

PRESS RELEASE**DENISON REPORTS RESULTS FROM Q3 2021**

Toronto, ON – November 4, 2021. Denison Mines Corp. ('Denison' or the 'Company') (TSX: DML, NYSE American: DNN) today filed its Condensed Interim Consolidated Financial Statements and Management's Discussion & Analysis ('MD&A') for the quarter ended September 30, 2021. Both documents will be available 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, ***“Our recent In-Situ Recovery ('ISR') field test results reflect several years of progress made towards systematically de-risking the use of the ISR mining method at the high-grade Phoenix deposit – culminating in the successful, and first of its kind, field test of a commercial-scale well pattern located in the expected first phase of the Phoenix orebody. Our accomplishments in the field and the laboratory have significantly increased our confidence in the use of the ISR mining method and support our landmark decision to advance the planned Phoenix ISR operation to the Feasibility Study design stage.*”**

With increased interest in the uranium market and a recent lift in both spot and long-term uranium prices, we are encouraged that future utility customers are returning to the market and looking at Denison's Wheeler River project as a potentially viable source of reliable and low-cost future supply. Taken together with our effective 95% interest in Wheeler River and strong balance sheet, which, as of today, includes 2.5M lbs U₃O₈ of physical uranium holdings acquired at a price under US\$30/lb U₃O₈, we believe Denison is well positioned to become an intermediate supplier of choice in the second half of the decade at a time when market fundamentals are predicted to be favourable as a result of growing demand for uranium and a relative shortage of advanced low-cost uranium development assets in stable jurisdictions.

Our team is focused on advancing Phoenix in the coming months and years to realize on our vision of becoming the next new uranium producer in the Athabasca Basin region.”

HIGHLIGHTS**▪ Successful completion of ISR field test activities at Phoenix**

The initial results of the 2021 ISR field test program ('2021 ISR Field Test') completed at the Phoenix uranium deposit ('Phoenix') include (1) the achievement of commercial-scale production flow rates consistent with those assumed in the pre-feasibility study ('PFS') prepared for the Wheeler River Project ('Wheeler River' or the 'Project') in 2018; (2) the demonstration of hydraulic control of injected solution during the ion tracer test; and (3) the establishment of breakthrough times between injection and recovery wells, spaced 5 to 10 metres apart, that are consistent with the hydrogeological model prepared by Petrotek Corporation ('Petrotek') in 2020 demonstrating "proof of concept". In addition, the Company completed the clean-up phase following the tracer test, demonstrating the ability to remediate the commercial scale well ('CSW') test pattern, reducing tracer concentrations to as low as 4% of peak test levels, with eight days of remediation.

▪ Advancement of Phoenix to feasibility study ('FS') stage and selection Wood PLC as independent lead author

In September 2021, the Wheeler River Joint Venture ('WRJV') approved the initiation of an independent FS for the ISR mining operation proposed for Phoenix. The completion of the FS is a critical step in the progression of the project and is intended to advance de-risking efforts to the point where the Company and the WRJV will be able to make a definitive development decision. The Company also selected leading global consulting and engineering firm

Wood PLC to lead and author the FS in accordance with Canadian Securities National Instrument 43-101 ('NI 43-101').

- **Initiated exploration drilling programs at Wheeler River and Moon Lake South**

In early September, Denison's exploration team initiated diamond drilling exploration programs at Wheeler River, and the Moon Lake South project. Approximately 6,500 m of diamond drilling is planned for Wheeler River, with regional exploration drilling expected to be focused on expanding mineralization encountered in 2020 at K West and M Zone, plus additional exploration drilling at Phoenix Zone A to test the extents of high-grade mineralization encountered in drill hole GWR-045. Moon Lake South is a Denison-operated joint venture with CanAlaska Uranium Ltd., in which Denison holds a 75% interest. Drilling planned for Moon Lake South is expected to consist of 2,400 metres focused on testing geophysical targets.

- **Completed acquisition of 50% of JCU (Canada) Exploration Company, Limited ('JCU') for \$20.5 million**

In August 2021, Denison completed the acquisition of 50% of JCU from UEX Corporation ('UEX') for cash consideration of \$20.5 million, following UEX's acquisition of 100% of JCU from Overseas Uranium Resources Development Co., Ltd. for \$41 million. JCU holds a portfolio of 12 uranium project joint venture interests in Canada, including a 10% interest in Wheeler River, a 30.099% interest in the Millennium project (Cameco Corporation 69.901%), a 33.8123% interest in the Kiggavik project (Orano Canada Inc. 66.1877%), and a 34.4508% interest in the Christie Lake project (UEX 65.5492%).

- **Completed the sale of shares and warrants of GoviEx Uranium Limited ('GoviEx') for proceeds of up to \$41,600,000**

In October, the Company sold, by private agreement, 32,500,000 common shares of GoviEx, held by Denison for investment purposes, and 32,500,000 common share purchase warrants, entitling the holder of the warrant to acquire one additional common share of GoviEx owned by Denison at an exercise price of \$0.80 for a term of up to 18 months. Denison received gross proceeds of \$15,600,000 on the sale of the shares and warrants and continues to hold 32,644,000 common shares of GoviEx. If the GoviEx warrants are exercised in full, Denison will receive further gross proceeds of \$26,000,000 and will transfer a further 32,500,000 GoviEx common shares to the warrant holders.

- **Recorded significant mark-to-market fair value gains on the Company's long-term investments in uranium**

During the nine months ending September 30, 2021, the Company acquired 2,400,000 pounds of uranium at a weighted average cost of \$36.59 (US\$29.62) per pound U₃O₈ to be held as a long-term investment. Due to significant activity in the uranium spot market in the third quarter, the spot price appreciated from US\$32.10 per pound U₃O₈ to US\$43.00 per pound U₃O₈ resulting in mark-to-market gains for the three months ended September 30, 2021 of \$36,138,000 on these uranium investments.

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 and Denison's 50%-owned JCU. Denison is the operator of the project and holds an effective 95% ownership interest. 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 U₃O₈ (1,809,000 tonnes at an average grade of 3.3% U₃O₈), plus combined Inferred Mineral Resources of 3.0 million pounds U₃O₈ (82,000 tonnes at an average grade of 1.7% U₃O₈).

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 U₃O₈ 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 U₃O₈. 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 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 and territories. 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 its effective 95% interest in the Wheeler River Uranium Project, Denison's interests in Saskatchewan include a 22.5% ownership interest in the McClean Lake Joint Venture, which includes several uranium deposits and the McClean Lake uranium mill, which 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 66.90% interest in the Tthe Heldeth Túé ('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 33.8123%) and Christie Lake (JCU 34.4508%). Denison's exploration portfolio includes further interests in properties covering approximately 280,000 hectares in the Athabasca Basin region.

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

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
President and Chief Executive Officer

(416) 979-1991 ext 362

Sophia Shane
Investor Relations

(604) 689-7842

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@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: projections with respect to exploration, development and expansion plans and objectives, including the plans and objectives for Wheeler River and the related evaluation field program activities and exploration objectives; the interpretation of the results of the ISR field test activities at Wheeler River; the interpretation of the results of its exploration drilling programs; its plans for the feasibility study; its use of proceeds of recent financings; its investments in uranium; the impact of COVID-19 on Denison's operations; the estimates of Denison's mineral reserves and mineral

resources or results of exploration; 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 energy and uranium demand. 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 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 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 Denison's Annual Information Form dated March 26, 2021 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.**