# ASX/MEDIA RELEASE

ARGENT MINERALS LIMITED

2 February 2017

## 10 METRE GOLD INTERSECTION RETURNED BY 1ST KEMPFIELD ASSAYS

### 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, ARDO |
| Share price (1 February 2017): | $0.027 |
| Shares on issue: | 360.1 M |
| Market capitalisation: | $9.72 M |

### 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

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### Highlights:

- Assay results have been received from the 8 hole, 1,833 metre Kempfield diamond drilling program – for hole AKDD197.
- A shallow gold system has been encountered by hole AKDD197, which was designed to test an IP anomaly overlapping magnetic anomaly situated to the south of the known deposit.
- Initial sampling of strong silicification with network quartz-pyrite veining from 12 to 53 metres has returned the following significant gold intervals in hole AKDD197:
  - **10.2 m @ 1.5 g/t Au from 28.0 m**
    incl. **5.0 m @ 2.6 g/t Au from 32.2 m**
    incl. **1.0 m @ 4.4 g/t Au from 32.2 m**
    and **1.0 m @ 5.1 g/t Au from 34.2 m**
  - **1.0 m @ 1.0 g/t Au from 48.4 m.**
- Drill core samples have been submitted for 5 holes to date, with samples from the remaining 3 holes to be submitted by approximately mid-February 2017.

Argent Minerals Limited (**ASX: ARD**, **Argent**, or the **Company**) is pleased to report that significant gold intersections have been returned by the first batch of assay results received for the recent 8 hole, 1,833 metre diamond drilling program at Kempfield.

Assays have been received for hole AKDD197, designed to test a strong induced polarisation (**IP**) chargeability anomaly overlapping a strong magnetic anomaly to the south of the main deposit, both untested prior to the current drilling programme.

**About the AKDD197 gold intersections**

Initial samples were submitted for assay through a zone of strong silicification with network quartz-pyrite veining in the AKDD197 drill core from 12.5 to 53.4 metres. AKDD197 was drilled to a total length of 152.2 metres.

The following significant intersections were returned:

- **10.2 m @ 1.5 g/t Au from 28.0 m**

  *Including:* **5.0 m @ 2.6 g/t Au from 32.2 m**

  *which includes the following individual samples:*

  **1.0 m @ 4.4 g/t Au from 32.2 m**; and

  **1.0 m @ 5.1 g/t Au from 34.2 m.**

- **1.0 m @ 0.97 g/t Au from 48.4 m at 0.5 g/t Au.**

There were no significant intersections of silver, lead, copper or zinc.

Figure 1 illustrates the collar positions and hole trace design for AKDD197 in the context of the lithostratigraphic model announced on 10 October 2016 and the potential extensions and geophysical anomalies that the drilling programme has been designed to test.

Figure 1 – Plan view of potential mineralisation extensions and geophysical anomalies being tested by the programme.

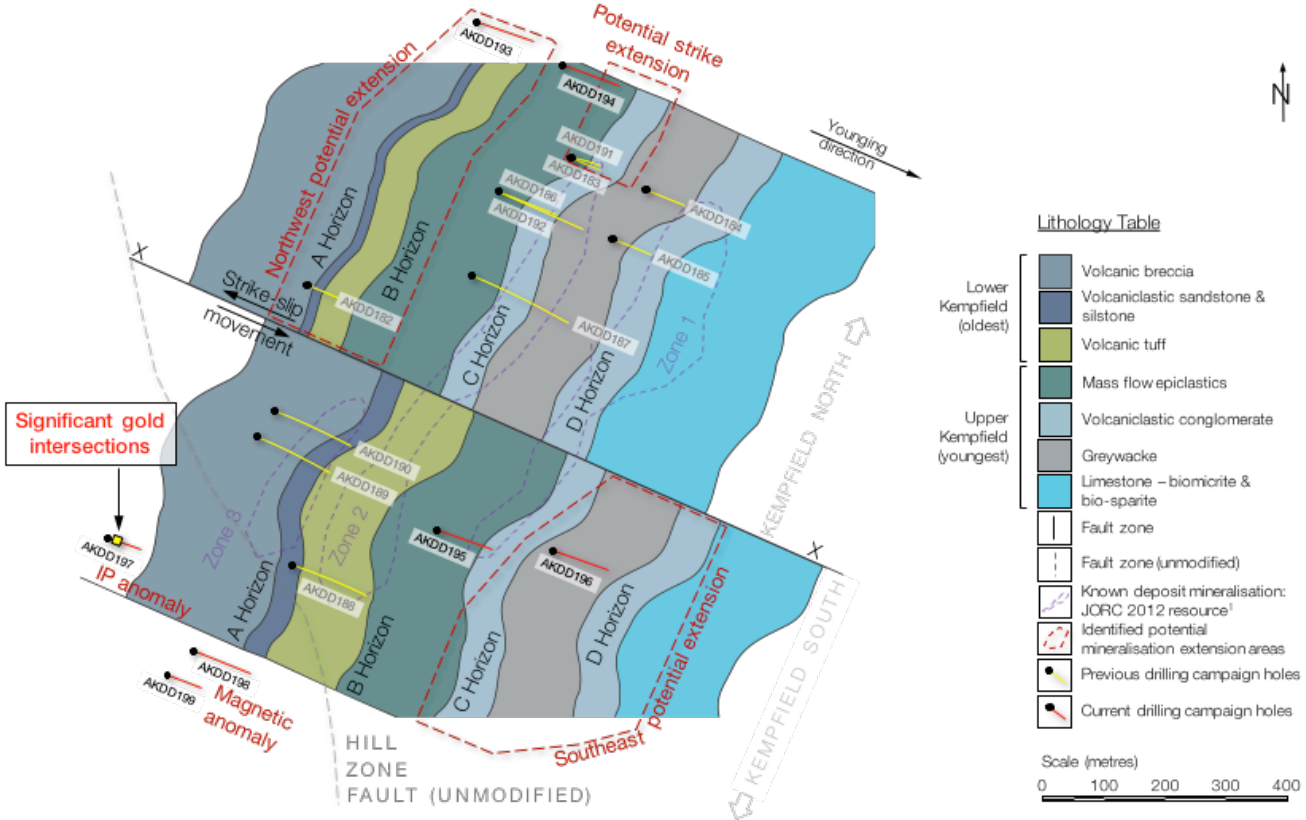
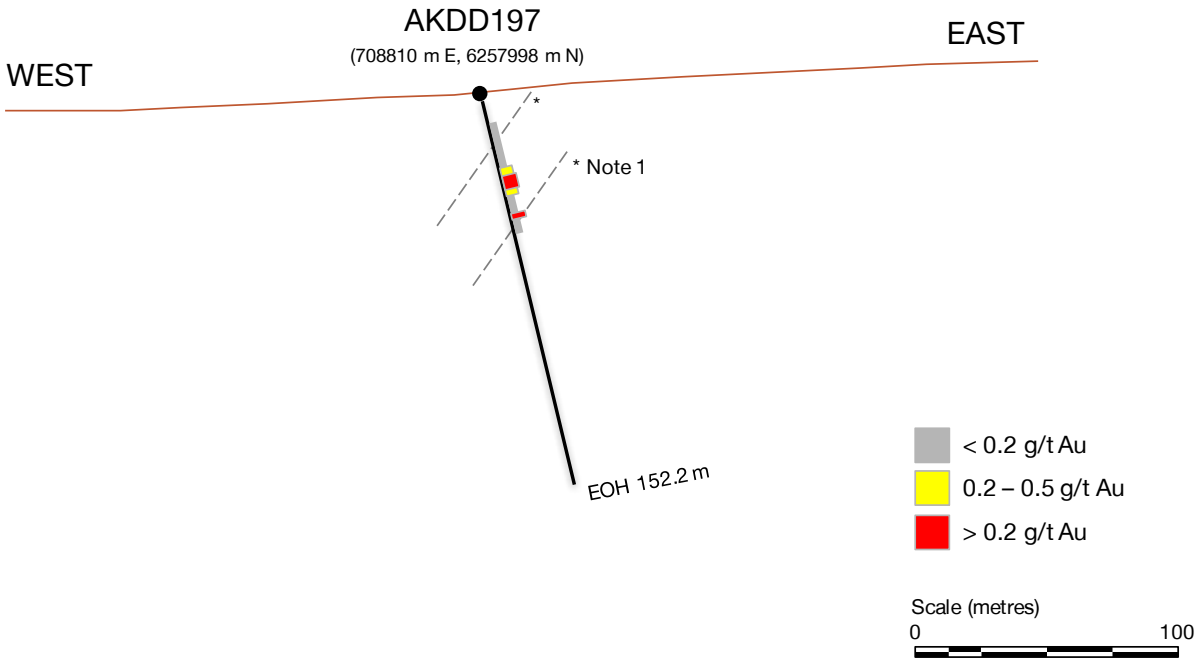


Figure 2 provides a section view illustrating hole AKDD197 and the returned assay results in the context of the preliminary visual observations of the sampled drill core.

Figure 2 – Section view illustration for AKDD197




* Note 1

The immediate local geological sequence and foliation is inclined at 55 degrees to the west returning true widths of 7.2 m, 3.5 m, and 0.7 m for the reported downhole widths of 10.2 m, 5 m and 1 m.

This area is confined within a complex corridor between the southwestern margin of the defined volcanic-hosted (VHMS) Kempfield Ag-Pb-Zn deposit and outcropping Silurian age granites to the west.

A detailed review of the results and investigation into the controls on mineralisation and anomalous geophysical signature is underway.

Potential mineralisation remains open to the south, at depth, and to the north. The Company's main tenement EL5748 extends approximately 2 kilometres to the south of hole AKDD197.

This ASX Report must be read in conjunction with Appendix A and JORC 2012 Table 1 provided in Appendix B.

For further information please contact:

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Managing Director

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# APPENDIX A

## SUMMARY FOR KEMPFIELD DRILLING EXPLORATION RESULTS

**Table A – Drill hole summary**

| BHID | Easting (m) | Northing (m) | RL (m) | Depth[1] (m) | Azimuth (° TN) | Dip (°) | Status |
|---|---|---|---|---|---|---|---|
| AKDD193 | 708418 | 6258841 | 753.3 | 224.9 | 110 | -60 | Results pending |
| AKDD194 | 708555 | 6258785 | 766.1 | 262.9 | 110 | -60 | Results pending |
| AKDD195 | 708371 | 6258005 | 782.9 | 233.7 | 110 | -60 | Results pending |
| AKDD196 | 708577 | 6257960 | 798.1 | 299.9 | 110 | -60 | Results pending |
| AKDD197 | 707810 | 6257998 | 747.8 | 152.5 | 110 | -80 | Reported |
| AKDD198 | 707971 | 6257785 | 763.0 | 206.9 | 110 | -60 | Results pending |
| AKDD199 | 707917 | 6257751 | 760.0 | 215.6 | 110 | -80 | Results pending |
| AKDD200 | 709150 | 6259500 | 839.3 | 236.6 | 110 | -60 | Results pending |

Notes:

1. 'Depth' in this Appendix A means hole length from collar to 'End of Hole' (EOH abbreviation)
2. Easting and Northing coordinates are all referenced to Geodetic Datum of Australia 94 (GDA94), Map Grid of Australia (MGA) projection, Zone 55
3. All holes were commenced with PQ3 drill width to firm material (approximately 20 metres), then continued to end of hole with HQ2 width
4. For hole AKDD197 mineralisation dips at 55° to the west. AKDD197 is inclined at 80° to the east. These parameters define the likely true widths shown in Table B.

**Table B – Significant reportable intersections**

| BHID | From (m) | To (m) | Interval (m) | Au (g/t) | True width[4] (m) | Hole width |
|---|---|---|---|---|---|---|
| AKDD197 | 28.0 | 38.2 | 10.2 | 1.5 | 7.2 | HQ2 |
| incl. | 32.2 | 37.2 | 5 | 2.6 | 3.5 | HQ2 |
| incl. | 32.2 | 33.2 | 1 | 4.4 | 0.7 | HQ2 |
| and | 34.2 | 35.2 | 1 | 5.1 | 0.7 | HQ2 |
| and | 36.2 | 37.2 | 1 | 1.6 | 0.7 | HQ2 |
| AKDD191 | 48.4 | 49.4 | 1 | 1.0 | 0.7 | HQ2 |
| AKDD197 EOH at 152.2 m | | | | | | |

# APPENDIX B - JORC 2012 EDITION TABLE 1

## KEMPFIELD DRILLING UPDATE

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

**Section 1 - Sampling Techniques and Data**

| Criteria | Commentary |
|---|---|
| Sampling techniques | Drillholes are sampled based on observed mineralisation or intensity of alteration. Eight holes were drilled. PQ ¼ core, and HQ ½ core was used for sample submittal. Samples are generally constrained to >0.6 m or <1.4 m interval lengths with an average sample length of 1 m. A minimal amount of samples are taken with interval lengths <0.6 m due to rock condition or stratigraphic constraints. |
| Drilling techniques | Diamond drilling utilised PQ collars and HQ drilling to depth. 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. Triple tube was permanently employed to maintain core integrity |
| Logging | 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. |
| Sub-sampling techniques and sample separation | Drillholes are sampled on observed mineralisation or intensity of alteration. PQ ¼ core, and HQ ½ core was used for sample submittal. Samples were constrained to >0.6 m or <1.4 m interval lengths with an average sample length of 1 m. A minimal amount of samples are taken with interval lengths <0.6 m due to rock condition or stratigraphic constraints. Assay and preparation are carried out by ALS Global Orange and ALS Global Brisbane. 2-3 kg samples were crushed using a jaw crusher, riffle split, and pulverized to produce a 250 g sample for various analytical methods. |
| Quality of assay data and laboratory tests | Samples were digested with a 4-acid total digest (hydrochloric, perchloric, nitric and hydrofluoric acids) to counteract the ubiquitous presence of barite. Samples were assayed using ICP-AES for: Ag, Al, As, Ba, Be, Bi, Ca, Cd, Co, Cr, Cu, Fe, Ga, K, La, Mg, Mn, Mo, Na, Ni, P, Pb, S, Sb, Sc, Sr, Th, Ti, Tl, U, V, W, Zn. Samples over detection limit were re-assayed using 4-acid digest with ICP-AES finish. Au was quantified using a 50g 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 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.<br>All drillhole information is stored graphically and digitally in excel format.<br>Assay results span low-level, high-level and ore-grade amounts which have been reported in a homogenised format. |
| Location of data points | All data used in this report are in:<br>Datum: Geodetic Datum of Australia 94 (GDA94)<br>Projection: Map Grid of Australia (MGA)<br>Zone: Zone 55<br>Collar positions were recorded by handheld GPS.<br>Topographic control was gained using government DTM data with handheld GPS check. |
| Data spacing and | AKDD197 is a single hole located 200m West of the southern limit of drilling at the Kempfield Ag –Pb-Zn deposit some historic drilling is located 120 m to the north of the AKDD197 collar. No drilling occurs to the |

| | |
|---|---|
| distribution | south or west of AKDD197 |
| Orientation of data in relation to geological structure | Samples were taken with consideration of stratigraphy and alteration, samples do not straddle geological boundaries.<br>The immediate local geological sequence and foliation is inclined at 55 degrees to the west returning true widths of 7.2 m, 3.5 m, and 0.7 m for the reported downhole widths of 10.2 m, 5 m and 1 m.<br>Drillholes were targeted to intersect geology on oblique sections to increase intercept potential. |
| Sample security | Chain of custody involved graphic and digital sign off sheets onsite, sample transfer protocols onsite, delivery to ALS Global Orange by Argent Minerals staff, and receipt by ALS Global Orange. |
| Audits or reviews | A walk through inspection of ALS Global Orange facilities was conducted by the Exploration Manager of Argent Minerals and deemed to be satisfactory.<br>A review of assay method was conducted by the Exploration Manager of Argent Minerals and was altered from a partial digest (3-acid), to a total digest (4-acid). Significant amounts of barite cause Ag to precipitate out of solution which is difficult to quantify in a partial digest solution. |

**Section 2 - Reporting of Exploration Results**

| Criteria | Commentary |
|---|---|
| Mineral tenement and land tenure status | • 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.<br>• Argent Minerals has freehold title to the land which has historically been utilised 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, responded to Argent Minerals advertisements as part of the standard 'right to negotiate' process, and is the sole registrant.<br>• The Company's Exploration Licence renewal application for the full licence area for a five (5) year term has been approved to July 2020. |
| Exploration by other parties | 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.<br>Kempfield has been explored for more than forty years by several exploration companies as set out in Table 1.2.1.<br>**Table 1.2.1 – Exploration history**<br>Company / Period / Exploration activities<br>Argent Minerals / 2007-current / Drilling, VTEM survey, pole-dipole IP survey, gravity survey, ground EM and down-hole EM survey<br>Golden Cross / 1996-2007 / Drilling and high resolution airborne magnetic survey<br>Jones Mining / 1982-1995 / Drilling<br>Shell / 1979-1982 / Drilling, ground EM survey, dipole-dipole IP survey, and soil sampling<br>Inco / 1972-1974 / Drilling<br>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. |
| Geology | The deposit type is a volcanic hosted massive sulphide (VHMS) deposit.<br>The geological setting is in the Siluro-Devonian Kangaloolah Volcanics within the intra-arc Hill End Trough within the Lachlan Orogen, Eastern Australia.<br>The style of mineralisation is strata bound barite-rich horizons hosting silver, lead, zinc ± copper ± gold. |
| Drill hole | |

| | |
|---|---|
| Information | <table><tr><th>BHID</th><th>Easting (m)</th><th>Northing (m)</th><th>RL (m)</th><th>Depth[1] (m)</th><th>Azimuth (° TN)</th><th>Dip (°)</th><th>Status</th></tr><tr><td>AKDD193</td><td>708418</td><td>6258841</td><td>753.3</td><td>224.9</td><td>110</td><td>-60</td><td>Results pending</td></tr><tr><td>AKDD194</td><td>708555</td><td>6258785</td><td>766.1</td><td>262.9</td><td>110</td><td>-60</td><td>Results pending</td></tr><tr><td>AKDD195</td><td>708371</td><td>6258005</td><td>782.9</td><td>233.7</td><td>110</td><td>-60</td><td>Results pending</td></tr><tr><td>AKDD196</td><td>708577</td><td>6257960</td><td>798.1</td><td>299.9</td><td>110</td><td>-60</td><td>Results pending</td></tr><tr><td>AKDD197</td><td>707810</td><td>6257998</td><td>747.8</td><td>152.5</td><td>110</td><td>-80</td><td>Reported</td></tr><tr><td>AKDD198</td><td>707971</td><td>6257785</td><td>763.0</td><td>206.9</td><td>110</td><td>-60</td><td>Results pending</td></tr><tr><td>AKDD199</td><td>707917</td><td>6257751</td><td>760.0</td><td>215.6</td><td>110</td><td>-80</td><td>Results pending</td></tr><tr><td>AKDD200</td><td>709150</td><td>6259500</td><td>839.3</td><td>236.6</td><td>110</td><td>-60</td><td>Results pending</td></tr></table><br>1. Depth is hole length to end of hole. |
| Data aggregation methods | This report contains significant gold intersections. Significant intersections are continuous intervals of sampling where each individual sample is of a grade greater than 0.2 g/t Au. |
| Relationship between mineralisation widths and intercept lengths | The immediate local geological sequence and foliation is inclined at 55 degrees to the west returning true widths of 7.2 m, 3.5 m, and 0.7 m for the reported downhole widths of 10.2 m, 5 m and 1 m. |
| Diagrams | Diagram descriptions are included in the Figure descriptions.<br>A plan view and a section view only are provided in this announcement, which has been created based on the Kempfield Micromine model for lithostratigraphic projections to surface, with MapInfo-generated hole collar positions and traces overlaid, all of which has been finished in Microsoft PowerPoint. |
| Balanced reporting | This report contains significant gold intersections. Significant intersections are continuous intervals of sampling where each individual sample is of a grade greater than 0.2 g/t Au. A cutoff of 0.5 g/t Au is also used to report the internal higher grade intervals. No Pb Zn or Ag grades associated with the hole are considered significant to report. Surrounding drilling to the North and Northeast has been reported in earlier Argent Minerals releases. |
| Other substantive exploration data | All available exploration data relevant to this report has been provided. |
| Further work | Lithogeochemical and geophysical assessments will be conducted to adequately define mineralisation and alteration type. Further drilling is planned to continue as soon as possible. |

## 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 :

- 10 October 2016 Diamond drilling results in major breakthrough at Kempfield[1]

Competent Person:

1. Clifton Todd McGilvray

The Company confirms 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.

### Exploration Results

The information in this report that relates to Exploration Results is based on information compiled by Mr. Peter Carolan 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. Carolan consents to the inclusion in this report of the matters based on the information in the form and context in which it appears.