

PRESS RELEASE**DENISON REPORTS RESULTS FROM Q2 2020**

Toronto, ON – August 6, 2020. Denison Mines Corp. (“Denison” or the “Company”) (DML: TSX, DNN: NYSE MKT) today filed its Condensed Consolidated Financial Statements and Management’s Discussion & Analysis (“MD&A”) for the quarter ended June 30, 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, *“We’ve seen several positive trends develop in the uranium sector over the last several months. Demand has remained relatively stable with nuclear power plants answering the call to provide reliable and competitive base-load energy during the pandemic. At the same time, COVID-19 related supply curtailments and associated producer spot market buying has put upward pressure on the uranium spot price – to the point where the current spot price is approximately 10% higher than the base-case selling price assumed in the Pre-Feasibility Study for first production from Denison’s proposed Phoenix In-Situ Recovery (‘ISR’) operation. While announcements have been made regarding the resumption of certain curtailed uranium mines, this was always expected by market participants. Regardless of the timing of these restarts, we should not lose sight of how impactful even temporary curtailments can be in a market that is actively drawing down inventories and other secondary supplies as part of a cyclical commodity correction – resulting in a permanent acceleration towards sustained improvements to supply-demand fundamentals.*

From a Denison perspective, our recent results illustrate our commitment to become the first company to bring the low-cost ISR uranium mining method to the high-grade uranium deposits of the Athabasca Basin region. In June 2020, we reported a significant milestone in the de-risking of the ISR mining method at Phoenix – announcing that an independent specialist firm concluded that a hydrogeologic model, developed based on actual field tests carried out at Phoenix in 2019, had produced ‘proof of concept’ for the application of the ISR mining method at Phoenix. With this validation in-hand, and with a series of new health and safety protocols in place to ensure a safe work environment amidst the pandemic, we were pleased to also announce the resumption of ISR field testing activities at Phoenix. The 2020 ISR field program is designed to minimize the disruption created by the pandemic to the overall project schedule by collecting additional information necessary to support the completion of a future Feasibility Study.

Additionally, the Company announced the successful completion of an \$8 million equity financing and encouraging results from an internal Concept Study evaluating the use of the ISR mining method at the Company’s J Zone deposit. Taken together, the second half of 2020 promises to be very active for Denison, with several catalysts on the horizon – including the completion of ISR field testing at Phoenix, an exploration program designed to delineate additional uranium resources at Phoenix, and a Preliminary Economic Assessment for the J Zone deposit, all of which are planned and funded as part of the Company’s current Outlook for 2020.”

HIGHLIGHTS

- **Achieved independent “Proof of Concept” for application of In-Situ Recovery (‘ISR’) mining method at the Phoenix uranium deposit (‘Phoenix’)**

In June 2020, Denison announced that the hydrogeologic model developed by Petrotek Corporation (‘Petrotek’), for the high-grade Phoenix deposit, produced demonstration of “proof of concept” for the application of the ISR mining method at Phoenix, with respect to potential operational extraction and injection rates (see Denison press release dated June 4, 2020). The hydrogeologic model was developed based on the data collected from the ISR field test completed in 2019.

- **Resumed ISR field testing activities at Phoenix with commencement of 2020 ISR field program**

In July 2020, Denison announced the successful resumption of ISR field testing activities with the commencement of the Company’s 2020 ISR field program (‘2020 Field Test’) focused on the Phoenix deposit. The 2020 Field Test is intended to build additional confidence in the results of the hydrogeologic model developed for the deposit by Petrotek, and to support further field work expected to be required for the completion of a future Feasibility Study (‘FS’). In order to ensure the Company’s operations comply with all applicable health and safety guidelines associated with the

COVID-19 pandemic, all operating procedures at the Company's Wheeler River site have been reviewed and adapted to incorporate physical distancing and enhanced hygiene protocols, as well as special travel protocols designed by Denison for northern Saskatchewan.

- **Completed conceptual mining study ('Concept Study') evaluating the ISR mining method for the J Zone uranium deposit ('J Zone') and initiated Preliminary Economic Assessment ('PEA')**

In July 2020, Denison announced the successful completion of an internal Concept Study examining the potential future development of J Zone using the ISR mining method. J Zone is located on the Waterbury Lake property, which is owned by Denison (66.71%) and Korea Waterbury Uranium Limited Partnership (33.29%). Based on the results from the Concept Study, the Company has decided to initiate the preparation of a PEA, which is expected to be completed during the second half of 2020. The cost of completing the PEA is included in the Company's current estimate of exploration and evaluation expenditures in the Outlook for 2020.

- **Successfully completed \$8 million equity financing to provide funding for business activities into 2021**

In April 2020, Denison successfully completed a public offering of 28,750,000 common shares at a price of USD\$0.20 per common share for gross proceeds of \$8,041,000 (USD\$5,750,000), which included the full exercise of the over-allotment option of 3,750,000 common shares. The estimated net proceeds of \$6,878,000 are expected to be used to fund the Company's business activities for the remainder of 2020 and into 2021.

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).

A pre-feasibility study ('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 recent social, financial and market disruptions, Denison has suspended certain activities at Wheeler River, including the EA program, which is on the critical path to achieving the project development schedule outlined in the PFS. Given the uncertainty associated with the duration of suspension, the Company is not currently able to estimate the impact to the project development schedule outlined in the PFS, and users are cautioned against relying on the estimates provided therein regarding the start of pre-production activities in 2021 and first production in 2024.

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. The Company's flagship project is the 90% owned Wheeler River Uranium Project. Denison's interests in Saskatchewan also 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 66.71% interest in the J Zone and Huskie deposits on the Waterbury Lake property. The Midwest, J Zone 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 disclosure of scientific and technical information regarding Denison's material properties in the MD&A was prepared by, or reviewed and approved by David Bronkhorst, P.Eng., the Company's Vice President Operations, a Qualified Person in accordance with the requirements of NI 43-101.

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CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

Certain information contained in this news 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 news 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; evaluation activities and plans for a PEA for the J Zone deposit; the suspension of EA activities and anticipated results of such suspension; the impact of COVID-19 on Denison's operations; the estimates of Denison's mineral reserves and mineral resources; plans for any FS, and any work to be undertaken in respect thereto; 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 the ISR field test 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 or PEA for J Zone at Waterbury Lake, 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 13, 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 news 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 news release. Denison does not undertake any obligation to publicly update or revise any forward-looking information after the date of this news 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 Measured, Indicated and Inferred Mineral Resources and Probable Mineral Reserves: This MD&A may use the terms 'measured', 'indicated' and 'inferred' mineral resources. United States investors are advised that while such terms have been prepared in accordance with the definition standards on mineral reserves of the Canadian Institute of Mining, Metallurgy and Petroleum referred to in Canadian National Instrument 43-101 Mineral Disclosure Standards ('NI 43-101') and are recognized and required by Canadian regulations, these terms are not defined under Industry Guide 7 under the United States Securities Act and, until recently, have not been permitted to be used in reports and registration statements filed with the United States Securities and Exchange Commission ('SEC'). 'Inferred mineral resources' have a great amount of uncertainty as to their existence, and as to their economic and legal feasibility. It cannot be assumed that all or any part of an inferred mineral resource will ever be upgraded to a higher category. Under Canadian rules, estimates of inferred mineral resources may not form the basis of feasibility or other economic studies. **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.** In addition, the terms "mineral reserve", "proven mineral reserve" and "probable mineral reserve" for the purposes of NI 43-101 differ from the definitions and allowable usage in Industry Guide 7. Effective February 2019, the SEC adopted amendments to its disclosure rules to modernize the mineral property disclosure requirements for issuers whose securities are registered with the SEC under the Exchange Act and as a result, the SEC now recognizes estimates of "measured mineral resources", "indicated mineral resources" and "inferred mineral resources". In addition, the SEC has amended its definitions of "proven mineral reserves" and "probable mineral reserves" to be "substantially similar" to the corresponding definitions under the CIM Standards, as required under NI 43-101. However, information regarding mineral resources or mineral reserves in Denison's disclosure may not be comparable to similar information made public by United States companies.