

PRESS RELEASE**DENISON EXPANDS STRIKE LENGTH OF GRYPHON D SERIES LENSES
AND ANNOUNCES PLANS FOR FOLLOW-UP DRILLING AT K-WEST
ON WHEELER RIVER**

Toronto, ON – September 7, 2016 Denison Mines Corp. (“Denison” or the “Company”) (DML: TSX, DNN: NYSE MKT) is pleased to announce that results from an additional 13 exploration drill holes, targeting the D series mineralized lenses, have successfully expanded the strike length of the lenses immediately north and northwest of the Gryphon uranium deposit, on the 60% owned Wheeler River property, which is located in the infrastructure rich eastern portion of the Athabasca Basin region in northern Saskatchewan.

The Company is also pleased to announce that it will commence initial follow-up drilling, in the coming weeks, on the basement hosted mineralization discovered earlier this summer in drill hole WR-663 on the K-West conductive trend (see Denison’s Press Release dated August 4, 2016). The K-West conductive trend is parallel with, and located approximately 500 metres west of, the K-North conductive trend which hosts the Gryphon deposit. The basement hosted uranium mineralization intersected in drill hole WR-663 is associated with an extensive alteration zone which is indicative of significant fluid flow with the potential for high grade mineralization. The discovery of uranium mineralization and a significant alteration zone, taken together with a favorable geological setting similar to and in proximity to the Gryphon deposit, makes the K-West trend a prime target for the discovery of meaningful additional mineralization.

David Cates, President and CEO of Denison commented, *“Our team is focused on adding value to our project portfolio despite the current price of uranium, and positioning our Company to be a producer in the future – when it is expected that years of low uranium prices will lead to a shortage of low cost uranium supplies at a time when demand is anticipated to grow dramatically. We can justify our continued exploration and development activities because we’re focused on adding value to a project, in Wheeler River, which has the potential to become a large-scale and profitable operation with relatively low up front capital costs in even a low price environment.*”

Our summer exploration program at Wheeler River has built on the success of our discovery of significant mineralization in the Gryphon D series lenses earlier this year. With 75% of drill holes completed in the D lens target areas this summer having intersected uranium, the extent of the mineralization around the Gryphon deposit continues to grow and remains open. Beyond the D lenses, our exploration team also managed to discover mineralization to the west of Gryphon, earlier this summer, on the K-West trend. After reviewing the results at K-West and considering the potential for the discovery of a significant mineralized zone occurring in a similar geological setting and in close proximity to Gryphon, we’ve decided to go back to K-West before we wrap up drilling this season and expect to complete some initial follow-up holes over the coming weeks.”

Expansion of D Series Lenses

Exploration drilling at Wheeler River during the summer of 2016 has focused primarily on exploring the Gryphon D series mineralized lenses, which occur within 200 metres north and northwest of the Gryphon deposit. Previously reported assay highlights for the D series lenses include 5.3% U₃O₈ over 11.0 metres, 11.9% U₃O₈ over 1.5 metres, 2.9% U₃O₈ over 6.0 metres, 2.3% U₃O₈ over 4.0 metres and 6.2% U₃O₈ over 2.5 metres (see Denison’s Press Release dated May 26, 2016). The holes were 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. The D series lenses have not yet been included in the current resource estimate or the Preliminary Economic Assessment (“PEA”) for the Wheeler River project.

Results from an additional 13 drill holes in this area indicate continued expansion of the D series lenses along strike. To date, the 2016 summer exploration drill program has expanded the strike extent of the D series lenses by approximately 90 metres to the northeast and 115 metres to the southwest using an approximate 50 x 50 metres drill spacing. The D series lens mineralization currently totals 330 meters in collective strike extent, with mineralization still open along strike in both directions. Table 1 provides a summary of mineralized intersections from the most recently completed drill holes.

Results of importance include:

- On Section 5350 GP, the most northeastern section drilled to date, intersections of **9.39% eU₃O₈ over 1.6 metres** and **1.16% eU₃O₈ over 1.8 metres** indicate the continued strength of the mineralizing system and significant potential along strike and down-plunge to the northeast where no drilling has been undertaken to date; and
- On Section 5100 GP, multiple mineralized intercepts including **1.21% eU₃O₈ over 5.3 metres**, **2.26% eU₃O₈ over 1.2 metres** and **0.68% eU₃O₈ over 3.1 metres** indicate continuity between the recently defined D series lenses discovered during winter 2016 and the D series lenses previously identified in 2014.

Table 1: Summary of mineralized intersections from exploration drilling on Section 5050GP, 5100 GP, 5250 GP, 5300 GP and 5350 GP

Section	Drill Hole	From (m)	To (m)	Length (m) ⁽³⁾	eU3O8 (%) ⁽¹⁾⁽²⁾
5050 GP	WR-565D1	668.3	669.3	1.0	0.12
	and	678.2	679.2	1.0	0.08
	WR-669	647.4	649.4	2.0	0.17
	and	652.2	653.4	1.2	0.08
	and	722.2	723.2	1.0	0.05
	and	746.2	747.3	1.1	0.80
	WR-671	583.5	584.7	1.2	2.26
	and	670.0	671.1	1.1	0.33
	and	697.9	700.0	2.1	0.14
	and	703.1	704.9	1.8	0.57
5100 GP	WR-671D1	656.7	662.0	5.3	0.11
	and	662.8	663.8	1.0	0.06
	and	668.4	669.4	1.0	0.26
	and	682.2	687.5	5.3	1.21
	WR-671D2	658.8	659.9	1.1	0.52
	and	664.2	667.3	3.1	0.68
	and	675.4	676.4	1.0	0.76
	and	686.0	687.0	1.0	0.27
	WR-671D4	642.1	643.1	1.0	0.11
	and	651.4	652.4	1.0	0.22
	and	659.3	661.4	2.1	0.11
	and	670.5	671.5	1.0	0.14
	and	678.4	679.4	1.0	0.07
	WR-613EXT	No significant mineralization			
5300 GP	WR-670	610.2	611.2	1.0	0.06
	and	613.7	614.7	1.0	0.05
	and	650.6	651.7	1.1	1.34
	and	657.1	658.1	1.0	0.05

WR-670D1		No significant mineralization			
	WR-672A	588.8	589.8	1.0	0.28
	and	599.7	602.6	2.9	0.10
	and	613.1	614.4	1.3	0.84
5350 GP	WR-672AD1	596.8	597.8	1.0	0.09
	WR-507D1EXT	721.7	723.5	1.8	1.16
	WR-507D2	557.3	559.2	1.9	0.22
	and	579.5	581.1	1.6	9.39

Notes:

1. eU_3O_8 is radiometric equivalent U_3O_8 from a calibrated total gamma down-hole probe. eU_3O_8 results are preliminary in nature and all mineralized intervals will be sampled and submitted for chemical U_3O_8 assay.
2. Intersection interval is composited above a cut-off grade of 0.05% eU_3O_8 . Composites are compiled using 1.0 metre minimum ore thickness and 2.0 metres maximum waste
3. As 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 75% of the intersection lengths

Exploration drilling is ongoing with two drills that have commenced testing for extensions along strike to the southwest of the D series lenses previously identified in 2014.

Illustrative Figures & Further Details

A property location and basement geology map is provided in Figure 1, which show the K-North and K-West conductive trends. 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 2, which shows the location of the D series lenses interpreted from winter 2016 drilling results and the summer mineralized intercepts as yellow stars. Cross-sections for section lines 5350 GP and 5100 GP are provided in Figures 3 and 4 respectively, showing the location of the new mineralized intercepts from the D lenses relative to the Gryphon deposit's A, B, and C lenses. Figure 5 provides a cross-section along section line 5050 GP showing the intersection of mineralization and alteration at K-West in drill hole WR-663.

Further details regarding the Gryphon deposit and the current mineral resource estimates 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.

Qualified Persons

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. For a description of the 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 filed under the Company's profile on SEDAR (www.sedar.com).

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% U₃O₈) based on 166,000 tonnes of mineralization at an average grade of 19.1% U₃O₈, 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 U₃O₈), 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 up 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 61.55% 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; and the estimates of Denison's mineral resources.

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.*

K-North and K-West Trends, Wheeler River Property

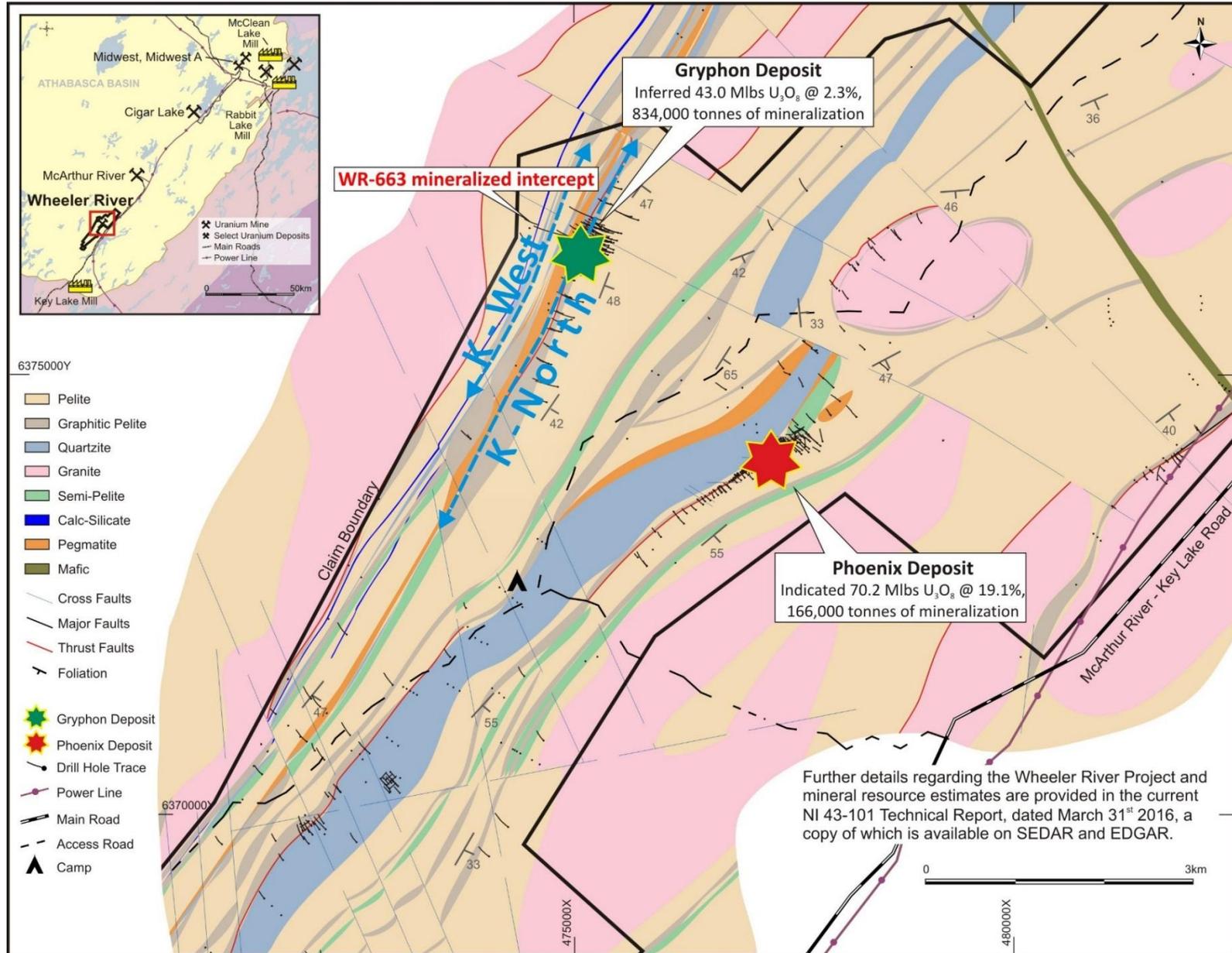


Figure 1: Wheeler River property location and basement geology

Plan Map, Gryphon Deposit

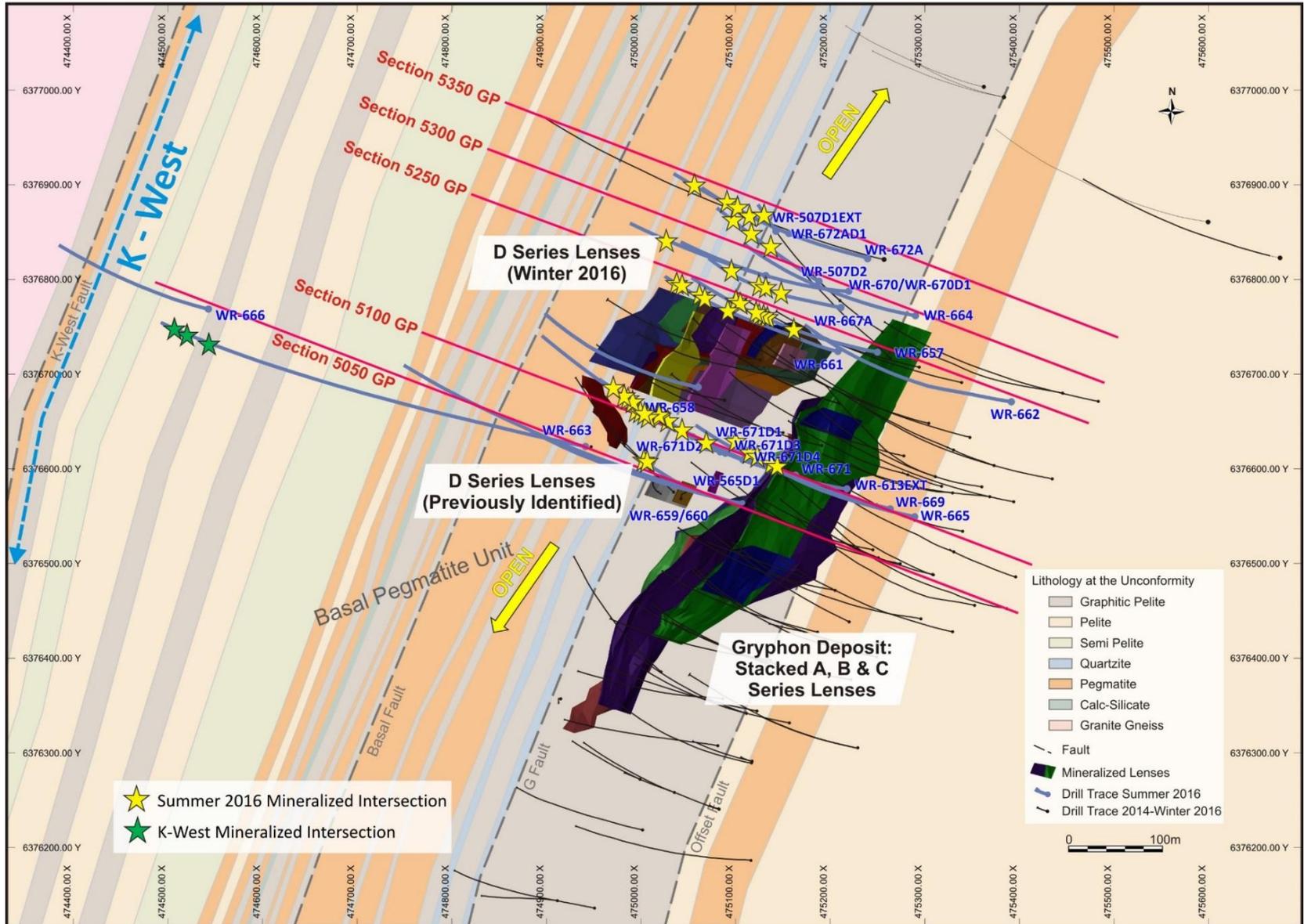


Figure 2: Plan map of the northeast plunging Gryphon mineralized lenses projected up to the simplified basement geology at the sub-Athabasca unconformity

Section 5350GP, Gryphon Deposit

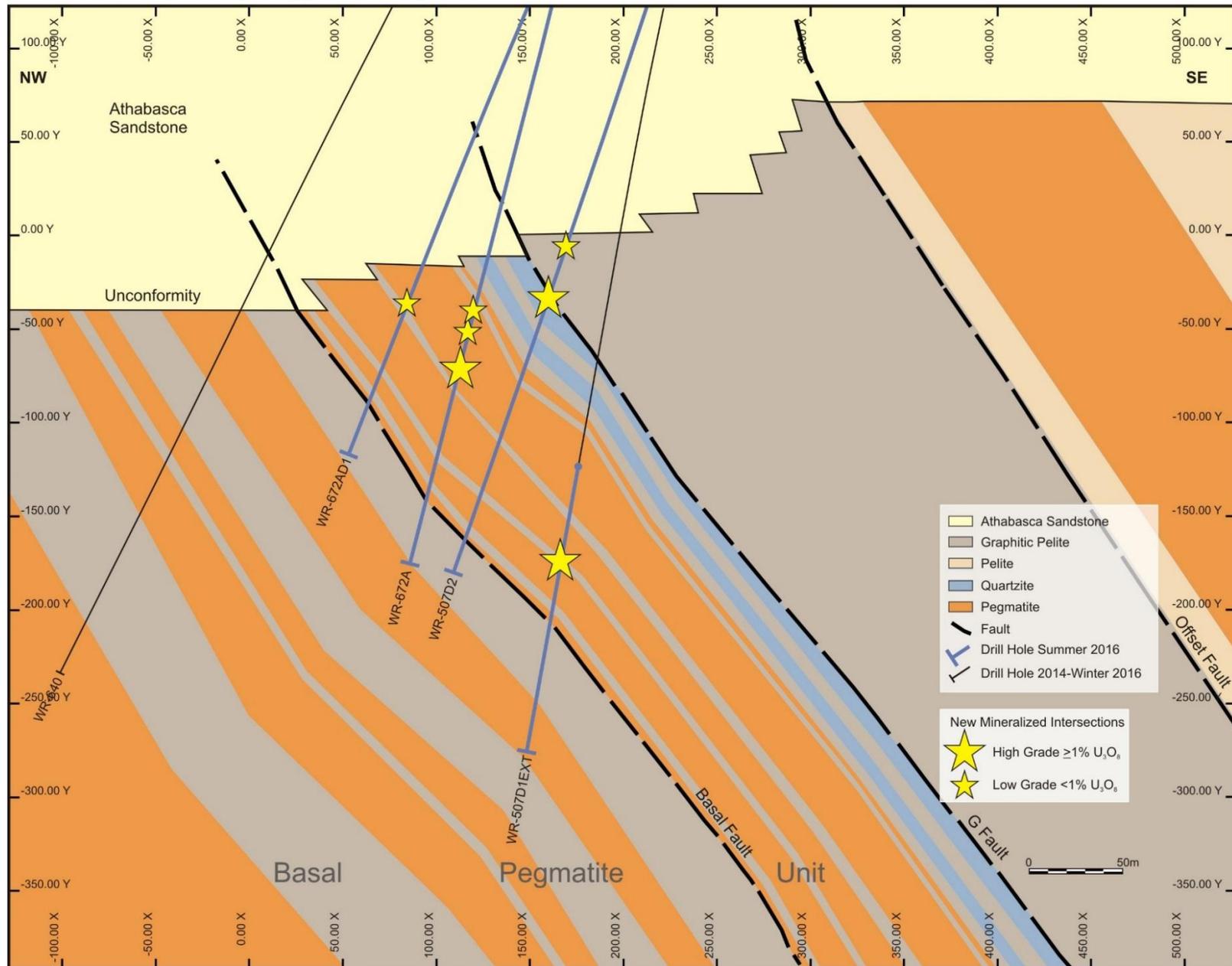


Figure 3: Cross-section along section line 5350 GP, the most northeastern section drilled to date

Section 5100GP, Gryphon Deposit

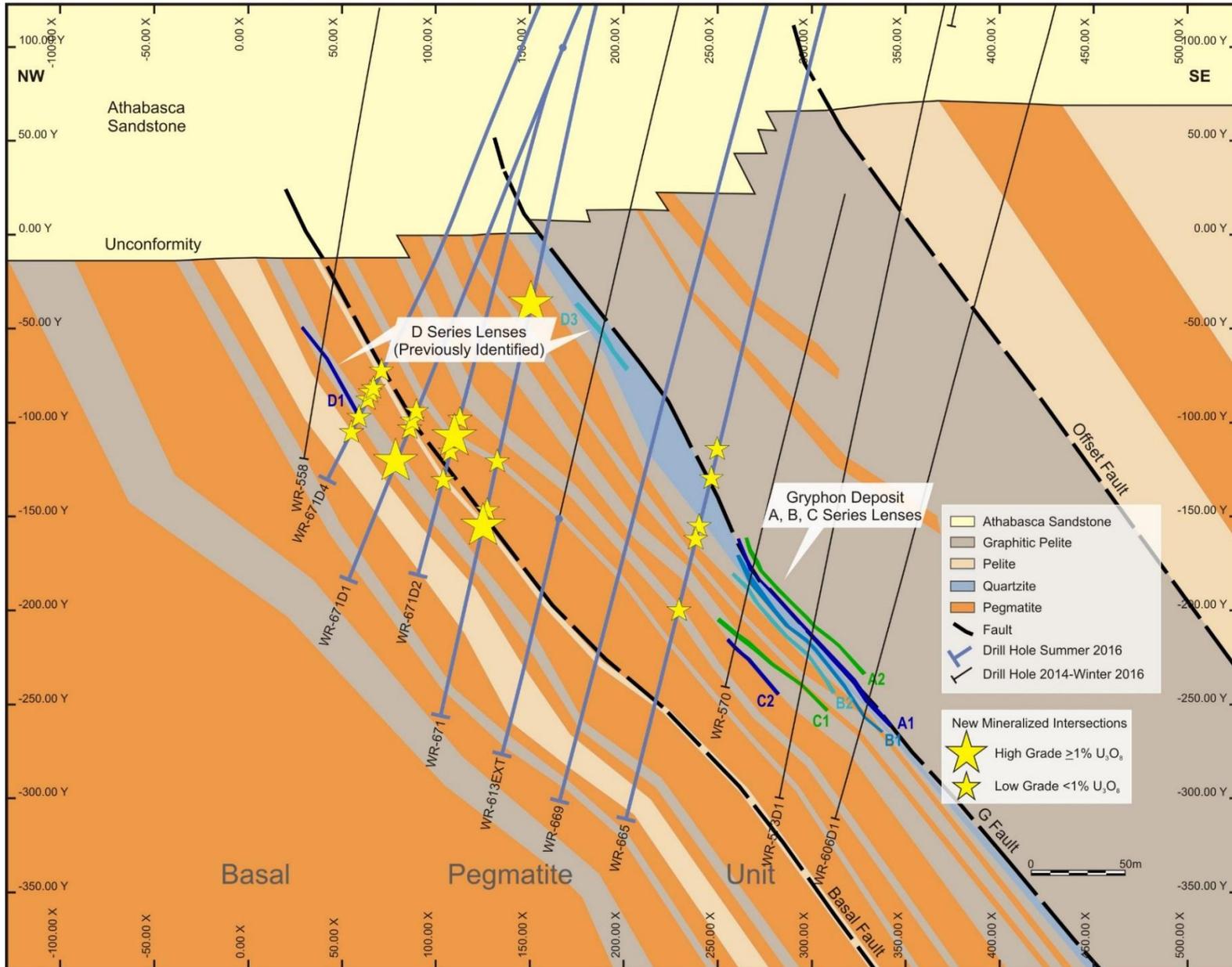


Figure 4: Cross-section along section line 5100 GP indicating continuity between the newly defined D lenses discovered during winter 2016 and the D lenses previously identified in 2014

Section 5050GP, Gryphon Deposit

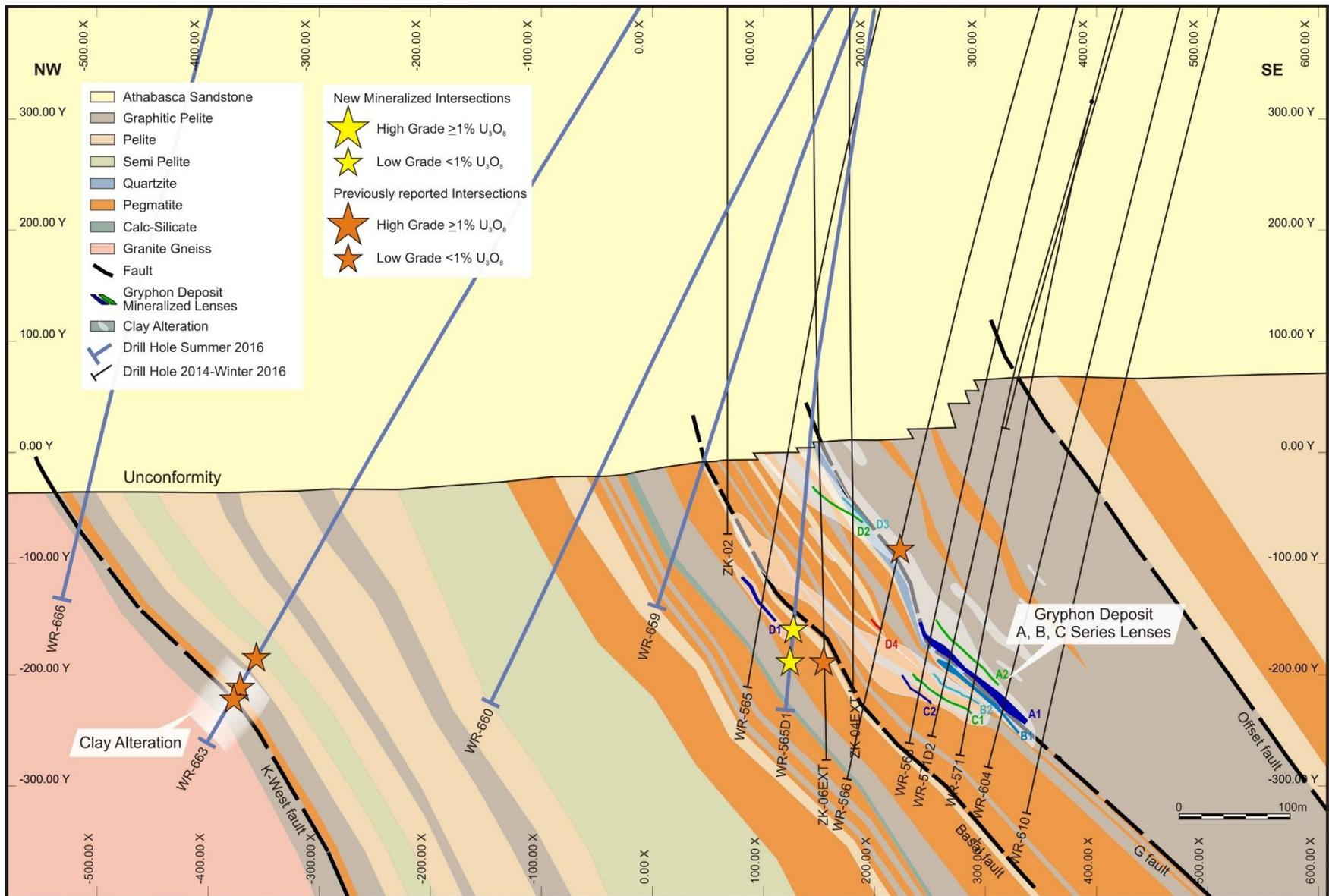


Figure 5: Cross-section along section line 5050 GP showing the intersection of mineralization and alteration at K-West in drill hole WR-663