

EXPANDING U.S. URANIUM PRODUCTION CAPACITY

Corporate Presentation | April 2019



PENINSULA
ENERGY LIMITED

 **ASX**
ASX:PEN

This presentation is provided on the basis that the Company nor its representatives make any warranty (express or implied) as to the accuracy, reliability, relevance or completeness of the material contained in the Presentation and nothing contained in the Presentation is, or may be relied upon as, a promise, representation or warranty, whether as to the past or the future. The Company hereby excludes all warranties that can be excluded by law. The Presentation contains material which is predictive in nature and may be affected by inaccurate assumptions or by known and unknown risks and uncertainties, and may differ materially from results ultimately achieved.

The Presentation contains “forward-looking statements”. All statements other than those of historical facts included in the Presentation are forward-looking statements including estimates of resources, timing of permit and license amendments, and rates of uranium extraction and recovery. However, forward-looking statements are subject to risks, uncertainties and other factors, which could cause actual results to differ materially from future results expressed, projected or implied by such forward-looking statements. Such risks include, but are not limited to, uranium price volatility, currency fluctuations, increased production costs and variances in ore grade or recovery rates from those assumed in mining plans, as well as political and operational risks and governmental regulation and judicial outcomes. The Company does not undertake any obligation to release publicly any revisions to any “forward-looking statement” to reflect events or circumstances after the date of the Presentation, or to reflect the occurrence of unanticipated events, except as may be required under applicable securities laws. All persons should consider seeking appropriate professional advice in reviewing the Presentation and all other information with respect to the Company and evaluating the business, financial performance and operations of the Company. Neither the provision of the Presentation nor any information contained in the Presentation or subsequently communicated to any person in connection with the Presentation is, or should be taken as, constituting the giving of investment advice to any person.

This presentation shall not constitute an offer to sell or solicitation of an offer to buy securities of the Company, and the securities of the Company may not be offered or sold in any jurisdiction in which their offer or sale would be unlawful.

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

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 three 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 asset – with major project transformation in progress	
Long term sales contract protection	
Strong leverage to rising uranium market prices	
Direct exposure to Section 232 outcomes	
Ability to rapidly expand production capacity	
Low current CAPEX requirements	
Experienced technical, commercial & financial team	
Attractive valuation when compared to ISR peers	

- **The Section 232 Investigation**

- The US Dept of Commerce (DOC) is currently investigating the adverse national security impacts related to excessive importation of uranium
- The DOC report and recommendations are **DUE** on **14 April, 2019**
 - The report may be made public upon completion
- President Trump can act on the report **through mid-July** (within 90 days of the DOC report submittal)

- **Strong Case for Pro-active Remedies**

- US uranium production down to 830,000 pounds in 2018, 30% below 2017 and the lowest level since 1949
- US mine production is on track to drop to 382,000 pounds in 2019, which is **less than 1 percent of U.S. annual requirements and not enough to power even a single nuclear reactor**

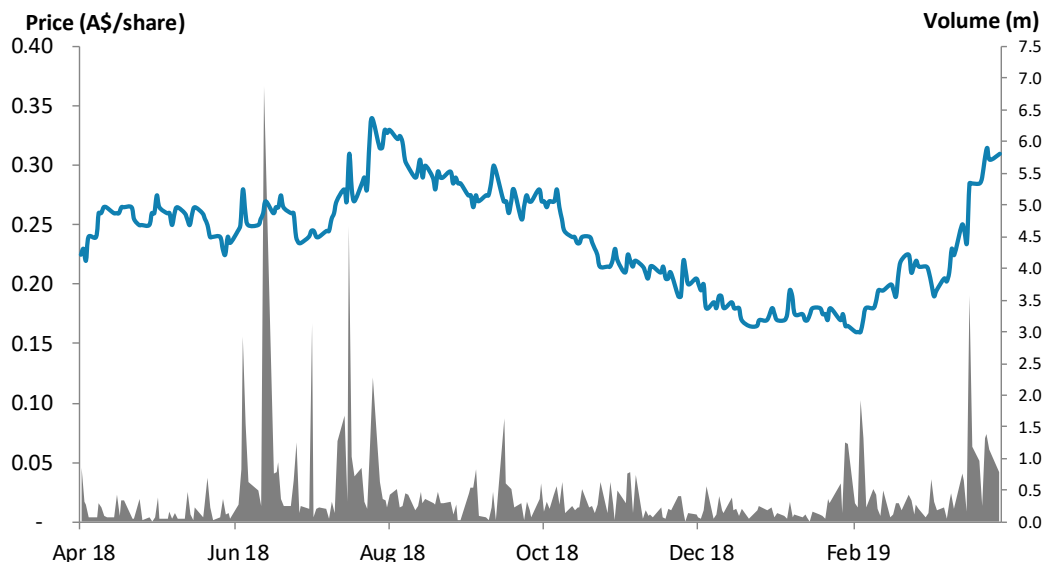
Corporate Overview

Capital Structure

Shares on issue*	245m
Share price (29-Mar-19)	A\$0.310
Market capitalisation (29-Mar-19)	A\$76m
Enterprise Value (29-Mar-19)	A\$90m
Available Cash (31-Dec-18)	US\$7.5m

Share Price & Volume History

Ticker: ASX:PEN



Shareholding*

Holding (%)



23.3%

COLLINS ST

VALUE FUND

2.5%



2.3%

Top 20 Shareholders

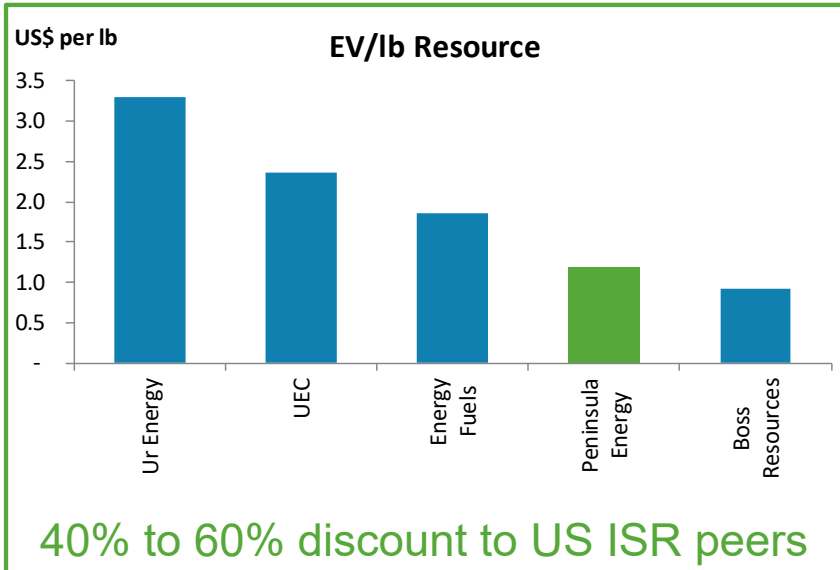
57.0%

Research Coverage

Patersons	Cam Hardie
H.C. Wainwright & Co.	Heiko Ihle
Roth Capital Partners	Joe Reagor
BMO Capital Markets	Alex Pearce
VIII Capital	Dave Talbot

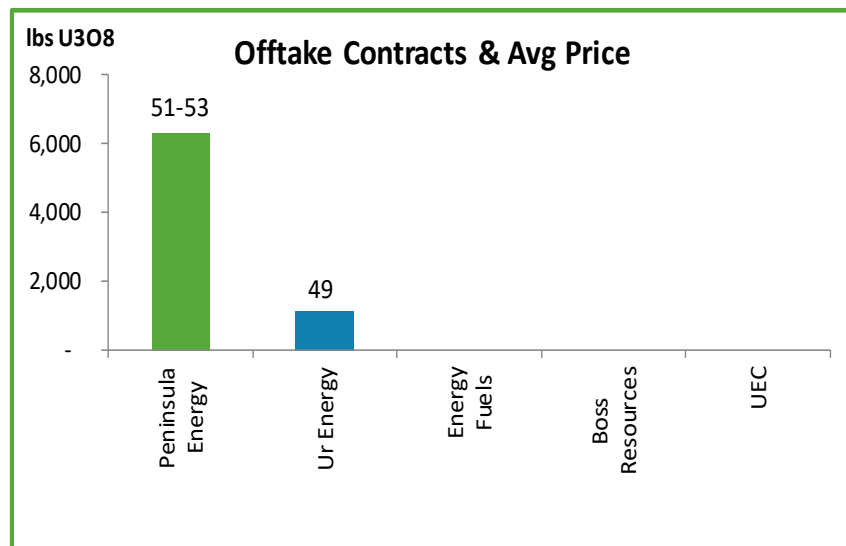
*Undiluted as at 29 March 2019

Investment Upside – Low EV/lb vs Peers



Imminent share price re-rate events in 2019

- Completion of low pH Permit amendments
 - First re-rate event occurred with approval of Permit to Mine Amendment
 - Second catalyst pending with Source Materials License Amendment
- News flow from low pH field trials
- US Section 232 decision



Peer group leading revenue base

- Investment grade customer base
- Predictable base revenue
- Substantial leverage to uranium price recovery with only 20% of LOM production under contract

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

Sales & Marketing

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

Focus on Core Asset

- Current production from a top-rated uranium jurisdiction
- Lance Project contains resources of 53.9M lbs of U₃O₈²

Step Change for Lance

- Conversion to low pH ISR operations in 2019/2020
 - Set to transform performance and cost profile

Growth

- Building core production capacity for the improving market

- **Our Vision: Realising 1st quartile cost basis at our Lance Project**

2 – See Appendix 2

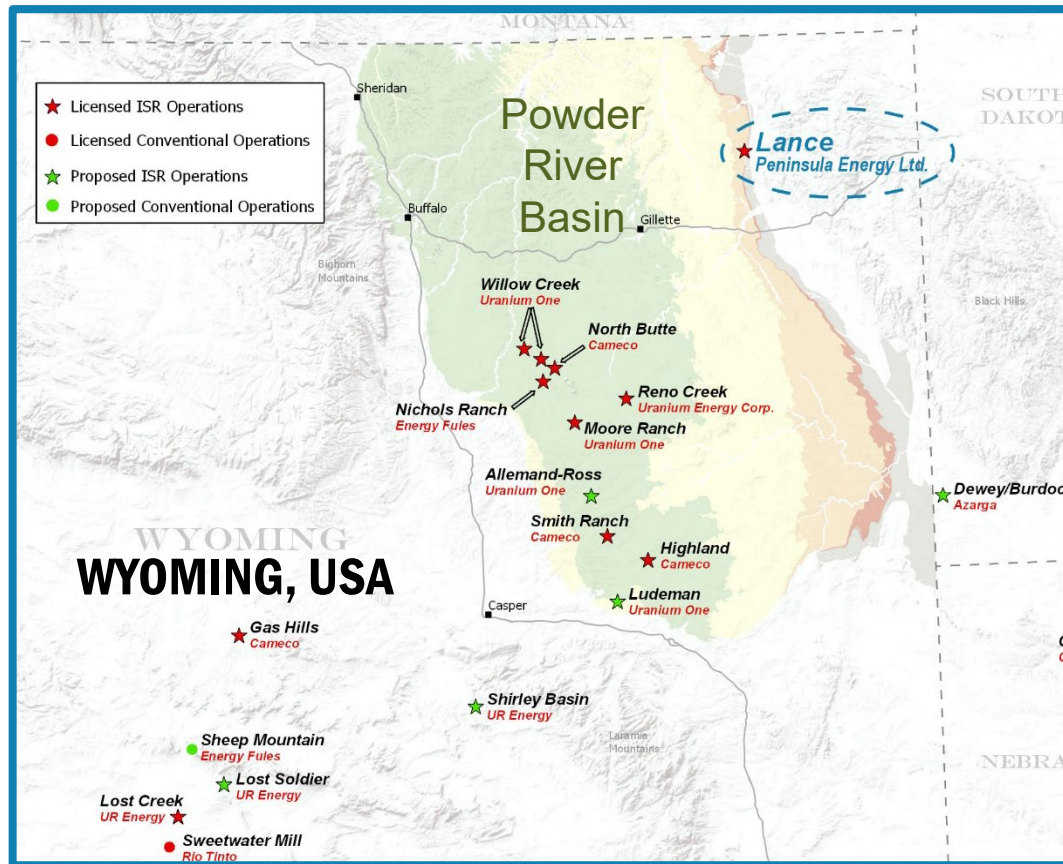
Lance ISR Project | Wyoming, USA

- Wyoming is a “can do” state

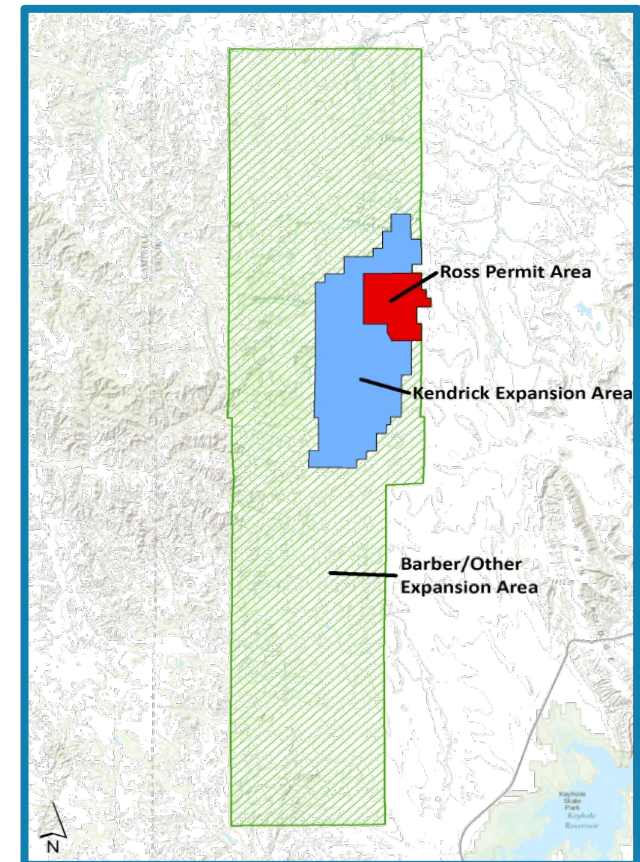


Lance – A Premier US Uranium Project

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



Lance Regional Setting



Lance Permit Areas

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 base²

Home-grown Success

- Peninsula developed the Lance Project from conception to a producing asset
- Spent US\$140M over 12 years, with a current EV of US\$64M

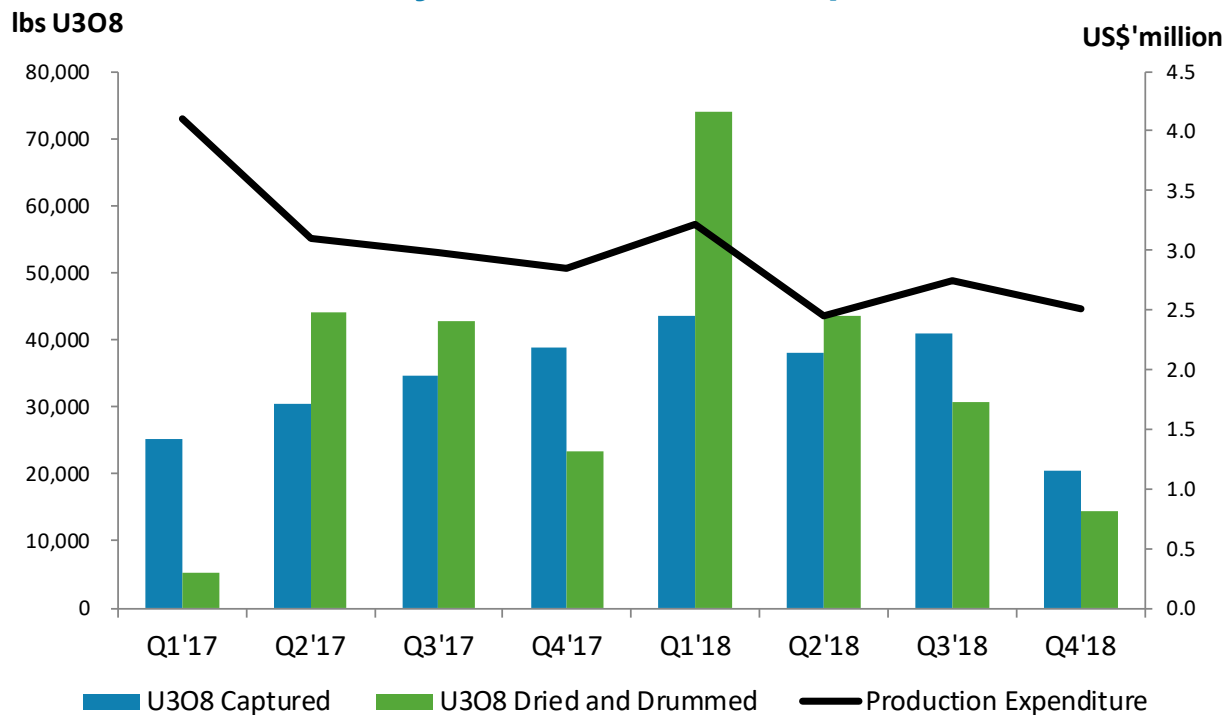
Scalable Production

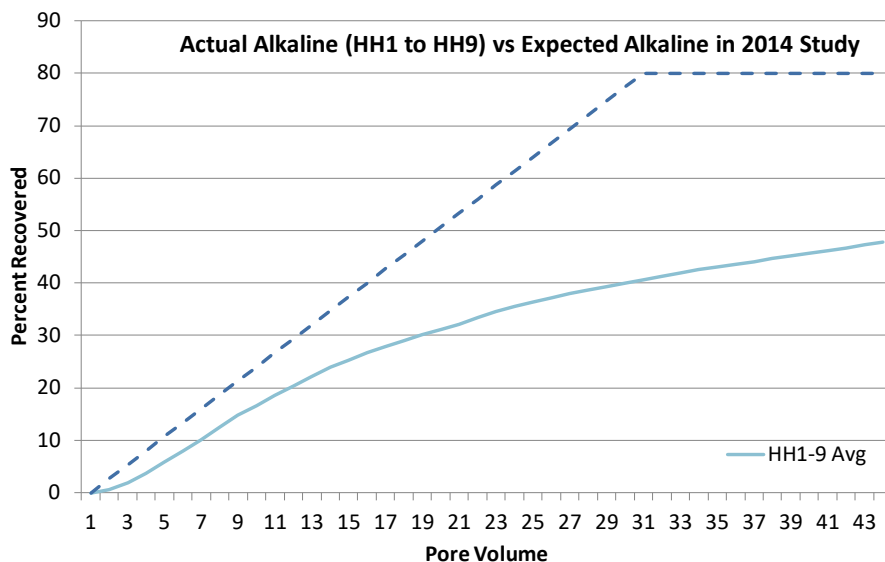
- Lance is licensed to produce up to 3M lbs U3O8 per annum
 - Would be the No.1 producer in the US and Top 10 globally
- Current (Stage-1) plant capacity of 1.15M lbs U3O8 per annum

² – See Appendix 2

- **Demonstrating cost control while continuing production during low pH transition**
 - FY19 production guidance of 90,000 – 110,000 lbs
 - Production significantly cut back to preserve developed well fields for low pH operations
 - Tightly controlled production expenditures

Quarterly Production and Expenditure





- Production using alkaline lixiviant commenced Dec-2015
- Uranium recoveries did not meet pre-mining targets

Our Response

Advanced mineralogy and leach chemistry research

License amendment requests to allow use of low pH lixiviants

Low pH Feasibility Study

Low pH Field Demonstration

- **Low pH ISR transformation initiative is being actively advanced**

High
Potential

- Set to transform the performance and cost profile
- Feasibility Study released in September 2018
- Low pH field demonstration operating since December 2018

Short
Timeline

- Two regulatory approvals required. Final regulator decision expected 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

Timeline for Low pH ISR Transformation

Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
CY17	CY17	CY18	CY18	CY18	CY18	CY19	CY19	CY19	CY19	CY20	CY20	CY20	CY20

Alkaline ISR Operations 

Ongoing Laboratory Testwork 

Feasibility Study 

Regulatory Approval Process 

Low pH Transition CAPEX

Low pH Field Demonstration

Low pH Operations

- Permit to Mine amendment APPROVED. 
- Source Materials License amendment advancing on schedule for mid-2019 outcome.

Phase 1 FLT

- Field Leach Trial demonstration of safe mining capabilities
- Initial field scale groundwater restoration demonstration

Phase 2 Commercial

- Successful completion of Phase 1 allows for progression to Phase 2
- Phase 2 involves commercial recovery operations in previously operated areas including Mine Units 1 and 2 at Ross

Phase 3 FLT

- Continuation of groundwater restoration demonstration in trial area
- Criteria for successful outcomes defined in amended Permit to Mine

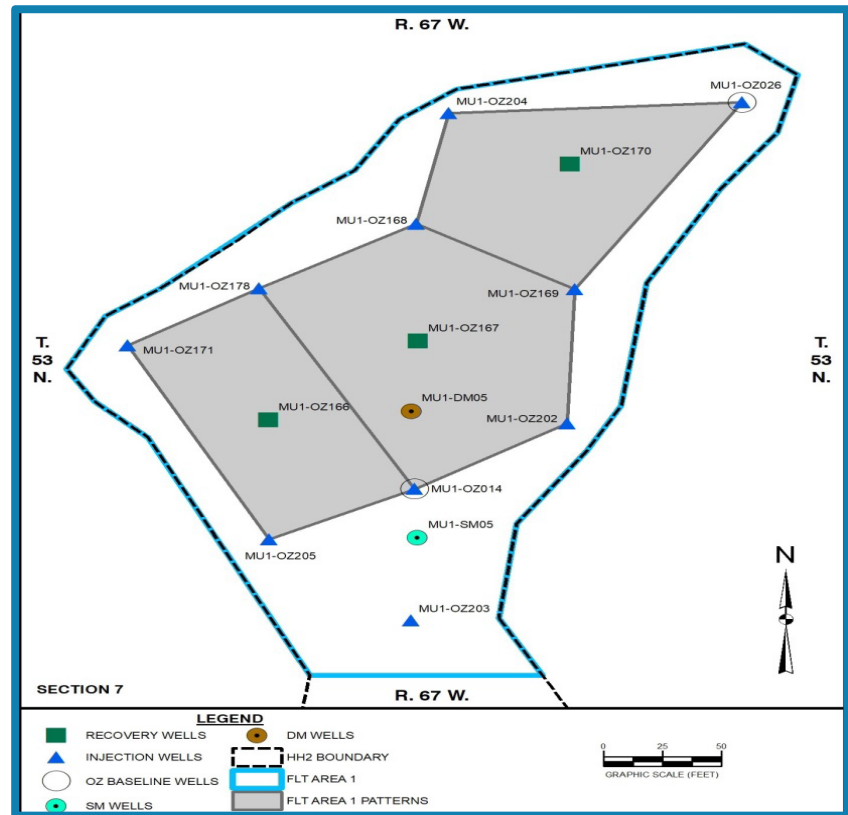
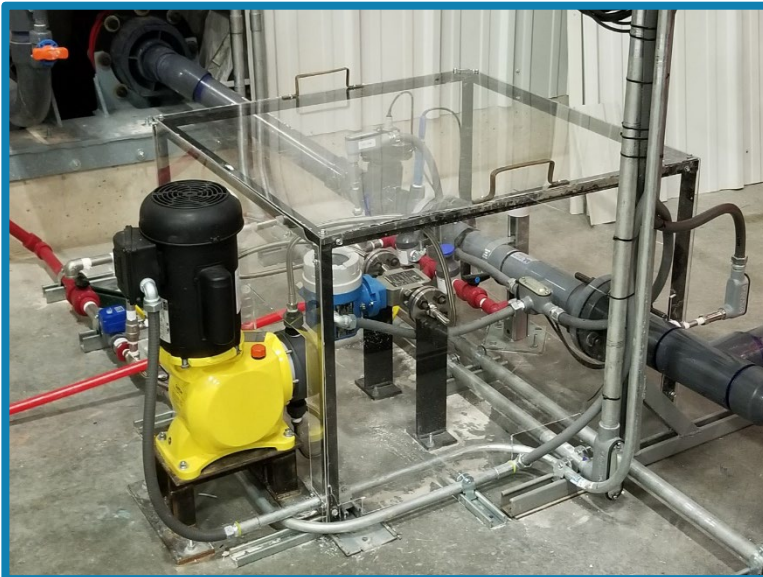
Phase 4 Commercial

- Successful completion of Phase 3 allows for progression to Phase 4
- Phase 4 involves commercial recovery in newly developed Mine Units

Lance Low pH Field Demonstration

- Approved by regulators in Nov-2018
- Operations started Dec-2018
- Three production patterns in test area
- Planned 6-month test duration

Sulfuric Acid Addition Pump



Test Pattern Map (in MU-1)

- **The Company has successfully achieved all key technical performance objectives for the Phase 1 mining step of the low pH Implementation Plan**
 - pH reduced to commercial operating levels throughout the area
 - Acid injection and consumption metrics consistent with projections
 - Injection and production well flow rates and pressures have been maintained in line with the Low pH Feasibility Study (FS)
 - Observed substantially elevated uranium recovery rates and solutions grades consistent with the FS parameters
 - No environmental or safety concerns have been observed to date
- **The Company is preparing to transition the field demonstration operations to the Phase 1 Initial Restoration activities**

LOM Production

- 33.4 million lbs U₃O₈
- 17 year minelife

Financial Metrics

- LOM AISC of US\$31.77/lb
- NPV8 US\$157M at US\$49/lb

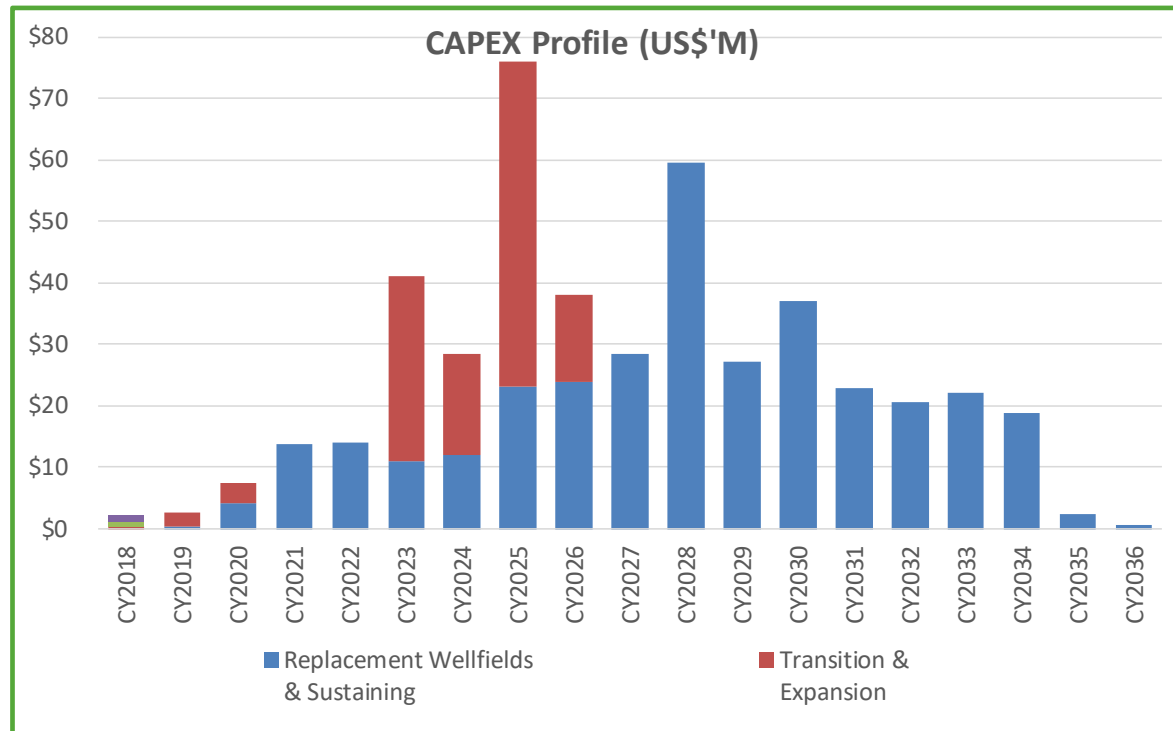
Three Stage Expansion Plan

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

Very low conversion CAPEX of only US\$5.3M

Note: 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.

FS Outcomes – LOM CAPEX Profile

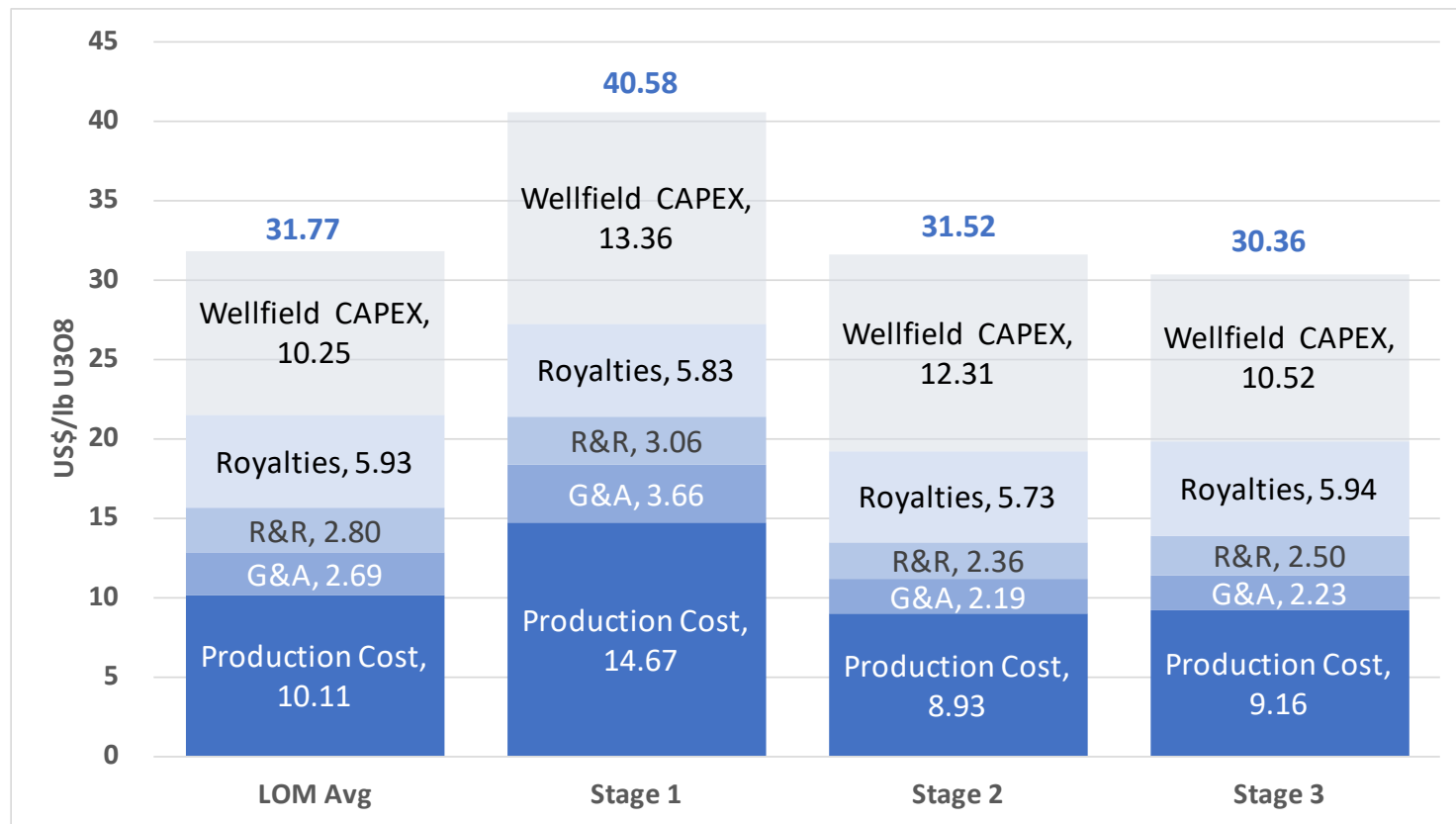


- Transition US\$5.3M
- Stage 2 exp. 2023/24
- Stage 3 exp. 2025/26
- Tight +/- 5 to 10% range of CAPEX accuracy
- Includes average contingency of 5.8%

FS CAPEX cost estimates maintain elements of conservatism

Opportunities to reduce LOM wellfield development costs identified

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



- Comparative basis to Kazakhstan type low pH ISR (ie, exclude royalties & local taxes, rest. & rehab, disposal wells for rest. & rehab and permitting/regulatory costs)
 - Stage 1: \$28.87/lb U₃O₈; Stage 2: \$21.03/lb U₃O₈; Stage 3: \$19.60/lb U₃O₈

*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*

Technical Basis

- Over 12 months of comprehensive laboratory testing
- Almost 50% of global uranium mined using this method

LOM Production

- 17 year mine life
- 33.4 million lbs U₃O₈ production potential

Leveraged to U₃O₈ price

- US\$10/lb increase in U₃O₈ price assumption for uncontracted production increases NPV8 by almost US\$100m

Regulatory Pathway

- Substantial progress completed in CY18
- Clear pathway ahead

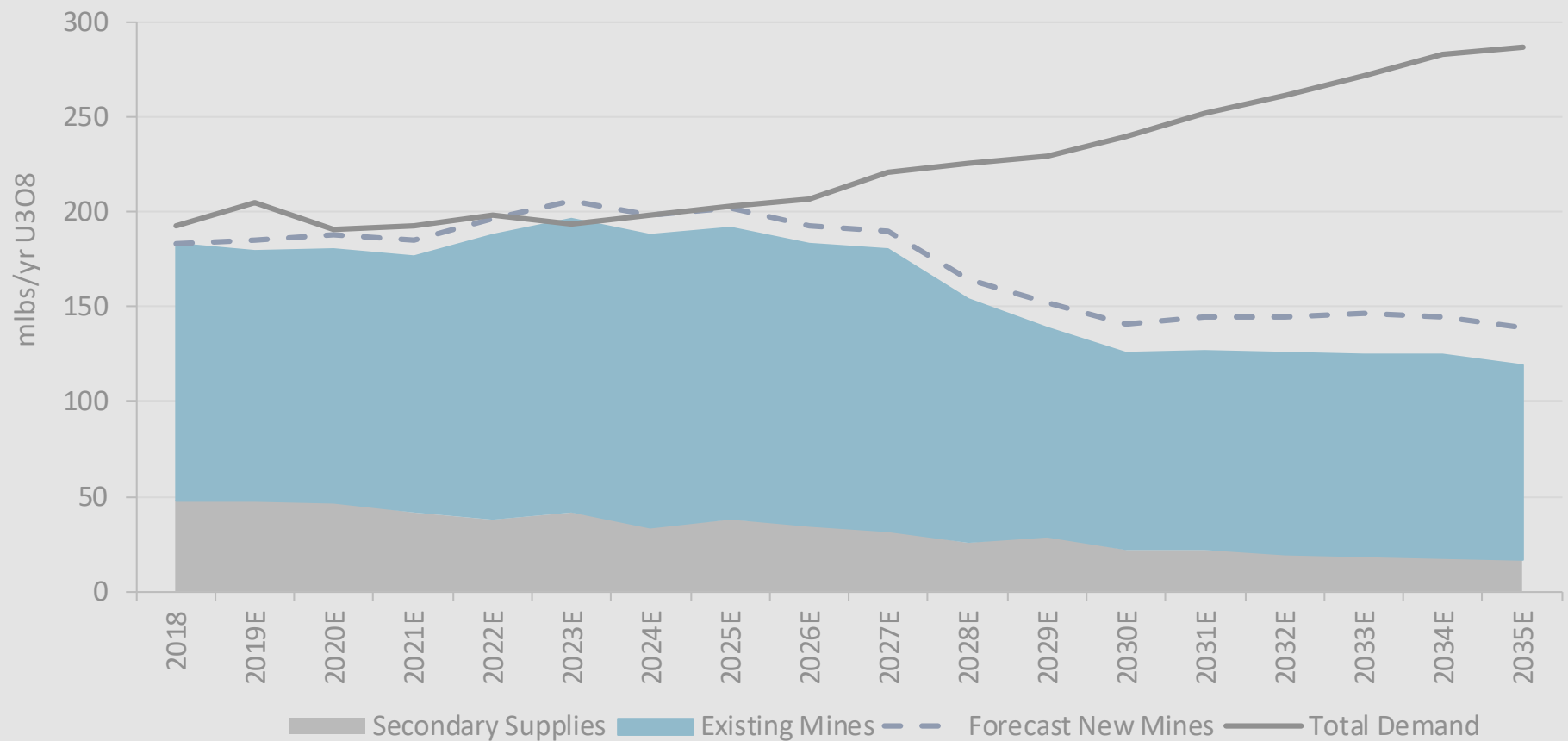
Cost Competitive

- \$31.77 / lb U₃O₈ LOM all-in sustaining cash cost
- \$34.00 / lb U₃O₈ break-even price for uncontracted production

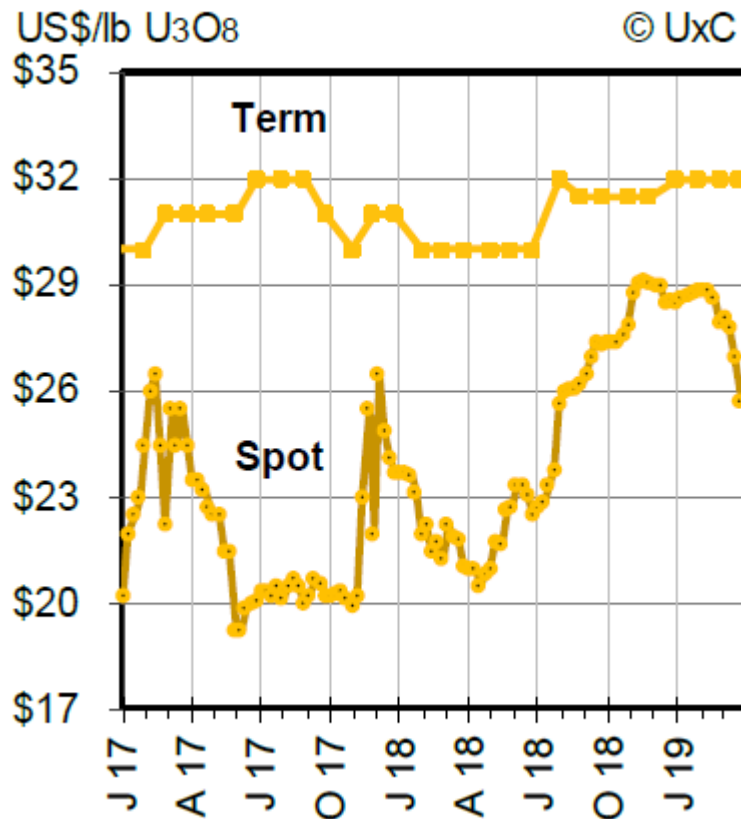
Existing Contracts

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

The Uranium Market



- The long-term market was in a “wait and see” mode during early 2019



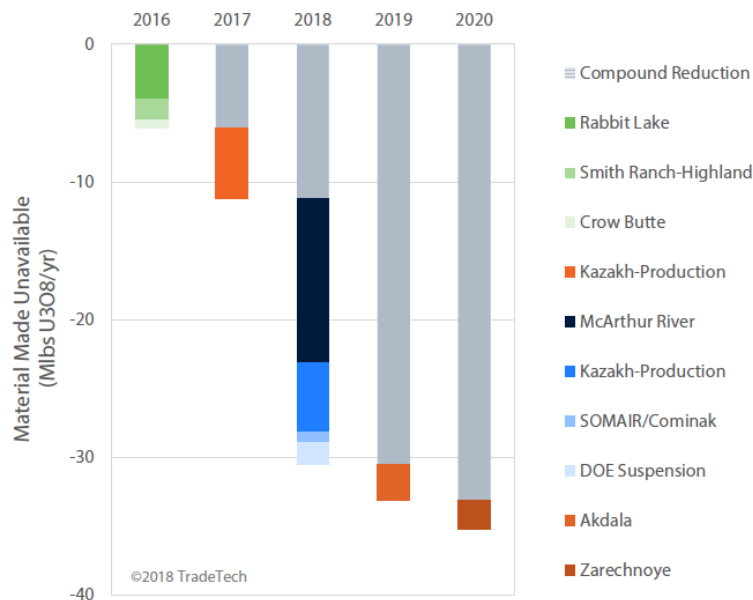
- The spread between the spot & term markets is at historically thin levels
- Spot market up >30% since April-2018
- Spot market volumes at record highs
- Term market volumes correspondingly suppressed
- Both markets current prices are still well below average production costs

Source: UxC, LLC

Both Supply & Demand Factors Favour Higher Uranium Prices in 2019

Supply: Global supply restraint

- The producers keep reducing production target levels – now off 20% or 30M lbs U3O8/yr
- Available inventory stockpiles are decreasing



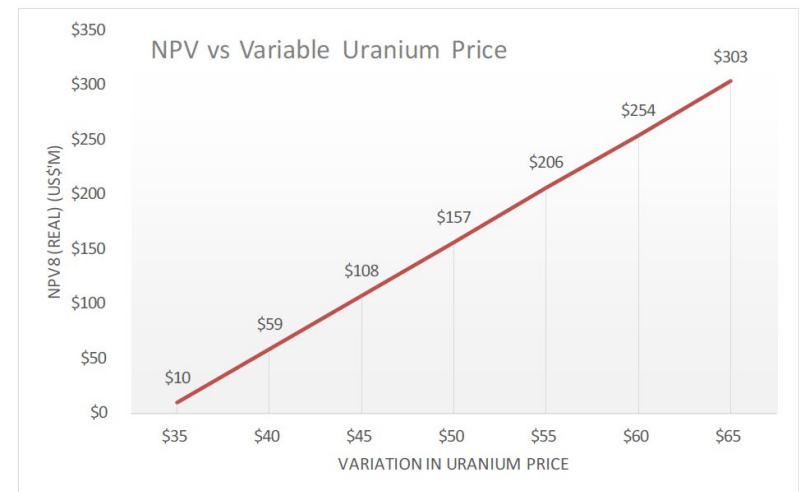
Source: TradeTech

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

Demand: Strong demand is driving the market price up

- Primary producers are buying big spot volumes; Cameco purchasing 18-21M lbs U3O8 in CY19
- New investment funds are buying and holding physical uranium inventories
- Forecasts continue to show primary/utility demand growth well beyond 2030

Lance is leveraged to rising prices



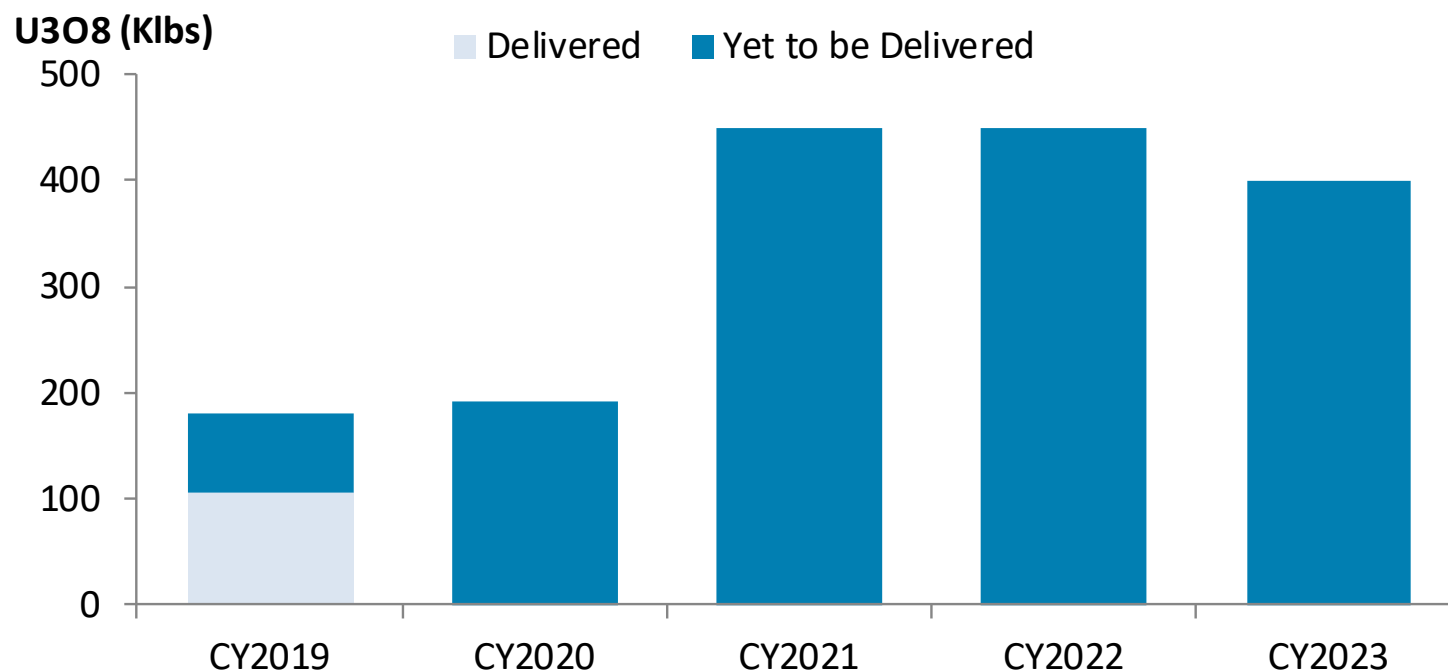
Uranium Sales Portfolio



- **Five sales agreements with a globally diverse customer base**
 - Weighted sales price between US\$51-53/lb U_3O_8
 - Contract portfolio carries through year 2030
- **Up to 6.3 million pounds U_3O_8 remaining under contract**
 - 4.4 million pounds U_3O_8 committed deliveries
 - Up to 1.9 million pounds U_3O_8 optional at customer election between 2021 and 2026
- **Material origin clauses allow blending production with purchased U_3O_8**
 - Contracted to purchase 225,000 lbs U_3O_8 as needed in 2019/20 at fixed purchase prices averaging US\$23.69/lb U_3O_8
- **Sales 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.

Conclusion

“Peninsula (ASX:PEN) will be one of the most exciting uranium production companies to follow in 2019.”

Wayne Heili – CEO



Amendment Progression

- Permit to Mine amendment granted
- Source Material License amendment review advancing

Testing & Planning

- Continue low pH mining and restoration field demonstration
- Maintain alkaline based mining at reduced rates

Mine Unit 3 Funding

- Investment in Mine Unit 3 wellfields planned for H2 CY2019
- MU3 sustaining development CAPEX cost ~US\$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 positioned to benefit from ongoing corporate initiatives and current market trends, including Sec.232 outcomes

Long Life Project

- Lance has the largest defined US uranium resource currently in production
- Low pH transition expected to transform production & cost base

Valuable Contract Book

- Total sales of up to 6.3M lbs sales at weighted price between **US\$51-53/lb** U_3O_8

Financial Strength

- Robust cash position with peer group leading revenue base

Attractive Valuation

- Low EV/lb resource compared to peer group with substantial share price re-rating events forecast throughout 2019

Contact Details

REGISTERED OFFICE

Unit 32/33, Level 3, 22 Railway Road
Subiaco, Western Australia 6008
Australia

www.pel.net.au
info@pel.net.au

FURTHER INFORMATION

Wayne Heili Managing Director +61 8 9380 9920

David Coyne Finance Director / CFO +61 8 9380 9920

Board

John Harrison, Non-Executive Chairman

Wayne Heili, Managing Director & CEO

David Coyne, Finance Director & CFO

Harrison Barker, Non-Executive Director

Mark Wheatley, Non-Executive Director

Capital Markets

Exec. Leadership & Technical

Finance & Risk Management

Nuclear Fuel Markets

Mining CEO & ISR Technical

Management Team

Ralph Knode

CEO USA

David Hofeling

CFO USA

Mike Brost

VP Geology USA

Jay Douthit

VP Operations USA

Mike Griffin

VP Permitting, Regulatory & Environment USA

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	3.8	1.8	488	3.9
Indicated	10.9	5.4	495	11.9
Inferred	36.3	17.3	476	38.1
Total	51.0	24.5	479	53.9

1) JORC Table 1 included in an announcement to the ASX released on 14 November 2018: “Revised Lance Projects Resource Tables”. 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.