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Enhance.  
Deliver.

# Sydney Mining Club

Nic Earner, Managing Director

6 February 2020

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RESOURCES LTD



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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 countries' 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.



# Corporate profile



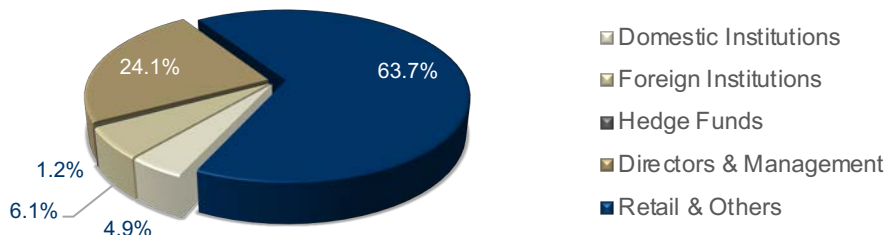
## Capital Structure

Ordinary shares	580 million
Share Price (4 February 2020)	A\$0.82
Market capitalisation	A\$467M
12 Month low/high	A\$0.18/\$0.86
Cash and gold bullion (Dec-19)	A\$78.4M
Listed investments (market value Dec-19)	A\$13.2M
Debt	Nil
Enterprise value	A\$369M
Average daily turnover	\$1.45M/day

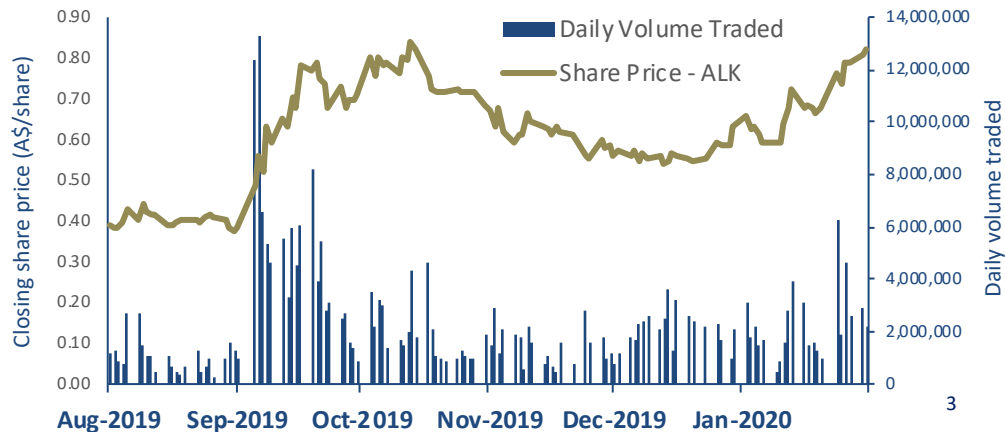
## The board

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

## Shareholder ownership (At 31 Dec 2019)



## Share price and volume (6 months)

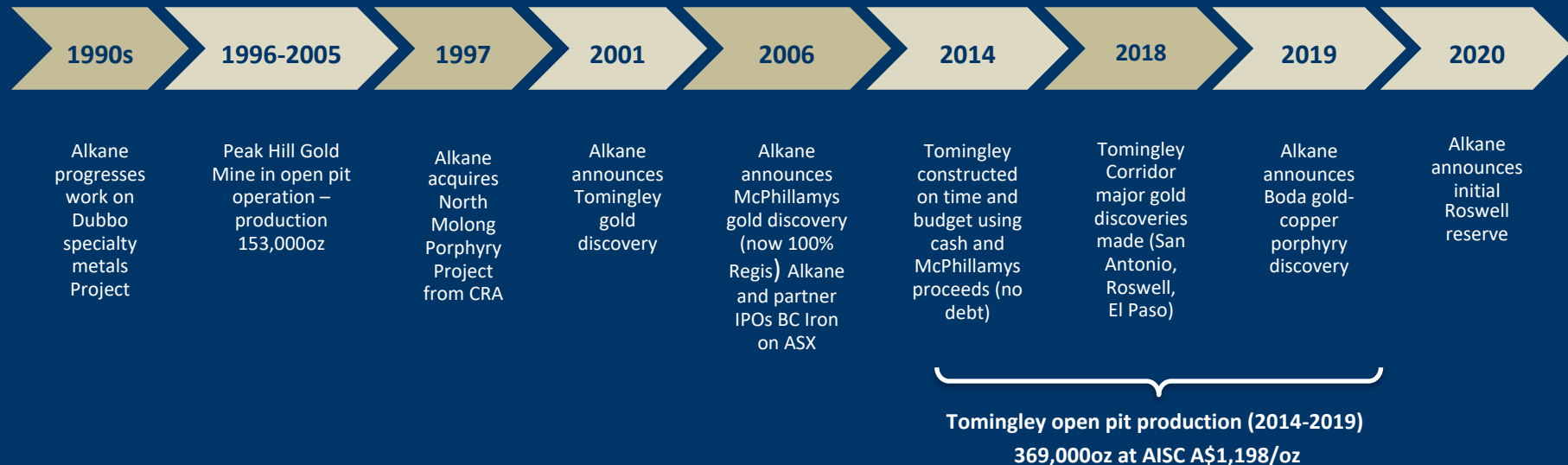




# Corporate history – 50 years of Find. Enhance. Deliver.

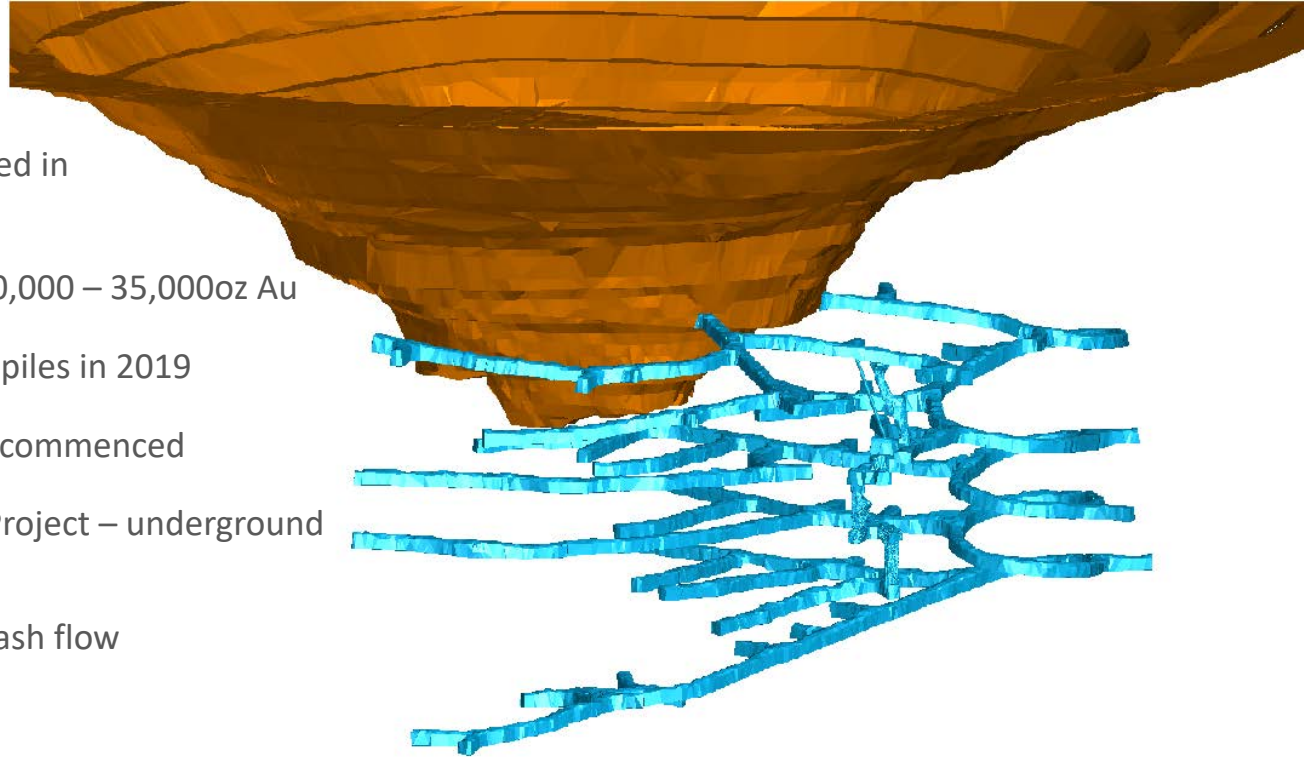


## Timeline of Key Milestones (incorporated 1969)





- 1.0 mtpa plant (achieved run rate of 1.4mtpa on oxide ore)
- 12 month construction completed in 2014 on time and budget
- Production guidance for FY20 30,000 – 35,000oz Au
- Treated existing low grade stockpiles in 2019
- Underground mining of ore has commenced
- Exploration has revitalised the Project – underground and Tomingley Corridor
- Potential for strong near term cash flow

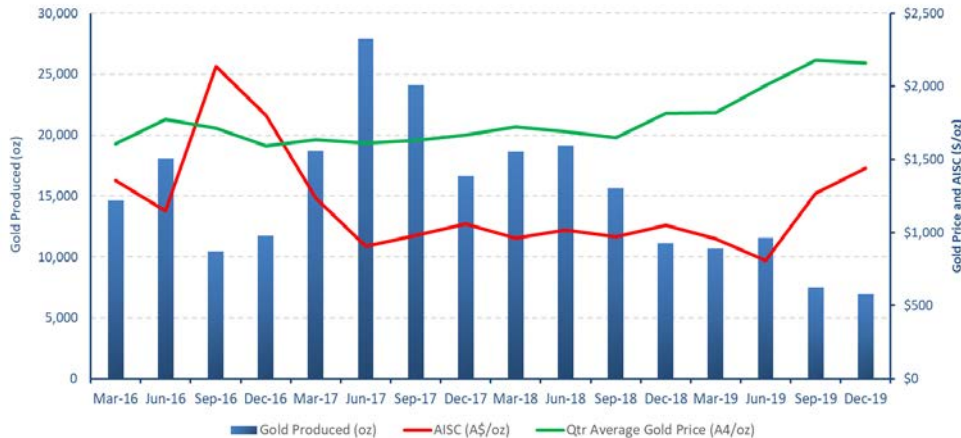




## Producer in a strong position



### Alkane Resources – Quarterly Gold Produced and AISC



**369,000 ounces produced**  
**average AISC A\$1,198/oz**  
**(Feb 2014 to December 2019)**

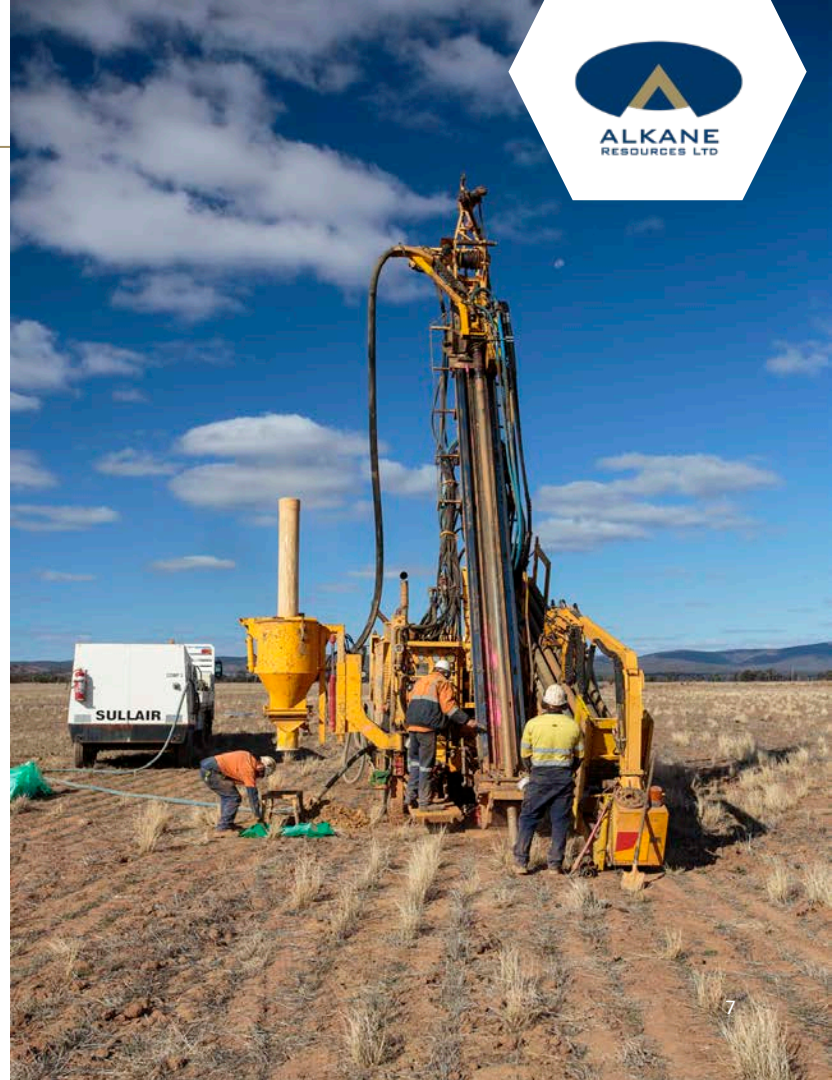
**Cash, bullion and investment**  
**A\$91.7m**

FY19 - produced ~49,000 oz

FY20 - production guidance - 30,000-35,000 oz @ AISC A\$1,250-\$1,400



**Exploration +  
Development +  
Production +  
Investment  
= Growth**







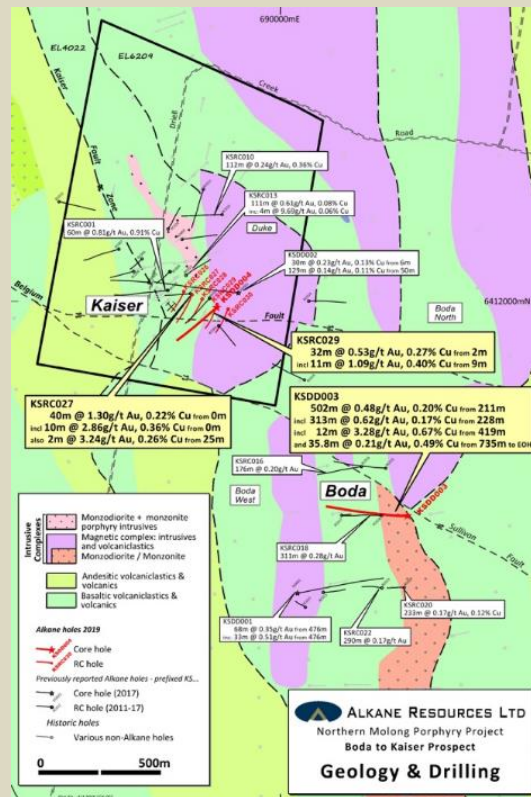
- Alkane has an extensive tenement package in NSW and continues to seek new tenements
- Our gold exploration focuses on three broad target types
  - Orogenic gold systems such as Tomingley
  - Volcanogenic Massive Sulphide (VMS) - gold systems such as McPhillamys and
  - Epithermal porphyry gold-copper systems such as Boda



## “A game changing discovery”

- Significant Gold-Copper Porphyry mineralisation at Boda and Kaiser prospects
- Boda target identified by geophysics followed by RC drilling (KSRC018 311m @0.28g from surface)
- Recent diamond hole demonstrates increasing grade at depth\*
- Alkane acquired original tenements from CRA (now RioTinto) in 1997
- Actively working this tenement package and including targets to the north since the early 2000's.
- Numerous other intercepts within 2-3km strike length demonstrating extensive mineralised system
- Prospect potential akin to Cadia Valley (Newcrest)
- Regional targeting underway informed by Boda

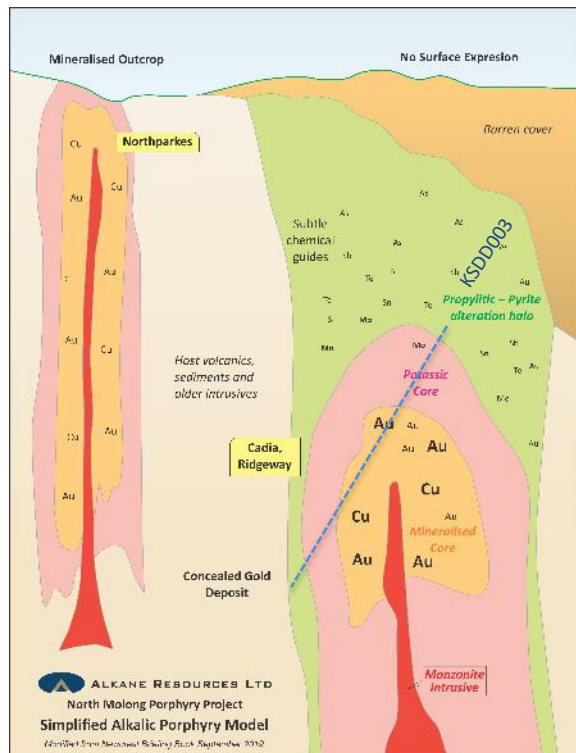
\*ASX Release: 9 September 2019



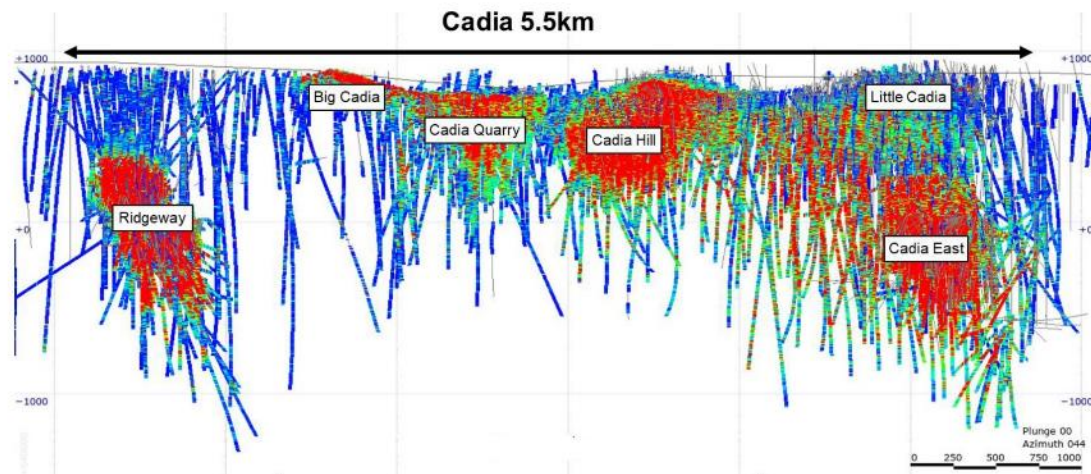


# NMPP – the ‘model’ and Cadia Valley

## Macquarie Arc Porphyry Model



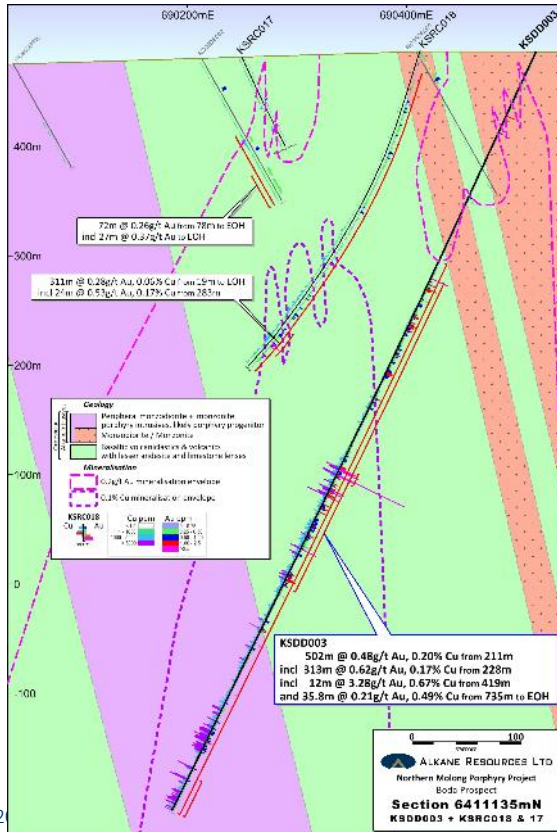
## Newcrest Mining's Cadia Valley Porphyry System



Modified from Newcrest Briefing Book September 2019

Lachlan Orogen in the Central West of NSW hosts a number of world class porphyry - epithermal gold-copper orebodies





- Significant Gold – Copper Porphyry mineralization at Boda and Kaiser prospects

- Recent Boda diamond hole\*:

KSDD003 507m @ 0.48g/t Au, 0.20% Cu from 211m

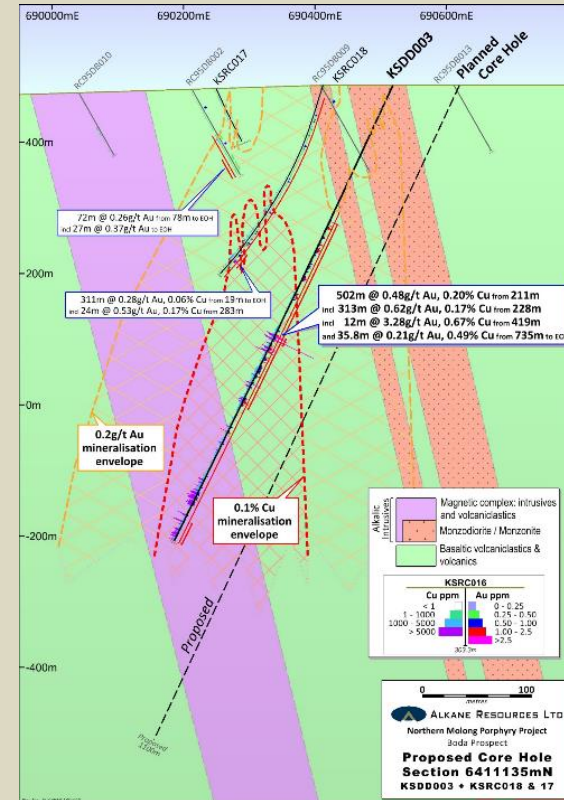
- incl 313m @ 0.62g/t Au, 0.17% Cu from 228m
- incl 100m @ 1.06g/t Au, 0.41% Cu from 408m
- incl 12m @ 3.28g/t Au, 0.67% Cu from 419m
- and 35.8m @ 0.21g/t Au, 0.49% Cu from 735m to EOH
- Numerous other intercepts within 2-3km strike length

\*ASX release 9 September 2019



# Current Boda drilling

- Series of 5 step out holes at ~100m spacing strike and also targeting underneath the discovery hole KSDD003 (which finished in mineralisation) currently underway
- Updated IP survey underway over ~5km prospective corridor
- Results will be released on a hole-by-hole basis
- Currently awaiting assays from first hole to receive and release within 2 weeks
- Expect to release further holes every 3-4 weeks thereafter.

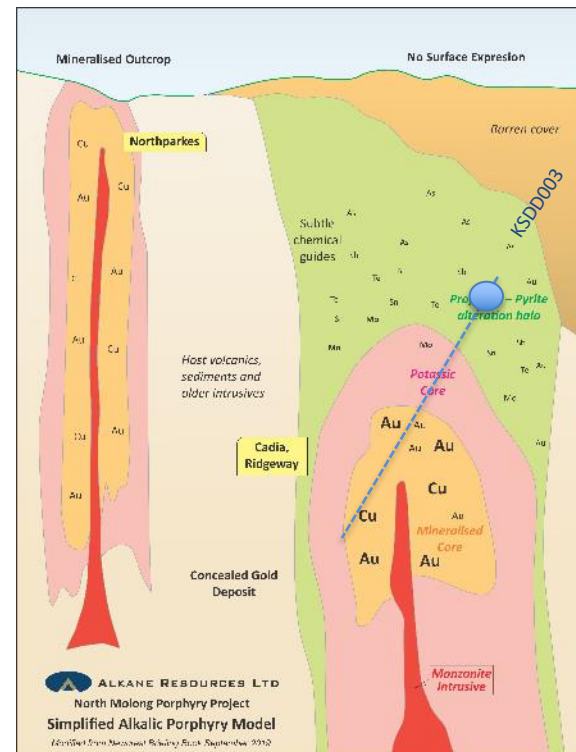




## NMPP – Boda core

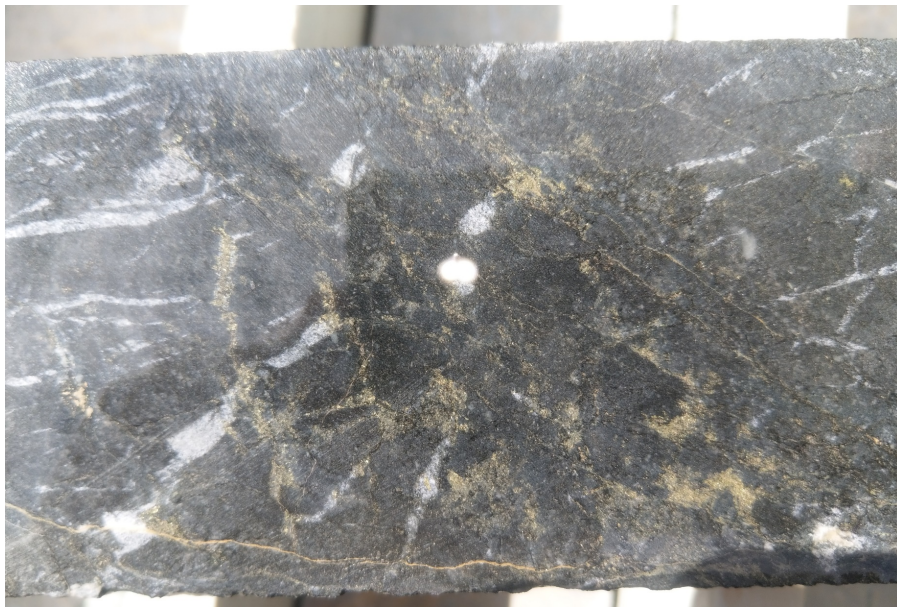


Outer propylitic alteration – disseminated pyrite zone  
Hosts +0.1 – 0.5g/t gold



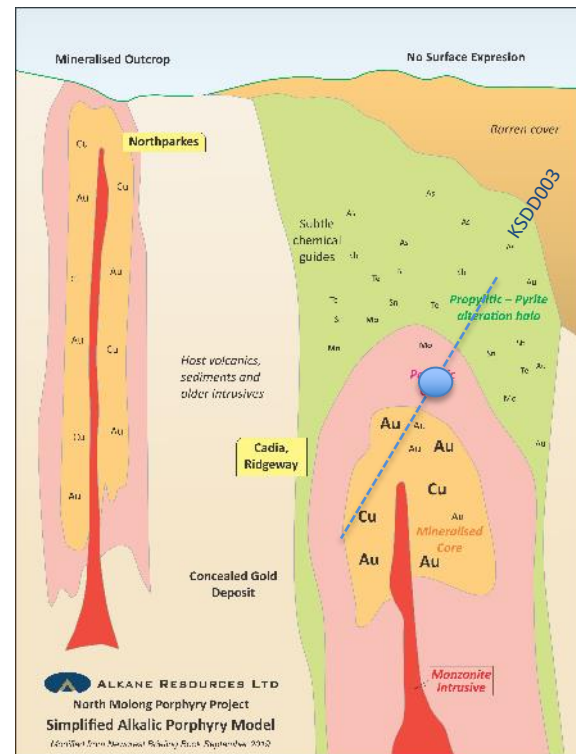


## NMPP – Boda core



Inner potassic alteration (biotite/kspar) – stringer chalcopyrite  
– (pyrite) zone

Gold 0.3 – +1.0g/t Copper 0.1 – 0.5%

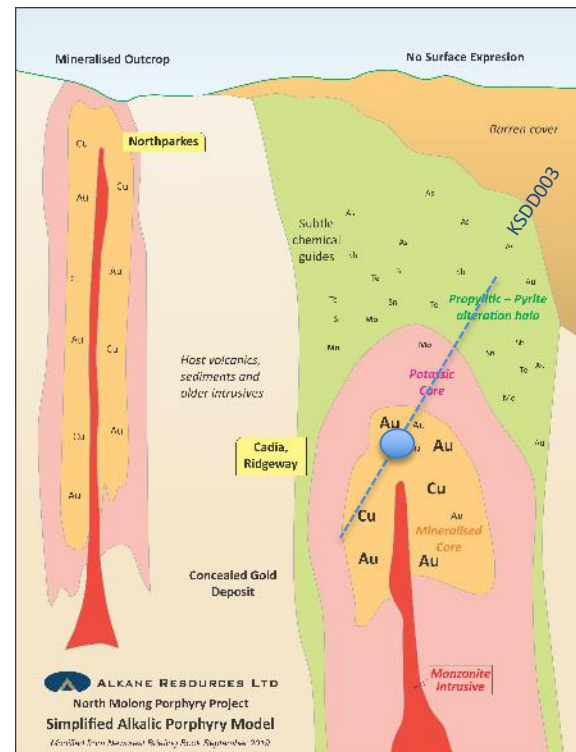




## NMPP – Boda core



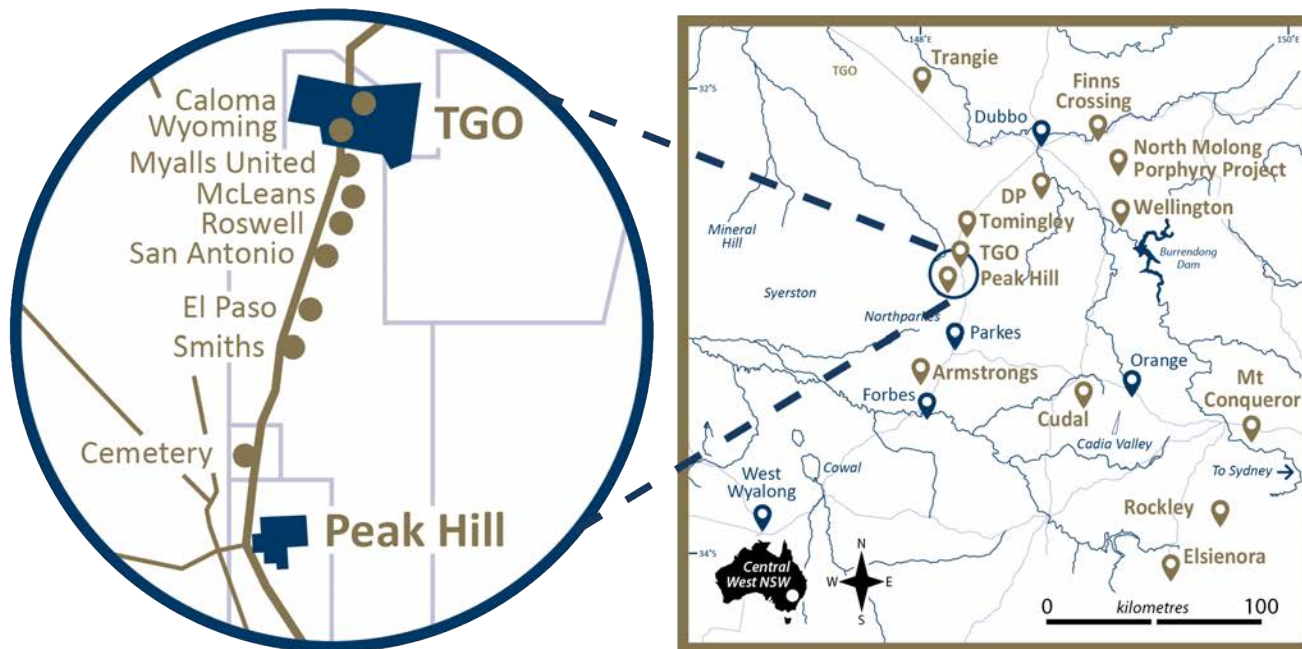
Veined and strong inner potassic alteration (biotite/ksp) –  
disseminated and blebby bornite - chalcopyrite zone  
Gold +0.5g/t    Copper +0.2%





# Tomingley Corridor: Central West NSW

~10km mineralisation adjacent  
to established processing infrastructure





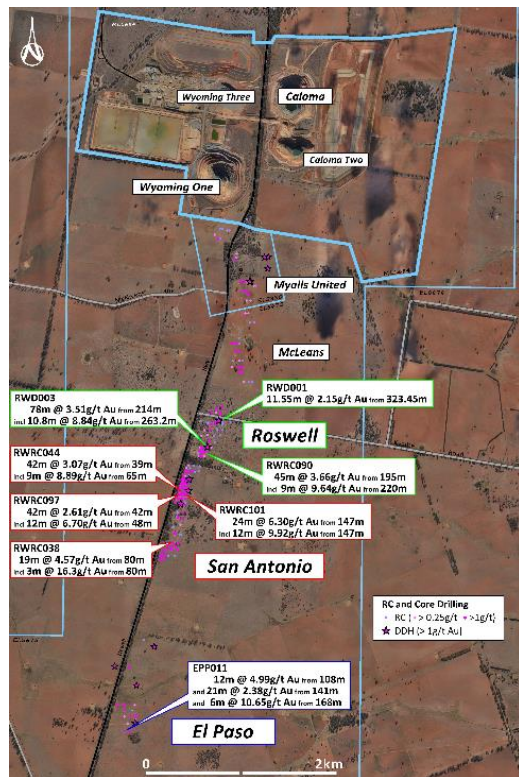
# Tomingley Gold Operations



1 Mt/year processing



# Tomingley Corridor: Exploration



- Three major target areas within 8km of mill; Roswell, San Antonio and El Paso
- Infill drilling at 40m spacing of Roswell, San Antonio largely progressed
- Exploration Target (San Antonio, El Paso) of ~12.5 – 17.6 million tonnes (open pit and underground) at a grade ranging between 1.7-2.2 g/t Au\*
- Maiden Resource (Roswell) – 7.02Mt @ 1.97g/t Au (455,000 oz)<sup>#</sup>
  - Cf 2009 Tomingley Mineral Resource – 11.2Mt @ 1.8g/t Au
- Extent of mineralisation in San Antonio, Roswell alone covers significantly larger area than original Tomingley discoveries

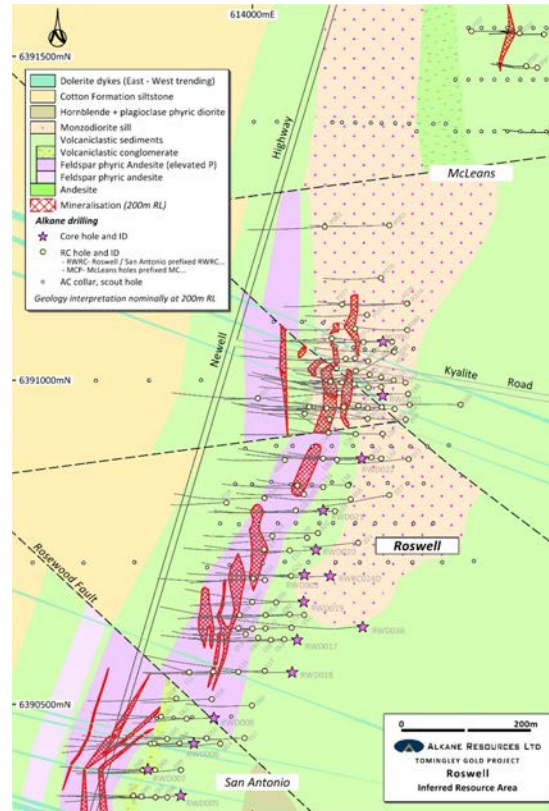
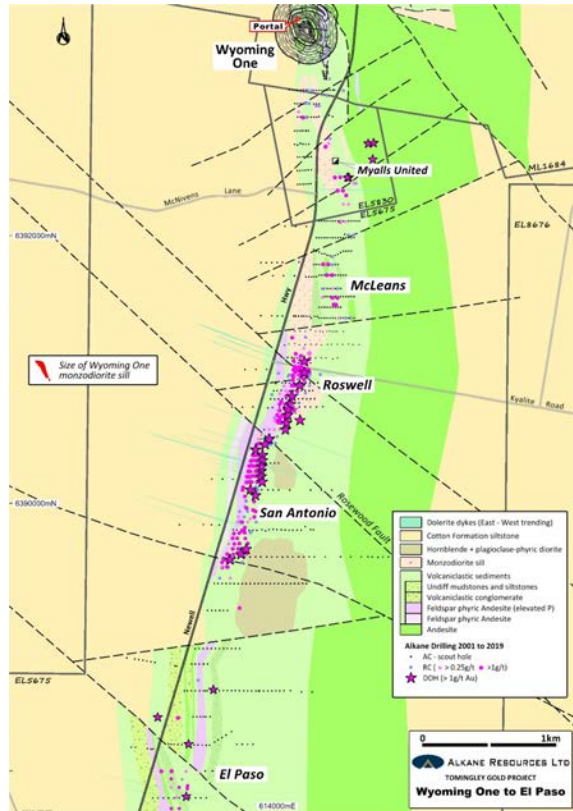
\*ASX: release 9 July 2019

<sup>#</sup>ASX Release: 28 January 2020

*\*The potential quantity and grade of the Exploration Target is conceptual in nature and therefore is 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. The Exploration Target has been prepared and reported in accordance with the 2012 edition of the JORC Code.*



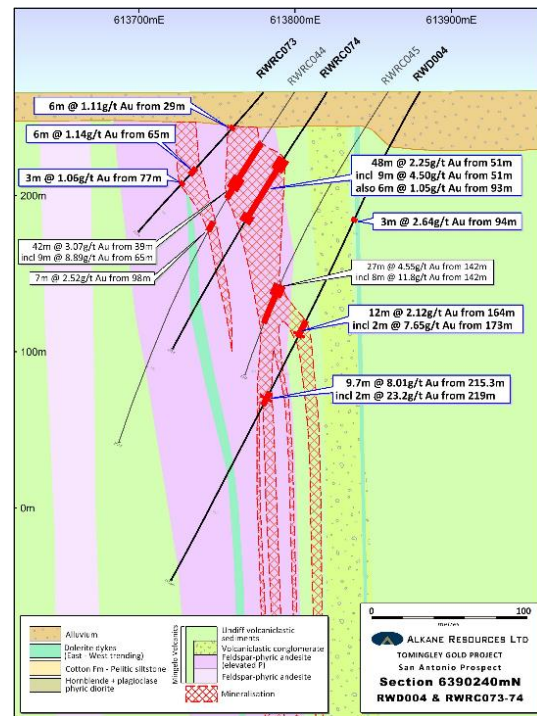
# Tomingley Corridor: Plans



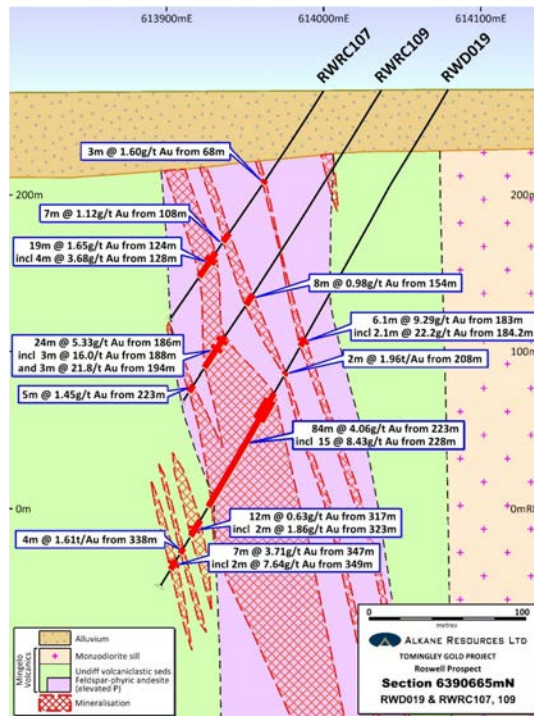


# Tomingley Corridor: Cross sections

## San Antonio

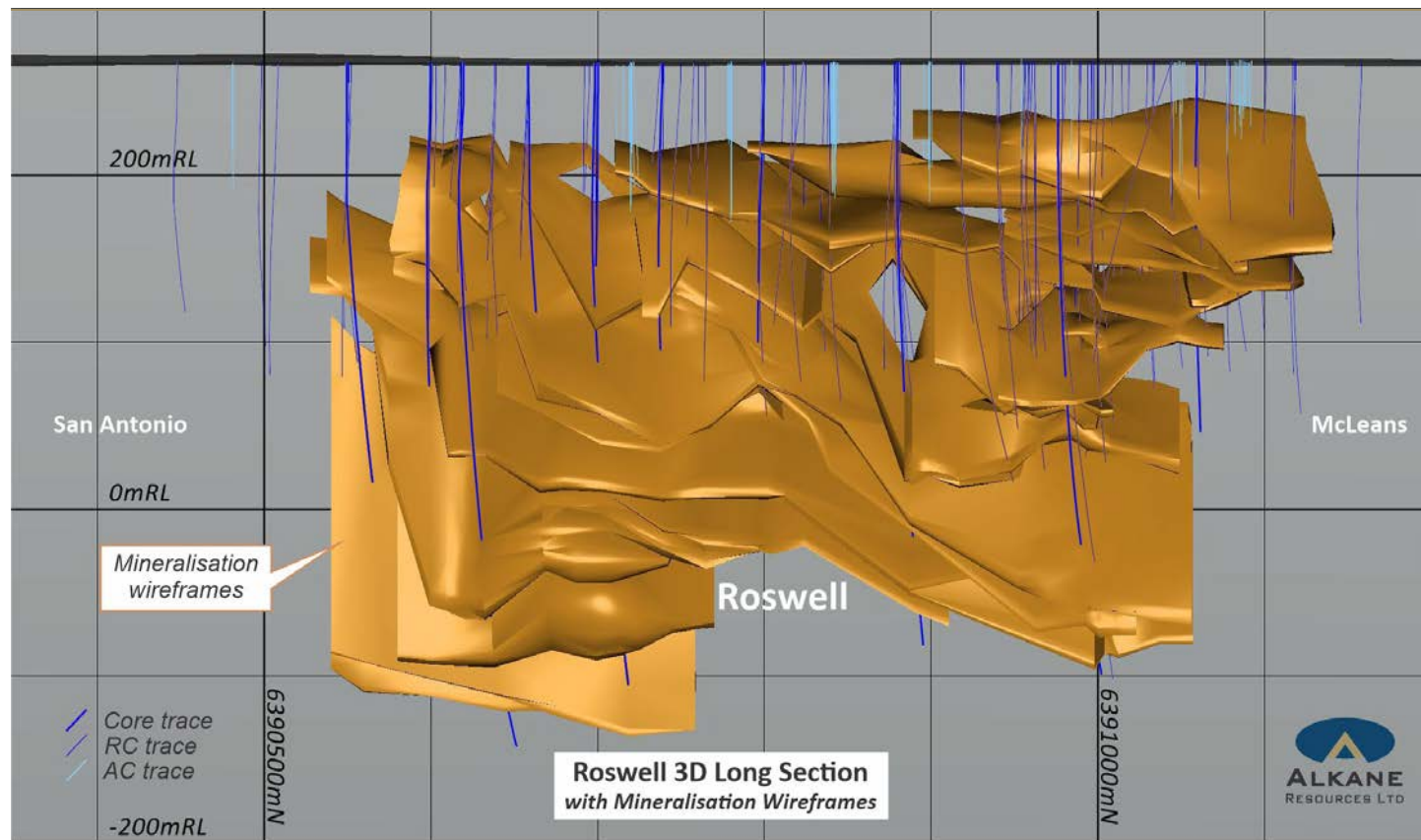


## Roswell





# Roswell 3D long section







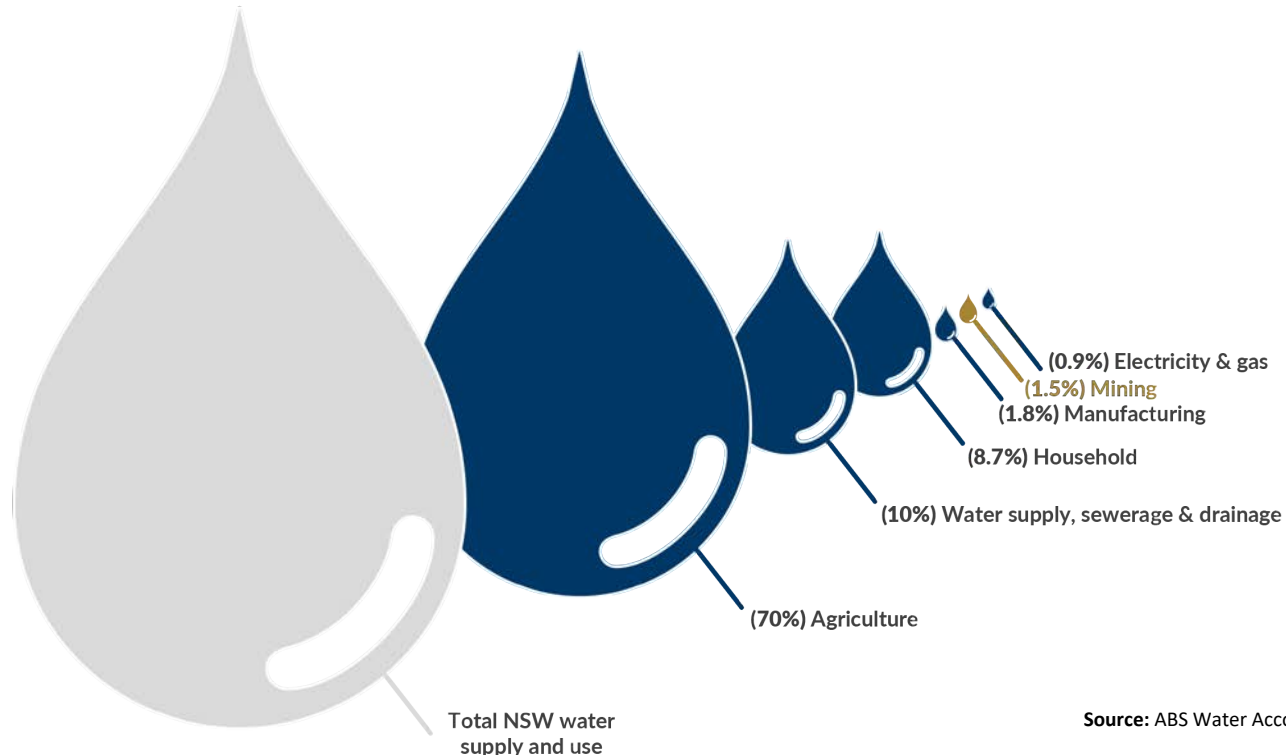


# Mining in NSW





The mining industry is a relatively small user of water, using just 1.5% of total water consumed in NSW in 2016-17, compared with 70% used by agriculture and 8.7% by households.





## Dubbo Project

- Critical minerals resource
  - Rare earths, zirconium, hafnium and niobium
  - Used in clean energy, electric vehicles and most modern technology
- Defined resource supports 70+ year open pit operation
- 400km northwest of Sydney
- Extensive piloting at ANSTO since 2008
- Full FEED with Hatch and further updates
- All major State and Federal approvals in place
- Land and resource wholly owned



## Korean Metals Plant

- RMR tech pilot plant under construction
- Seeking to confirm low cost, low emission process
- 2020 feasibility on integrated separation & metallisation plant



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

### 20 year Base case (1 Mtpa)

- 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

### Modular 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*



## Key work plan & milestones – Next 6 months

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- Results of step-out drilling at Boda (Q1/Q2 2020)
- Inferred Resource for San Antonio in Tomingley Corridor (March 2020)
- Acquisition of key land for Tomingley Corridor (some under option)
- Approvals and Commencement of Tomingley Corridor Exploration Drive
- Update on ASM Demerger decision (Q1 2020)



Grow shareholder value by increasing production at Tomingley, pursuing organic growth through exploration and development, and strategic acquisition.

Unlock the value of Australian Strategic Materials (ASM), including a potential demerger and listing in H1 2020.

Corporate strength	Existing production	Landmark discovery at Boda	Growth options
<ul style="list-style-type: none"><li>• \$91.7M in cash, bullion and listed investments as at 31 December 2019 (nil debt)</li><li>• Extensive senior management expertise in the full mining-cycle (exploration, approvals, construction, operation, rehab)</li><li>• Well-credentialled and experienced Board</li></ul>	<ul style="list-style-type: none"><li>• Tomingley mill partially utilised for the existing underground; upgraded FY20 guidance of 30,000oz-35,000oz</li><li>• Production growth through Tomingley Corridor (San Antonio, Roswell)</li><li>• Expediting development pathway; underground initially with open pit longer term</li><li>• Potential for strong near term cash flow</li></ul>	<ul style="list-style-type: none"><li>• Extensive porphyry mineralisation encountered with similar characteristics to Newcrest's Cadia Project (110km south)</li><li>• Strong indications of large system at Kaiser-Boda</li><li>• RC drilling shows extensive low grade from surface, with increase in grade from ~200m</li><li>• 502m at 0.48g/t Au and 0.2% Cu; higher than Cadia East reserve grade</li><li>• Drill program will test scale and depth extension; 5 step-out diamond holes &amp; IP</li></ul>	<ul style="list-style-type: none"><li>• Extensive tenement holding in NSW with strong exploration potential</li><li>• 15% of Genesis Minerals (ASX: GMD)</li><li>• 13% of Calidus Resources (ASX: CAI)</li><li>• 100% of Australian Strategic Materials, including Dubbo Project, with imminent demerger under consideration</li></ul>



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