

29 October 2014

## KEMPFIELD DEEP DIAMOND DRILLING PROGRAM

### HIGHLIGHTS:

- Deep drilling program to be conducted at Kempfield - up to 650 metres maximum hole length
- Three diamond holes to test Colossal Reef copper mine, interpreted VMS feeder zone and lenses
- Additional diamond hole to test for potential extension of mineralisation at depth below existing resource
- 1,900 m total drilling - featuring 1,500 m of drilling in the highly prospective untested area immediately to the west of the existing deposit
- Targeting high grade zinc, lead, copper and gold associated with higher temperature deposition
- First three holes (1,500 m) sponsored by the NSW Government Cooperative Drilling Program

## KEMPFIELD POLYMETALLIC PROJECT, NSW AUSTRALIA

Argent Minerals Limited (ASX: ARD, Argent, Argent Minerals or the Company) is pleased to announce a deep diamond drilling program for the Kempfield Polymetallic Project.

The drilling program features a test of the area immediately to the west of the Kempfield deposit, where the Company has identified the potential for additional volcanogenic massive sulphide (VMS) mineralisation lenses and a high temperature feeder zone (Western Prospective Area).

Argent Minerals Managing Director David Busch said, "This will be the deepest drilling program conducted at Kempfield in over four decades of exploration. Financially supported by the NSW Government, this program will test the Western Prospective Area for additional higher grade base and precious metals in the interpreted feeder zone and mineralisation lenses, as well as for potential lens extensions at depth, underneath the existing Mineral Resource.

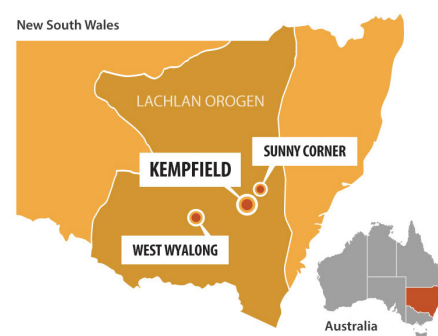
"Through a combination of advanced exploration techniques, and drawing on a range of industry best-practice expertise including the Company's in-house expert Dr. Vladimir David who has a track record in VMS deposit discovery, Argent has developed a comprehensive model of interpreted mineralisation that has not been detected by traditional survey techniques.

"Argent's exploration strategy includes a systematic approach based on a genesis model framework supported by geochemistry and an advanced geophysics program. The geophysics program combined the results of induced polarisation (IP) surveys and the more recent magnetometric resistivity (MMR) surveys, to provide a new and innovative method for the detection of lead zinc mineralisation at Kempfield. This has provided us with fresh insight into the potential mineralisation structures, which are now ready for drill-testing.

"Four holes will be drilled for a total length of 1,900 metres. The first two holes will be drilled toward the Southeast from locations adjacent the historic Colossal Reef copper mine. The first hole will be drilled to a length of up to 500 metres, and the second, the deepest hole in the program, will be drilled to a length of up to 650 metres. Together these first two holes will test the interpreted VMS feeder zone and Lenses 4 and 5.

"The third hole in the program will be drilled for a length of up to 350 metres to test the interpreted VMS Lenses 4, and the Northeast extension of Lens 3. A fourth hole will also be drilled for a length of up to 400 metres underneath the known mineral resource, to test for extensions of Lenses 2 and 3 at depth".

Figures 1 and 2 set out the design of the drill hole plan designed to test the interpreted feeder zone and mineralisation lenses, where Figure 1 is a plan view against the MMR anomalies, and Figure 2 is a cross section.



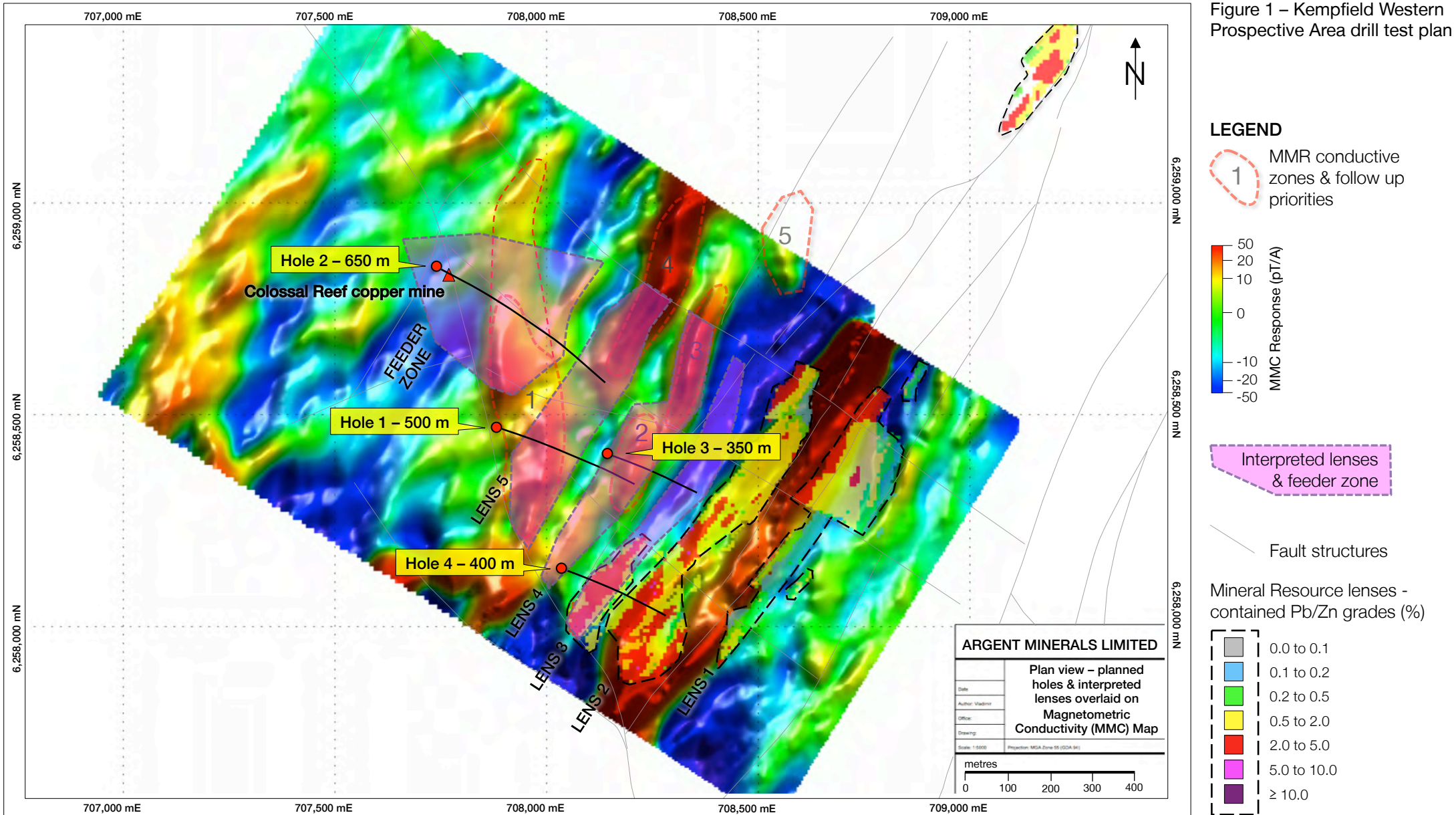
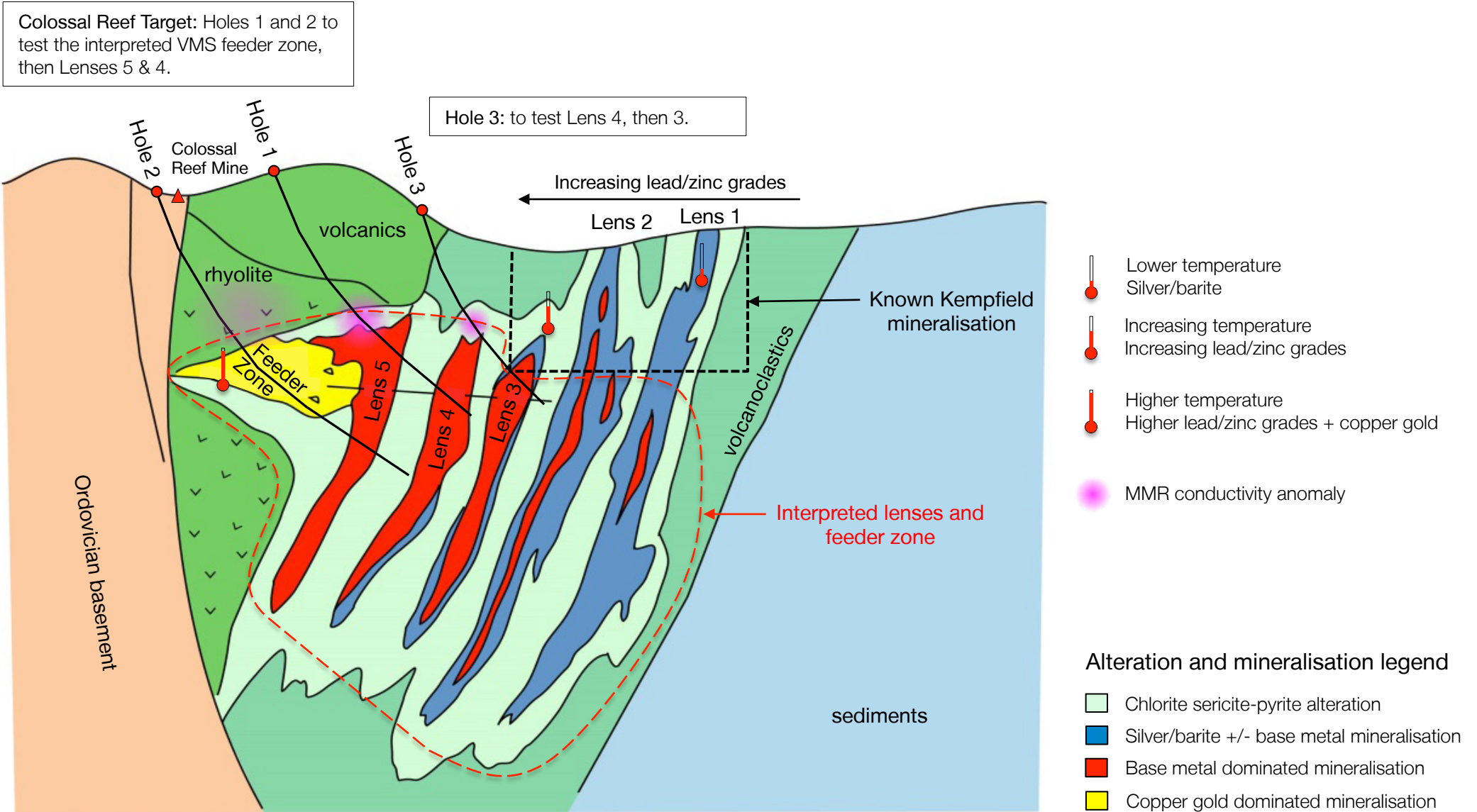


Figure 2 – Cross section of design for Holes 1, 2 & 3 for testing interpreted lenses and feeder zone – conceptual model



The cross section in Figure 2 sets out the drill holes in relation to a diagram of the Kempfield genesis model and MMR anomalies that the holes are also designed to intercept as part of the test program.

**About the diamond drilling program**

In order to increase efficiency yet retain the benefits of diamond drilling, each hole will be drilled with reverse circulation (RC) 'pre-collars' that extend to a length of approximately 50-60 metres. Diamond 'tails' will then be extended to approximately 100 - 150 metres at the larger HQ size in order to firmly establish the direction for each hole, before reducing to the smaller diameter NQ size for the remainder of each hole.

Hole 1 (500 m) will be drilled prior to the more technically challenging Hole 2 (650 m), in order to establish drill rig parameters for hole lift in this area of Kempfield geology.

Geophysics surveys will be performed on each hole, commencing with downhole MMR, which provided the clear response in the rich lead-zinc mineralisation section of the West McCarron hole AKDD159.

Downhole electromagnetic (EM) surveys will be performed in the Colossal Reef copper mine holes 1 and 2 to test for copper conductors.

Table A summarises key drilling plan design parameters and the targets for each hole.

Table A - Drill plan design parameters and targets

Hole #	Azimuth	Dip	Target depth (m)	Target
1	107°	-60°	500	<ul style="list-style-type: none"> <li>- Ore genesis model and geological model of interpreted Lens 5 and interpreted Lens 4 (at depth);</li> <li>- northern portion of MMR conductivity anomaly associated with moderate IP chargeability response; and</li> <li>- central portion of MMR conductivity anomaly Priority#1 associated with moderate IP chargeability response and depth extension of MMR conductivity anomaly Priority #2 at depth.</li> </ul>
2	117°	-55°	650	<ul style="list-style-type: none"> <li>- Ore genesis and geological model (interpreted feeder zone and interpreted Lens 5 at depth);</li> <li>- northern portion of MMR conductivity anomaly (Priority#1) associated with moderate IP chargeability response;</li> <li>- geochemical anomalies in soil and rock chips; and</li> <li>- depth extension of existing historic copper mine workings.</li> </ul>
3	105°	-58°	350	<ul style="list-style-type: none"> <li>- Ore genesis model of interpreted Lens 4 and Lens 3 at depth; and</li> <li>- central portion of MMR conductivity anomaly Priority#2 associated with IP chargeability response at depth of 120m.</li> </ul>
4	105°	-55°	400	<ul style="list-style-type: none"> <li>- Depth extension of Mather Zone mineralisation intersected in holes (AKDD159 and AKRC134); and</li> <li>- depth extension of McCarron zone mineralisation intersected in holes (AKDD159 and AKRC134), McCarron Zone (depth of 200m) and McCarron East Zone (depth of 250m).</li> </ul>

### **About the NSW Government Sponsorship**

On 17 September 2014 Argent Minerals announced that it had been awarded NSW Government funding.

This New South Wales Government initiative is designed to encourage private drilling programs that are searching for mineral deposits in under-explored areas of New South Wales, and employ the latest technology.

The Kempfield deep diamond drilling project has been selected on the basis of its merit to participate in the New Frontiers Co-operative Drilling Program, following a detailed review by an independent panel of experts.

The Kempfield deep drilling project has attracted one of the five largest grants.

Under the Co-operative Drilling Program award, Argent Minerals will receive \$158,400 on completion of the work, and after sharing of the results, drill samples and reports with the NSW Government Division of Resources and Energy.

### **Next steps**

Whilst Argent is in possession of an approval for drilling up to six diamond holes in the area, the Company will shortly submit an amendment to the Government authorities with precise details of the collars for each hole as set out in this announcement.

Argent anticipates a relatively short turnaround of the final approval process.

The commencement date for the drilling in November 2014 will be announced to the ASX once a firm date has been set.

For further information please contact:

David Busch

Managing Director

**Argent Minerals Limited**

M: 0415 613 800

E: [david.busch@argentminerals.com.au](mailto:david.busch@argentminerals.com.au)

## COMPETENT PERSON STATEMENTS

### Previously Released Information

This ASX announcement contains information extracted from the following reports which are available for viewing on the Company's website <http://www.argentminerals.com.au> :

- 24 June 2014 Kempfield Exploration Update – drill target delineation;
- 27 July 2014 Geophysics Team Mobilises for Kempfield DHMMR Survey;
- 27 August 2014 Presentation to 8th Annual Mining Conference, Orange;
- 8 September 2014 MMR indicates new lead zinc lenses 4, 5 and 6 at Kempfield;
- 17 September 2014 Kempfield Drilling Program Awarded NSW Government Funding;
- 16 October 2014 Base and precious metal grade zonation in Kempfield Resource; and
- 22 October 2014 Conductive Zones detected by MMR surveys at Kempfield.

The Company confirms it is not aware of any new information or data that materially affects the information included in the original market announcements, and, in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement

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By its very nature exploration for minerals is a high risk business and is not suitable for certain investors. Argent Minerals securities are speculative. Potential investors should consult their stockbroker or financial advisor. There are a number of risks, both specific to Argent Minerals and of a general nature which may affect the future operating and financial performance of Argent Minerals and the value of an investment in Argent Minerals including but not limited to economic conditions, stock market fluctuations, silver, lead, zinc, copper and gold price movements, regional infrastructure constraints, securing drilling rigs, timing of approvals from relevant authorities, regulatory risks, operational risks and reliance on key personnel and foreign currency fluctuations.

Certain statements contained in this Announcement, including information as to the future financial or operating performance of Argent Minerals and its projects, are forward-looking statements that:

- may include, among other things, statements regarding targets, estimates and assumptions in respect of mineral resources and mineral reserves and anticipated grades and recovery rates, production and prices, recovery costs and results, capital expenditures, and are or may be based on assumptions and estimates related to future technical, economic, market, political, social and other conditions;

- are necessarily based upon a number of estimates and assumptions that, while considered reasonable by Argent Minerals, are inherently subject to significant technical, business, economic, competitive, political and social uncertainties and contingencies; and,
- involve known and unknown risks and uncertainties that could cause actual events or results to differ materially from estimated or anticipated events or results reflected in such forward-looking statements.

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All forward-looking statements made in this announcement are qualified by the foregoing cautionary statements. In particular, the corporate mission and strategy of the Company set forth in this Announcement represents aspirational long-term goals based on current expectations. Investors are cautioned that forward-looking statements are not guarantees of future performance and accordingly investors are cautioned not to put undue reliance on forward-looking statements due to the inherent uncertainty therein.

No verification: Although all reasonable care has been undertaken to ensure that the facts and opinions given in this Announcement are accurate, the information provided in this Announcement has not been independently verified.