	-60	500m
Central Porphyry	23BRD0015	268365	7345440	186m	225	-50	600m
Central Porphyry	Z_CP2204	268365	7345440	186m	225	-75	400m

#### Table 2 Planned 2022/23 drill holes designed to test Exploration Targets at the Briggs Copper Project

\* Completed Depth (EoH).



*Figure 3.* Plan displaying Cu in soil geochemistry, Exploration Target outlines based on 0.1% Cu contour and existing Inferred Resource outline, plus historic and planned drill holes.

The first hole in the program, 22BRD0013, intersected almost continuous copper mineralisation from surface (**441.5m @ 0.21% copper from 8m down-hole depth to end-of-hole**) with several higher-grade zones near intrusive contacts with older volcanic/sedimentary host-rocks. This hole ended in mineralisation grading 0.34% copper over the bottom 3.5m.

The second hole, 22BRD0014, tested the northern end of the Northern porphyry target, and contained visible disseminated and quartz-vein hosted copper mineralisation over much of its



length. This hole was terminated at a down-hole depth of 536.5m after passing through a contact with a post-mineral mafic intrusion at 528.6m.

Drilling has commenced on the next hole, 23BRD0015, to test the Briggs Central exploration target (for location see Figure 3).

## **Observations from 22BRD0014**

22BRD0014 intersected volcanic sediments, tuffs and fragmental rocks intruded by multiple phases of variably porphyritic felsic intrusions (granite to granodiorite composition) forming dykes and stocks (Figure 4). The hole passed into a post-mineral intrusion at 528.6m down-hole depth and was terminated at 536.5m. All rock types other than post-mineral intrusions contain variable densities of mm- to cm-scale porphyry-style quartz veins and are variably mineralised with copper and iron sulphides as disseminations in the rock mass, and/or in the quartz-veins (Figures 5 and 6).

A broad interval (~140m) of well mineralized porphyritic intrusive, and the associated volcanic sediment contact zone, is observed in the lower portion of 22BRD0014 (Figure 7 to 11). This intrusive has no surface expression and its discovery opens significant exploration opportunities targeting higher grade zones of copper mineralisation, particularly in the contact zone along the north-eastern margin of the Briggs system.

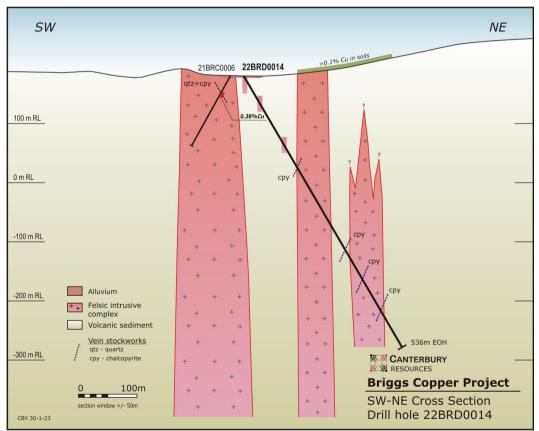


Figure 4. Geological Cross Section for 22BRD0014

In relation to the disclosure of visual mineralisation, the Company cautions that visual estimates of sulphide presence and abundance should never be considered a proxy or substitute for laboratory analysis. Laboratory assay results are required to determine the widths and grade of the visible mineralisation reported in preliminary geological logging. The Company will update the market when laboratory analytical results become available.





*Figure 5.* Quartz-chalcopyrite porphyry-style veins with minor chloritic alteration in porphyritic volcaniclastic host rocks. 22BRD0014 at 57-59m down-hole depth. HQ3 core (63.5mm diameter).



*Figure 6.* Porphyritic granodiorite cut by numerous quartz-chalcopyrite porphyry-style veins with orthoclase (potassic) alteration haloes. 22BRD0014 at approximately 100m down-hole depth. HQ3 core (63.5mm diameter).

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*Figure 7.* Multiple intrusions in 22BRD0014 at 465m down-hole depth. Upper part of photo shows porphyritic granite with quartz veins and potassic alteration. Lower part shows porphyritic granodiorite. All are cut by quartz veins with chalcopyrite and pyrite. Paler granite appears to intrude darker granodiorite, with chilled margins along contacts. HQ3 core (63.5mm diameter).



*Figure 8.* Quartz-chalcopyrite+/-anhydrite+/-K-feldspar veins cutting weakly porphyritic fragmental volcanic rocks. 22BRD0014 at 487m down-hole depth. HQ3 core (63.5mm diameter).





*Figure 9.* Dyke of porphyritic granite with potassic alteration intruding into volcanic sediments and fragmental rocks at 510m down-hole depth, 22BRD0014. HQ3 core (63.5mm diameter).



Figure 10. Close-up of previous figure. HQ3 core (63.5mm diameter).





*Figure 11.* Thick quartz vein with minor coarse-grained chalcopyrite and zones of K-feldspar. Complex contact with volcanic sediments, truncated in turn by a post-mineral intrusion with contact at 528.6m down-hole depth. HQ3 core (63.5mm diameter).

Core from hole 22BRD0014 is being sent to ALS Global is Brisbane for cutting and assaying. Results are expected in early Q2 2023.

This announcement is authorised for release by Managing Director, Frazer Tabeart.

For further information, please contact the Company directly: +61 8 6465 5500 investors@almametals.com.au



#### **COMPETENT PERSONS STATEMENT**

The Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the 'JORC Code') sets out minimum standards, recommendations and guidelines for Public Reporting in Australasia of Exploration Results, Mineral Resources and Ore Reserves. The information contained in this announcement has been presented in accordance with the JORC Code (2012 edition) and references to "Measured, Indicated and Inferred Resources" are to those terms as defined in the JORC Code (2012 edition).

The information in this report that relates to Exploration Targets, Exploration Results and Mineral Resources is based on information compiled by Dr Frazer Tabeart (Executive Director of Alma Metals Limited). Dr Tabeart is a member of the Australian Institute of Geoscientists.

Dr Tabeart has sufficient experience which is relevant to the style of mineralisation and type of deposits under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Dr Tabeart consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

There is information in this announcement extracted from:

- (i) the Mineral Resource Estimate for the Briggs Central Copper Deposit, which was previously announced on 18 August 2021;
- (ii) exploration results which were previously announced on 18 February 2022, 11 April 2022, 12 May 2022, 4 July 2022 and 30 January 2023.
- (iii) Exploration Target which was previously announced on 4 July 2022.

The company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements and, in the case of estimates of Exploration Targets and Mineral Resources, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement continue to apply and have not materially changed. The company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

#### FORWARD LOOKING STATEMENTS:

Any forward-looking information contained in this news release is made as of the date of this news release. Except as required under applicable securities legislation, Alma Metals does not intend, and does not assume any obligation, to update this forward-looking information. Any forward-looking information contained in this news release is based on numerous assumptions and is subject to all of the risks and uncertainties inherent in the Company's business, including risks inherent in resource exploration and development. As a result, actual results may vary materially from those described in the forward-looking information. Readers are cautioned not to place undue reliance on forward-looking information due to the inherent uncertainty thereof.



### **APPENDIX 1 - JORC TABLES**

### JORC Code, 2012 Edition – Table 1

## Section 1 Sampling Techniques and Data

(Criteria in this section apply to all succeeding sections.)

Criteria	JORC Code explanation	Commentary
Sampling techniques	<ul> <li>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 down hole gamma sondes, or handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.</li> <li>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</li> <li>Aspects of the determination of mineralisation that are Material to the Public Report.</li> <li>In cases where 'industry standard' work has been done this would be relatively simple (eg '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.</li> </ul>	<ul> <li>Photographs of drill core from 22BRD0014, the second of 6 planned holes at Briggs copper prospect, have been presented for visual reference.</li> <li>Intercept depth is indicated for each respective photograph.</li> <li>The drill core will be systematically sampled and assayed once logging is completed.</li> </ul>
Drilling techniques	<ul> <li>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).</li> </ul>	• Diamond drilling is HQ3 (63.5mm diameter) from surface.
Sample recovery	<ul> <li>Method of recording and assessing core and chip sample recoveries and results assessed.</li> <li>Measures taken to maximise sample recovery and ensure representative nature of the samples.</li> <li>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.</li> </ul>	• Not Applicable.
Logging	<ul> <li>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.</li> <li>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</li> <li>The total length and percentage of the relevant intersections logged.</li> </ul>	The JV partners' geologists are currently photographing and logging drill core.



Criteria	JORC Code explanation	Commentary		
Sub-sampling techniques and sample preparation	<ul> <li>If core, whether cut or sawn and whether quarter, half or all core taken.</li> <li>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</li> <li>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</li> <li>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</li> <li>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.</li> <li>Whether sample sizes are appropriate to the grain size of the material being sampled.</li> </ul>	Not Applicable.		
Quality of assay data and laboratory tests	<ul> <li>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</li> <li>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.</li> <li>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.</li> </ul>	Not Applicable.		
Verification of sampling and assaying Location of data points	<ul> <li>The verification of significant intersections by either independent or alternative company personnel.</li> <li>The use of twinned holes.</li> <li>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</li> <li>Discuss any adjustment to assay data.</li> <li>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.</li> <li>Specification of the grid system used.</li> <li>Quality and adequacy of topographic control.</li> </ul>	<ul> <li>Not Applicable.</li> <li>Coordinates of the collar of 22BRD0014 are recorded using a handheld GPS.</li> <li>Down hole survey data is being collected systematically at approximately 50m intervals.</li> <li>Grid references are provided in GDA94 MGA Zone 56.</li> </ul>		
Data spacing and distribution	<ul> <li>Data spacing for reporting of Exploration Results.</li> <li>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.</li> <li>Whether sample compositing has been applied.</li> </ul>	<ul> <li>Topographical control has been obtained by Lidar survey.</li> <li>Photographs of core samples are selective with the intention of providing examples of the range of rock types and styles of mineralization observed in drill hole 22BRD0014.</li> </ul>		



Criteria	JORC Code explanation	Commentary		
Orientation of data in relation to geological structure	<ul> <li>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</li> <li>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.</li> </ul>	<ul> <li>Drill hole 22BRD0014 was drilled to test the Northern Porphyry Exploration Target (ASX announcement 14 October 2022).</li> <li>The drill hole was designed to test beneath a surface soil copper anomaly close to RC drill hole 21BRC0010 (ASX announcement 18 February 2022).</li> </ul>		
Sample security	• The measures taken to ensure sample security.	Not Applicable.		
Audits or reviews	• The results of any audits or reviews of sampling techniques and data.	Not Applicable.		

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# Section 2 Reporting of Exploration Results

(Criteria listed in the preceding section also apply to this section.)

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<ul> <li>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.</li> <li>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.</li> </ul>	<ul> <li>EPM19198 (Briggs) is located 50km west southwest of Gladstone in central Queensland.</li> <li>EPM19198 is 100% owned by Canterbury Resources Limited (ASX: CBY). Rio Tinto holds a 1.5% NSR interest.</li> <li>In July 2021, Alma Metals committed to a joint venture covering EPM19198 and adjoining CBY tenements whereby it has the right to earn up to 70% interest by funding up to \$15.25M of assessment activity.</li> </ul>
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	<ul> <li>Refer to ASX release from 18 August 2021 covering work by Noranda (1968-1972), Geopeko (early 1970s), Rio Tinto (2012-2016) and Canterbury Resources (2019-2022).</li> <li>A 12-hole RC drilling program was completed testing the Central, Northern and Southern porphyry prospects in 2021 (ASX announcement 18 February 2022).</li> </ul>
Geology	Deposit type, geological setting, and style of mineralisation.	<ul> <li>At Briggs, a granodiorite porphyry stock (GDP) with dimensions more than 500m by 200m has been drilled to a depth of ~500m at the Central Porphyry prospect. This stock has intruded volcanoclastic sediments with a zone of hornfels along the contact. The Central Porphyry is one of at least three intrusive centers comprising the Briggs Cu ± Mo porphyry prospect. Intrusive outcrop, soil geochemistry and magnetics (depressed susceptibility) indicate the existence of at least two other centers, referred to as the Northern and Southern Porphyry, that have been comparatively poorly explored.</li> <li>Copper as chalcopyrite with accessory molybdenum as molybdenite dominate the potentially economic minerals. A relatively thin oxide zone blankets the deposit. The GDP is pervasively altered to potassic style alteration (biotite – k-feldspar) overprinted by phyllic (sericite) alteration. Distribution of copper grade is relatively consistent and predictable within the GDP and in the contact hornfels.</li> <li>Banded silica bodies with UST textures have been intersected in drilling. These siliceous bodies appear to be sub-vertical and dyke-like in character and may have formed at contacts between intrusive phases. The silica bodies are generally well mineralised. It is suggested that they represent emanations from a fertile parent intrusive at depth.</li> <li>Canterbury's interpretation is that copper deposition at Briggs is multi-stage, with an earlier event associated with quartz - K-feldspar - chalcopyrite - molybdenum veins and a later</li> </ul>



		<ul> <li>cross-cutting event dominated by quartz - sericite - chalcopyrite. The earlier event appears related to the intrusion of the granodiorite porphyry and potassic alteration, while the later event is thought to be related to phyllic alteration and an as-yet undiscovered intrusive at depth.</li> <li>The earlier copper event is predominantly hosted within the granodiorite porphyry and the latter along the contact between the intrusive stock and volcanoclastic sediments, probably taking advantage of permeability afforded along intrusive contacts and faults with deposition controlled by brittle fracture and reaction with Fe-rich host rocks.</li> </ul>
Drill hole 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 drill holes: <ul> <li>easting and northing of the drill hole collar</li> <li>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</li> <li>dip and azimuth of the hole</li> <li>down hole length and interception depth</li> <li>hole length.</li> </ul> </li> <li>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.</li> </ul>	<ul> <li>Drill hole 22BRD0014 (planned hole NP2202) is the second of 6 planned holes at Briggs (ASX announcement 14 October 2022).</li> <li>Planned holes: -         <ul> <li>Target Hole_D Hole_Type East North RL Azimuth Dip Depth Central</li> <li>Porphyry Z_CP201 DDH 268515 7345275 191 225 -60 600 Central</li> <li>Porphyry Z_CP202 DDH 268365 7345440 185 225 -50 600 Central</li> <li>Porphyry Z_CP203 DDH 268365 7345440 185 225 -50 600 Central</li> <li>Porphyry Z_CP2204 DDH 268365 7345440 185 225 -75 400 Northern</li> <li>Porphyry Z_NP2201 DDH 267900 7345663 175 45 -60 400 Northern</li> <li>Porphyry Z_NP2202 DDH 267815 7345830 181 45 -60 500</li> </ul> </li> </ul>
Data aggregation methods	<ul> <li>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.</li> <li>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.</li> <li>The assumptions used for any reporting of metal equivalent values should be clearly stated.</li> </ul>	Not Applicable.
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> <li>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').</li> </ul>	<ul> <li>Drill holes are designed to test across the dominant NW-SE structural grain.</li> </ul>
Diagrams	<ul> <li>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.</li> </ul>	See figures in body of the report.



Balanced reporting	<ul> <li>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.</li> </ul>	Not Applicable.
Other substantive exploration data	<ul> <li>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.</li> </ul>	• Not Applicable.
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>	<ul> <li>A 6-hole diamond program commenced at Briggs in October 2022 (refer ASX announcement 14 October 2022).</li> <li>The drill program is designed to test exploration targets at Central and Northern porphyries (refer ASX announcement 4 July 2022).</li> </ul>