



# **Drilling Progress at the Briggs Copper Project**

### **Summary:**

- Core drilling continues at the Briggs Copper Project in Central Queensland, testing large scale targets immediately along strike from the Briggs Central copper deposit (143Mt at 0.29% Cu).
- The 3,000m campaign is testing the validity of Exploration Targets at the Northern and Central Porphyry areas (refer to ALM release 14 October 2022).
- The first hole, 22BRD0013, testing the Northern Porphyry target, was terminated at a downhole depth of 449.5m in weakly mineralised volcanic sediments:
  - The hole has intersected volcanic sediments and tuffs intruded by multiple porphyritic intrusions. The volcanic rocks and intrusives contain quartz veins with variable copper and iron sulphide mineralisation throughout.
  - Observations from 22BRD0013 are consistent with pre-drilling concepts and Exploration Targets (ALM release 4 July 2022).
  - o Initial assays from the drill program will be available in the New Year.
- Drilling is expected to continue into the New Year due to weather related delays.
- Alma can earn up to a 70% joint venture interest in the Briggs Copper Project.



Figure 1 Alma Metals personnel inspecting drill core from 22BRD0013



## 2022 Briggs Drilling Progress to Date

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

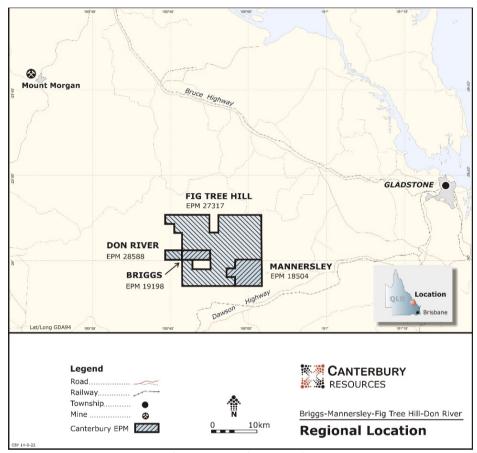


Figure 2 Regional Location Plan

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

Target	<b>Exploration Target Ranges</b>
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

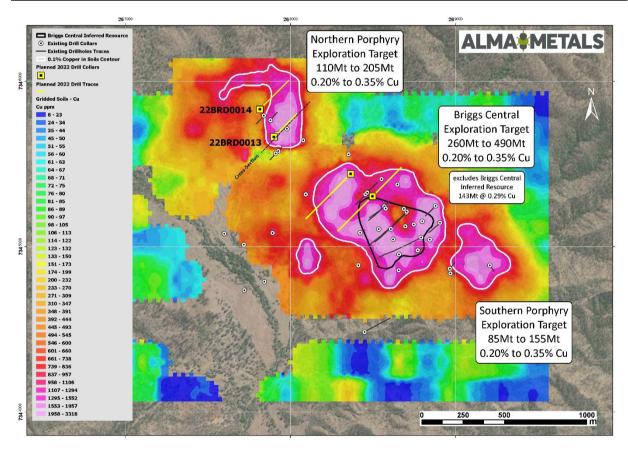
**NOTE:** The potential tonnage and grade ranges of the Exploration Targets in Table 1 are conceptual in nature and there has been insufficient exploration to estimate a Mineral Resource. It is uncertain if further exploration will result in an increase in the Mineral Resource Estimate. The Exploration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



Up to six deep diamond drill holes, for ~3,000m, are planned in the current diamond drilling program; four to potentially expand 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 the New Year following weather related delays.

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

Target	Hole ID	Easting	Northing	RL	Azimuth	Dip	Planned Depth
Central Porphyry	Z_CP2201	268497	7345304	191m	225	-60	600m
Central Porphyry	Z_CP2202	268497	7345304	191m	45	-60	500m
Central Porphyry	Z_CP2203	268365	7345440	186m	225	-50	600m
Central Porphyry	Z_CP2204	268365	7345440	186m	225	-75	400m
Northern Porphyry	22BRD0013	267900	7345663	172m	45	-60	449.5m
Northern Porphyry	22BRD0014	267815	7345830	185m	45	-60	500m



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

The first hole in the program, 22BRD0013, was terminated at 449.5m downhole depth and tested the southern portion of Northern Porphyry target. Drilling of 22BRD0014, testing the northern end of the Northern porphyry target, will commence immediately.



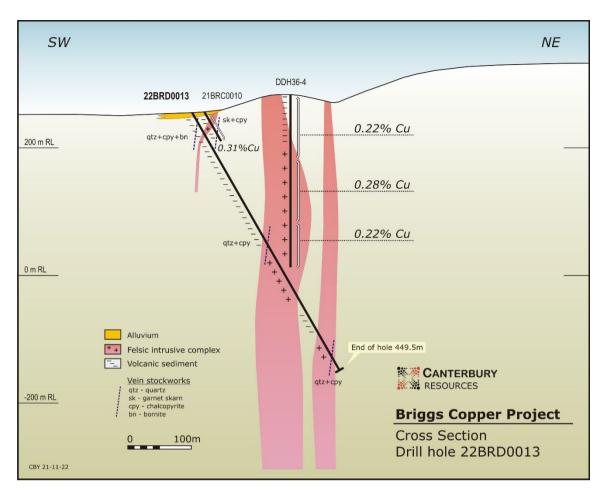


Figure 4 Cross Section for 22BRD0013

22BRD0013 has intersected volcanic sediments and tuffs intruded by fine grained granodiorites forming dykes and stocks (Figure 4).

All rocks contain mm- to cm-scale porphyry-style quartz veins and are variably mineralised throughout with copper and iron sulphides (Figures 5 and 6). Coarse chalcopyrite is observed in quartz veins associated with a narrow porphyritic granodiorite dyke within a 40m zone from 10m (true width ~20m). These veins also contain magnetite, and locally, anhydrite, confirming the oxidised nature of the mineralising fluids.



**Figure 5** Coarse chalcopyrite associated with porphyry-style quartz vein. Drill hole 22BRD0013 at ~86m.

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**Figure 6** Coarse chalcopyrite and pyrite associated with porphyry-type quartz vein. Drill hole 22BRD0013 at ~122m.

An upper granodiorite stock extends from 231m to 321m (true width ~45m) and is quartz veined and mineralised throughout with more abundant chalcopyrite observed at the upper contact.

A lower granodiorite stock extends from 388m to 438m depth (true width ~25m). Porphyry-style quartz veins occur throughout with variable sulphide mineralisation. Coarse chalcopyrite as veins and disseminations is associated with a narrow porphyritic granodiorite dyke at 434m (Figure 7).



**Figure 7** Coarse chalcopyrite veins and disseminations in porphyritic granodiorite. Drill hole 22BRD0013 at~434m down-hole depth. HQ3 core (63.5mm diameter).



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 8** Coarse chalcopyrite and pyrite vein hosted in volcanic rocks. Drill hole 22BRD0013 at 434.5m.

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

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#### 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 and 4 July 2022.
- (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 (eg 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 (eg submarine nodules) may warrant disclosure of detailed information.</li> </ul>	<ul> <li>Photographs of drill core from 22BRD0013, the first 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 (eg core, reverse circulation, openhole hammer, rotary air blast, auger, Bangka, sonic, etc) and details (eg 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 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</li> </ul>	Not Applicable.
Quality of assay data and laboratory tests	<ul> <li>grain size of the material being sampled.</li> <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 (eg standards, blanks, duplicates, external laboratory checks) and whether acceptable levels of accuracy (ie 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 22BRD0013 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> <li>Topographical control has been obtained</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>	Photographical control has been obtained by Lidar survey.      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 22BRD0013.



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 22BRD0013 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 and 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.		



## **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 in excess of 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 centres 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 observed at Northern, Central and Southern Porphyries. Similar quartz zones 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>



		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.  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.
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>	Drill hole 22BRD0013 (planned hole NP2201) is the first of 6 planned holes at Briggs (ASX announcement 14 October 2022).  Planned holes:-    Target
Data aggregation methods	<ul> <li>In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations (eg 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 (eg 'down hole length, true width not known').</li> </ul>	Drill holes are designed to test across the dominant NW-SE structural grain.
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	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.	Not Applicable.
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.	Not Applicable.
Further work	<ul> <li>The nature and scale of planned further work (eg 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>	in October 2022 (refer ASX announcement 14 October 2022).