

PRESS RELEASE

**Denison Announces Exploration Agreement
with the Ya'thi Néné Lands and Resources Office,
the Athabasca Nations, and Communities of the Nuhenéné**

Toronto, ON – October 20, 2022. Denison Mines Corp. (“Denison” or the “Company”) (TSX: DML; NYSE American: DNN) is pleased to announce that it has entered into an exploration agreement (the “Exploration Agreement”) with the Ya'thi Néné Lands and Resources Office (“YNLR”), 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.

David Cates, Denison’s President and CEO, commented that ***“This agreement formalizes years of work that Denison and the YNLR have undertaken together in the spirit of collaboration, resulting in several notable achievements, including the renaming of Waterbury Lake’s J Zone deposit to Tthe Heldeth Tō̄y in honour of the Denesuliné territory in which the deposit is located. Our past and present actions demonstrate a mutual willingness to engage in positive business practices that advance reconciliation, and this Exploration Agreement further codifies how the principles expressed in Denison’s Indigenous Peoples Policy will guide our activities in the Nuhenéné into the future.”***

Mary Denechezhe, YNLR Board Chair, stated that ***“Our communities want to participate in and benefit from projects happening on our lands, which historically has not always been the case. This Exploration Agreement will provide certainty to our Basin communities that there will be meaningful engagement on proposed projects and monitoring of exploration activities to ensure the environment and all Treaty Rights are respected. The economic benefits will help to strengthen our communities in the Basin. We acknowledge and respect Denison’s leadership in advancing reconciliation with our communities.”***

The Exploration Agreement establishes a progressive and sustainable basis for maintaining a cooperative and mutually beneficial relationship between the parties, which respects the rights and interests of the YNLR, Athabasca Nations and Athabasca Communities, while supporting Denison’s exploration and evaluation activities. The Exploration Agreement includes a framework for predictable information-sharing and permitting processes, environmental protection and monitoring, as well as the sharing of benefits to support community development initiatives. Through this cooperative approach, Denison is able to obtain consent for its exploration and evaluation activities within the Nuhenéné.

About YNLR and the Athabasca Nations and Communities

The YNLR is a non-profit organization owned by the Athabasca Nations of Hatchet Lake Denesuliné First Nation, Black Lake Denesuliné First Nation, Fond du Lac Denesuliné First Nation and the Athabasca Communities of 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.

The YNLR was established in June 2016 with the mandate to promote and enhance the environmental, social, economic, and cultural well-being of current and future Athabasca residents.

About Denison

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. Denison's interests in Saskatchewan also include a 22.5% ownership interest in the McClean Lake joint venture, which includes 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 67.01% interest in the Tthe Heldeth Tuvé ("THT", formerly J Zone) and Huskie deposits on the Waterbury Lake property. The Midwest Main, 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 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.

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Cautionary Statement Regarding Forward-Looking Statements

Certain information contained in this news 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 'potential', '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' or 'be achieved'.

In particular, this news release contains forward-looking information pertaining to the following: expectations with respect to the obligations of, and intended cooperation with, the parties to the Exploration Agreement; intentions regarding engagement with respect to the Company's exploration and evaluation programs; and expectations regarding its joint venture 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 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, Denison may decide or otherwise be required to discontinue testing, evaluation and development work if it is unable to maintain or otherwise secure the necessary resources (such as testing facilities, capital funding, regulatory approvals, 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 or subsequent quarterly financial reports 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 news 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 news release. Denison does not undertake any obligation to publicly update or revise any forward-looking information after the date of this news release to conform such information to actual results or to changes in Denison's expectations except as otherwise required by applicable legislation.