ALKANE RESOURCES LTD

MULTI-COMMODITY MINER EXPLORER

www.alkane.com.au

ASX : ALK

OTCQX : ANLKY

Annual General Meeting

Sydney

16 November 2016

Shareholder Presentations Melbourne 17 November and Perth 18 November

Gadolinium Europium Gold Yttrium Niobium Terbium Dysprosium Hafnium Praseodymium Neodymium Zirconium

Mining the metals of the future.

Board & Management

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 (Company Secretary)** BEc

Senior Management

- **Nic Earner (Chief Operations Officer)** BEng (Hons)
- **Michael Ball (Chief Financial Officer)** CA BCom
- **Terry Ransted (Chief Geologist)** BSc
- **Michael Sutherland (General Manager NSW)** BSc
- **Brendan Ward (Commercial Manager)** LLB, BA
- **Sean Buxton (TGO Operations Manager)** BEng
- **Natalie Chapman (Corporate Communications)** BSc, MBA

DZP Marketing Consultants

- **Alister MacDonald (Marketing TCMS)** - BE(Hons) Ceramic Eng
- **Jeff Swingler (Special Strategic Advisor)** - CA, MEI
- **Dudley Kingsnorth (REE Markets IMCOA)** - BMet (Hons), MSc.,
- **Minchem Pty Ltd – UK based zirconium market specialists**

DZP Engineering and Metallurgy

- **Peter Hedley (Senior Project Engineer)**
- **Ian Gough (Senior Metallurgist)**
- **TZ Minerals International**
- **ANSTO Minerals Group**

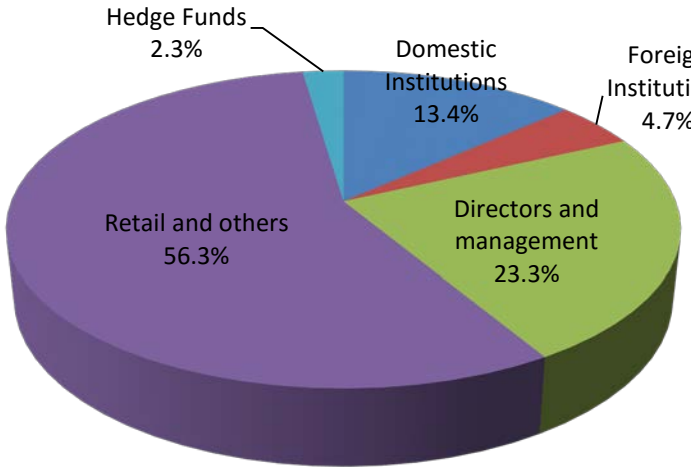
FY2016 Snapshot

- **FY2016 Financials**
  - Total income A$109.6 million
  - Profit before income tax A$6.7 million
  - Total equity A$190.3 million
  - Market cap at 15 November ~A$300 million
  - Issued capital 505 million shares
  - Cash and bullion ~A$30 million

- **Tomingley Gold Operations**
  - Production 67,812 ounces
  - Gold revenue A$109.1 million
  - AISC[(1)] A$1,124/oz (expected LOM average ~A$1,000 - A$1,100)
  - Operating cash flow A$24.6 million
  - Profit before income tax A$14.3 million

- **Dubbo Zirconia Project**

  ECI, process development, marketing, land acquisitions
  - FY16 total outflows A$7.0 million (FY15 A$15.8 million)
  - Funded from TGO cash flows

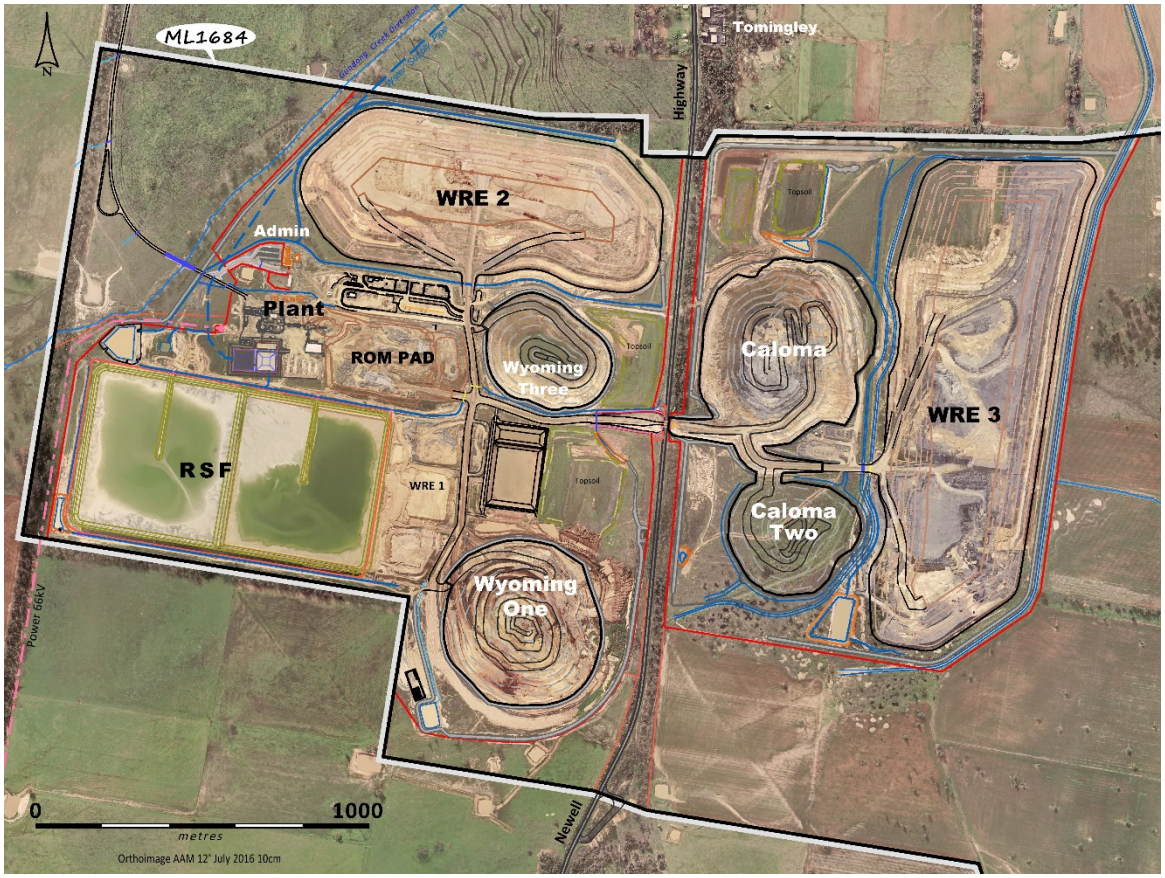


At 31 October 2016
Major Shareholders:
~22% Abbotsleigh (Gandel Metals)
~10% Fidelity Group

[(1)] Refer to ASX Quarterly Activities Report dated 14 July 2016 for definition

Tomingley Gold Operations FY16

- Resource – 579,000oz of gold (22 Sept 2016)
- Reserve – 253,000oz (22 Sept 2016)
- Mine Method – open cut W1, W3 & Caloma
- Underground feasibility in progress
- Mine Life – 4.5 years without addition
- Processing plant throughput – 1.0Mtpa
- 2.00g/t Au and 93% recovery standard CIL
- Gold Production FY17 – 65 -72,000oz @ AISC A$1,250 – 1,350/oz
- Forward Gold Contracts at 30 Sept 2016 54,900oz @ A$1,704/oz



Resource Expansion and Exploration

- Major subpit RC and core drilling programs in progress to expand resource/reserve base in mine environs
- Regional aircore drilling to test multiple targets
- Re-evaluation of large gold-copper system at Peak Hill mine site

Note: ASX announcement 22 September 2016 - 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.

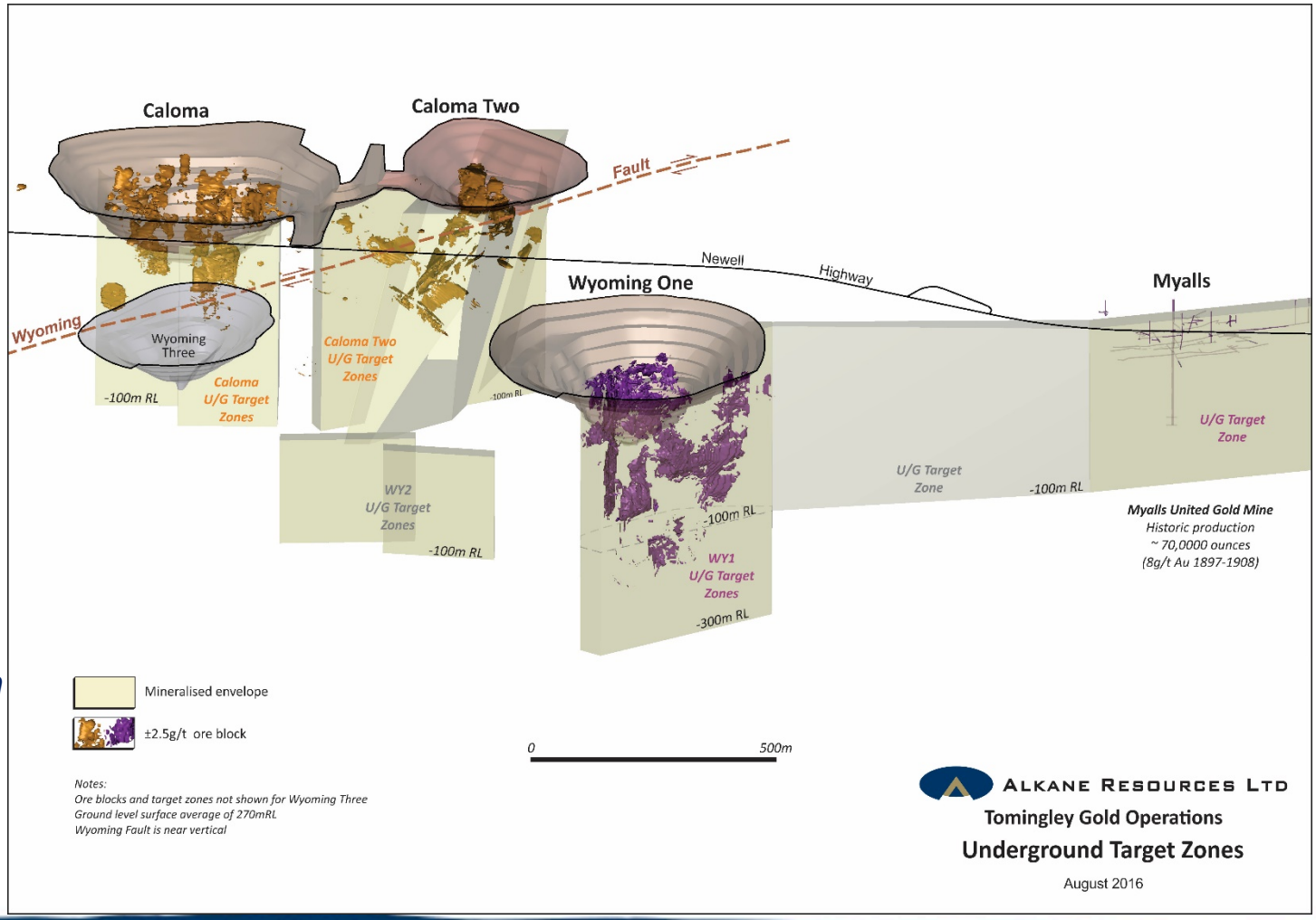
TGO Resource Reserve Expansion

Underground Targeting

Existing reserve below the pit in Wyoming One

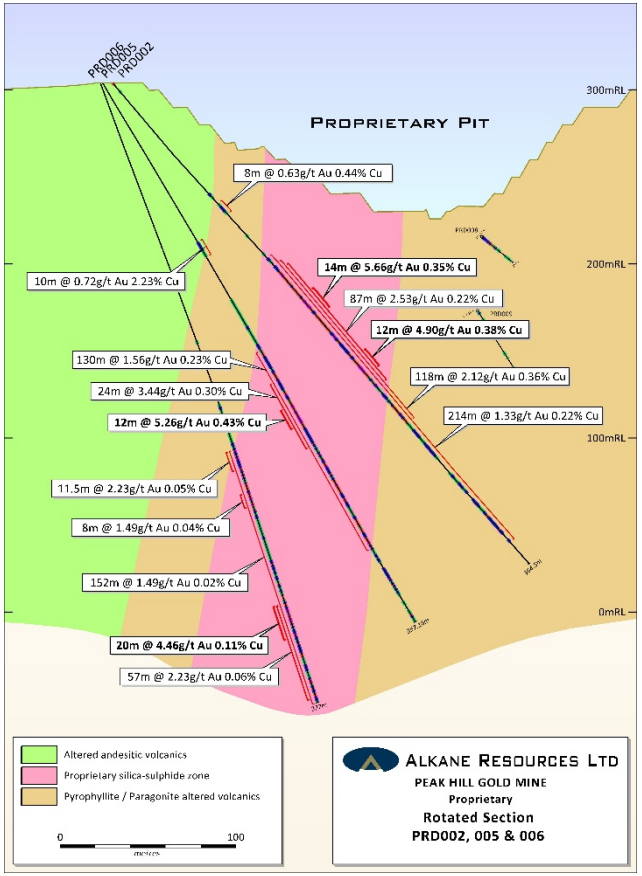
3km strike length of target zone

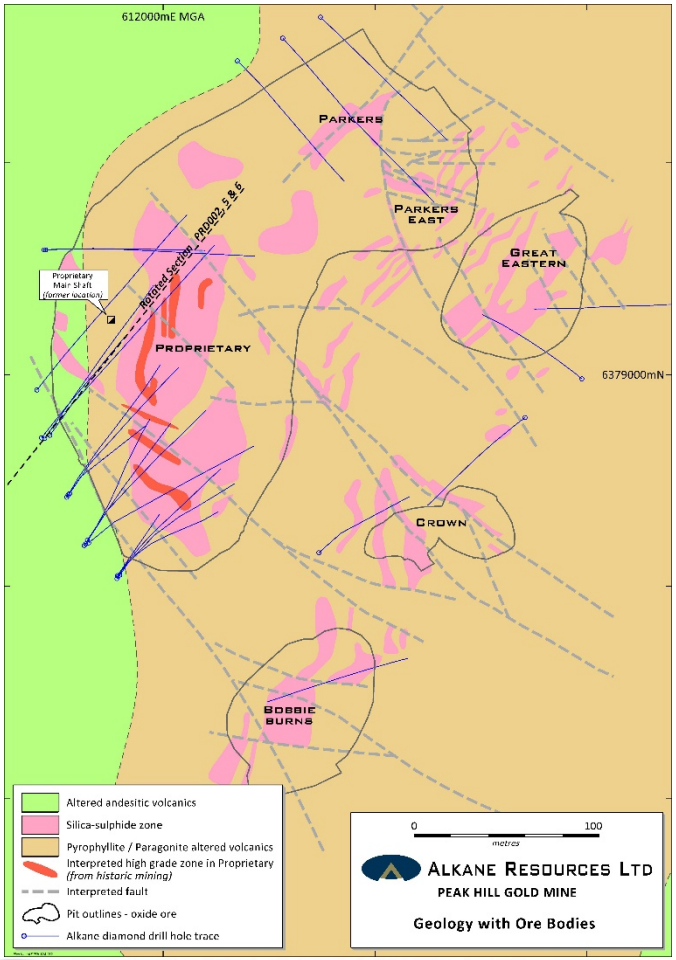
Historic production at Myalls United ~70,000oz 1897-1908



Peak Hill Resource Potential

Historic production 1904-1917 ~70,000oz
Alkane production 1996-2005 ~152,000oz





Substantial high grade gold and copper intercepts
Moderately refractory sulphide mineralization have to be pretreated before processing at TGO

TGP Resource Expansion

Additional Resource Potential

60km long target zone

Myalls underground (historic 70k gold production)

MCD 003	34 metres grading 0.51g/t gold from 294 metres
including	4 metres grading 2.98g/t gold from 294 metres
MCD 005	17 metres grading 0.75g/t gold from 439 metres
including	2 metres grading 3.47g/t gold from 443 metres

McLeans – ore intercepts

MCP 037	1 metre grading 24.45g/t gold from 37 metres
MCP 038	18 metres grading 1.38g/t gold from 81 metres
including	4 metres grading 3.68g/t gold from 83 metres
MCP 040	2 metres grading 4.24g/t gold from 106 metres

Tomingley One and Two – ore intercepts

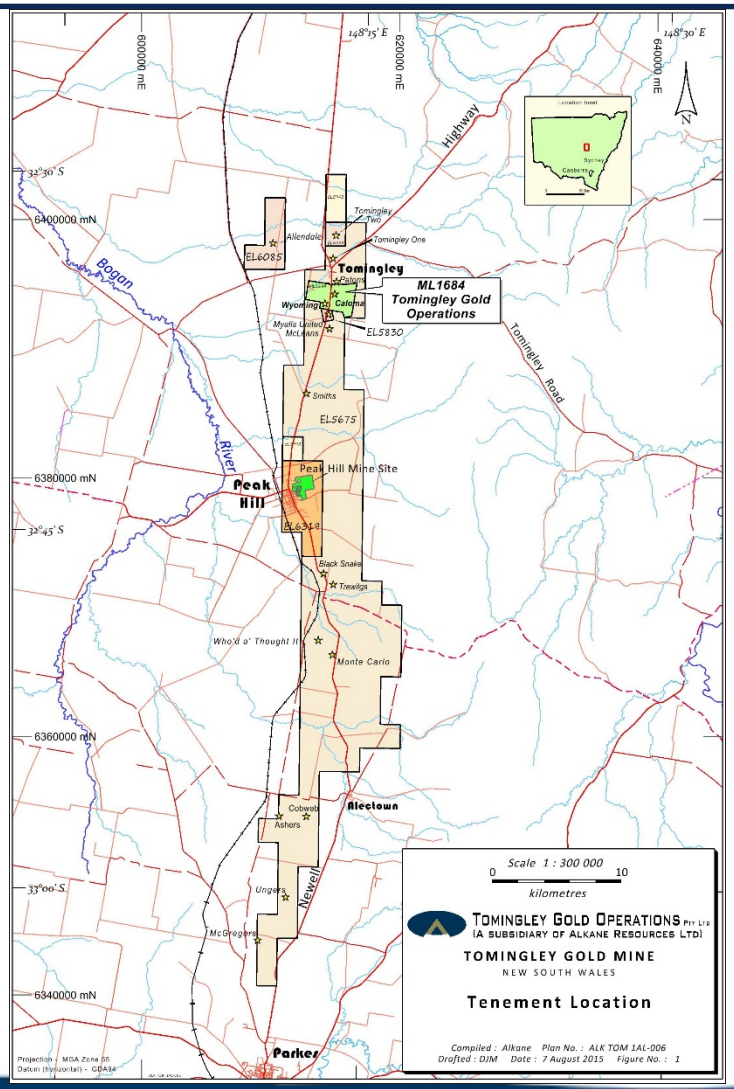
TO 123	3 metres grading 4.93g/t gold from 111 metres
TO 162	20 metres grading 0.76g/t gold from 123 metres
including	5 metres grading 1.38g/t gold from 138 metres
TO 203	102 metres grading 0.66g/t gold from 129 metres
including	24 metres grading 1.29g/t gold from 201 metres
TO 215	9 metres grading 1.75g/t gold from132 metres

Smiths – alteration and low grade gold intercepts

Black Snake – ore intercepts

BS 005	1 metre grading 5.94g/t gold from 92 metres
BS 006	1 metre grading 3.76g/t gold from 86 metres
BS 007	8 metres grading 1.84g/t gold from 46 metres

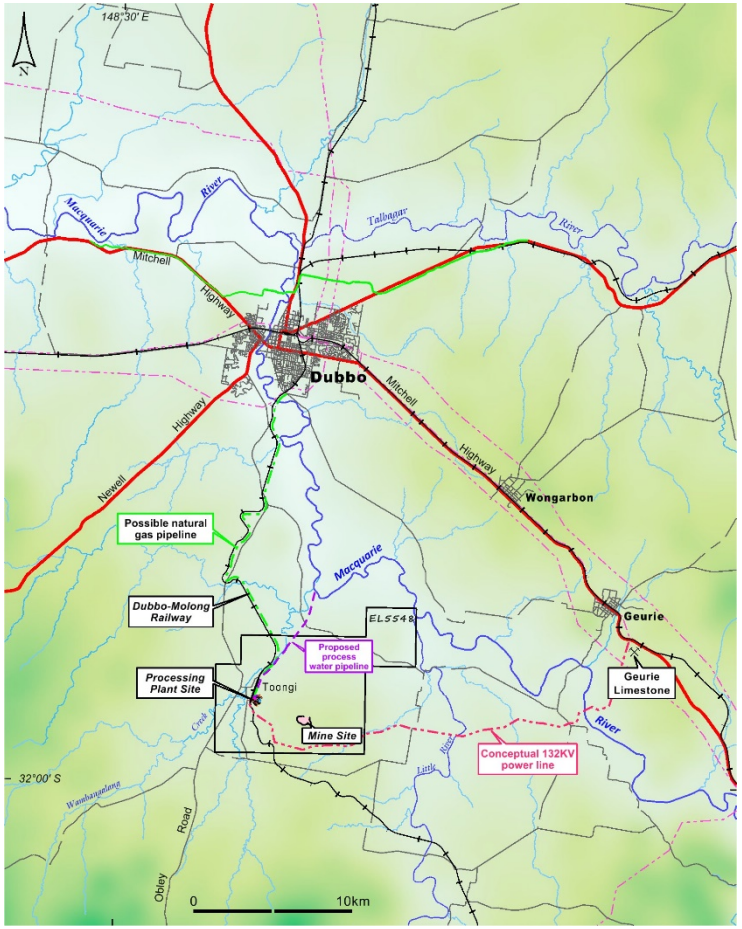
Monte Carlo, Ungers, Ashes, McGregors – surface geochemical anomalies



Note: Details in ASX announcement 22 September 2016

Dubbo Zirconia Project

- Located 400km northwest of Sydney within a region that has substantial infrastructure – roads, rail, power, gas, light engineering, people (~100,000), being a large agricultural and mining area
- A very large polymetallic resource of the metals zirconium hafnium, niobium (tantalum), yttrium and rare earths
- Important and strategic metal mix
- Reserve supports 35 year mine life at 1 million tonne ore processing per annum with defined resource supporting an 80 year open pit operation
- Demonstrated flow sheet with pilot plant and products for market evaluation operated at ANSTO since 2008
- August 2015 Front End Engineering Design (FEED) study confirmed the robust technical and financial DFS of April 2013
- State and Federal environment approvals in May and August 2015
- Finnish technology/engineering solutions company Outotec appointed for Early Contractor Involvement (ECI) in September 2015 to present a fixed price EPC



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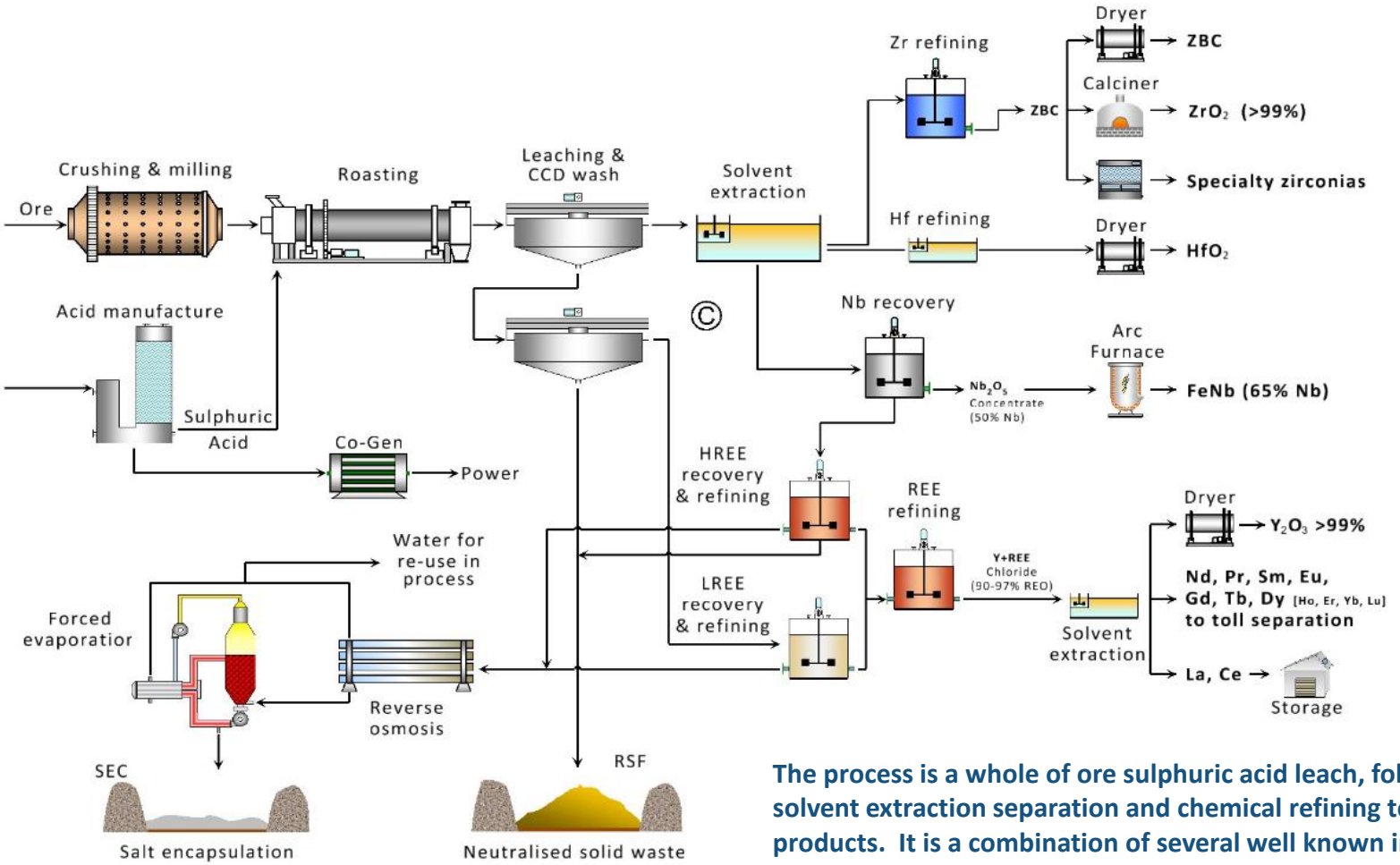
DZP Key Milestones

- State Approval 28 May 2015
- Federal Department of Environment Approval 25 August 2015
- Front End Engineering Design (FEED) completed 27 August 2015
- Revamped flowsheet, with specific rare earth separation on site, improved waste management and reduced water consumption
- Technology engineers Outotec appointed 29 September 2015 for Early Contractor Involvement (ECI) to produce EPC (Fixed price) construction cost
- Mining Lease Approved 18 December 2015
- Environmental Protection Licence (EPL) approved 14 March 2016
- Rare Earth Toll Treatment Agreement with Vietnam Rare Earth JSC April 2016
- Zirconium Marketing and Sales Agreement with the UK based Minchem Pty Ltd August 2016
- MOU signed with Siemens for off-take and equipment supply October 2016
- Modularised construction concept advanced October 2016

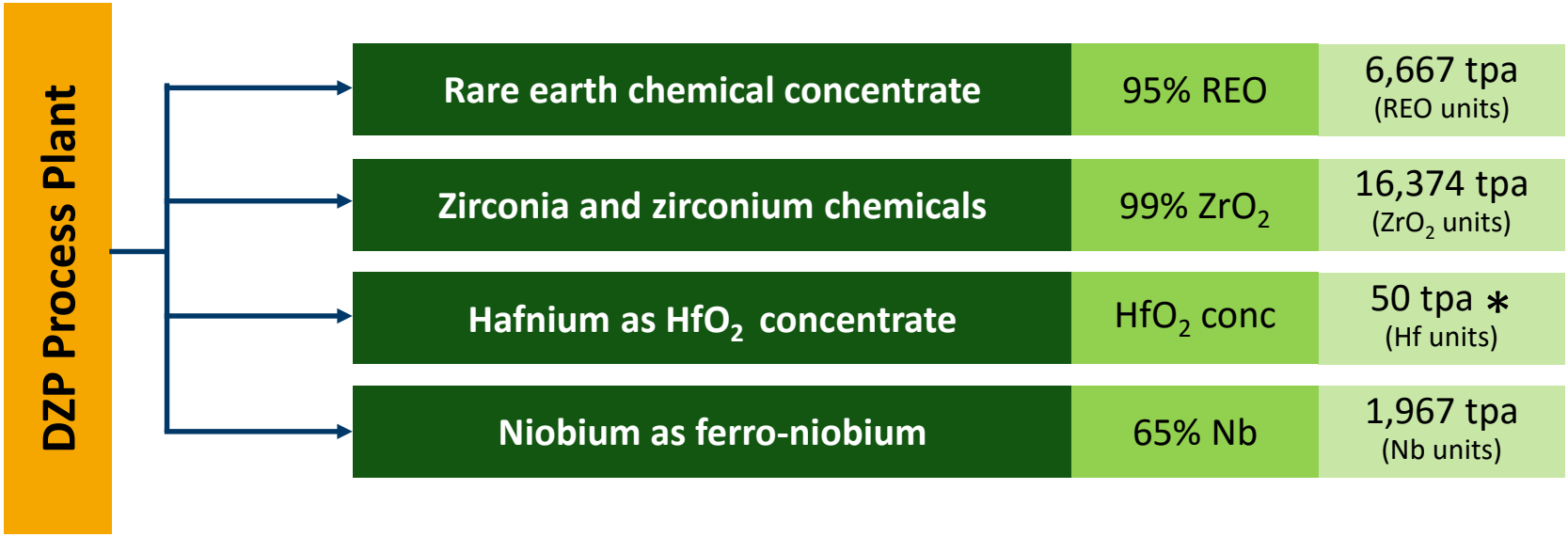
- Financing, product off-take agreements – continued progress

Process Flowsheet



The process is a whole of ore sulphuric acid leach, followed by solvent extraction separation and chemical refining to produce products. It is a combination of several well known individual process components.

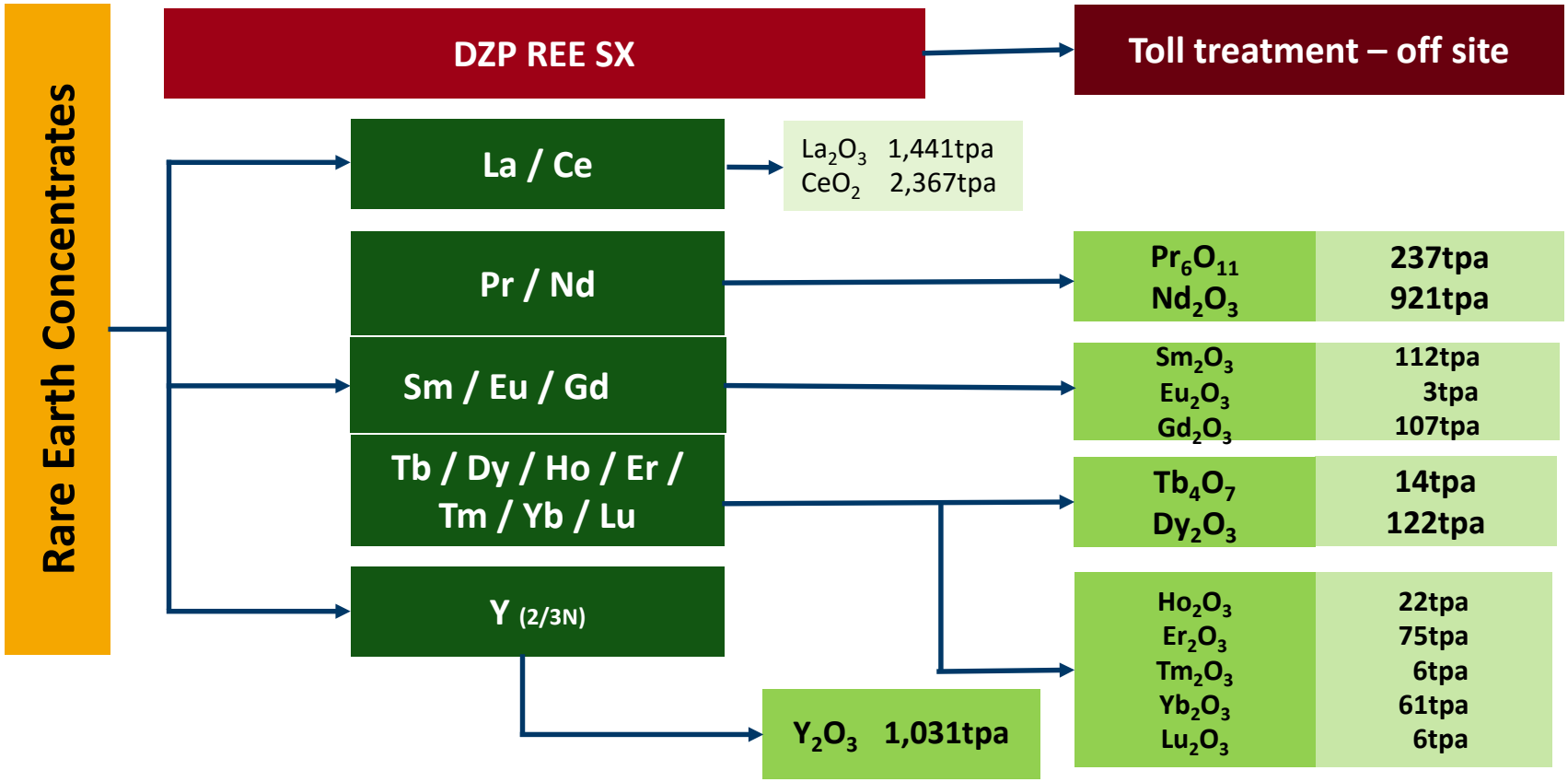
Product Output



∗ **Start up output. 200tpa potential depending upon market demand**

Tonnage based upon recoveries developed from mass balances of the demonstration pilot plant.
Total output approximately 25,200 tpa of all products

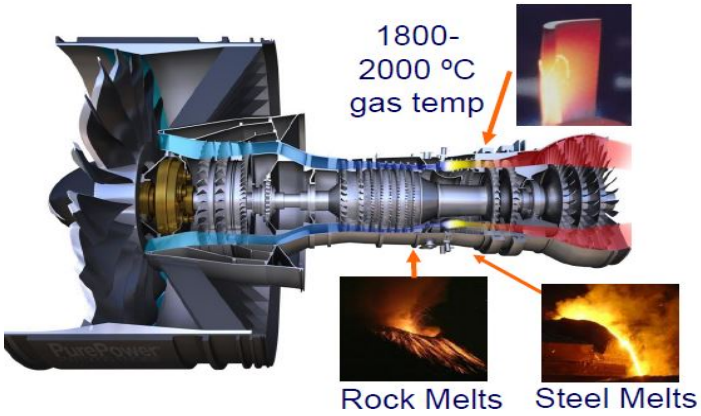
Rare Earth Output



Tonnage based upon recoveries developed from mass balances of the demonstration pilot plant, including solvent extraction stages, some of which will occur on site at the DZP. Total saleable RE products from site ~1,030 tpa and off site ~ 1,675 tpa.

DZP Marketing and Off-take

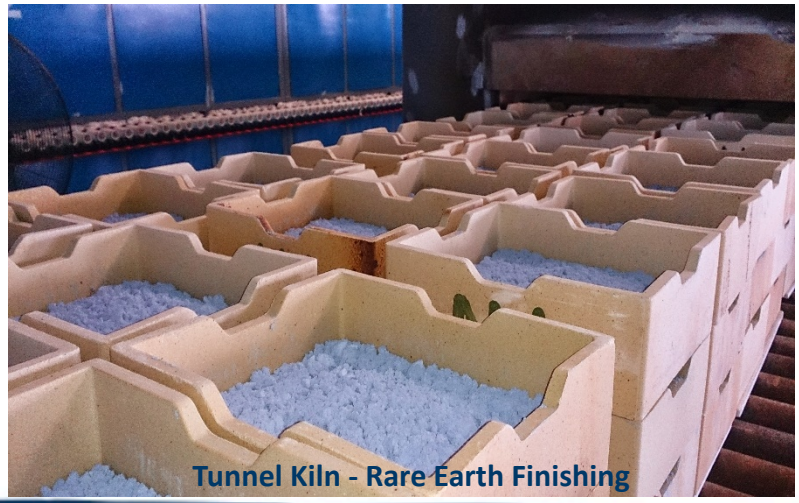
- **Minchem** – World wide zirconium product & marketing/sales agreement.
- **Treibacher Industrie AG** - JV to produce & market ferro-niobium
- **Vietnam Rare Earth (VRE)** – LOI for the production and marketing of separated rare earth products, and down stream value added metal alloy production
- **Siemens** – MOU signed for supply of rare earths and rare metals by DZP and supply of equipment and services by Siemens
- **Industrial Companies - permanent magnet and aerospace** – Ongoing interest and discussions with multiple end users for specific rare metals and separated rare earth products
- **Supply and JV discussions ongoing** - High purity zirconium feed for reactor grade metal and hafnium for metal and high grade oxide production



Vietnam Rare Earth JSC LOI

- **Phu Ly** – 4,000tpa REO separation plant producing La, Ce, Nd, Pr, Dy and Tb
  - Selling certified products into Asia
- **Hai Phong** – 1,200tpa RE metal /alloy plant
  - Selling certified RE metals into Asian permanent magnet manufacturers
- **AZL – VRE Agreement**
  - Toll process DZP RE concentrate feed to produce separated rare earth products to certified standard
  - Establish a joint marketing company to expand VRE's market base into Europe and North America using VRE existing feed
  - Replace and expand existing feed progressively as DZP comes on stream
  - Expand product output to build on AZL's customer base in aerospace and industrial groups in Europe and North America
  - Expand production facilities to increase market penetration
- **VRE Costs** – currently equal to or less than quoted for Chinese rare earth industry

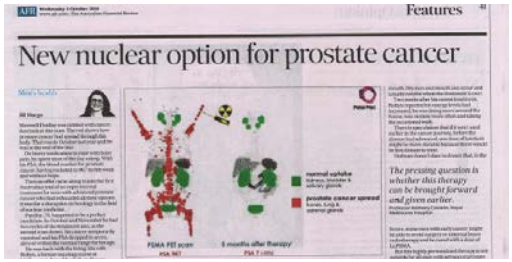

Rare Earth Separation Plant


Tunnel Kiln - Rare Earth Finishing

Key Applications

- **ZIRCONIUM:** Auto catalysts for emissions minimization; thermal barrier coatings for turbines (jet and industrial); ceramics; special alloys/glass; paint drying; paper coating; jewelry
- **HAFNIUM:** Turbine super alloys (jet and industrial); special ceramics; k-gates (computer chips). New applications such as heat energy conversion to electricity
- **NIOBIUM:** Special alloys (steel for tensile strength and lightness); other super alloys; superconductors; coinage
- **RARE EARTHS:** Permanent magnets for electric motors (wind turbines, marine, hybrid and electric cars); catalysts for emissions minimization; batteries; phosphors for energy efficient lighting; numerous electronic applications; photovoltaics; gasless refrigeration

Some Innovations


Features

New nuclear option for prostate cancer

The pressing question is whether this therapy can be brought forward and given earlier.

- An isotope of the rare earth, lutetium, can be inserted into the cancer to radiate from within to eliminate the tumor.

- A lithium-lanthanum-zirconia battery has been developed to eliminate fire issues with lithium-ion batteries

Say sayonara to exploding batteries—LLZO ceramic thin films offer hope for safer, thinner all-solid state lithium-ions

Ultra-thin ferroelectric material for next-generation electronics

TOKYO INSTITUTE OF TECHNOLOGY

- Very thin hafnium oxide films developed for the next generation microprocessors for computers etc

- Special hafnium oxide products can convert heat into electrical energy. Huge potential applications

September 15, 2016

'Thermal metamaterial' innovation could help bring waste-heat harvesting technology to power plants, factories

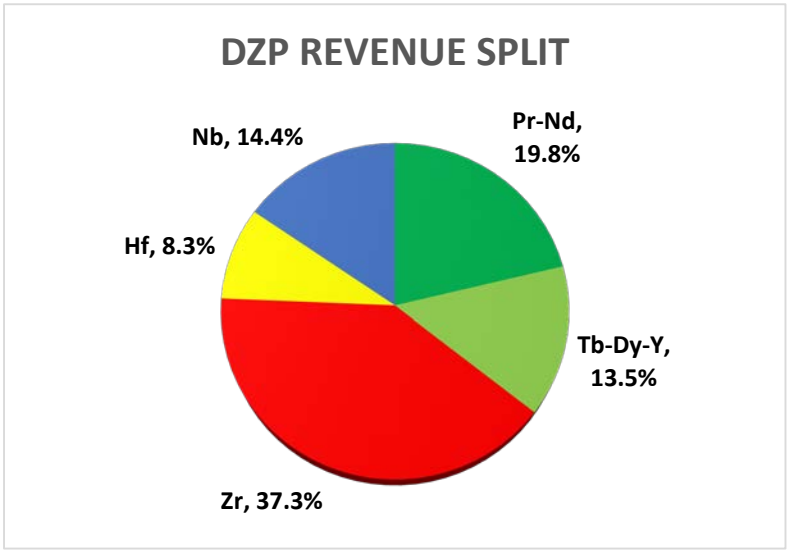
DZP Base Case Financial Summary

Front End Engineering Design (FEED) completed August 2015 on 1Mtpa ore processed

Capex	US$0.93B / US$80M contingency
Revenue	US$430 - $470Mpa
Opex	US$220 - 230Mpa
EBITDA	US$235 - $275Mpa
20 year NPV	US$1.1B (8%)

Revenue based upon Chinese domestic rare earth prices and current spot ranges for Zr and Nb, and a long term sustainable Hf price.

Rare earth revenues largely derived from Pr, Nd, Tb, Dy and Y (for production of RE magnets and special ceramics/alloys)



Operating costs to produce a kilogram of product range from US$7.00 to US$8.00/kg

Revenue averages US$17.00/kg (REO US$23/kg or US$56/kg without La/Ce; Zr US$8-25/kg; Hf US$500/kg; Nb US$38/kg)

Capital intensity ~ US$35/kg of product

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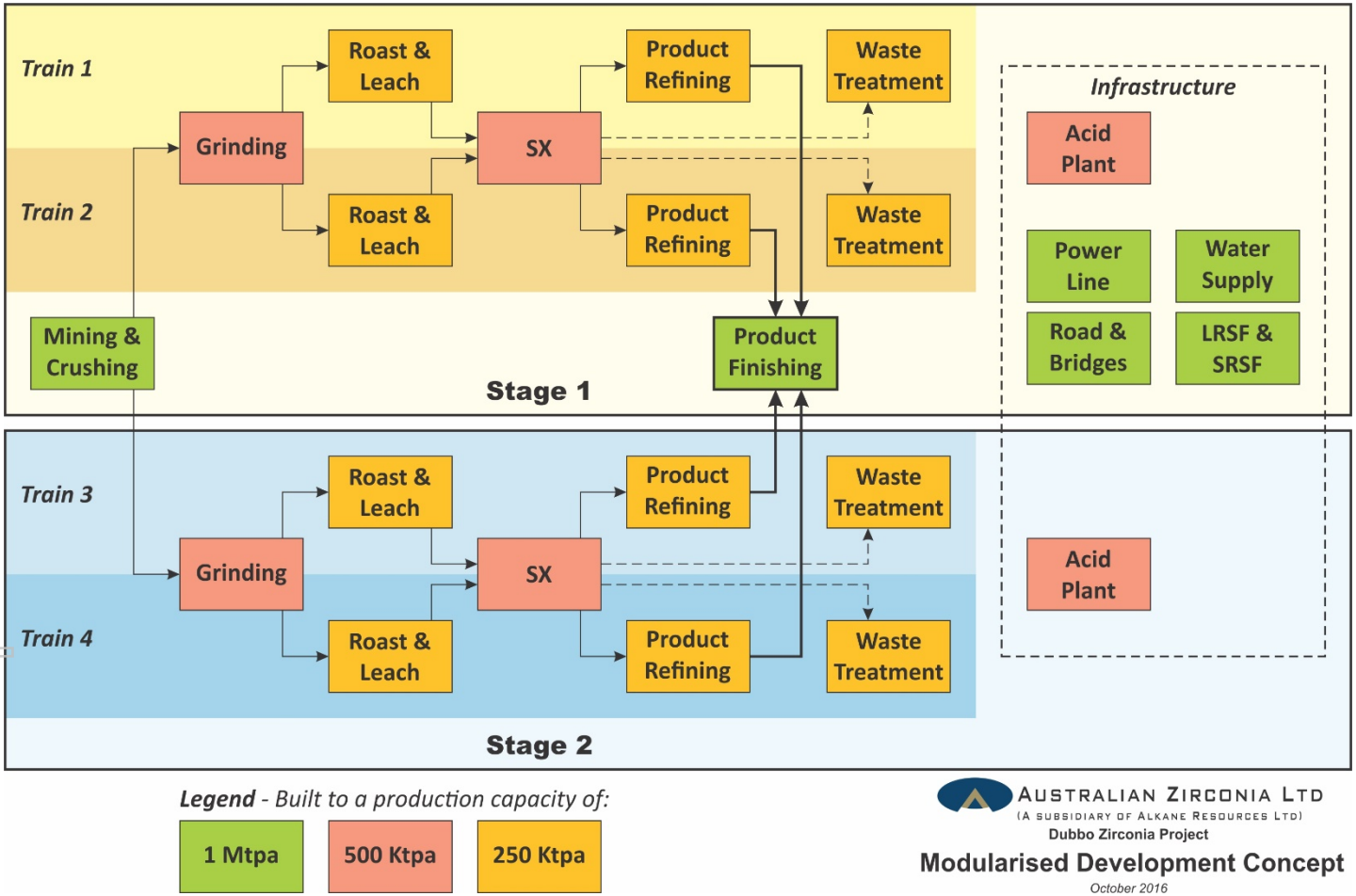
Modularised Development Concept

- Review of engineering and capital cost following the FEED study, modularised development and construction concept is being investigated
- Key outcomes to date have shown that the 1Mtpa plant can be divided into four 0.25Mtpa trains that can be built in easily transportable modules
- This is a similar approach to that used in the LNG industry
- Initial optimisation indicates two 0.25Mtpa trains for 0.5Mtpa ore throughput operation
- Capex for first stage estimated ~US$480M plus ~US$80M working capital. Includes full site infrastructure; power and water supply and half size sulphuric acid plant.
- Production to commence in 2019. Revenue and opex about 50% of base case
- Second stage construction commences in 2022 with production scheduled in 2023. Capex estimated ~ US$360M, and takes product output and revenue to full production level of 1Mtpa

Progressive build concept

De-risks financial exposure, technical complexity and assists market qualification

Modularised Development Concept



Construction 2017 - 2019

Estimated cost US$480M

Construction 2022 - 2023

Estimated cost US$360M

Estimated cost US$840M

The DZP Advantage

- **Internationally strategic**– supply of critical metals from non-Chinese sources
- **Robust revenues forecast** - even at current Chinese domestic RE and Zr prices
- **Supply of all rare earth magnet materials** – neodymium, praseodymium, dysprosium and terbium produced, "heavy" rare earths & yttrium (with developing advanced materials applications)
- **Diversified product output -** provides increased stability across many markets (very different revenue profile to pure rare earth producers Lynas' Mt Weld & Molycorp's Mt Pass,
- **High margin zirconium product -** High purity (99.9%) zirconium increases premium product revenue. Production of zirconium chemicals is not related to zircon or the mineral sands industry.
- **Potential to be world's largest hafnium producer –** DZP is able to supply long term stable production of high purity hafnium products and determine pricing into the expanding aerospace and industrial gas turbine industries, not related to the production of reactor grade zirconium metal. Many new uses for hafnium in development.
- **One of the lowest cost producers –** proposed operating cost structure very competitive @ US$7 - $8/kg of DZP product produced, which places the project in the lowest quartile producer

Toongi Pastoral Company

TPC established to manage farming properties and non mine operations environment

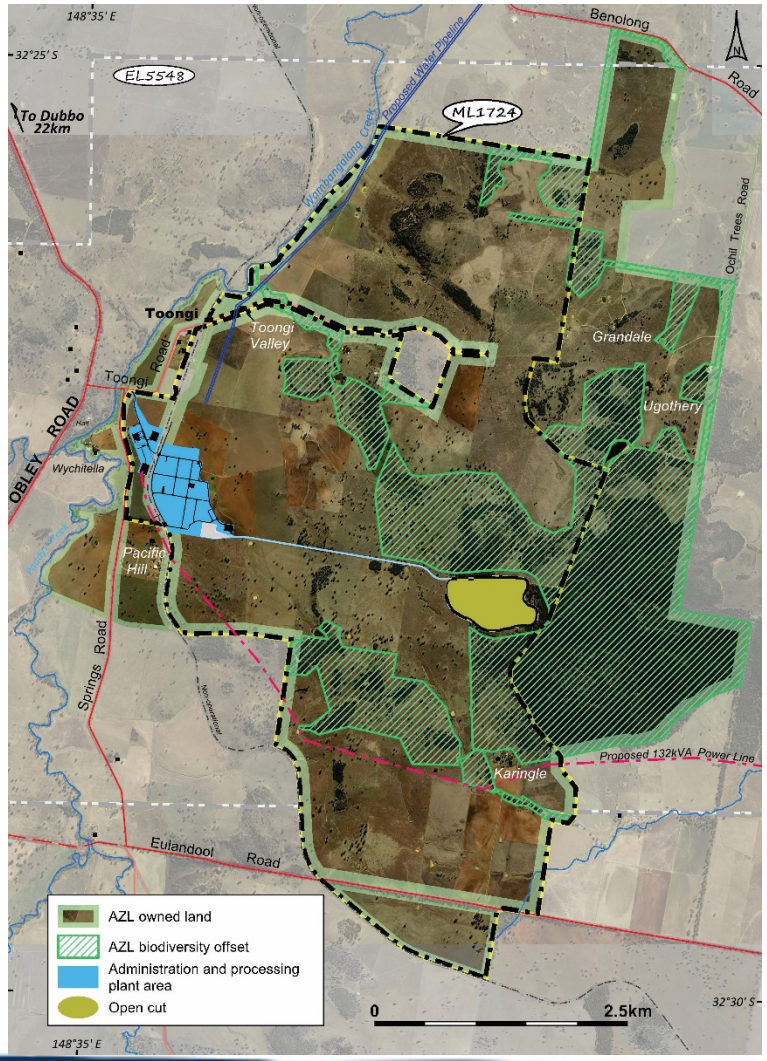
- Operations ~ 500 hectares
- Biodiversity offset ~1,000 hectares
- Commercial farming ~2,000 hectare

Commercial Farming

- Mixed cattle and sheep grazing
- Initial stocking commenced
- Planned to be a self-sustaining and profitable enterprise

Investigating the production of oils from pine trees

- Test facility to distill leaves and timber from White Cypress pine trees to recover oils
- White Cypress is regarded as an invasive native species in the area
- Oils have pharmaceutical properties



The Future

- Build on the gold production and cash flow from TGO by extending known reserves and regional exploration and resource potential
- Advance the modular/staged development of the DZP though off-take, technology partnerships and financing
- Progress DZP to production and cash flow
- Maintain the diversified exploration effort within the Central West Region to define and develop the next generation of resources
- Maintain highest possible environmental and community engagement standards. Ensure the success of Toongi Pastoral Company
- Retain focus on substantial cash flows, with capital growth and potential dividends

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 of 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.

DZP Resources and Reserves

Dubbo Zirconia Project – Mineral Resources

Toongi Deposit	Tonnage (Mt)	ZrO_2 (%)	HfO_2 (%)	Nb_2O_5 (%)	Ta_2O_5 (%)	Y_2O_3 (%)	REO (%)
Measured	35.70	1.96	0.04	0.46	0.03	0.14	0.75
Inferred	37.50	1.96	0.04	0.46	0.03	0.14	0.75
Total	73.20	1.96	0.04	0.46	0.03	0.14	0.75

These Mineral Resources are based upon information compiled by Mr Terry Ransted MAusIMM (Alkane Chief Geologist) 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. 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_2O_5 (%)	Ta_2O_5 (%)	Y_2O_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 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. The reserves were calculated at a1.5% combined ZrO_2+Nb_2O_5+Y_2O_3+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.

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Resource & Reserves: Tomingley

TOMINGLEY GOLD PROJECT MINERAL RESOURCES (as at 30 June 2016)									
DEPOSIT	MEASURED		INDICATED		INFERRED		TOTAL		Total Gold
	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	(Koz)
Open Pittable Resources (cut off 0.50g/t Au)									
Wyoming One	1,980	1.7	416	1.6	671	1.1	3,067	1.6	153
Wyoming Three	86	2.0	16	1.3	33	1.4	135	1.7	8
Caloma	604	1.3	1,892	1.4	1,204	1.4	3,700	1.4	163
Caloma Two			1,085	2.4	704	1.3	1,789	2.0	112
Stockpiles							701	0.8	18
Sub Total	**2,670**	**1.6**	**3,409**	**1.7**	**2,612**	**1.3**	**9,392**	**1.5**	**454**
Underground Resources (cut off 2.50g/t Au)									
Wyoming One	169	4.8	206	4.4	363	4.2	738	4.4	104
Wyoming Three	10	3.6	6	3.1	4	3.1	20	3.4	2
Caloma			1	2.9	18	2.9	19	2.9	2
Caloma Two			92	3.5	63	3.2	155	3.3	17
Sub Total	**179**	**4.7**	**305**	**4.1**	**448**	**4.0**	**932**	**4.2**	**125**
TOTAL	**2,849**	**1.8**	**3,714**	**1.9**	**3,060**	**1.7**	**10,324**	**1.8**	**579**

TOMINGLEY GOLD PROJECT ORE RESERVES(as at 30 June 2016)							
DEPOSIT	PROVED		PROBABLE		TOTAL		Total Gold
	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	Tonnage (Kt)	Grade (g/t Au)	(Koz)
Open Pittable Reserves (cut off 0.50g/t Au)							
Wyoming One	1,297	1.7	150	1.5	1,447	1.6	78
Wyoming Three	0	0	0	0	0	0	0
Caloma	116	1,7	722	1.6	838	1.6	43
Caloma Cut Back	233	1.4	251	1.1	484	1.2	19
Caloma Two	-	-	318	3.2	318	3.2	33
Stockpiles	701	0.8	-	-	701	0.8	18
Sub Total	**2,347**	**1.4**	**1,441**	**1.9**	**3,788**	**1.5**	**191**
Underground Reserves (cut off 2.50g/t Au)							
Wyoming One*	224	4.0	301	3.4	524	3.7	62
Sub Total	**224**	**4.0**	**301**	**3.4**	**524**	**3.7**	**62**
TOTAL	**2,571**	**1.6**	**1,742**	**2.2**	**4,312**	**1.8**	**253**

Note: ASX announcements 21 September 2015, 10 December 2015 and 22 September 2016 - 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.

TGO “Rain events”


Flooded TGO site access road, July 2016


Flooded farms TGO, July 2016


Caloma Pit, September 2016


Wyoming One Pit, September 2016