

# UNLOCKING THE FULL POTENTIAL

Corporate Presentation | October 2018



**PENINSULA**  
**ENERGY** LIMITED

 **ASX**  
ASX: PEN

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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 and Metallurgical Results at Peninsula's Lance Projects is based on information compiled by Mr. Jim Guiling. Mr. Guiling 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. Guiling is Principal of independent consultants World Industrial Minerals. Mr. Guiling 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. Guiling consents to the inclusion in the presentation of the matters based on his information in the form and context in which it appears.

# Cautionary & Inferred Resources Notice

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The Feasibility Study completed for the Lance Projects includes measured and indicated resources and an assumed resource conversion of 60% (inferred to indicated or greater). The purpose of the Feasibility Study is to demonstrate the Lance Projects economic viability and the robustness of the planned low pH operations over an extended mine life beyond the existing Ross production area.

The Feasibility Study itself is based on various assumptions, including homogeneity of the delineated ore body contained within the Lance Projects. This is considered reasonable by the Company's technical consultants, competent persons and independent external consultants. The Company believes that it has a reasonable basis upon which to prepare and release these Feasibility Study results, particularly given that the Lance Projects have been in operation since December 2015. Whilst the Company considers that all the material assumptions underpinning the Feasibility Study are based on reasonable grounds, there is no certainty that they will prove to be correct or that the outcomes indicated by the Feasibility Study will be achieved.








The Company believes it has a reasonable basis for providing the forward-looking statements and production targets included in this announcement. The material assumptions are included in Appendix 1 of this announcement and in the JORC table disclosures appended. The detailed assumptions regarding the resources are outlined in the ASX announcement released on 17 September 2018.

Investors should also note that there is no certainty that the Company will be able to raise the amount of funding for the Lance Projects when it is required or on terms that are not overly dilutive or that are favourable to the value of the Company's existing shares.

This announcement has been prepared in accordance with the JORC Code (2012) and the ASX Listing Rules. There is a low level of geological confidence associated with inferred mineral resources and there is no certainty that further exploration and delineation work will result in the determination of indicated mineral resources or that the production target itself will be realised. Financial information contained in this announcement is preliminary in nature and is in-part based on low-level technical and economic assessments and is insufficient to support the estimation of reserves or to provide assurance of economic development.

Under the Feasibility Study mine plan, the first 5 years production can be sourced almost entirely from Measured and Indicated Resources. If the Inferred Resources are excluded from the Feasibility Study, the economic analysis still forecasts a positive financial performance. Therefore, the Company is satisfied that the use of Inferred Resources is not a determining factor in overall Project viability and that it is reasonable to include Inferred Resources in the Feasibility Study, particularly given that the Lance Projects is an operating project that has been producing uranium for over two years.

In accordance with the relevant regulations governing the disclosure of mineral projects, readers are cautioned that mineable resources based on inferred resource material are considered too speculative geologically to enable them to be classified as reserves.

Investment Criteria	Peninsula
Active US uranium production assets	
Long term sales contract protection	
Direct exposure to Section 232 outcomes	
Strong leverage to rising uranium market price	
Ability to rapidly expand production capacity	
Low current CAPEX requirements	
Experienced technical, commercial and financial team	



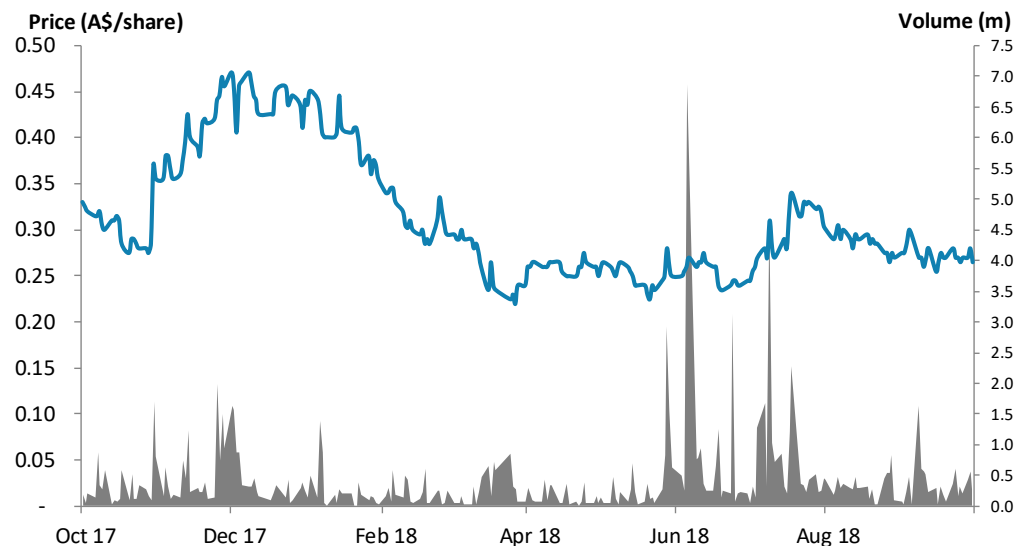
# Corporate Overview

## Capital Structure

Shares on issue*	237m
Share price (10-Oct-18)	A\$0.265
Market capitalisation (10-Oct-18)	A\$63m
Enterprise Value (10-Oct-18)	A\$71m
Available Cash (30-Jun-18)	US\$12.0m

## Share Price & Volume History

Ticker: ASX:PEN



## Shareholding\*

## Holding (%)



22.5%



11.3%



3.0%



2.6%



2.5%

## Top 20 Shareholders

**59.5%**

## Research Coverage

H.C. Wainwright & Co.

Heiko Ihle

Roth Capital Partners

Joe Reagor

BMO Capital Markets

Alex Pearce

Numis

Justin Chan

VIII Capital

Dave Talbot

\*Undiluted as at 10 October 2018

- **Develop and operate long-life, low-cost production assets underpinned by long-term product sales contracts**

## Sales & Marketing

- Valuable long term sales contracts provide financial foundation
  - Source of current/ongoing cash revenues

## Core Asset

- Lance contains resources of 53.9M lbs of U3O8<sup>2</sup>

## Step Change for Lance

- Conversion to low pH ISR operations in 2019/2020
- License amendment review progressing on schedule

## Growth

- Building core production capacity for the improving market

- **Our Vision: Peninsula capitalizing on uranium market rebound with 1<sup>st</sup> quartile cost base at Lance ISR Project**

## 1. Long-life operating mine located in a favourable jurisdiction

- Wyoming is a “can do” state
- Benefit from any Section 232 outcomes favouring US producers

## 2. Existing sale contracts and relationships with major utilities

- 20% of LOM production under contract – provides downside protection
- Ability to expand production rates as new sale contracts are entered

## 3. Robust low pH FS outcome

- Completed with conservative price assumptions
- Identified opportunities to outperform on a number of cost areas

## 4. Low risk transformation of an operating project

- Clearly defined and focused plan to enhance shareholder value
- Changing project chemistry to industry leading method
- Low capital requirements for transition

# Lance ISR Project | Wyoming, USA

A photograph of an industrial facility, likely a water treatment plant, featuring large black pipes, white insulated sections, and red-handled valves. The pipes are supported by a grey metal framework. In the background, there are yellow storage tanks and a blue motor. The scene is brightly lit by overhead industrial lights.



## Exceptional Asset

- Lance holds the largest defined uranium resource of any currently producing project in the United States
- 53.9M lbs U3O8 JORC (2012) compliant resource base<sup>2</sup>

## Home-grown Success

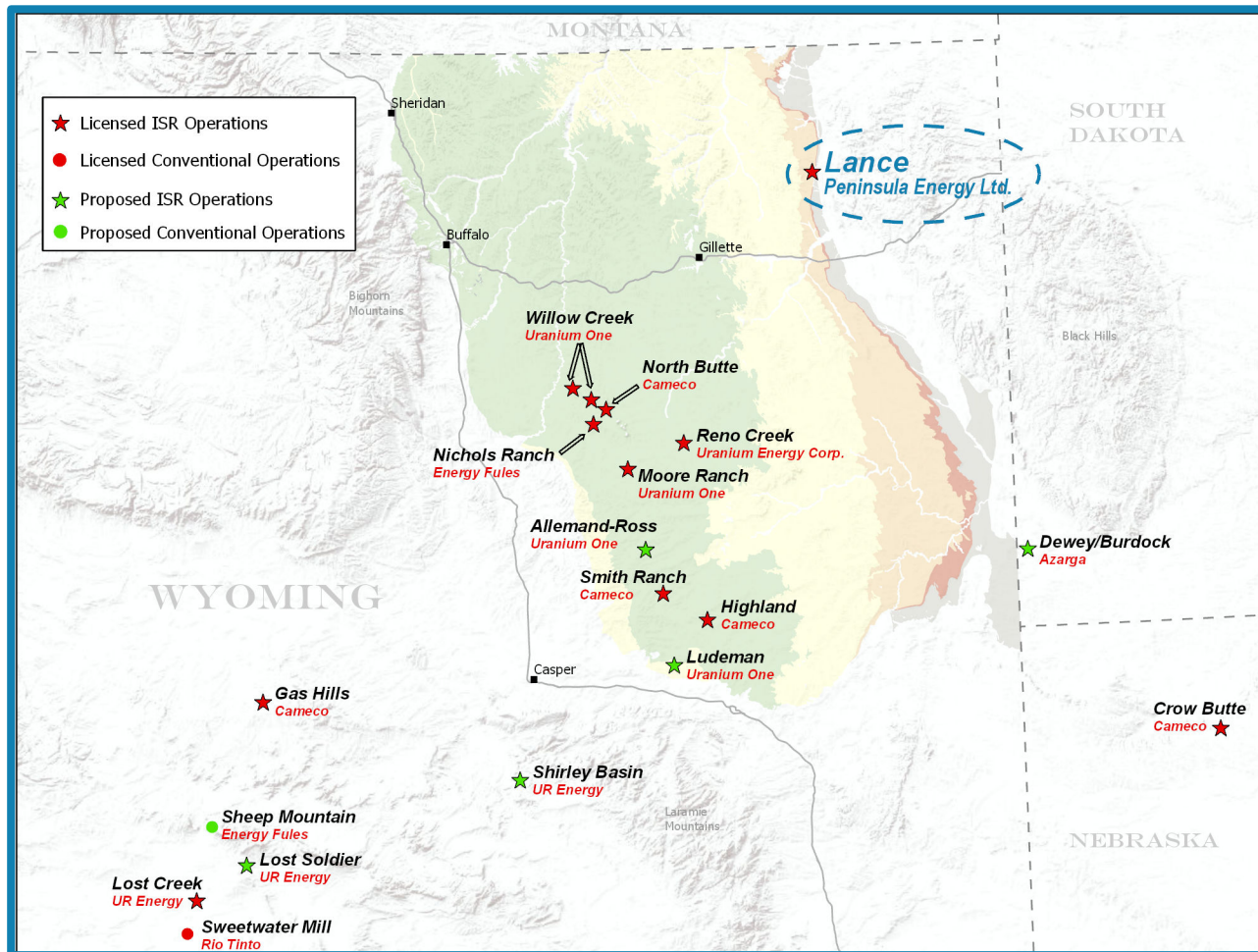
- Peninsula developed the Lance Project from conception to a producing asset

## Scalable Production

- Lance is licensed to produce up to 3M lbs U3O8 per annum
- Current (Stage-1) plant capacity of 1.15M lbs U3O8 per annum

# Premier US Uranium Jurisdiction

- Wyoming is a premier US uranium extraction jurisdiction, hosting multiple licensed facilities

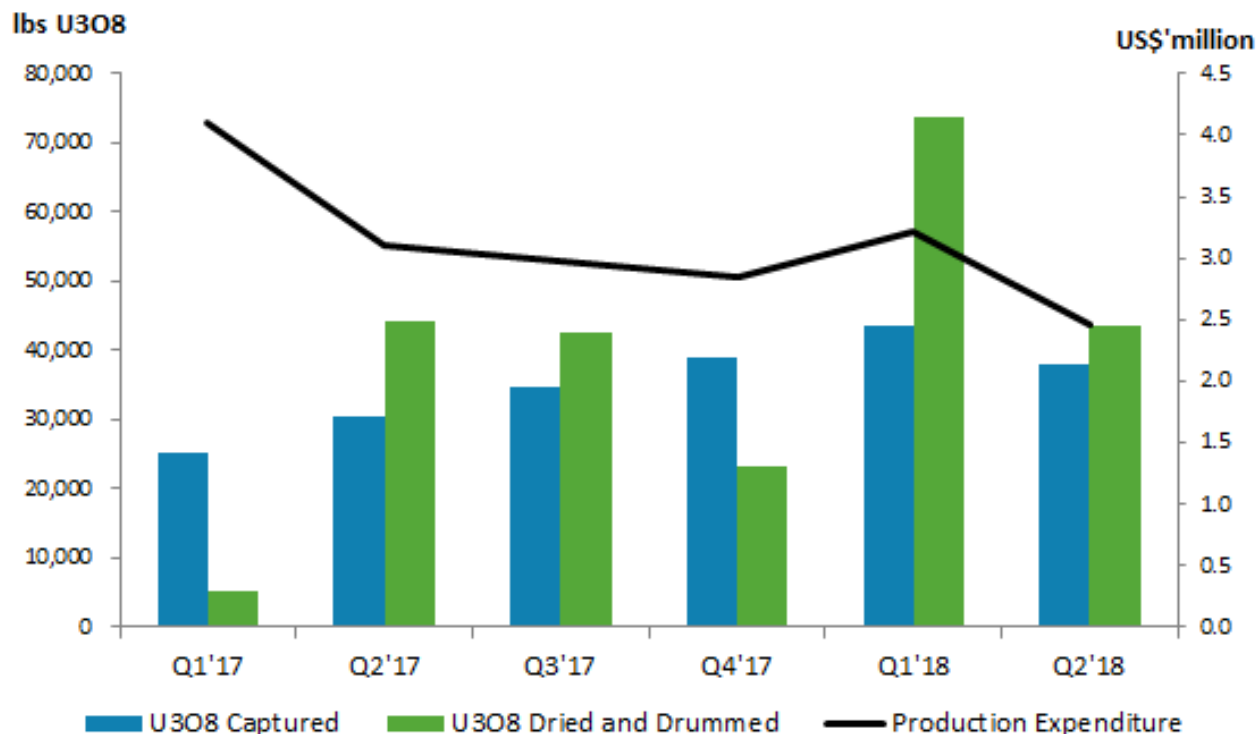


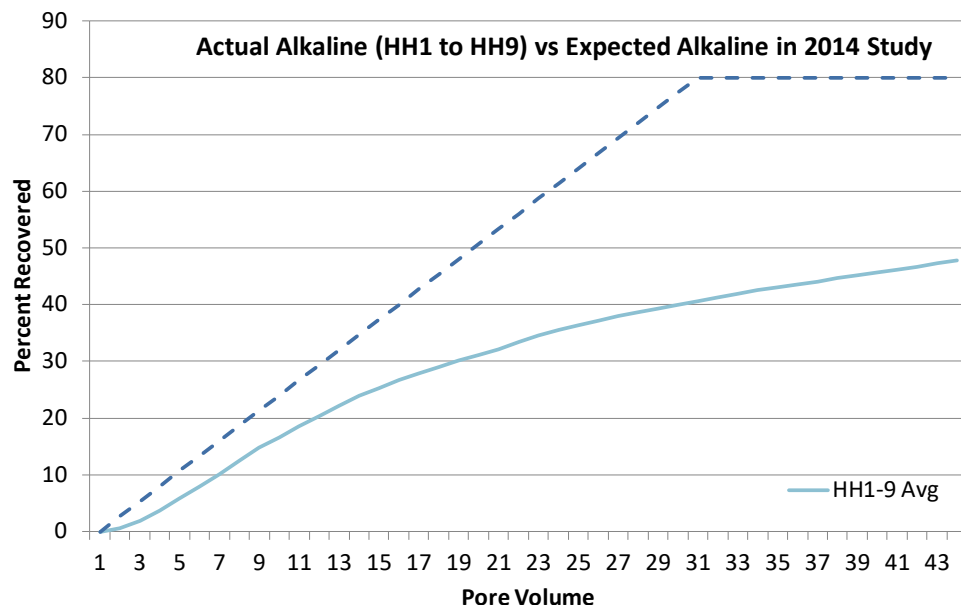
# Lance - Steady Production Results

- **Demonstrating consistency with quarterly production rates**

- 38,001 lbs produced; 43,553 lbs dried & drummed in 2Q18
- Production in Mine Unit 1 significantly cutback to preserve more “pounds in the ground” for low pH operations
- Tightly controlled production expenditures

## Quarterly Production and Expenditure





- Production commenced Dec-2015
- Current mining operations use an alkaline lixiviant
- Just over 350,000 lbs  $U_3O_8$  mined since production started
- Uranium recoveries using alkaline not meeting pre-mining targets

Our response

Mineralogy and leach chemistry research initiative

Amendment requests to permit use of low pH lixiviants

Low pH Feasibility Study



- Low pH ISR transformation initiative is being actively advanced

## High Potential

- Potential to transform the performance and cost profile
- Feasibility Study released in September 2018

## Short Timeline

- Permit and licence amendments submitted to regulator and under review, expected approvals in mid-CY2019
- Plant and wellfield modifications can be implemented while production from alkaline ISR operations continues

## Low Capital Cost

- \$5.3M CAPEX required for process equipment modifications
- Initial low pH operations will occur in existing wellfields

## LOM Production

- 33.4m lbs U<sub>3</sub>O<sub>8</sub>
- 17 year minelife

## Financial Metrics

- LOM AISC of \$31.77/lb
- NPV8 \$157m at \$49/lb
- NPV8 \$254m at \$57/lb

### Three Stage Expansion Plan

Stage	Year	Expansion CAPEX	Production Cost \$/lb.	AISC \$/lb.	Capacity mlbs/yr
Stage 1	2019	\$5.3m	\$14.67	\$40.58	1.15
Stage 2	2024	\$43.1m	\$8.93	\$31.52	2.3
Stage 3	2026	\$70.3m	\$9.16	\$30.36	3.0

Capital Costs	\$USM	\$US/lb
Low pH – Transition	5.3	0.16
Stage 2 - Plant & Wellfield Expansion	43.1	1.29
Stage 3 – Barber Satellite & Wellfield Expansion	70.3	2.10
Wellfield Replacement & Sustaining CAPEX	342.4	10.25
<b>Total</b>	<b>461.2</b>	<b>13.81</b>

***CAPEX cost estimates maintain an element of conservatism – opportunities to reduce LOM wellfield development costs continue to be explored***

- Tight +/- 5 to 10% range of accuracy
- Includes resource definition & delineation costs over LOM
- Includes costs to complete Kendrick and Barber / Satellite permits
- Scope to reduce Wellfield Development costs through bulk drilling campaigns
- Includes average contingency of 5.8%

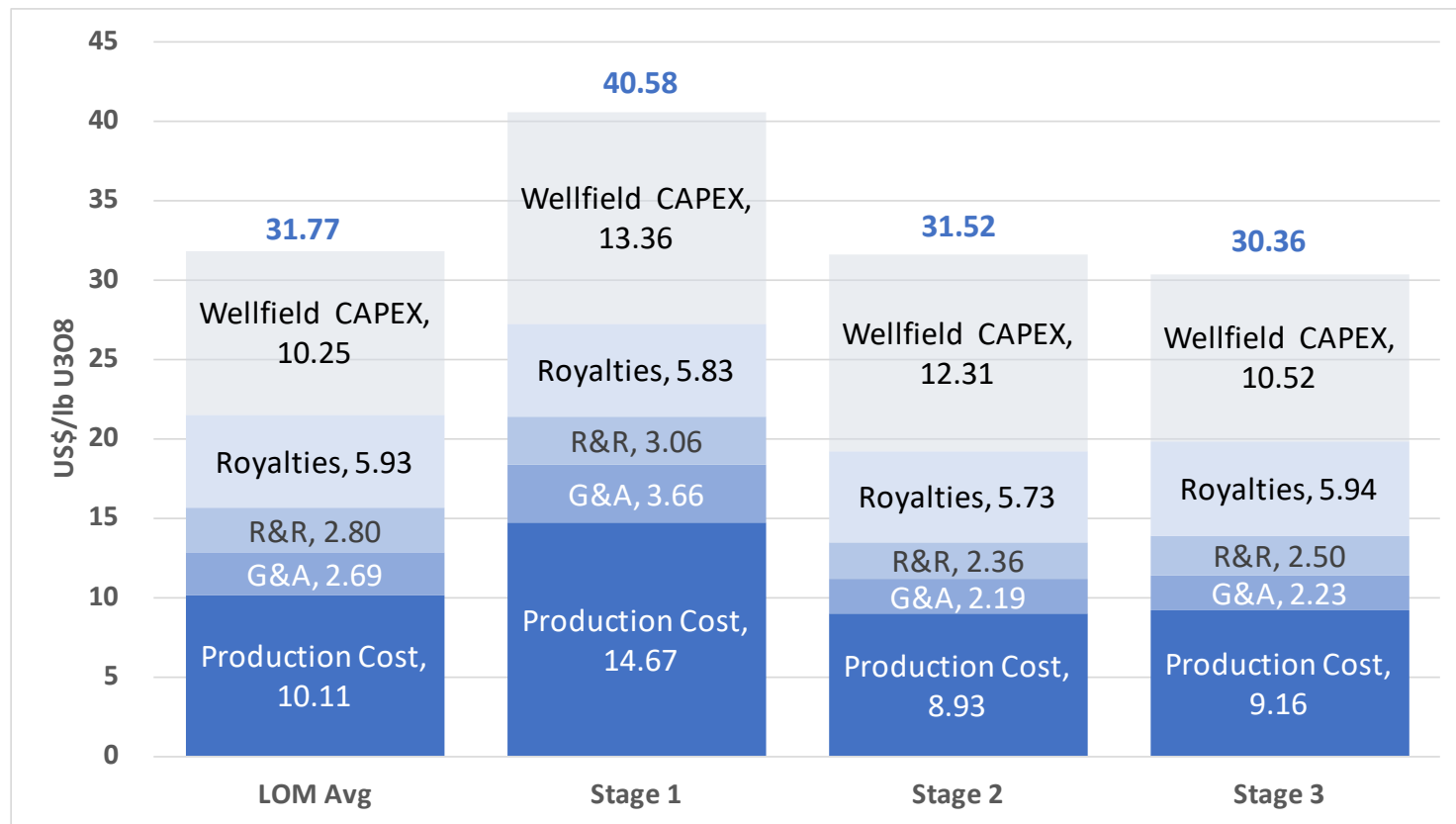
Operating Costs (+/-5%)	US\$ Per lb U <sub>3</sub> O <sub>8</sub>
Wellfield	6.08
Processing Costs	3.04
Site and US G&A	3.32
Restoration & Rehabilitation	2.80
Contingencies	0.36
<b>Total</b>	<b>15.59</b>

- Tight +/- 5% range of accuracy\*
- Sulfuric acid cost assumption - \$162/t landed at site
- Toll milling ends when Stage 2 is commissioned
- Includes all site and US operations G&A costs
- Includes average contingency of 2.4%

***\* Cost estimates are based on knowledge gained from operations at the Lance Projects – not estimates of what might happen when operations commence in the future***



# FS Outcomes - All-in Sustaining Cash Costs: LOM and by Stage



- Comparative basis to Kazakhstan type low pH ISR (ie, exclude royalties & local taxes, rest. & rehab, DDWs for rest. & rehab and permitting/regulatory costs)
  - Stage 1: \$28.87/lb U<sub>3</sub>O<sub>8</sub>; Stage 2: \$21.03/lb U<sub>3</sub>O<sub>8</sub>; Stage 3: \$19.60/lb U<sub>3</sub>O<sub>8</sub>

*Note: All-in sustaining cash costs **exclude** CAPEX for low pH transition, Stage 2 expansion and Stage 3 expansion and are calculated as at the steady state production rate for each respective stage*

# Timeline for Low pH ISR Transformation

Q3 CY17	Q4 CY17	Q1 CY18	Q2 CY18	Q3 CY18	Q4 CY18	Q1 CY19	Q2 CY19	Q3 CY19	Q4 CY19	Q1 CY20	Q2 CY20	Q3 CY20	Q4 CY20
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Alkaline ISR Operations

Ongoing Laboratory Testwork

Feasibility Study

Regulatory Approval Process

Low pH Transition CAPEX

Low pH Operations

- Low pH Transition CAPEX in MU1 and process plant to be carried out parallel to regulatory approval process
- Low pH Transition CAPEX in MU2 can be carried out while low pH operations in MU1 are ramping up

## Technical Basis

- Over 12 months of laboratory tests completed
- More rigorous test basis than prior alkaline FS
- Almost 50% of global uranium mined using this method

## Favourable Ore Body

- Carbonate content <2.0% - great for use of mild acid
- 53.9m lbs  $U_3O_8$  resource
- Staged expansion flexible to align to uranium market needs

## Regulatory Pathway

- Clear pathway ahead
- PTM Amendment application submitted in Apr'18; SML submitted Oct'18 – reviews progressing

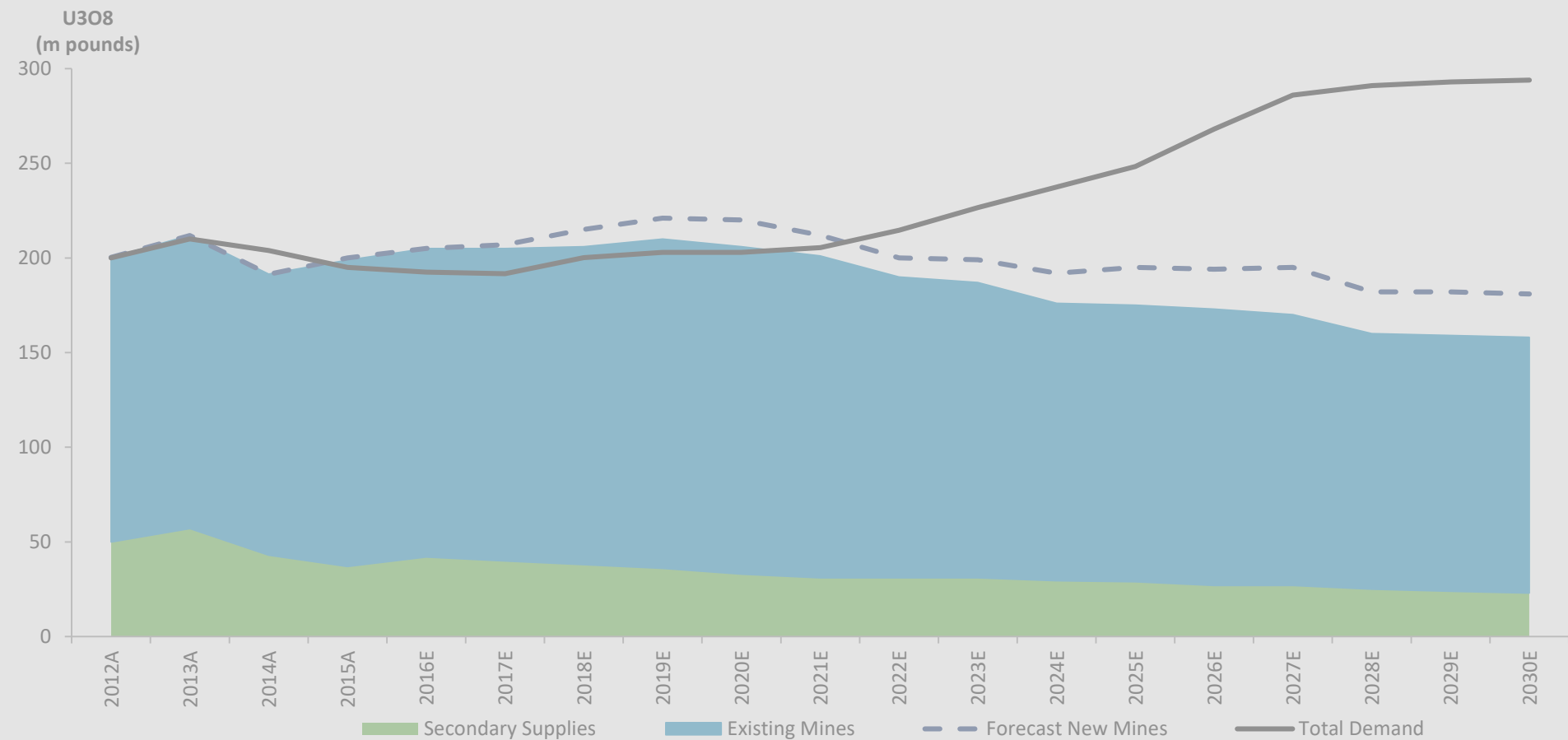
## Cost Competitive

- \$31.77 / lb  $U_3O_8$  LOM all-in sustaining cash cost
- \$34.00 / lb  $U_3O_8$  break-even price
- \$5.3m low pH transition cost

## Existing Contracts

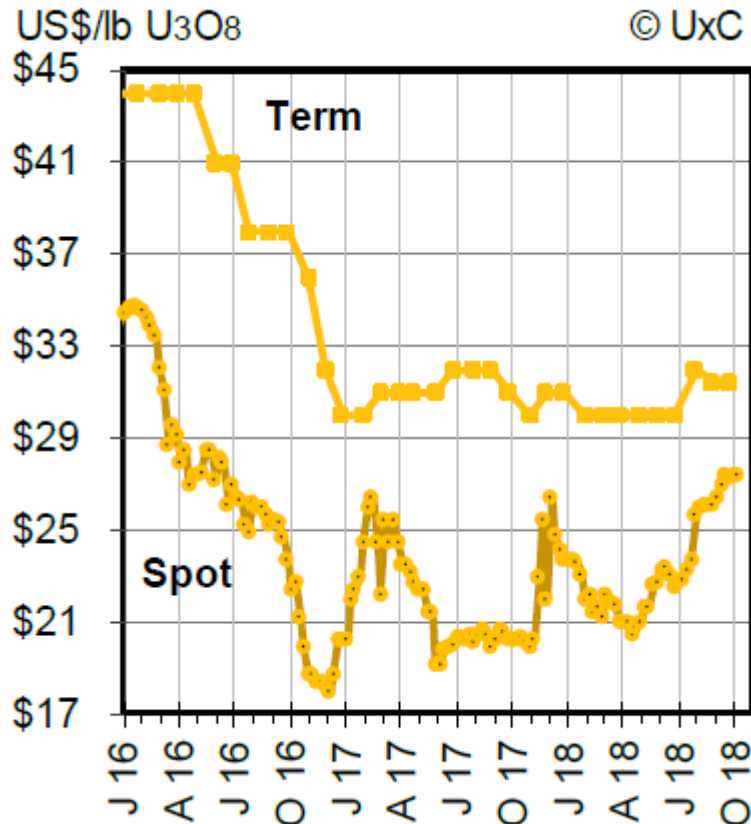
- 20% of LOM production already under contract
- Contracted revenue stream to assist financing activities

# The Uranium Market





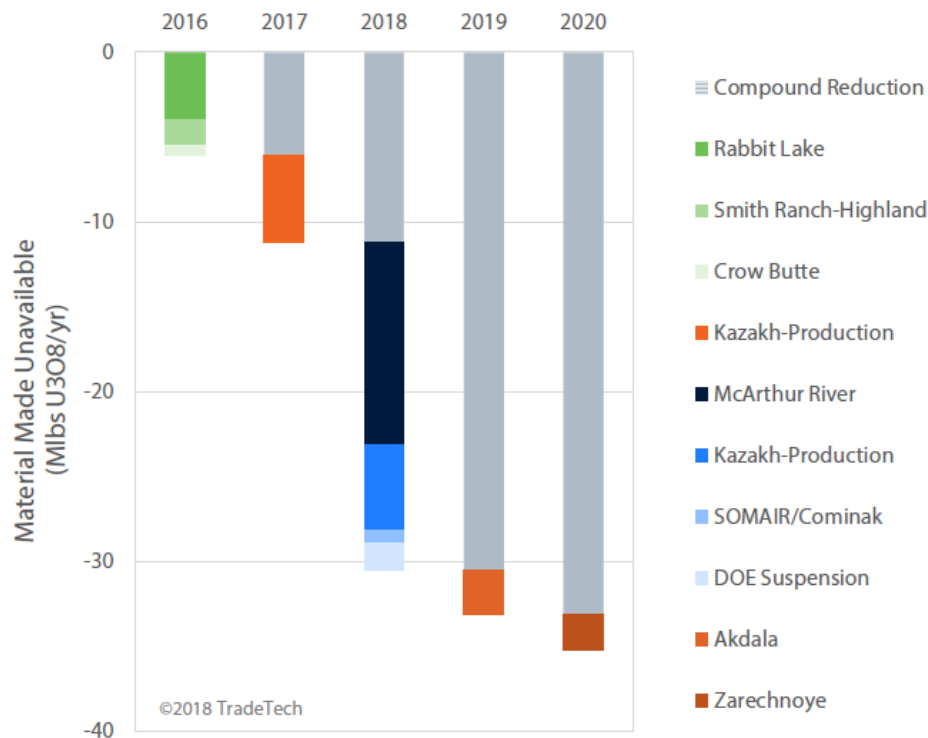
- The uranium bear market may have reached its turning point



- Uranium is sold in spot & term markets
- Utilities have been buying from spot for several years
- Spot market supply depth is being tested by producer/investor buying
- Term market is opening up
- Both markets are still well below industry's average cost of production

Source: The Ux Consulting Company, LLC

- Both supply and demand factors point to rising prices



Source: TradeTech

- Excludes Langer Heinrich C&M announced by Paladin on 25 May 2018

## Supply: Global supply restraint

- The miners keep reducing production target levels – now off 30 M lbs U<sub>3</sub>O<sub>8</sub>/yr
- 2018 production estimated at 135M lbs
- Available inventory stockpiles are decreasing

## Demand: New demand is driving the market up

- Primary producers are buying big spot volumes
- New investment funds are buying and holding physical uranium inventories
- Forecasts continue to show demand growth for nuclear power generation well beyond 2030

- **Increasing geopolitical support for domestic production**
  1. Section 232 of the US Trade Expansion Act Petition
    - US Dept. of Commerce (DOC) commenced investigation on 18 July 2018
    - Starts twelve month clock for government action
    - Remedies likely to bolster market for US based production
  2. US Dept of Energy suspension of excess uranium barter/sales
    - 2018 & 2019 US Fiscal Years
    - Support for permanent suspension
  3. Review/extension of the Russian Suspension Agreement

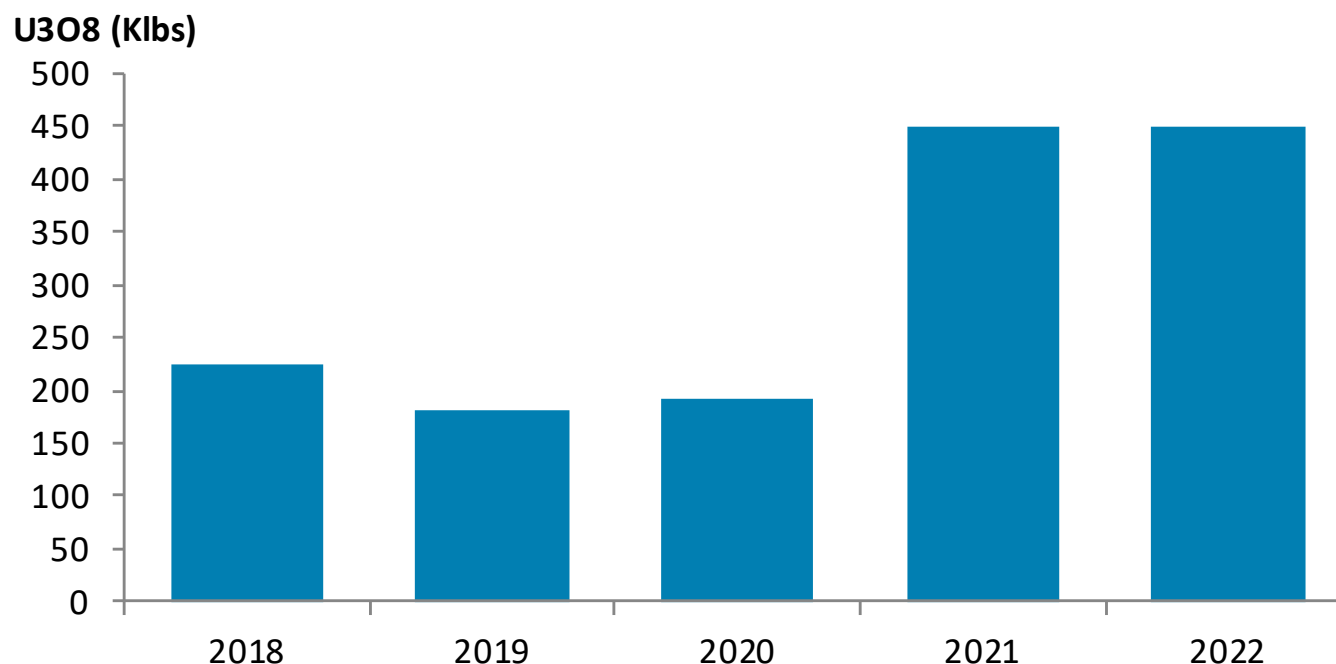
# Uranium Sales Portfolio



- **Five sales agreements with global customer base**
- **Significant contract portfolio carries through year 2030**
- **Up to 6.4 million pounds  $U_3O_8$  remaining under contract**
  - 4.5 million pounds  $U_3O_8$  committed deliveries
  - Up to 1.9 million pounds  $U_3O_8$  optional at customer election between 2021 and 2026
- **Term contracts weighted price between US\$51-53/lb  $U_3O_8$** 
  - Well above the current spot and term market price structure
- **Portfolio represents ~20% of projected Lance LOM production**

- Near and mid-term sales contracts underpin Peninsula's business
- CY2018 completed deliveries of 225,000 lbs of U3O8

## 5-Year Sales Profile (\*)

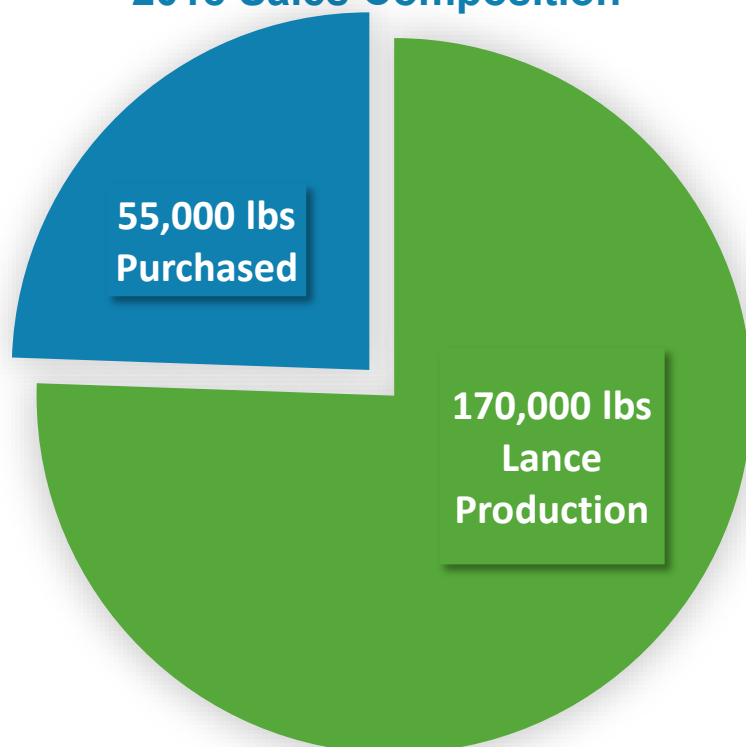


(\*) Committed deliveries only and excludes optional delivery quantities that customers may elect from 2021 onwards.

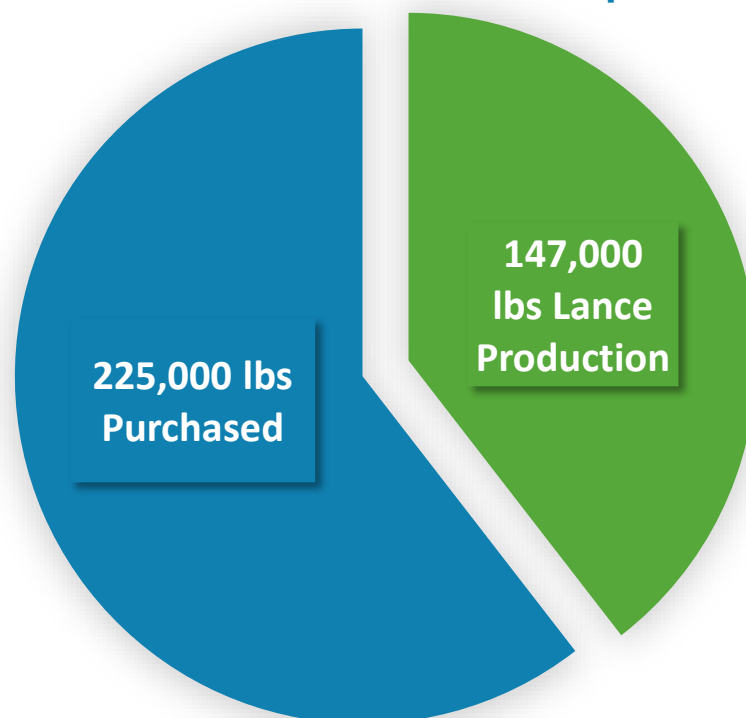


- Blending production with spot purchases
- Some deliveries in 2019 and 2020 have flexible origin clauses allowing seller optionality
- Contracted to purchase 225,000 lbs  $U_3O_8$  as needed – fixed purchase prices with average cost of \$23.69/lb  $U_3O_8$ 
  - No negative exposure to rising uranium prices

2018 Sales Composition



2019-2020 Planned Sales Composition



# Conclusion



## Amendment Progression

- Wyoming gained Agreement State status 1 October 2018
- Source material license amendment application submitted
- Finalise low pH implementation plan with WDEQ

## Testing & Planning

- Continue to refine low pH mining plans through ongoing test work
- Evaluate low pH field trials opportunities
- Continue alkaline based mining at reduced rates until low pH approved

## Mine Unit 3 Funding

- Investment in Mine Unit 3 wellfields to commence H2 CY2019
- MU3 sustaining development CAPEX cost ~\$9M
- Funding options being considered

## Customer Base

- Continue to engage with our existing & potential new customers
- Seek opportunities for new long term contracts – at acceptable prices

## U.S. Domestic Producer

- Peninsula is well positioned to benefit from current market trends

## Long Life Project

- Lance has the largest defined US uranium resource currently in production

## Valuable Contract Book

- Up to 6.4M lbs sales at weighted price between **US\$51-53/lb**  $U_3O_8$

## Financial Strength

- Robust cash position with reliable income generation

## Unlocking Value

- Clearly defined and focused strategy to enhance shareholder value



# Contact Details

## REGISTERED OFFICE

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[info@pel.net.au](mailto:info@pel.net.au)

## FURTHER INFORMATION

**Wayne Heili** Managing Director +61 8 9380 9920

**David Coyne** Finance Director / CFO +61 8 9380 9920

## Board

<b>John Harrison</b> , Non-Executive Chairman	<i>Capital Markets</i>
<b>Wayne Heili</b> , Managing Director & CEO	<i>Exec. Leadership &amp; Technical</i>
<b>David Coyne</b> , Finance Director & CFO	<i>Finance &amp; Risk Management</i>
<b>Harrison (Hink) Barker</b> , Non-Executive Director	<i>Nuclear Fuel Markets</i>
<b>Mark Wheatley</b> , Non-Executive Director	<i>Mining CEO &amp; ISR Technical</i>

## World Class Management Team

<b>Ralph Knode</b>	<i>CEO USA</i>
<b>David Hofeling</b>	<i>CFO USA</i>
<b>Mike Brost</b>	<i>VP Geology USA</i>
<b>Jay Douthit</b>	<i>VP Operations USA</i>
<b>Mike Griffin</b>	<i>VP Permitting, Regulatory &amp; Environment USA</i>
<b>Willie Bezuidenhout</b>	<i>CEO South Africa</i>



# Appendix 2 – Resources & Competent Person Statement

## Lance Projects Resource Estimate as at 31 December 2017

Classification	Tonnes (million)	U3O8(kg)	Grade (ppm U3O8)	U3O8(lbs)
Measured	3.7	1.8	489	3.9
Indicated	9.1	5.4	466	11.9
Inferred	36.1	17.3	463	38.1
<b>Total</b>	<b>48.9</b>	<b>24.5</b>	<b>473</b>	<b>53.9</b>

1) JORC Table 1 included in an announcement to the ASX released on 17 September 2018: “Lance Projects JORC Compliant Resource Update”. 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.