Corporate Update August 2023

Powering PEOPLE, PARTNERSHIPS AND PASSION.

enison Mines Uranium Development & Exploration

0 0

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 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 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 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.Geo, Denison's Director Technical Services, and Andy Yackulic, P.Geo, Denison's Director Exploration, each of whom is a Qualified Person in accordance with the requirements of NI 43-101.

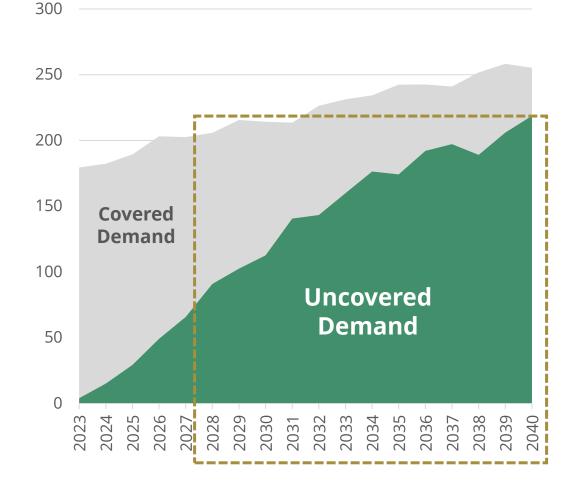
Technical Reports

- 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 The Heldeth Túé (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 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

~285,000 hectares of exploration ground

РНОТО:

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

Penison

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.

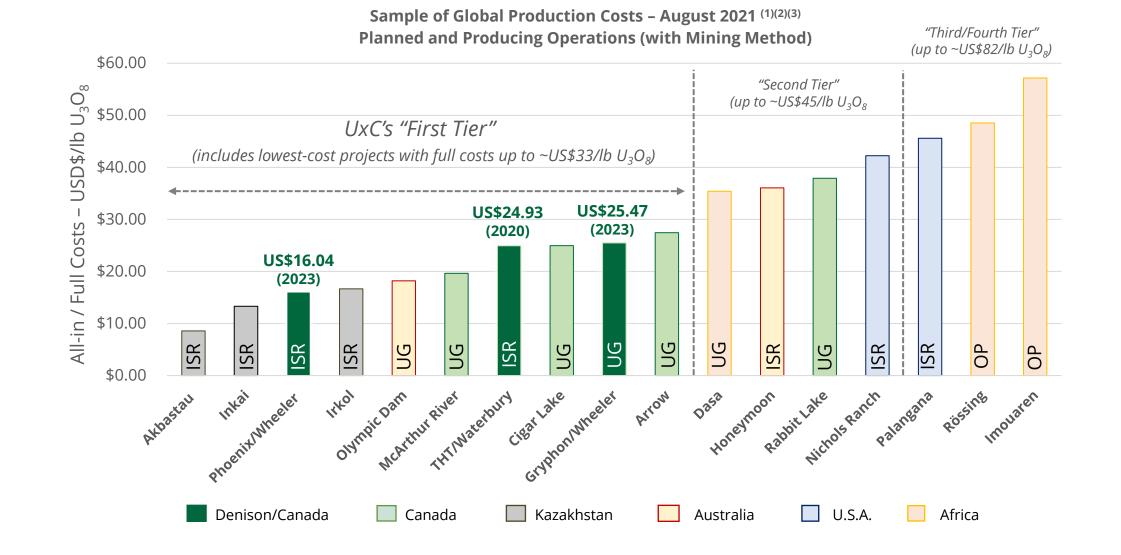
(5) See news release dated August. 3, 2021.

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

Participating interests in key developmentstage 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⁾

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



Penison

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 Ibs U_3O_8

in holdings of physical uranium

Market value **~CAD\$185M** (US\$56.00/lb U_3O_8) Acquired at average cost of **US\$29.66/lb U_3O_8**

Long term helding evented to enhance

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





Penison

PHOTO:

Packaged U₃O₈ yellowcake at Denison's 22.5% owned McClean 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



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⁾

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



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/manag ement/board-games/articlethe-globe-and-mailscomprehensive-ranking-ofcanadas-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⁾





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

Two

Low-cost development assets

Phoenix – designed as a lowcost 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

~16.5 years Aggregate operating Mine life⁽³⁾

106.4M Ibs 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

enison

PHOTO:

Installation of largediameter commercial scale ISR test wells at Phoenix during 2021.

LINKS:

<u>Wheeler River Project</u> <u>Page on Denison Website</u>

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.

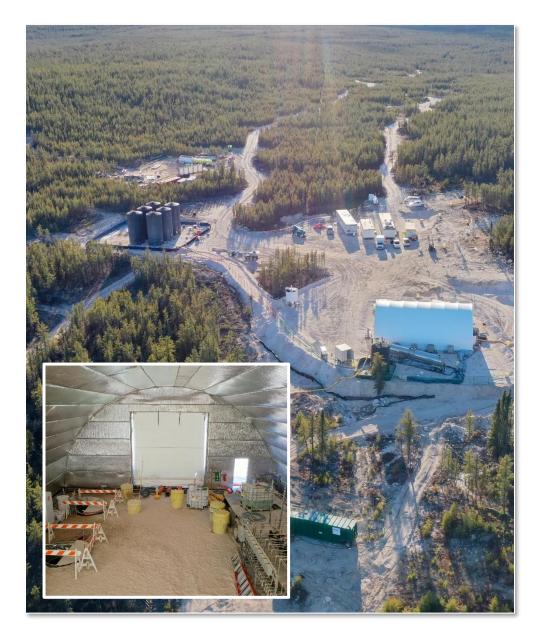
(3) Reflects 10-year mine life estimated for Phoenix and 6.5-year mine life estimated for Gryphon.

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

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

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



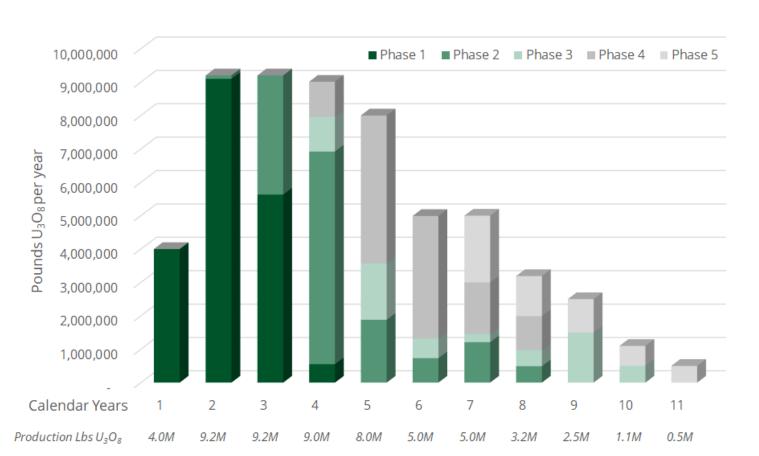
70.5M Ibs U ₃ O ₈ @ 11.4% U ₃ O ₈ Measured & Indicated	c\$1.56B estimated Base-case post-tax NPV _{8%} (100% basis) (see note 3, 4)	c\$419M estimated Initial CAPEX (100% basis)	Phoenix Feasibility Field Test (FFT) facilities during operations in 2022. NOTES: (1) See the Wheeler River Technical Report titled "NI 43-101 Technical Report on the Wheeler River Project, Athabasca Basin, Saskatchewan, Canada" d ated June 23, 2023. (2) All-in cost is estimated on a pre-tax basis and includes all project
Mineral Resources (280,200 tonnes, 100% basis) One of the highest- grade undeveloped uranium deposits globally	90.0% estimated Base-case post-tax IRR (see note 3, 4)	3.7 to 1 impressive Base-case post-tax NPV to initial capital cost ratio	 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.
Including 56.3M Ibs U ₃ O ₈ @ 46.0% U ₃ O ₈ M&I mineral resources for Zone A high-grade domain	Us $$6.28$ / Ibs U ₃ O ₈ average Cash Operating Costs (C\$8.51/Ib U ₃ O ₈)	us $\$16.04$ / lbs U ₃ O ₈ average All-in Cost ⁽²⁾ (C $\$21.73$ /lb U ₃ O ₈)	(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. 10



Phoenix ISR Feasibility Study (2023)⁽¹⁾:

Optimized production profile based on detailed ISR mine planning efforts



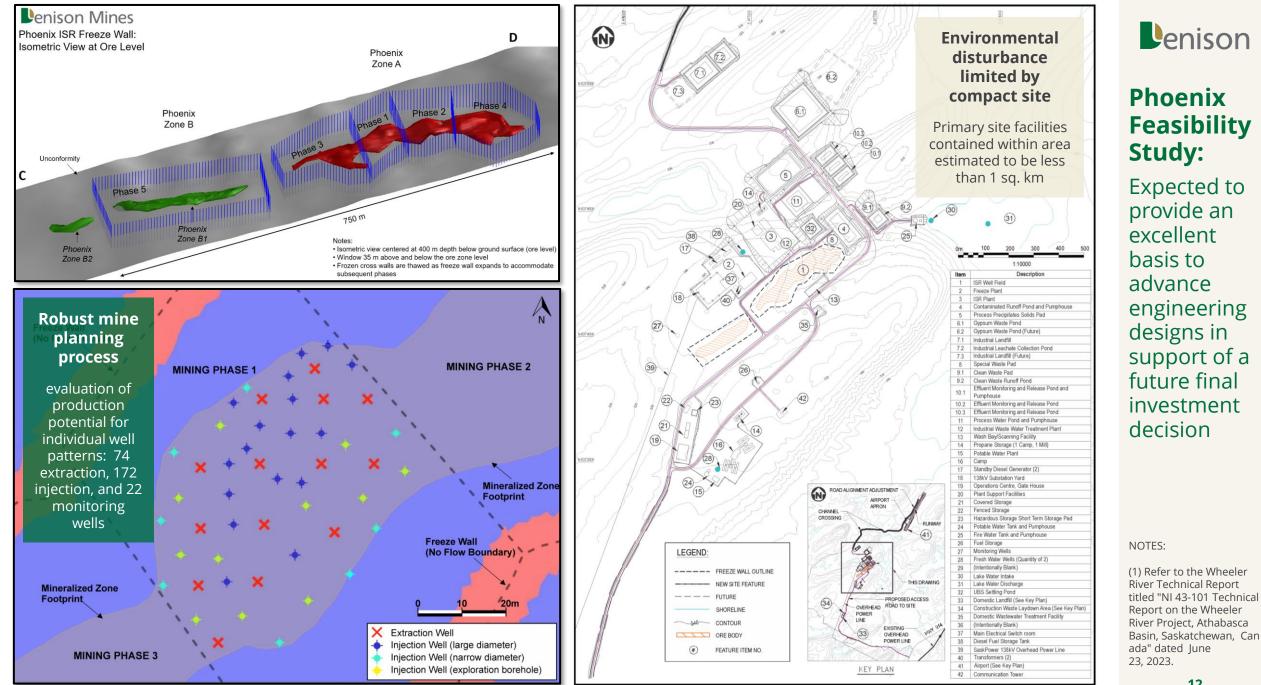


Phoenix mine production per year by phase

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 periodover the second post-
for pre- and post-
tax base-case
scenarios

56.7 million Ibs 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%



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 recharge wells

2 large-diameter commercial scale wells

Pump and injection tests collecting critical hydrogeological data

Demonstrated "<u>Proof of</u> <u>Concept</u>" 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 headgrade 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⁾

LNIDS - XEINI

22.0% eU₃**O**₈ 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 commercialscale flow-rate used in the 2018 PFS

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

Penison

PHOTOS (Left to Right):

Small diameter ISR test wells installed at Phoenix in 2019; Specialized coreleach 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)





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

<u>Completed</u> 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

<u>Completed</u> 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 (reinjected into sub-surface).



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.

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

Gryphon mine production per year

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



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 fromexisting orplannedDenison-ownedinfrastructure

Payback period under 2-years

Penison

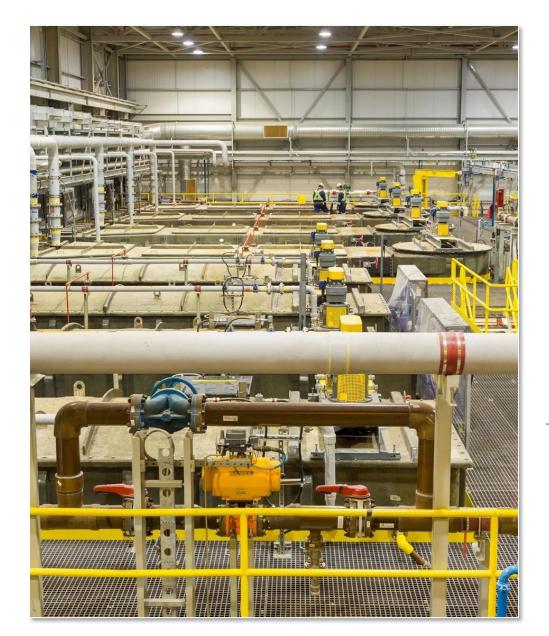
for pre- and posttax base-case scenarios

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_3O_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⁾



1		1	РНОТ
61.9M Ibs U ₃ O ₈ @ 1.7% U ₃ O ₈ Indicated	c\$864M estimated Base-case after-tax NPV _{8%} (100% basis) (see note 3, 4)	c\$737M estimated Initial CAPEX (100% basis)	View i at Der McCle is assi produ Gryph NOTE (1) Sec Techn 43-10 on the Projec
Mineral Resources (1,643,000 tonnes, 100% basis) Moderate grade allows low-cost conventional UG mining approach	37.6% estimated Base-case after-tax IRR (see note 3, 4)	2023 PFS Update Scope limited to cost update and minor schedule optimization	Basin, Canac 23, 20 (2) All- on a p includ opera costs decon divide numb to be (3) NP calcul
Plus 1.9M Ibs U ₃ O ₈ Inferred mineral resources (73,000 tonnes @ 1.2% U ₃ O ₈ , 100% basis)	Us \$12.75 / Ibs U ₃ O ₈ average Cash Operating Costs (C\$17.27/Ib U ₃ O ₈)	Us \$25.47 / Ibs U ₃ O ₈ average All-in Cost ⁽²⁾ (C\$34.50/Ib U ₃ O ₈)	asses: uranit of pre activit opera (4) Inc result a com Phoer Denis owner slide 1



DTO:

inside the SX circuit enison's 22.5% owned lean Lake mill, which sumed to toll mill luction from the hon UG operation

ES:

ee the Wheeler River nnical Report titled "NI 01 Technical Report he Wheeler River ect, Athabasca n. Saskatchewan. ada" dated June 2023.

ll-in cost is estimated pre-tax basis and ides all project rating costs, capital s post-FID, and ommissioning costs led by the estimated 1 ber of pounds U₃O₈ e produced.

IPV and IRR are ulated based on ssed "high-case" nium price, to the start re-production ities for the Gryphon ration.

ndicative post-tax Its were prepared on mbined basis with the enix deposit for ison's then 90% ership interest, see 12 for details.

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

ISR Mining method

Tthe 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 Ibs U₃O₈ projected Mine Production (100% basis)

12.8M lbs U_3O_8 @ 2.0% U_3O_8 (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 stateowned nuclear company Korea Hydro Nuclear Power ("KHNP")

40,256

hectares of prospective ground over 13 claims

Penison

PHOTO:

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

LINKS:

<u>Waterbury Lake Project</u> <u>Video on Vimeo</u>

Waterbury Project Page on Denison Website

(1) Refer to the Waterbury

NOTES:

McClean Lake (Orano / Denis

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.

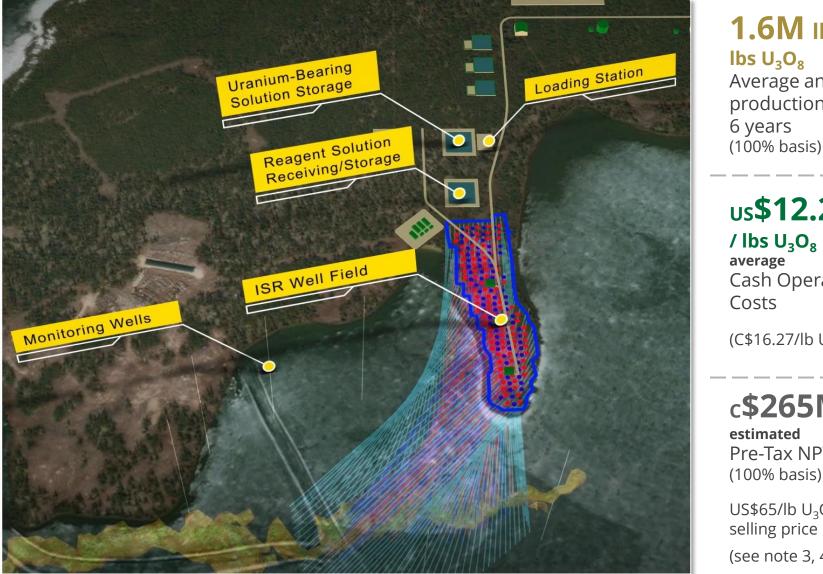
Located within the boundaries of Treaty 10

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

¹⁰ 40,2

Tthe Heldeth Túé ("THT") ISR Operation:

PEA (2020) shows potential for ISR to change uranium mining landscape in Canada⁽¹⁾



1.6M lbs c**\$112M** estimated lbs U₃O₈ Initial Average annual CAPEX production over (100% basis)

us**\$12.23** / lbs U₃O₈ average Cash Operating

 $(C$16.27/lb U_3O_8)$

c\$265M estimated Pre-Tax NPV_{8%}

US $$65/lb U_3O_8$ selling price

(see note 3, 4)

us**\$24.93** / lbs U₃O₈ average

All-in

Cost⁽²⁾ $(C$33.16/lb U_3O_8)$

50.0% estimated Pre-Tax IRR

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

Penison

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 () 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.

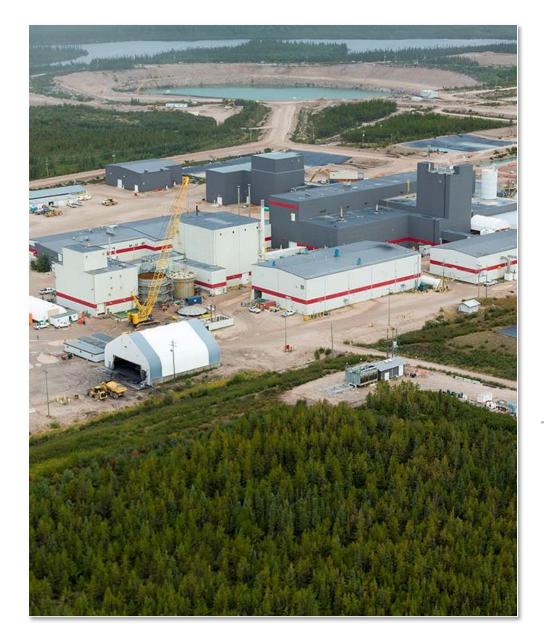
(3) NPV and IRR are calculated based on assessed "high-case" uranium price, to the start of pre-production activities.

(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).

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 U_3O_8 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 Ibs U₃O₈

Licensed annual production⁽⁴⁾

10-Year CNSC Operating License⁽⁴⁾

Renewed in 2017 for operations up to June 30, 2027

+50M

Ibs 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

Penison

PHOTO:

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

LINKS:

McClean Lake Project Page on Denison Website

NOTES:

(1) Per UxC's Q1'2023 Uranium Market Outlook.

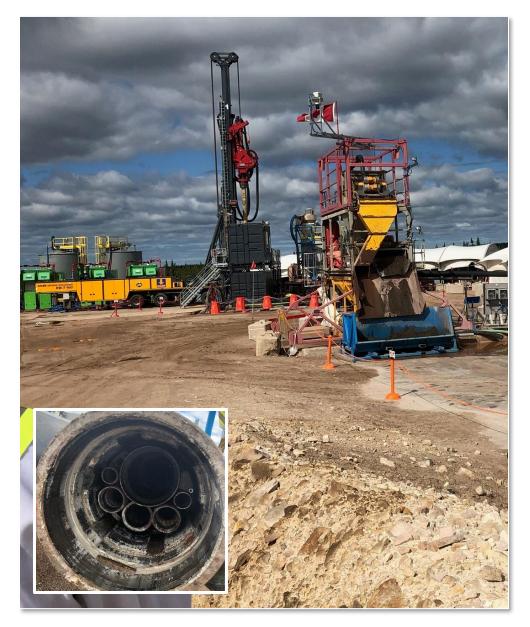
(2) Denison monetized its share of tolling revenues from the Cigar Lake toll milling agreement. See Denison's news releases dated February 1, 2017 and February 13, 2017. Please also refer to Denison's current Annual Information Form and Financial Statements and Management, Discussion and Analysis for 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 highvalue 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 Ibs U₃O₈ Indicated Mineral Resources⁽²⁾

Resources⁽²⁾ (100% basis)

Combined 374,900 tonnes @ 2.22% U_3O_8 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 Ibs 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⁾

Penison

PHOTO:

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

LINKS:

<u>McClean Lake Project</u> Page on Denison Website

NOTES:

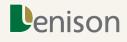
(1) See Denison's news release dated November 3, 2021.

(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	ISR Concept Study	Orano Canada Inc.	
	Statement ("EIS")	Positive results support joint venture decision to complete	French nuclear giant serves as project operator and is owner of	
	Despite deferral of development	additional ISR	74.83% interest	PHOTO:
	decision in 2008,	studies and potential PEA ⁽³⁾		Aerial view of Midwest Project.
The second second	EIS approval efforts continued		- 	LINKS:
the state of the s	with assessment of open pit mining	Midwest	Midwest	<u>Midwest Project Page on</u> Denison Website
	method and	Main	" A "	NOTES:
	processing at McClean Lake.	deposit ⁽²⁾	deposit ⁽²⁾	(1) See Denison's current Annual Information Form for additional details
	CNSC approved	39.9M lbs U ₃ O ₈	10.8M lbs U ₃ O ₈	regarding the Midwest project.
	final EIS in 2012 ⁽¹⁾	(453,000 tonnes @ (4.0% U₃O ₈) in Indicated Mineral Resources	(566,000 tonnes @)0.87% U₃O ₈) in Indicated Mineral Resources	(2) Refer to the Midwest Technical Report titled "Technical Report with an Updated Mineral Resource Estimate for the
	from McClean	11.5M lbs U ₃ O ₈	6.7M lbs U ₃ O ₈	Midwest Property, Northern Saskatchewan,
	Lake mill	(793,000 tonnes @ 0.66% U ₃ O ₈) in	(53,000 tonnes @ 5.8% U ₃ O ₈) in	Canada" and dated March 26, 2018.
	Via existing roads, and only 1km from	Inferred Mineral Resources	Inferred Mineral Resources	(3) See Denison's news release dated April 12, 2023.
	the Points North airstrip	(100% basis)	(100% basis)	21

Reserves & Resources as of June 26, 2023

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 (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
McClean - Caribou (Indicated)	47,800	2.6	2,800	600
McClean - Sue D (Indicated)	122,800	1.1	2,800	600
McClean - McClean 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
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
Christie Lake ⁽¹³⁾	588,000	1.57	20,400	3,500
Total Inferred Resources	2,291,500		54,100	15,600
Historic Mineral Resources		100% Dacia		Denison

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 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 Socot 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 AcClean Lake property; a 25.17% interest in the Millenview project, and a 67.41% interest in the Waterbury Lake property pursuant to the agreements with its 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/businesse/uranium-projects/millennium/reserves-resources. Cut-off grades and other assumptions, parameters and methods used to estimate resources are unknown. (12) Kiggavik mineral resources are unknown. (13) Christie Lake mineral resources, and relevant assumptions, parameters and methods used for estimating, are documented in the "Technical Report of the Christie Lake Uranium Project, Saskatchewan, Canada" with an effective 40.20% usides in the 'are-ond's profile on SEDAR and EloGAR on March 27, 2023. The Christie Lake mineral resources for estimated at a cut-off grade of 0.2% U308; (14) The summary information on Denison's provem mineral resources for the Company's profile on SEDAR and EloGAR on March 27, 2023. The Christie Lake mineral resources for the Company or onfirm they area-ond stockpile survey reported by Camaco combines may not add due to rounding. (16)



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% U308 based on the ISR mining method, using a long-term uranium price of USD\$50/Ib U308 and a USD\$/CAD\$ exchange rate of 1.33. The mineral reserves are based on a mine operating cost of \$0.78/Ib U308, process operating cost of \$5.20/Ib U308, 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 longterm 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.

Capital Structure & Corporate Information

Market Summary⁽¹⁾ TSX: DML Exchanges NYSE American: DNN Shares Outstanding 835.9 M Share Purchase Warrants Share Units 8.9 M 9.3 M Options Fully Diluted Shares 854.1 M DML (TSX) Market Can @ Ct1 72/chara(2)

Market Cap @ C\$1.72/share ⁽²⁾	CAD \$1.4 B
Daily Trading Volume ⁽³⁾	1.0M Shares
DNN (NYSE American)	
Market Cap @ US\$1.28/share ⁽²⁾	USD \$1.1 B
Daily Trading Volume ⁽³⁾	3.4M Shares

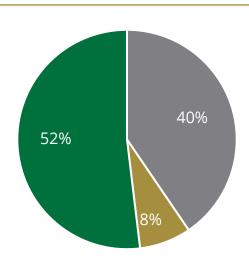
Management

David Cates (President & CEO, Director) Mac McDonald (Exec. VP & CFO) Kevin Himbeault (VP Operations & Reg. Affairs) Elizabeth Sidle (VP Finance) 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⁾



Penison



NYSE

LINKS:

Website: www.denisonmines.com

Twitter: @DenisonMinesCo

Email: IR@denisonmines.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 July 2023.

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

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.