

PRESS RELEASE

Denison Announces \$16 Million Contract Award to Wood for Completion of Detailed Design Engineering for Flagship Phoenix ISR Project

Toronto, ON – January 22, 2024. Denison Mines Corp. (“Denison”) (TSX: DML, NYSE American: DNN) is pleased to announce the award to Wood Canada Limited (“Wood”), part of the leading global consulting and engineering firm Wood PLC, of a contract for the completion of detailed design engineering for the In-Situ Recovery (“ISR”) mining project planned for Denison’s flagship Phoenix uranium deposit (“Phoenix”).

Phoenix and the nearby Gryphon uranium deposit (“Gryphon”) are part of the Wheeler River Uranium Project (“Wheeler River” or the “Project”), which is the largest undeveloped uranium mining project in the infrastructure-rich eastern portion of the Athabasca Basin region in northern Saskatchewan, Canada. Denison has an effective 95% ownership interest in Wheeler River and is the Project operator.

An NI 43-101 Feasibility Study was completed by Wood in 2023 to evaluate the use of the ISR mining method at Phoenix (“Phoenix Feasibility Study”). The results of the Phoenix Feasibility Study reflected several years of technical de-risking efforts successfully completed by Denison and demonstrated very robust base-case after-tax (adjusted) economics – including a Net Present Value (“NPV”) of \$1.56 billion (100% basis), an Internal Rate of Return (“IRR”) of 90.0%, and an NPV to initial capital cost ratio in excess of 3.7 to 1. The base-case in the Phoenix Feasibility Study assumed uranium selling prices in the range of USD\$66.53 to USD\$70.11 per pound U₃O₈. The current spot price for uranium is approximately USD\$105 per pound U₃O₈, reflecting an increase of over 50% from the average of the base-case pricing assumptions used in the Phoenix Feasibility Study of USD\$68.99 per pound U₃O₈.

Following completion of the Phoenix Feasibility Study, Denison’s Board of Directors approved the continuation of efforts to advance Phoenix towards a final investment decision and, in late 2023, the Management Committee of the Wheeler River Joint Venture approved a budget for the applicable 2024 expenditures. Detailed engineering design constitutes a significant portion of the work remaining to advance Phoenix to the point where a decision can be made to proceed to construction and, ultimately, production.

Kevin Himbeault, Denison’s Vice President of Operations, commented, ***“In recognition of Wood’s performance leading the Phoenix Feasibility Study, competitive pricing, and alignment with our bid evaluation process, we are pleased to announce the award of a detailed design engineering contract to Wood. Maintaining continuity through completion of the Phoenix Feasibility Study, front-end engineering design, and detailed design allows us to build on our combined knowledge and working relationship to deliver an engineering package that will ultimately support the construction and operation of the first ISR uranium mining operation in the Athabasca Basin.”***

The scope of the facilities to be designed by Wood under this contract is extensive, including (i) site civil earthworks and distribution of utility piping throughout the main project site, (ii) electrical power distribution on site, (iii) surface piping and services for the mine wellfield, (iv) the process plant and related infrastructure, (v) operations complex, (vi) maintenance and related buildings, (vii) metallurgical and analytical laboratories, and (viii) site-wide communications systems.

Based on the currently anticipated scopes of work, the detailed design engineering contract with Wood is estimated to be up to approximately \$16 million in value, with the scope of work planned to commence in Q1’2024 and to potentially continue into H1’2025.

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. The project is host to the high-grade Phoenix and Gryphon uranium deposits, discovered by Denison in 2008 and 2014, respectively, and is a joint venture between Denison (90% and operator) and JCU (Canada) Exploration Company Limited ("JCU", 10%). In August 2023, Denison filed a technical report summarizing the results of (i) the feasibility study completed for ISR mining of the high-grade Phoenix uranium deposit and (ii) a cost update to the 2018 Pre-Feasibility Study for conventional underground mining of the basement-hosted Gryphon uranium deposit. Based on the respective studies, both deposits have the potential to be competitive with the lowest cost uranium mining operations in the world. Permitting efforts for the planned Phoenix ISR operation commenced in 2019 and have advanced significantly, with licensing in progress and a draft Environmental Impact Statement submitted for regulatory and public review in October 2022. More information is available in the technical report titled "NI 43-101 Technical Report on the Wheeler River Project Athabasca Basin, Saskatchewan, Canada" dated August 8, 2023 with an effective date of June 23, 2023, a copy of which is available on Denison's website and under its profile on SEDAR+ at www.sedarplus.ca and on EDGAR at www.sec.gov/edgar.shtml.

About Denison

Denison is a uranium exploration and development company with interests focused in the Athabasca Basin region of northern Saskatchewan, Canada. In addition to Denison's effective 95% interest in its flagship Wheeler River Uranium Project, Denison's interests in Saskatchewan include a 22.5% ownership interest in the McClean Lake Joint Venture, which comprises 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 67.41% interest in the Tthe Heldeth Tùé ("THT") 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 ~285,000 hectares in the Athabasca Basin region.

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Qualified Persons

The technical information contained in this release has been reviewed and approved by Mr. Chad Sorba, P. Geo, Denison's Vice President Technical Services & Project Evaluation, and Mr. Andrew Yackulic, P. Geo., Denison's Vice President Exploration, each of whom is a Qualified Person in accordance with the requirements of Canadian National Instrument 43-101 Mineral Disclosure Standards ("NI 43-101").

Cautionary Statement Regarding Forward-Looking Statements

Certain information contained in this press release constitutes "forward-looking information", within the meaning of the United States Private Securities Litigation Reform Act of 1995 and similar 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: the anticipated services Wood will be contracted to provide and the objectives to be achieved with the engagement of Wood, and the anticipated costs thereof; the interpretation of the Phoenix Feasibility Study and expectations with respect thereto, including estimates of NPV, IRR, capital costs and uranium prices; and Denison's percentage interest in its properties and its plans and agreements with its joint venture 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, performance or achievements of Denison to be materially different from those expressed or implied by forward-looking statements. 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 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 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.

Cautionary Note to United States Investors Concerning Estimates of Mineral Resources and Mineral Reserves:

This news release may use the terms 'measured', 'indicated' and 'inferred' mineral resources. United States investors are advised that 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 NI 43-101 and are recognized and required by Canadian regulations. 'Inferred mineral resources' have a great amount of uncertainty as to their existence, and as to their economic and legal feasibility. 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 an inferred mineral resource exists and/or will ever be upgraded to a higher category, nor assume that all or any part of measured or indicated mineral resources will ever be converted into mineral reserves.

Effective February 2019, the United States Securities and Exchange Commission ("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.