

PRESS RELEASE**Denison Reports Financial and Operational Results for Q1 2023**

Toronto, ON – May 10, 2023. 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 March 31, 2023. 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, *“Our Q1’2023 operational highlights showcase the multiple facets that make up our dynamic company. During the quarter at our flagship Wheeler River project (‘Wheeler River’), we progressed our efforts on the Phoenix deposit (‘Phoenix’) Feasibility Study (‘FS’), incorporating results from the highly successful leaching and neutralization phases of the Feasibility Field Test (‘FFT’) completed in late 2022. With the FS nearing completion, and the environmental assessment for Phoenix progressing in parallel to our technical de-risking efforts over the last several years, Phoenix remains squarely positioned to become the next new uranium mine in the eastern portion of the Athabasca Basin region.*

We also reported notable news from other assets in our vast project portfolio – including the discovery of high-grade uranium mineralization at the Moon Lake South exploration project and positive results from the completion of an internal concept study (‘Concept Study’) for the use of the in-situ recovery (‘ISR’) mining method at Denison’s 25.17% owned Midwest development project (‘Midwest’). The discovery at Moon Lake South is in the very early stages and illustrates the untapped potential of our large exploration property portfolio. Moon Lake South is a particularly exciting property, given that it is nearly surrounded by Denison controlled exploration properties and is adjacent to our flagship Wheeler River property. At Midwest, we are collaborating with our long-time joint venture partner Orano Canada Inc., to take steps that could see Midwest emerge as another meaningful source of low-cost future production for Denison. Based on the positive results of the Concept Study, the Midwest joint venture has approved a program and budget for 2023 that will support the further de-risking of the application of the ISR mining method at Midwest, and which may result in the completion of a Preliminary Economic Assessment (‘PEA’).

With truly meaningful developments ahead on multiple Denison projects and the uranium market benefiting from a sustained stream of positive developments increasing projections of global demand for nuclear power, Denison is well positioned to offer investors unique leverage to the uranium market from our multi-stage / multi-asset portfolio of high-grade Athabasca Basin projects.”

Highlights**▪ Completed an internal Concept Study examining the application of the ISR mining method at Midwest**

The Company completed a Concept Study examining the potential application of the ISR mining method at Midwest. The Concept Study was prepared by Denison during 2022 and formally issued to the Midwest Joint Venture (‘MWJV’) in early 2023. Based on the positive results of the Concept Study, the MWJV has provided Denison with approval to complete additional ISR-related work for Midwest in 2023.

Evaluation activities planned for Midwest during 2023 include the collection of deposit-specific information and the completion of select preliminary engineering studies to support the further evaluation and de-risking of the key criteria required to further assess the potential application of the ISR mining method, which may result in the preparation of a PEA to support the development, if warranted, of future field tests.

▪ Discovered high-grade uranium mineralization at Moon Lake South

In April 2023, Denison reported that drill hole MS-23-10A intersected 1.38% eU₃O₈ over 8.7 metres (0.05% eU₃O₈ cut-off), including a sub-interval grading 2.88% eU₃O₈ over 3.1 metres, intersected approximately 30 metres above the unconformity in the Athabasca sandstone, as part of the recently completed winter exploration program at the Moon Lake South property. Uranium mineralization was encountered in four of the six drill holes completed during the 2023 winter exploration program, which was designed to evaluate the strike length of low-grade mineralized occurrences identified in the 2021 and 2016 drill programs.

- **Feasibility Study for Wheeler River Phoenix deposit on track for completion by mid-2023**

Feasibility level engineering design, well field production modelling and cost estimation for the application of ISR mining for the high-grade Phoenix uranium deposit at Wheeler River progressed during the first quarter of 2023, and is currently on track to support the announcement of the results from the FS by mid-2023.

- **Released 2022 ESG report, highlighting progress on environmental, social and governance initiatives**

In April 2023, Denison released its 2022 ESG Report, which provides information on the Company's environmental, social and governance ('ESG') initiatives and demonstrates its ongoing commitment to sustainability and transparency. Denison's 2022 ESG Report focuses on key ESG topics including the Company's objective to maintain excellence in corporate governance practices, "best in class" engagement with communities potentially impacted by its activities, diversity in the Company's workforce, and robust assessments of the environment and biodiversity in the regions within which it operates.

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 67.41% 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, 33.8118%) 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, 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 Chad Sorba, P.Geo., Denison's Director, Technical Services, and Andy Yackulic, P.Geo., Denison's Director, Exploration, who are both Qualified Persons 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 technical de-risking 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 with respect to a FS for Phoenix; expectations regarding regulatory applications and approvals and the elements thereof, including the EIS; objectives and interpretations of the Midwest Concept Study and any potential for further studies and/or an EA; the Company's ESG objectives; expectations regarding the performance of the uranium market and global sentiment regarding nuclear energy; expectations regarding Denison's joint venture ownership interests; and expectations regarding the continuity of its agreements with third parties. 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 the Company's Annual Information Form dated March 27, 2023 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.