

20 May 2020



Goldman Sachs Webinar Series

Alkane Resources Limited (ALK) (Alkane or the Company) advises that Australian Strategic Materials Limited Managing Director, Mr David Woodall, will be presenting at the Goldman Sachs Webinar Series on Wednesday, 20 May 2020.

The presentation is attached and is also available on the Company's website: www.alkane.com.au

This document has been authorised for release to the market by Nic Earner, Managing Director.

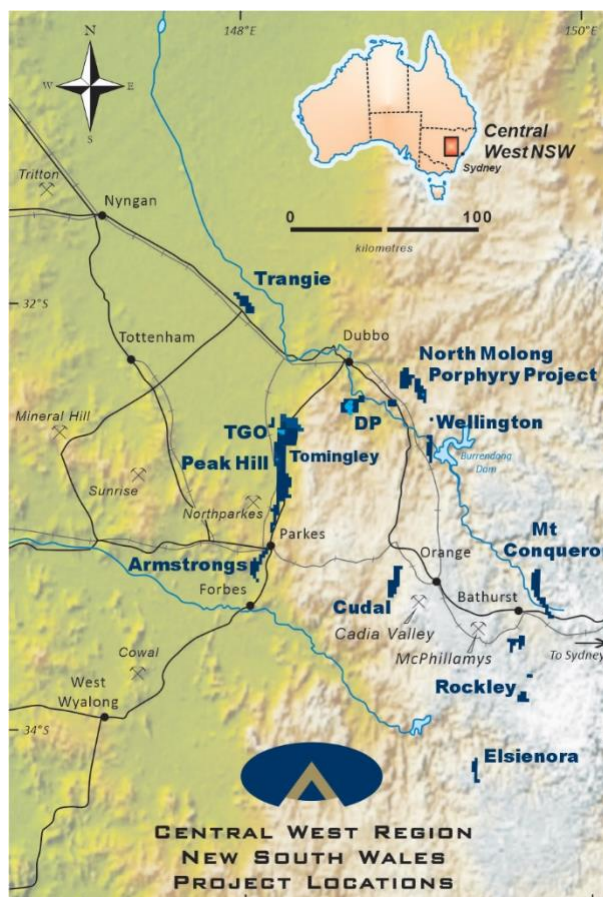
ABOUT ALKANE - www.alkane.com.au - **ASX: ALK and OTCQX: ANLKY**

Alkane is a gold production company with a multi-commodity exploration and development portfolio. Alkane's projects are predominantly in the Central West Region of NSW, but extend throughout Australia through investments in other gold exploration and mining companies.

Alkane's gold production is from the Tomingley Gold Operations (TGO) which has been operating since early 2014 and its most advanced gold exploration projects are in the 100% Alkane owned tenement area between TGO and Peak Hill and have the potential for sourcing additional ore for TGO.

Alkane has other 100% owned exploration tenements in the Central West NSW prospective for gold and copper. The recently announced significant porphyry gold-copper mineralisation intersected at Boda is an example of this potential.

Alkane's largest non-gold project is the Dubbo Project (DP), a large in-ground resource of zirconium, hafnium, niobium, yttrium and rare earth elements. As it is an advanced polymetallic project outside China, it is a potential strategic and independent supply of critical minerals for a range of sustainable technologies and future industries. The DP is development ready, subject to financing, with the mineral deposit and surrounding land acquired and all major State and Federal approvals in place



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Australian manufacture of critical materials for advanced technologies

David Woodall – Managing Director

20 May 2020

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. Mr Chalmers is a shareholder of Alkane Resources Limited and participates in the short and long term incentive plans.

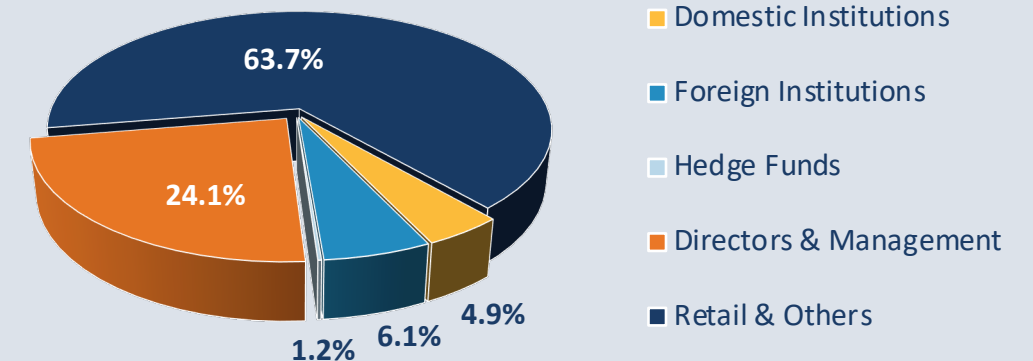
Corporate Profile

- Australian Strategic Materials Ltd (ASM) is an emerging producer of value add metals and oxides products
- Established in 2000, historically a wholly-owned subsidiary of ASX-listed Alkane Resources Ltd and holding company for the Dubbo Project
- ASM to be standalone listed entity in early July 2020 (subject to shareholder resolution)
- Cash of A\$20 million (1 April 2020) and no debt
- Focused Board and Management Team to unlock shareholder value through construction, partnering and commercialisation
- Project located 400km northwest of Sydney Land and resource wholly owned



Directors	
Ian Gandel	Chairman
David Woodall	Managing Director
Nicholas Earner	Non-Executive Director
Ian Chalmers	Non Executive Director
Gavin Smith	Non-Executive Director
Dennis Wilkins	Company Secretary

Shareholder Ownership (Pro-forma Demerger)
~ 119m ASM shares out

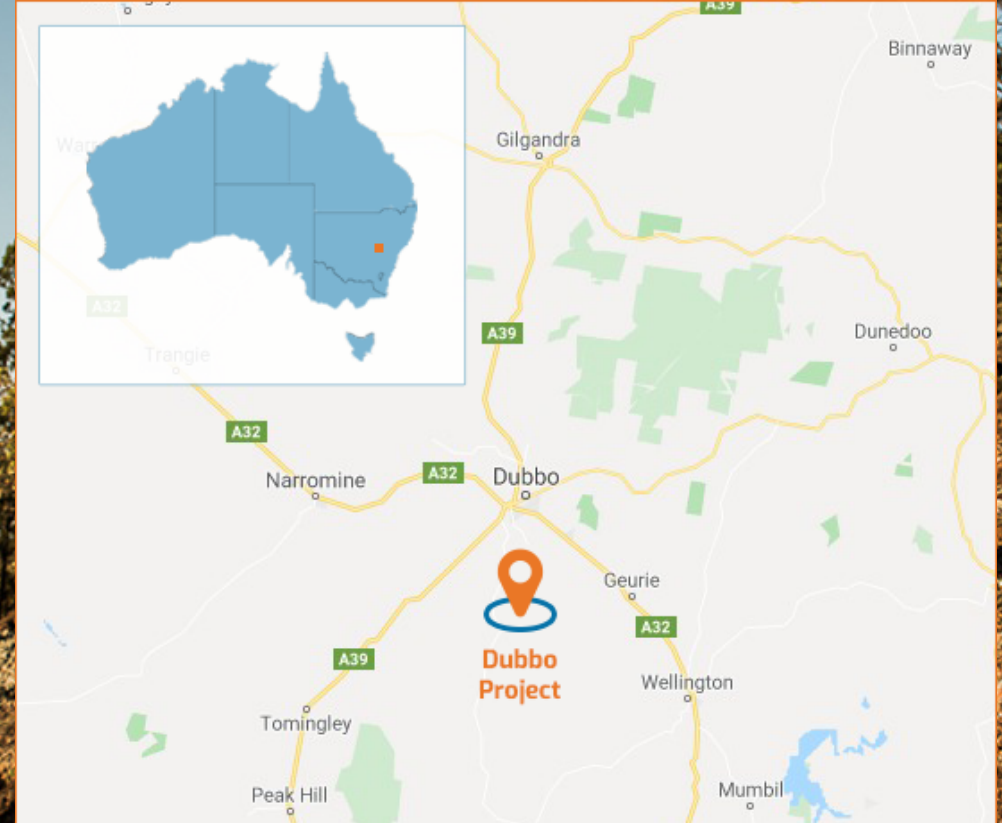


ASM Listing

- Shareholders to vote on ASM becoming separate company (de-merger from Alkane) in early July
- Eligible Shareholders will be entitled to receive one ASM Share for every five Alkane Shares
- Proposed ASX listing in mid July – no ongoing ownership by Alkane
- ASM Board and Management to bring focus and prioritise commercialisation of the Dubbo Project
- ASM to be demerged with a strong working capital position of A\$20 million and no debt
- Further detail on the demerger can be found on the recently launched website asm-au.com



Dubbo Project long life polymetallic project construction ready



**JORC (2012) Resource - 75.18 Mt @ 1.89%
ZrO₂, 0.04 % HfO₂, 0.44% Nb₂O₅, 0.9% TREO**

Critical minerals are:

- Noted as critical by all major manufacturing nations
- Essential to national economy + security
- Vulnerable to supply disruptions, e.g. COVID19
- Essential to new and green technologies

Zirconium, Rare Earth Elements, Niobium and Hafnium are critical for:

1. Clean energy and reduced emissions (e.g. EV's, renewables)
2. High-Tech Products (e.g. phones, tablets)
3. Health & Well-being Products (e.g. MRI, replacement joints)
4. Aerospace & Manufacturing (e.g. jet engines)



Lack of global supply diversity of critical minerals?



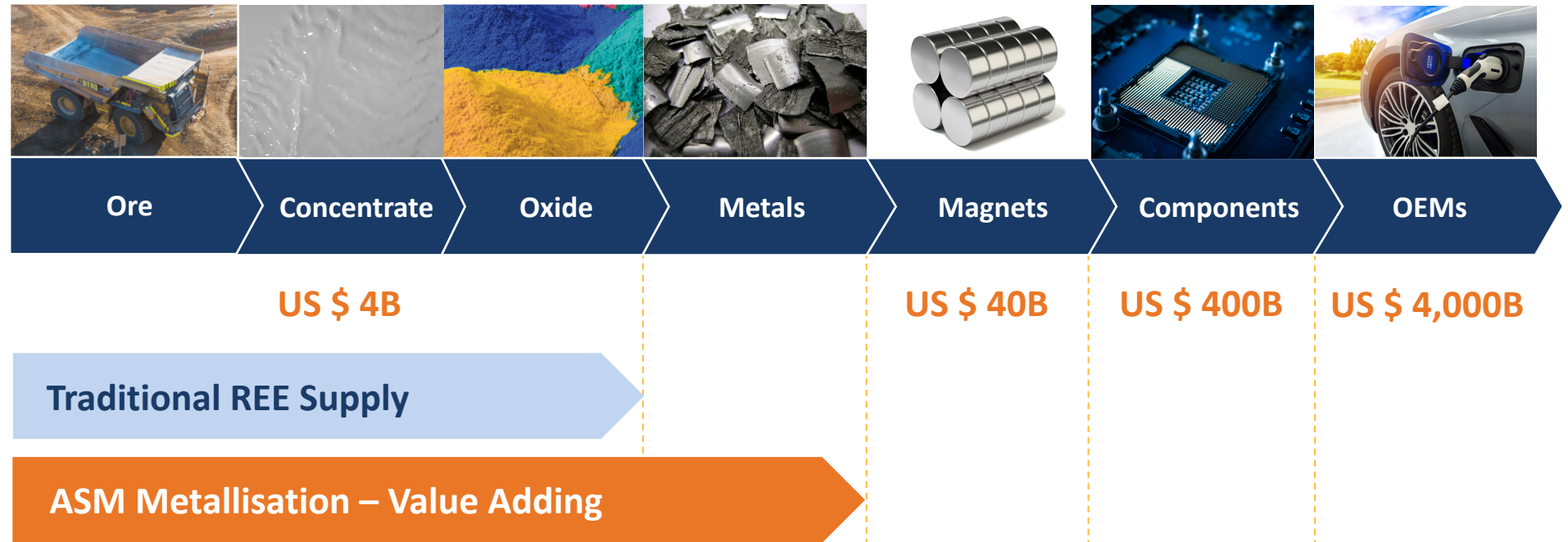
Majority of REE and Zr are used in China to manufacture high-tech products for domestic + global markets
= 'Made in China 2025' policy

Limited supply reaching Australia + other nations
Further choked by COVID-19

- ▶ increased threat to international economies and security
- ▶ **high demand for alternative sources**

ASM in the REE Integrated Supply Chain

REE Value Chain



- Mine to customer supply chain
- Delivery to customer specification
- Additional value added to all ASM products, inclusive of REE

This figure is adapted from a presentation made by Professor K. G. van den Boogaart at the SME Critical Minerals Conference in Denver in August 2014.

Australia's in-ground resource

Ore to high purity metal oxides

The Dubbo Project: 100% Australian



25km south of Dubbo, the Dubbo deposit is a **proven, large deposit** of Zr, REE, Nb and Hf minerals.



ASM spent **15 years in development with ANSTO** to optimise minerals recovery + processing.

Clean Metal Project

2019

Joint Venture with ZironTech, South Korea

- Combine our proprietary oxide separation process and ZironTech's efficient metallisation technology
- ASM has exclusive global commercialisation rights on the metallisation process

2020

ASM's unique metals technology pilot plant to commence production

- Prove that we can manufacture pure metals at commercial scale
- Build strategic customer relationships for offtake agreements

ASM – Dubbo Project 2020

Detailed Feasibility Study announced in June 2018

- Robust project economics at forecast prices
- Diversified Products – Zirconium, REE, Niobium and Hafnium
- Project Approved – Construction Ready

2020 Optimisation Program

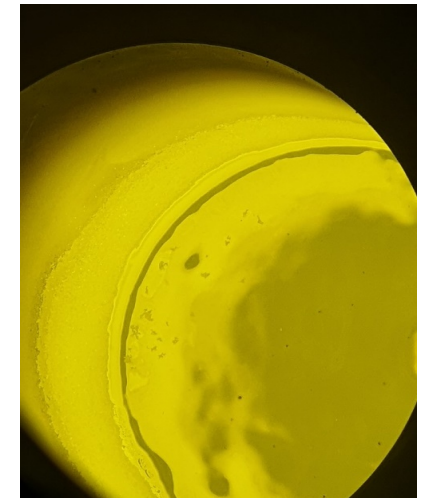
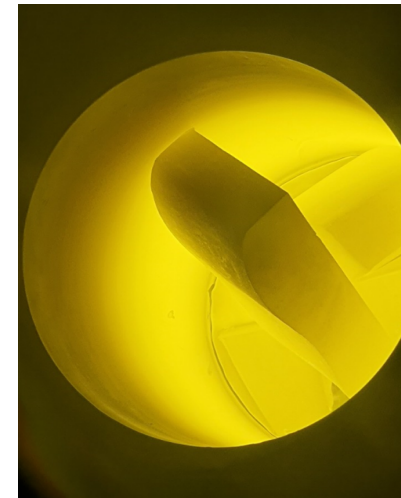
- Targeting step changes in financial returns by reducing capital requirements and increasing IRR and NPV
- Shift product revenue balance
- Process Optimisation:
 - Concentrate via flotation
 - Reduce leaching and solvent extraction capital
 - Maintain output for lower capex and opex
- Metallisation:
 - South Korean JV well established
 - Allows delivery to final customers
 - Offtake enabling

	2018 FEED Study *	2020 Study Goals
Capital Expenditure	AUD \$1,300 M	↓
NPV ₈ (pre-tax)	AUD \$1,240 M	↑
EBITDA pa	AUD \$320 M	↑
IRR (pre-tax)	17.5 %	↑
Products Produced:		
Zirconium Products	~16,000 t	Slight reduction
TREO	~6,000 t	Increase
NdPr	~1200 t	Increase
Ferro - Niobium	~ 2,000 t	Slight reduction
Hafnium	50 t	Unchanged

* As per ASX announcement of 4 June 2018. The Company confirms that all the material assumptions and technical parameters underpinning the forecast financial information derived from a production target, in the initial public report continue to apply and have not materially changed.

ASM – 2020 Milestones

Value Adding Strategies	Project Implementation	Milestone
Production of Critical Metals: <ul style="list-style-type: none"> • Joint Venture • Exclusive global licensing • All ASM products 	RMR Tech JV – with IP rights	✓
	Laboratory test program – Zr, Hf, and REE	✓
	Pilot Plant Construction	Q2 2020
	2t Zirconium Metal Production	Q3 2020
	REE Metallisation	Q3 2020
	Feasibility of Independent Metals Plant	Q3 2020
Process Plant <ul style="list-style-type: none"> • Optimisation program 	Laboratory scale testwork	✓
	Flotation test program	Q2 2020
	Solvent extraction pilot program	Q3 2020
	Optimised FEED Study	Q4 2020
Strategic Investor / Financing	Export Finance Australia	✓
	Heads of Agreement Metalation	Q3 2020
	Strategic Partner	Q4 2020
	Offtake Agreement	Q4 2020





Dave Woodall

ASM Managing Director

 asm-au.com  [ASM_au](https://twitter.com/ASM_au)

Dubbo Project Resources & Reserves

Dubbo Project – Mineral Resources

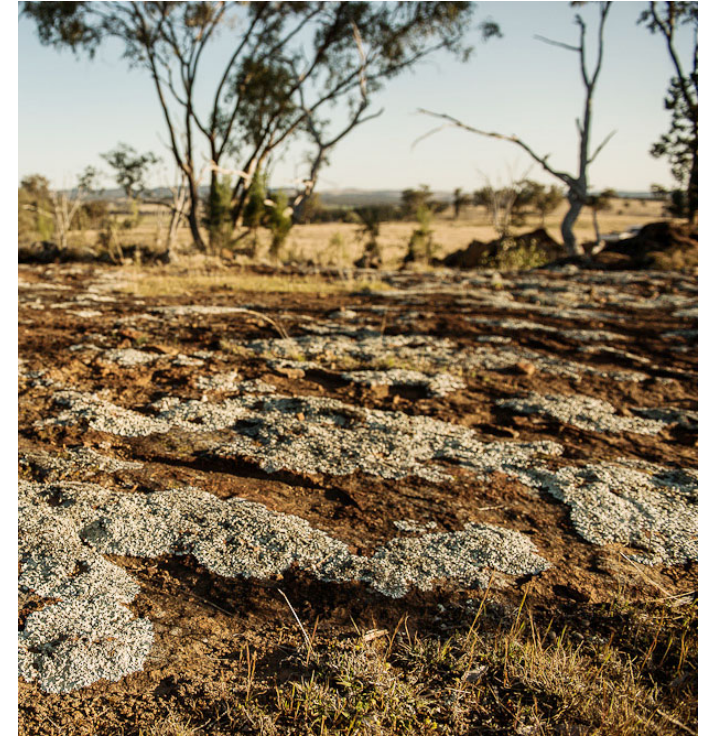
Resource Category	Tonnes (Mt)	ZrO ₂ (%)	HfO ₂ (%)	Nb ₂ O ₅ (%)	Ta ₂ O ₅ (%)	Y ₂ O ₃ (%)	TREO* (%)
Measured	42.81	1.89	0.04	0.45	0.03	0.14	0.74
Inferred	32.37	1.90	0.04	0.44	0.03	0.14	0.74
Total	75.18	1.89	0.04	0.44	0.03	0.14	0.74

*TREO% is the sum of all rare earth oxides excluding ZrO₂, HfO₂, Nb₂O₃, Ta₂O₅, Y₂O₃,

Dubbo Project – Ore Reserves

Reserve Category	Tonnes (Mt)	ZrO ₂ (%)	HfO ₂ (%)	Nb ₂ O ₅ (%)	Ta ₂ O ₅ (%)	Y ₂ O ₃ (%)	TREO* (%)
Proved	18.90	1.85	0.04	0.440	0.029	0.136	0.735
Total	18.90	1.85	0.04	0.440	0.029	0.136	0.735

*TREO% is the sum of all rare earth oxides excluding ZrO₂, HfO₂, Nb₂O₃, Ta₂O₅, Y₂O₃,



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