

Corporate Update
September 2023

Powering
**PEOPLE, PARTNERSHIPS
AND PASSION.**

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

DML
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TSX

DNN
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NYSE
AMERICAN

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 third-party information, such as the uranium market, other issuers, provincial and federal infrastructure and regulations, etc., 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 2023 Phoenix feasibility study ("Phoenix FS"), the 2023 Gryphon PFS Update ("Gryphon PFS Update") 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 proposed 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 the Annual Information Form dated March 27, 2023 available under its profile at www.sedar.com and Annual Report on 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, and the results of the Phoenix FS, Gryphon PFS Update and Waterbury PEA, was reviewed and approved by Chad Sorba, P.Geol., Denison's Director Technical Services, and Andy Yackulic, P.Geol., Denison's Director Exploration, each of whom is a Qualified Person in accordance with the requirements of NI 43-101.

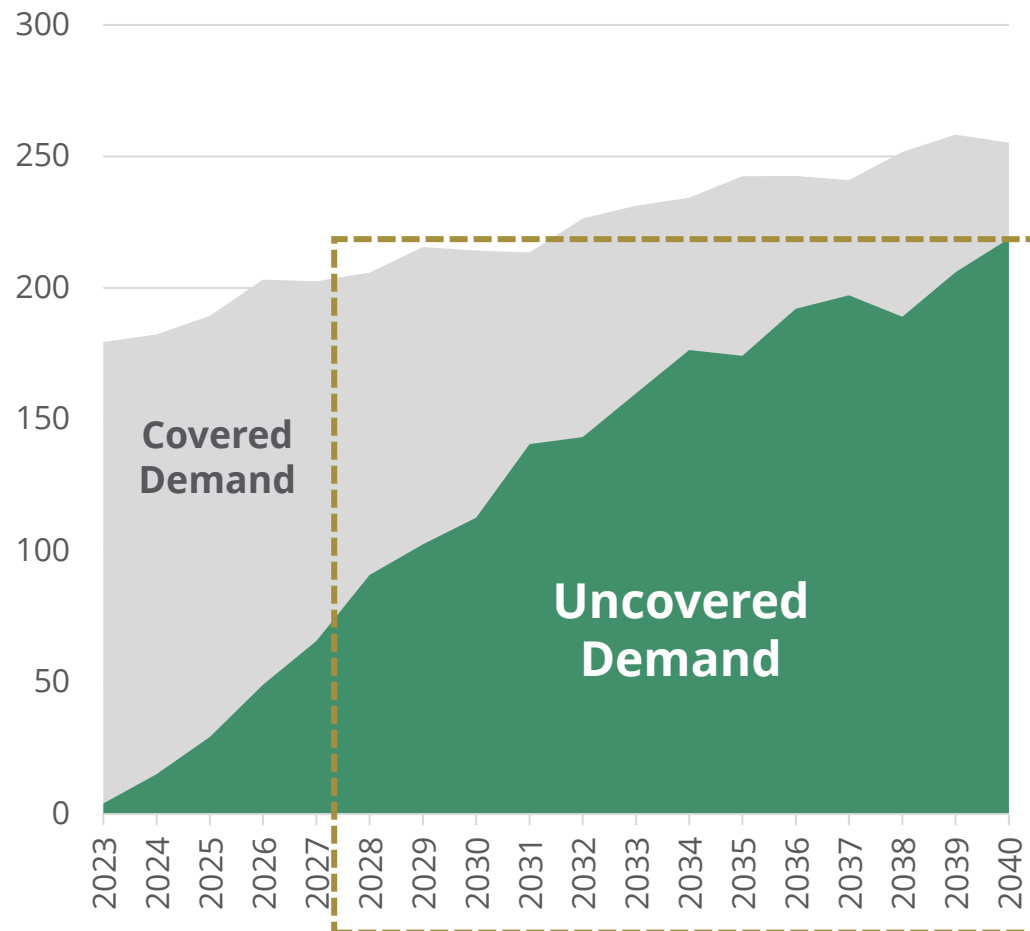
Technical Reports

- For further details regarding the **Wheeler River project**, please refer to the Company's press release dated June 26, 2023 announcing the results of the Phoenix FS and Gryphon PFS Update and the technical report titled "*NI 43-101 Technical Report on the Wheeler River Project, Athabasca Basin, Saskatchewan, Canada*" with an effective date of June 23, 2023 ("Wheeler River Technical Report").
- 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.** The PEA includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment 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 27, 2023. 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: Rapid re-alignment of scarce supplies in the face of growing demand

Annual Utility Uranium Requirements ⁽¹⁾
(million pounds U₃O₈ - per UxC Q1'23)



Key Market Themes:

1. Projected demand for uranium exceeds current supply forecast.⁽²⁾ Many sources of additional near-term supply require higher prices to justify new mine development.⁽³⁾
2. Geopolitical concerns continue to drive nuclear fuel contracting as buyers look to reduce or eliminate Russian exposure.⁽⁴⁾
3. Positive demand outlook for existing reactor fleet, with major government efforts in USA, Japan, and South Korea to preserve several operating reactors and build additional ones.
4. Small modular reactors (SMRs) move closer to deployment, with uranium demand impact potentially beginning in the late 2020s.⁽⁵⁾
5. Supply chain challenges are causing delays and production challenges in the short term at operating mines and brownfield restarts.⁽⁶⁾

NOTES:

(1) Data in this slide has been derived from UxC's Uranium Market Outlook dated Q1'2023, including UxC's estimates of uncovered requirements and the URM "Base Demand No Inventory Build" requirements forecast to estimate covered demand.

(2) See Ux Weekly 36-42.

(3) See TradeTech's *Nuclear Market Review*, 11/30/22, "In Focus - TradeTech's Production Cost Indicator."

(4) See Ux Weekly 36-13, 36-16, and 36-47.

(5) OPG currently projects completion of SMR at Darlington by 2028 ([LINK](#)).

(6) See Ux Weekly 37-12.

Diversified Athabasca Basin asset base with superior development leverage

95%⁽¹⁾
effective interest in Flagship Wheeler River project

Development-stage project
 Largest undeveloped uranium project in the infrastructure rich eastern Athabasca Basin
 2023 Phoenix Feasibility Study⁽²⁾
 Draft Environmental Impact Statement (“EIS”) submitted⁽⁶⁾

22.5%
interest in Strategic McClean Lake Uranium Mill

Strategic regional asset
 +11% of global uranium production
 Excess licensed annual capacity
 Licenced for expansion of tailings management facility (“TMF”) ⁽³⁾

67.41%
interest in Emerging Waterbury Lake project

PEA stage development project⁽⁴⁾
 Tthe Heldeth Túé (“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⁽⁵⁾

~285,000
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) See the Wheeler River Technical Report titled "NI 43-101 Technical Report on the Wheeler River Project, Athabasca Basin, Saskatchewan, Canada" dated June 23, 2023.

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

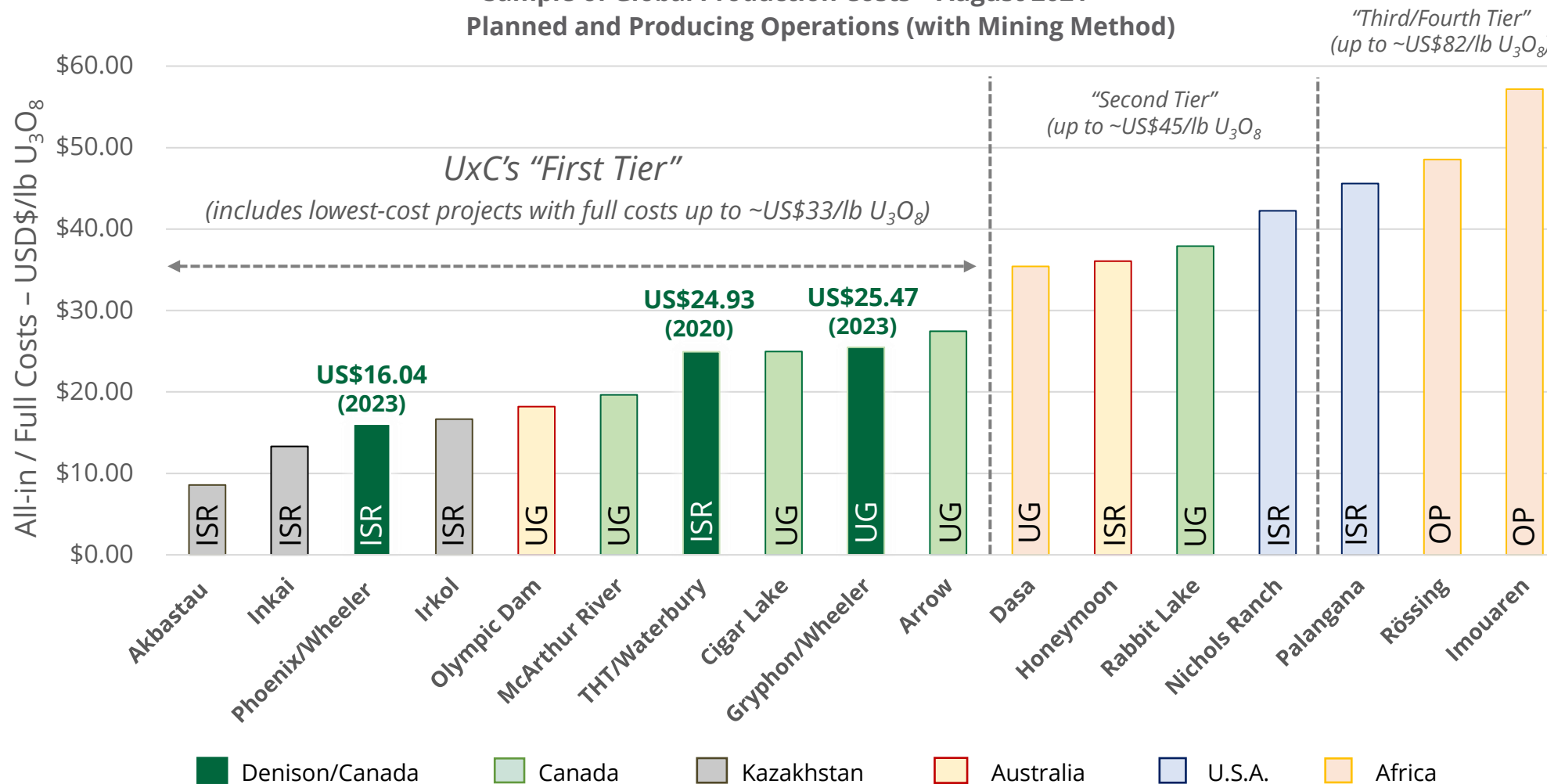
(4) Refer to the Waterbury Lake Technical Report titled "Preliminary Economic Assessment for the Tthe Heldeth Túé (J Zone) Deposit, Waterbury Lake Property, Northern Saskatchewan, Canada" dated October 30, 2020.

(5) See news release dated August. 3, 2021.

(6) See news release dated October 26, 2022.

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

Sample of Global Production Costs – August 2021 ⁽¹⁾⁽²⁾⁽³⁾
Planned and Producing Operations (with Mining Method)



NOTES:

(1) Chart data, including "full 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, see the Wheeler River Technical Report titled "NI 43-101 Technical Report on the Wheeler River Project, Athabasca Basin, Saskatchewan, Canada" dated June 23, 2023.

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

Robust Balance Sheet with +CAD\$237M in working capital and investments⁽¹⁾

2.5M lbs U₃O₈
in holdings of
physical uranium

Market value ~**CAD\$185M** (US\$56.00/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\$8.5M
investments in
uranium equities

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

At-The-Market (ATM)⁽³⁾ facility
in place to provide opportunistic and low-cost access
to capital through base-shelf prospectus.

8.5M common shares issued in 2023 at an average
price of **CAD\$1.85** per share⁽⁴⁾

~CAD\$46.5M in cash and cash equivalents at June 30, 2023

PHOTO:

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

NOTES:

(1) As of June 30, 2023, for
additional details see
financial statements and
MD&A for the period
ended June 30, 2023;
excludes investment in
joint venture (JCU).

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

(3) See Denison's news
release dated September
28, 2021.

(4) As of June 30, 2023, for
additional details see
financial statements and
MD&A for the period
ended June 30, 2023.

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

Fundamental considerations driving Denison's operations



Comprehensive ESG Reporting

Designed to address GRI, SASB, TCFD and other global disclosure frameworks

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

Zero lost time injuries across all operations and no significant environmental events for 2022⁽⁸⁾

Top 125 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**^(6, 7)

Authentic Social Programs

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

Multiple Indigenous Agreements In Place

Participation/Funding and/or Exploration Agreements with:

- English River First Nation⁽²⁾
- Kineepik Métis Local / Pinehouse⁽³⁾
- Ya'thi Néné Lands & Resources Office⁽⁴⁾
- Métis Nation – Saskatchewan⁽⁵⁾

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 ESG Report](#)

NOTES:

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

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

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

(4) See news release dated October 20, 2022.

(5) See MD&A for the period ended Dec. 31, 2022

(6) For more information: <https://www.theglobeandmail.com/business/careers/management/board-games/article-the-globe-and-mails-comprehensive-ranking-of-canadas-corporate-boards-2/>

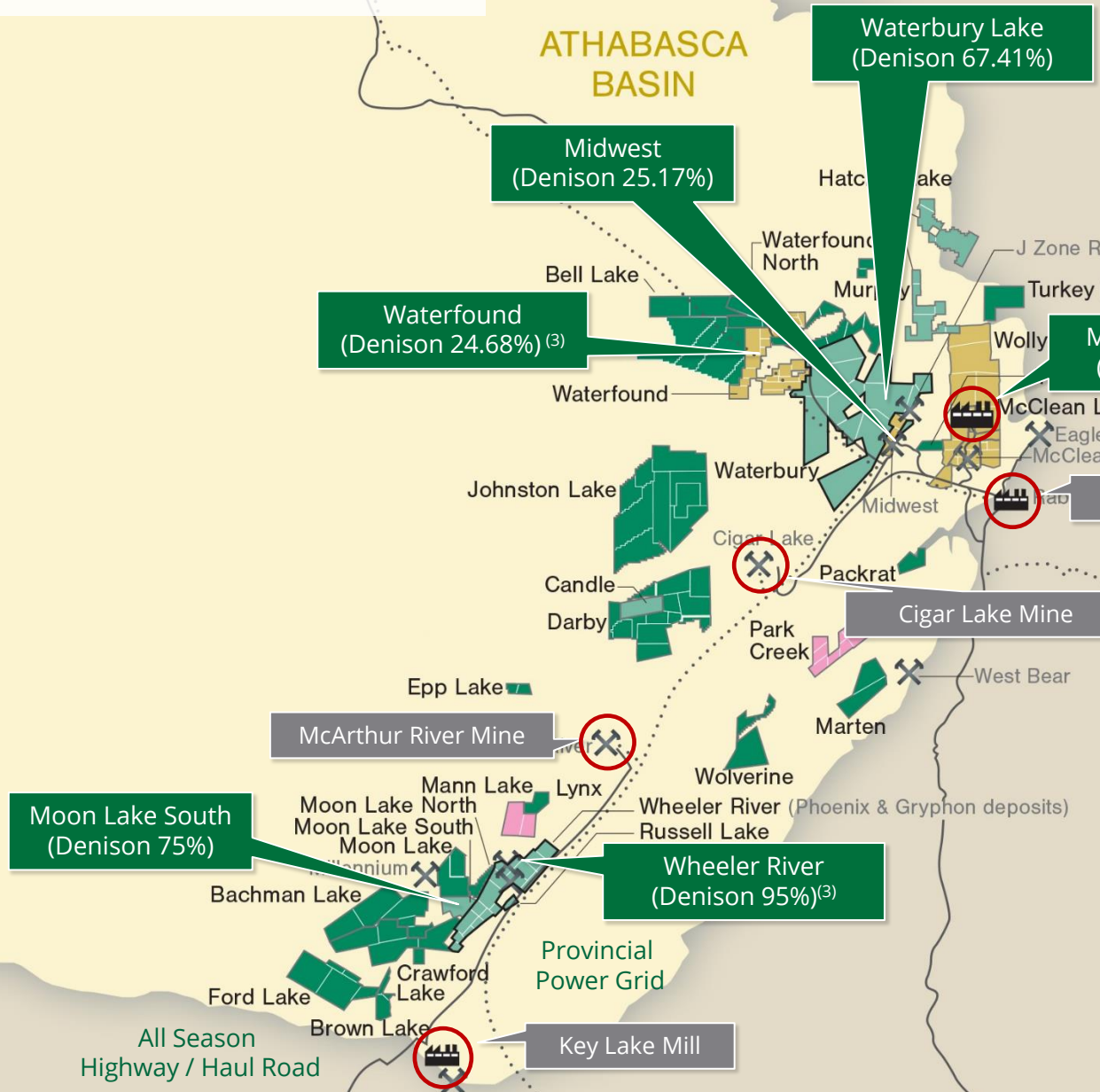
(7) See Denison's news release dated March 15, 2021.

(8) See Denison's 2022 Annual Information Form for additional details.

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



- 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 June 30, 2023.
- (2) Excludes interests held only through 50% ownership of JCU – See Denison news release dated August 3, 2021.
- (3) Reflects Denison's effective interest, including a portion attributable to Denison's 50% ownership in JCU (Canada) Exploration Company, Limited. See Denison's news release dated August 3, 2021.

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

Two

Low-cost development assets

Phoenix – designed as a low-cost In-Situ Recovery (“ISR”) operation with on-site processing to finished yellow cake (U₃O₈)

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

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

~16.5 years

Aggregate operating Mine life⁽³⁾

106.4M lbs U₃O₈

combined Proven & Probable Reserves (100% basis)

CAD\$419M

Estimated (100% basis) Initial CAPEX (Phoenix)

2023 Costing

in NI 43-101 compliant Phoenix Feasibility Study and Gryphon PFS Update reflect current post-inflation costing environment

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 Page on Denison Website](#)

NOTES:

(1) Refer to the Wheeler River Technical Report titled “NI 43-101 Technical Report on the Wheeler River Project, Athabasca Basin, Saskatchewan, Canada” dated June 23, 2023.

(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.

(3) Reflects 10-year mine life estimated for Phoenix and 6.5-year mine life estimated for Gryphon.

Phoenix In-Situ Recovery ("ISR") Feasibility Study (2023):

Reflects rigour of multi-year technical de-risking and delivers impressive economic results⁽¹⁾



PHOTOS:

Phoenix Feasibility Field Test (FFT) facilities during operations in 2022.

NOTES:

(1) See the Wheeler River Technical Report titled "NI 43-101 Technical Report on the Wheeler River Project, Athabasca Basin, Saskatchewan, Canada" dated June 23, 2023.

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

(3) NPV and IRR are calculated to the start of construction activities for the Phoenix operation, and excludes \$67.4 million in pre-FID expenditures.

(4) Post-tax NPV, IRR and payback period are based on the "adjusted Post-tax" scenario, which includes the benefit of entity level tax attributes which are expected to be available and used to reduce taxable income from the Phoenix operation. See Wheeler River Technical Report for details.



70.5M

lbs U₃O₈

@

11.4%

U₃O₈

Measured & Indicated Mineral Resources (280,200 tonnes, 100% basis)

One of the highest-grade undeveloped uranium deposits globally

Including...

56.3M

lbs U₃O₈

@ **46.0% U₃O₈**

M&I mineral resources for **Zone A high-grade domain**

c\$1.56B

estimated

Base-case post-tax NPV_{8%} (100% basis)

(see note 3, 4)

90.0%

estimated

Base-case post-tax IRR

(see note 3, 4)

us\$6.28

/ lbs U₃O₈

average

Cash Operating Costs

(C\$8.51/lb U₃O₈)

c\$419M

estimated

Initial CAPEX (100% basis)

3.7 to 1

impressive

Base-case post-tax NPV to initial capital cost ratio

us\$16.04

/ lbs U₃O₈

average

All-in Cost⁽²⁾

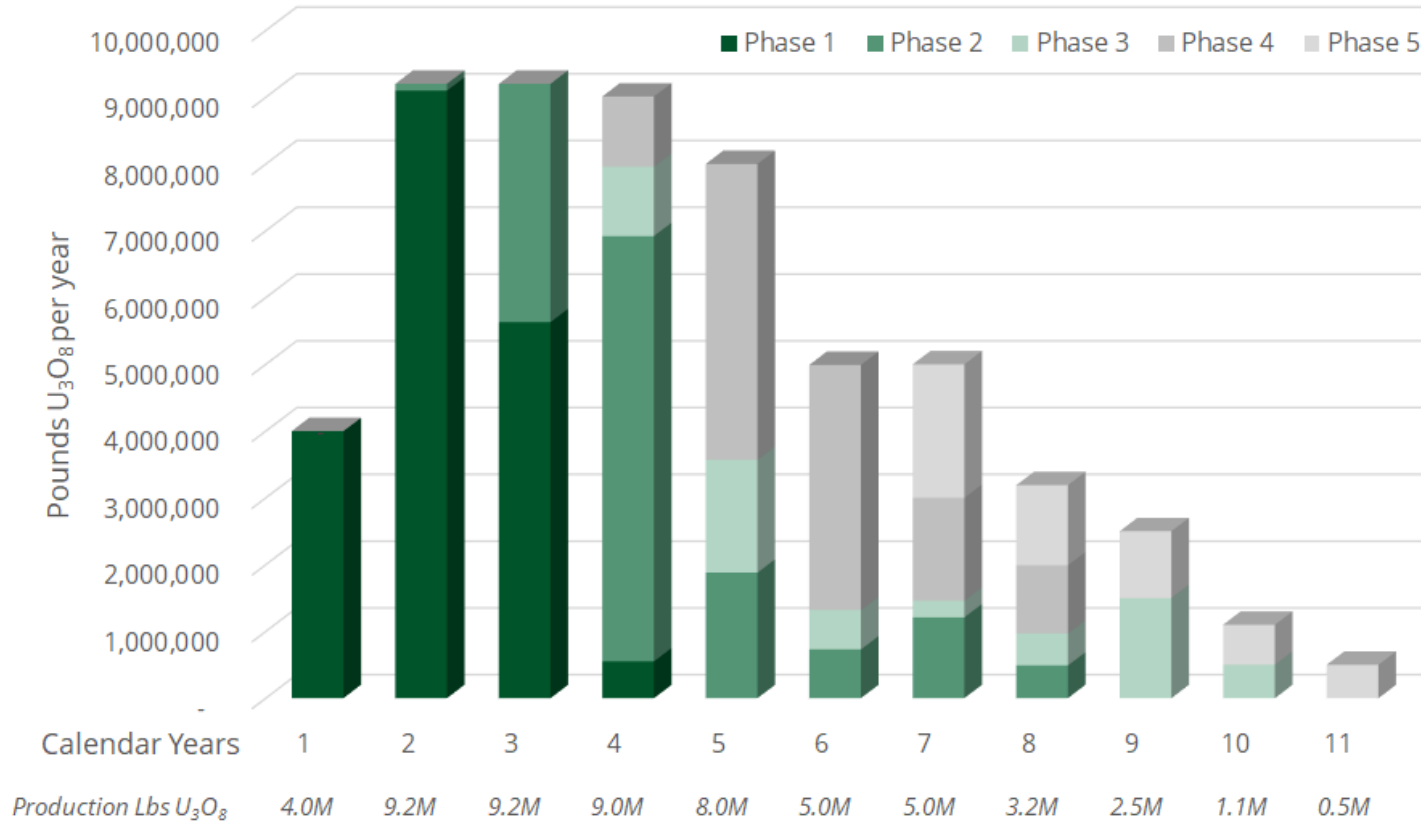
(C\$21.73/lb U₃O₈)

Phoenix ISR Feasibility Study (2023)⁽¹⁾:

Optimized production profile based on detailed ISR mine planning efforts



Phoenix mine production per year by phase



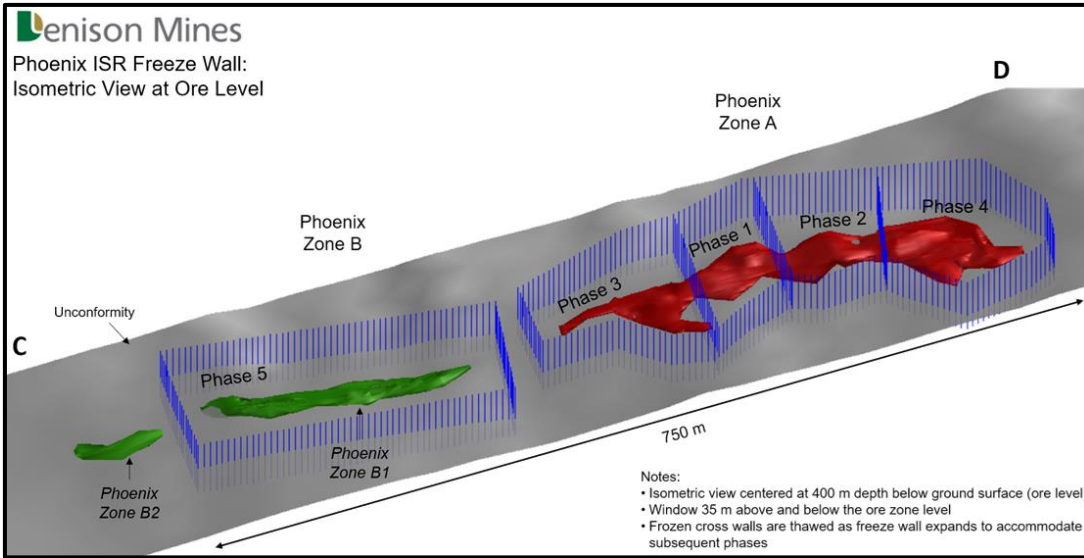
NOTES: (1) Refer to the Wheeler River Technical Report titled "NI 43-101 Technical Report on the Wheeler River Project, Athabasca Basin, Saskatchewan, Canada" dated June 23, 2023; (2) NPV and IRR are calculated to the start of construction activities for the Phoenix operation, and excludes \$67.4 million in pre-FID expenditures; (3) Payback period is stated as number of months to payback from the start of uranium production; (4) Post-tax NPV is estimated to be \$1.43 billion (\$1.56 billion adjusted) in the base-case and \$1.26 billion (\$1.38 billion adjusted) in the PFS Reference Case; (5) Post-tax payback period is estimated to be 11 months (10 months adjusted) in the Base-Case and 12 months (11 months adjusted) in the PFS Reference Case; (6) Post-tax IRR is estimated to be 82.3% (90.0% adjusted) in the Base-Case and 76.4% (83.9% adjusted) in the PFS Reference Case.

Robust economics easily absorb cost-inflation + design changes

~10-month payback period for pre- and post-tax base-case scenarios

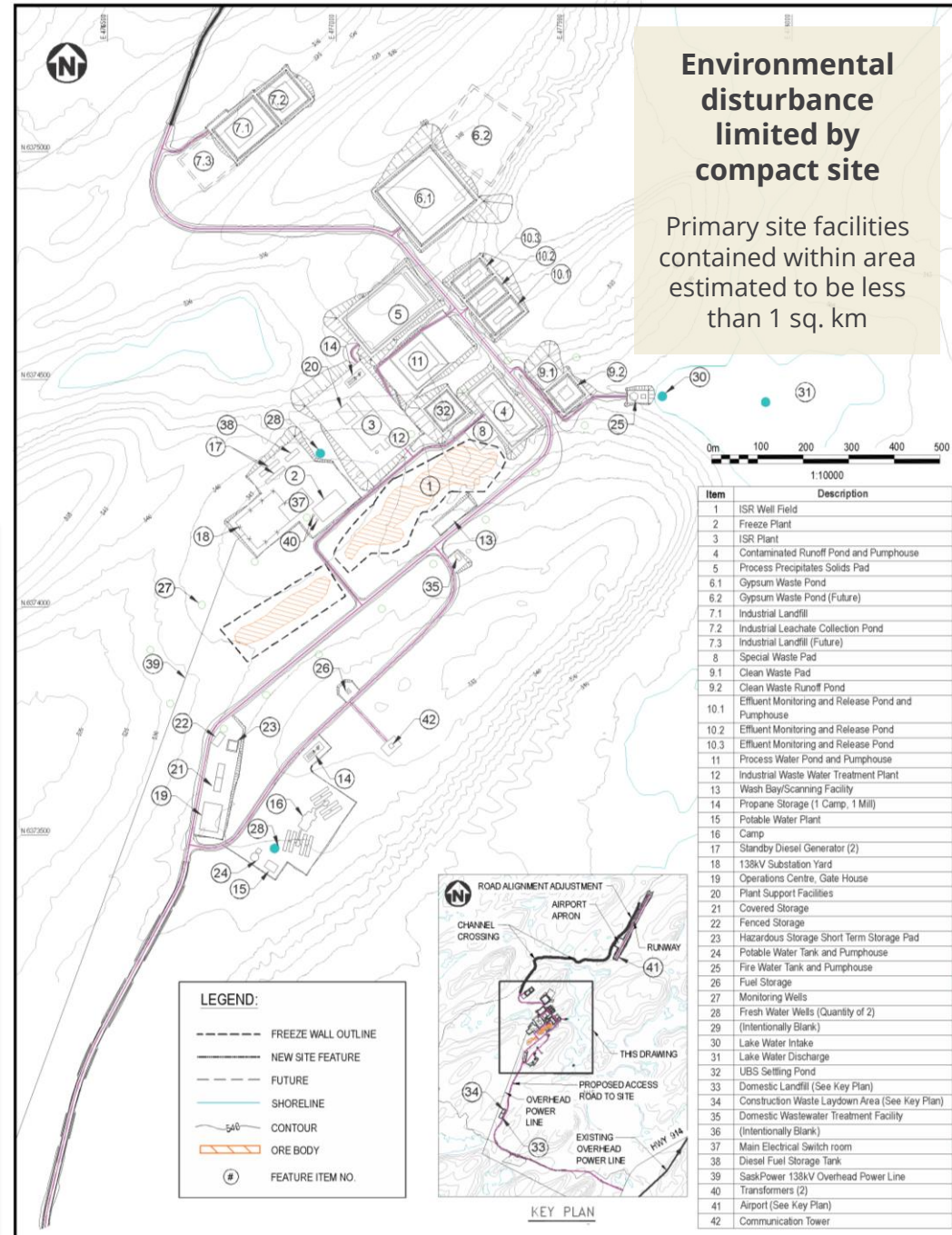
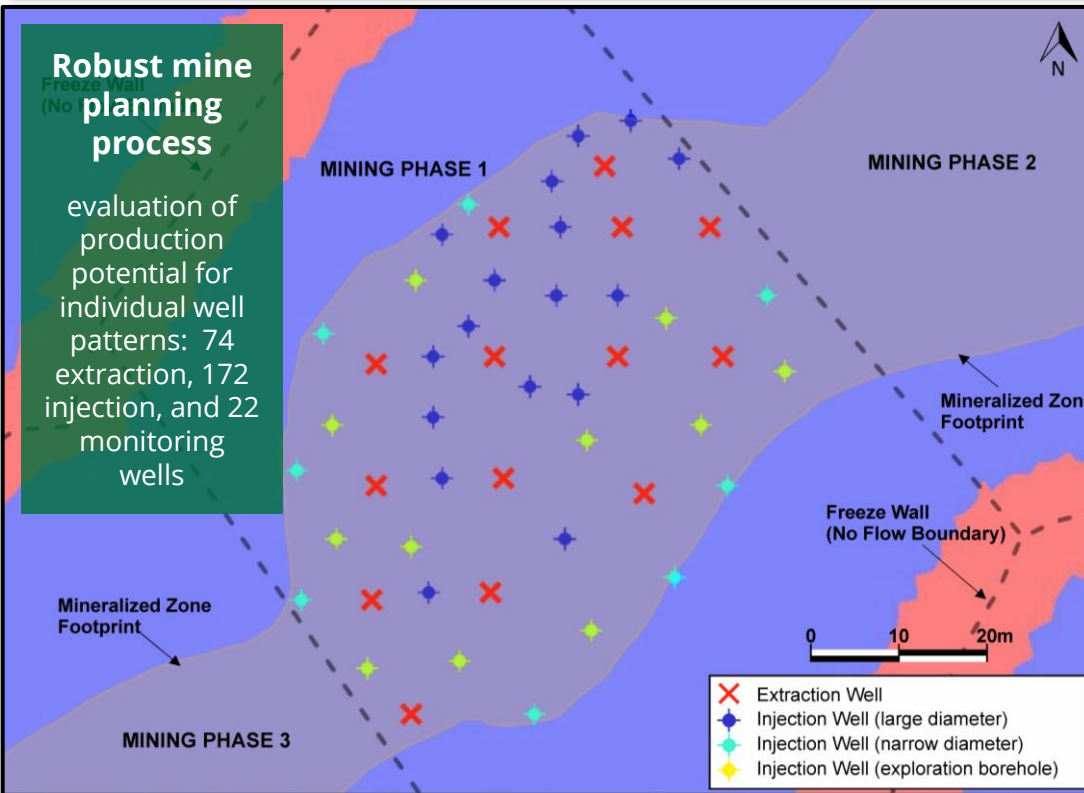
56.7 million lbs U₃O₈ in proven and probable reserves (219,000 tonnes at 11.7% U₃O₈)

Assumptions / Results ⁽¹⁾	Base Case	PFS Ref.
Selling price / lb U ₃ O ₈	US\$66-US\$70	US\$65
USD:CAD FX Rate	1.35	1.3
Pre-tax NPV _{8%} ⁽²⁾⁽⁴⁾ (100%)	\$2.34 billion	\$2.05 billion
Change from 2018 PFS	+150%	+5%
Pre-tax payback period ⁽³⁾⁽⁵⁾	~10 months	~10 months
Pre-tax IRR ⁽²⁾⁽⁶⁾	105.9%	98.4%



Robust mine planning process

evaluation of production potential for individual well patterns: 74 extraction, 172 injection, and 22 monitoring wells



Phoenix Feasibility Study:

Expected to provide an excellent basis to advance engineering designs in support of a future final investment decision

NOTES:

(1) Refer to the Wheeler River Technical Report titled "NI 43-101 Technical Report on the Wheeler River Project, Athabasca Basin, Saskatchewan, Canada" dated June 23, 2023.

Phoenix ISR De-Risking:

Combining the world's lowest cost uranium mining method with one of the world's highest-grade undeveloped uranium deposits

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

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⁽²⁾

+97% recovery achieved during long-term test⁽⁵⁾

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's 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.

(5) See Denison's news release dated December 8, 2022.

Fully Permitted In-Situ Recovery Feasibility Field Test (FFT): Multiple catalysts from first-of-its-kind test in the Athabasca Basin^(1, 2)



PHOTO:

Inside FFT coverall structure during commissioning – including view of commercial scale test wells, monitoring wells, and injection solution preparation module (left) and plan map of Phoenix FFT site (right).

NOTES:

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

(2) See Denison’s news release dated August 8, 2022.

(3) See Denison’s news release dated October 17, 2022.

(4) See Denison’s news release dated December 12, 2022.

The Phoenix FFT was designed to validate and inform various Feasibility Study (FS) elements for use of **In-Situ Recovery (ISR)** mining, including production and remediation profiles, and is planned to occur in three phases. The first two phases completed in **2022** to support FS:

Leaching

Completed ✓
successful injection of acidic solution and recovery of uranium bearing solution using a portion of the test pattern installed at Phoenix in 2021⁽³⁾.

Neutralization

Completed ✓
successful injection of mild alkaline solution to reverse the leaching process and return test area to protective conditions⁽⁴⁾.

Recovered Solution Management (2023)

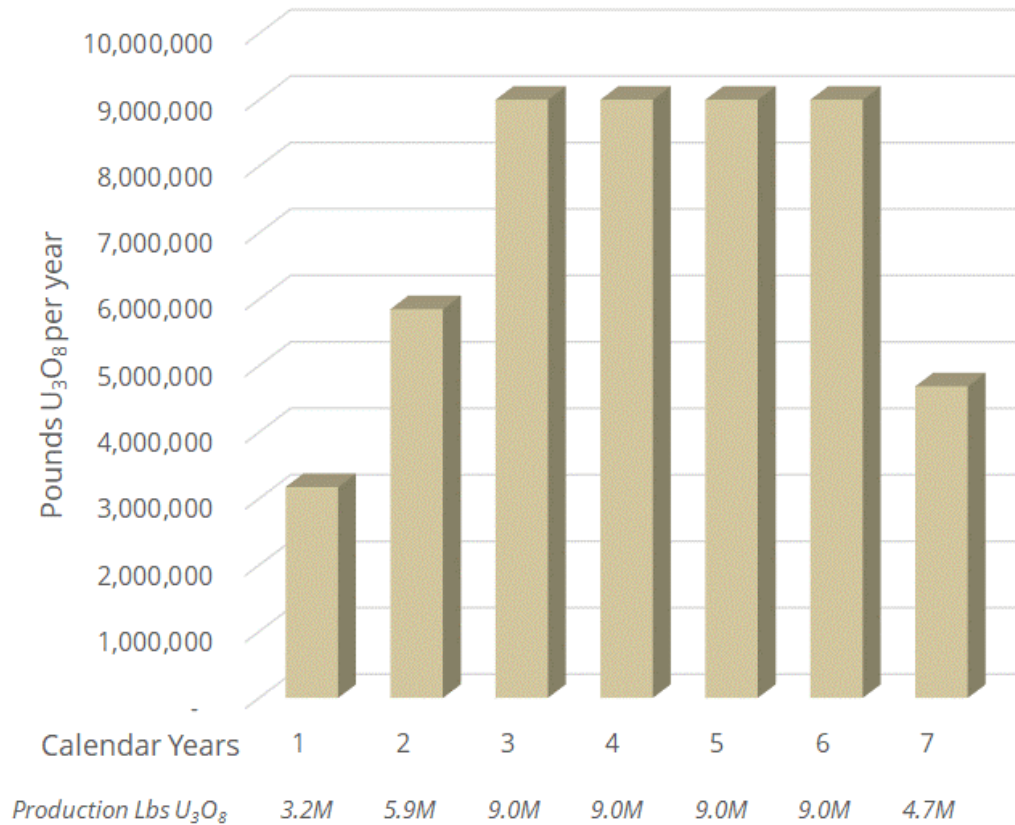
Compliance phase to separate recovered solution into mineralized precipitates (temporarily stored in tanks on surface) and neutralized treated solution (re-injected into sub-surface).

Gryphon UG Pre-Feasibility Study Update (2023)⁽¹⁾:

Capital and operating costs updated from 2018 PFS + minor scheduling optimizations



Gryphon mine production per year



NOTES: (1) Refer to the Wheeler River Technical Report titled "NI 43-101 Technical Report on the Wheeler River Project, Athabasca Basin, Saskatchewan, Canada" dated June 23, 2023; (2) NPV and IRR are calculated to the start of construction activities for the Gryphon operation, and excludes \$56.5 million in pre-FID expenditures; (3) Payback period is stated as number of months to payback from the start of uranium production; (4) Post-tax NPV is estimated to be \$864.2 million in the base-case and \$599.9 million in the PFS Reference Case; (5) Post-tax payback period is estimated to be 23 months in the Base-Case and 26 months in the PFS Reference Case; (6) Post-tax IRR is estimated to be 37.6% in the Base-Case and 30.6% in the PFS Reference Case.

Benefits from existing or planned Denison-owned infrastructure

Payback period under 2-years

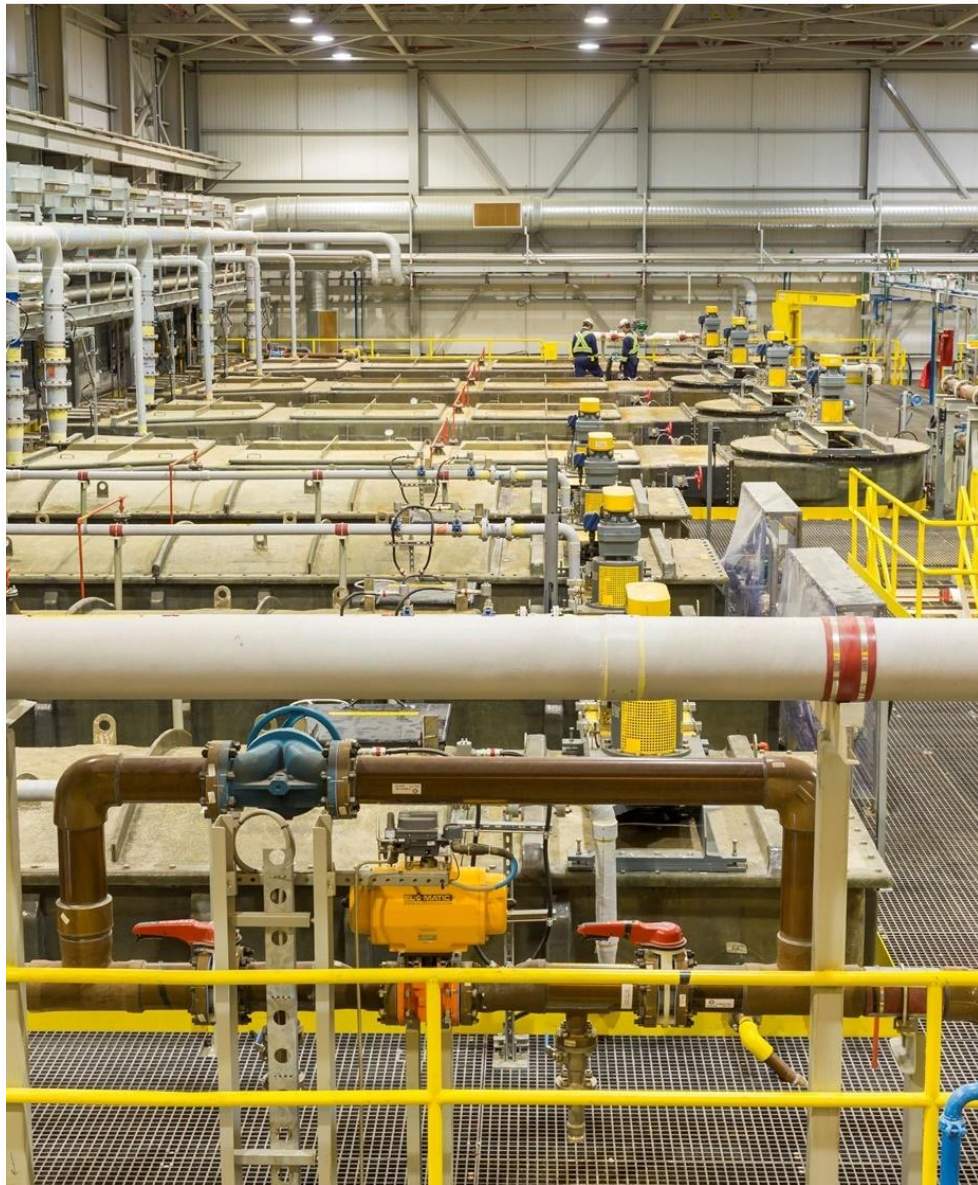
for pre- and post-tax base-case scenarios

49.7 million lbs U₃O₈ in probable reserves (1,275,000 tonnes at 1.8% U₃O₈)

Assumptions / Results ⁽¹⁾	Base Case	PFS Ref.
Selling price / lb U ₃ O ₈	US\$75	US\$65
USD:CAD FX Rate	1.35	1.3
Pre-tax NPV _{8%} ⁽²⁾⁽⁴⁾ (100%)	\$1.43 billion	\$1.00 billion
Change from 2018 PFS	+148%	-5%
Pre-tax payback period ⁽³⁾⁽⁵⁾	~20 months	~24 months
Pre-tax IRR ⁽²⁾⁽⁶⁾	41.4%	34.0%

Gryphon Underground ("UG") Pre-Feasibility Study Update (2023):

Provides Denison with additional source of low-cost production to deploy Phoenix cash flows⁽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)

c\$864M

estimated
Base-case after-tax NPV_{8%}
(100% basis)
(see note 3, 4)

37.6%

estimated
Base-case after-tax IRR
(see note 3, 4)

us\$12.75

/ lbs U₃O₈
average
Cash Operating Costs
(C\$17.27/lb U₃O₈)

c\$737M

estimated
Initial CAPEX
(100% basis)

2023 PFS Update

Scope limited to cost update and minor schedule optimization

us\$25.47

/ lbs U₃O₈
average
All-in Cost⁽²⁾
(C\$34.50/lb U₃O₈)

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) See the Wheeler River Technical Report titled "NI 43-101 Technical Report on the Wheeler River Project, Athabasca Basin, Saskatchewan, Canada" dated June 23, 2023.

(2) All-in cost is estimated on a pre-tax basis and includes all project operating costs, capital costs post-FID, and decommissioning costs divided by the estimated number of 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.

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.

67.41% owned Waterbury Lake project demonstrates potential for ISR to transform portfolio projects⁽¹⁾

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

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)

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

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

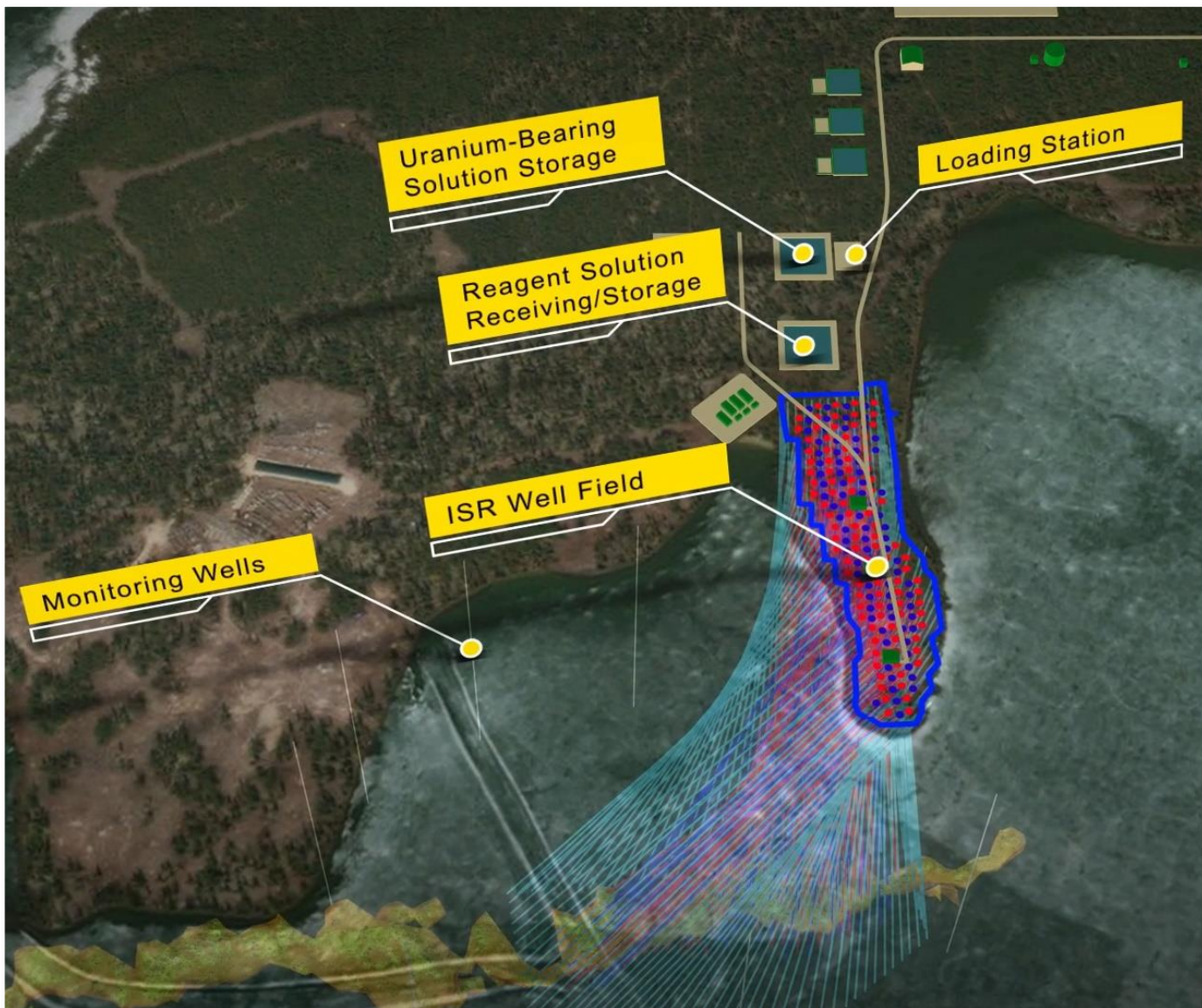
Partnership
with consortium led by state-owned nuclear company Korea Hydro Nuclear Power ("KHNP")

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

Tthe Heldeth Túé (“THT”) ISR Operation:

PEA (2020) shows potential for ISR to change 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 U₃O₈ 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 U₃O₈
Average annual production over 6 years (100% basis)

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

us\$12.23
/ lbs U₃O₈
average Cash Operating Costs

us\$24.93
/ lbs U₃O₈
average All-in Cost⁽²⁾

(C\$16.27/lb U₃O₈)

(C\$33.16/lb U₃O₈)

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

50.0%
estimated
Pre-Tax IRR

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

US\$65/lb U₃O₈ 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



+14%
of global uranium production

2022 operating production of ~18M lbs U₃O₈ from Cigar Lake under tolling agreement, represents ~14% 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⁾

6M
lbs U₃O₈
Excess licensed capacity

if 18M 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 Q1'2023 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

Discovered “new” mineralization at McClean South⁽³⁾ in 2021 + expanded footprint in 2022⁽⁴⁾

PHOTO:

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

LINKS:

[McClean 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 McClean Lake deposits and SABRE mining method.

(3) See Denison’s current Annual Information Form.

(4) See Denison’s news release dated September 8, 2022.

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

ISR Concept Study

Positive results support joint venture decision to complete additional ISR studies and potential PEA⁽³⁾

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 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.

(3) See Denison's news release dated April 12, 2023.

Reserves & Resources as of June 26, 2023



SOURCE:

For Wheeler River, see the Wheeler River Technical Report titled "NI 43-101 Technical Report on the Wheeler River Project, Athabasca Basin, Saskatchewan, Canada" dated June 23, 2023.

For all other projects, see Denison's Annual Information Form dated March 27, 2023

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 estimated at a cut-off grade of 0.5% U₃O₈ based on the ISR mining method, using a long-term uranium price of USD\$50/lb U₃O₈ and a USD\$/CAD\$ exchange rate of 1.33. The mineral reserves are based on a mine operating cost of \$0.78/lb U₃O₈, process operating cost of \$5.20/lb U₃O₈, and process recovery of 99%.

(3) Mineral Reserves for the Gryphon deposit are estimated at a cut-off grade of 0.58% U₃O₈ based on longhole mining using a long-term uranium price of USD\$50/lb and a USD\$/CA\$ exchange rate of 0.80. The mineral reserves are based on a mine operating cost of \$150/t, mill operating cost of \$275/t, G&A cost of \$99/t, transportation cost of \$50/t, milling recovery of 97%, and 7.25% fee for Saskatchewan royalties. Mineral reserves estimates account for diluting material and mining losses.

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

(5) See AIF or June 26, 2023 news release, as applicable, for details of the various cut-off grades used for measured & indicated mineral resources.

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)	
McClellan - Ore Stockpile (Proven)	90,000	0.37	700	200	
Wheeler River – Phoenix (Proven)	6,300	24.5	3,400	3,200	
Wheeler River – Phoenix (Probable)	212,700	11.4	53,300	50,600	
Wheeler River – Gryphon (Probable)	1,257,000	1.8	49,700	47,200	
Total Proven & Probable Reserves	1,566,000		107,100	101,200	

Measured & 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⁾ (Measured)	64,200	21.8	30,900	29,400	
Wheeler River - Phoenix ⁽⁷⁾ (Indicated)	216,000	8.3	39,700	37,700	
Wheeler River - Gryphon ⁽⁷⁾ (Indicated)	1,643,000	1.7	61,900	58,800	
McClellan - Caribou (Indicated)	47,800	2.6	2,800	600	
McClellan - Sue D (Indicated)	122,800	1.1	2,800	600	
McClellan - McClellan North (Indicated)	204,300	2.8	12,200	2,700	
Midwest - Midwest Main (Indicated)	453,000	4.0	39,900	10,100	
Midwest - Midwest A (Indicated)	566,000	0.87	10,800	2,700	
Waterbury – THT (Indicated)	291,000	2.0	12,800	8,600	
Total Measured & Indicated Resources	3,608,100		213,800	151,200	

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⁾	5,600	2.6	300	300	
Wheeler River - Gryphon ⁽⁷⁾	73,000	1.2	1,900	1,800	
McClellan - Caribou	24,200	0.39	200	0	
McClellan - Sue D	483,400	0.69	7,300	1,600	
McClellan - McClellan 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	
Christie Lake ⁽¹³⁾	588,000	1.57	20,400	3,500	
Total Inferred Resources	2,291,500		54,100	15,600	

Historic Mineral Resources (see Notes 15, 16)				100% Basis	Denison Share ⁽¹⁰⁾
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	
Tot. Historic Inferred Resources	1,143,400		34,400	5,300	

Notes cont'd: (6) See AIF or June 26, 2023 news release, as applicable, for details of the cut-off grades used for the inferred mineral resources. (7) Measured & Indicated mineral resources for Phoenix and Gryphon deposits are inclusive of 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) Reflects an effective 95.00% interest in the Wheeler River project, a 22.50% interest in the McClellan Lake property; a 25.17% interest in the Midwest project; and a 67.41% interest in the Waterbury Lake property pursuant to the terms of the agreements with its applicable joint venture partners. (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 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 for the Christie Lake Uranium Project, Saskatchewan, Canada" with an effective date of December 31, 2021 and filed under the Company's profile on SEDAR and EDGAR on March 27, 2023. 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 for McClellan Lake 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.

Capital Structure & Corporate Information



Market Summary⁽¹⁾

Exchanges	TSX: DML NYSE American: DNN
Shares Outstanding	835.9 M
Share Purchase Warrants	-
Share Units	8.9 M
Options	9.3 M
Fully Diluted Shares	854.1 M

DML (TSX)

Market Cap @ C\$1.90/share ⁽²⁾	CAD \$1.6 B
Daily Trading Volume ⁽³⁾	1.2M Shares

DNN (NYSE American)

Market Cap @ US\$1.40/share ⁽²⁾	USD \$1.2 B
Daily Trading Volume ⁽³⁾	4.2M Shares

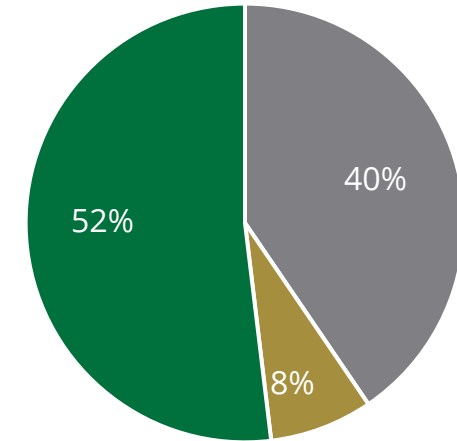
Management

David Cates (President & CEO, Director)
 Mac McDonald (Exec. VP & CFO – Medical Leave)
 Kevin Himbeault (VP Operations & Reg. Affairs)
 Elizabeth Sidle (VP Finance, Interim CFO)
 Amanda Willett (VP Legal)
 David Bronkhorst (Technical Advisor)

Board of Directors

Ron Hochstein (Non-Executive Chair)
 Brian Edgar (Lead Director)
 Byeong Min An (KHNP Nominee)
 David Cates (President & CEO, Director)
 David Neuburger
 Laurie Sterritt
 Jennifer Traub
 Patricia Volker

Shareholders⁽⁴⁾



■ Institutional ■ Insiders ■ Other

(4) Shareholder information is estimated as of May 25, 2023. Information is provided for indicative purposes only. Institutional holdings are estimated based on information available on Bloomberg. Insider holdings are estimated based on applicable filings and includes estimated holdings from entities entitled to appoint a nominee to the Board of Directors. Other holdings are determined as shares outstanding less those reported as institutional and insider holdings. Share ownership is subject to change.



LINKS:

Website:
www.densonmines.com

Twitter:
[@DensonMinesCo](https://twitter.com/DensonMinesCo)

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IR@densonmines.com

NOTES:

(1) Share capital information as of August 9, 2023 (Q2'2023 MDA).

(2) Based on shares outstanding above and DML/DNN share prices as of the end of August 2023.

(3) Average daily trading volume over previous 3 months as of the end of August 2023.