

PRESS RELEASE

DENISON ANNOUNCES EXECUTION OF AGREEMENTS WITH THE ENGLISH RIVER FIRST NATION

Toronto, ON – April 6, 2021. Denison Mines Corp. ("Denison" or the "Company") (DML: TSX, DNN: NYSE American) is pleased to announce that it has entered into a Participation and Funding Agreement (the "Participation Agreement") and Letter of Intent (the "LOI") with the English River First Nation ("ERFN") in connection with the advancement of the proposed in-situ recovery ("ISR") uranium mining operation at Denison's 90% owned Wheeler River Uranium Project ("Wheeler River Project"), which is located in the eastern portion of the Athabasca Basin region, in northern Saskatchewan. Additionally, Denison and ERFN have also entered into an Exploration Agreement (the "Exploration Agreement") in respect of Denison's exploration and evaluation activities within the ERFN traditional territories.

These agreements reflect Denison's desire to operate its business in a progressive and sustainable manner that respects ERFN rights and advances reconciliation with Indigenous peoples. The agreements provide ERFN with economic opportunities and other benefits, while establishing a foundation for future collaboration in an authentic, cooperative, and respectful way – designed to cultivate a long-term partnership in support of the Company's activities, including the advancement of the Company's flagship Wheeler River Project, which is currently advancing through a Federal and Provincial Environmental Assessment ("EA") process.

David Cates, President & CEO of Denison commented, "Many of Denison's interests in the Athabasca Basin region, including our flagship Wheeler River Project, are situated in the traditional territory of ERFN. We acknowledge and respect the rights of ERFN and are pleased to formalize our Company's effort to work with ERFN in the pursuit of achieving (1) a genuine understanding of the interests of the Nation, and (2) meaningful mutual benefits from Denison's activities. We feel strongly that the future of the Wheeler River Project will be greatly enhanced by partnering with ERFN – ensuring Indigenous knowledge regarding historical and contemporary land use, environmental knowledge, and environmental stewardship associated with ERFN's connection to this land, are all embedded as essential components of the EA process and project designs. Together, Denison and ERFN are putting reconciliation principles into action and contributing to the important evolution of Indigenous and industry relationships in the province of Saskatchewan."

Chief Jerry Bernard, of ERFN, added, "We look forward to building on our positive relationship with Denison Mines. The participation and exploration agreements underscore the importance of starting in a good way. That means recognizing and considering ERFN's rights and traditional land and resources uses in all proposed activities on our ancestral lands. The agreements will provide benefits for our community by providing employment and contracting opportunities, annual financial contributions and the ability to help shape project activities to minimize environmental impacts."

Participation Funding Agreement & Letter of Intent

The Participation Agreement and LOI outline a mutually agreeable framework and applicable funding arrangements to facilitate ERFN's participation and engagement in the EA process for the Wheeler River Project – including ERFN's meaningful contribution to Denison's environmental understanding of the Wheeler River Project in a holistic way that respects ERFN's rights and interests. The LOI also outlines a mutual desire to co-develop a future Shared Prosperity Agreement with respect to the Wheeler River Project, which is intended to reflect a shared vision of how new uranium mining operations in the Athabasca Basin region can prioritize sustainability while also offering new and creative ways to generate wealth and prosperity for all parties involved in the advancement of the Project.

Exploration Agreement

The Exploration Agreement establishes a framework for a cooperative and mutually beneficial relationship between Denison and ERFN whereby Denison's exploration and evaluation activities are consented to by ERFN and Denison agrees to support ERFN's interests in relation to community development and benefits, environmental protection and monitoring, as well as sustainable and predictable consultation and engagement processes. Through this cooperative approach, the parties seek to continue building a strong and positive foundation for Denison to proceed with its exploration and evaluation activities, in the traditional territory of ERFN, in a manner that is informed by and respects the rights and interests of ERFN.

About ERFN

English River First Nation is located about 500 km north of Saskatoon in Treaty 10, with a main settlement at Patuanak, alongside the Churchill River. ERFN has seven different reserves: Porter Island, Cree Lake, Elak Dase, Knee Lake, Dipper Rapids, Wapachewunak and La Plonge.

ERFN is a multilingual community with various combinations of Dene, Cree, Michif, English and French spoken by over 1,400 members. The "people of the river" are known for their bold and collaborative spirit and trusting and humble nature. They are dedicated to stewardship of the land and the education of future generations.

An industrious and entrepreneurial group, ERFN has led the way in efficient economic relationship building through its support and advancement of community development partnerships. These relationships have been instrumental in advancing community support and understanding across northern Saskatchewan.

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 – including combined Indicated Mineral Resources of 132.1 million pounds U_3O_8 (1,809,000 tonnes at an average grade of 3.3% U_3O_8), plus combined Inferred Mineral Resources of 3.0 million pounds U_3O_8 (82,000 tonnes at an average grade of 1.7% U_3O_8). 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 (10%).

A Pre-Feasibility Study ("PFS") was completed for Wheeler River in late 2018, considering the potential economic merit of developing the Phoenix deposit as an ISR operation and the Gryphon deposit as a conventional underground mining operation. Taken together, the project is estimated to have mine production of 109.4 million pounds U₃O₈ over a 14-year mine life, with a base case pre-tax NPV of \$1.31 billion (8% discount rate), Internal Rate of Return ("IRR") of 38.7%, and initial pre-production capital expenditures of \$322.5 million. The Phoenix ISR operation is estimated to have a stand-alone base case pre-tax NPV of \$930.4 million (8% discount rate), IRR of 43.3%, initial pre-production capital expenditures of \$322.5 million, and industry leading average operating costs of US\$3.33/lb U₃O₈. The PFS is prepared on a project (100% ownership) and pre-tax basis, as each of the partners to the Wheeler River Joint Venture are subject to different tax and other obligations.

Further details regarding the PFS, including additional scientific and technical information, as well as after-tax results attributable to Denison's ownership interest, are described in greater detail in the NI 43-101 Technical Report titled "Pre-feasibility Study for the Wheeler River Uranium Project, Saskatchewan, Canada" dated October 30, 2018 with an effective date of September 24, 2018. A copy of this report is available on Denison's website and under its profile on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

Denison suspended certain activities at Wheeler River during 2020, including the EA process, which is on the critical path to achieving the project development schedule outlined in the PFS. While the EA process has resumed, the Company is not currently able to estimate the impact of the 2020 suspension on the project development schedule outlined in the PFS, and users are cautioned against relying on the estimates provided therein regarding the start of pre-production activities in 2021 and first production in 2024.

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 the Wheeler River project, Denison's interests in the Athabasca Basin include a 22.5% ownership interest in the McClean Lake joint venture ("MLJV"), 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 and Midwest A deposits, and a 66.90% interest in the Tthe Heldeth Túé ("THT," formerly J Zone) and Huskie deposits on the Waterbury Lake property. The Midwest, Midwest A, THT and Huskie deposits are located within 20 kilometres of the McClean Lake mill. In addition, Denison has an extensive portfolio of exploration projects covering approximately 270,000 hectares in the Athabasca Basin region.

Denison is engaged in mine decommissioning and environmental services through its Closed Mines group (formerly Denison Environmental Services), which manages Denison's Elliot Lake reclamation projects and provides post-closure mine care and maintenance services to a variety of industry and government clients.

Denison is also the manager of Uranium Participation Corp., a publicly traded company which invests in uranium oxide and uranium hexafluoride.

For more information, please contact

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Investor Relations

Follow Denison on Twitter @DenisonMinesCo

Qualified Persons

The technical information contained in this release has been reviewed and approved by Mr. David Bronkhorst, P.Eng, Denison's Vice President, Operations, who is a Qualified Person 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 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 news release contains forward-looking information pertaining to the following: current intentions and objectives regarding engagement with respect to the Wheeler River project, including participation funding and the co-development of a shared prosperity agreement; expectations with respect to exploration and intended cooperation with ERFN with respect thereto; development and expansion plans and objectives, generally; 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, the modelling and assumptions upon which the work plans for exploration and/or the Wheeler River Project are based may not be maintained after further work is completed. In addition, Denison may decide or otherwise be required to discontinue exploration, testing, evaluation and development work, including its advancement and planned completion of the EA process at Wheeler River, if it is unable to maintain or otherwise secure the necessary resources (such as testing facilities, capital funding, regulatory approvals, etc.) or operations are otherwise affected by COVID-19 and its potentially far-reaching impacts. This may impact Denison's ability to meet the objectives stated in this press release, or the objectives of Denison and ERFN could become misaligned. 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 13, 2020 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.

Cautionary Note to United States Investors Concerning Estimates of Mineral Resources and Mineral Reserves: This press release may use terms such as "measured", "indicated" and/or "inferred" mineral resources and "proven" or "probable" mineral reserves, which are terms defined with reference to the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") CIM Definition Standards on Mineral Resources and Mineral Reserves ("CIM Standards"). The Company's descriptions of its projects using CIM Standards may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements under the United States federal securities laws and the rules and regulations thereunder.