



10 May 2010

Manager Announcements  
Company Announcements Office  
ASX Limited  
20 Bridge Street  
Sydney NSW 2000

Dear Sir,

### **PRESENTATION**

Attached is a copy of a presentation to shareholders immediately following the annual general meeting today.

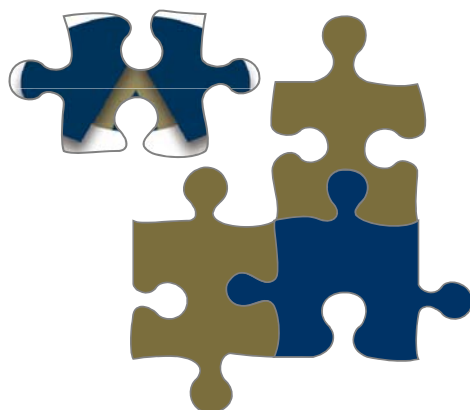
A copy of this presentation will also be available on the Company's website [www.alkane.com.au](http://www.alkane.com.au).

Yours faithfully,  
for **ALKANE RESOURCES LTD**

A handwritten signature in black ink, appearing to read 'D I Chalmers'. The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

D I Chalmers  
**Managing Director**

...putting the pieces together



## Annual General Meeting

10 May 2010



## Corporate snapshot



Exchanges ASX: ALK

Share Price (7 May 2010) A\$0.29

Shares 249m

Fully Diluted Market Cap ~A\$73m

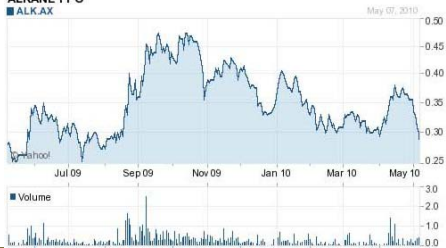
Cash (at April 31 2010) ~A\$10.0m

No debt

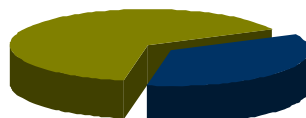
12 Month High / Low A\$0.48/ \$0.18

ALKANE FPO

■ ALKAX



### Shareholder profile\*



Retail	Top 20	~60%
Institutions	Directors & Management	3%
	Abbotsleigh (Gandel Metals)	29%

\*at 31 December 2009

### Directors & Management

J. S. F. Dunlop	Chairman
D. I. Chalmers	Managing Director
I. R. Cornelius	Non-Executive Director
A. D. Lethlean	Non-Executive Director
I. J. Gandel	Non-Executive Director
L.A. Colless	CFO Joint Secretary
K.E. Brown	Joint Secretary
T W Ransted	Chief Geologist
M D Sutherland	General Manager NSW



## Business Strategy



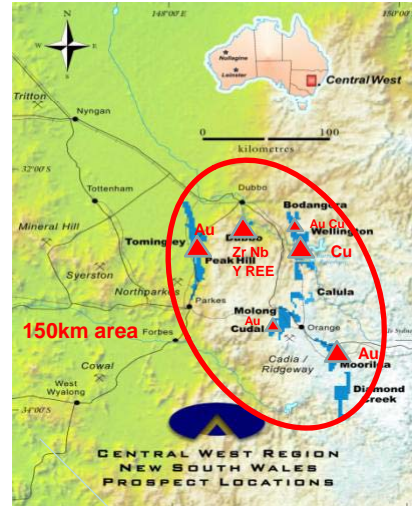
Multi commodity explorer and miner, focussed in the Central West of New South Wales, Australia

Dubbo Zirconia Project – world class resource of zirconium, hafnium, niobium, tantalum, yttrium and rare earths

Gold production from Peak Hill mine 1996 – 2005.  
New gold development planned at Tomingley based upon 800,000 oz resource

Major gold discovery at McPhillamys (+4 million oz)  
Joint Venture with Newmont

Develop multiple operations within tight geographic area over next five years



## Tomingley Project

Gold

Definitive Feasibility Study  
Mintrex Pty Ltd  
Study Manager: *Fiona Morgan*

Environmental Assessment  
R W Corkery & Co Pty Ltd



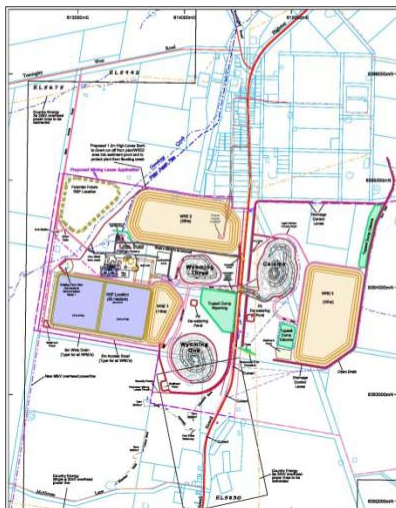
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- 

**...advanced feasibility study**



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- **Infrastructure:**
  - **water** => 45km pipeline
  - **power** (State Grid) => 20km 66Kv power line
  - **roads** => primary & secondary access
- **Skilled local workforce**
  - population base of 150,000 within 120km diameter area
  - No FIFO, no accommodation required

## Proposed site layout

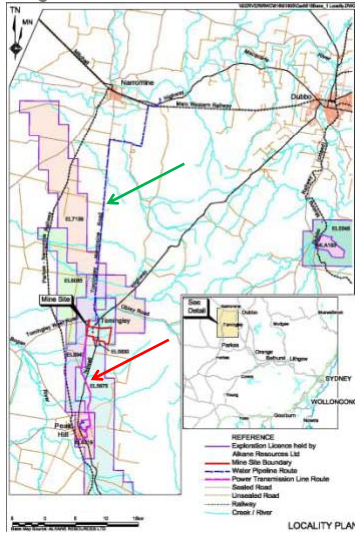


## TGP Infrastructure

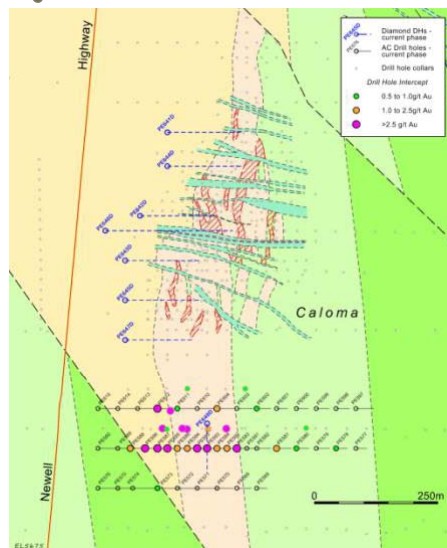


45km water pipeline and 20km power line

Alkane's test bore near Narromine



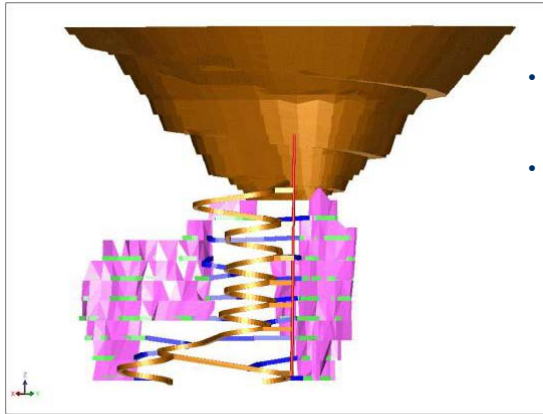
## TGP Current Resource Expansion



- **South Caloma Discovery:**
  - 3,000m aircore with several +3.0g/t intercepts
  - RC resource drill out planned
  - Potential 1Mt open pit resource
- **Caloma Underground**
  - Seven core holes 3,500m
  - Numerous mineralised intercepts
  - Geological modelling for resource potential



## TGP Wyoming One Underground



- Resource at 3.00g/t gold cut off:
  - 690,000 tonnes @ 5.00g/t Au (121,000 oz)
- Prefeasibility study:
  - Decline development near base of pit
  - Sub level long hole open stoping
  - Only three ore bodies '376', '831' and 'Hangingwall' targetted
  - > 80,000 oz recovered

Conceptual underground development



## TGP Economics



PRODUCTION OUTCOMES	BASE CASE	EXPANDED CASE
Mine Life	6 Years	7 - 10 Years
Annual Throughput		
Open Pit	1.0 Million tonnes	
Underground		0.5 Million tonnes
Annual Average Production	50,000oz	50,000oz
Method	conventional CIL circuit	conventional CIL circuit
Recovery	>90%	>90%
Capex (+/- 10%)	A\$90 Million	+A\$10 Million
Estimated cash costs	A\$800/oz	A\$800/oz
Potential LOM cashflow	~A\$120 Million <sup>#</sup>	A\$210 Million <sup>#</sup>

<sup>#</sup> Based on A\$1250 per ounce gold price; 1 Mtpa mill throughput for open pit and 0.5Mtpa for underground

*...targeting 10 year mine life*





## Advanced Exploration

Gold ODEJV - McPhillamys

**Newmont Australia Limited (NAL)**

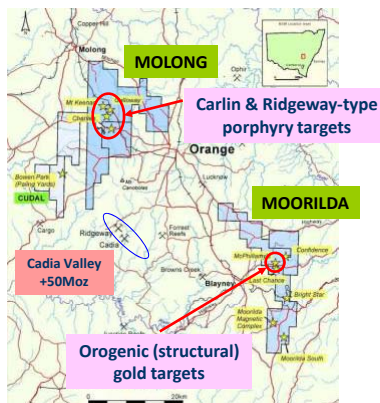
Subsidiary of US based Newmont Mining Corporation

NAL are the Managers and Operators



### ORANGE DISTRICT EXPLORATION JOINT VENTURE (ODEJV)

Gold, Copper – Orange, NSW | Alkane Resources: 49%, Newmont Australia: 51%



#### TWO FOCUS AREAS:

- **Molong**
  - targeting copper-gold porphyry-style gold mineralisation (Ridgeway-type) and Carlin style
- **Moorilda**
  - drilling confirms potential to host a major gold system @ McPhillamy's
- Newmont have earned 51%, to go to 75% by carrying all expenditures through to completion of final BFS

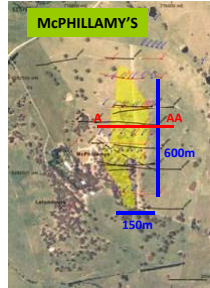
*...low risk with significant upside + 4moz system*



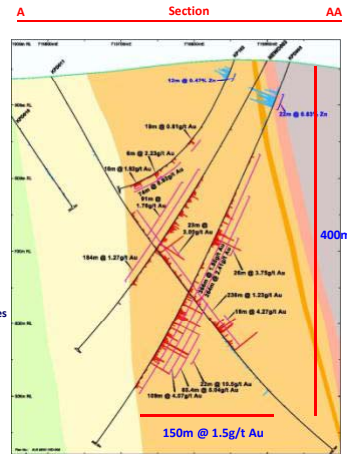


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- ## CONCEPTUAL TARGET



- **BASE AREA**
- ~600m x 150m x 85% = 76,500m<sup>2</sup>
- Vertical depth of 500m = ~38 million m<sup>3</sup>
- Tonnage [@ 2.8 SG] = ~100 million tonnes



**... potential open cut or block caving operation**

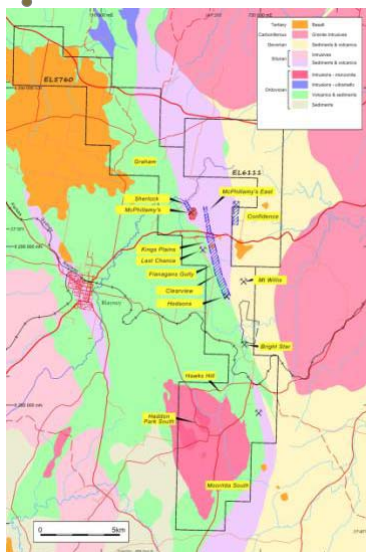


## ODEJV Moorilda Regional Targets



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- ### MULTIPLE TARGET AREAS:







## Dubbo Zirconia Project

Zirconium, niobium, yttrium, rare earth elements

### Definitive Feasibility Study

TZ Minerals International Pty Ltd

Study managers: *Steve Gilman and Gavin Diener*

Marketing: *Alister MacDonald (TCMS) and Dudley Kingsnorth (IMCOA)*

DPP Operations: *ANSTO Minerals Group*



## Rare Metals - Rare Earths

### Rare Metals – Rare Earths

- China produces 90% of world downstream zirconium chemicals
- China is limiting the export of raw rare earths materials
- China currently produces 95% of world REE output
- Brazil produces 90% of world niobium

Periodic Table

Rare metals

Light rare earths Mids Heavy rare earths

Yttrium "powered" compact fluorescent light



- ◆ **Green technology** is dependant on **rare metals and rare earths**
- ◆ **Increased demand** also driven by **changes in legislation**
- ◆ China has dominant position

*...not so rare, but increasingly valuable*



## Dubbo Zirconia Project Location



Dubbo region pop 80,000

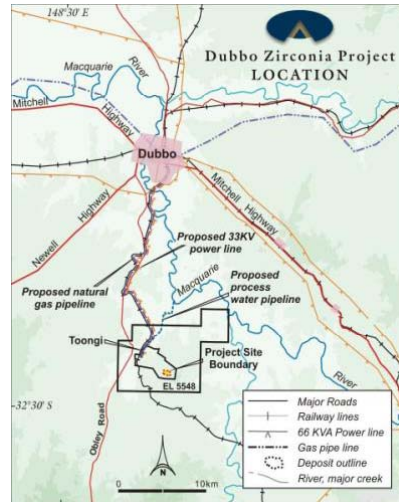
State power grid

State gas grid

Major mixed agriculture

Transport hub

Substantial light industry



## DZP Resources



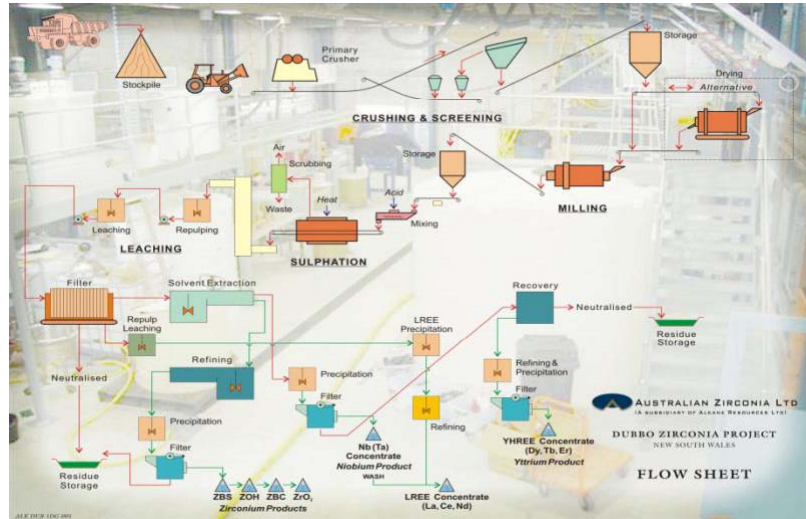
<b>Measured Resource</b> 0 - 55 metres	:	35.7 million tonnes grading 1.96% ZrO <sub>2</sub> , 0.04% HfO <sub>2</sub> , 0.46% Nb <sub>2</sub> O <sub>5</sub> , 0.03% Ta <sub>2</sub> O <sub>5</sub> , 0.14% Y <sub>2</sub> O <sub>3</sub> , 0.75% REO and 0.014% U <sub>3</sub> O <sub>8</sub>
<b>Inferred Resource</b> 55 - 100 metres	:	37.5 million tonnes at similar grades
<b>TOTAL</b>	:	73.2 million tonnes

Major world resource of zirconium, hafnium, niobium, tantalum, yttrium and rare earth elements

Although the ore is not classified as a radioactive deposit, it contains 23 million lbs (10,200t) of uranium

Production of uranium is currently prohibited in NSW





**Increased demand for many of the metals is driven by environmental legislation to ensure emissions minimisation and energy consumption efficiency**



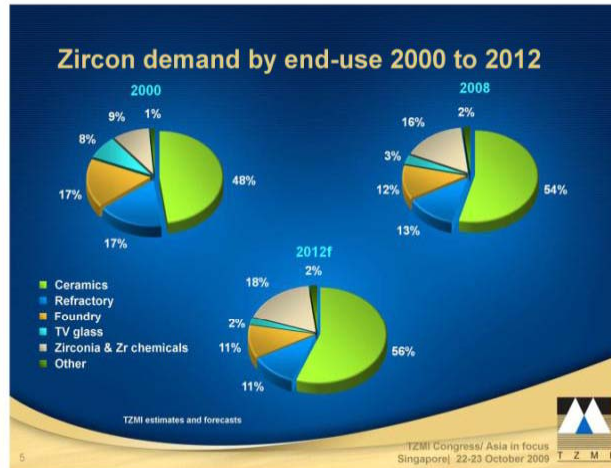
## Zircon Usage

Zircon provides the feedstock for the zirconium industry



**2012 Global  
consumption  
estimate  
1,400,000tpa**

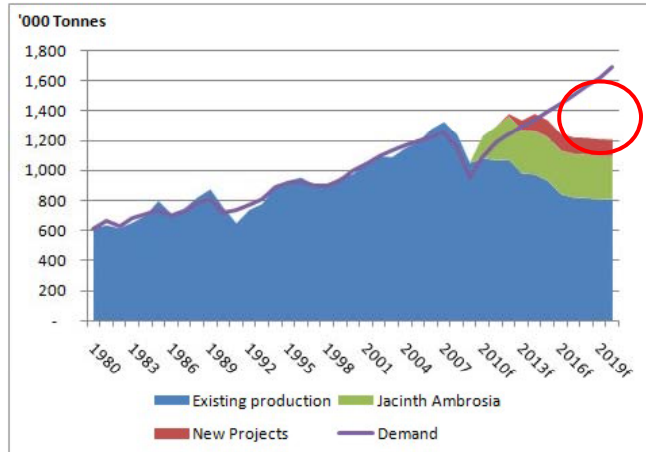
**18% = 250,000t zircon  
for zirconia and  
zirconium chemicals**



Source: TZMI



## Zircon Supply Demand Price



20% shortfall by 2020

**Zircon price and supply will have a major impact on the cost and availability  
of zirconium chemicals, zirconia and zirconium metal**

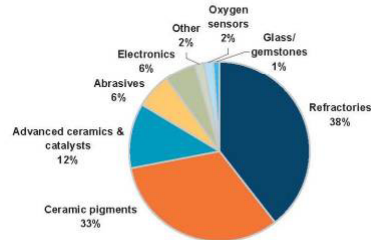
Source: TZMI



## Zirconium Chemicals



### Current Zirconia Zirconium Chemical Uses



2015 Estimated

150,000 tonnes with industry growth rate of 4.5%pa

High growth areas:

Advanced ceramics and catalysts 13.0%pa

Ceramic pigments 8.0%pa

Zirconium metal for nuclear applications ?

Products range from US\$4/kg to US\$20/kg

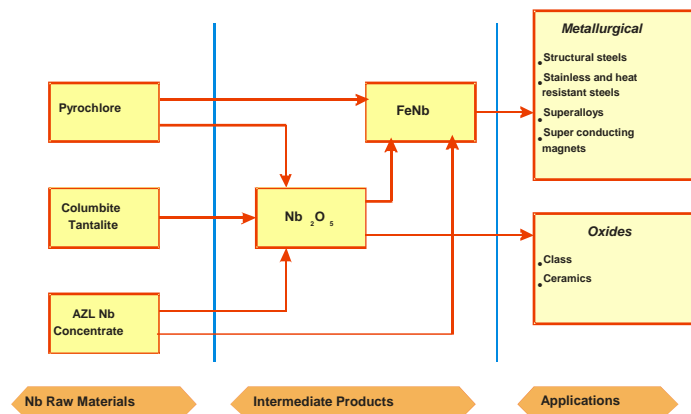
Metal US\$200/kg



Source: TZMI



## Structure of Niobium Industry



DZP process removes radioactive elements such as uranium and thorium, producing clean concentrate

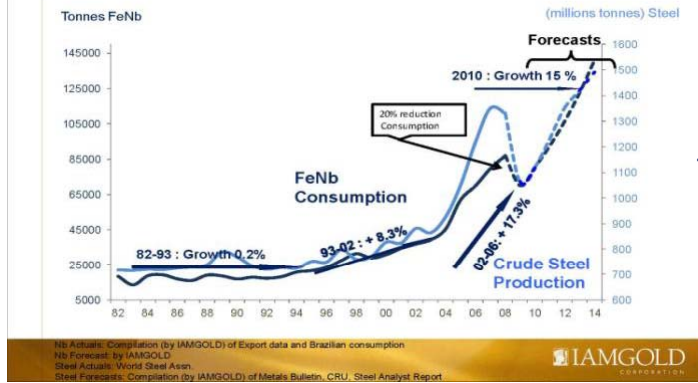
Source: TZMI



## Niobium Demand



### World Consumption Forecast (FeNb)



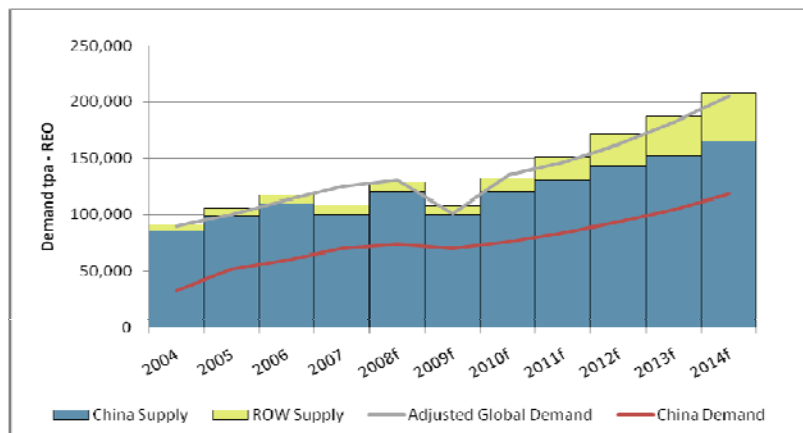
**Niobium 2008  
(Ferroniobium units)  
consumption  
~85,000t – 90% Brazil  
Estimate for 2012  
~100,000t**

**Ferroniobium price spiralled to US\$60/kg in March 07 and is currently around US\$35 - 40/kg  
Long term expected to be in US\$25 - \$35/kg**

**Sources: IAMGOLD / TZMI**



## Rare Earth Supply - Demand



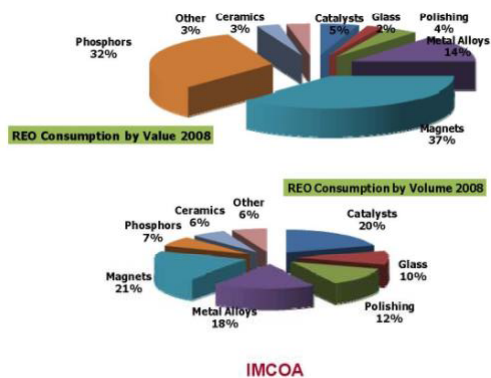
**Source: IMCOA**



## Rare Earth Consumption



### 2008 REO Consumption



Total YREE demand 2014 estimated to be 200,000 tonnes

Source: IMCOA



## DZP Product Output



Base case model of 400,000 tonnes per year of ore processed

Ore processed	400,000tpa	1,000,000tpa "Blue sky"
ZBS, ZOH, ZBC, ZrO <sub>2</sub>	15ktpa (6ktpa ZrO <sub>2</sub> )	37ktpa (15ktpa ZrO <sub>2</sub> )
Nb-Ta concentrate	2ktpa (1.4ktpa Nb <sub>2</sub> O <sub>5</sub> )	5ktpa (3.5ktpa Nb <sub>2</sub> O <sub>5</sub> )
LREE concentrate	1,980tpa (REOs)	4,950tpa (REOs)
YREE concentrate	600tpa (REOs)	1,500tpa (REOs)

Base case revenues ~US\$100m  
Open pit life 200 years

Blue sky ~US\$250m  
Open pit life 80 years

- ZBS = zirconium basic sulphate; ZOH = zirconium hydroxide; ZBC = zirconium carbonate    Equivalent ~99% ZrO<sub>2</sub> + HfO<sub>2</sub>
- Nb-Ta concentrate = ~70% Nb<sub>2</sub>O<sub>5</sub> + Ta<sub>2</sub>O<sub>5</sub> calcined basis    ■ LREE = La, Ce, Nd    ■ YHREE = Y, Gd, Dy, Tb



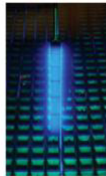


## Zr Applications - metal

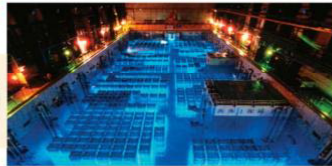
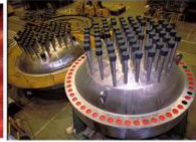
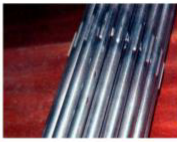
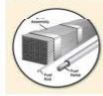


### Zirconium metal and alloys for nuclear power plants

#### Fuel Rods - Zirconium Metal Use



Spent Fuel Rod



*Today there are 436 reactors, with 40 under construction, 110 planned and 272 proposed.*

*Depending upon reactor type, each uses 10 to 45 tonnes Zr metal.*

*Fuel rod has life of 5 to 6 years, and then must be replaced*

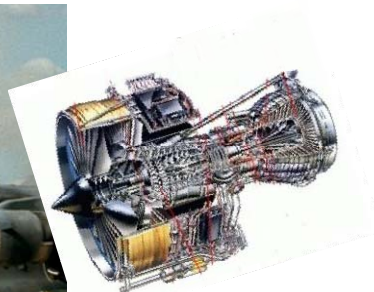


## Zr - Nb Applications



### Niobium alloys for turbine blades

### Zirconia thermal barrier coatings in jet engines





## Applications in the Auto Industry



### Main challenges for the car industry



2009, November - Hana Kana, Roskill



Source: Rhodia



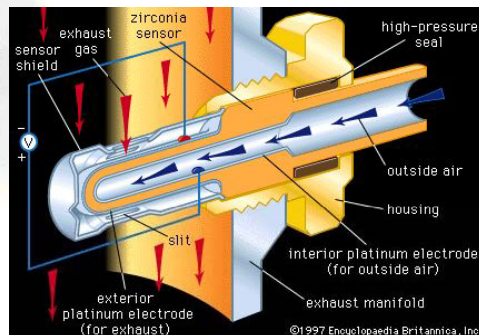
## Zr Applications



### Emission control – zirconia ceramics



Catalytic converter



Oxygen sensors

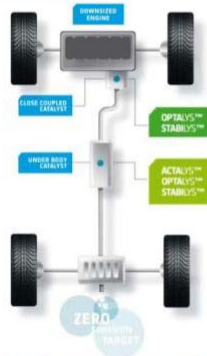
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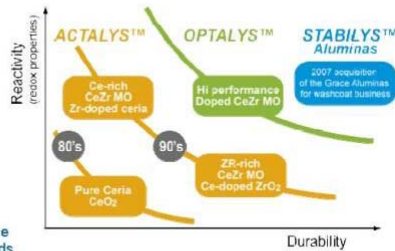
## Zr REE Applications



### Materials for cost effective gasoline catalyst formulations



Rhodia materials keep precious metal available for catalysis after severe ageing, and enable the formulation of cost effective low Precious Metal loaded catalysts



Rhodia has been present in TWC since the very beginning. « the alumina beads time », and since then has continuously brought innovations to the market

2009. November - Hono Kona, Roskill



Source: Rhodia

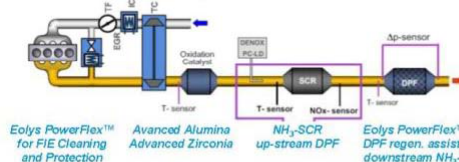


## Zr REE Applications



### Rhodia's Diesel Materials Platform for EURO6

- **EOLYS PowerFlex™** for Diesel Particulate Filter Regeneration assistance
  - DPF regeneration quality
  - Fuel economy
  - Fuel injection cleaning
  - Cost reduction: ~20% Pt/Pd reduction at the DOC / ~100% Pt reduction at the DPF
  - Fuel flexibility (biodiesels, Sulfur contents)
- **Acidic Zirconia for NH<sub>3</sub>-SCR Catalysts: ACILYS™**
  - Precious metals savings
  - Fuel efficiency and CO<sub>2</sub> emission reductions
  - Flexibility in exhaust integration
- **Advanced Alumina/Zirconia for Diesel Oxidation Catalysts: STABILYS™**
  - Highly sulfur resistant support
  - Precious metals saving with high thermalstable materials



\*ACILYS™ is a joint development with MEL Chemicals

2009. November - Hono Kona, Roskill



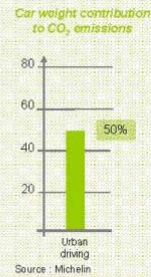
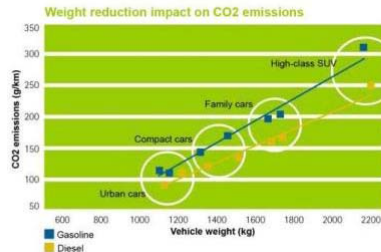
Source: Rhodia



## Nb Applications



### Weight reduction to lower CO<sub>2</sub> emissions



Also the addition of 0.15kg of niobium to the steel content of an average car, decreases the weight by 100kg

Niobec (IAMGOLD)

Metal is being replaced by polyamide engineering plastics for structural, exterior and under-the-hood parts.  
Electrical motors using NdFeB based magnets

2009, November - Honda Kona, Rostill



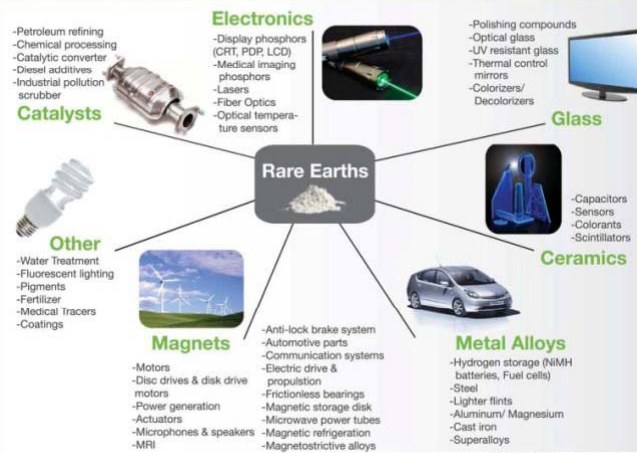
Source: Rhodia



## REE Applications



### Applications For Rare Earth Elements



© 2009 Molycorp Minerals LLC

Source: Molycorp



## Development pathway



		-> 2009	2010	2011	2012	2013
DUBBO ZIRCONIA PROJECT	Resource definition 2001 -2002	✓				
	Flow sheet development 2002	✓				
	Laboratory Zr – Nb 1999 - 2002	✓				
	Pilot plant Zr – Nb 2002	✓				
	Mine Plan & Scheduling 2002	✓				
	Plant Design & Engineering 2002	✓				
	Laboratory Y & REE 2009 -					
	Demonstration Pilot Plant 2008 -					
	Zr – Nb Product Distribution	✓				
	Y - REE Product Distribution					
	Secure Offtake Agreements					
	Definitive Feasibility Study	2002				
	Environmental Impact (EA)	2000 ->				
	Detailed Design					
	Project Financing					
	Construction					
	Production					

CAPEX base case estimated at approximately A\$150



## DZP Strategic Significance



Majority of “downstream” zirconium products are derived from zircon, whose output is governed by ilmenite/rutile from mineral sands mining operations.

China dominates downstream zirconium business at ~90% but feed is zircon.

Niobium production dominated by one company, CBMM in Brazil with 90% of market.

Rare earth and yttrium production dominated by China (95%). DZP offers new source particularly for important Y and HREE.

Production costs are spread across the four metal outputs – zirconium (hafnium), niobium (tantalum), light rare earths and yttrium-heavy rare earths.

Project located in region with very favourable infrastructure and legislative framework, both at a State and Federal level.

The DZP provides an alternative and strategic source for a number of important metals, and is capable of producing for hundreds of years from one ore body.





## Community Activities



### The Tomingley Annual Picnic Race Meeting



## Community Activities



### Gilgandra High School F1 in Schools National Final - Melbourne





## Community Activities



### Narromine Glenn McGrath Statue



## Peak Hill Site Rehabilitation



### Heap Leach Pads and Waste Rock Emplacement

#### Kangaroos on Heap Leach Pads







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*...a perfect fit*



## Disclaimer



### 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.

### 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.



## NSW Central West Location Movie



## Demonstration Pilot Plant Movie





## NAGAL PLANT PINJARRA WA

### Large mixer-settlers



## NAGAL PLANT PINJARRA WA

### All mixer-settlers

