

PRESS RELEASE

Denison Reports Financial and Operational Results for Q2 2022, Including Uranium Sales from Production at \$74.65 per lb U₃O₈

Toronto, ON – August 4, 2022. Denison Mines Corp. ('Denison' or the 'Company') (TSX: DML, NYSE American: DNN) today filed its Condensed Consolidated Financial Statements and Management's Discussion & Analysis ('MD&A') for the quarter ended June 30, 2022. Both documents will be available on the Company's website at www.denisonmines.com, 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, *"During the second quarter, Denison capitalized on rising uranium prices with the sale of the Company's share of Canadian-origin production received from the successful SABRE mining test completed by the McClean Lake Joint Venture ('MLJV') in 2021. The SABRE test resulted in the production of over 175,000 lbs U₃O₈. By comparison, this test production represents over eight times the total mine production of uranium reported in the United States for 2021 – highlighting the importance of new sources of low-cost Canadian uranium supply as the global uranium market grapples with sanctions and self-sanctioning against Russian uranium supplies and progresses towards a geopolitical bifurcation where product origin could be crucial.*

The Company's flagship Wheeler River development project is well positioned to respond to global demand for Canadian-origin uranium, and our efforts through the second quarter have produced several key developments that have advanced the project – namely, the receipt of regulatory approval from the Province of Saskatchewan to carry out the Feasibility Field Test ('FFT') planned for the Phoenix deposit and the achievement of key metallurgical milestones to define the components necessary for the Phoenix processing plant and confirm our ability to produce a saleable yellowcake. We were also pleased to report the execution of two important agreements with Kineepik Métis Local #9 ('KML') for (i) Denison's exploration and evaluation activities within KML's land and occupancy area, and (ii) the co-development of an agreement related to the advancement of the proposed Phoenix In-Situ Recovery ('ISR') uranium mining operation.

During the second half of the year, we are anticipating the completion of ISR field testing initiated at Wheeler River during the first quarter of the year and the transition of our efforts to focus on the preparation, construction, and operation of the Phoenix FFT. From a regulatory standpoint, we are approaching the submission of our draft Environmental Impact Statement for Wheeler River, which is expected to represent a key accomplishment in the environmental assessment and permitting process. On the exploration side, we will be participating in partner-operated programs and are planning to complete regional exploration drilling programs at Wheeler River and Waterbury Lake."

Highlights

- **Completed the sale of 40,000 pounds of U₃O₈ from MLJV production at a sales price of \$74.65 (US\$59.25) per pound U₃O₈.**

In April 2022, Denison completed the sale of 40,000 pounds of U₃O₈, representing the Company's share of production from the SABRE test mining program completed at the MLJV in 2021. The uranium was sold at a price of \$74.65 (US\$59.25) per pound U₃O₈.

- **Received approval to construct and operate the Phoenix FFT**

In July 2022, Denison announced that it had received approval from the Province of Saskatchewan to prepare, construct, and operate the facilities required to carry out the ISR FFT planned for the Phoenix deposit ('Phoenix') at the Company's 95% owned Wheeler River Uranium Project ('Wheeler River' or 'the Project'). The approval was granted by the Saskatchewan Minister of Environment and authorizes Denison to operate "pollutant control facilities" – which is typical for mining operations and allows for the management of material recovered from mineral extraction through to waste water treatment, discharge, and storage (as applicable). The approval followed the completion of a process involving the review of and consultation on the Company's permit application and supporting materials related to the FFT.

- **Achieved key milestone for Phoenix with completion of metallurgical test work to define Phoenix process plant components and confirmation of ability to produce Yellowcake**

In August 2022, Denison announced the substantial completion of extensive metallurgical test work to define the mechanical components for the planned Phoenix processing plant as part of the Feasibility Study underway for Wheeler River. In addition, the metallurgical program has confirmed the ability to produce a yellowcake product that meets industry standard ASTM C967-13 specifications.

- **Executed agreements with KML**

In June 2022, Denison announced that it has entered into a Participation and Funding Agreement with KML which expresses Denison's and KML's mutual commitment to the co-development of an agreement supporting the advancement of the ISR uranium mining operation proposed at Wheeler River. The Company also entered into an Exploration Agreement in respect of all of Denison's exploration and evaluation activities within KML's land and occupancy area. These agreements reflect Denison's commitment to the principles set out in the Company's Indigenous People's Policy and advancing reconciliation through taking action.

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 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 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. A Pre-Feasibility Study ('PFS') was completed for Wheeler River in late 2018, considering the potential economic merit of developing Phoenix as an ISR operation and the Gryphon deposit as a conventional underground mining operation. Denison's interests in Saskatchewan also include a 22.5% ownership interest in the MLJV, 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 67.01% 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 (Canada) Exploration Company Limited ('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 approximately 300,000 hectares in the Athabasca Basin region.

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

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 who is 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 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 scope, objectives and interpretations of the Feasibility Study process for the proposed ISR operation for the Phoenix deposit, including the FFT and metallurgical testing programs described herein and the interpretation of the results therefrom; expectations regarding regulatory applications and approvals and the elements thereof, including the submission of the Environmental Impact Statement; 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 its evaluation activities and/or the FS 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 25, 2022 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.