

PRESS RELEASE**Denison Reports Financial and Operational Results for Q3 2022, Including Significant De-Risking and Regulatory Milestones**

Toronto, ON – November 3, 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 September 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, *“It is an incredibly exciting time to be a Denison shareholder. Our company is delivering on our plans to systematically advance the development of Canada’s first In-Situ Recovery (ISR) uranium mine – having recently completed significant de-risking and regulatory milestones. This is occurring at the same time as interest in nuclear energy projects continues to increase as a result of the growing realization that nuclear power must play a critical role in our global battle against climate change.*

During the third quarter, Denison was successful in obtaining regulatory approvals to construct and operate the Phoenix ISR Feasibility Field Test (‘FFT’) facility and completed the construction and commissioning of the lixiviant injection modules necessary to launch the leaching phase of the FFT. Shortly thereafter, in October, the Company announced the history-making recovery of uranium bearing solution from the FFT following the successful acidification of the ISR test pattern. This result reflects the tireless effort of our Saskatoon-based technical team to de-risk and validate the 2018 selection of the ISR mining method for the Phoenix uranium deposit (‘Phoenix’). We have now demonstrated that Athabasca Basin uranium can be recovered by the ISR mining method.

In parallel, our regulatory team successfully advanced our assessment of the potential environmental impacts of the ISR uranium mine and processing plant proposed for Wheeler River, to the point of completing and submitting the draft Environmental Impact Statement (‘EIS’) for the project. Through this extensive process, it became apparent that the project has the potential to achieve a superior standard of environmental sustainability, with fewer residual effects remaining after mitigation when compared to conventional uranium mining and milling operations.

Taken together, these milestones have notably advanced the prospect of using the ISR mining method at Phoenix and bringing Denison back to the ranks of meaningful Canadian uranium producers during the second half of this decade. This timing is projected to be aligned with accelerating global demand for uranium following a wave of continuing and new investments into nuclear energy projects including recently announced (i) new builds of conventional nuclear power plants in Poland, South Korea, China, and the United Kingdom, (ii) reactor restarts and life extensions in the United States and Japan, and (iii) advancements in small-modular reactor (‘SMR’) projects like in Ontario, where Canada is positioning to be the first nation in the G7 to commercially deploy an SMR.”

Highlights**▪ Recovered uranium bearing solution from the Feasibility Field Test at Phoenix**

In October 2022, the Company announced that it had successfully recovered uranium bearing solution from the ISR FFT for Phoenix, at the Company’s 95% owned Wheeler River project (‘Wheeler River’ or the ‘Project’) at targeted rates and grades, indicating that the hydrogeological system at Phoenix was responding as expected with pH trends, flow characteristics, and uranium recovery meeting expectations. The preliminary results received to date demonstrated the successful acidification of the test pattern and recovery of uranium using the ISR mining method.

The Company previously announced, in July and August 2022, that it had received approval to construct and operate a pollutant control facility from the Saskatchewan Minister of Environment (‘SKMOE’) and a License to Possess, Use, Store and Transfer a Nuclear Substance from the Canadian Nuclear Safety Commission (‘CNSC’). With the receipt of these approvals, the Company was fully permitted to operate the FFT facility and carry out the process of recovering a uranium bearing solution from the Phoenix ore body. The Company completed the construction and wet commissioning of the lixiviant injection system for the FFT in September 2022 and commenced the leaching phase of the FFT. Given the highly successful results of the FFT, lixiviant injection has ceased, and operations at the Phoenix FFT site have transitioned from the leaching phase of the FFT to the neutralization phase, which is expected to be

completed before the end of the year. The final phase of the FFT, which involves management of the recovered solution, is expected to commence in the spring of 2023.

- **Achieved significant regulatory milestone for Wheeler River with the submitted draft Environmental Impact Statement**

In October 2022, Denison announced a significant regulatory milestone for Wheeler River with the submission of the draft EIS to the SKMOE and the CNSC. The EIS submission outlines the Company's assessment of the potential effects, including applicable mitigation measures, of the proposed ISR uranium mine and processing plant planned for Wheeler River, and reflects several years of baseline environmental data collection, technical assessments, plus extensive engagement and consultation with Indigenous and non-Indigenous interested parties.

- **Executed an exploration agreement with the Ya'thi Néné Lands and Resources Office, the Athabasca Nations, and Communities of the Nuhenéné**

In October 2022, Denison announced that it entered into an exploration agreement with the Ya'thi Néné Lands and Resources Office ('YNLRO'), Hatchet Lake Denesuliné First Nation, Black Lake Denesuliné First Nation, Fond du Lac Denesuliné First Nation (collectively, the 'Athabasca Nations') and the Northern Hamlet of Stony Rapids, the Northern Settlement of Uranium City, the Northern Settlement of Wollaston Lake and the Northern Settlement of Camsell Portage (collectively, the 'Athabasca Communities') in respect of Denison's exploration and evaluation activities within the traditional territory of the Athabasca Nations (the 'Nuhenéné').

The exploration agreement expresses the parties' intention to build a long-term relationship between Denison and the YNLR, Athabasca Nations, and Athabasca Communities. Denison wishes to conduct and advance its exploration activities in a sustainable manner that respects the Athabasca Nations' Indigenous rights, advances reconciliation with Indigenous peoples, and provides economic opportunities and other benefits to the Athabasca Communities in an authentic, cooperative and respectful way.

- **Expanded high-grade uranium mineralization at McClean Lake South**

In September 2022, Denison announced that assays received from exploration drilling completed at the Company's 22.5% owned McClean Lake Joint Venture ('McClean Lake' or 'MLJV') during the winter of 2022 have resulted in a significant expansion of the "new" high-grade unconformity-hosted zone of uranium mineralization discovered in 2021 between the McClean South 8W and 8E pods (see news release dated April 14, 2021). Ten drill holes completed during 2022 by Orano Canada Inc. ('Orano Canada'), 77.5% owner and operator of the MLJV, returned notable uranium mineralization, including drill hole MCS-58, which returned 2.96% U_3O_8 over 15.5 metres, including 24.49% U_3O_8 over 1.5 metres, located approximately 54 metres to the southeast of drill hole MCS-34, which was completed in 2021 and returned a mineralized interval of 8.67% U_3O_8 over 13.5 metres. Overall, the results from 2022 have successfully expanded the footprint of the "new" mineralized zone to approximately 180 metres in strike length.

- **Intersected additional high-grade uranium mineralization on the Waterfound Joint Venture**

In September 2022, Denison announced that uranium mineralization was encountered in three of the seven drill holes completed during the summer exploration program at the Orano Canada-operated Waterfound Joint Venture ('Waterfound'), highlighted by drill hole WF-74A, which intersected 4.75% eU_3O_8 over 13.3 metres, including a sub-interval grading 25.23% eU_3O_8 over 0.5 metres. The mineralized intersection from WF-74A represents the best mineralized hole drilled on the Waterfound property to date, and highlights the potential for the discovery of additional high-grade uranium mineralization further along strike to the west of the Alligator Zone. Denison holds an effective 24.68% ownership interest in Waterfound through its direct interest in the joint venture and its 50% ownership of JCU (Canada) Exploration Company Limited ('JCU').

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 T   (‘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 David Bronkhorst, P.Eng, Denison’s Vice President, Operations and Andy Yackulic, P.Geo., Denison’s Director Exploration who are 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 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 EIS; 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 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.