

## WEST WYALONG DIAMOND DRILLING INTERSECTS POTENTIAL Cu-Au MINERALISATION

### HIGHLIGHTS

- DDH-1 Diamond rig arrives to West Wyalong
- 5 diamond tails drilled in February and March 2021
- Deep RC drilling intersects potential mineralisation with sulphides, quartz veining + sulphides and phyllic and propylitic alteration
- Diamond tails successfully completed and diamond drill core intersects sulphides and quartz veins that could potentially be a mineralised copper-gold porphyry
- First diamond drill hole AWN002 completed to approximately 503m depth
- Significant intersections on diamond core logs on DDH AWN002 (visual inspection awaiting logging and laboratory analysis) are;
  - From 230.5m to 277.3m, 46.8m of propylitic - phyllic alteration in thin quartz stringers and sericite alteration containing minor amounts of disseminated sulphide (mostly pyrite)
  - From 288.7m to 331.5m, 42.8m phyllic zone of thicker veins of quartz with abundant and chalcopryite stringers and potassium bearing K-feldspar showing brecciated host, (photo below)
  - with a 4.6m intersection 327.2m to 331.3m composing massive and abundant quartz and chalcopryite vein stringers (photo below)
  - 338.7m to 387.5m, 48.8m zone of disseminated pyrite with minor veining and brecciation
- These zones may well contain gold and copper mineralisation when assays are available

Argent Minerals Limited (ASX: ARD, Argent, or the Company) is pleased to announce that a diamond drill rig has arrived at the Company's West Wyalong gold-copper project at West Wyalong.

### West Wyalong Diamond Drilling

The Company contracted a diamond drill rig from DDH1 Limited (ASX: DDH) to test the potential for a major gold-copper porphyry system at West Wyalong. Argent made the decision to deploy a diamond rig due to substantial amounts of Pyrite, Chalcopyrite (both massive and disseminated intersections) and Quartz veining that was drilled during the RC drilling program which commenced in February 2021.

The RC drilling program announced in January 2021 successfully prepared the 5 pre collars that intersected significant zones of targeted host rock containing suitable the alteration that are key indicators for porphyry style copper – gold deposits.



**Figure 1** – AWN002 drill core with quartz veining and pyritic, chalcopyritic massive veining in chloritic-phyllic altered host



**Figure 2** – Diamond Drill Rig at West Wyalong drilling AWN002

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**Argent Minerals Managing Director/CEO George Karageorge commented:**

*“We are delighted to announce that even in trying conditions, the Argent Team, DDH-1 and Strike Drilling has successfully drilled and intersected in the first diamond drill hole what we hope is the top of a Gold copper porphyry” Mr Karageorge added “we encouraged with the thick zones of potential mineralization on the first of 5 diamond drill holes and hope the recent flooding at West Wyalong allows drilling to restart ASAP”.*

*“As soon as ground conditions improve in the coming week Argent will throw all available field crews and drill the next diamond hole along strike of AWN002”.*



**Figure 3 - Diamond Core from AWN002 from 327.2m to 331.3m showing 4.6m of massive quartz veining with abundant chalcopyrite stringers and disseminations.**

## **Drill Core Intersections & Copper-Gold Potential**

### **Propylitic Zone**

The drill core intersections from the upper part of the core from approximately 214 meters to 277 meters have highly fractured and chloritic alteration in an altered grey-green intrusive or Monzodiorite and is clear evidence of propylitic alteration.

The zone contains low pyrite with magnetite and chlorite alteration.

### **Phyllic Zone**

The drill core intersected quartz veins and stringers from approximately 288 meters to 318 meters with the onset of the alteration and K-feldspar in the larger veins which are up to 0.4-meter thickness.

The veining appears to be vertical to sub vertical and reliable orientation marks will be qualified in due course when logging is completed shortly.

The core represents the phyllic zone with higher composition of K-feldspar, pyrite, magnetite and minor chalcopyrite.

### **Potassic & Porphyry Zone**

The drill core changed in composition from approximately 327 meters to 331 meters with quartz veining and abundant chalcopyrite stringers both massive and disseminated that may contain copper and gold mineralization indicating that the host porphyry is within the drilled zone.

Below 338 meters the veining became minor veining after this point chlorite alteration was more intense towards the bottom of the hole at approximately 387 meters.

### **Next Steps**

The intersected zones from 214 meters to 390 meters may yield copper -gold mineralization once assay results become known.

The geological modelling drill hole locations appears to be on target with hopeful copper -gold mineralization in the intersections at AWN002.

The core will be logged and prepared for sampling whilst awaiting ground conditions to improve and move onto the next drill pad situated north of AWN002 in the coming week once flood waters and drillers return to the working area.

This ASX announcement has been authorised for release by the Board of Argent Minerals Limited.

-ENDS-

**For further information, please contact:**

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**Competent Persons Statement:**

*The information in this report that relates to Exploration Targets and Exploration Results is based on information compiled by Mr Stuart Till, a Competent Person who is a Member of the Australian Institute of Geoscientists and has sufficient experience that is relevant to the style of mineralisation and type of deposit 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". Mr Till is employed as an independent geological consultant by Argent Minerals Limited and consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.*

## APPENDIX A – DRILL HOLE SUMMARY INFORMATION

**Table A – Summary of available drill hole information for AWN002.**

Hole ID	Easting (mE) <sup>1</sup>	Northing (mN) <sup>1</sup>	Azimuth	Dip	Elevation (mRL)	EOH	Hole Width
<b>AWN002</b>	527947.4	6238988.1	90	-60	229.1	503 <sup>2</sup>	NQ

**Notes:**

1. Geodatic Datum of Australia 94 (GDA94), projection Map Grid of Australia (MGA) Zone 55
2. Planned End of Ho (EOH)

## APPENDIX B – JORC CODE, 2012 EDITION – TABLE 1

### West Wyalong Copper Gold Porphyry Drilling Results

The following information follows the requirements of JORC 2012 Table 1 Sections 1, 2 and as applicable for ASX Report

#### Section 1 Sampling Techniques and Data

Criteria	JORC Code explanation	Commentary
<i>Sampling techniques</i>	Drilling cited in this report was completed by DDH1 Drilling. Drillholes are sample based on observed mineralisation, veining, intensity of alteration or stratigraphic selection. One hole has been drilled. NQ ¼ core will be used as the sample submittal.	Samples will be crushed and pulverized to 90% passing -70µm. Samples were partially digested with Aqua Regia to produce a 50 g charge for fire assay and a 5 g charge for ME-ICP41 multi-element assay.
<i>Drilling techniques</i>	Diamond drilling utilised RC pre-collars and NQ triple tube core drilling to EOH. The drill string was configured with a triple tube 3 m barrel and wireline/overshot setup.	
<i>Drill sample recovery</i>	Recovery is recorded by the geologist or field geotechnician. Triple tube is permanently being employed to maintain core integrity and reduce core loss.	
<i>Logging</i>	Geological logging is conducted to a high standard via graphic and digital logging noting lithology, mineralisation, alteration and structure with associated degrees of intensity. Logging is undertaken using both qualitative and quantitative methods accompanied with wet and dry core photography, and sampling for type section lithogeochemistry. Core was oriented when recovered and will be logged in full.	
<i>Sub-sampling techniques and sample preparation</i>	Drillholes will be sampled on observed mineralisation or intensity of alteration. NQ ½ core, will be used for sample submittal.	Assay and preparation will be carried out by NAGROM Metallurgical in Perth. 2-3 kg samples were crushed using a jaw crusher, riffle split, and pulverized to produce a 250g sample for various analytical methods. Various internal lab standards were utilised along with vendor standards, duplicates and blanks at a 1:10 ratio.
<i>Quality of assay data and laboratory tests</i>	Samples will be digested with a 3-acid partial digest (hydrochloric, perchloric and nitric). Samples will be assayed using ICP-MS for: Ag, Al, As, B, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cu, Fe, Ga, Hg, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Sr, Th, Ti, Tl, U, V, W, Zn. Samples over detection limit are re-assayed to Ore Grade Standard. Au is quantified using a 50g charge with fire assay and AAS finish. Any over-limit samples will be assayed via dilution method.	
<i>Verification of sampling and assaying</i>	Argent and NAGROM Metallurgical employ independent QAQC assay checks. Argent uses coarse crush, fine crush and pulp duplicates, blanks and 2 types of CRM's inserted at a ratio of 1:10.	All drillhole information is stored graphically and digitally in excel format. Assay results span low-level, high-level and ore-grade amounts which have been reported in an homogenised format.
<i>Location of data points</i>	All data used in this report are in: Datum: Geodetic Datum of Australia 94 (GDA94) Projection: Map Grid of Australia (MGA) Zone: Zone 55 Collar positions were recorded by a staff mounted DGPS. Topographic control was gained using government DTM data and with handheld GPS check.	

Criteria	JORC Code explanation	Commentary
<i>Data spacing and distribution</i>	There was no prior drilling into hard rock in the area surrounding AWN002, except for AWT001, AWT002, AWT003, AWT004 and AWT005. There are numerous air core drillholes in the immediate area of the collars. AWN001 has several surrounding historic drillholes from 150 metre collar separation.	
<i>Orientation of data in relation to geological structure</i>	<p>Samples were taken with consideration of stratigraphy and alteration; samples do not straddle geological or stratigraphic boundaries.</p> <p>The immediate local geological sequence and foliation is inclined at 60 degrees to the east and will return minor extensions on true widths.</p> <p>Drillholes were targeted to intersect geology on mildly oblique sections to increase intercept potential.</p>	
<i>Sample security</i>	Chain of custody involves graphic and digital sign off sheets onsite, sample transfer protocols onsite, delivery to NAGROM Metallurgical Perth by Argent staff, and formal receipt by NAGROM Metallurgical Perth.	
<i>Audits or reviews</i>	<p>A walk-through inspection of NAGROM Metallurgical Perth facilities was conducted by the Exploration Manager of Argent and deemed to be satisfactory.</p> <p>A review of assay method was conducted by the Exploration Manager of Argent and was confirmed for a partial digest (3-acid) and fire assay to be sufficient to quantify mineralisation.</p>	

## Section 2 Reporting of Exploration Results

Criteria	JORC Code explanation	Commentary
<i>Mineral tenement and land tenure status</i>	The West Wyalong Copper Gold Porphyry Project is held under joint venture between Argent Minerals Ltd and Golden Cross Operations Pty Ltd within exploration license EL8430 (interest held at end of quarter by Argent Minerals Ltd 89% and Golden Cross Operations Pty Ltd 11%.	
<i>Exploration done by other parties</i>	<p>The West Wyalong project has a long history of exploration with a strong focus on the Wyalong Goldfield. The Wyalong Goldfield was discovered in 1893 and production peaked in 1897 with 45,000 ounces. Mining ceased in 1920 with a reported total production of 445,700 ounces from 340,000 tonnes (average grade 1.31 oz/t or 40 g/t Au). Post 1920, systematic exploration only commenced in 1981 when Mineral Management and Securities Ltd held EL 1658 over the Wyalong Goldfield and surrounding area (including part of the previous tenement EL 8001) until its relinquishment in January 1989.</p> <p>Previous exploration work by different mineral exploration companies is summarised by historical tenements as follow:</p> <ul style="list-style-type: none"> <li>- EL 2179 Seltrust/Paragon Gold (1984-1986);</li> <li>- EL 2246 Lachlan Resources (1985-1988);</li> <li>- EL 3620 North Ltd/Gold Mines of Australia/Cyprus (1990-1998);</li> <li>- EL 4533 CRA (1993-1996);</li> <li>- EL 6515 Golden Cross Resources (1997-2000); and 14 Argent Minerals Limited ABN 89 124 780 276 Phone +61 2 9300 3390 Facsimile +61 2 9221 6333 <a href="http://www.argentminerals.com.au">www.argentminerals.com.au</a></li> <li>- EL 5915 Golden Cross Operations/Newcrest/MIM Exploration (2000-2006).</li> </ul> <p>The extensive exploration activities performed by Golden Cross Operation on EL4615 over the period 1995 to 2000 included:</p> <ul style="list-style-type: none"> <li>- The entire licence area was flown with aeromagnetics and Quest EM;</li> <li>- 26 x RCP holes were drilled for 2,116.6 metres;</li> </ul>	

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	<ul style="list-style-type: none"> <li>- 234 x air core drill holes for 10,991 metres;</li> <li>- 7 x costeans were excavated for 272 metres;</li> <li>- 10 x mud/percussion holes were drilled for 807 metres;</li> <li>- The entire licence area was geologically mapped and interpreted at 1:25,000 scale;</li> <li>- 112 partial leach soils were collected;</li> <li>- 4,309 samples of composited hand and auger soils were submitted for assay;</li> <li>- Re-assay of 32 air core pulps for Pt, Pd, Co, Ni and V;</li> <li>- A gravity survey was taken over the entire licence area; and</li> <li>- 778 rock chip samples were collected over all the various prospects.</li> </ul> <p>During 1998 to 2000, exploration work carried out by Newcrest Operations under a joint venture agreement with Golden Cross Operations in the Narragudgil (south-eastern portion) area included:</p> <ul style="list-style-type: none"> <li>- 90 x air core drill holes for 7,838.4 metres at the Narragudgil prospect;</li> <li>- 10 x RCP holes for 1,822.5 metres at Yiddah North prospect; and</li> <li>- 8 x combined air core/diamond core holes for 1,224 metres of air core, and 824.5 metres diamond core.</li> </ul> <p>Initial work carried out by MIMEX in 2002 included a compilation of historic drill results, review of existing core, mapping, reconnaissance ground magnetics, and MIMDAS surveys. A total of 57.5-line km of MIMDAS IP/MT were surveyed on 19 lines and five RC percussion holes for a total of 834 metres were drilled to test anomalous areas. The MIMDAS geophysical IP/resistivity, magneto telluric system was used in the pole-dipole configuration with 100 dipoles. MIMEX withdrew its interest in the joint venture in June 2003.</p> <p>Reviews by Argent of past exploration including drilling, surface geochemistry and geophysical surveys highlighted two prospects: Narragudgil and Yiddah North Prospects, both directed towards porphyry style base metals (Cu-Au) in the Narragudgil Volcanics. These prospects are located in the southwestern portion of the EL8430 tenement area. A wide zone (400 metres) of principally propylitic alteration was identified during the drilling, extending in a north westerly direction for around 3 km through the licence area.</p>																							
<b>Geology</b>	<p>The Argent exploration strategy at West Wyalong primarily focuses on the targeting of porphyry style Cu-Au systems hosted in Ordovician arc rocks, as well as orogenic / structurally controlled quartz vein hosted gold deposits. The occurrences of major epithermal (Cowal), porphyry (Marsden, Yiddah North and Gidginbung) and intrusion related (Hobbs, Adelong) deposits provide encouragement that large intrusion/volcanic-related hydrothermal systems may exist in this part of the Lachlan Orogen. This, in addition to the discoveries at Cadia, near Orange, and Northparkes, near Parkes, shows that Ordovician age magmatic arc complexes in New South Wales are highly prospective for Cu-Au porphyries and associated epithermal deposits.</p>																							
<b>Drill hole Information</b>	<table border="1"> <thead> <tr> <th>Hole ID</th> <th>Easting (mE)<sup>1</sup></th> <th>Northing (mN)<sup>1</sup></th> <th>Azimuth</th> <th>Dip</th> <th>Elevation (mRL)</th> <th>EOH</th> <th>Hole Width</th> </tr> </thead> <tbody> <tr> <td><b>AWN002</b></td> <td>527947.4</td> <td>6238988.1</td> <td>90</td> <td>-60</td> <td>229.1</td> <td>503<sup>2</sup></td> <td>NQ</td> </tr> </tbody> </table> <p>Notes:</p> <ol style="list-style-type: none"> <li>1. All holes were commenced with RC Pre-collars drill width to firm material (approximately 70 metres), then continued with NQ3 width to unoxidized ground and NQ3 width to end of hole.</li> <li>2. Easting and Northing coordinates are all referenced to Geodetic Datum of Australia 94 (GDA94), Map Grid of Australia (MGA) projection, Zone 55.</li> <li>3. 'Depth' in this Appendix means hole length from collar to 'End of Hole' (EOH abbreviation).</li> <li>4. With no drilling having been conducted in this area, the drillholes were designed at 280°TN azimuth and -70° dip west to test magnetic features (except for hole AWN002, which was designed with an azimuth of 90°).</li> </ol>								Hole ID	Easting (mE) <sup>1</sup>	Northing (mN) <sup>1</sup>	Azimuth	Dip	Elevation (mRL)	EOH	Hole Width	<b>AWN002</b>	527947.4	6238988.1	90	-60	229.1	503 <sup>2</sup>	NQ
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<b>Data aggregation methods</b>	<p>Data aggregation methods has been included in the Significant Assay table (Appendix 1). Hard cut-offs have been employed with the cut-off included in the table, no internal dilution below this cut-off has occurred.</p>																							

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Criteria	JORC Code explanation	Commentary
<i>Relationship between mineralisation widths and intercept lengths</i>	Unknown at this point, nothing to report	
<i>Diagrams</i>	Nothing to report.	
<i>Balanced reporting</i>	Nothing to report.	
<i>Other substantive exploration data</i>	All available exploration data relevant to this report has been provided.	
<i>Further work</i>	Lithogeochemical assessments will be conducted to adequately define mineralisation and alteration type.	

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