



Uranium Development & Exploration

The Athabasca Basin, Northern Saskatchewan

January 2020 | Vancouver Resource Investment Conference



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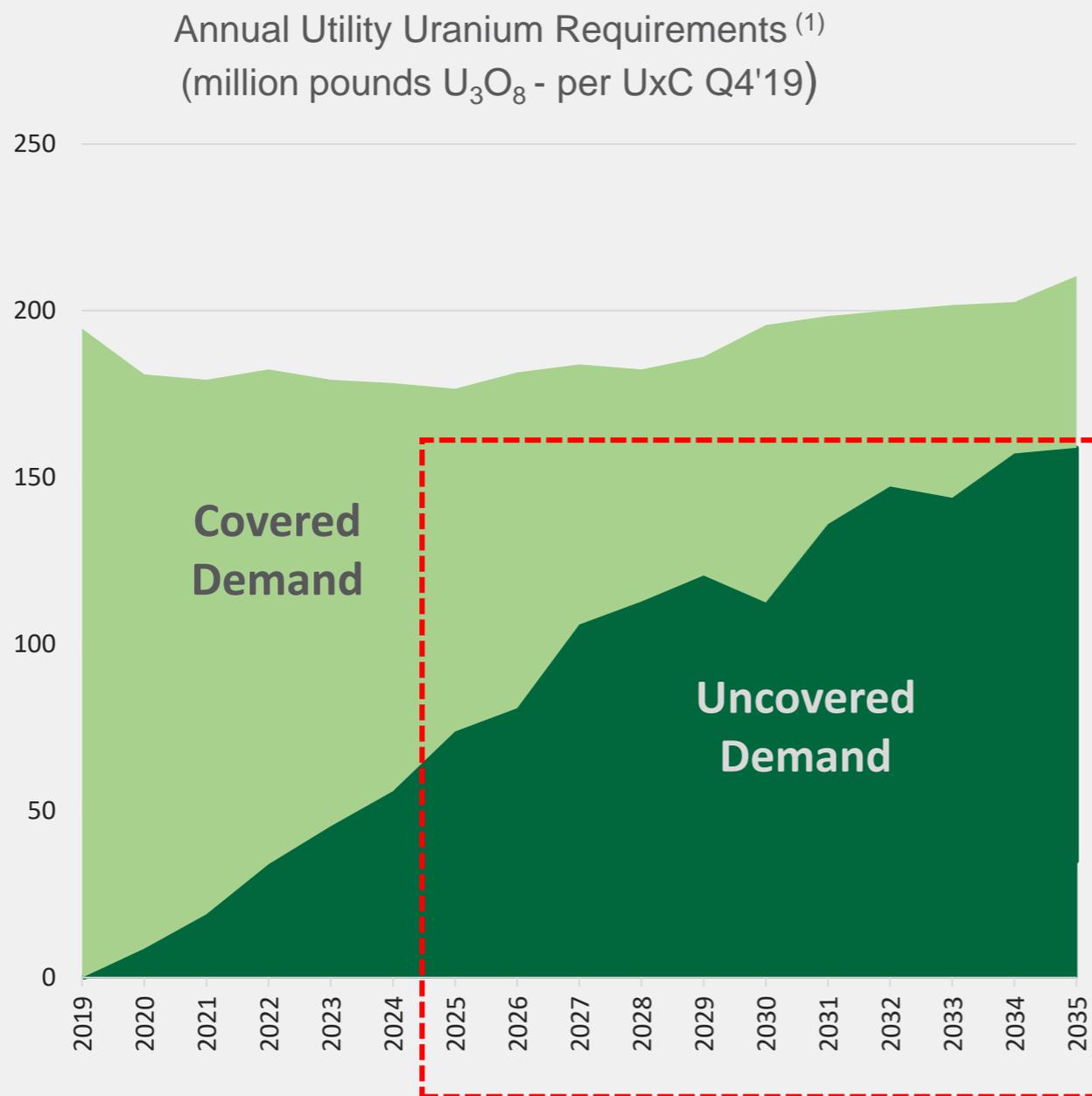
Qualified Persons

The disclosure of a scientific or technical nature within this presentation, including the disclosure of mineral resources and reserves and PFS results, was reviewed and approved by Dale Verran, MSc, P.Geo., Pr.Sci.Nat., Denison's Vice President Exploration, who is a Qualified Person in accordance with the requirements of NI 43-101.

Wheeler River Technical Reports

For further details regarding the Wheeler River project, please refer to the Company's press release dated September 24, 2018 and the technical report titled "Prefeasibility Study for the Wheeler River Uranium Project, Saskatchewan, Canada" with an effective date of September 24, 2018. For a description of the data verification, assay procedures and the quality assurance program and quality control measures applied by Denison, please see Denison's Annual Information Form dated March 12, 2019. Copies of the foregoing are available on Denison's website and under its profile on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

The Uranium Investment Thesis: Fundamentals are improving, leading to a positive new uranium cycle



Key Market Themes:

1. Long-term contracts from the previous uranium bull cycle have acted as a lifeline to high-cost mines – this is coming to an end, with **significant uncovered utility requirements emerging** as Denison is expected to enter production
2. Demand story is positive and improving – requirements now exceed pre-Fukushima levels, despite much of Japanese fleet remaining shut
3. Significant curtailment decisions have been made by largest uranium producers, helping to correct an over-supplied market
4. Given sustained low prices, project pipeline may be inadequate to deliver new production in time to replace mines that are dropping off
5. Utilities expected to re-enter the market following long-awaited outcome of section 232 related trade uncertainty in the U.S.

Diversified Athabasca Basin Asset Base with Superior Development Leverage

Strategic Asset Portfolio:

- 90% interest in Flagship **Wheeler River** project
 - Development stage project
 - Largest undeveloped uranium project in the infrastructure rich eastern Athabasca Basin
 - Environmental Assessment (“EA”) initiated
- 22.5% interest in **McClean Lake Uranium Mill**
 - Processing +12% of global uranium production
 - Excess licensed capacity
- Additional leverage to the uranium price from interests in undeveloped uranium resources at **McClean Lake, Midwest, and Waterbury Lake**
- ~**305,000 hectares** of prospective exploration ground in the Athabasca Basin
- Internal sources of **Cash Flow**
 - Uranium Participation Corp. (TSX-U)
 - Closed mine care & maintenance (formerly Denison Environmental Services)



~305,000 Hectares of Prospective Exploration & Development Ground Focused in the Infrastructure Rich Eastern Athabasca Basin



Flagship Wheeler River Development Project⁽¹⁾

90% Denison Owned (10% JCU):

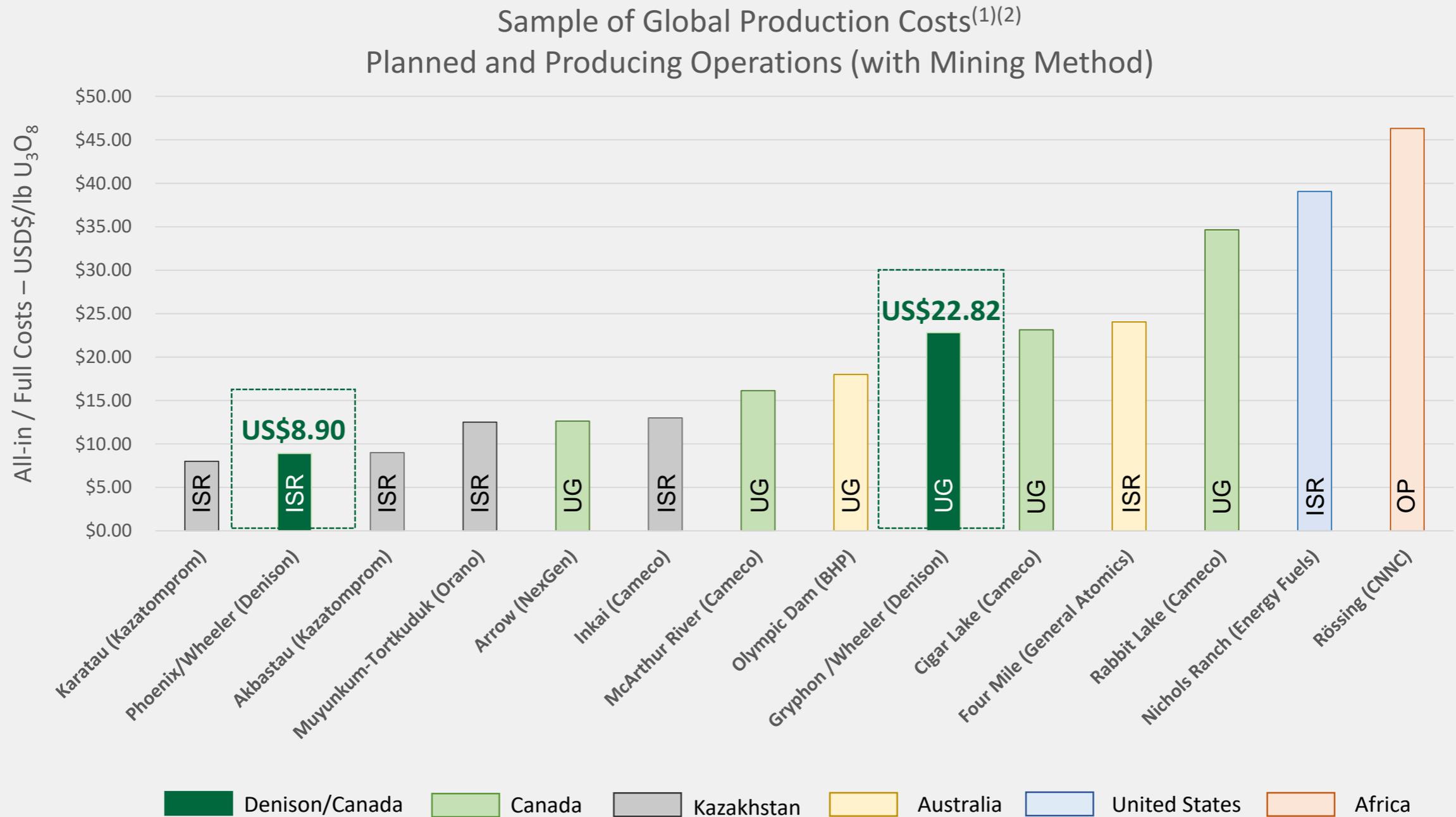
- Host to two high-grade uranium deposits
- NI 43-101 compliant Pre-Feasibility Study (“PFS”) considers staged development plan
- **Phoenix** estimated to potentially have lowest costs of any undeveloped uranium deposit
 - **In-Situ Recovery (“ISR”) mining method**
 - On-site processing to finished yellow cake
 - Initiation of EA approved by Board & JV
 - All-in costs of **US\$8.90/lb U₃O₈**
 - Operating costs of **US\$3.33/lb U₃O₈**
- **Gryphon** contributes additional low-cost pounds
 - Conventional underground mining approach
 - Assumes toll-milling at McClean Lake mill
 - All-in cost of **US\$22.82/lb U₃O₈**
 - Operating costs of **US\$11.70/lb U₃O₈**
- Combined **109.4M lbs U₃O₈** Probable Reserves
- Combined **14 year** mine life
- Initial CAPEX (Phoenix) of **\$322.5M** (100%)



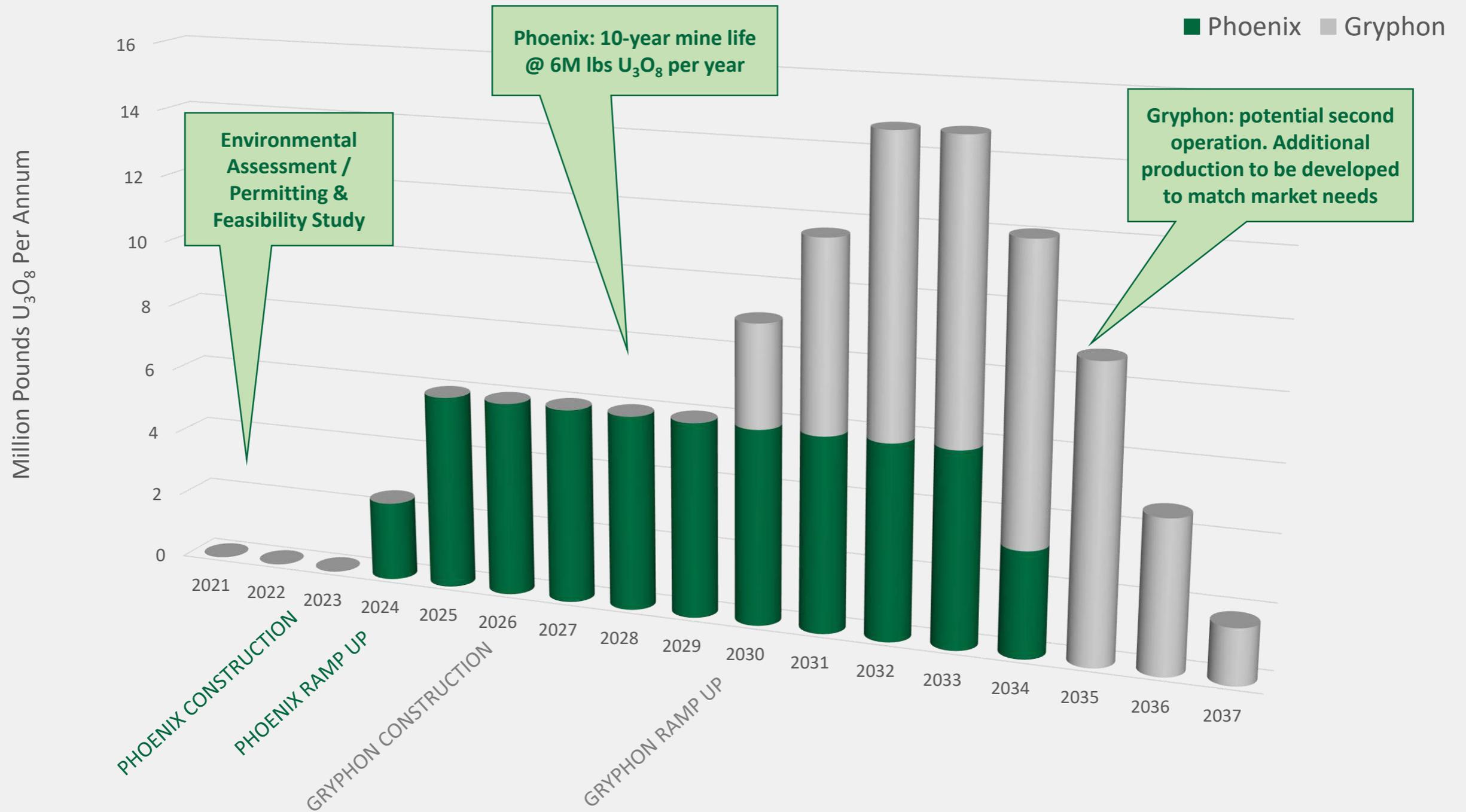
NOTES: (1) Refer to the Wheeler River Technical Report titled “Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada” dated September 24, 2018;



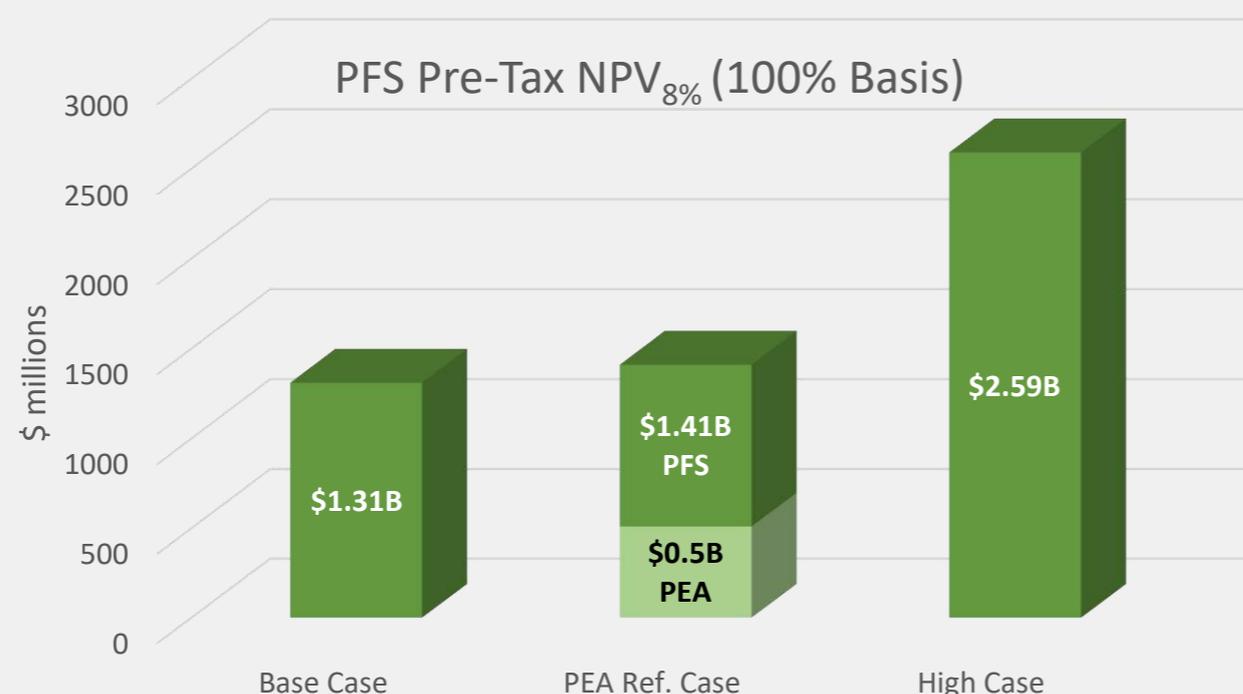
Wheeler River PFS: Potential to be one of the lowest all-in cost uranium mining operations



Wheeler River PFS: Staged development plan with combined 14-year mine life⁽¹⁾



Wheeler River PFS: Uranium price assumptions, commercial strategy, and sensitivities



Base Case Price Assumptions Reflect Commercial Strategy:

- **Phoenix Operation:**
 - Low all-in cost per lb U₃O₈ suggests contract “base-loading” not required
 - Uranium selling price based on UxC Spot price forecast (Q3’2018 UMO “Composite Midpoint” scenario)
 - ~US\$29/lb U₃O₈ to US\$45/lb U₃O₈
 - Stated in “constant” 2018 dollars
- **Gryphon Operation:**
 - US\$50/lb U₃O₈ fixed price
 - Market support expected to be trigger for development

Comparison to 2016 Preliminary Economic Assessment (“PEA”):

- 2016 PEA provided pre-tax project NPV_{8%} of \$513 million at fixed uranium price of US\$44/lb U₃O₈
- PFS equivalent represents **+275% of pre-tax project NPV from PEA**

Assumptions / Results ⁽¹⁾	Base Case	PEA Ref. Case	High Case
Uranium selling price	As above	US\$44/lb U ₃ O ₈	US\$65/lb U ₃ O ₈
Pre-tax NPV _{8%} ⁽²⁾ (100% Basis)	\$1.31 billion	\$1.41 billion	\$2.59 billion
Pre-tax IRR ⁽²⁾	38.7%	47.4%	67.4%
Pre-tax payback period ⁽³⁾	~24 months	~ 15 months	~ 11 months

Phoenix Deposit:
Combining the world's lowest-cost uranium mining method with the world's
highest-grade undeveloped uranium deposit





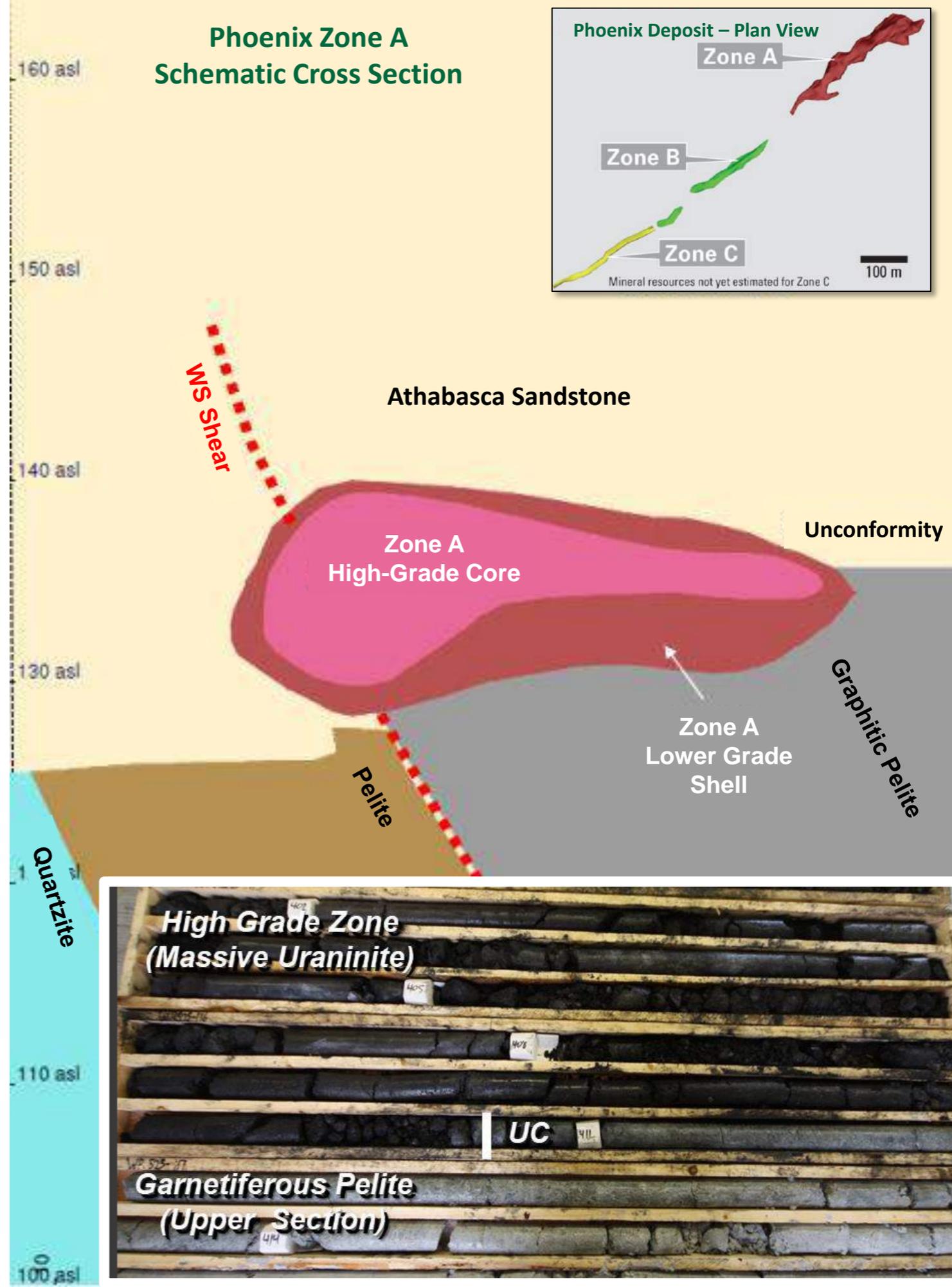
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Phoenix Geology: Unique uranium deposit with exceptionally high grades

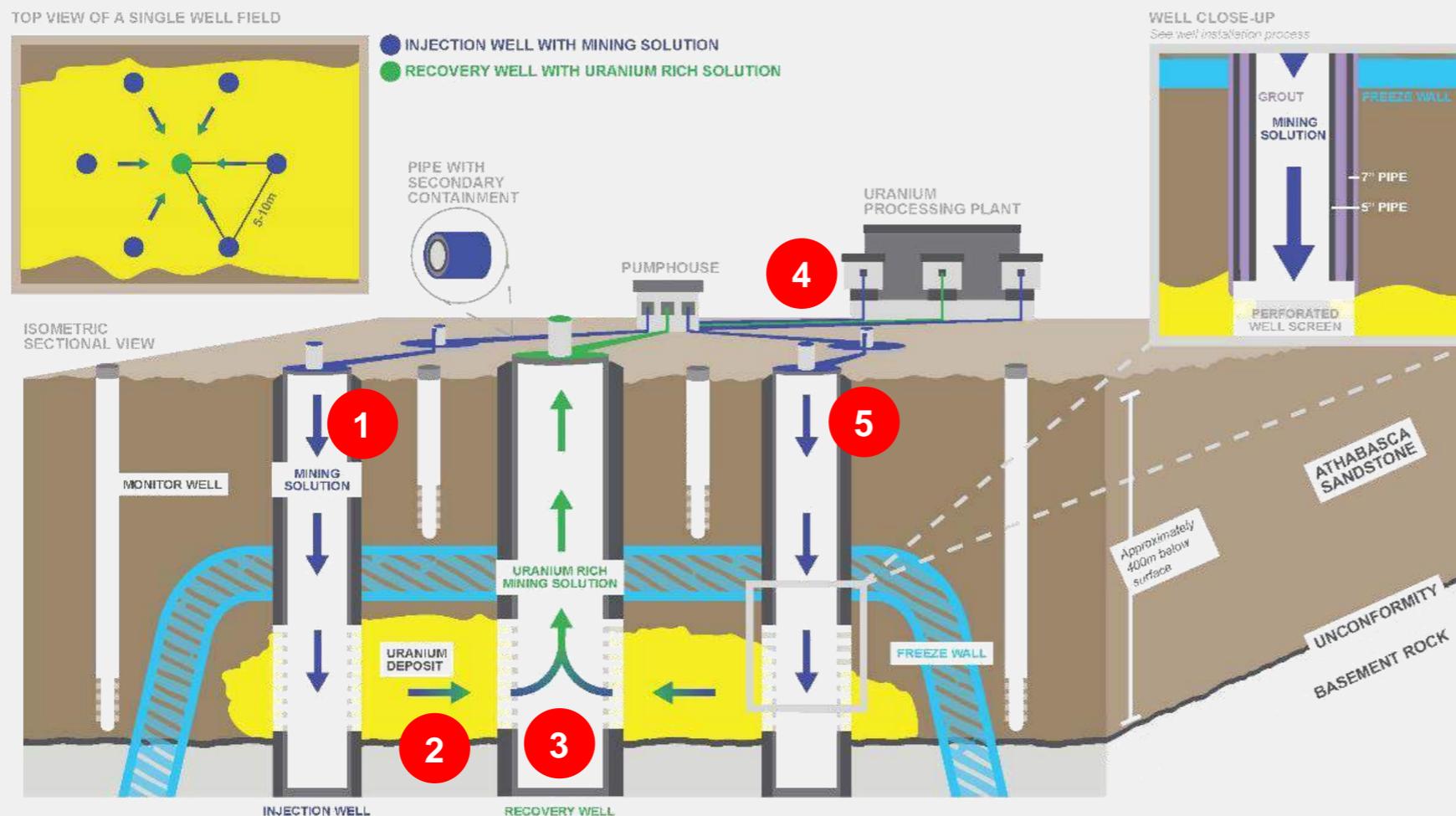
Highlights⁽¹⁾:

- Mineralization is situated at or immediately above the unconformity (“UC”)
- Two distinct zones – Phoenix A + B
- Approximately 400m below surface
- World’s highest-grade undeveloped uranium deposit
- **70.2 million pounds U_3O_8 @ 19.14% U_3O_8**
Indicated mineral resources (166,400 tonnes)⁽²⁾
 - Zone A High-Grade Core contains an estimated **59.9 M lbs U_3O_8 @ 43.2% U_3O_8** (62,900 tonnes)
 - Cut-off grade of 0.8% U_3O_8
 - 1.1M lbs U_3O_8 in Inferred mineral resources (8,600 tonnes @ 5.8% U_3O_8)⁽³⁾
- ✓ Geological setting expected to be amenable to ISR mining, with ~90% of the mineral resource (contained metal) hosted in sandstone



NOTES: (1) Refer to the Wheeler River Technical Report titled “Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada” dated September 24, 2018; (2) Indicated resources are inclusive of Reserves; (3) The PFS does not include any economic analysis based on estimated Inferred resources.

Phoenix Operation: Application of low-cost ISR mining method to high-grade Athabasca Basin



Schematic does not represent detailed engineering of the ISR well field and its components. Schematic not drawn to scale.

ISR Mining Process⁽¹⁾:

1. Mining solution (also known as “lixiviant”) is pumped through a permeable orebody via injection well
2. Lixiviant dissolves the uranium as it travels through the orebody
3. Uranium bearing mining solution (“UBS”) is pumped back to surface via recovery well
4. UBS is sent to a processing plant on surface for chemical separation of the uranium and reconditioning of lixiviant
5. Lixiviant is returned back to well field for further production

Phoenix Freeze Cap: Novel concept to contain mining solution, using established technology

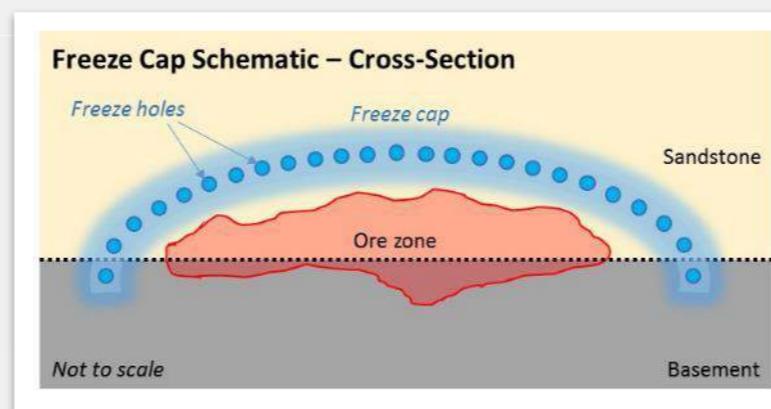
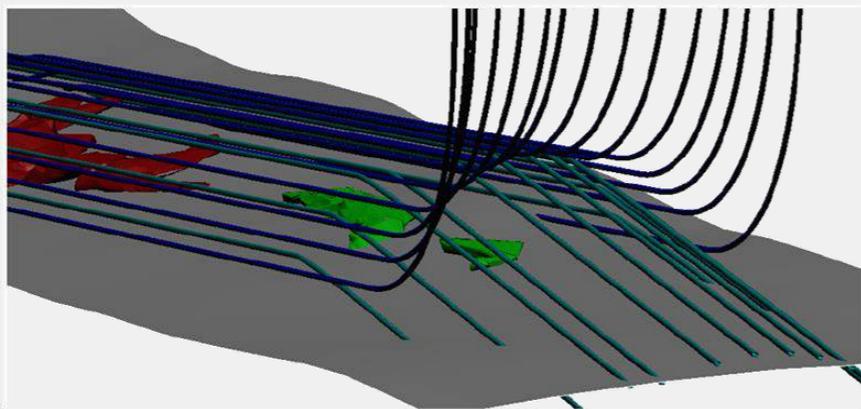
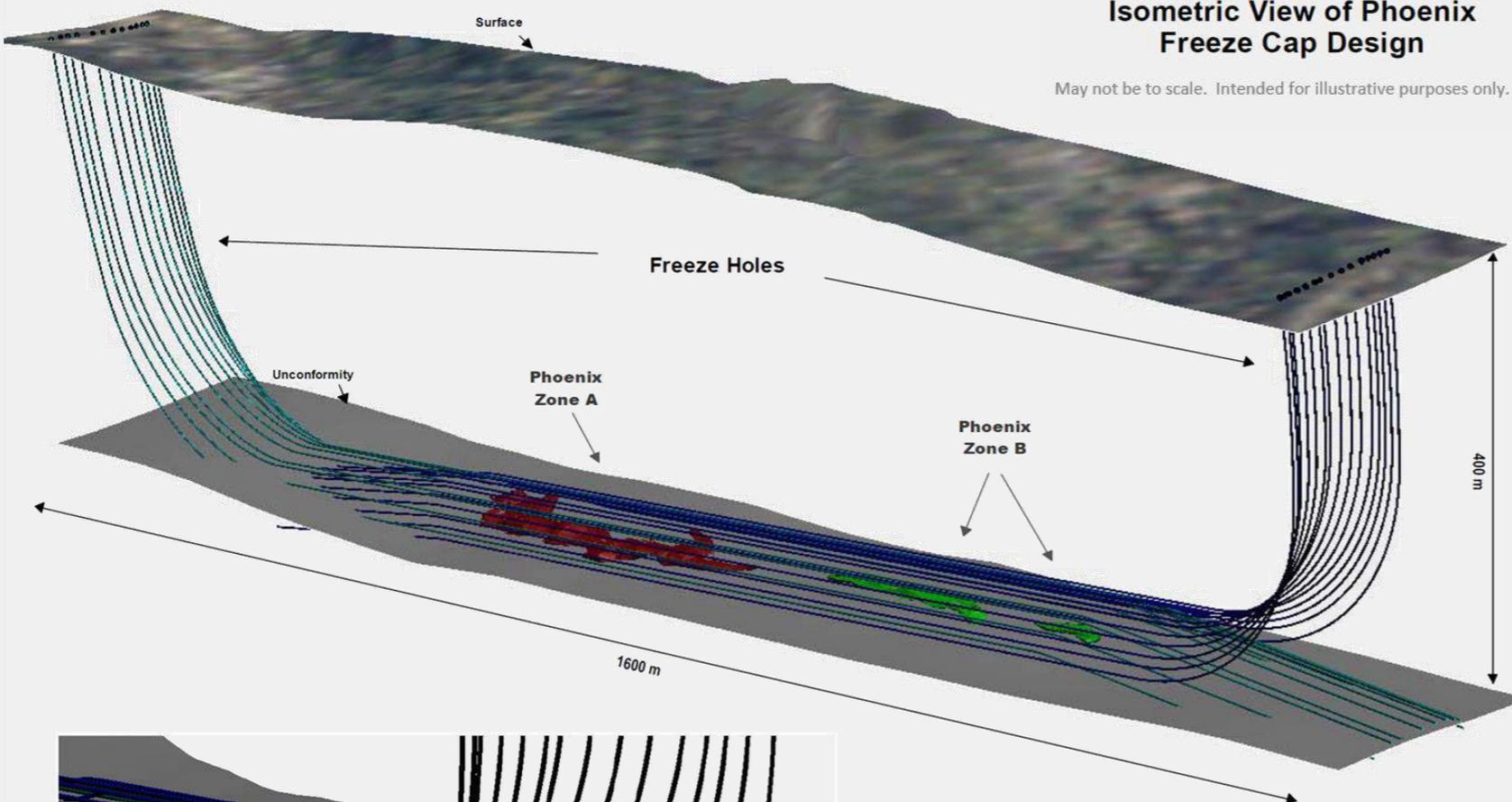
Artificial freeze cap replicates confining layer typically required for ISR mining operations⁽¹⁾

- Parallel cased holes drilled from surface and anchored into impermeable basement rock surrounding the Phoenix deposit
- Circulation of low-temperature brine solution through cased pipes will freeze groundwater in sandstone surrounding the deposit
- 10 metre thick freeze wall, together with basement rocks will encapsulate Phoenix deposit

✓ Eliminates common environmental concerns with ISR mining and facilitates controlled reclamation

Isometric View of Phoenix Freeze Cap Design

May not be to scale. Intended for illustrative purposes only.



Market Summary ⁽¹⁾	
Exchanges	TSX: DML, NYSE MKT: DNN
Shares Outstanding	590.2 M
Warrants	1.7 M
Share Units	4.9 M
Options	13.7 M
Fully Diluted Shares	610.5 M
Market Cap – DML @ C\$0.52/share ⁽²⁾	CAD \$307 M
Daily Trading Volume – DML ⁽³⁾	0.52 M Shares
Market Cap – DNN @ U\$0.40/share ⁽²⁾	USD\$236 M
Daily Trading Volume – DNN ⁽³⁾	0.33 M Shares

Management & Directors

- David Cates (President & CEO, Director)
- Mac McDonald (VP Finance & CFO)
- Dave Bronkhorst (VP Operations)
- Tim Gabruch (VP Commercial)
- Dale Verran (VP Exploration)

- Catherine Stefan (Non-Executive Chair)
- W. Robert Dengler (Director)
- Brian D. Edgar (Director)
- Ron F. Hochstein (Director)
- Jack Lundin (Director)
- William A. Rand (Director)
- Geun Park (Director)
- Patricia M. Volker (Director)

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