

PRESS RELEASE

DENISON ANNOUNCES FOCUSED CAD\$14.5M EXPLORATION AND EVALUATION PROGRAM BUDGET FOR 2017

Toronto, ON – January 17, 2017 Denison Mines Corp. (“Denison” or the “Company”) (DML: TSX, DNN: NYSE MKT) is pleased to announce the details of its CAD\$14.5 million (Denison’s share) exploration and evaluation budget for 2017. The budget is focused on the Company’s 60% owned flagship Wheeler River project, which is located in the infrastructure rich eastern portion of the Athabasca Basin region, in northern Saskatchewan.

Following a break in field activities, after the completion of a highly successful summer exploration program in October 2016, exploration drilling and project development work resumed at Wheeler River in early January 2017. The 2017 work program for Wheeler River includes approximately 46,000 metres of infill and exploration drilling designed to confirm and expand uranium mineralization at or near the Gryphon deposit, ahead of the completion of a Pre-Feasibility Study (“PFS”) for the project. Accordingly, a CAD\$12.5 million work program and budget has been approved for Wheeler River in 2017, of which Denison’s share will be CAD\$9.4 million – representing 75% of the project budget. As previously announced on [January 10, 2017](#), Denison has entered into an agreement with its Wheeler River Joint Venture partners, Cameco Corp. (“Cameco”) and JCU (Canada) Exploration Limited (“JCU”) to fund 75% of Joint Venture expenses in 2017 and 2018 (ordinarily 60%) in exchange for an increase in Denison’s interest in the project to up to approximately 66%. Under the terms of the agreement, Cameco will fund 50% of its ordinary 30% share in 2017 and 2018, and JCU is expected to continue to fund its 10% interest in the project.

Additional exploration programs are expected to commence in the coming weeks on five high-priority pipeline projects included in Denison’s significant Athabasca-focused exploration portfolio. High-priority projects for 2017 include the recently acquired Hook-Carter project, in the western portion of the Athabasca Basin, as well as the Waterbury Lake, Murphy Lake, Crawford Lake and Moon Lake South projects in the eastern portion of the Athabasca Basin. The Company’s exploration and evaluation activities for 2017 are fully funded with a total budget of approximately CAD\$14.5 million (Denison’s share). Including partner’s share of expenses, the projected 2017 work program is budgeted to cost over CAD\$20.5 million, and is expected to include approximately 68,000 metres of drilling across eight of Denison’s projects.

David Cates, President and CEO of Denison, commented, *“Following the recent announcement of our agreement to increase our interest in our flagship Wheeler River project, from our existing 60% interest to up to approximately 66%, it should come as no surprise that our 2017 budget is heavily weighted towards the work required to advance Wheeler River towards the completion of a PFS. With new mineralization discovered in the immediate vicinity of the Gryphon deposit on numerous fronts in 2016, and the addition of the highly prospective Hook-Carter project to our exploration pipeline portfolio in late 2016, we are optimistic that 2017 is poised to be another high-impact year for Denison’s Saskatoon based exploration team.”*

Wheeler River Project

In April 2016, Denison released a Preliminary Economic Analysis (“PEA”) for the Wheeler River project, which evaluated the economic merit of co-developing the Gryphon and Phoenix deposits. The PEA returned a Pre-Tax internal rate of return (“IRR”) of 20.4%, based on a uranium price of US\$44/lb U₃O₈ and initial CAPEX for Denison’s 60% interest of CAD\$336 million. A Pre-Feasibility Study (“PFS”) was initiated later in 2016 with completion originally expected in mid-2017.

Since the PEA was released, Denison completed a highly successful 2016 exploration drilling program, which identified additional mineralization in the immediate vicinity of the Gryphon deposit – including the newly discovered D Series lenses to the northwest and the up-dip and down-dip expansion of the A and B Series lenses. These discoveries provide potential to materially increase the estimated mineral resources at Gryphon, which could extend the mine life in the economic model for the Gryphon deposit and ultimately improve the economics of the project. As a result, the original timeline for completing infill drilling at the Gryphon deposit during H1-2017 has been modified to allow for additional exploration and infill drilling throughout the 2017 winter and summer field seasons. Additional infill drilling is intended to improve the indicated resource base at Gryphon for inclusion in the PFS. Consequently, the completion of the PFS has also been deferred from H2-2017 to H1-2018.

Project Development

Project development field programs, including environmental and engineering data collection programs required for the PFS and Environmental Assessment process, commenced at Wheeler River in June 2016 (see Denison's [Press Release dated November 2, 2016](#) for a detailed update). Existing data collection programs will continue during 2017 and additional programs, including metallurgical testing and analysis, will be initiated. Further engineering studies related to shaft sinking methodologies, mining methods and water treatment will also be initiated in 2017. In addition, throughout the year, Denison expects to continue to advance and strengthen relationships with various northern communities.

Gryphon Infill Drilling

Concurrent with project development field programs, infill drilling will continue at the Gryphon deposit in 2017 in order to upgrade the inferred resources to an indicated level of confidence. This drilling program involves increasing the previous 50 x 50 metre drill spacing to an approximate 25 x 25 metre spacing across the previously defined A, B and C Series lenses of the Gryphon deposit. An initial set of five infill drill holes was completed during 2016 and approximately 35 infill drill holes are expected to be completed during 2017, to achieve the 25 x 25 metre spacing. The directional drilling method utilized during 2016, which demonstrated significant cost savings and reliable accuracy, will continue in 2017.

Gryphon Exploration Drilling

Exploration drilling outside of the Gryphon deposit during 2016 resulted in the discovery of (1) new high grade lenses of mineralization approximately 200 metres northwest of the Gryphon deposit (termed the D Series lenses), which have been delineated over approximately 330 metres of strike length, and (2) high grade intersections down-dip and along strike of the Gryphon deposit A and B Series lenses (see Denison's [Press Release dated November 17, 2016](#)). These high grade results are located outside of the previously released inferred resources, in areas that remain open for further expansion and constitute priority target areas for drill testing in 2017.

High Priority Pipeline Projects

Hook-Carter Project

Denison's Hook-Carter project includes the Hook-Carter claims acquired from ALX Uranium Corp. ("ALX") and the contiguous Coppin Lake claims acquired from AREVA Resources Canada Inc. and UEX Corporation. The Hook-Carter project is owned 80% by Denison and 20% by ALX, and Denison has agreed to fund ALX's share of the first CAD\$12M in expenditures (see Denison's Press Releases dated [October 13th](#) and [November 7th](#), 2016). The Hook-Carter project consists of 38 claims, totaling nearly 20,000 hectares, and is located near the southwestern margin of the Athabasca Basin. The project is highlighted by 15 kilometres of strike potential along the prolific Patterson Lake Corridor – host to the recently discovered Triple R deposit (Fission Uranium Corp.), Arrow deposit (NexGen Energy Ltd.), and Spitfire discovery (Purepoint Uranium Group Inc., Cameco Corp., and AREVA Resources Canada Inc.), which occur within 8 to 20 kilometres of the property. The property is significantly underexplored compared to other properties along this trend, with only five of eight historic drill holes located along the 15 kilometres of Patterson Lake Corridor strike length. The property also covers significant portions of the Derkson and Carter Corridors which provide additional priority target areas.

Denison's work plan for Hook-Carter in 2017 includes initial ground resistivity and electromagnetic surveying during winter, followed by a reconnaissance five-hole drill program (2,700 metres) during the summer months. Work is expected to be focused on the southwestern portion of the property on the Patterson Lake Corridor, where Athabasca sandstone thicknesses vary between 250 and 450 metres.

Waterbury Lake Project

Denison's 63.01% owned Waterbury Lake project, which includes the J-Zone uranium deposit, is located within 20 kilometres of the McClean Lake mill, and is situated near the Roughrider, Midwest and Midwest A deposits. During the 2016 exploration program, Denison identified the new and highly prospective Hamilton Lake trend, located on the western side of the property (see Denison's [Press Release dated November 3, 2016](#)). An initial two-hole drill fence identified features associated with unconformity-related uranium deposits, including highly altered and structured sandstone and graphitic basement rocks, an unconformity offset, and anomalous geochemistry including 8.3 ppm uranium over the basal 25 metres of sandstone and 0.5 metres intervals of 389 ppm and 299 ppm uranium immediately above the unconformity. The Hamilton Lake trend has an interpreted minimum strike length of 4.5 kilometres to the south of the two holes completed in 2016 and appears to continue for a further 9 kilometres to the north. No drilling has been conducted along this trend outside of the two holes completed in 2016. A winter drill program of approximately 10 holes (4,600 metres) is planned to test priority resistivity targets along this extensive trend.

Murphy Lake Project

Exploration drilling during 2016 extended the strike length of mineralization and strong sandstone alteration, originally encountered during the winter of 2015, from 200 to 850 metres. As outlined in Denison's [Press Release dated April 21, 2016](#), highlight mineralized drill intercepts include 0.25% U_3O_8 over 6.0 metres (drill hole MP-15-03), 0.13% U_3O_8 over 14.5 metres (drill hole MP-16-11) and 0.19% eU_3O_8 over 2.9 metres drill hole (MP-16-08). The mineralization occurs at, or immediately above, the sub-Athabasca unconformity (similar to other Athabasca unconformity-hosted deposits) and is open along strike both to the east and to the west. A drilling program consisting of a total of eight drill holes (3,200 metres) is planned for the winter of 2017 and is expected to test high-priority geophysical and geological targets along strike of the mineralized zone. The Murphy Lake property is located approximately 30 kilometres northwest of the McClean Lake mill and is a joint venture between Denison (78.94%) and Eros Resources Corp. (21.06%).

Crawford Lake and Moon Lake South Projects

Denison continues to receive encouraging results from the CR-3 conductive trend located on the Crawford Lake property (100% Denison) and the Moon Lake South property (Denison earn-in option, currently 100% owned by CanAlaska Uranium Ltd). The CR-3 trend is located approximately 2 kilometres west of the K-Trend – a highly prospective trend which hosts the Gryphon deposit on Denison's adjacent Wheeler River property. Drilling during 2015 and 2016 at Crawford Lake identified strong alteration and significant structure along the CR-3 trend, both within the Athabasca sandstone and underlying graphitic basement rocks. An initial hole drilled at Moon Lake South in 2016 (MS-16-01) on the CR-3 trend intersected 0.1% U_3O_8 over 0.5 metres at the sub-Athabasca unconformity, and was encompassed by a significant sandstone alteration and geochemical halo (see Denison's [Press Release dated April 21, 2016](#)). The CR-3 trend has been interpreted over a distance of approximately nine kilometres with only six drill holes completed to date. The trend is completely untested to the northeast of drill hole MS-16-01 on the Moon Lake South property. Work planned for 2017 along the CR-3 conductive trend includes a resistivity survey at Moon Lake South during the winter and a four-hole summer drill program (2,300 metres) to test priority targets at both Crawford Lake and Moon Lake South.

Non-Operated Projects

Drilling programs are also planned in 2017 for joint venture projects operated by AREVA Resources Canada Inc., including 4,500 metres of drilling in approximately 15 holes at Wolly (22.5% Denison), and 4,800 metres of drilling in approximately 18 holes at McClean Lake (22.5% Denison). No field work is planned in 2017 for the Mann Lake project (30% Denison), which is operated by Cameco Corp.

Illustrative Figures & Further Details

Figure 1 provides a map of Denison's Athabasca Basin mineral dispositions with priority exploration projects outlined in bold. A detailed location and basement geology map for Wheeler River is provided in Figure 2. A plan map of the northeast plunging Gryphon deposit mineralized lenses, projected up to the simplified basement geology at the sub-Athabasca unconformity, is provided in Figure 3. The plan map shows the location of the D Series lenses, interpreted from the 2016 drilling and assay results. All mineralized lenses are defined using a 0.05% U_3O_8 grade shell and minimum thickness of two metres. Assay results shown have been previously reported in Denison's [Press Release dated November 17, 2016](#). All Gryphon drill holes shown are drilled at a high angle to mineralization to allow for better evaluation of true thicknesses which are expected to be approximately 75% of the intersection lengths.

Further details regarding the Gryphon deposit and the current mineral resource estimates for Wheeler River are provided in the NI 43-101 Technical Report for the Wheeler River project titled "Preliminary Economic Assessment for the Wheeler River Uranium Project, Saskatchewan, Canada" dated April 8, 2016 with an effective date of March 31, 2016. 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. Further details on Denison's pipeline exploration projects are available in the Company's MD&A available on Denison's website and under its profile on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

Qualified Person & Assay Procedures

The disclosure of a scientific or technical nature contained in this news release was prepared by Dale Verran, MSc, Pr.Sci.Nat., Denison's Vice President, Exploration, who is a Qualified Person in accordance with the requirements of NI 43-101.

Drill core with anomalous total gamma radioactivity (>500 counts per second) was selected for sampling and uranium assay over 0.5 metre intervals. Sampling is undertaken on site by splitting the core in half, with one half submitted for analysis and the other half retained in the core box for future reference. Uranium assays are performed by the Saskatchewan Research Council ("SRC") Geoscientific Laboratories using an ISO/IEC 17025:2005 accredited method for the determination of U_3O_8 weight %. Sample preparation involves crushing and pulverizing core samples to 90% passing -106 microns. The resultant pulp is digested using aqua-regia and the solution analyzed for U_3O_8 weight % using ICP-OES. For further details regarding the description of the data verification, assay procedures and the quality assurance program and quality control measures applied by Denison, please see Denison's Annual Information Form dated March 24, 2016 available under Denison's profile on SEDAR at www.sedar.com, and its Form 40-F available on EDGAR at www.sec.gov/edgar.shtml.

About Wheeler River

The Wheeler River property is a joint venture between Denison (60% and operator), Cameco Corp. (30%), and JCU (Canada) Exploration Company Limited (10%), and is host to the high-grade Gryphon and Phoenix uranium deposits discovered by Denison in 2014 and 2008, respectively. The Gryphon deposit is hosted in basement rock and is currently estimated to contain inferred resources of 43.0 million pounds U_3O_8 (above a cut-off grade of 0.2% U_3O_8) based on 834,000 tonnes of mineralization at an average grade of 2.3% U_3O_8 . The Phoenix unconformity deposit is located approximately 3 kilometres to the southeast of Gryphon and is estimated to include indicated resources of 70.2 million pounds U_3O_8 (above a cut-off grade of 0.8% U_3O_8) based on 166,000 tonnes of mineralization at an average grade of 19.1% U_3O_8 , and is the highest grade undeveloped uranium deposit in the world.

On April 4th, 2016, Denison announced the results of a Preliminary Economic Assessment ("PEA") for the Wheeler River Project, which considers the potential economic merit of co-developing the high-grade Gryphon and Phoenix deposits as a single underground mining operation. The PEA returned a base case pre-tax Internal Rate of Return ("IRR") of 20.4% based on the current long term contract price of uranium (US\$44.00 per pound U_3O_8), and Denison's share of estimated initial capital expenditures ("CAPEX") of CAD\$336M (CAD\$560M on 100% ownership basis). Exploration results from the winter and summer 2016 drilling program have not been incorporated into the resource estimate or the PEA. The PEA is

preliminary in nature and includes inferred mineral resources that are considered too speculative geologically to have the economic considerations applied to them to be categorized as mineral reserves, and there is no certainty that the preliminary economic assessment will be realized. Mineral resources are not mineral reserves and do not have demonstrated economic viability. On July 19th, 2016 Denison announced the initiation of a Pre-Feasibility Study ("PFS") for the Wheeler River property and the complimentary commencement of an infill drilling program at the Gryphon deposit to bring the inferred resources to an indicated level of confidence.

About Denison

Denison is a uranium exploration and development company with interests focused in the Athabasca Basin region of northern Saskatchewan. Including 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 over 350,000 hectares in the infrastructure rich eastern Athabasca Basin. 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, 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 63.01% 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; potential mineralization of drill targets; the estimates of Denison's mineral resources and the results of its PEA.

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. Denison believes that the expectations reflected in this forward-looking information are reasonable but there can be no assurance that such statements 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 "Risk Factors" in Denison's Annual Information Form dated March 24, 2016 available under its profile at www.sedar.com and in its Form 40-F available at www.sec.gov/edgar.shtml. 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. 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 its 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.

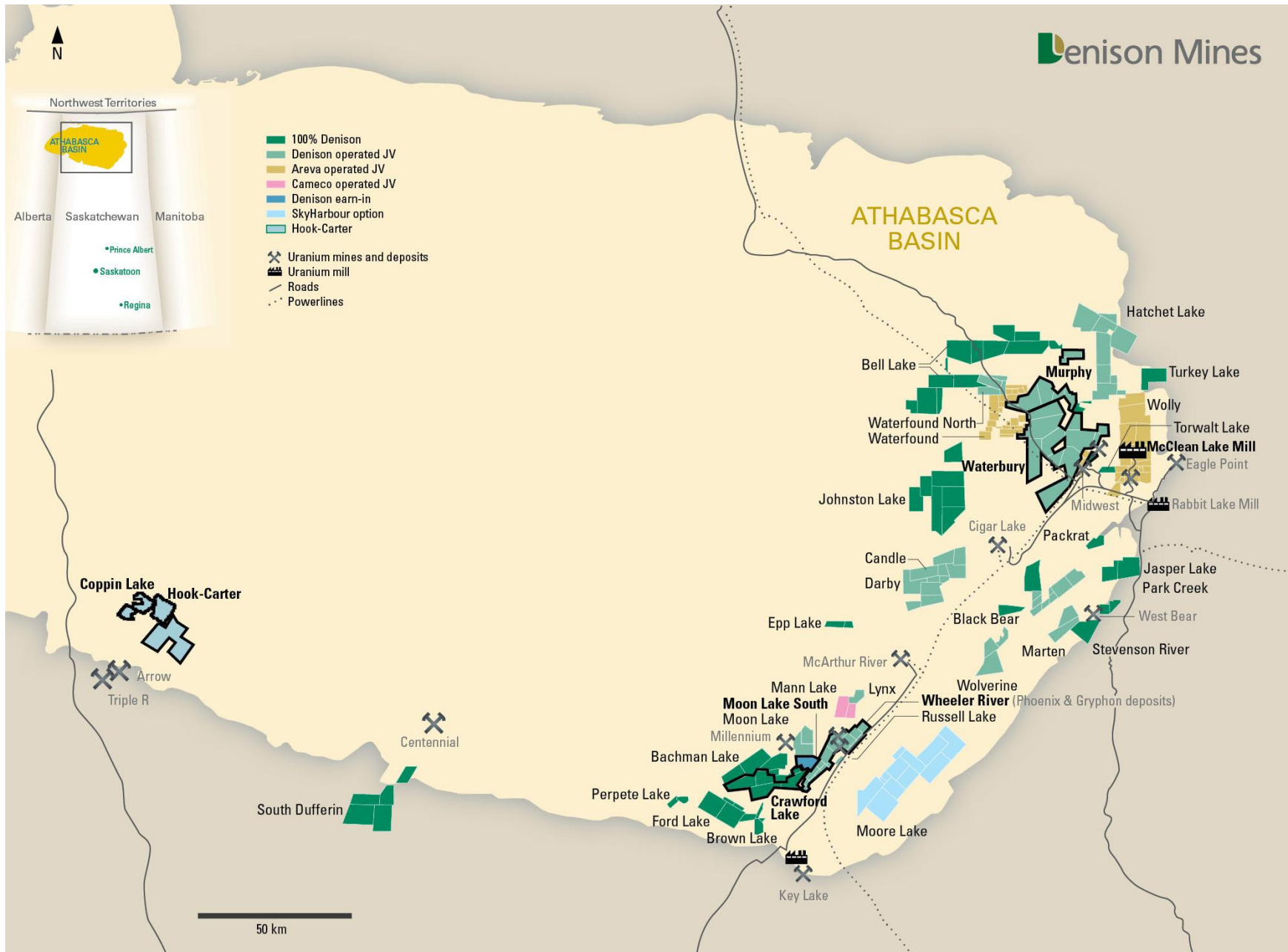


Figure 1: Denison's Athabasca Basin mineral dispositions with priority exploration projects outlined in bold.

Wheeler River Property Location and Geology

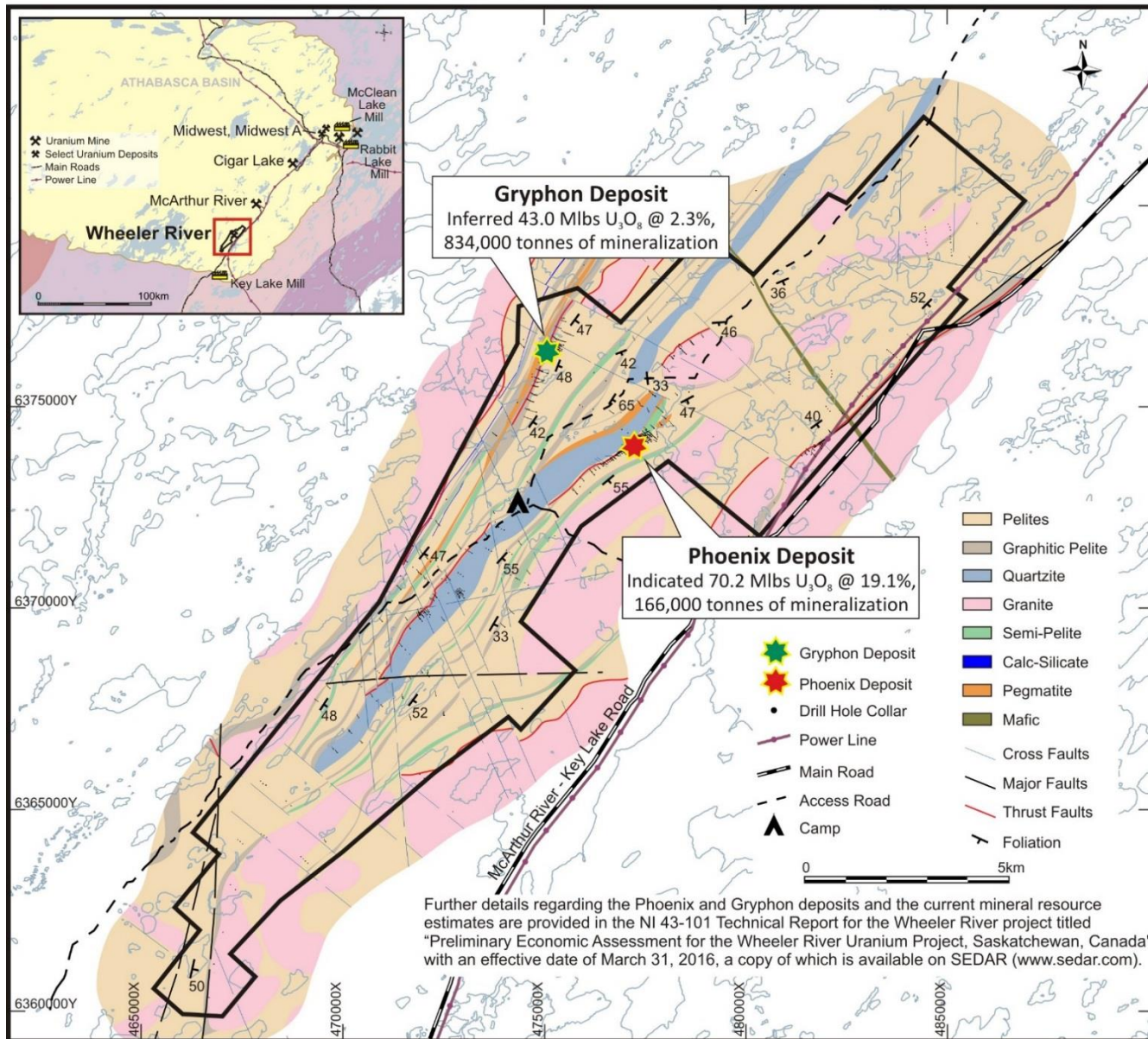


Figure 2: Wheeler River property location and basement geology

Plan Map, Gryphon Deposit

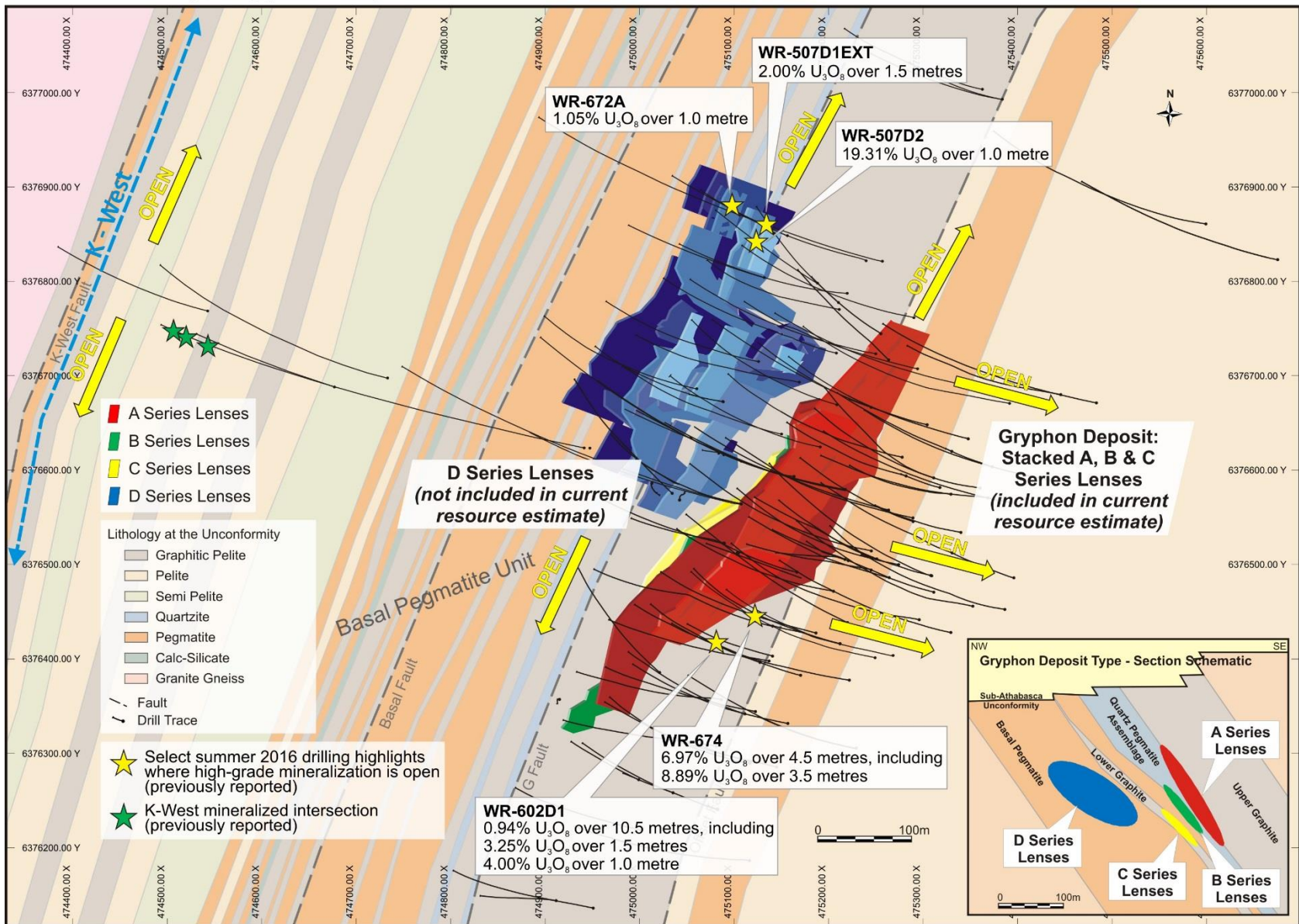


Figure 3: Plan map of the northeast plunging Gryphon mineralized lenses projected up to the simplified basement geology at the sub-Athabasca unconformity. Yellow stars show select summer 2016 drilling highlights where high-grade mineralization is open.