10 October 2016

DIAMOND DRILLING RESULTS IN MAJOR BREAKTHROUGH AT KEMPFIELD

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.

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ASX Code:	ARD, ARDO
Share price (7 October 2016):	$0.025
Shares on issue:	358.8M
Market capitalisation:	$8.97M

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Highlights:

- **Major breakthrough** – VHMS host horizons identified at the Kempfield deposit, leading to efficient drill targeting of high grade precious and base metals.
- **Significant potential mineralised extensions identified.**
- **High grade gold trend geometry identified** and confirmed as a later stage orogenic overprint related to the **Trunkey-Kings Plain gold system.**
- **High grade VHMS precious and base metal discovery potential enhanced by identification of key elements characterising Kempfield:**
  - **Primary feeder zone** defined by analysis that vectors to an untested area with a coincident high magnetic signature to the south of the known deposit;
  - **Secondary feeder zones** located in Kempfield North and Quarries Zone; and
  - **Potential mineralised extensions of the newly identified VHMS host horizons** into substantial untested areas to the northwest and southeast of the known deposit.
- **Massive sulphide intersections** in proximity to known intrusive confirm Kempfield North as a high-ranking target area.
- **Proven continuity of mineralisation** along strike and at depth in Kempfield North.
- **Design of follow-up drill testing program underway.**

Argent Minerals Limited (**ASX: ARD**, **Argent**, or the **Company**) is pleased to report exploration results for the 2016 diamond drilling program completed at the Company's flagship project at Kempfield, NSW.

Strategically designed to test the Kempfield stratigraphy, the 11 hole diamond drilling program produced 3,167 metres of drill core containing vast amounts of information that is significant to understanding the Kempfield deposit for further exploration success. Intensive detailed analyses have been performed on the entire drill core, and will continue, with the results at this juncture representing a significant milestone in the exploration of the Kempfield VHMS system.

The significant advances reported in this announcement have taken the understanding of the deposit to a new, far more detailed, higher level than that afforded by the minimal information made available by historical RC drilling.

VHMS HOST HORIZONS IDENTIFIED FOR KEMPFIELD DEPOSIT

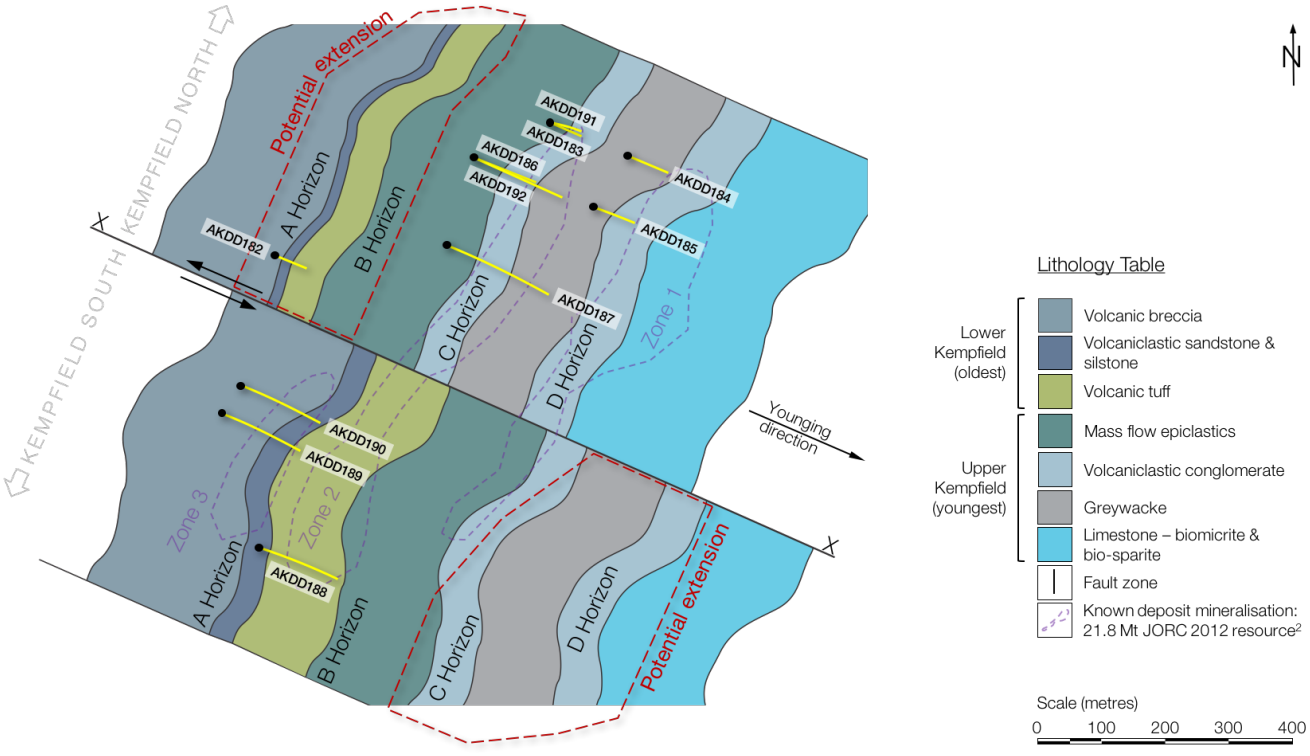
Vital to the exploration of volcanic-hosted massive sulphide (**VHMS**) systems is the identification of the specific host rock horizons or geological features that control mineralisation, and their arrangement.

The litho-stratigraphy has now been defined at the Kempfield deposit and four key host horizons have been identified. Horizons A, B, C and D have been identified within stratigraphy that dips approximately 70^0-80^0 to the west and youngs to the east[1].

The identification of the lithology and host horizons represents a major breakthrough for the project, leading to highly efficient drill targeting of high grade precious and base metals at Kempfield.

Figure 1 is a simplified geological plan view illustrating the dominant lithology and identified VHMS host horizons projected to surface, together with outlines of the three mineralisation zones of the known deposit and the 11 recently drilled holes.

Figure 1 – Simplified plan view of Kempfield lithology, the identified VHMS host horizons, and diamond drill hole locations



1. See p.7 of http://www.argentminerals.com.au/wp-content/uploads/2016/06/Presentation-to-Investors.pdf for the current interpretation of the Kempfield genesis in which the original VHMS deposit was subsequently tilted and overturned by a west to east rotation through approximately 100^0-120^0
2. See Appendix B of this announcement for mineral resource estimate details

LARGE POTENTIAL MINERALISED EXTENSIONS

Diamond drill core analyses provide a leap forward in the understanding of the deposit structure

Historical interpretation of the Kempfield deposit had been limited by the minimal available information from reverse circulation (RC) drilling. The new information provided by the recent diamond drilling program, however, has resulted in a leap forward in understanding the structure and architecture of the Kempfield deposit.

Diamond drilling provides a substantial level of detail that is missed by RC drilling, including bedding angles and thicknesses of the stratigraphy, as well as subtleties in host rock composition and mineralisation - details that are essential for constructing a 3D model of the VHMS deposit in preparation for drill targeting precious and base metals.

Vital information revealed – mineralisation offset by transverse faults

A key result of the detailed diamond drill core assessment is the identification of preferentially mineralised horizons that had been offset by numerous transverse faults, especially the main central fault labelled X-X in Figure 1. Sinistral strike-slip movement associated with this fault had previously given the impression that mineralisation was homogenous along mineralised zones but in fact was not. Whereas these movements may have historically been apparent as contradictions in the data, this new level of detail provides fresh understanding and clarity.

Figure 1 shows that Zone 1, for example, is in reality composed of mineralisation from D Horizon in Kempfield North (north of the X-X transverse fault), and C Horizon from Kempfield South (south of the fault line). This is in direct contrast to the historical interpretation that Zone 1 was composed of mineralisation from one continuous and homogenous lens. Dip-slip reverse fault movement has also given the appearance that lenses are continuous down-dip, but in reality comprises two different lenses juxtaposed by faulting (see Figure 8 - AKDD187 section).

Similarly, Zone 2 comprises mineralisation from B Horizon in Kempfield South and C Horizon in Kempfield North.

Potential mineralised extensions identified for drill targeting

An immediate result of this new level of detail is the identification of two potentially significant areas of additional mineralisation (each labelled as 'Potential Extension' in Figure 1):

- Northwest Kempfield – comprising A and B Horizons north of the transverse fault X-X; and
- Southeast Kempfield – comprising C and D Horizons to the south of the fault.

The discovery and delineation of the host horizons and the identification of the potential mineralised extensions represent significant advances at Kempfield. The mineralisation extension potential is especially significant when considered together with the recent depth extensions to northern portions of the deposit, which were confirmed to be at least twice that afforded by historical shallow drilling.

Given the existing JORC 2012 mineral resource estimate reference point of 21.8 million tonnes (Mt), **the additional tonnage potential is significant, and includes the prospect of high grade precious and base metals.**

HIGH GRADE GOLD TREND

The diamond drill core assessment has confirmed two main types of gold occurrences at Kempfield:

- VHMS related gold – generally in the range of 0.5-1.5 g/t Au, widespread, and associated with the original VHMS silver and base metal mineralisation event; and
- Orogenic gold overprint related to the Trunkey-Kings Plain gold system – that occurred as a later stage event. Gold occurrences of highly variable grades to as high as **1.0 m @ 1,065 g/t Au from 97 m** (AKDD181) have been identified as being related to the Trunkey-Kings Plain orogenic gold system. Diamond drill core analyses and modeling has identified that these occur within a variable trend that generally dips 25° to the west. The interference of the existing VHMS system and the overprinted gold system holds potential for further occurrences of structural upgrading to achieve high gold grades (see Figures 2, 3, and 6 to 9).

DIAMOND DRILL HOLE SECTIONS AND SIGNIFICANT INTERSECTIONS

Figures 2 to 9 follow, presenting section views of the identified lithology, significant intersections and selected drill core photos, in an order commencing from the most northern part of the deposit and progressing south (refer to Figure 1 for a plan view of drill hole collars and traces against the identified lithology and VHMS host horizons).

Figure 2 – Gold trend and VHMS lenses confirmed by analyses of diamond holes AKDD191, 183 and 184 (section view)

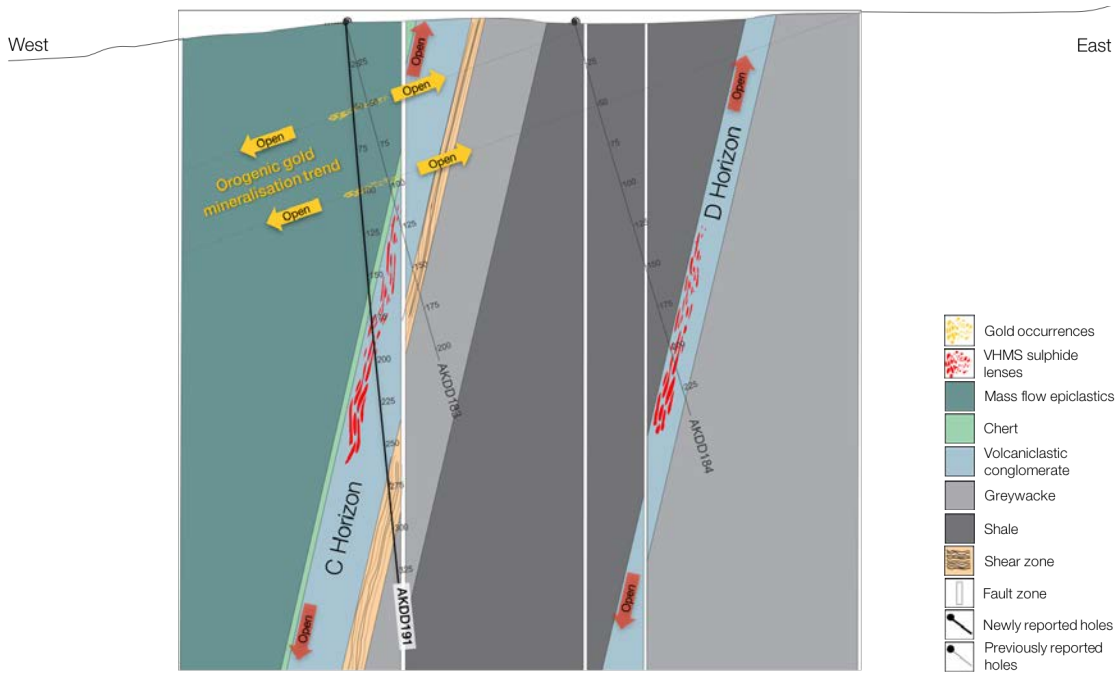
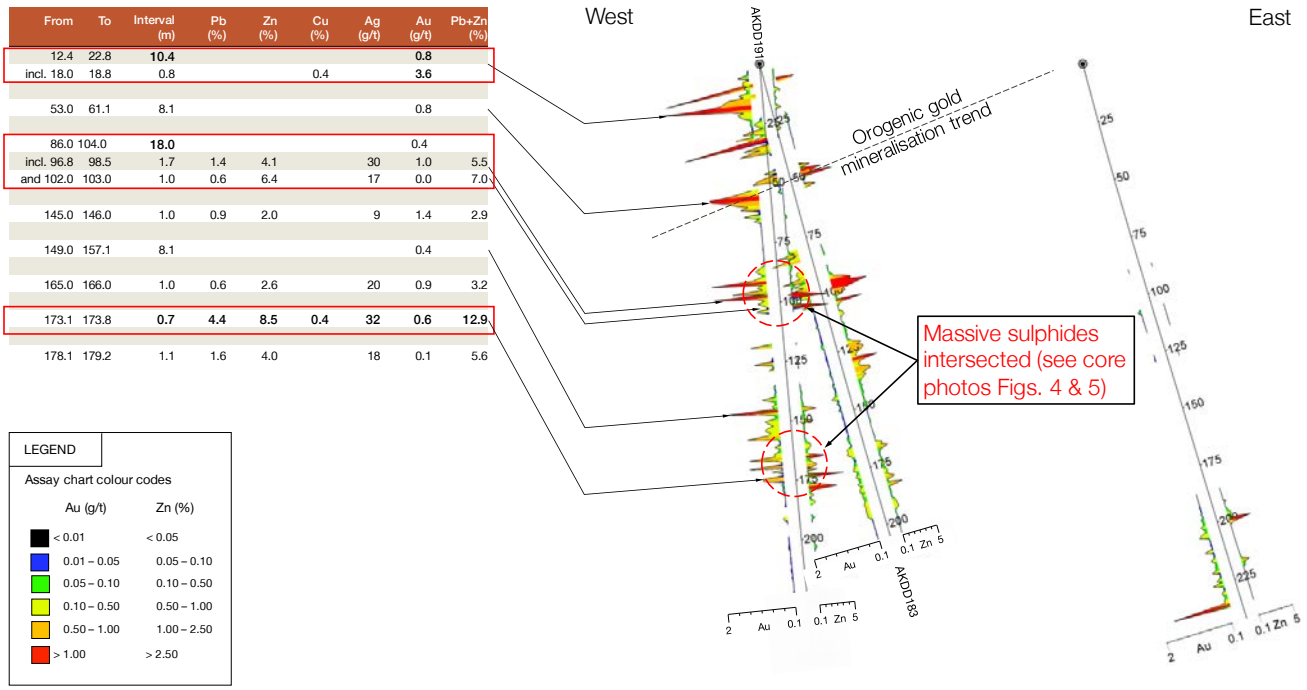


Figure 3 – Significant AKDD191 intersections (section view)[1]

From	To	Interval (m)	Pb (%)	Zn (%)	Cu (%)	Ag (g/t)	Au (g/t)	Pb+Zn (%)
12.4	22.8	**10.4**					**0.8**	
incl. 18.0	18.8	0.8			0.4		**3.6**	
53.0	61.1	8.1					0.8	
86.0	104.0	**18.0**					0.4	
incl. 96.8	98.5	1.7	1.4	4.1		30	1.0	5.5
and 102.0	103.0	1.0	0.6	6.4		17	0.0	7.0
145.0	146.0	1.0	0.9	2.0		9	1.4	2.9
149.0	157.1	8.1					0.4	
165.0	166.0	1.0	0.6	2.6		20	0.9	3.2
173.1	173.8	**0.7**	**4.4**	**8.5**	**0.4**	**32**	**0.6**	**12.9**
178.1	179.2	1.1	1.6	4.0		18	0.1	5.6



1. For AKDD183 and 184 significant intersections see announcement 15 June 2016 High grade zinc lead silver and gold added to Kempfield

Massive sulphides intersected by AKDD191

The small intervals of massive sulphide mineralisation are a very positive discovery for the northern area of Kempfield. It shows that sulphide mineralisation is increasing in quality, and grade, with depth and there is a high potential for further depth extensions. The coincidence of a rhyolite intrusive and increasing grades with depth strongly indicates there was a growth fault at this location controlling the distribution of sulphide mineralisation.

Figure 4 – AKDD191 core samples including intersection of massive sphalerite and minor galena from 97.8 m to 98.5 m

Figure 5 - AKDD191 core samples including massive galena and sphalerite within the intersection 0.7 m @ 8.5% Zn, 4.4% Pb, 32g/t Ag and 0.6% Au from 173.1 m

About the high grade gold potential and VHMS mineralised lenses identified through the analyses of diamond holes AKDD191, 183 and 184

AKDD191 was drilled to test for extensions to Pb, Zn, Cu, Ag and Au mineralisation intersected by AKDD183.

Continuity was observed in Pb, Zn, Cu and Au occurring as narrow, higher grade lenses with broad disseminated sulphide shells. Ag mineralisation is more widely distributed, but is centred around the higher grade occurrences of the other base metals. Au generally occurs as a broad alteration halo stratigraphically above Pb-Zn-Ag occurrences - consistent with metal zonation observed in VHMS style deposits.

Additional isolated Au intervals occur at a trend dipping approximately 25° to the west and cross-cutting existing geology and most faults. The latter gold occurrences are hosted by chloritic quartz and quartz-carbonate veins and have a positive correlation with bismuth and cobalt. **These Au occurrences have the characteristics of orogenic Au mineralisation seen in the Trunkey-Kings Plain gold system.**

Sulphide mineralisation on the AKDD191 section is consistently constrained to a volcaniclastic conglomerate unit which appears to have controlled hydrothermal fluids during mineralisation. The surrounding greywacke and shale likely acted as an aquiclude. **This distinction is important for the Kempfield deposit because an easily identifiable host sequence can now be distinguished and targeted by future drill programs.**

There is no drilling to the west of, or down-dip of, AKDD183. The lens remains open at depth and for 200 metres along strike to the north where existing mineralisation has previously been intersected. The lens intersected in AKDD184 is also open at depth and is potentially continuous to the north for a further 80 metres.

The elevated Au occurrence at 97m in AKDD183 has coincident elevated zinc. A review of this interval showed the sphalerite had been remobilised into the same set of structures. It appears that the later Au mineralising event was of a magnitude large enough to remobilise coincident sulphides, indicating the **potential for structural upgrades and Trunkey-Kings Plain type high grade gold in the main Kempfield deposit area.**

Figure 6 – Gold trend and VHMS lens continuity confirmed by analyses of diamond holes AKDD186, 192 and 185 (section view)

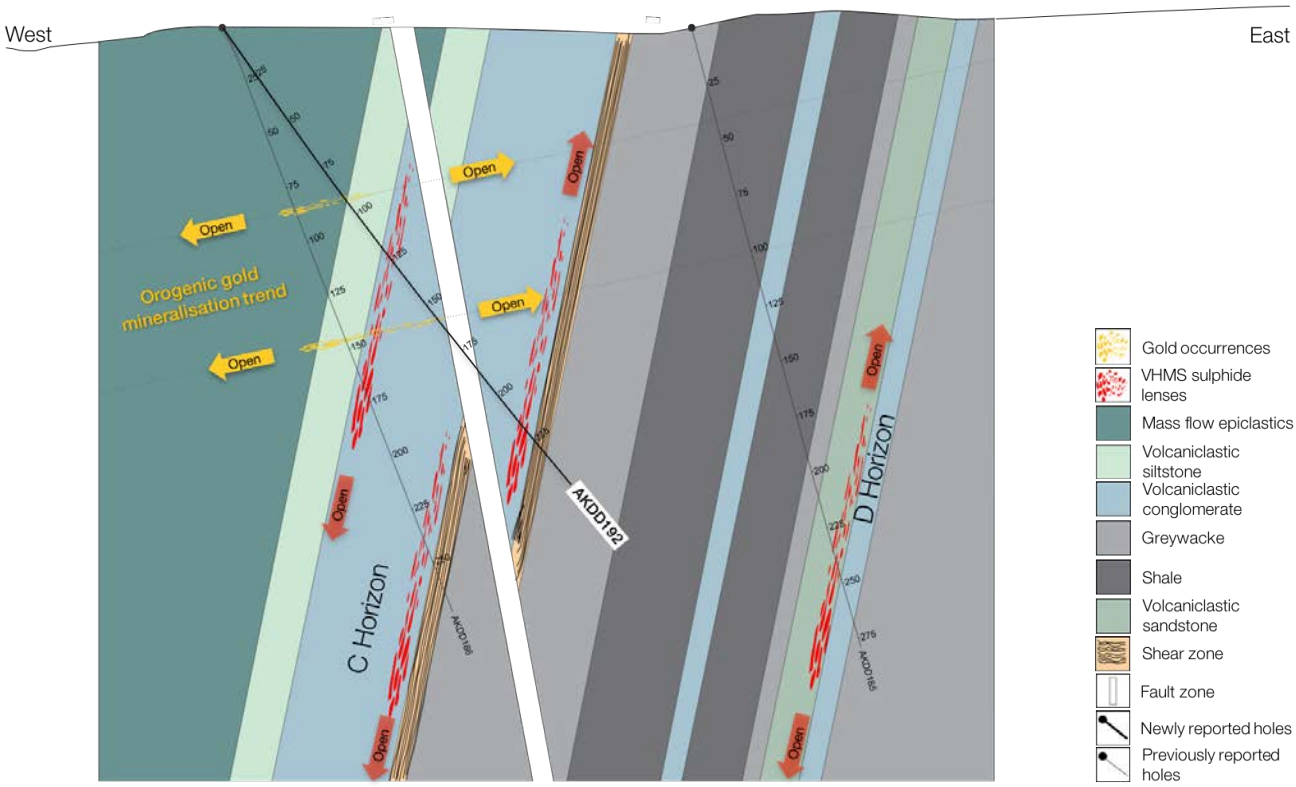
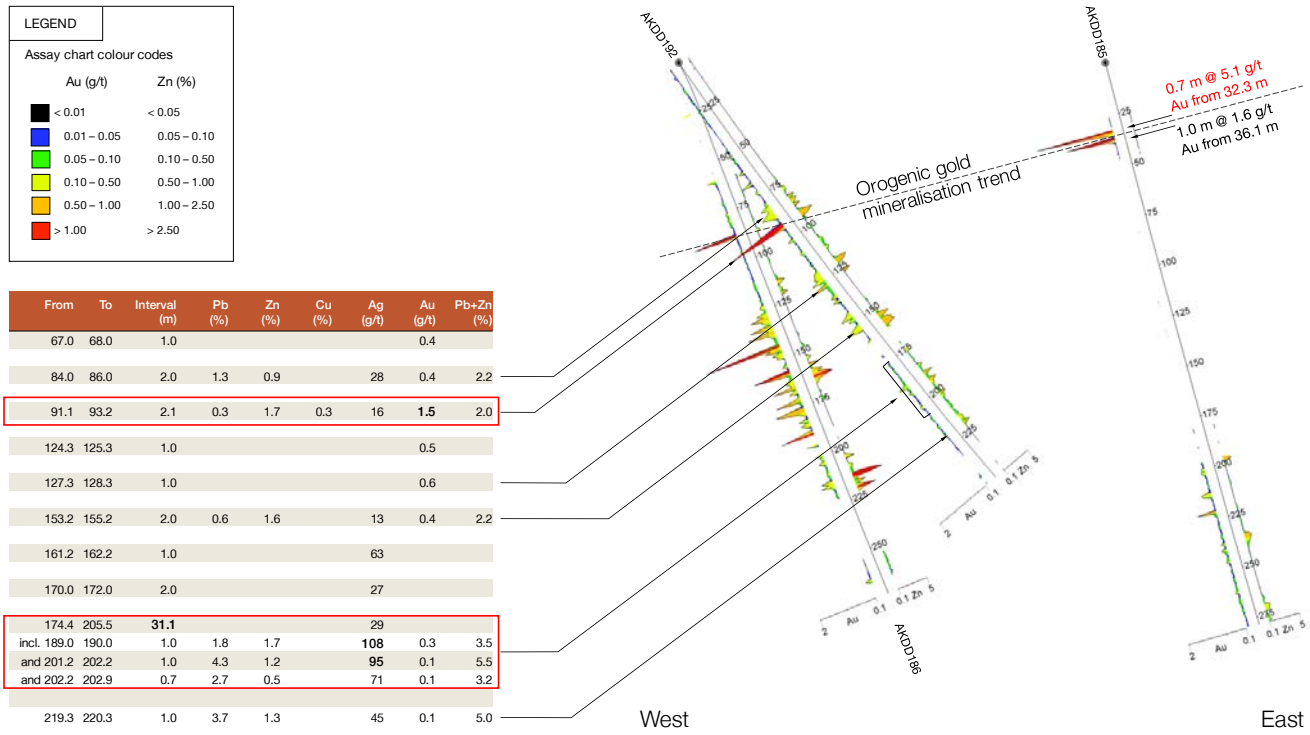
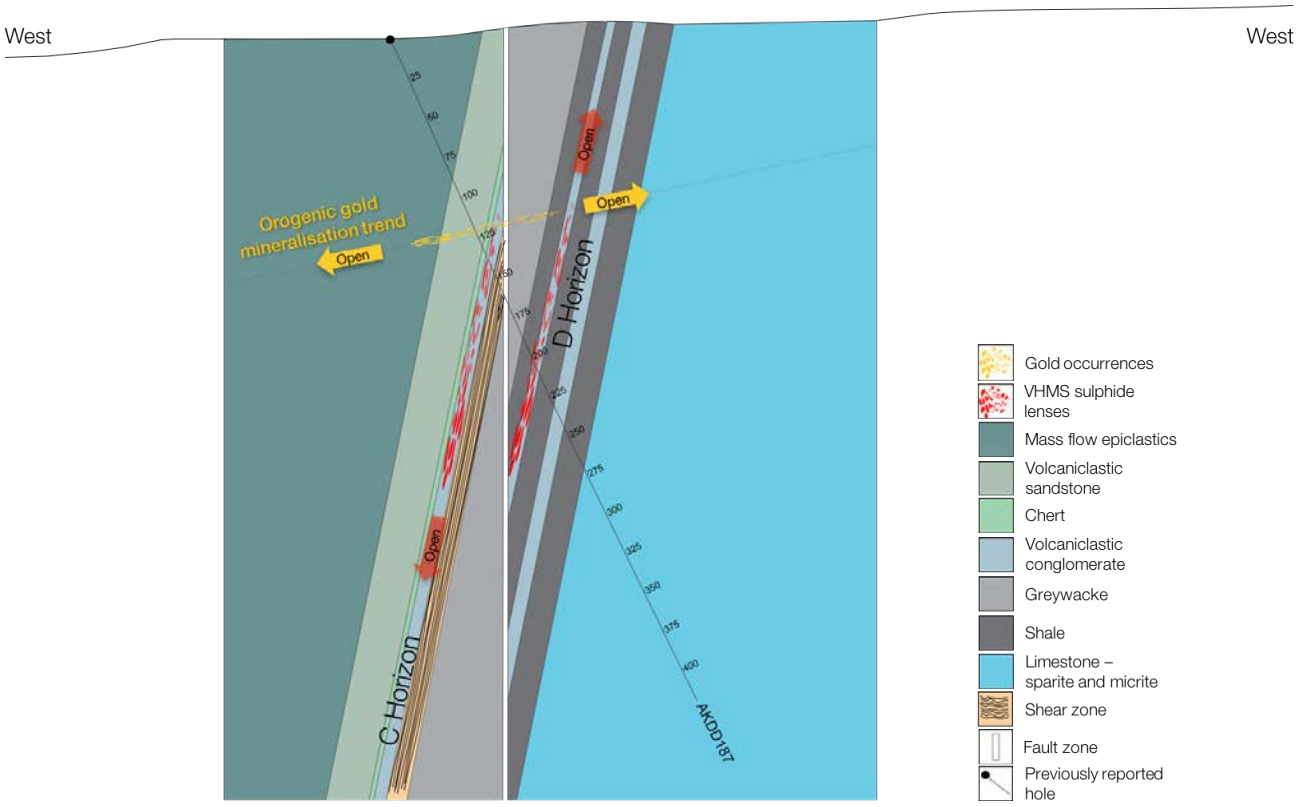


Figure 7 – Significant AKDD192 intersections (section view)[1]



From	To	Interval (m)	Pb (%)	Zn (%)	Cu (%)	Ag (g/t)	Au (g/t)	Pb+Zn (%)
67.0	68.0	1.0					0.4	
84.0	86.0	2.0	1.3	0.9		28	0.4	2.2
91.1	93.2	2.1	0.3	1.7	0.3	16	**1.5**	2.0
124.3	125.3	1.0					0.5	
127.3	128.3	1.0					0.6	
153.2	155.2	2.0	0.6	1.6		13	0.4	2.2
161.2	162.2	1.0				63		
170.0	172.0	2.0				27		
174.4	205.5	**31.1**				29		
incl. 189.0	190.0	1.0	1.8	1.7		**108**	0.3	3.5
and 201.2	202.2	1.0	4.3	1.2		**95**	0.1	5.5
and 202.2	202.9	0.7	2.7	0.5		71	0.1	3.2
219.3	220.3	1.0	3.7	1.3		45	0.1	5.0

Figure 8 – AKDD187 reveals new detail for mineralised lens geometry



AKDD187 provided valuable information in the Central Kempfield section, showing a progression from basal epiclastic breccia up stratigraphy through C and D Horizon positions into a well-developed carbonate sequence.

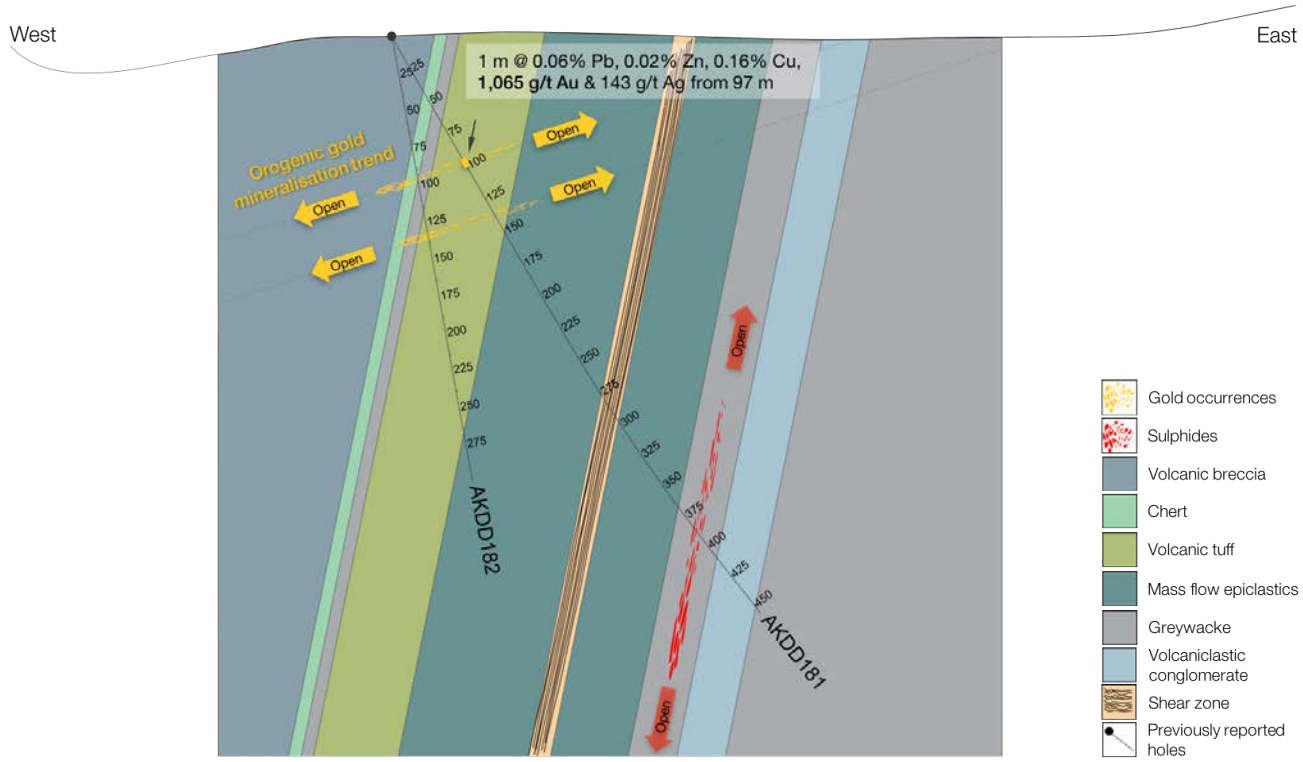
The thick greywacke and shale sequences seen in Figures 2 and 6 have been faulted out.

While both host sequences are present on this section, faulting has terminated the extension of each lens, and dip-slip fault movement has positioned the lenses nearing juxtaposition.

Mineralisation remains open at depth for C Horizon.

It is highly likely that similar instances occur throughout Kempfield which have been not yet been identified to date, due to the majority of historical drill coverage being percussion drilling.

Figure 9 – AKDD182 and AKDD181 confirm VHMS footwall mineralisation and geometry



Intersected footwall mineralisation indicates potential proximity to high grade base and precious metals

AKDD182 was drilled further to the west and most importantly, confirmed the upper conformable boundary of the mafic tuff sequence, and confirmed the vein controlled gold trends seen in AKDD181.

The AKDD182 and AKDD181 drillhole section defined the lower portion of Upper Kempfield, and provided sufficient information to delineate Kempfield geology into Upper and Lower domains, which is important to progressing the exploration strategy at Kempfield (Figure 1).

Historically, the mafic volcanic tuff was designated as part of the Ordovician Coombing Formation which was overlaid by the Kangaloolah Volcanics, the Kempfield host sequence (David 2015).

Recent drilling has confirmed that this mafic tuff unit is part of the lower Kangaloolah Volcanics and has the potential to be mineralised at the upper boundary (B Horizon).

About the orogenic gold

The orogenic gold trend on the AKDD182 and AKDD181 section dips 25° west, which is consistent with trends seen on sections further to the north. Gold occurrences are hosted by quartz veins or in strongly altered wall-rock on the hangingwall side of veins. Mineralised veins are difficult to distinguish from unmineralised veins at this stage; however, ongoing assessment of the Trunkey Gold occurrences and further work to be conducted at Kempfield will aid in defining any gold corridors in the future.

Drillholes AKDD190 and AKDD189

AKDD189 was drilled in Kempfield South to test a section 160m north of AKDD188 and AKDD190 was drilled 50m north of AKDD189 to test positioning and continuity of mineralisation across an apparent displacement fault.

Figure 10 – AKDD190 section

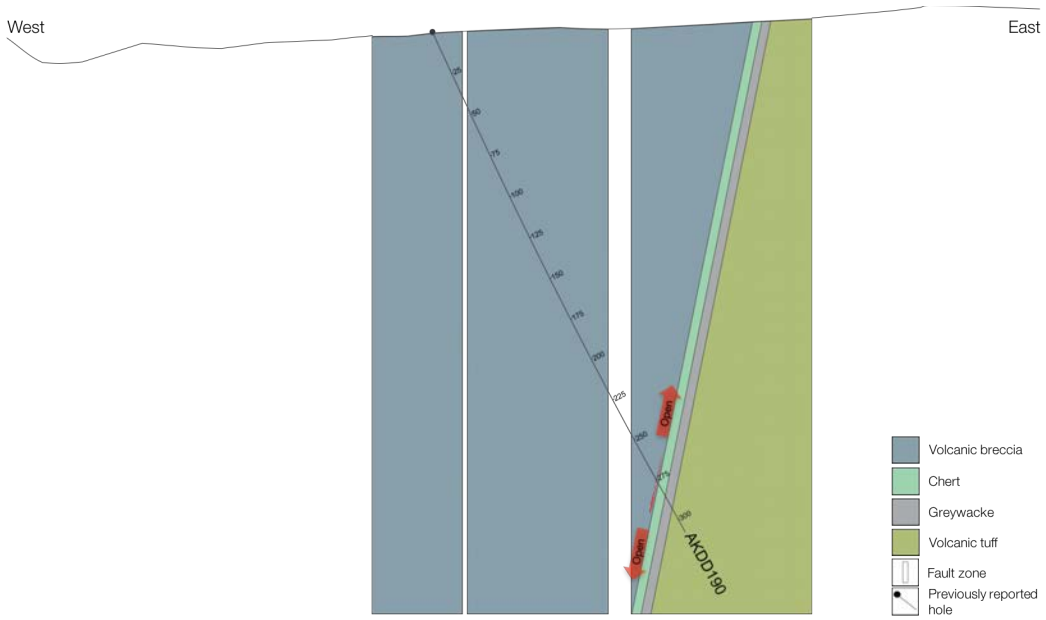
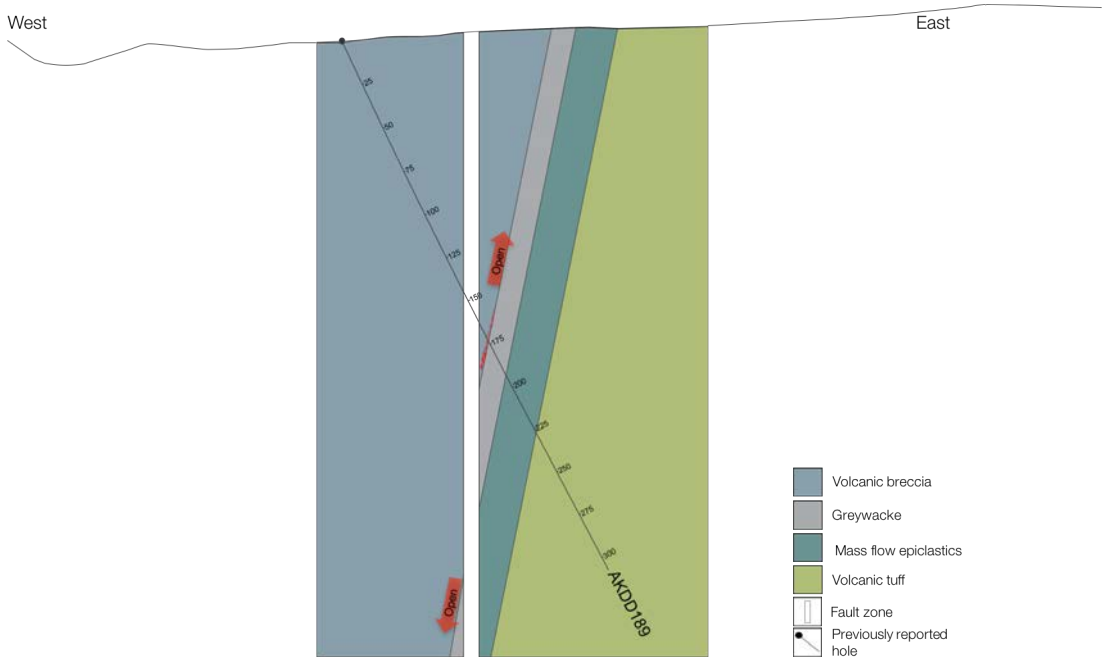


Figure 11 – AKDD189 section



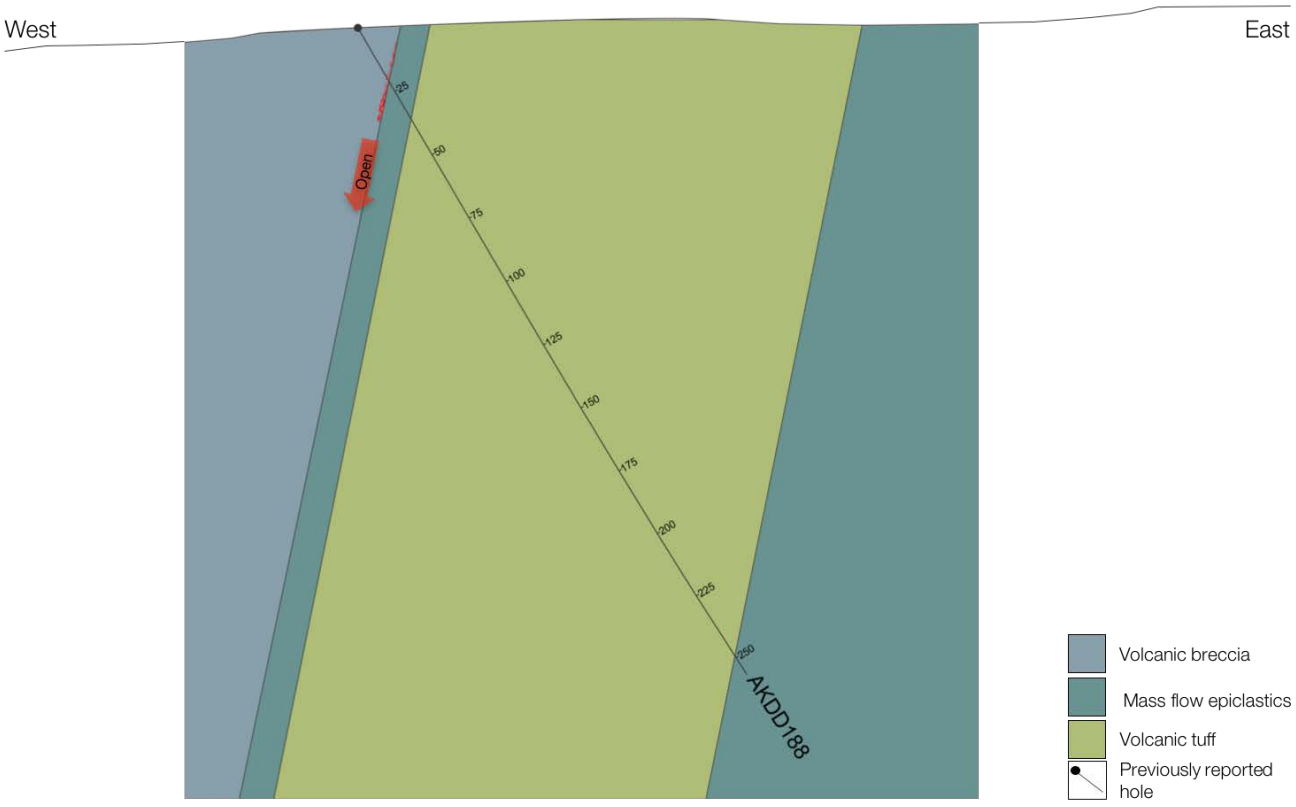
The key findings are:

- The mafic sequence observed in Kempfield South, seen in AKDD188, is continuous to AKDD189 from 280.7 m, to AKDD190 from 291.7 m and to AKDD182 from 131.1 m. The composition becomes more felsic towards the north and can be reliably projected for future interpretive work and drill design. There is a high degree of confidence in the identification of the mafic tuffaceous sequence due to the litho-geochemical fingerprint (elevated Cr, Ni and P); and
- The transition from felsic volcanism to mafic volcanism indicates that a significant change in the volcanic regime has occurred in Kempfield South. This change can represent close proximity to a vent source, interplay of multiple eruptive centres, and/or exhaustion of a rapidly depleted magma chamber.

Drillhole AKDD188

AKDD188 was drilled in the southern portion of Kempfield south (Figure 1).

Figure 12 – AKDD188 section



Two key findings were discovered:

- The transition from felsic to mafic volcanics is conformable and has resulted in a re-interpretation of the nature of the host rocks. Previous interpretations defined the mafic volcanic package as a basal or older sequence that was faulted against the Kempfield host package that was unlikely to host mineralisation. AKDD188 shows the conformable transition from felsic volcanics to mafic volcanics downhole. **The mafic volcanic package was present during mineralisation of the Kempfield deposit and now holds potential for hosting mineralised lenses**; and
- A notable gold occurrence in the upper portion of the mafic volcanic tuff in AKDD188 is a positive indicator of B Horizon extending further south (1.0 m @ 0.8 g/t Au from 238.0 m).

Significant outcome – untested area south of Hill Zone fault to be drill-tested

The first key finding above is a potentially significant outcome for Kempfield exploration. Historically assumed to be closed to mineralisation, the untested area to the south of the Hill Zone Fault (Figure 13) is to be scheduled for drill testing as a priority.

POTENTIAL HIGH TEMPERATURE ZONE

Key result

Diamond drill core analyses that a potential high temperature zone exists immediately to the south of the known Kempfield deposit. This is important for defining the deposit and assists with predicting potential locations of the higher grade portions for drill testing. The pyrite-pyrrhotite-chalcopyrite mineralisation intersected by hole AKDD182 indicates a higher temperature metal assemblage which occurs in the felsic volcanic breccia sequence.

Litho-stratigraphic assessments from diamond drill core have identified that prospective volcanogenic sediments have likely originated from the south. Most of the immature volcanic sediments are thickest in the south and thin towards the north. Average clast sizes in the epiclastic breccia sequence decrease towards the north. Quiescent sediment types are in contrast thickest in the north and thin out to the south. The depositional environment in Kempfield South appears to have been exposed to more volcanic activity and to have sustained greater movement on existing faults. The implications of the felsic volcanic breccia sequence forming the basal section of Lower Kempfield, in conjunction with higher temperature metal assemblages seen in AKDD182, and likely sourcing of volcanogenic sediment from the south enhances the exploration potential of the southern area.

Potential feeder zone locations

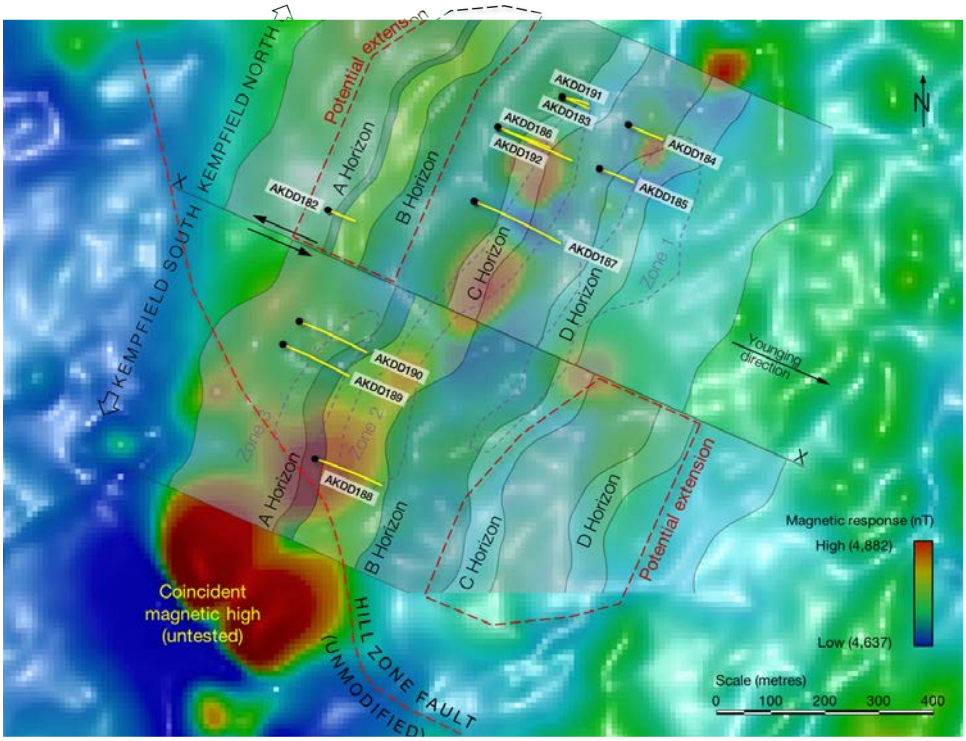
With this evidence in mind, it is possible that the majority of hydrothermal fluids emanated from the south via large growth and propagation faults, with additional secondary growth centres at Kempfield North and Quarries Zone.

VHMS deposits are characterised by multiple hydrothermal fluid source centres. The relatively large dimensions of the known deposit (over 3km in strike) indicates significant overall exploration potential of Kempfield. Given the apparent gaps in the deposit over this strike length, further work is required to establish whether these gaps are in reality continuous, or if there are additional fluid source centres yet to be discovered.

Magnetic high to be drill-tested

Recent drilling confirmed pyrite-pyrrhotite-chalcopyrite stringers in the Lower Kempfield section of Central Kempfield. Upon review of results and correlation with available geophysical data it is apparent that pyrrhotite mineralisation in AKDD182 is broadly consistent with an elevated magnetic signature (Figure 13).

Figure 13 – Simplified Kempfield lithology and drill holes with magnetic survey background (plan view)



The size and frequency of the pyrrhotite stringers intersected to date do not warrant a magnetic signature of that size; magnetite was not present in the mafic volcanic tuff.

An important question has therefore arisen as to exactly what is producing the magnetic response in Kempfield South. In addition, review of an historic ground IP survey revealed high chargeability anomalies that overlap the magnetic high.

The next drill campaign will include holes to test the magnetic high signature.

SUMMARY

The strategically designed 11 hole diamond drilling program produced 3,167 metres of drill core containing vast amounts of information about Kempfield that is significant to understanding the deposit for further exploration success.

Detailed physical analyses were first performed on the drill core to record host rock types, thicknesses and angles, and where visible, mineralisation. The physical drill core information was then assessed together with assays as they became available following standard QAQC. Whole rock assays were performed on more than 50% of the drill core[1] to yield a further significant level of detail – a 36 element suite for each metre of core sampled.

In addition to the obvious pursuit of silver, gold, zinc, lead and copper mineral grades, authentic VHMS exploration that employs the latest techniques requires the remaining 31 elements to be assessed in detail to discover and quantify their associations with the target minerals and the inter-relationships that are unique for the deposit being explored.

To assess and interpret the complexities of this detailed information in the context of hundreds of millions of years of multiple geological processes, and ultimately be able to reconstruct the intricacies of the current form of the deposit for highly efficient drill targeting, requires specialised VHMS knowledge and experience.

These processes have been performed on the recent drill core, and will continue, with the results to date representing a significant milestone in the exploration of the Kempfield VHMS system.

The significant advances reported in this announcement have taken the understanding of the deposit to a new, far more detailed, higher level than that afforded by the minimal information made available by historical RC drilling.

The key results of the program reported in this announcement are summarised as follows:

- **Major breakthrough – detailed litho-stratigraphy defined, and four key host horizons identified**, which will lead to highly efficient drill targeting of precious and base metals at Kempfield;
- **Significant potential mineralised extensions identified**, following the analyses that revealed the strike-slip movements caused by transverse faulting;
- **High grade gold trend geometry identified** and confirmed as a later stage orogenic overprint related to the Trunkey-Kings Plain gold system – and the potential for structural upgrades and Trunkey–Kings Plain type high grade gold in the main Kempfield deposit area;
- **Proven continuity of mineralisation along strike and at depth** in Kempfield North;
- **Significant potential for hosted mineralised lenses identified in the untested southern area** historically assumed to be closed; and
- **Potential high temperature zone** and primary/secondary feeder sources identified.

1. Split core sampling (see Sampling Techniques and Data' in Appendix C – JORC 2012 Table 1)

NEXT STEPS

Preparations are underway for the next phase of drill testing at Kempfield. Targets under review include drill testing the large magnetic and IP anomalous feature in Kempfield South, confirmation of the extensions of Horizons C and D in Kempfield South, confirmation of Horizons A and B in Kempfield North, and a single test of the depth extent to

the Quarries Zone (which has also been the subject of relatively shallow historical drilling).

Access negotiations for the southern area and regulatory approval process are expected to take 1-2 months, following which the drill sites will need to be prepared, and a drilling contractor organised and mobilised. Further updates will be provided as they become available.

Work continues in parallel on the 3D deposit model construction, and the review of the Kempfield mineral resource estimate has commenced.

In addition, Argent has been reviewing its other tenements in Trunkey-Kings Plain orogenic gold system, including the historic Pine Ridge gold mine.

This ASX Report must be read in conjunction with Appendix A, mineral resource estimate details in Appendix B, and JORC 2012 Table 1 provided in Appendix C.

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APPENDIX A

SUMMARY OF EXPLORATION RESULTS FOR KEMPFIELD DRILLING

Table A – Summary of significant assay results

BHID	Planned BHID	Easting (m)	Northing (m)	RL (m)	Depth[1] (m)	Azimuth (°)	Dip (°)	Status
AKDD182	Drillhole F	708141	6258403	735	299.9	110	-80	Reported
AKDD183	Drillhole A	708580	6258615	749	206.9	110	-75	Reported
AKDD184	Drillhole B	708706	6258564	759	242.2	110	-75	Reported
AKDD185	Drillhole D	708649	6258481	778	278.8	110	-75	Reported
AKDD186	Drillhole C	708460	6258559	763	273.0	110	-60	Reported
AKDD187	Drillhole E	708417	6258419	758	419.9	110	-60	Reported
AKDD188	Drillhole K	708118	6257937	762	256.7	110	-60	Reported
AKDD189	Drillhole I	707056	6258152	752	307.2	110	-65	Reported
AKDD190	Drillhole H	708087	6258195	745	307.9	110	-65	Reported
AKDD191	Drillhole A	708580	6258615	749	333.6	110	-85	Reported
AKDD192	Drillhole B	708706	6258564	759	249.9	110	-55	Reported

Notes:

1. ‘Depth’ in this Appendix A means ‘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 HQ3 width
4. Holes AKDD183 and AKDD191 were drilled from the same drill pad/collar location referred to as ‘Planned BHID’ location A. Similarly holes AKDD184 and AKDD192 were drilled from the same drill pad/collar location referred to as ‘Planned BHID’ location B.

BHID	From (m)	To (m)	Interval (m)	Pb (%)	Zn (%)	Cu (%)	Ag (g/t)	Au (g/t)	Pb+Zn (%)
AKDD182	70.90	71.90	1.0			0.3	23	0.1	
AKDD182	89.90	90.50	0.6			0.8	44	0.8	
AKDD182	106.40	107.40	1.0			0.6	62	0.2	

BHID	From (m)	To (m)	Interval (m)	Pb (%)	Zn (%)	Cu (%)	Ag (g/t)	Au (g/t)	Pb+Zn (%)
AKDD188	238.00	239.00	1.0					0.83	

BHID	From (m)	To (m)	Interval (m)	Pb (%)	Zn (%)	Cu (%)	Ag (g/t)	Au (g/t)	Pb+Zn (%)
AKDD191	12.4	22.8	10.4					0.8	
incl.	18.0	18.8	0.8			0.4		3.6	
AKDD191	53.0	61.1	8.1					0.8	
AKDD191	145.00	146.00	1.0	0.9	2.0		9	1.4	2.9
AKDD191	149.0	157.1	8.1					0.4	
AKDD191	165.00	166.00	1.0	0.6	2.6		20	0.9	3.2
AKDD191	173.10	173.80	0.7	4.4	8.5	0.4	32	0.6	12.9
AKDD191	178.10	179.20	1.1	1.6	4.0		18	0.1	5.6

BHID	From (m)	To (m)	Interval (m)	Pb (%)	Zn (%)	Cu (%)	Ag (g/t)	Au (g/t)	Pb+Zn (%)
AKDD192	67.0	68.0	1.0					0.4	
AKDD192	84.0	86.0	2.0	1.3	0.9		28	0.4	2.2
AKDD192	91.1	93.2	2.1	0.3	1.7	0.3	16	1.5	2.0
AKDD192	124.3	125.3	1.0					0.5	
AKDD192	127.3	128.3	1.0					0.6	
AKDD192	153.2	155.2	2.0	0.6	1.6		13	0.4	2.2
AKDD192	161.2	162.2	1.0				63		
AKDD192	170.0	172.0	2.0				27		
AKDD192	174.4	205.5	31.1				29		
incl.	189.0	190.0	1.0	1.8	1.7		108	0.3	3.5
and	201.2	202.2	1.0	4.3	1.2		95	0.1	5.5
and	202.2	202.9	0.7	2.7	0.5		71	0.1	3.2
AKDD192	219.3	220.3		3.7	1.3		45	0.1	5.0

APPENDIX B – MINERAL RESOURCE ESTIMATE

KEMPFIELD (NSW, AUSTRALIA - 100% ARGENT)

Table 1 is a summary of the Kempfield mineral resource as at 30 June 2016 and Table 2 provides details of metal grade zonation as announced initially on 16 October 2014. Table 3 shows the resource tonnes and grades by Measured, Indicated and Inferred categories, whilst Table 4 provides details of tonnes and contained metal in the Measured and Indicated categories.

At cut-off grades 25 g/t Ag for Oxide/Transitional and for 50 g/t Ag equivalent[1] for Primary:

Table 1 - Kempfield Mineral Resource Summary – 30 June 2016

		Silver (Ag)		Gold (Au)		Lead (Pb)		Zinc (Zn)		In-situ Contained Ag Equivalent[2]	
	Resource Tonnes (Mt)	Grade (g/t)	Contained Metal (Moz)	Grade (g/t)	Contained Metal (000 oz)	Grade (%)	Contained Metal (000 t)	Grade (%)	Contained Metal (000 t)	Grade (Ag Eq g/t)	Contained Ag Eq (Moz)
Oxide/ Transitional*	6.0	55	10.7	0.11	21	N/A	N/A	N/A	N/A	-	11.7
Primary**	15.8	44	22.3	0.13	66	0.62	97	1.3	200	-	40.5
Total***	**21.8**	**47**	**33.0 M**	**0.12**	**86**	N/A	**97**	N/A	**200**	**75**	**52 M**

* 90% ** 79% *** 82% : % of resource tonnes in Measured or Indicated Category. See Table 4 for details.

Resource details

Table 2 – Kempfield Mineral Resource – Primary material tonnes and grades by mineralisation zone

			Grade (g/t)		Grade (%)		
Lens	Zone	Resource Tonnes (Mt)	Silver (Ag)	Gold (Au)	Zinc (Zn)	Lead (Pb)	cbm* (Pb+Zn)
1	BJ Zone	6.3	53	0.05	1.1	0.34	1.4
	Southern Conglomerate Zone	0.48	43	0.20	0.25	0.28	0.53
	Lens 1 Total	6.8	52	0.06	1.0	0.33	1.4
2	Quarries Zone	1.7	46	0.05	1.4	0.73	2.1
	McCarron Zone	5.8	38	0.18	1.3	0.90	2.2
	Lens 2 Total	7.5	40	0.15	1.4	0.86	2.2
3	West McCarron	1.5	26	0.34	1.9	0.70	2.6
	Lens 3 Total	1.5	26	0.34	1.9	0.70	2.6
Grand Total	Lens 1 + Lens 2 + Lens 3	15.8	44	0.13	1.3	0.62	1.9

* Combined base metals

Table 3 - Resource by Category

		Grade (g/t)		Grade (%)		In-situ Grade (Contained Ag Eq g/t)
Category	Resource Tonnes (Mt)	Silver (Ag)	Gold (Au)	Lead (Pb)	Zinc (Zn)	Silver Equivalent (Ag Eq)
Oxide/Transitional						
Measured	2.7	68	0.11	-	-	73
Indicated	2.7	47	0.11	-	-	52
Inferred	0.6	39	0.08	-	-	43
Total Oxide/Transitional	6.0	55	0.11	-	-	60
Primary						
Measured	4.1	57	0.12	0.66%	1.2%	93
Indicated	8.4	41	0.13	0.58%	1.2%	76
Inferred	3.2	35	0.13	0.66%	1.4%	74
Total Primary	15.8	44	0.13	0.62%	1.3%	80
Total Resource	**21.8**	**47**	**0.12**	N/A	N/A	**75**

Table 4 - Kempfield Resource tonnes and contained metal in Measured and Indicated categories

	Contained Metal					
	Resource Tonnes (Mt)	Moz Silver (Ag)	000 oz Gold (Au)	000 t Lead (Pb)	000 t Zinc (Zn)	In-situ Moz Silver Equivalent (Ag Eq)
Oxide/Transitional						
Measured	2.7	5.8	9.3	-	-	6.3
Indicated	2.7	4.1	9.9	-	-	4.6
Measured + Indicated	**5.4**	**10**	**19**	**-**	**-**	**11**
As % of Total Oxide/Transitional	**90%**	**93%**	**93%**	**-**	**-**	**93%**
Primary						
Measured	4.1	7.5	16	27	51	12
Indicated	8.4	11	36	49	103	21
Measured + Indicated	**13**	**19**	**51**	**76**	**154**	**33**
As % of Total Primary	**79%**	**83%**	**79%**	**78%**	**77%**	**81%**
Oxide/Transitional + Primary						
Measured	6.8	13	25	27	51	19
Indicated	11	15	46	49	103	25
Total Measured + Indicated	**18**	**28**	**71**	**76**	**154**	**44**
As % of Total Resource	**82%**	**86%**	**82%**	**78%**	**77%**	**84%**

Note 1 - 50 g/t Silver Equivalent Cut-off Grade

This Resource is only reported in Resource tonnes and contained metal (ounces of silver and gold, and tonnes for lead and zinc). The Resource estimation for the Primary material was based on a silver equivalent cut-off grade of 50 g/t.

A silver equivalent was not employed for the oxide/transitional material estimation and was based on a 25 g/t silver only cut-off grade.

The contained metal equivalence formula is based on the following assumptions made by Argent Minerals:

Silver price:	$US 30/oz ($US 0.9645/g)
Gold price:	$US 1,500/oz
Lead & zinc price:	$US 2,200/tonne
Silver and gold recoverable and payable:	80% of head grade
Lead & zinc recoverable & payable:	55% of head grade

Based on metallurgical testing to date, Argent Minerals is of the opinion that recoverable and payable silver and gold of 80% is achievable, and recoverable and payable lead and zinc at 55% of the head grade. Argent Minerals is also of the opinion that this is consistent with current industry practice. These metallurgical recoveries were included in the calculation of silver equivalent cut-off grades used for reporting of mineral resources. Please note that Ag Eq is reported as in-situ contained ounces and grade ie. not recoverable & payable ounces and grade, and in accordance with the JORC Code 2012 Code for the Reporting of Exploration Results, Mineral Resources and Ore Reserves.

Note 2 - Contained Silver Equivalent ('Ag Eq') Calculation Details

(i) A revenue figure was calculated for each metal by category and material class (r) as follows:

r = tonnes * head grade * recoverable and payable %.

Eg. For Measured Oxide/Transitional silver: r = 2.7Mt * 68 g/t * 80% / 31.1 g/oz * $US 30/oz = $US 142M.

Eg. For Measured Primary Zinc: r = 4.1Mt * 1.2% * 55% *$US 2,200/t = $US 59.5M.

(ii) Total revenue R was calculated for each resource category and material class as the sum of all the individual (r) revenues for that category and class.

(iii) Contained silver metal equivalent ounces was then calculated as follows:

Ag Eq (oz) = R / Ag recoverable and payable % / Ag price = R / 80% /$US 30.

(iv) Contained silver metal grade was calculated as follows:

Grade (Contained Ag Eq g/t) = Ag Eq (oz) * 31.1 / tonnes.

Note 3 – Rounding and Significant Figures

Figures in the tables in this report may not sum precisely due to rounding; the number of significant figures does not imply an added level of precision.

APPENDIX C - JORC 2012 EDITION TABLE 1

KEMPFIELD DRILLING PROGRAM ASSAY RESULTS

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 were sampled based on observed mineralisation or intensity of alteration. Eleven holes were drilled on seven ESE sections. 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 were taken with interval lengths <0.6 m due to rock condition or stratigraphic constraints. Assay and preparation were carried out by ALS Global in Orange and ALS Global Brisbane. 2-3 kg samples were passed through a jaw crusher, riffle split, and pulverized to produce a 250 g sample for various analytical methods.
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 was conducted to a high standard via graphic and digital logging noting lithology, mineralisation, alteration and structure with associated degrees of intensity. Logging was 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 logged in full.
Sub-sampling techniques and sample separation	Drillholes were sampled on observed mineralisation or intensity of alteration. PQ core 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 were taken with interval lengths <0.6 m due to rock condition or stratigraphic constraints. Assay and preparation were 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 used 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 a homogenised format.
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 Collar positions were recorded by handheld GPS. Topographic control was gained using government DTM data with handheld GPS check.

Data spacing and distribution	Eleven drillholes are being reported herein drilled on ESE sections approximately 100 m apart. Drillhole distribution has been designed to test Inferred positions of known mineralisation (80 m down-dip spacing). No sample compositing was carried out.
Orientation of data in relation to geological structure	Samples were taken with consideration of stratigraphy and alteration, samples do not straddle geological boundaries. 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. 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. 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. • 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, 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 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. Kempfield has been explored for more than forty years by several exploration companies as set out in Table 1.2.1. **Table 1.2.1 – Exploration history** 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 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. The geological setting is in the Siluro-Devonian Kangaloolah Volcanics within the intra-arc Hill End Trough within the Lachlan Orogen, Eastern Australia. The style of mineralisation is strata bound barite-rich horizons hosting silver, lead, zinc ± copper ± gold.

Drill hole Information

BHID	Planned BHID	Easting (m)	Northing (m)	RL (m)	Depth[1] (m)	Azimuth (°)	Dip (°)	Status
AKDD182	Drillhole F	708141	6258403	735	299.9	110	-80	Reported
AKDD183	Drillhole A	708580	6258615	749	206.9	110	-75	Reported
AKDD184	Drillhole B	708706	6258564	759	242.2	110	-75	Reported
AKDD185	Drillhole D	708649	6258481	778	278.8	110	-75	Reported
AKDD186	Drillhole C	708460	6258559	763	273.0	110	-60	Reported
AKDD187	Drillhole E	708417	6258419	758	419.9	110	-60	Reported
AKDD188	Drillhole K	708118	6257937	762	256.7	110	-60	Reported
AKDD189	Drillhole I	707056	6258152	752	307.2	110	-65	Reported
AKDD190	Drillhole H	708087	6258195	745	307.9	110	-65	Reported
AKDD191	Drillhole A	708580	6258615	749	333.6	110	-85	Reported
AKDD192	Drillhole B	708706	6258564	759	249.9	110	-55	Reported

1. Depth is hole length to end of hole.
2. Holes AKDD183 and AKDD191 were drilled from the same drill pad/collar location referred to as 'Planned BHID' location A. Similarly holes AKDD184 and AKDD192 were drilled from the same drill pad/collar location referred to as 'Planned BHID' location B.

Data aggregation methods

A nominal cut-off grade of 0.1% Pb, Zn and Cu were used, 0.01 g/t Au and 1 g/t Ag.

Significant intersections have been length weighted where grouped results exceed a single sample. Higher grade intervals use a lower cut-off grade of 0.5% Pb and Zn, 0.2% Cu, 0.2g/t Au and 10 g/t Ag.

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.

Relationship between mineralisation widths and intercept lengths

Mineralisation dips steeply westward at approximately 80º. All drillholes were targeted towards the ESE, where true width is 70%-80% of downhole length. Downhole lengths are reported herein.

Diagrams

Diagram descriptions are included in the Figure descriptions.

Cross sections were completed in Micromine and assay results are displayed using the drillhole line graph function with the following parameters: Au – Normal mode with 2.5 g/t top cut filter, 15x scale factor with 0.1 g/t to 2 g/t scale bar; Cu – Normal mode with 5.0% top-cut filter, 15x scale factor and 0.1% to 2.0% scale bar; Pb – Normal mode with 5.0% top-cut filter, 3x scale factor and 0.1% to 5.0% scale bar; Zn – Normal mode with 5.0% top-cut filter, 3x scale factor and 0.1% to 5.0% scale bar; Ag – Normal mode with 50 g/t top-cut filter, 0.5x scale factor and 1 g/t to 50 g/t scale bar.

Balanced reporting

All significant intervals are reported with a nominal cut-off grade of 0.1% Pb, Zn and Cu were used, 0.01 g/t Au and 1 g/t Ag. Significant intersections have been length weighted where grouped results exceed a single sample. Higher grade intervals use a lower cut-off grade of 0.5% Pb and Zn, 0.2% Cu, 0.2 g/t Au and 10 g/t Ag.

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, preferably in 2016, and will in any case continue into 2017.

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 :

- 15 June 2016 High grade zinc lead silver and gold added to Kempfield[1]; and
- 10 August 2016 Annual Report to Shareholders – Mineral Resources and Ore Reserves Statement[2].

Competent Person:

1. Clifton Todd McGilvray
2. Arnold van der Heyden

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. 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.