

PRESS RELEASE

**Denison Reports a Year of Significant Project
and Company De-Risking**

Toronto – March 4, 2021 Denison Mines Corp. (“Denison” or the “Company”) (DML: TSX) (DNN : NYSE American) today filed its Audited Consolidated Financial Statements and Management’s Discussion & Analysis (“MD&A”) for the year ended December 31, 2020. Both documents can be found on the Company’s website at www.denisonmines.com or on SEDAR (at www.sedar.com) and EDGAR (at www.sec.gov/edgar.shtml). The highlights provided below are derived from these documents and should be read in conjunction with them. All amounts in this release are in Canadian dollars unless otherwise stated.

David Cates, President and CEO of Denison commented, *“Confronted with the varied challenges of the global COVID-19 pandemic, Denison’s resilient teams excelled in 2020 and early 2021 – accomplishing a significant de-risking of our flagship Wheeler River project and the Company’s balance sheet.*

At Wheeler River, our technical team achieved a key milestone, receiving an independent confirmation of ‘Proof of Concept’ for the application of the In-Situ Recovery (‘ISR’) mining method at the high-grade Phoenix deposit. We also completed an important trade-off study leading to the adoption of a freeze ‘wall’ design for containment of the ISR operation at Phoenix – a decision that is expected to be favourable from an environmental standpoint, reduce technical complexity and operational risks, allow for a phased mining approach with lower up-front capital costs, and strengthen project sustainability. With the Environmental Assessment process fully resumed and a \$21.8 million budget (Denison’s share \$19.4 million) approved and funded for evaluation and environmental assessment work at Wheeler River in 2021, the entire team is now focused on advancing Phoenix through the regulatory and community consultation process to support a future Feasibility Study (‘FS’), with the objective of pairing Phoenix, the world’s highest grade undeveloped uranium deposit, with ISR mining, the world’s lowest cost uranium mining method.

In 2020, the technical team also delivered positive results from the Waterbury Lake Preliminary Economic Assessment (‘PEA’), which considered the potential future development of the Tthe Heldeth Túé (‘THT’) uranium deposit as Denison’s second ISR amendable project in the Athabasca Basin region. The results were highlighted by low initial capital costs and globally competitive operating costs. Adding to Wheeler River’s Phoenix and Gryphon deposits, THT represents Denison’s third development asset with fully loaded costs (including initial capital costs, sustaining capital costs, and operating costs) estimated at under US\$25 per pound U₃O₈.

On the Corporate side, the Company’s financial situation has also been significantly de-risked, having completed a round of critical capital raising over the last 12 months that has positioned the company with approximately \$85 million in cash and investments, while remaining debt-free. Taken together, Denison is uniquely positioned as a well-capitalized uranium developer, with multiple low-cost assets, at a time when the uranium market is showing signs of incremental improvement underpinned by growing calls for nuclear energy to re-emerge as a leading technology important to a sustainable global energy transition.”

HIGHLIGHTS**▪ Significant progress de-risking the Wheeler River project in 2020**

In 2020, the Company made significant progress on systematically de-risking the technical risks identified for the ISR mining operation planned for the Phoenix uranium deposit (‘Phoenix’) following completion of the 2018 Pre-Feasibility Study (‘PFS’) for the Company’s 90% owned Wheeler River Uranium Project (‘Wheeler River’) (see Denison news releases dated June 4, 2020, Feb. 19, 2020, Oct. 28, 2020, and Dec. 1, 2020, respectively):

- Achieved independent “Proof of Concept” for application of ISR mining method at Phoenix;
- Completed initial core leach tests, reporting uranium concentrations up to four times the amount assumed in the PFS for the Phoenix ISR operation;
- Completed a 2020 ISR Field Program designed to build additional confidence in the results of the independent hydrogeologic model developed by Petrotek Corporation (‘Petrotek’), and to support the design and permitting of further field work expected to be incorporated into a future FS; and
- Completed a trade-off study demonstrating the merit of adopting a freeze wall design, rather than the freeze “dome” design included in the PFS, as part of the ISR mining approach planned for Phoenix.

▪ **Restarted the formal Environmental Assessment (‘EA’) process for Wheeler River**

In January 2021, Denison restarted the formal EA process for Wheeler River. The decision to resume the EA process marked the end of the temporary suspension announced in March 2020 amidst the significant social and economic disruption that emerged as a result of the onset of the COVID-19 pandemic.

▪ **Successful series of equity financings to fund the EA and FS process for Wheeler River**

Denison completed equity financings for gross proceeds of over US\$56 million (including approximately US\$3 million from an At-the-Market (‘ATM’) offering, excluding the flow-through financings) in 2020 and early 2021. Subject to a decision to advance to a formal FS for Phoenix, the proceeds from the offerings are expected, based on current estimates, to be sufficient to complete such FS process and the EA process.

▪ **Completed flow-through equity financings to fund Canadian exploration**

The Company completed flow-through equity financings of \$8.9 million in late 2020 and early 2021. Proceeds of the financings are expected to be used for eligible Canadian exploration activities in 2021 and 2022.

▪ **2020 Phoenix expansion drilling returns best results to date at Zone C**

The primary focus of the Company’s 2020 exploration drilling program at Wheeler River centered on the area proximal to the Phoenix deposit with the potential to expand the extent of mineralization currently estimated for Phoenix. Expansion drilling in the Zone C area of Phoenix, which does not currently have an estimate of mineral resources, returned high grade mineralization – including 5.69% U₃O₈ over 5.0 metres in WR-328D1, which represents the best mineralized intersection at Zone C to date (see Denison press release dated February 9, 2021).

▪ **Discovery of new high-grade uranium mineralization four kilometres from Phoenix at Wheeler River**

As part of the Company’s 2020 exploration drilling program at Wheeler River, certain regional target areas were also tested, which resulted in the discovery of new high-grade unconformity-hosted uranium mineralization up to 7.66% U₃O₈ along the K-West conductive trend (see Denison press release dated January 28, 2021).

▪ **Completed a Preliminary THT deposit on the Waterbury Lake Property**

On Dec. 30, 2020, Denison filed the technical report “Preliminary Economic Assessment for the Tthe Heldeth Túé (J Zone) Deposit, Waterbury Lake Property, Northern Saskatchewan, Canada”, with an effective date of October 30, 2020 for the 66.90% Denison-owned Waterbury Lake property. The technical report includes a PEA that demonstrates robust economics for the potential future development of THT as a small-scale Athabasca Basin ISR uranium mining project – including low initial capital costs, low average cash operating costs and globally competitive all-in costs under US\$25 per pound U₃O₈.

About Wheeler River

Wheeler River is the largest undeveloped uranium project in the infrastructure rich eastern portion of the Athabasca Basin region, in northern Saskatchewan and is a joint venture between Denison (90% and operator) and JCU (Canada) Exploration Company Limited (10%). The project is host to the high-grade Phoenix and Gryphon uranium deposits, discovered by Denison in 2008 and 2014, respectively, estimated to have combined Indicated Mineral Resources of 132.1 million pounds U_3O_8 (1,809,000 tonnes at an average grade of 3.3% U_3O_8), plus combined Inferred Mineral Resources of 3.0 million pounds U_3O_8 (82,000 tonnes at an average grade of 1.7% U_3O_8).

The PFS was completed in late 2018, considering the potential economic merit of developing the Phoenix deposit as an ISR operation and the Gryphon deposit as a conventional underground mining operation. Taken together, the project is estimated to have mine production of 109.4 million pounds U_3O_8 over a 14-year mine life, with a base case pre-tax net present value ('NPV') of \$1.31 billion (8% discount rate), Internal Rate of Return ('IRR') of 38.7%, and initial pre-production capital expenditures of \$322.5 million. The Phoenix ISR operation is estimated to have a stand-alone base case pre-tax NPV of \$930.4 million (8% discount rate), IRR of 43.3%, initial pre-production capital expenditures of \$322.5 million, and industry leading average operating costs of US\$3.33/lb U_3O_8 . The PFS was prepared on a project (100% ownership) and pre-tax basis, as each of the partners to the Wheeler River Joint Venture are subject to different tax and other obligations.

Further details regarding the PFS, including additional scientific and technical information, as well as after-tax results attributable to Denison's ownership interest, are described in greater detail in the NI 43-101 Technical Report titled "Pre-feasibility Study for the Wheeler River Uranium Project, Saskatchewan, Canada" dated October 30, 2018 with an effective date of September 24, 2018. A copy of this report 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.

Given the social, financial and market disruptions related to COVID-19, and certain fiscally prudent measures, Denison temporarily suspended certain activities at Wheeler River starting in April 2020, including the formal parts of the EA program, which is on the critical path to achieving the project development schedule outlined in the PFS Technical Report. While the formal EA process has resumed in early 2021, the Company is not currently able to estimate the impact to the project development schedule, outlined in the PFS Technical Report, and users are cautioned that certain of the estimates provided therein, particularly regarding the start of pre-production activities in 2021 and first production in 2024 should not be relied upon.

About Denison

Denison Mines Corp. was formed under the laws of Ontario and is a reporting issuer in all Canadian provinces. Denison's common shares are listed on the Toronto Stock Exchange (the 'TSX') under the symbol 'DML' and on the NYSE American exchange under the symbol 'DNN'.

Denison is a uranium exploration and development company with interests focused in the Athabasca Basin region of northern Saskatchewan, Canada. In addition to the Company's flagship project, Wheeler River, Denison's interests in Saskatchewan include a 22.5% ownership interest in the McClean Lake Joint Venture ('MLJV'), which includes several uranium deposits and the McClean Lake uranium mill, which is currently processing ore from the Cigar Lake mine under a toll milling agreement, plus a 25.17% interest in the Midwest deposits and a 66.90% interest in the THT and Huskie deposits on the Waterbury Lake property. The Midwest, THT and Huskie deposits are located within 20 kilometres of the McClean Lake mill. In addition, Denison has an extensive portfolio of exploration projects in the Athabasca Basin region.

Denison is engaged in mine decommissioning and environmental services through its Closed Mines group (formerly Denison Environmental Services), which manages Denison's Elliot Lake reclamation projects and provides post-closure mine and maintenance services to a variety of industry and government clients.

Denison is also the manager of Uranium Participation Corporation ('UPC'), a publicly traded company listed on the TSX under the symbol 'U', which invests in uranium oxide in concentrates ('U₃O₈') and uranium hexafluoride ('UF₆').

Technical Disclosure and Qualified Person

The technical information contained in this press release has been reviewed and approved by David Bronkhorst, P.Eng, Denison's Vice President, Operations and/or Andrew Yackulic, P. Geo, Denison's Director, Exploration, each of whom is a Qualified Person in accordance with the requirements of NI 43-101.

For more information, please contact

David Cates (416) 979-1991 ext 362
President and Chief Executive Officer

Sophia Shane (604) 689-7842
Investor Relations

Follow Denison on Twitter @DenisonMinesCo

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

Certain information contained in this press release constitutes 'forward-looking information', within the meaning of the applicable United States and 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 following: exploration, development and expansion plans and objectives, including the results of, and estimates and assumptions within, the PFS, the plans and objectives for ISR and the related field and hydrogeological testing results, models, "proof of concept", plans and objectives; expectations, plans and objectives of a future FS for Wheeler and any work to be undertaken in respect thereto, including any "de-risking" and the EA process; the impact of COVID-19 on Denison's operations; the results of, and estimates and assumptions within, the PEA for the THT deposit at Waterbury Lake; projections with respect to use of proceeds of recent financings; the estimates of Denison's mineral reserves and mineral resources; expectations regarding Denison's joint venture ownership interests; expectations regarding the continuity of its agreements with third parties; and its interpretations of, and expectations for, nuclear power and uranium supply, demand and related market factors. Statements relating to 'mineral reserves' or 'mineral resources' are deemed to be forward-looking information, as they involve the implied assessment, based on certain estimates and assumptions that the mineral reserves and 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. For example, the results and underlying assumptions and interpretations of the PFS as well as de-risking efforts such as the ISR field tests and hydrogeological test programs discussed herein may not be maintained after further testing or be representative of actual conditions within the applicable deposits. In addition, Denison may decide or otherwise be required to extend the EA and/or otherwise discontinue testing, evaluation and development work, including a FS at Wheeler River, if it is unable to maintain or otherwise secure the necessary approvals or resources (such as testing facilities, capital funding, etc.). Denison believes that the expectations reflected in this forward-looking information are reasonable, but no assurance can be given

that these expectations will prove to be accurate and results 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 factors discussed in the MD&A for the year ended December 31, 2020 under the heading 'Risk Factors'. 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 Denison's expectations except as otherwise required by applicable legislation.

Cautionary Note to United States Investors Concerning Estimates of Mineral Resources and Mineral Reserves: This press release 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 using CIM Standards 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. . **United States investors are cautioned not to assume that all or any part of measured or indicated mineral resources will ever be converted into mineral reserves. United States investors are also cautioned not to assume that all or any part of an inferred mineral resource exists, or is economically or legally mineable.**