

PRESS RELEASE

**DENISON ANNOUNCES AT THE MARKET OFFERING AGREEMENT WITH
CANTOR FITZGERALD & SCOTIA CAPITAL**

Toronto, ON – Sept 28, 2021. Denison Mines Corp. (“Denison” or the “Company”) (DML: TSX, DNN: NYSE American) is pleased to announce that it has entered into an equity distribution agreement dated September 28, 2021 (the “Equity Distribution Agreement”), providing for an at-the-market (“ATM”) equity offering program, with Cantor Fitzgerald Canada Corporation (“CFCC”), Scotia Capital Inc. (together with CFCC, the “Co-Lead Canadian Agents”), Cantor Fitzgerald & Co. and Scotia Capital (USA) Inc. (together with the Co-Lead Canadian Agents, the “Agents”).

The ATM will allow Denison, through the Agents, to, from time to time, offer and sell, in Canada and the United States through the facilities of the Toronto Stock Exchange (“TSX”) and/or NYSE American, such number of common shares as would have an aggregate offering price of up to USD\$50 million. Sales of the common shares, if any, will be made by means of ordinary brokers’ transactions on the TSX and/or NYSE American or otherwise at market prices prevailing at the time of sale. The ATM will be effective until October 16, 2023 unless terminated prior to such date by Denison or otherwise in accordance with the Equity Distribution Agreement.

The Company considers the execution of the Equity Distribution Agreement a routine capital markets matter, establishing the ATM as a potentially valuable tool for future access to the public market, where equity offerings can occur at market prices and with significantly reduced costs. The timing and extent of the use of the ATM will be at the discretion of the Company. Accordingly, total gross proceeds from equity offerings under the ATM could be significantly less than USD\$50 million.

As outlined in the prospectus supplement, the Company intends to use any proceeds from the ATM to fund its mineral property evaluation and project engineering activities, long lead project construction items as well as general, corporate and administrative expenses. The actual allocation of the proceeds may vary depending on the amount of proceeds raised, the time periods in which the proceeds are raised, and the future developments in relation to the Company’s projects or unforeseen events.

The sale of the Company’s common shares through the ATM will be made pursuant to, and qualified in Canada by, a prospectus supplement dated September 28, 2021 (“Prospectus Supplement”) to the base shelf prospectus of the Company dated September 16, 2021 (“Base Prospectus”), and in the United States pursuant to a prospectus supplement dated September 28, 2021 to the Company’s final base shelf prospectus contained in the Company’s registration statement Form F-10 (File No. 333-258939) as amended and declared effective on September 17, 2021 (the “U.S. Registration Statement”) filed with the United States Securities and Exchange Commission.

Copies of the Prospectus Supplement and Base Prospectus may be obtained for free from SEDAR at www.sedar.com, and copies of the Prospectus Supplement and U.S. Registration Statement containing the Base Prospectus may be obtained for free from EDGAR on the SEC website at www.sec.gov. Alternatively, any of the following Agents participating in the ATM will arrange to send you these documents if you make a request by contacting:

In the United States:

Cantor Fitzgerald & Co.
Attention: Equity Capital Markets
499 Park Avenue, 6th Floor,
New York, New York, 10022
Email: prospectus@cantor.com

Scotia Capital (USA) Inc.
Attention: Equity Capital Markets
250 Vesey Street, 24th Floor
New York, New York, 10281
Email: equityprospectus@scotiabank.com
Telephone: 212-225-6853

In Canada:

Cantor Fitzgerald Canada Corporation
Attention: Equity Capital Markets
181 University Avenue, Suite 1500,
Toronto, ON, M5H 3M7
Email: ecmcanada@cantor.com

Scotia Capital Inc
Attention: Equity Capital Markets,
Scotia Plaza, 62nd Floor, 40 King Street West,
Toronto, ON M5H 3Y2,
Email: equityprospectus@scotiabank.com
Telephone: 416-863-7704

The common shares that may be issued by the Company under the ATM have been conditionally approved for listing on the TSX and have been approved for listing on the NYSE American.

This press release shall not constitute an offer to sell or a solicitation of an offer to buy, nor will there be any sale of these securities in any state or jurisdiction in which such an offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such state or jurisdiction.

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. 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 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 66.90% interest in the Tthe Heldeth Túé ("THT," formerly J Zone) and Huskie deposits on the Waterbury Lake property. Each of Midwest Main, Midwest A, THT and Huskie 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 is also 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 care and maintenance services to a variety of industry and government clients.

For more information, please contact

David Cates
President and Chief Executive Officer

(416) 979-1991 ext 362

Shae Frosst
Investor Relations

(416) 979-1991 ext 228

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: the ATM and agreements with the Agents with respect thereto; the use of proceeds of any offerings that may be completed pursuant to the ATM; and expectations regarding its joint venture ownership interests and the continuity of its agreements with its 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, Denison may decide or otherwise be required to discontinue its field test activities or other testing, evaluation and development work at Wheeler River if it is unable to maintain or otherwise secure the necessary resources (such as testing facilities, capital funding, regulatory approvals, etc.) or operations are otherwise affected by COVID-19 and its potentially far-reaching impacts. 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 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.