

MODEL UPDATE POST UEX/JCU DEAL CLOSE

Increasing Wheeler River Stake with JCU Deal Yields Target Bump – Plus Positive Met Update

OUR TAKE: Yesterday Denison announced the closing of its Agreement with UEX Corp. (UEX-T, not rated) to acquire a 50% interest in “JCU” (JCU (Canada) Exploration Company, Limited) for \$20.5M, originally announced June 15th, 2021. The deal enabled Denison to further consolidate the Wheeler River Project (to 95% ownership), which is very positive. We previously expressed our view that the arrangement looked highly accretive to DML shareholders on the Wheeler River (WR) component alone, but highlight that DML is gaining an interest in other valuable assets, including an ~15% stake in the Millennium deposit, which we believe has high future development potential. Previously, we valued DML’s 90% share of the Wheeler River project at C\$1.486B (implies C\$82.5M for 5%, vs the \$20.5M paid under the deal). With the deal closed, we have increased DML’s interest in the project to 95% in our DCF NAV project model and added in-situ valuation credits for DML’s share of the Millennium, Kiggavik, and Christie Lake projects, plus a credit for the balance of earlier stage assets in the portfolio, resulting in a **\$0.20/share increase in our 12-month target which moves to \$2.40.**

This morning Denison also announced results of metallurgical test work on its Phoenix ISR deposit at the WR project. Based on core and column leach tests, Denison will base future economics on a 50% higher head-grade than previously contemplated in the 2018 PFS on the project. This should translate into reduced initial CAPEX for the process plant and reduced OPEX for a similar production profile (~6 Mlbpa U₃O₈) in a future Pre-Feasibility Study update. Denison remains a **‘Top-Pick’, p.30.**

KEY HIGHLIGHTS

- ◆ **Adding Assets at big discount.** DML paid \$20.5M for a 50% stake in JCU, and in turn, picks up an additional 5% interest in the core Wheeler River project, plus a share in a suite of other assets. The \$20.5M paid is equal to just ~¼ of our valuation of a 5% stake in WR alone. On an in-situ resource basis, \$20.5M is equal to ~US\$0.337/lb for 50% of JCU’s total resources across projects of ~97Mlb U₃O₈ vs DML trading at ~US\$4.59/lb pre-close, with peers at ~US\$3.89/lb.
- ◆ **JCU Project Portfolio:** Key assets acquired include the additional 5% stake in Wheeler River (135.1 Mlb U₃O₈ in total resources), plus half of JCU’s 30.1% stake in the Millennium Project with 104.9 Mlb U₃O₈ in resources (Cameco 69.9%), half of JCU’s 33.8% interest in the Kiggavik Project with 133 Mlb in resources (Orano Canada Inc. 66.2%), and half of JCU’s 34.5% interest in UEX’s Christie Lake Project (20.35 Mlb). (see Tables 1 and 2 for details).

OUTLOOK

- ◆ **Increasing target on deal accretion.** We are increasing our target to \$2.40 (from \$2.20) with this report, increasing DML’s share of our Wheeler River project DCF NAV to 95% (from 90%), plus the following in-situ credits: Millennium (DML 15.05%): \$79.6M (US\$4.00/lb for 15.8 Mlb U₃O₈ attrib.); Kiggavik (DML 16.91%): \$14.1M (US\$0.50/lb for 22.4 Mlb U₃O₈ attrib.); Christie Lake (DML 17.23%): \$6.6M (US\$1.50/lb for 3.5 Mlb U₃O₈ attrib.); net other projects: \$10M.

RECOMMENDED ACTION

We recommend adding exposure as Phoenix continues to be de-risked...

- ◆ **Attractive entry point.** DML shares have been demonstrating excellent sector leverage as of late, while it continues to de-risk its world-class Wheeler River project. Trading well off its recent highs, we see great upside in this ‘Top-Pick’ in a forecast rising uranium price environment.

CATALYSTS

1. **H2/2021** - Further technical work to de-risk the ISR mining approach to Phoenix at Wheeler River - including potential future field programs in support of a future FS / EA process
2. **2021** – PFS update or full Feasibility Study for Wheeler River integrating the extensive technical advancements made since the 2018 PFS.
3. **2021** – Exploration results – seeking satellite deposits at Wheeler River; and Studies for other potentially ISR amenable projects similar to THT/Waterbury.

PROJECTED RETURN

76%

RISK FACTOR

Very High

SCENARIO ANALYSIS

Downside Scenario	Current Price	Price Target
\$0.60	\$1.36	2.40
↓56%		↑76%

KEY STATISTICS AND METRICS

52-Week High/Low	\$2.29/\$0.41
YTD Performance	62%
Dividend Yield	N/A
Shares O/S	804.7M
Market Capitalization	\$1,094M
Cash	\$115M
Debt	NIL
Enterprise Value	\$979M
Daily Volume (3 mos.)	2,268,233
Currency	C\$ unless noted

HAYWOOD ESTIMATES

Year	2019A	2020A	2021E
Revenue (\$M)	\$15.5	\$14.4	\$13.5
U ₃ O ₈ Production	-	-	-
EBITDA (\$M)	(\$14.9)	(\$7.3)	(\$15.1)
CFPS (\$/share)	(\$0.03)	(\$0.02)	(\$0.02)

VALUATION

Our target is based on a corporate NAV sum-of-parts assessment of Denison’s full suite of interests, including a DCF_{6%} assessment of future production from the Wheeler River project and other credits.

Net of corporate adjustments, our NAV is \$2.1 billion, or \$2.37 per fully diluted share.

INVESTMENT THESIS

We believe Denison continues to make significant progress in redefining what its flagship Wheeler River project could be, especially with respect to the Phoenix deposit and the ISR mining approach it is developing. Denison's unique (to the Athabasca) plan to in-situ leach the Phoenix deposit is perceived as technically challenging, but with a very high potential reward, with a PFS-supported cost profile among the lowest in the world, due to the extremely high grades at Phoenix.

- ◆ **Innovator in the basin looking to shed risk perception.** Denison defined the ISR mining concept for its Phoenix deposit back in September of 2018 with the publication of its Prefeasibility Study on the Wheeler River project (Denison owns 95%). The approach marries for the first time several proven commercial uranium mining techniques (ISR, freeze walls) and proven conventional processing. The full Wheeler River project PFS indicated a pre-tax NPV of \$1.3 billion, with LoM blended OPEX of US\$7.1/lb, and pre-production CAPEX of just C\$323M (100% basis). The PFS sequences in the Gryphon deposit at Wheeler River, but the current focus of Denison is Phoenix, where OPEX outlined in the PFS is just US\$3.33/lb U₃O₈, with all-in costs of US\$8.90/lb implementing ISR mining techniques. Phoenix alone drove a **pre-tax NPV of \$930.4M and a pre-tax IRR of 43.3% using a ramping uranium price** ranging from US\$29 to US\$45/lb U₃O₈. The high asset quality, low CAPEX burden and industry leading cost profile potential make Denison a very compelling name in the junior uranium sector.
- ◆ **New approach could further improve economics.** Denison conducted a trade-off study examining the use of 'freeze walls' and sequential ISR mining phases to replace the 'freeze dome' outlined for the Phoenix deposit in the PFS. Mining of Phoenix via ISR was already a very attractive economic proposition, and with the freeze wall approach, we could see these economics improve further. Each Phase would isolate a smaller portion of the deposit than the freeze dome and would not require the use of complex and more expensive directional drilling techniques. The trade-off study is preliminary but **lower initial CAPEX is supportable as the phased freeze wall approach is much simpler less costly to initial production due to the smaller footprint and cheaper installation techniques.** We expect there will naturally be an increase in sustaining CAPEX associated with the installation of sequential freeze walls as DML moves through production phases, and therefore, some increase in all-in sustaining cost of production. That said, we believe that this is the much better proposition, as it places the bulk of the sequential CAPEX into a timeframe where it can be 'production-supported', reflecting the potential for reduced dilution to shareholders on the lower upfront financing need.

KEY RISKS

- **Financing** – dilution from future equity financings.
- **Technical Risk** – Denison is working to prove an unconventional, but potentially extremely low-cost, ISR mining concept for the Phoenix deposit at its flagship Wheeler River Project, eastern Athabasca Basin. The concept marries several proven technologies in a way not seen before. This innovative approach carries with it the typical high risk of any new mining technique.
- **Commodity Risk** – Denison shares remain highly correlated with uranium price movements. Weakness or volatility in the commodity could induce similar outcomes in DML shares.

SCENARIO ANALYSIS

Denison Mines Corp. (DML-T)



Source: Capital IQ, and Haywood Securities

TARGET PRICE

Our \$2.40 target is based on a corporate NAV sum-of-parts assessment of Denison's full suite of interests, including a DCF_{6%} assessment of future production from the Wheeler River project and other credits. Net of corporate adjustments, our NAV is \$2.1 billion, or \$2.37 per fully diluted share.

DOWNSIDE CASE

Acknowledging the risks. While Denison's low-case valuation should have support from its significant 22.5% interest in the McClean Lake mill hard asset, there is no hiding from commodity price exposure and technical risk at its flagship Wheeler River project. The Company is working diligently to reduce perceived risk of ISR mining at Phoenix, but set-backs in that regard and/or further weakness in uranium price would negatively impact DML shares. In consideration of a confluence of negative factors our downside case from DML shares is \$0.60.

Our downside scenario price is a theoretical case based on notional valuation metrics and market assumptions. The downside price is solely intended for demonstrative purposes and is not to be regarded as a reflection of all market possibilities. It is not a guarantee that this company's share price will not drop below this price level and hence should not be taken as such.

Denison Mines Corp. Denison is advancing its flagship Wheeler River uranium project, the largest, highest-grade undeveloped uranium project in the prolific eastern Athabasca Basin, Saskatchewan.

Website

www.denisonmines.com

Key Management

David Cates – President & CEO



Denison Mines Corp. TSX:DML Price: CDN \$1.36 Shares O/S (M) 804.7 Rating: Buy
 NYSEAM:DNN Price: US \$1.08 MCap (CDN\$ M) \$1,094.3 Target (CDN \$): \$2.40 Return: 76%

Alpha: Denison Mines is focused on becoming the preeminent exploration company in the Athabasca Basin. Following the sale of its U.S. assets, the Company has continued to expand its portfolio of strategic assets organically, and through strategic acquisition and investment in mainly in the eastern Athabasca Basin, Saskatchewan. Denison has a 22.5% interest in the McClean Lake mill.

Investment Highlights

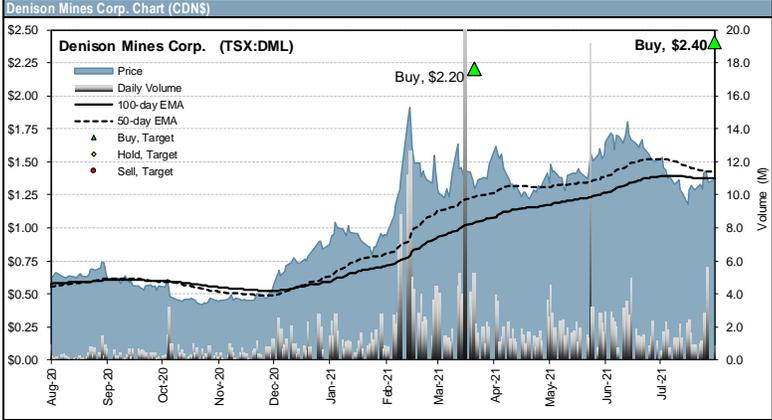
- Denison is focused on building on its diverse strategic asset base making up its portfolio of uranium development assets in Canada, led by its 90%- owned flagship Wheeler River Project in the eastern Athabasca Basin.
- In addition to the catalysts outlined below, Denison's 2021 programs will focus on further technical de-risking of ISR mining at Phoenix, including potential future field programs in support of a future FS / EA process. Progress with permitting / Environmental Assessment, including negotiations / agreements with Indigenous groups, issuance of draft EIS, etc. Initial discussions on project financing / commercial developments to support the funding of future construction. Exploration results – seeking satellite deposits at Wheeler River.

Catalysts:

H1/2021 - Further technical work to de-risk the ISR mining approach to Phoenix at Wheeler River - including potential future field programs in support of a future FS / EA process

2021 – PFS update or full Feasibility Study for Wheeler River integrating the extensive technical advancements made since the 2018 PFS.

2021 – Exploration results – seeking satellite deposits at Wheeler River; and, Studies for other potentially ISR amenable projects similar to THT/Waterbury.

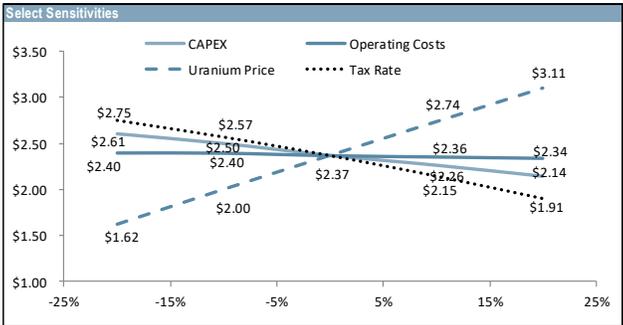


Financials	2017	2018	2019	2020	2021e
Forecast U308 Spot Price, US\$/lb	\$22	\$25	\$26	\$29	\$39
Forecast U308 LT Contract Price, US\$/lb	\$31	\$31	\$32	\$32	\$46
C\$/US\$ FX Rate	1.35	1.33	1.33	1.34	1.28
A\$/US\$ FX Rate	1.38	1.38	1.45	1.45	1.33
Shares O/S, millions	569.2	589.2	597.2	679.0	804.7
Revenue, C\$M	\$16.1	\$15.6	\$15.5	\$14.4	\$13.5
Mine Site Expense	\$13.8	\$15.6	\$14.4	\$10.6	\$8.6
Corporate G&A	\$7.5	\$8.6	\$9.2	\$9.0	\$8.0
EBITDA	(\$12.7)	(\$15.9)	(\$14.9)	(\$7.3)	(\$15.1)
EV / EBITDA	-	-	-	-	-
DD&A	\$9.1	\$8.6	\$8.7	\$7.1	\$0.0
Earnings	(\$19.6)	(\$30.1)	(\$18.1)	(\$15.4)	(\$13.6)
Adjusted EPS, C\$	(\$0.04)	(\$0.05)	(\$0.03)	(\$0.03)	(\$0.02)
Current Price / EPS	-	-	-	-	-
Target Price / EPS	-	-	-	-	-
Cash Flow Before W/C Changes	\$18.3	(\$21.3)	(\$21.1)	(\$13.2)	(\$13.7)
CFPS, C\$	\$0.03	(\$0.04)	(\$0.03)	(\$0.02)	(\$0.02)
Current Price / CFPS	33.4x	-	-	-	-
Target Price / CFPS	58.9x	-	-	-	-
Operating Cash Flow, C\$M	\$17	(\$21)	(\$19)	(\$13)	(\$14)
Financing Cash Flow, C\$M	\$19	\$5	\$5	\$31	\$144
Investing Cash Flow, C\$M	(\$48)	\$36	(\$1)	\$0	\$0
Change in Cash, C\$M	(\$12)	\$20	(\$15)	\$17	\$129
Working Capital	\$35	\$19	\$2	\$21	\$136
Current Ratio	3.2x	2.5x	1.1x	2.8x	11.7x
LT Debt, US\$M	\$0	\$0	\$0	\$0	\$0
Debt as % of Capitalization	0.0%	0.0%	0.0%	0.0%	0.0%

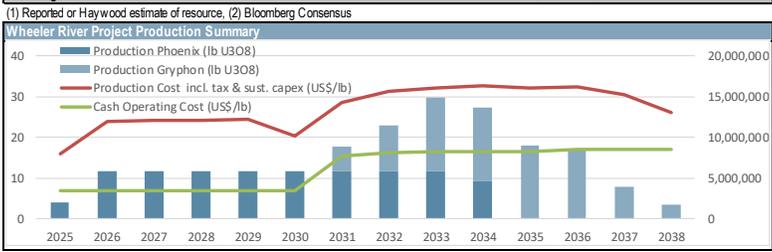
Trading Statistics (CDN\$): Capital Structure			
52 Week High/Low	\$2.29 / \$0.41	Average Daily Volume (90 day)	2,268,240
Ownership	Management / Institutional	Major Shareholders	
Shares (million)	3.97 / 174.30	MM Asset Management Inc	4.5%
% O/S	0.5% / 21.7%	Beutel Goodman & Company Ltd.	2.3%
Last Financing			
Z2-Mar-21 US\$86.3 M - unit offering - 78.4M units at US\$1.10 - (each unit = 1 common share + 1/2 warrant, X-price of US\$2.25 for 24 mths)			
Shares O/S - Basic, F.D.	804.7	873.3	
(CSM)	Av Strike (C\$)	Units (M)	ITM Units (M) Proceeds (C\$)
Working Capital			\$156
Options/Warrants	\$2.38	68.67	\$10
Convertible Bonds			
Total NWC & ITM		68.67	13.66
Market Cap (C\$)			\$1.094

NAV Summary, Target Generation and Sensitivity	Base	-20%	-10%	+10%	+20%
Average Realized U308 (US\$/lb)	\$65	\$52	\$59	\$72	\$78
McClean Lake/Midwest DCF (C\$M)	(\$6.0%)	\$58.5			
Wheeler River DCF (C\$M)	(\$6.0%)	\$1,568.5			
NPV of Corporate CF	(\$6.0%)	-\$29.9			
Total Project NAV - Net of Corporate CFs		\$1,597.1			
McClean Lake Mill 22.5% Value (C\$M)		\$150.0			
Canada - Waterbury, Millennium, others (C\$M)		\$163.8			
Equity interest in Goviex (CSM)		\$14.3			
Corporate NAV Subtotal (CDN\$)	\$1,925.2	\$1,266.8	\$1,600.8	\$2,247.6	\$2,568.8
Working Capital + Uranium Inventory (est. year end 2021)	\$135.7	\$135.7	\$135.7	\$135.7	\$135.7
Dilutive Capital	\$10.0	\$10.0	\$10.0	\$10.0	\$10.0
Corporate NAV (CDN\$)	\$2,071.0	\$1,412.6	\$1,746.5	\$2,393.4	\$2,714.5
Corporate NAVPS	\$2.37	\$1.76	\$2.17	\$2.97	\$3.37
Current P/NAV	0.6x	0.8x	0.6x	0.5x	0.4x
Target P/NAV	1.0x	1.0x	1.0x	1.0x	1.0x
Target (CDN\$)	\$2.40	\$1.80	\$2.20	\$3.00	\$3.40

Bloomberg Consensus Data (excluding Haywood estimates)	2021
OCFPS	(\$0.02)
EPS	(\$0.03)



Peer Group Comparables	Symbol	Price (C\$)	M.CAP C\$	EV US\$	EV / lb Res (1)
Denison Mines Corp.	TSX:DML	\$1.36	\$1,094	\$721.4	\$4.99
NexGen Energy Ltd.	TSX:NXE	\$5.23	\$2,487	\$1,866.6	\$5.53
Fission Uranium Corp.	TSX:FCU	\$0.52	\$336	\$251.7	\$1.86
UEX Corporation	TSX:UEX	\$0.32	\$146	\$111.6	\$1.08
Average					\$3.27



Sales & Production Profile	2025	2026	2027	2028	2029
Production Attrib. Wheeler River U ₃ O ₈ (Mlb)	2.0	5.9	5.9	5.9	5.9
Sales Attrib. Wheeler River U ₃ O ₈ (Mlb)	2.0	5.9	5.9	5.9	5.9
U ₃ O ₈ Realized Price, US\$/lb	\$65	\$65	\$65	\$65	\$65
U ₃ O ₈ Cash Cost, US\$/lb	\$7.0	\$7.0	\$7.0	\$7.0	\$7.0
U ₃ O ₈ Product. Cost after tax & sust. capex, b/f interest, US\$/lb	\$15.8	\$23.8	\$24.2	\$24.3	\$24.4

Corporate Contact	
Website:	www.denisonmines.com
Tel:	0
CEO:	Colin Healey, MBA - Research Analyst
	emma.boggio@haywood.com
	604-697-6089

Source: S&P Capital IQ, SNL Financial, Bloomberg, Haywood Securities, Company Reports



Denison Further Consolidates Flagship Wheeler River, Now Owns 95% and adds to Project Portfolio in the Basin

A Steal of a Deal

As noted earlier in this report, DML is picking up the additional **5% interest in Wheeler plus a share in the list of assets in Table 1 for \$20.5M. This amount is equal to only ~¼ of our model-implied valuation for the same stake in Wheeler, reflecting a large discount before considering the other assets.** DML paid \$20.5M to acquire 50% of JCU from UEX, equal to ~US\$0.337/lb for 50% of JCU's ~97Mlb U₃O₈. DML traded at ~US\$4.59/lb in-situ resource pre-close and Athabasca Basin peers traded at an average of ~US\$3.89/lb, further suggesting Denison is picking up these assets at an enviable discount (see Haywood Uranium Sector Comps table on page 8).

Table 1 - JCU 's Canadian Exploration Projects and Ownership as of December 31, 2020

Project	Province	JCU Share (%)	Partners (%) * Operator	
Millennium	Saskatchewan	30.0990	Cameco Corporation*	69.9010
Kiggavik	Nunavut	33.8123	Orano Canada Inc.* Urangesellschaft Canada Ltd	24.0033 42.1844
Wheeler River	Saskatchewan	10.0000	Denison Mines Corp.*	90.0000
Christie Lake	Saskatchewan	34.4508	UEX Corporation*	65.5492
Wolly	Saskatchewan	13.1077	Orano Canada Inc.* Denison Mines Corp.	64.9997 21.8926
Close Lake	Saskatchewan	10.3128	Orano Canada Inc.* Cameco Corporation	75.1279 14.5593
Candle Lake	Saskatchewan	25.0000	Denison Mines Corp.* Uranium One	44.9400 30.0600
Beatty River	Saskatchewan	21.4253	Orano Canada Inc.* UEX Corporation	56.5303 22.0444
Waterfound River	Saskatchewan	26.9830	Orano Canada Inc.* Denison Mines Corp.	60.7008 12.3162
Cree Extension	Saskatchewan	30.0990	Cameco Corporation* Orano Canada Inc.	41.9645 27.9365
Moon Lake	Saskatchewan	20.1494	Cameco Corporation* Orano Canada Inc.	56.6816 23.1690
Moore Tomblin	Saskatchewan	13.5947	Orano Canada Inc.* Cameco Corporation	66.6194 19.7859

Source: UEX Corporation

Table 2 – Historic Indicated and Inferred Resources – JCU Projects

Deposit ⁽¹⁾	Ownership Interest	Indicated Resources				Inferred Resources			
		Tonnes	Grade (wt% U ₃ O ₈)	U3O8 (lbs)	Combined Company Share (lbs)	Tonnes	Grade (wt% U ₃ O ₈)	U3O8 (lbs)	Combined Company Share (lbs)
Wheeler River ⁽⁴⁾	JCU - 10%	1,809,000	3.3	132,100,000	13,210,000	82,000	1.700	3,000,000	300,000
Millennium ⁽⁵⁾	JCU - 30.099%	1,442,600	2.39	75,900,000	22,845,141	412,400	3.19	29,000,000	8,728,710
Kiggavik ⁽⁶⁾	JCU - 33.8123%	10,418,000	0.47	127,267,000	43,031,900	713,000	0.28	5,353,000	1,809,972
Christie Lake ⁽²⁾⁽³⁾	JCU - 34.45%					588,000	1.57	20,350,000	7,010,575
Subtotal - JCU Projects					79,087,041				17,849,257

Source: UEX Corporation



Phoenix Metallurgy Update from the Field Very Positive

Increasing ISR Head-Grade Target 50% on Solid Bench Lab Data

This morning Denison announced very positive results of metallurgical test work on its Phoenix ISR deposit, part of its 95%-owned Wheeler River project.

- ◆ **Higher Head-Grade = Reduced Process Plant / Fluid Handling** - Based on core and column leach tests, **Denison will base future economics on a 50% higher head-grade than previously contemplated in the 2018 PFS on the project.** This should translate into reduced initial CAPEX of the process plant and reduced OPEX for a similar production profile (~6 Mlbpa U₃O₈), driving even more robust economics in a future Pre-Feasibility Study update (see re-cap of 2018 PFS in Table 4).
- ◆ **Metallurgical testing shows Phoenix can support 50% higher head-grade** - Core leach tests on high-grade/low-clay samples (Table 3, left) easily supported average leach rates of >15g/litre, the new target rate for future planning, ranging from 22.0g/l to 31.1g/l (over 56-85 days). Two core leach tests on medium-grade/high-clay samples (Table 3, right) were also provided indicating that, following DML-developed MaxPERF permeability enhancement technique simulations, these rocks also exceeded the 15g/l target uranium-bearing solution (UBS) head-grade, returning 24.9g/l over the first 28 days of testing (still in progress).
- ◆ Currently, the Phase 1 mining area at Phoenix is estimated to contain probable reserves of 22.2Mlb U₃O₈ grading 27.1%, and notably, an estimated 6.6 Mlb U₃O₈ grading 39.2% of the probable reserves in Phase 1 are covered by the now complete commercial-scale 5-well test pattern installed as part of the current field program.
- ◆ **Planned testing for the remainder of 2021: 1)** multi-day pump and injection tests on full-scale 5-well pattern, **2)** Ion tracer tests (mentioned above), **3)** Evaluation and testing of other permeability enhancement techniques, **4)** continued permeability testing and data analysis performed on drill core. **This is all ahead of a possible lixiviant injection test in 2022, which would be a major milestone and de-risking event for this 'unique to the Basin' ISR mining approach.**

Table 3 – Core Leach Test Results

LHS: High-Grade/Low Clay Core Sample;

RHS: Medium-Grade/High Clay Core Sample

Summary Results from High-Grade/ Low clay Core Leach Tests			
	Sample #1	Sample #3A	Sample #3C
Sample diameter	6.1 cm	8.1 cm	7.8 cm
Sample length	19 cm	18 cm	7cm
Sample grade (U ₃ O ₈)	70%	83%	83%
Clay Content	Low	Low	Low
UBS range in steady state (U)	13.5 g/L to 39.8 g/L	29g/L to 90g/L	14g/L to 74g/L
UBS average interval (U)	22g/L over 56 days	29.6 g/L over 85 days	31.1 g/L over 64 days

Summary Results from medium Grade/ High clay Core Leach Tests		
	Sample #2A	Sample #2B ⁽¹⁾
Sample diameter	61mm	61mm
Sample length	12cm	10cm
Sample grade (U ₃ O ₈)	28%	28%
Clay Content	High	High
Permeability Enhancement	No	Yes
UBS range in steady state (U)	N/a	5.8g/L to 76.0 g/L
UBS average interval (U)	3.8g/L over 1 day	24.9 g/L over 28 days

Notes: (1) Core test is still in progress. Results are as of August 3, 2021.

Source: Denison Mines

Table 4 – Wheeler River PFS (2018) Base Case Re-cap

Parameter	Result
Mine Life (y)	14 years
LoM Production (lb)	109.4 Mlb U ₃ O ₈
Phoenix	(years 1-10): 59.7 Mlb U ₃ O ₈
Gryphon	(years 8.5-14): 49.7 Mlb U ₃ O ₈
Avg. Annual Production (lb)	7.8 Mlb U ₃ O ₈
Phoenix	6.0 Mlb U ₃ O ₈
Gryphon	7.6 Mlb U ₃ O ₈
Up-Front CAPEX (\$M)	C\$322.5 million
Phoenix	C\$322.5 million
Gryphon	C\$623.1 million

Parameter	Result
Sustaining CAPEX (\$M)	C\$186.2 million
Phoenix	C\$103.5 million
Gryphon	C\$82.7 million
LoM OPEX (\$/lb)	US\$7.13/lb U ₃ O ₈
Phoenix	US\$3.33/lb U ₃ O ₈
Gryphon	US\$11.70/lb U ₃ O ₈
Base Case Financial Valuation	At US\$29-45/lb U ₃ O ₈ for Phoenix (y 1-10) At US\$50/lb U ₃ O ₈ flat for Gryphon (y 8.5-14)
IRR (%)	Pre-tax: 38.7%
NPV _{8%}	Pre-tax: C\$1.31 billion
Payback (y)	~ 2 years

Source: Denison Mines, Haywood Securities



Valuation & Recommendation

Maintaining Buy Rating on our 'Top-Pick'; Increasing Target Price to \$2.40 (from \$2.20)

- ◆ **Increasing target on accretive transaction. We are increasing our target to \$2.40 (from \$2.20)** with this report, as we believe the sum-of-the-parts of the assets acquired with a 50% interest in JCU far outweigh the cost. **We attribute ~\$193M or ~\$0.22/FD share before costs of \$20.5M or \$0.023/FD share, for a net increase in corporate NAV of ~\$0.197/FD share.**
- ◆ **Our revised target includes (Table 5/6):**
 - **Wheeler River (DML 95%): \$82.5M or \$0.10/FD share** - inclusion of the additional 5% stake to our DCF project NAV;
 - In-situ credits for:
 - **Millennium (DML 15.05%): \$79.6M or \$0.09/FD share** (US\$4.00/lb for 15.8 Mlb U₃O₈ attrib.);
 - **Kiggavik (DML 16.91%): \$14.1M or \$0.016/FD share** (US\$0.50/lb for 22.4 Mlb U₃O₈ attrib.);
 - **Christie Lake (DML 17.23%): \$6.6M or \$0.008/FD share** (US\$1.50/lb for 3.5 Mlb U₃O₈ attrib.);
 - **Net other projects in the JCU portfolio: \$10M or \$0.01/FD share**
- ◆ **Valuation – Our \$2.40 target (from \$2.20)** is based on a 1.0x multiple to our corporate NAV sum-of-parts assessment of Denison's full suite of interests, including a DCF_{6%} assessment of future production from the Wheeler River project and other credits. Net of corporate adjustments, our NAV is \$2.07 billion, or \$2.37 per fully diluted share (Table 6). **DML currently trades at 0.82x Consensus NAV and 0.57x Haywood NAV, where Athabasca Basin peers are currently trading at 0.78x consensus NAV.** See Uranium Sector Comps on page 8.
- ◆ **Top Pick, Eastern Athabasca Uranium Explorer/ Developer:** We continue to highlight Denison as one of our top picks in the uranium mining sector in 2021. Denison has done an impressive job of redefining what its flagship Wheeler River project could be, especially with respect to the Phoenix deposit and the ISR mining approach it is developing. We believe the market is significantly underestimating the importance of the de-risking event of the recent 'freeze-wall' technical update on Phoenix and will gain the recognition it deserves over time. **Denison continues to be a 'top-pick' in the uranium space largely underpinned by our thesis that recent de-risking work at Wheeler River regarding the ISR mining approach to the ultra-high-grade Phoenix deposit is going under-appreciated by the market. We expect future work to demonstrate the viability of this low-cost mining approach and believe that it will translate into more positive movement in DML's share price.** Denison was highlighted in our Haywood 2021 Top Picks Report here [<Link to Haywood 2021 Top-Picks report. DML details on p.30>](#).

Table 5: Breakdown of in-situ and 'other' valuation credits for 50% interest in JCU

Property	DML Ownership	Measured & Indicated (Mlb U ₃ O ₈)	Grade (% U ₃ O ₈)	Inferred (Mlb U ₃ O ₈)	Grade (% U ₃ O ₈)	Attributable Global (Mlb U ₃ O ₈)	In-situ Credit Metric (US\$/lb)	In-situ Credit Valuation (C\$M)
Millennium, Saskatchewan	15.05%	75.900	2.39%	29.000	3.19%	15.787	\$4.00	\$79.6
Kiggavik, Nunawut	16.91%	127.267	0.470%	5.353	0.280%	22.421	\$0.50	\$14.1
Christie Lake, Saskatchewan	17.23%			20.350	1.570%	3.505	\$1.50	\$6.6
Wolly, Saskatchewan	6.55%							
Close Lake, Saskatchewan	5.16%							
Candle Lake, Saskatchewan	12.50%							
Beatty River, Saskatchewan	10.71%							\$10.00
Waterfound River, Saskatchewan	13.49%							
Cree Extension, Saskatchewan	15.05%							
Moon Lake, Saskatchewan	10.07%							
Moore Tomblin, Saskatchewan	6.80%							
Total Attrib. Res. ->						41.71	Total Credits ->	\$110.3

Source: Haywood Securities, Company reports



Table 6: Valuation Breakdown & Sensitivity to Uranium Price Movement

NAV Summary, Target Generation and Sensitivity	Base	-20%	-10%	+10%	+20%
Average Realized U3O8 (US\$/lb)	\$65	\$52	\$59	\$72	\$78
McClellan Lake/Midwest DCF (C\$M) (@6.0%)	\$58.5				
Wheeler River DCF (C\$M) (@6.0%)	\$1,568.5				
NPV of Corporate CF (@6.0%)	-\$29.9				
Total Project NAV - Net of Corporate CFs	\$1,597.1				
McClellan Lake Mill 22.5% Value (C\$M)	\$150.0				
Canada - Waterbury, Millennium, others (C\$M)	\$163.8				
Equity interest in Goviex (C\$M)	\$14.3				
Corporate NAV Subtotal (CDN\$)	\$1,925.2	\$1,266.8	\$1,600.8	\$2,247.6	\$2,568.8
Working Capital + Uranium Inventory (est. year end 2021)	\$135.7	\$135.7	\$135.7	\$135.7	\$135.7
Dilutive Capital	\$10.0	\$10.0	\$10.0	\$10.0	\$10.0
Corporate NAV (CDN\$)	\$2,071.0	\$1,412.6	\$1,746.5	\$2,393.4	\$2,714.5
Corporate NAVPS	\$2.37	\$1.76	\$2.17	\$2.97	\$3.37
Current P/NAV	0.6x	0.8x	0.6x	0.5x	0.4x
Target P/NAV	1.0x	1.0x	1.0x	1.0x	1.0x
Target (CDN\$)	\$2.40	\$1.80	\$2.20	\$3.00	\$3.40

Source: Haywood Securities

Recommendation

- ◆ **Attractive entry point as risk/reward proposition improving.** A core strength of Denison remains its ability to leverage its technical team and knowledge gained in studying ISR and its applicability to unconformity-hosted uranium deposits in the Basin. Denison continues to demonstrate this as it applies its growing in-house ISR skill set, unique in the Athabasca Basin, to another deposit, potentially unlocking value in a project that would otherwise likely require significant scaling to be economic by conventional mining techniques. We recommend buying Denison to gain leverage to the uranium sector and potentially ultra low cost future production from Wheeler River while Denison works to uncover additional value in its extensive portfolio of other projects. Following major global production cuts, the uranium market is in fundamental deficit. We believe key major global projects will remain offline until uranium prices climb, which will be a major catalyst for high torque names like Denison.

Looking Ahead

Denison has recently added a significant investment in physical uranium adding a new dimension of flexibility to the story in addition to its robust portfolio of uranium assets in the prolific Athabasca Basin. Our long-term price forecast of US\$65/lb U₃O₈, and the ever-tightening supply/demand fundamentals in the uranium space suggest significant upside for DML's physical position and its development and exploration stage assets. Denison could liquidate the physical inventory investment to raise capital for development of Wheeler River or use the inventory as a buffer to initial production if it signs future delivery commitments. The pounds could be used as security against future development capital or to add comfort to a potential off-take partner.

- ◆ **ISR field work continues in 2021:** Denison has installed a 5-well ISR test pattern replicating a production injection/recovery well installation configuration using commercial-scale wells at the Phoenix deposit to "facilitate further hydrogeological evaluation and support the final production well design pattern, as well as refine cost estimates, while allowing for testing of further permeability enhancement options." DML expects to be in a position to carry out a lixiviant test in 2022 which will be a major milestone for the project and, if successful, highly de-risking from an ISR extraction feasibility perspective. DML says "[t]he 2021 field program is fully permitted, with all approvals received from the provincial government to commence work on site."
- ◆ **Continuation of metallurgical test work:** More lab work to replicate and confirm the ISR process flowsheet is planned. DML states that "studies are expected to include additional core leach tests followed by uranium bearing solution ("UBS") preparation, through column leaching, to allow for bench-scale tests planned to simulate each unit of operation in the process plant."
- ◆ **Advancement of engineering activities:** According to Denison, "[d]esktop and field investigations are planned to finalize specific Project details necessary for the EA and engineering inputs required to formally initiate the FS. Areas of investigation are expected to include site layout design and earthworks updates, electrical power studies, borrow pit investigation, geotechnical analysis, final ISR well designs and decommissioning plans."



Uranium Sector Comps

Company (Ticker)	Consensus Targets			Shares (millions)	Market Capitalization (millions)	In-Situ Comps - EV/lb U3O8			NAV Comps		Cash Flow Comps							
	Share Price	Consensus Target	Implied Return			Enterprise Value (USD)	Total Reserves & Resources (M lb)	USD EV/lb Resource	IBES Consensus NAV	Price / Nav	CFPS (LoC)			P/CFPS				
PRODUCERS																		
Haywood Covered Names bold																		
Kazatomprom (KAP-LSE)	\$25.35	\$27.77	10%	259	\$6,575	\$7,512	1,184	\$6.35	\$26.69	0.95x	\$1.75	\$1.89	\$2.19	14.5x	13.4x	11.6x		
Cameco Corporation (CCO-T)	\$21.72	\$23.82	10%	398	\$8,639	\$6,753	1,057	\$6.39	\$16.57	1.31x	\$0.86	\$0.16	\$0.47	25.2x	139.2x	46.2x		
Paladin Energy (PDN-AU)	\$0.51	\$0.43	(16)%	2,678	\$1,366	\$1,151	375.4	\$3.06	\$0.61	0.84x	(\$0.01)	(\$0.01)	(\$0.01)					
Energy Fuels (UUUU-US)	\$5.26	\$7.10	35%	149	\$782.0	\$706.4	124.8	\$5.66	\$5.14	1.02x	(\$0.20)	(\$0.25)	(\$0.15)					
Uranium Energy (UEC-US)	\$2.26	\$4.16	84%	233	\$527.1	\$489.9	111.5	\$4.39	\$3.60	0.63x	(\$0.06)	(\$0.05)	(\$0.08)					
Energy Resources (ERA-AU)	\$0.27			3,691	\$978.2	\$581.6	302.3	\$1.92			\$0.17			1.6x				
Ur-Energy Inc. (URE-T)	\$1.43	\$1.90	33%	195	\$278.6	\$217.5	41.2	\$5.28	\$2.13	0.67x	\$0.04	(\$0.05)	(\$0.02)	35.8x				
Lotus Resources (LOT-AU)	\$0.19	\$0.20	4%	956	\$181.7	\$128.1	24.4	\$5.25										
Peninsula Energy (PEN-AU)	\$0.15	\$0.29	97%	996	\$144.4	\$97.5	53.6	\$1.82	\$0.37	0.39x	(\$0.03)							
Group Average - Producers								\$4.46		0.83x				19.3x	76.3x	28.9x		
DEVELOPERS																		
NexGen Energy (NXE-T)	\$5.23	\$6.50	24%	476	\$2,487.3	\$1,867	337.8	\$5.53	\$6.29	0.83x	(\$0.04)	(\$0.03)	(\$0.02)					
Denison Mines (DML-T)	\$1.36	\$1.76	29%	805	\$1,094.3	\$721.4	157.1	\$4.59	\$1.65	0.82x	(\$0.03)	(\$0.02)	(\$0.02)					
Global Atomic (GLO-T)	\$2.86			163	\$465.1	\$358.9	292.5	\$1.23										
Fission Uranium (FCU-T)	\$0.52	\$1.15	121%	646	\$336.1	\$251.7	135.2	\$1.86	\$1.00	0.52x	(\$0.01)	(\$0.01)	(\$0.01)					
Boss Energy (BOE-AU)	\$0.17	\$0.20	18%	2,278	\$387.3	\$274.2	71.4	\$3.84	\$0.23	0.74x	(\$0.00)	(\$0.00)	(\$0.00)					
American Lithium (LLV)	\$1.57	\$6.95	343%	177	\$278.1	\$207.4	123.4	\$1.68										
Deep Yellow (DYL-AU)	\$0.68	\$0.71	4%	332	\$225.6	\$159.5	195.9	\$0.81										
UEX Corporation (UEX-T)	\$0.32	\$0.70	119%	457	\$146.1	\$111.6	103.2	\$1.08	\$0.79	0.41x								
Bannerman Energy (BMN-AU)	\$0.16	\$0.14	(13)%	1,189	\$190.3	\$138.2	257.2	\$0.54										
Forsys Metals (FSY-T)	\$0.81			193	\$156.5	\$124.1	127.0	\$0.98										
GovEx Uranium (GXU-V)	\$0.22	\$0.55	150%	539	\$118.5	\$95.3	201.7	\$0.47	\$0.72	0.31x								
Berkeley Energia (BKY-AU)	\$0.28			259	\$72.5	\$60.6	89.4	\$0.68			(\$0.05)							
Vimy Resources (VMY-AU)	\$0.13	\$0.22	72%	1,033	\$134.3	\$95.9	117.4	\$0.82	\$0.21	0.61x	(\$0.01)							
Western Uranium (WUC-L)	\$2.83			38	\$108.1	\$81.9	99.2	\$0.83										
Laramide Resources (LAM-T)	\$0.51			177	\$90.1	\$75.5	122.7	\$0.62										
Toro Energy (TOE-AU)	\$0.02			3,897	\$66.3	\$57.6	90.9	\$0.63										
Azarga Uranium (AZZ-T)	\$0.34	\$0.59	76%	235	\$78.7	\$61.1	46.0	\$1.33	\$0.65	0.51x	(\$0.03)	(\$0.01)	(\$0.01)					
A-Cap Energy (ACB-AU)	\$0.06			872	\$48.8	\$42.0	190.6	\$0.22										
Energy Metals (EME-AU)	\$0.15			210	\$31.5	\$11.2	61.1	\$0.18										
Group Average - Developers								\$1.47		0.59x								
EXPLORERS																		
IsoEnergy Ltd. (ISO-V)	\$2.61	\$3.00	15%	99	\$258.0	\$207.0												
enCore Energy (EU-V)	\$1.26			199	\$251.1	\$185.3	117.5	\$1.58										
Azmut Exploration (AZM-V)	\$2.17			82	\$177.4	\$137.4												
Aurania Resources (ARU-V)	\$2.76			47	\$129.4	\$104.9												
Appia Energy (API-AU)	\$0.72			108	\$77.4	\$56.9	55.8	\$1.02										
Alligator Energy (AGE-AU)	\$0.03			2,388	\$76.4	\$54.5												
Consolidated Uranium (CUR-V)	\$1.80	\$3.80	111%	43	\$77.1	\$49.8	69.4	\$0.72	\$3.82	0.47x								
Mega Uranium (MGA-T)	\$0.23			348	\$78.3	\$47.2												
Elevate Uranium (EL8-AU)	\$0.30			228	\$68.5	\$47.1	113.6	\$0.41										
Globex Mining (GMX-T)	\$1.09			55	\$60.0	\$39.1												
Skyharbour Resources (SYH-V)	\$0.35	\$0.86	146%	118	\$41.4	\$28.5	7.0	\$4.09	\$1.14	0.31x								
Forum Energy (FMC-V)	\$0.32			160	\$51.1	\$38.0	0.6	\$64.20										
CanAlaska Uranium (CWV-V)	\$0.46			84	\$38.0	\$24.1												
Anfield Energy (AEC-V)	\$0.12	\$0.25	108%	278	\$33.4	\$26.3	29.2	\$0.90										
Purepoint Uranium (PTU-V)	\$0.10	\$0.25	150%	324	\$32.4	\$24.3												
Blue Sky (BSK-V)	\$0.16			175	\$28.0	\$20.4	22.7	\$0.90										
ValOre Metals (VO-V)	\$0.28			120	\$33.0	\$23.2	43.5	\$0.53										
Baselode Energy (FIND-V)	\$0.48			53	\$25.4	\$15.5			\$1.44	0.33x								
Fission 3.0 (FUU-V)	\$0.09			182	\$16.4	\$12.3												
Standard Uranium (STND-V)	\$0.27			93	\$25.0	\$16.9			\$0.28	0.96x								
Azincourt Energy (AAZ-V)	\$0.06			346	\$19.0	\$11.2			\$0.05	1.10x								
92 Energy (92E-AU)	\$0.28			66	\$18.5	\$13.1												
Cauldron Energy (CXU-AU)	\$0.03			456	\$13.7	\$8.7	30.9	\$0.28										
ALX Resources (AL-V)	\$0.07			174	\$11.3	\$8.5												
GTI Resources (GTR-AU)	\$0.02			645	\$11.0	\$5.8												
X-Terra Resources (XTT-V)	\$0.08			79	\$6.0	\$4.2												
Tarku Resources (TKU-V)	\$0.09			58	\$5.2	\$3.3												
Roughrider Exploration (REL-V)	\$0.12			41	\$4.7	\$2.8												
Vanadian Energy (VEC-V)	\$0.09			42	\$3.6	\$3.1	43.2	\$0.07										
Northern Uranium (UNOH-V)	\$0.02			162	\$2.4	\$1.9												
Uravan Minerals (UVN-V)	\$0.04			47	\$1.9	\$1.4												
Avrupa Minerals (AVU-V)	\$0.09			33	\$2.8	\$2.1												
Eros Resources (ERC-V)	\$0.10			98	\$9.3	(\$7.9)												
Group Average - Explorers								\$6.79										
INVENTORY FUNDS																		
Uranium Participation (U-T)	\$5.11	\$6.13	20%	150	\$768.7	\$470.2	17.2	\$27.27	\$5.16	0.99x								
Yellow Cake (YCA-LN)	\$2.77	\$3.05	10%	154	\$424.7	\$462.8	13.0	\$35.60										
ROYALTY COMPANIES																		
Uranium Royalty (URC-V)	\$3.44	\$4.50	31%	83	\$284.9	\$118.2			\$3.07	1.12x								

Source: S&P Capital IQ, SNL Financial, Bloomberg, Haywood Securities, Company Reports



Important Information and Legal Disclaimers

This report is intended for institutional investors and may only be distributed to non-institutional US clients in the following states: nil. Otherwise, this report may only be distributed into those states with an institutional buyer state securities registration exemption.

Analyst Certification

I, Colin Healey, hereby certify that the views expressed in this report (which includes the rating assigned to the issuer's shares as well as the analytical substance and tone of the report) accurately reflect my/our personal views about the subject securities and the issuer. No part of my/our compensation was, is, or will be directly or indirectly related to the specific recommendations.

Important Disclosures

Of the companies included in the report the following Important Disclosures apply:

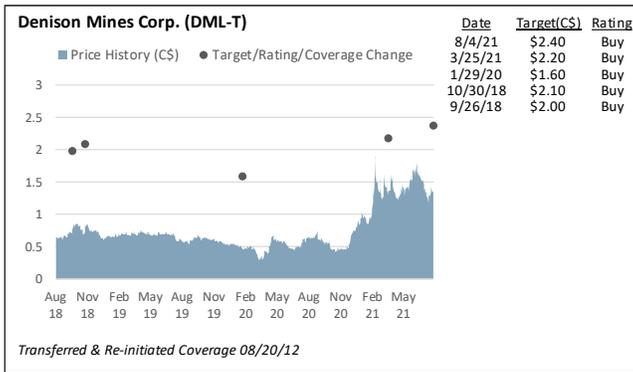
Ticker	Company	1	2	3	4	5	6	7	8	9
TSX:AZZ	Azarga Uranium Corp.	X	X	X	X		X			
TSX:DML	Denison Mines Corp.			X	X	X				
TSX:EFR	Energy Fuels Inc.			X						
TSXV:ISO	IsoEnergy Ltd.			X	X	X	X			
TSX:NXE	NexGen Energy Ltd.			X						
AMEX:UEC	Uranium Energy Corp.			X	X					
1	The Analyst(s) preparing this report (or a member of the Analysts' households) have a financial interest in this company.									
2	As of the end of the month immediately preceding this publication either Haywood Securities, Inc., one of its subsidiaries, its officers or directors beneficially owned 1% or more of this company.									
3	Haywood Securities, Inc. has reviewed lead projects of this company and a portion of the expenses for this travel may have been reimbursed by the issuer.									
4	Haywood Securities Inc. or one of its subsidiaries has managed or co-managed or participated as selling group in a public offering of securities for this company in the past 12 months.									
5	Haywood Securities, Inc. or one of its subsidiaries has received compensation for investment banking services from this company in the past 12 months.									
6	Haywood Securities, Inc. or one of its subsidiaries has received compensation for investment banking services from this company in the past 24 months.									
7	Haywood Securities, Inc. or one of its subsidiaries is restricted on this company at the time of publication.									
8	Haywood Securities, Inc. or one of its subsidiaries expects to receive or intends to seek compensation for investment banking services from this company in the next three months.									
9	Haywood Securities, Inc. or one of its subsidiaries currently provides market making services to this company, for which Haywood is compensated by the Issuer on a monthly basis.									

Distribution of Ratings (as of August 4, 2021)

	%	#	IB Clients (TTM)
Buy	84.9%	79	89.7%
Hold	6.5%	6	7.7%
Sell	0.0%	0	0.0%
Tender	0.0%	0	0.0%
UR (Buy)	0.0%	0	0.0%
UR (Hold)	0.0%	0	0.0%
UR (Sell)	0.0%	0	0.0%
Dropped (TTM)	8.6%	8	2.6%



Price Chart, Rating and Target Price History (as of August 4, 2021)



B: Buy; H: Hold; S: Sell; T: Tender; UR: Under Review
 Source: Capital IQ and Haywood Securities

Link to Research Policy: <http://haywood.com/what-we-offer/research/research-policy>
 Member of the Canadian Investor Protection Fund

