

ALKANE RESOURCES LTD

Corporate Presentation

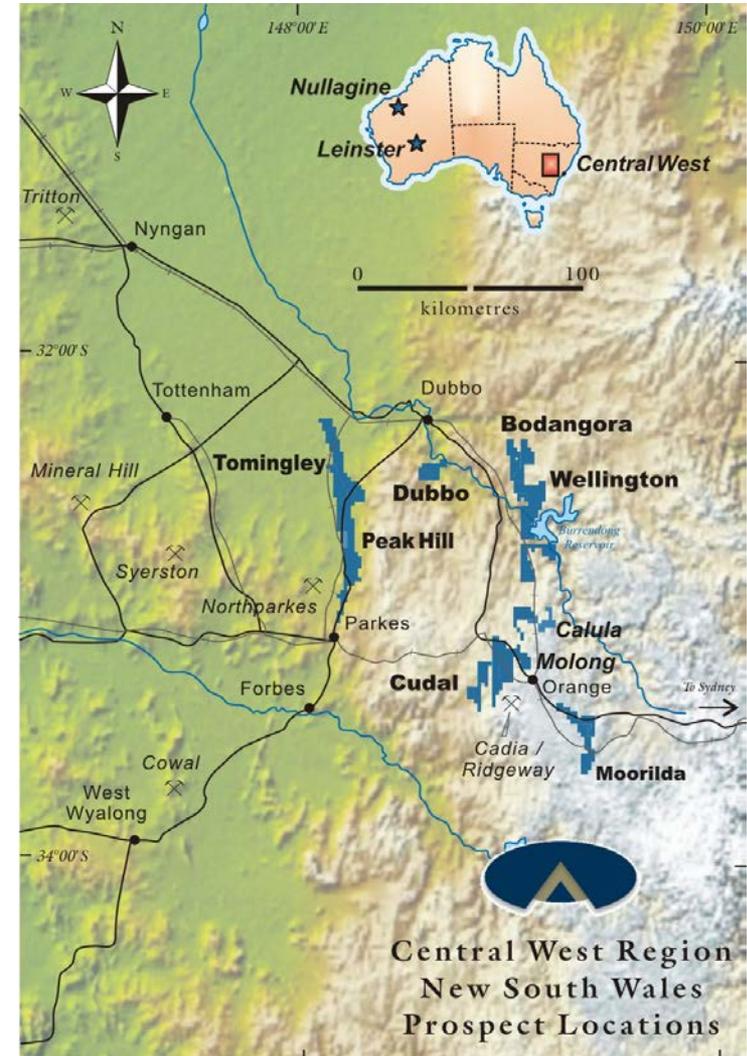
Transition to operations



MULTI-COMMODITY MINER EXPLORER
www.alkane.com.au

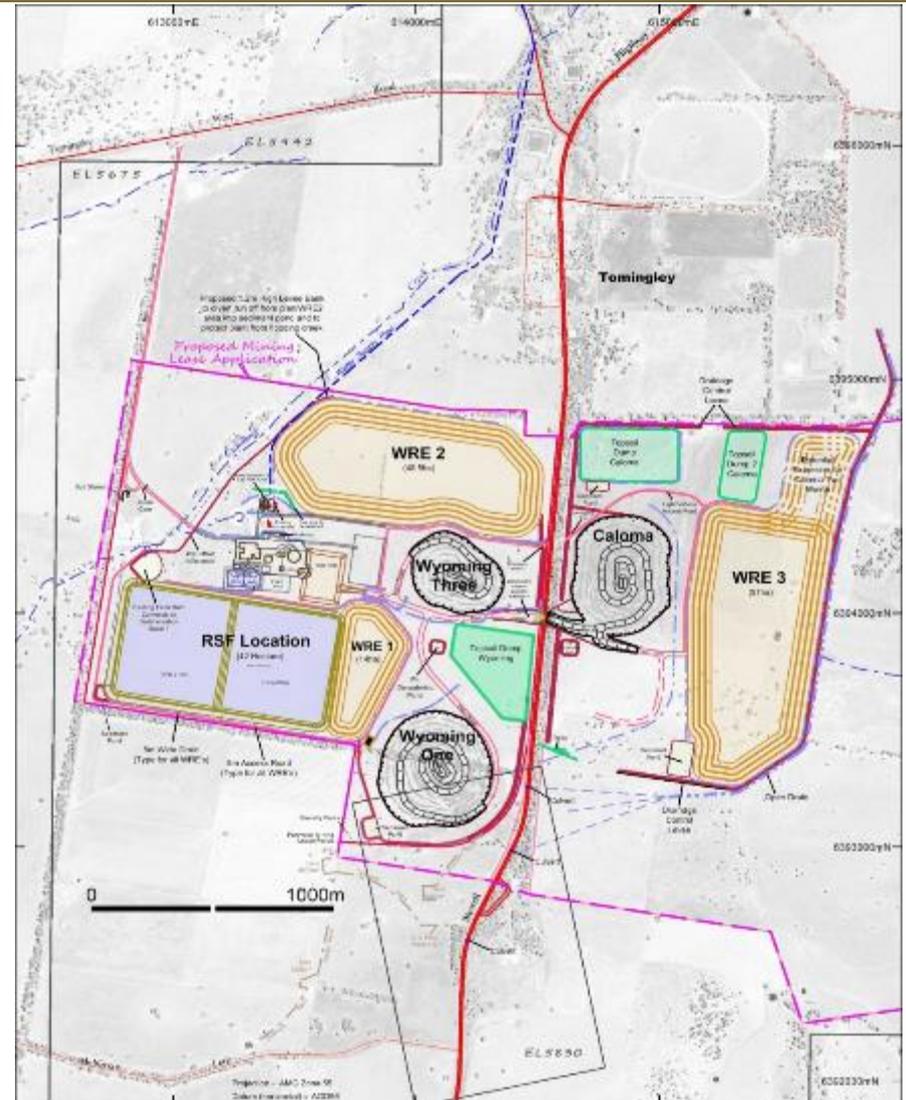
November 2013

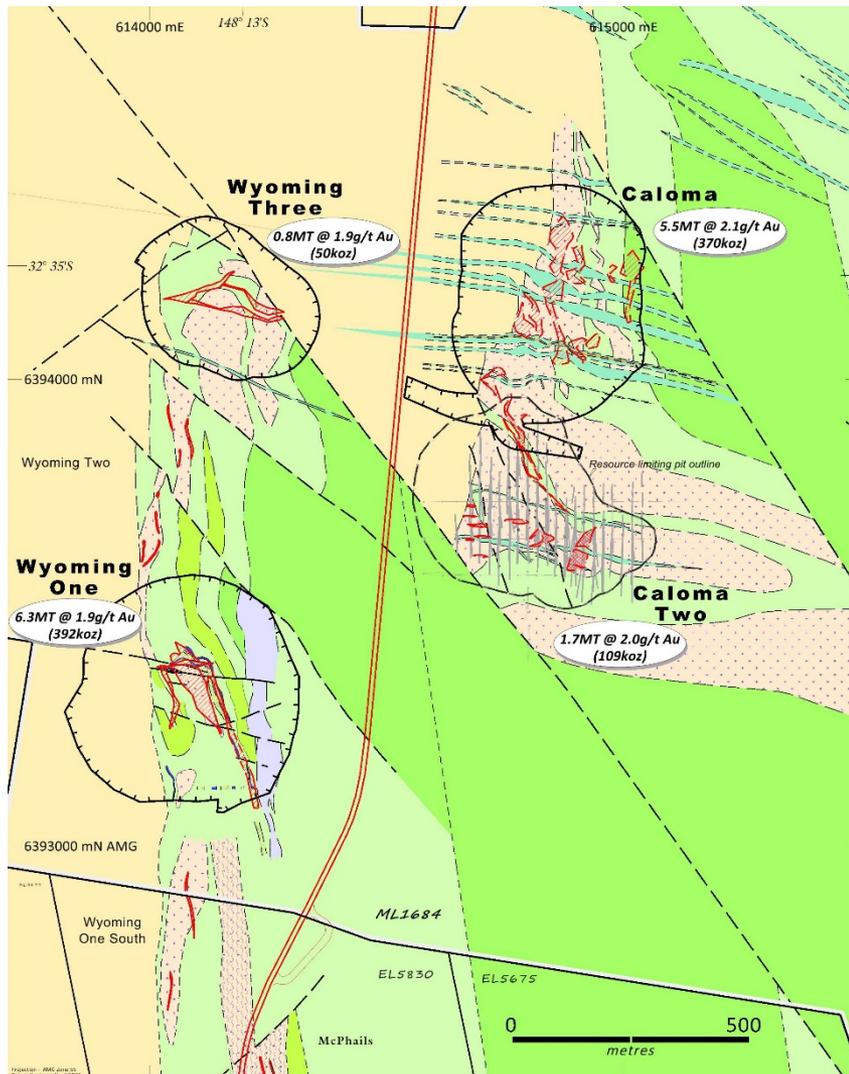
- Listed on ASX since 1969, also listed on OTCQX (US)
- Market cap ~\$135M
- ~6,300 shareholders
- Multi commodity explorer, miner and developer focused on Central West of NSW, Australia
- Active in region for more than 20 years
- Developed Peak Hill Gold Mine in 1996, operated to 2005 being the end of mine life
- Tomingley Gold Project (TGP) construction nearing completion, first gold production expected early 2014
- World-class Dubbo Zirconia Project (DZP) feasibility completed; environmental assessment and financing in progress
- Successful ongoing exploration program



Base case statistics

- Project approval by NSW Department of Planning and Infrastructure late July 2012
 - Mining Lease approved February 2013
 - Resource – 921,000oz of gold
 - Construction CAPEX – A\$107M
 - Mine Method – open cut & underground
 - Mine Life – 7.5years (targeting 10+ years)
 - Processing plant throughput – 1.0Mtpa
 - 2.00g/t Au and 93% recovery standard CIL
 - Gold Production – ~400,000oz over base case life
 - Cash operating costs (C3) estimated and averaged over base case life – ~A\$1,000/oz
 - EBITDA – estimated \$140M (spot A\$1,350/oz)
 - Base case does not include Caloma Two
- Commissioning anticipated early 2014

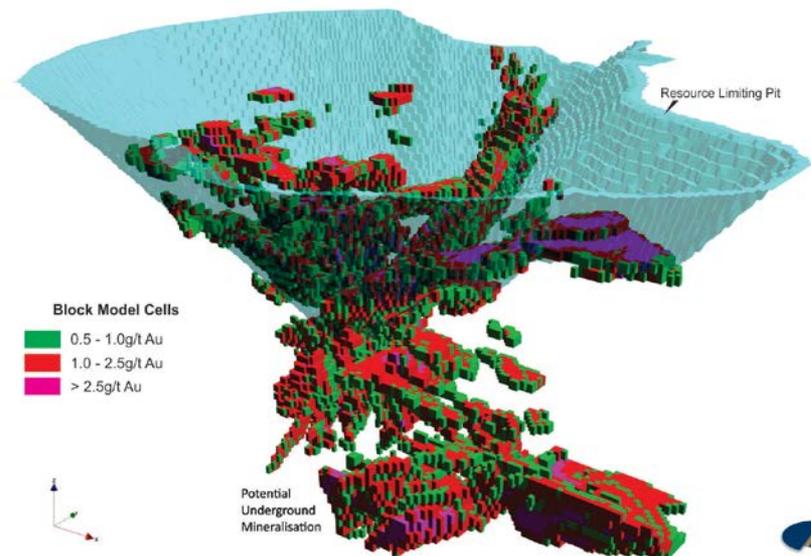




Additional Resource Potential

Caloma Two open pit and underground
Expand Wyoming One underground
Caloma underground
Myalls underground
Wyoming Two and Three underground
McLeans

Caloma Two – Geological model



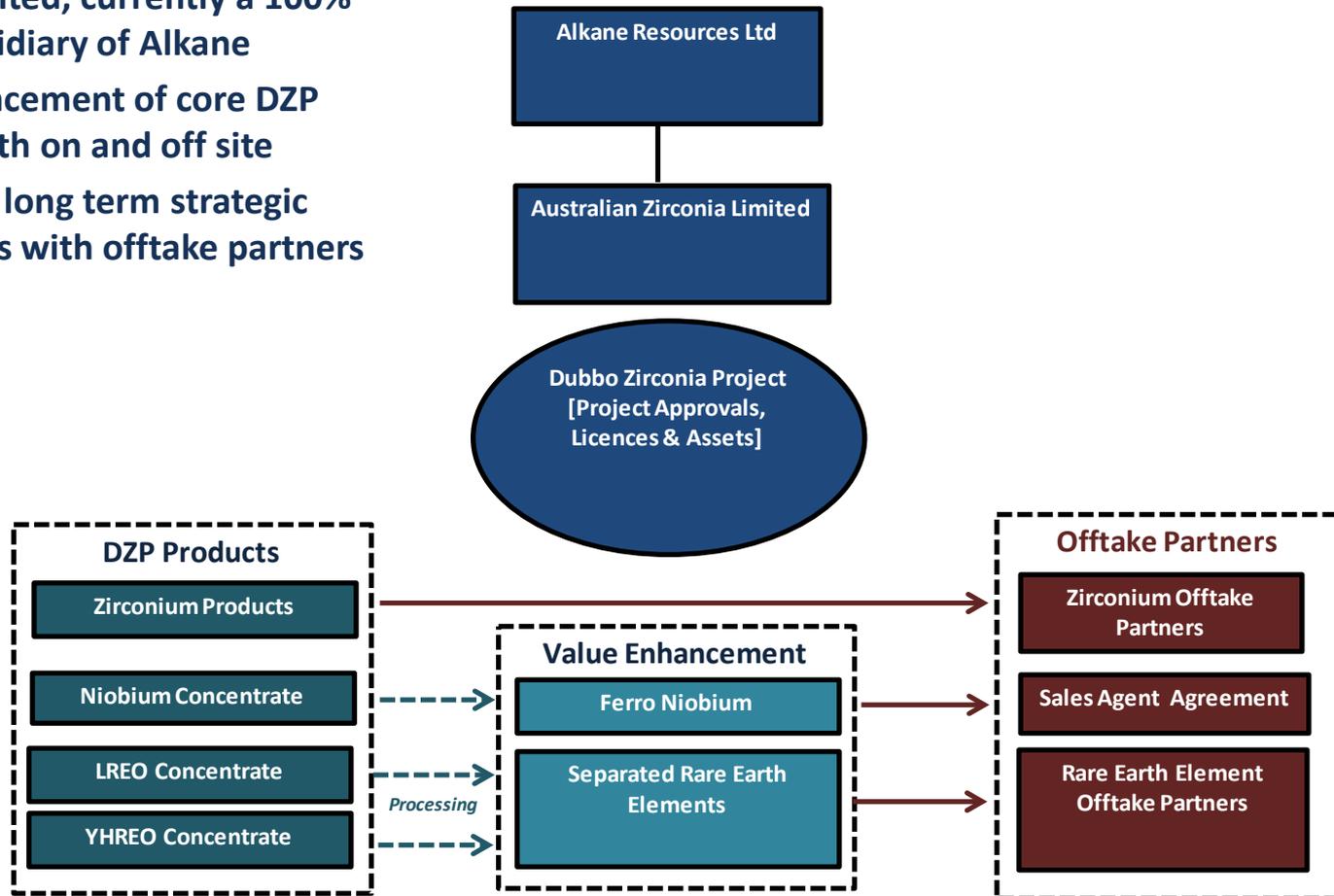


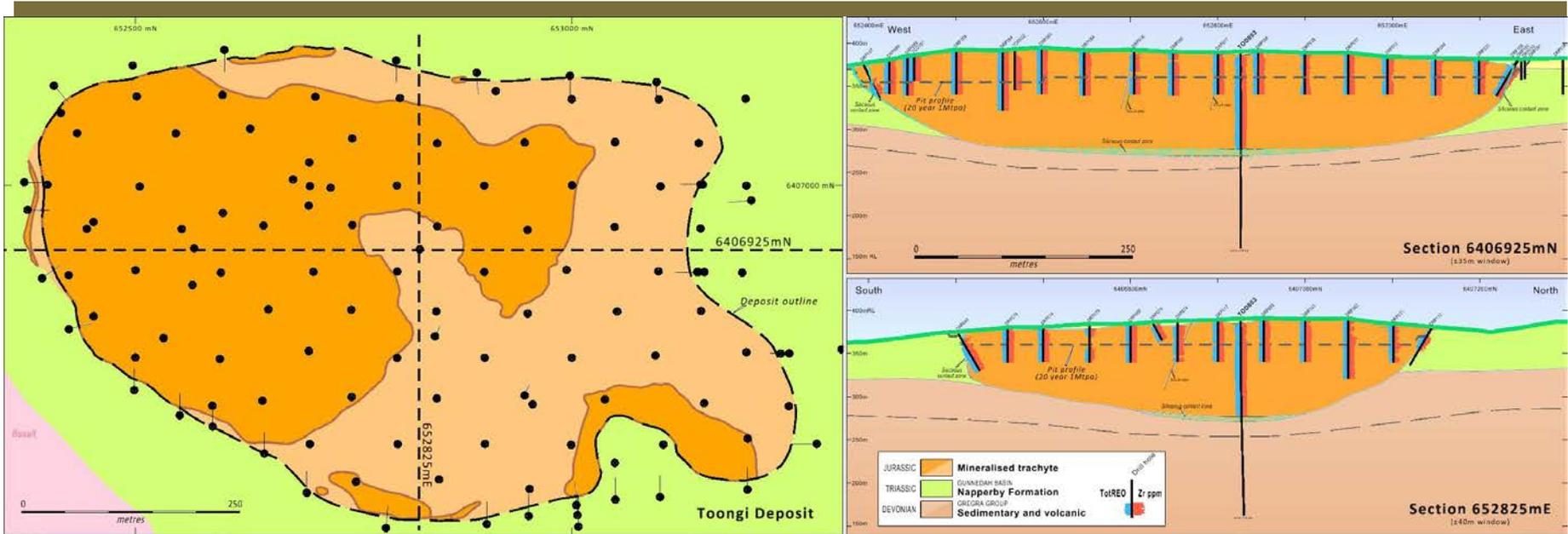


- A very large polymetallic resource of the metals zirconium (hafnium), niobium (tantalum), yttrium and rare earths
- Important and strategic metal mix - 25% of rare earth output is in “heavy” group
- Reserve supports 35 year mine life at 1 million tonne ore processing per annum with defined resource potentially supporting a significantly longer operation
- \$1B project cost – 95% in processing plant, acid plant and infrastructure
- Demonstrated flow sheet with pilot plant and products for market evaluation
- Robust technical and financial feasibility completed
- Environmental Impact Statement compiled and on public exhibition from 18 Sept to 18 Nov
- Strong market interest in products
- Growing and diverse markets



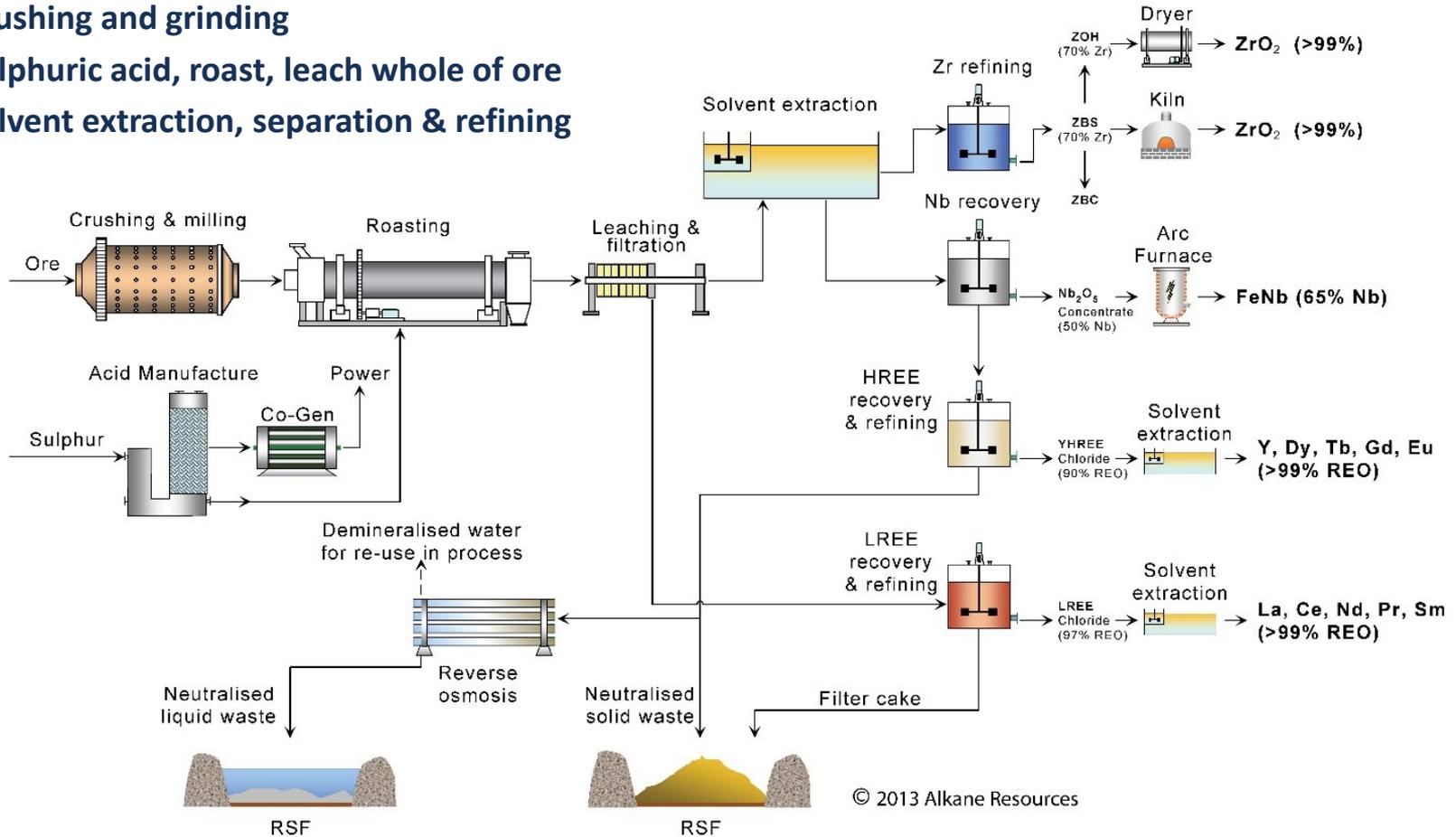
- Project owned by Australian Zirconia Limited, currently a 100% owned subsidiary of Alkane
- Value enhancement of core DZP products both on and off site
- Establishing long term strategic relationships with offtake partners





Resources	Depth (m)	Tonnes (Mt)	Grade
Measured	0-55	35.7	1.94% ZrO ₂ , 0.04% HfO ₂ , 0.46% Nb ₂ O ₅ , 0.03% Ta ₂ O ₅ , 0.14% Y ₂ O ₃ , 0.74% REO (0.9% TREO)
Inferred	55-100	37.5	As above
Total	0-100	73.2	As above
Reserves			
Proven	0-26	8.1	1.93% ZrO ₂ , 0.04% HfO ₂ , 0.46% Nb ₂ O ₅ , 0.03% Ta ₂ O ₅ , 0.14% Y ₂ O ₃ , 0.75% REO (0.9% TREO)
Probable	26-45	27.9	As above
Total	0-45	35.9	As above

- Simple open cut mining operation
- Crushing and grinding
- Sulphuric acid, roast, leach whole of ore
- Solvent extraction, separation & refining



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DPP Filtration, PLS, SX, Zr and Nb recovery



Y and HREE refining and recovery

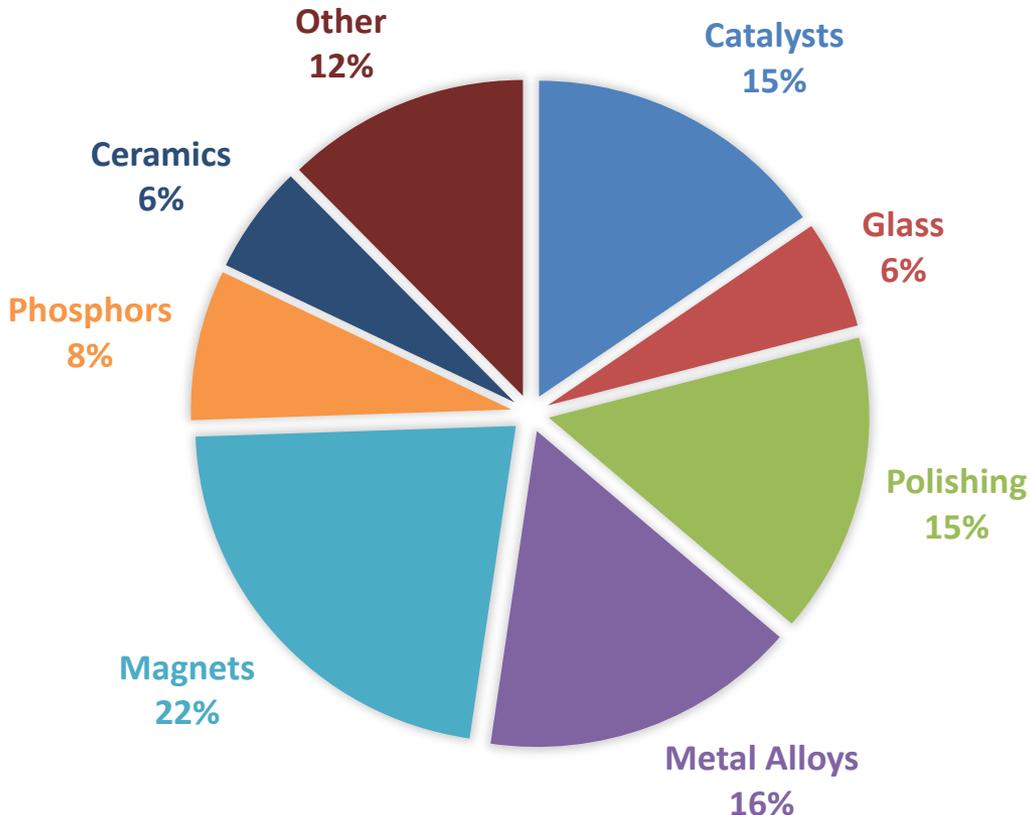


Zirconium refining and precipitation



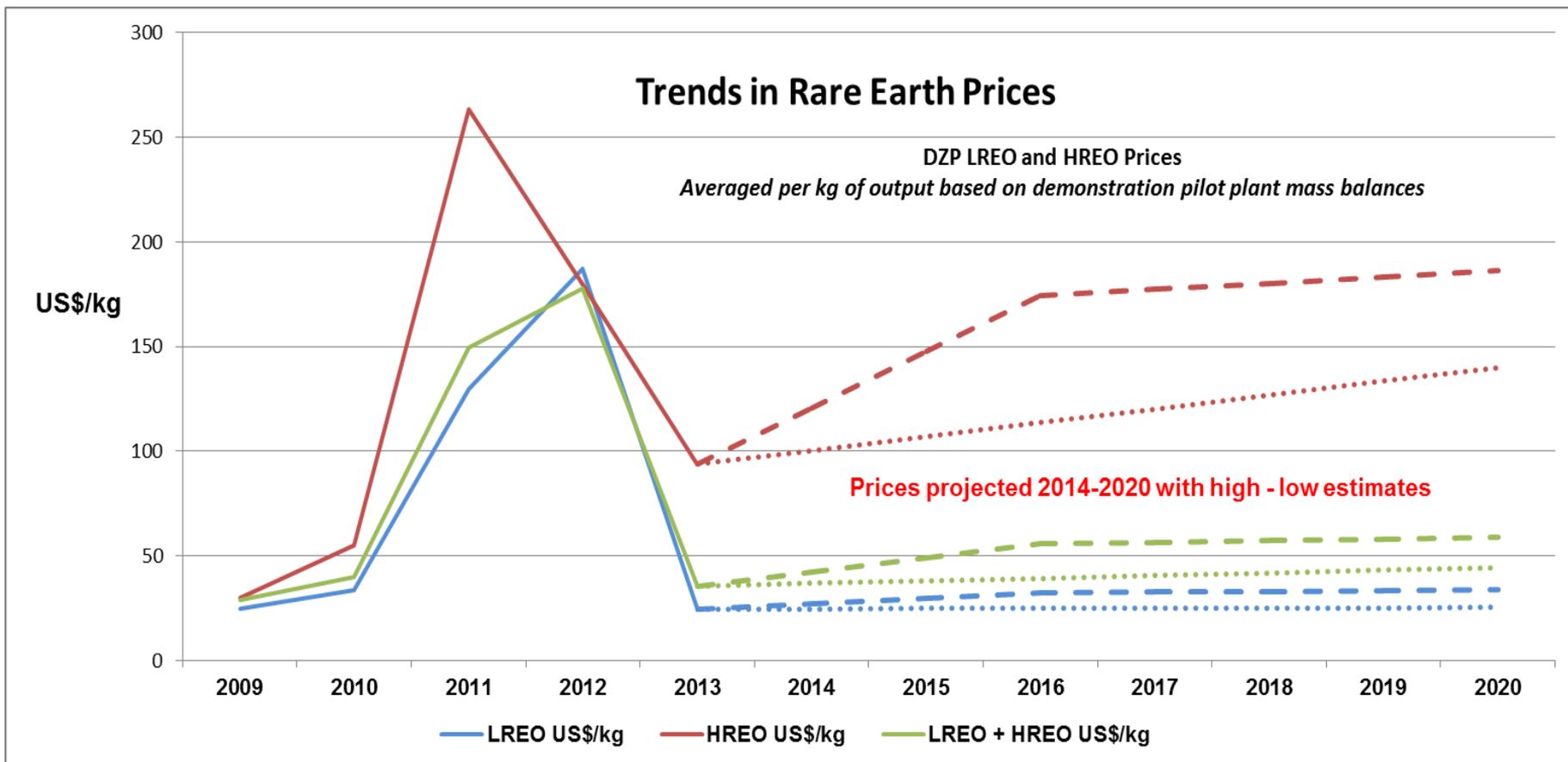
Reverse osmosis and water recycle

REE DEMAND 2016

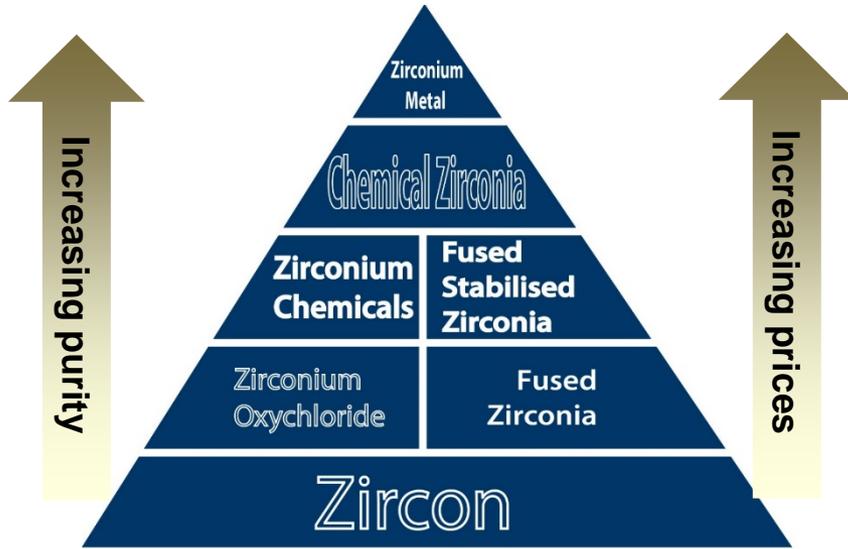


- Total REE consumption 2012 115,000t with annual growth estimated at 5-10% to be 162,000t in 2016
- Global market US\$3-5B
- China produces about 90% of world supply and consumed about 65%, with Japan 15% and the US 14%
- The REE industry is “imbalanced” with potential oversupply of light rare earths (Ce & La) and undersupply of heavy rare earths and neodymium
- Nd, Eu, Tb, Dy and Y are considered to be in critical supply through to at least 2020

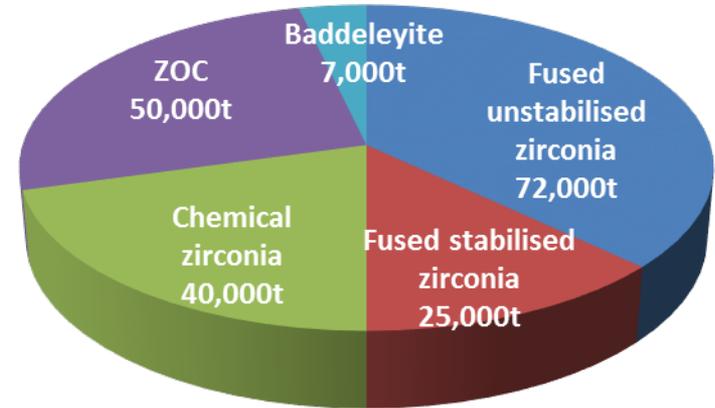
Market imbalanced but overall CAGR 6% - 12% seems likely by 2016



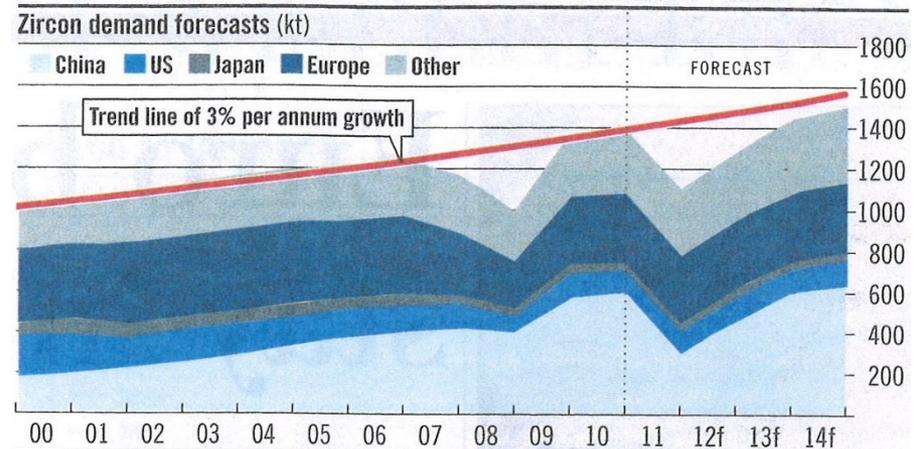
These are not “basket prices”



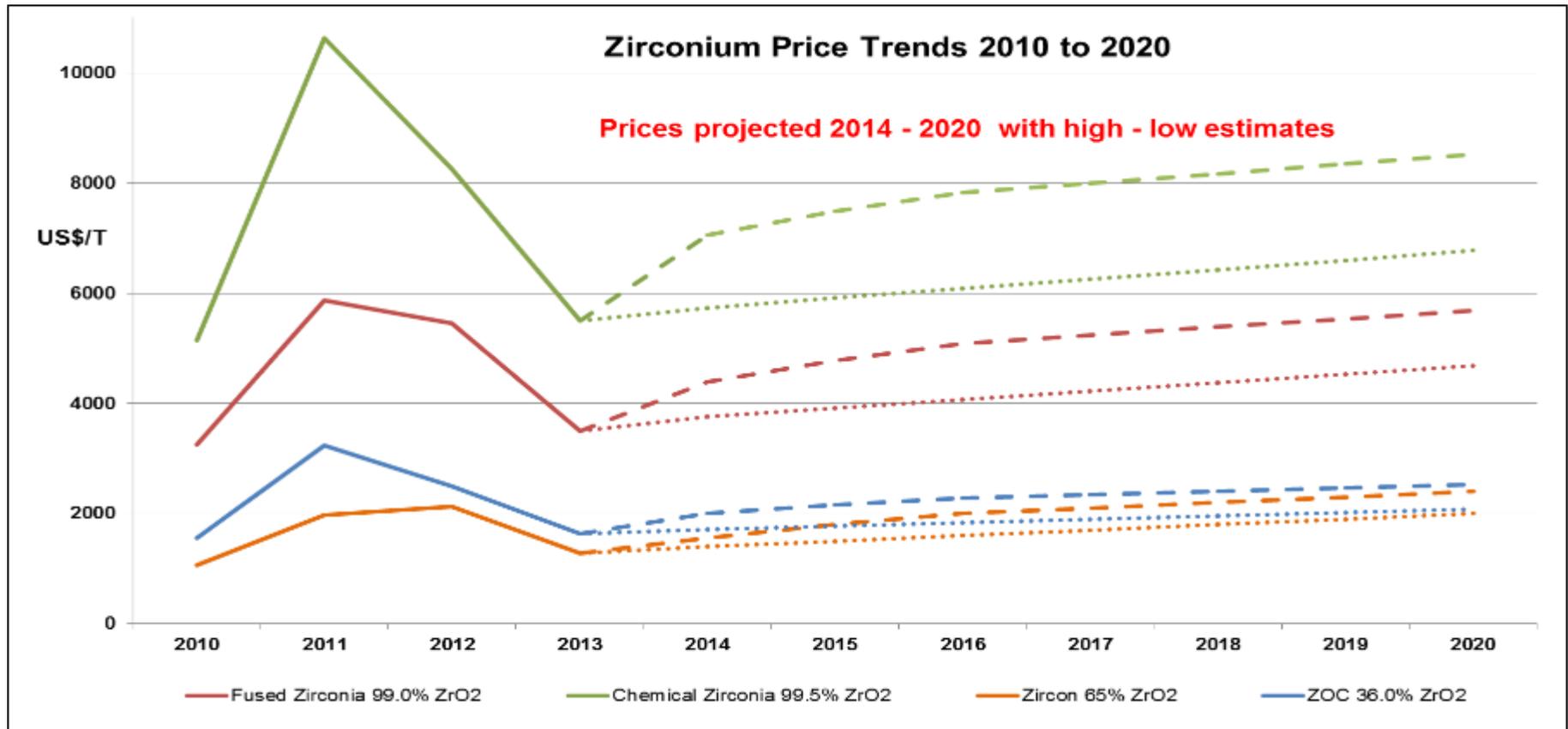
Zirconium Chemicals Output (2011 – 194,000t ZrO₂ basis CAGR 5-10%)



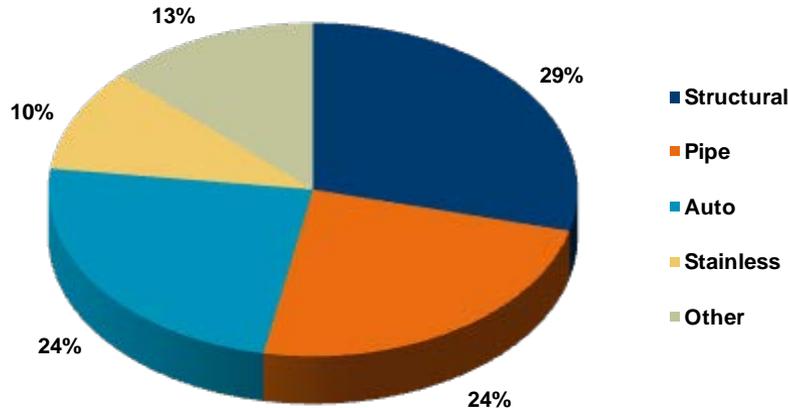
- Global market US\$3-4B
- Mid 2013 consumer zircon inventories running down
- Market expected to move back into under supply 2015 - 2016
- Prices starting to recover
- 18% - 20% zircon used in zirconium chemicals
- CAGR anticipated at 5% - 8% pa



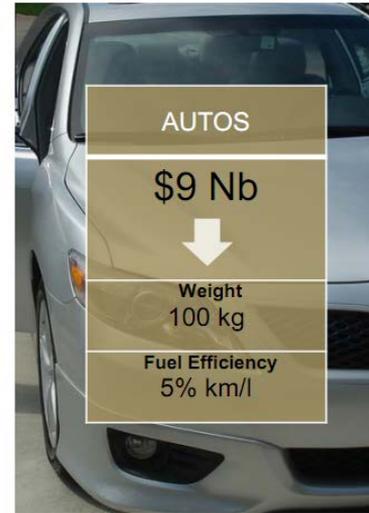
SOURCE: JPMORGAN



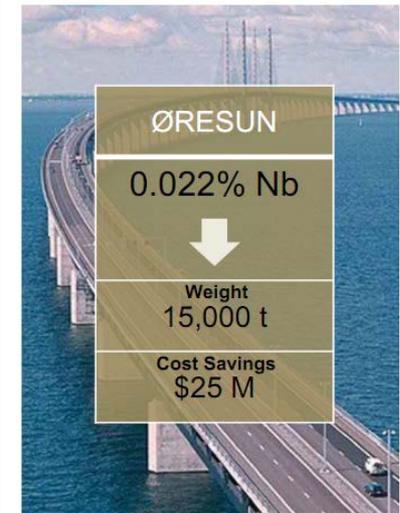
Current use of ferro-niobium



Autos

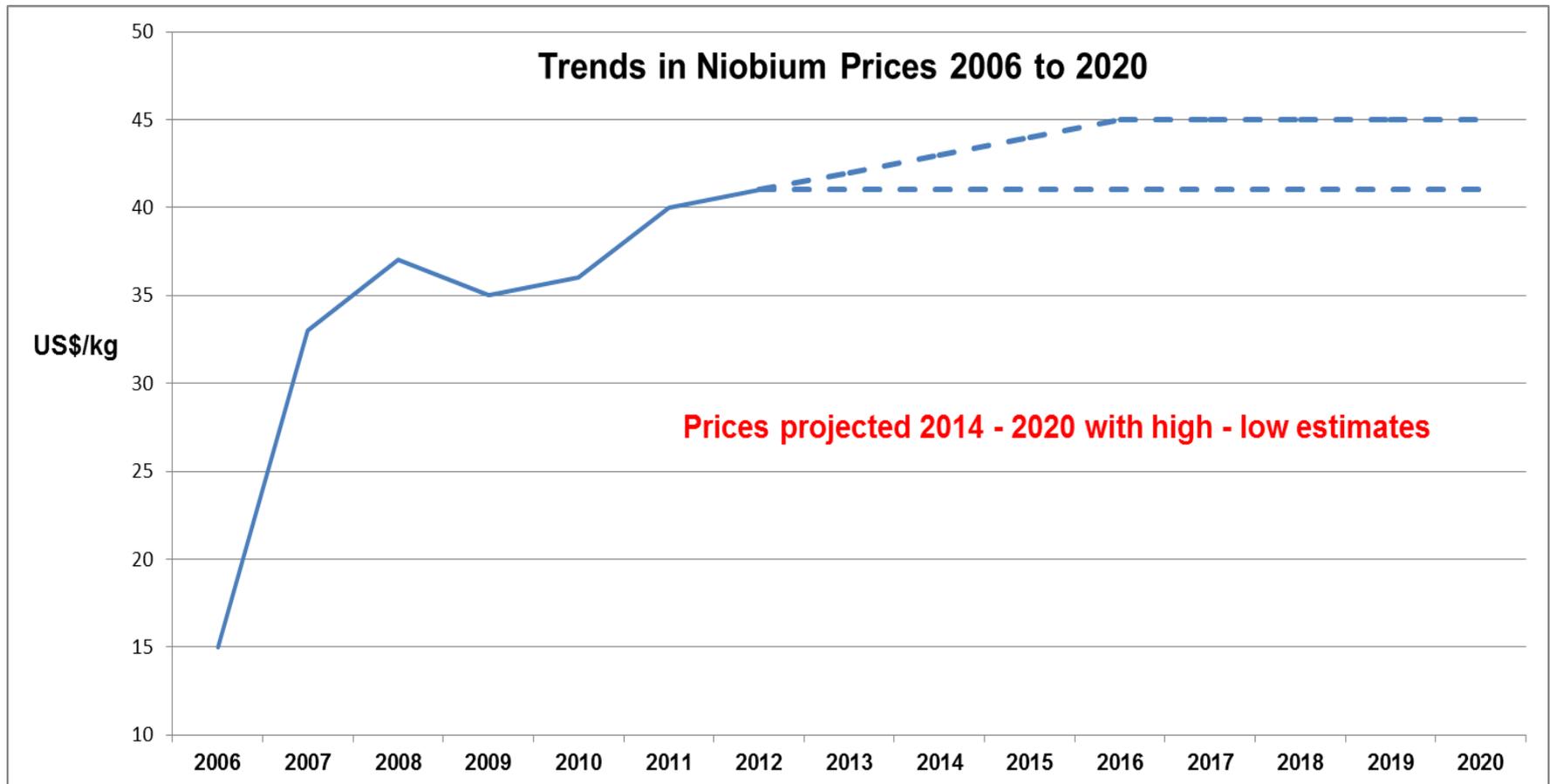


ØRESUN Bridge



- 90% of Nb used in standard grade ferro-niobium for the production of high strength low alloy (HSLA) steels
- Nb HSLA steels are primarily consumed in structural and pipe, but the auto industry is becoming an increasing consumer
- World production 80,000t Nb in 2012. CBMM in Brazil accounts for 85%
- Global market US\$3-4B

CAGR 10% Demand driven by greater usage in steels of BRIC producers



Continuous process optimisation and product development through operation of the demonstration pilot plant

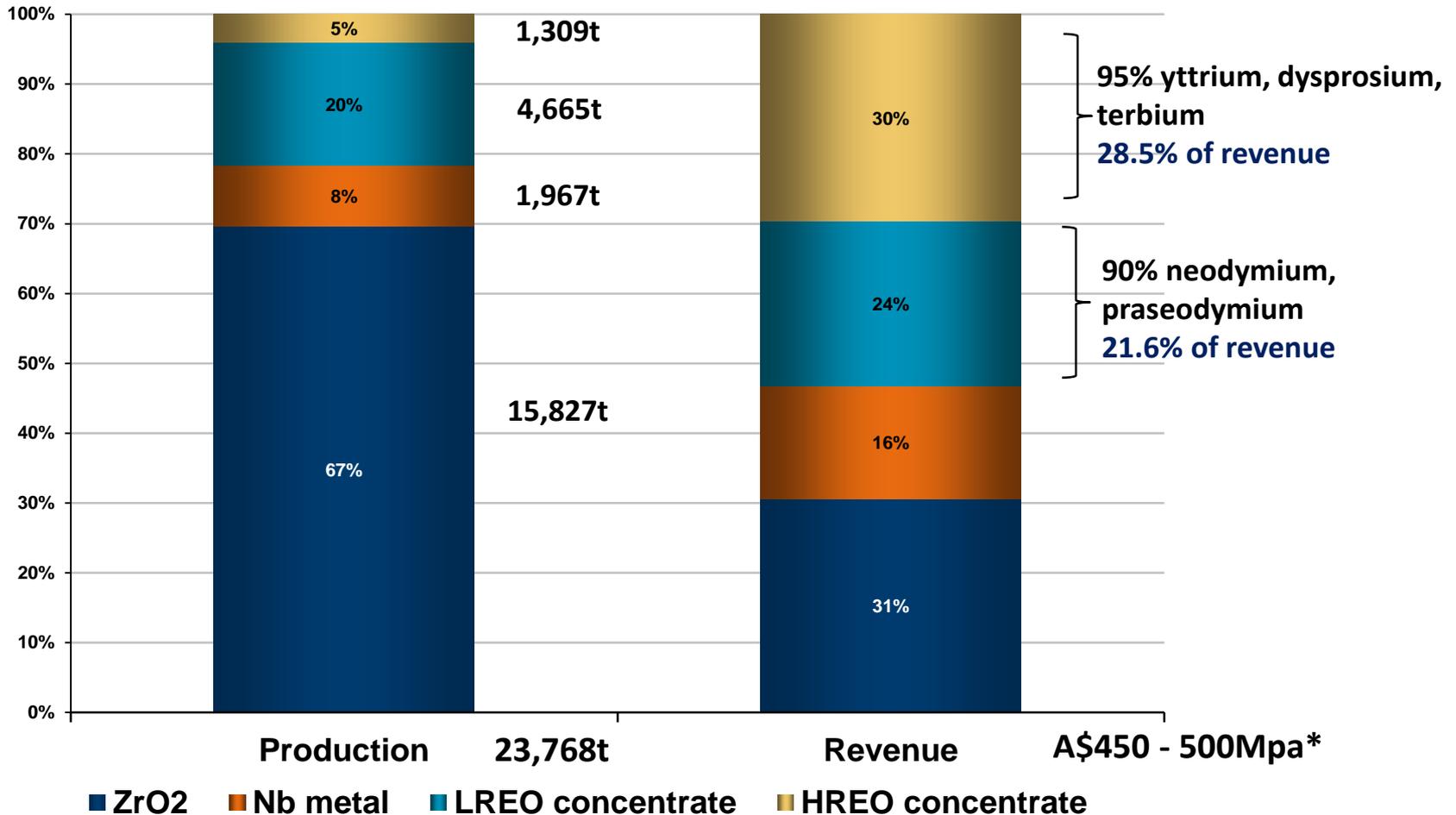
- *Development of high purity, variable grain size zirconia for multiple end use applications*
- *Operation of ceramics colours laboratory to provide test samples for ceramic companies*

- *Significant improvement of rare earth recoveries:*

<i>LREEs</i>	<i>45-61% → 67-74%</i>	<i>3,997tpa → 4,665tpa</i>	<i>(+17%)</i>
<i>HREEs</i>	<i>32-54% → 52-66%</i>	<i>911tpa → 1,309tpa</i>	<i>(+44%)</i>
- *Major increase in revenue potential from improved rare earth recovery without increased operating costs*

- *Significant water recycling*
- *Experimental work for tantalum recovery*
- *Experimental work for waste salt recovery and re-use*

Estimated Product Output @ 1Mtpa



Revenue* based on DFS long term product prices and A\$:US\$0.85. OPEX est A\$200M – A\$220Mpa

AZL MOU's and Agreements aiming to secure 100% of output



Zirconium (Zr)

- Leading chemical company to develop applications and markets in Asia for zirconia produced by DZP
- European manufacturer/trading company to market DZP products in Europe and North America
- Ceramic colours laboratory developed in Perth to produce test products for ceramic tile industry

Niobium (Nb)

- JV with European Treibacher Industrie AG to produce and market ferro-niobium
- Test work for tantalum recovery

Light rare earths Heavy rare earths

- MoU with Japan's Shin-Etsu Chemical for toll treatment JV for separation and sale

Alkane has a 25 year history of sustainable mine management

EIS lodged 28 June and addresses all environmental aspects

Water

- 70% recycle of process water currently achievable
- Limited groundwater aquifers – minimal impact
- Water secured from existing water licences

Transport

- Mixture of rail and road preferred, but rail still has some limitations

Power

- State grid. The sulphuric acid plant will generate (cogen) about 70% of power onsite

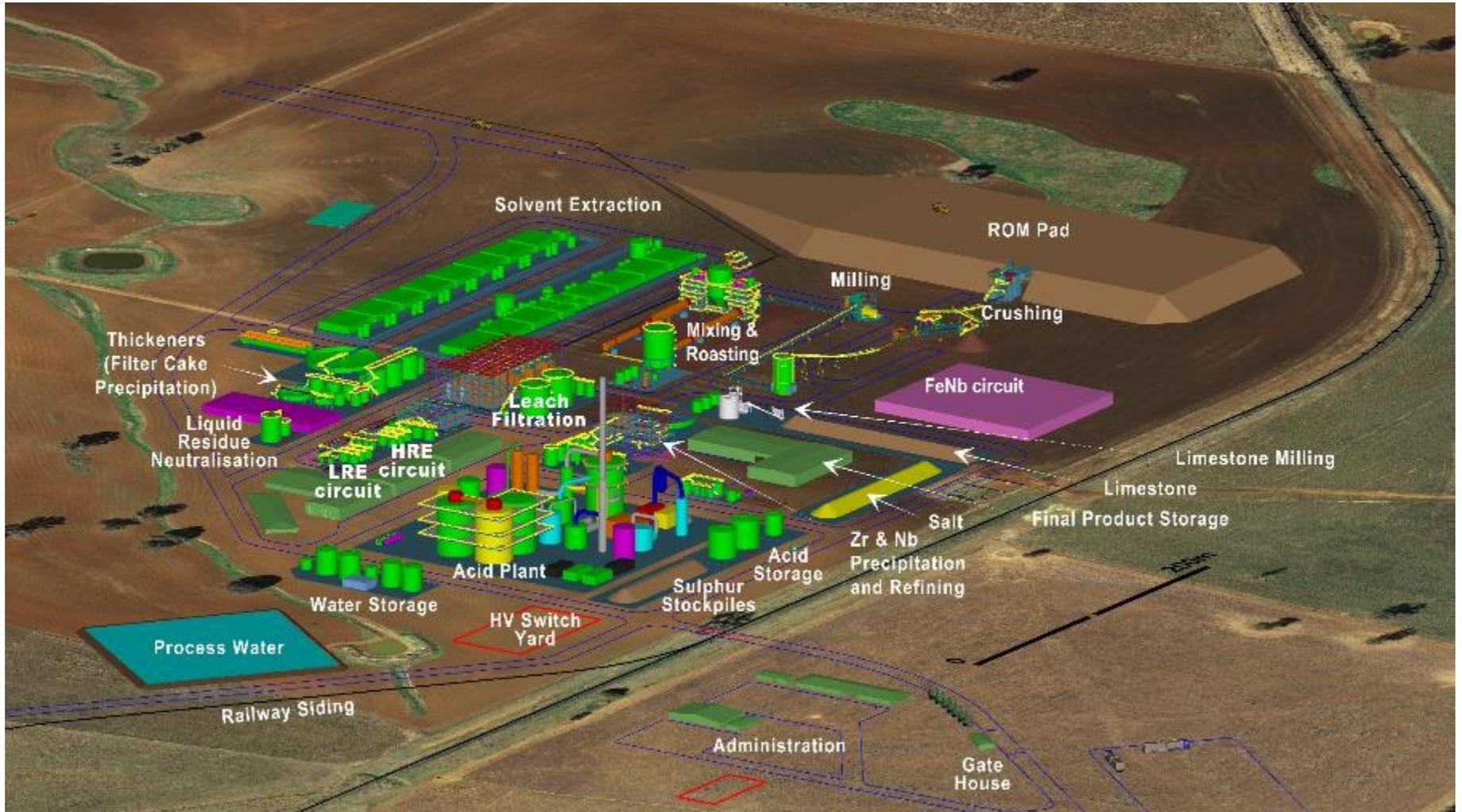
Fauna

- Farming/industry co-habitation: sheep/cattle farming across available farming land
- Endangered species identified and potential impacts mitigated

Naturally occurring radioactive material (NORM)

- Waste salts remain onsite and contains less radioactivity than ore.





- **Hybrid EPCM/EPC construction strategy**
 - EPCM for front end engineering with large packages as EPC (eg EPC acid plant and niobium plant)

- **Strategy to be optimised as front end engineering design progresses**
 - potential for capex reducing strategies (eg BOO/BOOT)
 - minimisation of timetable and cost risk

- **Front End Engineering Design (FEED)**
 - expressions of interest received and narrowed down to short list
 - request for tender to be issued to short list in December 2013
 - FEED scheduled to commence in Q1 2014
 - targeting
 - ✓ internationally renown contractor
 - ✓ appropriate experience on similar projects
 - ✓ proven track record of delivering on time on budget
 - expected output includes
 - ✓ increased accuracy in cost and timing
 - ✓ identified long lead items and source
 - ✓ identified EPC/lump sum contracts
 - ✓ tender packages to progress to construction

Advisors assisting with A\$1B DZP financing package

- Sumitomo Mitsui Banking Corp
- Credit Suisse (Australia)
- Petra Capital

Targeted Funding Sources		Anticipated Funding Uses	
Debt Funding		Construction	
- Government Assistance/ECA Funding		Capital Expenditure - Plant	\$396.8 M
- Commercial Banks		Sulphuric Acid Plant	\$116.6 M
		Infrastructure & Owners Costs	\$253.4 M
		Project Management	\$63.5 M
Further Equity Funding		Sub-total	\$830.3 M
- Equity Raising		Contingency/Working Capital	\$166.1 M
- Project Level Minority Interest Sale			
Total Funding Required	\$996.4 M	Total	\$996.4 M

CAPEX based on April 2013 DFS

- **Government Assistance Programs/ECA style funding**
 - **Lead Coordinator: SMBC**
 - **Attractive Project:**
 - ✓ long life low cost strategic source of critical metals
 - ✓ long term off-take agreements with international companies

- **Commercial Bank Debt**
 - **Financial Advisors: Credit Suisse & SMBC**
 - **Attractive Project:**
 - ✓ strong operating cash flows
 - ✓ diversified revenue stream
 - ✓ new markets will add to project value

- **Sale of Project Level (AZL) Minority Interest(s) (~15%)**
 - **Sale Advisors: Credit Suisse & SMBC**
 - Strategic interest(s) in long term supply of critical metals
 - Introduction of cornerstone investor(s)

- **Equity Capital Raising (Alkane)**
 - **Advisors Credit Suisse & Petra Capital**

DZP Major Milestones

Major Milestones	2013	2014	2015	2016
Environmental Impact Statement	Q1, Q2			
Project Approval Process		Q3, Q4		
Project Financing Program	Q1, Q2	Q3, Q4	Q1, Q2, Q3, Q4	
Engineering Contract		Q3, Q4	Q1	
Front End Engineering Design (FEED)		Q3, Q4	Q1, Q2, Q3, Q4	
CONSTRUCTION			Q3, Q4	Q1, Q2, Q3, Q4
PRODUCTION				Q1, Q2, Q3, Q4

Estimates of times are indicative only and are subject to change.
 Alkane reserves the right to vary the timetable without notice.

Board

- **John S F Dunlop (Chairman)** BE(Min), MEngSc(Min). Mining engineer
- **D Ian Chalmers (Managing Director)** MSc. Geologist
- **Ian J Gandel (Director)** LLB, BEc. Businessman
- **Anthony D Lethlean (Director)** BAppSc. Geologist/Banker

- **Karen Brown (Joint Company Secretary)** BEc
- **Lindsay Colless (Joint Company Secretary)** CA



Senior Management

- **Michael Ball (Chief Financial Officer)** CA BCom
- **Nic Earner (Chief Operations Officer)** BEng (Honours)
- **Terry Ransted (Chief Geologist)** BSc .
- **Michael Sutherland (General Manager NSW)** BSc
- **Brendan Ward (Commercial Manager)** LLB, BA
- **Tony Wright (Commercial Manager - retiring)**
- **Henry Kaye (TGP Project Manager)** – Mechanical Engineer
- **Sean Buxton (TGP Operations Manager)** – Mining Engineer

Senior Consultants

- **Fiona Morgan (TGP EPCM – Mintrex)** – Mechanical Engineer
- **Greg Foster (TGP EPCM – Mintrex)** – Mechanical Engineer

- **Steve Gilman (DZP - Consulting Director TZMI)** – Metallurgist
- **Alex Ryan (DZP - Senior Consultant TZMI)** – Metallurgical Eng
- **Alister MacDonald (DZP - Marketing TCMS)** - Ceramic Engineer

- **Natalie Chapman (Corporate Communications Manager)**
- **Westbrook Financial Services (Media Advisors)**



DZP a highly strategic asset

- Globally significant resource of zirconium, niobium, yttrium and rare earths
- Significant yttrium and heavy rare earth content providing an estimated 30% of project revenues



Positive feasibility study completed: long mine life, low cost project indicated

- Robust technical and financial feasibility complete
- Successful pilot plant operations since 2008 providing product samples for prospective customers
- Open pit mine life of at least 70 years based on resource
- Diversified revenues, low unit cost operation



Attractive market fundamentals

- Markets characterised by few major suppliers
- Significant demand from a wide and expanding range of product applications
- Limited new significant supply prospects provide attractive returns to new entrants



Expert management team

- Significant specialist personnel to aid DZP project delivery
- Recent additions of key management personnel to aid TGP and DZP project delivery



Strong market interest in products and supportive partners

- Development of strategic partnerships to provide value enhancement and revenue security
- MOU for separation of REE with Shin-Etsu; JV with Treibacher to produce FeNb; other MOUs



TGP provides near term cash flows

- Tomingley Gold Project construction 90% complete, currently within budget and on schedule for expected first production February 2014

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

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) 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 2004 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 Zirconia Project – Mineral Resources

Toongi Deposit	Tonnage (Mt)	ZrO ₂ (%)	HfO ₂ (%)	Nb ₂ O ₅ (%)	Ta ₂ O ₅ (%)	Y ₂ O ₃ (%)	REO (%)	U ₃ O ₈ (%)
Measured	35.70	1.96	0.04	0.46	0.03	0.14	0.75	0.014
Inferred	37.50	1.96	0.04	0.46	0.03	0.14	0.75	0.014
Total	73.20	1.96	0.04	0.46	0.03	0.14	0.75	0.014

These Mineral Resources are based upon information compiled by Mr Terry Ransted MAusIMM (Principal, Multi Metal Consultants Pty Ltd) who is a competent person as defined in the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Terry Ransted consents to the inclusion in the report of the matters based on his information in the form and context in which it appears. The full details of methodology were given in the 2004 Annual Report.

Dubbo Zirconia Project – Ore Reserves

Toongi Deposit	Tonnage (Mt)	ZrO ₂ (%)	HfO ₂ (%)	Nb ₂ O ₅ (%)	Ta ₂ O ₅ (%)	Y ₂ O ₃ (%)	REO (%)
Proved	8.07	1.91	0.04	0.46	0.03	0.14	0.75
Probable	27.86	1.93	0.04	0.46	0.03	0.14	0.74
Total	35.93	1.93	0.04	0.46	0.03	0.14	0.74

These Ore Reserves are based upon information compiled by Mr Terry Ransted MAusIMM (Alkane Chief Geologist) who is a competent person as defined in the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. The reserves were calculated at a 1.5% combined ZrO₂+Nb₂O₅+Y₂O₃+REO cut off using costs and revenues defined in the notes in ASX Announcement of 16 November 2011. Terry Ransted consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

Tomingley (TGP) – Mineral Resources

DEPOSIT	MEASURED		INDICATED		INFERRED		TOTAL		
	Tonnage (Mt)	Grade (g/t) Au	Ounces						
Wyoming One ²	2.32	2.2	0.89	2.2	3.12	1.7	6.32	1.9	392,400
Wyoming Three ²	0.64	2.0	0.06	2.0	0.10	1.3	0.81	1.9	49,900
Caloma ²	2.69	2.3	0.57	2.1	2.19	1.9	5.45	2.1	369,400
Caloma Two ¹			1.0	2.4	0.7	1.4	1.70	2.0	109,300
Total	5.65	2.2	2.52	2.25	6.11	1.73	14.29	2.0	921,000

¹ These Mineral Resources are based upon information compiled by Mr Richard Lewis FAusIMM (Lewis Mineral Resource Consulting Pty Ltd) who is a Competent Person as defined in the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Richard Lewis consents to the inclusion in this report of the matters based on his information in the form and context in which it appears. Full details of methodology were given in the ASX Announcement 12 November 2013

² These Mineral Resources are based upon information compiled by Mr Richard Lewis FAusIMM (Lewis Mineral Resource Consulting Pty Ltd) who is a Competent Person as defined in the 2004 Editions of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code). Richard Lewis consents to the inclusion in this report of the matters based on his information in the form and context in which it appears. The details of methodology for estimating these resources was reported 29 March 2012..

Tomingley (TGP) – Ore Reserves

DEPOSIT	PROVED		PROBABLE		TOTAL		
	Tonnage (t)	Grade (g/t) Au	Tonnage (t)	Grade (g/t) Au	Tonnage (t)	Grade (g/t) Au	Ounces
Wyoming One	1,700,000	1.6	200,000	1.3	1,900,000	1.6	94,500
Wyoming Three	500,000	1.6	0	0.0	500,000	1.6	28,100
Caloma	1,100,000	2.3	100,000	1.7	1,200,000	2.2	86,500
Total	3,300,000	1.8	300,000	1.5	3,600,000	1.8	209,100

These Ore Reserves are based upon information compiled under the guidance of Mr Dean Basile MAusIMM (Mining One Pty Ltd) who is a competent person as defined in the 2004 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. The Reserves and Resources are estimated at an effective A\$1,540 per ounce gold price. Dean Basile consents to the inclusion in the report of the matters based on the information in the form and context in which it appears.