



## ARGENT MINERALS LIMITED ASX:ARD

PRESENTATION TO 8<sup>TH</sup> ANNUAL MINING NSW CONFERENCE, ORANGE  
GAINING A BETTER UNDERSTANDING OF A MUCH LARGER SYSTEM

27 AUGUST 2014



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## Capital Structure

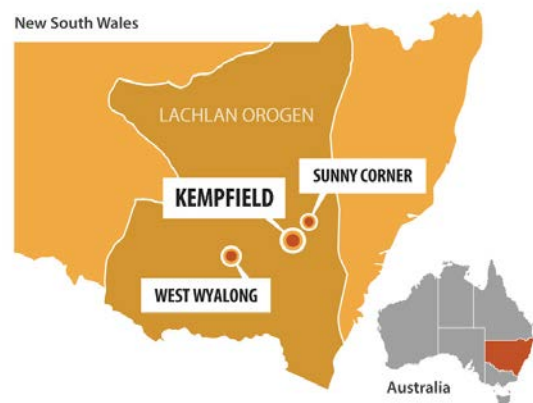
Ordinary shares (ASX:ARD)	153.6M
Share price <sup>1</sup>	\$0.03
Market capitalisation <sup>1</sup>	\$4.6M
Cash <sup>1</sup>	\$893,000
Listed Options (ASX:ARDO) <sup>2</sup>	53M
ASX Listing	3 April 2008
Top 20 shareholders <sup>3</sup>	40.3%

1. As at 30/6/14 2. \$0.175, expiry 31/3/16 3. As at 24/9/13 (2013 Annual Report)

## Board & Management

Stephen Gemell	<b>Chairman (Non-exec)</b> B.Eng (Hons), FAusIMM (CP)
David Busch	<b>Managing Director</b> B.Eng, BSc, MAusIMM
Marcus Michael	<b>Director (Non-exec)</b> B.Bus, CA
Sarah Shipway	<b>Company Secretary</b> B.Com, CA
Dr. Vladimir David	<b>Chief Geologist</b> BSc (Hons, Geology), PhD (Economic Geology), Registered Professional Geoscientist (RPG), MAIM

Three projects in rich, productive geological terrane, featuring:

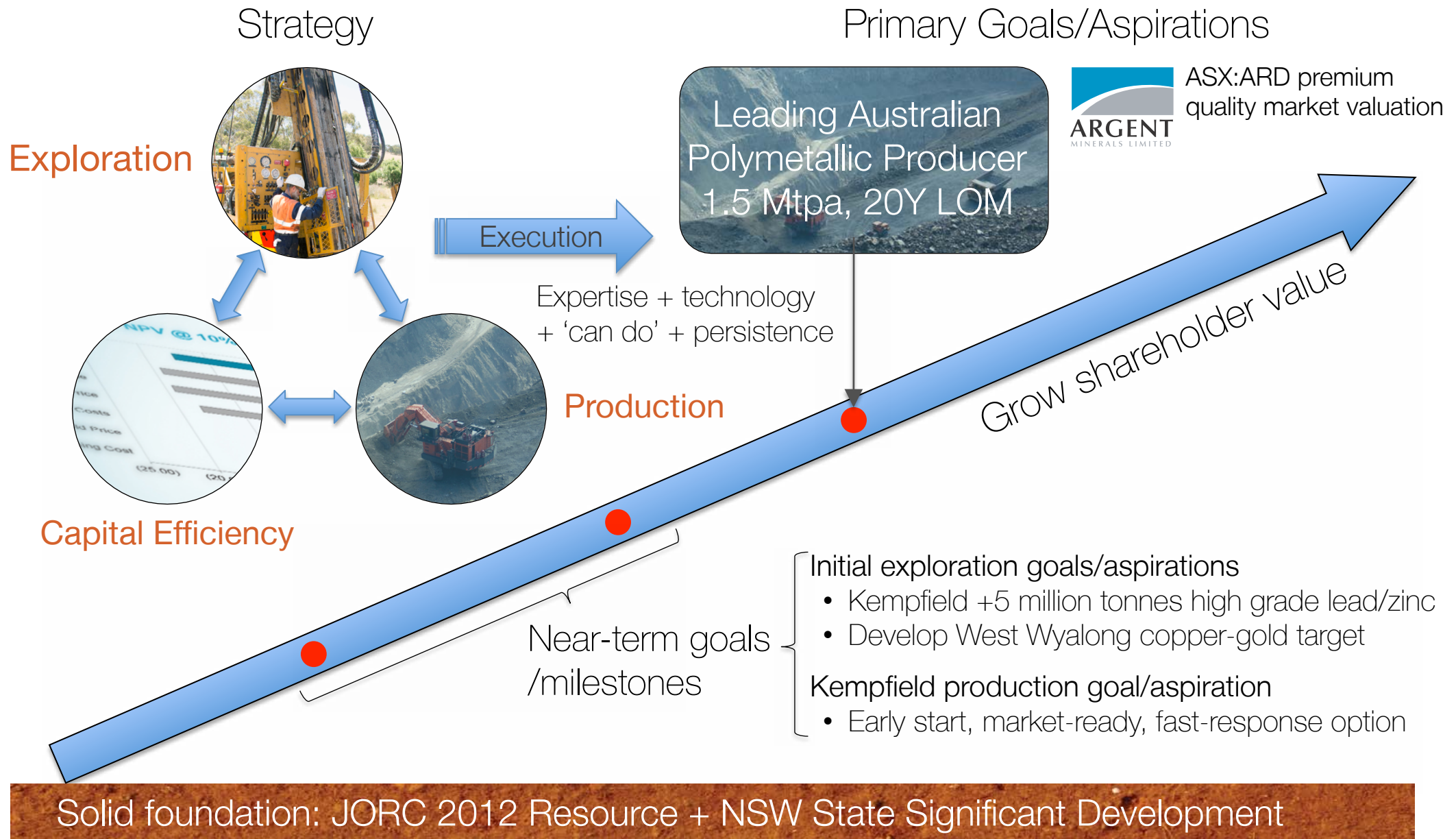


### Kempfield Polymetallic Project (Argent 100%)

- Near-term cash generation potential – NSW State Significant status
- 22 million tonne JORC 2012 Resource - silver, lead, zinc & gold
- World-class growth potential identified, rich targets to be drilled

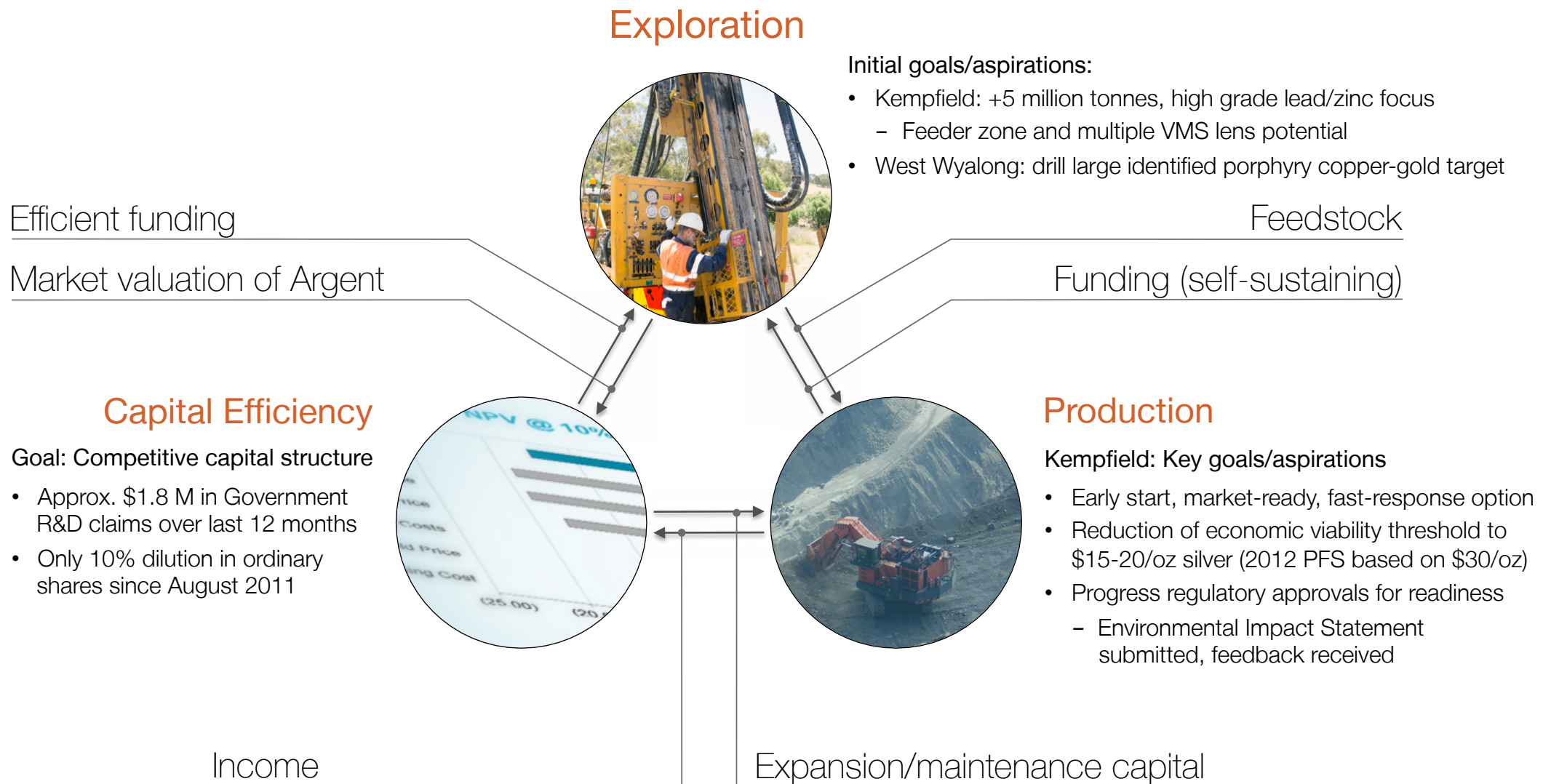
**West Wyalong (now 51%):** large porphyry copper-gold target identified







# ARGENT STRATEGY: THREE KEY ELEMENTS



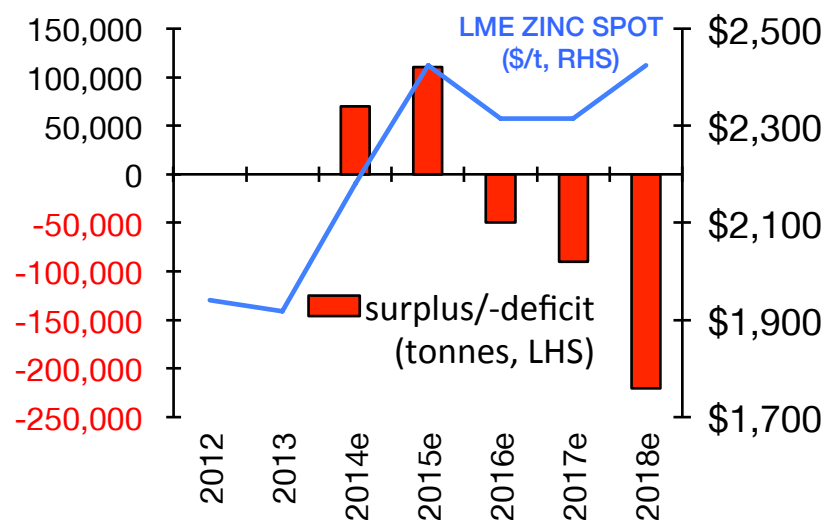


## INCREASED EXPOSURE TO ZINC AS MARKETS PRICE IN SUPPLY OUTLOOK

HISTORICAL LME ZINC SPOT AND STOCKS – 12 MONTHS ACTUAL



UBS FORECAST<sup>1</sup>



Mine	Production (ktpa) <sup>2</sup>	Closing Date <sup>2</sup>
Century	455-470	2015
Lisheen	180	FY2014-15
Skorpion	125	2016-17
Tara	166	2019
Rosebery	80-85	2024

1. UBS Global I/O@: Miner's Price Review 9 July 2014
2. Company public reports as at the date of this presentation (most recent production). Investors must not rely on this information. Please refer directly to the individual company reports.
3. Based on world usage rate forecast of 13.58 million tonnes for 2014. Source: International Lead and Zinc Study Group: 'ILZSG Spring 2014 Meetings/Forecasts' 2 April 2014.



## 52 MILLION OUNCES SILVER EQUIVALENT OF SILVER, LEAD, ZINC & GOLD

At cutoff grades 25 g/t (Oxide/Transitional) and 50 g/t Ag Eq (Primary):

		Silver (Ag)		Gold (Au)		Lead (Pb)		Zinc (Zn)		In-situ Contained Ag Equivalent <sup>1</sup>	
	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
<b>TOTAL***</b>	<b>21.8</b>	<b>47</b>	<b>33.0 M</b>	<b>0.12</b>	<b>86</b>	<b>N/A</b>	<b>97</b>	<b>N/A</b>	<b>200</b>	<b>75</b>	<b>52 M</b>

86% Measured or Indicated<sup>2</sup>

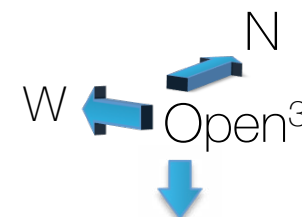
2:1 Zinc:Lead

1. See Appendix A for further detail.

2. \* 90% \*\* 79% \*\*\* 82%: Percentage of Resource tonnes in Measured or Indicated Category (86% of the total contained silver metal ounces is in either Measured or Indicated Category).

3. Mineralisation is open to the West, North and at depth

4. The data on which the Mineral Resource estimate is based does not yet include the drilling intercepts announced 10 March 2014





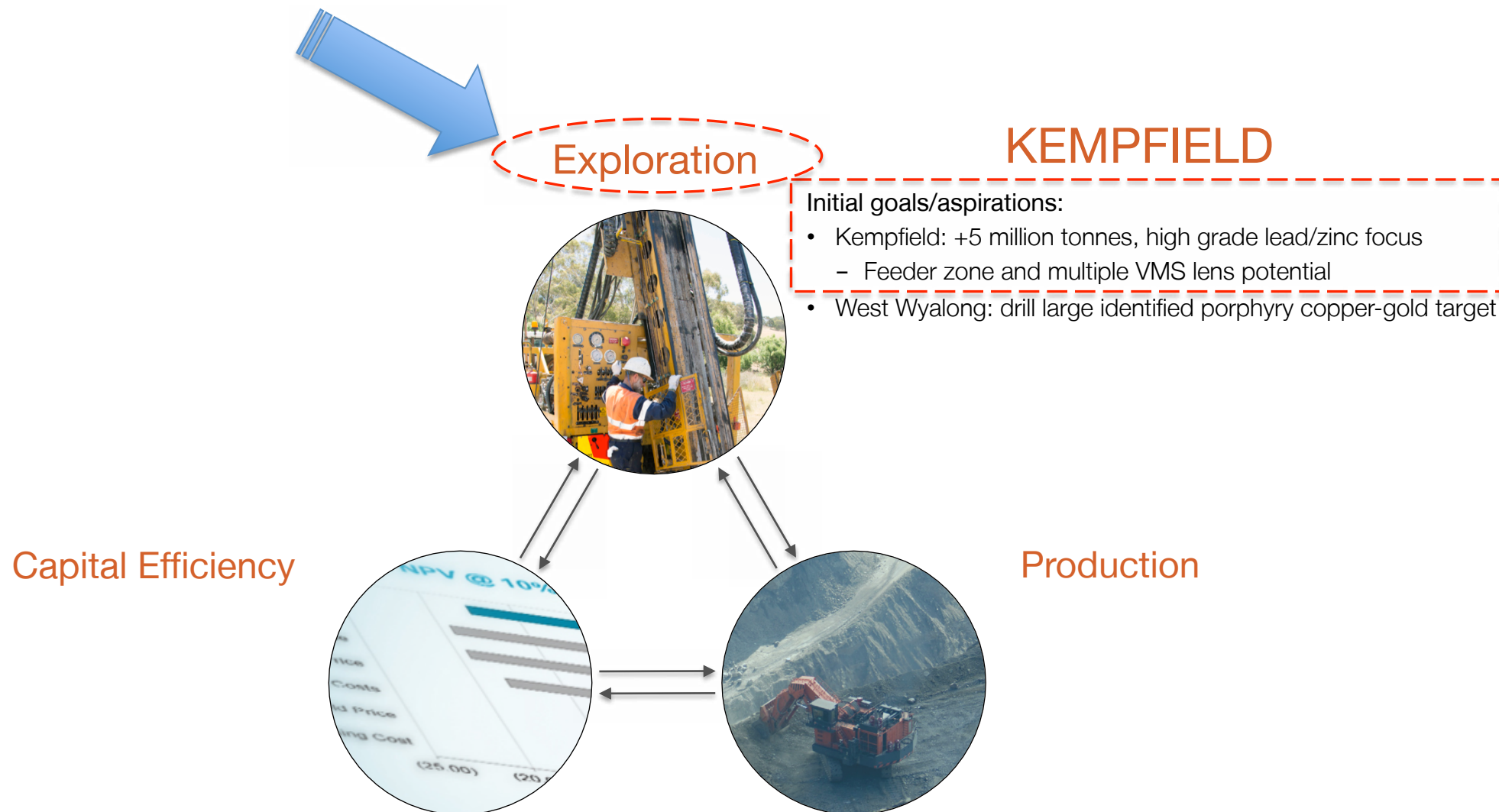
## ■ EXCELLENT RESULT FOR ARGENT

- Review process conducted by H&S Consultants
- Database: clean bill of health through excellent QAQC
- No change in Resource categories – ‘High Distinction’ score: 86% Measured/Indicated
- Kempfield Resource ready for next phase of exploration
- Solid foundation for growth

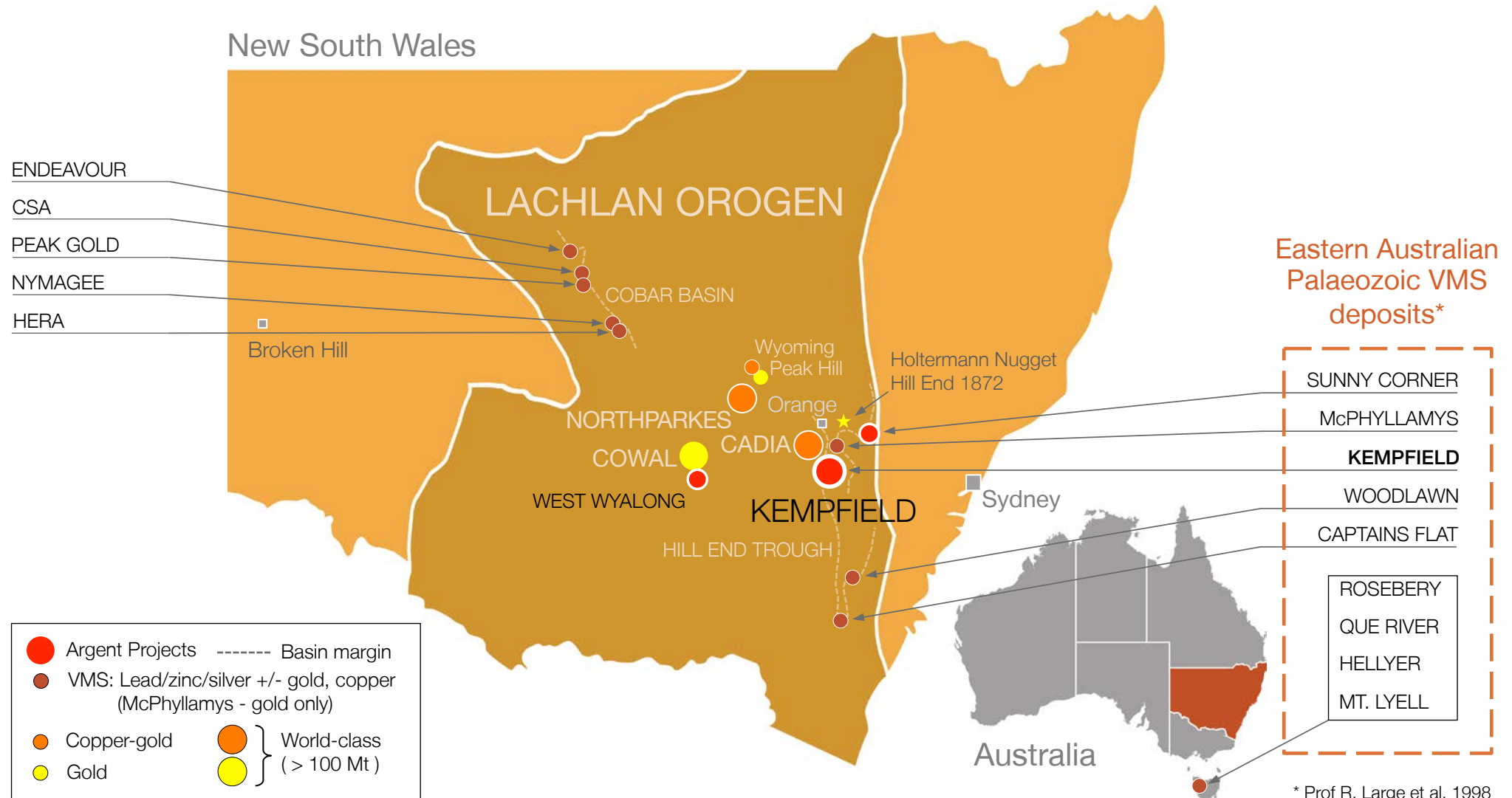




## KEY FOCUS OF THIS PRESENTATION



- **HIGHLY PRODUCTIVE GEOLOGICAL TERRANE**
- **COMPELLING PEER GROUP: RICH VMS DEPOSITS AT BASIN MARGINS**



Gaining a better understanding of a much larger system



## RESEARCH LED BY PROFESSOR ROSS LARGE

- Centre of Excellence in Ore Deposit Research (CODES)<sup>1</sup>:

Key Features: Palaeozoic VMS Deposits		Target
Major deposit size		15-90 Mt
Average grade (Cu-Pb-Zn deposits)	1.0% Cu, 12% Zn, 5% Pb	
High Ag and Au credits	120 g/t Ag, 2.0 g/t Au	
Zn-Pb massive sulphide lens is stratiform		
Vertical (up-stratigraphy) zonation of Cu/Au -> Pb/Zn/Ag/Au -> Ba		

## Kempfield Comparison<sup>2</sup>

✓ 21.8 Mt + significant potential

Exploration focus. Similar grades intercepted at West McCarron.

✓ Multiple lenses

✓ Increasing Pb-Zn-Ag-Au grades

## ■ EASTERN AUSTRALIAN PALAEOZOIC VMS DEPOSITS

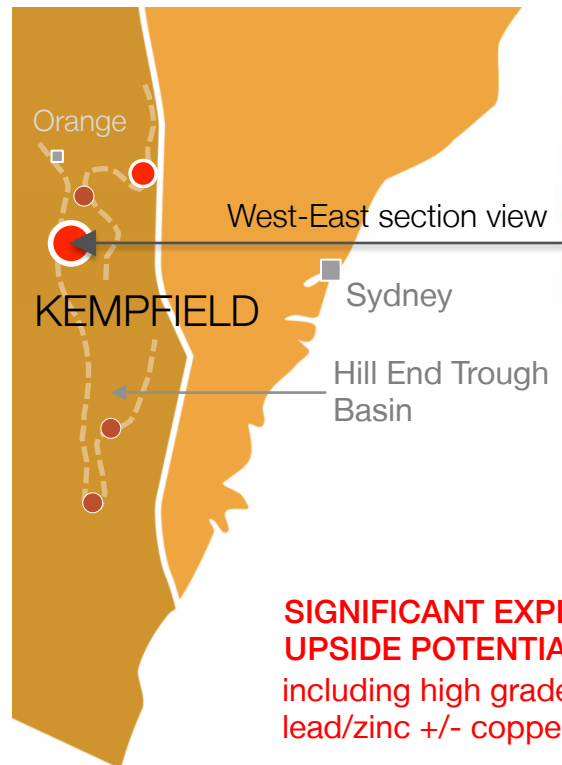
- Strong evidence that all belong to the one genetic group of ore deposits<sup>1</sup>
- Similarities noted by Prof Ross Large between Kempfield Causeway Zone and the rich Que River deposit<sup>3</sup>
- Major source of Cu ± Au, and significant source of Pb-Zn-Ag over the last 100 years (ref 1998)<sup>1</sup>

1. Summary information has been extracted by Argent from the following scientific publication: J. Bruce Gemmell, Ross R. Large & Khin Zaw, Centre of Excellence in Ore Deposits, University of Tasmania, 1998. Palaeozoic volcanic-hosted massive sulphide deposits. AGSO Journal of Australian Geology & Geophysics 17(4). 129-137.

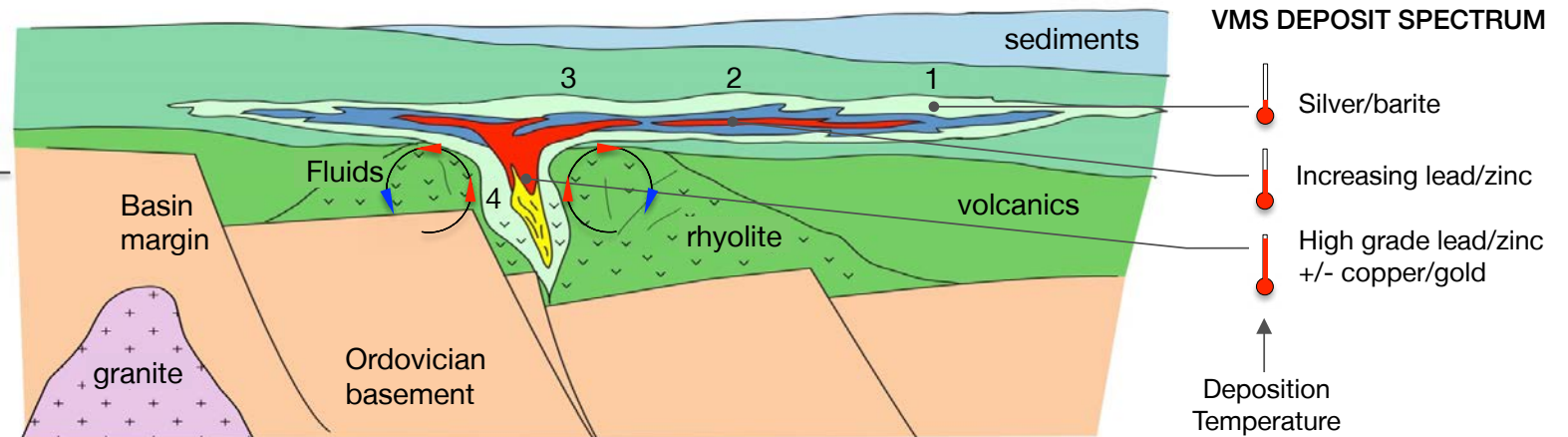
2. Comparisons made by Argent Minerals based on the above referenced scientific paper

3. See ASX Announcement 21 February 2013

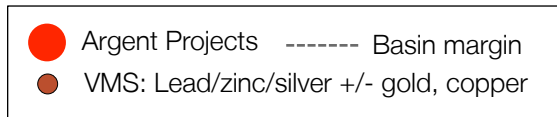
# GENESIS MODEL 1 - TECTONICALLY DISTORTED VMS COMPLEX



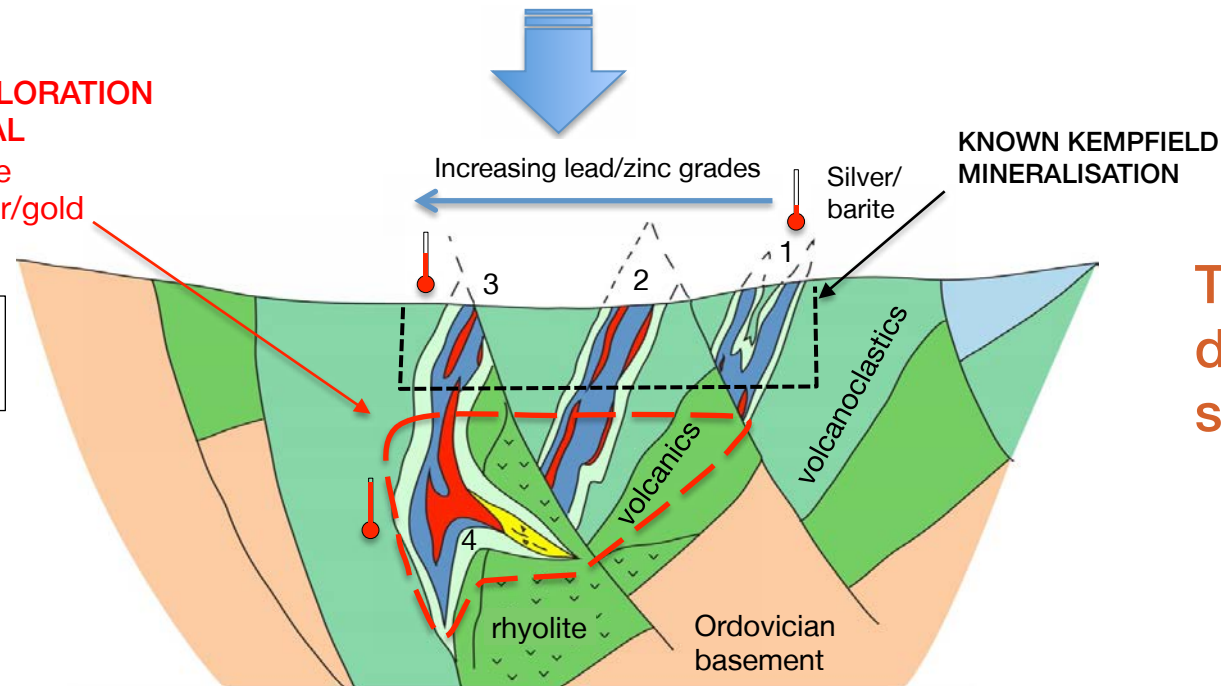
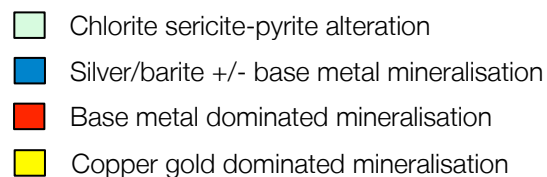
## Original position of Kempfield VMS system



**SIGNIFICANT EXPLORATION  
UPSIDE POTENTIAL**  
including high grade  
lead/zinc +/- copper/gold



### Alteration and mineralisation legend

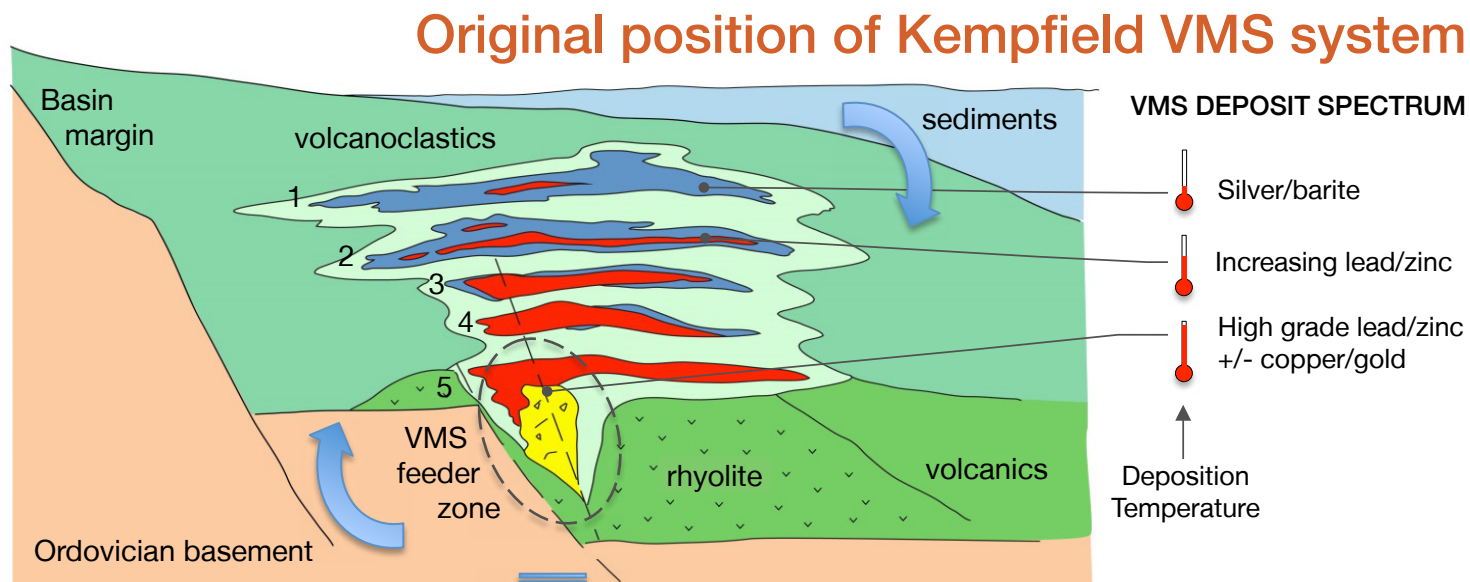
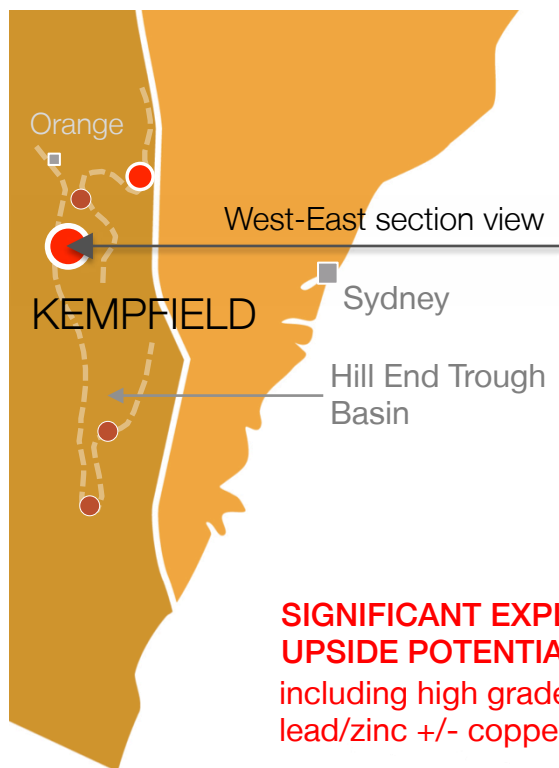


**Tectonically  
distorted VMS  
system**

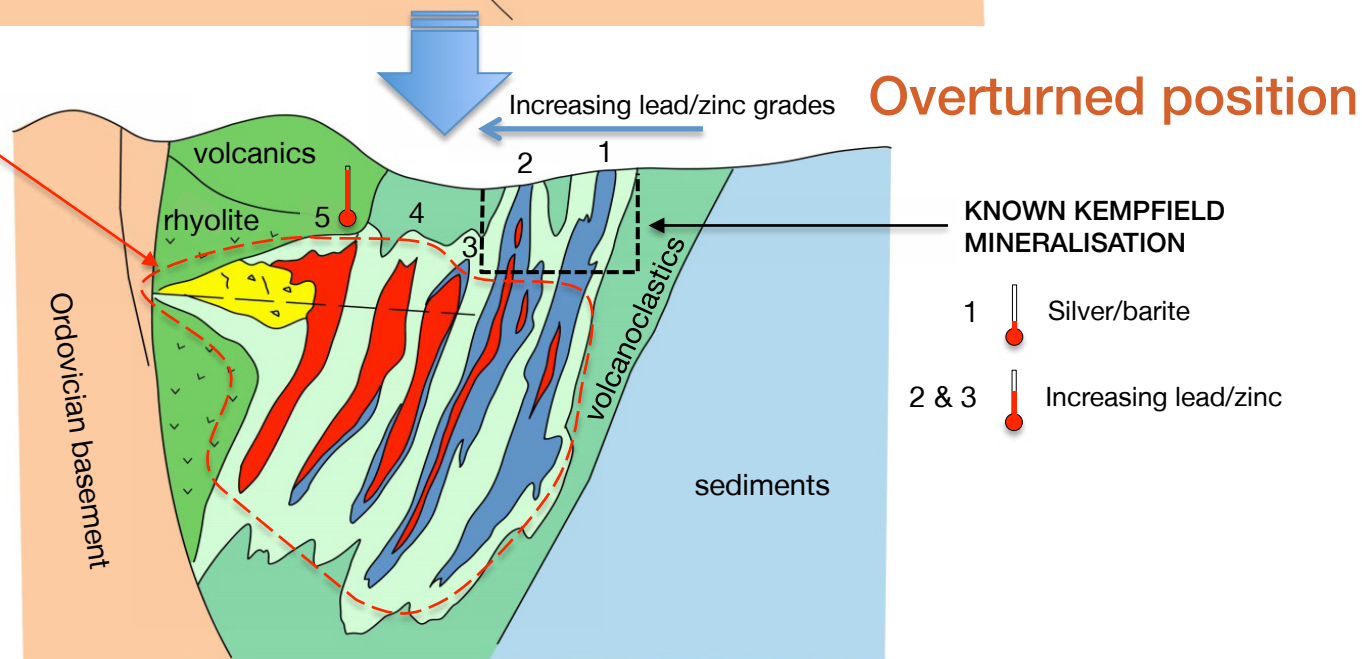
Gaining a better understanding of a much larger system



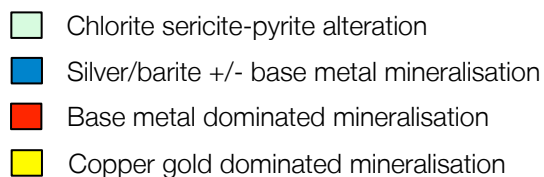
# GENESIS MODEL 2 (FAVOURABLE) – OVERTURNED VMS MOUND



**SIGNIFICANT EXPLORATION  
UPSIDE POTENTIAL**  
including high grade  
lead/zinc +/- copper/gold

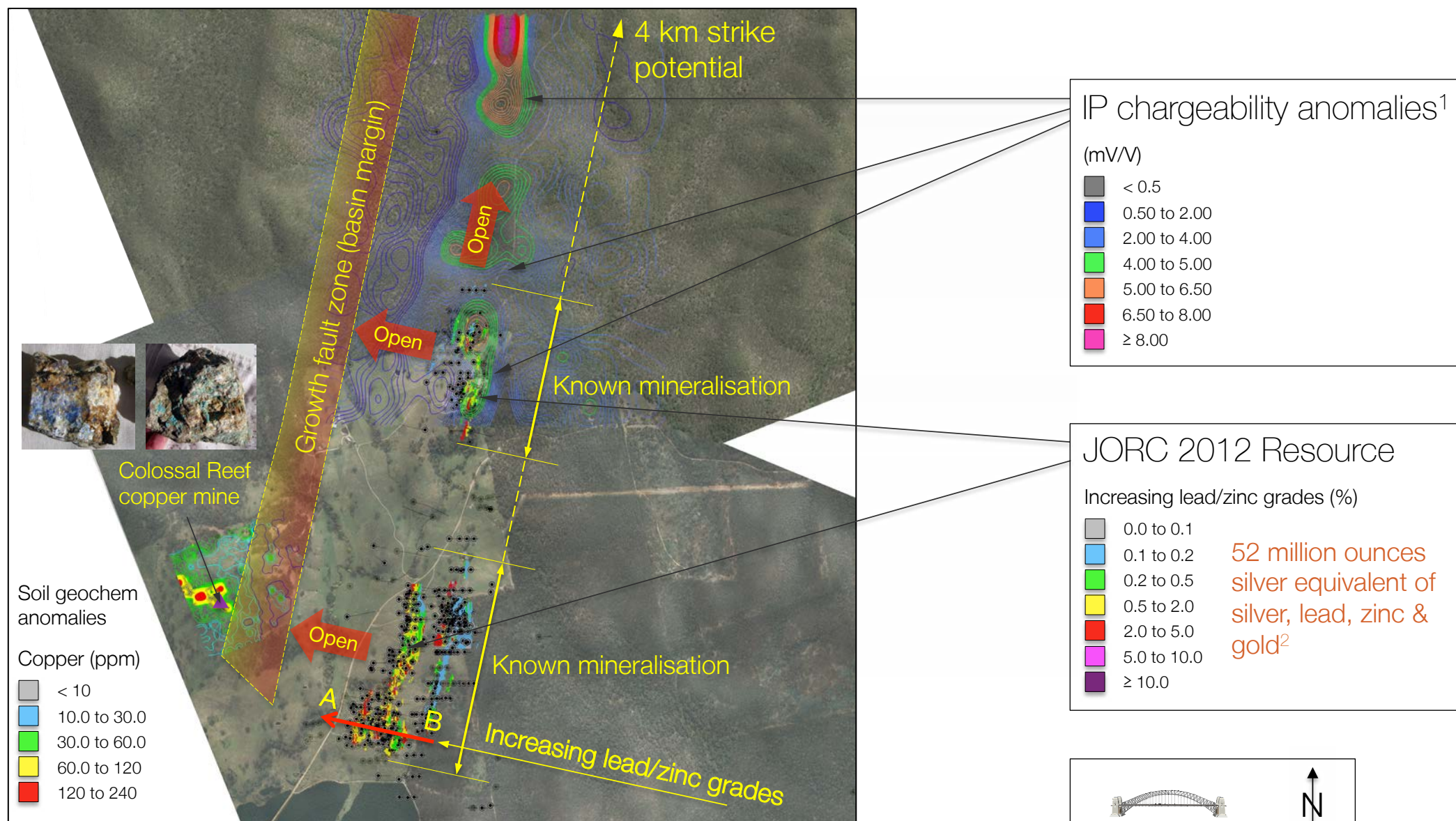


### Alteration and mineralisation legend





# SUBSTANTIAL OPEN, HIGHLY PROSPECTIVE, UNTESTED AREAS

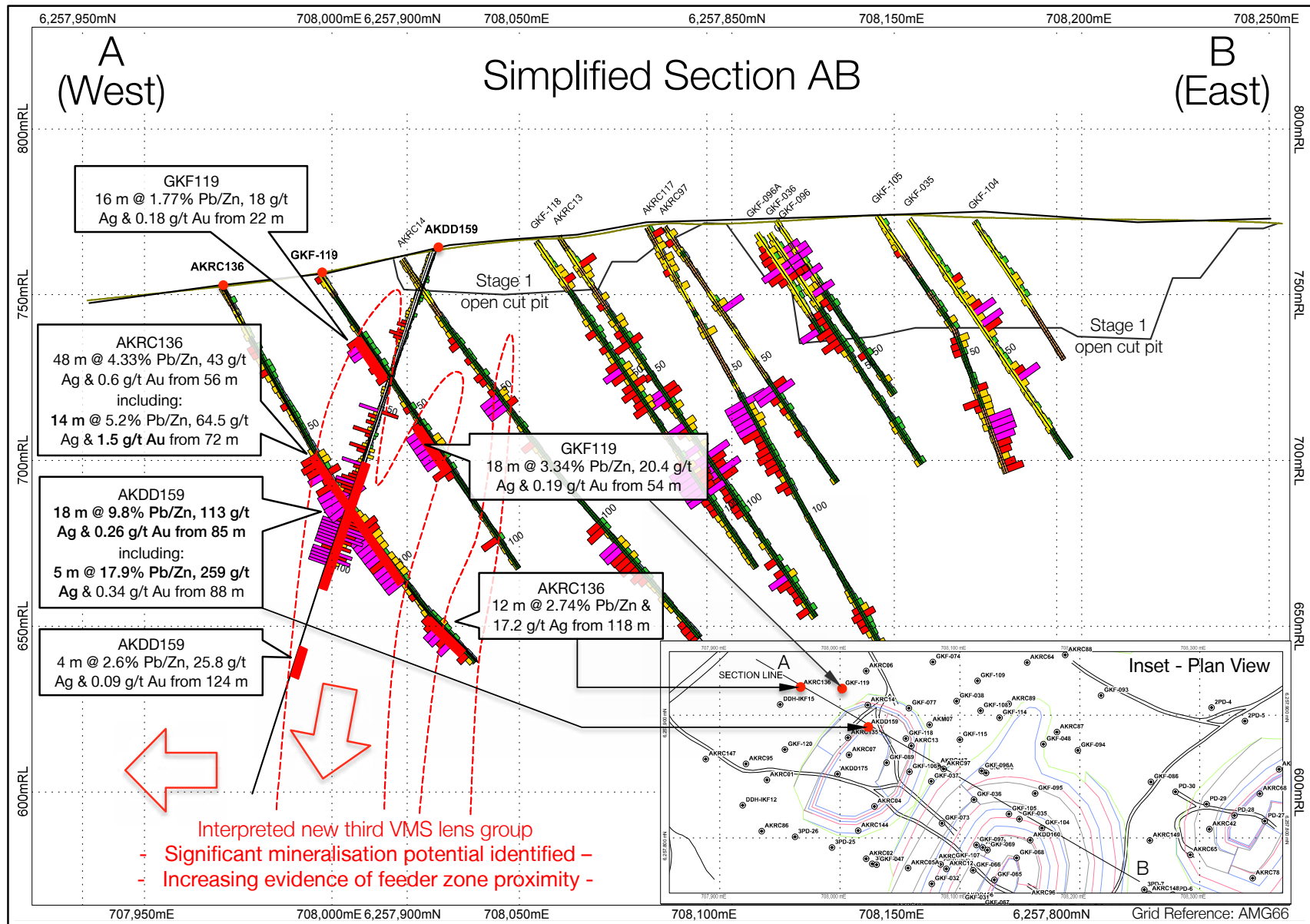


1. See ASX Announcement 2 Sep 2009
2. See Appendix A for details

Gaining a better understanding of a much larger system



# RICH INTERCEPTS - NEW THIRD VMS LENS

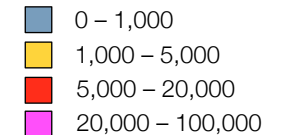


## HISTOGRAM LEGEND

### Base metals grade (Zn)

Histograms on left hand side of drillholes

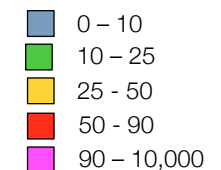
### Base metals grade (ppm)



### Precious metals grade (Ag)

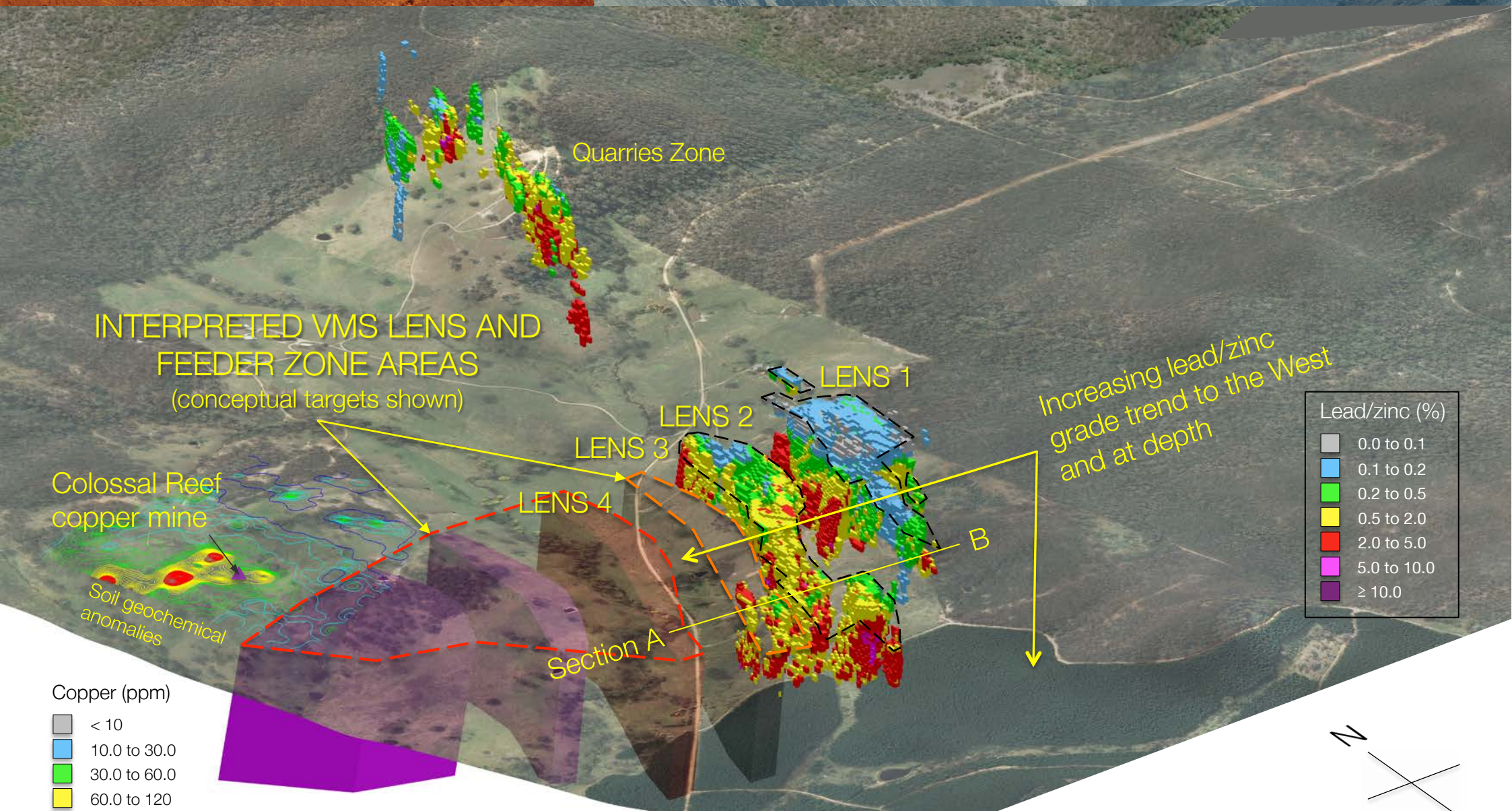
Histograms on right hand side of drillholes

### Ag Grade (ppm)





# EXPLORATION STRATEGY – INTERPRETED LENS/FEEDER FOCUS



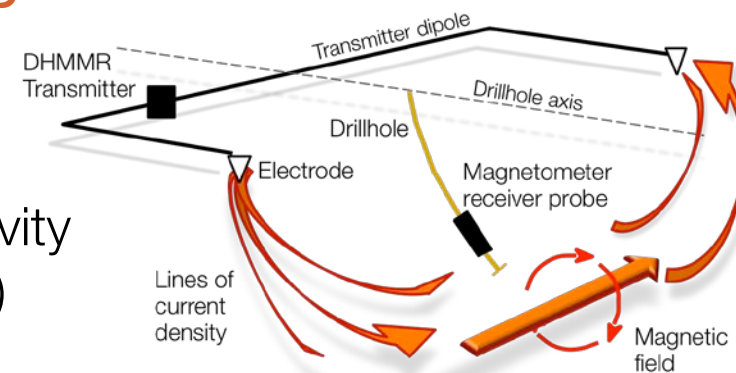
View toward the North East

Gaining a better understanding of a much larger system



## NEW GEOPHYSICAL TOOL IDENTIFIED FOR KEMPFIELD

- DHMMR<sup>1</sup> for lead/zinc target definition (July 2014)
- ✓ Confirmed complement to existing geophysics
- ✓ Clear, strong response to known rich, low conductivity Kempfield lead/zinc mineralisation (West McCarron)
- ✓ Peers: Perilya Potosi and North Mine Zinc Lodes



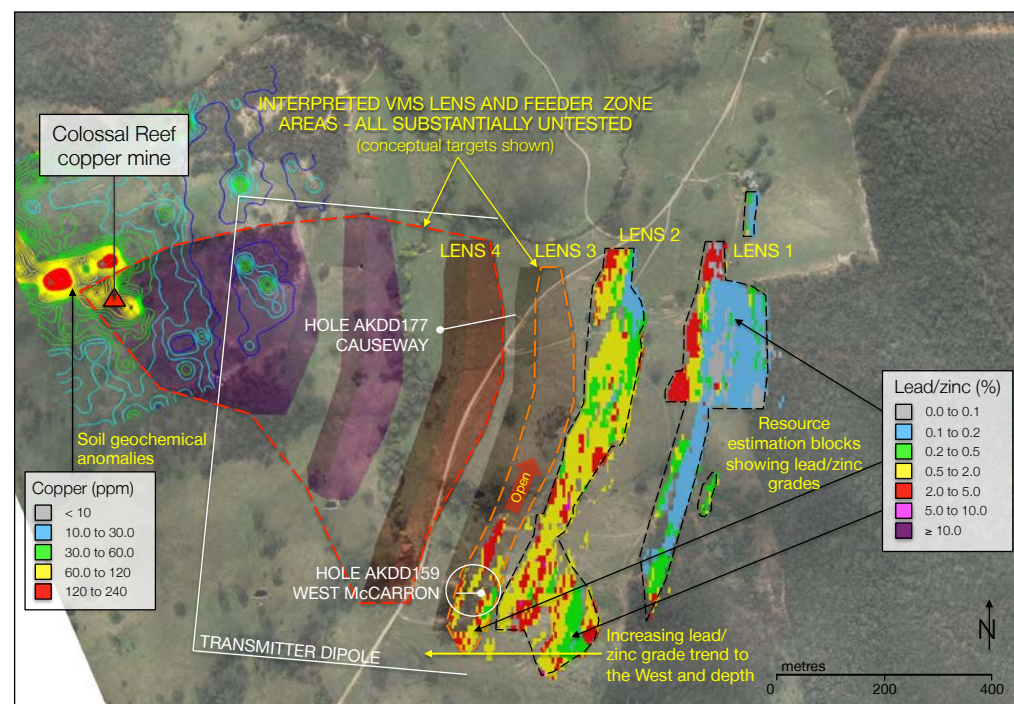
Source: Kate Hine/Mitre Geophysics

## TARGET DELINEATION

- Conduct surface MMR over interpreted VMS lens and feeder zone

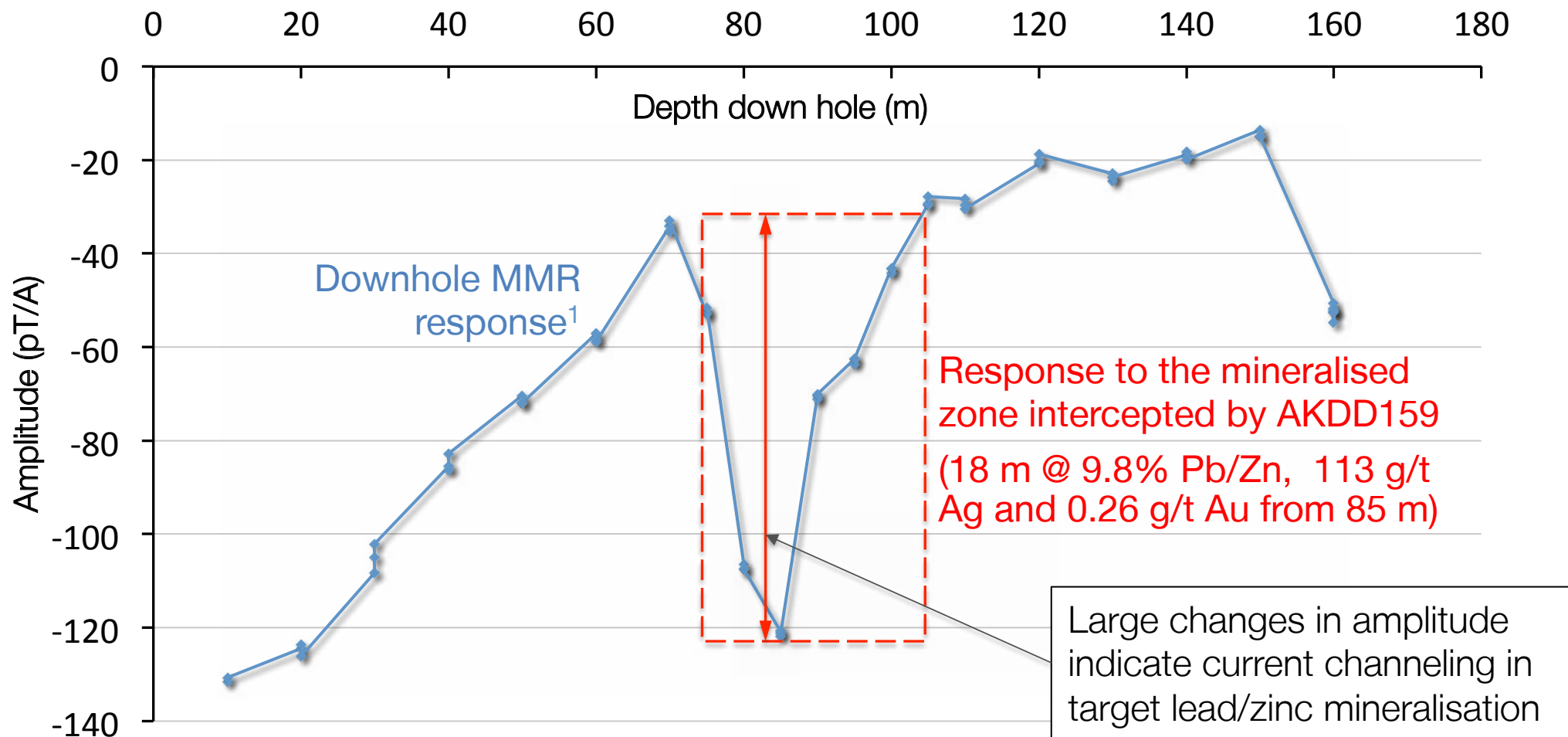
IN PROGRESS

## DRILL TEST



1. Downhole MagnetoMetric Resistivity survey – see 24 June 2014 ASX Announcement
2. Reverse circulation (RC) to water table (approximately 50 m)

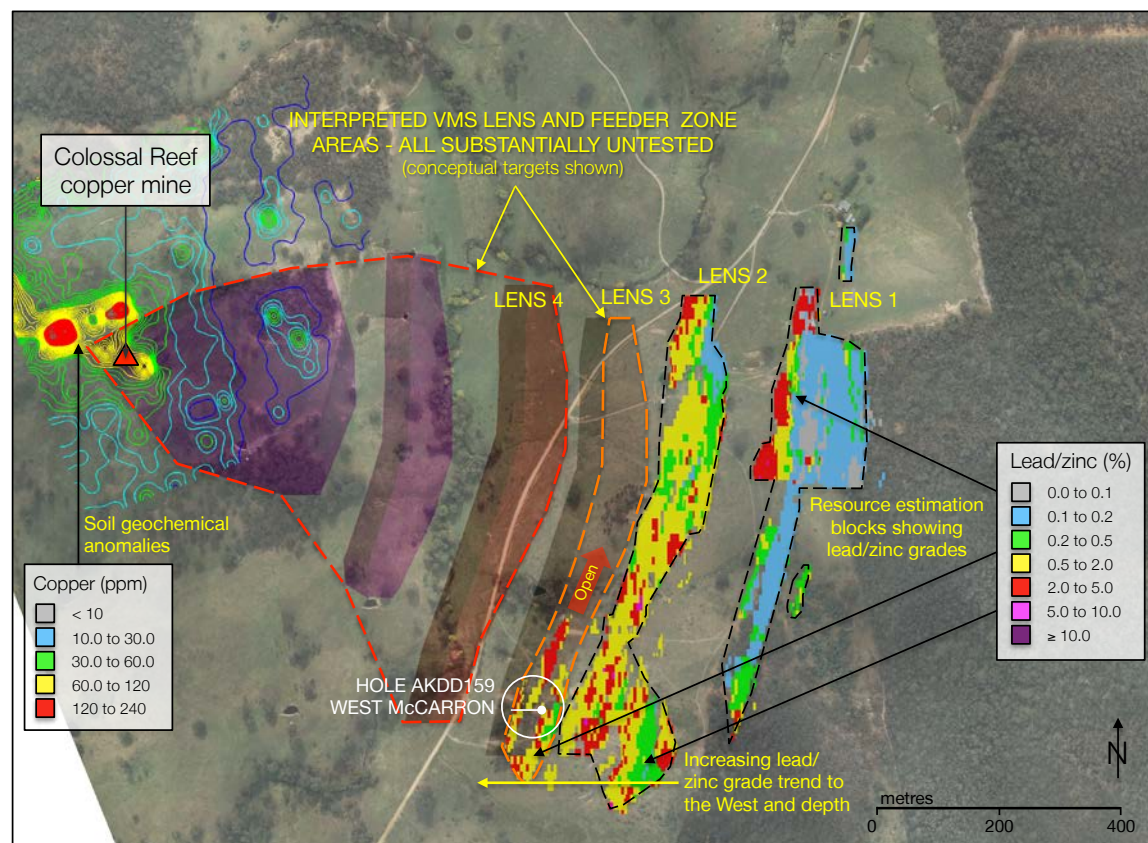
## ■ CLEAR, STRONG DOWNHOLE MMR RESPONSE TO LEAD/ZINC MINERALISATION



1. See 31 July 2014 ASX Announcement



- **STRONG CURRENT CHANNELING OBSERVED**
  - ✓ Correlating with known lead/zinc mineralisation (Lens 2 and western edge of Lens 1)<sup>1</sup>
- **POTENTIAL NEW LEAD/ZINC LENS RESPONSES OBSERVED**
  - Lens 4 and Lens 3



## PROGRAM:

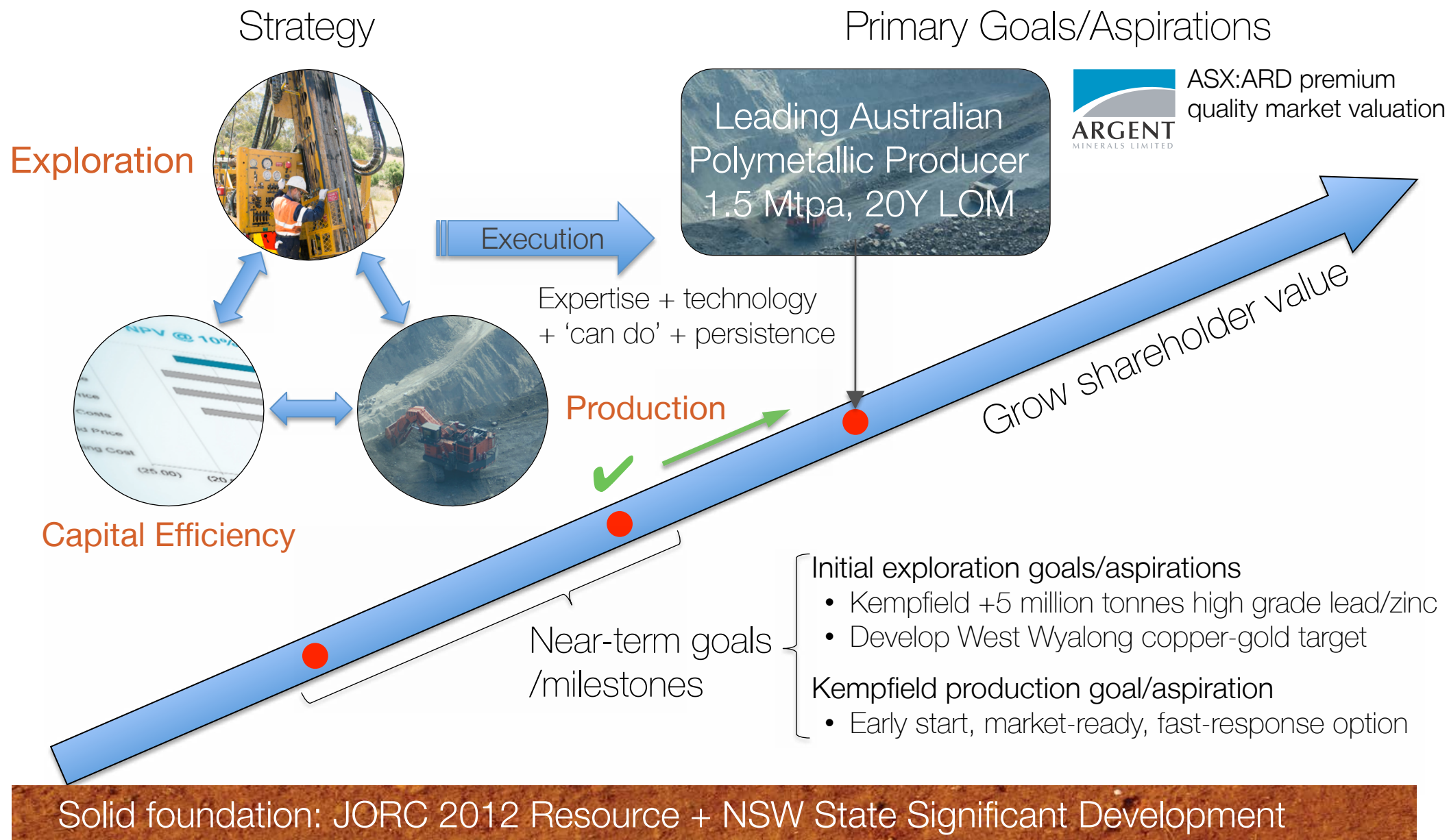
- **TARGET DELINEATION**
  - Complete surface MMR over interpreted VMS lens and feeder zone (August 2014)
  - Geophysics analysis (September 2014)
- **DRILL-TEST THE GENERATED TARGETS**
  - Colossal Reef area priority
  - Test interpreted VMS lens and feeder
  - Deep holes envisaged (eg. > 400m)
  - RC pre-collar/diamond tails<sup>2</sup>
  - Targeting commencement Oct 2014

1. See 15 August 2014 ASX Announcement

2. Reverse circulation (RC) to water table (approximately 50 m)



# SUCCESS WILL BE A GAME CHANGER & 'COMPANY MAKER'

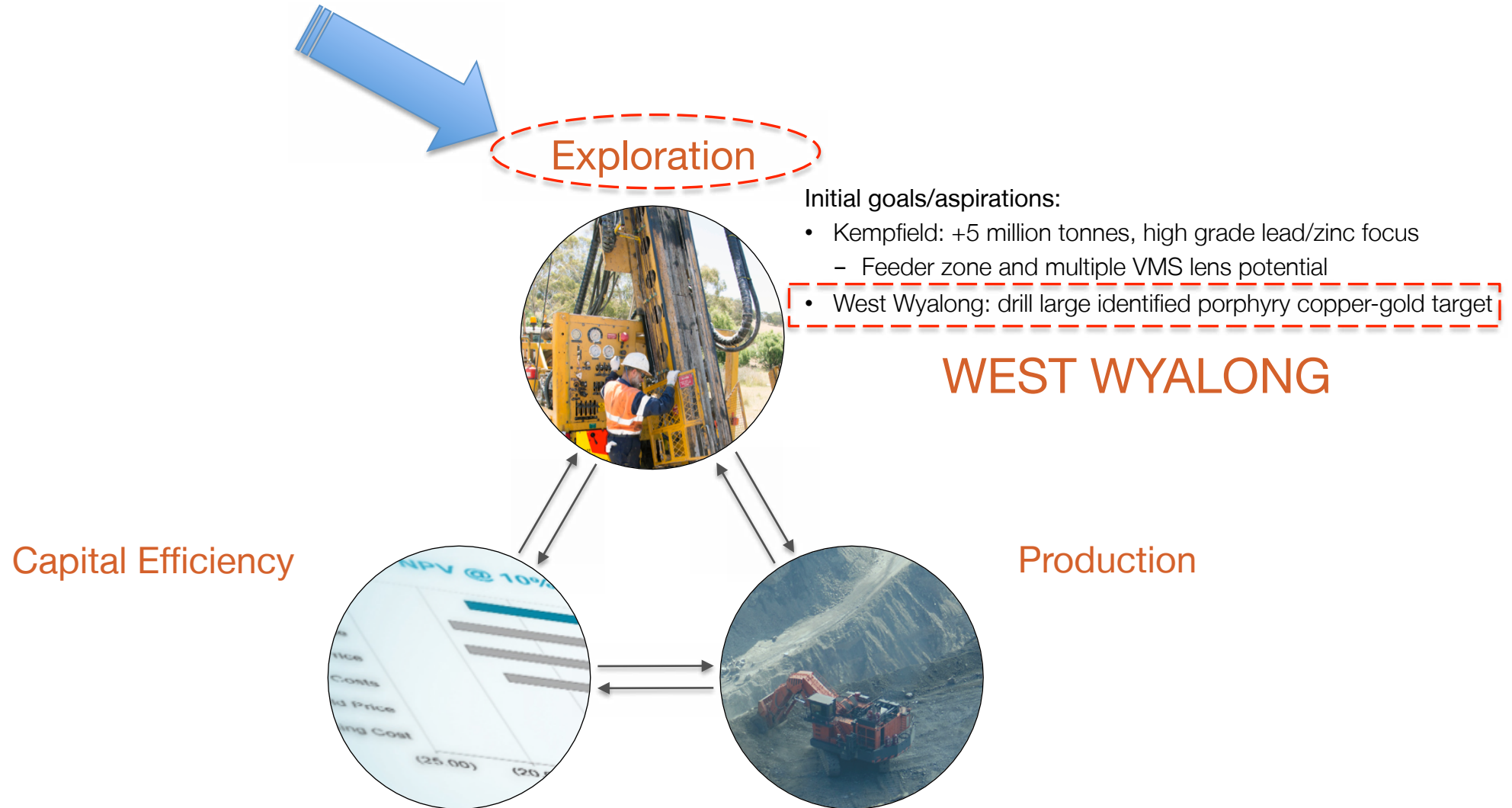




- **EMPLOYMENT**
  - Up to 150 jobs in the construction year
  - Up to 80 jobs during production years
  - Training/skills enhancement
- **FLOW-ON EFFECTS TO LOCAL INDUSTRIES**
  - ‘Multiplier effect’ estimates range to 3X
- **WEALTH CREATION**
- **ROYALTIES**
- **TAXES**



## KEY FOCUS OF THIS PRESENTATION





# WEST WYALONG PROJECT LEAPS FORWARD

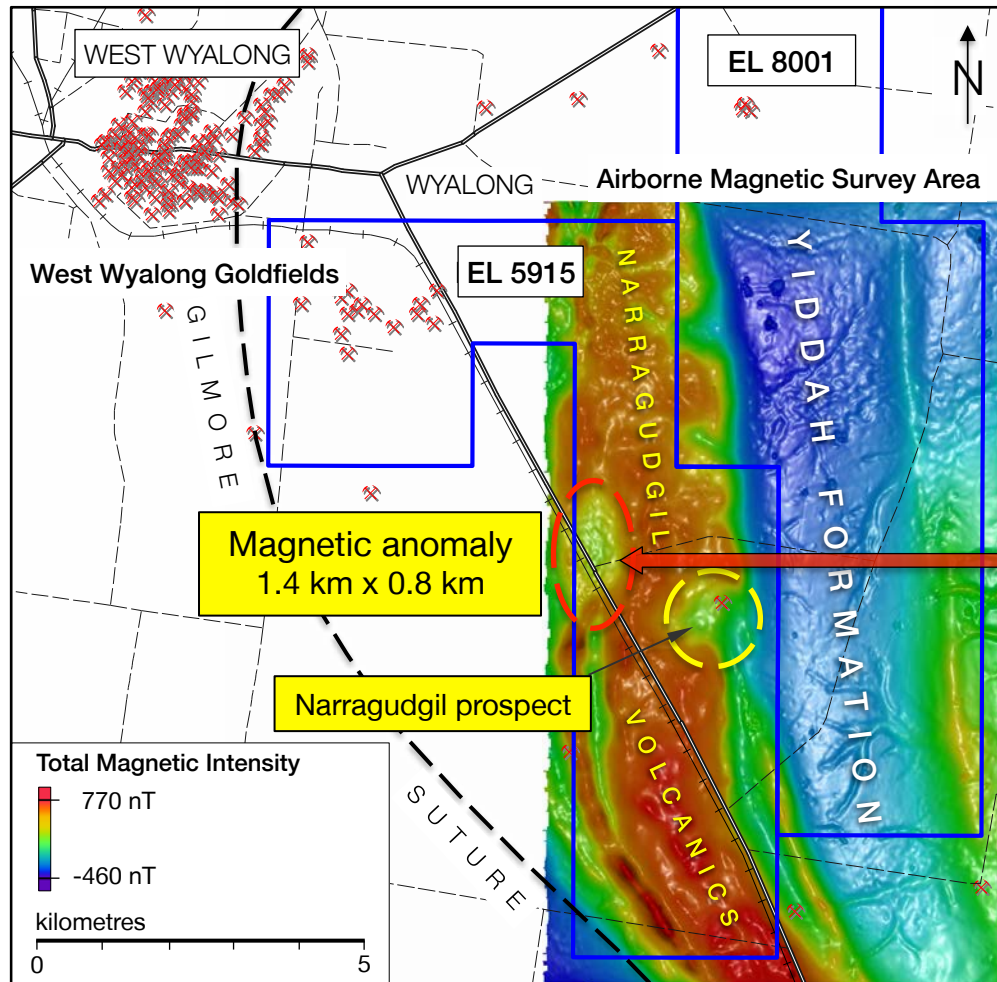
- MAJOR DEPOSIT POTENTIAL INDICATED IN PROVEN PORPHYRY COPPER-GOLD AREA
- WEST WYALONG PROJECT NOW ON THE MAP



Gaining a better understanding of a much larger system

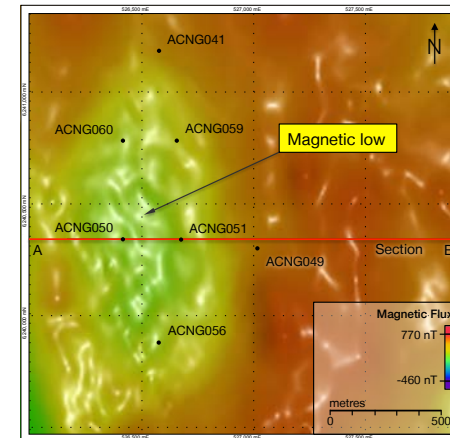
## MAGNETIC SURVEY REVEALS LARGE PORPHYRY COPPER-GOLD TARGET

ARGENT PROJECT EQUITY NOW 51%

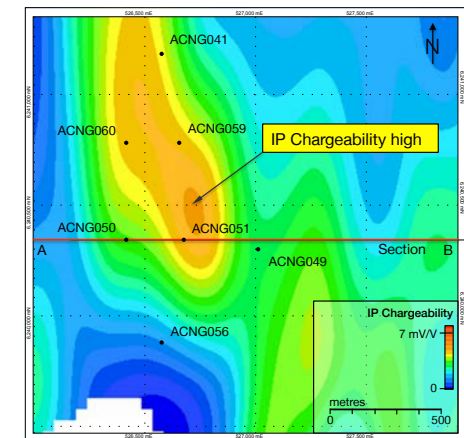


- Porphyry copper-gold signature indicated: coincident magnetic low and IP chargeability high anomalies in Ordovician volcanics
- Strong copper-gold geochemistry intersected by shallow aircore drilling
- Similarities to Northparkes system observed

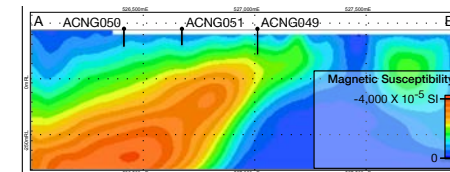
Magnetic low anomaly (plan view)



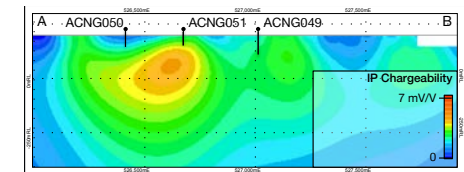
Coincident IP chargeability high



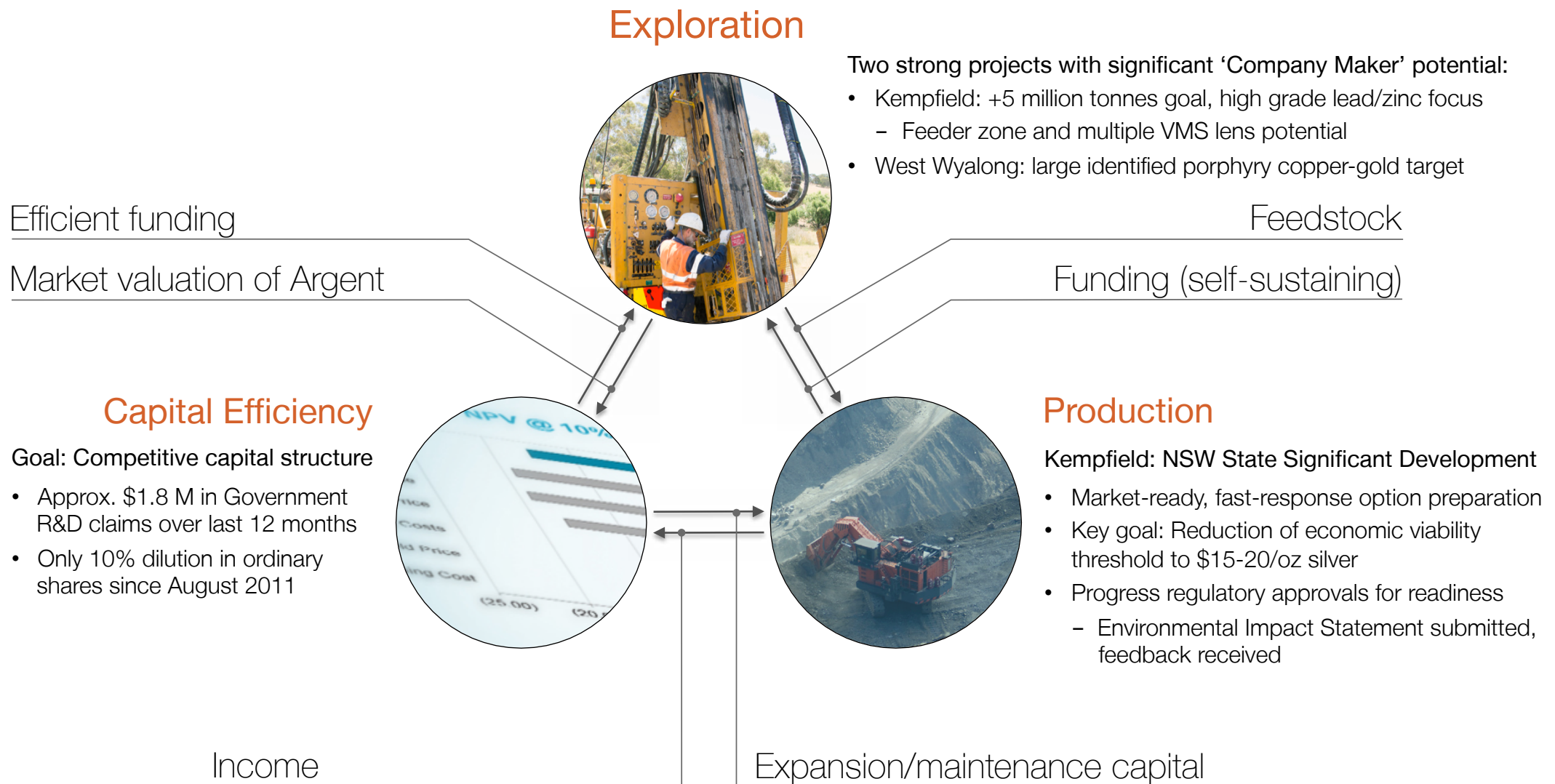
Magnetic anomaly (cross section AB)



IP chargeability (cross section AB)







THANK YOU

## KEMPFIELD JORC 2012 RESOURCE STATEMENT SUMMARY

Table 1.0 is a summary of the Kempfield mineral resource announced on 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<sup>1</sup> (Primary):

Table 1.0 - Kempfield Resource Summary

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

\* 90% \*\* 79% \*\*\* 82%; Percentage of Resource tonnes in Measured or Indicated Category. See Table 3.0 for details.

### 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.



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

## 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:  
 $r = \text{tonnes} * \text{head grade} * \text{recoverable and payable \%}$   
 Eg. For Measured Oxide/Transitional silver:  $r = 2.7\text{Mt} * 68 \text{ g/t} * 80\% / 31.1 \text{ g/oz} * \$\text{US } 30/\text{oz} = \$\text{US } 142\text{M}$ .  
 Eg. For Measured Primary Zinc:  $r = 4.1\text{Mt} * 1.2\% * 55\% * \$\text{US } 2,200/\text{t} = \$\text{US } 59.5\text{M}$ .
- (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:  
 $\text{Ag Eq (oz)} = R / \text{Ag recoverable and payable \%} / \text{Ag price} = R / 80\% / \$\text{US } 30$ .
- (iv) Contained silver metal grade was calculated as follows:  
 $\text{Grade (Contained Ag Eq g/t)} = \text{Ag Eq (oz)} * 31.1 / \text{tonnes}$ .

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)
<b>Oxide/Transitional</b>						
Measured	2.7	5.8	9.3	-	-	6.3
Indicated	2.7	4.1	9.9	-	-	4.6
<b>Measured + Indicated</b>	<b>5.4</b>	<b>10</b>	<b>19</b>	<b>-</b>	<b>-</b>	<b>11</b>
<b>As % of Total Oxide/Transitional</b>	<b>90%</b>	<b>93%</b>	<b>93%</b>	<b>-</b>	<b>-</b>	<b>93%</b>
<b>Primary</b>						
Measured	4.1	7.5	16	27	51	12
Indicated	8.4	11	36	49	103	21
<b>Measured + Indicated</b>	<b>13</b>	<b>19</b>	<b>51</b>	<b>76</b>	<b>154</b>	<b>33</b>
<b>As % of Total Primary</b>	<b>79%</b>	<b>83%</b>	<b>79%</b>	<b>78%</b>	<b>77%</b>	<b>81%</b>
<b>Oxide/Transitional + Primary</b>						
Measured	6.8	13	25	27	51	19
Indicated	11	15	46	49	103	25
<b>Total Measured + Indicated</b>	<b>18</b>	<b>28</b>	<b>71</b>	<b>76</b>	<b>154</b>	<b>44</b>
<b>As % of Total Resource</b>	<b>82%</b>	<b>86%</b>	<b>82%</b>	<b>78%</b>	<b>77%</b>	<b>84%</b>

## Note 3 – Rounding and Significant Figures

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



## COMPETENT PERSON STATEMENTS

### Previously Released Information

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

- 2 September 2009 Presentation to Mining NSW Conference;
- 21 February 2013 Argent Minerals Identifies Major Upside Potential at Kempfield Silver Project;
- 10 March 2014 Assays Confirm Third VMS Lens Group at Kempfield – Revised;
- 6 May 2014 Kempfield Resource Statement Upgraded to JORC 2012 Standard;
- 24 June 2014 Kempfield Exploration Update – Drill Target Delineation;
- 17 July 2014 Mag Survey Reveals Large Copper-Gold Target at West Wyalong;
- 24 July 2014 Geophysics Team Mobilises for Kempfield DHMMR Survey;
- 31 July 2014 Geophysics Breakthrough in Kempfield Lead/zinc Detection; and
- 15 August 2014 Kempfield Drill Target Update – Surface MMR Success.

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcements, and, in the case of estimates of Mineral Resources or Ore Reserves, that all material assumptions and technical parameters underpinning the estimates in the relevant market announcements continue to apply and have not materially 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.