

SIGNIFICANT INTERSECTIONS AT KEMPFIELD – INCLUDING COPPER AND HIGH GRADE GOLD

Argent at a glance

ASX-listed mineral resource company focused on the expansion, development, extraction and marketing of its existing base and precious metals discoveries in NSW.

Facts

■ ASX Code:	ARD
■ Share price (21 December 2015):	\$0.019
■ Shares on issue:	255.8M
■ Market capitalisation:	\$4.86M

Directors and Officers

Stephen Gemell
Non-Executive Chairman

David Busch
Managing Director

Peter Nightingale
Non-Executive Director

Peter Michael
Non-Executive Director

Vinod Manikandan
Company Secretary

Contact details

PRINCIPAL OFFICE
Suite 6, Level 6, 50 Clarence Street
Sydney NSW 2000
T: +61 2 9262 2211
F: +61 2 9475 5346

REGISTERED OFFICE
Level 2, 66 Hunter Street
Sydney NSW 2000
T: +61 2 9300 3390
F: +61 2 9221 6333
E: admin@argentminerals.com.au

Highlights:

- First time copper intersections at Kempfield, including 1.8 m @ 1.21 % Cu from 136 metres by hole AKDD181
- High grade gold intersected by hole AKDD181 – 1 m @ 1,065 g/t Au from 97 metres by hole AKDD181
- Discovery of new mineralisation supporting Argent Lens 4 interpretation
- Depth potential of Kempfield deposit confirmed to > 400 metres
- Strong chlorite and moderate intensity carbonate alteration observed in Lens 2 position at 420 m depth - indicative of potential proximity to massive sulphides

Argent Minerals Limited (ASX: ARD, Argent, Argent Minerals or the Company) is pleased to report that significant intersections have been encountered early in the Kempfield diamond drilling program.

Holes AKDD181 and AKDD180 have both intersected copper values, including 1.8 m @ 1.21 % Cu from 136 metres by hole AKDD181.

Hole AKDD181 has also intersected very high grade gold, including 1 m @ 1,065 g/t Au from 97 metres.

Whilst the exploration results are preliminary in nature at this early stage of the planned 7 hole 3,200 metre drilling program, the intersections confirm the occurrence of new mineralisation that extends along strike to the north – supporting earlier interpretations by Argent of a Lens 4 based on magnetometric conductivity (MMC) surveys performed in 2014, and symmetry with existing known lenses.

Intersections also confirm depth extensions of Lens 2 to greater than 400 metres, with the observed alteration intensity indicating proximity to possible massive sulphides.



Whilst elevated assays were observed at the Lens 3 position for hole AKDD181, no significant mineralisation was intersected in that location.

About the intersections

Significant assays are reported in the order of drilling as follows:

■ Hole AKDD181

- 1 m @ 0.06% Pb, 0.02% Zn, 0.16% Cu, 143 g/t Ag & **1065¹ g/t Au** from 97 metres;
- 1.8 m @ 0.02% Pb, 0.05% Zn, **1.21% Cu, 50g/t Ag & 2.99 g/t Au** from 136.8 metres;
- 1.6 m @ 0.93% Pb, 0.82% Zn, 0.01% Cu, **29 g/t Ag** & 0.42 g/t Au from 382.5 metres; and
- 0.2 m @ **4.09 g/t Au** from 407.3 metres.

■ Hole AKDD180

- 4 m @ 0.45% Pb, 1.19% Zn, 0.45% Cu, 20 g/t Ag & 0.1g/t Au from 54 metres.

Notes:

1. The magnitude of the Au intersection is likely due to a nugget effect. However, the results are of a considerable value. Core inspections will be conducted to confirm whether the gold occurrence is nuggety or homogeneous in nature. Further assays will also be conducted on core and pulps to test for the possibility of a nugget effect.
2. Drill core was selectively sampled for assay based on visual observations. Further sampling assays may be conducted as deemed appropriate by the exploration manager.
3. Visual core observations conducted at the Lens 2 position at depth noted strong to intense chlorite alteration with moderately intense carbonate alteration indicating a proximal position to possible massive sulphides. Alteration of this type and combination are common in the zone between the barite position and massive sulphides.
4. Figure 1 provides a plan view with the hole collars and approximate hole azimuths indicated.
5. Figures 2 and 3 provide section representations of the holes and the reported intersections in relation to existing and interpreted lenses.
6. Hole AKDD180 was terminated at 210.5 metres due to poor drilling conditions encountered.

Next steps

Further analysis will be conducted by Argent on the first two holes, including pathfinder element geochemistry, in order to optimise the position and design of the next holes in the drilling program.

Drilling is anticipated to recommence approximately during the 3rd week of January 2016, depending on the analysis and drilling logistics.

For further information please contact:

David Busch

Managing Director

Argent Minerals Limited

M: 0415 613 800

E: david.busch@argentminerals.com.au

Figure 1 – Plan view showing collar locations of Holes AKDD181 and AKDD180

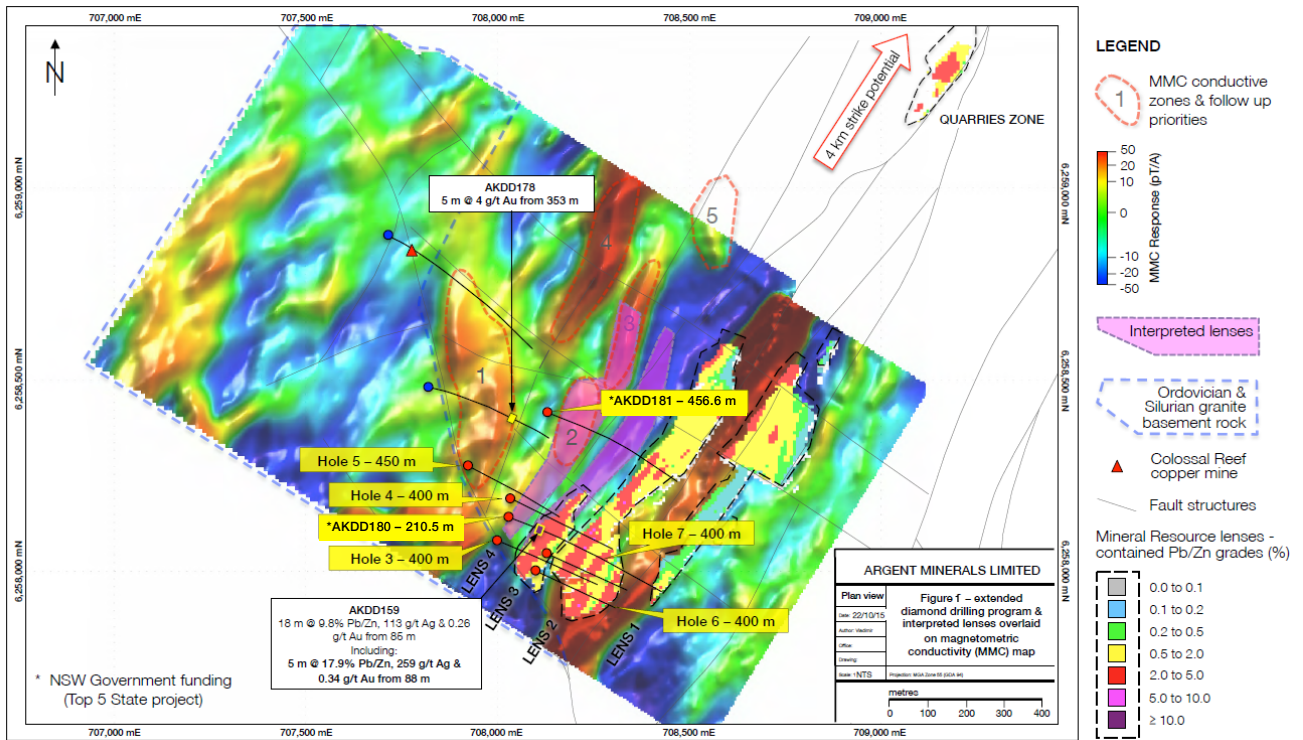


Figure 2 – West-East section view of hole AKDD181 showing intersections in relation to Lenses 2, 3, and the new Lens 4

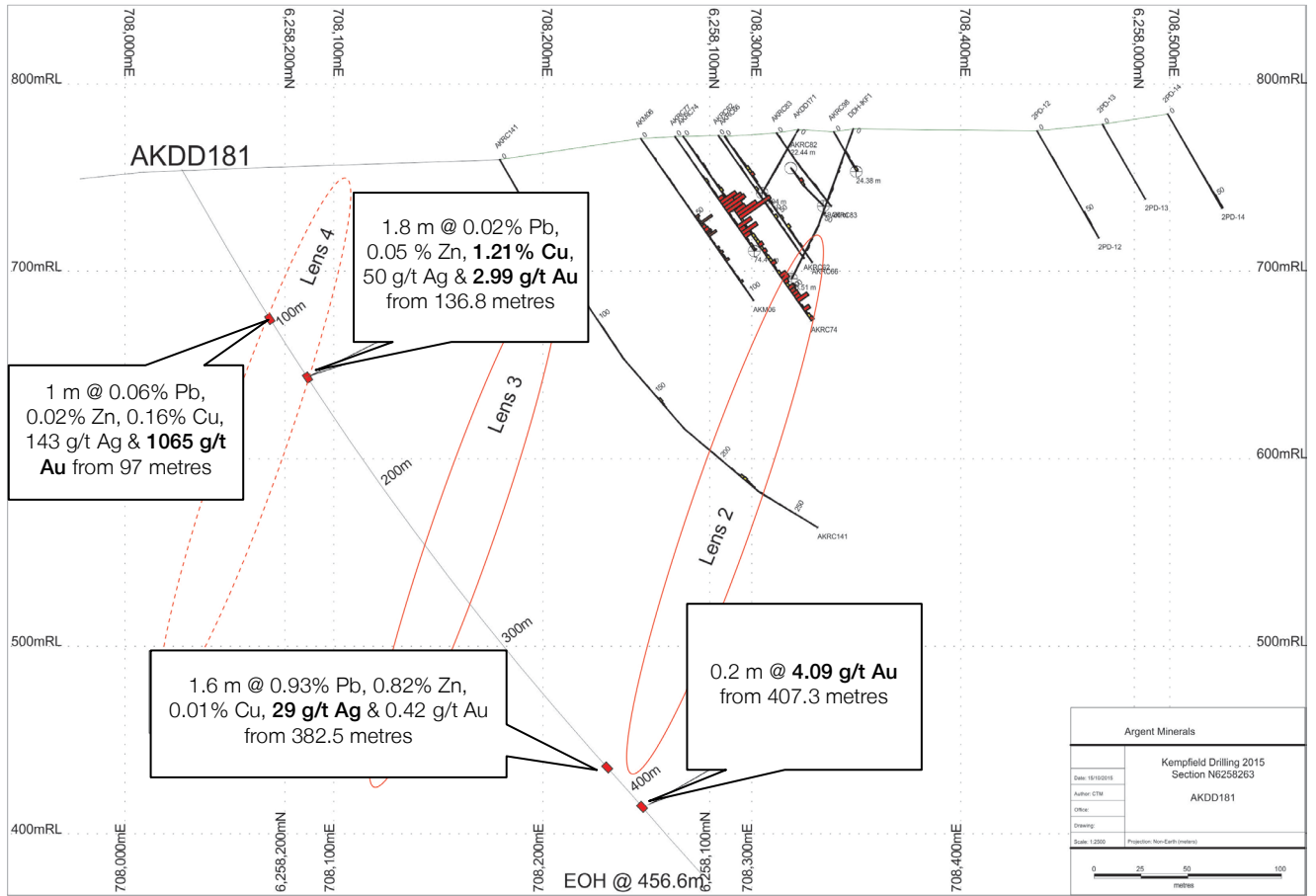
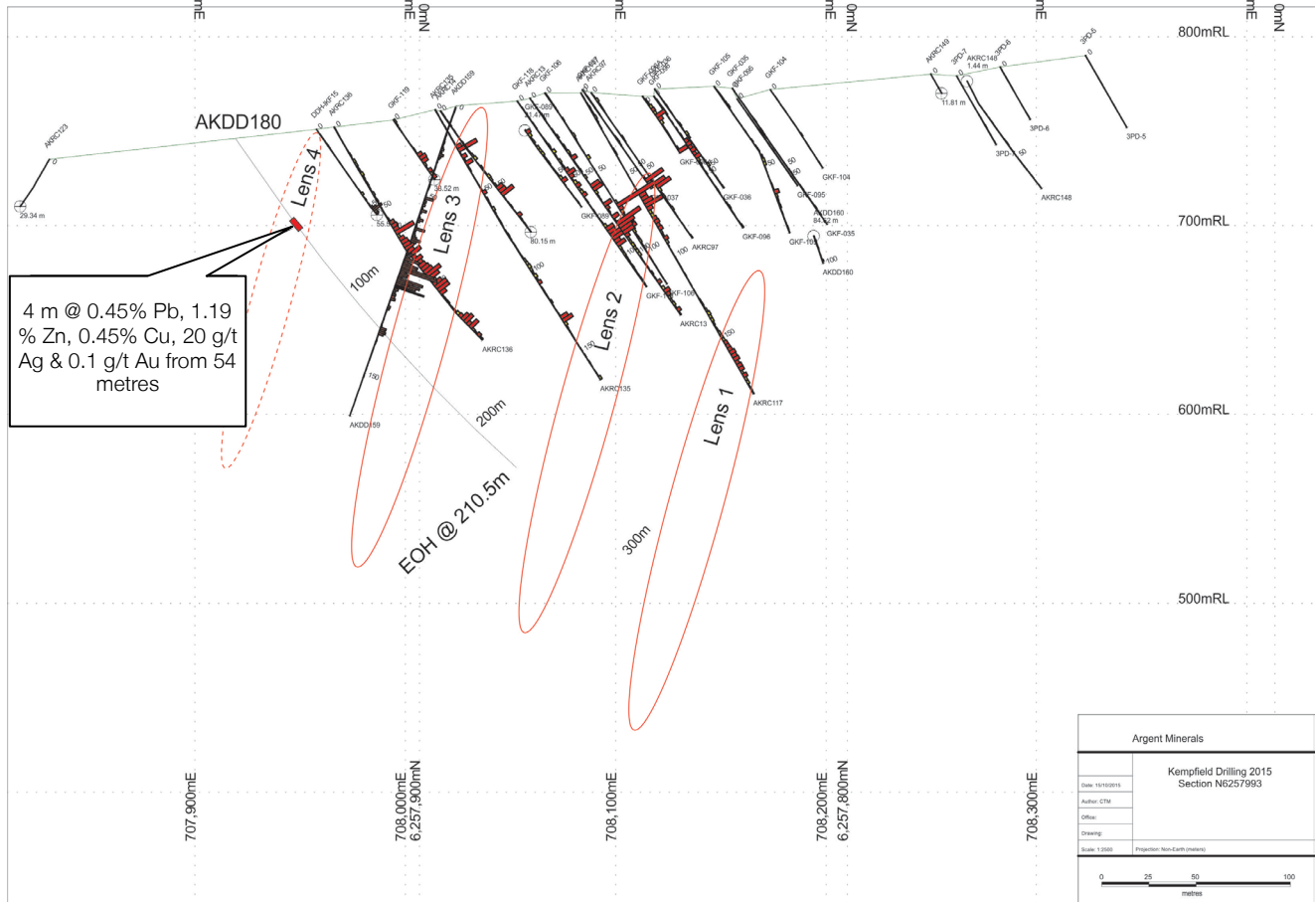


Figure 3 – West-East section view of hole AKDD180 showing intersections in relation to Lenses 2, 3, and the new Lens 4





APPENDIX A - JORC 2012 EDITION TABLE 1

KEMPFIELD PHASE 2 - 2015 DRILL PROGRAM ASSAY RESULTS

The following information follows the requirements of JORC 2012 Table 1 Sections 1, 2 and as applicable for ASX release related to Kempfield Phase 2 2015 Drill Program Assay Results.

Section 1 - Sampling Techniques and Data

Criteria	Commentary
Sampling techniques	Drillholes were sampled based on observed mineralisation or intensity of alteration. PQ core utilised ¼ core, HQ utilised ½ core and NQ utilised ½ core for sample submittal. Samples were constrained to >0.6m or <1.4m interval lengths with an average sample length of 1m. A minimal amount of samples were taken with interval lengths <0.6m due to rock condition or stratigraphic constraints. Assay and preparation were carried out by ALS Global in Orange. 2-3kg samples were crushed using a jaw crusher, riffle split, and pulverised to produce a 250g sample for various assay methods.
Drilling techniques	Diamond drilling utilized PQ collars, HQ drilling to oxidation depth, and NQ drilling thereafter. The drill string was configured with a triple tube 3 m barrel and wireline/overshot setup.
Drill sample recovery	Recovery was recorded by the geologist or field geotechnician. HQ was extended to reasonable depth to maintain recovery in poor ground.
Logging	Geological logging was conducted to a reasonable standard via graphic and digital logging noting lithology, mineralisation, alteration and structures with associated degrees of intensity. Logging was undertaken using both qualitative and quantitative methods accompanied with wet and dry core photography, and lithological sampling for litho geochemistry.
Sub-sampling techniques and sample separation	Drillholes were sampled based on observed mineralisation or intensity of alteration. PQ core utilised ¼ core, HQ utilised ½ core and NQ utilised ½ core for sample submittal. Samples were constrained to >0.6m or <1.4m interval lengths with an average sample length of 1m. A minimal amount of samples were taken with interval lengths <0.6m due to rock condition or stratigraphic constraints. Assay and preparation were carried out by ALS Global in Orange. 2-3kg samples were crushed using a jaw crusher, riffle split, and pulverized to produce a 250g sample for various assay methods. QAQC samples were taken at a 1:10 ratio utilizing coarse crush, fine crush and pulp duplicates along with blanks and certified reference material (CRM).
Quality of assay data and laboratory tests	The assaying method utilized a 4-acid digest (total) due to the ubiquitous presence of barite. Samples were then assayed using ICP-AES for: Ag, Al, As, Ba, Be, Bi, Ca, Cd, Ce, Co, Cr, Cs, Cu, Fe, Ga, Ge, Hf, In, K, La, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, Re, S, Sb, Sc, Se, Sn, Sr, Ta, Te, Th, Ti, Tl, U, V, W, Y, Zn, Zr. Samples over detection limit were re-assayed using 4-acid digest with ICP-AES finish. Au was quantified using a 30g charge with fire assay and AAS finish. Any over-limit samples were assayed via dilution
Verification of sampling and assaying	Argent minerals and ALS Global used independent QAQC assay checks. All drillhole information is stored graphically and digitally in excel format. Assay results spanned low-level, high-level and ore-grade amounts which have been reported in a homogenized format, where highest level assay has been reported regardless of highest value.
Location of data points	All data used in this report are in: Datum: Geodetic Datum of Australia 94 (GDA94) Projection: Map Grid of Australia (MGA) Zone: Zone 55



	<p>Collar positions were recorded by handheld GPS</p> <p>Topographic control was gained using government DTM data with handheld GPS check.</p>
Data spacing and distribution	<p>Drillhole AKDD180 intersected 20m from known mineralisation. Further work is necessary to convert to a mineral resource.</p> <p>Drillhole AKDD181 intersected 300m from known mineralisation and is regarded as an intersection only. Further work is necessary to convert to a mineral resource.</p>
Orientation of data in relation to geological structure	<p>Samples were taken with consideration of stratigraphy and alteration, samples do not straddle geological boundaries.</p> <p>The majority of results are considered as exploration and any predominant orientation is unknown as yet. Existing drilling shows drill intersections are within reasonable estimation as true width.</p> <p>Drillholes were targeted to intersect geology as close to perpendicular as possible.</p>
Sample security	<p>Samples were strictly controlled using graphic and digital sign off sheets onsite, strict sample transfer protocols onsite, delivery to ALS Global Orange by Argent Minerals staff, and receipt by ALS Global Orange.</p>
Audits or reviews	<p>A walk through inspection of ALS Global Orange facilities was conducted by the Exploration Manager of Argent Minerals and deemed to be satisfactory.</p> <p>A review of assay method was conducted by the Exploration Manager of Argent Minerals and it was changed from a partial digest (3-acid), to a total digest (4-acid). Significant amounts of barite cause Ag to precipitate out of solution which cannot be quantified in a partial digest solution.</p>

Section 2 - Reporting of Exploration Results

Criteria	Commentary
Mineral tenement and land tenure status	<ul style="list-style-type: none"> • Exploration Licence Kempfield EL5748, Trunkey Creek, NSW held by Argent (Kempfield) Pty. Ltd. (100%), a wholly owned subsidiary of Argent Minerals Limited. There are no overriding royalties other than the standard government royalties for the relevant minerals. • Argent Minerals has freehold title to the land which has historically been utilized for pastoral activities. Heritage items have been identified on the property. A native title claim (Gundungurra Application #6) was lodged on the 29th April 1997 covering a large area inclusive of Kempfield. A single counterpart only, the Gundungurra Tribal Council Aboriginal Corporation, has responded to Argent Minerals advertisements as part of the standard ‘right to negotiate’ process, and is the sole registrant. • The Company’s Exploration Licence renewal application for the full licence area for a three (3) year term has been approved to July 2016.
Exploration by other parties	<ul style="list-style-type: none"> • Argent Minerals Limited through its wholly owned subsidiary Argent (Kempfield) Pty Ltd is the sole operator of the project. Argent Minerals introduced best industry practice work. • Kempfield has been explored for more than forty years by several exploration companies as set out in Table 1.2.1.



	<p>Table 1.2.1 – Exploration history</p> <table border="1" data-bbox="391 338 1347 584"> <thead> <tr> <th>Company</th> <th>Period</th> <th>Exploration activities</th> </tr> </thead> <tbody> <tr> <td>Argent Minerals</td> <td>2007-current</td> <td>Drilling, VTEM survey, pole-dipole IP survey, gravity survey, ground EM and down-hole EM survey</td> </tr> <tr> <td>Golden Cross</td> <td>1996-2007</td> <td>Drilling and high resolution airborne magnetic survey</td> </tr> <tr> <td>Jones Mining</td> <td>1982-1995</td> <td>Drilling</td> </tr> <tr> <td>Shell</td> <td>1979-1982</td> <td>Drilling, ground EM survey, dipole-dipole IP survey, and soil sampling</td> </tr> <tr> <td>Inco</td> <td>1972-1974</td> <td>Drilling</td> </tr> </tbody> </table> <ul style="list-style-type: none"> Earlier exploration was performed by to the industry standard of the time; available QAQC indicates that the historical data is reasonable and suitable for use in Mineral Resource estimates. 	Company	Period	Exploration activities	Argent Minerals	2007-current	Drilling, VTEM survey, pole-dipole IP survey, gravity survey, ground EM and down-hole EM survey	Golden Cross	1996-2007	Drilling and high resolution airborne magnetic survey	Jones Mining	1982-1995	Drilling	Shell	1979-1982	Drilling, ground EM survey, dipole-dipole IP survey, and soil sampling	Inco	1972-1974	Drilling
Company	Period	Exploration activities																	
Argent Minerals	2007-current	Drilling, VTEM survey, pole-dipole IP survey, gravity survey, ground EM and down-hole EM survey																	
Golden Cross	1996-2007	Drilling and high resolution airborne magnetic survey																	
Jones Mining	1982-1995	Drilling																	
Shell	1979-1982	Drilling, ground EM survey, dipole-dipole IP survey, and soil sampling																	
Inco	1972-1974	Drilling																	
<p>Geology</p>	<ul style="list-style-type: none"> The deposit type is a volcanic hosted massive sulphide (VHMS) deposit The geological setting is in the Siluro-Devonian Kangaloolah Volcanics within the intra-arc Hill End Trough within the Lachlan Orogen, Eastern Australia; and The style of mineralisation is strata bound barite-rich horizons hosting silver, lead, zinc ± copper ± gold 																		
<p>Drill hole Information</p>	<p>The drillhole information derived from Newcrest Mining archive files are:</p> <ul style="list-style-type: none"> Drillhole collar AKDD180: <ul style="list-style-type: none"> 708,029mE; 6,258,120mN; Elevation 760 mRL; Dip -55 °; Azimuth 110° TN; Final depth 210.5m. Drillhole collar AKDD181: <ul style="list-style-type: none"> 708,144mE; 6,,258,406mN; Elevation 770 mRL; Dip -55 °; Azimuth 110° TN; Final depth 456.6 m. 																		
<p>Data aggregation methods</p>	<ul style="list-style-type: none"> No cutoff grades employed at this point Significant intersections use the ‘sumproduct’ function of MSexcel where grouped results exceed a single sample. Sub-grade results are included in significant intersections if bounded by 1 or more significant results. Only significant results initiate grouping whereby the majority of assay results are deemed significant 																		
<p>Relationship between mineralisation widths and intercept lengths</p>	<ul style="list-style-type: none"> Mineralisation dips steeply westward at approximately 80°. Drillholes AKDD180 and AKDD181 were drilled towards the east, intersecting 70% of downhole length to define true width. Downhole lengths are reported herein. 																		
<p>Diagrams</p>	<p>Diagrams are included in the report.</p>																		
<p>Balanced reporting</p>	<p>All significant results are reported herein.</p>																		



Other substantive exploration data	All available exploration data relevant to this report has been provided.
Further work	Lithogeochemical assessments will be conducted to adequately define mineralisation and alteration type. Further drilling is planned for 2016.

COMPETENT PERSON STATEMENTS

Exploration Results

The information in this report that relates to Exploration Results is based on information compiled by Mr. Clifton Todd McGilvray who is a member of the Australasian Institute of Mining and Metallurgy, an employee of Argent Minerals, and who has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activities being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the ‘Australasian Code for Reporting Exploration Results, Mineral Resources and Ore Reserves’ (JORC Code). Mr. McGilvray consents to the inclusion in this report of the matters based on the information in the form and context in which it appears.

DISCLAIMER

This ASX announcement (**Announcement**) has been prepared by Argent Minerals Limited (ABN: 89 124 780 276) (**Argent Minerals, Argent** or the **Company**). It should not be considered as an offer or invitation to subscribe for or purchase any securities in the Company or as an inducement to make an offer or invitation with respect to those securities. No agreement to subscribe for securities in the Company will be entered into on the basis of this Announcement.

This Announcement contains summary information about Argent Minerals, its subsidiaries and their activities which is current as at the date of this Announcement. The information in this Announcement is of a general nature and does not purport to be complete nor does it contain all the information which a prospective investor may require in evaluating a possible investment in Argent Minerals.

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 constrains, 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.

Argent Minerals disclaims any intent or obligation to update publicly any forward-looking statements, whether as a

result of new information, future events or results or otherwise. The words 'believe', 'expect', 'anticipate', 'indicate', 'contemplate', 'target', 'plan', 'intends', 'continue', 'budget', 'estimate', 'may', 'will', 'schedule' and similar expressions identify forward-looking statements.

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.