

# *Mining a cleaner tomorrow*

Melbourne Mining Club – 19 July 2016

Mike Young, Managing Director and CEO

Vimy Resources Limited



## ‘Mining a cleaner tomorrow’

Vimy aims to become a **reliable** and **respected** uranium producer.



# ● ● Vimy Resources – a uranium company



## People



Board with proven track records in building mines and management team with strong uranium experience

## Project



Mulga Rock is the third largest undeveloped uranium deposit in Australia

## Commodity



Growing demand for uranium

## Financially sound



Strong balance sheet

## Shareholders



Supportive share register



# ● ● People who deliver



**Hon. Cheryl Edwardes, AM**

Non-Executive Chairman

***Significant networks in Government and in Asia's business community***

Former WA State Government Minister holding Ministries of Environment, Labour Relations and Attorney General



**Mike Young**

CEO and Managing Director

***Building mines***

Founding Managing Director of BC Iron Ltd  
Uranium experience in Canada and Australia



**Julian Tapp**

Executive Director

***Expertise in regulatory approvals***

Previous Head of Government Relations and  
Director of Strategy at Fortescue Metals Group



**Tony Chamberlain**

Chief Operating Officer

***Considerable experience with Australian uranium projects***

Extensive operational and capital delivery experience;  
has previously worked on several uranium projects globally



**Ron Chamberlain**

CFO and Company Secretary

***Finance professional with uranium experience***

Significant experience in funding and development  
of uranium projects  
Inaugural CFO for Paladin Energy

***A team with proven track records  
in building mines***

# Strong balance sheet and shareholder base

## Capital structure

Shares on issue	230 million
Share price (14 July 2016)	\$ 0.32
Market cap	\$ 73.6 million
Cash (30 June 2016)	\$ 4.6 million
Debt drawn (30 June 2016)	\$ 7.5 million
Debt facility available (30 June 2016)	\$ 7.5 million
Options (unlisted)	2.9 million @ 35c (June 2018)
	8.7 million @ 154c (Dec 2018)
	8.7 million @ 70c (Dec 2018)
	1.4 million @ 80c (Dec 2019)

## Significant shareholders

Forrest Family Investments	25%
Macquarie	19%
Acorn Capital	19%
Michael Fewster	16%
Resource Capital Funds VI <sup>1</sup>	8%
Directors	3.5%

## Resource Capital Fund VI A\$30m funding package

- \$ 5 million placement
- \$10 million royalty payment (1.15% GSR)
- \$15 million bridging loan

**Resource Capital Fund VI (“RCF”)** is a group of commonly managed private equity funds, established in 1998 with a mining sector specific investment mandate spanning all hard mineral commodities and geographic regions. Since inception, RCF has supported 148 mining companies, with projects located in 47 countries and across 29 commodities. The sixth fund, Resource Capital Fund VI L.P. (“RCF VI”) with committed capital of \$2.04 billion, is now being invested. Further information about RCF can be found on its website [www.resourcecapitalfunds.com](http://www.resourcecapitalfunds.com)

**Forrest Family Investments (“FFI”)** is an Andrew Forrest entity within the Munderoo Group. Andrew Forrest was the founding chief executive officer of Fortescue Metals Group, the world’s fourth largest iron ore producer.



# Chinese action on climate change

- Chinese commitments (INDCs\*) to UNFCC\*\*
  - Carbon emissions will peak by 2030 or earlier
  - Carbon emissions/GDP lowered by 60-65% compared to 2005 levels (34% already achieved)
  - Increase share on non-fossil fuels in *primary energy* to ~ 20%**
    - Will require > 150 GW by 2030**
- Primary energy* from non-fossil fuels (in 2014) ~ 11.2%

Source of power	Design capacity	Capacity utilisation factor	Energy generated TWh	Share of primary energy
Hydro	~ 300 GW	~ 40%	~ 1065	8.6%
Wind	~ 115 GW	~ 16%	~ 160	1.3%
Solar	~ 30 GW	~ 11%	~ 30	0.2%
Nuclear	~ 20 GW	~ 72%	~ 125	1.0%

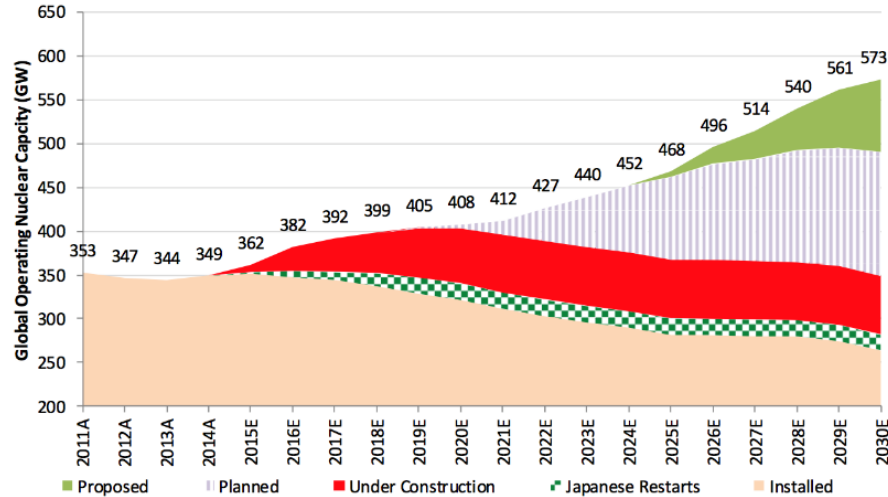


Photos courtesy of guardianlv.com, vice.com and theaustralian.com.au

\* Intended Nationally Determined Contributions; \*\* United Nations Framework Convention on Climate Change

# U market – supply vs demand

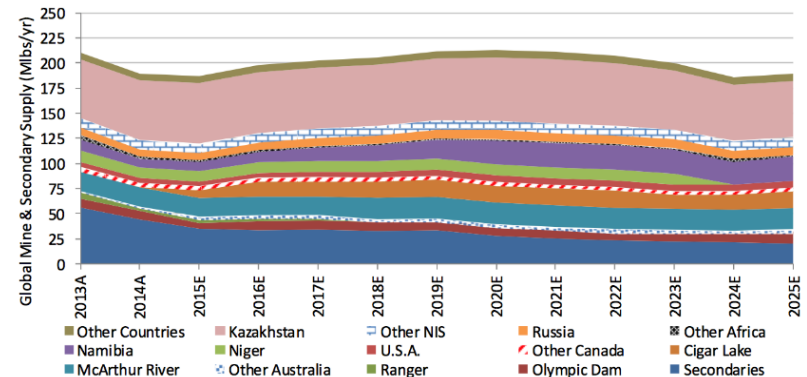
## Operating nuclear capacity forecast (GWe gross)



- Flat growth
- Clear mismatch
- Requires >\$50 US

- RJL is conservative vs WNA
- 2020E units running or under construction
- Planned = approved and funded but no concrete

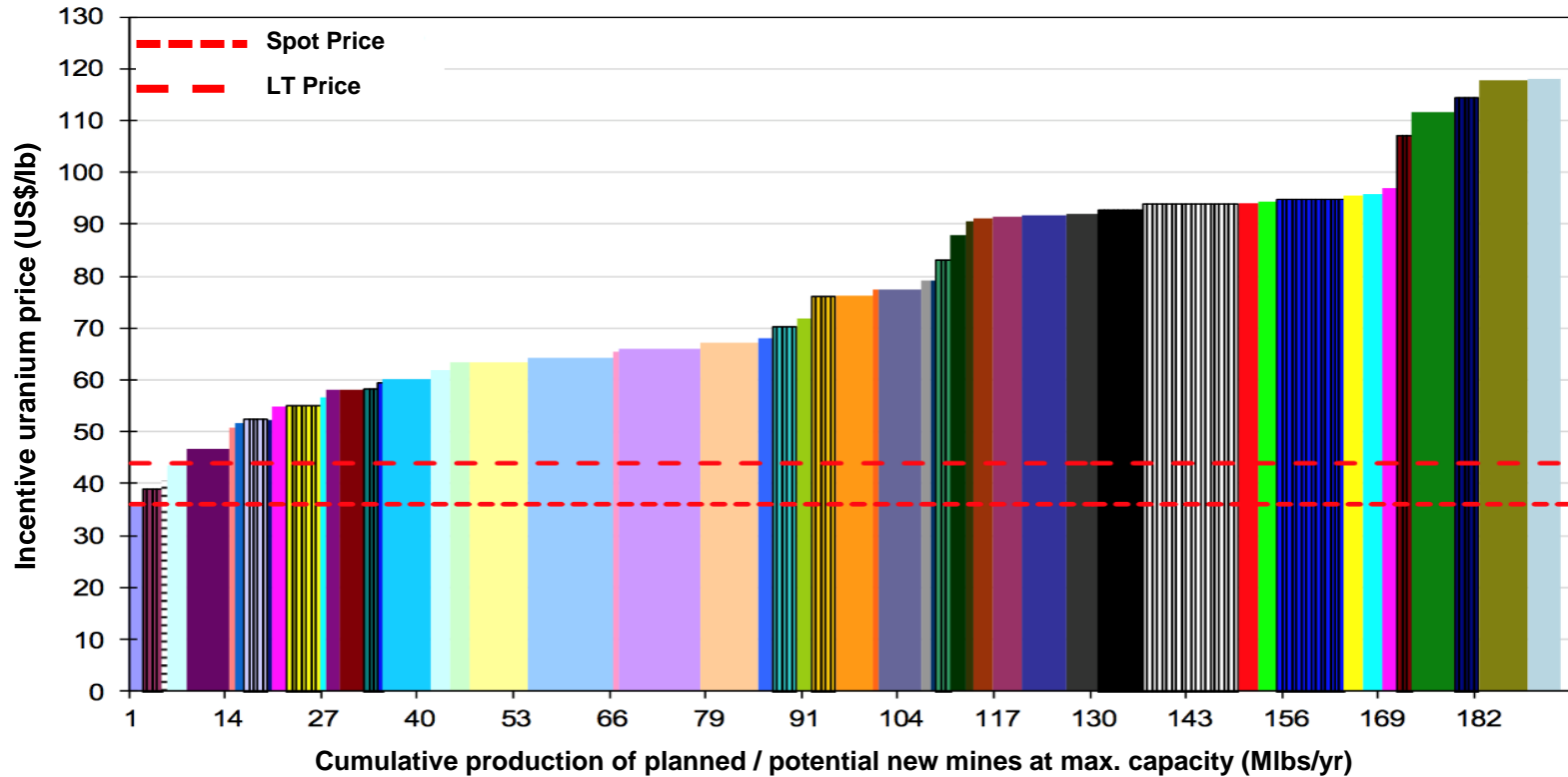
## Global supply forecast (Mlbs/yr U<sub>3</sub>O<sub>8</sub>eq)



Source: Raymond James, 2015

# Uranium price

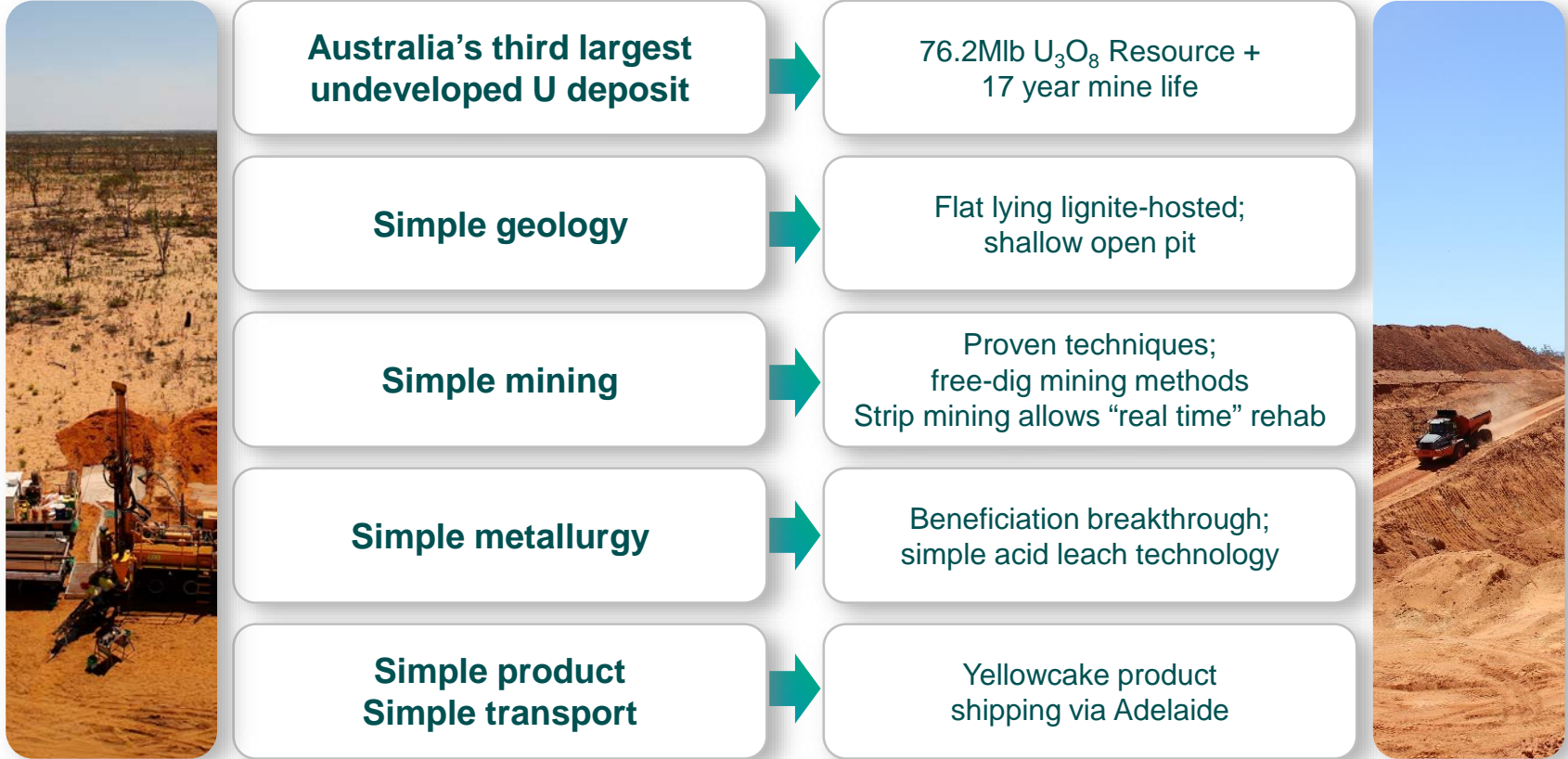
## Global uranium incentive price curve for planned and potential new primary supply



Source: [Raymond James](#), 2015



# Mulga Rock Project – Western Australia



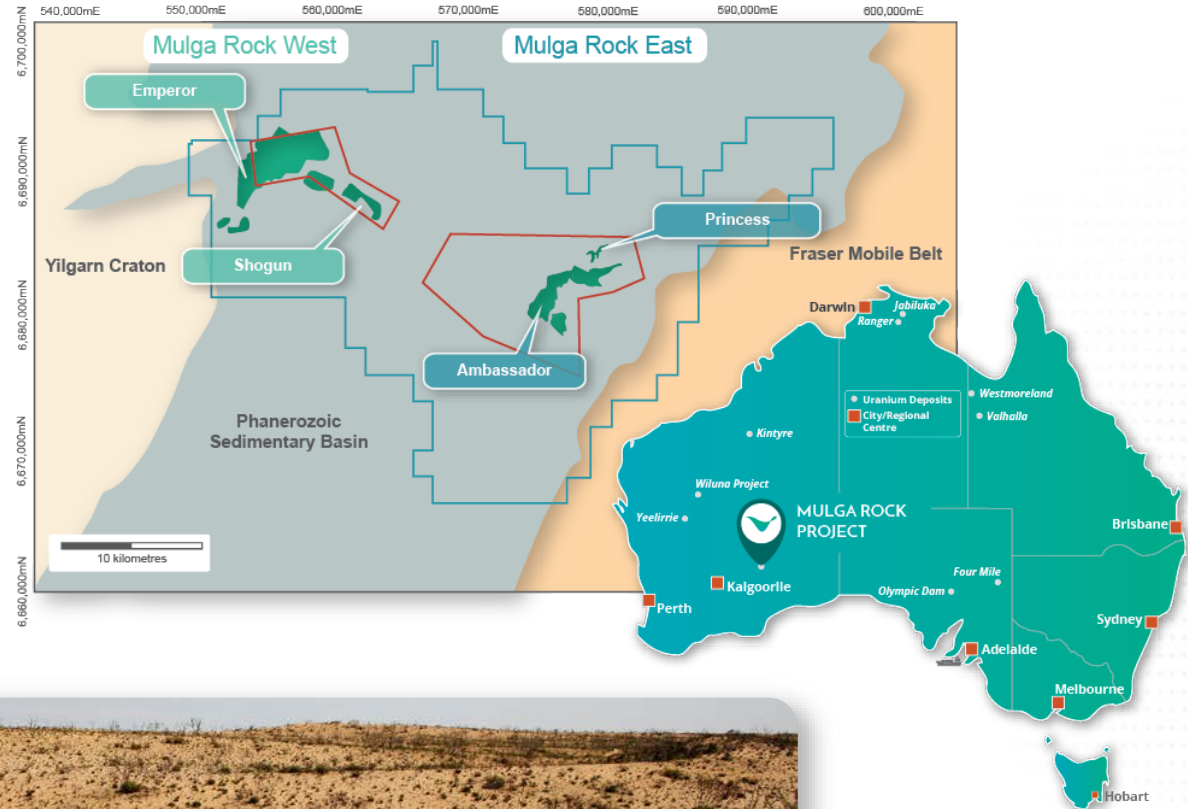
# U<sub>3</sub>O<sub>8</sub> Mineral Resource Estimate

Deposit / Resource	Classification	Cut-off grade (ppm U <sub>3</sub> O <sub>8</sub> )	Tonnes (Mt)	U <sub>3</sub> O <sub>8</sub> (ppm)	U <sub>3</sub> O <sub>8</sub> (Mlb)
<b>Mulga Rock East</b>					
Princess	Indicated	150	1.3	690	1.9
Princess	Inferred	150	2.5	380	2.1
Ambassador	Indicated	150	19.8	720	31.5
Ambassador	Inferred	150	10.4	330	7.7
<b>Sub-total</b>			<b>34.1</b>	<b>580</b>	<b>43.2</b>
<b>Mulga Rock West</b>					
Emperor	Inferred	150	28.4	450	28.1
Shogun	Inferred	150	4.1	550	4.9
<b>Sub-total</b>			<b>32.5</b>	<b>460</b>	<b>33.0</b>
<b>Total Resource</b>			<b>66.6</b>	<b>520</b>	<b>76.2</b>

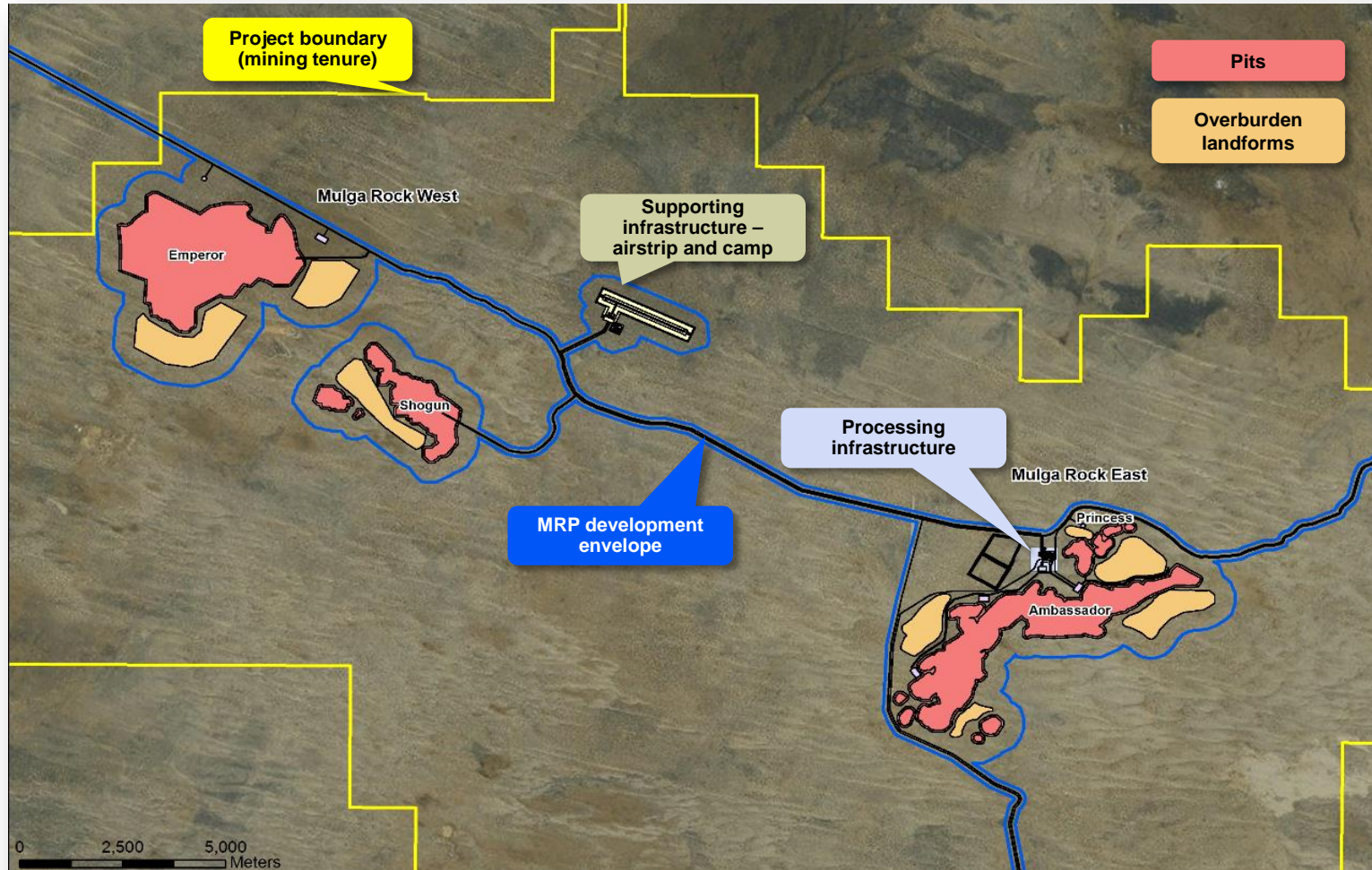
This Resource estimate was released to the ASX on 23 June 2016 Please see [www.asx.com.au/asxpdf/20160623/pdf/4382qcpt6zk1bv.pdf](http://www.asx.com.au/asxpdf/20160623/pdf/4382qcpt6zk1bv.pdf)

# ● ● Mulga Rock Project location plan

- 76.2 Mlb  $U_3O_8$  Resource, >17 year mine life
- 58Mlb  $U_3O_8$  Mineral Inventory (diluted and recovered)
- Remote, arid location with no local inhabitants +200km to nearest town
- Deposits covered by granted Mining Leases on vacant Crown land

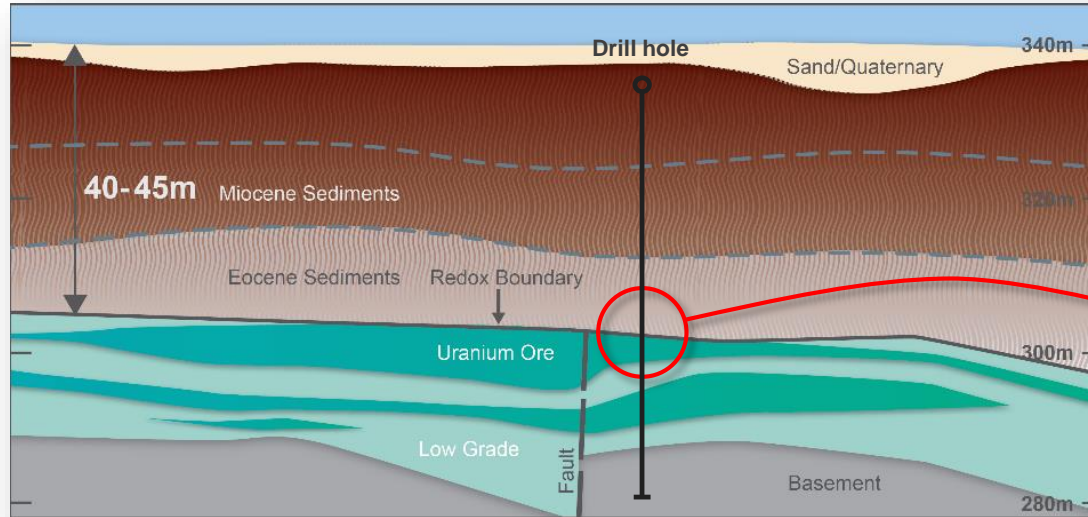


# Deposit location plan showing development envelope





# Geology: carbon-rich sediment host rock



- Hosted within deeply weathered sediments comprising carbonaceous sandstone; silt; sandy lignites
- Mostly **Uraninite ( $\text{UO}_2$ )** associated with carbonaceous material and lignite – no complex silicate minerals
- Deep weathering = *soft friable rock*
- Deep pit voids to provide tailings disposal and waste dumps

Typical aircore drill hole



Overburden – oxidised sediments

Redox boundary

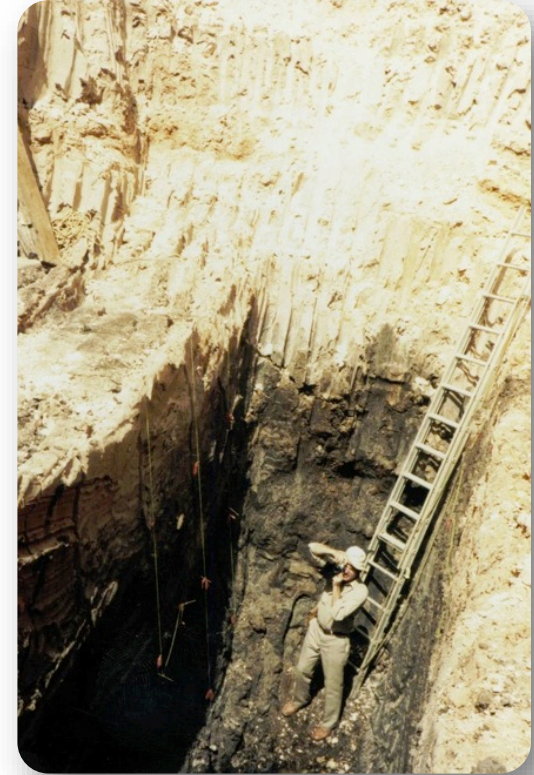
Uranium-bearing carbonaceous sandstone

## ● ● Mining: simple, established mining methods

- Japanese test pit at Shogun in 1980s shows clear demarcation between carbon-rich mineralisation and oxidised overburden
- Overburden amendable to **free dig mining methods**
- DFS will optimise bulk mining methods for overburden excavation using coal mining technology
- Strip mining method results in in-pit waste disposal and 'real time' rehabilitation – key environmental factor
- Pit voids to be used for tailings disposal and management – *key environmental factor*



Ambassador East pit  
February 2016

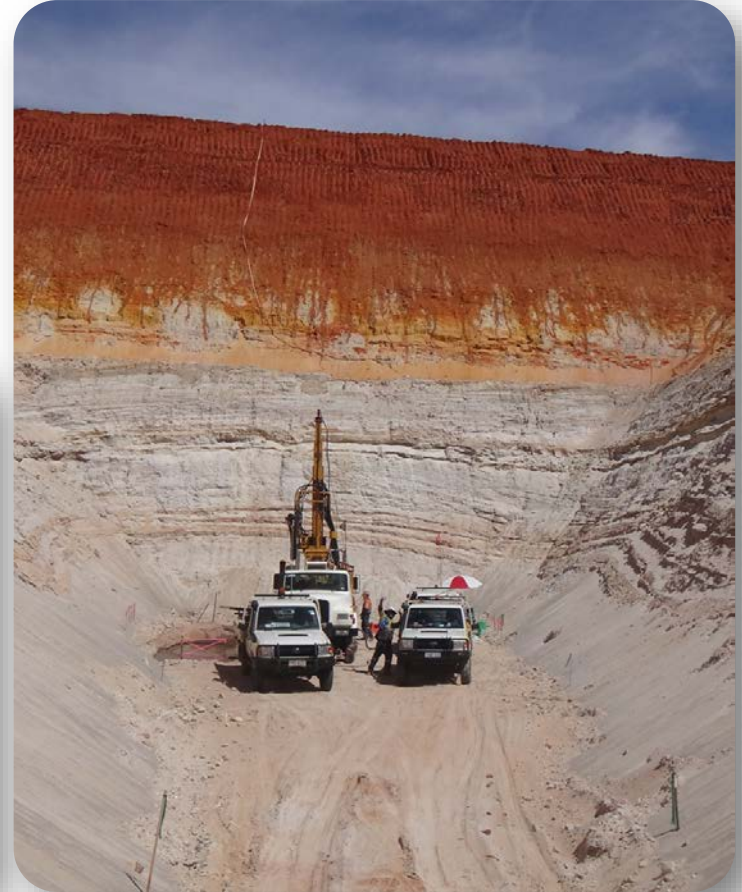


Close-up in Japanese test pit (1980s)  
showing carbon-rich ore and free dig nature  
of material



## Geotechnical investigation trenches

- Free dig / dozer ripping – no blasting
- Geotech confirmed – upper horizon highly stable
- Mining rates higher than expected
- Groundwater level as expected
- 25t ore sample mined



## ● ● Strip mining method – in-pit crushing and conveying



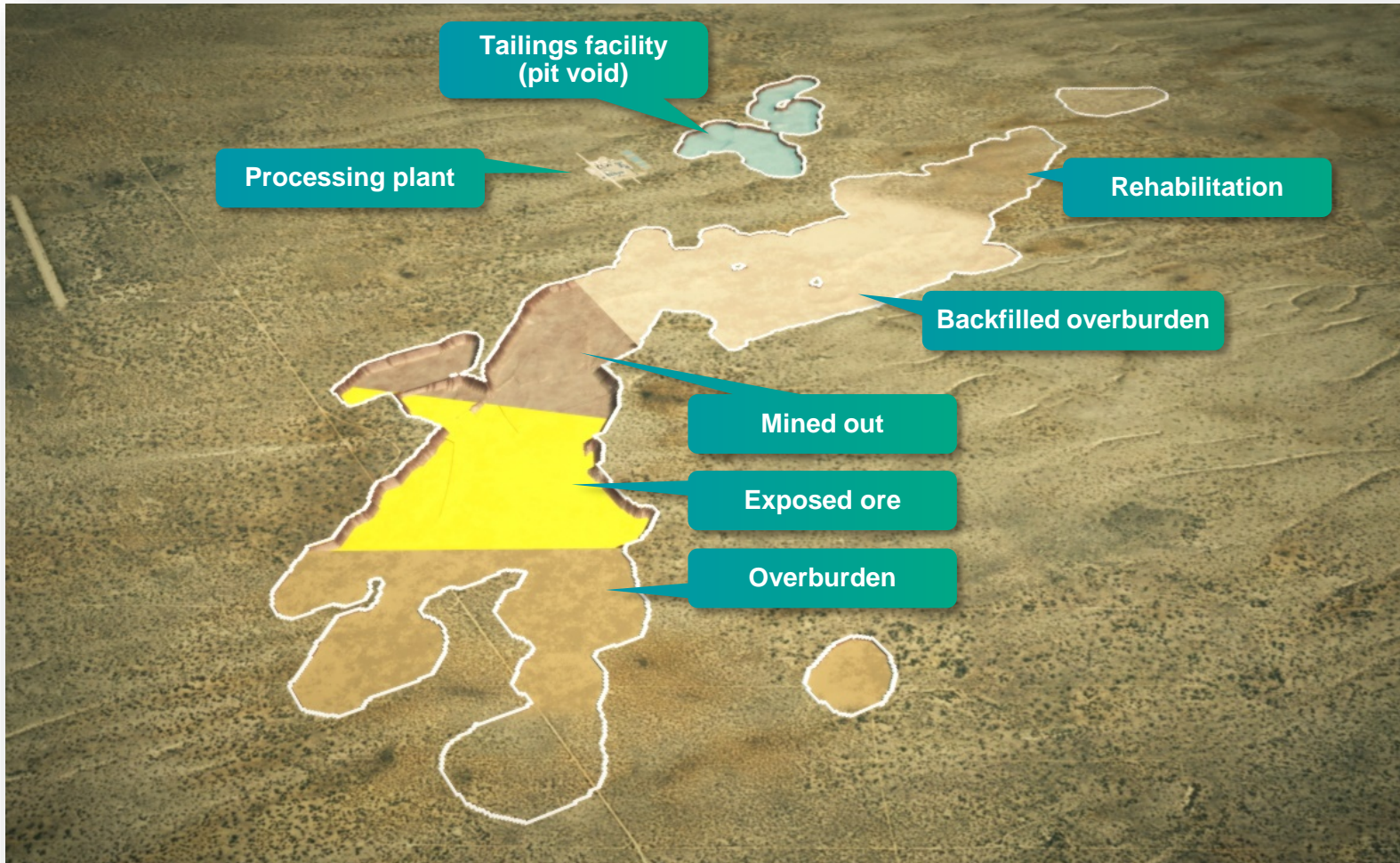


## ● ● Ore mining method – selective mining

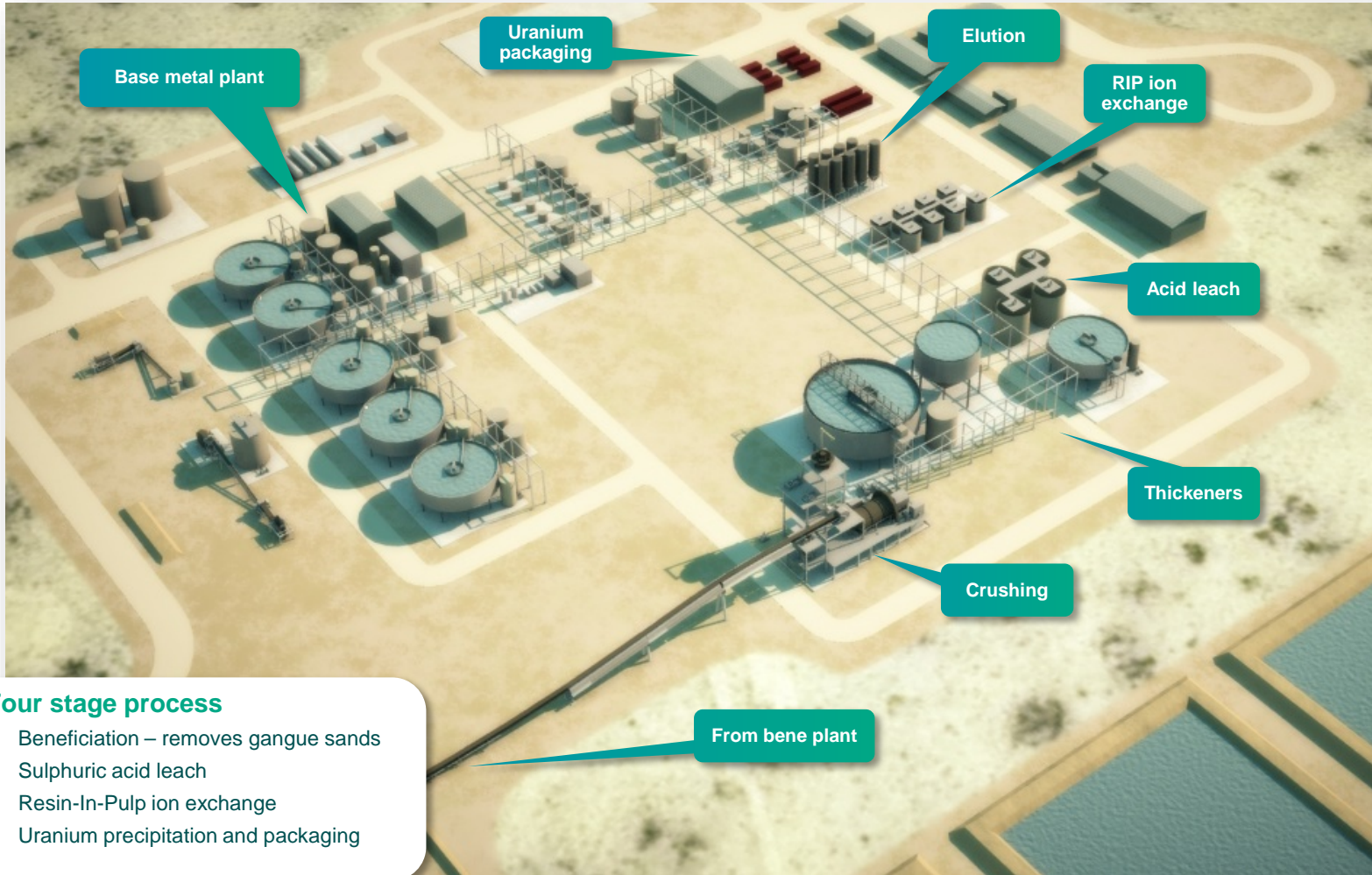




## ● ● Mining: large, strip mining operation



# Proven metallurgy



## Four stage process

- Beneficiation – removes gangue sands
- Sulphuric acid leach
- Resin-In-Pulp ion exchange
- Uranium precipitation and packaging



## ● ● Process development – pilot test work

Upward classifier



Leach tank train



Resin-in-Pulp circuit





# Definitive Feasibility Study - activities

## Mine design



- Optimisation of resource upgrades (August)
- Material movements using mechanised mining equipment
- One third of Mulga Rock's operating cost associated with overburden removal – **key element of DFS**

## Ore reserves



- Conversion Indicated → Probable Ore Reserves (August)
- Expecting ~ 30Mlbs
- Underpins initial 10 year mine life
- Further +7 years in Optimised Mineral Inventory

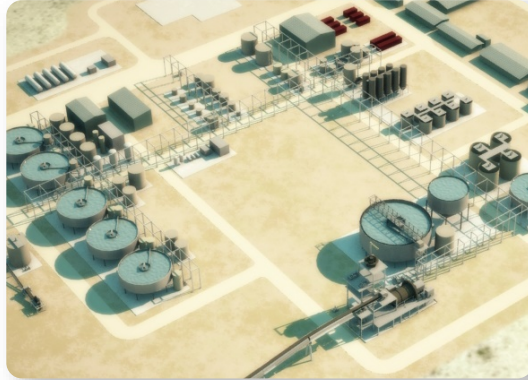
## Process piloting



- Beneficiation circuit successfully proves upgrade concept
- Leach and RIP work underway
- Verify metallurgical recoveries
- Generate final process design criteria for DFS engineering

# Definitive Feasibility Study - activities

## Engineering



- Project Mngr → GR Engineering
- Plant design to produce 3Mlbs  $U_3O_8$
- Assessment of supporting infrastructure
- Expect a +/-10% accurate capital and operating cost estimate

## U marketing and project finance



- Active U marketing underway – Areva, EDF, Exelon, etc.
  - > Strong interest in Australian U
  - > Social licence important
- Early engagement with banks – Soc Gen, C-A, Natixis, etc.
- Equatorial principles

## First shovel in ground



- Early works include:
  - Mine access road
  - Communications tower
  - Water borefield
  - Pre-clearing of Princess pit



## ● ● Investment summary

Globally significant uranium deposit  
- **size and scale**

Excellent commodity opportunity  
- **growing uranium demand**

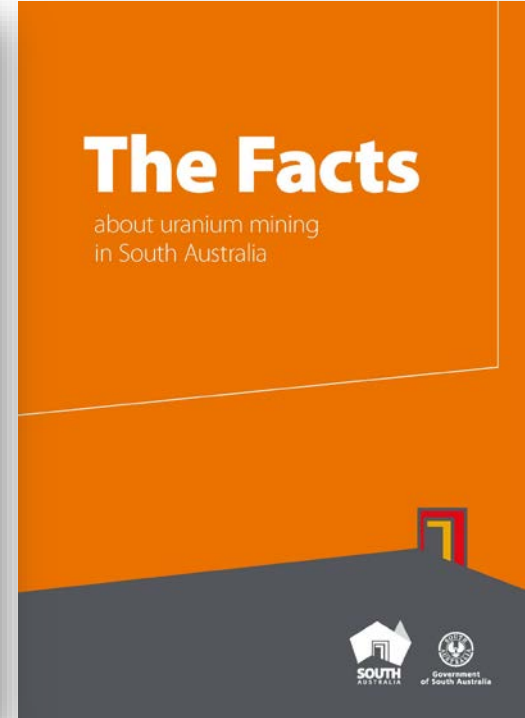
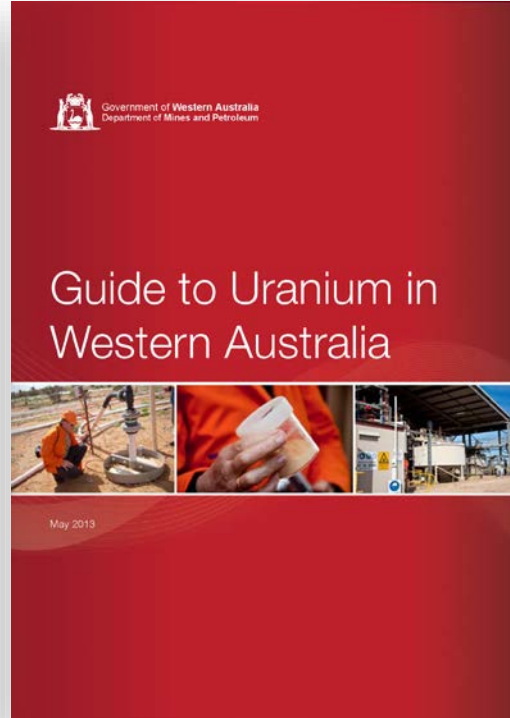
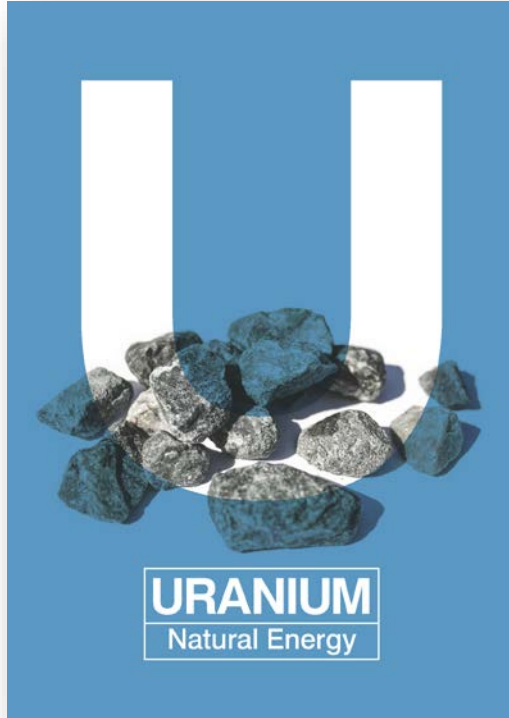
People with track record and vision

“Non-stop” development schedule

Strong balance sheet



● ● For more information on the uranium industry



See Vimy Resources website – Useful links

<http://www.vimyresources.com.au/index.php/2016-06-16-01-41-27/uranium-information>



# Disclaimer and statement of confirmation

The purpose of this presentation is to provide general information about Vimy Resource Limited (**Vimy**); it constitutes a professional opinion only and is given in good faith. It is not recommended that any person makes any investment decision in relation to Vimy based on this presentation. To the extent that this presentation contains "forward-looking statements" they are only subjective predictions and are subject to inherent risks and uncertainties which could cause outcomes to differ materially from those expressed, implied or projected in such forward-looking statements. No representation or warranty, express or implied, is made by Vimy that the material contained in this presentation is accurate, reliable, relevant or complete, or will be achieved or prove to be correct.

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## Pre-feasibility Study statement

The Company advises that the Pre-feasibility Study referred to in this announcement is based on lower-level technical and preliminary economic assessments, and does not yet support a statement of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the PFS will be realised. The Production Target referred to in this announcement is partly based on Inferred Mineral Resources (which comprise approximately 28% of the Inferred Resource mined during the project payback period of 7 years at the capital breakeven uranium price). There is a low level of geological confidence associated with the Inferred Mineral Resources and there is no certainty that further exploration work will result in the determination of Indicated or Measured Mineral Resources or that the production target or preliminary economic assessment will be realised.

## Statement of confirmation by Company

The Company confirms that all the material assumptions underpinning the information in the Pre-Feasibility Study release of 17 November 2015 continue to apply and have not materially changed.

The Resource Estimate referred to above was announced to the market by the Company on 23 June 2016. The Company is not aware of any new information, or data, that affects the information in that announcement and that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.





# Appendix

Biographies – Board and key management  
Resource Estimates and table  
Pre-feasibility Studies project metrics

# ● ● People: The Board



## **The Hon. Cheryl Edwardes – Non-Executive Chairman**

- Former WA State Government Minister holding Ministries of Environment, Labour Relations and Attorney General
- Providing statutory and approvals advice to Atlas Iron, Hancock Prospecting, FTI Consulting
- Significant networks in State and Federal Government and broad experience and networks in China's business community



## **Mike Young – Chief Executive Officer and Managing Director**

- Founding Managing Director of BC Iron Limited (ASX200:BCI) from 2006 to 2013. BC Iron went from first drill hole to first ore on ship in under four years and now exports 6 Mtpa of iron ore from a JV with FMG (75:25 BCI:FMG)
- Experienced mining consultant – Resource modelling and estimation – with Golder Associates
- Founding director of uranium developer Bannerman Resources and currently non-executive Chairman of Cassini Resources
- Studied at Queens University, Ontario and worked on uranium exploration projects and mines in Canada



## **Julian Tapp – Executive Director**

- Head of Government Relations and Director of Strategy at Fortescue Metals Group until 2012 with special responsibility for expediting approvals
- Trained as an economist in London, lectured at a number of universities including the London School of Economics
- Chief Economist for Ford Europe, BP and Rover Group before transitioning into role as Director, New Business Development



## **David Cornell – Non-Executive Director**

- Founding director of the Element Group with significant commercial and financial experience in the mining and oil and gas sectors
- Previously an associate director at the LinQ group which managed Australia's largest listed resource fund
- Specialist in providing corporate and professional services to both WA junior explorers and international mining companies



## **Andy Haslam – Non-Executive Director**

- Highly qualified mining executive, with significant experience in project development and operations for both miners and mining contractors
- Currently Non-Executive Director of BC Iron and industry representative on WA Quarry Managers' Board of Examiners
- Holds Diplomas in Mining and Extractive Industries Management from University of Ballarat, Victoria and SEM College in Western Australia



## **Mal James – Non-Executive Director**

- Resources company director with extensive background in finance and accounting
- Very strong focus on uranium, developed over ten years at Peninsula Energy as Executive Director responsible for daily operations through to finance
- Holds a Bachelor of Business (Accounting) from RMIT Melbourne, Fellow of Australian Institute of Company Directors and is a Member of AusIMM

# ● ● People : The Team



## **Ron Chamberlain – Chief Financial Officer and Company Secretary**

- Financial professional with over 25 years' experience in resources companies – exploration through to mine closure
- Significant experience with uranium companies as inaugural CFO for Paladin Energy and Extract Resources
- Bachelor of Commerce from UWA and Fellow of Chartered Accountants Australia and New Zealand



## **Tony Chamberlain – Chief Operating Officer**

- Involved in a number of uranium projects in Australia, Asia, Africa and Eurasia
- Extensive operational and process engineering experience with WMC and BHP Billiton projects
- Delivered pre-feasibility and feasibility studies and process design packages for Goldfields, Barrick, Paladin and Mega Uranium



## **Xavier Moreau – Geology and Exploration**

- General Manager of Geology and Exploration at Vimy since February 2010
- Valuable uranium project management experience with Areva and U3O8 Limited
- Extensive experience in uranium and gold exploration with Areva and Afmeco with significant time spent on Goldfields projects
- Educated in France and Canada and holds an Honours degree in Geology





# PFS Optimised Diluted Mineral Inventory – November 2015

Deposit / Pits	Ore Tonnes (Mt)	U <sub>3</sub> O <sub>8</sub> (ppm)	U <sub>3</sub> O <sub>8</sub> (Mlbs)	Cu (ppm)	Zn (ppm)	Ni (ppm)	Co (ppm)	Waste Tonnes (mt)
<b>Mulga Rock East</b>								
Princess	3.7	450	3.7	460	815	330	175	54
Ambassador	28.0	550	34.0	245	890	475	220	378
<b>Sub-Total</b>	<b>31.7</b>	<b>535</b>	<b>37.6</b>	<b>270</b>	<b>885</b>	<b>460</b>	<b>215</b>	<b>432</b>
<b>Mulga Rock West</b>								
Emperor	14.3	500	15.8	-	-	-	-	319
Shogun	5.8	445	5.7	-	-	-	-	69
<b>Sub-Total</b>	<b>20.1</b>	<b>485</b>	<b>21.5</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>388</b>
<b>Total Inventory</b>	<b>51.8</b>	<b>515</b>	<b>58.9</b>	<b>270</b>	<b>885</b>	<b>460</b>	<b>215</b>	<b>820</b>

The Pre-feasibility Study was released to the ASX on 17 November 2015. See: <http://www.asx.com.au/asx/statistics/displayAnnouncement.do?display=pdf&idsId=01685657>

# Mulga Rock Maiden Ore Reserve

Deposit / Resource	Classification	Cut-off Grade (ppm U <sub>3</sub> O <sub>8</sub> )	Tonnes (Mt)	U <sub>3</sub> O <sub>8</sub> (ppm)	Total Metal U <sub>3</sub> O <sub>8</sub> (Mlb)
<b>Mulga Rock East</b>					
Princess	Probable	150	1.3	640	1.8
Ambassador	Probable	150	13.9	660	20.2
<b>Total Reserve</b>			<b>15.2</b>	<b>660</b>	<b>22.1</b>

- Mulga Rock Maiden Ore Reserve announced to ASX 30 March 2016
- Based on work carried out during PFS
- Approximately 97% of Indicated Resources in PFS mine schedule has been converted to Ore Reserves



This Reserve estimate was released to the ASX on 30 March 2016. Please see <http://www.asx.com.au/asxpdf/20160330/pdf/436587mktclpz4.pdf>

# Pre-feasibility Study results

We are proud that Mulga Rock will deliver enough uranium fuel to offset the equivalent of 50Mt of CO<sub>2</sub> emissions per year or 10% of Australia's total CO<sub>2</sub> emissions

A flat exchange rate of A\$1.00 : \$US\$0.7019 and a flat uranium price of US\$65/lb U<sub>3</sub>O<sub>8</sub> have been assumed across the entire project life for the Pre-feasibility Study.

Base metal prices are based on LME spot prices as of 1 September on a Real LOM flat rate basis.

Life of Mine (LOM)	17.1 years
Nameplate Run-of-Mine	2.65 Mtpa
ROM Uranium Grade (Years 1-10)	601 ppm U <sub>3</sub> O <sub>8</sub>
ROM Uranium Grade (LOM)	515 ppm U <sub>3</sub> O <sub>8</sub>
Average Strip Ratio LOM (waste tonne / ore tonne)	15.8
Overall Metallurgical Recoveries	
Uranium	85.3%
Copper	35%
Zinc	48%
Nickel	43%
Cobalt	38%
Annual Production – Uranium as U <sub>3</sub> O <sub>8</sub>	3.00 Mlbs U <sub>3</sub> O <sub>8</sub>
Process plant and infrastructure capital costs	US\$254M
Mine pre-strip cost (additional to process plant capital)	US\$33.6M
Uranium Opex Years 1 - 10 (after by-product credits)	US\$27.77 / lb U <sub>3</sub> O <sub>8</sub>
Uranium Opex Years 1 - 10 (before by-product credits)	US\$31.47 / lb U <sub>3</sub> O <sub>8</sub>
Uranium Opex LOM (after by-product credits)	US\$31.32 / lb U <sub>3</sub> O <sub>8</sub>
Uranium Opex LOM (before by-product credits)	US\$33.89 / lb U <sub>3</sub> O <sub>8</sub>
Base Case Uranium Price	US\$65.00 / lb U <sub>3</sub> O <sub>8</sub>
Exchange Rate A\$:US\$	0.7019
<b>NPV (inclusive of royalty, pre-tax @ 10% DCF)</b>	<b>A\$432M</b>
<b>IRR (inclusive royalty, pre-tax)</b>	<b>25.1%</b>
<b>Payback from start of production</b>	<b>3.9 years</b>

The Pre-feasibility Study was released to the ASX on 17 November 2015

See: <http://www.asx.com.au/asx/statistics/displayAnnouncement.do?display=pdf&idsId=01685657>