

# **Developing the Superior Lake Project**

Canada's Highest Grade Zinc Deposit with Significant Exploration Upside

**ASX: SUP** 





## **Important Notices**

#### **Disclaimer and Forward Looking Statements**

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#### **Competent Person Statement**

#### **Exploration Target**

The information contained in this presentation that relates to the exploration target is based on, and fairly reflects, information compiled by Mr. Alfred Gillman, an independent consultant Superior Lake Resources Limited. Mr. Alfred Gillman is a Fellow and Chartered Professional of the Australian Institute of Mining and Metallurgy and was engaged as a consultant to Superior Lake Resources to complete the JORC (2012) resource. Mr. Gillman has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is undertaking 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'. Mr. Gillman consents to the inclusion in this announcement of the matters based on his information in the form and context in which it appears.

#### **Exploration Results and Mineral Resources**

The information in this presentation that relates to Exploration Results was first reported by the Company to ASX on May 1st, 2018. The information in this presentation that relates to the Mineral Resources on the Superior Lake Project was first reported by the Company to ASX on July 3rd, 2018. 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, 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.

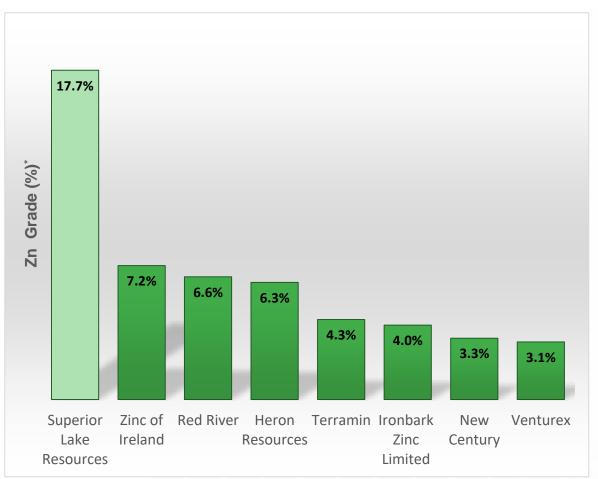




## **Developing the Superior Lake Project**

- Restart Study contains high grade; highly profitable project (released 10 October 2018)
  - Low-cost quartile zinc producer (AISC US\$0.51/lb)
  - Low initial capital cost project leverage off historical mine development and infrastructure (US\$75 million)
- Minimal exploration in 20 years
- Significant brownfield exploration target\* of 2.1 to 5.2
   Mt at a grade between 13.3% to 15.4% Zn
- Fully funded Definitive Feasibility Study (mid-2019)
- Tribeca Investment Partners Pty Ltd appointed to arrange up to US\$60 million in Project Financing

<sup>\*</sup>Cautionary Note: The potential quantity and grade of the Exploration Target is conceptual in nature and is therefore an approximation. There has been insufficient exploration to estimate a Mineral Resource and it is uncertain if further exploration will result in the estimation of a Mineral Resource. See ASX announcement dated 26 September 18 for further information on the Exploration Target.







## **Company Structure**

Capital Structure					
ASX Ticker	SUP				
Shares On Issue	856.88M				
Options (unlisted)	Director Options	20M (3c exp Feb 2022)			
	Employee Options	25M (3c exp April 2021) 27M (6c exp April 2021)			
	Broker Options	10M (6c exp August 2021) 10M (8c exp August 2021)			
Market Cap	~A\$44.6M (at \$0.052)				
Cash	~A\$5.2M (as at 30 September 2018)				

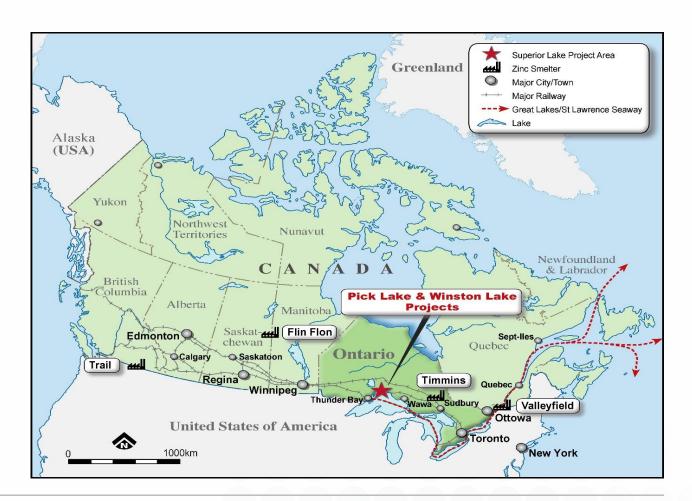






## First World Location – Hosting a Leading Mineral Province

- Canada is a First World mining jurisdiction
- Ontario is 7<sup>th</sup> in global Fraser Institute investment attractiveness rankings
- A highly prospective mineral province







## Restart Study – Robust Project Confirmed

#### Highlights

- Robust high-value, high-grade project
- NPV 10% post tax A\$158.5M
- IRR 10% post tax 48%
- Rapid payback period 2.25 years
- Initial mine life of 6.5 years, prospective to extend to 10 years
- Low-cost quartile of zinc producer AISC US\$0.51/lb
- Low initial capital cost US\$75M<sup>2</sup>
- Excellent metallurgical recoveries 93.7 % Zn and 78% Cu

#### **Next Steps**

- Fully funded Definitive Feasibility Study commenced completion expected mid-2019
- Project Permitting has commenced
- Near term exploration to target mine life extensions

<sup>1</sup>Pease refer Restart Study announcement titled "Outstanding study confirms Superior Lake as low-cost zinc project" dated 10 October 2018. Please note Cautionary Statements regarding Restart Study and the Cautionary Statement regarding forward looking statements on page 2. The Restart Study uses a portion of Inferred Resources (5%) over the life of mine, there is a low level of geological confidence associated with inferred resources and there is no certainty that further exploration work will result in the determination of indicated mineral resources or that the production target itself will be realised.

<sup>2</sup>Estimate is accurate to +/-35% and includes a 25% contingency.

3USD:AUD \$0.75

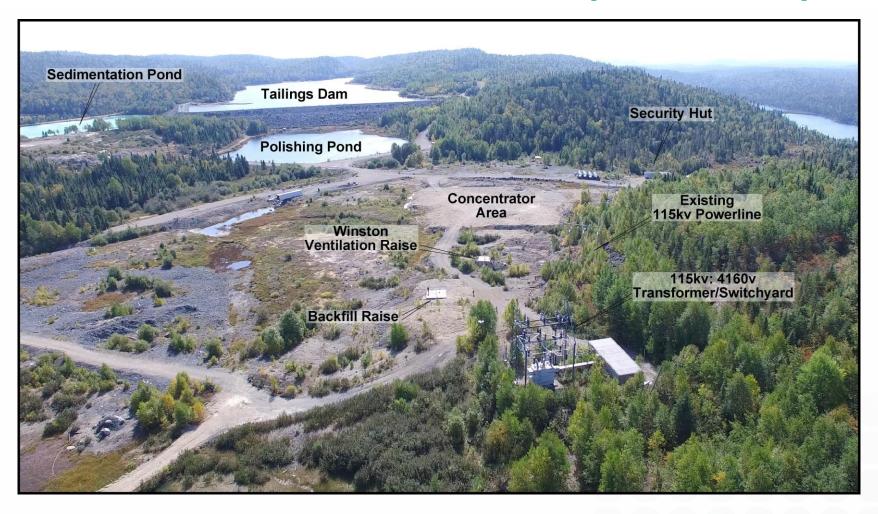
The Company confirms that all the material assumptions underpinning the production targets, or the forecast financial information derived from the production target, continue to apply and have not materially changed.

Description <sup>1</sup>	Units	Value (Approx.)	
Mining Tonnage	Tonnes	2,000,000	
Plant Throughput	tpd	1,000	
Plant – head grade	% Zn	14.1%	
Plant – head grade	% Cu	0.66%	
Zn Metal Production (steady state)	tpa	46,640	
Cu Metal Production (steady state)	tpa	1,740	
Average EBITDA	US\$60.3 M	A\$80.4 M³	
NPV at 10% - pre-tax	US\$164.8 M	A\$219.7 M³	
NPV at 10% - post tax	US\$118.9 M	A\$158.5 M³	
IRR at 10 % - pre-tax	56	5 %	
IRR at 10% - post tax	48 %		





# Significant Infrastructure in Place – Low Capital Development

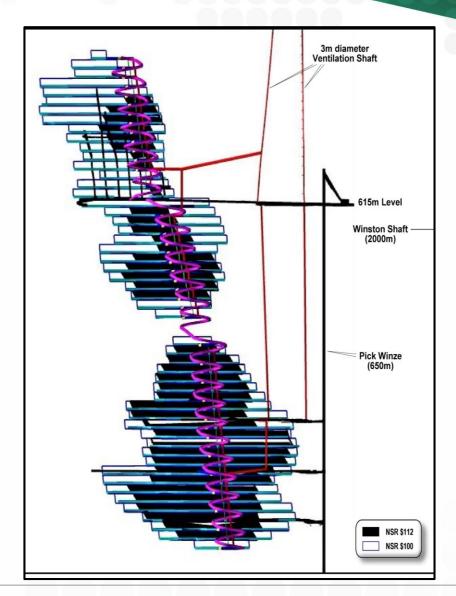






## **Potential DFS Improvements**

- Cut-off grade options at US\$100 per tonne (current US\$112/t)
  - Potential to extend mine life to 10 years
- Longhole open stoping at 20m sublevels in the wider Lower Pick area
- Potential to develop an all electric mine
- Ramp access from the surface to support early production rampup - Decline versus Shaft Options





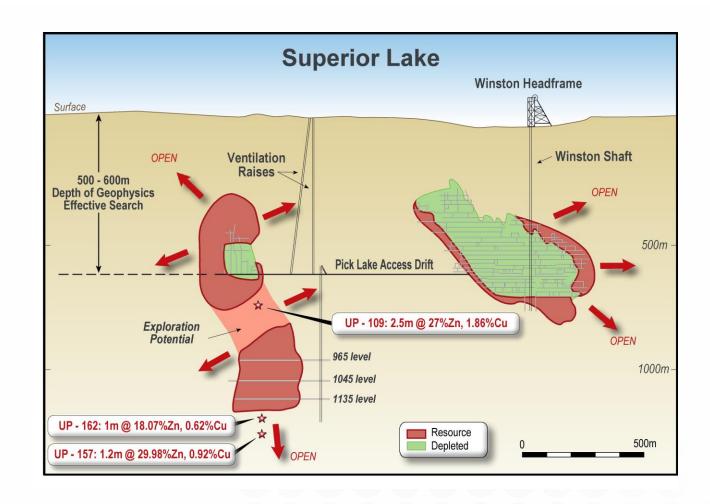


## **Significant Brownfield Exploration Potential**

Exploration Target - 2.1 to 5.2 Mt at a grade between 13.3% to 15.4% Zn

#### **Short Term Plan**

- GIS database and geological model review -October 2018
- Diamond drill and complete Down-the-Hole Geophysics in the mid-Pick area - Q4 2018
- High powered, high resolution Surface geophysics (TEM) survey - Q1 2019

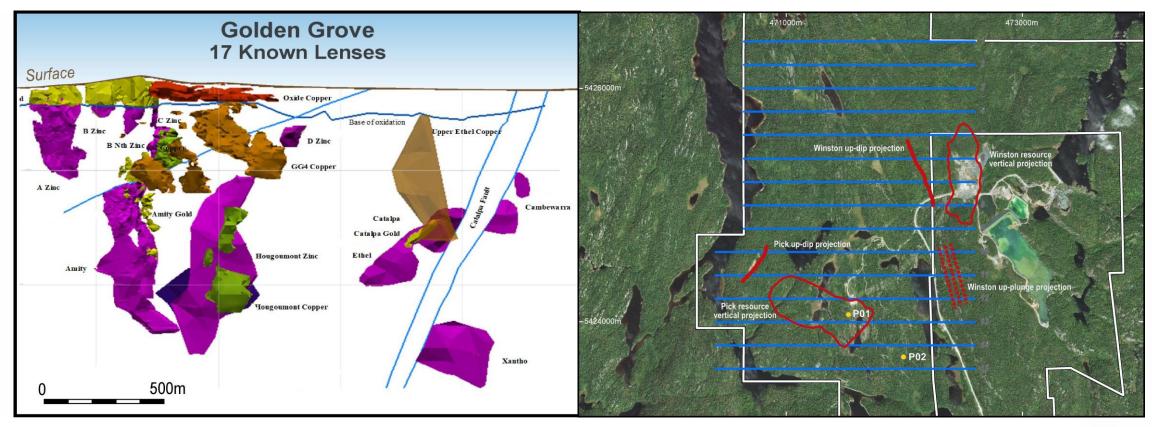






10

## 175 km<sup>2</sup> of Significant Greenfield Potential - VMS System Analogy



- Generally VMS deposits are multiple lens systems
- System open along strike and at depth
- Confidence to add resources given advances in modern high powered geophysical techniques
- Greenfield exploration to identify priority targets commence 2019

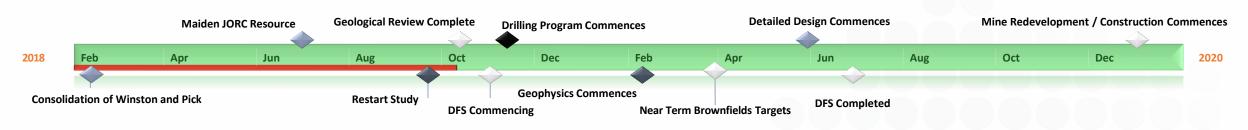
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## Superior Lake Summary – Significant Shareholder Value

# High grade zinc deposit - 2.15 Mt at 17.7% Zn, 0.9% Cu, 0.5 g/t Au and 33.4 g/t Ag High Margin (US\$0.51/lb) , Low Capital Project (\$US75 million) Substantial brownfields and greenfields exploration potential Substantial mine infrastructure already in place Close to road, rail and shipping access and transport Grid power to project site inclusive of 8MW transformer Water treatment and tails facility in place Permitting process for the project has commenced Commence drilling program to convert exploration target into resources to increase mine life by Q4 2018 Complete a surface geophysics program in Q1 2019 Deliver the definitive feasibility study by end of Q2 2019



### For further information

**David Woodall** davidw@superiorlake.com.au







# High Grade JORC (2012) Resource – 3% and 6% cut-off grade

Superior Lake Project	Tonnes	Zn %	Cu %	Au g/t	Ag g/t
Indicated – 3% cut-off grade	1,992,000	17.8	0.9	0.4	33.7
Inferred – 3% cut-off grade	152,000	15.4	0.9	0.4	31.2
Indicated – 6% cut-off grade	1,880,000	18.7	0.9	0.4	35.3
Inferred – 6% cut-off grade	130,000	16.9	0.9	0.4	33.2
Total – 3% cut-off grade	2,145,000	17.7	0.9	0.4	33.5
Total – 6% cut-off grade	2,010,000	18.5	0.9	0.4	35.1

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# **Board of Directors and Management**

	Board of Directors	Management	
Keong Chan	Non Executive Chairperson  Provides advice to a number of companies on corporate matters in relation to capital raisings, IPOs, back door listings, mergers and acquisitions, takeovers/divestments and has sat on or acted as an advisor to a number of ASX listed boards.	David Woodall – Chief Executive Officer  A mining engineer with + 30 years of international mining experience in corporate Executive and Senior Operational Leadership roles involving project evaluation, project execution, and operational leadership in a wide range of commodities and processes.	
Grant Davey	Executive Director  A mining engineer with over 25 years of senior management and operational experience in the construction and operation of gold, platinum and coal mines in Africa, Australia, South America and Russia. More recently, he has been involved in venture capital investments in several exploration and mining projects and he has been instrumental in developing the Panda Hill niobium project as well as the Honeymoon uranium project. His focus is in securing first	Keith Bowes – Project Director A process engineer with +20 years experience in metallurgy, project management and operations internationally also in projects and plants covering a wide range of commodities and processes.	
	Class mining projects in world class mining jurisdictions.  Non-Executive Director  A geologist was formerly Chief Geophysicist and Manager of Geoscience Technology for WMC Resources. He was one of the founding members of Independence Group Limited and developed high powered 3 component 3D TEM applications that lead to the discovery of over 75,000t of nickel at the	Alf Gillman – Geology Manager  A geologist with +35 years of international exploration experience in senior management and Board roles across gold, base metals, uranium and industrial mineral exploration.	
Peter Williams	Victor Long Nickel Mine in Kambalda. Peter has extensive experience in West Africa where he was the vendor of Gryphon Minerals' Banfora Gold Project, was involved in the project generation of Papillion's Mali projects and was a founding director of Ampella Mining Ltd. Peter was a co-founder of the International Resource Sector Intelligence company, Intierra, and was a co-founder of the first dedicated hard rock mineral seismic company in the world, HiSeis.	Mathew O'Hara - Company Secretary A Chartered Accountant with + 14 years international experience in corporate finance, accounting and governance roles, having acted as company secretary and CFO of several companies in the resources sector.	

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#### **Zinc – Continual Growth Forecast**

#### **Global Zinc Market**<sup>1</sup>:

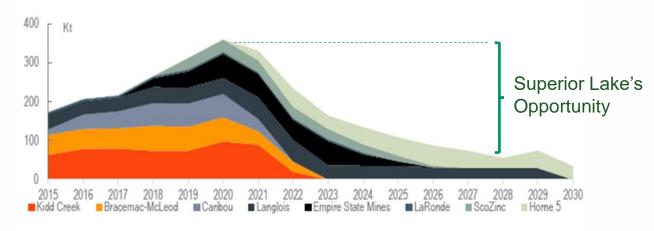
- Mine Closures and stringent environmental oversight in China has impacted mine production
- Zinc mine output in China dragged world output down 5% to 3.84Mt. Ex-China mine output grew by 2%
- Global refined zinc forecast to remain in deficit until 2020 resulting in reduced zinc stocks supporting higher prices

#### **North American Zinc Market:**

A tightening of mine production with the shutdown of a number of major operations

Only 3 advanced projects in the pipeline at this stage to replace lost production

#### Northeast Canadian/United States Zinc Mine Production



Source: Company Reports, AME

Forecast Zinc Prices



2018 US\$ 2,852 / t 2018<sup>1</sup> US\$ 2,675 / t 2020<sup>1</sup> US\$ 3,600 / t