

Denison Reports New High-Grade Uranium Discovery on the Waterbury Lake Property

TORONTO, ONTARIO--(Marketwired - Aug. 1, 2017) - Denison Mines Corp. ("Denison" or the "Company") (TSX:DML)(NYSE MKT:DNN)(NYSE American:DNN) is pleased to report a new high-grade uranium intersection in basement rocks from the first hole completed as part of the summer 2017 drilling program at the Waterbury Lake property. Drill hole WAT-17-443 intersected 1.1% eU3O8 over 0.8 metres (from 296.9 to 297.7 metres) approximately 1.5 kilometres to the northeast of the property's J Zone uranium deposit. The high-grade mineralization occurs immediately below a broader 10.3 metre mineralized interval (from 282.8 to 293.1 metres) with an average grade of 0.15% eU3O8. The mineralization is open in all directions and follow-up drilling is presently underway. Results are reported as preliminary radiometric equivalent grades ("eU3O8") derived from a calibrated downhole total gamma probe. The Company subsequently reports definitive assay grades following sampling and chemical analysis of the mineralized drill core.

Dale Verran, Denison's Vice President of Exploration, commented, ***"This is an exciting start to our summer program at Waterbury Lake. This initial mineralized intercept, and the associated alteration and structure, bodes well for this untested trend on the project. Our extensive knowledge from the Gryphon basement-hosted deposit puts our team in good stead to evaluate this prospect and hopefully build upon the initial intercept. We look forward to reporting further results over the next few weeks."***

Drill hole WAT17-443 was orientated steeply to the southeast (azimuth 157°, dip -73°) and intersected the sub-Athabasca unconformity at a depth of 212 metres, followed by a moderately north dipping package of basement rocks dominated by semi-pelitic gneisses. Mineralization was intersected approximately 70 metres vertically below the unconformity in semi-pelitic gneiss and was associated with strong hematite alteration, bleaching and faulting - features typical of basement-hosted uranium mineralization within the Athabasca Basin. The true thickness of the mineralization is yet to be determined.

The drill hole is the first of a planned six-hole program to test an east-west trend which shares interpreted geological similarities with the east-west trend that hosts the J Zone and Roughrider deposits, which are located approximately one kilometer to the south. The location of drill hole WAT17-443 and the J Zone and Roughrider deposits are provided in Figure 1.

To view Figure 1 please click the following link:<http://media3.marketwire.com/docs/DenisonFigure1.pdf>

The J Zone deposit, located on the Waterbury Lake property, occurs at the sub-Athabasca unconformity and is estimated to contain indicated resources of 12.8 million pounds U3O8 based on 291,000 tonnes of mineralization at an average grade of 2.0% U3O8. The Roughrider deposit on Rio Tinto's Roughrider property is located immediately along strike to the east of J Zone deposit and occurs at the sub-Athabasca unconformity and below within the basement rocks. Prior to acquisition by Rio Tinto in 2012, the Roughrider deposit was estimated to contain indicated resources of 17.2 million pounds U3O8 based on 394,200 tonnes of mineralization at an average grade of 1.98% U3O8 and inferred resources of 40.7 million pounds U3O8 based on 161,600 tonnes of mineralization at an average grade of 11.43% U3O8.

The Waterbury Lake property consists of multiple claims covering 40,256 hectares, and is located in the infrastructure rich eastern portion of the Athabasca Basin region in northern Saskatchewan. The property is jointly owned by Denison (63.63%) and Korea Waterbury Uranium Limited Partnership ("KWULP") (36.37%) through the Waterbury Lake Uranium Limited Partnership ("WLULP"). KWULP consists of a consortium of investors in which Korea Hydro & Nuclear Power ("KHNP") holds a majority position. KWULP has elected not to fund the 2017 exploration program and, as a result, will incur dilution of its ownership interest in the WLULP.

KHNP is also a significant shareholder in Denison, holding 58,284,000 common shares of Denison, which represents approximately 10.42% of the Company's issued and outstanding common shares.

For more information on the J Zone deposit, please refer to the Technical Report on the Mineral Resource Estimate on the J Zone Uranium Deposit, Waterbury Lake Property dated September 6, 2013 by Allan Armitage, Ph. D., P. Geo, and Alan Sexton, M.Sc., P.Geo, of GeoVector Management Inc. available on Denison's website and under the Company's profile on SEDAR (www.sedar.com). For further details on the Roughrider deposit, prior to acquisition by Rio Tinto in 2012, please refer to the Preliminary Economic Assessment Technical Report for the East and West Zones Roughrider Uranium Project, Saskatchewan dated September 2013, 2011 by SRK Consulting (Canada) Inc. available on SEDAR.

Qualified Persons and Data Quality

Dale Verran, MSc, P.Geo, Pr.Sci.Nat., Denison's Vice President, Exploration, who is a Qualified Person in accordance with the requirements of NI 43-101 has reviewed and approved the technical information contained in this release. The Company currently reports preliminary radiometric equivalent grades ("eU3O8"), derived from a calibrated downhole total gamma probe, during its exploration programs and subsequently reports definitive assay grades following sampling and chemical analysis of the mineralized drill core. Radiometric equivalent probe results are subject to verification procedures by qualified persons employed by Denison prior to disclosure. For further details on the total gamma downhole probe methods employed by

Denison, QAQC procedures and data verification procedures please see Denison's Annual Information Form dated March 23, 2017 filed under the Company's profile on SEDAR.

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 its 60% owned Wheeler River project, which hosts the high grade Phoenix and Gryphon uranium deposits, Denison's exploration portfolio consists of numerous projects covering approximately 359,000 hectares in the Athabasca Basin region, including 340,000 hectares in the infrastructure rich eastern portion of the Athabasca Basin. Denison's interests in Saskatchewan also include a 22.5% ownership interest in the McClean Lake joint venture ("MLJV"), which includes several uranium deposits and the McClean Lake uranium mill, which is currently processing ore from the Cigar Lake mine under a toll milling agreement, plus a 25.17% interest in the Midwest deposit and a 63.63% interest in the J Zone deposit on the Waterbury Lake property. Both the Midwest and J Zone deposits are located within 20 kilometres of the McClean Lake mill.

Denison is also engaged in mine decommissioning and environmental services through its Denison Environmental Services division and is the manager of Uranium Participation Corp., a publicly traded company which invests in uranium oxide and uranium hexafluoride.

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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 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: exploration (including drilling) and evaluation activities, plans and objectives, and Denison's percentage in its properties and its plans and agreements with its joint venture partners, as applicable. 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 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 23, 2017 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 Measured, Indicated and Inferred Mineral Resources: *This press release may use the terms "measured", "indicated" and "inferred" mineral resources. United States investors are advised that while such terms are recognized and required by Canadian regulations, the United States Securities and Exchange Commission does not recognize them. "Inferred mineral resources" have a great amount of uncertainty as to their existence, and as to their economic and legal feasibility. It cannot be assumed that all or any part of an inferred mineral resource will ever be upgraded to a higher category. 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 measured or indicated mineral resources will ever be converted into mineral reserves. United States investors are also cautioned not to assume that all or any part of an inferred mineral resource exists, or is economically or legally mineable.

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