

PRESS RELEASE

Denison Announces Filing of Technical Report for Wheeler River

Toronto, ON – August 9, 2023. Denison Mines Corp. (“Denison” or the “Company”) (TSX: DML; NYSE American: DNN) announces the filing of its technical report supporting the results of (i) the Feasibility Study (“Phoenix FS”) completed for In-Situ Recovery (“ISR”) mining of the high-grade Phoenix uranium deposit (“Phoenix”) and (ii) a cost update (“Gryphon Update”) to the 2018 Pre-Feasibility Study (“2018 PFS”) for conventional underground mining of the basement-hosted Gryphon uranium deposit (“Gryphon”). The report is titled “NI 43-101 Technical Report on the Wheeler River Project Athabasca Basin, Saskatchewan, Canada” dated August 8, 2023 with an effective date of June 23, 2023 (“Technical Report”).

The parties to the Wheeler River Joint Venture are Denison (operator) and JCU (Canada) Exploration Company Limited (“JCU”). Denison has an effective 95% ownership interest in the WRJV (90% directly, and 5% indirectly through a 50% ownership in JCU).

This press release constitutes a “designated news release” for the purposes of the Company’s prospectus supplement dated September 28, 2021 to its short form base shelf prospectus dated September 16, 2021.

Wheeler River Technical Report

The Technical Report will be posted on the Company’s website at www.denisonmines.com and is or will be available under its profile on SEDAR at www.sedarplus.ca and on EDGAR at www.sec.gov/edgar.shtml.

This report supports the disclosure made by the Company in its news release dated June 26, 2023, “Denison reports significant increase in economic results for Wheeler River” (the “News Release”). There are no material differences in the Technical Report from the information disclosed in the News Release.

As outlined below and in the News Release, (i) the Phoenix FS confirms robust economics and the technical viability of an ISR uranium mining operation with low initial capital costs and a high rate of return, and (ii) the Gryphon PFS Update demonstrates that the underground development of Gryphon is a positive potential future use of cash flows generated from Phoenix, as it is able to leverage existing infrastructure to provide an additional source of low-cost production.

Summary of Economic Results (100% Basis) – Base Case		
	<i>Phoenix</i>	<i>Gryphon</i>
Uranium selling price	UxC Spot Price⁽¹⁾ (~USD\$66 to USD\$70/lb U ₃ O ₈)	USD\$75/lb U₃O₈⁽²⁾ (Fixed selling price)
Exchange Rate (USD\$:CAD\$)	1.35	1.35
Discount Rate	8%	8%
Operating profit margin ⁽³⁾	90.9%	83.0%
Pre-tax NPV _{8%} ⁽⁴⁾ (Change from 2018 PFS) ⁽⁵⁾	\$2.34 billion (+150%)	\$1.43 billion (+148%)
Pre-tax IRR ⁽⁴⁾	105.9%	41.4%
Pre-tax payback period ⁽⁶⁾	~10 months	~ 20 months
Post-tax NPV _{8%} ⁽⁴⁾	\$1.43 billion	\$864.2 million
Post-tax IRR ⁽⁴⁾	82.3%	37.6%
Post-tax payback period ⁽⁶⁾	~11 months	~ 22 months

Adjusted Post-tax NPV _{8%} ⁽⁴⁾⁽⁷⁾	\$1.56 billion	n/a
Adjusted Post-tax IRR ⁽⁴⁾⁽⁷⁾	90.0%	n/a
Adjusted Post-tax payback period ⁽⁶⁾⁽⁷⁾	~10 months	n/a

- (1) Spot price forecast is based on "Composite Midpoint" scenario from UxC's Q2'2023 Uranium Market Outlook ("UMO") and is stated in constant (not-inflated) dollars, see the News Release and Technical Report for details.
- (2) Fixed selling price is based on the forecasted annual "Composite Midpoint" long-term uranium price from UxC's Q2'2023 UMO and is stated in constant (not-inflated) dollars, see the News Release and Technical Report for details.
- (3) Operating profit margin is calculated as aggregate uranium revenue less aggregate operating costs, divided by aggregate uranium revenue. Operating costs exclude all royalties, surcharges and income taxes.
- (4) NPV and IRR are calculated to the start of construction activities for the applicable operation, and excludes \$67.4 million and \$56.5 million in pre-FID expenditures for Phoenix and Gryphon, respectively.
- (5) Change from 2018 PFS is computed by reference to the same scenario from the 2018 PFS, adjusted to incorporate certain pre-FID costs for consistent comparability.
- (6) Payback period is stated as number of months to payback from the start of uranium production.
- (7) The Adjusted Post-tax NPV, IRR and payback period are based on the "adjusted Post-tax" scenario, which includes the benefit of certain entity level tax attributes which are expected to be available and used to reduce taxable income from the Phoenix operation. There is no "adjusted" post-tax case for Gryphon, given that the entity level tax attributes of the WRJV owners are assumed to have been fully depleted by the Phoenix operation. See the News Release and Technical Report for details.

Front-End Engineering Design

The completion of the Phoenix FS is a key milestone to support the next phases of engineering design for the project. The front-end engineering design ("FEED") phase has already commenced and is expected to be completed before the end of the year. The objective of the FEED phase is to assess optimization opportunities and identify key long lead procurement requirements. Including the detailed design phase, project engineering efforts are expected to be completed in approximately two years.

Following a future final investment decision ("FID") and completion of engineering, construction is expected to last another two years. Assuming sufficient funding is secured by the owners of the WRJV, engineering and other pre-construction activities advance per plan, and timely receipt of required regulatory approvals, first production is currently anticipated to occur in 2027 or 2028.

For more information, please contact:

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About Denison

Denison is a uranium exploration and development company with interests focused in the Athabasca Basin region of northern Saskatchewan, Canada. The Company has an effective 95% interest in its flagship Wheeler River Uranium Project, which is the largest undeveloped uranium project in the infrastructure rich eastern portion of the Athabasca Basin region of northern Saskatchewan. The Feasibility Study was completed for Wheeler River's Phoenix deposit as an ISR mining operation, and the Gryphon Update to the previously prepared Pre-Feasibility Study was completed for Wheeler River's Gryphon deposit as a conventional underground mining operation. Based on the respective studies, both deposits have the potential to be competitive with the lowest cost uranium mining operations in the world. Permitting efforts for the planned Phoenix ISR operation commenced in 2019 and have advanced significantly, with licensing in progress and a draft Environmental Impact Statement submitted for regulatory and public review in October 2022.

Denison's interests in Saskatchewan also include a 22.5% ownership interest in the McClean Lake Joint Venture, which comprises several uranium deposits and the McClean Lake uranium mill that is contracted to process the ore from the Cigar Lake mine under a toll milling agreement, plus a 25.17% interest in the Midwest Main and Midwest A deposits and a 67.41% interest in the Tthe Heldeth T   (THT, formerly J

Zone) and Huskie deposits on the Waterbury Lake property. The Midwest Main, Midwest A, THT and Huskie deposits are located within 20 kilometres of the McClean Lake mill.

Through its 50% ownership of JCU, Denison holds additional interests in various uranium project joint ventures in Canada, including the Millennium project (JCU, 30.099%), the Kiggavik project (JCU, 33.8118%) and Christie Lake (JCU, 34.4508%).

Denison's exploration portfolio includes further interests in properties covering ~285,000 hectares in the Athabasca Basin region.

Denison is also engaged in post-closure mine care and maintenance services through its Closed Mines group, which manages Denison's reclaimed mine sites in the Elliot Lake region and provides related services to certain third-party projects.

Qualified Persons

The technical information contained in this release has been reviewed and approved by Mr. Chad Sorba, P. Geo, Denison's Director, Technical Services, and Mr. Andrew Yackulic, P. Geo., Denison's Director, Exploration, each of whom is a Qualified Person in accordance with the requirements of NI 43-101.

Non-GAAP Financial Measures

This release includes certain terms or performance measures commonly used in the mining industry that are not defined under International Financial Reporting Standards ("IFRS"). Such non-GAAP performance measures, including NPV, are included because the Company understands that investors use this information to determine the Company's ability to generate earnings and cash flows. The Company believes that conventional measures of performance prepared in accordance with IFRS do not fully illustrate the ability of mines to generate cash flows. Non-GAAP financial measures should not be considered in isolation as a substitute for measures of performance prepared in accordance with IFRS and are not necessarily indicative of operating costs, operating profit or cash flows presented under IFRS.

Cautionary Statement Regarding Forward-Looking Statements

Certain information contained in this press release 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 press release contains forward-looking information pertaining to the results of, and estimates, assumptions and projections provided in, the Technical Report and the interpretation of the Phoenix FS and Gryphon Update and expectations with respect thereto, including estimates of NPV, capital costs, operating costs and estimated uranium revenue; expectations with respect to pre- and post-FID costs; expectations with respect to taxes and royalties; assumptions with respect to uranium prices; expectations with respect to project development and permitting; plans for FEED and detailed design for Phoenix; future development methods and plans; the timing for commencement of production; and joint venture ownership interests and the continuity of its agreements with its joint venture partners.

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. For example, the modelling and assumptions upon which the interpretation of results are based may not be maintained after further testing or be representative of actual conditions. 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 27, 2023 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.

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