

Corporate Update
July 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; de-risking and project assessment activities, plans and objectives; assumptions regarding Denison's ability to obtain all necessary regulatory approvals to commence development at Wheeler; Denison's percentage interest in its projects and assumed continuity of its agreements with its joint venture partners and other third parties; production and SABRE development outlook for McClean Lake; and estimates of uranium industry factors, including physical uranium supply and demand. 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 and its Form 40-F available at 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.Geo, each of whom is a Qualified Person in accordance with the requirements of NI 43-101.

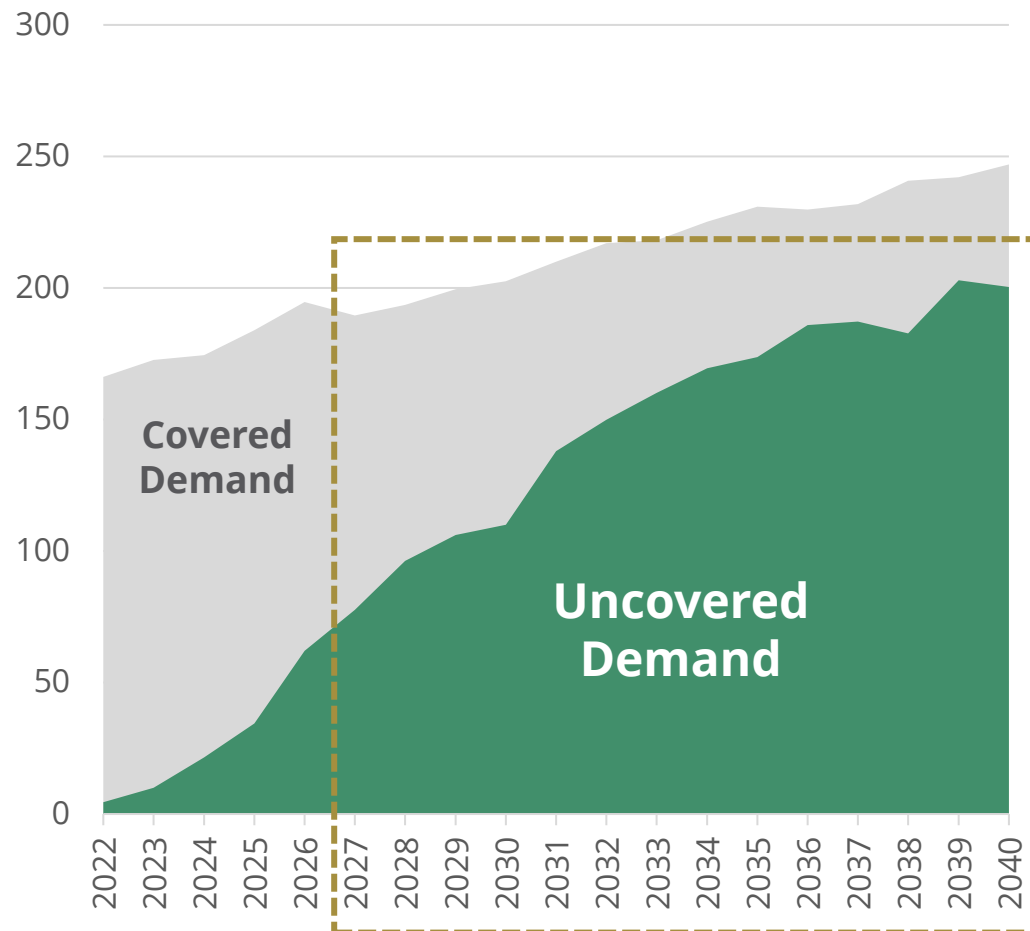
Technical Reports

- 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  e (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 and on EDGAR at www.sec.gov/edgar.shtml.

The Uranium Investment Thesis: Fundamentals progressing towards a positive new uranium cycle

Annual Utility Uranium Requirements ⁽¹⁾
(million pounds U₃O₈ - per UxC Q1'22)



Key Market Themes:

1. Demand story is positive – exceeding pre-Fukushima levels + realization of the critical role of nuclear as key to a **clean-energy transition**.
2. Recent curtailments + COVID-19 related supply disruptions created significant primary production deficit and accelerated the drawdown of surplus inventories.
3. Long-term contracts from previous cycle are ending with **significant uncovered utility requirements emerging / approaching**.
4. Recent + significant **increase in long-term contracting activity** reported amidst supply threats from geopolitical events – pointing to security of supply concerns.
5. Sustained period of low prices means project pipeline may be inadequate to deliver new production in time to replace aging mines.
6. Investor interest in uranium market has increased, with holdings of **physical uranium** gaining in popularity and testing the depth of discretionary supplies.

NOTES:

(1) Data in this slide has been derived from UxC's Uranium Market Outlook dated Q1'2022, including UxC's estimates of uncovered requirements and the URM "Base Demand No Inventory Build" requirements forecast to estimate covered demand.

Diversified Athabasca Basin asset base with superior development leverage

95%⁽¹⁾

effective interest in
Flagship
Wheeler River project

PFS stage development project⁽²⁾

Largest undeveloped uranium
project in the infrastructure rich
eastern Athabasca Basin

Environmental Assessment (“EA”) and Feasibility Study initiated⁽³⁾

22.5%

interest in
Strategic McClean Lake
Uranium Mill

Strategic regional asset

+11% of global uranium
production

Excess licensed annual capacity

Licensed for expansion of tailings
management facility (“TMF”) ⁽⁴⁾

66.9%

interest in
Emerging
Waterbury Lake project

PEA stage development project⁽⁵⁾

The Heldeth Tùé (“THT”) deposit
(formerly J Zone) highlights
potential for future development
project pipeline

Participating interests in key development-stage assets operated by uranium “majors”

Includes 22.5% in McClean Lake (Orano), 25.17% in Midwest (Orano), and an effective 15% in Millennium (Cameco) through 50% ownership of JCU⁽⁶⁾

~300,000

hectares of
exploration ground

PHOTO:

Aerial view of Denison’s 22.5% owned McClean Lake mill facility

NOTES:

(1) 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.

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

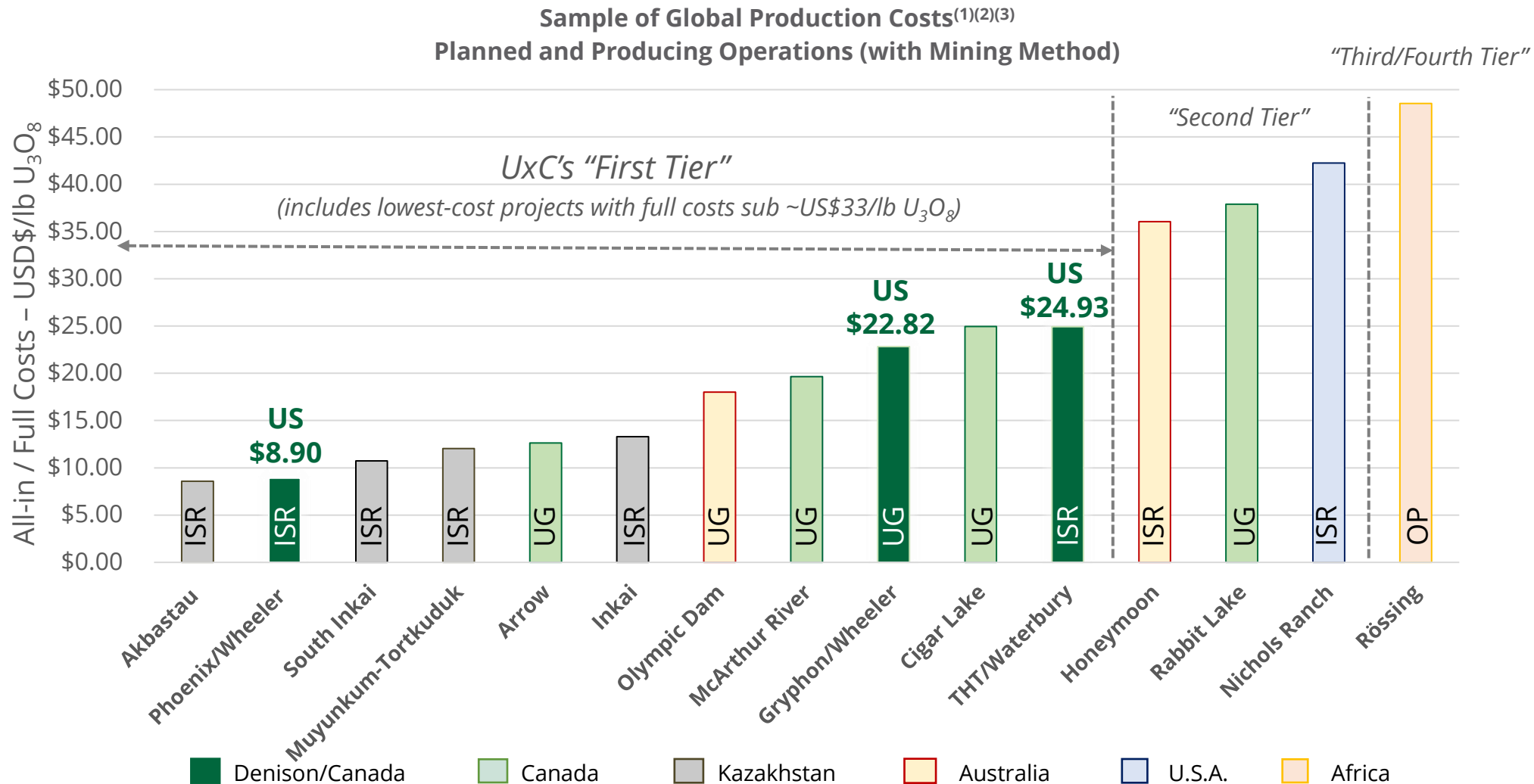
(3) See Denison’s news release dated September 22, 2021.

(4) See Denison’s news release dated January 19, 2022.

(5) Refer to the Waterbury Lake Technical Report titled “Preliminary Economic Assessment for the Tthe Heldeth Tùé (J Zone) Deposit, Waterbury Lake Property, Northern Saskatchewan, Canada” dated October 30, 2020.

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

Denison's development portfolio projects: Positioned amongst the lowest all-in cost assets of UxC's First Tier



NOTES:

(1) Chart data, including all-in costs and UxC's categorization of production cost "tiers", have been derived from UxC's estimates of Worldwide Production Costs from the Uranium Production Cost Study dated August 2021.

(2) For Phoenix and Gryphon, refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018.

(3) for THT/Waterbury, refer to the Waterbury Lake Technical Report titled "Preliminary Economic Assessment for the Tthe Heldeth Túé (J Zone) Deposit, Waterbury Lake Property, Northern Saskatchewan, Canada" dated October 30, 2020.

Robust Balance Sheet with +CAD\$250M in working capital and investments⁽¹⁾

2.5M lbs U₃O₈

in holdings of
physical uranium (Mar. 31, 2022)

Market value ~**CAD\$181M** (US\$57.90/lb U₃O₈)

Acquired at average cost of **US\$29.66/lb U₃O₈**

Long-term holding expected to enhance access to
future project financing for flagship Wheeler River⁽²⁾

All material received and held in licenced North
American storage facilities (Cameco + ConverDyn)

~CAD\$19M

investments in
uranium equities (Mar. 31, 2022)

Significant equity holdings in uranium
exploration and development companies,
including GoviEx Uranium Inc. ("GoviEx") &
Skyharbour Resources Ltd.

Sold 32.5M shares in GoviEx and option to
purchase further 32.5M of Denison's shares in
GoviEx (at exercise price of CAD\$0.80/share) in
2021 for **CAD\$15.6M**.⁽³⁾

+CAD\$65M in cash and cash equivalents at Mar. 31, 2021

PHOTO:

Packaged U₃O₈ yellowcake
at Denison's 22.5% owned
McClellan Lake mill.

NOTES:

(1) As of March 31, 2022,
for additional details see
financial statements and
MD&A for the period
ended March 31, 2021.

(2) See Denison's news
releases dated March 15,
2021, March 22, 2021, and
April 1, 2021.

(3) See Denison's news
releases dated October
21, 2021 and October 26,
2021.

Environmental, Social, Governance & Indigenous (ESG+I)

Fundamental considerations driving Denison's operations



Comprehensive ESG Reporting

2021 [ESG Report](#) completed in early 2022, designed to address TCFD, GRI and other global disclosure matrixes

Board approved Indigenous Peoples Policy

First-in-sector policy reflecting Denison's commitment to take action towards advancing reconciliation with Indigenous peoples in Canada⁽¹⁾

Strong EHS&S Culture & Results

Total Recordable Incident Rate (TRIR) of zero and no significant environmental events for 2021⁽⁶⁾

Top 200 in Canada Leading Governance Practices & Disclosure

Denison recognized by Globe & Mail "Board Games" as top uranium development company for corporate governance practices & disclosure in its assessment of leading companies and trusts included in Canada's benchmark **S&P/TSX Composite Index**^(4, 5)

Authentic Social Programs

Denison's community / social investment program targets community-based initiatives

Multiple Indigenous Agreements In Place

Participation/Funding + Exploration Agreements with:

- English River First Nation⁽²⁾
- Kineepik Métis Local / Pinehouse ("KML")⁽³⁾

PHOTO:

Highlights of the Elders of Sakitawak's market garden in Ile a la Crosse, a community-based initiative sponsored by Denison.

LINKS:

[Denison's 2021 ESG Report](#)

NOTES:

(1) See Denison's news release dated December 2, 2021.

(2) See Denison's news release dated April 6, 2021.

(3) See Denison's news release dated June 23, 2022.

(4) For more information: <https://www.theglobeandmail.com/business/careers/management/board-games/article-the-globe-and-mails-comprehensive-ranking-of-canadas-corporate-boards/>

(5) See Denison's news release dated March 15, 2021.

(6) See Denison's 2021 Annual Information Form for additional details.

Large land position in the infrastructure-rich eastern portion of the Athabasca Basin⁽¹⁾⁽²⁾



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.

95% owned flagship Wheeler River development project⁽¹⁾⁽²⁾

Two

High-grade uranium deposits

Phoenix – designed as a low-cost In-Situ Recovery (“ISR”) operation with on-site processing to finished yellow cake (U_3O_8)

Gryphon – contributes additional low-cost production via conventional underground mining with assumed toll milling at 22.5% Denison owned McClean Lake mill

14-year
combined
Mine Life

109.4M lbs U_3O_8
combined
Probable Reserves
(100% basis)

CAD\$322.5M
estimated
Initial CAPEX
(100% basis)

NI 43-101
compliant
Pre-Feasibility Study
completed in 2018
considers staged
development plan⁽¹⁾

Located within the boundaries of Treaty 10
in the traditional territory of English River First Nation, in the homeland of the Métis and within Nuhenéné

11,720
hectares of prospective
ground over 19 claims

PHOTO:

Installation of large-diameter commercial scale ISR test wells at Phoenix during 2021.

LINKS:

[Wheeler River Project Video on Vimeo](#)

[Wheeler River Project Page on Denison Website](#)

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) 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.

Phoenix In-Situ Recovery ("ISR") Operation:

PFS highlights potential to become one of the lowest cost uranium mines in the world⁽¹⁾



70.2M
lbs U₃O₈
@
19.14%
U₃O₈

Indicated Mineral Resources
(166,000 tonnes, 100% basis)

Highest-grade undeveloped uranium deposit

Plus...
1.1M
lbs U₃O₈
Inferred mineral resources
(8,600 tonnes @ 5.8% U₃O₈, 100% basis)

6M lbs
lbs U₃O₈
Average annual production over 10 years
(100% basis)

us\$3.33
/ lbs U₃O₈
average Cash Operating Costs

(C\$4.33/lb U₃O₈)

c\$1.91B
estimated Pre-Tax NPV_{8%}
(100% basis)

US\$65/lb U₃O₈ selling price
(see note 3, 4)

c\$322.5M
estimated Initial CAPEX
(100% basis)

us\$8.90
/ lbs U₃O₈
average All-in Cost⁽²⁾

(C\$11.57/lb U₃O₈)

71.5%
estimated Pre-Tax IRR

US\$65/lb U₃O₈ selling price
(see note 3, 4)

PHOTOS:

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

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) All-in cost is estimated on a pre-tax basis and includes all project operating costs and capital costs, divided by the estimated number of total pounds U₃O₈ to be produced.

(3) NPV and IRR are calculated based on assessed "high-case" uranium price, to the start of pre-production activities for the Phoenix operation.

(4) Indicative post-tax results were prepared on a combined basis with the Gryphon deposit for Denison's then 90% ownership interest, see slide 12 for details.

Gryphon Underground (“UG”) Operation:

PFS shows potential to add further low-cost production by using existing infrastructure⁽¹⁾



61.9M
lbs U₃O₈
@
1.7%
U₃O₈

Indicated Mineral Resources (1,643,000 tonnes, 100% basis)

Moderate grade allows low-cost conventional UG mining approach

Plus...
1.9M
lbs U₃O₈
Inferred mineral resources
(73,000 tonnes @ 1.2% U₃O₈, 100% basis)

7.6M
lbs U₃O₈
Average annual production over 6.5 years (100% basis)

US\$11.70
/ lbs U₃O₈
average Cash Operating Costs
(C\$15.21/lb U₃O₈)

c\$998.8M
estimated Pre-Tax NPV_{8%} (100% basis)
US\$65/lb U₃O₈ selling price
(see note 3, 4)

c\$623.1M
estimated Initial CAPEX (100% basis)

US\$22.82/
lbs U₃O₈
average All-in Cost⁽²⁾
(C\$29.67/lb U₃O₈)

31.0%
estimated Pre-Tax IRR
US\$65/lb U₃O₈ selling price
(see note 3, 4)

PHOTO:

View inside the SX circuit at Denison’s 22.5% owned McClean Lake mill, which is assumed to toll mill production from the Gryphon UG operation

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.

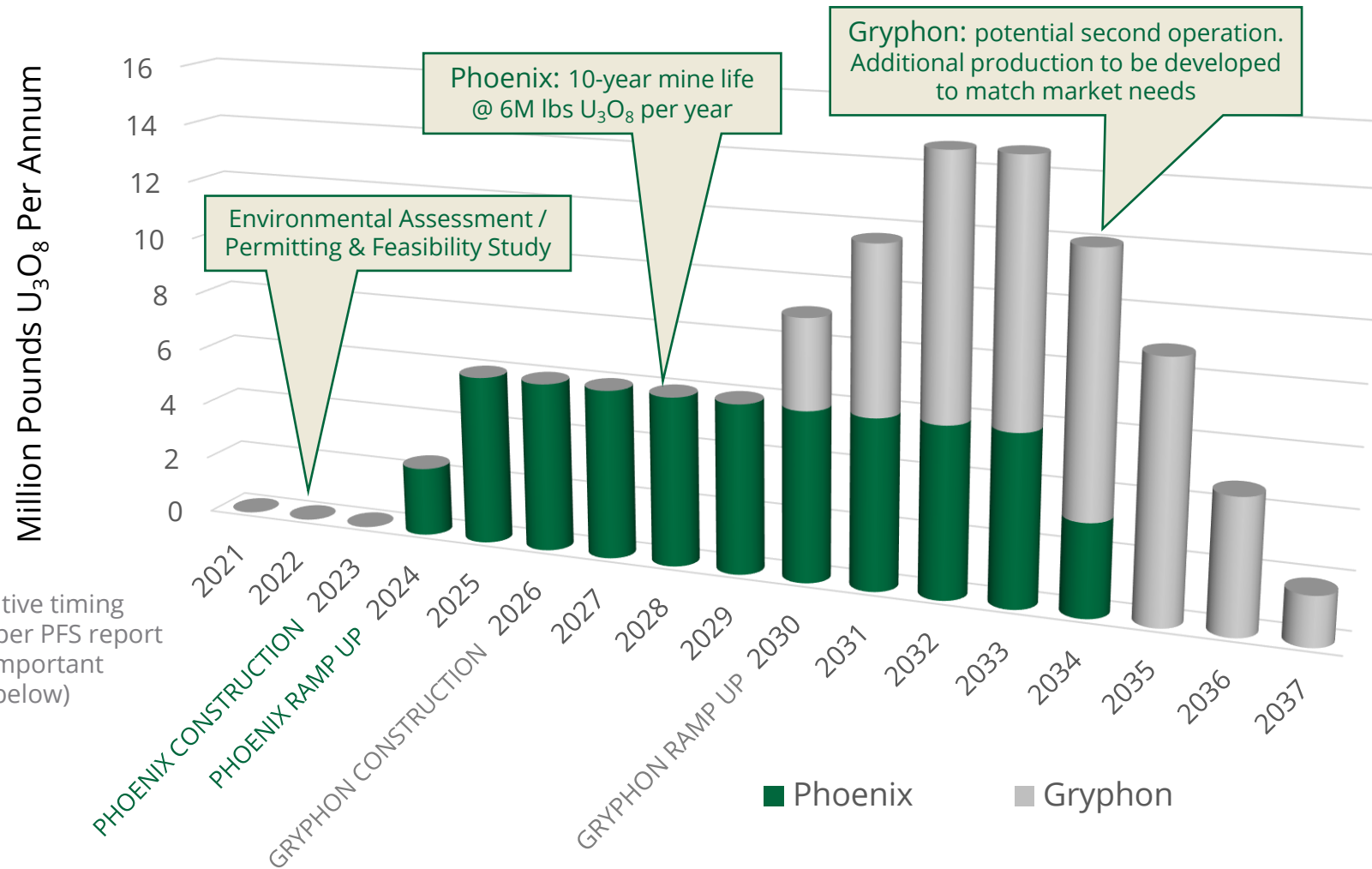
(2) All-in cost is estimated on a pre-tax basis and includes all project operating costs and capital costs, divided by the estimated number of total pounds U₃O₈ to be produced.

(3) NPV and IRR are calculated based on assessed “high-case” uranium price, to the start of pre-production activities for the Gryphon operation.

(4) Indicative post-tax results were prepared on a combined basis with the Phoenix deposit for Denison’s then 90% ownership interest, see slide 12 for details.

Wheeler River PFS:

Staged development plan reduces risk and delivers production to match market needs⁽¹⁾



Indicative timing only, per PFS report (see important note below)

NOTES:

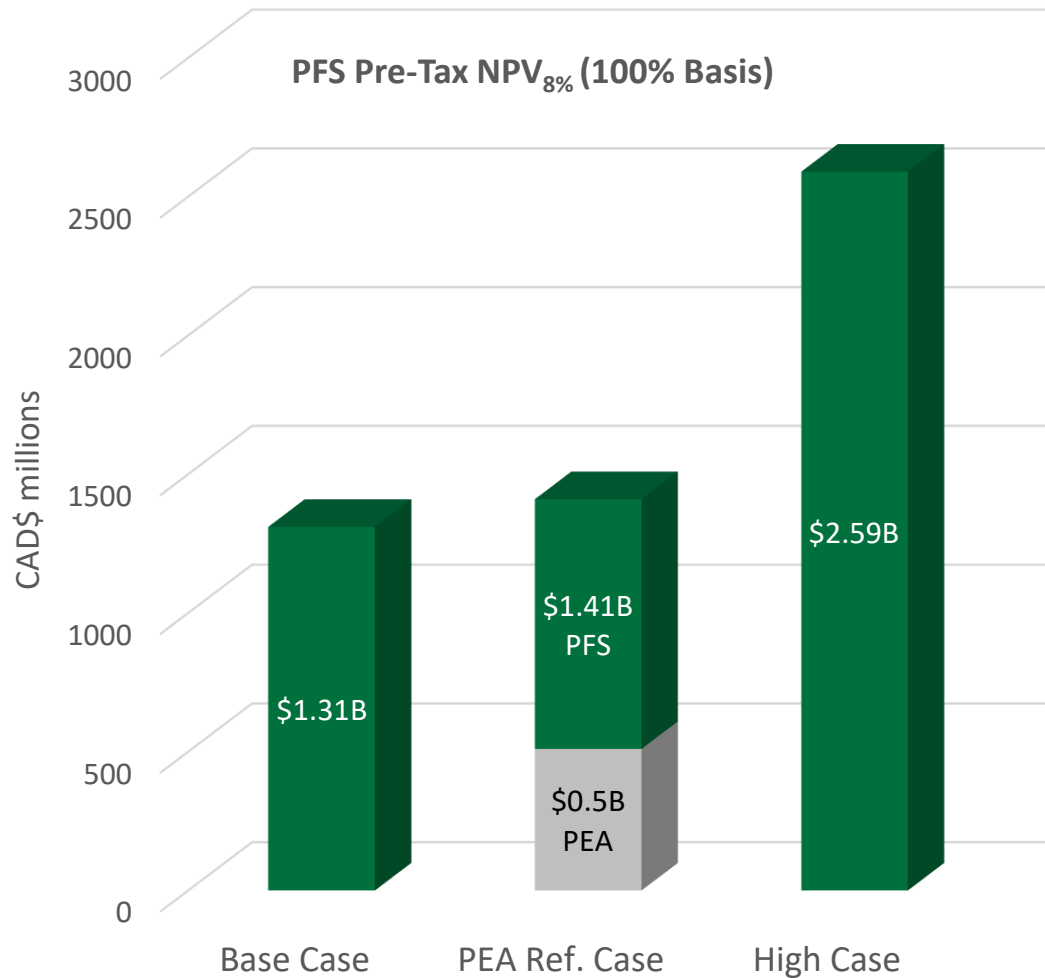
(1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018.

(2) See Denison's news release from March 20, 2020, for details.

*****IMPORTANT***** The Wheeler River PFS estimated pre-production activities to begin in 2021, assuming receipt of required regulatory approvals, with first production from the Phoenix deposit expected in 2024. In response to the onset of the COVID-19 pandemic in Canada in 2020, Denison suspended certain activities at Wheeler River, including the Environmental Assessment programs on the critical path to achieving the project development schedule outlined in the PFS. **See Note 2. EA activities were resumed effective January 2021.** The temporary suspension of the EA process is expected to impact the project development schedule outlined in the PFS for Wheeler River. The Company is not yet able to estimate the impact to the project development schedule outlined in the PFS, and **users are cautioned that the estimates provided therein regarding the start of pre-production activities in 2021 and first production in 2024 should not be relied upon.**

Wheeler River PFS:

Robust economics supported by conservative uranium price assumptions



Phoenix

~US\$29/ lb U₃O₈
increasing to US\$45/lb U₃O₈ used in Base Case

Gryphon

US\$50/ lb U₃O₈
fixed price used in Base Case

+175% increase in pre-tax project NPV from 2016 PEA⁽⁶⁾ (using PEA selling price of US\$44/lb U₃O₈)

Assumptions / Results ⁽¹⁾	Base Case	PEA Ref.	High Case
Selling price / lb U ₃ O ₈	As above	US\$44	US\$65
Pre-tax NPV _{8%} ⁽²⁾⁽⁴⁾ (100%)	\$1.31 billion	\$1.41 billion	\$2.59 billion
Pre-tax IRR ⁽²⁾⁽⁵⁾	38.7%	47.4%	67.4%
Pre-tax payback period ⁽³⁾	~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 U₃O₈.

Phoenix ISR De-Risking:

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

2019/2020 ISR Field Tests⁽¹⁾

35 small-diameter test, observation and re-charge wells

2 large-diameter commercial scale wells

Pump and injection tests collecting critical hydrogeological data

Demonstrated "Proof of Concept" for use of ISR

Specialized Core Leach Testing⁽²⁾

Leach testing indicative of in-situ conditions using intact core samples from Phoenix

Results consistently produced uranium bearing solution head-grade levels significantly higher than grade used in the 2018 PFS

Additional High-Grade uranium discovered at Phoenix⁽³⁾

22.0% eU₃O₈
over 8.6 metres in GWR-045

Located outside of the existing high-grade resource domain for Zone A and Phase 1 of the current mining plan

2021 field test of commercial-scale ISR test pattern⁽⁴⁾

Achieved commercial-scale flow-rate used in the 2018 PFS

Completed Athabasca Basin first "tracer test" showing hydraulic control, breakthrough times consistent with modelling, and ability to carry out "clean-up"

PHOTOS (Left to Right):

Small diameter ISR test wells installed at Phoenix in 2019; Specialized core-leach testing apparatus from the Saskatchewan Research Council (SRC); high-grade uranium core and scintillometer; monitoring of commercial scale ISR test wells at Phoenix in 2021.

LINKS:

[2021 Phoenix ISR Test Program on Vimeo](#)

NOTES:

(1) See Denison's news releases dated December 18, 2019, February 24, 2020, and June 4, 2020.

(2) See Denison's news releases dated February 19, 2020, and August 4, 2021.

(3) See Denison's news release dated July 29, 2021.

(4) See Denison's news release dated October 28, 2021.

Feasibility Field Test (FFT) Approved by Saskatchewan Minister of Environment

Preparation and construction of facilities fully authorized with ~2 month timeline^(1, 2, 3)

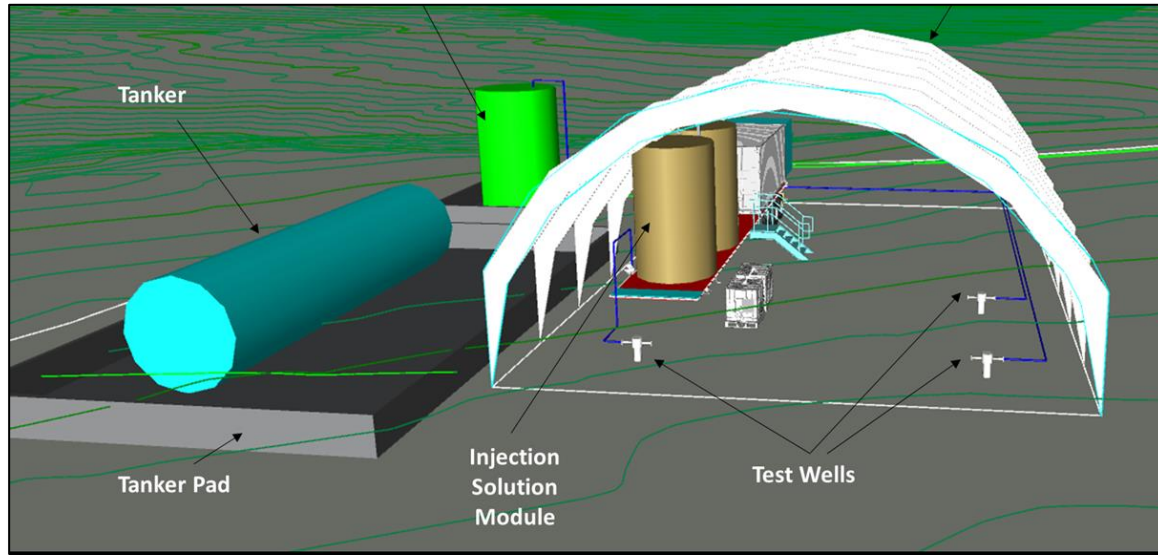


PHOTO:

Isometric view of planned FFT facilities (left) and plan map of Phoenix FFT site (right).

NOTES:

(1) See Denison's news release dated July 12, 2022.

(2) A Nuclear Substance License from the Canadian Nuclear Safety Commission (CNSC) is also required for Denison to possess and store a nuclear substance (mineralized solution containing Uranium) resulting from the operation of the FFT. The process to obtain this license is well advanced, and the license is expected to be received before the site preparation and commissioning activities for the FFT facilities are completed.

(3) The majority of the test activities (leaching and neutralization phases) are expected to occur within an estimated 60-day operating time frame, with construction and placement of temporary facilities commencing approximately two months prior.

The Phoenix FFT is expected to validate and inform various feasibility study elements for use of **In-Situ Recovery (ISR)** mining, including production and remediation profiles, and is planned to occur in three phases commencing in **H2'2022**:

Leaching

Controlled injection of acidic solution into a portion of the existing commercial-scale test pattern installed at Phoenix in 2021.

Neutralization

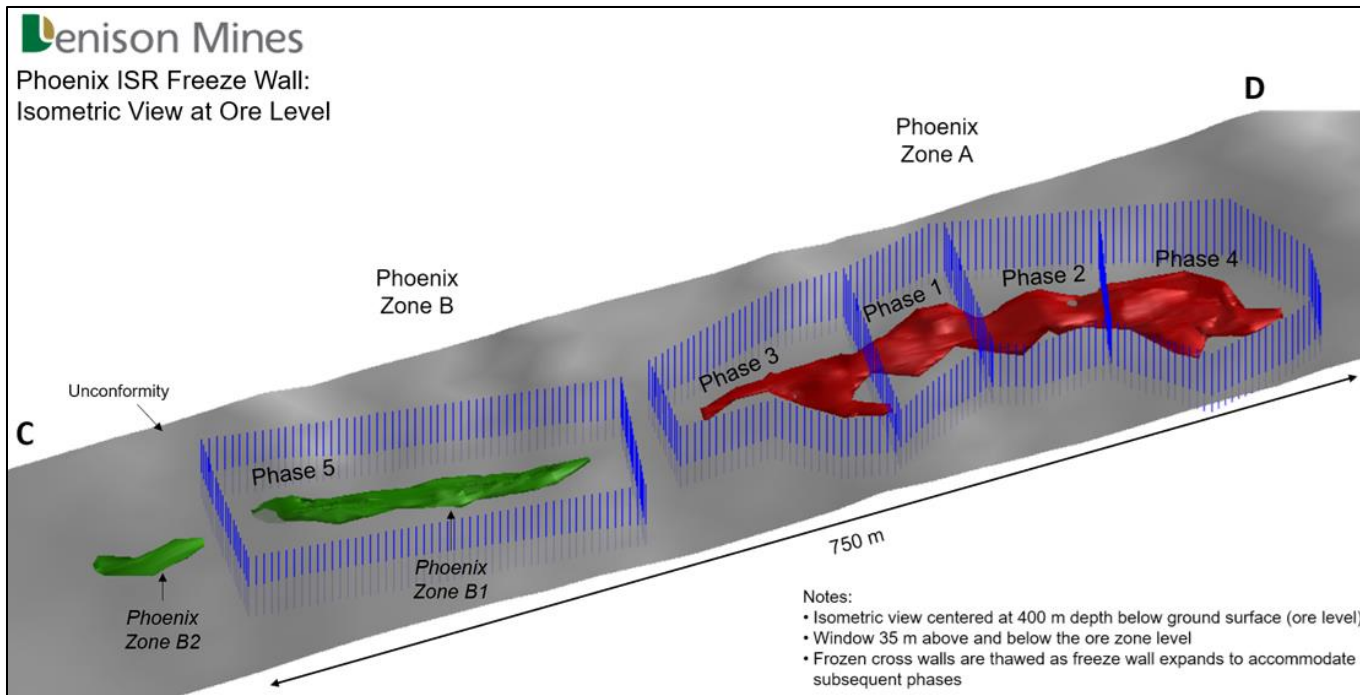
Injection of mild alkaline solution to reverse the leaching process and return test area to protective conditions.

Recovered Solution Management

Separation of recovered solution into mineralized precipitates (temporarily stored in tanks on surface) and neutralized treated solution (re-injected into sub-surface).

Phoenix ISR Feasibility Study:

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



50% increase

to ISR mining uranium head-grade in PFS⁽³⁾

Updated

Estimate of Mineral Resources including results from GWR-045⁽⁴⁾

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⁽²⁾

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.

PHOTO:

Isometric schematic of ISR wellfield and freeze wall at depth of the THT deposit on Waterbury Lake property.

LINKS:

[Waterbury Lake Project Video on Vimeo](#)

[Waterbury Project Page on Denison Website](#)

NOTES:

(1) Refer to the Waterbury Lake Technical Report titled "Preliminary Economic Assessment for the Tthe Heldeth Túé (J Zone) Deposit, Waterbury Lake Property, Northern Saskatchewan, Canada" and dated October 30, 2020.

(2) 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.

66.90% owned Waterbury Lake project demonstrates potential for ISR to transform portfolio projects⁽¹⁾

(Rio Tinto)

ISR

Mining method

The Heldeth Túé ("THT") deposit (formerly J Zone) designed as a low-cost In-Situ Recovery ("ISR") operation with freeze wall design

Uranium Bearing Solution ("UBS") to be transported by truck to 22.5% Denison's owned McClean Lake mill for toll processing

Minimal site infrastructure

6-year
Mine Life

CAD\$112M
estimated
Initial CAPEX
(100% basis)

9.7M lbs U₃O₈
projected
Mine Production
(100% basis)

12.8M lbs U₃O₈ @ 2.0% U₃O₈
(291,00 tonnes) in Indicated Mineral Resources estimated for THT (100% basis)

NI 43-101
compliant
Preliminary Economic Assessment ("PEA")
Completed in 2020⁽²⁾

Partnership

with consortium led by state-owned nuclear company Korea Hydro Nuclear Power ("KHNP")

Located within the boundaries of Treaty 10

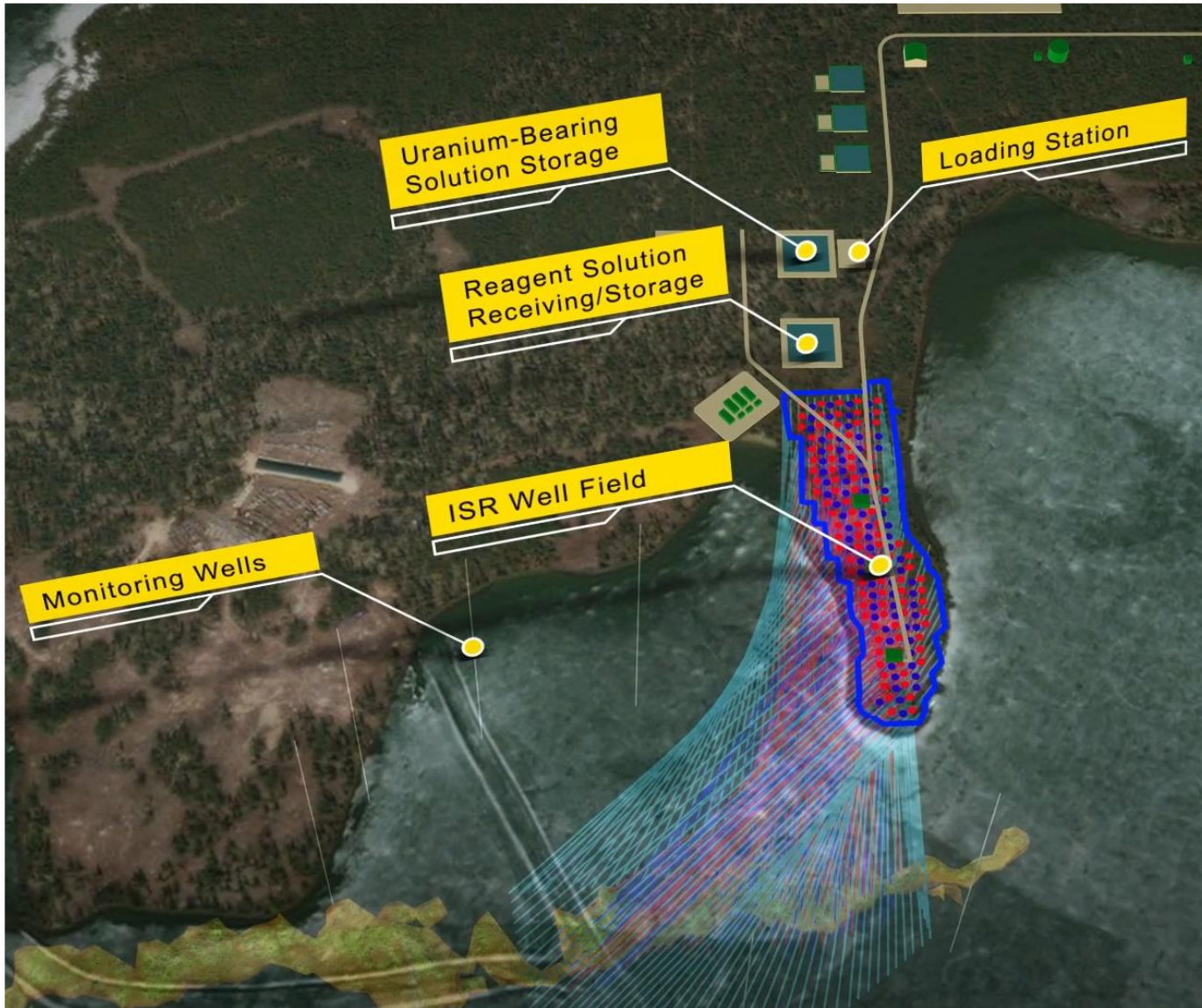
in Nuhenéné / Athabasca Denesúliné traditional territory and the homeland of the Métis

40,256

hectares of prospective ground over 13 claims

McClean Lake
(Orano / Denison)

Tthe Heldeth Túé (“THT”) In-Situ Recovery (“ISR”) Operation: PEA shows potential for ISR to change future of uranium mining landscape in Canada⁽¹⁾



PHOTOS:

Aerial rendering of surface facilities for the THT ISR operation

NOTES:

(1) Refer to the Waterbury Lake Technical Report titled “Preliminary Economic Assessment for the Tthe Heldeth Túé (J Zone) Deposit, Waterbury Lake Property, Northern Saskatchewan, Canada” dated October 30, 2020. See PEA note on Slide 15.

(2) All-in cost is estimated on a pre-tax basis and includes all project operating costs and capital costs divided by the estimated number of finished pounds U_3O_8 produced.

(3) NPV and IRR are calculated based on assessed “high-case” uranium price, to the start of pre-production activities.

(4) Post-tax NPV attributable to Denison's then 66.90% interest is estimated to be between \$72 million (base-case) and \$109 million (\$65/lb high-case).

(5) Post-tax IRR attributable to Denison's then 66.90% interest is estimated to be between 30.4% (base-case) and 38.9% (\$65/lb high-case).

1.6M lbs
lbs U_3O_8
Average annual production over 6 years (100% basis)

c\$112M
estimated
Initial CAPEX (100% basis)

us\$12.23
/ lbs U_3O_8
average Cash Operating Costs
(C\$16.27/lb U_3O_8)

us\$24.93
/ lbs U_3O_8
average All-in Cost⁽²⁾
(C\$33.16/lb U_3O_8)

c\$265M
estimated
Pre-Tax NPV_{8%} (100% basis)

US\$65/lb U_3O_8 selling price
(see note 3, 4)

50.0%
estimated
Pre-Tax IRR

US\$65/lb U_3O_8 selling price
(see note 3, 5)

22.5% Denison-owned McClean Lake Mill Operation: Excess licensed capacity and CNSC approval in place for expansion of tailings facility



+11%
of global uranium production

Planned 2022 operating production of ~15M lbs U₃O₈ from Cigar Lake under tolling agreement, represents +11% of UxC's estimated global primary production for 2022⁽¹⁾

750km
north of Saskatoon⁽⁴⁾

Accessible by road over all-weather highways and by air via Points North

24M
lbs U₃O₈

Licensed annual production⁽⁴⁾

10-Year
CNSC Operating License⁽⁴⁾

Renewed in 2017 for operations up to June 30, 2027.

+50M
lbs U₃O₈

Historic uranium production from mined McClean Lake deposits (JEB + Sue A, B, C, & E)⁽⁴⁾

9M
lbs U₃O₈
Excess licensed capacity

if 15M lbs U₃O₈ produced under Cigar Lake tolling⁽²⁾

Orano
Canada Inc.

French nuclear giant serves as site operator and is owner of 77.5% interest

TMF
Expansion Approved⁽³⁾

CNSC approval obtained to increase tailings capacity

PHOTO:

Aerial view of Denison's 22.5% owned McClean Lake mill facility

LINKS:

[McClellan Lake Project Page on Denison Website](#)

NOTES:

(1) Per UxC's Q1'2022 Uranium Market Outlook.

(2) Denison monetized its share of tolling revenues from the Cigar Lake toll milling agreement. See Denison's news releases dated February 1, 2017 and February 13, 2017. Please also refer to Denison's current Annual Information Form and Financial Statements and Management, Discussion and Analysis for additional details related to the toll milling agreement.

(3) See Denison's news release dated January 19, 2022.

(4) See Denison's current Annual Information Form for additional details regarding the McClean Lake mill facility.

22.5% Denison-owned McClean Lake Property: SABRE mining method has potential to unlock value from unmined deposits close to mill



SABRE mining method

Successful 5-year test mining program for “Surface Access Borehole Resource Extraction” (SABRE) mining method

Mined four cavities of McClean North deposit in 2021 to produce ~1,500 tonnes of high-value ore ⁽¹⁾

Orano Canada Inc.

French nuclear giant serves as project operator and is owner of 77.5% interest

Patented

SABRE mining method is property of McClean Lake JV with patent issued in 2016

17.8M lbs U₃O₈
Indicated Mineral Resources⁽²⁾ (100% basis)

Combined 374,900 tonnes @ 2.22% U₃O₈ for the Caribou, Sue D and McClean North deposits

4,258
Hectares

4 mineral leases (1,147 hectares) plus 13 mineral claims (3,111 hectares)

To Evaluate

The use of the SABRE mining method for use on unmined McClean Lake deposits⁽¹⁾

7.6M lbs U₃O₈
Inferred Mineral Resources⁽²⁾ (100% basis)

Combined 510,900 tonnes @ 0.68% U₃O₈ for the Sue D, Sue E, and McClean North deposits

8.67% U₃O₈ over 13.5 metres

Recently discovered in drill hole MCS-34 at the McClean South target area⁽³⁾

PHOTO:

2021 SABRE test mining program in action, with view of specialized mining pipes in inset photo.

LINKS:

[McClellan Lake Project Page on Denison Website](#)

NOTES:

(1) See Denison’s news release dated November 3, 2021.

(2) See Denison’s current Annual Information Form for additional details regarding the McClellan Lake deposits and SABRE mining method.

(3) See Denison’s current Annual Information Form

25.17% Denison-owned Midwest Property:

Two high-grade uranium deposits in close proximity to the McClean Lake mill



Approved Environmental Impact Statement ("EIS")

Despite deferral of development decision in 2008, EIS approval efforts continued with assessment of open pit mining method and processing at McClean Lake.

CNSC approved final EIS in 2012⁽¹⁾

25km from McClean Lake mill

Via existing roads, and only 1km from the Points North airstrip

Deferred

2007 development decision for Midwest Main was deferred in 2008, due to regulatory approval timeline, and then decline in uranium market⁽¹⁾

Midwest Main deposit⁽²⁾

39.9M lbs U₃O₈
(453,000 tonnes @ 4.0% U₃O₈) in Indicated Mineral Resources

11.5M lbs U₃O₈
(793,000 tonnes @ 0.66% U₃O₈) in Inferred Mineral Resources
(100% basis)

Orano

Canada Inc.

French nuclear giant serves as project operator and is owner of 74.83% interest

Midwest "A" deposit⁽²⁾

10.8M lbs U₃O₈
(566,000 tonnes @ 0.87% U₃O₈) in Indicated Mineral Resources

6.7M lbs U₃O₈
(53,000 tonnes @ 5.8% U₃O₈) in Inferred Mineral Resources
(100% basis)

PHOTO:

Aerial view of Denison's 25.17% owned Midwest Project.

LINKS:

[Midwest Project Page on Denison Website](#)

NOTES:

(1) See Denison's current Annual Information Form for additional details regarding the Midwest project.

(2) Refer to the Midwest Technical Report titled "Technical Report with an Updated Mineral Resource Estimate for the Midwest Property, Northern Saskatchewan, Canada" and dated March 26, 2018.

Reserves & Resources as of December 31, 2021



Mineral Reserves (see Notes 1, 2, 3, 4, 14, 15)				100% Basis	Denison Share ⁽⁹⁾
Project/Deposit	Tonnes	Grade % U ₃ O ₈	Lbs U ₃ O ₈ (,000)	Lbs U ₃ O ₈ (,000)	
McClean - Ore Stockpile ⁽¹⁴⁾	90,000	0.37	726	163	
Total Proven Mineral Reserves	90,000		726	163	
Wheeler River - Phoenix	141,000	19.1	59,700	56,700	
Wheeler River - Gryphon	1,257,000	1.8	49,700	47,200	
Total Probable Reserves	1,398,000		109,400	103,900	

Indicated Mineral Resources (see Notes 1, 5, 15)				100% Basis	Denison Share ⁽⁹⁾
Project/Deposit	Tonnes	Grade % U ₃ O ₈	Lbs U ₃ O ₈ (,000)	Lbs U ₃ O ₈ (,000)	
Wheeler River - Phoenix ⁽⁷⁾	166,000	19.1	70,200	66,700	
Wheeler River - Gryphon ⁽⁷⁾	1,643,000	1.7	61,900	58,800	
McClean - Caribou	47,800	2.6	2,800	600	
McClean - Sue D	122,800	1.1	2,800	600	
McClean - McClean North	204,300	2.8	12,200	2,700	
Midwest - Midwest Main	453,000	4.0	39,900	10,100	
Midwest - Midwest A	566,000	0.87	10,800	2,700	
Waterbury - THT	291,000	2.0	12,800	8,600	
Total Indicated Resources	3,493,900		213,400	150,800	

Inferred Mineral Resources (see Notes 1, 6, 15)				100% Basis	Denison Share ⁽⁹⁾
Project/Deposit	Tonnes	Grade % U ₃ O ₈	Lbs U ₃ O ₈ (,000)	Lbs U ₃ O ₈ (,000)	
Wheeler River - Phoenix ⁽⁷⁾	9,000	5.8	1,100	1,000	
Wheeler River - Gryphon ⁽⁷⁾	73,000	1.2	1,900	1,800	
McClean - Caribou	24,200	0.39	200	0	
McClean - Sue D	483,400	0.69	7,300	1,600	
McClean - McClean North	3,300	0.79	100	0	
Midwest - Midwest Main	793,000	0.66	11,500	2,900	
Midwest - Midwest A	53,000	5.8	6,700	1,700	
Waterbury - Huskie	268,000	0.96	5,700	3,800	
Total Inferred Resources	1,706,900		34,500	12,800	

Historic Mineral Resources (see Notes 15, 16)				100% Basis	Denison Share ⁽⁹⁾
Project/Deposit	Tonnes	Grade % U ₃ O ₈	Lbs U ₃ O ₈ (,000)	Lbs U ₃ O ₈ (,000)	
Millennium - Indicated ⁽¹¹⁾	1,442,600	2.39	75,900	11,400	
Kiggavik - Indicated ⁽¹²⁾	10,418,000	0.47	127,300	21,500	
Tot. Historic Indicated Resources	11,860,600		203,200	32,900	
Millennium - Inferred ⁽¹¹⁾	412,400	3.19	29,000	4,400	
Kiggavik - Inferred ⁽¹²⁾	731,000	0.28	5,400	900	
Christie Lake - Inferred ⁽¹³⁾	588,000	1.57	20,400	3,500	
Tot. Historic Inferred Resources	1,706,900		54,800	8,800	

(7) Indicated mineral resources for Phoenix and Gryphon deposits are inclusive of probable mineral reserves; (8) The operator conducted confirmatory drilling on a portion of the Sue E mineral resources outside the designated pit and late in 2006 submitted a preliminary analysis detailing an inferred mineral resource of approximately 2 million pounds on a 100% basis in this area, as compared to the 7.3 million pounds that Scott Wilson Roscoe Postle Associates Inc. ("Scott Wilson RPA", succeeded by Roscoe Postle Associates Inc. ("RPA") and then acquired by SLR Consulting Limited, "SLR"), estimated in its February 2006 technical report. The mineral resource has not been re-estimated using the new drill information.; (9) As at December 31, 2021, pursuant to the terms of the agreements with its applicable joint venture partners and subsequent to its acquisition of JCU in August 2021, the Company had an effective 95.00% interest in the Wheeler River project, a 22.50% interest in the McClean Lake property; a 25.17% interest in the Midwest project; and a 66.90% interest in the Waterbury Lake property.; (10) Denison's share has been calculated as 50% of the product of JCU's percentage interest in the applicable project multiplied by the estimated mineral resources on a 100% basis.; (11) Millennium mineral resources as reported by Cameco as of December 31, 2021 on their website at <https://www.cameco.com/businesses/uranium-projects/millennium/reserves-resources>. Cut-off grades and other assumptions, parameters and methods used to estimate resources are unknown.; (12) Kiggavik mineral resources as reported by Orano in their 2020 Activities Report available on their website at https://www.orano.group/docs/default-source/orano-doc/groupe/publications-reference/publication-groupe/orano_annual-activity-report_2020_online.pdf?sfvrsn=b8263a0d_27 and converted from tonnes U to pounds U₃O₈ and from %U to %U₃O₈. Cut-off grades and other assumptions, parameters and methods used to estimate resources are unknown.; (13) Christie Lake mineral resources, and relevant assumptions, parameters and methods used for estimating, are documented in the "Technical Report on the Christie Lake Uranium Project, Saskatchewan, Canada" with an effective date of December 13, 2018, which is available under UEX's profile on SEDAR at www.sedar.com, filed on February 1, 2019. Inferred resources attributable to JCU have been modified from the values stated in such Technical Report to reflect a decrease in JCU's ownership of the Christie Lake Project from 40% to 34.4508% effective January 1, 2021. The Christie Lake mineral resources were estimated at a cut off grade of 0.2% U₃O₈.; (14) The summary information on Denison's proven mineral reserve estimates was prepared from the year-end stockpile survey reported by Orano Canada, the MLJV operator.; (15) Numbers may not add due to rounding.; (16) A qualified person has not done sufficient work to verify and classify these historical estimates as current mineral resources for the Company or confirm their reporting of resources is in accordance with NI 43-101 categories. See AIF for details.

SOURCE:

Denison's Annual Information Form dated March 25, 2022.

NOTES:

(1) CIM definitions were followed for classification of mineral reserves and mineral resources. Mineral resources are not mineral reserves and do not have demonstrated economic viability.;

(2) Mineral reserves for the Phoenix deposit are reported at the mineral resource cut-off grade of 0.8% U₃O₈. The mineral reserves are based on the block model generated for the May 28, 2014 mineral resource estimate. A mining recovery factor of 85% has been applied to the mineral resource above the cut-off grade.;

(3) Mineral reserves for the Gryphon deposit are estimated at a cut-off grade of 0.58% U₃O₈ using a long-term uranium price of US\$40/lb, and a US\$/CAD\$ exchange rate of 0.80. The mineral reserves are based on the block model generated for the January 30, 2018 mineral resource estimate. The cut-off grade is based on an operating cost of \$574/tonne, milling recovery of 97%, and a 7.25% fee for Saskatchewan royalties (basic royalty plus resource surcharge).;

(4) Mineral reserves are stated at a processing plant feed reference point and include diluting material and mining losses.;

(5) See AIF for details of the various cut-off grades used for indicated mineral resources.;

(6) See AIF for details of the cut-off grades used for the inferred mineral resources.;

Notes continued below tables.

Capital Structure & Corporate Information

Market Summary ⁽¹⁾

Exchanges	TSX: DML NYSE American: DNN
Shares Outstanding	817.8 M
Share Purchase Warrants (US\$2/US\$2.25)	15.8M / 39.2M
Share Units	8.4 M
Options	9.7 M
Fully Diluted Shares	890.9 M
Market Cap – DML @ C\$1.27/share ⁽²⁾	CAD \$1.0 B
Daily Trading Volume (TSX) ⁽³⁾	3.1M Shares
Market Cap – DNN @ US\$0.973/share ⁽²⁾	USD \$0.8 B
Daily Trading Volume (NYSE American) ⁽³⁾	9.4M Shares

Management & Directors

David Cates (President & CEO, Director)

Mac McDonald (Exec. VP & CFO)

David Bronkhorst (VP Operations)

Kevin Himbeault (VP Plant Ops. & Reg. Affairs)

Elizabeth Sidle (VP Finance)

Amanda Willett (VP Legal)

Ron F. Hochstein (Non-Executive Chair)

Brian D. Edgar (Director)

Yun Chang Jeong (Director)

David Neuburger (Director)

Laurie Sterritt (Director)

Jennifer Traub (Director)

Patricia M. Volker (Director)

LINKS:

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www.denisonmines.com

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info@denisonmines.com

NOTES:

(1) Share capital information as of May 4, 2022 (Q1'2022 MDA) .

(2) Based on shares outstanding above and DML/DNN share prices as the end of June 2022.

(3) Average daily trading volume over previous 3 months as of the end of June 2022.