

**INVESTOR UPDATE -- MAY 2012**  
**ASX Code: PEN**



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The Exploration and Target Potential described in this presentation is conceptual in nature, and there is insufficient information to establish whether further exploration will result in the determination of a Mineral Resource

## Competent Person

The information in this report that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Mr Alf Gillman and Mr Jim Gullinger. Mr Gillman is a Fellow of the Australian Institute of Mining and Metallurgy. Mr Gillman is General Manager Project Development and is a Competent Person under the definition of the 2004 JORC Code. Mr Gullinger is a Member of a Recognised Overseas Professional Organisation included in a list promulgated by the ASX (Member of Mining and Metallurgy Society of America and SME Registered Member of the Society of Mining, Metallurgy and Exploration Inc). Mr Gullinger is Principal of independent consultants World Industrial Minerals. Both Mr Gillman and Mr Gullinger have sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking as a Competent Person as defined in the 2004 Edition of the ‘Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves’. Both Mr Gillman and Mr Gullinger consent to the inclusion in the report of the matters based on their information in the form and context in which it appears.

U<sub>3</sub>O<sub>8</sub> grades from the 2008-2011 drilling are obtained either from the prompt fission neutron (PFN) down-hole probe and are not subject to disequilibrium effects or a downhole gamma tool which are subject to disequilibrium effects.

## **Our Mission**



- *To develop and operate the 100% owned Lance ISR Projects*
- *Increase production at Lance from 750,000lbs U<sub>3</sub>O<sub>8</sub> pa to 2.2mlbs pa*
- *Expand resource base through exploration and acquisitions*
- *Develop the 76% owned Karoo Project in South Africa*
- *Acquire new projects across diverse geographical and geological environments*
- *Maintain safety, integrity and quality throughout all activities*

**DELIVER SUPERIOR RETURNS TO SHAREHOLDERS**

# Company Snapshot



- **Lance ISR Projects – Wyoming, USA – Moving to Production**
  - 51.5mlbs U<sub>3</sub>O<sub>8</sub> JORC Resource
  - Production H2C13
  - Feasibility Study – Project Cash Flow \$905M on Revenue of \$2.2B
  - Feasibility Study excludes Vanadium Credits
  
- **Karoo – South Africa**
  - JORC Resource H2C12
  - Feasibility Study C15
  - Production C16/C17
  
- **Peninsula poised to become uranium producer**
  - Cash \$13M
  - Project Funding for Lance on track
  - Expertise in exploration, project assessment, mine development and operations

**Peninsula has the track record and management team to deliver**

**Low Capex ISR project providing platform for growth on target potential of 140-200mlbs**

## Recent Achievements

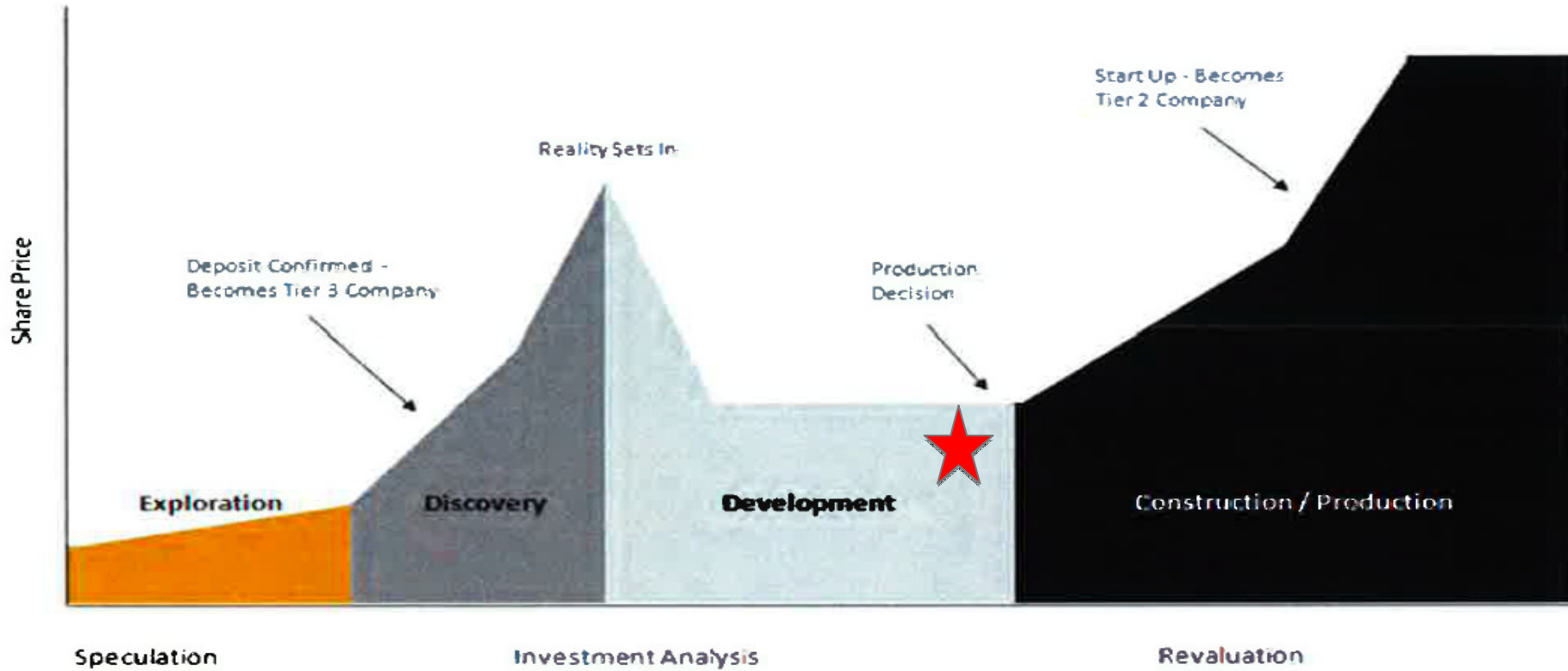


- *Lance ISR Projects Feasibility Study completed*
- *Licensing process ahead of schedule*
- *Development and operational team engaged*
- *Long term sales agreement in place*
- *Project funding well advanced*
- *Strong cornerstone investor – Pala Investments*
- *\$100M Equity Facility in place*

*Quality license applications reducing permitting timeframes*

*Peninsula on the cusp of production and re-rating*

# Peninsula Re Rating



*Peninsula continues to achieve milestones for major re-rating*

## **Near-Term Milestones**

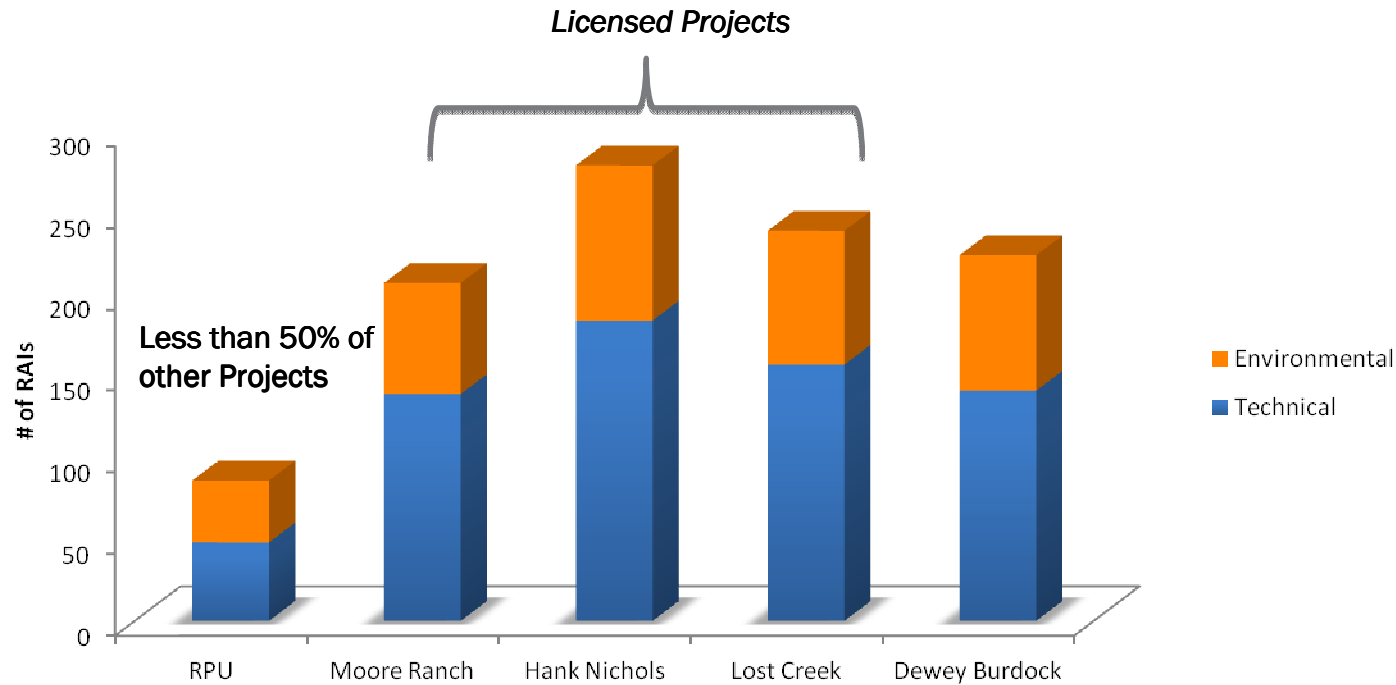
- *Lance Project funding* H2C12
- *JORC Resource – Karoo* H2C12
- *Lance Project upgraded resource* H2C12
- *Key licenses*
  - *Permit To Mine (WDEQ)* H2C12
  - *Source Materials License (NRC)* H1C13\*
- *First uranium production on track* H2C13

\* Subject to regulatory approval

**On track to deliver into long term sales contract H2C13**

# Recent Achievements – NRC

*Licensing Process continues ahead of NRC schedule*



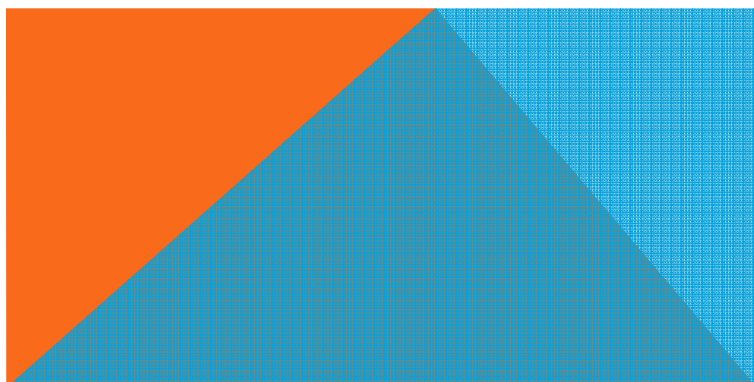
*Quality license applications reducing permitting timeframes*



# Corporate Summary



Shares on Issue	2,163m
Share Price	\$0.035
Market Cap	\$76m
Cash Balance	\$13m
Debt	\$0
Enterprise Value (E/V)	\$63m
E/V per lb	\$1.22
Equity Facility	\$100m



Options on Issue	#	Strike	Expiry
Listed - PENOA	375.88m	\$0.03	30-Jun-12
Listed - PENOC	484.67m	\$0.03	31-Dec-15
Unlisted	24.00m	\$0.04-\$0.125	Sep-12 to Dec-15
Performance Shares	18.50m	Class C	30 Jun-14

# The Team



- **Australia:**
  - **Executive Chairman**      **Gus Simpson**
  - **Finance Director**      **Malcolm James**
  - **Technical Director**      **Alf Gillman**
  
- **United States:**      **Strata Energy, Inc.**
  - **Chief Executive Officer**      **Ralph Knode** *ISR mine construction and operation expert  
25yrs experience*
  
- **South Africa:**
  - **Chief Operating Officer (PEN)**      **Glenn Black** *Senior mine construction and African operations engineer*
  - **Chief Executive Officer**      **Tasman Pacific – SA operating subsidiary**

## **Board of Directors**

- **Executive Chairman**      **Gus Simpson**
- **Finance Director**      **Malcolm James**
- **Technical Director**      **Alf Gillman**
- **Director**      **Warwick Grigor**
- **Director**      **Mike Barton**

# Projects Overview

## Wyoming, USA

### Uranium

- JORC Resource – 51.5mlbs
- Target 104-163mlbs U308
- 13 identified project areas
- 6 expanded to date
- 3 \* 750,000lbs production units initial

## Karoo, South Africa

### Uranium / Molybdenum

- Target 90-150mlbs U308
- 6 identified project areas
- Resource drilling advanced
- JORC Resource – H2C12
- Production Target – C17



# Road to Production

## Lance ISR Projects

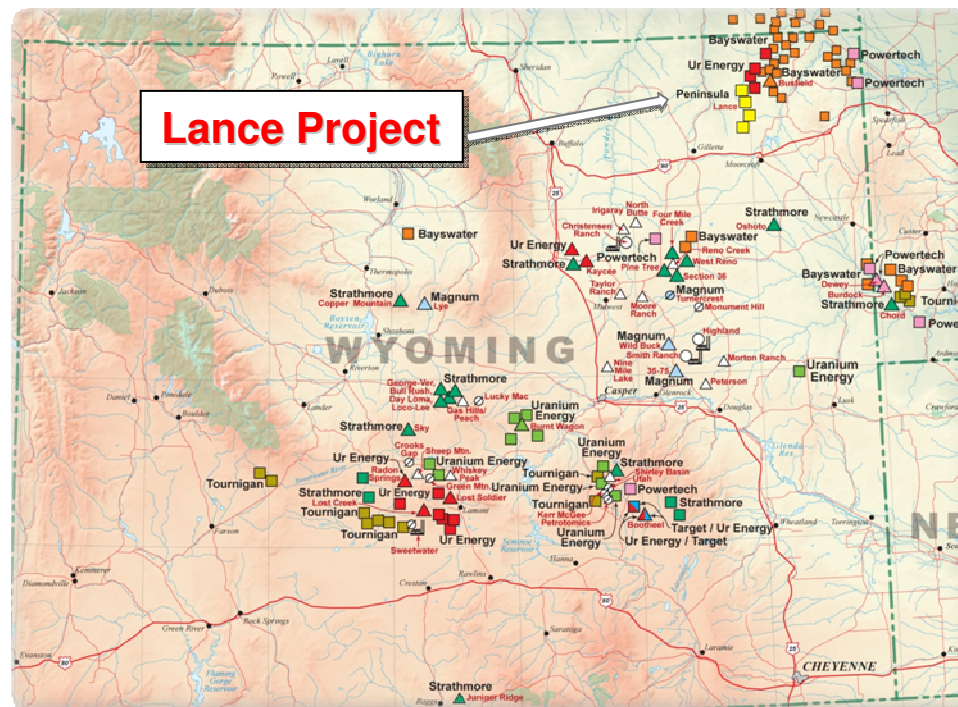
- Updated JORC Resource – March C12 ✓
- Feasibility Study – April C12 ✓
- Permitting
  - WDEQ – finalised (pending bonds) Q3C12 ✓
  - NRC – ahead of schedule H2C13
- Construction
  - Plant long lead items Q3C12
  - Initial Deep Disposal Well H2C12
  - Initial monitor wells H2C12

Site civils

H2C12

**Peninsula is on schedule to commence production and deliver into long term contract(s) in H2C13**

# Lance Projects – Wyoming, USA



*Located in established mining State with five  
ISR projects licensed*

# Key Parameters – Lance

- **JORC Resource** 51.5mlbs  $U_3O_8$  (M, I & I)
- **Feasibility Study**
  - Recovery 76%
  - $U_3O_8$  recovered 29mlbs (Inferred converted @ 65% - Kendrick/Barber)
- **Initial Capex** \$78M
- **Expansion Capex**
  - Phase 1 \$28M
  - Phase 2 \$38M
- **Production Profile**
  - Ross Production Unit H2C13 750,000lbs pa
  - Kendrick Production Unit H2C14 750,000lbs pa (1.5mlbs)
  - Barber Production Unit H2C15 750,000lbs pa (2.2mlbs)

**Peninsula set to commence production H2C13  
ramping up to 2.2mlbs pa from first three production  
units**

## Financial Evaluation – Lance (LOM)



Life-Of-Mine (LOM)	\$ Millions	\$ Per lb
<b>Project Revenue</b>	<b>\$2,200</b>	<b>\$62.58*</b>
Royalties & Indirect Taxes	(\$323)	\$11.11
Operating Costs	(\$398)	\$13.72
Restoration & Closure Costs	(\$126)	\$4.34
Wellfield Development (on-going)	(\$447)	\$15.41
<b>Project Cash Flow (pre-tax)</b>	<b>\$906</b>	
<b>Project NPV <sub>8%</sub></b>	<b>\$255</b>	

\* 2011 long term contract price escalated

**Net Project Cash \$906M on Revenue \$2,200M**

## Financial Evaluation – Lance (SSP)



Steady State Production (SSP)	\$ Millions pa	\$ Per lb
Project Revenue	\$171	\$62.58*
Royalties & Indirect Taxes	(\$25)	(\$11.11)
Operating Costs	(\$26)	(\$11.77)
Restoration & Closure Costs	(\$7)	(\$3.04)
Wellfield Development (on-going)	(\$35)	(\$15.91)
<b>Project Cash Flow (pre-tax)</b>	<b>\$78</b>	

\* 2011 long term contract price escalated

**Significant Project Cash Flow per annum**

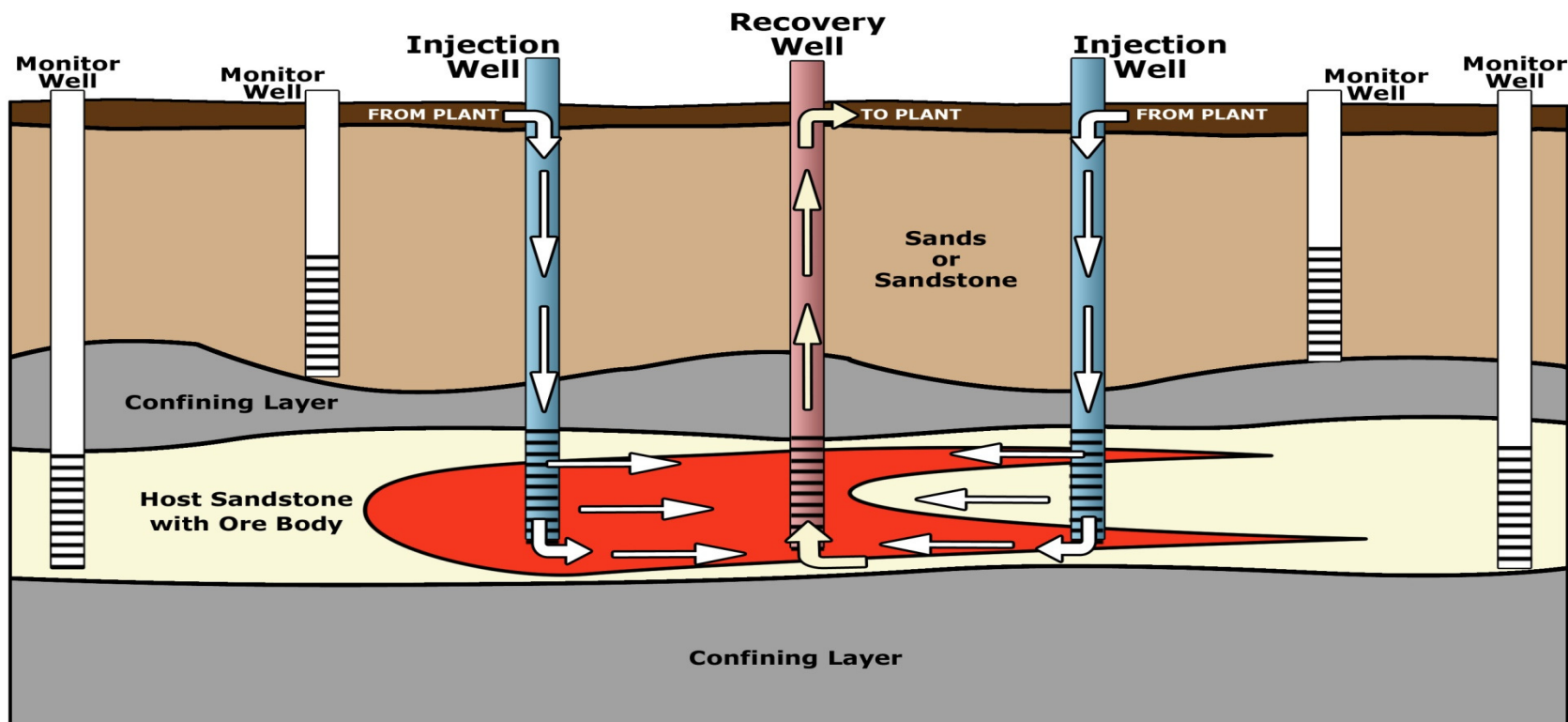


## Capex – Lance

Capital Cost Breakdown - Initial	\$ Millions
Central Processing Plant	\$34.4
Deep Disposal Wells	\$6.3
Wellfield Development	\$28.3
Wellfield Restoration / Sales Tax	\$9.2
	<b>\$78.2</b>
<b>Expansion Capex*</b>	
Phase 2 (to 1.25mlbs pa)	\$28
Phase 3 (to 2.20mlbs pa)	\$38
<i>* Includes CPP expansion, satellite facilities, initial wellfields and associated infrastructure</i>	

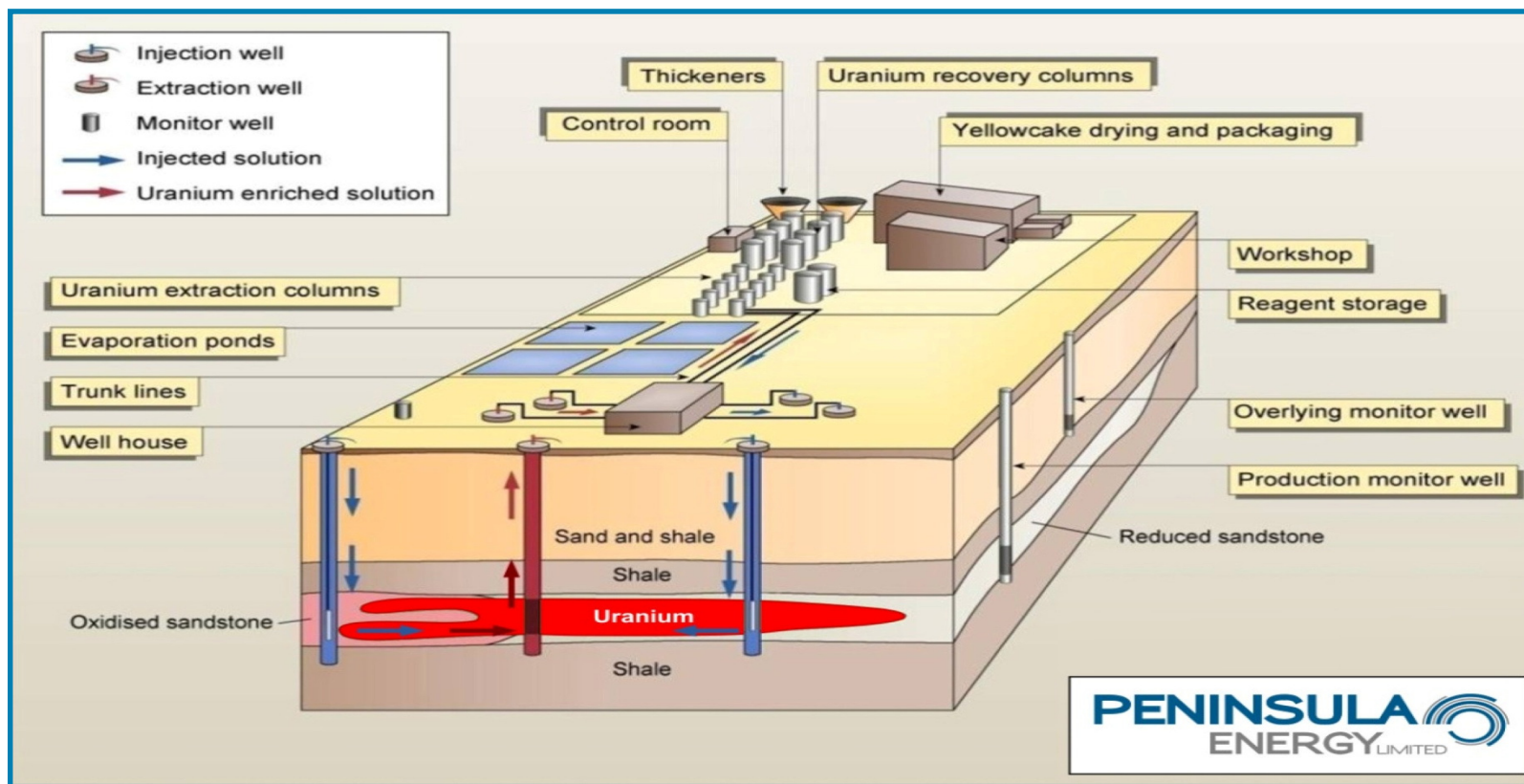
*Low initial Capex and staged expansions*

# Wellfield Operations - Lance



*Wellfield's contained prohibiting migration*

# ISR Mining Process – Lance



*Demonstrated technology active in Wyoming  
Five licensed projects  
45% of  $U_3O_8$  production is ISR*

# Wellfield Development On-going – Lance



Wellfield Development Costs (major items only)	\$ Per lb
Injection / Recovery / Monitor Well	\$10.67
Piping and Pumping	\$2.37
Valve Stations / Buildings	\$1.53

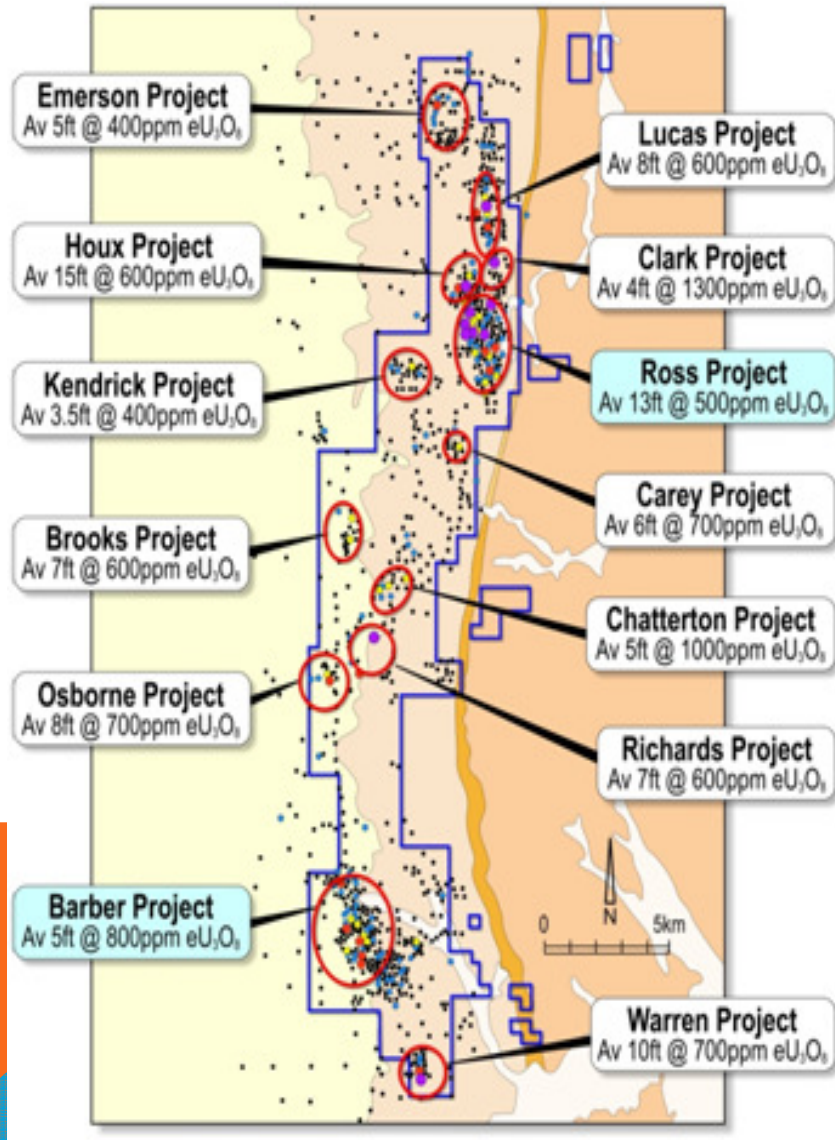
*Wellfield engineering continues to reduce development costs*

## Opex – Lance

Opex / Restoration Costs (major items only)	\$ Per lb
Labour	\$2.00
Power	\$2.89
Plant	\$1.84
Groundwater restoration	\$2.69
Well abandonment	\$0.35

*Operating and restoration costs continue to reduce through detailed wellfield design*

# Resources & Potential – Lance

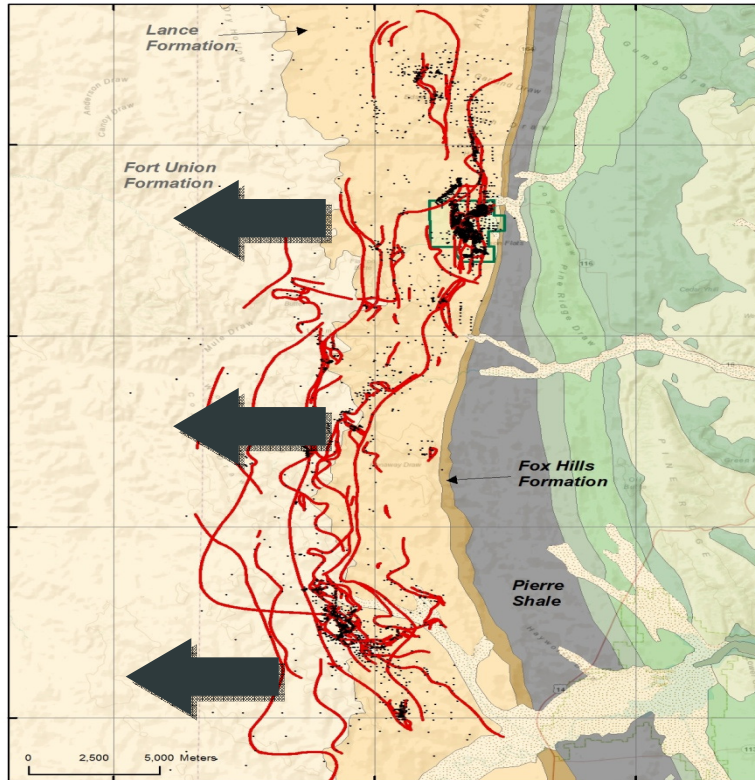


- 13 Project areas
- Only 6 expanded to date
- Resource open at depth and to the West

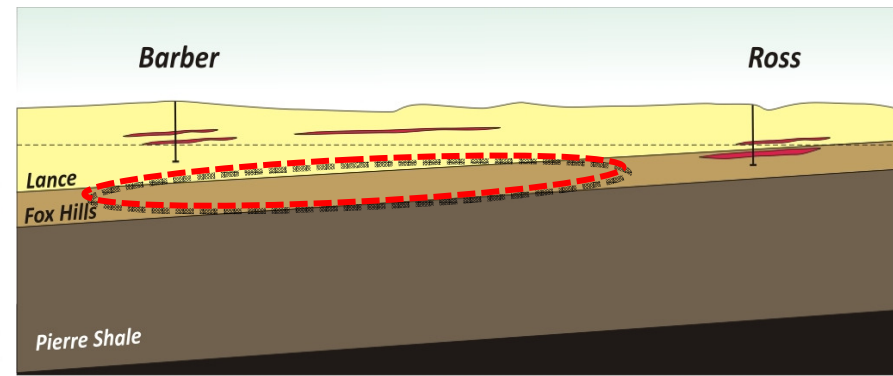
Historic grades - NuBeth

Targeting up to 163mlbs U<sub>3</sub>O<sub>8</sub>

# Resource Potential – Lance

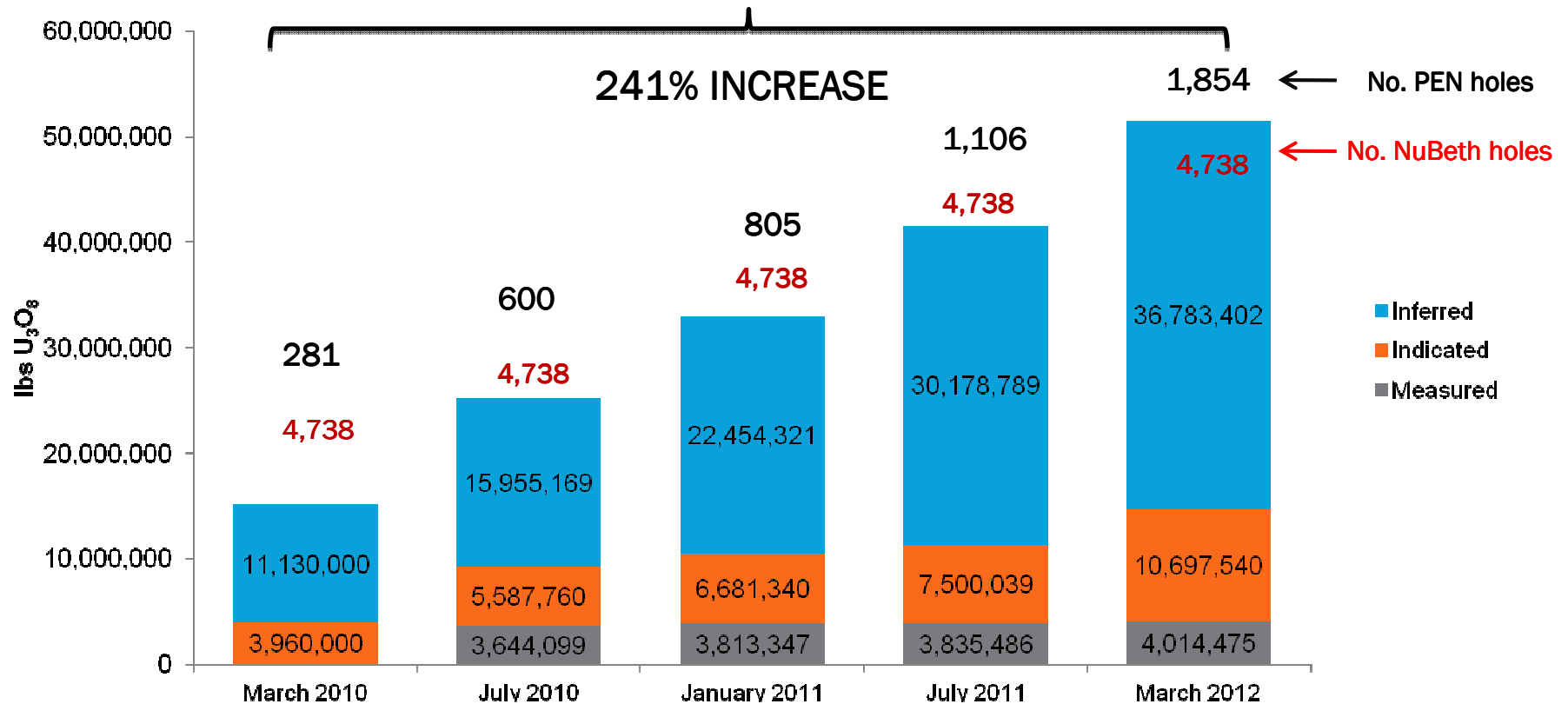


- NuBeth – 1971-1980 - 5,000 historic holes
- 13 separate project areas
- >2,000 holes 2009-2012
- JORC Resource – 51.5mlbs
- 305 line-km of redox-fronts -104-163MIbs potential



**Significant resource upside to the West and at Depth**

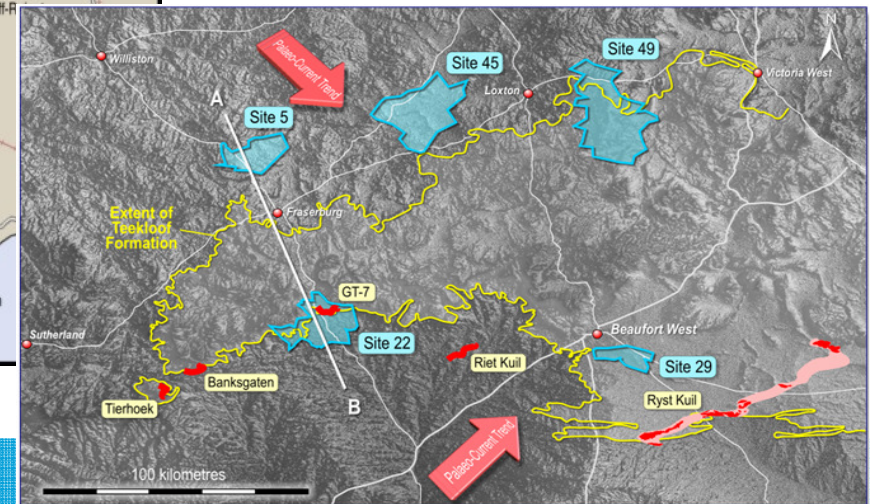
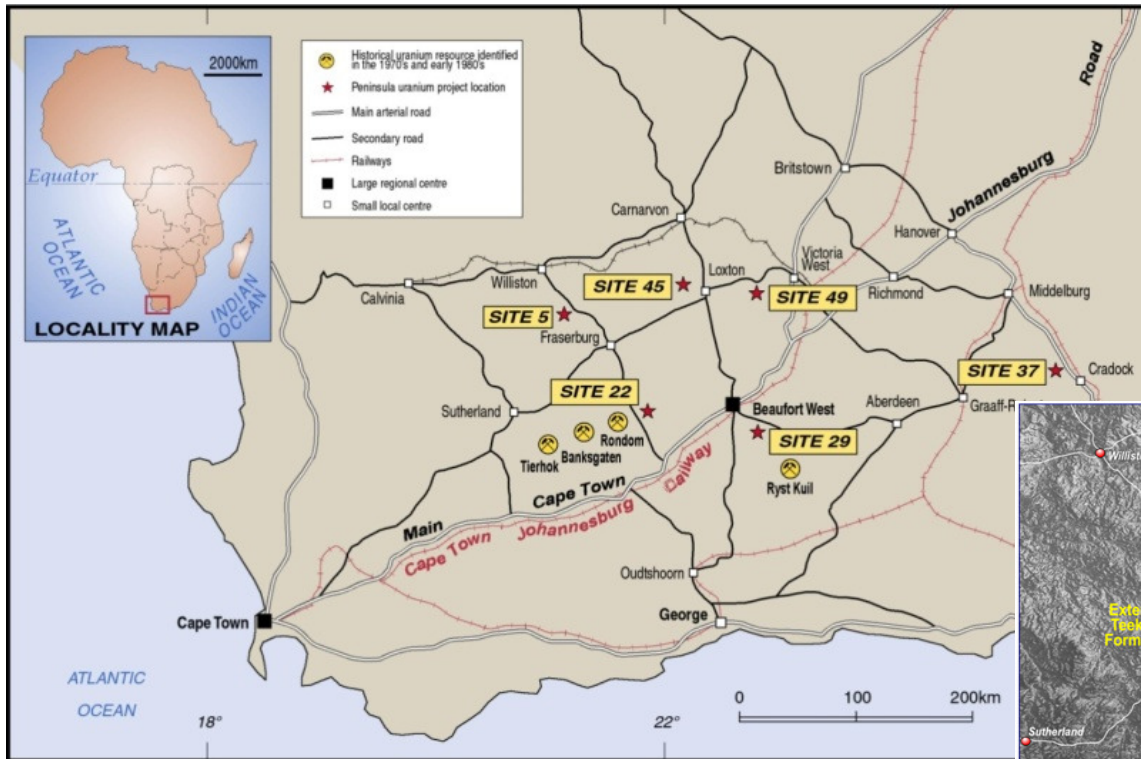
# Resource Growth Trend – Lance



Significant resource increases to 51.5mlbs and expanding



# Karoo Project – South Africa



*Ideally situated for central processing and infrastructure*

## Key Parameters – Karroo

Exploration Potential	Tonnes (m)		Grade (ppm U <sub>3</sub> O <sub>8</sub> )		U <sub>3</sub> O <sub>8</sub> (mlbs)	
	From	To	From	To	From	To
Total	36	60	1,200	1,400	90	150

Historic Mineralisation	Tonnes	Grade (ppm eU <sub>3</sub> O <sub>8</sub> )	Total (eU <sub>3</sub> O <sub>8</sub> millbs)
Site 22	860,000	1,480	2.8
Site 45	2,786,000	700	4.3
Site 29	246,000	1,107	0.6
Total	3,892,000	1,015	7.7

*Historic high grade mineralisation with significant exploration upside – targeting 90-150Mlbs U<sub>3</sub>O<sub>8</sub>*

# Resource Potential – Karoo Per Site



SITE 29	SITE 22	SITE 45
<ul style="list-style-type: none"> <li>• Drill-defined 600,000 lbs U<sub>3</sub>O<sub>8</sub> at 1,107 ppm</li> <li>• 108km<sup>2</sup> of Prospective Poortjie Sandstone</li> <li>• 308 holes drilled by Union Carbide</li> <li>• 214 RC twin and exploration holes completed in 2011</li> <li>• 167 historic holes drilled re-probed</li> <li>• &gt;5-8mlbs U<sub>3</sub>O<sub>8</sub> potential</li> <li>• Amenable to open-pit mining</li> <li>• Numerous un-tested uranium occurrences and channel systems</li> </ul>	<ul style="list-style-type: none"> <li>• Prospect 2.8mlbs eU<sub>3</sub>O<sub>8</sub> at 1,460 ppm</li> <li>• 707 historic percussion holes drilled by JCI</li> <li>• 118 RC holes and 4 diamond holes in 2011</li> <li>• 160 historic holes drilled re-probed</li> <li>• Stacked uranium bearing channels</li> <li>• &gt;15mlbs U<sub>3</sub>O<sub>8</sub> potential</li> <li>• Amenable to open-pit mining</li> <li>• Numerous un-tested U<sub>3</sub>O<sub>8</sub> occurrences</li> </ul>	<ul style="list-style-type: none"> <li>• 4.3mlbs eU<sub>3</sub>O<sub>8</sub> at 700 ppm</li> <li>• 400 historic drilled by JCI</li> <li>• 340 km<sup>2</sup> prospective Davidskolk formation</li> <li>• 16 historic holes probed in 2011</li> <li>• Stacked uranium bearing channels</li> <li>• Potential 15mlbs U<sub>3</sub>O<sub>8</sub></li> <li>• Numerous un-tested U<sub>3</sub>O<sub>8</sub> occurrences</li> </ul>

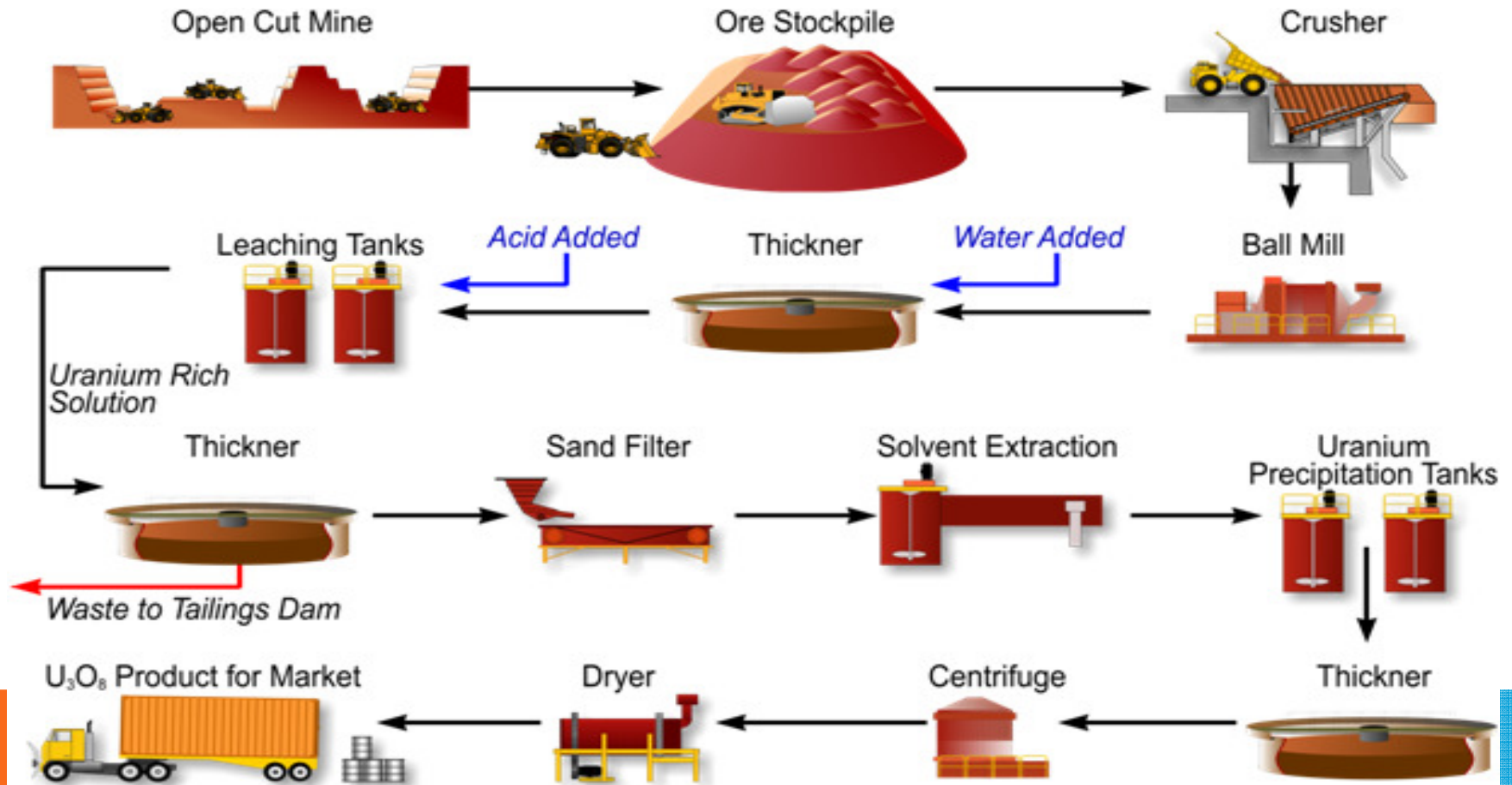
*Multiple sites with historic high grade mineralisation*

## ***Development Model – Karoo***

- **Multiple open-pits; with central processing facility at Site 29**
- **All sites within road-hauling distance**
- **Planning production in 2016/2017**
- **Continue to delineate > 120mlbs of uranium mineralisation**

*Central CPP with connecting infrastructure*

# Process Flow – Karoo



## ***Investment Highlights***

- **JORC Resource**
- **Feasibility Study confirms technical and economic robustness**
- **Under rated on all peer group comparisons**
- **Near term production**
- **U<sub>3</sub>O<sub>8</sub> from 750,000lbs to 2.2mlbs pa over three years**
- **Karoo follows in C17**
- **Organic and acquisitional growth**
- **Corporate, management and operational team engaged**

*Imminent Re-rating on milestones*

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## ***APPENDIX 1 – CVs***



**Mr Glenn Black (Chief Operating Officer)**

Mr Black is an engineer who has 36 years experience in the mining industry in senior management and operational positions, including extensive experience in mine/plant construction, project management, development and implementation. He has worked across a broad spectrum of minerals and in energy generation. Prior to joining Peninsula, Mr Black has been employed for the last 20 years with the De Beers Mining Group, most recently at Debswana Diamond Company, the world's leading producer of diamonds by value, where he held senior construction, engineering and project management positions. Mr Black's experience at De Beers included direct involvement in the building and commissioning of multiple mines, other plant and infrastructure.

**Mr Ralph Knode (Chief Executive Officer - Strata Energy Inc)**

Mr Knode has over 30 years experience in uranium exploration, property evaluation, mine construction and mine operations throughout North America, Kazakhstan and Australia. Prior to joining Peninsula, Mr Knode held senior management positions at Uranium One, most recently as Senior Vice President, Projects. For over 25 years Mr Knode held various mid level and senior management positions for Cameco's USA subsidiaries Crow Butte Resources and Power Resources and JV Inkai in Kazakhstan. In these capacities, Mr Knode has been directly involved in the start-up and/or operation of five In Situ Recovery projects on three different continents.

## ***APPENDIX 2 – Uranium Market***

## Existing Uranium Demand Drivers

- 434 operating nuclear power stations (Feb 2012) operated by 31 countries
- 240 research and medical isotope reactors
- 140 nuclear powered ships
- Consuming 200mlbs uranium p.a.
- One ton of natural uranium produces more than 40 million kilowatt-hours of electricity
- This is equivalent to burning 16,000 tons of coal or 80,000 barrels of oil
- **Electricity generation costs**
  - Gas and coal costs 5.0c per Kwh
  - Nuclear costs 0.7c per Kwh

Source: CNN interview CEO Southern Company Feb 2012

*World reliance on nuclear power, medical  
advancements increases*

# Future Uranium Demand

## Reactor Units and Market Demand Forecasts by Region

Region	2010 Reactor Units	U <sub>308</sub> Demand mlbs/pa	2015 Reactor Units	U <sub>308</sub> Demand mlbs/pa	2020 Reactor Units	U <sub>308</sub> Demand mlbs/pa	2025 Reactor Units	U <sub>308</sub> Demand mlbs/pa	2030 Reactor Units	U <sub>308</sub> Demand mlbs/pa
North America	124	52	125	54	126	59	125	59	128	60
Western Europe	129	54	118	55	117	58	103	53	97	52
Japan	54	23	49	24	49	26	48	25	43	22
Eastern Europe	<b>67</b>	<b>29</b>	<b>76</b>	<b>33</b>	<b>84</b>	<b>38</b>	<b>93</b>	<b>40</b>	<b>100</b>	<b>44</b>
Asia & Oceania	61	23	101	44	144	67	181	85	221	108
Africa & Middle East	2	1	3	1	8	5	15	10	22	12
South America	4	2	6	3	6	3	8	4	11	7
<b>TOTALS</b>	<b>441</b>	<b>183.9</b>	<b>478</b>	<b>213.1</b>	<b>534</b>	<b>254.5</b>	<b>573</b>	<b>276</b>	<b>622</b>	<b>292.8</b>

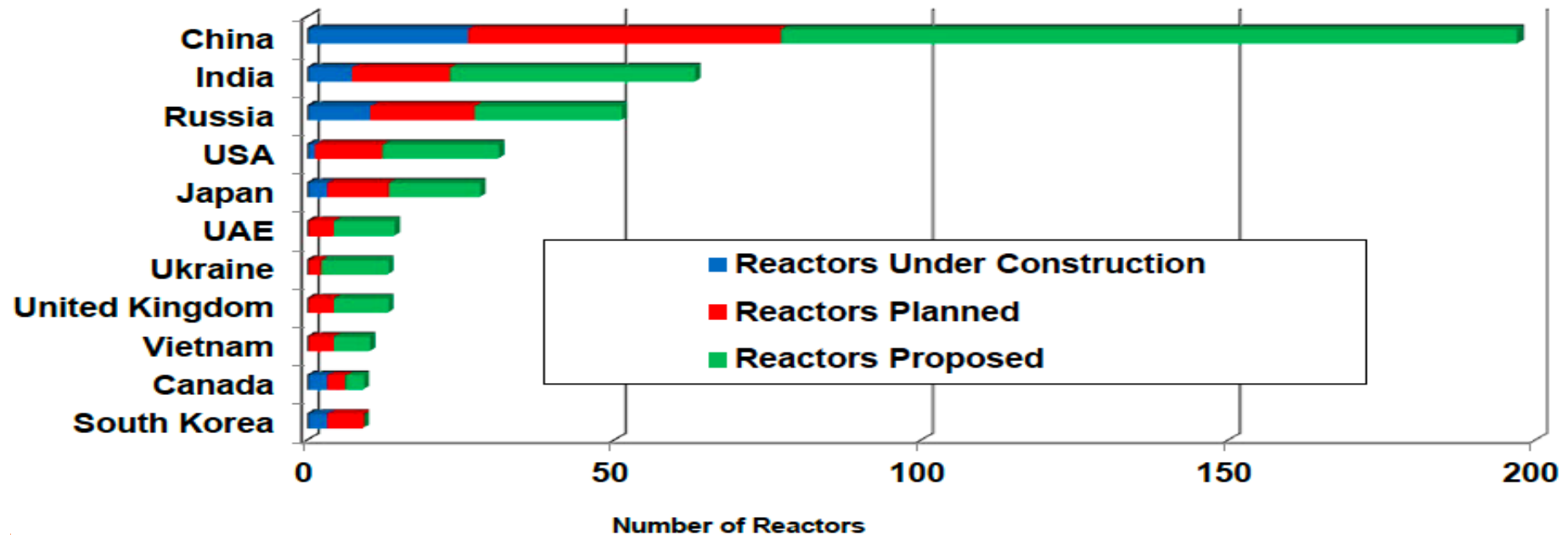
Source : UxConsulting Q4 2011

**61 NPP are in construction**  
**156 are in the approval stage**

•China, India and Eastern Europe will increase U consumption by 250% by 2030

# Power Demands Continue to Increase

441 reactors operating world-wide - > 60 under construction  
522 reactors currently in construction, planned or proposed

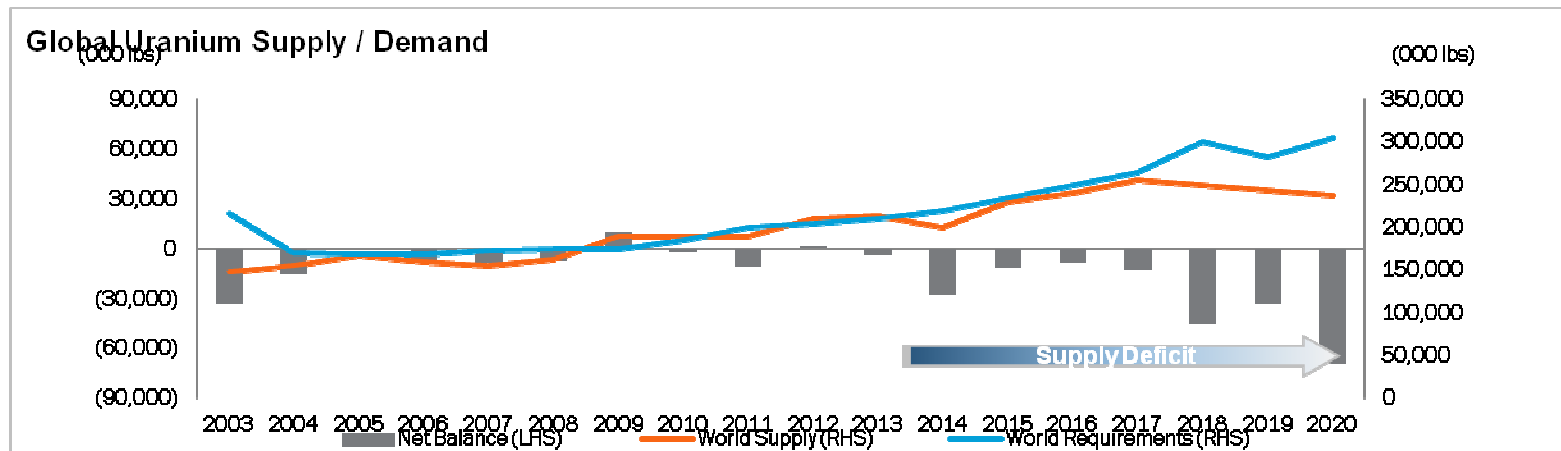


Source: World Nuclear Association website as of May 2012

Significant new sources required to meet power demand

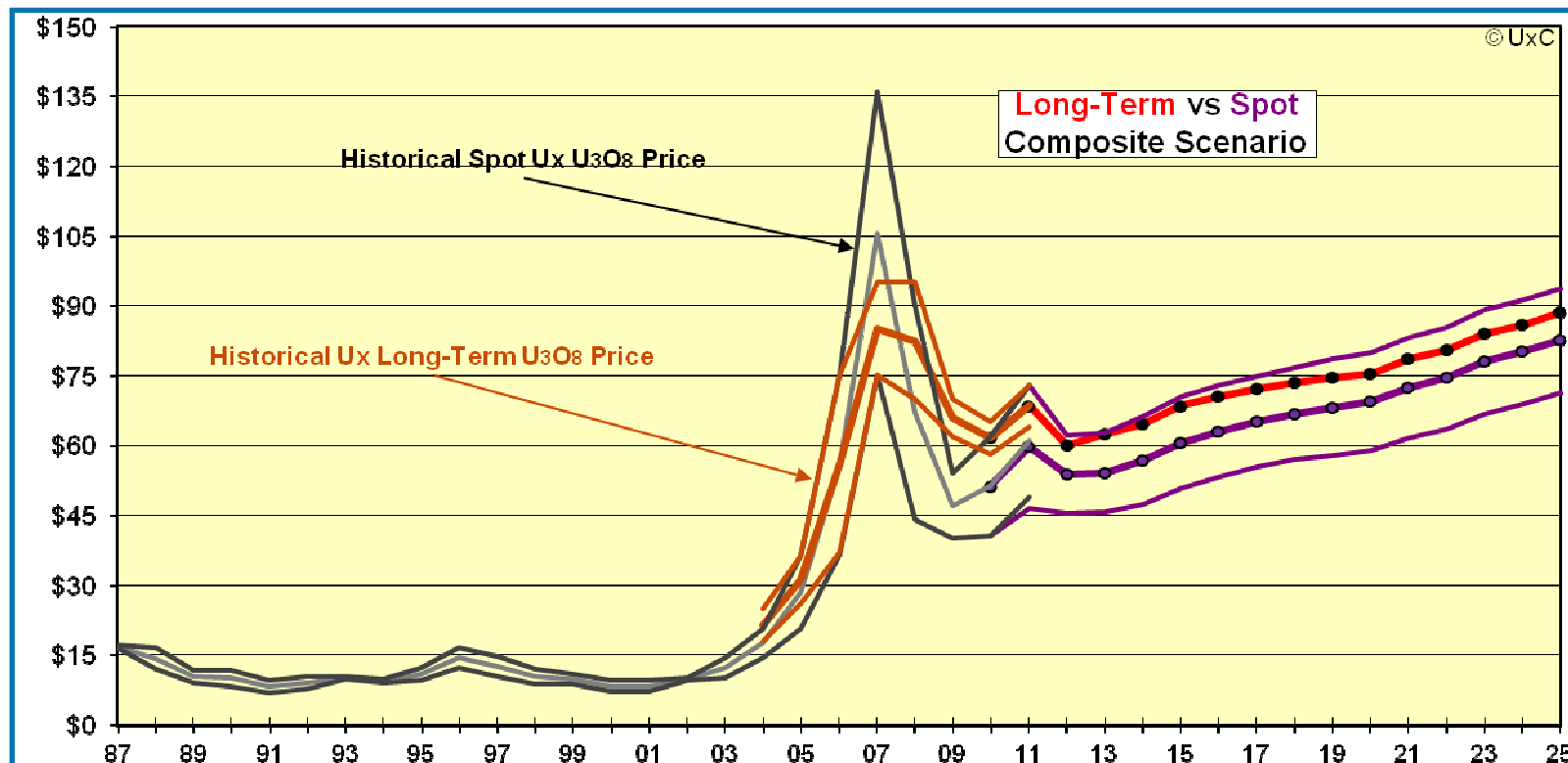
# Uranium Supply

- Kazakhstan ISL U<sub>3</sub>O<sub>8</sub> Production Growth:**  
 2000, 5mlbs    2008, 18mlbs    2009, 36mlbs    2011, 44mlbs    2012, 44mlbs est.
- Megatons to Megawatts program:**  
 Uranium recovery from nuclear weapons – US utilities - end of 2013 24mlbs
- Fukushima more likely to impact supply rather than demand**



*Supply fails to keep pace with demand*

# Long Term Uranium Price



Medium / Long term outlook for higher uranium prices  
Matching PEN production profile