



4 July 2016

#### **Investigator Resources: Investor presentation**

Attached is a copy of the latest investor presentation prepared by the company.

Web: www.investres.com.au

For further information contact: Mr John Anderson Managing Director *Investigator Resources Limited* Phone: 08 7325 2222

# Investigator Resources Limited The Rising Australian Silver Stock

INVESTIGATOR RESOURCES LIMITED



Investor Presentation July 2016

# **Disclaimer & Competent Person Statement**

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#### **COMPETENT PERSONS STATEMENT**

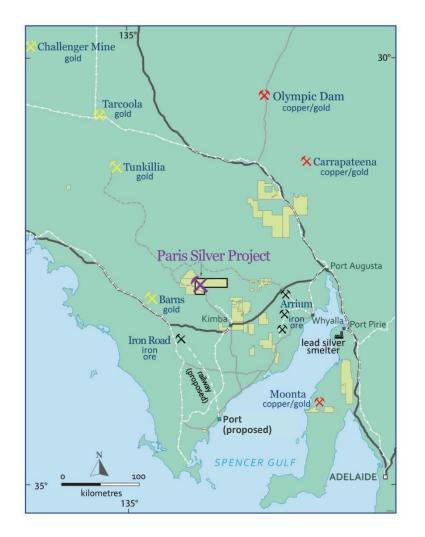
The information in this presentation relating to exploration results is based on information compiled by Mr. John Anderson who is a full time employee of the company. Mr. Anderson is a member of the Australasian Institute of Mining and Metallurgy. Mr. Anderson has sufficient experience of relevance to the styles of mineralisation and the types of deposits under consideration, and to the activities undertaken, to qualify as a Competent Person as defined in the 2012 Edition of the Joint Ore Reserves Committee (JORC) Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr. Anderson consents to the inclusion in this report of the matters based on information in the form and context in which it appears.

The information in this presentation that relates to Mineral Resources Estimates at the Paris Silver Project is extracted from the report entitled "Upgraded Paris resource estimate: 60% increase to 33Moz silver" dated 9 November 2015 and is available to view on the Company website <u>www.investres.com.au</u>. The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and that all material assumptions and technical parameters underpinning the estimates in the relevant market announcement 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 announcement.



## Paris Silver Project: Path to Development





### 33Moz high grade 116g/t silver deposit

- Inferred Resource
- 100% IVR
- Positive open-pit mining & processing attributes
- Exploration potential for more silver resources
- Good location to mining & transport infrastructure
  - Near regional rural centre
  - Spencer Gulf industry & ports
  - Port Pirie lead silver smelter

#### Investigator's 2016/2017 priority is putting Paris on the pathway to production

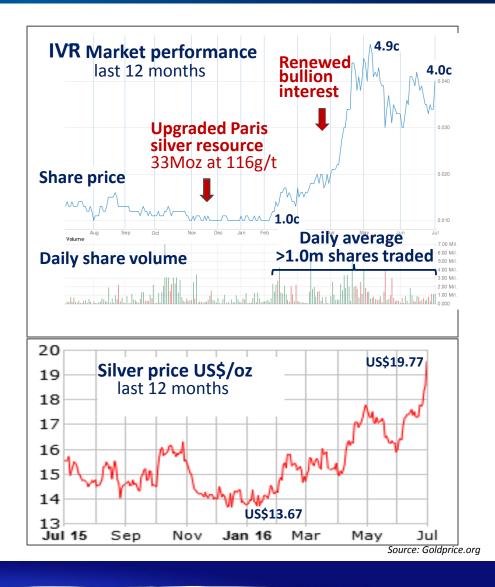
- Drill resource to Indicated Resource status
- Add to positive metallurgical tests
- Tests on identified local water supply
- On-going internal project studies

### **Planning for:**



## **IVR Corporate Overview:** *Well Positioned with Increasing Silver Price & Renewed Bullion Interest*

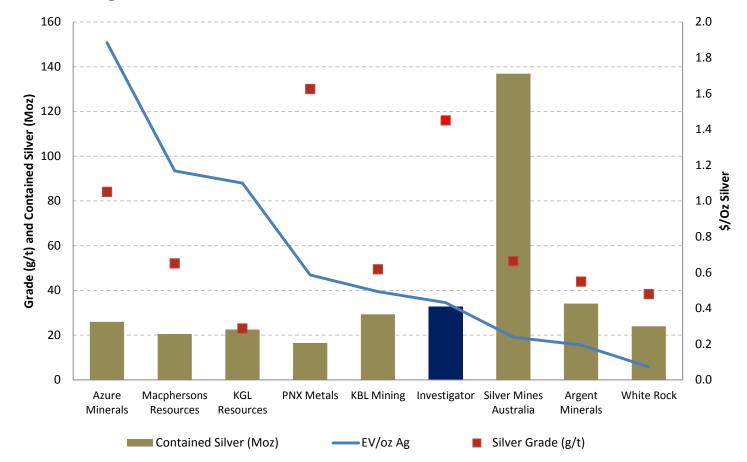
Capital Structure	
ASX listed since 2007	IVR
Shares (ordinary)	462.3M
Options (Listed)	114.2M
Options (unlisted)	19.6M
Share Price (1 July 2016)	<b>4.0</b> c
Options Price """"	0.9c
Market Cap (A\$m)	\$18.5M
Cash (31 March 2016)	\$2.1M



Share Register as at 7 June 2016		
CITIC Australia	14.5%	
Board & Management	2.3%	
Тор 20	35.9%	
Total shareholders	3,287	

### **IVR:** *Peer Review*





### High Grade and Low EV/Resource Ounce Relative to Peers

# Silver: 35% Price Increase in 2016 & Tracking Gold Upturn



### **Increasing Demand**

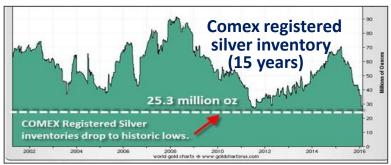
Increased ETF purchases & Indian demand

#### **Decreasing Supply**

- Comex silver inventories have fallen from 70Moz to about 25Moz (a historic low) over the last 12-months
  - Less scrap supply
  - Reduced production grades
  - Closures of lead zinc silver mines

#### Silver is tracking & rerating with gold

- Price ratio recently trending towards historic level of 60:1
- Forecasts of US\$19 US21/oz by end of 2016



Source: Goldchartsrus



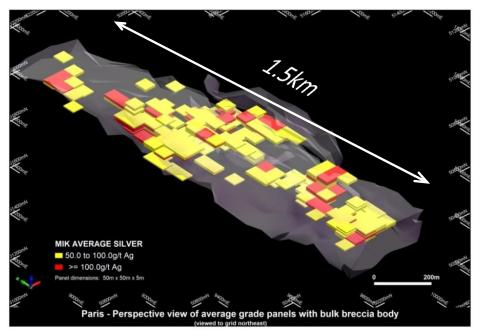
Source: Iress

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# Paris Silver Deposit: Well Placed for Development



Inferred Resource 8.8Mt @ 116g/t silver \* using 50g/t silver cut-off



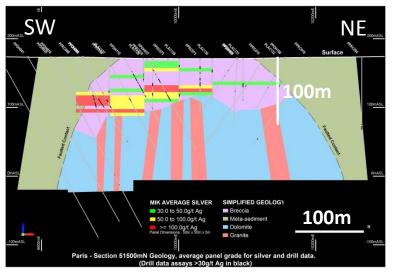
Oblique perspective view looking grid northeast representing the distribution of >50g/t average silver grade blocks

Silver mineralisation lies within a elongate tabular breccia body between 5m & 160m depth from surface

- 33Moz contained silver
- High open-pit silver grade
- Offering mining advantages:
  - ✓ Shallow & amenable to bulk mining
  - ✓ Potential low-cost soft dig
  - Options for higher-grade starter pits
- Early indications of conventional silver extraction
  - ✓ 65% 97% initial recoveries in preliminary metallurgical laboratory trials
- Potential local water source
  - Lower costs than piping in processing water
- Baseline flora & fauna study
  - No significant species identified
- \* Upgraded Paris silver Inferred Resource (November 2015)

# Paris Silver Deposit: Open-pit Mining Scenarios



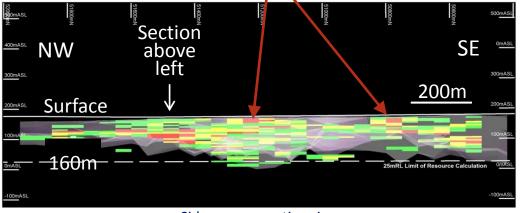


Section view of average grade block model panels within purple breccia host above blue basement

1. Shallow: 5m to 160m below surface with bulk of deposit at 50m to 120m depth



- 2. Mostly clay matrix offering possibilities of low-cost soft dig
- 3. Abundant mineralisation just below cut-off (green) offering mineralised stockpiles for later processing; plus higher-grade starter pit opportunities

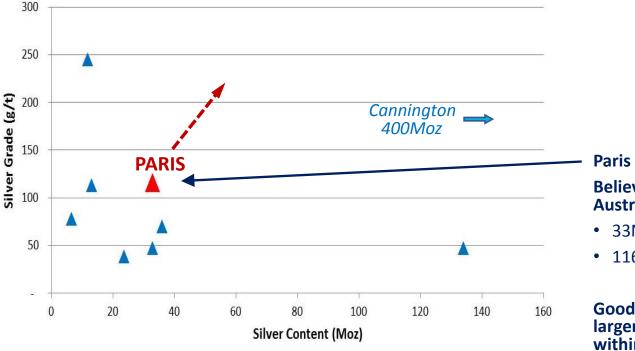


#### Side-on perspective view

MIK AVERAGE SILVER 30.0 to 50.0g/t Ag 50.0 to 100.0g/t Ag >= 100.0g/t Ag

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\* Based on current published resources & reserves; Silver contents only

**Paris Silver Resource** 

Believed to be one of the best new Australian silver deposits with:

- 33Moz contained silver
- 116g/t silver grade

Good exploration potential for larger & higher-grade silver deposits within the local field to expand the Paris project

# Paris Silver Deposit: Positive Preliminary Metallurgy Tests

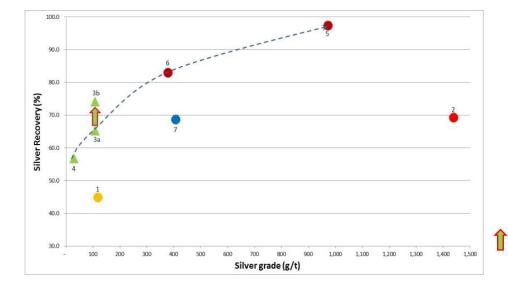
# \*

### 2013 initial laboratory trials showed good results

- ✓ Good leach recoveries (65% 95%) for a range of representative samples
- ✓ Indicates a choice of either leach or flotation processing paths giving flexibility for project design & costing
- ✓ Potential for optimisation upside: e.g. finer grind\*

### Further metallurgical test work proposed for 2016/7:

- To select optimum metallurgical processing pathways
- Using existing & new large diameter drill samples



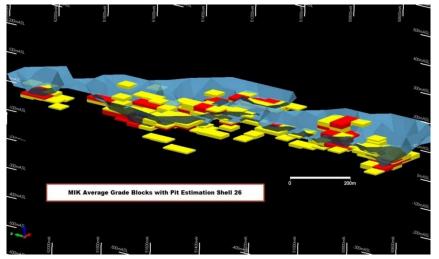
### $e.g.\ \mbox{Recovery performance of Leach Trials}$

- 1 Shallow oxidised mineralisation
- 2 Sulphide-rich zone
- 3a Polymict breccia moderate grade ( $P_{80}$  of 106 $\mu$ m)
- 3b Polymict breccia moderate grade ( $P_{80}$  of 53 $\mu$ m)
- 4 Polymict breccia Low grade
- 5 Oxidised iron-rich contact zone (native silver)
- 6 Iron-rich contact zone
- 7 Sulphide in dolomite

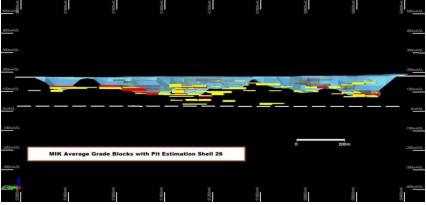
### \* 9% increased recovery with trial finer grind

# Paris Silver Project: Conceptual 'Optimised' Open-pit





Oblique perspective view looking at the Pit 26 Optimisation 'Shell', with MIK >50g/t average silver grade blocks



Perspective view of the Pit 26 Optimisation 'Shell', with MIK >50g/t average silver grade blocks, looking local grid east for the Paris silver deposit

#### An independent mining consulting firm undertook a pit optimisation study on the 2015 MIK Minerals Resource 'Block Model'

# The optimised pit shells were generated using the Whittle<sup>®</sup> optimisation software

# The key input parameters used were verified by the independent mining consultants



# Applying best practice operating and cost assumptions, the Company is assessing a number of development scenarios for Paris such as:

- Utilising a suitable mining contractor & modular mobile processing plants to enable flexibility in scaling up to optimal output rates
- Process ore by either a) tank leaching to produce silver doré (*more valuable product; lower transport costs*); b) flotation to produce a silver-lead concentrate (*smaller footprint, lead recovery, likely lower capital costs, local ports*); or c) leaching a floated concentrate
- Either operate its own metallurgical process plant (*higher initial capital costs*) or lease a suitable process plant (*lower capital costs*) and operated by a third party specialist operator (*likely higher operating costs*)

# **Paris Silver Project:** Investigator's Development Pathway

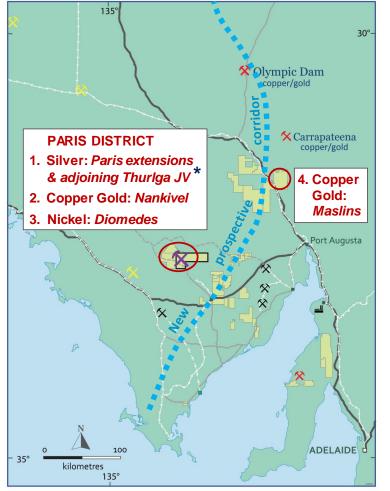


	<b>2016/17 Objective:</b> <i>Achieve Prefeasibility study mid-2017</i> Cost c. \$3.5m	2017/18 Objective: <i>Achieve Feasibility study mid-2018</i> Cost c. \$4.5m
Resource	Upgrade resource to Indicated: Selective drilling (12,500m - mostly RCP) Resource re-estimate	Reserve drilling Modelling & grade control studies for mine design
Mine Design	Preliminary geotechnical study Continue internal optimisation studies including pit design	Full geotechnical study Pit design & scheduling Contracting/partnership options
Metallurgy & Processing	<ul> <li>Additional laboratory metallurgical trials on existing &amp; new drill samples</li> <li>Establish optimum processing pathway:- <ul> <li>Leaching to produce silver doré; or</li> <li>Flotation to produce concentrate &amp; assess any synergies with local smelter</li> </ul> </li> <li>Hydrological drilling (c. 500m) to advance knowledge/advantages of local water supply</li> <li>Plan permitting pathway</li> </ul>	Process & plant design Full hydrological study incl. deposit area Tailings dam design Geotechnical & condemnation drilling for plant, tailings & waste dump areas Leasing/partnership options Permitting applications in place

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# Significant Flow-On of Exploration Opportunities





\* Thurlga JV with Adelaide Resources; IVR may earn to 75%

#### Aiming for Tier 1 &2 company-maker deposits

#### \$2m drilling planned 2016/17 to test:

- 1. For new silver resources to expand Paris project
- 2. Copper-gold targets in Paris field
- 3. Nickel targets in basement near Paris
- 4. Large IOCG copper-gold target in revitalised extension to Olympic Dam belt

#### Applications submitted for government PACE co-funding

 subject to pending government assessment & announcement of successful applicants



#### IVR is moving Paris forward towards development

• Early results show positive economic attributes (grade, size, mining, processing, location)

#### Pathway to production

- Aiming to convert the Paris resource to Indicated status & complete a feasibility study by mid-2018
- Requiring an estimated \$3.5m expenditure year 1 and \$4.5m in year 2

#### Significant surrounding discovery potential to move IVR to the next echelon

- Silver targets to build on the Paris project
- Breakthrough copper gold & nickel targets with Tier 1/2 potential
- Aiming to drill test in 2016/2017

# \*

### **For Further Information:**

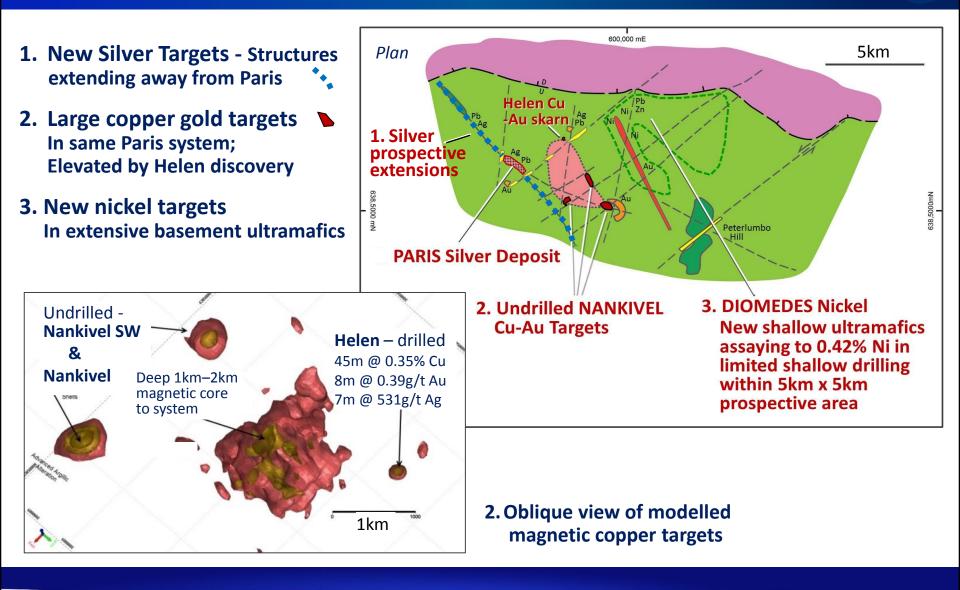
John Anderson Managing Director Investigator Resources Limited



18 King Street Norwood South Australia Ph: +61 8 7325 2222 Email: info@investres.com.au www.investres.com.au

# Appendix 1: Paris-Nankivel field – Further Discovery Opportunities



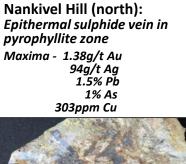


# Appendix 2: Nankivel Copper Gold Target – Large Skarn or Porphyry 🧩

# Outcrop geology supports underlying copper gold targets

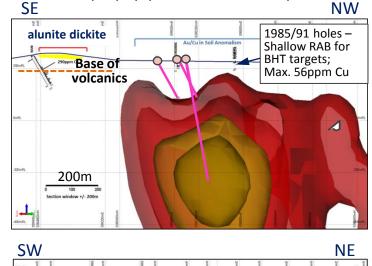
Nankivel Hill (south): Silica alunite dickite haematite altered volcanic breccia







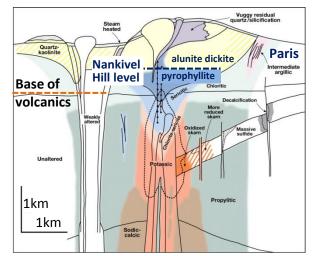


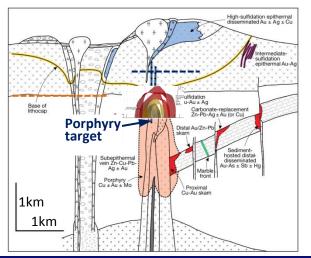


#### 

### Fits standard porphyry model

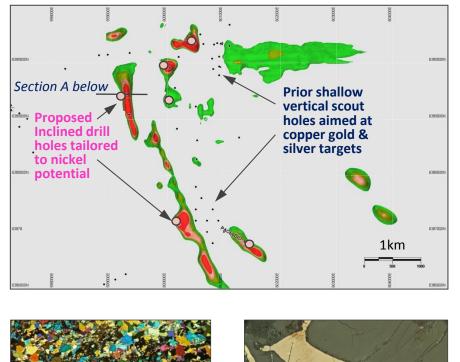
(sections from Sillitoe Economic Geology 2010)





## Appendix 3: Diomedes Nickel Targets – in Basement near Paris

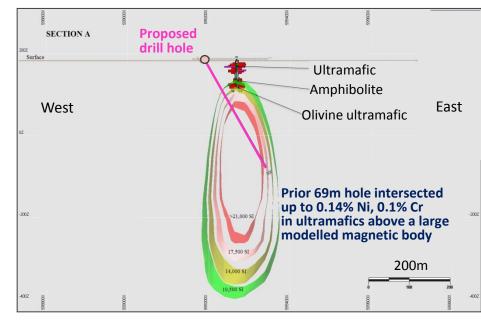




### 0.05 mm

### Plan of modelled magnetic ultramafics

- Provides first pass targets for assessing ultramafic type & nickel potential
- This will determine follow-up targeting tactics such as EM for the wider prospective area



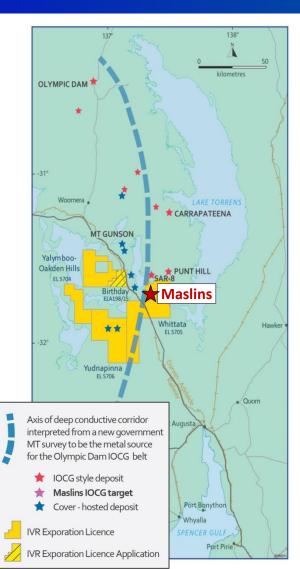
#### **Example section A**

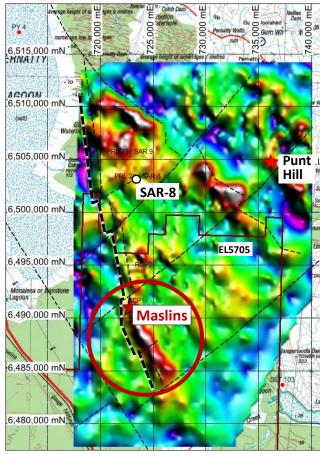
Fresh olivine ultramafic (left) & sulphides (right) at 54m depth including probable pentlandite (nickel sulphide); microscope images

1 mm

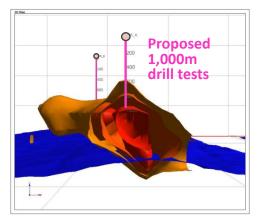
### Appendix 4: Maslins IOCG Gravity Target







Gravity plan - Filtered Bouguer gravity



**3-D model of Maslins gravity target** Viewed from the south end.

#### **Maslins IOCG Target**

- Gravity anomaly good density contrast
- Modelled as 6km long x 1km diameter horizontal body
- 600m 700m depth to top at prospective IOCG geological position
- Underlain by magnetic zone (modelled top in blue).
   Possibly a deeper skarn zone as expected under the standard IOCG target model.