



## Achilles Copper/Base Metals Target Zone Extended to 3km in Length

- New lead/copper in soils extends length of Achilles target from 350m to 3km
- Soils and recent shallow drill intercepts above large conductive EM anomaly
- Follow up and extended drill program, and down hole EM planned for mid-June
- Permitting underway for up to twenty RC/DD drill holes

Australian Gold and Copper Ltd (ASX: AGC) (“AGC” or the “Company”) is pleased to announce the results of a large, soil sampling program using portable X-Ray fluorescence (pXRF) completed along the Achilles shear zone southward from the recent drilling, at its 100% owned Cargelligo licence, southern Cobar Basin, central NSW.

Results highlight two encouraging new base-metal anomalies alongside the recently drilled Achilles copper/base-metals target. The total length of known base-metal soil anomalies has extended from 350m to 3km, see figure 1. All three anomalies are considered open as they look to extend under shallow transported cover in areas of low topography.

Elevated lead (Pb) in soils is typically used as the most reliable pathfinder for Cobar style mineralisation and was important in the discovery histories of the Hera mine (Coops, 2017) and Federation and Dominion deposits (McKinnon and Munroe 2019).

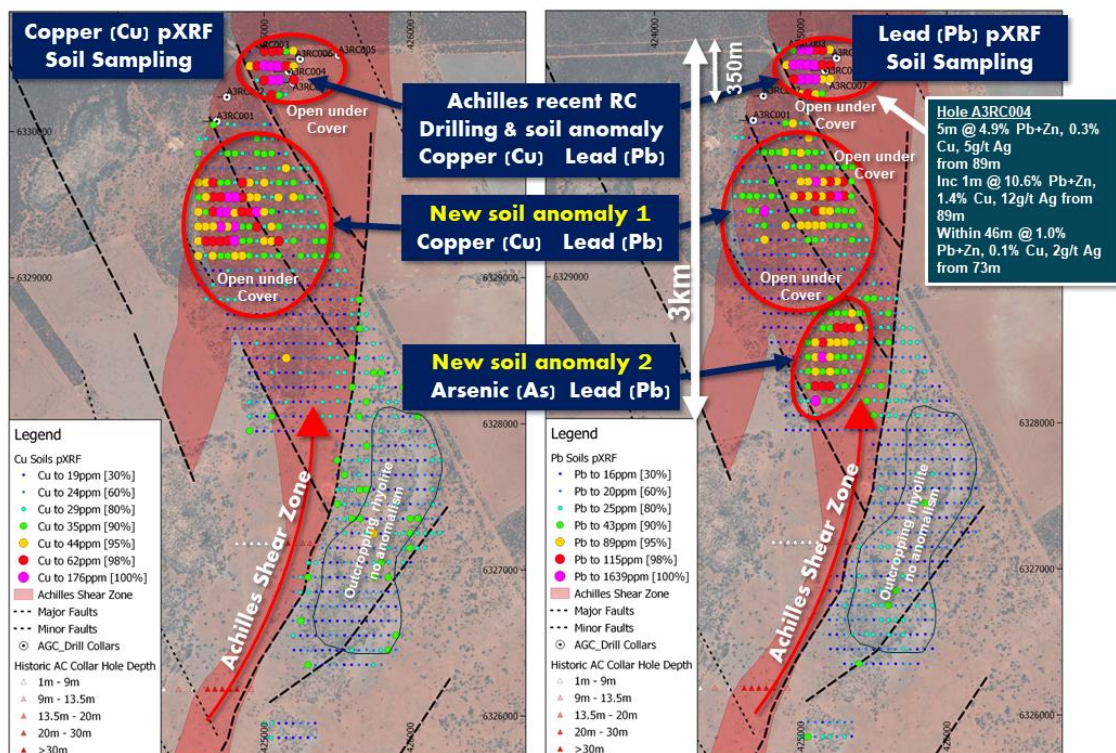


Figure 1: Satellite images of Achilles with copper (left) and lead (right) pXRF soil results showing their prominent locations along the Achilles shear zone. Structural mapping and interpretation using government open-source magnetics demonstrate the 3km strike of anomalies are controlled by splay faults off the primary fault.

### New soil anomaly 1

This new Anomaly 1 is 1km by 1km in size and hosted within east-dipping sheared sediments. It is an offset copper (Cu), lead (Pb) and arsenic (As) anomaly with the zone of elevated Cu located on the western side in the footwall sediments, with arsenic in the upper middle and Pb on the eastern side stratigraphically above the Cu. This transition from Cu in the footwall sediments to Pb above is commonly observed in base-metal deposits. Importantly the anomaly is confined to a small hill, is open under shallow transported cover to the south and the east. Figure 2 shows potential extensions along magnetic lows. Sheared outcrop of siltstones/sandstone exhibit strong alteration and oxidised sulphides, see figures 3, 4 and 5.

### New soil anomaly 2

This new Anomaly 2 is defined by anomalous Pb and As across an elongate 600m length and is hosted by sheared pyritic siltstones, see figure 2 and 5. Numerous pits and trenches from early explorers were found while soil sampling and mapping. Base metal systems typically display metal zonation and here at Anomaly 2, the Cu is not elevated however As, and Pb are both strong and within a magnetic low in figure 2 which provides significant encouragement.

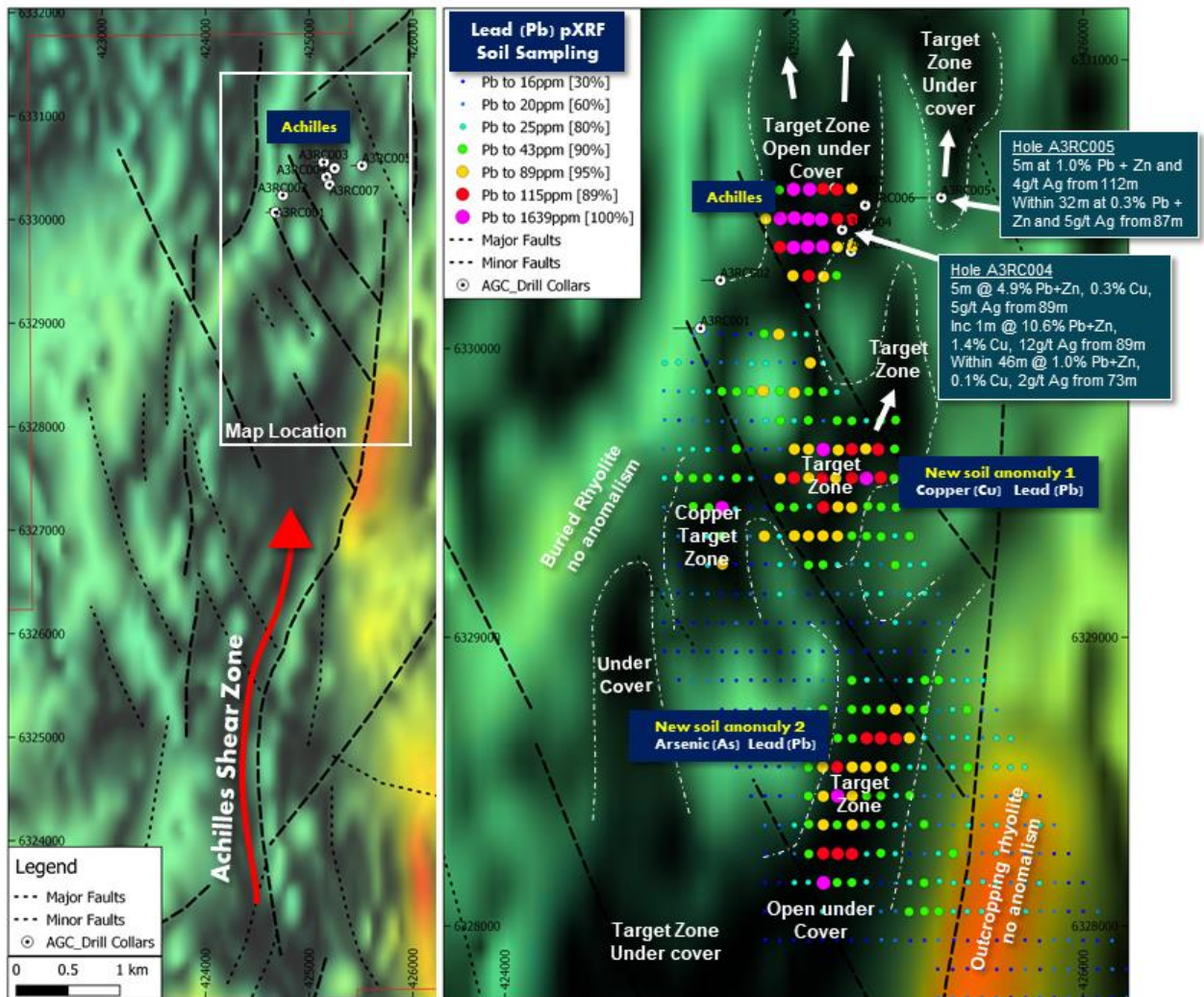


Figure 2: Achilles shear zone (left) and lead (right) pXRF soil sampling results over magnetics TMI RTP (overlay on tilt filtered TMI RTP) showing the soil anomalies prominent locations within the darker shading which are areas are deep magnetic lows, interpreted as the Achilles shear zones mineralising fluids which have demagnetised the rock. These are considered the prospective areas.



*Figure 3 and 4: Various outcrop from the soil anomaly 1 area at the copper zone. Photo left of highly sheared sediments with intense, sub-parallel quartz veining and photo right of east dipping lithic sandstone with around 1% iron oxides after pyrite. Both display encouraging alteration and veining and are considered as favourable for potentially hosting mineralisation.*

### **Achilles Base-Metal Target**

To validate the pXRF soil sampling program, the soil sampling program traversed the already known 350m long, Achilles Pb Cu As soil anomaly in order to compare the new pXRF results with previous laboratory analysed soil samples. The results demonstrate a good correlation and provides confidence in the pXRF procedures employed.

- This Achilles soil anomaly saw significant drill results with hole AC3RC004 which intercepted (ASX AGC 3<sup>rd</sup> May 2021):
- 5m @ 4.9% Pb + Zn, 0.3% Cu, 5g/t Ag from 89m
- including 1m at 10.7% Pb + Zn, 1.4% Cu, 12g/t Ag from 89m
- within 46m at 1.0% Pb + Zn, 0.1% Cu and 2g/t Ag from 73m

### **Follow Up and Extended Drilling, and Down Hole EM Planned for mid June**

Follow up drilling is planned in mid-June and will target underneath the recent copper and base-metal intercepts including 5m at 4.9% Pb+Zn, 0.3% Cu, 5g/t Ag, (released 3<sup>rd</sup> May 2021). The drill plan has been extended to also drill into the new soil anomalies. A rig is secured and drill permitting is underway for up to twenty RC/DD holes.

Down hole EM will be completed as soon as a contractor is available.

An aeromagnetic and radiometric survey is also scheduled for July to be flown over the Cargelligo licence.

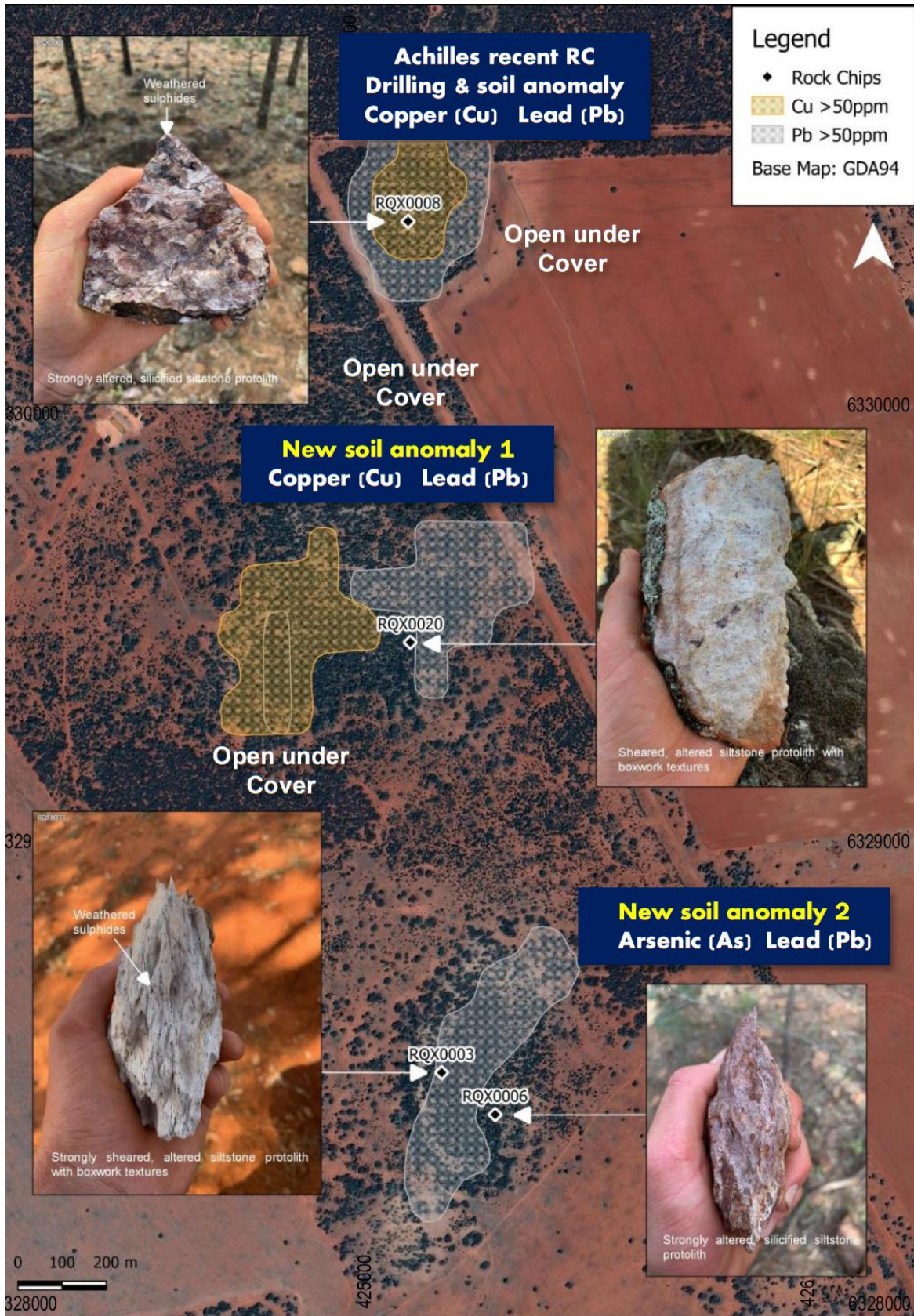


Figure 5: Satellite map showing locations of soil anomalies and photos inset of various sheared and altered outcropping rocks sampled from those areas. The soil anomalies are generally confined to the hills as transported cover appear to mask further anomalies.

### **About pXRF soil sampling**

Soil sampling utilising pXRF can be a quick and effective method of sampling when completed using a systematic methodology with regular QAQC and validation with laboratory results, refer 2015 AIG QLD pXRF symposium in references. Soil sampling for base metals such as copper and lead and pathfinders such as arsenic can be reliably detectable using a pXRF if systematic procedures are followed. Further details of the survey methodology can be found in the JORC Table.

### **References:**

AGC ASX prospectus lodged 18<sup>th</sup> November 2020

ASX AGC 3<sup>rd</sup> May 2021 Strong base-metal sulphide zone above large EM Conductor at Achilles  
Australian Institute of Geoscientists; pXRF Geochemistry: use and abuse in exploration and mining – Friday Seminar Series 13<sup>th</sup> November 2015

<https://www.aig.org.au/librar/seminar-presentations/qld-branch-presentations-events/aig-qld-presentations-pxrf-geochemistry/>

Cooper I., 2017, Finding Hera, Looking for the rest of the family, CWEDG.

<http://s://www.smedg.org.au/pdf/CWEDGAug2017FindingHera.pdf>

**About Achilles**

Achilles is one of multiple “Hera/Federation style” Au Cu Pb Zn targets within the Cargelligo licence (EL8968) along the 8km long Achilles shear zone and Mount Boorithumble, and are located in the Southern Cobar Basin, south of the recent Federation discovery and Hera mine along the eastern margin of the Cobar Basin, see p100-117 AGC ASX prospectus lodged 18<sup>th</sup> November 2020.

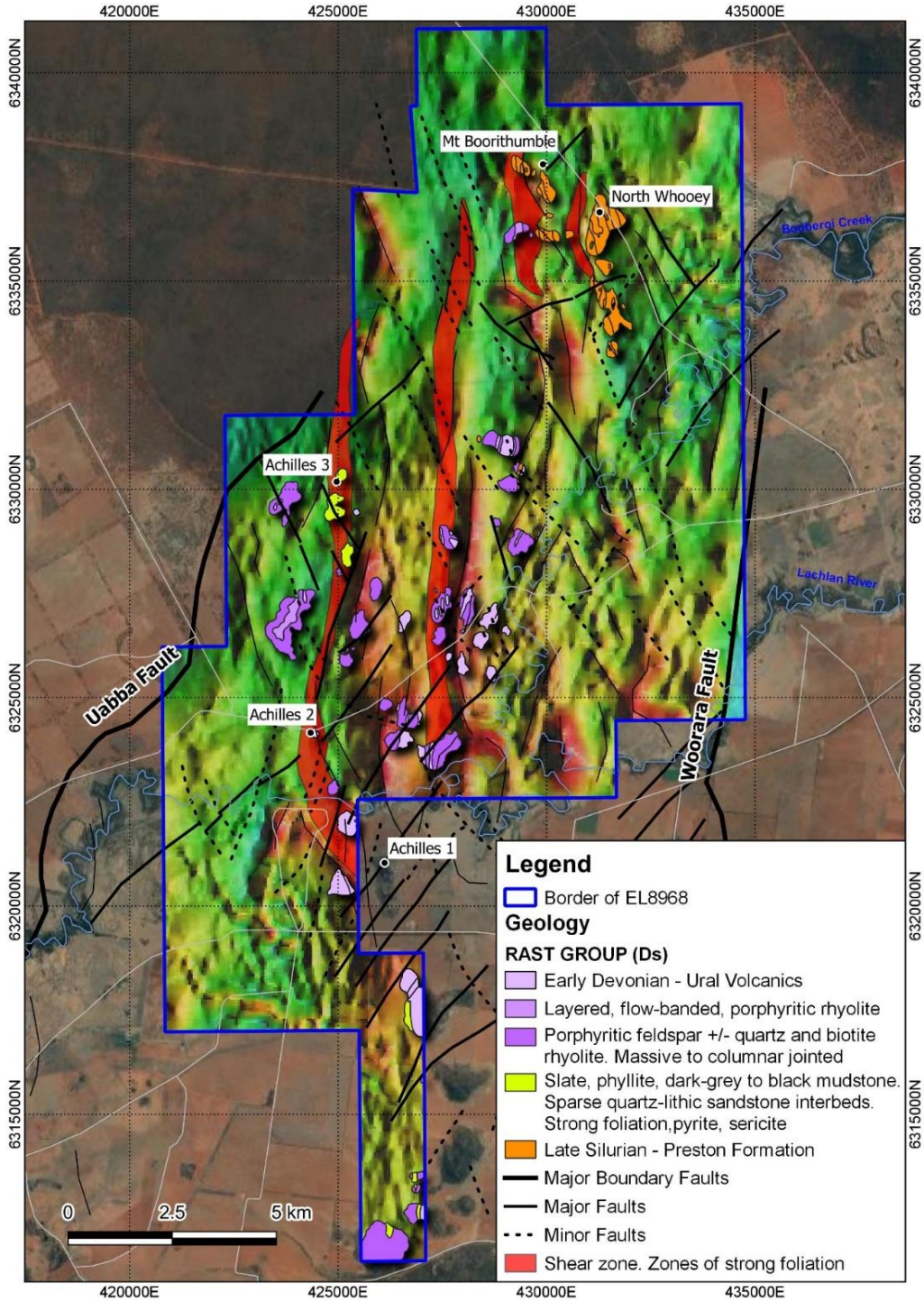


Figure 6: Cargelligo licence geology overview map see p116 AGC ASX prospectus lodged 18<sup>th</sup> November 2020. Background of magnetic RTP with basic geology and interpreted major shear zones in red. The Achilles shear is the western shear zone.

This announcement has been approved for release by the Board of AGC.

**ENDS**

**For further information:**

Glen Diemar  
Managing Director  
Australian Gold and Copper Limited  
+61 434 827 965  
[gdiemar@austgoldcopper.com.au](mailto:gdiemar@austgoldcopper.com.au)  
[www.austgoldcopper.com.au](http://www.austgoldcopper.com.au)

**For media enquiries:**

Jane Morgan  
Director  
Jane Morgan Management  
+61 405 555 618  
[jm@janemorganmanagement.com.au](mailto:jm@janemorganmanagement.com.au)

**Forward-Looking Statements**

This announcement contains “forward-looking statements.” All statements other than those of historical facts included in this announcement are forward-looking statements. Where the Company expresses or implies an expectation or belief as to future events or results, such expectation or belief is expressed in good faith and based upon information currently available to the company and believed to have a reasonable basis. Although the company believes the expectations expressed in such forward-looking statements are based on reasonable assumptions, such statements are not guarantees of future performance and no assurance can be given that these expectations will prove to be correct as actual results or developments may differ materially from those projected in the forward-looking statements. Forward-looking statements are subject to risks, uncertainties and other factors, which could cause actual results to differ materially from future results expressed, projected or implied by such forward-looking statements. Such risks include, but are not limited to, copper, gold, and other metals price volatility, currency fluctuations, increased production costs and variances in ore grade or recovery rates from those assumed in mining plans, as well as political and operational risks and governmental regulation and judicial outcomes. Readers are cautioned not to place undue reliance on forward-looking statements due to the inherent uncertainty thereof. The forward-looking statements contained in this press release are made as of the date of this press release and except as may otherwise be required pursuant to applicable laws, the Company does not undertake any obligation to release publicly any revisions to any “forward-looking statement”.

**Competent Persons Statement**


The information in this document that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Glen Diemar who is a member of the Australian Institute of Geoscientists. Mr Diemar is a full-time employee of Australian Gold and Copper Limited, and is a shareholder, however Mr Diemar believes this shareholding does not create a conflict of interest, and Mr Diemar has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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”. Mr Diemar consents to the inclusion in this presentation of the matters based on his information in the form and context in which it appears.

**Previously Reported Information**

The information in this report that references previously reported exploration results is extracted from the Company’s ASX IPO Prospectus released on the date noted in the body of the text where that reference appears. The ASX IPO Prospectus is available to view on the Company’s website or on the ASX website ([www.asx.com.au](http://www.asx.com.au)). 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. 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 announcements.

Appendix I – JORC Code, 2012 Edition – Table 1

Section 1 Sampling Techniques and Data: **Cargelligo Project, Achilles pXRF Soil program**

Criteria	JORC Code explanation	Commentary
<p><i>Sampling techniques</i></p>	<p><i>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.</i></p>	<p>A handheld XRF analyser was used to obtain soil analyses. The unit is a 2019 Olympus Vanta VMW pXRF.</p> <p>A total of 699 samples were analysed on a systematic grid, 50m apart on 100m line spacing. Sample sites were prepared by digging/scuffing to 5cm depth to remove the vegetation and immediate topsoil, see photo. The instrument was then used to analyse the area directly. A very thin sandwich bag was placed over the front of the analyser to protect it from dust and contamination.</p> <p>The photo was taken during this Achilles program to demonstrate the sampling technique.</p> 
	<p><i>Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.</i></p>	<p>Written procedures for pXRF sampling and QAQC were developed and carried out by AGC staff using up to date techniques. Certified standard reference materials by OREAS were analysed at the start and end of each day and duplicates were recorded approximately every 50 and often once per line if highly anomalous lead (Pb) readings were analysed.</p> <p>A previous explorers aqua-regia (ME-MS41) analysed soil samples over the northern Achilles anomaly were repeated using a pXRF during this survey to ensure repeatability. These two datasets have been compared and anomalies are considered comparable hence AGC is confident in the pXRF soil method used for the elements reported at the Achilles site.</p> <p>The soil was analysed only if relatively dry, moist soil was not analysed. Battery is changed when at 25%. The pXRF machine has been calibrated by Olympus annually, last calibration February 2021. The Vanta is a three beam analyser, each beam time was set to 20 seconds, giving total read time as 60 seconds.</p> <p>Location by hand held GPS device to 3m accuracy, GDA94 zone 55</p>



Criteria	JORC Code explanation	Commentary
	<p><i>Aspects of the determination of mineralisation that are Material to the Public Report.</i></p> <p><i>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.</i></p>	Not applicable
<b>Drilling techniques</b>	<i>Drill type (eg core, reverse circulation, open-hole 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).</i>	Not applicable
<b>Drill sample recovery</b>	<i>Method of recording and assessing core and chip sample recoveries and results assessed.</i>	Not applicable
	<i>Measures taken to maximise sample recovery and ensure representative nature of the samples.</i>	Not applicable
	<i>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.</i>	Not applicable
<b>Logging</b>	<i>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.</i>	Not applicable
	<i>Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.</i>	Not applicable
	<i>The total length and percentage of the relevant intersections logged.</i>	Not applicable
<b>Sub-sampling techniques and sample preparation</b>	<i>If core, whether cut or sawn and whether quarter, half or all core taken.</i>	Not applicable
	<i>If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.</i>	Not applicable
	<i>For all sample types, the nature, quality and appropriateness of the sample preparation technique.</i>	Not applicable
	<i>Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.</i>	Not applicable
	<i>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.</i>	Not applicable
	<i>Whether sample sizes are appropriate to the grain size of the material being sampled.</i>	The sample methods are considered appropriate for the fine grain nature of the soils being analysed
<b>Quality of assay data and laboratory tests</b>	<i>The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.</i>	Discussed above under 'sampling techniques'
	<i>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.</i>	2019 Olympus Vanta VMW pXRF, three beam analyser, each beam time was set to 20 seconds, giving total read time as 60 seconds. No calibration factors applied.
	<i>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.</i>	Discussed above under 'sampling techniques'

Criteria	JORC Code explanation	Commentary
Verification of sampling and assaying	<i>The verification of significant intersections by either independent or alternative company personnel.</i>	Not applicable
	<i>The use of twinned holes.</i>	Not applicable
	<i>Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.</i>	Not applicable
	<i>Discuss any adjustment to assay data.</i>	No adjustments made
Location of data points	<i>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.</i>	A handheld Garmin GPSmap was used to pick up collars with waypoint accuracy of 3m.
	<i>Specification of the grid system used.</i>	Coordinates picked up using WGS84 and transformed into Map Grid of Australia 1994 Zone 55.
	<i>Quality and adequacy of topographic control.</i>	Using government data topography and 2017 DTM data
Data spacing and distribution	<i>Data spacing for reporting of Exploration Results.</i>	A total of 699 samples were analysed on a systematic grid, 50m apart on 100m line spacing.
	<i>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.</i>	Not applicable
	<i>Whether sample compositing has been applied.</i>	No
Orientation of data in relation to geological structure	<i>Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.</i>	Not applicable
	<i>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.</i>	Not applicable
Sample security	<i>The measures taken to ensure sample security.</i>	Not applicable
Audits or reviews	<i>The results of any audits or reviews of sampling techniques and data.</i>	No audits or review are warranted at this stage

## Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
Mineral tenement and land tenure status	<i>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.</i>	EL8968 Cargelligo licence is located 20km north of Lake Cargelligo NSW. The tenement is held by Australian Gold and Copper Ltd. No royalties exist on AGC tenure. Ground activity and security of tenure are governed by the NSW State government via the Mining Act 1992. Land access was granted.

Criteria	JORC Code explanation	Commentary
	<i>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.</i>	
<i>Exploration done by other parties</i>	<i>Acknowledgment and appraisal of exploration by other parties.</i>	Previous to AGC, private explorer New South Resources developed the concepts of the targets and ground truthed by compiling quality work completed by previous explorers Thomson Resources and WPG Resources, Santa Fe Mining and EZ.
<i>Geology</i>	<i>Deposit type, geological setting and style of mineralisation.</i>	Base metal ± gold silver
<i>Drill hole Information</i>	<p><i>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:</i></p> <ul style="list-style-type: none"> <li>• <i>easting and northing of the drill hole collar</i></li> <li>• <i>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar</i></li> <li>• <i>dip and azimuth of the hole</i></li> <li>• <i>down hole length and interception depth</i></li> <li>• <i>hole length.</i></li> </ul>	
	<i>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.</i>	Not applicable
<i>Data aggregation methods</i>	<i>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.</i>	Not applicable
	<i>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.</i>	Not applicable
	<i>The assumptions used for any reporting of metal equivalent values should be clearly stated.</i>	Not applicable
<i>Relationship between mineralisation widths and intercept lengths</i>	<i>These relationships are particularly important in the reporting of Exploration Results.</i>	Not applicable
	<i>If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.</i>	Not applicable
	<i>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').</i>	Not applicable
<i>Diagrams</i>	<i>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.</i>	See figures in body of report
<i>Balanced reporting</i>	<i>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.</i>	Not applicable
	<i>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,</i>	The geological results are discussed in the body of the report.

Criteria	JORC Code explanation	Commentary
<i>Other substantive exploration data</i>	<i>geotechnical and rock characteristics; potential deleterious or contaminating substances.</i>	
<i>Further work</i>	<i>The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).</i>	See body of report.
	<i>Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.</i>	See figures and text in body of report.