

PRESS RELEASE

**DENISON REPORTS RESULTS FROM WHEELER RIVER PEA,
INCLUDING PRE-TAX IRR OF +20% AT CURRENT URANIUM PRICES
AND INITIAL CAPEX OF CAD\$336M**

Toronto, ON – April 4, 2016 Denison Mines Corp. (“Denison” or the “Company”) (DML: TSX, DNN: NYSE MKT) is pleased to announce the results of the Preliminary Economic Assessment (“PEA”) on its 60% owned Wheeler River Project, including a base case pre-tax Internal Rate of Return (“IRR”) of 20.4% at current uranium prices, based on today’s long term contract price for uranium, and Denison’s share of estimated initial capital expenditures (“CAPEX”) of CAD\$336M (CAD\$560M on 100% ownership basis).

The PEA considers the potential economic merit of co-developing the high-grade Gryphon and Phoenix deposits as a single underground mining operation, and assumes processing at Denison’s 22.5% owned McClean Lake mill, located in the infrastructure rich eastern portion of the Athabasca Basin.

Highlights of the PEA:

- **Current uranium price:** Base case scenario uses today’s long term contract price for uranium of US\$44 per pound of U₃O₈, leading to a pre-tax IRR of 20.4% and a pre-tax Net Present Value (“NPV”) of CAD\$513M (Denison’s share CAD\$308M);
- **Exposure to rising uranium price:** Strong profitability at today’s price offers lower risk exposure to rising prices, as evidenced by a US\$62.60 per pound U₃O₈ production case scenario resulting in a pre-tax IRR of 34.1% and pre-tax NPV of CAD\$1,420M (Denison’s share CAD\$852M);
- **Strategic development plan:** Designed to minimize risk, generate higher up-front margins, and reduce initial capital funding requirements – by development of the conventionally mined basement hosted Gryphon deposit first, followed by the unconformity hosted Phoenix deposit;
- **Existing infrastructure & reduced risk:** Decreased project risk, capex, and schedule by utilizing existing infrastructure in the eastern Athabasca Basin (including excess milling capacity, provincial highways, and the provincial power grid), justifying an 8% discount rate, and leading to an initial project CAPEX of CAD\$560M (Denison’s share CAD\$336M);
- **Cash operating costs:** The Gryphon deposit is expected to produce 40.7 million pounds U₃O₈, over a seven year mine life, at a cash operating cost of USD\$14.28 per pound U₃O₈. The Phoenix deposit is expected to produce 64.0 million pounds U₃O₈, over a nine year mine life, at a cash operating cost of USD\$22.15 per pound U₃O₈;
- **Resource upside:** Ability to incorporate potential resource growth at the Gryphon deposit, as demonstrated by the high-grade intersections previously reported from the winter 2016 exploration program (not included in the PEA), including drill holes WR-641, with 3.9% eU₃O₈, over 9.2 metres, and WR-633D1, with 1.7% eU₃O₈ over 7.6 metres including 6.3% eU₃O₈ over 1.7 metres (see Denison news release dated March 10, 2016).

David Cates, President and CEO of Denison commented “We are very pleased with the positive results of the PEA – particularly being able to illustrate that the project has potential to generate robust economics based on today’s uranium price and with our current resource base. Thanks to the existing infrastructure in the eastern Athabasca Basin, our ownership interest in the McClean Lake mill, and a project designed to minimize risk and upfront capex, the Wheeler River project has the potential to emerge as one of the next producing assets in the region.”

Speaking to the next steps on the project, Mr. Cates continued, “With the opportunity for resource growth at Gryphon and higher uranium prices on the horizon, the PEA provides Denison with a solid foundation to work from and supports our decision to continue to explore on the property and advance the project immediately into a Pre-Feasibility Study.”

Wheeler River PEA Summary

The Wheeler River project, host to both the Phoenix and Gryphon deposits, is a joint venture between Denison (60%), Cameco Corp. (CCO: TSX, CCJ: NYSE) (30%), and JCU (Canada) Exploration Company Limited (10%). In September 2015, Denison commissioned SRK Consulting (Canada) Inc. and Amec Foster Wheeler Americas Limited to prepare a PEA for the project.

The PEA is based on the exploration drilling completed on the property through to the end of the summer 2015 exploration program and the mineral resources estimated for the Wheeler River project prepared by Roscoe Postle Associates Inc. ("RPA"), with an effective date of September 25, 2015, as disclosed in the report titled "Technical Report on a Mineral Resource Estimate for the Wheeler River Property, Eastern Athabasca Basin, Northern Saskatchewan, Canada", dated November 25, 2015, which is available on Denison's website (www.denisonmines.com), and under Denison's profile on SEDAR (www.sedar.com) or EDGAR (www.sec.gov/edgar.shtml).

The PEA contemplates the underground development of the Gryphon deposit, followed by the Phoenix deposit, over a 16 year mine life, producing a total of 104.8 million pounds U₃O₈ and processing of the mine production at the Company's 22.5% owned McClean Lake mill (Areva Resources Canada Inc. 70%, OURD (Canada) Co. Ltd. 7.5%). Pre-production activities are estimated to begin in 2021 with first production from the Gryphon deposit in 2025. The PEA considers two distinct pricing scenarios as a result of the long lead time to production and the current uranium market: (1) a Base Case scenario using the long term contract price as quoted by the Ux Consulting Company, LLC ("UxC") as of March 28, 2016, and (2) a Production Case scenario using the mid-case projected long-term price for the year 2026 per UxC's Uranium Market Outlook for Q1'2016. Key assumptions and financial results of the PEA are summarized in Table 1.

Table 1: Summary of PEA Assumptions & Financial Highlights

Assumption / Financial Results	Base Case	Production Case
Uranium Price per lb U ₃ O ₈	US\$44.00	US\$62.60
Exchange Rate (CAD:USD)	1.35	1.35
Net Sask. Royalties ⁽¹⁾	7.25%	7.25%
Discount Rate	8.00%	8.00%
Initial Capital Costs	CAD\$560M	
Sustaining Capital Costs	CAD\$543M	
Average Operating Cost per lb U ₃ O ₈ - CAD	CAD\$25.67	
Average Operating Cost per lb U ₃ O ₈ - USD	USD\$19.01	
Pre-Tax IRR ⁽²⁾	20.4%	34.1%
Pre-Tax NPV ⁽²⁾ @ 100%	CAD\$513M	CAD\$1,420M
Payback Period ⁽³⁾	~3 years	~18 months

(1) Net Sask. royalties are included in the Pre-Tax NPV and consist of the following: (a) resource surcharge (3%), (b) basic uranium royalty (5%) and offset by (c) resource credit of (0.75%). The profit from operations is subject to an additional uranium profit royalty, which is treated as an income tax.

(2) NPV and IRR are calculated to the start of pre-production activities in 2021.

(3) Payback period is stated as number of years to pay-back from the start of commercial production.

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. Additional definition drilling is required to improve the confidence in the existing mineral resources estimated for the Gryphon deposit, and is expected to be completed as the Company advances the project towards the completion of a Pre-Feasibility study ("PFS").

Geology, Mineral Resources and Mining Methods

The Gryphon deposit consists of a set of parallel, stacked, elongate lenses that are broadly conformable with the basement geology, and associated with a significant fault zone that separates a thin unit of quartzite (quartz-pegmatite) from an overlying graphitic pelite (upper graphite). The lenses dip moderately to the southeast and plunge moderately to the northeast. The deposit is approximately 450 metres long in the plunge direction and 80 metres wide across the plunge. The deposit is centered at 720 metres below surface and approximately 220 metres below the sub-Athabasca unconformity. A total of 55 drill holes have delineated the Gryphon deposit, which is estimated to contain inferred mineral resources of 834,000 tonnes at a grade of 2.31% U_3O_8 for a total of 43.0 million pounds U_3O_8 .

The more moderate grades and style of mineralization at the Gryphon deposit are expected to allow for conventional underground mining methods. For the PEA, a longitudinal longhole mining method has been assumed. Based on an assessment of available geotechnical data and in comparison to other mining operations, this method is expected to be suitable for the safe and cost efficient extraction of uranium mineralization from the Gryphon deposit.

Approximately three kilometres to the southeast of Gryphon is the Phoenix deposit, one of the highest grade undeveloped deposits in the world. Phoenix is located at the unconformity between the Athabasca Basin sandstone and basement rocks, approximately 400 metres below surface. Mineralization has been defined over a strike length of approximately one kilometer and is coincident with a significant steeply dipping fault zone. A total of 196 drill holes have delineated two distinct zones (A and B) of high grade uranium mineralization lying horizontally at the unconformity. The Phoenix deposit is estimated to contain indicated mineral resources of 166,400 tonnes, at a grade of 19.14% U_3O_8 for a total of 70.2 million pounds U_3O_8 and inferred mineral resources of 8,600 tonnes at a grade of 5.80% U_3O_8 for a total of 1.1 million pounds U_3O_8 .

The higher grade Phoenix deposit is expected to require the use of remote mining methods to safely extract the uranium mineralization. In addition, the proximity to the sub-Athabasca unconformity and the associated complexities with the water saturated Athabasca sandstone above the deposit, is expected to require ground freezing to prevent uncontrolled water inflows. The jet boring mining method, used at Cameco's Cigar Lake mine, has been successful in extracting uranium ore hosted in these conditions and depths. As a result, the jet boring mining method has been assumed as the preferred mining method for the Phoenix deposit. The jet boring method produces a uranium bearing slurry as mine production, which is transported from underground to surface by pumping.

Strategic Development Plan

Although the Phoenix deposit is much higher grade, the Gryphon deposit is expected to be the more profitable deposit due to lower capital and operating costs. Located well below the unconformity and in stronger ground conditions allows for conventional development and mining practices. Conversely, at Phoenix the unconformity style mineralization requires more sophisticated lateral development and ground freezing, as well as remote extraction methods necessitated by the high uranium grades and associated radiation levels. The mining of Phoenix also carries increased technical risk associated with mining at the unconformity, which may lead to delays in production. Sequencing Phoenix production after Gryphon also carries additional advantages, including:

- Allows time to develop a three kilometer underground connection drift, rather than a second production shaft and headframe, further reducing and deferring capital costs;
- Allows time to complete freezing from underground at Phoenix rather than from surface, leading to a significant reduction in the schedule and capital costs associated with freezing; and
- Permits additional time for engineering on the Phoenix mining method to minimize schedule risk.

As a result of the strategic approach, the main facilities for the project will be located in proximity to the Gryphon deposit, eliminating the need for secondary facilities at the Phoenix site. The planned underground layout of the Wheeler River mine is illustrated in Figure 1. The planned surface infrastructure is illustrated in Figure 2.

Mineral Processing & Production Plan

The preliminary metallurgical test results from both Gryphon and Phoenix composite samples indicated the mineralization is amenable to processing at any of the existing uranium mills in the eastern Athabasca Basin. Overall, uranium process recovery has been estimated at 97.0% for Gryphon, and 98.1% for Phoenix. Due to the excess processing capacity expected at Denison's 22.5% owned McClean Lake mill, by the end of 2016, the PEA assumes mineral processing will be completed at McClean Lake.

The production plan for the Gryphon and Phoenix deposits aligns well with the current production plan for the McClean Lake mill. The mill is currently in the final stages of an upgrade that is expected to increase the facility's annual production capacity to up to 24 million pounds U_3O_8 , which will enable processing of up to 18 million pounds U_3O_8 per year from the Cigar Lake mine, under a toll milling agreement, and up to 6 million pounds U_3O_8 from other mine feeds. Based on the current schedule, Cigar Lake Phase 1 ore feed is expected to peak at 18 million pounds U_3O_8 and decreases towards the end of Phase 1 in the late 2020s. Co-milling of Wheeler River and Cigar Lake ore feeds are expected to utilize the full capacity of the mill and improve processing economics for both feed sources. As such the PEA has aligned mine production with predicted mill capacity at the following rates:

- Gryphon deposit – 7 year mine life, at 6.0 Mlbs U_3O_8 per year (399 t/d)
- Phoenix deposit – 9 year mine life, at 7.0 Mlbs U_3O_8 per year (73 t/d)

In order to co-mill the full tonnage of the Gryphon deposit feed with the Cigar Lake Phase 1 feed, the PEA has incorporated the costs of an expansion to the #1 leaching circuit at the McClean Lake mill, as well as increasing the capacities of the solid/liquid separation circuits and installation of piping to transfer slurry to the #1 leach circuit from the slurry load-out facilities. Overall the expected modifications to the mill are minor in nature and in areas that are not used for Cigar Lake processing.

Reduced Risk Profile

The eastern Athabasca basin is host to several existing and historic uranium mining operations. As a result, the area has amassed considerable regional infrastructure, which plays a key role in the development of new projects. The importance of this infrastructure cannot be understated – particularly from a risk standpoint, when considering capital costs and project scheduling. Key regional infrastructure includes the following:

- **Existing milling facility with excess capacity:** Denison's 22.5% owned McClean Lake Mill, which is located approximately 160 kilometres to the northeast of the Wheeler River property is currently in operation and processing 100% of the ore produced by the Cigar Lake mine under a toll milling agreement. The McClean Lake mill was built in 1997 and is in the process of being upgraded, at the expense of the Cigar Lake joint venture, to an annual capacity of up to 24 million pounds U_3O_8 . With Cigar Lake expected to produce 18 million pounds U_3O_8 per year, starting in 2017, the mill is expected to have excess capacity of up to 6 million pounds U_3O_8 per year. In addition, the McClean Lake operation also includes a CNSC approved and permitted tailings facility.
- **Existing provincial highways and provincial power grid:** Existing mining and milling facilities are currently accessed by all-weather provincial highways and source their power from the provincial power grid. This existing infrastructure is located on the eastern edge of the Wheeler River property within six kilometres of the proposed Gryphon mine facilities.
- **Established mining jurisdiction and social infrastructure:** Saskatchewan was ranked as the second most attractive jurisdiction for mining investment globally in 2015 by the Fraser Institute's Annual Survey of Mining Companies, and current operations in the eastern Athabasca Basin have supported the development of community infrastructure, including airports, vendors for equipment and supplies, as well as skilled labour and contractors with expertise in the uranium mining sector.

Taken together with the Company's strategic development plan designed to reduce project risk, the Wheeler River project is supported by several elements that present a reduced risk profile. This has allowed for the use of an 8% discount rate in the Company's base case and production case NPV estimates. Figure 3 illustrates the key existing infrastructure in the eastern Athabasca Basin and its location in proximity to the Wheeler River property.

Capital and Operating Costs

Capital costs include all costs associated with surface construction and underground development up to the point of contact with mineralization of the Wheeler River site as well as the required modifications to the McClean Lake mill. Capital costs include initial and sustaining costs and are expressed in 2015 Canadian dollars to a bottom line accuracy of +/- 40%. Initial capital costs are based on the five-year period from January 1, 2021 through to December 31, 2025, and sustaining capital costs are for the period from January 1, 2026 through to decommissioning in 2045. Total capital costs are estimated at CAD\$1,103 million, which includes a contingency of 26% as shown in Table 2.

Table 2: Wheeler River Project Capital Cost Estimate

Capital Costs (CAD\$ millions)	Initial	Sustaining	Total
Surface Infrastructure	\$166	\$7	\$174
Mine	\$220	\$334	\$554
Mineral Processing	\$19	\$60	\$79
Owners Costs	\$25	\$0	\$25
Decommissioning	\$0	\$40	\$40
<i>Subtotal</i>	<i>\$429</i>	<i>\$442</i>	<i>\$871</i>
Contingency	\$131	\$101	\$232
Total Capital	\$560	\$543	\$1,103

Operating costs have been estimated separately for each deposit, based on the differences in geology and mining methods selected. For the Gryphon and Phoenix deposits, operating costs are estimated at CAD\$19.28 per pound U₃O₈ and CAD\$29.90 per pound U₃O₈, respectively. The combined average operating cost of both deposits is estimated to be CAD\$25.67 or US \$19.01 per pound U₃O₈. Table 3 shows the projected operating cost estimates for each deposit.

Table 3: Wheeler River Project Operating Cost Estimate

Operating Costs (CAD\$/lb U₃O₈)	Gryphon	Phoenix
Mining	\$3.45	\$17.45
Surface Transportation	\$1.63	\$0.85
Mineral Processing (including toll mill fees)	\$10.03	\$8.03
General & Administration	\$4.17	\$3.57
Total (CAD \$/lb U₃O₈)	\$19.28	\$29.90
Total (USD \$/lb U₃O₈)	\$14.28	\$22.15

Future Outlook

Denison intends to proceed with the commencement of a PFS for the Wheeler River project and associated Environmental Assessment studies, as part of the budget approved by the Wheeler River Joint Venture and consistent with the Company's financial plan for 2016. Denison expects the PFS will take 12-18 months and will address the following key items:

- The potential growth in mineral resources at or in proximity to the Gryphon deposit and an increase in the level of confidence associated with the mineral resources estimated for the Gryphon deposit;
- The potential to optimize the project for increased rates of production based on a combination of resource growth and increased milling capacity through capital investment or other opportunities;
- The result of a formal review and evaluation of toll milling and other processing options with applicable joint venture partners;
- The detailed evaluation of key engineering designs including shaft development, material movement, and mining methods; and
- The inclusion of environmental baseline information and radiological assessments to ensure safe and environmentally responsible development plans.

Indicative Post-Tax Results for Denison

The PEA is prepared on a pre-tax basis, as each of the partners to the Wheeler River Joint Venture have different circumstances from a taxation standpoint. Denison has completed an indicative post-tax assessment based on its 60% ownership stake in the Wheeler River project, and the recovered toll mill fees from its 22.5% interest in the McClean Lake Joint Venture. Based on the Company's current and expected tax balances, as well as the prevailing federal and provincial taxation regulations, the results are summarized in Table 4.

Table 4: Summary of Denison's Post-Tax Results (60% ownership basis)

Assumptions/ Financial Results	Base Case	Production Case
Uranium Price per lb U ₃ O ₈	US\$44.00	US\$62.60
Exchange Rate (CAD:USD)	1.35	1.35
Discount Rate	8%	8%
Initial Capital Costs		CAD\$336M
Sustaining Capital Costs		CAD\$325M
Denison Post-Tax IRR ⁽¹⁾	17.8%	29.2%
Denison Post-Tax NPV ⁽¹⁾	CAD\$206M	CAD\$548M
Payback Period ⁽²⁾	~3 years	~18 months

(1) NPV and IRR are calculated to the start of pre-production activities in 2021.

(2) Payback period is stated as number of years to pay-back from the start of commercial production.

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.

Qualified Person

The disclosure regarding the metallurgical test results contained in this news release was prepared and approved by Peter Longo, P. Eng, MBA, PMP, Denison's Vice-President, Project Development, who is a Qualified Person in accordance with the requirements of NI 43-101.

The disclosure of a scientific or technical nature regarding the Phoenix and Gryphon deposits 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 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 filed under the Company's profile on SEDAR at www.sedar.com.

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 390,000 hectares in the 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. Internationally, Denison owns 100% of the Mutanga project in Zambia, 100% of the uranium/copper/silver Falea project in Mali, and a 90% interest in the Dome project in Namibia. Denison has recently entered into an agreement with GoviEx Uranium Inc. (GXU: CSE) to sell its African interests, with an expected closing date in May, 2016.

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: the results of, and estimates, assumptions and projections provided in, the PEA, including future market prices, costs and capital expenditures, the processing ability and potential for future excess capacity at the McLean Lake mill, and available infrastructure; the estimates of Denison's mineral resources; exploration, development and expansion plans and objectives and anticipated results of current activities; the commencement and completion of a PFS; and expectations regarding ongoing joint ventures and Denison's share of the same. Statements relating to “mineral resources” are deemed to be forward-looking information, as they involve the implied assessment, based on certain estimates and assumptions that the 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. 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 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. Any forward-looking information and the assumptions made with respect thereto speaks only as of the date of this press release. 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: Wheeler River Underground Schematic

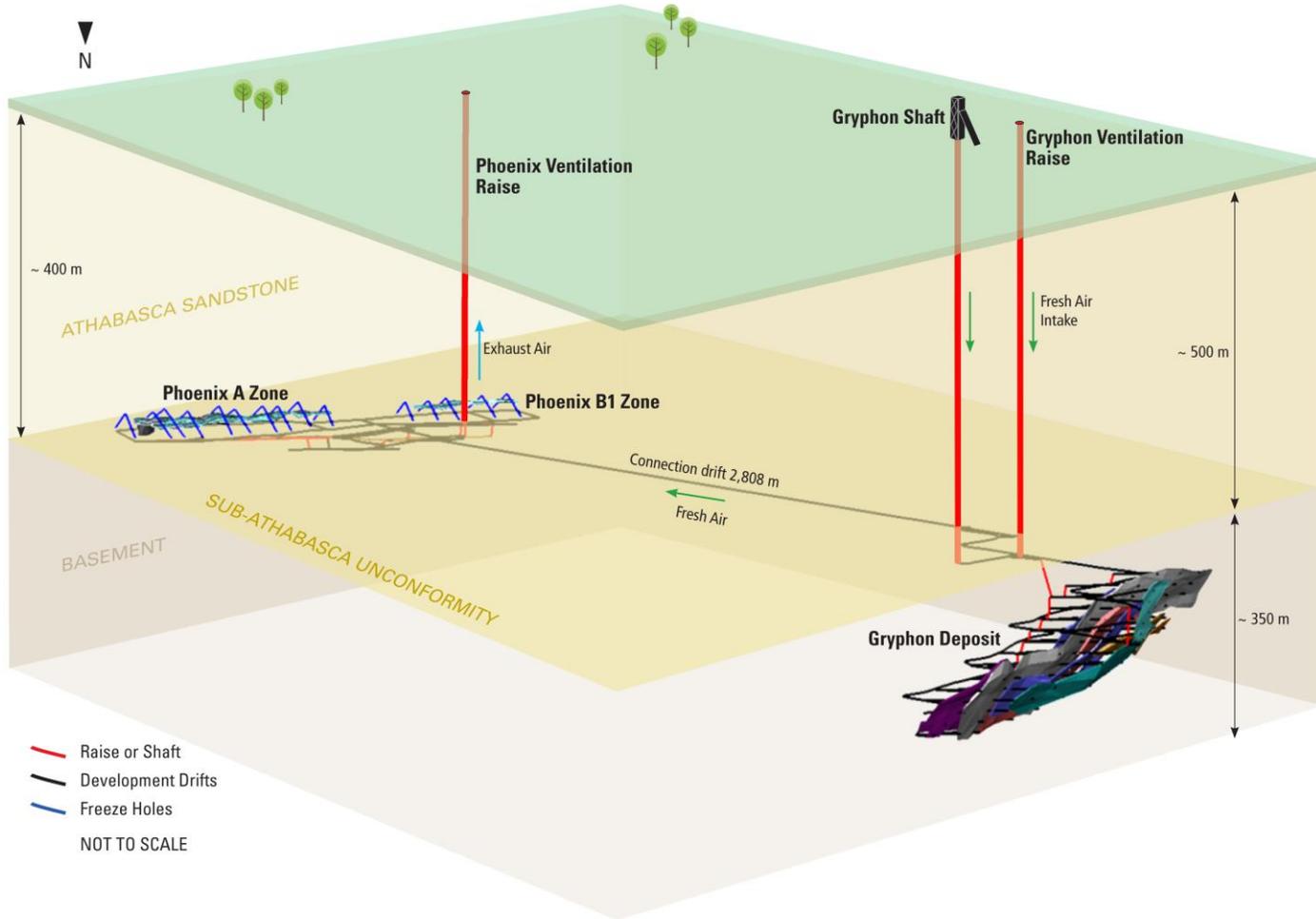


Figure 2: Wheeler River Surface Schematic

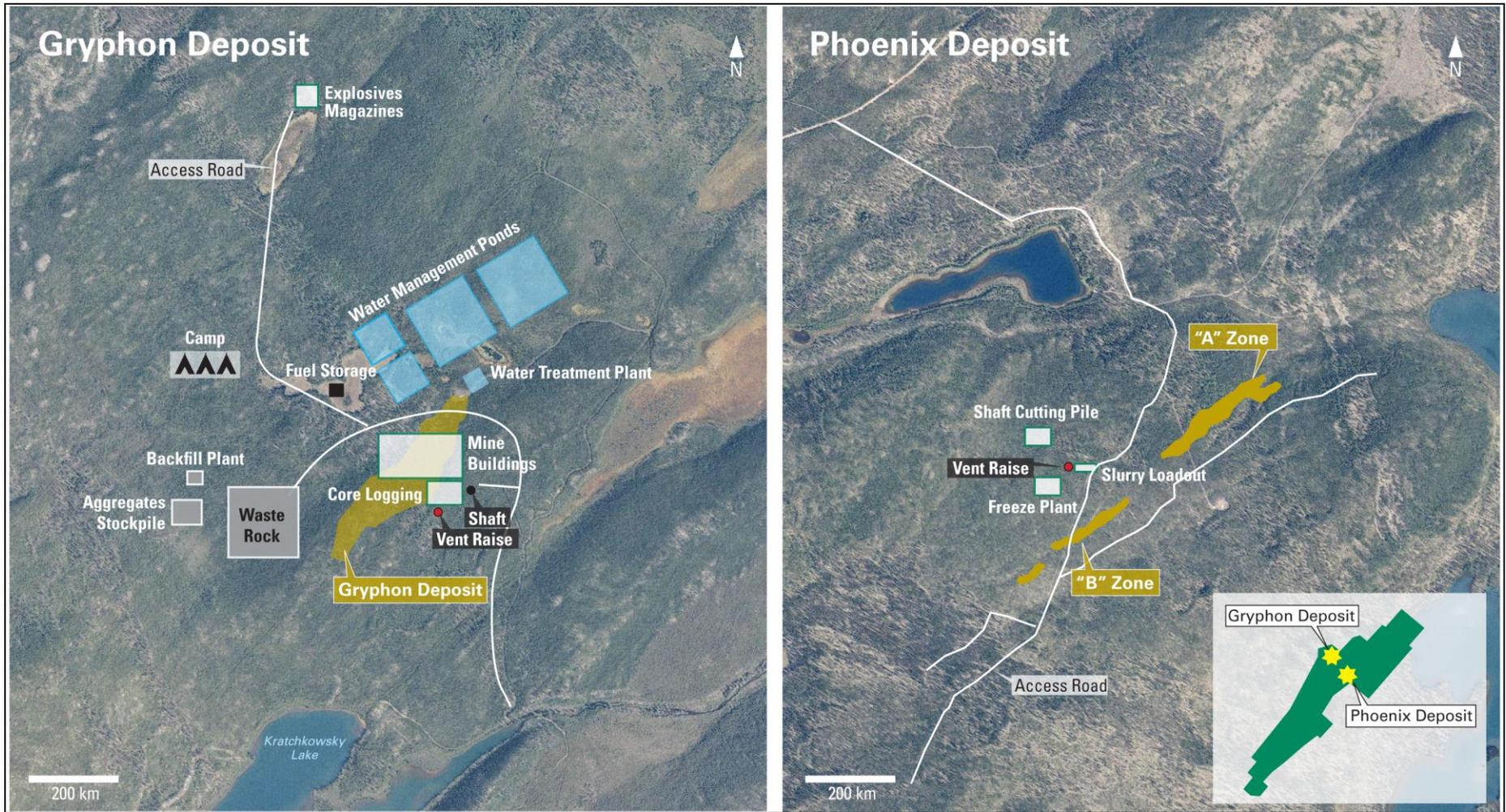


Figure 3: Eastern Athabasca Basin Regional Infrastructure

