Denison Mines

Uranium Development & Exploration

The Athabasca Basin, Northern Saskatchewan

September 2018 | Investor Update

Cautionary Statements & References

Cautionary Statements:

This presentation includes forward-looking information or forward-looking statements under Canadian and U.S. securities laws that involve risks, uncertainties and other factors that could cause actual results to differ materially from those expressed or implied by such forward-looking statements.

Factors that could cause differences may include: the speculative nature of exploration and development projects, the failure of Denison to realize benefits from transactions, Denison's inability to expand and replace its mineral reserves and resources and the imprecision of mineral reserves and resources estimates, the impact of volatility in uranium prices on the valuation of mineral reserves and resources and the market price of Denison's shares, unexpected development and operating risks, delays in obtaining permits and licenses for development properties, reliance on other operators and partners, and uncertainty surrounding Denison's successful completion of exploration plans, timely completion economic analyses (including a PEA or PFS), the ability to reach revenue targets, and the ability to operate within budget. In addition, we have made assumptions in drawing the conclusions contained in these statements, including assumptions regarding future demand for uranium, production levels and costs, mining conditions, relationships with partners, and our ability to continue our operations without any significant disruptions.

Additional information about the material factors that could cause the results to differ materially, and the material assumptions we have made, are contained in our current Annual Information Form and our current annual MD&A, which are available on SEDAR. Forward-looking information is designed to help you understand management's current views of our near and longer-term prospects, and it may not be appropriate for other purposes. We will not necessarily update this information unless we are required to by securities laws.

This presentation may use the terms "measured", "indicated", "inferred" and "historical" mineral resources. U.S. investors are advised that, while such terms are recognized and required by Canadian regulations, the Securities and Exchange Commission does not recognize them. "Inferred mineral resources" and "historical estimates" have a great amount of uncertainty as to their existence and great uncertainty as to their economic feasibility. It cannot be assumed that all or any part of an inferred mineral resource or a historical estimate 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. Further, historical estimates are not recognized under Canada's NI 43-101. U.S. investors are cautioned not to assume that all or any part of measured or indicated mineral resources will ever be converted to mineral reserves.

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.

***Technical Reports*:**

- **McClean Lake**: Technical Report on the Denison Mines Inc. Uranium Properties, Saskatchewan, Canada, dated November 21, 2005, as revised February 16, 2006, by Richard E. Routledge, M.Sc., P. Geo of Scott Wilson RPA (now RPA Inc.)
- **McClean Lake - Sue D**: Technical Report on the Sue D Uranium Deposit Mineral Resource Estimate, Saskatchewan, Canada, dated March 31, 2006, by Richard E. Routledge, M.Sc., P. Geo. and James W. Hendry, P. Eng of Scott Wilson RPA (now RPA Inc.).
- **McClean Lake – McClean North:** Technical Report on the McClean North Uranium Deposit Mineral Resource Estimate, Saskatchewan, Canada, dated January 31, 2007, by Richard E. Routledge, M.Sc., P. Geo. and James W. Hendry, P. Eng of Scott Wilson RPA (now RPA Inc.), and subsequent revision by letter dated October 20, 2009 from Scott Wilson RPA.
- **Midwest:** Technical Report with an Updated Mineral Resource Estimate for the Midwest Property, Northern Saskatchewan, Canada, dated March 26, 2018, by Dale Verran, MSc, P.Geo, Pr.Sci.Nat. and Chad Sorba, P.Geo, of Denison Mines Corp. and G. David Keller, PGeo, and Oy Leuangthong, PEng, of SRK Consulting.
- **Waterbury Lake:** Mineral Resource Estimate On The J Zone Uranium Deposit, Waterbury Lake Property, dated September 6, 2013, by Allan Armitage, Ph.D., P.Geo, and Alan Sexton, M.Sc., P.Geo of GeoVector Management Inc.
- **Wheeler River:** Technical Report with an Updated Resource Estimate for the Wheeler River Property, Northern Saskatchewan, Canada, dated March 15, 2018, by Mr. Mark Mathisen, C.P.G. of Roscoe Postle Associates Inc. ("RPA") and Mr. Ken Reipas, P.Eng of SRK Consulting (Canada) Inc. *The report includes the Preliminary Economic Analysis completed March 2016.*

All Technical Reports are available on SEDAR at www.sedar.com.

Diversified Athabasca Basin Asset Base with Superior Development Leverage

Strategic Project Portfolio:

- 63.3% interest in Flagship **Wheeler River** project – largest undeveloped uranium project in infrastructure rich eastern Athabasca Basin
- 22.5% interest in operating **McClean Lake Uranium Mill** – 6M lbs U_3O_8 excess licensed capacity, +12% of global uranium production
- Interests in uranium resources at McClean Lake, Midwest, and Waterbury Lake
- ~320,000 hectares of prospective exploration ground in the Athabasca Basin

✓ Internal sources of **cash flow** from management of Uranium Participation Corp. (TSX-U), and Denison Environmental Services (DES)

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~320,000 Hectares of Prospective Exploration Ground Focused in the Infrastructure Rich Eastern Athabasca Basin

Denison Land Position
as of June 30, 2018

All Season Highway / Haul Road

Provincial Power Grid

The Infrastructure Rich Eastern Athabasca Basin

Existing infrastructure supports mining operations in proximity of Wheeler River:

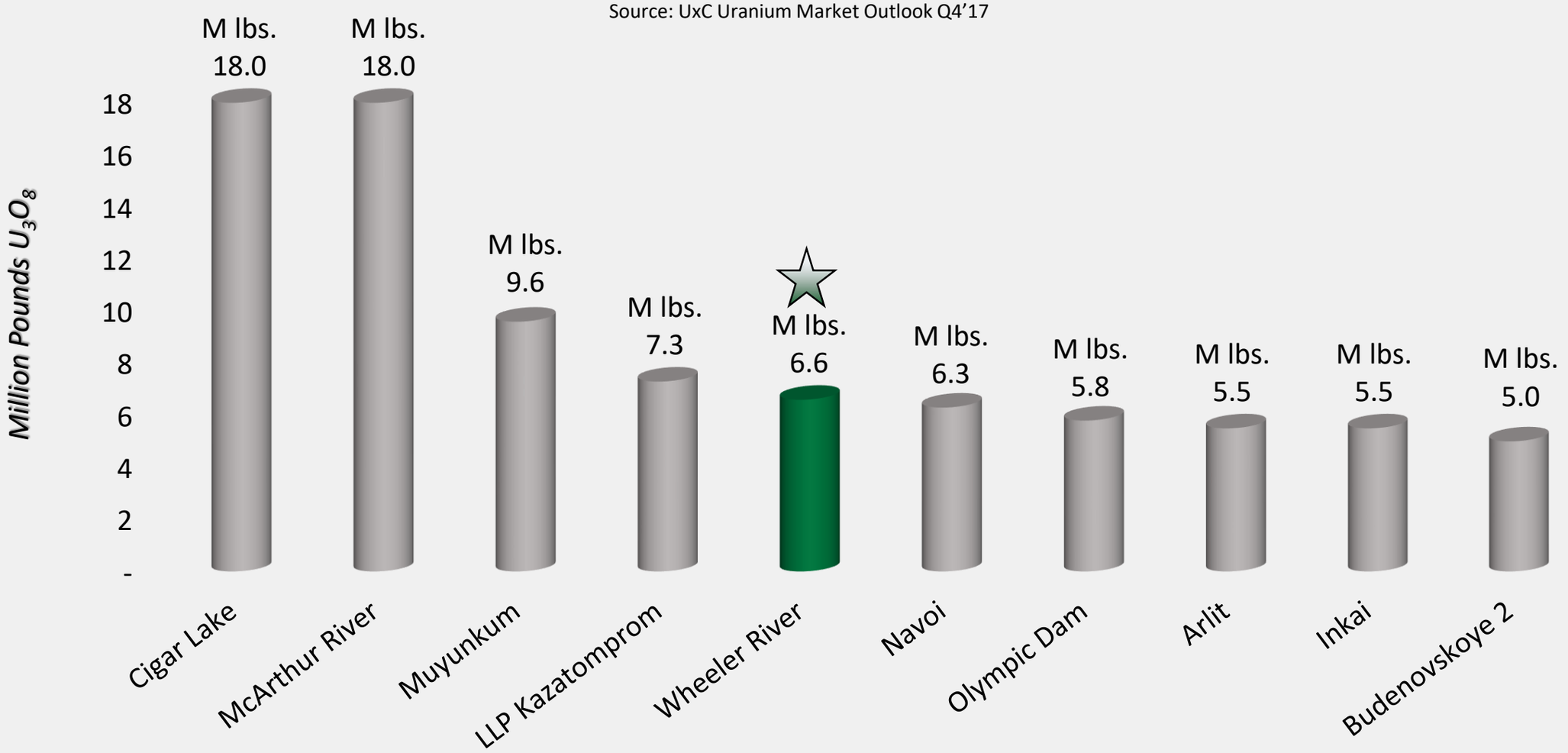
- 4 licensed uranium mines (Cigar Lake, McArthur River, Eagle Point, McClean) + 3 licensed uranium mills (McClean, Key, Rabbit)
- Provincial power grid – reliable, cost efficient, ability to power operation without emissions from / reliance on diesel fuel generators
- Existing Provincial highways / haul roads – allows for transport of supplies, personnel, mine production, and finished goods
- Precedents set with local stakeholders

✓**Reduced risk and expectation of shorter timelines for regulatory approval**

Flagship Wheeler River Uranium Project
Potential to be a Top-5 producing uranium mine

Top Producing Uranium Mines 2017 est. vs. Wheeler PEA Production Plan[(1)(2)]

Source: UxC Uranium Market Outlook Q4'17



(1) **IMPORTANT CAUTION REGARDING THE PRELIMINARY ECONOMIC ASSESSMENT ("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 value. See Press Release dated April 4, 2016 and Technical Report filed on SEDAR and EDGAR: Technical Report with an Updated Resource Estimate for the Wheeler River Property, Northern Saskatchewan, Canada, dated March 15, 2018, by Mr. Mark Mathisen, C.P.G. of Roscoe Postle Associates Inc. ("RPA") and Mr. Ken Reipas, P.Eng of SRK Consulting (Canada) Inc. *The report includes the Preliminary Economic Analysis completed March 2016.*

(2) Based on Wheeler River average annual production (100% basis) per PEA

Flagship Wheeler River Uranium Project
Poised to be the next uranium development project in the Athabasca Basin

Project Development Scorecard	Wheeler River	Ranking[(1)]
Ownership of licenced mill with excess capacity	Denison owns 22.5% of McClean Lake Mill	1st
Proximity to infrastructure	Provincial power line and highway on property	1st
Estimated resources in M&I category	132M lbs U_3O_8	2nd
Degree of confidence in estimated resources	97% of total resources in M&I	1st
Overall Grade on existing M&I resources	3.3% U_3O_8	2nd
Estimate of CAPEX required to build[(2)] (Lowest)	CAD $560M	1st
Timeline to Pre-Feasibility Study[(3)] (Shortest)	By end of Q3'2018	1st

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NOTES: (1) Rankings are based on comparison of undeveloped uranium projects (at 100% ownership) with total indicated resources greater than 40M lbs U_3O_8, located in the Athabasca Basin region – namely Arrow (NexGen Energy Ltd.), Triple R (Fission Uranium Corp.), Millennium (Cameco, JCU), Shea Creek (Orano, UEX Corp.), Midwest (including the Midwest and Midwest A deposits) (Orano, Denison, OURD). All numbers used in comparisons have been taken from corporate presentations, technical reports, website disclosure and/or news releases available on their respective websites or SEDAR. (2) CAPEX estimates are per NI 43-101 technical reports. Certain projects do not have NI 43-101 estimates of upfront capital costs. (3) Timeline to feasibility is based on company disclosures / guidance.

Flagship Wheeler River Uranium Project
Largest Undeveloped High-Grade Uranium Project in Eastern Athabasca

"Our strategy… involves the advancement of our flagship Wheeler River project towards development and production – intending to claim the 'pole position' as the next new uranium mine to be built in Canada"

David Cates, President & CEO

- Combined indicated resources of 132.1M lbs U_3O_8 (1,809,000 tonnes @ 3.3% U_3O_8)
- Phoenix: "Zone A" high-grade core estimated to contain 62,900 tonnes at 43.2% U_3O_8 for 59.9M lbs U_3O_8
- Jan. 10, 2017 announced agreement to fund 75% of JV expenditures in 2017 and 2018 to increase ownership from 60% to ~66%
- Exploration activities transitioning back to discovery focus

✓**Ownership (2017):** 63.3% Denison, 26.7% Cameco, 10.0% JCU

Deposit	Class.	Tonnes	Grade	Lbs U_3O_8	Denison Share*
Phoenix	Indicated	166,000	**19.1% U_3O_8**	70.2M	44.4M
Gryphon	Indicated	1,634,000	1.7% U_3O_8	61.9M	39.2M
Phoenix	Inferred	9,000	5.8% U_3O_8	1.1M	0.7M
Gryphon	Inferred	73,000	1.2% U_3O_8	1.9M	1.2M

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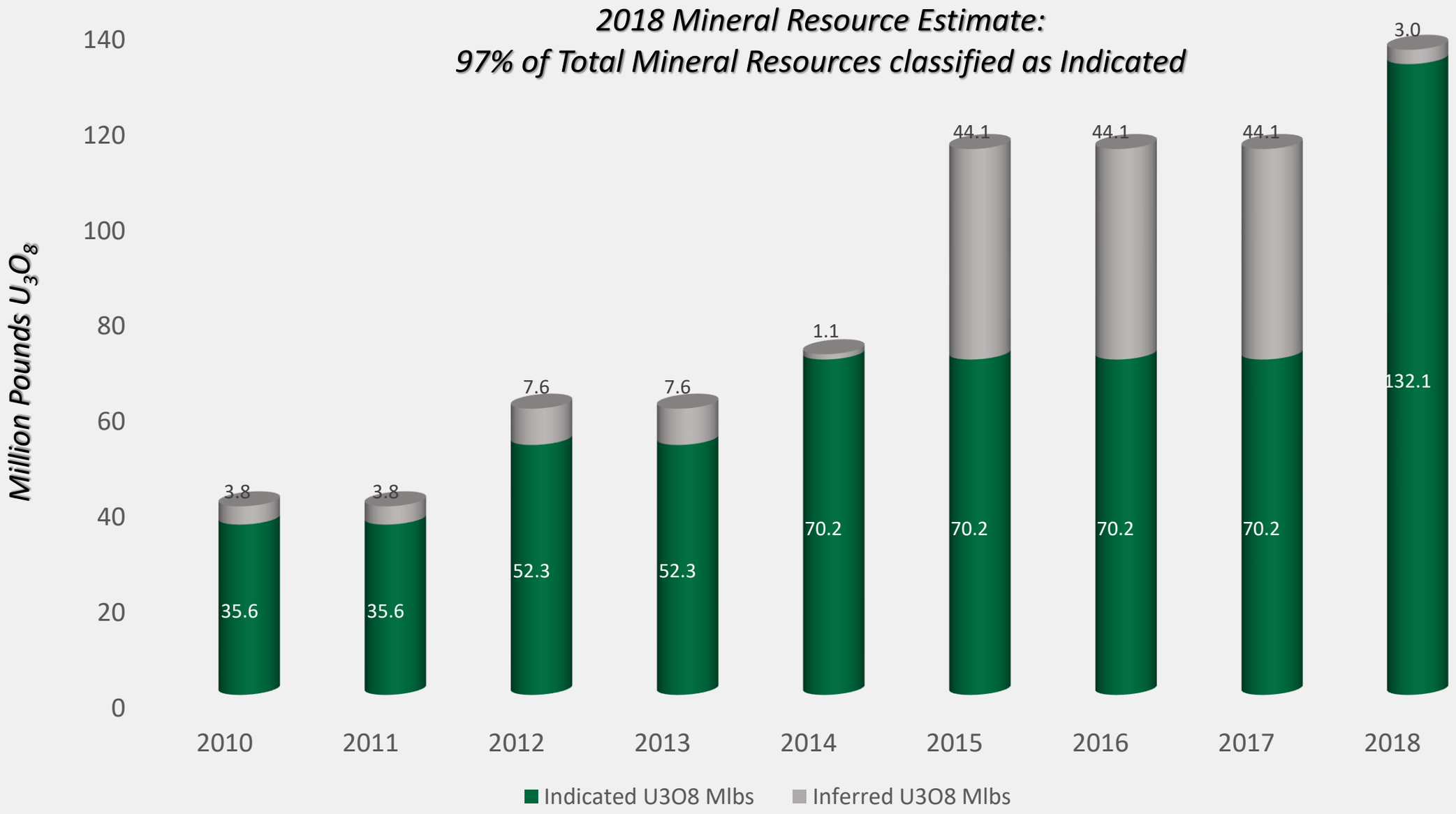
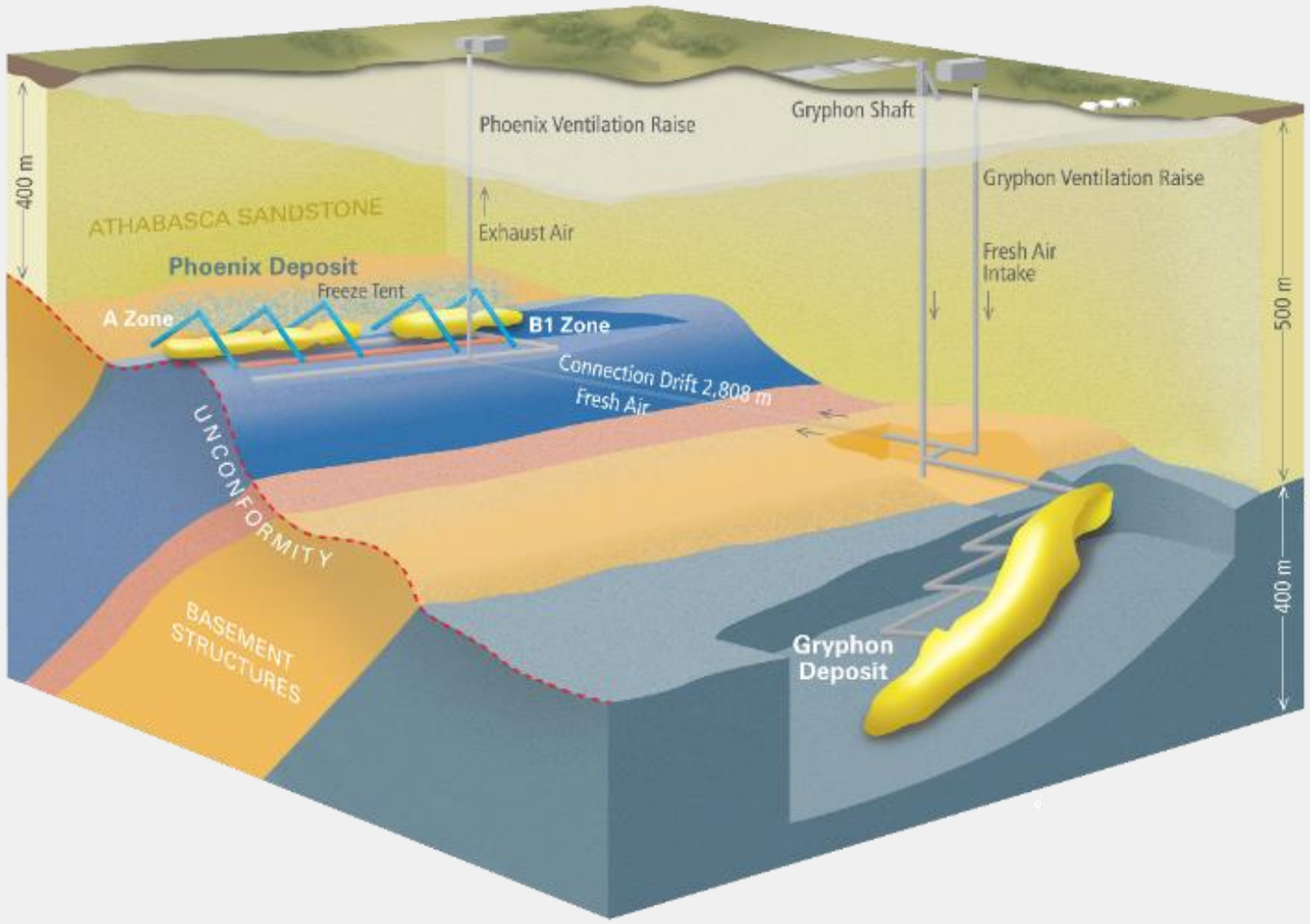
Notes: (1)The Mineral Resource estimates were prepared for the Company by RPA Inc. in accordance with CIM Definition Standards (2014) and NI 43-101, (2) Mineral Resources for the Phoenix and Gryphon deposit are reported above a cut-off grade of 0.8% U3O8 and 0.2% U3O8 respectively.
Source: Technical Report with an Updated Resource Estimate for the Wheeler River Property, Northern Saskatchewan, Canada, dated March 15, 2018, by Mr. Mark Mathisen, C.P.G. of Roscoe Postle Associates Inc. ("RPA") and Mr. Ken Reipas, P.Eng of SRK Consulting (Canada) Inc. *The report includes the Preliminary Economic Analysis completed March 2016.*

Flagship Wheeler River Uranium Project
History of Exploration Success & Resource Growth



(1) Mineral resources are not mineral reserves and do not have demonstrated economic value. See Press Releases dated April 4, 2016 and January 31, 2018, as well as the Technical Report filed on SEDAR and EDGAR "Technical Report with an Updated Resource Estimate for the Wheeler River Property, Northern Saskatchewan, Canada", dated March 15, 2018, by Mr. Mark Mathisen, C.P.G. of Roscoe Postle Associates Inc. ("RPA") and Mr. Ken Reipas, P.Eng of SRK Consulting (Canada) Inc. *The report includes the Preliminary Economic Analysis completed March 2016.*

Flagship Wheeler River Uranium Project
2016 PEA[(1)]: 2 Phase Development Plan @ US$44/lb U_3O_8



2016 PEA has not been updated for 2018 resource estimate or new mining method selected for Phoenix

- **20.4% Pre-Tax IRR @ US$44/lb U_3O_8**
- CAD$560M (100%) Initial CAPEX
- Avg. USD$19.01/lb U_3O_8 OPEX
- CAD$1.4B NPV @ US$62.60/lb U_3O_8

Phase 1 - Gryphon

- Conventional underground mining
- USD $14.28/lb U_3O_8 est. OPEX
- 6M lbs U_3O_8 / year[1]
- 7 Years

Phase 2 - Phoenix

- U/G freezing + Jet Bore mining
- USD $22.15/lb U_3O_8 est. OPEX
- 7M lbs U_3O_8 / year[1]
- 9 Years

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Wheeler River PEA Assumes Processing at 22.5% Denison owned McClean Lake Mill(1)

Processes +12% of global uranium production:

- Operating under 10-year license granted by Canadian Nuclear Safety Comm. in 2017
- Licensed for 24M lbs U_3O_8 annual production
- 18M lbs U_3O_8/year reserved for Cigar Lake Joint Venture under tolling agreement.
- 6M lbs U_3O_8/year excess licensed capacity
- Positive metallurgical test results for Wheeler River's Phoenix and Gryphon deposits

✓ **Ownership:** 22.5% Denison, 70% Orano (formerly "Areva"), 7.5% OURD

(1) See IMPORTANT CAUTION REGARDING PEA on slide 2

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Diversified Asset Base with Company Specific Catalysts on the Horizon

Wheeler River Drilling Program

Q1 to Q3 2018

Completed 21,153 metre drill program during the winter, resulting in the discovery of high-grade uranium mineralization 600m & 1km NE of the Gryphon deposit. A 24,000 metre summer program is in progress as part of the 45,500 metre drilling program planned for 2018.

CAD$9.5M Budget
(CAD$7.1M Denison)

Wheeler River Pre-Feasibility Study

Q3-2018

The PFS is expected to build on the previously released 88% increase in estimated indicated mineral resources at Wheeler River, and introduce a new mining method for the Phoenix deposit – together having the potential to enhance the already strong economics of the project.

CAD$3.6M Budget
(CAD$2.7M Denison)

Exploration Pipeline Projects

Winter & Summer 2018

~23,000 metres of exploration drilling completed on exploration pipeline projects through mid-July 2018. Currently primarily focused on the Hook-Carter and Waterbury Lake properties.

CAD$6.4M Budget
(Denison's Share)

SABRE Mining Method

2019-2020 Test Mine

Design, procurement, and fabrication of SABRE mining equipment, as well as drilling and casing of test mining holes to the top of the McClean North orebody ahead of test mining activities planned for 2019-2020.

CAD$17.6M Budget
(CAD$4.0M Denison)

Appendix: Diversified Project Portfolio – Project Profiles

McClean Lake Uranium Project
Processing Plant Licensed for Annual Production of 24M lbs U_3O_8

"(the APG) financing allows Denison to benefit immediately from the cash flow expected to be produced from the McClean Lake mill over the next several years, without the overhang of a bullet payment or convert at the end of a debt, and without selling its stake in the mill"

David Cates, President & CEO

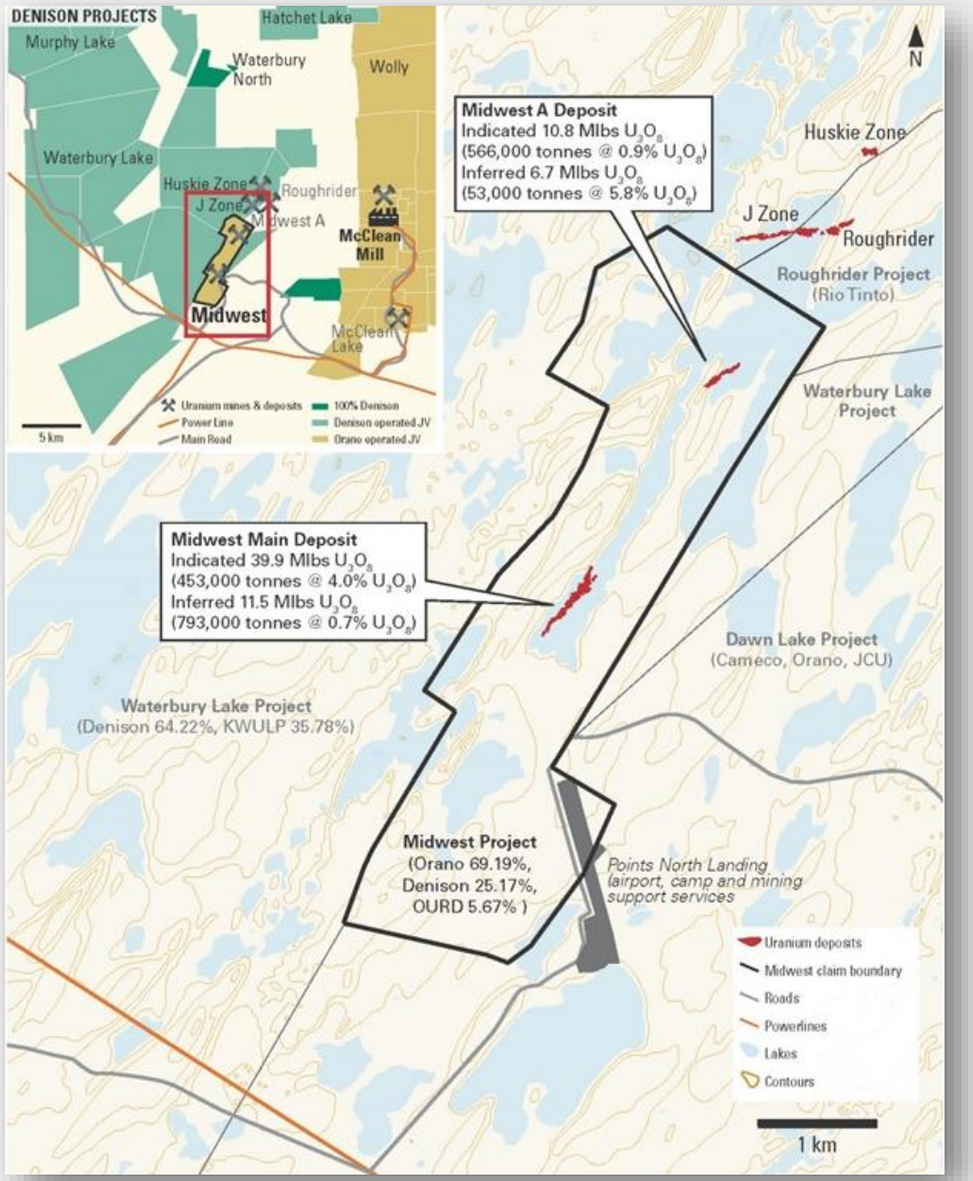
- Processing ~18M lbs U_3O_8/year from Cigar Lake mine
- Cigar Lake toll milling cash flows monetized in transaction with Anglo Pacific Group ("APG") in 2017 for $43.5M
- Operating license renewed for 10-year period by CNSC in 2017

✓**Ownership:** 22.5% Denison, 70.0% Orano, 7.5% OURD

Deposit	Class.	Tonnes	Grade	Lbs U_3O_8	Denison Share
McClean North	Indicated	205,800	2.8% U_3O_8	12.4M	2.8M
Caribou	Indicated	47,800	2.6% U_3O_8	2.8M	0.6M
Sue D	Indicated	122,800	1.1% U_3O_8	2.8M	0.6M
Sue E	Inferred	483,400	0.69% U_3O_8	7.3M	1.6M

Notes: (1) The Mineral Resource estimates were prepared for the Company by Scott Wilson RPA (now RPA Inc.) in accordance with CIM Definition Standards and NI 43-101, (2) Mineral Resources are reported above a cut-off grade of 0.1% U_3O_8.
Sources: Technical Report on the Denison Mines Inc. Uranium Properties, Saskatchewan, Canada, dated November 21, 2005, as revised February 16, 2006, by Richard E. Routledge, M.Sc., P. Geo of Scott Wilson RPA (now RPA Inc.); Technical Report on the Sue D Uranium Deposit Mineral Resource Estimate, Saskatchewan, Canada, dated March 31, 2006, by Richard E. Routledge, M.Sc., P. Geo. and James W. Hendry, P. Eng of Scott Wilson RPA (now RPA Inc.); Technical Report on the McClean North Uranium Deposit Mineral Resource Estimate, Saskatchewan, Canada, dated January 31, 2007, by Richard E. Routledge, M.Sc., P. Geo. and James W. Hendry, P. Eng of Scott Wilson RPA (now RPA Inc.), and subsequent revision by letter dated October 20, 2009 from Scott Wilson RPA.

Midwest Uranium Project
Significant Increase in Mineral Resources with Updated Estimate



"With the application of more rigorous and robust estimation procedures, in accordance with NI 43-101, we are pleased to see a significant increase in overall project resources, without additional recent drilling."

Dale Verran, VP Exploration

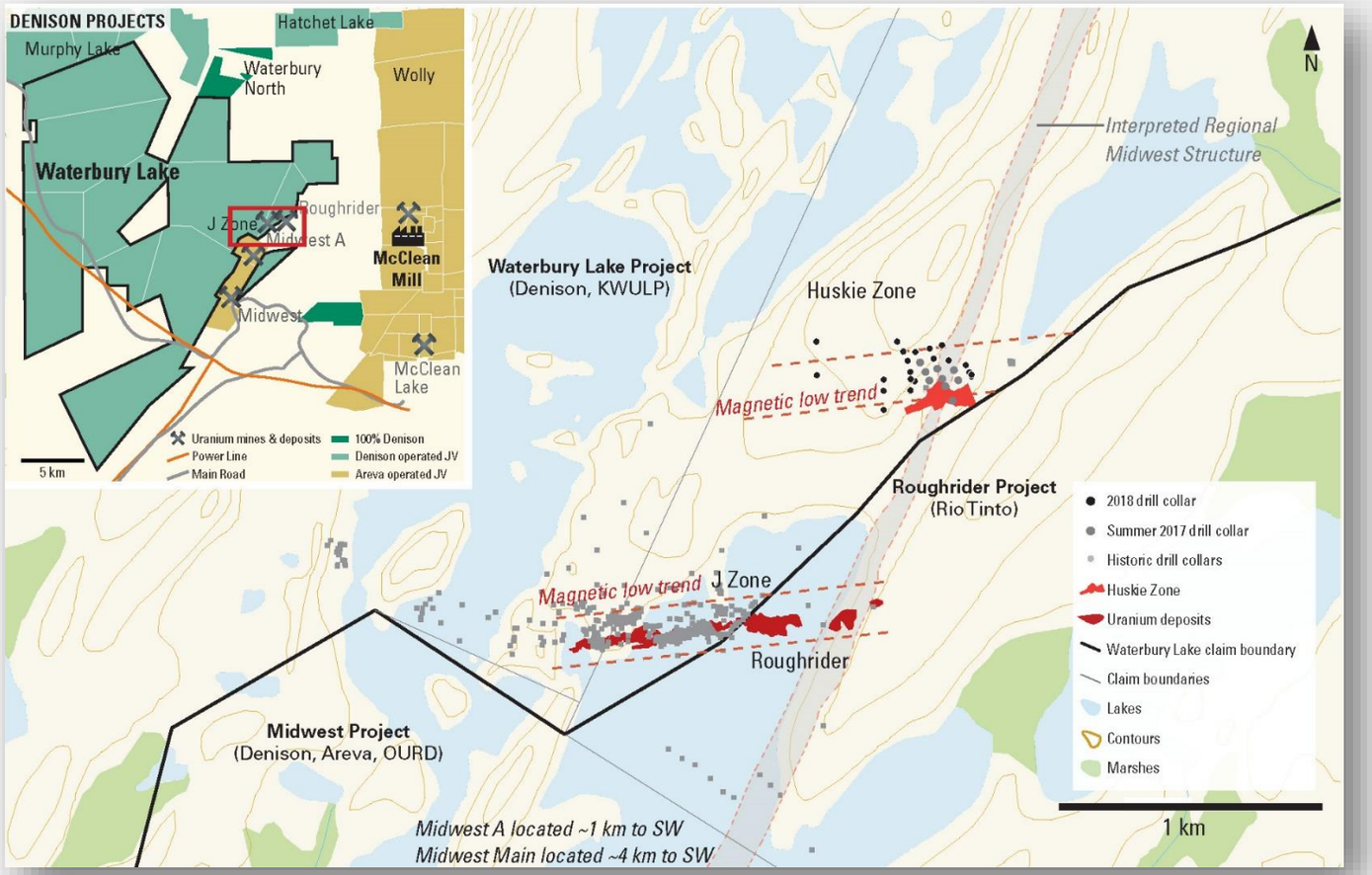
- Mineral resource estimate updated in March 2018
- 25 kilometres by existing roads to the McClean Lake mill
- Environmental Impact Statement ("EIS") approved in 2012

✓**Ownership:** 25.17% Denison, 69.19% Orano, 5.67% OURD

Deposit	Class.	Tonnes	Grade	Lbs U_3O_8	Denison Share
Midwest	Indicated	453,000	4.0% U_3O_8	39.9M	10.1M
Midwest	Inferred	793,000	0.66% U_3O_8	11.5M	2.9M
Midwest A	Indicated	566,000	0.87% U_3O_8	10.8M	2.7M
Midwest A	Inferred	53,000	5.8% U_3O_8	6.7M	1.7M

Notes: (1) The Mineral Resource estimate was audited for the Company by SRK Consulting in accordance with CIM Definition Standards (2014) and NI 43-101, (2) Mineral Resources for the Midwest Main and Midwest A deposits are reported above a cut-off grade of 0.1% U_3O_8.
Source: Technical Report with an Updated Mineral Resource Estimate for the Midwest Property, Northern Saskatchewan, Canada, dated March 26, 2018, by Dale Verran, MSc, P.Geo, Pr.Sci.Nat. and Chad Sorba, P.Geo, of Denison Mines Corp. and G. David Keller, PGeo, and Oy Leuangthong, PEng, of SRK Consulting.

Waterbury Lake Uranium Project
Mineral Resources in Close Proximity to Roughrider & McClean Lake



"The high-grade mineralization at Huskie appears to be controlled by the intersection of east-west striking faults, associated with the graphitic gneiss unit, and cross-cutting northeast striking faults, possibly related to the regional Midwest structure."

Dale Verran, VP Exploration

- Host to J-Zone and Huskie deposits
- Adjacent to Rio Tinto's Roughrider project and Denison's Midwest project
- Over 40,000 hectares of ground

✓ **Ownership:**
65.45% Denison, 34.55% KHNP

Deposit	Classification	Tonnes	Grade	Lbs U_3O_8	Denison Share
J-Zone	Indicated	291,000	2.0% U_3O_8	12.8M	8.M
Huskie	Not Estimated	n/a	n/a	n/a	n/a

Notes: (1) The J Zone Mineral Resource estimate was prepared for the Company by GeoVector Management Inc. in accordance with CIM Definition Standards (2005) and NI 43-101, (2) Mineral Resources for the J Zone deposit are reported above a cut-off grade of 0.1% U_3O_8.
Source: Mineral Resource Estimate On The J Zone Uranium Deposit, Waterbury Lake Property, dated September 6, 2013, by Allan Armitage, Ph.D., P.Geo, and Alan Sexton, M.Sc., P.Geo of GeoVector Management Inc.

Hook-Carter Uranium Project
Exploration on the Patterson Lake Corridor in the Western Athabasca Basin

"This is Elephant country - a large property that has seen very little drilling on a geological trend with a precedent for large and high-grade uranium deposits."

Dale Verran, VP Exploration

- 15 km of relative untested ground on the Patterson Lake Corridor
- Reconnaissance drill program completed in 2018
- Designed to generate targets for further exploration drilling in 2019

✓**Ownership:** 80% Denison, 20% ALX

SABRE Mining Method
Experimental Mining Method with Potential to Access Orebodies from Surface

Surface Access Borehole Resource Extraction – or "SABRE" for short – is a proprietary mining method designed to excavate underground material from surface using a water jetting process

- +CAD$50M invested for development – including engineering, drilling, mining tests, and procurement
- Recently re-designed key SABRE equipment to improve performance and economics with a new mining test slated to occur 2017-2020
- Potential benefits include low CAPEX, scalability, reduced timelines, and minimal environmental impact

✓ **Ownership:** 22.5% Denison, 70.0% Orano, 7.5% OURD

Appendix: 2016 Wheeler River Preliminary Economic Assessment

Appendix: 2016 Wheeler River Preliminary Economic Assessment[1]

Assumptions	Base Case	Production Case
Uranium Price	US$44.00	US$62.60
Exchange Rate (CAD:USD)	1.35	1.35
Discount Rate	8.00%	8.00%

Financial Results	Base Case	Production Case
Pre-Tax IRR[2]	20.4%	34.1%
Pre-Tax NPV[2] (100%)	CAD$513M	CAD$1.4B
Payback Period[3]	~3 years	~18 months

Highlights	CAD$
Initial Capital Costs (100%)	$560M
Initial Capital Costs (Denison) [4]	$336M
Sustaining Capital Costs (100%)	$543M
Sustain. Capital Costs (Denison) [4]	$326M
Average Operating Costs per lb U_3O_8	$25.67 (USD$19.01)

Capital Costs (CAD$ millions)	Initial	Sustain.	Total
Surface Infrastructure	$166	$7	$174
Mine	$220	$334	$554
Mineral Processing	$19	$60	$79
Owners Costs	$25	$0	$25
Decommissioning	$0	$40	$40
Subtotal	**$429**	**$442**	**$871**
Contingency	$131	$101	$232
Total (100%)	**$560**	**$543**	**$1,103**

Operating Costs (CAD$/lb U_3O_8)	Gryphon	Phoenix
Mining	$3.45	$17.45
Surface Transportation	$1.63	$0.85
Processing (including tolling)	$10.03	$8.03
General & Administration	$4.17	$3.57
Total (CAD$/lb U_3O_8)	$19.28	29.90
Total (USD$/lb U_3O_8)	$14.28	$22.15

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(1) See IMPORTANT CAUTION REGARDING PEA on slide 2
(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.
(4) Based on DML's ownership of 60% at time of PEA (current ownership of 63.3%)

Capital Structure & Corporate Information

Market Summary [1]	
Exchanges	TSX: DML, NYSE MKT: DNN
Shares Outstanding	559.2 M
Warrants	1.7 M
Options	17.5 M
Fully Diluted Shares	578.4 M
Market Cap – DML @ C$0.64/share[2]	CAD $352.3 M
Daily Trading Volume – DML[3]	0.53 M Shares
Market Cap – DNN @ U$0.49/share[2]	USD$268.2 M
Daily Trading Volume – DNN[3]	0.50 M Shares

Management & Directors

- David Cates (President & CEO, Director)
- Mac McDonald (VP Finance & CFO)
- Peter Longo (VP Project Development)
- Dale Verran (VP Exploration)

- Catherine Stefan (Non-Executive Chair)
- W. Robert Dengler (Director)
- Brian D. Edgar (Director)
- Ron F. Hochstein (Director)
- Jack Lundin (Director)
- William A. Rand (Director)
- Moo Hwan Seo (Director)
- Patricia M. Volker (Director)

Website: www.denisonmines.com Email: info@denisonmines.com

(1) As of August 9th, 2018 – per Denison's Q2'2018 Report
(2) Based on shares outstanding above and DML/DNN share prices as of August 9th, 2018
(3) Average daily trading volume over 90 day period as at June 11th, 2018