3 March 2023 Australian Gold and Copper Ltd ACN 633 936 526



# **HIGH GRADE HISTORIC GOLD MINES DISCOVERED AT SOUTH COBAR PROJECT**

# Rockchips to 24.4g/t Gold

### SOUTH COBAR: BASE METALS GOLD TARGETS

**ASX ANNOUNCEMENT** 

- Extensive historic gold mine workings discovered and sampled 35km North of Lake Cargelligo on EL9336 Rast (1 of 3 tenements in South Cobar Project)
- Mine workings spread over 1.2km in length with a tight cluster of significant workings 250m in length and as deep as 80m
- First pass sampling designed to determine the prospective rock types returned:
  - $\triangleright$ rock chips to 24.4g/t gold within the shafts and dumps and
  - $\geq$ composite samples to 9.4g/t gold from mine tailings
- Creamy Hills formed in a deformed wedge of folded rock within a back thrust of the major Woorara fault on the Eastern edge of the Cobar Super Basin
- This location is considered an analogous position to the World Class Cobar mines including the CSA Copper Mine 20km north of Cobar in the Rookery fault backthrust on the eastern edge of the Cobar Basin
- Significant potential exists for expanding the footprint as no modern geochemistry, geophysics or drilling has been conducted and the targets are open in every direction
- A limited soil sampling test line returned two zones of elevated arsenic anomalism suggesting multiple stacked mineralised faults. Next steps are to complete a broader soil survey to highlight high potential gold targets
- Also at the South Cobar Project, geophysics crews will mobilise next week to conduct three induced polarisation (IP) geophysics surveys, targeting gold and base metal deposits adjacent to major fault structures at the Achilles, Hilltop, and Planet prospects

Australian Gold and Copper Ltd (ASX: AGC) ("AGC" or the "Company") is pleased to provide an update on the South Cobar licences where the AGC discovery team have uncovered a cluster of historic mines, called Creamy Hills gold mines at the South Cobar project, spanning 1.2km in length.





Figure 1: Drone photographs with annotated notes of mine workings, projected lode to surface and the locations of the highest grade gold samples.



Figure 2: Mine shafts and workings at Creamy Hills gold mine.

**AGC Managing Director, Glen Diemar** said "We originally found these mine workings from satellite data and their proximity relative to the eastern Cobar Fault seemed incredibly important as many of the Cobar mines have similar positions. When we went there, we simply couldn't believe the extent of the workings and the large amount of material excavated from these old mines.

The extensive outcrop and lack of transported cover in this area enabled us to use soils sampling as an effective method of exploration. To our delight, elevated arsenic correlated with our mapping of the gold workings and rock chips. Extensive soil sampling program is planned to highlight high potential gold targets.

Next week Fender Geophysics mobilises to South Cobar Project to complete three poledipole induced polarisation surveys which are used to discover zones of abundant sulphide minerals include copper sulphides. We are very excited about our future."

#### AGC<sup>A</sup> AUSTRALIAN GOLD AND COPPER

Extensive historic gold mine workings called Creamy Hills gold mines have been recently discovered and sampled by AGC geologists. The mine workings are spread over 1.2km in length with a tight cluster of significant working 250m in length and as deep as 80m.

- First pass sampling designed to determine the prospective rock types returned:
  - rock chips to 24.4g/t gold within the shafts and dumps (CHRK019) and
  - composite samples to 9.4g/t gold from mine tailings (CHRK021)

The location of the gold mines is in a deformed wedge of folded rock within a back thrust of the major Woorara fault on the eastern edge of the Cobar Super Basin.

This location is considered an analogous position to the World Class Cobar mines including the CSA Copper Mine north of Cobar which also sit within folds in the Rookery fault back thrust on the eastern edge of the Cobar Basin.

Significant potential exists for expansion as no modern geochemistry, geophysics or drilling has been conducted and the targets are open in every direction.

A limited soil sampling test line returned two zones of elevated arsenic anomalism suggesting multiple stacked mineralised faults. Next steps are to complete a broader soil survey to map anomalism in the soils and expand the footprint.

Also at the South Cobar Project, Fender Geophysics crews mobilising next week to conduct three induced polarisation (IP) geophysics surveys, targeting gold and base metal deposits adjacent to major fault structures at the Achilles, Hilltop and Planet prospects.



*Figure 3:* Photograph of AGC geologists standing on mullock heap above the main decline adit which was so deep that the base could not estimated.

# AUSTRALIAN GOLD AND COPPER



Figure 4: Plan view map of the regional geology and structural interpretation.





*Figure 5*: Photograph of Geo Jack sampling dump material of the main extraction shaft estimated to be 80m depth.



**Figure 6**: Photograph of Geo Glen holding the sample bag at its sample location that returned 24.4g/t gold within shaft 5 and looking into shaft 6.





Figure 7: Photograph of AGC geologists behind the 80m deep main extraction shaft.

| SampleID | GDA94_East | GDA94_North | Geology Description  | WEI-21_kg | Au g/t | Ag g/t | As_ppm | Bi_ppm |
|----------|------------|-------------|--|-----------|--------|--------|--------|--------|
| CHRK001  | 439986     | 6349120     | red pebbly conglonmerate (tertiary)  | 0.76      | -0.005 | 0.03   | 357    | 1.21   |
| CHRK002  | 439984     | 6349119     | white course grained sandstone   | 0.28      | -0.005 | 0.05   | 21.7   | 0.23   |
| CHRK003  | 439985     | 6349118     | microcrystalline white quartz  | 0.44      | -0.005 | 0.15   | 16.2   | 1.06   |
| CHRK004  | 439890     | 6349424     | pale siltstone, qz-sulf veinlets ~2mm x-cutting bedding/foliation                | 1.26      | -0.005 | 1      | 775    | 1.34   |
| CHRK005  | 439889     | 6349459     | vfg siltstone, qz-sulf veinlet x-cutting rock, chl altered?                      | 1.5       | 0.006  | 4.68   | 1430   | 0.98   |
| CHRK006  | 439923     | 6349492     | vfg white to pale-grey siltstone/shale, laminated                                | 1.78      | -0.005 | 0.17   | 221    | 0.56   |
| CHRK007  | 439924     | 6349495     | fg yellow to pale-grey sandstone   | 0.76      | -0.005 | 0.08   | 480    | 0.26   |
| CHRK008  | 439921     | 6349494     | grey high temp crystalline quartz  | 0.7       | -0.005 | 0.69   | 225    | 0.05   |
| CHRK009  | 439923     | 6349492     | fg yellow sandston, x-cut by qz-sulf veins                                       | 2.06      | 0.008  | 0.43   | 1635   | 0.44   |
| CHRK010  | 439925     | 6349491     | vfg siltstone/shale, qz-sulf veins, laminated                                    | 2.18      | 0.011  | 0.4    | 1515   | 0.53   |
| CHRK011  | 439919     | 6349521     | veined fg sandstonme, cut by high temp grey qz veins                             | 1.46      | 0.005  | 0.45   | 675    | 0.13   |
| CHRK012  | 439921     | 6349522     | veined vfg siltstone/shale, qz-sulf veinlets ~2mm wide, laminated                | 1.66      | 0.005  | 0.07   | 2740   | 0.46   |
| CHRK013  | 439920     | 6349524     | high temp grey quartz, feox along fractures, minor limonite staining             | 1.12      | 0.005  | 0.31   | 543    | 0.38   |
| CHRK014  | 439915     | 6349526     | yellow-grey bands, qz infill in structure  | 3.18      | 1.08   | 0.07   | 2110   | 0.24   |
| CHRK015  | 439914     | 6349522     | fg/vfg pale-grey/white sandstone, altered to clay, hanging wall to structure     | 1.08      | 0.354  | 0.14   | 1045   | 4.87   |
| CHRK016  | 439912     | 6349526     | 1m comp channel sample, altered clay, sulf veinlet                               | 1.34      | 0.145  | 0.05   | 1490   | 0.37   |
| CHRK017  | 439916     | 6349524     | sulf veinlet/faulted rock x-cutting interbedded siltstone-sandstone              | 4.18      | 0.307  | 0.12   | 1750   | 0.27   |
| CHRK018  | 439918     | 6349525     | interbedded siltstone-sandstone, ~1cm qz veinlets, footwall to structure         | 1.7       | 0.177  | 0.24   | 1080   | 0.44   |
| CHRK019  | 439915     | 6349526     | brecciated/gouged fault rock x-cutting interbedded siltstone-sandstone           | 1.64      | 24.4   | 2.11   | 3120   | 0.86   |
| CHRK020  | 439953     | 6349498     | bulk sample, tailings pile cyanide tank 2  | 4.14      | 0.716  | 0.45   | 2070   | 3.18   |
| CHRK021  | 439952     | 6349497     | bulk sample, tailings pile cyanide tank 1  | 3.74      | 9.44   | 1      | 2040   | 1.66   |
| CHRK022  | 439857     | 6349456     | pale-grey/white fg sandstone to shale, qz-sulf veins up to ~20mm                 | 2.96      | 0.014  | 0.04   | 252    | 0.46   |
| CHRK023  | 439998     | 6349903     | grab sample from mullock   | 3.06      | 0.043  | 0.05   | 844    | 0.37   |
| CHRK024  | 439893     | 6349457     | channel sample, both sides of shaft face, altered sedimemts + qz veining         | 2.3       | 0.012  | 0.06   | 990    | 0.8    |
| CHRK025  | 439891     | 6349455     | face sample, qz within fault breccia, interesting golden/vitreous mineral within | 2.1       | 0.011  | 0.05   | 473    | 0.22   |
| CHRK026  | 439913     | 6349526     | fault rock, slickenslides present, likely interbedded siltstone-sandstone        | 1.16      | 0.319  | 0.32   | 252    | 0.6    |

# Table 1: Creamy Hills Rock Chip Gold Results (GDA94)



## AGC Projects Overview

AGC's portfolio located in the Central Lachlan Fold Belt of NSW includes the Moorefield gold project exploring for multi-million ounce orogenic gold deposits, the Cargelligo copper-gold/base-metal project in the southern Cobar Super-Basin exploring for Hera and Federation style deposits, and the Gundagai gold project, exploring for multi-million ounce McPhillamy's type gold deposits.



*Figure 8:* Location of AGC's Projects in relation to major mines and deposits within the Lachlan Fold Belt., see p100 AGC ASX prospectus lodged 18th November 2020.



#### References

AGC ASX prospectus lodged 18th November 2020

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

# Appendix 1 – JORC Code, 2012 Edition – Table 1

#### Section 1 Sampling Techniques and Data: South Cobar Project, Creamy Hills rock chip and soil program

| Criteria               | JORC Code explanation  | Commentary   |
|------------------------|--|--|
| Sampling<br>techniques | Nature and quality of sampling (eg cut channels, random chips, or specific specialised industry standard<br>measurement tools appropriate to the minerals under investigation, such as down hole gamma sondes, or<br>handheld XRF instruments, etc). These examples should not be taken as limiting the broad meaning of sampling.   | Grab samples were taken from historic mine workings and mullock dumps. Sampling was<br>somewhat systematically completed to differentiate whether gold was focused preferentially in<br>sandstones or siltstones.<br>Soil samples test line were conducted to see if elevated arsenic or gold was present in the soil. |
|                        | Include reference to measures taken to ensure sample representivity and the appropriate calibration of any measurement tools or systems used.  | Sampling was somewhat systematic to differentiate whether gold was focused preferentially in sandstones or siltstones, late faults or in sulphide veins or all of the above.<br>Location by hand held GPS device to 3m accuracy, GDA94 zone 55   |
|                        | Aspects of the determination of mineralisation that are Material to the Public Report.<br>In cases where 'industry standard' work has been done this would be relatively simple (eg 'reverse circulation<br>drilling was used to obtain 1 m samples from which 3 kg was pulverised to produce a 30 g charge for fire assay').<br>In other cases more explanation may be required, such as where there is coarse gold that has inherent sampling<br>problems. Unusual commodities or mineralisation types (eg submarine nodules) may warrant disclosure of<br>detailed information. | All sampling was from the oxide zone and hence oxide gold and may be nuggety in nature.<br>1-5kg was pulverised to produce a 50g charge for fire assay Au-AA-24 and ME-MS61 ICP-<br>MS/OES   |
| Drilling<br>techniques | Drill type (eg core, reverse circulation, open-hole hammer, rotary air blast, auger, Bangka, sonic, etc) and details<br>(eg core diameter, triple or standard tube, depth of diamond tails, face-sampling bit or other type, whether core is<br>oriented and if so, by what method, etc).  | Not applicable   |
| Drill sample           | Method of recording and assessing core and chip sample recoveries and results assessed.  | Not applicable   |
| recovery               | Measures taken to maximise sample recovery and ensure representative nature of the samples.  | Not applicable   |
|                        | 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.   | Not applicable   |
| Logging                | Whether core and chip samples have been geologically and geotechnically logged to a level of detail to support<br>appropriate Mineral Resource estimation, mining studies and metallurgical studies.   | Mine workings and rock samples were logged for rock type, structure, veining and alteration  |
|                        | Whether logging is qualitative or quantitative in nature. Core (or costean, channel, etc) photography.   | Not applicable   |
|                        | The total length and percentage of the relevant intersections logged.  | Not applicable   |
| Sub-sampling           | If core, whether cut or sawn and whether quarter, half or all core taken.  | Not applicable   |
| techniques and         | If non-core, whether riffled, tube sampled, rotary split, etc and whether sampled wet or dry.  | Not applicable   |
| preparation            | For all sample types, the nature, quality and appropriateness of the sample preparation technique.   | A few kg of rock was sampled into a calico bag often by chipping with a geopick from the walls<br>of the shafts or adits. Sampling was manual and bias to the softer lithologies may have occurred   |

| Criteria   | JORC Code explanation   | Commentary   |
|--|---|--|
|  | Quality control procedures adopted for all sub-sampling stages to maximise representivity of samples.   | Not applicable   |
|  | Measures taken to ensure that the sampling is representative of the in situ material collected, including for<br>instance results for field duplicate/second-half sampling.   | Not applicable   |
|  | Whether sample sizes are appropriate to the grain size of the material being sampled.   | The sample methods are considered appropriate for the first pass nature                    |
| Quality of assay<br>data and<br>laboratory tests | The nature, quality and appropriateness of the assaying and laboratory procedures used and whether the technique is considered partial or total.  |  |
|  | 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.     |  |
|  | Nature of quality control procedures adopted (eg standards, blanks,<br>duplicates, external laboratory checks) and whether acceptable levels of<br>accuracy (ie lack of bias) and precision have been established.              | No standards or blanks were used in this sampling.   |
| Verification of                                  | The verification of significant intersections by either independent or alternative company personnel.   | Not applicable   |
| sampling and                                     | The use of twinned holes.   | Not applicable   |
| assaying   | Documentation of primary data, data entry procedures, data verification, data storage (physical and electronic) protocols.  | Primary data logged into a computer such as mapping were backed up with an sample photo    |
|  | Discuss any adjustment to assay data.   | No adjustments made  |
| Location of data points                          | Accuracy and quality of surveys used to locate drill holes (collar and down-<br>hole surveys), trenches, mine workings and other locations used in Mineral<br>Resource estimation.  | A handheld Garmin GPSmap was used to pick up collars with waypoint accuracy of 3m.         |
|  | 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<br>and distribution                 | Data spacing for reporting of Exploration Results.  | Soil samples were analysed on a systematic line at 25m.                                    |
|  | Whether the data spacing and distribution is sufficient to establish the degree of geological and grade continuity<br>appropriate for the Mineral Resource and Ore Reserve estimation procedure(s) and classifications applied. | Not applicable   |
|  | Whether sample compositing has been applied.  | No   |
|  | Whether the orientation of sampling achieves unbiased sampling of possible structures and the extent to which this is known, considering the deposit type.  | Not applicable   |

| Criteria   | JORC Code explanation   | Commentary                                      |
|--|---|---|
| Orientation of<br>data in relation<br>to geological<br>structure | If the relationship between the drilling orientation and the orientation of key mineralised structures is considered<br>to have introduced a sampling bias, this should be assessed and reported if material. | Not applicable                                  |
| 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.   | No audits or review are warranted at this stage |

# Section 2 Reporting of Exploration Results

| Criteria   | JORC Code explanation  | Commentary  |
|--|--|---|
| Mineral<br>tenement and<br>land tenure<br>status | Type, reference name/number, location and ownership including<br>agreements or material issues with third parties such as joint ventures,<br>partnerships, overriding royalties, native title interests, historical sites,<br>wilderness or national park and environmental settings.<br>The security of the tenure held at the time of reporting along with any<br>known impediments to obtaining a licence to operate in the area. | EL9336 Rast licence is located north west and south west 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.<br>Land access was granted. |
| Exploration done by other parties                | Acknowledgment and appraisal of exploration by other parties.  | Previous to AGC, no information is known about mining at Creamy Hills gold mine field   |
| Geology  | Deposit type, geological setting and style of mineralisation.  | Orogenic gold, in body of report  |
| Drill hole<br>Information                        | A summary of all information material to the understanding of the exploration results including a tabulation of<br>the following information for all Material drill holes:<br>easting and northing of the drill hole collar<br>elevation or RL (Reduced Level – elevation above sea level in metres) of the drill hole collar<br>dip and azimuth of the hole<br>down hole length and interception depth<br>hole length.              | Not applicable  |
|  | 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.  | Not applicable  |
| Data<br>aggregation<br>methods                   | In reporting Exploration Results, weighting averaging techniques, maximum and/or minimum grade truncations<br>(eg cutting of high grades) and cut-off grades are usually Material and should be stated.  | Not applicable  |
|  | Where aggregate intercepts incorporate short lengths of high-grade results and longer lengths of low grade<br>results, the procedure used for such aggregation should be stated and some typical examples of such<br>aggregations should be shown in detail.   | Not applicable  |

| Criteria  | JORC Code explanation  | Commentary  |
|---|--|---|
|   | The assumptions used for any reporting of metal equivalent values should be clearly stated.  | Not applicable  |
| Relationship                                      | These relationships are particularly important in the reporting of Exploration Results.  | Not applicable  |
| between   | If the geometry of the mineralisation with respect to the drill hole angle is known, its nature should be reported.  | Not applicable  |
| mineralisation<br>widths and<br>intercept lengths | If it is not known and only the down hole lengths are reported, there should be a clear statement to this effect (eg<br>'down hole length, true width not known').   | Not applicable  |
| Diagrams  | Appropriate maps and sections (with scales) and tabulations of intercepts<br>should be included for any significant discovery being reported. These<br>should include, but not be limited to a plan view of drill hole collar locations<br>and appropriate sectional views.  | See figures in body of report                                   |
| Balanced<br>reporting                             | Where comprehensive reporting of all Exploration Results is not practicable, representative reporting of both low<br>and high grades and/or widths should be practiced to avoid misleading reporting of Exploration Results.   | Not applicable  |
| Other<br>substantive<br>exploration data          | Other exploration data, if meaningful and material, should be reported<br>including (but not limited to): geological observations; geophysical survey<br>results; geochemical survey results; bulk samples – size and method of<br>treatment; metallurgical test results; bulk density, groundwater,<br>geotechnical and rock characteristics; potential deleterious or<br>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.                         |