Australian Gold and Copper Ltd ACN 633 936 526



# NEW DISCOVERIES AT ACHILLES AND HILLTOP

ASX ANNOUNCEMENT

23 April 2024

# Drilling returns grades up to 8.1g/t gold, 735g/t silver

# High-grade gold – silver intersected in multiple holes at Achilles

- Assay results returned for ten holes totalling 1,596 metres at Achilles, highlighting shallow, high-grade gold-silver-base metal mineralisation extending across at least 250 metres of strike in three holes
- A3RC020: 8m at 1.6g/t Au & 19g/t Ag from 91m
   inc. 2m at 4.3g/t Au, 33g/t Ag & 4.6% Pb+Zn from 97m

Occurs within a broader interval of 22m at 0.7g/t Au & 11g/t Ag from 90m including peak grades of **<u>8.1g/t gold</u>** and **40g/t silver** 

A3RC027: 5m at 2.3g/t Au, 102g/t Ag, 0.4% Cu & 3.8% Pb+Zn from 92m

Occurs within a broader interval of 46m at 0.6g/t Au & 38g/t Ag from 52m including peak grades of <u>4.6g/t gold</u> and <u>223g/t silver</u>

A3RC028: **7m at 1.2g/t Au & 208g/t Ag** from 77m
 inc. **2m at 2.4g/t Au & 498g/t Ag** from 79m

Includes peak grades of 3.3g/t gold and 735g/t silver

- High grade mineralisation is currently open in every direction and at depth
- AGC's Board have approved an immediate follow-up program of up to ten holes stepping along strike and down dip, with drilling currently underway
- Three additional targets have also been identified within the Achilles area including a large IP chargeability feature at depth to the west of the current drilling, with staged exploration planned for the coming quarters
- These results represent a greenfields discovery and the first significant mineralisation drilled within the Ural Volcanics in the Southern Cobar Basin, validating AGC's systematic South Cobar exploration strategy

# Maiden drilling at Hilltop delivers second mineralised system

 Assays were also returned for the maiden Hilltop program comprising eight RC holes for 1,580 metres



- Variable-grade gold-silver-base metal mineralisation was intersected in all holes, with best results including:
- HTCR003: 7m at 0.5g/t Au, 9g/t Ag & 0.3% Cu from 95m inc. 2m at 1.1g/t Au, 15g/t Ag & 0.5% Cu from 99m
- HTCR008: 2m at 0.8g/t Au, 42g/t Ag, 1.0% Cu & 4.2% Pb+Zn from 108m
- The drilling confirmed induced polarisation (IP) chargeability and surface geochemical anomalism is associated with numerous breccia zones hosting semi-massive pyrite within a broad alteration zone
- Mineralised zones are open in all directions, with future exploration to target higher grade potential at Hilltop

Australian Gold and Copper Ltd (ASX: AGC) ("AGC" or the "Company") is pleased to announce the discovery of significant mineralisation at Hilltop and Achilles in the southern Cobar Basin, NSW, following drilling at both areas. In particular, the discovery of high-grade gold and silver mineralisation at Achilles has led to an immediate follow-up program of up to ten holes, with drilling currently underway (Figure 1).

The results at both Achilles and Hilltop represent greenfields discoveries and are the first significant mineralisation drilled within the Ural Volcanics in the southern Cobar Basin, validating AGC's wider South Cobar exploration strategy (AGC ASX 16 March 2023).

**AGC Managing Director, Glen Diemar** said "It is extremely pleasing to have such spectacular gold and silver results at Achilles over such a distance and at consistent widths. The gold grades alone are positive but to have those silver grades adds another value driver. Our persistence and technical field work at Achilles are paying off. We are poised for an exciting exploration story and potential future growth at a time when precious metal prices are breaking out of long-term trends."

"It was an easy decision to bring the rig back in and get drilling again. We are stepping the rig north, south and down dip as the mineralisation is open in every direction."

"The other three targets at Achilles are equally as attractive with similar geological characteristics. It is an amazing opportunity for AGC's shareholders and stakeholders."

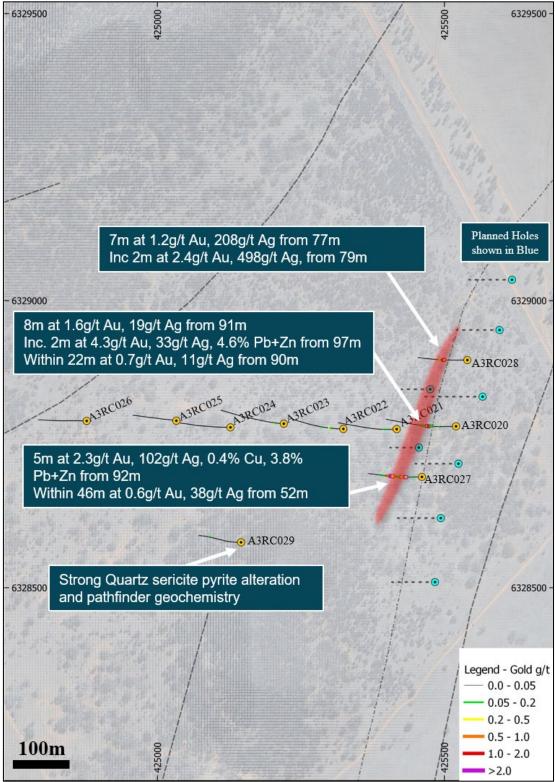
**Commenting on the initial drilling results, AGC Non-Executive Director Adam McKinnon** said "The Cobar Basin has a 150 year history of discovery and mining, with significant gold, silver, copper, zinc and lead production continuing to this day. Having been involved in multiple recent polymetallic orebody discoveries in the Cobar region, I am quite excited to see the initial drilling results returned by AGC's technical team at the South Cobar Project."

"In particular, the overlapping surface gold-lead anomalies, distinctive IP chargeability features, broad alteration zones and presence of strong gold-silver grades in association with variable zinc, lead and copper sulphide mineralisation shares a striking resemblance to the discovery of the high-grade Federation Deposit by Aurelia Metals in 2019. The pathfinder signatures associated with the latest drilling, including the very high silver



grades, are also suggestive of mineralisation at the Hera Mine and the Pearse and Parkers Hill Deposits at the Mineral Hill Mine."

"As drilling has only recently commenced, I very much look forward to seeing how these prospects develop with ongoing exploration."



**Figure 1:** Achilles plan map showing results of previous program (yellow collars) and planned drill holes (light blue collars).



# Achilles surface geochemistry and IP geophysics targeting

Drilling by AGC in 2021 demonstrated the Achilles region hosts several strike extensive zones of anomalous lead, zinc and copper mineralisation (AGC ASX 3 May 2021; AGC ASX 9 June 2021; AGC ASX 20 August 2021). In 2023, an IP chargeability anomaly was defined 700m to the south of this drilling, in an area with little outcrop. Given the large size of the IP target (Figure 2), auger soil sampling was undertaken to better define drill targets associated with the chargeability anomaly (Figures 3 & 4).

This new auger soil sampling defined two areas of interest, with the highest priority zone 800 x 200 metres in size and located stratigraphically above the defined southern IP chargeability anomaly and coincident with a lower amplitude chargeable feature. The auger anomaly was defined by high pathfinder values of lead (up to 1,120ppm) and arsenic (to 561ppm), with strongly elevated Au, Ag, Cu, Mo, Sb & Bi (Figures 3 & 4).

## The Achilles discovery

The recent RC program saw 1,596 metres drilled over ten holes at Achilles. The program was initially designed as a shallow, seven-hole program drilled in an east to west fence pattern aiming to understand the relationship between the soil geochemistry, east dipping geology and the large southern IP target (Figure 2).

**A3RC020** was the first hole drilled towards the west and intercepted massive volcanic and volcaniclastics rocks interbedded with foliated thin beds of grey sandstone. The sheared contact of the sandstone and volcaniclastics host pyrite-pyrrhotite with lesser arsenopyrite, sphalerite and galena, grading up to 8.1g/t gold and up to 40g/t silver:

# 8m at 1.6g/t Au & 19g/t Ag from 91m

including 2m at 4.3g/t Au, 33g/t Ag & 4.6% Pb+Zn from 97m

within a broader interval of 22m at 0.7g/t Au & 11g/t Ag from 90m

A thick footwall of intense quartz-sericite-pyrite alteration with disseminated and veined sphalerite and galena continues for another 80m until the end of hole.

A3RC021 to A3RC026 The next six holes were drilled to the west in a fence pattern and also intercepted volcaniclastics with thin beds of grey sandstone with lesser mineralisation and alteration.

A3RC027 and A3RC028 were additional holes stepped out 110 metres north and south from A3RC020 testing the extent of the mineralised horizon. Both holes intercepted similar geology and sulphide mineralisation to A3RC020, extending the high-grade zone to over 250m in length, with mineralisation completely open in all directions. Peak assay grades in these holes reached an impressive 735g/t for silver and 4.6g/t for Au.

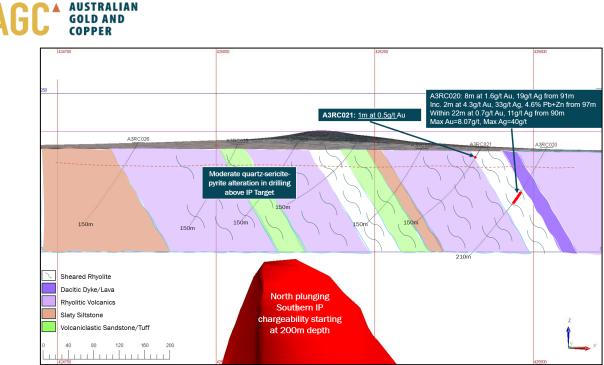
## A3RC027: 5m at 2.3g/t Au, 102g/t Ag, 0.4% Cu & 3.8% Pb+Zn from 92m

within a broader interval 46m at 0.6g/t Au & 38g/t Ag from 52m

A3RC028: 7m at 1.2g/t Au & 208g/t Ag from 77m

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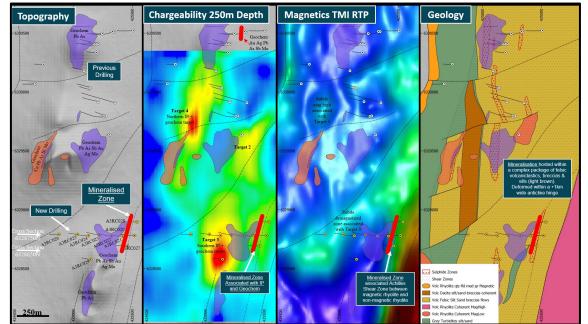
A3RC029 was designed to test the near surface, up-dip extent of the large IP chargeability feature. Encouragingly, a wide zone of intense quartz-sericite-pyrite alteration with highly anomalous lead and zinc highlights the potential of the deeper IP target and will be a high priority for near-term follow up.



*Figure 2:* Achilles schematic cross sections at 6328750N showing interpreted geology defined from recent drilling and A3RC020 and 021 drill results.

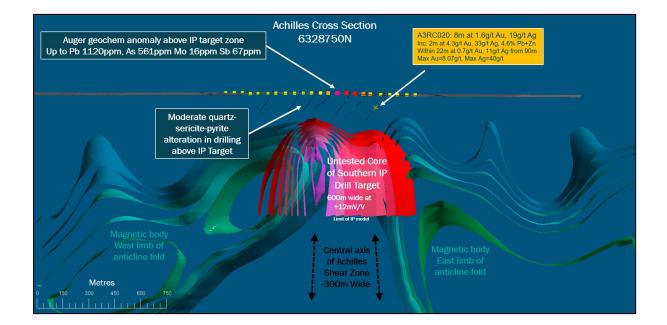
## Additional targets identified at Achilles

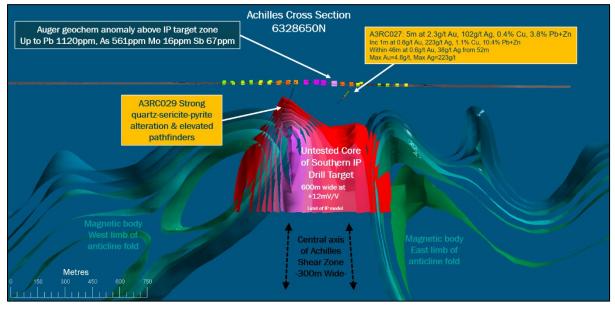
The advancements in geological knowledge developed at Achilles following the most recent drilling has led to three additional, high-priority targets being identified. The auger pathfinder geochemical signature (Pb, Au, Ag, As, Sb, Mo) associated with the 250 metre mineralised zone is also recognised as analogous to that of previous outcrop sampling 1 kilometre to the north at Target 2 and previously intercepted in drilling 1.8 kilometres to the north in the most eastern holes A3RC005, A3RC009, A3RC012 (AGC ASX 3 May 2021). Target 3 is a large IP chargeability feature at depth to the west of the current drilling ("Target 3" in Figure 3 and the cross section in Figure 4). A staged approach to exploration of these new targets is planned for the coming quarters.



*Figure 3:* Achilles technical maps showing the locations of the current mineralisation relative to the other three targets. Cross section locations are shown in white writing on the left hand topography map.







*Figure 4:* Two schematic cross sections of Achilles at 100m spacing, 6328750N (above) and 6328650N (below), showing the locations of current drill results, with respect to the southern IP chargeability (red) and lead-in-soil geochemistry. This target area sits within a package of relatively magnetic rhyolite (blue-green) folded and mineralised by the Achilles Shear Zone. Also see AGC ASX 5 May 2023.



# Hilltop drilling also delivers significant mineralisation

Assay results have also been returned for eight RC holes totalling 1,580 metres completed along the length of the outcropping Hilltop target zone. All eight holes were focused on a topographic high associated with strong IP chargeability anomalism and gold-bearing gossanous outcrops (AGC ASX 5 April 2023, AGC ASX 22 May 2023, AGC ASX 16 June 2023).

Each of the eight holes intercepted fault associated breccias cemented by pyrite (up to 30% by volume) with variable amounts of sphalerite, galena and chalcopyrite. Variable gold-silver base metal mineralisation was intersected in all holes (Figure 5), with best results including:

# HTCR003: 7m at 0.5g/t Au, 9g/t Ag & 0.3% Cu from 95m including 2m at 1.1g/t Au, 15g/t Ag & 0.5% Cu from 99m

## HTCR008: 2m at 0.8g/t Au, 42g/t Ag, 1.0% Cu & 4.2% Pb+Zn from 108m

The northern holes returned wide zones of alteration containing pyrite-sphalerite and were variably mineralised from the bottom of the oxidised zone to the end of hole (e.g. 108m at 0.33% Pb+Zn from 35m in HTRC006 and 166m at 0.21% Pb+Zn from 34m in HTRC007) suggesting a large hydrothermal system at Hilltop that warrants further exploration.

The induced polarisation (IP) chargeability anomalies are associated with strong pyrite in multiple breccia zones. The initial drilling at Hilltop has confirmed the presence of a very large hydrothermal system with analogous characteristics to other gold-silver base-metal deposits within the Cobar basin.

The northern zone has consistently higher silver in drilling and in rock chips and higher lead in soils, with a zone of strongly elevated lead and other pathfinders in historic aircore 500 metres further north again (Figure 6, AGC ASX 5 April 2023). This is suggestive of mineralisation continuing northward, with the full extent of the mineral system yet to be defined.

The extent of the sulphide cemented breccias and alteration highlight the potential for a significant mineral system in the Hilltop area, either at depth or adjacent to the current drilling. With the mineralisation open in all directions and precious and base-metal content increasing towards the north, future exploration will look to target potential higher-grade zones.



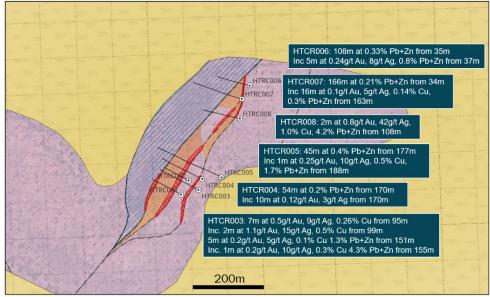
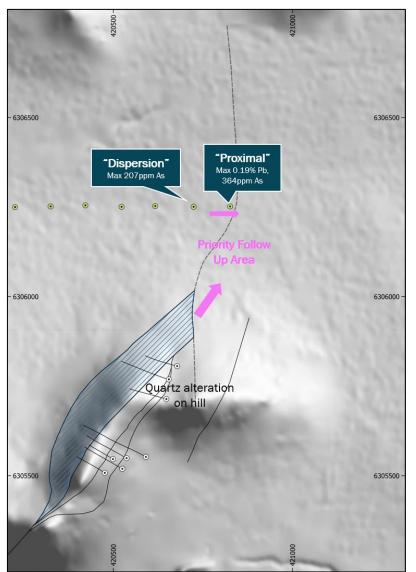


Figure 5: Hilltop drill locations and results over geology.



**Figure 6:** Hilltop drill locations and future areas of exploration potential, White drill collars- current AGC drilling; green collars - previously reported aircore (AGC ASX 5 April 2023).



Hole ID	Туре	Depth (m)	East	North	RL	Dip	Az	Swing (°/100m)	Lift (°/100m)
A3RC020	RC	210	425520	6328781	164	-60	270	5.8	6.8
A3RC021	RC	156	425417	6328776	164	-61	267	8.4	14.2
A3RC022	RC	150	425324	6328777	163	-61	270	10.7	11.7
A3RC023	RC	150	425220	6328786	172	-60	270	9.0	20.5
A3RC024	RC	150	425127	6328779	172	-60	270	1.9	6.6
A3RC025	RC	150	425033	6328791	170	-60	270	-3.1	9.1
A3RC026	RC	150	424877	6328791	173	-60	270	1.9	8.0
A3RC027	RC	150	425461	6328693	168	-60	270	5.2	15.9
A3RC028	RC	150	425540	6328897	162	-60	270	4.0	2.6
A3RC029	RC	180	425146	6328579	176	-75	270	3.4	10.0

Table 1: Achilles RC drill hole details (GDA94).

#### Table 2: Hilltop RC drill hole details (GDA94).

Hole ID	Туре	Depth (m)	East	North	RL	Dip	Az	Swing (°/100m)	Lift (°/100m)
HTRC001	RC	150	420476	6305508	228	-60	300	-3.4	8.6
HTRC002	RC	150	420499	6305546	226	-58	300	1.2	3.4
HTRC003	RC	198	420525	6305519	210	-55	300	0.8	3.1
HTRC004	RC	240	420537	6305549	214	-65	300	1.3	4.8
HTRC005	RC	300	420591	6305552	205	-65	300	-1.8	5.5
HTRC006	RC	150	420678	6305806	208	-60	285	6.4	14.6
HTRC007	RC	210	420655	6305769	215	-60	285	3.3	12.1
HTRC008	RC	180	420648	6305714	221	-60	285	0.8	9.8



Hole ID	From (m)	To (m)	Interval (m)	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	Zn+Pb (%)
A3RC020	90	112	22	0.7	11	0.0	0.4	0.1	0.5
incl	91	93	8	1.6	19	0.1	0.5	1.0	1.5
and	97	99	2	4.3	33	0.2	1.6	3.0	4.6
incl	97	98	1	8.1	24	0.2	1.1	2.1	3.1
and	110	112	2	0.5	5	0.1	0.4	0.7	1.1
A3RC021	10	11	1	0.5	11	0.0	0.2	0.0	0.2
A3RC027	52	98	46	0.6	38	0.1	0.4	0.5	0.9
incl	53	62	9	0.7	71	0.0	0.3	0.1	0.4
and	92	97	5	2.3	102	0.4	1.3	2.6	3.8
Incl	95	96	1	0.6	223	1.1	3.3	7.1	10.4
and	105	106	1	0.6	19	0.1	0.3	0.6	0.9
A3RC028	77	84	7	1.2	208	0.1	0.4	0.7	1.1
incl	79	81	2	2.4	498	0.2	0.7	1.5	2.2
Incl	80	81	1	1.6	735	0.2	0.8	1.8	2.6
also	92	93	1	0.1	12	0.2	0.9	2.1	3.0

Table 3: Achilles RC Results. Interval represent down hole widths as true widths are currently unknown.

Table 4: Hilltop RC Results. Interval represent down hole widths as true widths are currently unknown.

Hole ID	From (m)	To (m)	Interval (m)	Au (g/t)	Ag (g/t)	Cu (%)	Pb (%)	Zn (%)	Zn+Pb (%)
HTRC001	89	91	2	0.2					
HTRC002	96	101	5	0.3					
	116	118	2	0.3					
HTRC003	6	13	7	0.3	5		0.3		
	95	102	7	0.5	9	0.26			
Incl	99	101	2	1.1	15	0.5			
	151	156	5	0.2	5	0.1	0.3	1.0	1.3
Incl	155	156	1	0.2	10	0.3	0.8	3.5	4.3
	169	173	4	0.2	4		0.33	0.6	0.9
HTRC004	170	224	54						0.2
Incl	170	180	10	0.12	3				
HTRC005	177	222	45						0.4
Incl	182	183	1	0.1	6	0.2	0.6	2.0	2.6
Incl	188	189	1	0.25	10	0.5	0.7	1.1	1.8
HTRC006	35	143	108						0.3
Incl	37	42	5	0.24	9		0.3	0.5	0.8
HTRC007	34	200	166						0.2
	163	200	37						0.2
Incl	163	179	16	0.1	5	0.14			0.3
HTRC008	108	110	2	0.8	42	1	1.2	3.0	4.2

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### References and related ASX releases

AGC ASX 3 May 2021 Base-metal sulphides overlying EM conductor at Achilles AGC ASX 9 June 2021 Achilles copper/base metals targets zone extended to 3km AGC ASX 30 June 2021 Phase 2 drilling commenced at Achilles AGC ASX 20 August 2021 Achilles Phase 2 Drilling Identifies Copper Zone AGC ASX 15 September 2021 Exploration Update AGC ASX 6 October 2021 Cargelligo Project Diamond Drilling Update AGC ASX 28 October 2021 Achilles Diamond Drilling Update AGC ASX 16 December 2021 AGC Stakes Significant Landholding in Cobar Basin AGC ASX 16 March 2023 South Cobar Regional Technical Update Revised AGC ASX 5 April 2023, Hilltop: A new gold base metal target South Cobar Relodged AGC ASX 18 April 2023, Exploration Update South Cobar Project AGC ASX 5 May 2023, Achilles IP survey produces stellar drill results AGC ASX 22 May 2023, Hilltop IP survey defines third compelling drill target AGC ASX 16 June 2023, Hilltop returns further strong gold in rock chips AGC ASX 29 September 2023, Presentation Technical Update for Geohug AGC ASX 29 January 2024, Hilltop Drilling Underway

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

ENDS

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#### 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

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place undue reliance on forward-looking statements due to the inherent uncertainty thereof. The forward-looking statements contain 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). 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

Criteria	JORC Code explanation	Commentary
Sampling techniques	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.	1m bottom of hole auger sampling undertaken by Anomaly Exploration and Mining Services. Sample grid was 100m spaced lines and 50m spaced samples, samples were sieved -80 mesh, diameter 110mm and drilled vertically, photographed, logged and bagged for analysis. RC drilling and sampling was undertaken by Durock Drilling Pty Ltd. 1m samples were collected via reverse circulation (RC) drilling using a cyclone splitter. Samples were mostly dry and sample loss was minimal. Sample weights were recorded on site using digital scales for each calico sample. Reference chips for each meter were stored in chip trays. Magnetic susceptibility was recorded from the calico bag for each meter by a KT-10 mag sus meter.
	Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.	Sampling and QAQC procedures were developed and carried out by AGC staff. Standards and duplicates were inserted every 50 meters Drilling is angled perpendicular to strike of mineralisation as much as possible to ensure a representative sampling.
	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 (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.	No mineralisation was logged in the auger sampling. Mineralisation in RC drill chips were geologically logged, magnetic susceptibility was recorded from the calico bag for each meter by a KT-10 mag sus meter. Reverse circulation drilling was used to obtain 1 m samples from which 1-5kg was pulverised to produce a 50 g charge for fire assay by ALS Orange Laboratory AA-24 and four acid ICP analysis, ME-MS61 by ALS Brisbane or other ALS lab.
Drilling techniques	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).	Auger sampling completed by a light vehicle mounted mechanic auger. 110mm diameter drill with holes drilled vertically and sampled from the first meter to penetrate below transported. Reverse circulation (RC) drilling, using a truck mounted UDR1000
Drill sample recovery	Method of recording and assessing core and chip sample recoveries and results assessed.	Sample weights were recorded on site using digital scales for each calico sample. Recoveries were generally good however wet recorded poorer recoveries.

# Section 1 Sampling Techniques and Data: South Cobar Project, Achilles auger and Hilltop/Achilles RC drilling

Criteria	JORC Code explanation	Commentary			
	Measures taken to maximise sample recovery and ensure representative nature of the samples.	Auger samples were recovered onto a rubber mat and organic material was removed. RC Sample sizes were monitored and the cyclone was regularly agitated to reduce the potential for sample contamination			
	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 relationship between sample grade and recovery has not been assessed.			
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.	Both auger and RC Chip samples were geologically logged for lithology, mineralisation, veining and alteration. Structure could not be logged.			
	Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.	Logging was generally qualitative except for % sulphides. Photographs taken of chip trays and stored for future reference.			
	The total length and percentage of the relevant intersections logged.	All samples were logged for both RC and auger.			
Sub-sampling techniques and	If core, whether cut or sawn and whether quarter, half or all core taken.	Not applicable as auger and RC do not produce core.			
sample preparation	If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.	RC samples were separated and collected via a cyclone splitter on the rig.			
	For all sample types, the nature, quality and appropriateness of the sample preparation technique.	Mag sus was recorded on site directly on the calico sample bag as this was the most homogenous sample.			
	Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.	Duplicates and certified standard reference materials by OREAS were sampled approximately every 50m. ALS also conduct internal checks every 20m.			
	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.	Duplicates were sampled approximately every 50m and this is considered appropriate for greenfields drilling. Vanta VMW pXRF also used as a first pass test and these results are compared with lab results.			
	Whether sample sizes are appropriate to the grain size of the material being sampled.	The samples sizes of averages 3kg per meter and are considered appropriate for the fine grain nature of the volcanic and sedimentary material being sampled.			

Criteria	JORC Code explanation	Commentary		
Quality of assay data and laboratory tests	The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.	Four acid digest is considered a near total digest for most minerals. Induced coupled plasma ICP produces ultra low detection analysis and is considered the most appropriate method for exploration sampling.		
	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.	Magnetic susceptibility was recorded from the calico bag for each meter by a Terraplus KT-10 magnetic susceptibility meter. Vanta VMW pXRF also used as a first pass test and these results are compared with lab results.		
	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.	Appropriate standards and duplicates were inserted into the sample stream. Magnetic susceptibility readings were taken in isolation away from any other material. Acceptable levels of accuracy for the magsus readings were established and readings were consistent or repeated if not.		
Verification of sampling and assaying	The verification of significant intersections by either independent or alternative company personnel.	The significant intersections reviewed by numerous company personal and compiled by the competent person		
	The use of twinned holes.	Twinned holes were not completed in these programs.		
	Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.	Data was recorded onto a handheld device and downloaded into a field laptop. Logging and weights data was completed directly into a field computer on the rig. Visual validation as well as numerical validation was completed by two or more geologists.		
	Discuss any adjustment to assay data.	No adjustments made to the data.		
Location of data points	Accuracy and quality of surveys used to locate drill holes (collar and down- hole surveys), trenches, mine workings and other locations used in Mineral Resource estimation.	A handheld Garmin GPS map was used to pick up collars with an averaged waypoint accuracy of 1m.		
	Specification of the grid system used.	Coordinates picked up using WGS84 and transformed into Map Grid of Australia 1994 Zone 55.		
	Quality and adequacy of topographic control.	Using government data topography and 2017 DTM data		
Data spacing and distribution	Data spacing for reporting of Exploration Results.	Drill holes were preferentially located to most prospective areas.		
	Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral	Auger sampling only, not for JORC resource		

Criteria	JORC Code explanation	Commentary
	Resource and Ore Reserve estimation procedure(s) and classifications applied.	RC drilling was a first pass drill program at both locations and variable spacing to best test the targets. Further drilling would be warranted to be sufficient for a resource estimate.
	Whether sample compositing has been applied.	No, one metre sampling only.
Orientation of data in relation to geological	Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.	The orientation of sampling was designed perpendicular to strike and dip as much as possible to achieve relatively unbiased sampling
structure	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.	Drilling dipped at 60° towards 270° and the targeted horizon dips at around 60° to the east. Holes were designed to intercept perpendicular to mineralisation to best gain near true widths.
Sample security	The measures taken to ensure sample security.	Calicos were weighed on site during the logging and sampling process. This weight will be compared with the laboratory weights as a method to check sample security and integrity. Five calicos were placed into each polyweave bag and zip tied. Samples were driven to the lab by field staff.
Audits or reviews	The results of any audits or reviews of sampling techniques and data.	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	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.	EL8968 Cargelligo licence is located 20km north of Lake Cargelligo NSW. The tenement is held by Australian Gold and Copper Ltd. Ground activity and security of tenure are governed by the NSW State government via the Mining Act 1992. Land access was granted.
Exploration done by other parties	Acknowledgment and appraisal of exploration by other parties.	The auger and RC drilling was planned by Australian Gold and Copper exploration staff and drilling contractor Durock Drilling. Previous to AGC, private explorer New South Resources developed the more recent concepts of the targets and ground truthed by compiling the quality work completed by previous explorers Thomson Resources and WPG Resources, Santa Fe Mining and EZ. WPG/Santa Fe deserve a special mention as the quality of their work, in particular Gary Jones, had significantly expedited the Achilles targets.

Criteria	JORC Code explanation	Commentary		
Geology	Deposit type, geological setting and style of mineralisation.	See body of report.		
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> </ul>	See table 1 in the body of the article		
	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.	All info was included as well as the average swing and lift of the surveys. True width of mineralisation was not estimated due to insufficient data to calculate.		
Data aggregation methods	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.	Typically reported intervals were Au > 0.1ppm and/or Pb+Zn > 1000ppm with Internal dilution calculated by total number of meters <1000ppm Pb+Zn in the quoted interval, intervals were cut by having no more than 2m<1000ppm Pb+Zn consecutively. The higher grade Achilles intercepts are reported with higher cut off grades only.		
	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.	High grade intervals are only reported where they differ significantly to the overall interval. Reporting of the shorter intercepts allows a more thorough understanding of the overall grade distribution.		
	The assumptions used for any reporting of metal equivalent values should be clearly stated.	No metal equivalents were reported.		
Relationship between mineralisation widths and	These relationships are particularly important in the reporting of Exploration Results.	Geological mapping suggests a dip of 60 degrees to the east. Drilling dipped at 60° towards 270° and the targeted horizon dips at around 60° to the east. Holes were designed to intercept perpendicular to mineralisation to best gain near true widths.		
intercept lengths	If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.	Drilling dipped at 60° towards 210° and the targeted horizon dips at 60° to the north east. True width approximately 80% of intercept width however true widths are not reported given the low density of drilling to date.		

Criteria	JORC Code explanation	Commentary
	If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg 'down hole length, true width not known').	Table 2 in body of report states down hole widths, true widths not calculated.
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.	See figures in body of 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.	See body of report
Other substantive exploration data	Other exploration data, if meaningful and material, should be reported including (but not limited to): geological observations; geophysical survey results; geochemical survey results; bulk samples – size and method of treatment; metallurgical test results; bulk density, groundwater, geotechnical and rock characteristics; potential deleterious or contaminating substances.	The geological results are discussed in the body of the report.
Further work	The nature and scale of planned further work (eg tests for lateral extensions or depth extensions or large-scale step-out drilling).	See body of report.
	Diagrams clearly highlighting the areas of possible extensions, including the main geological interpretations and future drilling areas, provided this information is not commercially sensitive.	See figures and text in body of report.