

# DENISON MINES CORP.

## Positive ISR Field Test Results at Phoenix

### EVENT

This morning Denison Mines released results from the now complete 2021 in-situ recovery (ISR) field test program at the Phoenix deposit, part of its 95%-owned Wheeler River project in the Athabasca Basin.

### BOTTOM LINE

**Positive** – The successful 2021 field test is another clear de-risking event as it provides further “proof of concept” on the amenability of the high-grade Phoenix deposit to the ISR extraction method.

### FOCUS POINTS

- **Targeted Flowrates Achieved** – Flowrates for the Test Pattern achieved a sustainable rate of 45.3 litres per minute (L/min) in the injection well and 15.1 L/min in the three extraction wells. These results, in our view, more than satisfy the flow rate assumed in the 2018 Pre-Feasibility Study (PFS).
- **Lixiviant Test on Deck for 2022** – Hydrogeological monitoring of the ion tracer test indicated that there was no migration of the tracer element from the Test Pattern to the monitoring wells surrounding it. This is a very important positive development and is critical for permitting the lixiviant test set for next year. The lixiviant test will support a Definitive Feasibility Study set for Q4/22 and be a key de-risking element to the Environmental Assessment process.
- **Maintaining Buy Rating and Price Target** – We are maintaining our Buy rating and target price of \$3.75/C\$4.75/share on Denison Mines, based on a 1.5x NPV<sub>7.5%</sub> multiple on the Company’s Athabasca Basin uranium projects and 1.0x NPV on its net financial position (cash, investments, and U<sub>3</sub>O<sub>8</sub> in inventory).

### Recommendation:

**BUY**

Symbol/Exchange: DNN-NYSE/DML-TSX  
Sector: Metals & Mining  
*All dollar values in US\$ unless otherwise noted.*  
Current price: \$1.75/C\$2.15  
One-year target: \$3.75/C\$4.75  
Return to target: 114.3%  
Cash and U<sub>3</sub>O<sub>8</sub> inventory: ~C\$220 MM

### Financial Summary:

Shares O/S (MM)	805.7	52-week range	\$0.30 - \$1.97
Market cap (MM\$)	\$1,410.0	30D avg vol. ('000)	14,608.8
Market float (MM\$)	\$1,402.4	Fiscal year-end	31-Dec
<b>Probable Reserves</b>	<b>Tonnes</b>	<b>U<sub>3</sub>O<sub>8</sub> Grade</b>	<b>Attrib. Resource</b>
Wheeler River	1,398,000	3.54%	103.9 MMlb
<b>M&amp;I Resources</b>	<b>Tonnes</b>	<b>U<sub>3</sub>O<sub>8</sub> Grade</b>	<b>Attrib. Resource</b>
McClellan Lake Deposits	376,400	2.18%	4.0 MMlb
Midwest + Waterbury	1,310,000	2.20%	21.4 MMlb
JCU Interests	1,978,387	0.76%	32.9 MMlb
Wheeler River	1,809,000	3.30%	125.5 MMlb
<b>Inferred Resources</b>	<b>Tonnes</b>	<b>U<sub>3</sub>O<sub>8</sub> Grade</b>	<b>Attrib. Resource</b>
McClellan Lake Deposits	510,900	0.68%	1.6 MMlb
Midwest + Waterbury	1,114,000	0.98%	8.4 MMlb
JCU Interests	283,890	1.40%	8.8 MMlb
Wheeler River	82,000	1.70%	2.9 MMlb



**Company profile:** Denison Mines is a uranium exploration company and development company focused on the Athabasca Basin. Its 95%-owned Wheeler River project is one of the highest-grade uranium projects globally.

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See disclosure and a description of our recommendation structure at the end of this report.

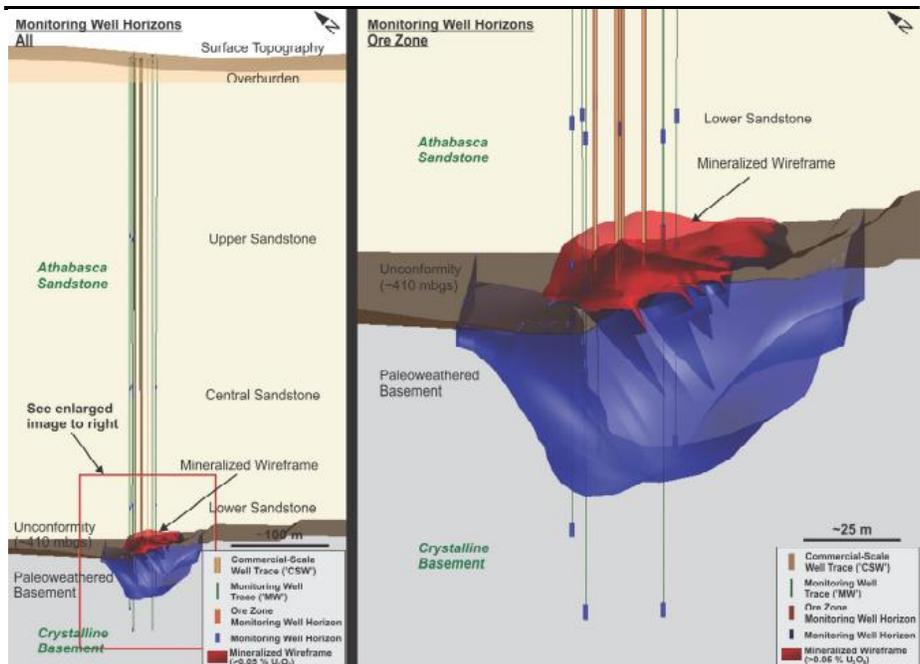
## POSITIVE ISR TEST RESULTS AT PHOENIX

This morning Denison Mines released results from the now complete 2021 ISR field test program at the Phoenix deposit, part of its 95%-owned Wheeler River project in the Athabasca Basin. The field test program had two key components: 1) the full-scale well pattern pump and injection test, and 2) hydrogeological monitoring of the ion tracer test. In our view, both components are clear de-risking events that provide further “proof of concept” on the amenability of the high-grade Phoenix deposit to the low-cost small-footprint ISR extraction method.

## TARGETED FLOWRATES ACHIEVED IN PUMP TEST

Flowrates for the modified four-spot Test Pattern achieved a sustainable rate of 45.3 litres per minute (L/min) in the injection well and 15.1 L/min in the three extraction wells. These results, in our view, more than satisfy the 50 L/min flow rate assumed in the 2018 Pre-Feasibility Study (PFS). We note that a seven-spot wellfield design was utilized in the PFS, comprising six injection wells per one extraction well. Assuming the ~15 L/min flowrate observed in the field test program, a 50 L/min extraction rate should be easily achievable (15 L/min x 6 injection wells = 90 L/min extraction, well above the 50 L/min extraction assumed in the PFS). Admittedly this is overly simplified as it is not a linear scale-up from the four-spot test pattern to the seven-spot PFS design pattern, but in our view, the flow rates observed in the 2021 test more than satisfy the assumptions made in the PFS.

**Exhibit 1. Well Screen Locations – 3D Isometric View**



Source: Denison Mines

## ION TRACER TEST DEMONSTRATES CONTAINMENT

Hydrogeological monitoring of the ion tracer test indicated that there was no migration of the tracer element from the Test Pattern to the monitoring wells surrounding it. We also note that after the injection of the tracer element via

injection well GWR-040, it was observed in extraction wells GWR-038, GWR-039 and GWR-041, within 14-hours, 9-hours, and 12-hours respectively, consistent with Denison's previous hydrogeological modelling. In our view, this clearly demonstrates that hydrogeologic flow in and around the wellfield is well understood and can be controlled and contained. Denison's 2021 field test program also demonstrated that the wellfield can be remediated as well, as a "clean-up" test was successfully completed that reduced the tracer element by 87-96% below peak values within eight days. The iron tracer test and successful "clean-up" test are very important positive developments and critical for permitting the lixiviant test set for next year.

### A BUSY 2022 ON DECK, FULLY FINANCED THROUGH 2024

Next year will be a busy one for Denison Mines. The successful 2021 field test program provides sufficient data to prepare and permit a lixiviant test planned for the Test Pattern in early-to-mid 2022. This test will support a Definitive Feasibility Study set for Q4/22 and be a critical de-risking element to the Environmental Assessment process (the draft Environmental Impact Statement will be submitted in H1/22). Following Denison's partial monetization of its interest in Goviex (GXU-TSXv, Not Covered) (note [here](#)), we estimate the Company has cash and equivalents of ~C\$80 MM which should be more than sufficient to fund the Environmental Assessment and Federal Licensing processes to completion (H2/24). We note Denison also continues to hold 2.5 MMlb U<sub>3</sub>O<sub>8</sub> in inventory that it purchased at an average price of \$29.61/lb U<sub>3</sub>O<sub>8</sub>. At the current spot price of \$46.88/lb U<sub>3</sub>O<sub>8</sub>, this material has a market value of \$117 MM that Denison can leverage toward project financing in the future.

### Exhibit 2. Denison Mines NAVPS Estimate

Asset (C\$)		Value (\$MM)	\$ Per Share	% of NAV
Wheeler River (95%)	7.5%	\$2,332.4	\$2.65	77%
McClean Lake Mill (22.5%)	7.5%	\$316.3	\$0.36	10%
Waterbury Lake (66.9%)	7.5%	\$72.0	\$0.08	2%
Athabasca Properties (\$/lb)	\$1.00/lb	\$28.9	\$0.03	1%
JCU Properties (\$/lb)	\$1.00/lb	\$52.2	\$0.06	2%
<b>Total Mining Assets</b>		<b>\$2,801.8</b>	<b>\$3.18</b>	<b>92%</b>
Cash and S/T Investments*		\$83.0	\$0.09	3%
U3O8 in Inventory		\$146.5	\$0.17	5%
Investment in GoviEx (GXU-TSXv)		\$16.9	\$0.02	1%
Current Debt + S/T Leases		\$0.0	\$0.00	
Long Term Debt + Leases		\$0.0	\$0.00	
Future Equity Financing		\$0.0	\$0.00	
Future Debt Financing		(\$210.0)	(\$0.24)	
<b>Net Asset Value</b>		<b>\$2,838.2</b>	<b>\$3.22</b>	
P/NAV			0.67x	

\*Pro-forma pending transactions, Cantor estimate  
Source: Cantor Fitzgerald

**MAINTAINING BUY RATING AND PRICE TARGET**

We are maintaining our Buy rating and target price of \$3.75/C\$4.75/share on Denison Mines, based on a 1.5x NPV<sub>7.5%</sub> multiple on the Company's Athabasca Basin uranium projects and 1.0x NPV on its net financial position (cash, investments, and U<sub>3</sub>O<sub>8</sub> in inventory). Given the Tier One status of the Wheeler River project, its top spot on the list of potential takeover candidates in the uranium sector, and the Company's balance sheet which is fully cashed-up through to construction, Denison should be a core holding for any/all institutional investors with a uranium focus, energy allocation, or Environmental, Social, and Governance (ESG) criteria. We maintain our Buy rating on the Company.

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The analysts responsible for this research report *do not have*, either directly or indirectly, a long or short position in the shares or options of Denison.

The analyst responsible for this report *has* visited the material operations of Denison. No payment or reimbursement was received for the related travel costs.

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**BUY (Speculative):** The stock is attractively priced relative to the company's fundamentals, however investment in the security carries a higher degree of risk.

**HOLD:** The stock is fairly valued, lacks a near term catalyst, or its execution risk is such that we expect it to trade within a narrow range of the current price in the next 6 to 12 months. The longer term fundamental value of the company may be materially higher, but certain milestones/catalysts have yet to be fully realized.

**SELL:** The stock is overpriced relative to the company's fundamentals, and we expect it to decline from the current price over the next 6 to 12 months.

**TENDER:** We believe the offer price by the acquirer is fair and thus recommend investors tender their shares to the offer.

**UNDER REVIEW:** We are temporarily placing our recommendation under review until further information is disclosed.

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