

# CONSTRUCTION COMPLETED PRODUCTION RAMPING UP



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Please note that in accordance with Clause 17 of the JORC (2012) Code, the potential quantity and grade of the "Exploration Target" in this presentation must be considered conceptual in nature as there has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource.

Please note that Production Targets within this presentation are based on a proportion of inferred resources. There is a low level of geological confidence associated with inferred mineral resources and there is no certainty that further exploration work will result in the determination of indicated mineral resource or that the production target itself will be realised.

#### **Competent Person Statement**

The information in this presentation that relates to Exploration Results, Mineral Resources or Ore Reserves at Peninsula's Lance Projects is based on information compiled by Mr. Jim Guilinger. Mr. Guilinger 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. Guilinger is Principal of independent consultants World Industrial Minerals. Mr. Guilinger has 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 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Guilinger to the information in the form and context in which it appears.

The information in this presentation that relates to Exploration Results, Mineral Resources or Ore Reserves at Peninsula's Karoo projects is based on information compiled by Mr. George van der Walt. Mr van der Walt is a Member of the Australian Institute of Mining and Metallurgy (AusIMM) and the South African Council for Natural Scientific Professions (SACNASP)). Mr van der Walt is a Geological Consultant and Director of Geoconsult International (Pty) Ltd. Mr van der Walt is a Geological Consultant and Director of Geoconsult as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. van der Walt consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.

Production Ramping Up & Positioned for Growth PENINSULA



# Nuclear Provides Significant Baseload in Developed Nations





Source: US Energy Information Administration: World Nuclear Association

NPP = Nuclear Power Plant; UC = Nuclear Power Plant Under Construction; P+P = Nuclear Power Plants Planned and Proposed

## Disproportionate Mix of CO<sub>2</sub> producing Fossil Fuels in Developing Nations





NPP = Nuclear Power Plant: UC = Nuclear Power Plant Under Construction: P+P = Nuclear Power Plants Planned and Proposed

# **Uranium Supply/Demand - Today**





Global Uranium Supply vs. Demand (mlbs/yr)

Source: UxC, WNA, IAEA, NIW, Raymond James Ltd.

# **Price Outlook**



Near Term	Long Term
Many reasons to expect price increase in 2016/17:	Expect increase to \$60-70 by 2017-19 to support required new mines:
- Return of utility contracting	- Need reasonable risk-adjusted return
- Japanese restarts increasing	on new projects well in advance of shortfall
- China construction – domestic	- Strong global demand growth
- China construction – export	<ul> <li>Declining secondary supplies</li> </ul>
- India – strategic reserve established	- Significant deficit at decade's end
<ul> <li>ConverDyn lawsuit vs DOE</li> </ul>	
<ul> <li>Producer M&amp;A – Energy Fuels/Uranerz;</li> <li>URI/Anatolia</li> </ul>	
- China strategic stakes – Paladin, Fission	

# **US & EU Utility Contract & Spot Volumes**



- Spot price draws the attention of the investment community
- Reality is that Term market volumes far outweigh Spot volumes

PENINSULA

- Pre-GFC and pre-Fukushima utilities committed to buy significant volumes under Term contracts
- Term contract activity reduced between 2013 and 2015 as utilities were well covered under previous contracts

Term contract volumes expected to increase in 2016/17 and beyond

- Prior long term contracts ending
- Utilities seeking security of long term supply and prices
- Lack of current price incentive for new major mine developments even though demand is increasing

Source: UxC, US Energy Information Administration; EurAtom Supply Agency

# **Business Plan**



Peninsula's plan is to be a uranium producer with multiple sources of supply in established mining economies with low cost, long life mines backed up by a sophisticated, well-recognized marketing arm dealing directly with the utility companies

Start operations in the Lance ISR project in Wyoming

Strengthen relationships with US and European utilities

Advance the DFS on the Karoo uranium project in South Africa

Acquire one of several Australian uranium projects

- Production commenced in December 2015
  - Construction on-schedule and on-budget; building to 2.3mlbs U<sub>3</sub>O<sub>8</sub> per annum;
  - · Acquire satellite deposit (plant capacity licensed for 3mlbs pa)
- Utilities are seeking security of supply through diversity of supply suppliers with multiple sources
  of low cost, long life uranium located in varied, stable and secure mining countries are preferred
  suppliers
- · Peninsula has over the last 4 years marketed directly to the large US and European utilities
  - To build knowledge of our plans and projects and to build trust and confidence in our management;
  - To establish Peninsula as a future preferred supplier: long life, low cost mines in USA, South Africa and Australia (planned); and
  - To enter into Long Term Contracts
- Complete feasibility studies and reserve drilling at Karoo Projects, South Africa and build a mine by 2019
  - Investment term sheet signed 8<sup>th</sup> May 2015; DD planned completion July 2015; earn-in percentage and JOA ongoing;
  - Complete Reserve drilling ; complete feasibility studies and build to 3- 4mlbs U<sub>3</sub>O<sub>8</sub> per annum over 3-4 years
- · Acquire one of several projects identified in Australia

Please note that Production Targets within this presentation are based on a proportion of inferred resources. There is a low level of geological confidence associated with inferred mineral resources and there is no certainty that further exploration work will result in the determination of indicated mineral resource or that the production target itself will be realised. The estimated mineral resources underpinning the production targets relating to the Lance Projects have been prepared by Jim Guilinger and for the Karoo Projects by Mr George van Der Walt, Competent Persons as defined in the 2012 edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. The basis of the Production Targets within this presentation are included in a presentation to ASX released on 27<sup>th</sup> March 2014 "Company Presentation – Mines and Money Hong Kong" for the Lance Projects and a presentation released on 5 February 2014 "Company Presentation – Mining Indaba Conference 2014" for the Karoo Projects." Peninsula confirms that it is not aware of any new information or data that materially affects the information included in this announcement and that all material assumptions and technical parameters underpinning the production targets continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement

# **Corporate Overview**



Capital Structure	
Shares on issue	176m
Share price	\$1.00
Market capitalisation	\$176m
Cash Undrawn Inventory Finance	\$6.3m US\$13.0m

Shareholding*	% holding
Resource Capital Fund VI	21.6%
Pala Investments	12.2%
BlackRock Funds	9.2%
J P Morgan	4.8%
Global-X	4.8%
AREVA	3.3%
Acorn Capital	2.9%
Top 20 Shareholders	. 64.6%

1 year share price & volume history



#### **Research coverage**

**RFC** Ambrian **Dundee Capital Markets** Pareto Patersons Rodman & Renshaw

CAPITAL FUNDS, J.P.Morgan V PALA

Jim Taylor Dave Talbot Rhys Bradley Simon Tonkin Heiko Ihle

# **BLACKROCK**

AREVA



## Peninsula team has extensive experience in mine development

Management Corporate & USA

Gus Simpson Managing Director/CEO

Ralph Knode CEO North America

David Coyne Chief Financial Officer

**Tefo Maloisane** *Country Manager, South Africa* 

Laurent Odeh VP Sales & Marketing

**Mike Griffin** VP Permitting, Regulatory and Environmental Compliance

Mike Brost VP Geology North America

Jan Fajgl VP Production

Ben Schiffer - WWC Engineering Lead Permitting Consultant

**Brian Pile - TREC** Project Manager-Design Engineers & EPC contractors for Lance Strong strategic leader, extensive background in resources, corporate finance and management; 25 years' experience in USA, Asia, Africa and Australia

Senior management geologist /engineer; 30 years' experience with Cameco and Uranium One in ISR mine development and operation in USA, Central Asia and Australia

CPA accountant and experienced mineral production CFO; 25 years' cross border experience in Australia, Asia and USA

Experienced commercial and business manager in the resources sector, including management of regulatory and joint venture relationships for AREVA in South Africa

15 years commercial and business development experience in the mining sector, including responsibility for Rio Tinto uranium sales in Europe and South Africa

Extensive experience in Health Physics, permitting and compliance with Cameco and Uranium One in North America, Central Asia and Australia

Senior uranium geologist ; 30+ years' experience in uranium roll front exploration and well field planning, design and operation with US subsidiary of Cameco

Mining engineer with over 25 years' experience in managing uranium field operations, mine engineering and hydrology in the United States, Czechoslovakia and Kazakhstan.

Over 30 years' operating experience in all facets of the Wyoming regulatory and permitting process (www.wwcengineering.com)

Senior construction engineer with leading US engineering firm in design and construction management of ISR facilities in North America (www.treccorp.com)

# **Uranium Mining in Wyoming**



## Wyoming very supportive of uranium extraction – multiple ISR operations in region



# **Rapid Resource Growth at Lance**





Resource grown from 5mlbs to 54mlbs U3O8 in 4 years: Delineation cost ~\$2/lb. (Est.)



### 01 **Emerson Project** Av 5ft @ 400ppm eU<sub>3</sub>O<sub>8</sub> Lucas Project Av 8ft @ 600ppm eU<sub>3</sub>O<sub>8</sub> **Houx Project Clark Project** Av 15ft @ 600ppm eU<sub>3</sub>O<sub>8</sub> Av 4ft @ 1300ppm eU<sub>3</sub>O<sub>8</sub> **Ross Project Kendrick Project** Av 13ft @ 500ppm eU<sub>3</sub>O<sub>8</sub> Av 3.5ft @ 400ppm eU<sub>3</sub>O<sub>8</sub> **Carey Project** Av 6ft @ 700ppm eU<sub>3</sub>O<sub>8</sub> **Brooks Project** Av 7ft @ 600ppm eU<sub>3</sub>O<sub>8</sub> **Chatterton Project** Av 5ft @ 1000ppm eU<sub>3</sub>O<sub>8</sub> **Osborne Project** Av 8ft @ 700ppm eU<sub>3</sub>O<sub>8</sub> **Richards Project** Av 7ft @ 600ppm eU<sub>3</sub>O<sub>8</sub> **Barber Project** 5km Av 5ft @ 800ppm eU<sub>3</sub>O<sub>8</sub> Warren Project Av 10ft @ 700ppm eU<sub>3</sub>O<sub>8</sub>

## Large Resource potential: 70+ years mine life

- Current JORC-2012 Compliant Resource 53.7mlbs<sup>1</sup> U3O8 (51.2Mt at 476ppm U3O8)
- 13 historic resources
- 22 roll fronts extend for a combined linear strike length of 194 miles (312km)
- Exploration Target 158-217mlbs U<sub>3</sub>O<sub>8</sub> (169-196mt at 426-530ppm U3O8) inclusive of 54mlbs JORC Resource

Please note that in accordance with Clause 17 of the JORC (2012) Code, the potential quantity and grade of the "Exploration Target" in this presentation must be considered conceptual in nature as there has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource.





### **Exploration Target**

The Lance Projects cover a significant proportion of the Powder River Basin Basin Cretaceous sandstones of Wyoming, which are believed to represent an Exploration Target of between 158 and 217mlbs  $U_3O_8$  which includes 54mlbs of existing JORC (2012) Code compliant resource.

Exploration Target	Tonnes (million)		Grade (ppm eU <sub>3</sub> O <sub>8</sub> )		eU <sub>3</sub> O <sub>8</sub> (mlbs)	
			Fro			
Range	From	То	m	То	From	То
Total	169	196	426	530	158	217

## Lance Projects Exploration Target (including the existing JORC (2012) Code Compliant Resource)

Please note that in accordance with Clause 17 of the JORC (2012) Code, the potential quantity and grade of the "Exploration Target" in this presentation must be considered conceptual in nature as there has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource.

### **Basis of Exploration Target**

Exploration Target is based on a combination of Exploration Results and on proposed exploration programs.

### **Exploration Results**

Approximately 7,500 drillholes, of which over 2,500 have been drilled and PFN logged since 2009. The data from these holes has been used to determine a JORC (2012) Code compliant resource and to extrapolate between areas of limited drilling but still within the mineralised trends.

### **Proposed Exploration Programs**

The Company has minerals rights and surface access rights to 122.2 square kilometres and 107.8 square kilometres respectively. This package covers the most prospective mineralised redox /roll front trends that have a cumulative strike length of over 300km. The Company intends to continue exploration over this ground with drilling in order to validate the exploration target and convert to resources.



#### **Basis of Grade and Tonnage Range Determination**

With a database of approximately 7,500 drillholes together with several decades of geological research the level of exploration activity on which the Exploration Target is based, is considered to be high.

The known Lance resources are located in the upper Lance Formation and in the lower Fox Hills horizons in which roll fronts have been identified over a cumulative length of over 300kms. These horizons have only been partially explored and towards the south (Barber area) the lower unit of the Fox Hills has not been systematically tested. Along these channels JORC-compliant resources have been estimated in localised areas in which reliable drilling data is available. The zones between the JORC (2012) Code compliant resource areas form the Exploration Target because of the following:

- · Continuity of the prospective sandstone established by geological mapping and regional drilling
- · Historic estimates of mineralisation based on drilling which has not yet been validated by Peninsula

The Exploration Target is based on a combination of:

- A tonnage calculation that incorporates the total cumulative prospective strike length of the identified redox fronts multiplied by the average width, thicknesses as determined in the resource estimate,
- · The grade range represents the lowest resource area grades and highest resource area grades

#### Summary of the Relevant Exploration Data Available and the Nature of the Results

For a comprehensive description of drilling information readers are referred to JORC Table 1 at the end of this presentation.

#### Proposed Exploration Activities Designed To Test Validity of the Exploration Target

Over the life of mine ongoing exploration drilling is proposed to expand the JORC (2012) Code compliant resource within the Exploration Target areas. This initial program will be focussed on the Kendrick area. Exploration activities will mostly comprise geophysical logging of additional drillholes.

#### Lance Projects Competent Person Statement

The information in this presentation that relates to Exploration Targets, Exploration Results and Exploration Potential at the Lance Projects is based on information compiled by Mr. Jim Guilinger. Mr. Guilinger 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. Guilinger is Principal of independent consultants World Industrial Minerals. Mr. Guilinger has 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 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. Guilinger consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.

# **Scalable Production Development**



- Lance Projects JORC 2012 Code compliant 54 million<sup>1</sup> lb. resource base and licenced mining rate of 3 million lbs. p.a. allows the ability to increase production quickly
  - No pre-stripping or mining development required
  - Production wells access the ore body directly at rate of approx.1 well/drilling rig/day
  - Processing plant comprised of parallel production arrays that are duplicated for each stage
- Nature of ISR lends itself to scalable expansion
  - Scalable development plan for Lance Projects based on Equity funding for Stage 1 production rate up to 700,000 lbs U<sub>3</sub>O<sub>8</sub> p.a. over H2, 2015 – H1, 2017
  - Stage 2 development plan based on construction in H1 2017 with additional production of 500,000 lbs  $U_3O_8$  p.a. over H2, 2017 2019 (1,200,000lbs )
  - Stage 3 development plan based on debt funding and construction in 2018 –19 with additional production of 1,100,000 lbs  $U_3O_8$  p.a. H2, 2019 onwards (2,300,000lbs)

Development plan designed to get into production at a meaningful rate with reduced capital investment using equity followed by expansion as market allows

Market conditions will be the determining factor in the timing of Stage 3



# **Scalable Plant Layout**





## Strong economics: IRR of 36% and average cash cost US\$29.16/lb

Key financial metrics <sup>1</sup>		Progressive cost improvement	US\$/lb
Unlevered NPV 8%	US\$288m	All-in Sustaining Costs <sup>3</sup>	
Cashflow positive	H2 2016		
IRR	36%	Feasibility Study (Apr 12)	\$36.60
Stage 1 CAPEX <sup>2</sup>	US\$33m		1
		Optimisation Study (Mar 13)	\$34.80
1 <sup>st</sup> Quartile All-in Costs @ 2.3mlbs p.a.	US\$/lb		L
Royalties and indirect taxes	\$6.28	Wellfield Optimisation (Jul 13)	\$30.65
Operating costs	\$11.48		
Restoration and closure costs	\$2.07	Scalable Plant (Oct 14)	\$29.16
Ongoing wellfield development costs	\$9.33		
Total ongoing cash costs	\$29.16		

<sup>1.</sup> US\$54/lb is the present value of average prices used between 2015 and 2024 (existing sales contract and forecast new sales contracts yet to be entered into), escalated at the minimum industry standard escalation rate. Post-2024, a present value price of US\$60/lb (consistent with uranium industry consensus) is applied over the remaining life of mine.

2. Stage 1 CAPEX inclusive of 10% cost contingency; excludes OPEX and working capital during commissioning

3. Unescalated, 2014\$

The basis of the Production and Financial Information within this presentation is included in a presentation to ASX released on 27<sup>th</sup> March 2014 "Company Presentation – Mines and Money Hong Kong" Peninsula confirms that it is not aware of any new information or data that materially affects the information included in this announcement and that all material assumptions and technical parameters underpinning the production and financial information continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement

# **Production and Cost Profile**





- Ramp-up of U<sub>3</sub>O<sub>8</sub> production to coincide with tightening uranium market
- CAPEX Stage 1 US\$33m; Stage 2 US\$35m; Stage 3 US\$78m
- Project cashflow positive in 2016
- No debt obligations



- Toll treatment for Stage 1 minimises up-front capital and commissioning risk for Peninsula
- Significant reduction in Stage 2 and 3 operating costs as a result of:
  - toll treating being brought in-house
    - greater economies of scale

# **Stage 1 Operating Performance to Date**



- Well Fields
  - Injection of O<sub>2</sub> and CO<sub>2</sub> commenced at 1<sup>st</sup> header house unit on 2 December 2015
  - Production wells are consistently flowing at above the forecast rate of 20gpm
  - Consistent flow rates have substantially confirmed permeability
  - Average head grades continue to increase
  - Best performing production well so far achieved 96 mg/L U<sub>3</sub>O<sub>8</sub> on 31 Jan 2016 (LOM average used in financial model is 38mg/L U<sub>3</sub>O<sub>8</sub>)
  - Construction of 2<sup>nd</sup> header house unit complete and now supplying lixiviant to CPP following HH1 start-up fines filter added and injecting increased quantities of O2 earlier to increase head grade ramp up in HH2
  - Following injection of CO<sub>2</sub>, bicarbonate in HH1 well field increased from 700mg/L to 1,300mg/L – will translate to reduction in bicarbonate usage and costs over LOM (our design assumes that we would have to inject bicarb to manually increase bicarb levels up from 700mg/L to 1,500-2,000mg/L)

# **Stage 1 Operating Performance to Date**



- Central Processing Plant
  - Operating to design specification
  - Initial capture rate of uranium on resin in ion exchange columns is exceeding expectations (tested grab sample shows 12 lbs uranium per cu.ft. resin vs forecast of 6 lbs/cu.ft.)
  - Average U3O8 grade in fluid leaving the CPP is 0.00 mg/L
- Deep Disposal Well
  - 168,000 gallons of potassium chloride buffer solution were injected into the DDW prior to the start of operations
  - Flow rates ranged between 80 and 120gpm a phenomenal rate and orders of magnitude better than all other operators in Wyoming
  - Each DDW costs around US\$3 million potential at Lance to defer timing for additional DDWs and reduce the total number needed over life of mine

# **Sales and Marketing Strategy**



## Strategy

- Align Peninsula with major utilities requirements
- Progressively commit production to term contracts
- Optimise revenue & reduce pricing risk

## Peninsula Uranium Limited (UK)

- Peninsula has established Peninsula Uranium Limited (PUL), a dedicated uranium sales and marketing company based in the UK
- Peninsula MD/CEO has a hands-on and direct management role within PUL
- PUL is responsible for arranging and administering all sales of uranium concentrate produced by Peninsula

## Term Contract Status

- 1,000,000 lbs  $U_3O_8$  contracted at WAP \$73-\$75 per lb  $U_3O_8$  from US utility for 2016 2020 delivery
- 912,000 lbs  $U_3O_8$  contracted at November 2014 Term contract price for 2016 2024 delivery
- 1,935,000 lbs  $U_3O_8$  contracted at H1 2015 prices for delivery 2016 2024
- Term Sheet with third utility for 4,000,000 lbs  $U_3O_8$  for delivery over 10 years

# Weighted average prices for deliveries made under signed Term contracts between 2016 and 2020 is US\$58/Ib U<sub>3</sub>O<sub>8</sub>

# Stage 2 Development – Significant Reduction in Cost per lb for the Group





■ Lance Projects AISC ■ Resource Replacement ■ Sales & Marketing ■ Corporate

- Lance Projects All-in Sustaining Cash Cost reduces from \$41 to \$31-32/lb end toll milling agreement with U1 and greater economies of scale
- Gross Sales & Marketing costs increase marginally but not in same proportion as production increase; gross Corporate costs unchanged – net effect is a reduction of close to 50% on a \$/lb basis

# Karoo Projects Overview



## JORC (2012) Compliant resource 56.9m<sup>2</sup> lbs eU<sub>3</sub>O<sub>8</sub> (23.3Mt at 1,108ppm)



- Located in the Karoo region of RSA, approx. 400km to 600km E-NE of Cape Town
- Known uranium and molybdenum mineralised province
- 7,800 km<sup>2</sup> over Permian sandstones
- 32,176 hectares of freehold land
- Freehold land covers majority of historic mineralisation
- Ownership:
  - Peninsula 74%
  - BEE Partners 26%



## Positive Karoo scoping study; Pre-Feasibility study underway

- Scoping Study completed on Karoo Eastern Sector Projects in South Africa
  - Combined open cast and decline mining
  - Acid processing route is the most efficient and cost effective
  - Decision to proceed to Pre-Feasibility Study
- Pre-Feasibility Study underway
- Targeting commencement of mining in 2018/19
- Significant upside potential Karoo Western Sector Projects not included in Scoping Study
- Exploration target size 250-350mlbs  $U_3O_8$  (126-133Mt at 900-1200ppm  $U_3O_8$ )

The Karoo Scoping Study referred to in this presentation is based on low-level technical and economic assessments, and is insufficient to support estimation of Ore Reserves or to provide assurance of an economic development case at this stage, or to provide certainty that the conclusions of the Scoping Study will be realised.

# Karoo Exploration Target Additional Disclosure



## **Basis of the Exploration Target**

The Exploration Target is based on a combination of Exploration Results and proposed exploration programs.

Please note that in accordance with Clause 17 of the JORC (2012) Code, the potential quantity and grade of the "Exploration Target" in this presentation must be considered conceptual in nature as there has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource.

#### **Exploration Results**

The database currently contains 9,343 historic holes, of which 7,230 have been used to determine the JORC (2012) Code compliant Mineral Resource and subsequent update and to extrapolate between areas of limited drilling still within the mineralised trends. Many of the remaining collar positions are for historic holes that are not within the current resource areas or are inaccessible (filled in over time). For a comprehensive description of drilling information readers are referred to the JORC Table 1 declaration included in the announcement released to ASX on 11 March 2014 titled "13% Resource Expansion and Upgrade at Karoo Projects".

#### **Proposed Exploration Programs**

Peninsula has prospecting rights to 7,550 square kilometres of ground. This package covers the most prospective mineralised trend that have a cumulative strike length of 23km. Peninsula intends to continue exploration over this ground using airborne radiometric data, geological mapping and prospecting together with follow up drilling with the intention of locating additional material for future mining and processing.

#### Basis of Grade and Tonnage Range Determination

With a database of 9,343 drill holes together with several thousand historic holes not yet located and entered into the database, and several decades of geological research and surface exploration, the level of exploration knowledge on which the Exploration Target is based is considered to be high.

The current Karoo resources are located on two well-defined sedimentary channels that each extends for at least 100 kms along strike. These channels have, according to historic records, been tested both recently and historically by in excess of 10,000 exploration drill holes representing 1.6 million metres of drilling. Along these channels JORC (2012) Code compliant resources have been estimated in localised areas in which reliable drilling data is available. The zones between the JORC-compliant resources areas form the Exploration Target because of the following:

- Continuity of the prospective sandstone established by geological mapping and regional drilling
- · Historic estimates of mineralisation based on drilling which has not yet been validated by Peninsula

The current JORC (2012) Code compliant resource of the Ryst Kuil channel alone, which represents the most completely drilled portion of the resources, comprises 18.5mt at 1,105ppm eU3O8.



This resource tonnage is distributed over a cumulative strike length of 23km representing approximately 0.80 million tonnes/km. The Exploration Target is based on a combination of:

- the total cumulative prospective strike length of the undrilled sections of the channel multiplied by the demonstrated tonnage/km, combined with,
- the areas of known mineralisation for which historic estimates exists but are not included in the JORC-compliant resource
- the grade range represents the lowest resource area grades and highest resource area grades

#### Summary of the Relevant Exploration Data Available and the Nature of the Results

For a comprehensive description of drilling information readers are referred to JORC Table 1 included in announcement to the ASX on 11th March 2014: 13% Resource Expansion and Upgrade at Karoo Projects. Peninsula confirms that it is not aware of any new information or data that materially affects the information included in this presentation and that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

#### Proposed Exploration Activities Designed To Test Validity of the Exploration Target

Over the next 3-5 years ongoing exploration drilling is proposed to expand the JORC (2012) Code compliant resource within the Exploration Target areas. This initial 3-5 years program will be focussed on the Eastern Sector RystKuil channel. Exploration activities will mostly comprise geophysical logging and geochemical sampling of additional drillholes, ground-based prospecting and geological mapping.

Testing of the Western Sector Exploration Target, utilising the same exploration techniques, areas will commence during following 5-10 year time frame.

#### Karoo Projects Competent Person Statement

The information in this presentation that relates to Exploration Targets, Exploration Results and Exploration Potential at Peninsula's Karoo projects is based on information compiled by Mr. George van der Walt. Mr. van der Walt is a Member of the Australian Institute of Mining and Metallurgy and is a member of a Recognised Overseas Professional Organisation included in a list promulgated by the ASX (The South African Council of Natural Scientific Professions, Geological Society of South Africa). Mr van der Walt is a Director of Geoconsult International. Mr van der Walt has 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 Competent Persons as defined in the 2012 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr. van der Walt consents to the inclusion in the presentation of the matters based on their information in the form and context in which it appears.



- Peninsula has now commenced production at the Lance Projects
- The Company has a low risk, clear path to production expansion
- Significant production volume in Term contracts
- Substantial operating margins over the current uranium price
- Strong financial support from first-tier shareholder base
- Karoo offers second production centre with diversity of supply and jurisdiction
- Tightening supply and new demand expected to lift the whole uranium sector

Major sector re-rating expected due to uranium supply contraction combined with increased new demand and utility contracting



# **APPENDICES**





Classification	Tonnes	Grade (ppm U3O8)	eU3O8 (Ibs)	Mineability factor	eU3O8 (Ibs)	Recovery factor	Recovered U3O8 (lbs) 50.4%
Measured	4,142,950	495	4,520,159	0.8	3,616,128	0.8	2,892,902
Indicated	11,532,135	497	12,640,951	0.8	10,112,761	0.8	8,090,209
M+Ind	15,675,085	497	17,161,110	0.8	13,728,888		10,983,111
Inferred	35,478,033	467	36,513,114	0.6	21,907,868	0.8	17,526,295
Total	51,153,119	476	53,674,224		35,636,757		28,509,405

<sup>1</sup>JORC Table 1 included in an announcement to the ASX released on 27th March 2014:"Company Presentation – Mines and Money Hong Kong". Peninsula confirms that it is not aware of any new information or data that materially affects the information included in this announcement and that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcement.

ISR Reserves are determined after well field development drilling



## JORC compliant Resource March 2014 Large resource potential – 100+ year mine life

Classification	eU3O8 (ppm) CUT-OFF	Tonnes (million)	eU3O8 (ppm)	eU3O8 (million lbs)
Indicated	600	8	1,242	21.9
Inferred	600	15.3	1,038	35
Total	600	23.3	1,108	56.9

Classification	Sector	eU3O8 (ppm) CUT-OFF	Tonnes (million)	eU3O8 (ppm)	eU3O8 (million lbs)
Indicated	Eastern	600	7.1	1,206	18.7
	Western	600	0.9	1,657	3.2
Inferred	Eastern	600	11.8	1,046	27.2
	Western	600	3.5	1,019	7.8
Total		600	23.3	1,108	56.9

Note: Totals may not sum exactly due to rounding.

<sup>2</sup>JORC Table 1 included in announcement to the ASX released on 11<sup>th</sup> March 2014 :"13% Resource Expansion and Upgrade at Karoo Projects". Peninsula confirms that it is not aware of any new information or data that materially affects the information included in this presentation and that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed.

# **Resin Loading Commissioning**





# **Reverse Osmosis Plant Commissioning**





# Ion Exchange Column Commissioning





## **Plant and Well Fields Commissioning**





# **NRC Pre-Production Inspection**



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## **Completed 25 November**



# Lance Stage 1 Construction Complete











# Lance Stage 1 Construction Complete





# Lance Stage 1 Construction Complete











## **Well Field Development**





# **Well Field Development Drilling**



