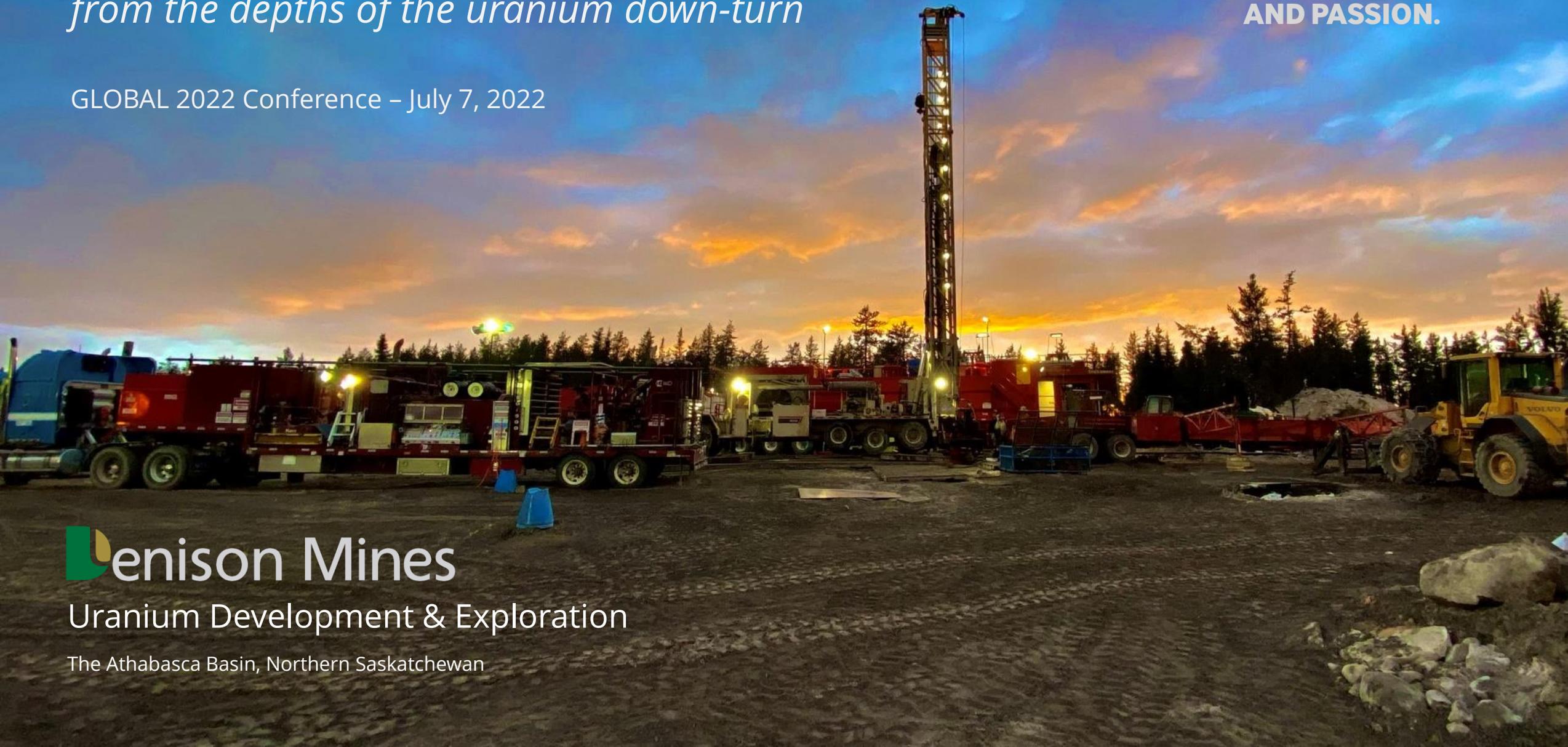


*A new standard of sustainable uranium mining rises  
from the depths of the uranium down-turn*

GLOBAL 2022 Conference – July 7, 2022

*Powering*  
**PEOPLE, PARTNERSHIPS  
AND PASSION.**

 **Denison Mines**  
Uranium Development & Exploration  
The Athabasca Basin, Northern Saskatchewan



# Cautionary Statements & References



This presentation and the information contained herein is designed to help you understand management's current views, and may not be appropriate for other purposes. This presentation contains information relating to the uranium market, third party and provincial infrastructure, and the plans and availability thereof, derived from third-party publications and reports which Denison believes are reliable but have not been independently verified by the Company.

**Certain information contained in this presentation constitutes "forward-looking information", within the meaning of the United States Private Securities Litigation Reform Act of 1995 and similar Canadian legislation concerning the business, operations and financial performance and condition of Denison.** Generally, these forward-looking statements can be identified by the use of forward-looking terminology such as "plans", "expects", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates", or "believes", or the negatives and / or variations of such words and phrases, or state that certain actions, events or results "may", "could", "would", "might" or "will be taken", "occur", "be achieved" or "has the potential to". In particular, this presentation contains forward-looking information pertaining to the results of, and estimates, assumptions and projections provided in, the Wheeler PFS and the Waterbury PEA, including future development methods and plans, market prices, costs and capital expenditures; assumptions regarding Denison's ability to obtain all necessary regulatory approvals to commence development at Wheeler; Denison's percentage interest in its projects and its agreements with its joint venture partners; and the availability of services to be provided by third parties. Statements relating to "mineral resources" are deemed to be forward-looking information, as they involve the implied assessment, based on certain estimates and assumptions that the mineral resources described can be profitably produced in the future.

**Forward looking statements are based on the opinions and estimates of management as of the date such statements are made, and they are subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of Denison to be materially different from those expressed or implied by such forward-looking statements.** Denison faces certain risks, including the current and potential impacts of the COVID-19 pandemic, use of mining methods which are novel and untested in the Athabasca basin, the inability to permit or develop its projects as currently planned, the inability to secure sufficient financing to pursue its business objectives, the unpredictability of market prices, events that could materially increase costs, changes in the regulatory environment governing the project lands, and unanticipated claims against title and rights to the project. Denison believes that the expectations reflected in this forward-looking information are reasonable but there can be no assurance that such statements will prove to be accurate and may differ materially from those anticipated in this forward looking information. For a discussion in respect of risks and other factors that could influence forward-looking events, please refer to the "Risk Factors" in Denison's Annual Information Form dated March 25, 2022 available under its profile at [www.sedar.com](http://www.sedar.com) and its Form 40-F available at [www.sec.gov/edgar.shtml](http://www.sec.gov/edgar.shtml). These factors are not, and should not be construed as being exhaustive.

**Readers should not place undue reliance on forward-looking statements.** The forward-looking information contained in this presentation is expressly qualified by this cautionary statement. Any forward-looking information and the assumptions made with respect thereto speaks only to the effective date of this presentation. Denison does not undertake any obligation to publicly update or revise any forward-looking information after such date to conform such information to actual results or to changes in its expectations except as otherwise required by applicable legislation.

**Cautionary Note to United States Investors Concerning Estimates of Mineral Resources and Mineral Reserves:** This presentation may use terms such as "measured", "indicated" and/or "inferred" mineral resources and "proven" or "probable" mineral reserves, which are terms defined with reference to the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") CIM Definition Standards on Mineral Resources and Mineral Reserves ("CIM Standards"). The Company's descriptions of its projects may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements under the United States federal securities laws and the rules and regulations thereunder.

## Qualified Persons

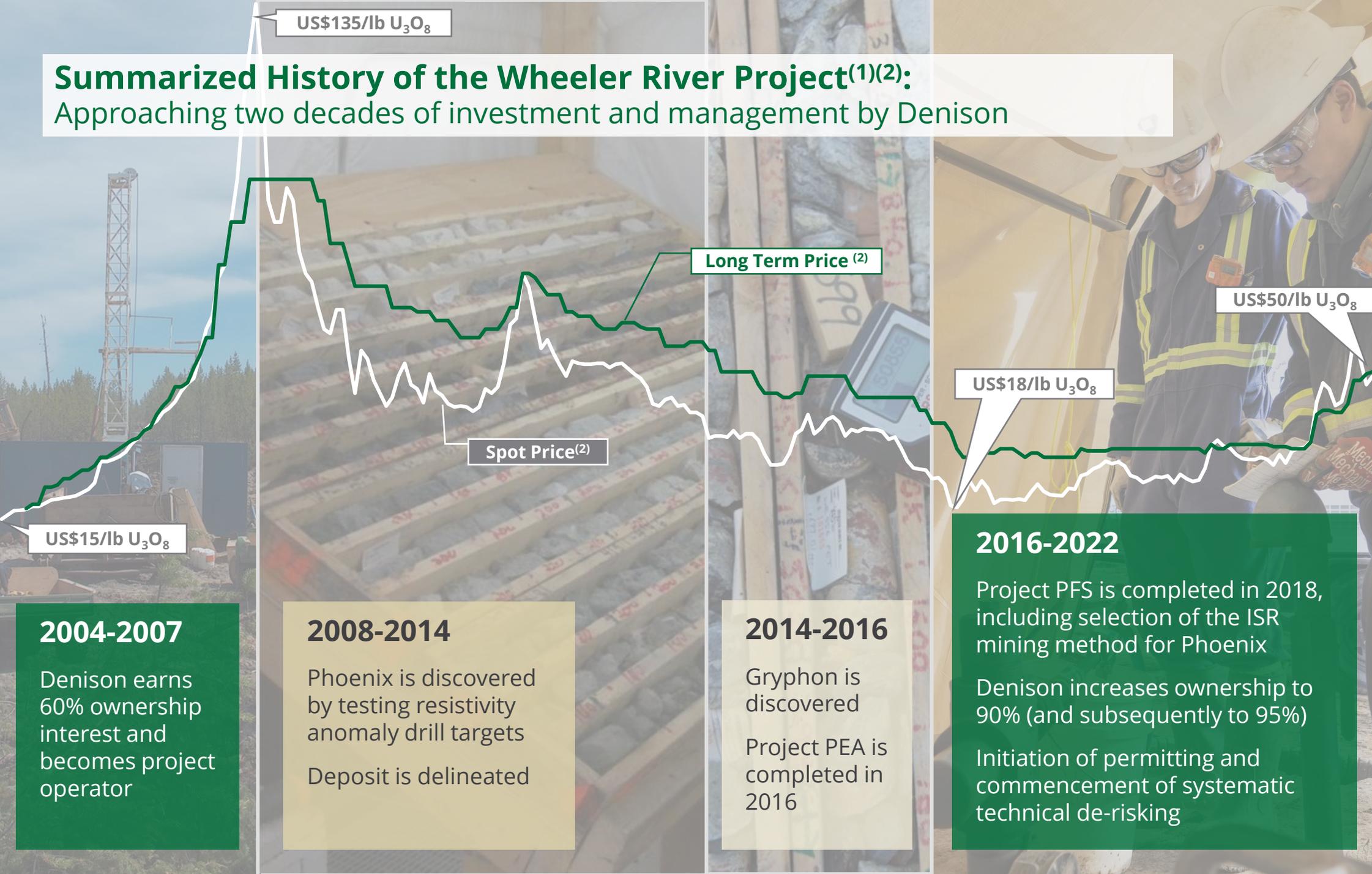
The disclosure of a scientific or technical nature within this presentation, including the disclosure of mineral resources, mineral reserves, as well as the results of the Wheeler PFS and Waterbury PEA, was reviewed and approved by David Bronkhorst, P.Eng. and Andy Yackulic, P.Geol., each of whom is a Qualified Person in accordance with the requirements of NI 43-101.

## 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 ("Wheeler PFS").
- For further details regarding the **Waterbury Lake project**, please refer to the Company's press release dated November 17, 2020 and the technical report titled "*Preliminary Economic Assessment for the Tthe Heldeth T   (J Zone) Deposit, Waterbury Lake Property, Northern Saskatchewan, Canada*" with an effective date of October 30, 2020 ("Waterbury PEA"). **The PEA is a preliminary analysis of the potential viability of the Project's mineral resources, and should not be considered the same as a Pre-Feasibility or Feasibility Study, as various factors are preliminary in nature. There is no certainty that the results from the PEA will be realized. Mineral resources are not mineral reserves and do not have demonstrated economic viability. Scheduled tonnes and grade do not represent an estimate of mineral reserves.**

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 25, 2022. A copy of the foregoing is available on Denison's website and under its profile on SEDAR at [www.sedar.com](http://www.sedar.com) and on EDGAR at [www.sec.gov/edgar.shtml](http://www.sec.gov/edgar.shtml).

# Summarized History of the Wheeler River Project<sup>(1)(2)</sup>: Approaching two decades of investment and management by Denison



US\$135/lb U<sub>3</sub>O<sub>8</sub>

US\$15/lb U<sub>3</sub>O<sub>8</sub>

Spot Price<sup>(2)</sup>

Long Term Price<sup>(2)</sup>

US\$18/lb U<sub>3</sub>O<sub>8</sub>

US\$50/lb U<sub>3</sub>O<sub>8</sub>

**2004-2007**  
Denison earns 60% ownership interest and becomes project operator

**2008-2014**  
Phoenix is discovered by testing resistivity anomaly drill targets  
Deposit is delineated

**2014-2016**  
Gryphon is discovered  
Project PEA is completed in 2016

**2016-2022**  
Project PFS is completed in 2018, including selection of the ISR mining method for Phoenix  
Denison increases ownership to 90% (and subsequently to 95%)  
Initiation of permitting and commencement of systematic technical de-risking

PHOTOS (Left to Right):

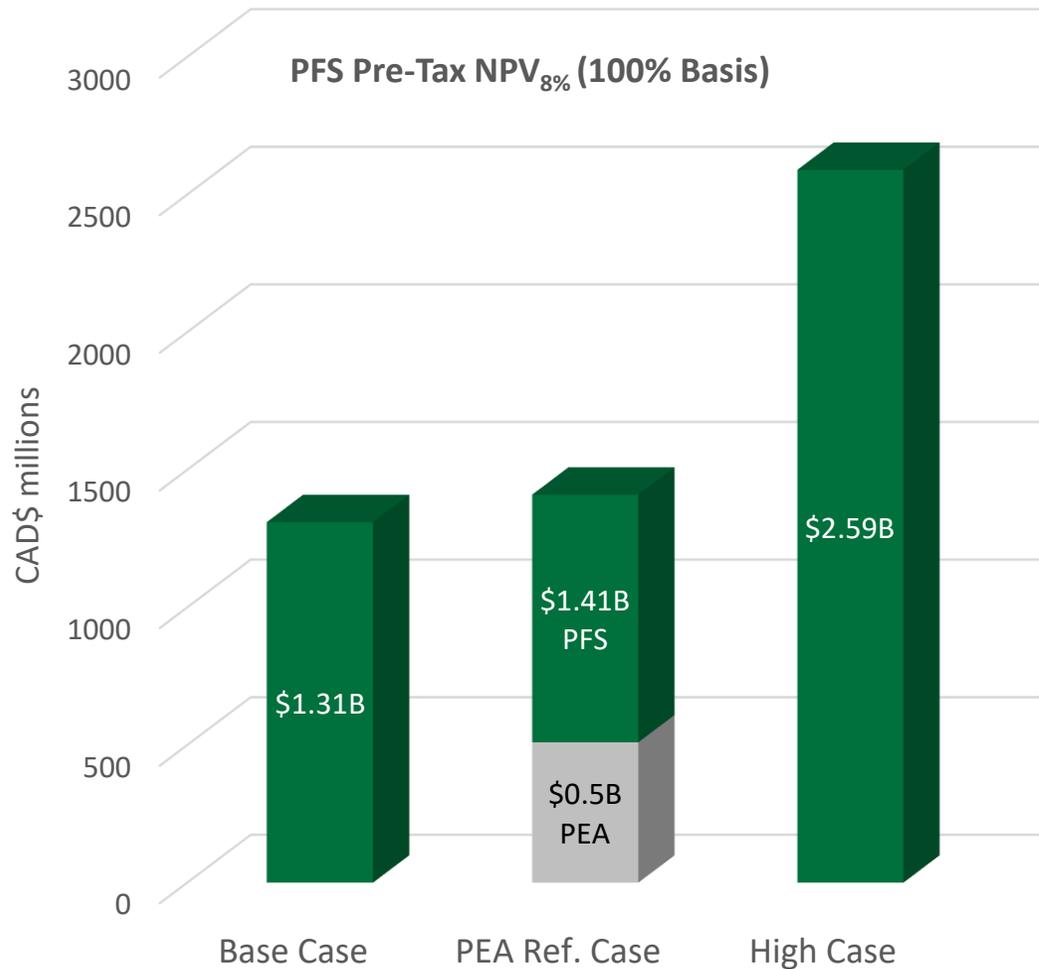
Drill rig carrying out exploration at the Wheeler River site in the mid 2000s; Core logging from discovery of Phoenix; Drill core and handheld scintillometer from discovery of Gryphon; monitoring of commercial scale ISR test wells at Phoenix in 2021.

NOTES:  
(1) See Denison's current Annual Information Form for additional details regarding the history of the Wheeler River project.

(2) The source for uranium price data included on this slide is UxC LLC.

# Wheeler River PFS:

Robust economics supported by conservative uranium price assumptions



### Phoenix

~US\$29/ lb U<sub>3</sub>O<sub>8</sub>  
increasing to US\$45/lb U<sub>3</sub>O<sub>8</sub> used in Base Case

### Gryphon

US\$50/ lb U<sub>3</sub>O<sub>8</sub>  
fixed price used in Base Case

**+175% increase** in pre-tax project NPV from 2016 PEA<sup>(6)</sup> (using PEA selling price of US\$44/lb U<sub>3</sub>O<sub>8</sub>)

Assumptions / Results <sup>(1)</sup>	Base Case	PEA Ref.	High Case
Selling price / lb U <sub>3</sub> O <sub>8</sub>	As above	US\$44	US\$65
Pre-tax NPV <sub>8%</sub> <sup>(2)(4)</sup> (100%)	<b>\$1.31 billion</b>	<b>\$1.41 billion</b>	<b>\$2.59 billion</b>
Pre-tax IRR <sup>(2)(5)</sup>	38.7%	47.4%	67.4%
Pre-tax payback period <sup>(3)</sup>	~24 months	~15 months	~ 11 months

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) NPV and IRR are calculated to the start of pre-production activities for the applicable operation.

(3) Payback period is stated as number of years to pay-back from the start of commercial production.

(4) Post-tax NPV attributable to Denison's then pro-forma 90% interest is estimated to be between \$756 million (base-case) and \$1.5 billion (\$65/lb high-case).

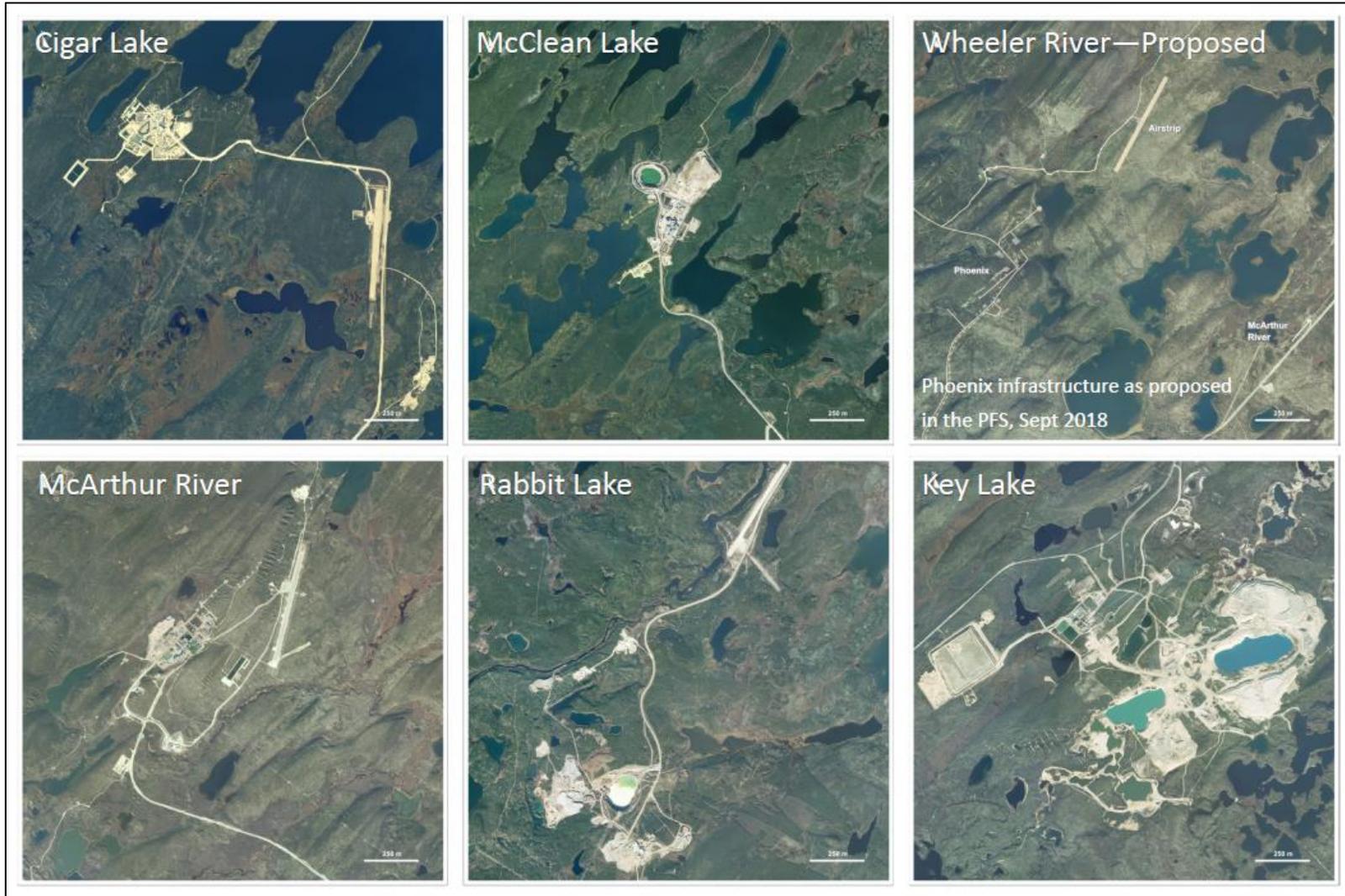
(5) Post-tax IRR attributable to Denison's then pro-forma 90% interest is estimated to be between 32.7% (base-case) and 55.7% (\$65/lb high-case).

(6) 2016 PEA produced pre-tax project NPV(8%) of \$513 million at fixed uranium selling price of US\$44/lb U<sub>3</sub>O<sub>8</sub>.



## Advantages of ISR uranium mining in Canada:

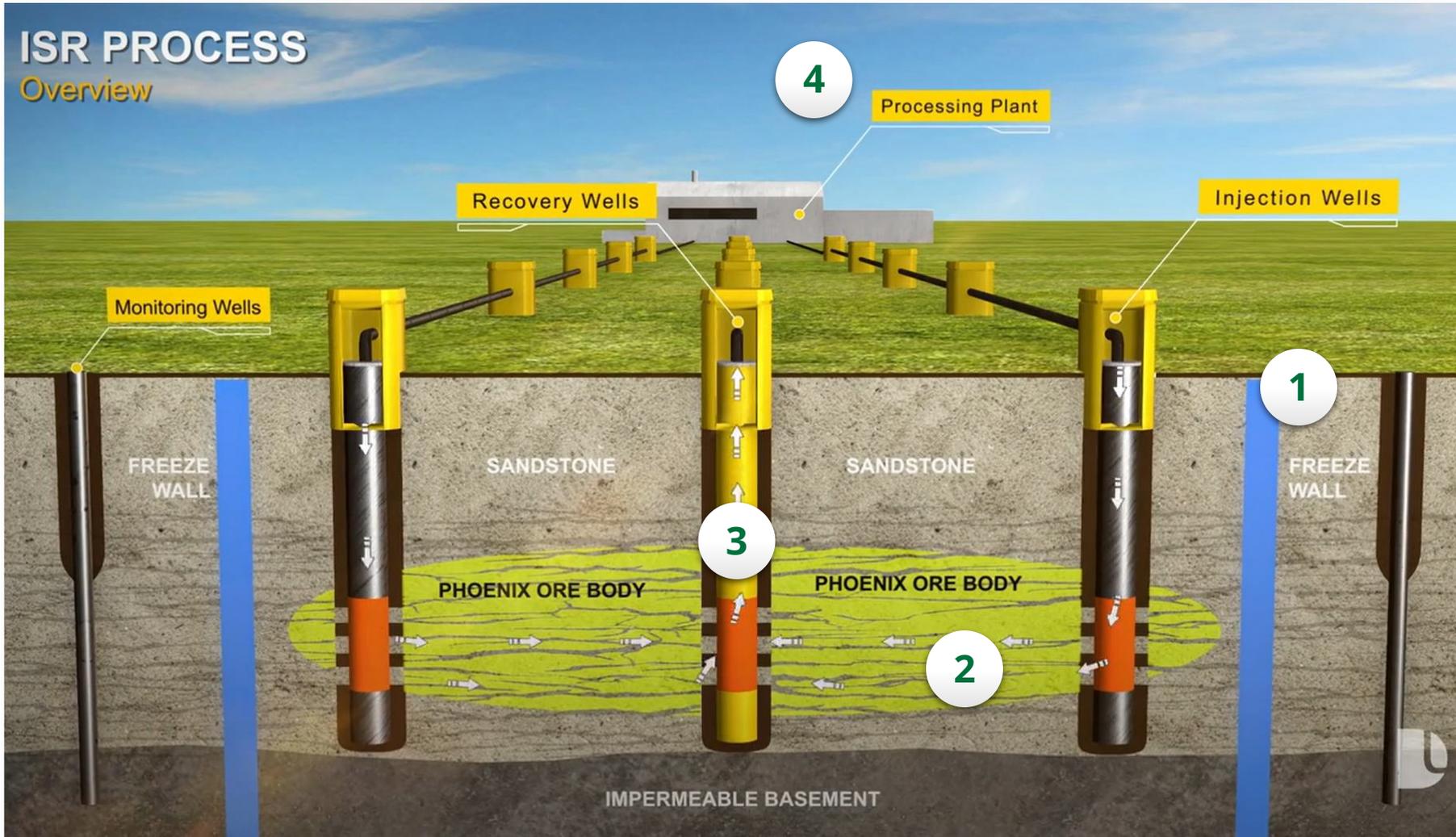
Potential to set superior standards for environmental protection, occupational health and safety, and sustainability



- ✓ Small surface footprint
- ✓ No tailings production
- ✓ Enhanced site reclamation
- ✓ Lower water consumption
- ✓ Lower energy consumption
- ✓ Lower CO<sub>2</sub> emissions
- ✓ Small volume treated effluent released to surface water bodies
- ✓ Potential for lower radiation doses to workers
- ✓ Very small volumes of clean waste rock (sandstone core from wellfield development)

# Phoenix ISR De-Risking:

## First principles of successful ISR mining in the Athabasca Basin



- 1. Containment:** ability to contain the mining solution injected into the formation
- 2. Permeability:** ability to establish hydraulic connections between injection and recovery wells to move the mining solution throughout the deposit
- 3. Leachability:** ability to complete leaching of the uranium mineralization while it is in the ground (in-situ);
- 4. Processing:** ability to recover a suitable finished product from the uranium bearing solution recovered from the wellfield.

# Phoenix ISR De-Risking: 2019 and 2020 ISR field test programs<sup>(1)(3)</sup>



## ~35 small- diameter wells

installed into  
and around the  
Phoenix deposit

All holes  
generally  
equipped with a  
down-hole  
pressure  
transducer or  
vibrating wire  
piezometer  
(“VWP”) to  
measures  
hydraulic  
pressure during  
test work

## Two large- diameter commercial- scale wells

First installed in  
the history of  
the Athabasca  
Basin

### Containment:

Tests show  
minimal vertical  
travel of injected  
fluids

Support decision  
to adopt “Freeze  
Wall” design<sup>(4)</sup>

## ~40 Pump and injection tests

completed to  
collect extensive  
data for  
development of  
hydrogeologic  
model

### Permeability:

Hydrogeologic  
model build and  
calibrated by  
third-party

Achieved ISR  
“**Proof of  
Concept**”<sup>(2)</sup>

#### PHOTOS:

ISR field testing at  
Wheeler River Phoenix  
Deposit, Summer 2019.

Inset photo shows close  
up view of downhole  
pressure transducer.

#### NOTES:

(1) See Denison’s news  
release dated Dec.18,  
2019.

(2) See Denison’s news  
release dated June 4,  
2020.

(3) See Denison’s news  
release dated Oct. 28,  
2020.

(4) See Denison’s news  
release dated Dec. 1,  
2020.

# Phoenix ISR De-Risking: 2021 commercial-scale test pattern and tracer test<sup>(1)</sup>



## 5-spot large- diameter commercial scale test pattern

installed in  
expected Phoenix  
mining Phase 1

## Tracer Test

First known  
completed ion  
tracer test for  
ISR mining in  
the history of  
the Athabasca  
Basin

## Permeability Enhancement Tools Tested

On a larger-scale  
than previous  
tests, verifying  
increased  
hydraulic  
connection  
where needed

### *Highlights of highly successful tracer test:*

- ✓ Achieved commercial-scale production flow rates
- ✓ Demonstrated hydraulic control of injected solution
- ✓ Established breakthrough times consistent with hydrogeological modelling
- ✓ Completed 'clean-up' phase consistent with hydrogeological modelling

#### PHOTOS:

ISR test pattern and commercial scale well-head (inset) at Phoenix during field tests / tracer test completed in 2021.

#### LINKS:

[2021 ISR Field Test Video](#)

#### NOTES:

(1) See Denison's news release dated Oct. 28, 2021

# Phoenix ISR De-Risking: Validating in-situ leachability through specialized metallurgical testing



## Core Leach Testing

Saskatchewan Research Council ('SRC') uses a specialized 'core leach' machine to simulate in-situ leach conditions by forcing the leach solution through the natural permeability of multiple representative in-tact core samples

**50% increase in ISR mining head grade<sup>(1)</sup>**

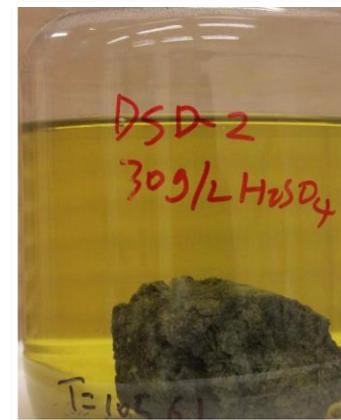
Core leach test results support decision in 2021 to increase the mining head grade assumed in the 2018 PFS

## Hydro-metallurgical test work

Progressing to support water effluent quality for ongoing environmental assessment.

## Plant design advancing

Metallurgical testing using roughly 1000L of uranium bearing solution to support bench-scale evaluations for plant design is well advanced



PHOTOS:

Specialized 'Core Leach' apparatus at the SRC labs in Saskatoon.

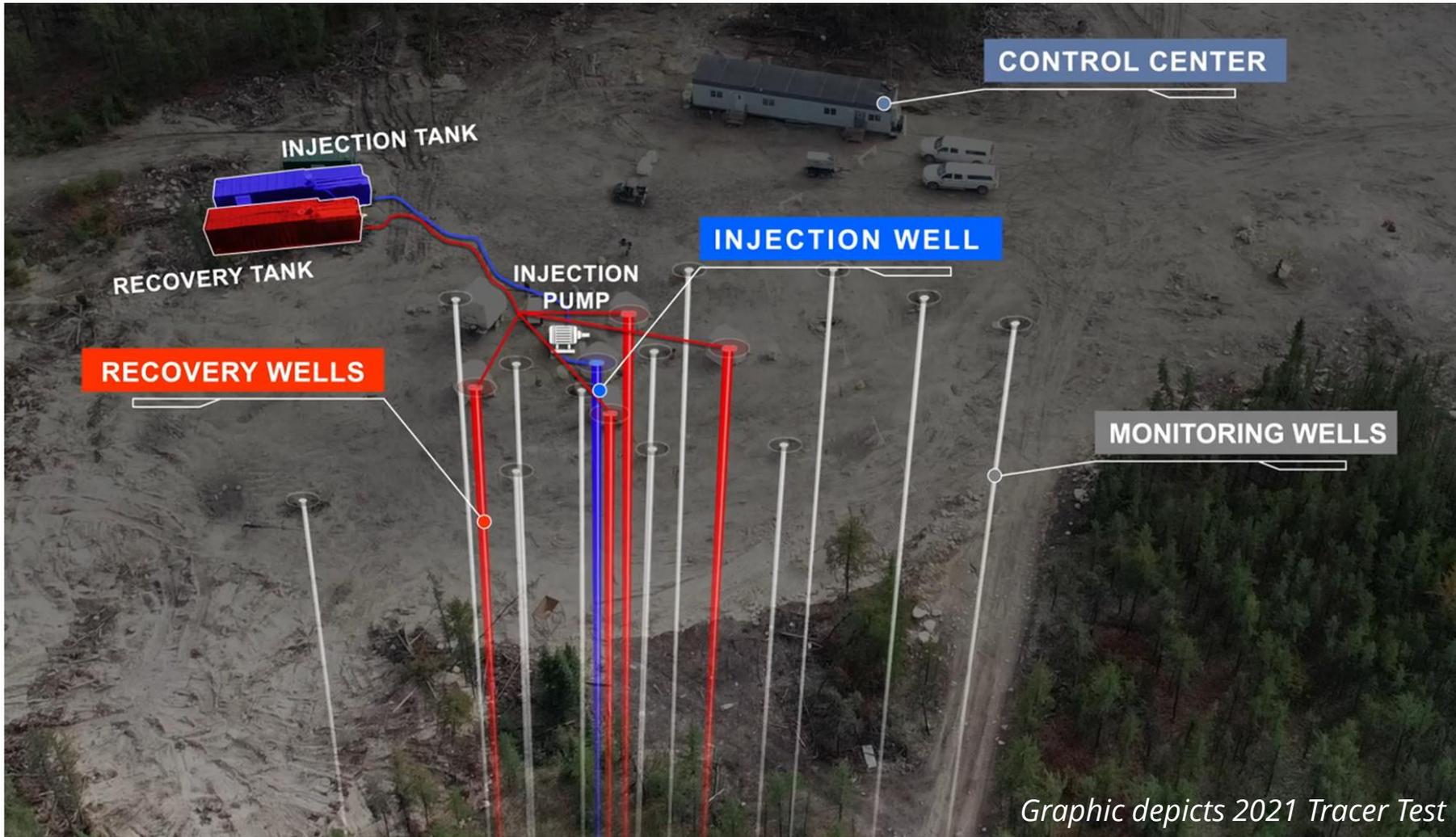
Inset photo shows 9" sample of in-tact high-grade drill core from Phoenix prior to insertion into the testing apparatus.

Bottom right, shows static leaching of uranium from undisturbed core sample.

NOTES:

(1) See Denison's news release dated August, 4, 2021.

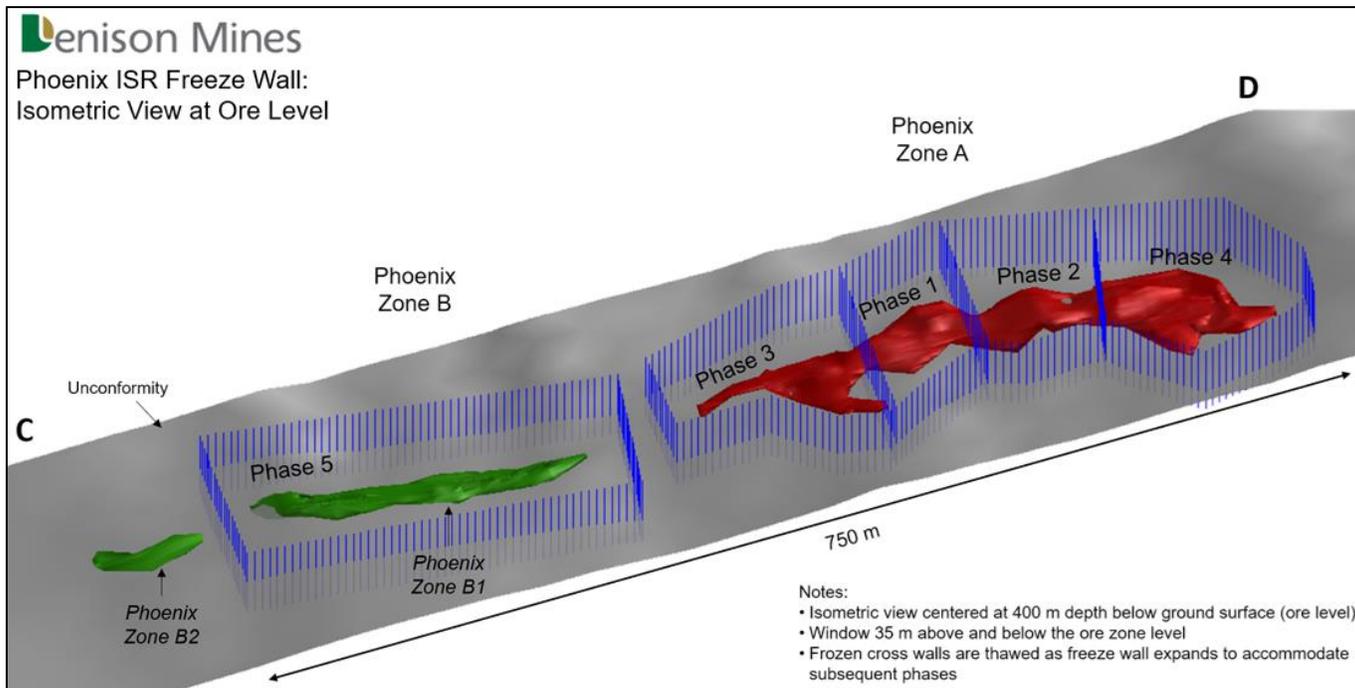
## Phoenix ISR De-Risking: Planned 2022 field feasibility test ('FFT')



- FFT is planned for the second half of 2022 – more details to come
- Expected to represent final confirmation of the technical feasibility of the ISR mining method at Phoenix
- Designed to make use of the existing commercial scale test pattern installed in 2021
- Expected to involve a controlled injection of lixiviant into an area of the test pattern and the recovery of mineralized solution

# Phoenix ISR Feasibility Study:

Wood PLC selected to lead + author independent Feasibility Study in accordance with NI 43-101<sup>(1)</sup>



**50% increase**

to ISR mining uranium head-grade in PFS<sup>(3)</sup>

**Updated**

Estimate of Mineral Resources including results from GWR-045<sup>(4)</sup>

**Process Plant Optimization**

Including increase in ISR mining head-grade

**Mine Design Optimization**

Including results from multiple field tests

## Freeze wall design shows potential for significant advantages<sup>(2)</sup>

Conventional freeze “wall” design selected to replace novel freeze dome / cap design in 2018 PFS

- Enhanced environmental design – full containment of ISR wellfield to surface
- Lower technical complexity and operational risk – using existing diamond drilling methods
- Expected reduction in initial capital costs with introduction of phased mining approach
- Strengthened project sustainability

**Superior**  
Standard of Environmental Stewardship

Incorporating technical work and feedback from ongoing EA

**Class 3**  
Capital Cost Estimate

AACE international standard with an accuracy of -15%/+25%

PHOTO:

Isometric view of planned ISR Freeze Wall for Phoenix, including illustration of phased mining approach

NOTES:

(1) See Denison’s news release dated September 22, 2021.

(2) See Denison’s news release dated December 1, 2020.

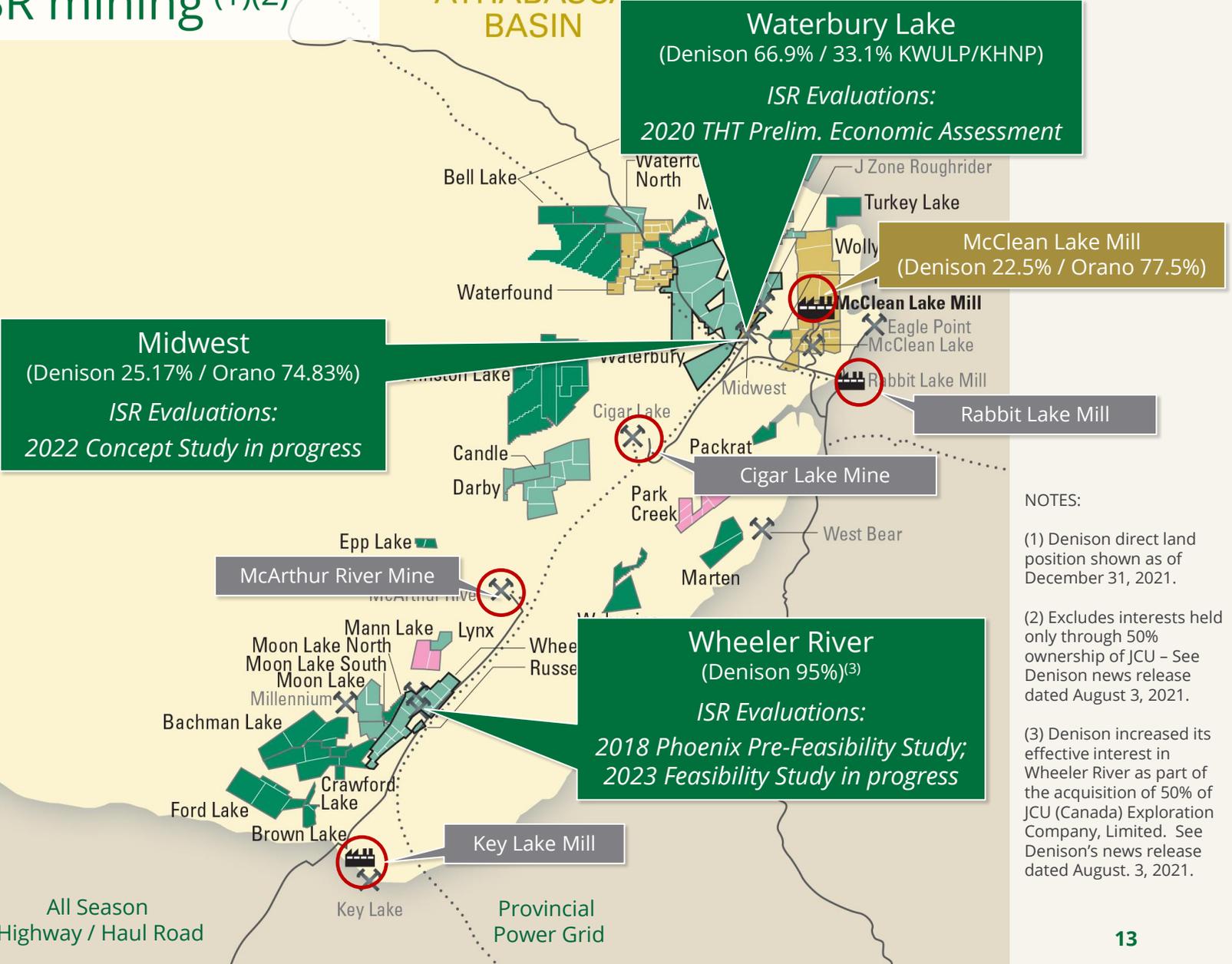
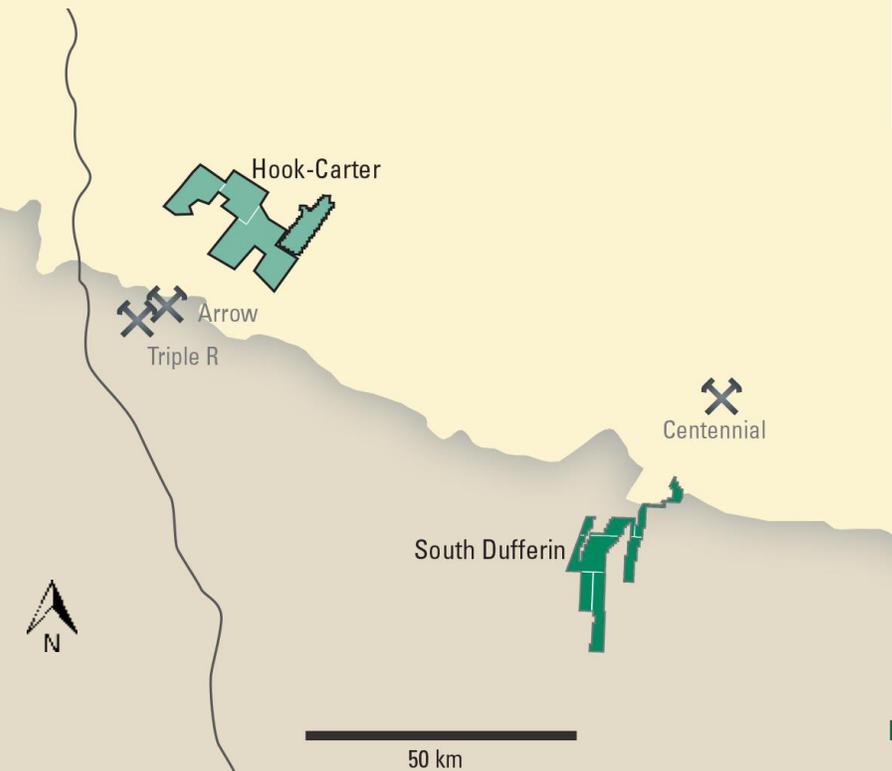
(3) See Denison’s news release dated August 4, 2021.

(4) See Denison’s news release dated July 29, 2021.

# Multiple Denison projects under evaluation for potential amenability of ISR mining <sup>(1)(2)</sup>



- 100% Denison
- Denison operated JV
- Orano operated JV
- Cameco operated JV
- Denison earn-in
- Uranium mines and deposits
- Uranium mill
- Roads
- Powerlines



- NOTES:
- (1) Denison direct land position shown as of December 31, 2021.
- (2) Excludes interests held only through 50% ownership of JCU – See Denison news release dated August 3, 2021.
- (3) Denison increased its effective interest in Wheeler River as part of the acquisition of 50% of JCU (Canada) Exploration Company, Limited. See Denison's news release dated August 3, 2021.