Denison Announces Completion of Conceptual Mining Study Evaluating ISR for Midwest and Plans to Advance Efforts in 2023

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TORONTO, April 12, 2023 - Denison Mines Corp. ("Denison" or the "Company") (TSX: DML) (NYSE American: DNN) is announce the successful completion of an internal conceptual mining study (the "Concept Study") examining the potent application of the In-Situ Recovery ("ISR") mining method at the Company's 25.17% owned Midwest project ("Midwest" Concept Study was prepared by Denison during 2022 and was formally issued to the Midwest Joint Venture ("MWJV") 2023. Based on the positive results of the Concept Study, the MWJV has now provided Denison with approval to comp additional ISR-related evaluation work for Midwest in 2023. View PDF version.

Midwest is located approximately 25 kilometres, by existing roads, from the 22.5% Denison owned McClean Lake uran is a joint venture owned by Denison (25.17%) and Orano Canada Inc. ("Orano Canada") (74.83%). Orano Canada is pa Orano Group, which is recognized as a leading international operator in the field of nuclear materials, with activities incl uranium mining, conversion, enrichment, and other fuel services.

David Cates, Denison's President & CEO, commented, "Since the completion of the Wheeler River Pre-Feasibility Stud Denison has invested in the development of a highly skilled and motivated Saskatoon-based technical team that has de industry leadership in the evaluation of the application of the ISR mining method to high-grade uranium deposits in the Basin.

We are encouraged by the results of the Midwest Concept Study, and we are pleased to continue the further evaluation potential application of the ISR mining method to Midwest, with the support of our partner Orano."

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

Property Location & History

Midwest is situated in the eastern portion of the Athabasca Basin region in northern Saskatchewan. The property is app one kilometre from the Points North Landing airstrip and about 25 kilometres west, by existing roads, from the McClean which is jointly owned by Denison (22.5%) and Orano Canada (77.5%). Access to Midwest is by both road and air. Goo transported to the site by truck over an all-weather road connecting with the provincial highway system. Air transportati provided through the Points North airstrip (See Figure 1).

Initial exploration work at Midwest began in 1966, and Denison first became an owner of the project in 1987. In 2007, C Canada completed an internal study evaluating the feasibility of mining the Midwest Main deposit via open pit mining m processing of the resulting ore at the McClean Lake mill. The MWJV subsequently advanced the project through the en assessment process as an open pit mine and the final version of the Midwest Project Environmental Impact Statement approved in September 2012.

Estimated Mineral Resources

The Midwest Main uranium deposit ("Midwest Main") is estimated to contain, on a 100% ownership basis, an Indicated resource of 39,900,000 lbs U_3O_8, based on 453,000 tonnes at an average grade of 4.00% U_3O_8, and an Inferred miner of 11,500,000 lbs U_3O_8 based on 793,000 tonnes at an average grade of 0.66% U_3O_8. Midwest Main is lens to cigar sh metres long, 10 to over 100 metres wide, with thicknesses ranging from 5 metres to 10 metres. The deposit consists of near-massive high-grade mineralized core that straddles the unconformity approximately 210 metres below surface. Th high-grade core is surrounded by lower-grade fracture-controlled mineralization primarily in sandstone.

Midwest is also host to the Midwest A uranium deposit ("Midwest A"), which is estimated to contain, on a 100% owners

Indicated mineral resource of 10,800,000 lbs U_3O_8, based on 566,000 tonnes at an average grade of 0.87% U_3O_8, and mineral resources totaling 6,700,000 lbs U_3O_8 based on 53,000 tonnes at an average grade of 5.8% U_3O_8. Midwest A i approximately 450 metres long, 10 to 60 metres wide, ranges up to 70 metres in thickness and occurs between 150 an metres below surface. Mineralization straddles the unconformity contact with minor amounts hosted within basement st immediately below the unconformity. Thicker zones of mineralization above the unconformity are concentrated in congl units at the base of the Athabasca sandstone. Similar to Midwest Main, a high-grade core of mineralization is surrounde lower-grade fracture-controlled envelope.

The mineral resource estimate for Midwest (and the technical information herein) is described in the independent techn prepared in accordance with NI 43-101, titled "Technical Report with an Updated Mineral Resource Estimate for the Mi Property, Northern Saskatchewan, Canada", dated March 26, 2018.

Concept Study

The Concept Study evaluated the potential use of the ISR mining method at Midwest. In an ISR uranium mining operati solution (lixiviant) is injected into the ore zone through a series of drill holes known as injection wells. The lixiviant leach uranium as it travels through the ore zone and is then recovered as a uranium bearing solution ("UBS"), which is pumpe surface via a series of recovery wells. Once on surface, the UBS is sent to a surface processing plant for the chemical s of the uranium. Following the uranium removal, the lixiviant is reconditioned and returned to the wellfield for further proc ISR mining method accounts for a significant portion of uranium mine production globally and is generally considered th lowest-cost uranium mining method in the world - owing to the fact that the method eliminates (i) the surface disturbanc costs associated with physically removing ore and waste from the ground, and (ii) the need for conventional tailings trea storage, which are normally associated with underground or open pit mining operations.

The internal studies undertaken on Midwest are preliminary in nature and there is significant uncertainty with respect to potential for, and the economic and technical risks associated with, the use of ISR mining for the Midwest deposits. Fur technical evaluations may not be advisable or completed if the preliminary results of internal studies are not maintained testing and/or analysis.

About Denison

Denison is a uranium exploration and development company with interests focused in the Athabasca Basin region of no Saskatchewan, Canada The Company has an effective 95% interest in its flagship Wheeler River Uranium Project, whi 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 join which includes several uranium deposits and the McClean Lake uranium mill that is contracted to process the ore from Lake mine under a toll milling agreement, plus a 25.17% interest in the Midwest Main and Midwest A deposits, and a 6 interest in the Tthe Heldeth Túé ("THT," formerly J Zone) and Huskie deposits on the Waterbury Lake property. The Mi Midwest A, THT and Huskie deposits are each 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 Cana 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 ~300,000 hectares in the Athabasca Bas

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

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Qualified Persons

The disclosure of scientific or technical information contained in this release has been reviewed and approved, as appli Mr. Chad Sorba, P.Geo., Denison's Director, Technical Services or Mr. Andrew Yackulic, P. Geo., Denison's Director, E who are Qualified Persons in accordance with the requirements of NI 43-101.

Cautionary Statement Regarding Forward-Looking Statements

Certain information contained in this news release constitutes 'forward-looking information', within the meaning of the a United States and Canadian legislation, concerning the business, operations and financial performance and condition o Generally, these forward-looking statements can be identified by the use of forward-looking terminology such as 'potent 'expects', 'budget', 'scheduled', 'estimates', 'forecasts', 'intends', 'anticipates', or 'believes', or the negatives and/or varia words and phrases, or state that certain actions, events or results 'may', 'could', 'would', 'might' or 'will' 'be taken', 'occur

achieved'.

In particular, this news release contains forward-looking information pertaining to the following: interpretation of the prel results of the Concept Study; expectations with respect to evaluation work and studies, including, scope, timing and the results thereof; the results and interpretations of the mineral resource estimate; and expectations regarding its joint ven ownership interests and the continuity of its agreements with its partners and third parties.

Forward looking statements are based on the opinions and estimates of management as of the date such statements a and they are subject to known and unknown risks, uncertainties and other factors that may cause the actual results, lev performance or achievements of Denison to be materially different from those expressed or implied by such forward-loo statements. For example, the modelling and assumptions upon which the work plans for planned evaluation work for M based may not be maintained after further work is completed. In addition, Denison may decide or otherwise be required discontinue testing, evaluation and development work if it is unable to maintain or otherwise secure the necessary reso as joint venture approvals, testing facilities, capital funding, regulatory approvals, etc.). Denison believes that the expec reflected in this forward-looking information are reasonable but no assurance can be given that these expectations will accurate and results may differ materially from those anticipated in this forward-looking information. For a discussion in risks and other factors that could influence forward-looking events, please refer to the factors discussed in Denison's An Information Form dated March 27, 2023 under the heading 'Risk Factors'. These factors are not, and should not be con being exhaustive.

Accordingly, readers should not place undue reliance on forward-looking statements. The forward-looking information c this news release is expressly qualified by this cautionary statement. Any forward-looking information and the assumpti with respect thereto speaks only as of the date of this news release. Denison does not undertake any obligation to publ or revise any forward-looking information after the date of this news release to conform such information to actual resul 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 ne may use the terms 'measured', 'indicated' and 'inferred' mineral resources. United States investors are advised that suc have been prepared in accordance with the definition standards on mineral reserves of the Canadian Institute of Mining and Petroleum referred to in Canadian National Instrument 43-101 Mineral Disclosure Standards ('NI 43-101') and are r and required by Canadian regulations. 'Inferred mineral resources' have a great amount of uncertainty as to their existe to their economic and legal feasibility. It cannot be assumed that all or any part of an inferred mineral resource will ever upgraded to a higher category. Under Canadian rules, estimates of inferred mineral resources may not form the basis o or other economic studies. United States investors are cautioned not to assume that all or any part of an inferred miner exists, or is economically or legally mineable. United States investors are also cautioned not to assume that all or any p 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 d rules to modernize the mineral property disclosure requirements for issuers whose securities are registered with the SE Exchange Act and as a result, the SEC now recognizes estimates of "measured mineral resources", "indicated mineral and "inferred mineral resources". In addition, the SEC has amended its definitions of "proven mineral reserves" and "pr mineral reserves" to be "substantially similar" to the corresponding definitions under the CIM Standards, as required un 43-101. However, information regarding mineral resources or mineral reserves in Denison's disclosure may not be com similar information made public by United States companies.

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