ASX/MEDIA RELEASE

ARGENT MINERALS LIMITED

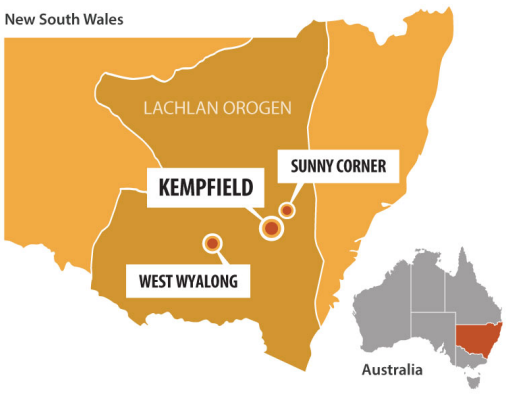
Date 6 May 2014

KEMPFIELD RESOURCE STATEMENT UPGRADED TO JORC 2012 STANDARD

HIGHLIGHTS:

- **Mineral Resource statement upgraded to JORC Code 2012 standard in preparation for the next steps in exploration drilling program, and progressing the Kempfield project toward production**
- **No change in the Mineral Resource estimates - reflects the quality of the Mineral Resources and the standard of work performed to date by Argent Minerals**
- **Mineral Resource estimates do not yet include the additional intercepted high grade Pb/Zn/Ag/Au mineralisation reported by Argent on 10 March 2014**
- **Kempfield Project on a solid, quality foundation for Argent Minerals growth path**

KEMPFIELD, NSW AUSTRALIA



Argent Minerals Limited (**ASX: ARD**, **Argent**, **Argent Minerals** or the **Company**) is pleased to report the Mineral Resource for its Kempfield Polymetallic Project in accordance with the 2012 edition of the JORC code (**JORC 2012**).

The Mineral Resource previously reported under the 2004 JORC code has undergone a comprehensive review by resource specialists H&S Consultants Pty Ltd (**H&SC**) for reporting under the JORC 2012 requirements; Argent has elected to upgrade its reporting to the new standard in preparation for the next phase of the continuing exploration at Kempfield, and progressing the project toward production.

A key result of the review is that there has been no material change to the Mineral Resource Estimate reported on 26 April 2012, and the Company is pleased to provide further detailed information in the Appendix of this announcement, prescribed by JORC 2012 as 'Table 1'.

Argent Minerals Managing Director David Busch said, "We are delighted with this outcome, as it reflects both the quality of the Mineral Resource itself, and the high standard of the Argent Minerals work to date on the project".

"As those who have undertaken this process will know, a JORC 2012 Mineral Resource Table 1 review is not a trivial exercise, and it cannot be assumed that a previous estimate reported under JORC 2004 will automatically meet the new standard. If, for example, exploration drilling procedures, checks and controls have not been performed or documented to a sufficient standard to enable reporting under the increased transparency requirements of JORC 2012, then those areas of a Mineral Resource could be at risk to being restricted to Inferred category unless additional drilling is performed to confirm the original drilllhole information".

"Under the JORC Code, Inferred Mineral Resources cannot be included in Ore Reserve estimates, and are generally excluded or discounted by financiers when considering capital raising proposals for mining projects. Only Measured or Indicated Mineral Resource categories are able to offer any opportunity for the estimation of Ore Reserves for mining production".

"Argent Minerals is in an excellent position, with 82% of the Mineral Resource tonnes in either Measured or Indicated category including 90% in the oxide/transitional material - now reported in accordance with the JORC 2012 standard. This places Argent Minerals on a strong, quality foundation for the growth path ahead".

Level 1, 115 Cambridge Street, PO Box 1305, West Leederville, WA 6901
Phone 618 9322 6600 | Facsimile 618 9322 6610 www.argentminerals.com.au ABN 89 124 780

Boost to Argent Minerals growth strategy

The strong, quality foundation affirmed by this Argent Minerals JORC 2012 Mineral Resource Statement provides a boost to the Company's three element growth strategy announced on 31 January 2014:

- **Exploration.** Argent Minerals has entered an new exciting phase of exploration. The Company is aggressively pursuing the significant upside potential identified within the Kempfield Project area, and new, rich mineralisation that has been identified as announced on 10 March 2014 (**New Mineralisation**).

  Under ASX Listing Rule 5.8 (**LR 5.8**), any material change to a Mineral Resource Estimate triggers a requirement for the entire resource to be reported in accordance with JORC 2012 and LR 5.8, a potentially significant and detailed workload that is not without risk.

  Having already completed these requirements for the existing Mineral Resource, and with the excellent outcome reported in this announcement, Argent Minerals is well-placed and on a solid foundation for the continuation of the drilling program. The Company is confident that it will be able to efficiently estimate and report any material changes that occur as a result of the combination of the New Mineralisation and continuing drilling. Tonnes and grade are key factors in all mining project economics, and the Company's current main focus is to add both where opportunities exist to do so, particularly where this has the potential to add to the Company's zinc and lead resources.

- **Income generation from mining production**. The high percentage of the Kempfield Mineral Resource in Measured or Indicated category, now reported in accordance with JORC 2012, provides a strong foundation from which the Company will continue to advance its 100%-owned Kempfield project, a registered NSW State Significant Development, toward its first stage of production. The first stage of production is based on a low cost silver-gold heap leach operation - a design that is advantageous in lower precious metal pricing environments and provides leverage to any price recovery that may occur.

- **Capital Efficiency.** The third key element in Argent's strategy is its capital efficiency. In addition to the low cost project design, the Company's overheads are relatively low, and during the last 12 months, Argent Minerals secured approximately $2.9 million in funding in one of the most difficult years on record for the industry. Significantly, more than $2.2 million of this cash was raised through the 2011, 2012, 2013 Research and Development claims and Options Entitlement Issue. A considerable portion of these funds are in the process of being invested directly into project value.

Kempfield drilling program

Planning is currently under way for the next phase of drilling at Kempfield, which will be reported to the ASX once finalised.

Please refer to the Mineral Resource Statement overleaf, which is followed by a Material Information Summary pursuant to LR 5.8, and Appendix A which contains Table 1 Sections 1, 2 and 3 in accordance with JORC 2012 and LR 5.8.

KEMPFIELD RESOURCE STATEMENT - 6 MAY 2014

Table 1.0 is a summary of the Kempfield mineral resource at 6 May, 2014. Table 2.0 shows the resource tonnes and grades by Measured, Indicated and Inferred categories, whilst Table 3.0 provides details of tonnes and contained metal in the Measured and Indicated categories.

At cutoff grades 25 g/t Ag (Oxide/Transitional) and for 50 g/t Ag equivalent[1] (Primary):

Table 1.0 - Kempfield Resource Summary

		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**	**0.12**	**86**	N/A	**97**	N/A	**200**	**75**	**52**

* 90% ** 79% *** 82% : % of resource tonnes in Measured or Indicated Category. See Table 3.0 for calculation details.

Table 2.0 - 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 3.0 - 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 Cutoff 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 cutoff 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 cutoff 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 cutoff 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.

MATERIAL INFORMATION SUMMARY

Pursuant to ASX Listing Rule 5.8.1 the following summary is provided of information material to understanding the Mineral Resource estimate.

Geology and Geological Interpretation

GEOLOGY

- The deposit type is Volcanogenic Massive Sulphide (VMS);
- The geological setting is Silurian felsic to intermediate volcaniclastics within the intra-arc Hill End Trough in the Lachlan Orogen, Eastern Australia; and
- The style of mineralisation comprises stratiform barite-rich horizons hosting silver, lead, zinc, +/- gold.

GEOLOGICAL INTERPRETATION

- There is a reasonable confidence level in the geological interpretation of the mineral deposits.
- The geological interpretation involved dividing the deposits into mineralised zones, essentially based on assay data, and identifying the fresh, transition and oxide zones from geological logging. Oxidation logging was checked against zinc assays as this element is the most sensitive to oxidation at Kempfield. It was assumed that the assays and logging are accurate.
- There appears to be limited scope for alternative interpretations. The mineralised zones are quite clearly defined, while the oxidation zones are a little more subjective. It is considered unlikely that alternative interpretations would have a substantial impact on the Mineral Resource estimates due to the generally close spacing of the data points.
- The mineralised zones were treated having as hard boundaries during grade estimation, while the oxidation boundaries were treated as soft boundaries, due to their gradational nature.
- The major factor affecting the continuity of both grade and geology is the cross-faulting that truncates or displaces mineralisation. These fault surfaces were treated as hard boundaries during estimation.

Sampling and Sub-sampling Techniques

SAMPLING TECHNIQUES

Overview

- The Kempfield deposit has been explored over a period of approximately forty years by Argent Minerals Limited (**Argent Minerals**), Golden Cross Operations Pty Ltd (**Golden Cross**), Jones Mining Limited (**Jones Mining**), The Shell Company of Australia/Metals Division (**Shell**), and International Nickel Australia Limited (**Inco**). Variation in techniques or procedures applied by each exploration company are outlined in this report as appropriate.
- The data on which the Resource Estimate has been determined is considered to be of high quality in nature.
- The Kempfield deposit was sampled with drill chips from reverse circulation (**RC**) and conventional rotary percussion (**PERC**) drilling, and with diamond drill hole (**DDH**) core of PQ, HQ and NQ size.
- A total of 23,374 drill samples have been collected, including 17,188 percussion chip samples and 6,186 diamond drill hole core samples. A summary of Kempfield sample types is provided in Table 4.0.

Table 4.0 – Summary of collected samples by drill hole type and exploration company

Company	Period	Samples			
		DDH	RC/PERC	Total	% Total
Argent Minerals	2007-current	3,051	9,302	12,353	53%
Golden Cross	1996-2007	45	4,090	4,135	18%
Jones Mining	1984-1985	409	-	409	2%
Shell	1979-1984	457	3,796	4,253	18%
Inco	1972-1974	2,224	-	2,224	10%
TOTAL		**6,186**	**17,188**	**23,374**	**100%**
% TOTAL		**26%**	**74%**	**100%**	

- Samples of between 2 and 3 kg each in weight were selected for assay according to the procedures detailed under the criteria heading 'Sub-sampling techniques and sample preparation'. These were crushed to 6 mm and then pulverized to 75 microns. A 25 g split of the sample was fire assayed for gold. The lower detection limit for gold is 0.01 ppm, which has been determined to be an appropriate detection level. All other elements including silver and base metals were analysed using acid digest and either an Inductively Coupled Laser - Mass Spectrometry (**ICP-MS**) or Inductively Coupled Laser - Atomic Emission Spectroscopy (**ICP-AES**) finish,

or an Atomic Absorption Spectrometer (AAS).

- Measures taken to ensure sample representivity and measurement calibration are noted under the Criteria headings 'Drill sample recovery', 'Sub-sampling techniques and sample preparation' and 'Quality of assay data and laboratory tests'.

SUB-SAMPLING TECHNIQUES AND SAMPLE PREPARATION

Percussion drilling chip sampling

- 74% of the total number of samples were collected by either RC or conventional percussion drilling. A total of 17,188 percussion drill chip samples were collected during three major drilling programs conducted by Shell, Golden Cross, and Argent Minerals. The sampling sizes (between 2 and 3 kg) and techniques are considered to have been appropriate for percussion drilled chip sampling for the style and grain size of mineralisation at Kempfield, and further details are set out according to exploration company as follows:

  - Argent Minerals conducted RC drilling under industry best practice procedures. The total recovered RC drill chips were collected at 1 metre intervals in plastic bags, left to dry out if required, split to 1:12 with a riffle splitter in calico bags each up to 2.5 kg in weight and then composited on 2 metre intervals.

  - Golden Cross conducted RC drilling and collected 4,090 samples. Samples were collected by the spear method – the total sample for a 1 metre of drill hole length was collected in a bag which was speared and the spear samples then composited at two metre intervals. Golden Cross samples were collected as both wet and dry, and sample sizes were between 2 and 3 kilograms each.

  - Shell drilled 150 percussion holes in three programs of 30, 30 and 90 holes respectively (147 of which are recorded in the Argent Minerals database and employed in the Kempfield Resource estimation detailed in this report). During programs one and two, cuttings were collected using either simple cyclones or sludge buckets and much of the fines was either blown or washed away. Sample collection methods were improved in the third program through the use of an Ingersoll Rand Jumbo Airtrac drilling rig, and from hole 3PD-27 onward the Aqua-Dust sampling system was used to minimise the loss of fines. Documentation is not available for the specifics of Shell's sample preparation techniques at Kempfield. Argent Minerals believes that it is a reasonable assumption that Shell, as a leading minerals exploration company, would have operated according to documented procedures, and that these procedures were likely to have reflected international best practice at the time. Given that the majority of the Shell holes were shallow (less than 50 metres depth), they are generally higher than the known water table in the area and therefore likely to be collected mostly as dry samples.

Diamond drill core sampling

- The diamond drill core sampling at Kempfield has provided high quality samples that were logged for multiple attributes including lithology, structure, geotechnical data, and density.
- The selected drill core was cut in either half or quarters (or in the case of one large diameter core, eighths), and the respective core section 'split' analysed at a certified assay laboratory.
- The sample sizes were appropriate to correctly represent the sulphide mineralisation at the Kempfield project based on the style of mineralisation, consistency of the intersections, and the sampling methodology.
- Further details are set out according to exploration company as follows:

  - Argent Minerals drilled diamond core with PQ, HQ and NQ size and split as half core (HQ and NQ size) and quarter (PQ) core with a diamond saw to produce samples for assaying. Intervals vary from 0.5 to 1.5 metres maximum. Sampling intervals were selected with an emphasis on mineralisation and geological control.

  - Golden Cross drilled diamond drill core of NQ size was split in half with a diamond saw. The majority of the samples comprised 1 metre intervals. Where zones were of variable geology and mineralisation, intervals of between 1 and 2 metres were selected on the basis of observed geology.

- Most of the **Jones Mining** core was split along the length by diamond saw, with half taken as either 1 or 2 metre samples. One PQ sized hole, JKF-18, was split and 1/8 core analysed.
- **Shell** diamond drill core sampling comprised predominantly split core in 2 metre lengths. The upper and lower sections of SKF-1 and all of the SKF-5 sampling was performed by bevelling.
- **Inco** collected samples comprising: a) 51 mm (2 inch) core chips collected over 1.52 metre (5 feet) intervals and b) 1.52 metre splits of core at varying intervals. Where significant mineralisation was noted, the total respective core length was split for analysis. Inco conducted selective sampling (1,516 samples in the Argent Minerals database) of drill core with limited assays (mostly for base metals).

  Selected core intervals were subsequently re-assayed for gold and silver by Shell and Golden Cross. Shell bevelled selected sections of Inco core over 6.1 metre (20 feet) intervals. Whilst some discrepancies in lead values exist, Shell's analysis verified Inco's results overall.

  Inco drill holes within the Kempfield resource outline were also resampled by Argent Minerals during 2011 - a total of 709 samples, and arranged for them to be analysed by a laboratory for gold, silver, base metals, pathfinder, and rock-forming elements.

- A total of 6,186 drill core samples of different sizes were collected (see Table 5.0 summary).

Table 5.0 – Summary of diamond core samples by drill hole size and sampled portion

Drill core size & sampled portion	Number of samples	% of Drill Core	Comments
1/4 PQ	674	10.9	Geotechnical drilling
1/2 HQ	831	13.4	Metallurgical drilling
1/4 HQ	519	8.4	Metallurgical drilling
1/2 NQ	3,452	55.8	Exploration drilling
1/4 NQ	710	11.5	Exploration drilling including re-assaying of three holes
TOTAL	**6,186**	**100%**	**100%**

Summary

- A summary of the sample media collected at Kempfield project is presented in Table 6.0.

Table 6.0 – Summary of Sample Media

Total number of samples	RC drill chip samples	DDH drill core samples
23,374	17,188 (74%)	6,186 (26%)
		including:
		¼ PQ 674 (plus additional 264 re-assays by Golden Cross)
		½ HQ 831
		¼ HQ 519
		½ NQ 3,452
		¼ NQ 710 (re-assayed by Argent Minerals)

- Details of quality control procedures and additional measures taken to ensure representivity are presented under the Criteria heading 'Quality of assay data and laboratory tests' (see the Table 9.0 summary and related discussion under the same Criteria heading).

Drilling Techniques

- A total of 495 holes for 42,353 metres of drilling has been conducted. Several industry standard drilling techniques have been applied in the extraction of the samples, including full length diamond drilling, percussion drilling (PERC and RC) and combination RC collar/DDH tails, as summarised in Table 7.0.

Table 7.0 – Summary of Drill Holes by Hole Type and Total Length Drilled

Company	All Diamond Drilling			Percussion Drilling		Combined RC/DDH Drilling		Total
	PQ	HQ	NQ	PERC	RC	RC Pre-Collars	DDH Tail	
Number of holes	9	19	38	148	276	5		495
Metres	745	2,543	4,581	7,978	25,132	815	559	42,353

- Variation in drilling techniques according to exploration company is set out in Table 8.0.

Table 8.0 – Summary of drilling metres by drilling technique and exploration company

Company	Period	Full Length DDH		Percussion Drilling (RC/PERC)		RC Pre-Collar/DDH Tail			All Holes		%
		Holes	Metres	Holes	Metres	Holes	RC Metres	DDH Tail Metres	Holes	Metres	Total
Argent Minerals	2007-current	28	3,105	179	17,849	2	359	400	209	21,713	51%
Golden Cross	1996-2007	-	-	99	7,586	3	456	159	102	8,201	19%
Jones Mining	1984-1985	14	771	-	-	-	-	-	14	771	2%
Shell	1979-1984	6	917	146	7,675	-	-	-	152	8,592	20%
Inco	1972-1974	18	3,076	-	-	-	-	-	18	3,076	7%
	TOTAL	66	7,869	424	33,110	5	815	559	495	42,353	100%
	% TOTAL	13%	19%	86%	78%	1%	2%	1%	100%	100%	100%

Diamond drilling techniques (including RC Pre-Collar and DDH tail)

- Diamond drilling was conducted with either double tube wireline core barrel or triple tube procedures.
- The historical drill core was orientated relative to regional, steep (80° to W) north-south trending cleavage. This is considered to be the most reliable orientation method for the historical holes at the Kempfield deposit. More recently, state of the art electronic orientation tools have become available, and commencing with hole AKDD177, are now employed at Kempfield as the method of choice.
- Core was measured and marked at 1 metre intervals after each drill run using benchmark block lengths to calibrate depth, except for Inco which marked at 1.52 metre intervals (5 feet). Rig procedures were adjusted as required including drilling rate, run length and fluid pressure, in order to maintain sample integrity.

Percussion drilling techniques

- Percussion drilling was conducted with conventional methods using a standard hammer sizes from 115 to 140 mm (4.5 - 5.5 inches).
- Please refer to Table 8.0 above for a summary of the relative portions of percussion holes drilled as RC and conventional percussion.

Classification Criteria

- The resource classification is essentially based on an ordinary Kriging three search pass methodology in which Pass 1 was classified as Measured, Pass 2 as Indicated, and Pass 3 as Inferred categories.
- A simplified explanation is that this method in effect considered a maximum drill spacing of 25 X 25 metres for the Measured category, and 50 X 50 metres for both the Indicated and Inferred categories. Both Measured and Indicated categories required at least two drill holes in order to obtain an estimate, whilst Inferred category required only a single hole.
- For search details see under the heading 'Estimation Methodology' below.

Sample Analysis Methods

- Quality assurance and quality control (QAQC) procedures for historical sampling, assay data and laboratory tests are summarised in Table 9.0. No geophysical tools or handheld XRF instruments were used. In summary, the net result of all the laboratory techniques and procedures applied are considered to have been high quality in nature, appropriate for the mineralisation and providing a near-total result sufficient for the Mineral Resource Estimate in this report. Additional relevant specifics for each exploration company are set out following the table.

Table 9.0 – QAQC Summary for each Exploration Company

Company	Number of assays	Comments
Argent Minerals	12,353	Full QAQC applied: - field coarse blanks (every 50th); - standard reference material from standards supplied by Geostats Pty Ltd (every 50th); - duplicate every 25th or 50th ; - cross laboratory check (ALS Orange, Genalysis Laboratory Services Pty Ltd); - cross analytical technique checks (ICP-MS versus four acid leach); and - three pairs of twin holes – RC vs DDH
Argent Minerals Re-assays of Inco samples	708	
Golden Cross	4,135	Satisfactory QAQC: - duplicates; and - cross-laboratory checks (ALS Orange, ALS Stafford, Becquerel and Genalysis), and cross-analytical technique checks (ICP-AES versus Neutron Activation Analysis - see discussion following this table)
Golden Cross Re-assays of Jones Mining samples	263	
Jones Mining	146	QAQC documentation partially available - Jones Mining re-assayed 82 samples
Shell	4,253	Satisfactory QAQC: - four check holes against percussion drilling program; and - cross-laboratory checks.
Inco	1,516	QAQC documentation not available
TOTAL	**23,374**	**21,712 assays (93%) with satisfactory QAQC procedures and documentation**

- Argent Minerals samples were submitted to ALS Laboratories in Orange for gold assays by fire assay, and silver and base metals by ICP-MS.
  - Samples were crushed by ALS to 6 mm and then pulverized to 75 microns. A 25 g split of the sample was fire-assayed for gold. The lower detection limit for gold is 0.01 ppm, which has been determined to be an appropriate detection level. All other elements including silver and base metals were analysed using aqua regia acid digest and an ICP-MS finish.
  - Aqua regia digest/ICP-MS finish was compared with four-acid/ICP-MS finish with a very high correlation achieved, confirming a near-total result for the aqua regia/ICP-MS technique.
  - ALS Laboratory QAQC comprised the use of certified reference materials, blanks, splits and duplicates as part of in-house procedures and internal standards.
  - Argent Minerals submitted an independent suite of standard reference materials (SRM) 1:25 and coarse

blanks 1:50 Field duplicates were collected every 25th sample during RC drill chip sampling. For percussion drilling samples, Argent Minerals performed laboratory cross checking by submitting samples to ALS and Genalysis Laboratory Services Pty Ltd for cross checking; a very high correlation was achieved.

- For core samples, metallurgical assays for 1/2 core were compared with the original 1/4 core assays; a very good correlation was achieved.
- Periodic internal QAQC reports for Argent Minerals sampling procedures show good precision and accuracy of analytical methods and sampling procedures. No obvious contamination was observed during sample preparation.
- Full sets of assay certificates are retained by Argent Minerals.

- Golden Cross samples were submitted to ALS Laboratories in Orange for gold assays by fire assay, silver and base metals by aqua regia digest with an ICP-AES finish, and barium by X-ray diffraction (XRF).
  - Samples were crushed by ALS to 6 mm and then pulverized to 75 microns. A 25 g split of the sample was fire-assayed for gold. The lower detection limit for gold is 0.01 ppm, which has been determined to be an appropriate detection level. All other elements including silver and base metals were analysed using aqua regia acid digest and an ICP-AES finish.
  - Duplicate samples were submitted to the Australian Nuclear Science and Technology Organisation (ANSTO) for Neutron Activation Analysis (NAA), a very sensitive method of quantitative multi-elemental analysis with the potential to determine concentrations in a sample from parts per billion (ppb) to tens of percent. Comparison of neutron activation, four acid/ICP-MS and aqua regia digest/ICP-AES assay results verified that the primary technique (aqua regia digest/ICP-AES) was reliable for silver and base metal assaying, yielding near-total results.
  - Full sets of assay certificates are retained by Argent Minerals.
- Jones Mining samples were assayed by Australian Laboratory Services in Brisbane for silver and barium using method XRF-1A, and one hole (JKF-20) by AMDEL in South Australia.
  - The XRF-1A method comprised sample preparation by milling to -75 microns and pressing into briquettes each of minimum 25 g weight. A limited number of samples were analysed for gold (7) and other elements (2), for which analysis procedure documentation has not been located.
  - Jones Mining reassayed many of the 2 metre lengths at 1 metre intervals using the same methodologies as for the original 1 metre interval assays. The PQ size hole, JKF-18, was split and 1/8 core analysed for Ag and Ba by ALS as per the above XRF-1A method together with the core from the other holes. Half of the silver anomalous zones were despatched to AMDEL in South Australia for metallurgical tests as well as silver and barium assays (analytical method documentation not available).
  - Partial documentation has been located in relation to the Jones Mining internal QAQC procedures. The original assay certificates have not been located.
  - In 1998 Golden Cross re-sampled and re-assayed material from Jones Mining's drill holes JKF-7 to JKF-18 and JKF-19 in 1999. Intervals were selected for re-assay where warranted by grade and distribution. A comprehensive inter-laboratory check assay program was performed, with samples sent to ALS Orange, ALS Stafford, Becquerel and Genalysis. Silver was assayed for by method A101 and lead and zinc by method G102. Method A101 was recommended by the lab for lead and silver ores containing barite and comprised aqua regia digestion, hydrochloric acid dissolution with addition of ammonium acetate and thiosulphate for complexation of lead and silver, followed by flame AAS. Method G102 was recommended by the lab for sulphidic samples, and comprised aqua regia digestion followed by flame AAS. Satisfactory QAQC procedures were applied, and data pertaining to ALS's internal lab standards are documented. Evaluation of the data found that there were good correlations between the Stafford laboratory by method A101, Stafford fire assay (correlation coefficient = 0.9976), and Becquerel (correlation coefficient = 0.9982). Data that fell outside the acceptable range of tolerance was discarded from the database, leaving those summarised in Table 9.0. From this work Golden Cross concluded that the best available sample and assay data have been employed in the database (favouring the Golden Cross re-assays). A subsequent

review by Argent Minerals determined that there are no material issues with the remaining Jones Mining data.

- Shell core and percussion samples were originally assayed by ALS method XRF-1A for barium (see description above) and 101-B for copper, lead, zinc, and silver.
  - ALS has advised Argent Minerals that method 101-B is likely to be have been a modified version of A101 (see description above) specifically designed for Pb and Zn analysis, and the Shell documentation notes that it involved 'specially developed digestion'.
  - Shell subsequently selected specific core samples from the six diamond holes and submitted them for re-assay by ALS (method 101-B) as well as COMLABS Pty Ltd. SKF-4 was re-assayed from 99 to 120 metres by ALS method 101-B and COMLABS method AAS-3 for silver, base metals and barium. Limited documentation has been located for method AAS-3 which is described as 'AAS using specially developed acid digestion technique'. ALS re-assayed all of the SKF-2, 3, 5 and 6 core sampled originally, with several methods. These included AAS-5B for gold (30 g charge), and for silver, AAS-3, XRF and 'AAS special acid attack' (no details). XRF was also employed for pathfinder elements gallium and antimony.
  - Approximately 11% of the original percussion hole metres were also reassayed by COMLABS in 6 metre segments for gold using method AAS-5B, and pathfinder elements gallium and antimony using XRF.
  - The original assay certificates for the Shell assays have not been located.
  - From this work Shell concluded from that the analytical techniques routinely used by ALS for all Kempfield samples was satisfactory.
- Inco submitted samples for assay by 'INAL' (Inco's own laboratory), Robertson Research', 'Geomin', Boulder Lab' and 'Rockhampton'. In some cases, the laboratory has not been identified in the available documentation.
  - The assay method has been recorded in the drill logs as 'AAS'. Where the method field has not been ticked the almost identical sheet format and context suggest that AAS has been employed.
  - No details of blanks, duplicates or internal standards are recorded in the logs, nor is there information about any of the laboratories' internal QAQC, nor have the original assay certificates been located.
  - In 1980 Shell resampled Inco's drillholes IKF-DDH1, 5, 7, 10, 17 and 18, and submitted them for re-assay by ALS using the AAS method; it had been suggested that the laboratory techniques employed by Inco may have underestimated the lead and silver content of the holes drilled by Inco. It was thought that lead and silver results would be notably depressed in the presence of large amounts of barite when perchloric acid digestion rather than aqua regia digestion was used before AAS determination. In order to test this hypothesis, sections of Inco's drill core were bevel sampled and the samples analysed for lead and silver and in some cases for gold, barium, copper and zinc. The results showed that generally the lead values from Inco's assays were depressed, but silver values were comparable with the re-sampling results.
  - In 1984 Jones Mining assayed some of the core for gold by fire assay.
- In 2012 Argent Minerals resampled selected intervals of Inco's drillholes IKF-DDH1, 5, 7, 10, 12, 14, 15, 17 and 18. A total of 708 samples was re-assayed at ALS in orange using fire assays Au-AA25 for gold and ME-ICP41 for silver and base metals.

Estimation Methodology

- A consistent estimation scheme was applied to all four deposits. All grades were estimated using ordinary Kriging, which was considered an appropriate technique because of the low to moderate coefficients of variation (typically CV < 2.0, where CV, a standardised measure of variability, is the standard deviation divided by the mean grade).
- Samples (typically 1 metre) were composited to nominal 2 metre lengths for data analysis and grade estimation. Domaining was described in the section on geological interpretation.
- Estimation was performed using Datamine software. A three pass search strategy was used, with initial radii of

5 x 25 x 25 metres, which were doubled for the second pass; a minimum of 8 and maximum of 24 composites in at least 4 octants was used for the first 2 passes. The third pass used the same radii as pass 2, with a minimum of 4 and maximum of 24 composites in at least 2 octants.

- The search ellipsoid dipped 70° west for all domains, except for zinc at BJ and McCarron/Mather zones, where the ellipsoid was flat for the oxide zone. The maximum extrapolation distance was 50 metres, and is only applicable to Inferred category; Measured and Indicated category Mineral Resources are essentially only interpolated.
- Several previous estimates were generated by H&SC (and its predecessor H&S) and the new estimates take into account these earlier estimates. The deposit remains unmined, so there are no production records for reconciliation.
- Kempfield is currently considered primarily a silver project, with lead, zinc and gold as by-products. Metallurgical test work has been performed for all these elements (see section below) and they have been incorporated into the cut-off grades for the sulphide (primary) mineralisation using appropriate revenue and recovery factors.
- There are no estimates for potentially deleterious elements or other non-grade variables of economic significance (eg. sulphur). Sulphide content at Kempfield is low, so acid mine drainage is unlikely to be a significant problem. No deleterious elements of economic significance have been identified to date.
- Parent block size is 5 x 12.5 x 10 metres, compared to a nominal sample spacing of 25 x 25 x 2 metres, in the X, Y and Z planes respectively. The block size in X reflects the down-hole sample spacing in the direction of least continuity, while the block size in Y is half the nominal section spacing. The block size in the Z plane is compatible with the proposed bench height and is around half the sample spacing in this direction.
- The model block size (nominally 5 x 12.5 x 10 metres, with sub-blocks to 2.5 x 6.25 x 5 metres) is effectively the selective mining unit for these estimates.
- Correlation between most elements is very weak; the exceptions are lead/zinc with good correlation and silver/barium with weak correlation. No assumptions about correlation between variables were made during estimation – each element was estimated independently.
- A description of how the geological interpretation was used to control the resource estimates was given in the section on geological interpretation.
- No grade cutting or capping was applied because the grade distributions are not particularly skewed, as indicated by the low coefficients of variation.
- The estimates were validated by several methodologies – visual and statistical comparisons of block and drill hole grades, examination of grade-tonnage data, and comparison with previous estimates. The comparisons of model and drill hole data demonstrated that the drilling tends to be clustered in the higher grade areas, but the estimates appear reasonable once this factor is taken into account. No reconciliation data is available because the deposit currently remains unmined.

Cut-off Grades

- Cut-off grades are 25 g/t silver for oxide and transitional mineralisation (silver cutoff grade only, no metal equivalence employed for Mineral Resource estimation in oxide/transitional material), and 50 g/t silver equivalent for the primary (fresh rock) mineralisation. The cutoff grades were chosen on the basis of providing reasonable prospects for eventual economic extraction given a multitude of factors including metallurgical testing, long term market prices, and mining and processing costs.
- The 2014 Mineral Resource estimate 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 1,550/oz (Gold/silver: 50:1)
  - Lead & zinc price: $US 2,200/t

- Silver & gold recoverable and payable: 80% of head grade
- Lead & zinc recoverable and payable: 55% of head grade

- Argent Minerals and the Competent Person have elected to maintain the above assumptions for consistency with the basis for previous estimates, and to maintain a conservative basis for the current estimate. Whereas the fundamentals of the Mineral Resource estimate have not changed from the April 2012 estimate, a reduction in the silver price in the above equivalence formula would have resulted in an apparent increase in the number of resource tonnes in the primary material, as well as an apparent increase in the silver equivalent ounces ('Ag Eq'), which could be potentially misleading.

Modifying Factors

The following modifying factors have been considered to date:

MINING FACTORS OR ASSUMPTIONS

- The mining method is currently assumed to be all open pit. The estimates include allowance for mining dilution, in that the parent block size is 5 x 12.5 x 10 metres and it may be possible to mine the resources more selectively than this.

METALLURGICAL FACTORS OR ASSUMPTIONS

- The metallurgical recovery assumptions are based on carbon in leach (CIL) processing for silver and gold, and flotation for lead and zinc. Based on metallurgical testing to date, Argent is of the opinion that silver and gold recoveries of 80%, and payable lead and zinc recoveries at 55% of the head grade, are both achievable and have been employed as the basis for Mineral Resource estimation.
- Metallurgical recoveries from test work are provided in the preceding section on cut-off parameters.

ENVIRONMENTAL FACTORS OR ASSUMPTIONS

- In April 2013, Argent submitted an Environmental Impact Statement for an initial heap leach phase of the Kempfield Project to the NSW Government Department of Planning & Infrastructure. The submitted project is a relatively compact heap leach design with no tailings dam for this phase. The heap leach pad will be underlain with an impermeable layer, and additional safeguards will be provided by underdrainage, electronic sensors, and monitoring systems. Argent has incorporated extreme rainfall event assumptions in the design of the heap leach pad. The environmental impacts associated with the project have been assessed by twelve specialist consultancies. In all cases, the impacts were determined to be less than the relevant criteria, capable of being offset through licencing, or not significant. Additionally, the submitted project includes a proposed biodiversity offset strategy that Argent contends will provide medium and long-term biodiversity benefits within and surrounding the site, while balancing the community need to ensure that agricultural land remains productive.
- Argent Minerals has also undertaken environmental study work for progressing Kempfield to a full scale polymetallic project with a mine life of up to 20 years. The study work was progressed beyond pre-feasibility toward feasibility, and was based on mining lead and zinc in addition to the silver and gold, designed as an open cut mine with CIL/flotation processing and a tailings dam for process residue disposal and waste rock emplacement. The relevant environmental aspects were investigated under the direction of an appropriately qualified environmental consultant experienced with NSW mining projects. Argent Minerals is satisfied that the environmental aspects of a full scale polymetallic project at Kempfield can be successfully managed to the satisfaction of the relevant regulations.

BULK DENSITY

- Density measurements were determined on site by Argent personnel in 2011 using an unsealed water immersion method – 292 samples were tested. Of these, 10 samples were submitted to ALS Orange for checking by unsealed and waxed immersion methods. There are a further 45 historical density measurements on core from the Jones Mining and Golden Cross core – these are believed to be unsealed water immersion

measurements.

- A comparison of the Argent site measurements and 10 ALS waxed values show no significant difference. Since all these samples appear to be fresh rock, little variation would be expected.

JORC Table 1

In accordance with section 5.8.2 of the ASX listing rules, Section 1 (Sampling Techniques and Data), Section 2 (Reporting of Exploration Results), and section 3 (Estimation and Reporting of Mineral Resources) of Table 1 of Appendix 5A (JORC Code) is attached as Appendix A to this announcement.

For further information please contact:

David Busch

Managing Director

Argent Minerals Limited

M: 0415 613 800

E: david.busch@argentminerals.com.au

APPENDIX A - JORC 2012 EDITION TABLE 1

KEMPFIELD RESOURCE

The following information follows the requirements of JORC 2012 Table 1 Sections 1, 2 and 3 as applicable for the estimation and reporting of Mineral Resources.

Section 1 - Sampling Techniques and Data

<table>
<tr><th>Criteria</th><th>Commentary</th></tr>
<tr><td>Sampling techniques</td><td>
<u>Overview</u>

The Kempfield deposit has been explored over a period of approximately forty years by Argent Minerals Limited (Argent Minerals), Golden Cross Operations Pty Ltd (Golden Cross), Jones Mining Limited (Jones Mining), The Shell Company of Australia/Metals Division (Shell), and International Nickel Australia Limited (Inco). Variation in techniques or procedures applied by each exploration company are outlined in this report as appropriate.
The data on which the Resource Estimate has been determined is considered to be of high quality in nature.
The Kempfield deposit was sampled with drill chips from reverse circulation (RC) and conventional rotary percussion (PERC) drilling, and with diamond drill hole (DDH) core of PQ, HQ and NQ size.
A total of 23,374 drill samples have been collected, including 17,188 percussion chip samples and 6,186 diamond drill hole core samples. A summary of Kempfield sample types is provided in Table 1.1.1.

Table 1.1.1 – Summary of collected samples by drill hole type and exploration company
<table>
<tr><th rowspan="2">Company</th><th rowspan="2">Period</th><th colspan="3">Samples</th><th rowspan="2">% Total</th></tr>
<tr><th>DDH</th><th>RC/PERC</th><th>Total</th></tr>
<tr><td>Argent Minerals</td><td>2007-current</td><td>3,051</td><td>9,302</td><td>12,353</td><td>53%</td></tr>
<tr><td>Golden Cross</td><td>1996-2007</td><td>45</td><td>4,090</td><td>4,135</td><td>18%</td></tr>
<tr><td>Jones Mining</td><td>1984-1985</td><td>409</td><td>-</td><td>409</td><td>2%</td></tr>
<tr><td>Shell</td><td>1979-1984</td><td>457</td><td>3,796</td><td>4,253</td><td>18%</td></tr>
<tr><td>Inco</td><td>1972-1974</td><td>2,224</td><td>-</td><td>2,224</td><td>10%</td></tr>
<tr><td>TOTAL</td><td></td><td>6,186</td><td>17,188</td><td>23,374</td><td>100%</td></tr>
<tr><td>% TOTAL</td><td></td><td>26%</td><td>74%</td><td>100%</td><td></td></tr>
</table>

Samples of between 2 and 3 kg each in weight were selected for assay according to the procedures detailed under the criteria heading 'Sub-sampling techniques and sample preparation'. These were crushed to 6 mm and then pulverized to 75 microns. A 25 g split of the sample was fire assayed for gold. The lower detection limit for gold is 0.01 ppm, which has been determined to be an appropriate detection level. All other elements including silver and base metals were analysed using acid digest and either an Inductively Coupled Laser - Mass Spectrometry (ICP-MS) or Inductively Coupled Laser - Atomic Emission Spectroscopy (ICP-AES) finish, or an Atomic Absorption Spectrometer (AAS).
Measures taken to ensure sample representivity and measurement calibration are noted under the Criteria headings 'Drill sample recovery', 'Sub-sampling techniques and sample preparation' and 'Quality of assay data and laboratory tests'.

</td></tr>
<tr><td>Drilling techniques</td><td>

A total of 495 holes for 42,353 metres of drilling has been conducted. Several industry standard drilling techniques have been applied in the extraction of the samples, including full length diamond drilling, percussion drilling (PERC and RC) and combination RC collar/DDH tails, as summarised in Table 1.1.2.

</td></tr>
</table>

Table 1.1.2 – Summary of Drill Holes by Hole Type and Total Length Drilled

Company	All Diamond Drilling			Percussion Drilling		Combined RC/DDH Drilling		Total
	PQ	HQ	NQ	PERC	RC	RC Pre-Collars	DDH Tail	
Number of holes	9	19	38	148	276	5		495
Metres	745	2,543	4,581	7,978	25,132	815	559	42,353

- Variation in drilling techniques according to exploration company is set out in Table 1.1.3.

Table 1.1.3 – Summary of drilling metres by drilling technique and exploration company

Company	Period	Full Length DDH		Percussion Drilling (RC/PERC)		RC Pre-Collar/DDH Tail			All Holes		%
		Holes	Metres	Holes	Metres	Holes	RC Metres	DDH Tail Metres	Holes	Metres	Total
Argent Minerals	2007-current	28	3,105	179	17,849	2	359	400	209	21,713	51%
Golden Cross	1996-2007	-	-	99	7,586	3	456	159	102	8,201	19%
Jones Mining	1984-1985	14	771	-	-	-	-	-	14	771	2%
Shell	1979-1984	6	917	146	7,675	-	-	-	152	8,592	20%
Inco	1972-1974	18	3,076	-	-	-	-	-	18	3,076	7%
	TOTAL	**66**	**7,869**	**424**	**33,110**	**5**	**815**	**559**	**495**	**42,353**	**100%**
	% TOTAL	**13%**	**19%**	**86%**	**78%**	**1%**	**2%**	**1%**	**100%**	**100%**	**100%**

Diamond drilling techniques (including RC Pre-Collar and DDH tail)

- Diamond drilling was conducted with either double tube wireline core barrel or triple tube procedures.
- The historical drill core was orientated relative to regional, steep (80° to W) north-south trending cleavage. This is considered to be the most reliable orientation method for the historical holes at the Kempfield deposit. More recently, state of the art electronic orientation tools have become available, and commencing with hole AKDD177, are now employed at Kempfield as the method of choice.
- Core was measured and marked at 1 metre intervals after each drill run using benchmark block lengths to calibrate depth, except for Inco which marked at 1.52 metre intervals (5 feet). Rig procedures were adjusted as required including drilling rate, run length and fluid pressure, in order to maintain sample integrity.

Percussion drilling techniques

- Percussion drilling was conducted with conventional methods using a standard hammer sizes from 115 to 140 mm (4.5 - 5.5 inches).
- Please refer to Table 1.1.3 above for a summary of the relative portions of percussion holes drilled as RC and conventional percussion.

Drill sample recovery

- The Argent Minerals database contains a detailed record of Argent Minerals drill core and drill chip recoveries. Relevant aspects of recoveries for diamond and percussion drilling are summarised as follows.

Diamond drilling sample recovery

- Diamond drill core recoveries were derived through reconciliation of the actual core and the drillers' records (for every diamond drilling program). Diamond core recoveries were recorded during drilling and reconciled during the core processing and geological logging. The method employed was to measure the length of the recovered core and divide by the drill interval for each section recovered. This was entered into a separate table which was then uploaded into the database.
- No significant core loss occurred during drilling. However, localised lower recoveries were recorded in intensively weathered (BJ Zone) and clay-altered (McCarron Zone) rocks.

	• Measures undertaken to maximize core recovery include: a) larger core diameter size (HQ) drilled through the weathered intervals and b) the use of short drill runs (0.5 -1.5 metres). • A statistical analysis of diamond core recoveries was performed in 2014 on a representative dataset of 27 holes out of the 28 full length diamond holes drilled by Argent Minerals. The result of the analysis is that there was no obvious bias in silver grades due to low sample recoveries. **Percussion drilling sample recovery** • During Argent Minerals RC drilling, special care was taken to adjust penetration rate and air pressure, especially if samples were wet. Drill chips were collected at one metre intervals in plastic bags, weighed, split (to 1:12 with a riffle splitter) and then composited on two metre intervals in calico bags. The weight of recovered drill chips per metre enabled recovery rates to be estimated. Wet samples were dried before weighing and splitting. • Percussion drill chip recoveries were calculated by weighing recovered chips per metre drilled and reconciling with the volume and expected relative density of the material sampled. This was entered into a separate table which was then uploaded into the database. • A statistical analysis of percussion sample recoveries was performed in 2014 on a representative dataset of 22 holes out of 179 RC holes drilled by Argent Minerals. The result of the analysis is that there was no obvious bias in silver grades due to low sample recoveries.
Logging	• Geological logging and re-logging of diamond drill core was employed to record lithology, alteration, mineralisation, veining and structures (faults and foliation). • The geological logging of core and chip samples and geotechnical logging of core has been performed to the level of detail required to support appropriate Mineral Resource estimation. • Drill core and drill chips were logged as both qualitative (descriptive) and quantitative (percentage volume visual estimates). Core was photographed in both wet and dry condition. Argent Minerals has also re-logged and re-photographed historical drill core stored at the NSW Core Library in Londonderry. • 100% of the total 42,353 metres of the diamond and percussion drill holes have been geologically, geochemically and geotechnically (diamond holes) logged.
Sub-sampling techniques and sample separation	**Percussion drilling chip sampling** • 74% of the total number of samples were collected by either RC or conventional percussion drilling. A total of 17,188 percussion drill chip samples were collected during three major drilling programs conducted by Shell, Golden Cross, and Argent Minerals. The sampling sizes (between 2 and 3 kg) and techniques are considered to have been appropriate for percussion drilled chip sampling for the style and grain size of mineralisation at Kempfield, and further details are set out according to exploration company as follows: - Argent Minerals conducted RC drilling under industry best practice procedures. The total recovered RC drill chips were collected at 1 metre intervals in plastic bags, left to dry out if required, split to 1:12 with a riffle splitter in calico bags each up to 2.5 kg in weight and then composited on 2 metre intervals. - Golden Cross conducted RC drilling and collected 4,090 samples. Samples were collected by the spear method – the total sample for a 1 metre of drill hole length was collected in a bag which was speared and the spear samples then composited at two metre intervals. Golden Cross samples were collected as both wet and dry, and sample sizes were between 2 and 3 kilograms each. - Shell drilled 150 percussion holes in three programs of 30, 30 and 90 holes respectively (147 of which are recorded in the Argent Minerals database and employed in the Kempfield Resource estimation detailed in this report). During programs one and two, cuttings were collected using either simple cyclones or sludge buckets and much of the fines was either blown or washed away. Sample collection methods were improved in the third program through the use of an Ingersoll Rand Jumbo Airtrac drilling rig, and from hole 3PD-27 onward the Aqua-Dust sampling system was used to minimise the loss of fines. Documentation is not available for the specifics of Shell's sample preparation techniques at Kempfield. Argent Minerals believes that it is a reasonable assumption that

Shell, as a leading minerals exploration company, would have operated according to documented procedures, and that these procedures were likely to have reflected international best practice at the time. Given that the majority of the Shell holes were shallow (less than 50 metres depth), they are generally higher than the known water table in the area and therefore likely to be collected mostly as dry samples.

Diamond drill core sampling

- The diamond drill core sampling at Kempfield has provided high quality samples that were logged for multiple attributes including lithology, structure, geotechnical data, and density.
- The selected drill core was cut in either half or quarters (or in the case of one large diameter core, eighths), and the respective core section 'split' analysed at a certified assay laboratory.
- The sample sizes were appropriate to correctly represent the sulphide mineralisation at the Kempfield project based on the style of mineralisation, consistency of the intersections, and the sampling methodology.
- Further details are set out according to exploration company as follows:
  - Argent Minerals drilled diamond core with PQ, HQ and NQ size and split as half core (HQ and NQ size) and quarter (PQ) core with a diamond saw to produce samples for assaying. Intervals vary from 0.5 to 1.5 metres maximum. Sampling intervals were selected with an emphasis on mineralisation and geological control.
  - Golden Cross drilled diamond drill core of NQ size was split in half with a diamond saw. The majority of the samples comprised 1 metre intervals. Where zones were of variable geology and mineralisation, intervals of between 1 and 2 metres were selected on the basis of observed geology.
  - Most of the Jones Mining core was split along the length by diamond saw, with half taken as either 1 or 2 metre samples. One PQ sized hole, JKF-18, was split and 1/8 core analysed.
  - Shell diamond drill core sampling comprised predominantly split core in 2 metre lengths. The upper and lower sections of SKF-1 and all of the SKF-5 sampling was performed by bevelling.
  - Inco collected samples comprising: a) 51 mm (2 inch) core chips collected over 1.52 metre (5 feet) intervals and b) 1.52 metre splits of core at varying intervals. Where significant mineralisation was noted, the total respective core length was split for analysis. Inco conducted selective sampling (1,516 samples in the Argent Minerals database) of drill core with limited assays (mostly for base metals).

    Selected core intervals were subsequently re-assayed for gold and silver by Shell and Golden Cross. Shell bevelled selected sections of Inco core over 6.1 metre (20 feet) intervals. Whilst some discrepancies in lead values exist, Shell's analysis verified Inco's results overall.

    Inco drill holes within the Kempfield resource outline were also resampled by Argent Minerals during 2011 - a total of 709 samples, and arranged for them to be analysed by a laboratory for gold, silver, base metals, pathfinder, and rock-forming elements.
- A total of 6,186 drill core samples of different sizes were collected (see Table 1.1.4 summary).

Table 1.1.4 – Summary of diamond core samples by drill hole size and sampled portion

Drill core size & sampled portion	Number of samples	% of Drill Core	Comments
1/4 PQ	674	10.9	Geotechnical drilling
1/2 HQ	831	13.4	Metallurgical drilling
1/4 HQ	519	8.4	Metallurgical drilling
1/2 NQ	3,452	55.8	Exploration drilling
1/4 NQ	710	11.5	Exploration drilling including re-assaying of three holes
TOTAL	**6,186**	**100%**	**100%**

Summary

- A summary of the sample media collected at Kempfield project is presented in Table 1.1.5.

Table 1.1.5 – Summary of Sample Media

Total number of samples	RC drill chip samples	DDH drill core samples
23,374	17,188 (74%)	6,186 (26%)
		including:
		¼ PQ 674 (plus additional 264 re-assays by Golden Cross)
		½ HQ 831
		¼ HQ 519
		½ NQ 3,452
		¼ NQ 710 (re-assayed by Argent Minerals)

- Details of quality control procedures and additional measures taken to ensure representivity are presented under the Criteria heading 'Quality of assay data and laboratory tests' (see the Table 1.1.6 summary and related discussion under the same Criteria heading).

Quality of assay data and laboratory tests

- Quality assurance and quality control (QAQC) procedures for historical sampling, assay data and laboratory tests are summarised in Table 1.1.6. No geophysical tools or handheld XRF instruments were used. In summary, the net result of all the laboratory techniques and procedures applied are considered to have been high quality in nature, appropriate for the mineralisation and providing a near-total result sufficient for the Mineral Resource Estimate in this report. Additional relevant specifics for each exploration company are set out following the table.

Table 1.1.6 – QAQC Summary for each Exploration Company

Company	Number of assays	Comments
Argent Minerals	12,353	Full QAQC applied: - field coarse blanks (every 50th); - standard reference material from standards supplied by Geostats Pty Ltd (every 50th); - duplicate every 25th or 50th ; - cross laboratory check (ALS Orange, Genalysis Laboratory Services Pty Ltd); - cross analytical technique checks (ICP-MS versus four acid leach); and - three pairs of twin holes – RC vs DDH
Argent Minerals Re-assays of Inco samples	708	
Golden Cross	4,135	Satisfactory QAQC: - duplicates; and - cross-laboratory checks (ALS Orange, ALS Stafford, Becquerel and Genalysis), and cross-analytical technique checks (ICP-AES versus Neutron Activation Analysis - see discussion following this table)
Golden Cross Re-assays of Jones Mining samples	263	
Jones Mining	146	QAQC documentation partially available - Jones Mining re-assayed 82 samples
Shell	4,253	Satisfactory QAQC: - four check holes against percussion drilling program; and - cross-laboratory checks.
Inco	1,516	QAQC documentation not available
TOTAL	**23,374**	**21,712 assays (93%) with satisfactory QAQC procedures and documentation**

- Argent Minerals samples were submitted to ALS Laboratories in Orange for gold assays by fire assay, and silver and base metals by ICP-MS.
  - Samples were crushed by ALS to 6 mm and then pulverized to 75 microns. A 25 g split of the sample was fire-assayed for gold. The lower detection limit for gold is 0.01 ppm, which has been determined to be an appropriate detection level. All other elements including silver and base metals were analysed using aqua regia acid digest and an ICP-MS finish.
  - Aqua regia digest/ICP-MS finish was compared with four-acid/ICP-MS finish with a very high

correlation achieved, confirming a near-total result for the aqua regia/ICP-MS technique.

- ALS Laboratory QAQC comprised the use of certified reference materials, blanks, splits and duplicates as part of in-house procedures and internal standards.
- Argent Minerals submitted an independent suite of standard reference materials (SRM) 1:25 and coarse blanks 1:50 Field duplicates were collected every 25th sample during RC drill chip sampling. For percussion drilling samples, Argent Minerals performed laboratory cross checking by submitting samples to ALS and Genalysis Laboratory Services Pty Ltd for cross checking; a very high correlation was achieved.
- For core samples, metallurgical assays for 1/2 core were compared with the original 1/4 core assays; a very good correlation was achieved.
- Periodic internal QAQC reports for Argent Minerals sampling procedures show good precision and accuracy of analytical methods and sampling procedures. No obvious contamination was observed during sample preparation.
- Full sets of assay certificates are retained by Argent Minerals.

• Golden Cross samples were submitted to ALS Laboratories in Orange for gold assays by fire assay, silver and base metals by aqua regia digest with an ICP-AES finish, and barium by X-ray diffraction (XRF).

- Samples were crushed by ALS to 6 mm and then pulverized to 75 microns. A 25 g split of the sample was fire-assayed for gold. The lower detection limit for gold is 0.01 ppm, which has been determined to be an appropriate detection level. All other elements including silver and base metals were analysed using aqua regia acid digest and an ICP-AES finish.
- Duplicate samples were submitted to the Australian Nuclear Science and Technology Organisation (ANSTO) for Neutron Activation Analysis (NAA), a very sensitive method of quantitative multi-elemental analysis with the potential to determine concentrations in a sample from parts per billion (ppb) to tens of percent. Comparison of neutron activation, four acid/ICP-MS and aqua regia digest/ICP-AES assay results verified that the primary technique (aqua regia digest/ICP-AES) was reliable for silver and base metal assaying, yielding near-total results.
- Full sets of assay certificates are retained by Argent Minerals.

• Jones Mining samples were assayed by Australian Laboratory Services in Brisbane for silver and barium using method XRF-1A, and one hole (JKF-20) by AMDEL in South Australia.

- The XRF-1A method comprised sample preparation by milling to -75 microns and pressing into briquettes each of minimum 25 g weight. A limited number of samples were analysed for gold (7) and other elements (2), for which analysis procedure documentation has not been located.
- Jones Mining reassayed many of the 2 metre lengths at 1 metre intervals using the same methodologies as for the original 1 metre interval assays. The PQ size hole, JKF-18, was split and 1/8 core analysed for Ag and Ba by ALS as per the above XRF-1A method together with the core from the other holes. Half of the silver anomalous zones were despatched to AMDEL in South Australia for metallurgical tests as well as silver and barium assays (analytical method documentation not available).
- Partial documentation has been located in relation to the Jones Mining internal QAQC procedures. The original assay certificates have not been located.
- In 1998 Golden Cross re-sampled and re-assayed material from Jones Mining's drill holes JKF-7 to JKF-18 and JKF-19 in 1999. Intervals were selected for re-assay where warranted by grade and distribution. A comprehensive inter-laboratory check assay program was performed, with samples sent to ALS Orange, ALS Stafford, Becquerel and Genalysis. Silver was assayed for by method A101 and lead and zinc by method G102. Method A101 was recommended by the lab for lead and silver ores containing barite and comprised aqua regia digestion, hydrochloric acid dissolution with addition of ammonium acetate and thiosulphate for complexation of lead and silver, followed by flame AAS. Method G102 was recommended by the lab for sulphidic samples, and comprised aqua regia digestion followed by flame AAS. Satisfactory QAQC procedures were applied, and data pertaining to ALS's internal lab standards are documented. Evaluation of the data found that there were good correlations between the Stafford laboratory by method A101, Stafford fire assay (correlation

	coefficient = 0.9976), and Becquerel (correlation coefficient = 0.9982). Data that fell outside the acceptable range of tolerance was discarded from the database, leaving those summarised in Table 1.1.6. From this work Golden Cross concluded that the best available sample and assay data have been employed in the database (favouring the Golden Cross re-assays). A subsequent review by Argent Minerals determined that there are no material issues with the remaining Jones Mining data. • Shell core and percussion samples were originally assayed by ALS method XRF-1A for barium (see description above) and 101-B for copper, lead, zinc, and silver. - ALS has advised Argent Minerals that method 101-B is likely to be have been a modified version of A101 (see description above) specifically designed for Pb and Zn analysis, and the Shell documentation notes that it involved 'specially developed digestion'. - Shell subsequently selected specific core samples from the six diamond holes and submitted them for re-assay by ALS (method 101-B) as well as COMLABS Pty Ltd. SKF-4 was re-assayed from 99 to 120 metres by ALS method 101-B and COMLABS method AAS-3 for silver, base metals and barium. Limited documentation has been located for method AAS-3 which is described as 'AAS using specially developed acid digestion technique'. ALS re-assayed all of the SKF-2, 3, 5 and 6 core sampled originally, with several methods. These included AAS-5B for gold (30 g charge), and for silver, AAS-3, XRF and 'AAS special acid attack' (no details). XRF was also employed for pathfinder elements gallium and antimony. - Approximately 11% of the original percussion hole metres were also reassayed by COMLABS in 6 metre segments for gold using method AAS-5B, and pathfinder elements gallium and antimony using XRF. - The original assay certificates for the Shell assays have not been located. - From this work Shell concluded from that the analytical techniques routinely used by ALS for all Kempfield samples was satisfactory. • Inco submitted samples for assay by 'INAL' (Inco's own laboratory), Robertson Research', 'Geomin', Boulder Lab' and 'Rockhampton'. In some cases, the laboratory has not been identified in the available documentation. - The assay method has been recorded in the drill logs as 'AAS'. Where the method field has not been ticked the almost identical sheet format and context suggest that AAS has been employed. - No details of blanks, duplicates or internal standards are recorded in the logs, nor is there information about any of the laboratories' internal QAQC, nor have the original assay certificates been located. - In 1980 Shell resampled Inco's drillholes IKF-DDH1, 5, 7, 10, 17 and 18, and submitted them for re-assay by ALS using the AAS method; it had been suggested that the laboratory techniques employed by Inco may have underestimated the lead and silver content of the holes drilled by Inco. It was thought that lead and silver results would be notably depressed in the presence of large amounts of barite when perchloric acid digestion rather than aqua regia digestion was used before AAS determination. In order to test this hypothesis, sections of Inco's drill core were bevel sampled and the samples analysed for lead and silver and in some cases for gold, barium, copper and zinc. The results showed that generally the lead values from Inco's assays were depressed, but silver values were comparable with the re-sampling results. - In 1984 Jones Mining assayed some of the core for gold by fire assay. - In 2012 Argent Minerals resampled selected intervals of Inco's drillholes IKF-DDH1, 5, 7, 10, 12, 14, 15, 17 and 18. A total of 708 samples was re-assayed at ALS in orange using fire assays Au-AA25 for gold and ME-ICP41 for silver and base metals.
Verification of sampling and assaying	• Initial internal verification of significant intersections was conducted by technical consultants David Timms (MAIG), senior geologist Chris Johnson and site geologist Hrvoje Horvat, and progressed to independent verification by H&SC for Mineral Resource estimation and reporting purposes. • Merging of down-hole sampling intervals with assay data was performed by Dr Vladimir David (RPGeo) using H&SC database software.

	• Use of twinned and check holes: - Argent Minerals has drilled three pairs of twin RC versus DDH holes. The assay results from these pairs show reasonable correlation in the mineralised intervals. This implies that the RC drilling and the applied sampling procedure was a reliable technique. - At the end of Shell's three part percussion program, three percussion holes were drilled alongside the first and second program holes to compare results from the different sampling methods. An additional, short diamond hole was drilled adjacent to a wet Aqua-Dust hole, for a total of four check holes. Equatable sections were compared. With the exception of two of the original 150 program holes, all four check holes upgraded the original intersections. • Argent Minerals undertook statistical comparisons of spear sampling versus riffle split sampling in order to confirm the reliability of the spear method; this analysis confirmed a high correlation. • Data entry, verification and storage protocols are to industry standard practice: - Samples are logged on-site with the resulting data digitally entered upon return to the site office, subsequently entered into the project database, and verified at head office. Drill hole data on which the Resource Estimate is based is stored in a reference Microsoft Access database which is maintained by H&SC. Argent Minerals has a copy of the database on its own system, whilst H&SC manages the 'key' for making any changes to the reference database. - Procedures are well understood by site personnel and formally documented. - All available primary physical documentation such as drill logs and historical documentation has been electronically scanned to Adobe PDF format, and the physical originals are stored securely at the Argent Minerals registered corporate address in Perth. - Argent Minerals has invested considerable effort and resources to ensure that all of the company's data is electronically accessible, in order to ensure efficient and reliable access to that data, and the best accuracy and precision in the management of the business. The Argent Minerals central data server is backed up on a nightly incremental basis to an offsite specialist third party service provider, and this is supplemented by regular backups to portable hard disk drives. • No adjustment or calibration was made to any primary assay data collected at the Kempfield project for purposes of Mineral Resources estimation and reporting.
Location of data points	• Surveys of the drill hole collars were conducted by the following methods: - Historical collars surveyed under the Kempfield local grid (47% of the total) and later converted to AMG 66 (Zone 55) grid (by a registered surveyor). Accuracy and quality of drill hole collar survey depends on the age of survey and exploration company which conducted the survey; - Holes not originally surveyed by a registered surveyor (8% of the total) were located with a GPS and stored in AMG66 (for consistency with the above); and - Collars surveyed by a registered surveyor in GDA 94 (Zone 55) grid (45% of the total) and then converted to AMG 66 (Zone 55) grid (also for consistency); all Argent Minerals drill hole collars are surveyed by a registered surveyor, an H&SC requirement. • Drillhole collar surveys are grouped into the three sets as set out in Table 1.1.7:

Table 1.1.7 – Drillhole collar survey summary

Company	Collars with historical survey calculated from local coordinates	Collars surveyed with hand-held GPS	Collars surveyed by registered surveyor
Argent Minerals	-	14	195
Golden Cross	62	25	15
Jones Mining	9	-	5
Shell	148	-	4
Inco	16	-	2
TOTAL	**235 (47%)**	**39 (8%)**	**221 (45%)**

- Drill hole collar surveys conducted by registered surveyors were reported as hard copy or locked pdf documents.
- Down-hole surveys of dip and azimuth were conducted using either a single shot Eastman Camera and electronic camera every 50 or 30 metres to detect hole direction. A summary of down-hole surveys for the 495 drill holes at Kempfield is shown in Table 1.1.8:

Table 1.1.8 – Down-hole survey summary

Company	Period	Holes with DH survey	Holes with DH survey inside roads	Holes without DH survey	Comments
Argent Minerals	2007-current	79	76	54	Holes were surveyed with Eastman camera; CTP100 camera and Campeg Proshop; Holes without surveys are shallow (<50m) and vertical
Golden Cross	1996-2007	5	92	5	Majority holes surveyed with Eastman camera
Jones Mining	1984-1985	14	-	-	Holes surveyed with Eastman camera
Shell	1979-1984	6	-	146	DD holes surveyed with Eastman camera; percussion holes are shallow in average 50m depth
Inco	1972-1974	18	-	-	Holes surveyed with Eastman camera
TOTAL		**122 (25%)**	**168 (34%)**	**205 (41%)**	

- The block models are currently defined in the Kempfield Local Grid, which has an origin of 705,728.69mE and 6,256,169.42mN in GDA94, and a rotation of 21.38° anti-clockwise from true north.
- The elevations for the Argent holes were surveyed by an independent registered surveyor (195 holes). Elevations for historical holes were either assigned from digital terrain model (**DTM**) or interpolated from known surveyed collar elevations. The DTM was derived from Light Detecting and Ranging (**LIDAR**) survey (with an accuracy of +/- 5 cm) conducted by Geospectrum for the Kempfield project during 2010.

Data spacing and distribution

- The drill holes are drilled on 25 metre sections and approximately 20 metres apart in vertical distance. In diamond drill holes, samples are taken at 1 metre intervals down the hole under geological control.
- Data spacing and distribution is sufficient to establish the degree of geological and grade continuity appropriate for the Mineral Resource estimation procedures and classifications applied.
- Sample compositing:
  - Argent and Golden Cross RC samples were taken at 1 metre down-hole intervals and composited to 2 metre intervals.
  - Shell drill chips – documentation has not been located.

Orientation of data in relation to

- In total, 453 (92%) holes were drilled towards local grid east (azimuth 111° in GDA94) at angles of 55° to 60° to intersect the stratigraphy and mineralisation as close as possible to perpendicular in order to

geological structure	provide the most representative samples. • No orientation based sampling bias has been identified in the data to date. However, holes drilled to the west (along stratigraphy) usually are controlled by cleavage and/or faults and reported assays can be inconsistent.
Sample security	• Each sample contained within a calico bag, with every ten calicos enclosed within a polyweave sack and in turn locked up within a sturdy sealable waterproof container. • Sulphide mineralisation can be identified macroscopically and valuable intersections required for analytical or metallurgical tests were stored in refrigerated conditions.
Audits or reviews	• Sampling techniques and procedures were regularly reviewed internally and by external consultants (H&SC). Data reviews conclude that QAQC protocols have been adequately employed. • Periodically Argent Minerals conducted assays QAQC analysis with emphasis on the field sampling procedures (field duplicates) and laboratory performance involving accuracy and contamination (standards and blanks). Reports relating to assay QAQC have been produced by Argent Minerals and H&SC has confirmed satisfactory performance. • In addition, Argent Minerals undertook internal QAQC review of the rock density data at Kempfield project; the report produced verifies satisfactory quality of data.

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% interest), 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 employed for pastural usage. Heritage items have been identified on the property. A native title claim has been lodged over a large area that includes Kempfield. A single counterparty only, the Gundungurra tribe, 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 2015.
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** • Earlier exploration was performed 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

Geology	• The deposit type is Volcanogenic Massive Sulphide (VMS); • The geological setting is Silurian felsic to intermediate volcaniclastics within the intra-arc Hill End Trough in the Lachlan Orogen, Eastern Australia; and • The style of mineralisation comprises stratiform barite-rich horizons hosting silver, lead, zinc, +/- gold.
Drill hole Information	• No new Exploration Results in this report. This report relates to Mineral Resources only.
Data aggregation methods	• No new Exploration Results in this report. This report relates to Mineral Resources only.
Relationship between mineralisation widths and intercept lengths	• No new Exploration Results in this report. This report relates to Mineral Resources only.
Diagrams	• No new Exploration Results in this report. This report relates to Mineral Resources only.
Balanced reporting	• No new Exploration Results in this report. This report relates to Mineral Resources only.
Other substantive exploration data	• No new Exploration Results in this report. This report relates to Mineral Resources only.
Further work	• No new Exploration Results in this report. This report relates to Mineral Resources only.

Section 3 - Estimation and Reporting of Mineral Resources

Criteria	Commentary
Database integrity	• Database integrity was managed by a three phase standardised procedure as follows. • Phase 1 - During data entry. Argent Minerals manually input data directly into the 'front end' of a Microsoft Access relational database designed by H&SC. The database 'backend' performed 'on the fly' data validation during data entry. Data that did not conform to a predetermined set of validity rules, keys and referential integrity checks was rejected, and the operator alerted accordingly. Argent Minerals also performed additional manual checking of sample database records against the original hard copies. All the assay data was imported from an ALS-provided electronic file directly into the master assay tables of the main backend database using an Assay Import Tool developed by H&SC. This tool imports both the metadata (lab report header) and the assay data itself in a systematic, repeatable and traceable way. • Phase 2 - Post-validation. This phase commenced with Argent Minerals merging the drill log and assay datasets, an automated procedure which forms part of the database export process. Argent Minerals then performed automated checks of the merged Microsoft Access database . Using the inbuilt routines created by H&SC as an integral part of the database tool set, this part of the post-validation process looked for inconsistency issues such as missing logs, overlaps or gaps in drill hole intervals and associated data (including assay data), end of hole length, or specific gravity variations. Downhole drill surveys were also automatically checked for variation of drill hole geometry outside predetermined parameters. Argent Minerals then performed manual checks on drill hole cross sections, all of which were able to be

	generated from the merged database. The post-validated database was then exported by Argent Minerals to H&SC for the next steps in the process. • Phase 3 - Final checks. This phase of the process commenced with the merged exported database being uploaded into Datamine by H&SC. A combination of automated, scripted, and manual checks were then performed by H&SC, including: - checking drill hole collars against topography; - checking for excessive down-hole deviation; - checking different assay methods for same elements; - visual and statistical checks of assays; and - recalculating density values from raw data and checking densities against values calculated from assays. • Whilst no detailed checking of the database against original records was performed by H&SC, both Argent Minerals and H&SC are satisfied that an appropriately comprehensive multiple phase checking process has been employed, upon which the Mineral Resource Statement is based. The conclusion of the above Phase 3 checks by H&SC on the database provided by Argent for Mineral Resource estimation was that no obvious errors were detected
Site visits	• The Competent Person visited site for 2 days in August 2011. • General site geology and layout were inspected, core and chip samples were examined and RC sample splitting was observed. No drilling was in progress at the time. • Field procedures were being performed in a professional manner and no material issues were identified.
Geological interpretation	• There is a reasonable confidence level in the geological interpretation of the mineral deposits. • The geological interpretation involved dividing the deposits into mineralised zones, essentially based on assay data, and identifying the fresh, transition and oxide zones from geological logging. Oxidation logging was checked against zinc assays as this element is the most sensitive to oxidation at Kempfield. It was assumed that the assays and logging are accurate. • There appears to be limited scope for alternative interpretations. The mineralised zones are quite clearly defined, while the oxidation zones are a little more subjective. It is considered unlikely that alternative interpretations would have a substantial impact on the Mineral Resource estimates due to the generally close spacing of the data points. • The mineralised zones were treated having as hard boundaries during grade estimation, while the oxidation boundaries were treated as soft boundaries, due to their gradational nature. • The major factor affecting the continuity of both grade and geology is the cross-faulting that truncates or displaces mineralisation. These fault surfaces were treated as hard boundaries during estimation.
Dimensions	• BJ Zone Main - 250 metres along strike by 100 metres wide on average (multiple lenses); starts at surface and extends to 185 metres below. • South Conglomerate Zone – 400 metres along strike by 20 metres wide on average; starts at surface and extends to 145 metres below. • McCarron East - 200 metres along strike by 30 metres wide on average; starts at surface and extends to 185 metres below. • McCarron West - 700 metres along strike by 35 metres wide on average; starts at surface and extends to 140 metres below. • Mather Zone - 300 metres along strike by 35 metres wide on average; starts at surface and extends to 145 metres below.

	• Quarries Zone – multiple lenses – largest = 160 metres along strike by 25 metres wide on average; starts at surface and extends to 150 metres below.
Estimation and modelling techniques	• A consistent estimation scheme was applied to all four deposits. All grades were estimated using ordinary Kriging, which was considered an appropriate technique because of the low to moderate coefficients of variation (typically CV < 2.0, where CV, a standardised measure of variability, is the standard deviation divided by the mean grade). • Samples (typically 1 metre) were composited to nominal 2 metre lengths for data analysis and grade estimation. Domaining was described in the section on geological interpretation. • Estimation was performed using Datamine software. A three pass search strategy was used, with initial radii of 5 x 25 x 25 metres, which were doubled for the second pass; a minimum of 8 and maximum of 24 composites in at least 4 octants was used for the first 2 passes. The third pass used the same radii as pass 2, with a minimum of 4 and maximum of 24 composites in at least 2 octants. • The search ellipsoid dipped 70° west for all domains, except for zinc at BJ and McCarron/Mather zones, where the ellipsoid was flat for the oxide zone. The maximum extrapolation distance was 50 metres, and is only applicable to Inferred category; Measured and Indicated category Mineral Resources are essentially only interpolated. • Several previous estimates were generated by H&SC (and its predecessor H&S) and the new estimates take into account these earlier estimates. The deposit remains unmined, so there are no production records for reconciliation. • Kempfield is currently considered primarily a silver project, with lead, zinc and gold as by-products. Metallurgical test work has been performed for all these elements (see section below) and they have been incorporated into the cut-off grades for the sulphide (primary) mineralisation using appropriate revenue and recovery factors. • There are no estimates for potentially deleterious elements or other non-grade variables of economic significance (eg. sulphur). Sulphide content at Kempfield is low, so acid mine drainage is unlikely to be a significant problem. No deleterious elements of economic significance have been identified to date. • Parent block size is 5 x 12.5 x 10 metres, compared to a nominal sample spacing of 25 x 25 x 2 metres, in the X, Y and Z planes respectively. The block size in X reflects the down-hole sample spacing in the direction of least continuity, while the block size in Y is half the nominal section spacing. The block size in the Z plane is compatible with the proposed bench height and is around half the sample spacing in this direction. • The model block size (nominally 5 x 12.5 x 10 metres, with sub-blocks to 2.5 x 6.25 x 5 metres) is effectively the selective mining unit for these estimates. • Correlation between most elements is very weak; the exceptions are lead/zinc with good correlation and silver/barium with weak correlation. No assumptions about correlation between variables were made during estimation – each element was estimated independently. • A description of how the geological interpretation was used to control the resource estimates was given in the section on geological interpretation. • No grade cutting or capping was applied because the grade distributions are not particularly skewed, as indicated by the low coefficients of variation. • The estimates were validated by several methodologies – visual and statistical comparisons of block and drill hole grades, examination of grade-tonnage data, and comparison with previous estimates. The comparisons of model and drill hole data demonstrated that the drilling tends to be clustered in the higher grade areas, but the estimates appear reasonable once this factor is taken into account. No reconciliation data is available because the deposit currently remains unmined.
Moisture	• Tonnages are estimated on a dry basis; moisture content not determined.
Cut-off parameters	• Cut-off grades are 25 g/t silver for oxide and transitional mineralisation (silver cutoff grade only, no metal equivalence employed for Mineral Resource estimation in oxide/transitional material), and 50 g/t silver equivalent for the primary (fresh rock) mineralisation. The cutoff grades were chosen on the basis of

	providing reasonable prospects for eventual economic extraction given a multitude of factors including metallurgical testing, long term market prices, and mining and processing costs. • The 2014 Mineral Resource estimate 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 1,550/oz (Gold/silver: 50:1) - Lead & zinc price: $US 2,200/t - Silver & gold recoverable and payable: 80% of head grade - Lead & zinc recoverable and payable: 55% of head grade • Argent Minerals and the Competent Person have elected to maintain the above assumptions for consistency with the basis for previous estimates, and to maintain a conservative basis for the current estimate. Whereas the fundamentals of the Mineral Resource estimate have not changed from the April 2012 estimate, a reduction in the silver price in the above equivalence formula would have resulted in an apparent increase in the number of resource tonnes in the primary material, as well as an apparent increase in the silver equivalent ounces ('Ag Eq'), which could be potentially misleading.
Mining factors or assumptions	• The mining method is currently assumed to be all open pit. The estimates include allowance for mining dilution, in that the parent block size is 5 x 12.5 x 10 metres and it may be possible to mine the resources more selectively than this.
Metallurgical factors or assumptions	• The metallurgical recovery assumptions are based on carbon in leach (CIL) processing for silver and gold, and flotation for lead and zinc. Based on metallurgical testing to date, Argent is of the opinion that silver and gold recoveries of 80%, and payable lead and zinc recoveries at 55% of the head grade, are both achievable and have been employed as the basis for Mineral Resource estimation. • Metallurgical recoveries from test work are provided in the preceding section on cut-off parameters.
Environmental factors or assumptions	• In April 2013, Argent submitted an Environmental Impact Statement for an initial heap leach phase of the Kempfield Project to the NSW Government Department of Planning & Infrastructure. The submitted project is a relatively compact heap leach design with no tailings dam for this phase. The heap leach pad will be underlain with an impermeable layer, and additional safeguards will be provided by underdrainage, electronic sensors, and monitoring systems. Argent has incorporated extreme rainfall event assumptions in the design of the heap leach pad. The environmental impacts associated with the project have been assessed by twelve specialist consultancies. In all cases, the impacts were determined to be less than the relevant criteria, capable of being offset through licencing, or not significant. Additionally, the submitted project includes a proposed biodiversity offset strategy that Argent contends will provide medium and long-term biodiversity benefits within and surrounding the site, while balancing the community need to ensure that agricultural land remains productive. • Argent Minerals has also undertaken environmental study work for progressing Kempfield to a full scale polymetallic project with a mine life of up to 20 years. The study work was progressed beyond pre-feasibility toward feasibility, and was based on mining lead and zinc in addition to the silver and gold, designed as an open cut mine with CIL/flotation processing and a tailings dam for process residue disposal and waste rock emplacement. The relevant environmental aspects were investigated under the direction of an appropriately qualified environmental consultant experienced with NSW mining projects. Argent Minerals is satisfied that the environmental aspects of a full scale polymetallic project at Kempfield can be successfully managed to the satisfaction of the relevant regulations.
Bulk density	• Density measurements were determined on site by Argent personnel in 2011 using an unsealed water immersion method – 292 samples were tested. Of these, 10 samples were submitted to ALS Orange for checking by unsealed and waxed immersion methods. There are a further 45 historical density measurements on core from the Jones Mining and Golden Cross core – these are believed to be unsealed water immersion measurements. • A comparison of the Argent site measurements and 10 ALS waxed values show no significant difference. Since all these samples appear to be fresh rock, little variation would be expected.

	• Dry bulk density at Kempfield is primarily controlled by the concentration of heavy minerals, as there is limited variation in the density of the unmineralised rock. The concentration of heavy minerals (galena, sphalerite and barite) can be calculated from assays, although not all samples are assayed for lead, zinc and barium. Unfortunately, samples were not systematically assayed for iron or sulphur, so pyrite content cannot be calculated but sulphide content is generally low. A set of density formulas based on heavy mineral concentration and oxidation were derived from available data and used to estimate density in the resource models.
Classification	• The resource classification is essentially based on an ordinary Kriging three search pass methodology in which Pass 1 was classified as Measured, Pass 2 as Indicated, and Pass 3 as Inferred categories. For search details see "Resource estimation and modelling techniques' Criteria above. • Appropriate account has been taken of all relevant factors, including the relative confidence in tonnage/grade estimations, reliability of input data, confidence in continuity of geology and metal values, quality, quantity and distribution of the data. • The geological and grade continuity of the deposit has been demonstrated and the quality of the assay data is adequate as shown by the quality control analysis. • The reported Mineral Resources appropriately reflect the Competent Person's view of the Kempfield deposits.
Audits or reviews	• Internal H&SC peer review has been undertaken and no material issues were identified.
Discussion of relative accuracy/ confidence	• The relative accuracy and confidence level in the Mineral Resource estimates are considered to be in line with the generally accepted accuracy and confidence of the nominated Mineral Resource categories. This has been determined on a qualitative, rather than quantitative, basis, and is based on the Competent Person's experience with similar VMS deposits around the world. The factors that could affect the relative accuracy and confidence of the estimate include: - The completeness and accuracy of the database; and - The accuracy of the historic assay methods. The Competent Person is of the opinion that the scope for variations is minimal, and if any, the impact on the Mineral Resource estimate is unlikely to be significant. • The estimates are local, in the sense that they are localised to model blocks of a size considered appropriate for local grade estimation. The tonnages relevant to technical and economic analysis are those classified as Measured and Indicated Mineral Resources. • No production data is available as the deposit currently remains unmined.

COMPETENT PERSON STATEMENTS

Mineral Resources – Kempfield

The information in this Report that relates to Mineral Resources for the Kempfield deposit (Appendix A) is based on information compiled by Mr. Arnold van der Heyden, who is a Member and Chartered Professional (Geology) of the Australian Institute of Mining and Metallurgy and a Director of H&S Consultants Pty Ltd. Mr. van der Heyden has sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify as a Competent Person as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves' (JORC Code). Mr. van der Heyden consents to the inclusion in this report of the matters based on the information in the form and context in which it appears.

Exploration Results

The information in this report that relates to Exploration Results is based on information compiled by Dr. Vladimir David who is a member of the Australian Institute of Geoscientists, 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). Dr. David consents to the inclusion in this report of the matters based on the information in the form and context in which it appears.

JORC 2012

The Company confirms it is not aware of any new information or data that materially affects the information included in market announcements referred to in this announcement relating to exploration activities carried out at the Kempfield Project and all material assumptions and technical parameters underpinning the exploration activities in those market announcements continue to apply and have not been 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 announcements.

DISCLAIMER

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 reserves and mineral resources 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. 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.

The images in the header of this announcement are not Argent Minerals Limited assets.