



# ***Corporate Presentation***

***November 2018***

*AGM Presentation*

*Nic Earner, Managing Director*



**ALKANE**  
RESOURCES LTD

# Corporate Overview

## Capital Structure

Ordinary shares	506M
Rights	15M
Share price (14 November 2018)	A\$0.23
Market capitalisation	A\$116M
12 Month low/high	A\$0.18/\$0.38
Share turnover (per month)	9.6m (avg)

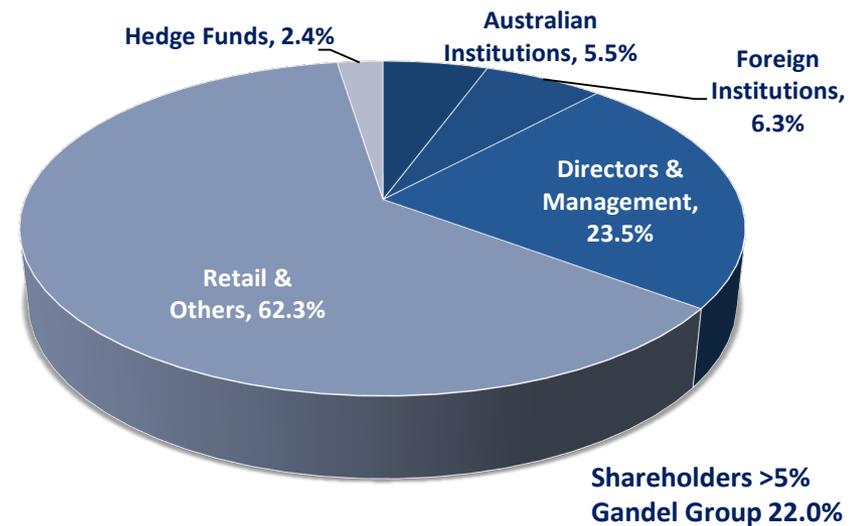
## Company Financials

Cash & Gold (30 Sep 18)	\$82.4m
Debt	Nil

## Board

Ian Gandel	Chairman
Nic Earner	Managing Director
Ian Chalmers	Technical Director
Anthony Lethlean	Non-Executive Director
Gavin Smith	Non-Executive Director
Dennis Wilkins	Company Secretary

## Ownership (31 Oct 18)



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# FY2018 Snapshot

## FY2018 Financials

- Total revenue A\$129.97 million
- Profit before income tax. A\$31.3 million
- Total equity A\$190.4 million

## Tomingley Gold Operations (TGO)

- Production 78,533 ounces
- Gold revenue A\$128.8 million
- AISC<sup>1</sup> A\$1,002/oz
- Operating pre-tax cash flow A\$60.1 million
- Profit before income tax and non-recurring items A\$39.1 million

<sup>1</sup>AISC = All in Sustaining Cost comprises all site operating costs, royalties, mine exploration, sustaining capex, mine development and an allocation of corporate costs, on the basis of ounces produced. AISC does not include share based payments or net realisable value provision for ore inventory

## Dubbo Project

- Dubbo Project Engineering and Financials Update released
- High purity hafnium capability confirmed
- Demand for minerals for clean energy and transport is increasing
- FY18 total outflows A\$9.0 million (FY17 A\$9.2 million)
- Funded from TGO cash flows

## Exploration

- Depth drilling at TGO to increase resource
- Mineralisation confirmed in TGO corridor

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# Highlights – Last 12 Months

## Tomingley

- Excellent operational performance
- Underground development has been approved and commenced

## Dubbo Project

- Financing effort continues as global supply uncertainty remains:
  - The United States has imposed tariffs on Chinese zirconium chemicals and powders
  - Ferro-niobium demand is increasing as steel companies are looking to substitute ferrovanadium (short supply and rapidly escalating prices)
  - China's rare earth permanent magnet industry continues to forecast increasing demand

# Highlights – Last 12 Months

## Regional Exploration – for additional ore feed to TGO

- Continued grade and mineralised intercepts around TGO
- Re-evaluation of the underground reserve potential for Peak Hill

## Gold Investments

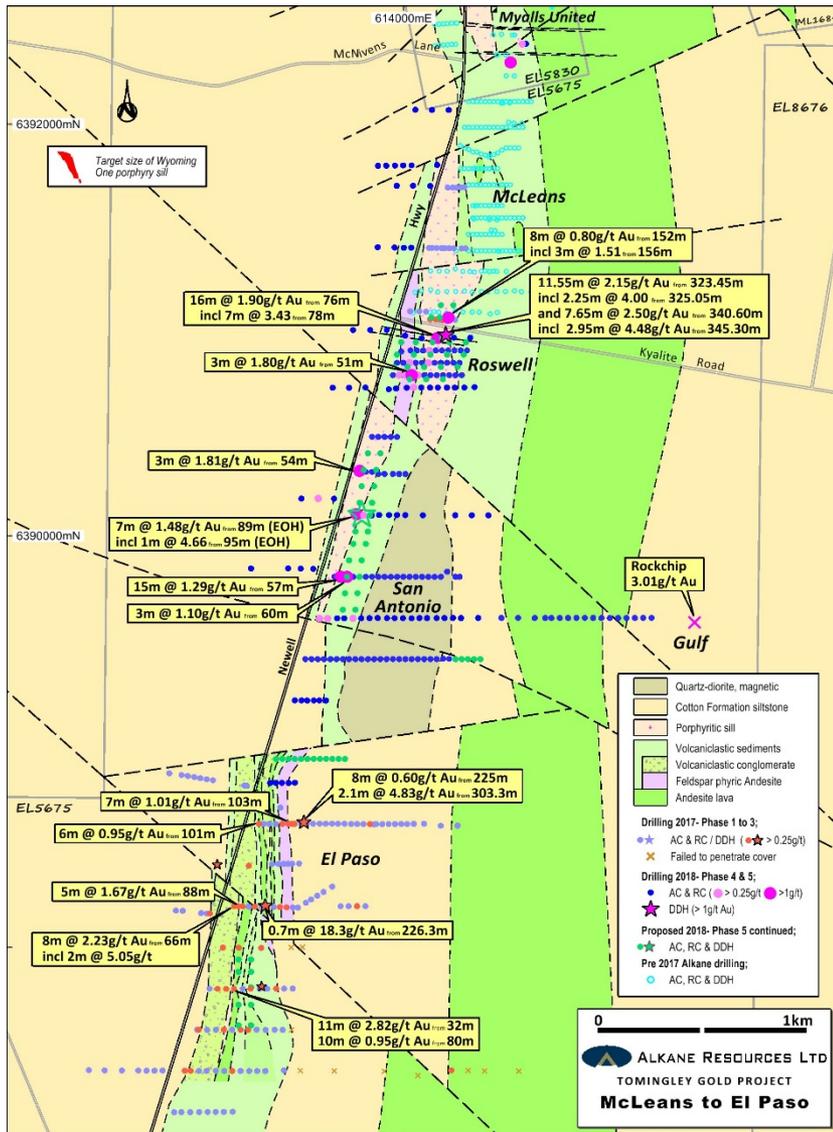
- Junior gold companies/projects meeting our investment criteria
- Investment into Calidus Resources Limited (ASX:CAI)
- Approved investment into gold exploration company Explaurum Limited (ASX:EXU) subject to Explaurum shareholder approval



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# Highlights – Last 12 Months



- Long corridor of mineralisation confirmed
- Predominantly aircore holes, with follow up RC and some diamond holes
- Open cut and underground targets
- Drill spacing wider in many areas that strike length that exists at TGO
- Three major target areas identified; Roswell, San Antonio and El Paso

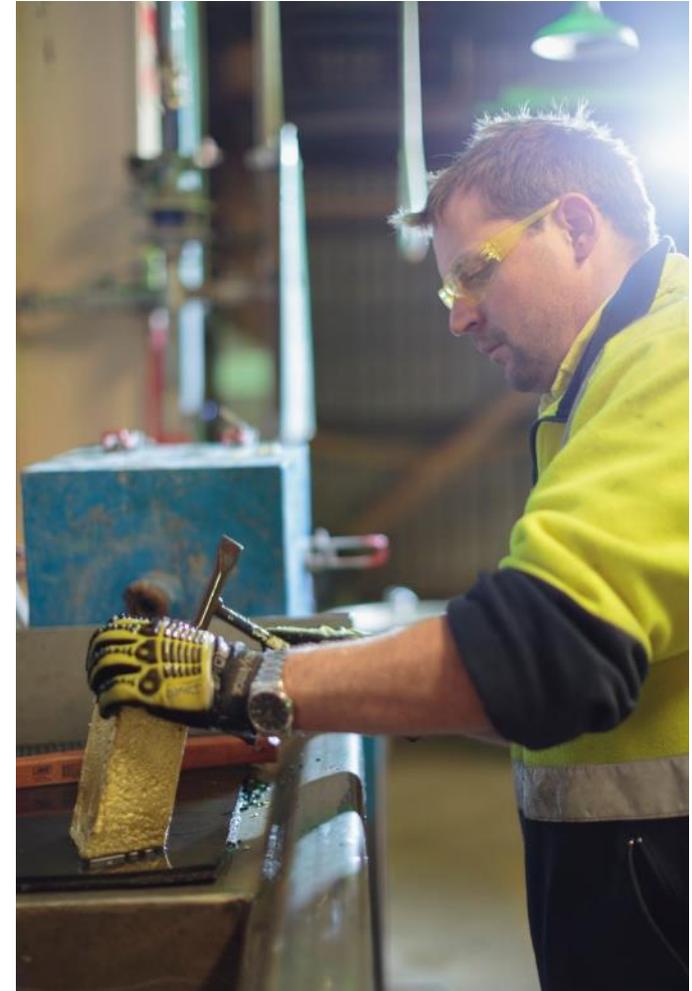
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# Tomingley Gold Operations FY18

- Resource – 437,000oz of gold (25 July 2018)
- Reserve – 144,000oz (25 July 2018)
- Open cut mining throughout FY18
- FY18 – production 78,533oz  
@AISC A\$1,002 /oz
- FY18 – revenue A\$128.8m
- Development of underground has commenced
- Initial UG mine life of 40 months
- FY19 guidance 30,000 – 35,000oz  
@AISC A\$1,300 – A\$1,400/oz



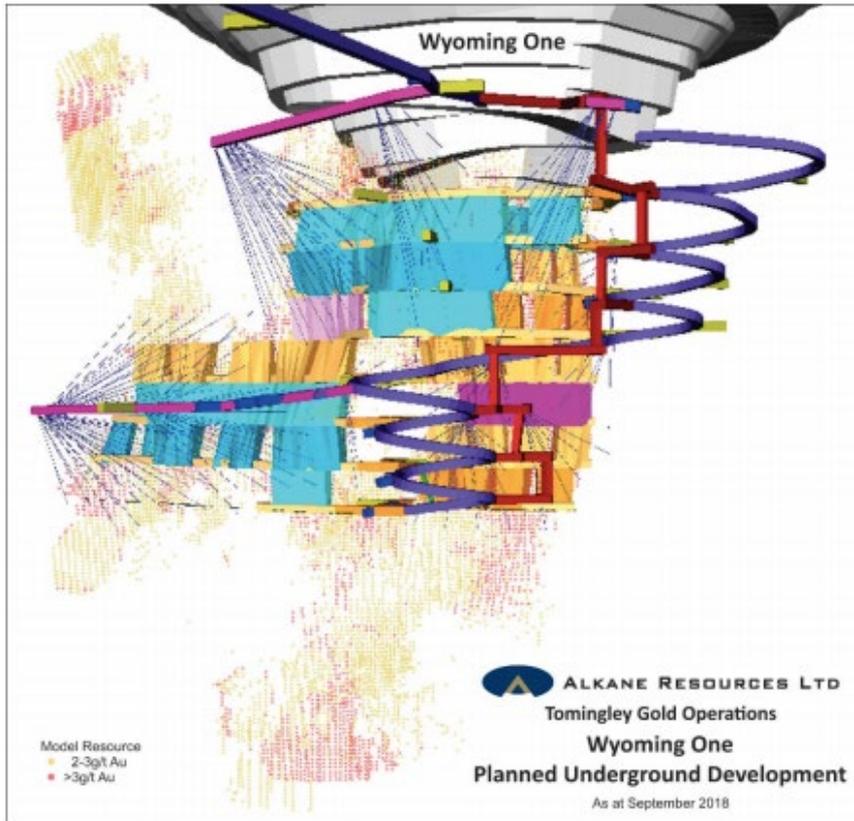
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# TGO Underground

Proposed portal location

Proposed vent drive location



**93,000 oz gold over 40 months @ cash costs ~A\$1,100 - A\$1,200 /oz**

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# TGO Underground Timeline

January 2019

- Portal

July 2019

- Development ore

September 2019

- Stope ore

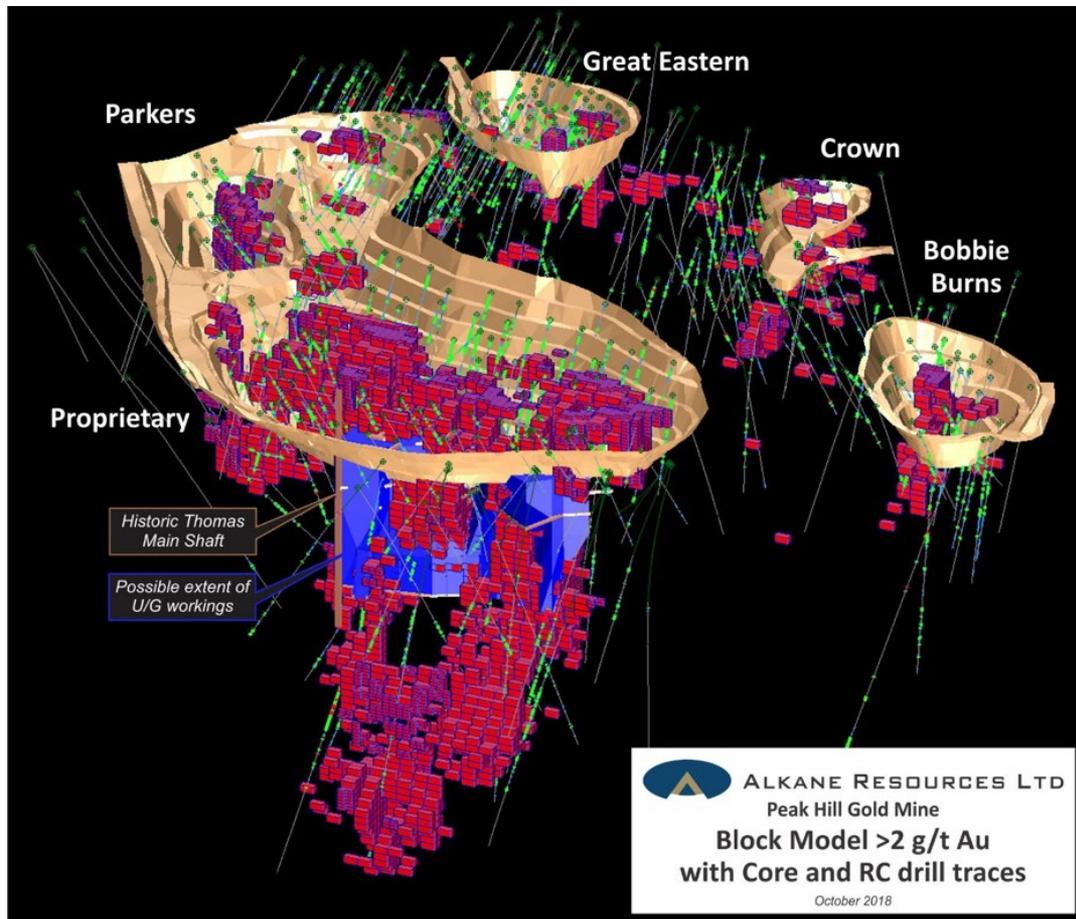
October 2019

- Processing restart

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# Regional Exploration – Peak Hill



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# Increasing shareholder value

## Gold Investment Strategy

- Underground mining at Tomingley Gold Operations
- Continued exploration of prospects in the Tomingley region
- Feasibility of extending the Peak Hill Gold Mine
- Investment in junior gold mining companies and projects with high potential



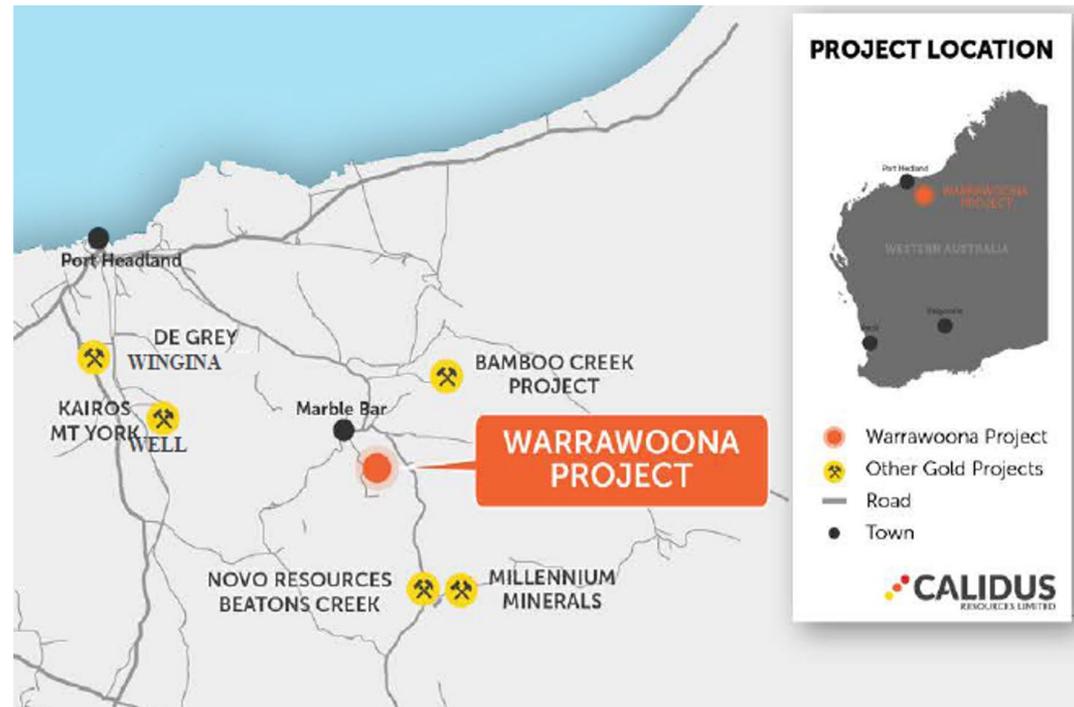
# About Calidus

- Calidus – ASX listed gold exploration company
- Warrawoona Gold Project
  - 712,000 oz resource @2.11g/t Au<sup>1</sup>
- High exploration upside as
  - mineralisation outcrops at surface at all deposits
  - open along strike and down dip at all deposits
  - many identified targets not yet tested
- Initial mining operation expected to be open cut
- Project is ready to progress through feasibility
- With Alkane investment Calidus is in a position to increase resources, test exploration targets and accelerate feasibility work

<sup>1</sup>As released by Calidus to the ASX on 18 December 2017.

# Calidus Investment Summary

- Alkane subscribed for 125 million ord shares via placement @2.95c/share (\$3,687,500)
- Alkane holds ~9% of Calidus on undiluted basis
- Alkane was also granted share options for 70 million shares @3.5c/share



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# Toongi Pastoral Company (TPC)



- Operates at agricultural excellence level, responsibly producing lamb, beef and wheat in a sustainable manner
- Comprehensive water supply project improved water management distribution
- TPC completed 32km of new fencing of biodiversity offset to manage impact of grazing animals.
- Affected by drought

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# Dubbo Project Financials

## Dubbo Project Engineering and Financials Update (4 June 2018)

### 20 year Base case (1mtpa)

- 1.0Mtpa (base case)
- CAPEX – A\$1.3B
- Revenue – A\$663m
- Operating Costs – A\$341m
- EBITDA – A\$320M
- IRR – 17.5%
- NPV – A\$1.24B

### Modular (4 June 2018)

#### Stage 1

- 0.5Mtpa
- CAPEX – A\$808m
- Revenue – A\$397m
- Operating Costs – A\$202m

#### Stage 2

- 0.5Mtpa
- CAPEX – A\$692m
- Revenue – A\$663m
- Operating Costs – A\$341m

#### Advantage

- Large elements of construction occur offsite
- Significantly reduces initial start-up capex
- Reduces construction period
- Allows Alkane to develop and grow with its customers and the target markets for its products

Note: As per ASX announcement of 4 June 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 announcement and 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 any Competent Person's findings are presented have not been materially modified from the original market announcement.

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# Products from Dubbo Project

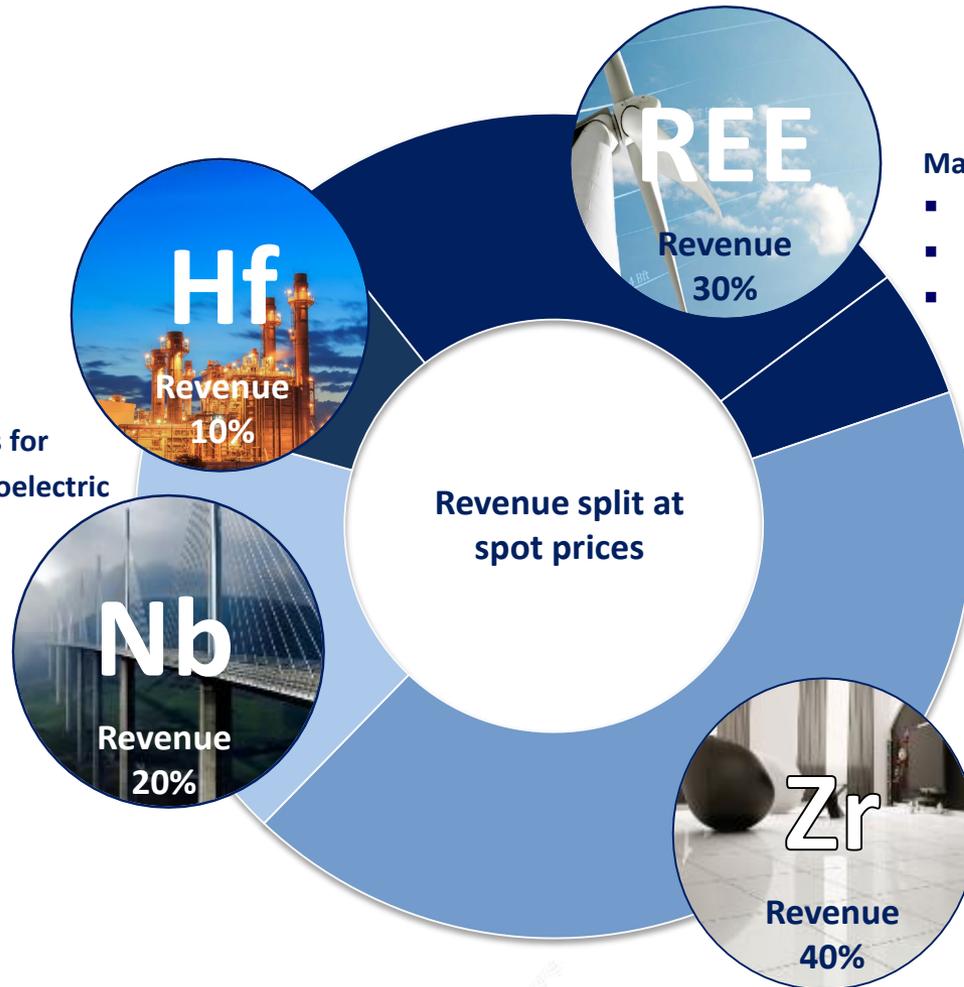
The Dubbo Project provides a strategic source of zirconium, rare earths, niobium and hafnium.

## Hafnium

- Superalloys
- Plasma cutting tips
- Nuclear control rods
- Catalyst precursor
- Jet engines TBCs
- Developing applications for thermoelectric and ferroelectric

## Niobium

- Superalloys
- Structural steel
- Auto steel
- Rocket nozzles



## REE 30%

### Magnets 25%

- EV's
- Wind power
- Robotics

### Non-Magnets 5%

- Catalysts
- Glass
- Phosphors
- Metal alloys
- Polishing
- Ceramics

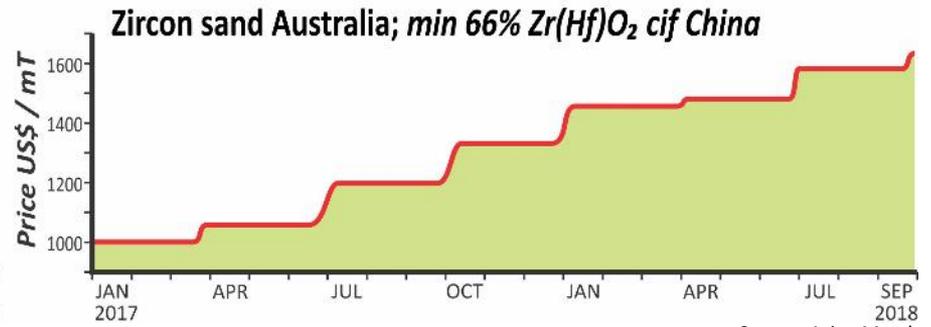
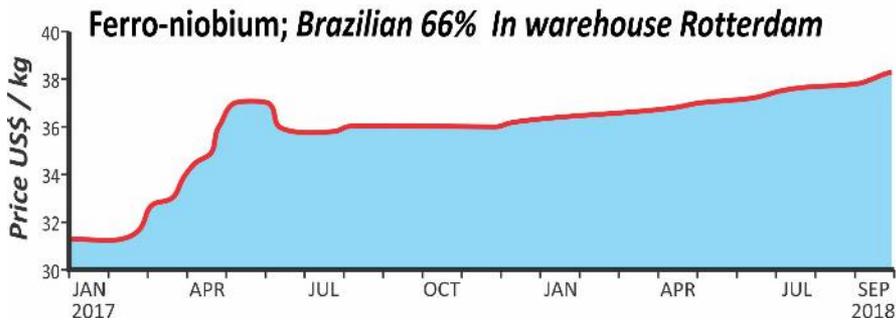
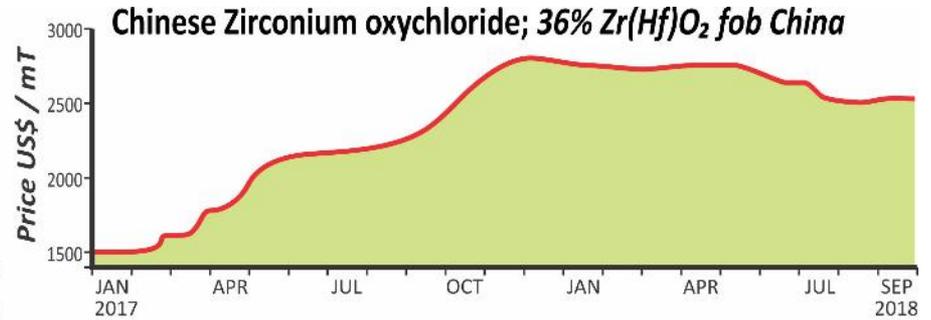
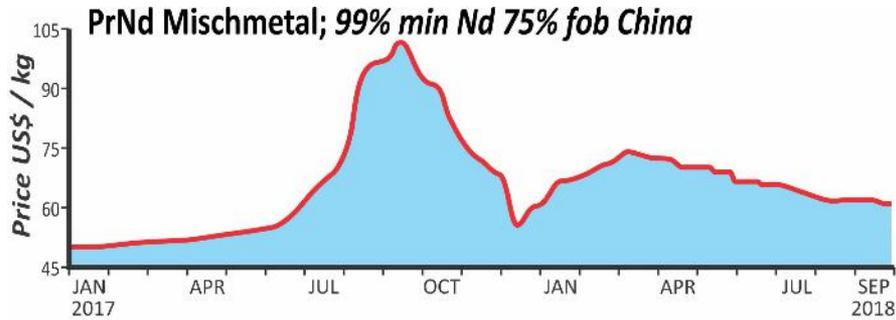
## Zirconium

- Ceramics
- Catalysts
- Chemicals
- Refractory
- Foundry
- Jet engines TBCs

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# Key Product Pricing - 2018



Source: Asian Metal

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# Why Invest in the Dubbo Project?

-  Proven Resource  ✓
-  Flow Sheet  ✓
-  Engineering  ✓
-  Permits  ✓
-  Land Tenure  ✓
-  Stable Mining Jurisdiction  ✓
-  Team  ✓
-  External Markets & Pricing  ✓

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# Next 12 Months

- **Tomingley**
  - Finish open cut
  - Commence underground
- **Dubbo Project**
  - Hafnium and zirconium product work
  - Secure financing
- **Regional Exploration**
  - TGO corridor results
  - Potential drilling at Bodangara
- **Investment**
  - Calidus DFS
  - Await Explaurum decision

# Disclaimer

This presentation contains certain forward looking statements and forecasts, including possible or assumed reserves and resources, production levels and rates, costs, prices, future performance or potential growth of Alkane Resources Ltd, industry growth or other trend projections. Such statements are not a guarantee of future performance and involve unknown risks and uncertainties, as well as other factors which are beyond the control of Alkane Resources Ltd. Actual results and developments may differ materially from those expressed or implied by these forward looking statements depending on a variety of factors. Nothing in this presentation should be construed as either an offer to sell or a solicitation of an offer to buy or sell securities.

This document has been prepared in accordance with the requirements of Australian securities laws, which may differ from the requirements of United States and other country securities laws. Unless otherwise indicated, all ore reserve and mineral resource estimates included or incorporated by reference in this document have been, and will be, prepared in accordance with the JORC classification system of the Australasian Institute of Mining, and Metallurgy and Australian Institute of Geosciences.

## **Competent Person**

Unless otherwise stated, the information in this presentation that relates to mineral exploration, mineral resources and ore reserves is based on information compiled by Mr D I Chalmers, FAusIMM, FAIG, (director of the Company) who 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 Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Ian Chalmers consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.

# Dubbo Project Resources & Reserves

## Dubbo Project – Mineral Resources

Resource Category	Tonnes (Mt)	ZrO <sub>2</sub> (%)	HfO <sub>2</sub> (%)	Nb <sub>2</sub> O <sub>5</sub> (%)	Ta <sub>2</sub> O <sub>5</sub> (%)	Y <sub>2</sub> O <sub>3</sub> (%)	TREO*
Measured	42.81	1.89	0.04	0.45	0.03	0.14	0.74
Inferred	32.37	1.90	0.04	0.44	0.03	0.14	0.74
<b>Total</b>	<b>75.18</b>	<b>1.89</b>	<b>0.04</b>	<b>0.44</b>	<b>0.03</b>	<b>0.14</b>	<b>0.74</b>

\*TREO% is the sum of all rare earth oxides excluding ZrO<sub>2</sub>, HfO<sub>2</sub>, Nb<sub>2</sub>O<sub>5</sub>, Ta<sub>2</sub>O<sub>5</sub>, Y<sub>2</sub>O<sub>3</sub>,

## Dubbo Project – Ore Reserves

Reserve Category	Tonnes (Mt)	ZrO <sub>2</sub> (%)	HfO <sub>2</sub> (%)	Nb <sub>2</sub> O <sub>5</sub> (%)	Ta <sub>2</sub> O <sub>5</sub> (%)	Y <sub>2</sub> O <sub>3</sub> (%)	TREO*
Proved	18.90	1.85	0.04	0.440	0.029	0.136	0.735
Probable	0						
<b>Total</b>	<b>18.90</b>	<b>1.85</b>	<b>0.04</b>	<b>0.440</b>	<b>0.029</b>	<b>0.136</b>	<b>0.735</b>

\*TREO% is the sum of all rare earth oxides excluding ZrO<sub>2</sub>, HfO<sub>2</sub>, Nb<sub>2</sub>O<sub>5</sub>, Ta<sub>2</sub>O<sub>5</sub>, Y<sub>2</sub>O<sub>3</sub>,

**Note:** Full details including Competent Person statements in ASX announcement 19 September 2017 - the Company confirms that all material assumptions and technical parameters underpinning the estimated Mineral Resources and Ore Reserves, and production targets and the forecast financial information as disclosed continue to apply and have not materially changed

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# TGO Resources and Reserves

TOMINGLEY GOLD OPERATIONS MINERAL RESOURCES (as at 30 June 2018)									
DEPOSIT	MEASURED		INDICATED		INFERRED		TOTAL		Total Gold (Koz)
	Tonnage (Kt)	Grade (g/t Au)							
Open Pittable Resources (cut off 0.50g/t Au)									
Wyoming One	410	1.6	991	1.7	137	0.7	1,538	1.6	79
Wyoming Three	86	2.0	16	1.3	33	1.4	135	1.7	8
Caloma	895	1.6	1,016	1.2	824	1.2	2,735	1.3	116
Caloma Two	71	2.1	824	1.98	26	1.4	921	2.0	59
<b>Sub Total</b>	<b>1,462</b>	<b>1.6</b>	<b>2,847</b>	<b>1.73</b>	<b>1,020</b>	<b>1.3</b>	<b>5,329</b>	<b>1.5</b>	<b>262</b>
Underground Resources (cut off 2.50g/t Au)									
Wyoming One	0	0.0	866	4.0	110	3.2	976	3.9	122
Wyoming Three	10	3.6	6	3.1	4	3.1	20	3.4	2
Caloma	82	3.8	35	3.4	47	3.0	164	3.5	18
Caloma Two	-	0.0	218	3.6	76	3.2	294	3.5	33
<b>Sub Total</b>	<b>92</b>	<b>3.6</b>	<b>1,125</b>	<b>3.9</b>	<b>237</b>	<b>3.2</b>	<b>1,454</b>	<b>3.7</b>	<b>175</b>
<b>TOTAL</b>	<b>1,554</b>	<b>1.8</b>	<b>3,972</b>	<b>1.9</b>	<b>1,257</b>	<b>1.7</b>	<b>6,783</b>	<b>1.8</b>	<b>437</b>

TOMINGLEY GOLD PROJECT MINERAL RESERVES (as at 30 June 2018)							
DEPOSIT	PROVED		PROBABLE		TOTAL		Total Gold (Koz)
	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	
Open Pittable Reserves (cut off 0.50g/t Au)							
Wyoming One	193	1.7	4	2.3	197	1.7	11
Wyoming Three	0	0.0	0	0.0	0	0.0	0
Caloma	0	0.0	0	0.0	0	0.0	0
Caloma Two	18	1.8	2	1.5	20	1.8	2
Stockpiles	1,257	1.0	0	0	1,257	1.0	39
<b>Sub Total</b>	<b>211</b>	<b>1.6</b>	<b>6</b>	<b>1.7</b>	<b>1,474</b>	<b>1.5</b>	<b>52</b>
Underground Reserves (cut off 2.50g/t Au)							
TGO underground	45	2.7	688	3.2	732	3.1	74
<b>Sub Total</b>	<b>45</b>	<b>2.7</b>	<b>688</b>	<b>3.2</b>	<b>732</b>	<b>3.1</b>	<b>74</b>
<b>TOTAL</b>	<b>256</b>	<b>1.8</b>	<b>694</b>	<b>1.9</b>	<b>2,206</b>	<b>1.8</b>	<b>126</b>

Note: Full details including Competent Person Statements in ASX announcements 4, 11 June and 8 October 2018 - the Company confirms that all material assumptions and technical parameters underpinning the estimated Mineral Resources and Ore Reserves, and production targets and the forecast financial information as disclosed continue to apply and have not materially changed

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# Peak Hill (PHGM) Resources

## Proprietary Mineral Resource

Project	Resource Category	Cut-Off	Tonnes (Mt)	Gold Grade g/t	Gold Metal (Koz)	Copper Metal (%)
Proprietary Underground	Inferred	2g/t Au	1.02	3.29	108	0.15
<b>Total</b>			<b>1.02</b>	<b>3.29</b>	<b>108</b>	<b>0.15</b>

Note: Full details including Competent Person Statements in ASX announcement 18 October 2018 - the Company confirms that all material assumptions and technical parameters underpinning the estimated Mineral Resources and Ore Reserves, and production targets and the forecast financial information as disclosed continue to apply and have not materially changed

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