

## EXPLORATION UPDATE

### Argent at a glance

ASX-listed Company focused on the expansion and development of its significant existing base and precious metal projects in NSW and to leverage its expertise to pursue value accretive acquisitions of other significant projects identified by the Company.

### Facts

■ ASX Codes:	ARD, ARDO <sup>1</sup>
■ Share price (7 June 2017):	\$0.029
■ Option price (7 June 2017):	\$0.008
■ Shares on issue:	420.7 M
■ Market capitalisation	\$12.2 M

<sup>1</sup> \$0.10 exercise price, 27 June 2019 expiry.

### Directors and Officers

#### Stephen Gemell

Non-Executive Chairman

#### David Busch

Chief Executive Officer

#### Peter Nightingale

Non-Executive Director

#### Peter Michael

Non-Executive Director

#### Vinod Manikandan

Company Secretary

### Contact details

#### PRINCIPAL OFFICE

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

#### REGISTERED OFFICE

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

### Highlights:

- Preparations underway for a 5,000 metre infill drilling programme for a Kempfield resource estimate update.
- Kempfield metallurgical programme commenced to assess potential silver/lead/zinc recoveries in a flotation processing environment.
- West Wyalong drill core sampling has progressed ahead of schedule – five of the six holes submitted for assay (averaging approximately 80% of the drill core).
- Loch Lilly drill test programme – all access arrangements executed and drilling application plan submitted to the NSW Government for approval.

Argent Minerals Limited (ASX: ARD, Argent, or the Company) is pleased to provide an exploration update for its three major projects - Kempfield, West Wyalong, and Loch Lilly.

#### Kempfield polymetallic project – 100% Argent

Following the recent diamond drilling programme at Kempfield which established significant depth extensions to the known deposit, an updated resources estimate will be prepared to incorporate extensions beyond the historical shallow drilling limit of approximately 120 metres on which the current Kempfield mineral resource estimate is based. Key inputs to the updated resource estimate will include data from a proposed infill drilling programme and a metallurgical test programme.

The metallurgical test programme has commenced for Kempfield, where the silver/lead/zinc recovery potential of primary rock material will be tested in a standard flotation processing environment.

Mr. Roland Nice has been appointed to oversee the programme – a highly experienced consulting metallurgical engineer, having worked on more than





100 projects in 26 different countries. These include the Cowal project for Barrick Gold Corporation, Cadia Ridgeway and Telfer for Newcrest Resources, Prominent Hill for Oxiana (now Oz Minerals), Jaguar (taken over by Independence Group), Mt. Lyell for Copper Mines of Tasmania, Thalanga (acquired by Red River Resources), the Voisey's Bay nickel Hydromet Project for CVRD, Olympic Dam for Western Mining Corporation (taken over by BHP), and most recently, the Woodlawn base metals project in NSW for Herron Resources.

Historical metallurgical testing was primarily focused on a first stage mining scenario where silver and gold would be firstly extracted by leaching processes from the oxide/transitional and primary material, followed by silver and base metals extraction by flotation of the leach residues. The oxide/transitional material extends from surface to approximately 40 metres. Below this, the primary (unoxidised) material is located, containing the lead and zinc components of the Kempfield resource in addition to silver and gold<sup>1</sup>.

Given the potentially substantial increase in base and precious metal resources resulting from the depth extensions, the new metallurgical test programme will focus on optimising the extraction of silver, lead and zinc from primary material as separate concentrates by a standalone flotation process. A primary material composite of approximately 50 – 100 kilograms will be constructed from representative samples that will be selected and cut from existing Kempfield drillcore. The composite will be divided into smaller samples for a series of metallurgical tests that will be devised and supervised by Mr. Roland Nice.

The results of the testing will provide additional data for the assessment of the equivalence formulae and cutoff grades for the Kempfield resource re-estimate.

The results will also provide additional data for a concept-level reassessment of Kempfield economics that will follow the updated resource re-estimate.

Preparations for the Kempfield resource infill drilling programme are underway. H&S Consultants Pty Ltd (H&SC) has updated the Kempfield drilling database that it employs for the resource estimation. Following an initial review in Micromine, formal QAQC checks will be conducted by H&SC, and an exploration targeting model developed. This will incorporate the Company's latest geological model to provide a basis for efficient resource infill drill planning by Argent.

Approximately 5,000 metres of reverse circulation (RC) drilling is envisaged, with infilling of the identified immediate lateral and depth extensions to the deposit as the first priority.

### **West Wyalong porphyry copper gold project – 70% Argent**

The West Wyalong drillcore processing is ahead of schedule, with the detailed core logging completed, and five of the six holes submitted for assay. The five holes already submitted comprise all of the drill test holes for the Theia target.

The core samples from the remaining sixth hole AWN001, which tested the Narragudgil target, are expected to be submitted early next week.

The laboratory has advised Argent to expect delays because of a significant increase in assay volumes, with assay results being available within a timeframe of up to five weeks from receipt of the samples. In response to the nationally increased workloads, the laboratory has also advised that it is in the process of progressively upgrading its processing capacity to a 7 day per week operation.

In total, more than 80% of the total drill core will have been submitted by Argent for assay. This significant percentage of drill core has been selected on the basis of visual observations during the drillcore logging process.

Following the Company increasing its ownership of the West Wyalong project to 70%, a formal joint venture is now in place under the West Wyalong Farmin and Joint Venture Agreement, whereby the Company's 30% partner will either contribute their share of exploration expenditure or be diluted.

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<sup>1</sup> March 2012 quarter activities and cash flow report, p.7 and Table 1 of Mineral Resources and Ore Reserves Statement, 2016 Annual Report to shareholders p. 75.



## **Loch Lilly drill programme – earning 51% by testing for Western Tasmania Mt. Read Volcanics potential**

In preparation for the upcoming Loch Lilly drill programme, the Company has executed all land access arrangements with the relevant landholders, allowing the drill sites to be inspected and photographed, and applications to drill submitted to the NSW Department of Planning and Environment for approval. All other regulatory authorities have also been notified as required.

Subject to a timely drilling approval by the NSW Government, Argent has currently scheduled drill site preparations to commence during the last week of June 2017, and the drilling to commence during the first half of July 2017. The drilling phase of the Loch Lilly test programme is anticipated to take approximately three weeks, subject to operational conditions and weather. This will be followed by Argent's standard process of detailed core logging and selection of samples for submission for assay.

Research undertaken by Argent's joint venture partner, Dr. Anthony J. Crawford, has indicated that a geological belt, which extends from western Tasmania to western Victoria and eastern South Australia before swinging northeast and into western NSW, includes rocks equivalent to western Tasmania's Mt. Read Volcanics, with potentially major discovery implications for the Loch Lilly - Kars Belt in NSW.

Over a strike distance of just 80 kilometres, the Mt. Read Volcanics of western Tasmania hosts several world-class base and precious metal deposits, including Mt. Lyell, Rosebery and Hellyer, and numerous medium-sized deposits, including the Que River and Hercules volcanic-hosted massive sulphide (VHMS) copper-lead-zinc deposits, and the Henty gold deposit.

Two compelling targets will be tested at Loch Lilly - Eaglehawk and Netley, which were identified by Anglo American's South American division in 2014 through a new magnetic - induced polarisation (IP) survey tool. Anglo American (Australia) Pty Ltd then partnered with Dr. Crawford in early 2015 to drill test the targets, but was instructed later that year by its head office to terminate all base metal exploration projects in Australia as part of a global restructuring effort.

By completing the two-hole 1,000 metre Loch Lilly drill programme comprising one 500 metre diamond hole for each target, Argent will earn a 51% interest in the project.

Under the Loch Lilly joint venture agreement executed between Dr. Crawford and Argent, the Company has the right to earn up to a 90% interest in the project, which has a combined exploration licence area of 1,447 km<sup>2</sup> that covers the majority of the Loch Lilly - Kars Belt.

The direct per-metre drilling costs of the Loch Lilly drill test programme are 75% co-funded by the NSW Government to a maximum of \$150,000.

All three of Argent's projects have been awarded NSW Government Cooperative Drilling funding grants, based on project prospectivity and technical merit as assessed by independent expert panels appointed by the NSW Government.

For further information please contact:

David Busch

Chief Executive Officer

**Argent Minerals Limited**

M: 0415 613 800

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



## COMPETENT PERSON STATEMENTS

### Previously Released Information

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

- 31 January 2012 Quarterly activities and cash flow report<sup>1</sup>
- 10 August 2016 Annual report to shareholders – Mineral Resources and Ore Reserves Statement<sup>1</sup>
- 10 October 2016 Diamond drilling results in major breakthrough at Kempfield<sup>2</sup>
- 14 February 2017 Approved West Wyalong drill test plan<sup>2</sup>
- 20 February 2017 Argent secures strategic stake in Mt. Reid equivalent belt
- 15 March 2017 Significant Ag Pb Zn intersections at Kempfield Henry Zone<sup>2</sup>

Competent Person:

1. Mr. Arnold Van der Heyden
2. Clifton Todd McGilvray

The Company confirms it is not aware of any new information or data that materially affects the information included in the original market announcements. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.