



Krucible Metals' Innovative Rare Earths Strategy

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Information of a scientific or technical nature has been prepared with the approval of Andrew Vigar. Mr Vigar has sufficient experience, which is relevant to the style of mineralisation and type of deposit under consideration and to the activity being undertaken to qualify him as "competent persons" as defined in the 2012 edition of the "Australasian Code of Reporting of Exploration Results, Mineral Resources and Ore Reserves". The technical material is generated and prepared by Bridgette Humphries, the company's Senior Geologist, who also has more than 6 years field and analytical experience with the Krucible tenements and resources and is in the process of becoming a competent person. Information of a corporate, industrial or financial nature in this report has been prepared by Allan Branch the company's Managing Director and CEO. For further information please refer to reports and releases to the Australian Stock Exchange together with the Company's website at www.kruciblemetals.com.au.





PRESENTATION SUMMARY

Following a dramatic increase in the value of rare earth elements (REE) in 2011, Krucible invested in exploring, discovering and developing its rare earth projects.

The result has been disclosures via the ASX of work at Coorabulka, Yttro and Valroy, including a JORC inferred resource at Korella.

Rare earth prices have returned to earth since then, but with significant time, money and resources expended by Krucible, it is prudent for the Company to commercialise its rare earth activities.

Otherwise that past work is a waste of shareholder funds.

Krucible discovered that the rare earth sector was complex and not well understood.

Nevertheless, rare earths are on everyone's agenda and countries like Japan and the USA, as well as the European Union have created organisations to develop strategies to avoid risk and dependence on China for supply.

So Krucible committed to a strategy of unprecedented innovation to avoid the pitfalls of other players.



KRUCIBLE METALS SHORT HISTORY



Listed in 2007 on ASX:KRB, head office in Townsville, Queensland, Australia

Share price 15/7/14 AU\$0.052 market cap AU\$4.2m, 80m shares, 20m options



Junior Explorer with tenements mostly in western Queensland

Indications of base and precious metal

25

Discovered phosphate in 2009 (Korella)

Discovered rare earths in 2011 (Korella)



Discovered more rare earths in 2011 (Coorabulka, Yttro)

Applied for first mining lease in 2011, granted in 2012



Initiated low cost rare earth processing R&D in 2012



Sold phosphate assets in 2013, for cash \$12





REE anomalism widened at Coorabulka and Valroy in May 2014

Commercializing rare earth assets in 2014





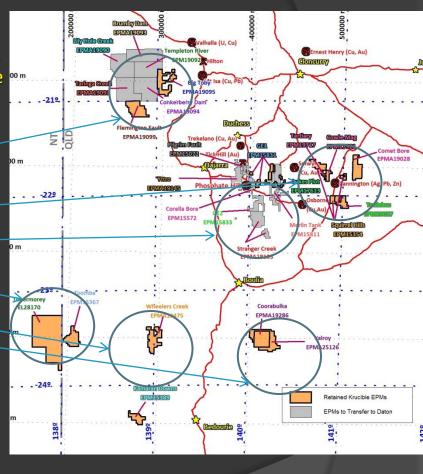
KRUCIBLE METALS TENEMENTS

Krucible has a number of exploration tenements and applications for tenements in north western Queensland and one across the border in the Northern Territory, concentrated in the areas shown. These are along existing fault corridors and following the sake of our developed phosphate tenements, are mostly greenfield sites:

- 1. Isa West
- 2. Cannington
- 3. Phosphate Hill *
- 4. Northern Territory
- 5. Diamantina -
- 6. Boulia South

Krucible explores for base and precious metals, but our focus is also on strategic metals like:

- Rare earths
- 2. Phosphate
- 3. Potash
- 4. Molybdenum
- 5. Strontium
- 6. Lithium
 - 7. Graphite



^{*} First right of refusal joint ventures with Australia New Agribusiness & Chemical Group

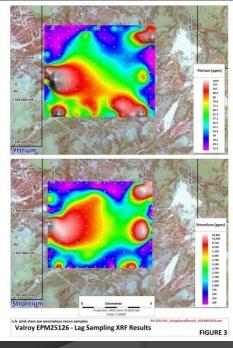




KRUCIBLE METALS RARE EARTH DISCOVERIES

Krucible has made a number of Heavy Rare Earth Element (HREE) discoveries in Queensland, Australia:

- 1. At the Korella Phosphate deposit Krucible has defined a JORC Code Inferred Resource of 7.03 million tonnes @ 0.93 kilograms per tonne Y_2O_3 (yttrium oxide) at shallow depth (average 30m). (ASX :5 April 2011)
- Exploration nearby at Yttro has discovered HREE in both Cambrian and Proterozoic aged units up to (in kilograms per tonne) 1.96 yttrium oxide, 2.22 neodymium oxide, 0.66 praseodymium oxide and 0.95 Scandium oxide. (ASX: Annual Report 2012)
- 3. Krucible has discovered further HREEs at Coorabulka, 300 km SSE of Mt Isa. Sampling has returned values up to (kilograms per tonne) 3.16 yttrium oxide, 4.49 neodymium oxide, 1.07 praseodymium oxide and 0.62 dysprosium oxide over a wide area. Interestingly 0.1% lead and 9.47% strontium were also recorded from this site. (ASX: 13 November 2012)
- 4. Exploration in May 2014 has extended the rare earths anomalism at Coorabulka and Valroy. (ASX: 6 June 2014)







THE RARE EARTHS INDUSTRY DYNAMICS ARE AN ENIGMA

- Everyone knows and trusts that rare earths are <u>critical</u> <u>commodities</u>
- 2. We all know that life as we know it in the <u>technology</u> sector would cease to exist without them
- 3. Their crucial need in magnets, alloys, LCD's, lasers, transport, alternative energy, defence, space, communications, and so on, is indisputable
- 4. It is common knowledge that the majority of rare earth mining and processing is based in China
- We know that <u>China controls its exports</u> and has even refused to supply the <u>key user, Japan</u>
- 6. We know that <u>China tries to control prices</u> because this is important to its economy
- 7. And still <u>prices fall</u> defying all supply and demand rules (charts at right and in this presentation June 2014 courtesy Metal-Pages).

"There's something a little strange going on in China's Production of the various rare earth oxides and metals. Something I'm not sure that I understand properly." (Tim Worstall Forbes Oct 27, 2012)





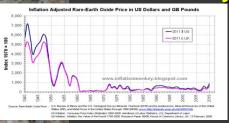






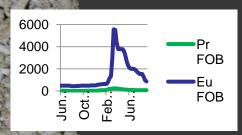
GLOBAL PRICING DYNAMICS

We started by examining long term historical pricing data



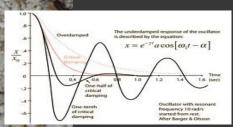
Since the beginning of solid state electronic consumer products, rare earth prices have always been modest

Then we looked at the high prices phenomenon of 2011



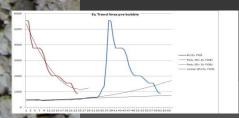
Which in early 2013 everyone expected or hoped to be resumed, but which was clearly an aberration

Then we looked at models of how prices might progress



Which generated acceptable models that allowed clever analysis of the pricing bubble

Then we made bold predictions about the future

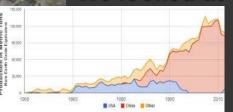


Which are accurate after 18 months



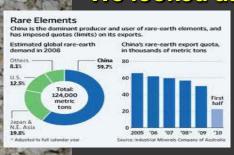
GEOPOLITICAL LANDSCAPE

We looked at the supply:



Even with Molycorp and Lynas now producing, 87% of supply still comes from China

We looked at the demand:



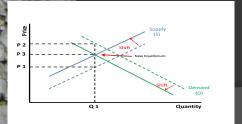
More than 60% of supply out side of China goes to Japan, which mostly manufactures consumer products

We looked at the applications:



Only 5% to 10% of supply goes to aero-defence applications, the rest to consumer products which are an elastic market

We made bold predictions about the market:



Because markets are mostly elastic, prices will never go high, instead manufacturers will source elsewhere or eliminate the use of rare earths



PROCESSING TECHNOLOGIES

We looked at Molycorp:



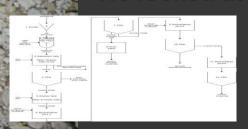
Molycorp describes themselves as a "Chemical Processing" company more than a rare earths miner

We looked at Lynas:



Lynas has had its share of legal and environmental challenges, primarily because of the radio active thorium

We looked at the methods and needed alternatives:



Rare earth processing is intense, complex, energy dependent, high pressure, high temperature,

We participated in research to develop alternative technologies:



Krucible now has a choice of not one but two new low cost alternatives processing options



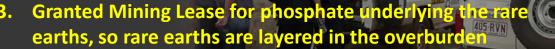


KRUCIBLE'S KORELLA DEPOSIT

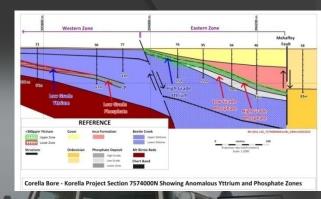
Krucible believes the deposit at Korella (ML90209) is one of the few JORC Inferred HREE resources in Australia and is an uncomplicated mining scenario:

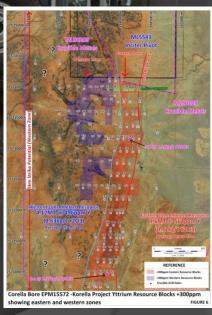






- 4. Metallurgy identified xenotime mineral known to be easier to concentrate than other REE minerals such as monazite
- Anomalous grades of valuable HREE such as dysprosium (Dy) up to 2m @ 294ppm from 19m (09CBRC-128) and neodymium (Nd) up to 1m @ 831ppm from 13m (11CBRC 161) have also been intersected in drilling at Korella. (ASX: Annual Report 30 October 2012)
- Krucible sold this tenement in 2013 and retains first right of refusal to a joint venture for rare earth mining





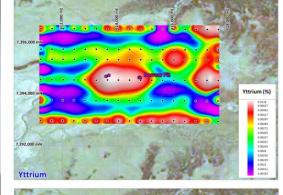


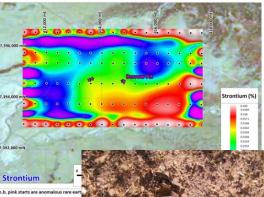
KRUCIBLE'S COORABULKA DEPOSIT

Coorabulka (EPM19286) lies to the south of Boulia where

Krucible has located strong REE values.

- 1. Discovered in a 'borrow pit' dug by the council.
- 2. Krucible has since discovered further enrichment over 1km west of this pit at Valroy (EPM25126).
- 3. The most anomalous values include:
 3.16 kg/t yttrium oxide (Y₂O₃)
 4.49 kg/t neodymium oxide (Nd₂O₃)
 1.08 kg/t praseodymium oxide (Pr₂O₃)
 0.62 kg/t dysprosium oxide (Dy₂O₃)
- 4. The area is also anomalous in other elements:
 1050ppm lead
 9.47% strontium (used in aluminium alloys)
- 6. May 2014 Krucible announced extensions to Coorabulka
- 5. Low-cost metallurgical leaching research underway and alternative chemical processing technology investigations





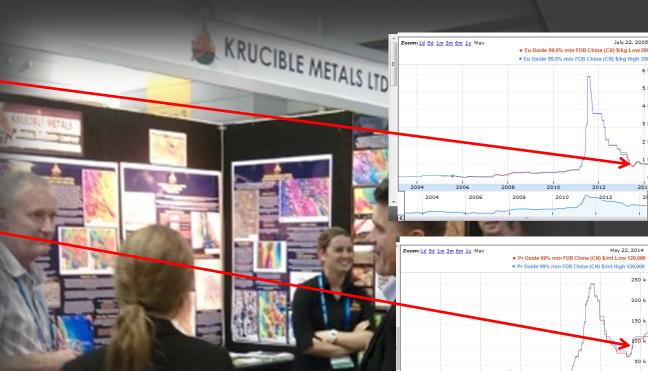


THE RARE EARTHS PRICE PREDICTIONS: SO FAR?

"Europium, a HREE, has dropped below its real value and will settle back to between \$1,200 and \$2,000 per kg by around 8 months while praseodymium, a LREE, has settled already at \$74 per kg, and will double in price every 4 years."

Branch June 2013

investorintel.com



2002



KRUCIBLE RARE EARTHS SUMMARY

Krucible has a 5 part strategy to commercialise or develop its rare earth discoveries:

- 1. Continue exploring and or acquiring rare earth deposits
- 2. Continue research and scale-up of innovative low cost processing technologies
- 3. Use results of analysis of global pricing dynamics to contribute to a profitable and sustainable business model
- 4. Promote these components on the international conference circuit
- 5. Invitation to joint venture or other partners





KRUCIBLE METALS TODAY

Krucible is a "modern" innovative exploration and development company designed specifically to cope with industry challenges

Company saved through an asset sale of phosphate holdings

Corporate activities:

Exploration – main focus

M&A/JV strategy – to ensure sustainability

REE commercialisation – to generate sharehold

REE challenges

Geopolitical - China manipulation

Prices demand

Heavies – heavy REE more valuable

Processing – extremely high cost of processing

Krucible solutions:

Australian based, sitting on infrastructure Global pricing analysis Krucible has heavies, no thorium New low cost processing technologies



Krucible Metals Ltd



Special thanks to Vertical Events for inviting Krucible to this year's conference