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PRESS RELEASE

Denison Announces Discovery of Additional High-Grade Mineralization at Gryphon and Reports Results from Successful Delineation Program

Toronto, ON – July 16, 2025. Denison Mines Corp. ("Denison" or the "Company") (DML: TSX, DNN: NYSE American) is pleased to announce the discovery of additional high-grade mineralization approximately 40 metres outside of the previously estimated mineralized domain associated with the D1 lens of the Gryphon uranium deposit ("Gryphon"). Drill hole WR-837AD2 intersected **2.3 metres at 1.69% eU_3O_8 including 0.5 metres at 5.48% eU_3O_8** in the in the down plunge direction from the previously defined D1 lens. This area remains open down-plunge and along strike to the northeast for further expansion. Gryphon is situated approximately 3 km northwest of the Company's flagship Phoenix In-Situ Recovery ("ISR") uranium mine development project, on Denison's 95%-owned Wheeler River property in northern Saskatchewan (see Figure 1).

The discovery was made as part of a highly successful delineation drill program carried out at Gryphon during the first half of 2025. Results from the delineation drilling are expected to add confidence to the previously estimated mineral resources for Gryphon, having confirmed the current geological interpretation of the deposit and intersecting uranium grades in line with expected values.

Denison's President and CEO, David Cates, commented, ***"Our 2025 Gryphon delineation program was highly successful and achieved each of the program's key objectives – including (a) increasing the density of drill testing within the A1 high-grade domain and confirming the geological model, (b) collecting additional geotechnical, metallurgical and hydrogeological samples and information to support future project evaluation efforts, and (c) initial testing of areas identified for possible expansion of mineral resources that are outside of the mine design outlined in the 2023 Pre-Feasibility Study ("PFS").***

The delineation results demonstrate that Gryphon is an excellent high-grade basement-hosted uranium deposit that justifies further project development evaluation and de-risking. With a focus on confirming the mineralization in the A-series of lenses, a limited number of drill holes were designed to test for possible expansion of the estimated mineral resource. As a result, we are excited that drill hole WR-837AD2 encountered high-grade mineralization outside of the existing mineralized domain in an area that remains wide open for further expansion down-plunge and along strike. We are currently developing plans to follow-up this result and test other expansion targets."

Gryphon Uranium Deposit

Gryphon was discovered by Denison in 2014 and is estimated to contain Indicated Mineral Resources of 61.9 million pounds U_3O_8 (1,643,000 tonnes an average grade of 1.7% U_3O_8), plus Indicated Mineral Resources of 1.9 million pounds U_3O_8 (73,000 tonnes at an average grade of 1.2% U_3O_8), with an effective date of August 7, 2018.

Gryphon is comprised of 24 primarily basement-hosted stacked lenses referred to as the A-series, B-series, C-series, D-series and E-series lenses, which are interpreted to be stacked to form a zone of mineralization measuring approximately 280 metres long by 113 metres wide, with each lens having variable thicknesses and generally plunging to the northeast and dipping to the southeast (See Figure 2). Four high-grade domains have been established within the A1 and D1 lenses. The A1 high-grade domain represents 40% of the total Indicated Mineral Resources estimated for the deposit; whereas the combination of the three D1 high-grade domains represent approximately 10% of the total Indicated Mineral Resources.

Potential future development of the Gryphon deposit has been assessed as an underground mining operation at a PFS level in 2018 with a cost update completed in 2023. The outcomes of the study highlight robust economics with an estimated after-tax base-case Net Present Value ("NPV") of $864.2 million and internal rate of return ("IRR") of 37.6%, based on estimated Probable Reserves of 49.7 million pounds U_3O_8 (1,275,000 tonnes at 1.8% U_3O_8), a uranium selling price of USD$75/lb U_3O_8 ($101.25/lb U_3O_8), and an 8% discount rate. Gryphon's cash operating costs are estimated to be USD$12.75/lb U_3O_8, and its all-in cost of production (including initial capital costs of CAD$737.4 million) is estimated to be US$25.47/lb U_3O_8. Accordingly, Gryphon has the potential to be competitive with the lowest cost uranium mining operations in the world.

Discovery of Additional High-Grade Mineralization Associated with the D1 lens

The D series lenses were targeted for potential mineral resource expansion in 2025 given their high-grade, structurally controlled nature, and that previous drilling left the mineralization partially open in the down-plunge and along-strike directions. Prior to this program, no significant expansion drilling has occurred proximal to Gryphon since 2018.

The last drill hole of the 2025 program (WR-837AD2) encountered high-grade uranium mineralization, which is interpreted to expand the extent of the D1 zone by ~40 metres in the down-plunge direction. This drill hole tested a 100-metre gap in the previous drill hole spacing (see Figure 3) and justifies further follow-up drilling to test to additional down-plunge extension as well as the potential for along strike continuation. Drill hole WR-836 was also completed in the expansion area and also encountered notable uranium mineralization, which indicates the system is open along strike to the north.

Denison reports its initial drilling results as radiometric equivalent uranium ("%eU_3O_8") from a calibrated, triple gamma, down-hole probe. All mineralized intersections have been sampled for chemical U_3O_8 assay and final results will be compiled following receipt of the data.

Table 1: Drill hole intercepts by lens for WR-836 and WR-837AD2.[1]

Drill Hole	Lens	From (m)	To (m)	Length (m)[5]	%eU_3O_8[2]
WR-836[1]	**D1[3]**	800.3	800.8	0.5	0.40
WR-837AD2[1]	**D1[3]**	834.6	836.9	2.3	1.69
	(includes)[4]	***835.6***	***836.1***	***0.5***	***5.48***

Notes:
1. Drill hole orientation (azimuth/dip) for WR-836 is 306.8°/-73.4° and for WR-837AD2 is 311.1°/-71.0°
2. eU_3O_8 is radiometric equivalent uranium from a calibrated total gamma down-hole probe. All intersections have been sampled for chemical U_3O_8 assay
3. Intersection interval is composited above a cut-off grade of 0.05% eU_3O_8
4. Intersection interval is composited above a cut-off grade of 2.0% eU_3O_8
5. As most of the drill holes are oriented steeply toward the northwest and the basement mineralization is interpreted to dip moderately to the southeast, the true thickness of the mineralization is expected to be approximately 85% of the intersection lengths

2025 Delineation Drill Program Highlights

A total of ~12,500 metres of diamond drilling was completed in seventeen drill holes and multiple off cuts during the 2025 delineation program at Gryphon. Overall, the delineation program confirmed the current geological interpretation of the deposit and supported the grade-thickness (GT) assumptions in the resource block model.

The A1 lens was the primary focus of the drill program as the high-grade and low-grade domains contain approximately 50% of the estimated Indicated Mineral Resource for Gryphon. Several drill holes intersected the A1 high-grade domain and established additional continuity within the A-series lenses.

The B and C series lenses are located below the A series within the center of the deposit and were also intersected as part of the 2025 delineation program. Together the B and C series lenses account for approximately 20% of the total estimated Indicated Mineral Resources.

Several drill holes encountered significant results, demonstrating the high-grade nature of Gryphon, including the following results from WR-831D1D2, which tested the primary lenses and returned the best mineralized intercepts from the delineation program:

Table 2: Drill hole intercepts by lens for WR-831D1D2.[1]

Lens	From (m)	To (m)	Length (m)[6]	%eU_3O_8[2]
A4[3]	655.6	657.3	1.7	0.87
A3[3]	664.9	667.3	2.4	0.20
A2[3]	682.5	684.3	1.8	0.76
A1[3]	689.3	700.3	11.0	1.76
(includes)[4]	***692.6***	***694.4***	***1.8***	***3.85***
(includes)[4]	***695.3***	***697.2***	***1.9***	***5.28***
B1[3]	701.2	708.0	6.8	0.13
B2[3]	713.0	717.4	4.4	0.14
B3[3]	721.0	735.5	14.5	2.13
(includes)[4]	***723.9***	***725.7***	***1.8***	***6.38***
(includes)[4]	***727.1***	***727.6***	***0.5***	***2.60***
(includes)[4]	***731.5***	***734.0***	***2.5***	***6.16***
B3 (continued)[3]	737.5	743.8	6.3	0.91
(includes)[4]	***740.1***	***740.7***	***0.6***	***3.42***

Notes:
1. Drill hole orientation (azimuth/dip) 295.8°/-77.0°
2. eU_3O_8 is radiometric equivalent uranium from a calibrated total gamma down-hole probe. All intersections have been sampled for chemical U_3O_8 assay
3. Intersection interval is composited above a cut-off grade of 0.05% eU_3O_8
4. Intersection interval is composited above a cut-off grade of 2.0% eU_3O_8
5. Intersections with less than 0.5 GT were left out of the table to simplify the results
6. As most of the drill holes are oriented steeply toward the northwest and the basement mineralization is interpreted to dip moderately to the southeast, the true thickness of the mineralization is expected to be approximately 85% of the intersection lengths

Additional Data Collected for Future De-risking and Study Work

Approximately 250 kg of whole-core samples were collected for metallurgical test work. Metallurgical test programs are being developed to assess uranium recoveries to advance the evaluation work completed to support the 2018 and 2023 PFS.

Geotechnical logging was completed on all drill holes and hydrogeological information was collected from two of the drill holes which were outfitted with vibrating wire piezometers (VWPs). The information collected from these exercises is expected to increase the understanding of different hydrogeological zones to support future mine-design planning.

This work adds to the extensive database of geological, hydrogeological, geotechnical, and metallurgical data for Gryphon. This site-specific data is expected to be used to validate certain key assumptions in potential future technical studies further evaluating the Gryphon deposit for underground mining.

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. 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 ("JCU", 10%). In August 2023, Denison filed a technical report summarizing the results of (i) the feasibility study completed for ISR mining of the high-grade Phoenix uranium deposit and (ii) a cost update to the 2018 Pre-Feasibility Study for conventional underground mining of the basement-hosted Gryphon uranium deposit. More information on the studies is available in the technical report titled "NI 43-101 Technical Report on the Wheeler River Project Athabasca Basin, Saskatchewan, Canada" dated August 8, 2023, with an effective date of June 23, 2023, a copy of which is available on Denison's website and under its profile on SEDAR+ at www.sedarplus.ca and on EDGAR at www.sec.gov/edgar.shtml.

Based on the respective studies, both deposits have the potential to be competitive with the lowest cost uranium mining operations in the world. Permitting efforts for the planned Phoenix ISR operation commenced in 2019 and several notable milestones were achieved in 2024 with the submission of federal licensing documents and the acceptance of the final form of the project's Environmental Impact Statement by the Province of Saskatchewan and the Canadian Nuclear Safety Commission.

About Denison

Denison is a uranium mining, exploration and development company with interests focused in the Athabasca Basin region of northern Saskatchewan, Canada. In addition to Denison's effective 95% interest in its flagship Wheeler River Project, Denison's interests in Saskatchewan also include a 22.5% ownership interest in the McClean Lake Joint Venture ("MLJV"), which includes unmined uranium deposits (planned for extraction via the MLJV's SABRE mining method starting in 2025) and the McClean Lake uranium mill (currently utilizing a portion of its licensed capacity to process the ore from the Cigar Lake mine under a toll milling agreement), plus a 25.17% interest in the Midwest Joint Venture's Midwest Main and Midwest A deposits, and a 70.55% interest in the Tthe Heldeth Túé ("THT") and Huskie deposits on the Waterbury Lake Property. The Midwest Main, Midwest A, THT and Huskie deposits are located within 20 kilometres of the McClean Lake mill. Taken together, Denison has direct ownership interests in properties covering ~384,000 hectares in the Athabasca Basin region.

Additionally, through its 50% ownership of JCU (Canada) Exploration Company, Limited ("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%).

In 2024, Denison celebrated its 70th year in uranium mining, exploration, and development, which began in 1954 with Denison's first acquisition of mining claims in the Elliot Lake region of northern Ontario.

For more information, please contact

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Qualified Persons

The technical information contained in this press release has been reviewed and approved by Chad Sorba, P.Geo., Denison's Vice President Technical Services & Project Evaluation, who is a 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 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: scope, objectives and interpreted results of the Gryphon delineation program; future plans, including potential future exploration potential and metallurgical test programs; and expectations regarding its joint venture ownership interests and the continuity of its agreements with its partners and third parties. 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 such forward-looking statements. For example, the modelling and assumptions upon which the plans for Wheeler River are based may not be maintained after further work is completed. In addition, Denison may decide or otherwise be required to discontinue testing, evaluation and other 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 28, 2025 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

Figure 1: Wheeler River Property Map

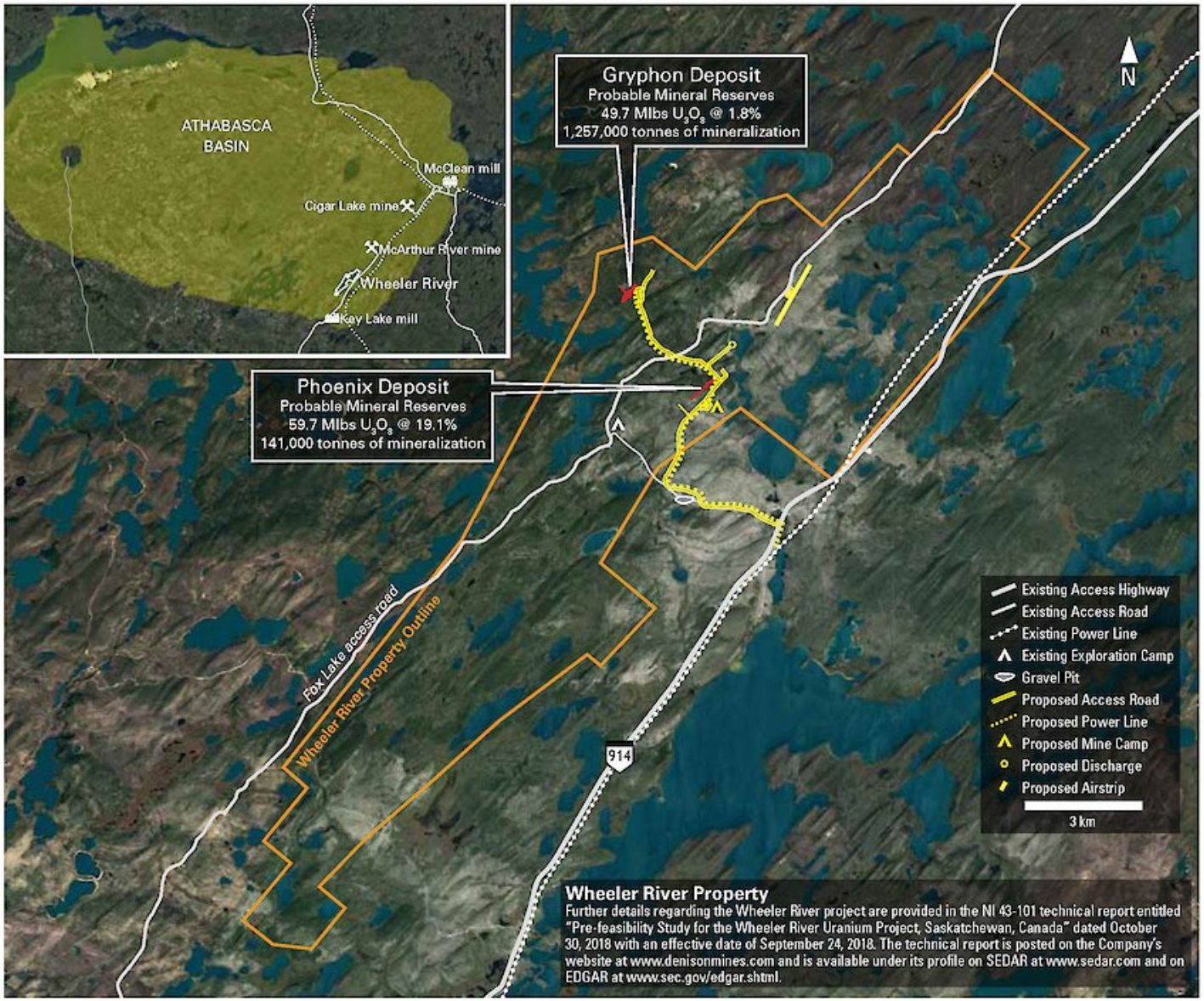

Figure 2: Plan View of Gryphon Deposit

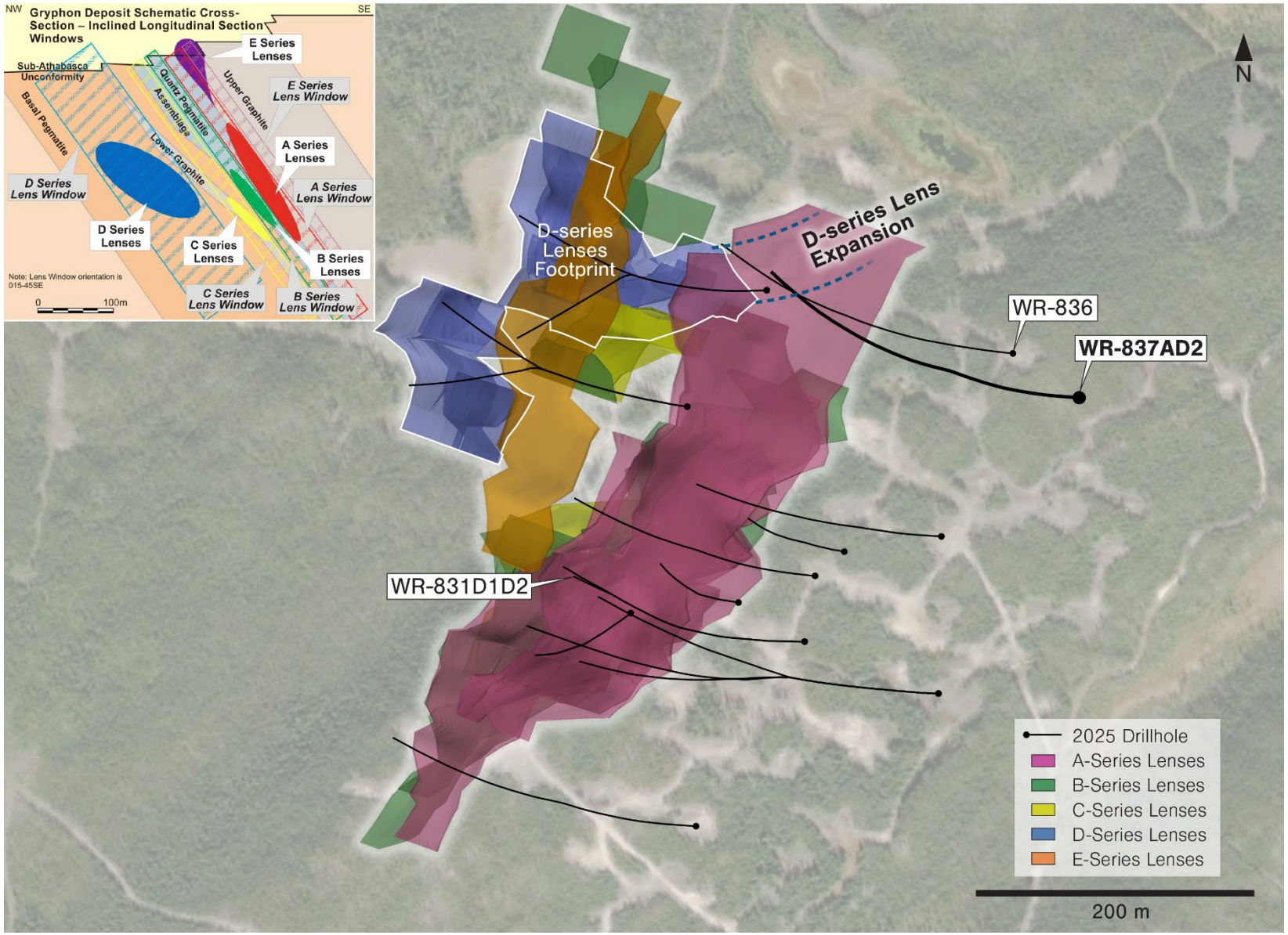
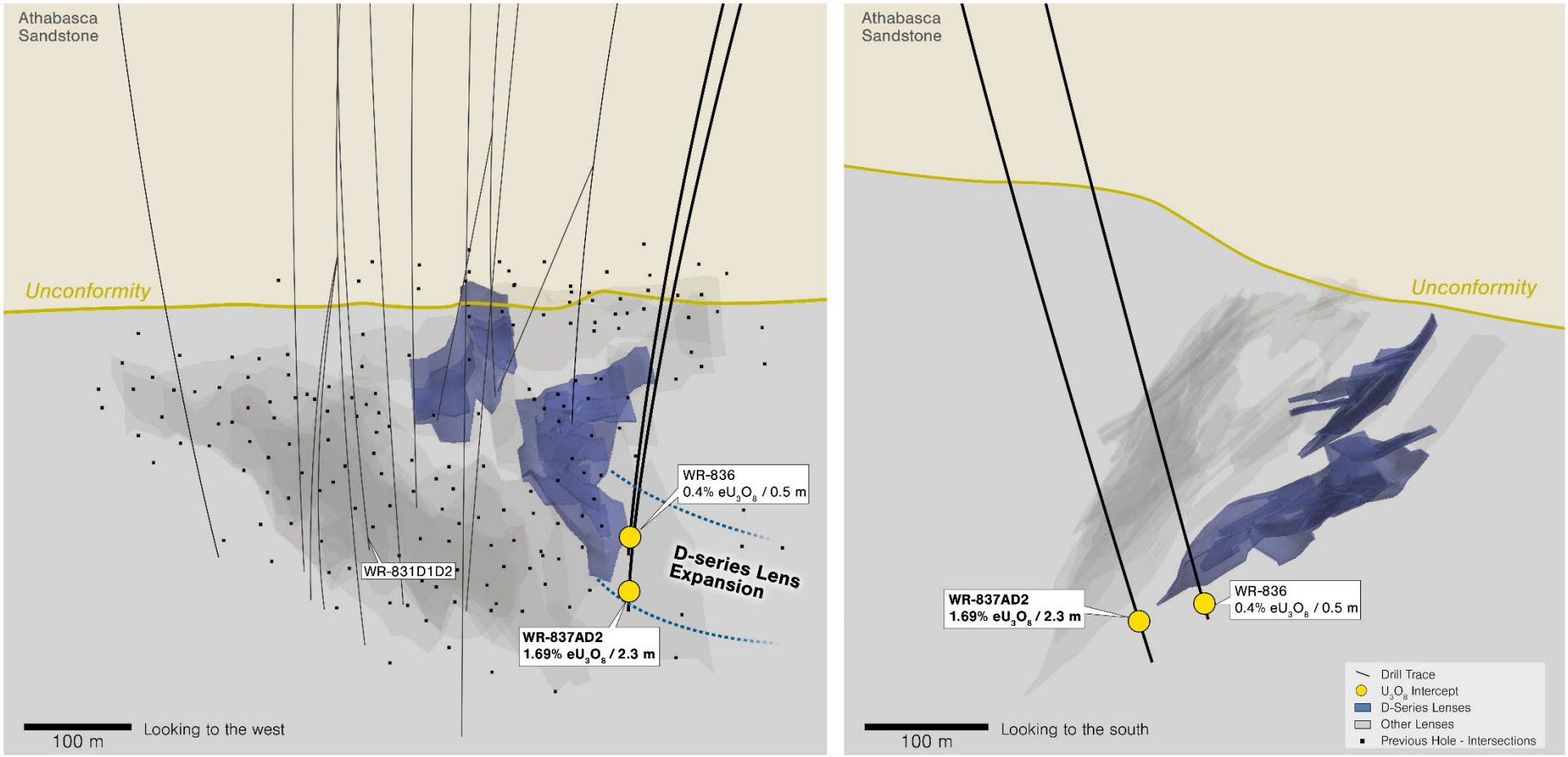
Figure 3: Location and Interpretation of Drill Holes WR-836 and WR-837AD2
Inclined Longitudinal Section (left) Isometric Cross-section (right)