CMD 25-H9.REF9 CNSC Staff Submission

Reference Package 9 for CMD 25-H9 CNSC Staff Submission on Denison Mines Licence Application to Prepare Site and Construct the Wheeler River Project

Classification	Unclassified
Type of CMD	References
CMD Number	CMD 25-H9.REF9
Original CMD	CMD 25-H9
Public hearing date	08 December 2025
PDF e-DOC #	7605585
Summary	This document contains documents related to the Environmental Assessment process, as posted to the Canadian Impact Assessment Registry, to be placed on the Record for the proceeding.
Actions required	There are no actions requested of the Commission. This CMD is in support of the actions and recommendations set out in CNSC staff CMD 25-H9.

CMD 25-H9.REF9 Soumission par le personnel de la CCSN

Références liées 9 au CMD 25-H9 Soumission par le personnel de la CCSN la demande de Denison Mines visant à prépare le site du projet de Wheeler River et à entamer les activités de construction

Classification	Choisir un niveau de classification
Type de CMD	Références
Numéro de CMD	CMD 25-H9.REF9
CMD Original	CMD 25-H9
Date de l'audience	08 décembre 2025
Numéro e-Doc du PDF	7605585
Résumé	Ce document contient des documents liés au processus d'évaluation environnementale, tels que publiés dans le Registre canadien d'évaluation d'impact, à verser au dossier de l'instance.
Mesures requises	Aucune mesure n'est requise de la Commission. Le présent CMD appuie les mesures et les recommandations énoncées dans le CMD CMD 25-H9 du personnel de la CCSN.

Canadian Nuclear Safety Commission | Commission canadienne de sûreté nucléaire

Canada
Choose a level

CMD 25-H9.REF9

Reference Package 9 for CMD 25-H9 CNSC Staff Submission on Denison Mines Licence Application to Prepare Site and Construct the Wheeler River Project

Signed by:

X Beaton, Dana

Digitally signed by Beaton, Dana
DN: C=CA, O=GC, OU=CNSC-CCSN, CN="Beaton, Dana"
Reason: I am approving this document
Location:
Date: 2025.11.24 08:28:39-05'00'
Foxit PDF Editor Version: 13.0.1

Dana Beaton
Director General, DERPA

Denison Mines

Wheeler River Project

Final Environmental Impact Statement

November 2024

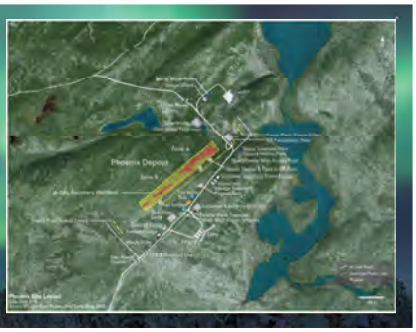
Powering
PEOPLE, PARTNERSHIPS AND PASSION.

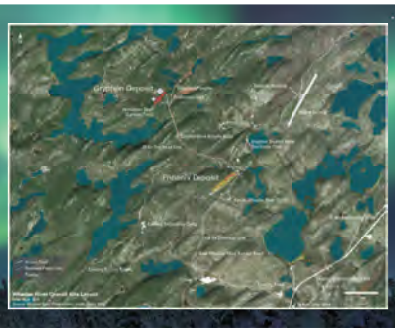
Appendix 4-A

ROC1

denison Mines

Future home of the Phoenix ISR uranium mining operation



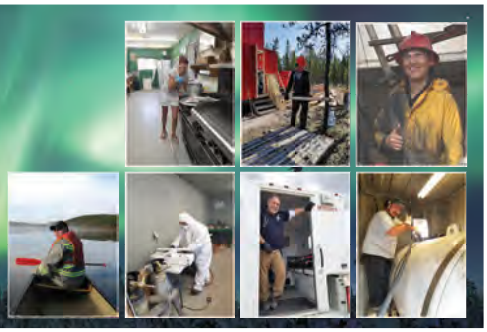


denison Mines

Camp and Employment Opportunities

Potential Employment Opportunities – Phoenix:

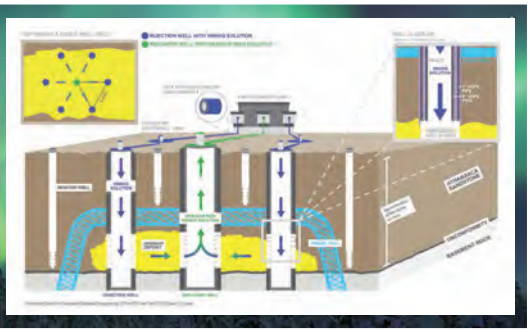
- Targeted to Wheeler Partner Communities
- Up to 300 jobs during ~2 years of construction
- Approximately 100 jobs during operation
- Wide variety of expected employment opportunities including ISR wellfield development, ISR mining processing plant, camp, security and EH&S
- ISR mining positions are all surface based
- Specific training expected for unique skills associated with Phoenix ISR development



denison Mines

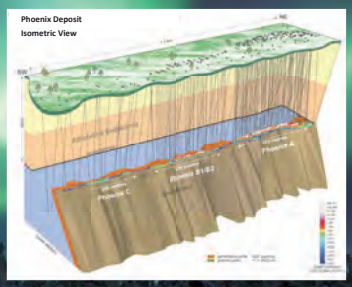
Application of ISR mining to the Athabasca Basin

- Bringing the world's lowest cost uranium mining method to the jurisdiction hosting the world's highest grade uranium deposits



Phoenix Uranium Deposit

- Phoenix is the world's highest grade undeveloped uranium deposit
- Estimated Indicated Resources of 70.2M lbs U_3O_8 at 19.1% U_3O_8 (166,000 tonnes)
- High grade core of Phoenix Zone A estimated to contain 62,900 tonnes at 43.2% U_3O_8 for 59.9M lbs U_3O_8



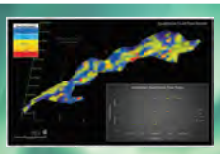
denison Mines

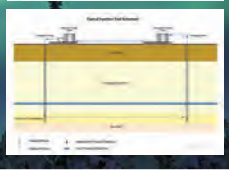
ISR Field Test

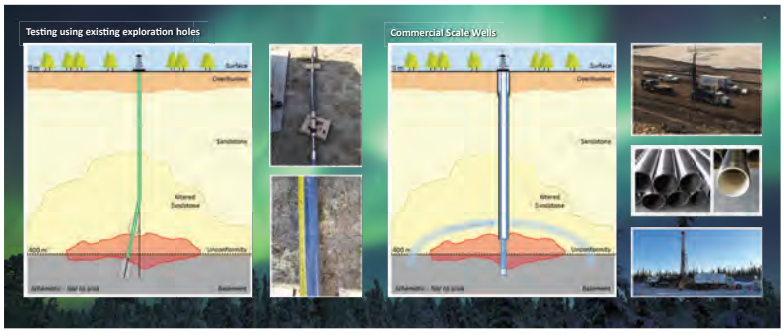
Program Objectives:

Collect an extensive database of hydrogeological data in order to evaluate the ISR mining conditions present at the Phoenix uranium deposit.

- Focused on in-situ testing in the orebody, using water to evaluate hydraulic conditions that can be used to assess mining solution flow between a series of test wells
- The information collected through this process is expected to increase the overall confidence of the application of ISR and facilitate detailed mine planning as necessary for the FS and to support the EIA process





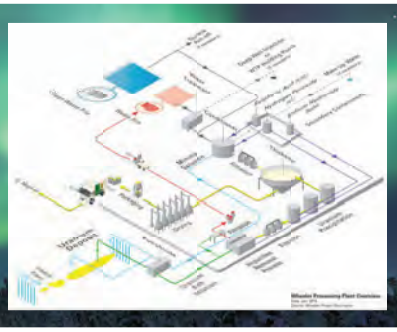


denison Mines

On site processing to Yellowcake Uranium

Highlights:

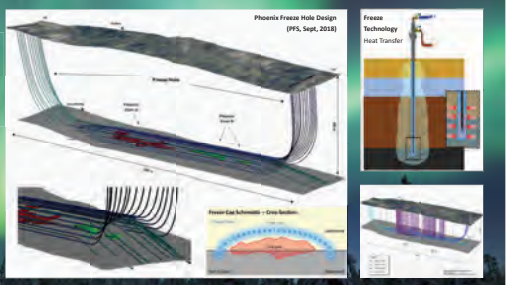
- No crushing, grinding or leach circuits – small footprint
- Potential for closed-loop system with limited / no discharge to the environment
- Mining solution is reconditioned and recycled to ISR wellfield for repeated mining
- High grade and low impurity solution allows for direct precipitation without solvent extraction or ion exchange
- On site drying / calcining in preparation for market
- No tailings generation or disposal



denison Mines

Freeze Design: Eliminates common environmental concerns with ISR mining

Directional Drilling
(currently used in the oil & gas industry)
+
Ground Freezing
(currently used in other mining operations in the Athabasca Basin)
=
Novel Concept to Contain ISR Mining Solution
(mining chamber created by freeze cap tied into basement rock)



denison Mines

Committed to collaborative engagement with all interested parties

Guiding Principles:

- Present meaningful and relevant information in culturally appropriate format and language
- Incorporate comments and recommendations into project decisions to minimize project impacts
- Engage interested parties in a variety of ways and in a manner that respects local traditions, culture, timeframes and decision making processes
- Provide frequent feedback, monitoring and evaluation related to the project and engagement activities

Respect for Indigenous Communities and Knowledge

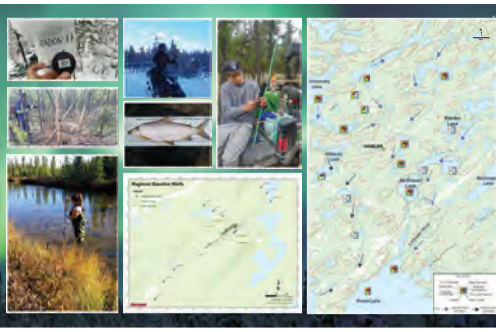
- We acknowledge and respect that we are working within Treaty 10 and the traditional territory of the English River First Nation and the Métis
- We wish to share the land together and work in partnership, to return maximum benefits from the Project to the communities
- We aim to ensure Indigenous Knowledge is deeply respected by our Company and within the environmental assessment process
- We understand the importance of protecting the area in which we are working – the land, the water, the animals, the air, the history
- We have designed the Project to have minimal adverse impacts to Indigenous and Treaty Rights, as well as to the environment

denison Mines

Environmental Baseline Studies

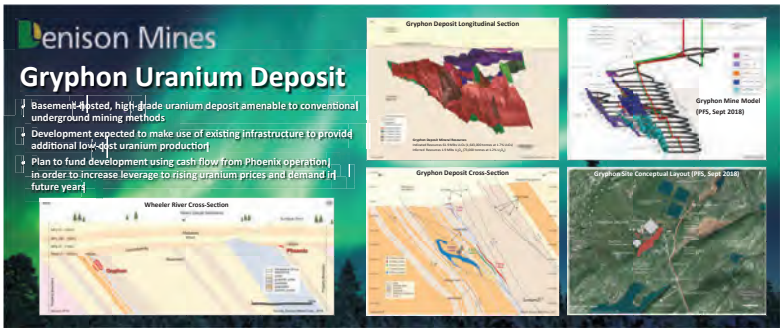
2012 – Present:

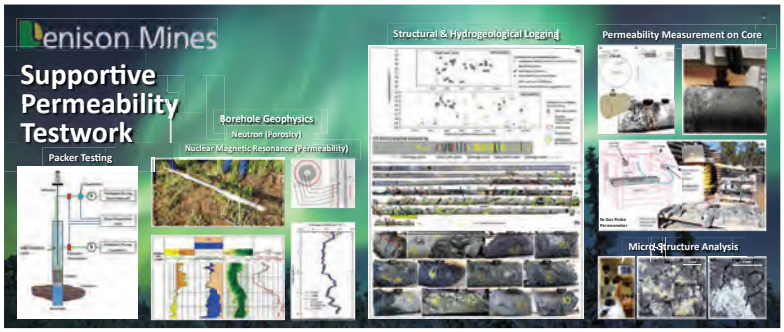
- Terrestrial environment (soil, vegetation, wildlife habitat, wildlife)
- Aquatic environment (hydrology, water quality, sediment quality, plankton, benthic invertebrates, fish communities, fish habitat)
- Groundwater quality & hydrogeology
- Heritage resources
- Air quality & noise
- Waste rock geochemistry
- Indigenous land use



ROC1

Cigar Lake
McClean Lake
Wheeler River - Proposed
(Phoenix infrastructure as proposed in the PFS, Sept 2018)
McArthur River
Rabbit Lake
Key Lake
Environmental Benefits of ISR
Compared to traditional uranium mining and milling in Canada:
Relatively small surface footprint
Lower water & energy consumption
Potentially near zero CO_2 emissions
Small volume (potentially zero) treated effluent released to surface water bodies
Potential for lower radiation doses to workers
No tailings production or storage
Very small volumes of clean waste rock (sandstone core from wellfield development)


Denison Mines
Gryphon Uranium Deposit
Basement-hosted, high-grade uranium deposit amenable to conventional underground mining methods
Development expected to make use of existing infrastructure to provide additional low-cost uranium production
Plan to fund development using cash flow from Phoenix operation in order to increase leverage to rising uranium prices and demand in future years
Wheeler River Cross-Section
Gryphon Deposit Longitudinal Section
Gryphon Mine Model (PFS, Sept 2018)
Gryphon Deposit Cross-Section
Gryphon Site Conceptual Layout (PFS, Sept 2018)


Denison Mines
Supportive Permeability Testwork
Packer Testing
Borehole Geophysics
Neutron (Porosity)
Nuclear Magnetic Resonance (Permeability)
Structural & Hydrogeological Logging
Permeability Measurement on Core
Micro-Structure Analysis

Denison Mines
Wheeler River Exploration
Under or unexplored target areas
Multiple historic intercepts that warrant follow-up
Focus on the discovery of additional high-grade deposits with the potential to form satellite ISR operations
Gryphon Deposit
Phoenix Deposit

Denison Mines
Welcome
Hoʔą
Tānsi pihtikwī
Tânisi pihtikwî
Wheeler River Uranium Project
A Joint Venture between Denison Mines Corp (90%) and JCU (Canada) Exploration Company Limited (10%)
We acknowledge and respect that we are working within the boundaries of Treaty 10 and the traditional territory of the English River First Nation and the Métis - who have a strong and significant relationship to this land
Saskatoon Office Contact Details:
t: 306-652-8200 x101 | f: 306-652-8202
230 22nd St. East, Suite 200
Saskatoon, SK, Canada, S7K 0E9
Project Manager | Clark Gamelin | c: 306-715-0759 | cgamelin@denisonmines.com
TSX: DML | NYSE American: DNN | www.denisonmines.com | @DenisonMinesCo

ROC1

Name:

Denison Mines

Uranium Development & Exploration

The Athabasca Basin, Northern Saskatchewan

August 2019 | Wheeler River Site Visit

Notes...

Denison Mines 2

Wheeler River Site Visit
August 2019

Agenda:

- Arrive at Wheeler River
- Welcome to the Wheeler River Uranium Project
- Denison Mines overview
- Introductions
- Camp orientation & safety
- Depart for Field Tour of Stations #1-9
- Snacks / refreshments (Station #6)
- Return to camp for late lunch
- Wrap-up Q&A
- Depart Wheeler River

Denison Mines 3

Diversified Athabasca Basin Asset Base with Superior Development Leverage

Strategic Project Portfolio:

- 90% interest in Flagship **Wheeler River** project [1] – largest undeveloped uranium project in infrastructure rich eastern Athabasca Basin
- 22.5% interest in operating **McClean Lake Uranium Mill** – excess licensed capacity, +12% of global uranium production
- Interests in uranium resources at McClean Lake, Midwest, and Waterbury Lake
- ~305,000 hectares of prospective exploration ground in the Athabasca Basin

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

Denison Mines 4

NOTES: (1) See Denison's news releases from January 17, 2017 and September 2, 2014 for additional details, as well as the Wheeler River Technical Report titled "Pre-Feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018.

~305,000 Hectares of Prospective Exploration & Development Ground Focused in the Infrastructure Rich Eastern Athabasca Basin

Denison Mines 5

Wheeler River Project Advancing to Permitting[1]

Pre-Feasibility Study Highlights[2]:

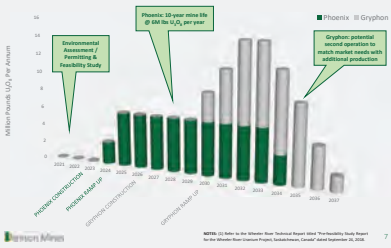
- PFS included selection of **In-Situ Recovery ("ISR") mining method** for Phoenix with onsite processing at Wheeler River
- **Phoenix** estimated to have exceptionally low operating costs for an undeveloped uranium deposit globally – **US$3.33/lb U_3O_8**
- Conventional UG **Gryphon** contributes additional low cost pounds – **US$11.70/lb U_3O_8**
- **109.4M** lbs U_3O_8 Probable Reserves
- **14** year mine life (7.8m lbs U_3O_8/year on avg.)
- Base-case pre-tax $NPV_{8\%}$ (100%) of **$1.31B**
- Base-case pre-tax IRR of **38.7%**
- Initial CAPEX of **$322.5M** (100%)

✓**Ownership[3]: 90% Denison, 10% JCU**

Denison Mines 6

NOTES: (1) See Denison's news releases from December 18, 2018 for additional details. (2) Refer to the Wheeler River Technical Report titled "Pre-Feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018. (3) See Denison's news releases from October 29, 2018

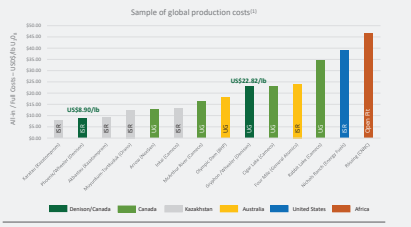
Wheeler River PFS:
14-year mine life producing +7.5M lbs U_3O_8 per year on average[1]



Denison Mines 7

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-Feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018

Phoenix ISR Operation:
Potential to be one of the lowest cost uranium mining operations



Denison Mines 8

NOTES: (1) Chart data, including all-in costs, have been derived from UxC's estimates of Worldwide Production Costs as of August 2018. Phoenix and Gryphon costs are per Denison's Pre-Feasibility Study for the project, available at www.denisonmines.com on SEDAR and EDGAR

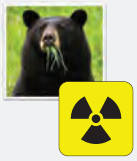
Wheeler River Site Visit
Introductions

Management & Technical Team:

- David Cates – President & CEO
- Mac McDonald – VP Finance & CFO
- Tim Gabruch – VP Commercial
- Dale Verran – VP Exploration
- Chad Sorba – Technical Services Manager
- Carolanne Inglis-McQuay – CSR Manager
- Pam Bennett – Environment Manager
- Jared Orynik – Project Manager, Project Dev.
- Clark Gamelin – Project Manager, Exploration
- Shae Frosst – Corp. Dev. & IR Manager

Denison Mines 9

Wheeler River Site Visit:
Safety and site orientation



Side by side ATVs:	Wear seatbelts, maintain safe speeds, beware of oncoming traffic and surroundings.
Wildlife:	Stay calm, slowly back away to vehicle, follow your Denison host
Rough terrain:	Tripping hazards, uneven surfaces
UV exposure:	Wear hat, apply sunscreen, stay hydrated
Radiation safety:	Time, Distance, Shielding ALARA (As Low As Reasonably Achievable) PPE (Personal Protective Equipment) Personal Decontamination

IMPORTANT: During the visit, the project site will be active. Accordingly, there are hazards that you may need to be made aware of during the field tour. Always listen to and follow instructions from your Denison hosts during the visit.

Denison Mines 10

Wheeler River 2019 Field Tour

Station #1 – Gate House
Future home of the Phoenix ISR uranium mining operation

Site Location

- 35 km north-northeast of the Key Lake mill and 35 km southwest of the McArthur River uranium mine in the southeastern portion of the Athabasca Basin region

Existing Regional Infrastructure

- Highway 914 - eastern edge of property
- Provincial power grid – SaskPower transmission line along Highway 914

Planned Site Infrastructure

- ~7km site road connection to Highway 914 outlined in Project Description
- Powerline connection to SaskPower transmission line
- Airstrip (1600 m length) and associated site road to allow for transport of staff

Denison Mines 12

Station #1 – Gate House
Future home of the Phoenix ISR uranium mining operation

Evolution of Site Design

- Site infrastructure design from PFS (September, 2018) shown opposite
- Updated site infrastructure design submitted for the Project Description shown on next page
- Ongoing efforts to optimize site layout to minimize capital expenditure requirements and impacts to the environment

Denison Mines 13

Station #1 – Gate House
Future home of the Phoenix ISR uranium mining operation

Key Site Elements:

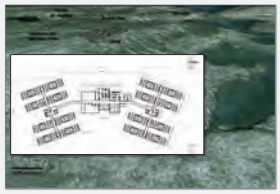
- ~150 person camp facility
- Site operations centre
- ISR wellfield
- Freeze plants
- Processing plant / WTP
- Potential WTP holding ponds and treated effluent discharge point
- Warehousing and fuel storage facilities
- Back-up power generators
- Wash bay, scanning and weight scale facilities
- Potable and waste water treatment / storage

Denison Mines 14

Notes...

Denison Mines 15

Station #2 – Phoenix Camp
Designing a home away from home



Preliminary Camp Design Features:

- ✓ ~150-person capacity
- ✓ Pre-fabricated design
- ✓ Single-occupancy units
- ✓ Kitchen & recreation facilities
- ✓ Situated within walking distance to work sites
- ✓ Common areas for relaxing, using the computer, doing laundry
- ✓ Layout to promote healthy lifestyle and enjoyment of the surrounding setting (lake view, fishing, etc.)

Denison Mines 16

Station #2 – Phoenix Camp
Building a local workforce

Potential employment opportunities associated with ISR mining operation:

- Targeted to Wheeler Partner Communities
- Up to 300 jobs during ~2 years of construction
- Approximately 100 jobs during operation of the planned ISR mining operation
- Opportunities similar to other uranium mining operations (processing plant, camp, security and EH&S roles)
- Various unique opportunities specific to an ISR mining operation, which will require diploma or technical certification available in Saskatchewan. Examples:
  - ✓ Process Operation Technician (SIIT in Meadow Lake)
  - ✓ Chemical Technology (Sask Polytechnic)
- In-house training programs can be developed once operations begin
- ISR mining positions are all surface-based
- Expected to operate as a fly-in / fly-out operation from planned Wheeler River airstrip

Denison Mines 17

Station #3 – ISR Wellfield
Bringing the world's lowest cost uranium mining method to the jurisdiction hosting the world's highest-grade uranium deposits

ISR Mining Process[1]:

1. Mining solution (also known as "lixiviant") is pumped through a permeable orebody via injection well;
2. Lixiviant dissolves the uranium as it travels through the orebody;
3. Uranium rich mining solution (also known as uranium bearing solution or "UBS") is pumped back to surface via recovery well;
4. UBS is sent to a processing plant on surface for chemical separation of the uranium and reconditioning of lixiviant;
5. Lixiviant is returned back to well field for further production

Denison Mines 18

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-Feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018.

ROC1

Station #3 – ISR Wellfield

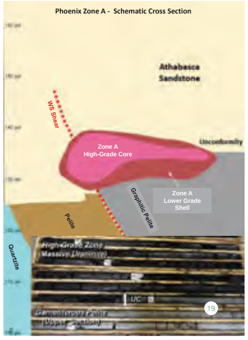
Phoenix Geology: Unique uranium deposit with exceptionally high grades

Highlights[1]**:**

- Mineralization is situated at or immediately above the unconformity ("UC")
- Two distinct ore zones – Phoenix A + B
- Approximately 400 m below surface
- World's highest-grade undeveloped uranium deposit
- Indicated Mineral Resources 70.2 M lbs U_3O_8 (166,000 tonnes at **19.1% U_3O_8**)
  - Includes 59.9 M lbs U_3O_8 estimated for Phoenix Zone A High-Grade Core (62,900 tonnes at **43.2% U_3O_8**)
- Inferred Mineral Resources 1.1 M lbs U_3O_8 (9,000 tonnes at 5.8% U_3O_8)
- Cut-off grade of 0.8% U_3O_8

✓ Geological setting expected to be amenable to ISR mining, with ~90% of the mineral resource (contained metal) hosted in sandstone

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018 for further details regarding the mineral resources estimated for the Phoenix deposit.

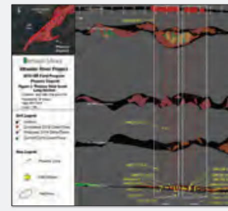


Station #3 – ISR Wellfield
First of its kind ISR Field Test in the Athabasca Basin

ISR Field Test Objectives:

- In-situ field work is necessary to increase the confidence / reduce the risks associated with application of the ISR mining method at Phoenix
  - ✓ Data required for detailed hydrogeological modelling
  - ✓ Forms the basis for ISR wellfield and freeze dome design necessary for the FS and to support the EIA process.
- Phoenix deposit divided into four (4) representative test areas
  - ✓ Intended to cover each of the various fluid flow domains expected within the deposit
  - ✓ Test areas expected to cover ~65% of the Indicated Mineral Resources estimated for the Phoenix deposit

Station #3 – ISR Wellfield
First of its kind ISR Field Test in the Athabasca Basin



Summer 2019 ISR Field Test:

- Designed to acquire data from Test Areas 1 and Test Area 2
- In-situ testing in the orebody, and surrounding areas, using water to evaluate hydraulic conditions
- 29 wells (17 Phoenix wells + 12 regional wells) installed to allow for preliminary testing
- Existing exploration holes used for installation of near vertical wells, where possible
- One large-diameter well (commercial-scale) planned for each Test Area following preliminary evaluations
- Possible evaluation of certain permeability enhancement techniques

Station #4 – ISR Processing Plant

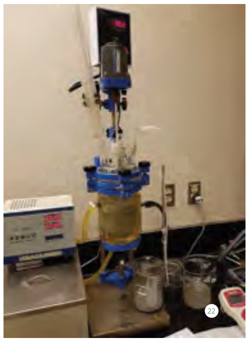
Phoenix PFS Test Work[1]: Confirms suitability of ISR mining method

Field and laboratory work included drill hole injection, permeability, metallurgical leach, agitated leach and column testing

- **Excellent Recoveries:** High rates of recovery in extraction (+90%) and processing (98.5%)
- **High Grade:** Agitated leach and column tests returned uranium concentrations of 12 to 20 grams per litre (g/L) – significantly higher than conventional low-grade ISR operations
- High uranium concentrations in the mining solution, plus low level of impurities (deleterious elements), allows for **direct precipitation of uranium**

✓ **No need for ion exchange or solvent extraction circuits = reduced costs**

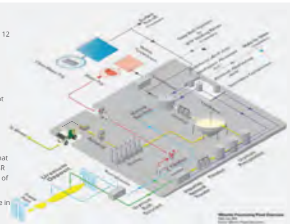
NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018.



Station #4 – ISR Processing Plant
On-site processing to Yellowcake Uranium

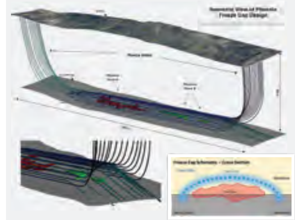
On-Site Processing Plant[1]

- Annual production between 6 and 12 million lbs U_3O_8 – depending on uranium concentrations from wellfield (10 g/L → 6M lbs U_3O_8 / year)
- No crushing or grinding circuits required – results in small footprint
- Low impurity solution allows for direct precipitation and eliminates need for ion exchange or solvent extraction
- Potential for closed loop system that recycles mining solution back to ISR wellfield with little to no discharge of effluents
- Drying/calcining to be done on-site in preparation for market
- Plant to be powered by provincial power grid



NOTES: (1) Indicative design only. Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018.

Station #5 - Freeze Plant & Collars
Novel concept to contain lixiviant, using established technology



Artificial freeze cap replicates confining layer typically required for ISR mining operations[1]

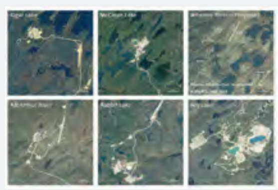
- Parallel cased holes drilled from surface and anchored into impermeable basement rock surrounding the Phoenix deposit
- Circulation of low-temperature brine solution through cased pipes will freeze groundwater in sandstone surrounding the deposit
- 10 metre thick freeze wall, together with basement rocks will encapsulate Phoenix deposit

✓ **Eliminates common environmental concerns with ISR mining and facilitates controlled reclamation**

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018.

Notes…

Station #6 – Environment & Community
Environmental benefits of ISR mining



Advantages of ISR mining compared to existing uranium mining in Canada:

- ✓ Small surface footprint
- ✓ Lower water consumption
- ✓ Lower energy consumption
- ✓ Potentially near zero CO_2 emissions
- ✓ Small volume (potentially zero) treated effluent released to surface water bodies
- ✓ Potential for lower radiation doses to workers
- ✓ No tailings production
- ✓ Very small volumes of clean waste rock (sandstone core from wellfield development)

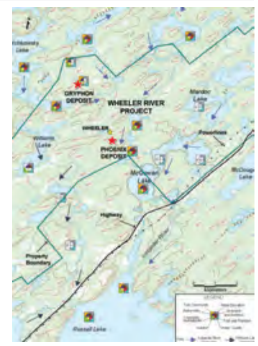
Station #6 – Environment and Community

Environmental baseline studies

Foundation of the environmental impact assessment

- Environmental baseline studies provide an understanding of current or existing conditions
- Overlay the proposed Project with the existing environment
- Identify where Project activities or components could interact with the environment

✓ **Having a robust baseline dataset allows Denison to more accurately predict potential environmental effects**



Station #6 – Environment and Community
The environmental impact assessment process

Environmental Baseline Studies	*Initiate EIA Process:*	*Environmental Impact Assessment (EIA) Process*			
Terrestrial environment; Aquatic environment; Groundwater; Heritage resources; Air quality; Noise; Waste rock geochemistry; Indigenous land use	Wheeler Provincial Technical Proposal and Federal Project Description accepted	*Work with Indigenous communities, the public and technical experts to:* Identify Valued Components; Predict project life-cycle interactions with environment; List potential effects of the Project on the environment; Describe mitigation measures; Assess significance of residual effects; Consider cumulative effects and potential effects of accidents; Propose monitoring programs to demonstrate compliance with regulations and predictions	Denison submits draft Environmental Impact Statement (EIS)	Provincial and Federal governments and the public review and provide comments on the EIS / Denison revises the EIS	Final EIS approved by Provincial and Federal governments *+ Proceed to next steps**
2012 - Present	*May 2019*	*2019-2020*	*Targeted for end of 2020*		

Community Engagement and Indigenous Consultation (ongoing throughout)

**Following final EIS approval, next steps involve commencement of detailed engineering, licensing, permitting, approvals to operate, and ultimately construction*

Station #6 – Environment and Community
Committed to collaborative engagement with all interested parties

Project design informed by collaborative engagement:

- ✓ Evaluation of alternative mining methods for the Phoenix deposit (ISR mining method)
- ✓ Selection of preferred route for the site access road and power line from existing provincial highway and transmission line
- ✓ Selection of preferred location for possible effluent discharge to surface water bodies

Station #6 – Environment and Community
Committed to collaborative engagement with all interested parties

Denison's Approach:

1. Present meaningful and relevant information in culturally appropriate format and language
2. Incorporate comments and recommendations into project decisions to minimize project impacts
3. Engage interested parties in a variety of ways and in a manner that respects local traditions, culture, timeframes and decision making processes
4. Provide frequent feedback, monitoring and evaluation related to the project and engagement activities

Station #6 – Environment and Community
Respect for Indigenous communities and knowledge

Denison's Guiding Principles:

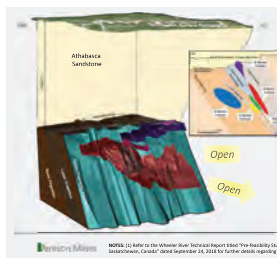
- We acknowledge and respect that we are working within Treaty 10 and the traditional territory of the English River First Nation and the Métis
- We wish to share the land together and work in partnership, to return maximum benefits from the Project to the communities
- We aim to ensure Indigenous Knowledge is deeply respected by our Company and within the environmental assessment process
- We understand the importance of protecting the area in which we are working – the land, the water, the animals, the air, the history
- We have designed the Project to have minimal adverse impacts to Indigenous and Treaty Rights, as well as to the environment

Station #7 – Gryphon Deposit Turnoff
Gryphon uranium deposit

Highlights:

- Basement-hosted, high-grade uranium deposit amenable to conventional underground mining methods
- Not currently approved for advancement, given market conditions – potential to be developed as uranium prices and demand rise in future
- Development expected to make use of existing infrastructure to provide additional low-cost uranium production
- Cash flow from Phoenix operation may be available to fund development

Station #7 – Gryphon Deposit Turnoff
Gryphon uranium deposit



Gryphon Geology & Estimated Mineral Resources

- 'Ingress-style' deposit occurring dominantly within crystalline basement rocks below the sub-Athabasca unconformity
- Consists of numerous stacked lenses of mineralization which are parallel to the dominant foliation and fault structures
- Indicated Mineral Resources 61.9 Mlbs U_3O_8 (1,643,000 tonnes at 1.7% U_3O_8)
- Inferred Mineral Resources 1.9 Mlbs U_3O_8 (73,000 tonnes at 1.2% U_3O_8)
- Cut-off grade of 0.2% U_3O_8

✓ **Deposit remains open for resource expansion down-plunge and within certain areas along strike to northeast**

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018 for further details regarding the mineral resources estimated for the Gryphon deposit.

Station #8 - Hot Shack
Supportive permeability test work & metallurgical sampling

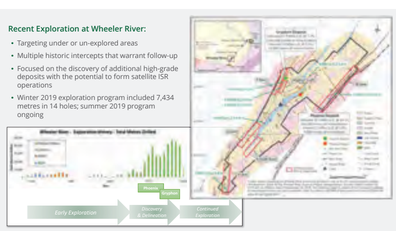
Summer 2019 ISR Field Program designed to facilitate various additional test work:

- Hydraulic conductivity tests (packer testing)
- Downhole geophysics (nuclear magnetic resonance and neutron), where borehole conditions allow.
- Additional mineralized core samples from the orebody, obtained from new drill holes or by wedging from existing boreholes, expected to be subject to the following:
  - Detailed onsite geological and geotechnical (structural & hydrogeological) logging
  - Permeability (permeameter) testing
- Specialized sample collection procedures in place and on-going to allow for metallurgical testing of undisturbed core in future metallurgical test programs

Station #9 – Core Yard
Considerable exploration potential remains at Wheeler River

Recent Exploration at Wheeler River:

- Targeting under or un-explored areas
- Multiple historic intercepts that warrant follow-up
- Focused on the discovery of additional high-grade deposits with the potential to form satellite ISR operations
- Winter 2019 exploration program included 7,434 metres in 14 holes; summer 2019 program ongoing



NOTES: Historic intercepts of uranium mineralization at Wheeler River are publically disclosed on the Company's website at www.denisonmines.com and/or on SEDAR (at www.sedar.com) and/or in the mineral assessment files in the Saskatchewan Mineral Assessment Database. https://www.saskatchewan.ca/business/agriculture-natural-resources-and-industry/mineral-exploration-and-mining/saskatchewan-geological-survey/saskatchewan-mineral-assessment-database-smad

Appendix: Pre-Feasibility Study (PFS) Economics

ROC1

Wheeler River PFS: Uranium price assumptions, and sensitivities

Assumptions / Result[4]	Base Case	PEA Ref. Case	High Case
Uranium selling price	As above	US$44/lb U_3O_8	US$65/lb U_3O_8
Pre-tax $NPV_{8\%}$[4] (100% Basis)	**$1.31 billion**	**$1.41 billion**	**$2.59 billion**
Pre-tax IRR[5]	38.7%	47.4%	67.4%
Pre-tax payback period[5]	~24 months	~ 15 months	~ 11 months

Base Case Price Assumptions:

- **Phoenix Operation:**
  - ~US$29/lb U_3O_8 to US$45/lb U_3O_8
  - UxC Spot price forecast
  - "Composite Midpoint" scenario
  - Stated in "constant" 2018 dollars
- **Gryphon Operation:**
  - US$50/lb U_3O_8 fixed price

Comparison to 2016 PEA

- 2016 PEA provided pre-tax project $NPV_{8\%}$ of $513 million at fixed uranium price of US$44/lb U_3O_8
  - PFS equivalent $NPV_{8\%}$ at US$44/lb U_3O_8 ($1.4 billion) represents **+275% of pre-tax project NPV from PEA**

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 26, 2018; (2) NPV and IRR are calculated to the start of pre-production activities for the application operation; (3) Payback period is stated as number of years to pay-back from the start of commercial production.

Phoenix Operation: ISR mining method delivers industry leading cost per pound U_3O_8

Phoenix Operation	PFS Result[1]
Mine life	**10 years** (6.0 million lbs U_3O_8 per year on average)
Average cash operating costs	**$4.33 (US$3.33) per lb U_3O_8**
Initial capital costs (100% basis)	**$322.5 million**
Operating margin[4]	**89.0%** at US$29/lb U_3O_8
All-in cost[2]	**$11.57 (US$8.90) per lb U_3O_8**

Assumptions / Results	Base Case	High Case
Uranium selling price	UxC Spot Price[3]	US$65/lb U_3O_8
Operating margin[4]	**91.4%**	**95.0%**
Pre-tax $NPV_{8\%}$[4] (100%)	**$930.4 million**	**$1.91 billion**
Pre-tax IRR[5]	43.3%	71.5%
Pre-tax payback period[5]	~ 21 months	~ 11 months

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 26, 2018; (2) All-in cost is estimated on a per-lb basis and includes all project operating costs and capital costs, divided by the estimated number of total pounds (U_3O_8) to be produced; (3) Spot Price is based on the "Composite Midpoint" spot price scenario from UxC's USAC; (4) Operating profit margin is calculated as uranium revenue less operating costs, divided by uranium revenue. Operating costs exclude all royalties, surcharges and income taxes; (5) NPV and IRR are calculated to the start of pre-production activities for the Phoenix operation in 2031; (6) Payback period is stated as number of years to pay-back from the start of uranium production.

Gryphon Operation: Additional low-cost production with conventional UG mining

Gryphon Operation	PFS Result[1]
Mine life	**6.5 years** (7.6 million lbs U_3O_8 per year on average)
Average cash operating costs	**$15.21 (US$11.70) per lb U_3O_8**
Initial capital costs (100% basis)	**$623.1 million**
Operating margin[3]	**77.0%** at US$50/lb U_3O_8
All-in cost[2]	**$29.67 (US$22.82) per lb U_3O_8**

Assumptions / Results	Base Case	High Case
Uranium selling price	US$50/lb U_3O_8	US$65/lb U_3O_8
Operating margin[3]	**77.0%**	**82.3%**
Pre-tax $NPV_{8\%}$[4] (100%)	**$560.6 million**	**$998.8 million**
Pre-tax IRR[4]	23.2%	31.0%
Pre-tax payback period[5]	~ 37 months	~ 31 months

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 26, 2018; (2) All-in cost is estimated on a per-lb basis and includes all project operating costs and capital costs, divided by the estimated total number of pounds (U_3O_8) to be produced; (3) Operating profit margin is calculated as uranium revenue less operating costs, divided by uranium revenue. Operating costs exclude all royalties, surcharges and income taxes; (4) NPV and IRR are calculated to the start of pre-production activities for the Gryphon operation in 2026; (5) Payback period is stated as number of years to pay-back from the start of uranium production.

Wheeler River PFS[1]: Statement of Reserves and Denison indicative post-tax results

Reserves[2, 3, 4, 7, 8]

Deposit	Class.	Tonnes	Grade	Lbs U_3O_8	Denison (90%)
Phoenix[6]	Probable	141,000	19.1% U_3O_8	59.7M	53.7M
Gryphon[5]	Probable	1,257,000	1.8% U_3O_8	49.7M	44.7M
Total	**Probable**	**1,398,000**	**3.5%**	**109.4M**	**98.4M**

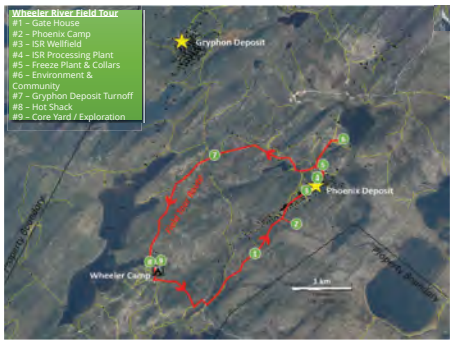
Indicative Denison post-tax results

Financial Results	Denison (90%)
Initial capital costs	**$290.3 million**
Base case post-tax IRR[9]	32.7%
Base case post-tax $NPV_{8\%}$[9]	$755.9 million
Base case post-tax payback period[10]	~ 26 months
High case post-tax IRR[9]	**55.7%**
High case post-tax $NPV_{8\%}$[9]	**$1.48 billion**
High case post-tax payback period[10]	**~12 months**

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-Feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 26, 2018; (2) Mineral reserves for the Phoenix deposit are reported at the mineral resource cut-off grade of 0.8% U_3O_8. The mineral reserves are based on the block model generated for the May 28, 2014 mineral resource estimate. A mining recovery factor of 85% has been applied to the mineral resource above the cut-off grade; (3) Mineral reserves for the Gryphon deposit are estimated at a cut-off grade of 1.0% U_3O_8. The mineral reserves are based on the block model generated for the May 28, 2014 mineral resource estimate. A mining recovery factor of 75% has been applied to the mineral resource above the cut-off grade; (4) Mineral reserves are reported using a US$50/lb U3O8 spot price, a US$1.50/CAD$ exchange rate, and a 2.0% royalty. The cut-off grade is based on an operating cost of CAD$70/tonne, milling recovery of 95%, and 1.25%/tonne Saskatchewan royalties. Mineral reserves include for diluting material and mining losses; (5) Mineral reserves are stated at a processing plant feed reference point; (6) Numbers may not add due to rounding; (7) NPV and IRR are calculated to the start of pre-production for the Phoenix operation in 2031; (10) Payback period is stated as number of months to pay-back from the start of commercial production.

Notes…

Appendix: Wheeler River 2019 Field Tour Maps



Site Tour: August 23, 2019
Wheeler Project Site location

In Attendance	
Pam Bennett (Denison) Carolanne Inglis-McQuay (Denison) David Cates (Denison) Dale Verran (Denison) Chad Sorba (Denison Jared Orynik (Denison)	Glen McCallum (President MNS) Mervin (Tex) Bouvier (Region 3 President Metis Nation) Mike Natomagan (Mayor Pinehouse Lake / Local President Kineepik Metis) Alex Ross (Executive Director Kineepik Metis) Nick Daigneault (Mayor Beauval / Vice President Sipisishik Metis) Gerald Roy (Deputy Mayor Ile a la Crosse) Jimmy Durocher (Local President A La Baie Metis) Percy Kenny (Local President Patuanak Metis) Jeff Skopyk (English River First Nation) Adam Zenobi (CNSC) Salman Ahkter (CNSC) Greg Adilman (Province of Saskatchewan; Ministry of Environment) Aimann Sadik (Province of Saskatchewan; Ministry of Environment)

Questions / Comments

Q: What are the resources required for ISR? Is this the same as SAG-D in Alberta? Do you need water? Steam?

A: No, just the use of a mining solution (acidic) to move through the rock – no high-pressure steam or significant amounts of water required.

Q: Are you following the protocol set out by the Metis Nation of Saskatchewan in terms of meeting with the regional level of government and then the local levels? What kind of relationship are you developing with the Metis?

A: We are aiming to meet at all the levels, recognizing the governance structure as set out by the Metis constitution, but that the local presidents and Metis are the local knowledge holders about land-based activities and rights. We are aiming to work with all levels of Metis government.

Q: Are there ponds for waste and waste rock?

A: There will be a special waste pad, but because minimal effluent discharge, there will be minimal ponds for wastewater – but the environmental assessment will ensure that we do assess ponds and treated effluent.

Q: No tailings?

A: That's right. No Tailings Management facility and no tailings. Residual materials coming up in the ISR solution would be stored on the special waste pad.

Q: Wastewater would be treated?

A: yes.

Q: What kind of trades would you require? There would be lots of maintenance required on the piping, etc.

A: Instrumentation, pipefitting, drilling on surface, maintenance

Q: Are your local contractors required to hire from the local communities?

A: yes. This has been done in the area of drillers and drillers helpers and also the field technicians for the various field studies that have been done.

Q: How do you measure the levels of radiation on the wells? Is there a concern with radiation?

A: The Uranium bearing solution will be pumped through piping with shielding (the same kind of shielding that has been used as the other uranium mining operations), the pumphouse will have, where required, the same kind of shielding necessary to protect workers. The exposure levels are predicted to be similar levels to diamond drilling for uranium.

Q: What is the chemical makeup of the solution? What happens to the solution when you are done?

A: Acidic solution, that is recycled back through the system.

Q: Will the high grade / low grade differences affect the concentration of the solution?

A: The concentration of the solution will be adjusted based on what is necessary – aiming to always get the same concentration of Uranium bearing solution at surface.

Q: Will the temperature of the freeze wall compromise the mining solution?

A: It isn't predicted to. The wells will be drilled through the freeze wall, into the cavity that is unfrozen. The cavity would be filled with livixiant.

Q: When would the directional freeze holes be drilled? How long would they take?

A: Many months, and then the freezing would take approximately 2 years

Q: The freeze wall 1) contains the solution and 2) protects the receiving environment. Correct?

A: Yes.

Q: How does the freeze wall work? Does it freeze the rock or the water inside the rock?

A: It freezes the water in between the rock particles.

Q: How long to freeze?

A: About 2 years, once the holes are installed. This is based on a 5m spacing apart of the holes.

Q: can you give us a breakdown of the 100 jobs that are available? What are they comprised of?

A: Presently working on this and will provide to the communities as soon as it is completed.

Q: How do you know where you are drilling? How do you know where the other holes are?

A: Uses magnetic ranging technology. The first hole goes in, and the second hole uses the first hole to determine against. And the third hole uses a triangulation methodology against that hole – and so on. Accuracy increases the more holes you have.

Q: What would be the thickness of the freeze zone?

A: 10m thick – or three basketball nets on top of each other.

Q: Would the freeze wall be kept intact for the life of the operation?

A: Yes and would be kept on until full reclamation was achieved and completed.

Q: When will the directional drilling take place for the test?

A: In the next couple of years.

Q: what would you be discharging?

A: Treated effluent.

Additional Comments

- Impressed with Denison Mines bringing the Metis leadership to site for a site tour.
- Is the ISR process done in other places?
  Explained how it was done in many other parts of the world, including the USA and Kazakhstan.
  Commented that Cameco used this technology, just not in Saskatchewan. Denison would be the first in Saskatchewan to use this technology for uranium recovery.
  Explained how the freeze dome was planned to be installed to encapsulate the ISR solution.
- Emphasized to that we shouldn't rush anything, get everything planned correctly.
- Said that this project would have their support.
- Asked how they could buy stocks in Denison as they were impressed with our Denison team, communication, technology and strategy.

ROC2

Denison Mines

Wheeler River Community Update

Community Workshop
January 16, 2018

1

AGENDA

Denison Mines

1. Denison Introduction / Refresher
2. Workshop
   A. Site Access Road Route Options
   B. Treated Water Discharge Location Options
   C. Mining Method Options
3. Environmental Baseline Data Collection Update

2

Denison – Who Are We?

Denison Mines

- **A Canadian uranium exploration & development Company**
  - Public company, but only 5% of the size of Cameco
  - A history of uranium mining, but no active mining operations
  - Several exploration properties in the eastern Athabasca Basin
  - 60% owner and the operator of the Wheeler River Project

3

Denison – Who Are We?

Denison Mines

- **A joint venture partner with Areva at McClean Lake**
  - Denison owns 22.5 % of the McClean Lake uranium deposits and the McClean Lake uranium mill (shown above) – Areva (70%) is operator
  - In our preliminary plans, Denison has assumed that the ore from Wheeler River will be processed at the McClean Lake mill

4

Denison – Who Are We?

Denison Mines

- **An operator of a Canadian environmental services business**
  - ~40 employees based in Elliot Lake, Ontario
  - Maintains Denison's closed and reclaimed mine site in Elliot Lake
  - Provides services to mining companies and governments across Canada

5

Denison – Who Are We?

Denison Mines

- **A strong supporter of our local communities**

Saskatchewan	Elliot Lake	Former African Assets
• McClean Lake community programs • Denison procurement from local vendors and personnel in northern communities	• Serpent River First Nations – employment, youth education initiative • Supported creation of a retirement lifestyle community after mining was completed	• Supported construction of schools and health offices for local villages • Drilled water wells • Leadership roles for local technical & admin staff

6

Location

Denison Mines

7

Wheeler River Today: Uranium Exploration

Denison Mines

- Exploration camp
- Drilling in winter & summer

8

Wheeler River Today

Denison Mines

- Two known uranium deposits – Gryphon + Phoenix
- Total of 114M lbs (U_3O_8)

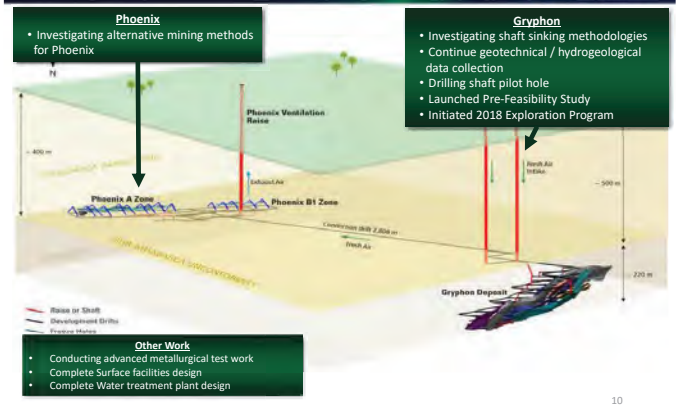
In comparison
- McArthur River: Produced ~290M lbs, Reserves 234M lbs
- Rabbit Lake: Produced ~202M lbs, Resources: ~70M lbs

9

ROC2

2017/2018 Activities

Denison Mines



Wheeler River Future

Denison Mines

Wheeler River: A Long Term Proposition

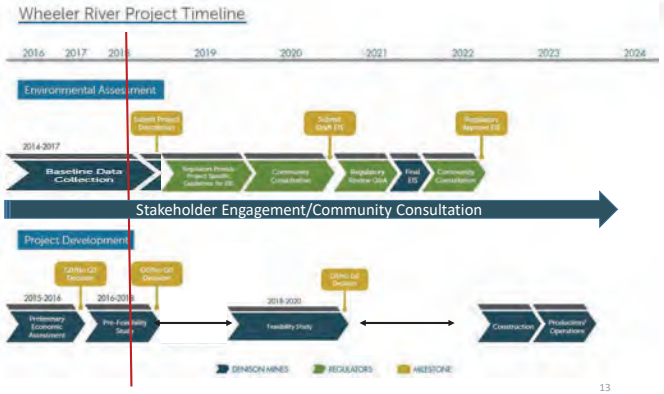
Denison Mines

- Initial and sustaining capital costs ~CAD$1.13 billion
- First uranium production projected by 2025/2026
- Operating costs expected to average US$19/pound U_3O_8
- Uranium spot price quoted at ~US$20/pound U_3O_8

➢ **Denison believes in the future of nuclear energy and is investing in the people and the province of Saskatchewan, despite historic low uranium prices and difficult market conditions**

Wheeler River : A Long Road Ahead

Denison Mines



Northern Capacity Development

Denison Mines

1. Denison
   - Drill camp supplied by the Beauval General Store
   - Worked with Drill Contractor to run a Drill Training Program, 2 northerners trained in fall, more to come
   - Employed northerners for baseline field program support
   - Supported career days last fall in Patuanak
   - Financially supported the IRM Program (BEAHR Program)
2. Denison Procurement: New contracts require
   - Competitive Costs & performance
   - Maximize northern employment and procurement of goods
   - Preference for northern ownership stake

Northern Capacity Development

Denison Mines

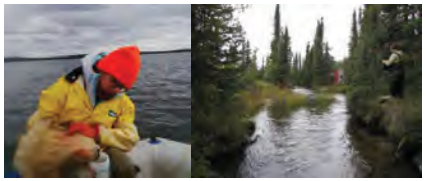
- Communities Requested Formal Agreements: Denison Issued Draft MOU (Memorandum of Understanding)
  - Formalize intent for Denison and Communities to work together in spirit of cooperation and respect
  - Sets the stage for an IBA (Impact Benefits Agreement) following the advancement of the project. Focus on 4 main areas:
    - Environmental Sustainability
    - Employment, Education and Training
    - Business Opportunities
    - Community Investment
- Draft issued to four communities/First Nations
  - Pinehouse, Ile a la Crosse, Beauval and ERFN
  - 2 signed, 2 remain under review

EIA Update: Baseline Environment

Denison Mines

Aquatics

- Hydrology ✓
- water quality ✓
- lake bathymetry ✓
- sediment quality ✓
- benthic invertebrate communities ✓
- benthic invertebrate chemistry ✓
- fish community ✓
- fish tissue chemistry ✓



EIA Update: Baseline Environment

Denison Mines

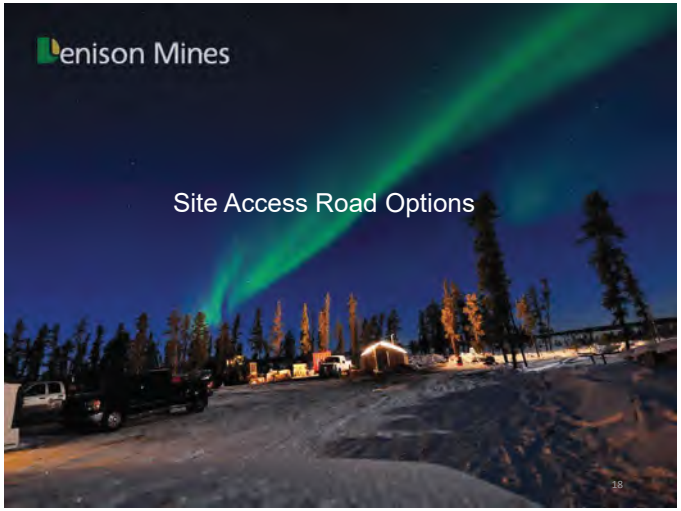
Terrestrial

- ecological land classification ✓
- breeding bird surveys ✓
- ungulate pellet counts ✓
- winter tracking surveys ✓
- aquatic furbearer shoreline surveys ✓
- small mammal trapping & chemistry ✓
- amphibian surveys ✓
- characterization of terrain and soil types ✓
- vegetation and soil chemistry ✓
- vegetation community ✓

Heritage

- heritage resources assessment ✓

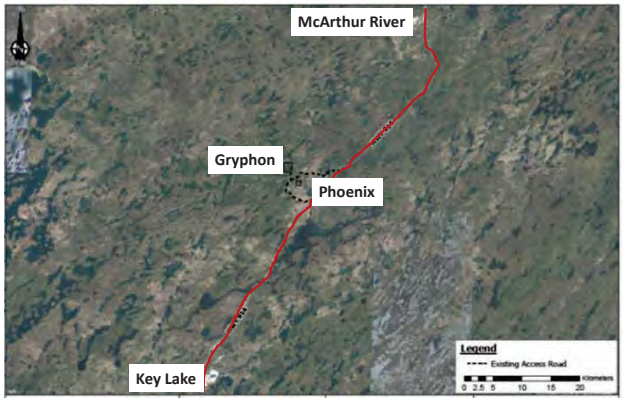
Denison Mines



ROC2

Wheeler River Road Access Alignment

enison Mines



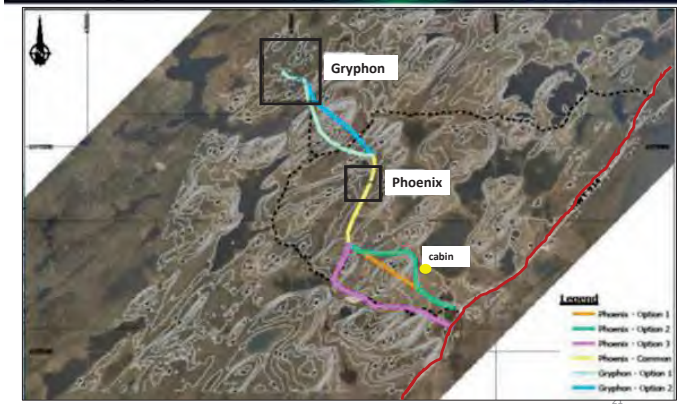
Wheeler River Road Access Alignment

enison Mines

- Constraints
  - 10 m wide
  - Slopes of cuts must be 3H:1V
  - Grade must not exceed 7%
- Considerations
  - Stream and river crossings, how many, how big
  - Proximity to lakes
  - Proximity to Cabin

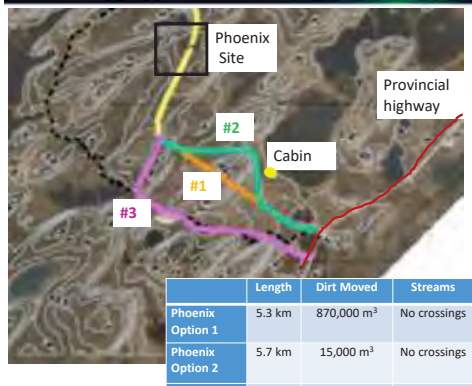
Wheeler River Road Access Alignment

enison Mines



Wheeler River Road Access Alignment

enison Mines



	Length	Dirt Moved	Streams	Distance to Water	Cabin
Phoenix Option 1	5.3 km	870,000 m³	No crossings	200 m to lake	500 m
Phoenix Option 2	5.7 km	15,000 m³	No crossings	140 m to lake	250 m
Phoenix Option 3	6.4 km	20,000 m³	No crossings	200 m to lake	1000 m

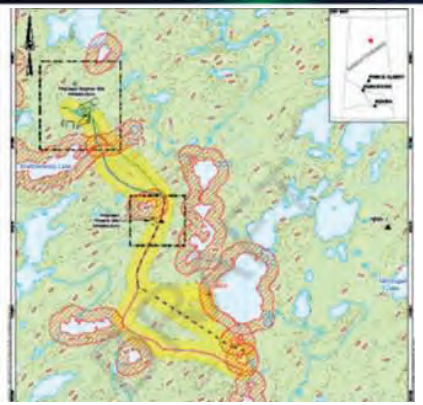
Wheeler River Road Access Alignment

enison Mines

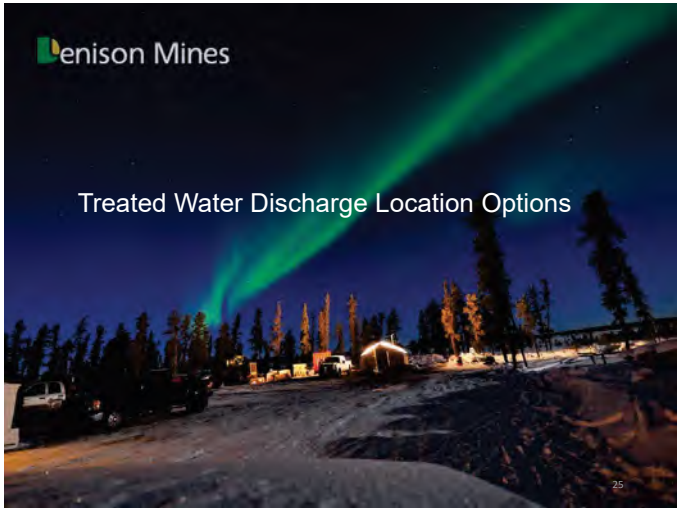
	Length Km	Dirt Moved	Streams	Distance To Water
Gryphon Option 1	3.3	265,000 m³	1 crossing (existing bridge)	25 m
Gryphon Option 2	3.1	1,000,000 m³	1 crossing (existing bridge)	200 m

Wheeler River Road Access Alignment

enison Mines



enison Mines



Discharge Location Options

enison Mines

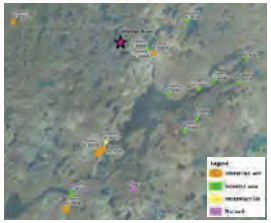
- Potential locations for treated water discharge were identified and assessed for:

1. Preliminary understanding of land uses
   - Traditional territories
   - Trails, trap lines, country food harvesting, angling
   - Cabins, camps
   - Industrial properties
2. Potential impacts to water quantity and quality
   - Avoid locations with low flows
   - Minimize increase in flows
   - Meet provincial and federal water quality guidelines
3. Potential impacts to fish and fish habitat
   - Avoid spawning habitat

Discharge Location Options
Traditional Knowledge and Land Use

enison Mines

- Preliminary understanding of land uses from:
  - ERFN traditional territories map
  - Land disposition map
  - Observations during baseline (2016-2017)



Discharge Location Options
Identification

Denison Mines

1. Preliminary factors:
   - Capacity (size of lake)
   - Watershed area (drainage)
2. Fish Spawning Grounds
   - Avoid
3. Flow Capacity
   - Can't be more than 50% treated

Discharge Location Options
Preliminary Results

Denison Mines

- LA-7, LA-6, LA-5, LA-1 and Russel Lake
  - Are environmentally safe to discharge into
  - Meet provincial and federal water quality guidelines
  - Avoid spawning habitat
- Community Considerations:
  - Cabins & fishing on Russell lake
  - Length of pipeline and disturbance to land
  - Other?

29

Denison Mines

Mining Method Options

30

Mining Method Options

Denison Mines

Gryphon: **Longhole Mining**

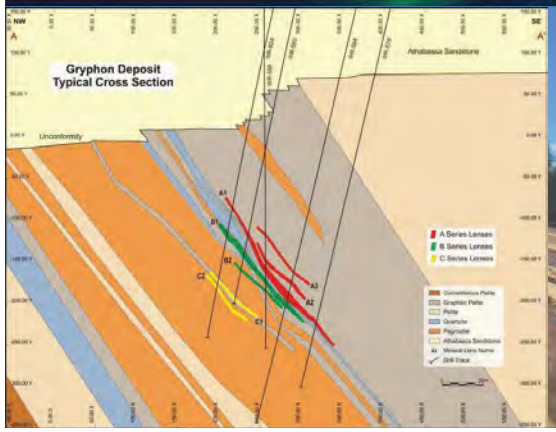
Phoenix: **Directional Drilling**

Insitu Recovery

31

Gryphon - Geology

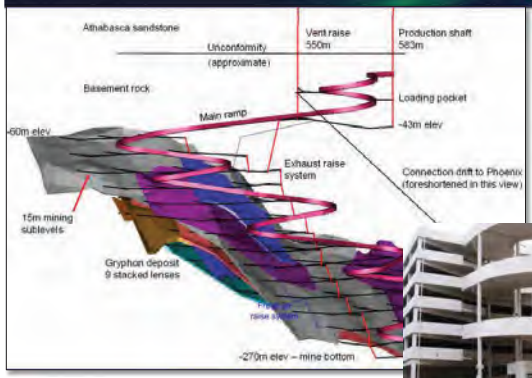
Denison Mines



32

Mining Method – Gryphon Deposit

Denison Mines



Gryphon Longhole Mining Method

Denison Mines

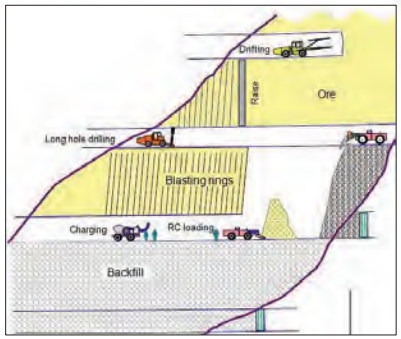
Step 1: Develop (drift) tunnels above and below the ore

Step 2: Drill holes between the two tunnels

Step 3: Load holes with explosives, blasting the ore

Step 4: Excavate (muck) out the ore

Step 5: Backfill opening



34

Gryphon: Longhole Mining Methods

Denison Mines

- Considerations:
  - Safety: Well established practices, equipment and procedures throughout Canada and the global mining industry
  - Radiation Safety: Proven safe, CNSN approved
  - Environmental: Minimizes waste rock on surface – can be used as backfill
  - Economics: Low cost, sustainable at current market prices
  - Industry Employment: No special skills / education required,

35

Mining Method Options

Denison Mines

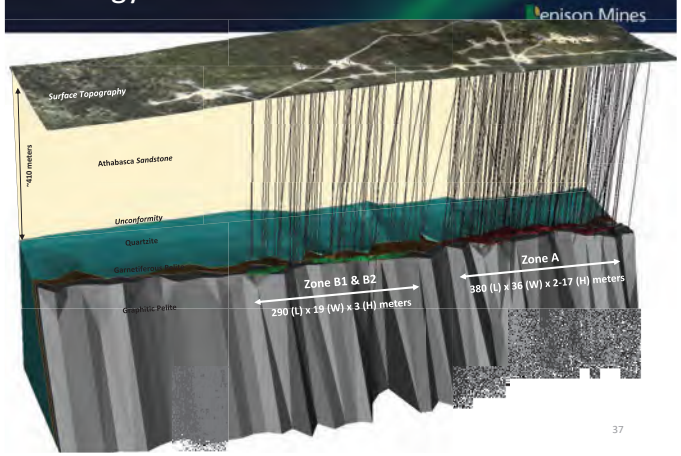
Gryphon: **Longhole Mining**

Phoenix: **Directional Drilling**

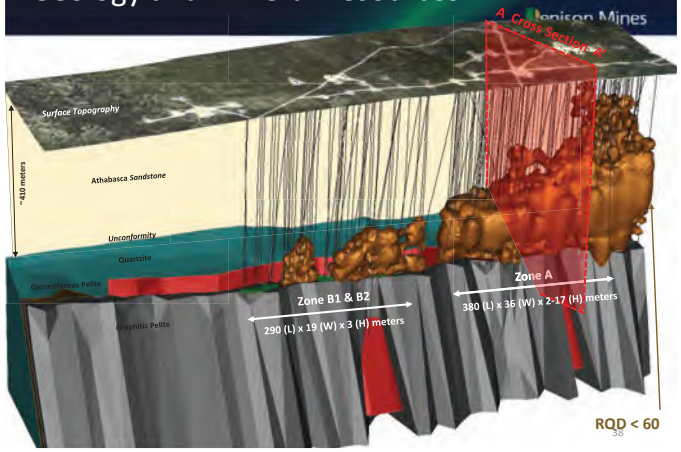
Insitu Recovery

36

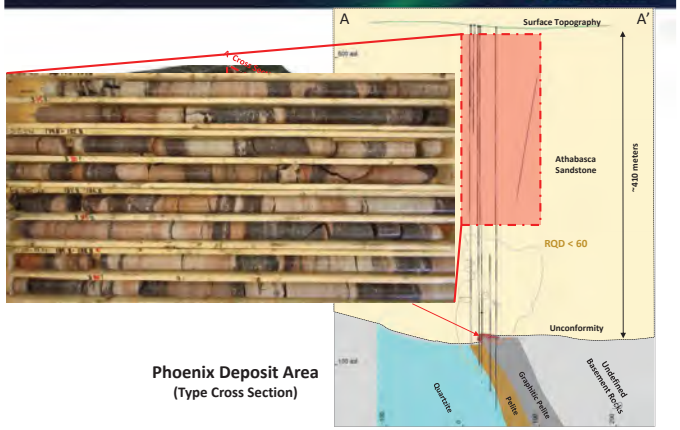
Geology and Mineral Resources



Geology and Mineral Resources

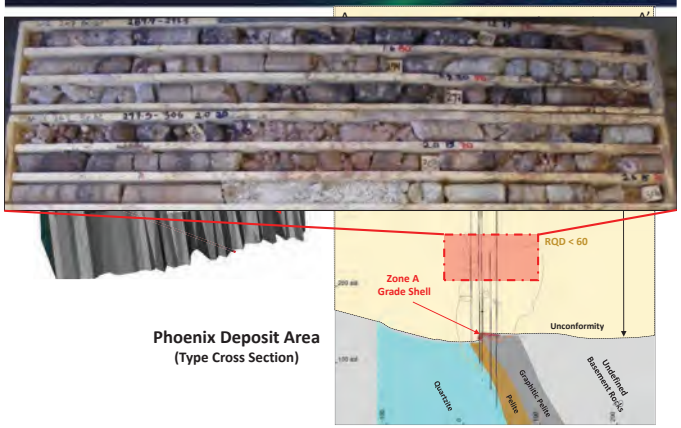


Geology and Mineral Resources



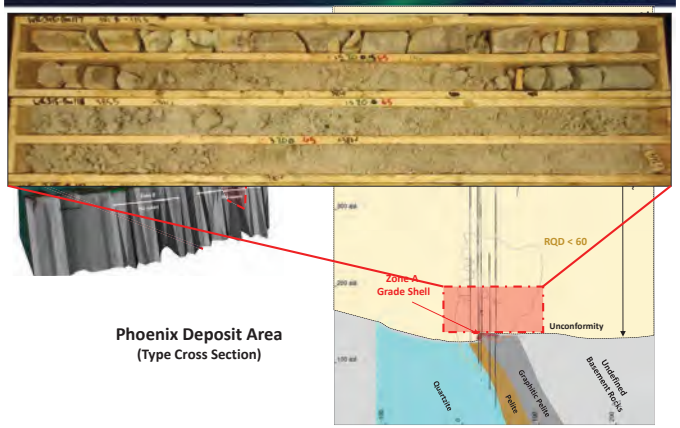
Phoenix Deposit Area
(Type Cross Section)

Geology and Mineral Resources



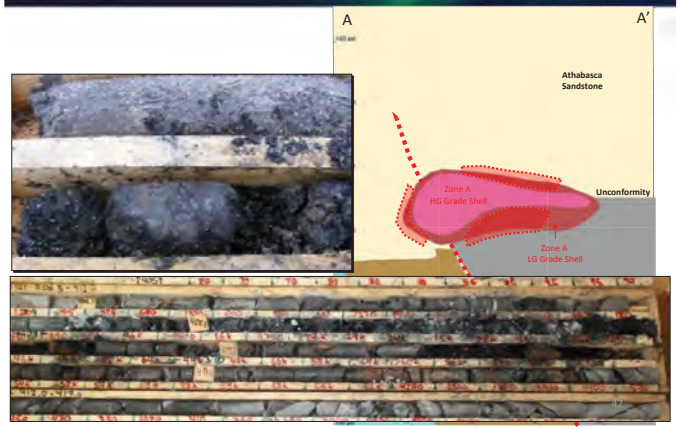
Phoenix Deposit Area
(Type Cross Section)

Geology and Mineral Resources



Phoenix Deposit Area
(Type Cross Section)

Geology and Mineral Resources



Phoenix: Mining Methods

- Due to poor ground conditions and high grade unable to use conventional mining methods
- Evaluated using Jet Boring System (i.e. Cigar Lake):
  - High Risk of technical challenges
  - Extreme Capital cost requirements
  - High operating cost
  - High degree of technical skills and education for employees
- Not profitable / sustainable in current market

Mining Method Options

Gryphon: Longhole Mining

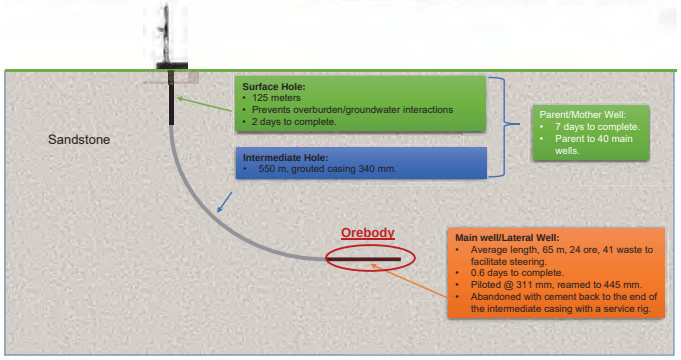
Phoenix: Directional Drilling

Insitu Recovery

Phoenix Mining: Directional Drilling

- Technology available from oil and gas industry
- Site visit conducted Nov. 2, 2017 with positive results

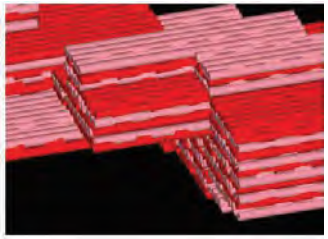
Phoenix Mining: Surface Boring

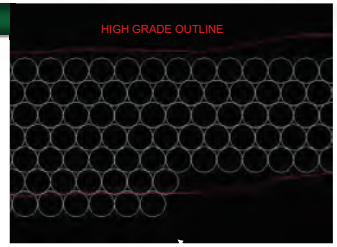


Phoenix Mining: Surface Boring - Recovery

Phoenix Honeycomb Pattern

- 90% theoretical recovery
- ~4,300 boreholes through deposit (assuming 17.5" diameter)
- 340,000 meters of drilling





- 30-40m length holes in ore
- 30-40m length in waste / low grade
- Holes backfilled after drilled

Phoenix Directional Drilling

- Considerations:
  - Safety: Well established practices, equipment and procedures established in Canada and the global industry
  - Radiation Safety: remote operation, no workers exposed to ore.
  - Environmental: Minimal surface and u/g disturbance, no water discharge,
  - Economics: Low cost, sustainable at current market prices
  - Industry Employment: No special skills / education required
- Material still needs to be trucked to McClean mill for processing
- Tailings are still produced

Mining Method Options

Gryphon: Longhole Mining

Phoenix: Directional Drilling

Insitu Recovery

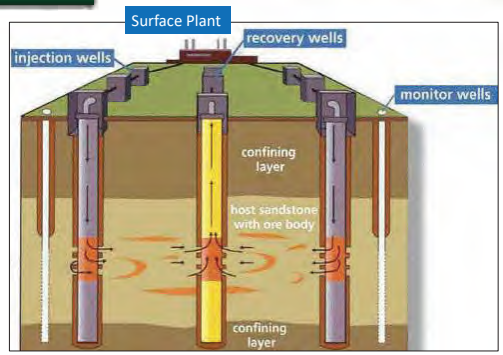
Phoenix Options - ISR

- Insitu Recovery has been utilized since the early 1960s
- Between 1961 and 2010 approximately 227, 700 t U was produced which equaled approximately 10% of historic global production
- In 2011 ISR production jumped to 46% of global production and is somewhere in this range today
- Production generally comes from 9 different jurisdictions
  - US and Australia would be considered the only two of these that host regulatory regimes similar in nature to Canada

Phoenix Mining: ISR

ISR Process Overview

1. Inject solution into the orebody via injection wells
2. Recovery solution via recovery well and pump to plant
3. In Surface Plant surface uranium is separated from solution
4. Solution is re-injected to extract more uranium
5. Restoration



Phoenix Mining: ISR

Surface Photo of Active ISR Operation

Phoenix Mining: ISR

Phoenix Mining: ISR

Phoenix Mining: ISR

Denison Mines

ISR Process Overview

- Uranium is stripped from the pregnant solution
- Peroxide or ammonia is then used to precipitate Uranium in solid
- Product is washed, dewatered and dried to form Yellowcake

Phoenix Mining: ISR

Denison Mines

- **Common Questions**
- Can we contain the mining solution during operations?
  - Monitoring / samples holes enable tracking of solution
  - Ability to increase / decrease pumping in/out of any individual hole
- Can we restore the groundwater conditions to baseline conditions following mining operations?
  - Continue treatment of water to adjust ph levels
  - Add lime or other basic element to increase ph
- At Wheeler we are currently gathering baseline information but we know the water quality now is not acceptable for use by humans or animals

Phoenix ISR

Denison Mines

- Considerations:
  - Safety: Well established practices, equipment and procedures established in the global industry
  - Radiation Safety: remote operation, no workers exposed to ore.
  - Environmental: Minimal surface and u/g disturbance
  - Environmental: No tailings production
  - Economics: Low cost, sustainable at current market prices
  - Industry Employment: No special skills / education required

Denison Mines

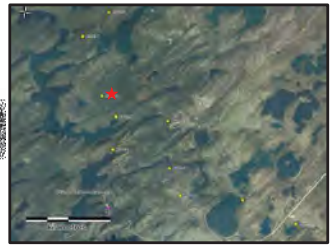
Environmental Baseline Data

EIA Update: Baseline Environment

Denison Mines

Atmospheric Radon Monitoring

- Radon detectors at 10 locations around Project Area
- Radon levels reported below <7.0 Bq/m^3
- Health Canada's radon guideline is 200 Bq/m^3



EIA Update: Baseline Environment

Denison Mines

Heritage

- Field program was completed in July 2017
  - Pedestrian reconnaissance and shovel probe/ tests
- One artifact HiNi-6 was discovered west of lake and deemed "limited interpretative value" by SK
- Clearance for project area received in Dec. 2017

EIA Update: Baseline Environment

Denison Mines

Aquatic Environment

- Aquatic Habitat
- Bathymetry
- Hydrology
- Water Quality
- Sediment Quality
- Plankton Community
- Benthic Invertebrate Community
- Fish Community and Spawning

EIA Update: Baseline Environment

Denison Mines

Aquatics: Aquatic Habitat

- Lake Depth
  - Max. 21.8 m LA-7A
  - Min. 2.7 m LA-6
- Pond Depth:
  - Max. 3.2 m PA-2
  - Min. 2.7 m PA-1

EIA Update: Baseline Environment

Denison Mines

Aquatics: Hydrology

- Water level elevations measured at 13 lakes and 2 ponds
- Stream flow measurements measured at 16 watercourses
- Continuous monitoring equipment installed at 8 locations

EIA Update: Baseline Environment

Denison Mines

Aquatics: Water Quality

- Water quality evaluated at 17 lakes and 11 ponds
- Results indicate low levels of:
  - Specific conductance
  - Dissolved metals
  - Nutrient levels (nitrate and phosphorus)
  - Suspended and dissolved solids
  - Nitrogen (ammonia)
  - Total dissolved solids
  - Radionuclide (radium -226, thorium-230, thorium-232)
- Background levels for metals (Al, Cd, Fe)
- pH range 5.7 to 7.2

64

EIA Update: Baseline Environment

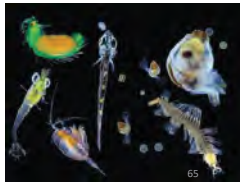
Denison Mines

Aquatics: Sediment Quality

- Comprised of silty-clays or sandy-silts
- Sediments collected from all lakes
- For parameters with sediment quality guidelines concentrations were at or below guideline value

Aquatics: Plankton Community

- Phytoplankton and Zooplankton
- Samples collected at 6 Locations
- Phytoplankton community 55 types
- Zooplankton community 32 types



65

EIA Update: Baseline Environment

Denison Mines

Aquatics: Benthic Invertebrate Community

- Collected at 10 locations
- 1,000 to 10,000 per m^2 of bottom surface area Insects most common
- Tissue collected at 9 locations and analyzed for metals and radionuclide contents
- Results were consistent throughout the study area
- Co and Ni were the most variable
- Radionuclides generally below Laboratory Detection limits

66

EIA Update: Baseline Environment

Denison Mines

Aquatics: Fish Community

- 13 fish species identified
- Spring and Fall Spawning Surveys at select locations
- Fish tissue samples collected
- Al and Se levels below guideline values
- Healthy fish community

67

EIA Update: Baseline Environment

Denison Mines

EIA Update: Baseline Environment

Denison Mines

Ground Water

- 4 groundwater monitoring wells drilled to establish background levels of:
  - Total metals
  - Dissolved metals
  - Major ions
  - Radionuclides
- Groundwater monitoring will continue

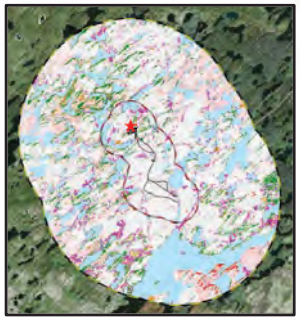
69

EIA Update: Baseline Environment

Denison Mines

Terrestrial Baseline

- ✓ Ecological land classification
- ✓ Breeding bird surveys
- ✓ Ungulate pellet counts
- ✓ Winter tracking surveys
- ✓ Aquatic furbearer shoreline surveys
- ✓ Small mammal trapping and chemistry
- ✓ Amphibian surveys
- ✓ Characterization of terrain and soil types
- ✓ Vegetation and soil chemistry
- ✓ Vegetation community



70

EIA Update: Baseline Environment

Denison Mines

Terrestrial: Ecological Land Classification

- Regional Study Area
  - 52% - jack pine blueberry/lichen
  - 21% Waterbodies
  - 13%- jack pine black spruce/feathermoss
- Local Study Area
  - 70% - jack pine/ blueberry/lichen
  - 13% Waterbodies
  - 5% jack pine black spruce/feathermoss

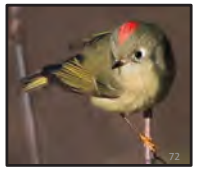
71

EIA Update: Baseline Environment

Denison Mines

Terrestrial: Breeding Bird Surveys

- Identified 36 species
- 10 most common:
  - Ruby-crowned Kinglet (51)
  - Dark-eyed Junco (40)
  - Gray Jay (34)
  - Yellow-rumped Warbler (31)
  - Swainson's Thrush (18)
  - Hermit Thrush (18)
  - Lincoln Sparrow (15)
  - Chipping Sparrow (15)
  - Fox Sparrow (15)
  - American Robin(13)
- Most preferred:
  - Jack pine – white birch/feathermoss
  - Jack pine – black spruce/feathermoss
  - Black spruce/blueberry/lichen



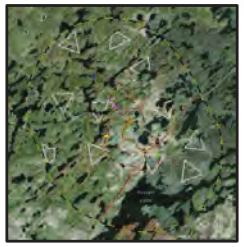
72

EIA Update: Baseline Environment

enison Mines

Terrestrial: Pellet Counts

- Pellets/ scats of 7 Species were identified
  - Grouse/ptarmigan
  - Moose
  - Woodland caribou
  - Black bear
  - Red Fox
  - Mink
  - Marten
- Woodland Caribou (2 transects)
  - Winter: Jack pine/blueberry/lichen
  - Summer: Labrador tea shrubby bog
- Moose wide occurrence in region
  - Winter: black spruce/blueberry/lichen
  - Summer: black spruce/balsam poplar/river alder swamp



73

EIA Update: Baseline Environment

enison Mines

Terrestrial: Winter Tracking

- January 25 and February 3, 2017
- 19 replicate transects completed
- Fresh snow tracks were identified
- 11 Species Identified
  - Snowshoe hare
  - Red squirrel
  - Grouse or Ptarmigan
  - Microtine
  - Marten
  - Canada Lynx
  - Ermine
  - Mink
  - Fisher
  - Moose
  - Woodland caribou

74

EIA Update: Baseline Environment

enison Mines

Terrestrial: Aerial Waterfowl and Raptor Surveys

- 20 waterfowl/raptor(s) identified
- 10 most observed:
  - Ring-necked Duck
  - Common Merganser
  - Common Loon
  - Mallard
  - White-headed Gull
  - Bald Eagle
  - Canada Goose
  - Lesser Scaup
  - Yellowlegs Spp.
  - Bufflehead

75

EIA Update: Baseline Environment

enison Mines

Terrestrial: Aquatic Furbearer Shoreline Survey

- Completed along shoreline 23 of creeks, lakes, and ponds
- 96 km total distance of shoreline surveyed
- Species identified:
  - Muskrat
  - Beaver
  - River otter

76

EIA Update: Baseline Environment

enison Mines

Terrestrial: Small Mammal Trapping and Chemistry

- Indicator species (Bioindicators)
- 26 trap lines in 17 different vegetation cover
- Tissue Analysis – Metals and Radionuclides
- Habitat Characterization
- Small Mammals Captured:
  - Red-back Vole – 92% of trap lines
  - Meadow Vole – 38% of trap lines
  - Dusky Shrew – 26% of trap lines

77

EIA Update: Baseline Environment

enison Mines

Terrestrial: Amphibian Surveys

- 61 sites surveyed
- Wood Frog identified in regional and local study area
- Boreal Chorus Frog identified in regional study area

78

EIA Update: Baseline Environment

enison Mines

Terrestrial: Vegetation and Soil Collection

- Blueberries, lichens and soil samples collected
- Samples analyzed for metals and radionuclides
- Relatively consistent across site

79

EIA Update: Baseline Environment

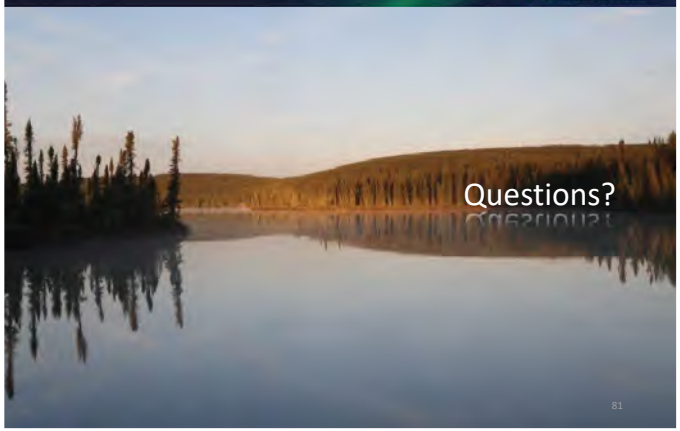
enison Mines

- Overall regional and local environment around the project area is a normal and healthy ecosystem
- Future Work:
  - Majority of baseline data collection is complete
  - Continue to monitor conditions around site
  - Gather more detailed data on field conditions as key project decisions are made (i.e. treated water discharge location)
- If project launches an Environmental Assessment, baseline data will be used to predict potential project impacts and enable avoidance & mitigation of impacts.

80

Thank You

enison Mines



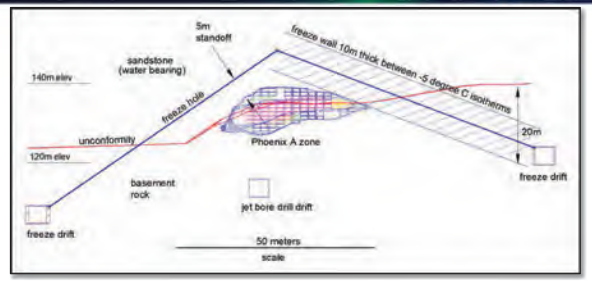
81

enison Mines

- Extra slides this point forward

Mining Method – Phoenix Options

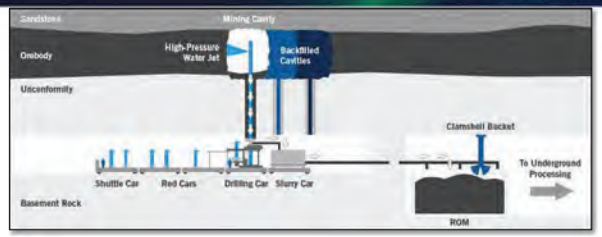
enison Mines



- **Freeze drifts excavated ~20m below unconformity in basement rock and well away from other infrastructure**
- 75m long freeze holes installed at 4m spacing along strike
- 16 months for initial freeze wall development

Mining Method – Phoenix Deposit

enison Mines

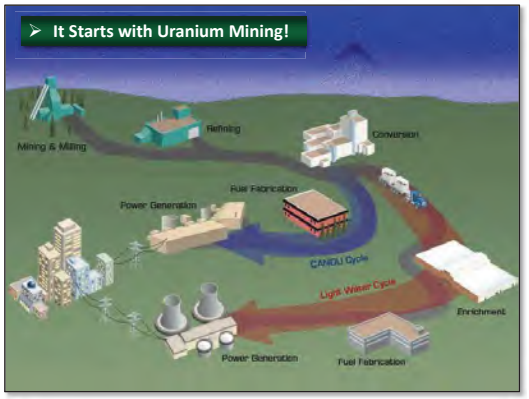


Source: Cigar Lake 2016 Technical Report

- Access drill drift in basement rock 30m below the mineralization
- Pilot hole drilled up into the deposit and a casing is installed
- High pressure rotating water jet cuts a cavity in the mineralization
- Slurry of water/broken rock flows out by gravity to receiving slurry car
- Mined out cavities are completely backfilled with concrete

Overview of the Nuclear Fuel Cycle

enison Mines



Transporting High-Grade Uranium Ore

enison Mines

Wheeler River: Long Road Ahead

enison Mines

Discharge Location Options

enison Mines

- Potential locations for treated water discharge were identified and assessed for:

1. Preliminary understanding of land uses
   - Traditional territories
   - Trails, trap lines, country food harvesting, angling
   - Cabins, camps
   - Industrial properties
2. Potential impacts to water quantity and quality
   - Avoid locations with low flows
   - Minimize increase in flows
   - Meet provincial and federal water quality guidelines
3. Potential impacts to fish and fish habitat
   - Avoid spawning habitat

Discharge Location Options *Identification*

enison Mines

- Preliminary factors:
  - Capacity
  - Watershed area
  - Connectivity
  - Distance to project

Discharge Location Options *Quantity and Quality Assessment*

enison Mines

- Preliminary factors:
  - Wheeler River historical flows (1973-2015)
  - Average flows from baseline (2016-2017)
  - Background water quality from baseline (2016-2017)
  - Estimated ranges of discharge flow and quality
  - 3 small watersheds eliminated

ROC2

Discharge Location Options
Fish and Fish Habitat Assessment

Denison Mines

- Preliminary factors:
  - Fish community, habitat, and spawning and depth surveys from baseline (2012-2014, 2016-2017)

Discharge Location Options
Preliminary Results

Denison Mines

- Preliminary results:
  - Avoid locations with low flows
  - Meet provincial and federal water quality guidelines
  - Avoid spawning habitat

Denison Mines Community Engagement
Wheeler River Project
Pinehouse, SK.
Tuesday January 16, 2018

In attendance:
Denison Mines: *Peter Longo VP Operations; Lea Willemse, Senior Environmental Scientist*
SRK Consulting: *Mark Liskowich, Principal Consultant, Environmental; Lee Christoffersen, Environmental Scientist.*
Recorder: *Gill Gracie, Aurora Communications*
Community: *About 8 community members, plus 15 Grade 11 & 12 students*

Vince Natomagan introduction:

Community member Vince Natomagan offered a preamble to orient the students to why it is important to learn about these projects. He explained what uranium is, where it is, who mines it.

Uranium is big. There are billions of dollars of uranium underground in northern Saskatchewan. Big mining companies want a piece of the action; Cameco and AREVA are the two that we know. Saskatchewan is one of the biggest producers.

Prices are really low now but the good times are coming. In two years time you guys will be talking to Pinehouse Business North about how to get into apprenticeships.

Five years ago Pinehouse signed a $200 million collaborative agreement so that if the price goes up, there's 47 million pounds of uranium waiting at Millennium, north of Key Lake, and if it's developed, Pinehouse Business North will construct all the surface buildings – abut $100 million worth of work. Who will build them – you will!

Denison Mines wants to be a big player. While prices are depressed, they are quietly laying down the foundation for the good times. They are travelling northern Saskatchewan, building relationships and signing MOUs. This is a commitment to start to talk. As part of relationship-building: the world needs energy, and uranium is required for nuclear power. 10-25 years from now you or your children will be working for these guys.

Vince encouraged the student to ask questions.

Mark Liskowich introduced himself and the team. Denison hired SRK Consulting to help with the environmental, regulatory and community engagement processes. He outlined the agenda.

Presentation: Peter Longo

Background

- Denison is a small-scale junior exploration company focused on uranium. We are 5% the size of Cameco. We were historically a mine operator from the 1950s to the 1990s, with several properties in Elliot Lake.
- We have a number of exploration properties in the Basin; the biggest is the Wheeler River property and that's why we're here today. We are a 22.5% partner in McClean Lake (operator AREVA). We would transport our ore from Wheeler River to McClean Lake for processing.
- Our environmental group, based in Elliot Lake, looks after our decommissioned sites there, treating water and maintaining the sites up to government standards. This group offers similar services to mining companies and governments for other closed sites across Canada.
- We support local communities and support AREVA's community involvement in Saskatchewan, and we like to use northern goods and services where possible. In Elliot Lake we have good relations with the Serpent River First Nation, where we have education and youth employment programs in place. Elliot Lake is a large community of 5-7000 people.

When the mines shut down in the 1990s we were one of the larger employers in town and we helped transition the city to a retirement village.

- We sold our African properties a couple of years ago. We helped them with water wells and building schools. We are happy to help where we can.

The Project

- Wheeler River is 30 km north of Key Lake. Our exploration camp has 20-30 rooms for drillers, geologists etc., and a core storage area. The rest is wilderness with some roads. We are 6 km from the McArthur River – Key Lake haul road.
- There are two deposits, Phoenix and Gryphon, 3 km apart. The resource, as of 2015, is 114 million pounds of uranium – about one quarter the size of McArthur River and a bit bigger than Rabbit Lake, which has 70 million lbs left in the ground. Gryphon is 500m below surface and will have two shafts; Phoenix is about 400m deep and will have one shaft. We are working on shaft design and data collection. We drilled a 3-¼ inch pilot hole to test the ground.
- In January we launched a prefeasibility study. Last week we started our exploration program; 45,000 metres will be drilled from now through March and from June through September.
- At Phoenix we've been looking at different mining methods. We are doing metallurgical test work and other surface work regarding the water treatment plant and what size of camp to build. Peter outlined the proposed surface facilities. There will be no tailings – they will be stored at McClean Lake.
- Capital cost will be $1.13 billion to build the mine; first production is expected in 2025-2026; construction could start in 2022-2023.
- Operational costs are expected to be $US19/lb. The current spot price is about $US20. We are building for prices 8-10 years from now, doing the basic work now so we are ready to start production.
- It's now 2018; we've done our data collection and are into the prefeasibility study. The middle of this year will be a big decision point for the company regarding whether the prefeasibility study provides the business case to keep moving forward.
- Northern capacity development: 1) The Beauval store is supplying the exploration camp. 2) We fund a driller training program, hired two last fall and there will be more. 3) We hired northerners for our baseline field studies, and 4)we financially supported the Career Days in Patuanak, and the BEAHRS environmental leadership program. We're trying to do what we can and make every dollar count in terms of education and training.
- New contracts require competitive costs and performance. They include clauses to maximize northern employment & procurement; we're also pushing to include preferential northern ownership of businesses.
- MOUs: We have given drafts to four communities, based on the four topics of environment, employment, investment and business growth. Two have signed, including Pinehouse; two are under review. It sets the stage for the next step.
- We have conducted baseline environmental studies; details later in the presentation. The baseline work establishes what's there today so that when we plan our project we can make sure we don't damage the land, and that 5-10 years after we're done it's back to where it was before or has never changed.

Questions/Comments

What is a shareholder and how do I become one?

- **P. Longo:** In order to raise money we issue ownership lots called shares; anyone can buy one for 75¢. We have about 500 million shares outstanding. The largest shareholders (the large pension funds etc.) own about10% of the company. We earn money for shareholders by

developing our assets. If you buy a share for 75¢ and the price goes up, you make money. If the price doesn't move, the share price may drop.

One person in town has 500,000 shares.

Do you plan to mine it yourself? A joint venture?

- **P. Longo:** Wheeler River is a joint venture; Cameco and JCU are minority owners; we will operate it, probably with a mix of our own employees and contractors. We could hire out expertise, but Denison's philosophy is to operate.

You must have feelers about how the price will slowly come back. Do you have legitimate sources of information?

- **P. Longo:** We can't predict the future any better than you; we do a lot of research; China is building a new nuclear reactor every quarter, so we see the demand rising based on China and India. We are very confident that in the early 2020s the price will rise.

That's the positive side. We heard that 10 years ago, and the price went down. In California they are doing away with uranium. That's not good news.

- **P. Longo:** To build a nuclear plant takes 10-15 years. We are starting to see them come on line now. China's air pollution is very bad, and they have to keep building at this pace just to decrease their carbon emissions. Some places, like Germany and the States, are changing their minds on it, and you'll always get that, but the Chinese influence is overwhelming.

You're the only company with hopeful news.

- **P. Longo:** It's a tough time to be producing today.

We rely on uranium production very heavily – when you go backward you drag the whole north with you. We will feel it in a year or so. How can that turn around in 10 months when it's been going down for seven years? I think we're looking at 2-5 years for the industry as a whole.

- **P. Longo:** We have a different perspective and we want to move forward. Optimism is still there for the early 20s.

What about Japan? They pay a lot for their energy.

- **P. Longo:** I have no insight here. Our partner utilities informally predict half the Japanese reactors will eventually restart. In the next six months they will be up to nine from 4-5 now, and the rest over the next 2-3 years. They do not see the older reactors coming back online, but see a need to build new ones, and that's a non-starter for the government right now.

Environmentally, they have to prove to us and to government, scientifically on paper, that they will not kill our fish or dirty our rivers.

What will your annual production be? How many years of construction?

- **P. Longo:** Probably 6-10 million lbs yearly. Probably 2-3 years of construction. Potentially there will be work available in 2021-22.

Mini Workshops: Mark Liskowich

1. Access road route:

- It has to be10m wide; slopes not more than 3 horizontal: 1 vertical; maximum grade 7%.
- As few stream/river crossings as possible, not close to lakes; proximity to recreational cabin.
- Three route options were identified to Phoenix (grid of options).
- A heritage study in 2016-17 indicated no heritage issues on any of the routes.

Handouts were provided; groups were asked to discuss pros and cons of each option. Two groups: Under 20, and 20 and over.

Pros & Cons, Road Alignment to Phoenix – Community Input

Option 1:

Pros

Youth Group 1

- Not discussed

Youth Group 2

- Quick travel; shorter distance
- Farther from water
- Not the closest to the cabin

Adult Group

- Not discussed

Cons

Youth Group 1

- Not discussed

Youth Group 2

- A lot of material to be moved.
- Not farthest from the cabin.

Adult Group

- Close to cabin; will scare game away
- Don't want tourist access to the area.

Option 2:

Pros

Youth Group 1

- Least dirt moved
- Less distance

Youth Group 2

- Not farthest from the highway

Adult Group

- Not discussed

Cons

Youth Group 1

- Close to the cabin

Youth Group 2

- Least amount of material

Adult Group

- Too close to the lake

Option 3:

Pros

Youth Group 1

- Not discussed

Youth Group 2

- Farthest from cabin and lake.
- Not much material to move.

Adult Group

- Preferred option
- Farthest from cabin and lake.

Cons

Youth Group 1

- Farther distance
- More disturbance

Youth Group 2

- Farthest distance

Adult Group

- Not discussed

Pros & Cons, Road Alignment Phoenix to Gryphon – Community Input

Option 1:

Pros

Youth Group 1
- Less dirt moved, less disturbance

Youth Group 2
- Less material

Adult Group
- Not discussed

Cons

Youth Group 1
- Not discussed

Youth Group 2
- Closest to water

Adult Group
- Way too close to the lake; unacceptable

Option 2:

Pros

Youth Group 1
- Not discussed

Youth Group 2
- Shorter road
- Farther from lake

Adult Group
- The only acceptable option for this stretch.

Cons

Youth Group 1
- More dirt moved, more disturbance

Youth Group 2
- Most material

Adult Group
- Not discussed

General Discussion
- The farther from the cabin and the lakes, the better
- From a contractor's perspective, the more dirt to move, the better – a long road, or more cut-and-fill.

2. Treated Water Discharge Options

- Mark outlined the methods used to reduce the number of options for locating the water treatment plant, and asked for pros and cons for each option.
- We eliminated smaller waterbodies and watersheds, and looked at eight watersheds
- Average discharge volume would be 200 m3/hour??? 600 m3 would indicate upset conditions. This eliminated three more watersheds, leaving four.
- Then we looked at fish spawning – can we discharge without harming fish?

Pros & Cons – Community Input

Pros

Youth Group 1
- LA-7 closer to the mine, so less disturbance
- LA-7 Farther from the cabin so fewer people disturbed.

- Russell Lake holds the most water

Youth Group 2

- LA-7 largest lake
- LA-7 closer to the mine
- LA-5 and LA-6 closer than LA-1 and Russell Lake
- LA-1 large
- Russell Lake large

Adult Group

- Russell Lake the best option because if something goes wrong, it all ends up in Russell Lake anyway because it's the farthest downstream.
- Russell Lake is the largest and can handle the worst upset conditions.
- More work for contractors to go into Russell Lake.
- LA-1 not discussed
- LA-7 cheapest option.

Cons

Youth Group 1

- Not discussed
- Russell Lake more impact to people and cabins
- Russell Lake concern about fish spawning grounds.

Youth Group 2

- LA-7 not discussed.
- LA-5 and LA-6 not as close as LA-7.
- LA-1 far from mine.
- Russell Lake has recreational uses.

Adult Group

- Lots of fishing and activity on this lake. Bad perception if you discharge directly into it.
- LA-1 has good fishing at the top of the lake near the inlet from LA-5.
- LA-7 not discussed

General Discussion

- Any lakes are OK except for Russell Lake because of the fishing.

The students left at this point, since the school day was over.

3. Mining Methods

Gryphon

- **Gryphon consists of stacked veins about three metres wide and 580m deep, below the** unconformity. It would be accessed by ramp (like a parking garage).
- The preferred mining method is longhole mining, like at Rabbit Lake. We drill and blast a tunnel on top and bottom of the ore, and open 3-4" diameter blast holes connecting the two levels. They are blasted; ore falls in chunks to the bottom where it is scooped, loaded, and trucked to the shaft for hoisting to surface and shipment to McClean Lake. The blast holes would be backfilled with waste rock or cemented waste rock to stabilize the ground.
- It's a proven method; we know we can do it safely from a radiation perspective. Environmentally, we only have to bring waste rock to surface; we place in in empty stopes so we minimize the material coming to surface. It's a low-cost, low-tech option and we know we can train people to do this.
- Considerations (see slide)
- Skipped to surface, not slurry pumped. Separate hoists for ore and waste.

Handouts were provided; groups were asked to discuss pros and cons. Two groups: Under 20, and 20 and over.

Questions/Comments

At McArthur River they pump ore to surface. What about at Gryphon?

- **P. Longo:** It would be skipped. McArthur skips up the low-grade material. We would have separate hoists for the ore and the waste. The grade of this ore is about 2%.

What would you use to backfill?

- **P. Longo:** We're looking at a cemented waste rock product produced when driving tunnels.

Radiation exposure is higher in longhole stoping. Raiseboring and jet boring are more protective but costs are high. There's not much for safety in stope mining; you breathe the air and the exhaust and even with ventilation workers are still at risk. Would it be regulated so you mine little bits at a time? Different ground responds differently to blasting. You don't know till you get there.

- **M. Liskowich:** You'd have to regulate the basting and make sure the ventilation is adequate.
- **P. Longo:** This is something we need to more information on. The volume of ventilation required would be significantly more than a gold mine or a base metal mine.

What about ground conditions; will you freeze before you blast? The ground won't be proven until you get down there. Do you have a backup plan?

- **P. Longo:** The water-bearing sandstone is 80-100 metres above the ore. In all the drilling and testing we've done, there's no sign of waterbearing features etc. so we're not planning on freezing in the basement rocks. We will freeze the shafts. If we can't mine safely, we won't do it. We look at it from a regional scale – when we get there we may have corners we don't know about, and we would walk away from those. There will be local issues in the ground. We may need additional support, additional shotcrete. We can't figure that out from surface.

Depending on how far you are, after every blast, ground conditions could change.

- **P. Longo:** Stope sizes will be small because the veins are only three metres wide.

Will there be one shaft for skipping and one for personnel?

- **P. Longo:** We haven't sorted that out yet. One is for fresh air, one for exhaust. One will be for hoisting; we're not sure if there will be a separate hoisting plant for men and materials or not. We're working on that now, with the help of Thyssen Mining.

Pros & Cons of Longhole Stoping – Community Input

General Discussion (Adult)

Pros

- Cost-efficient for company.

Cons

- After each blast, ground conditions change everywhere.
- Exposure to workers from blasting and radiation
- Concerns about radiation safety and ventilation.
- Concerns about size of holes in the mine
- Uncertainty about how conditions will change (don't know until we have a shaft)
- Potential to drill into a lake.

Phoenix: Directional Drilling

- This deposit is more like Cigar Lake, but smaller. There are two zones, A and B, like flat-lying pancakes sitting on the unconformity. The deposit is about 400 metres below surface, with a lot of water above in the overlying sandstone. Drill core is solid except just above the orebody, where the ground is like beach sand. It would be extremely hard to build a drift through that ground.
- The ore is 50-60% uranium, broken and clayey. Ground conditions mean conventional mining methods will not work. In our 2015 PEA we looked at the technology in use today.

Cigar Lake is the only other mine similar to this; they use jet boring but had a lot of challenges, resulting in decades of development and high capital and operating costs. Jet boring is not sustainable in the present market, and requires top-end technical skills. For this small ore body it's not profitable.

- One alternative is directional drilling, a technique that comes from oil and gas. The drilling starts vertically and turns horizontally; the 17" diameter hole would be cased all the way to the ore body so there's no way for fluids etc. to get outside the casing. We would drill through the orebody, backfill with cement then drill right beside it, creating a honeycomb cross-section pattern. We would mine 30-40m of ore per core in 4,300 boreholes.
- Considerations: See slide

Questions/Comments

Sounds very expensive. Would jet boring from surface work, like at McClean Lake?

- **P. Longo:** It's considerably cheaper than jet boring. The SABRE method (jet boring from surface) would not work at these depths. We're not comfortable with the economics or that it would even work.

Does directional drilling have anything to do with fracking? What is the impact on surface? Will it require fewer people? This illustrates how the ground can change over a short distance.

- **P. Longo:** In the SAGD operations they pressurize the ground to open up fractures. We are just drilling holes, with no pressurization. It's like diamond drilling but larger scale and we're doing it horizontally. The oilsands employ 100-150 people. We would still need our camp and offices etc. It would require no shaft or headframe; we just need a 200-metre square pad. There would be no ground control issues. It's a new idea for uranium mining.

This could mean more people come and try it.

- **P. Longo:** It's another tool in our toolbox, but only works on certain orebodies. This is a horizontal orebody; it wouldn't work at McArthur or at Gryphon because the orebodies are not horizontal; it would maybe work at Cigar.

How long does it take to drill one directional drill hole?

- **P. Longo:** Two days to complete the surface casing, seven days in total to case from surface to the ore body and half a day to a day to extract the ore and backfill. Then we would wait 24 hours for it to cure before drilling beside it. The sequencing has not yet been determined. We could do one borehole per day to day-and-a-half. Depending on production rate, we may have two rigs on the pad. 4,300 boreholes would take 11.7 years to mine.

Will you be drilling through the cement? That causes problems in the mill.

- **P. Longo:** It could happen. We would need 50-60 parent holes to get all the ore. Details to be worked out.

How many rigs?

- **P. Longo:** We have discussed one rig doing all the parent holes, and directional rigs coming in later.

How much ore will you get from each hole?

- **P. Longo:** It depends on which part of the orebody you're in. The average length of ore body is 30-40 metres. It is 400 metres long but it curves so we can't run a drill along the full length.

Pros & Cons of Directional Drilling

General Discussion

Pros

- Cheaper than jet boring
- Limited impact on surface
- No ground control issues

- Could open up new mines in the area because it's a new technology (only for horizontal orebodies).

Cons

- Sounds very expensive
- Perception that it's similar to fracking
- Not that many people hired (100 to 150)
- Need to look at timing and sequencing of drilling (need for information)
- Problems at other mines of going through cement, since it can mess up the drill. Took over a year to figure out at other mines.
- New technology, and unclear on details, like how many drills would be needed.

Phoenix: In Situ Recovery (ISR)

- Another alternative is in situ recovery (ISR), which has been used since the 1960s. In 2011 about half the world's production used this method – the US, Australia, Kazakhstan.
  It uses injection wells outside the ore body and a recovery well in the middle. We would inject solution into the injection holes and pull it out via the recovery well. The solution picks up uranium; the uranium-bearing solution goes to a small surface plant for recovery using the same reagents as are used in our mills. It's precipitated and put into drums.
- Every hole is measured, monitored and metered. They know exactly how much fluid is going in and out of each hole.
- Wheeler River is a lot deeper than current ISR operations. Water surrounding our deposits is already contaminated and not safe for wildlife, but it doesn't come to surface, so returning it to that state will not be particularly challenging.
- **Common questions: (slide)**
  - How do they contain the mining solution and prevent it from going into the environment;
  - Monitoring wells around the mining area are constantly monitored. If the solution reaches the monitoring wells you stop pumping solution into that particular area and keep pumping out.
  - How do you restore the ground water post-mining? Pump and treat. You stop injecting and pump until all the solution is out. You can also inject other safe reagents to help the remediation.
- **Considerations:**
  - We know its safe; it's been done globally although not in Canada yet. It's remote; there's minimal disturbance on surface and underground; and there's no tailings. It is processed on site with no transportation.
  - The economics are attractive
  - In other areas, all local people do the work.

Questions/Comments:

How do you get rid of tailings?

- **P. Longo:** The only thing coming to surface is fluids – just the uranium with a few impurities. The waste stays underground.

So this method is safer, more economical? I never heard of this one before.

- **L. Willemse:** Half the world is using it.
- **M. Liskowich:** It's used in potash mines in southern Saskatchewan.

What's the chemistry?

- **P. Longo:** It's an acidic solution; we have to lab test the actual formula. When we go to reclaim it, we will pump and treat but can also add lime.

Will you have someone monitoring the water? The other companies have their own people monitoring but there was talk about private monitoring companies so we get what the people want to hear.

- **M. Liskowich:** At present, each mine has its own internal monitoring program that they do monthly, weekly, daily – for example, water sampling. The data is submitted to government in monthly reports. But governments also require additional sampling. In the uranium industry you have to do a State of the Environment report every five years through an independent company to say what state that mine is in and how it differs from five years ago. Environment Canada also requires Environmental Effects Monitoring, also independent, on a three-year cycle, to see if the discharge is having an effect on the environment. Each site has to have third-party sampling and monitoring.

You guys do your presentations but sometimes that's as far as it goes. All the information is there, but nothing comes back to where it started. There's no more information after that. If there was a third party, maybe we could hear what's really happening to our waterbodies. It's always just at the beginning, to sell us on what you want to take out. Then you hear stories about two-headed fish because of the tailings. We don't get the information.

- **P. Longo:** Part of the MOU process is to try to establish what information the community wants, then work together as best we can to provide that. If that's important to the community we're happy to do that. I've worked in other communities that have demanded independent testing; I'm OK with that.

Come stand beside me and we'll drink that water; that's my test. But this water won't come to surface.

- **P. Longo:** It's undrinkable even now, before we start. It would come to surface through pipelines and be injected back underground in a closed system. We will pull out more water than we pump in, just to make sure we have containment. Anything we have to discharge would be treated first.

Is there water movement at that level?

- **P. Longo:** Very little. Based on our best estimate, half a metre to a metre every year.

We don't have enough information for further questions. In theory it looks really good.

- **M. Liskowich:** It's early stages; there's a lot to be worked out. In principle it will work, but a lot of tests have to be done. The workforce is about the same as surface boring – about 100 people. The plant is basically the SX circuit from the mill, which means a much smaller self-contained plant.

Pros & Cons of In-Situ Recovery – Community Input

General Discussion

Pros

- No mill, no tailings
- Seems safer, more economical, and better than the other options.
- In theory, this option looks really good.

Cons

- Not enough information to understand the pros and cons of this option.

General:

- Desire for independent monitoring
- Want opportunity for northerners
- No information comes back to the community.

Environmental Baseline Studies – Lea Willemse

- Since 2012 Denison has done a very extensive environmental baseline sampling campaign, especially over the past year and a half, sampling all the components of the environment surrounding the project area – air, surface water, rivers, sediments, soils, invertebrates.
- **Air:** Radon monitoring was done to establish baseline levels in 10 locations so we have a benchmark. Levels are below 7 bq/m^3, compared to Health Canada's indoor air quality limit of 200 bq/m^3.
- **Heritage:** The Saskatchewan Conservation Branch required us to complete an Historical Resources Impact Assessment. We did a field program in July 2017; archaeologists walked the proposed transportation corridors; we found one pre-contact artifact with limited interpretive value. Clearance was received in December 2017, which means we can develop around the corridors.
- **Aquatic:** We sampled 13 lakes, 2 ponds, and 16 rivers. The deepest was Krachkowsi Lake at 21.8 Metres. Lake 6 was the shallowest.
- We found the **shoreline vegetation** robust and healthy.
- **Hydrology:** Levels were measured in 13 lakes, 2 ponds, and continuous stream flows year-round in 16 watercourses; we also sampled sediments in the rivers. The water quality was evaluated in 17 lakes and 11 ponds for dissolved solids, metals, and nutrient levels. We found lakes were generally neutral or slightly acid, and it was good quality water, consistent throughout the project area.
- **Sediment:** Mostly silty clays or sandy silts. We found below guideline values of metals and radionuclides.
- **Plankton:** 55 species of phytoplankton and 32 of zooplankton – a lot of food in the water for fish and insects to eat.
- **Benthic invertebrates** (Insects, bugs, worms): 1000-10,000 per m^3 of bottom surface – again, nutrients for fish. Very low levels of metals and radionuclides.
- **13 fish species** were identified in lakes and streams; all metals were below detection or guidelines, so everything was very healthy.
- **Groundwater:** We drilled groundwater wells around the project area and tested for dissolved metals, major ions and radionuclides. This monitoring will continue throughout the project life.
- We investigated **land-based life** in a 400 sq. km area around the 48 sq. km project area.
- **Vegetation:** More than half the land area was jackpine/blueberry/lichen cover.
- We identified **36 bird species**
- **Pellet counts:** We found grouse, ptarmigan, moose, caribou, mink, marten, and also looked at what kind of vegetation was in the pellets. That gave us an indication of where the caribou, for example, were living in different parts of the year – winter around jackpine, blueberry, lichens and summer in boggy areas where it's cooler. Moose in winter prefer black spruce/blueberry/lichen because there's more cover, and in summer in swampy areas. Winter tracking covered the same areas and found 11 species including lynx that are never seen in summer.
- **Waterfowl/raptors:** Surveyed by helicopter; 20 species identified.
- **Aquatic furbearers:** Muskrat, beaver, river otters.
- **Small mammals:** An important source of food for bear, lynx, eagles, hawks; they contribute to the overall success of the larger animals.
- **Amphibians:** Surveyed at night by listening for the calls: wood frogs and boreal forest frogs were identified.
- **Vegetation and soil collection:** They surveyed blueberries, lichens and soils for metals and radionuclides, show to be consistent across the site.

- **Future work:** We did an extensive sampling program and collected a lot of data. We will further sample water quality at the discharge locations; continue to monitor conditions around the site; provide data in support of our environmental assessment. As our environmental assessment proceeds, we will have requirements for continued monitoring a part of our Environmental Effects Monitoring program, which will add to the baseline data already collected.
- If an EA is launched, the baseline data will be used to predict potential impacts.

Questions/Comments

From 1991-95 we did our major review of all the mines, for two reasons: First, what's the tipping point of the number of mines and activities versus the impact on the environment? When there were five we started getting nervous; that's when the CEM program came in. Now we're increasing again, are you building relationships with other mine sites? I'd like you to prove there's no long-range impact. Are you at the point where you need that relationship with other mine sites to make sure cumulative effects is proven to be zero rather than suggesting it will stay zero?

- **L. Willemse:** We have to prove we'll remain below guidelines and there's no cumulative effect in the 400 sq. km regional study area.

You're suggesting it's a stand-alone statement within the 400 sq. km. Who makes sure all together it's a clean statement?

- **M. Liskowich:** That's the government's responsibility. Its part of the Environmental Assessment.
- **L. Willemse:** They investigate our overall contributions to impacts.

We don't have full confidence in government. When's the tipping point where uranium mining has a stigma across the landscape? Everyone is concerned about uranium development. The mining industry carries 10% of the northern workforce and revenue stream. We still need forestry and tourism – where's the point where so much mining activity interferes with tourism development, based on general attitude? That was discussed 25 years ago; is it still being discussed, and when is that tipping point? There is no consideration in the E for the impact on other economies. Yours is a stand-alone statement for the impact of mining within a social development model. What happens when we can't have tourism in the areas you're in? I've never seen that element of a negative impact to tourism in any EA.

- **L. Willemse:** That's a socio-economic component of the EA.
- **M. Liskowich:** Its part of the overall project assessment. All activities in the area are considered as part of that assessment, and each has equal weight. A mine has the same weight as a fish camp across the lake. It will all be assessed as part of the cumulative impact to the region. The provincial Environmental Assessment Branch and CNSC play an equal role in assessment. They determine whether there's no impact, acceptable impact, or too much impact.

An example: because of the caribou in our region, trappers are not allowed roads, but mining or forestry is. At times, government makes decisions inconsistent with all economic initiatives, and they value some higher than others. We know government does not provide fair and equitable assessments for northern economic activity. We would like to have full confidence, but when you isolate a given area that's to the case. This is more of a heads-up: when you are doing Environmental Assessments, it's important to remember that this impacts on other areas. If government falls short you will not step up.

- **L. Willemse:** We do due diligence to try to mitigate or eliminate negative effects of our project. But it's government's responsibility to evaluate our submission in addition to existing operations.

- **M. Liskowich:** It's a very public process; once we start the EA process, there's ample opportunity to review the information presented. We'll be back with that information.
- **P. Longo:** We developed an MOU with Pinehouse and other communities; the next step would be an impact benefit agreement. We assess the impacts and do our best to mitigate them. Hopefully the benefits far outweigh the negative impacts.

I am fully supportive of mining; it doesn't take away from areas that fall short. Communities are still burdened with 1978 policies in a lot of areas. You could have an impact without the burden of responsibility. I'd like to see more in that relationship between mining and communities. When we're aware of something falling short, maybe we need to discuss it.

- **P. Longo:** We're happy to talk about it.

Will you share all this information?

- **P. Longo: Yes.**

ROC3

Denison Mines

Wheeler River Community Update

Community Workshop
January 16, 2018

1

AGENDA

Denison Mines

1. Denison Introduction / Refresher
2. Workshop
   A. Site Access Road Route Options
   B. Treated Water Discharge Location Options
   C. Mining Method Options
3. Environmental Baseline Data Collection Update

2

Denison – Who Are We?

Denison Mines

- **A Canadian uranium exploration & development Company**
  - Public company, but only 5% of the size of Cameco
  - A history of uranium mining, but no active mining operations
  - Several exploration properties in the eastern Athabasca Basin
  - 60% owner and the operator of the Wheeler River Project

3

Denison – Who Are We?

Denison Mines

- **A joint venture partner with Areva at McClean Lake**
  - Denison owns 22.5 % of the McClean Lake uranium deposits and the McClean Lake uranium mill (shown above) – Areva (70%) is operator
  - In our preliminary plans, Denison has assumed that the ore from Wheeler River will be processed at the McClean Lake mill

4

Denison – Who Are We?

Denison Mines

- **An operator of a Canadian environmental services business**
  - ~40 employees based in Elliot Lake, Ontario
  - Maintains Denison's closed and reclaimed mine site in Elliot Lake
  - Provides services to mining companies and governments across Canada

5

Denison – Who Are We?

Denison Mines

- **A strong supporter of our local communities**

Saskatchewan	Elliot Lake	Former African Assets
• McClean Lake community programs • Denison procurement from local vendors and personnel in northern communities	• Serpent River First Nations – employment, youth education initiative • Supported creation of a retirement lifestyle community after mining was completed	• Supported construction of schools and health offices for local villages • Drilled water wells • Leadership roles for local technical & admin staff

6

Location

Denison Mines

7

Wheeler River Today: Uranium Exploration

Denison Mines

- Exploration camp
- Drilling in winter & summer

8

Wheeler River Today

Denison Mines

- Two known uranium deposits – Gryphon + Phoenix
- Total of 114M lbs (U_3O_8)

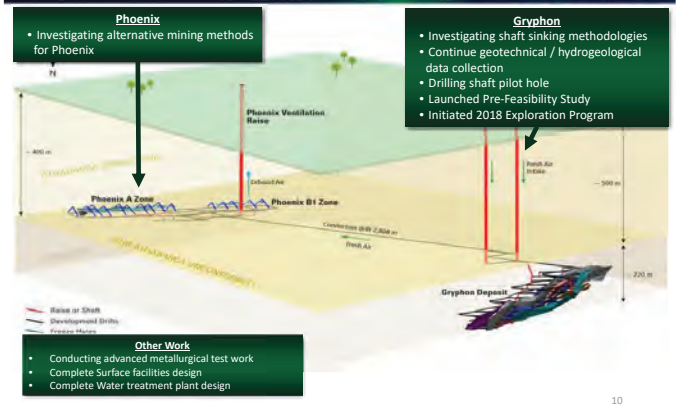
In comparison
- McArthur River: Produced ~290M lbs, Reserves 234M lbs
- Rabbit Lake: Produced ~202M lbs, Resources: ~70M lbs

9

ROC3

2017/2018 Activities

Denison Mines



Wheeler River Future

Denison Mines

- Small footprint
- Mine, Camp, Water Treatment Plant

Wheeler River: A Long Term Proposition

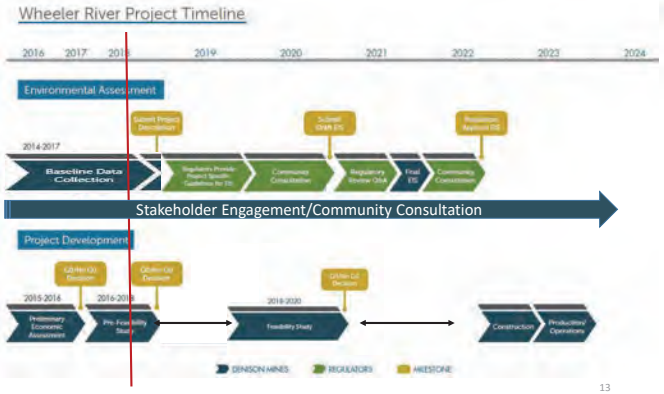
Denison Mines

- Initial and sustaining capital costs ~CAD$1.13 billion
- First uranium production projected by 2025/2026
- Operating costs expected to average US$19/pound U_3O_8
- Uranium spot price quoted at ~US$20/pound U_3O_8

- **Denison believes in the future of nuclear energy and is investing in the people and the province of Saskatchewan, despite historic low uranium prices and difficult market conditions**

Wheeler River : A Long Road Ahead

Denison Mines



Northern Capacity Development

Denison Mines

1. Denison
   - Drill camp supplied by the Beauval General Store
   - Worked with Drill Contractor to run a Drill Training Program, 2 northerners trained in fall, more to come
   - Employed northerners for baseline field program support
   - Supported career days last fall in Patuanak
   - Financially supported the IRM Program (BEAHR Program)
2. Denison Procurement: New contracts require
   - Competitive Costs & performance
   - Maximize northern employment and procurement of goods
   - Preference for northern ownership stake

Northern Capacity Development

Denison Mines

- Communities Requested Formal Agreements: Denison Issued Draft MOU (Memorandum of Understanding)
  - Formalize intent for Denison and Communities to work together in spirit of cooperation and respect
  - Sets the stage for an IBA (Impact Benefits Agreement) following the advancement of the project. Focus on 4 main areas:
    - Environmental Sustainability
    - Employment, Education and Training
    - Business Opportunities
    - Community Investment
- Draft issued to four communities/First Nations
  - Pinehouse, Ile a la Crosse, Beauval and ERFN
  - 2 signed, 2 remain under review

EIA Update: Baseline Environment

Denison Mines

Aquatics

- Hydrology ✓
- water quality ✓
- lake bathymetry ✓
- sediment quality ✓
- benthic invertebrate communities ✓
- benthic invertebrate chemistry ✓
- fish community ✓
- fish tissue chemistry ✓

EIA Update: Baseline Environment

Denison Mines

Terrestrial

- ecological land classification ✓
- breeding bird surveys ✓
- ungulate pellet counts ✓
- winter tracking surveys ✓
- aquatic furbearer shoreline surveys ✓
- small mammal trapping & chemistry ✓
- amphibian surveys ✓
- characterization of terrain and soil types ✓
- vegetation and soil chemistry ✓
- vegetation community ✓

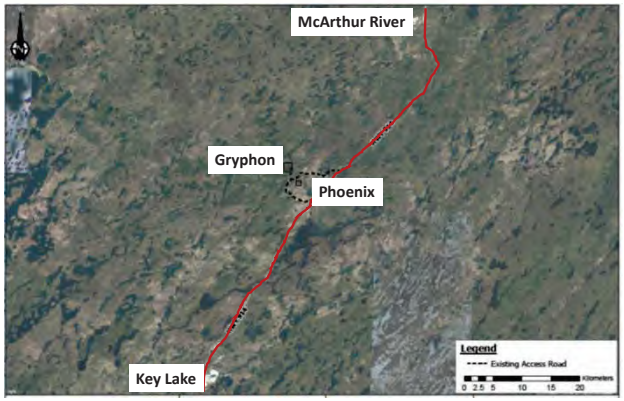
Heritage

- heritage resources assessment ✓

Denison Mines

Wheeler River Road Access Alignment

enison Mines



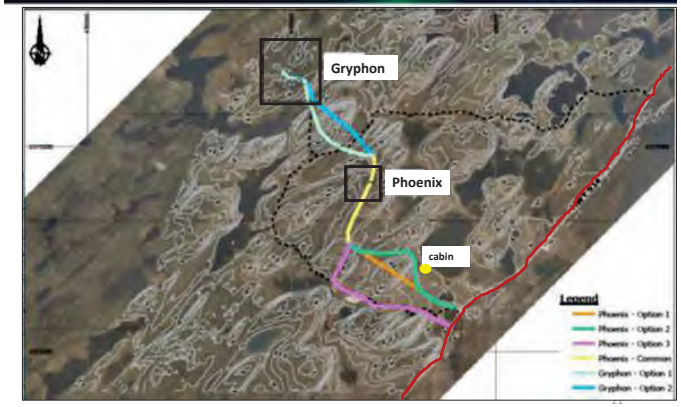
Wheeler River Road Access Alignment

enison Mines

- Constraints
  - 10 m wide
  - Slopes of cuts must be 3H:1V
  - Grade must not exceed 7%
- Considerations
  - Stream and river crossings, how many, how big
  - Proximity to lakes
  - Proximity to Cabin

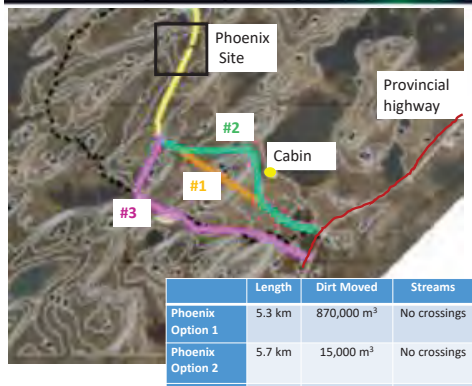
Wheeler River Road Access Alignment

enison Mines



Wheeler River Road Access Alignment

enison Mines



	Length	Dirt Moved	Streams	Distance to Water	Cabin
Phoenix Option 1	5.3 km	870,000 m³	No crossings	200 m to lake	500 m
Phoenix Option 2	5.7 km	15,000 m³	No crossings	140 m to lake	250 m
Phoenix Option 3	6.4 km	20,000 m³	No crossings	200 m to lake	1000 m

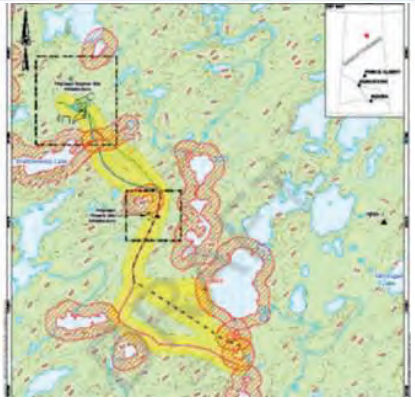
Wheeler River Road Access Alignment

enison Mines

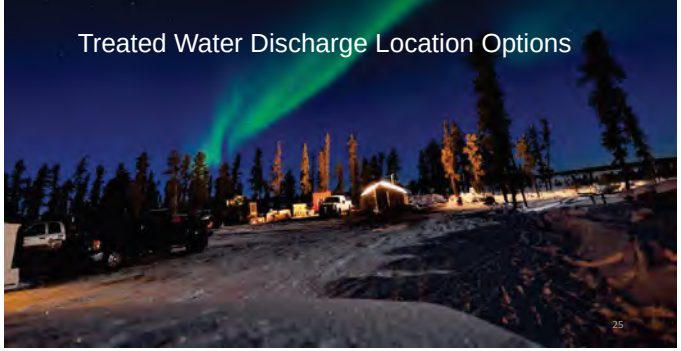
	Length Km	Dirt Moved	Streams	Distance To Water
Gryphon Option 1	3.3	265,000 m³	1 crossing (existing bridge)	25 m
Gryphon Option 2	3.1	1,000,000 m³	1 crossing (existing bridge)	200 m

Wheeler River Road Access Alignment

enison Mines



enison Mines



Discharge Location Options

enison Mines

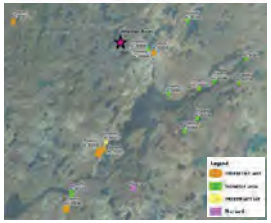
- Potential locations for treated water discharge were identified and assessed for:

1. Preliminary understanding of land uses
   - Traditional territories
   - Trails, trap lines, country food harvesting, angling
   - Cabins, camps
   - Industrial properties
2. Potential impacts to water quantity and quality
   - Avoid locations with low flows
   - Minimize increase in flows
   - Meet provincial and federal water quality guidelines
3. Potential impacts to fish and fish habitat
   - Avoid spawning habitat

Discharge Location Options
Traditional Knowledge and Land Use

enison Mines

- Preliminary understanding of land uses from:
  - ERFN traditional territories map
  - Land disposition map
  - Observations during baseline (2016-2017)



Discharge Location Options
Identification

Denison Mines

1. Preliminary factors:
   - Capacity (size of lake)
   - Watershed area (drainage)
2. Fish Spawning Grounds
   - Avoid
3. Flow Capacity
   - Can't be more than 50% treated

Discharge Location Options
Preliminary Results

Denison Mines

- LA-7, LA-6, LA-5, LA-1 and Russel Lake
  - Are environmentally safe to discharge into
  - Meet provincial and federal water quality guidelines
  - Avoid spawning habitat
- Community Considerations:
  - Cabins & fishing on Russell lake
  - Length of pipeline and disturbance to land
  - Other?

29

Denison Mines

Mining Method Options

30

Mining Method Options

Denison Mines

Gryphon: **Longhole Mining**

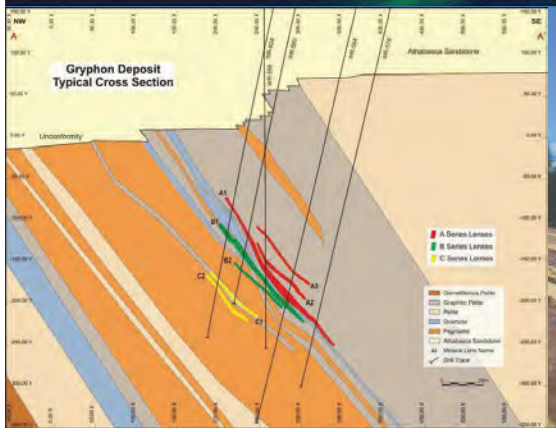
Phoenix: **Directional Drilling**

Insitu Recovery

31

Gryphon - Geology

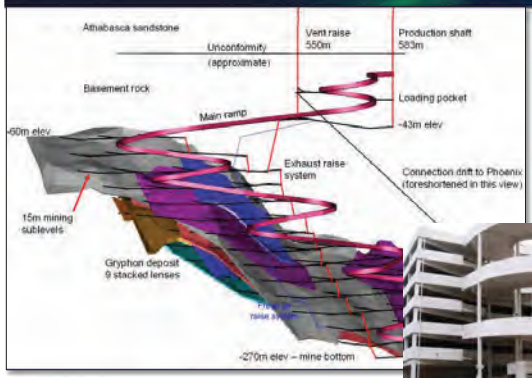
Denison Mines



32

Mining Method – Gryphon Deposit

Denison Mines



Gryphon Longhole Mining Method

Denison Mines

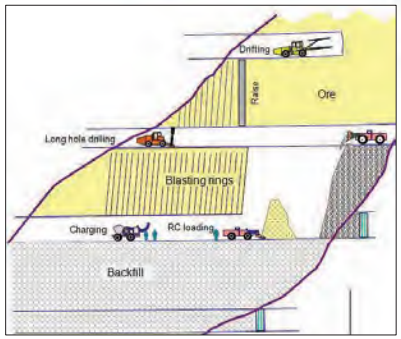
Step 1: Develop (drift) tunnels above and below the ore

Step 2: Drill holes between the two tunnels

Step 3: Load holes with explosives, blasting the ore

Step 4: Excavate (muck) out the ore

Step 5: Backfill opening



34

Gryphon: Longhole Mining Methods

Denison Mines

- Considerations:
  - Safety: Well established practices, equipment and procedures throughout Canada and the global mining industry
  - Radiation Safety: Proven safe, CNSN approved
  - Environmental: Minimizes waste rock on surface – can be used as backfill
  - Economics: Low cost, sustainable at current market prices
  - Industry Employment: No special skills / education required,

35

Mining Method Options

Denison Mines

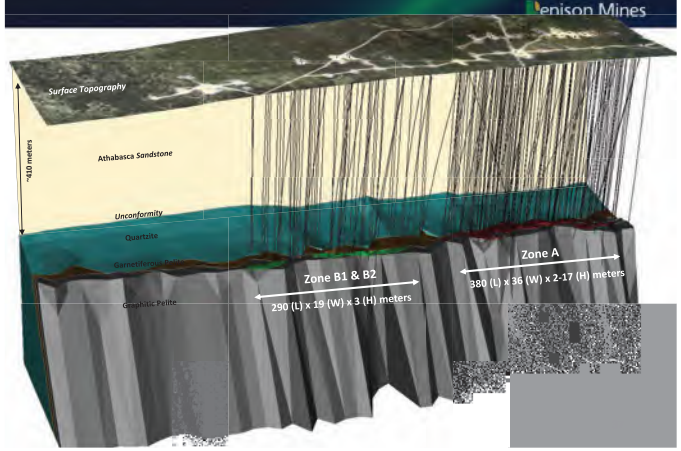
Gryphon: **Longhole Mining**

Phoenix: **Directional Drilling**

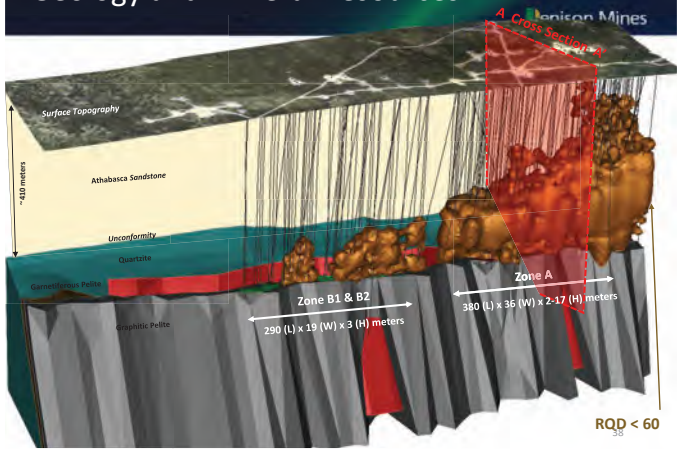
Insitu Recovery

36

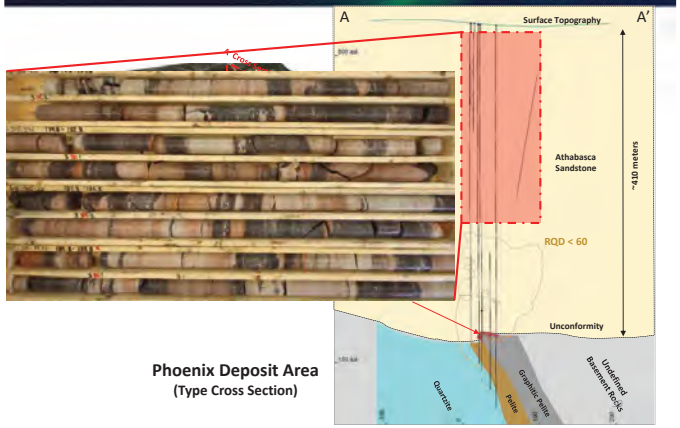
Geology and Mineral Resources



Geology and Mineral Resources

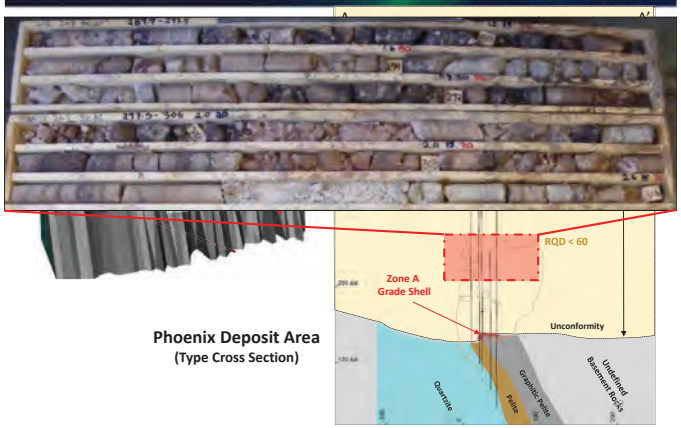


Geology and Mineral Resources



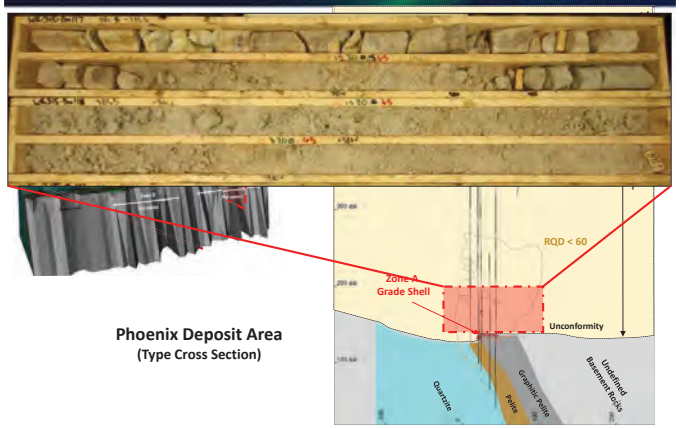
Phoenix Deposit Area
(Type Cross Section)

Geology and Mineral Resources



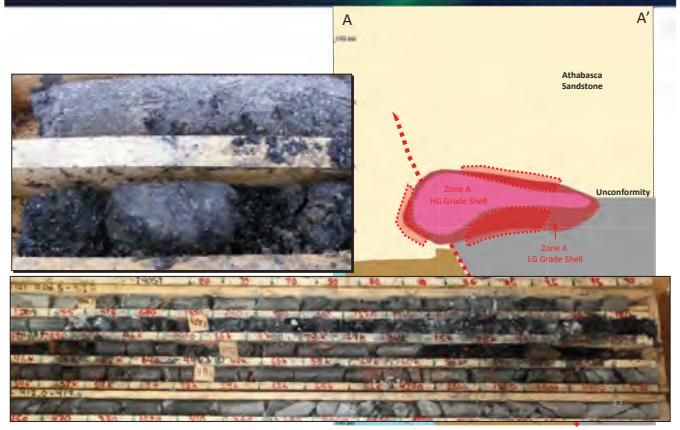
Phoenix Deposit Area
(Type Cross Section)

Geology and Mineral Resources



Phoenix Deposit Area
(Type Cross Section)

Geology and Mineral Resources



Phoenix: Mining Methods

- Due to poor ground conditions and high grade unable to use conventional mining methods
- Evaluated using Jet Boring System (i.e. Cigar Lake):
  - High Risk of technical challenges
  - Extreme Capital cost requirements
  - High operating cost
  - High degree of technical skills and education for employees
- Not profitable / sustainable in current market

Mining Method Options

Gryphon: Longhole Mining

Phoenix: Directional Drilling

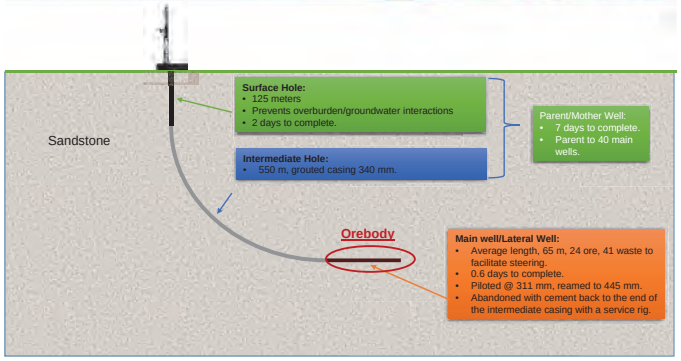
Insitu Recovery

Phoenix Mining: Directional Drilling

- Technology available from oil and gas industry
- Site visit conducted Nov. 2, 2017 with positive results

Phoenix Mining: Surface Boring

Denison Mines

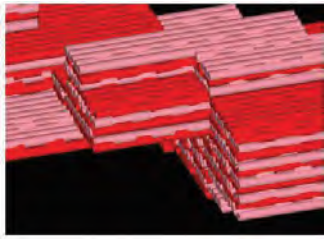


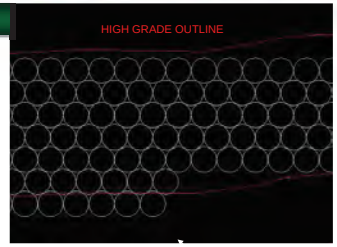
Phoenix Mining: Surface Boring - Recovery

Denison Mines

Phoenix Honeycomb Pattern

- 90% theoretical recovery
- ~4,300 boreholes through deposit (assuming 17.5" diameter)
- 340,000 meters of drilling





- 30-40m length holes in ore
- 30-40m length in waste / low grade
- Holes backfilled after drilled

Phoenix Directional Drilling

Denison Mines

- Considerations:
  - Safety: Well established practices, equipment and procedures established in Canada and the global industry
  - Radiation Safety: remote operation, no workers exposed to ore.
  - Environmental: Minimal surface and u/g disturbance, no water discharge,
  - Economics: Low cost, sustainable at current market prices
  - Industry Employment: No special skills / education required
- Material still needs to be trucked to McClean mill for processing
- Tailings are still produced

Mining Method Options

Denison Mines

Gryphon: **Longhole Mining**

Phoenix: **Directional Drilling**

Insitu Recovery

Phoenix Options - ISR

Denison Mines

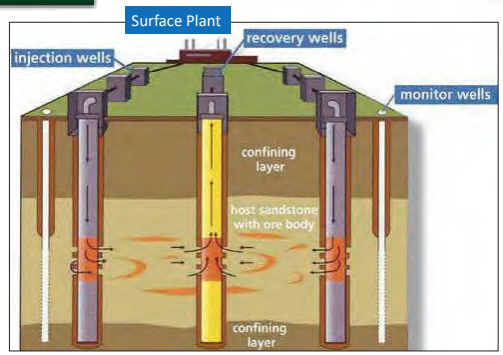
- Insitu Recovery has been utilized since the early 1960s
- Between 1961 and 2010 approximately 227, 700 t U was produced which equaled approximately 10% of historic global production
- In 2011 ISR production jumped to 46% of global production and is somewhere in this range today
- Production generally comes from 9 different jurisdictions
  - US and Australia would be considered the only two of these that host regulatory regimes similar in nature to Canada

Phoenix Mining: ISR

Denison Mines

ISR Process Overview

1. Inject solution into the orebody via injection wells
2. Recovery solution via recovery well and pump to plant
3. In Surface Plant surface uranium is separated from solution
4. Solution is re-injected to extract more uranium
5. Restoration



Phoenix Mining: ISR

Denison Mines

Surface Photo of Active ISR Operation

Phoenix Mining: ISR

Denison Mines

Phoenix Mining: ISR

Denison Mines

Phoenix Mining: ISR

Denison Mines

ISR Process Overview

- Uranium is stripped from the pregnant solution
- Peroxide or ammonia is then used to precipitate Uranium in solid
- Product is washed, dewatered and dried to form Yellowcake

Phoenix Mining: ISR

Denison Mines

- **Common Questions**
- Can we contain the mining solution during operations?
  - Monitoring / samples holes enable tracking of solution
  - Ability to increase / decrease pumping in/out of any individual hole
- Can we restore the groundwater conditions to baseline conditions following mining operations?
  - Continue treatment of water to adjust ph levels
  - Add lime or other basic element to increase ph
- At Wheeler we are currently gathering baseline information but we know the water quality now is not acceptable for use by humans or animals

Phoenix ISR

Denison Mines

- Considerations:
  - Safety: Well established practices, equipment and procedures established in the global industry
  - Radiation Safety: remote operation, no workers exposed to ore.
  - Environmental: Minimal surface and u/g disturbance
  - Environmental: No tailings production
  - Economics: Low cost, sustainable at current market prices
  - Industry Employment: No special skills / education required

Denison Mines

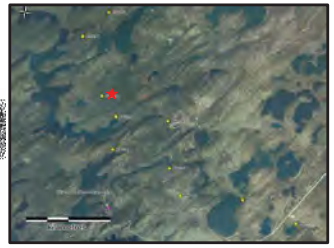
Environmental Baseline Data

EIA Update: Baseline Environment

Denison Mines

Atmospheric Radon Monitoring

- Radon detectors at 10 locations around Project Area
- Radon levels reported below <7.0 Bq/m^3
- Health Canada's radon guideline is 200 Bq/m^3



EIA Update: Baseline Environment

Denison Mines

Heritage

- Field program was completed in July 2017
  - Pedestrian reconnaissance and shovel probe/ tests
- One artifact HiNi-6 was discovered west of lake and deemed "limited interpretative value" by SK
- Clearance for project area received in Dec. 2017

EIA Update: Baseline Environment

Denison Mines

Aquatic Environment

- Aquatic Habitat
- Bathymetry
- Hydrology
- Water Quality
- Sediment Quality
- Plankton Community
- Benthic Invertebrate Community
- Fish Community and Spawning

EIA Update: Baseline Environment

Denison Mines

Aquatics: Aquatic Habitat

- Lake Depth
  - Max. 21.8 m LA-7A
  - Min. 2.7 m LA-6
- Pond Depth:
  - Max. 3.2 m PA-2
  - Min. 2.7 m PA-1

EIA Update: Baseline Environment

Denison Mines

Aquatics: Hydrology

- Water level elevations measured at 13 lakes and 2 ponds
- Stream flow measurements measured at 16 watercourses
- Continuous monitoring equipment installed at 8 locations

EIA Update: Baseline Environment

Denison Mines

Aquatics: Water Quality

- Water quality evaluated at 17 lakes and 11 ponds
- Results indicate low levels of:
  - Specific conductance
  - Dissolved metals
  - Nutrient levels (nitrate and phosphorus)
  - Suspended and dissolved solids
  - Nitrogen (ammonia)
  - Total dissolved solids
  - Radionuclide (radium -226, thorium-230, thorium-232)
- Background levels for metals (Al, Cd, Fe)
- pH range 5.7 to 7.2

EIA Update: Baseline Environment

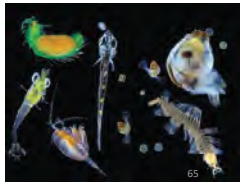
Denison Mines

Aquatics: Sediment Quality

- Comprised of silty-clays or sandy-silts
- Sediments collected from all lakes
- For parameters with sediment quality guidelines concentrations were at or below guideline value

Aquatics: Plankton Community

- Phytoplankton and Zooplankton
- Samples collected at 6 Locations
- Phytoplankton community 55 types
- Zooplankton community 32 types



EIA Update: Baseline Environment

Denison Mines

Aquatics: Benthic Invertebrate Community

- Collected at 10 locations
- 1,000 to 10,000 per m^2 of bottom surface area Insects most common
- Tissue collected at 9 locations and analyzed for metals and radionuclide contents
- Results were consistent throughout the study area
- Co and Ni were the most variable
- Radionuclides generally below Laboratory Detection limits

EIA Update: Baseline Environment

Denison Mines

Aquatics: Fish Community

- 13 fish species identified
- Spring and Fall Spawning Surveys at select locations
- Fish tissue samples collected
- Al and Se levels below guideline values
- Healthy fish community

EIA Update: Baseline Environment

Denison Mines

EIA Update: Baseline Environment

Denison Mines

Ground Water

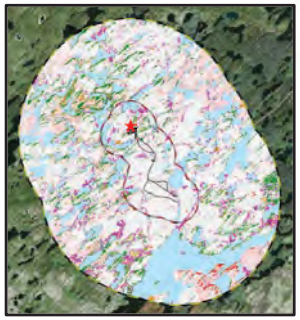
- 4 groundwater monitoring wells drilled to establish background levels of:
  - Total metals
  - Dissolved metals
  - Major ions
  - Radionuclides
- Groundwater monitoring will continue

EIA Update: Baseline Environment

Denison Mines

Terrestrial Baseline

- ✓ Ecological land classification
- ✓ Breeding bird surveys
- ✓ Ungulate pellet counts
- ✓ Winter tracking surveys
- ✓ Aquatic furbearer shoreline surveys
- ✓ Small mammal trapping and chemistry
- ✓ Amphibian surveys
- ✓ Characterization of terrain and soil types
- ✓ Vegetation and soil chemistry
- ✓ Vegetation community



EIA Update: Baseline Environment

Denison Mines

Terrestrial: Ecological Land Classification

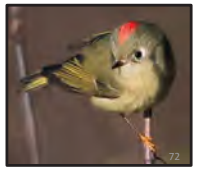
- Regional Study Area
  - 52% - jack pine blueberry/lichen
  - 21% Waterbodies
  - 13%- jack pine black spruce/feathermoss
- Local Study Area
  - 70% - jack pine/ blueberry/lichen
  - 13% Waterbodies
  - 5% jack pine black spruce/feathermoss

EIA Update: Baseline Environment

Denison Mines

Terrestrial: Breeding Bird Surveys

- Identified 36 species
- 10 most common:
  - Ruby-crowned Kinglet (51)
  - Dark-eyed Junco (40)
  - Gray Jay (34)
  - Yellow-rumped Warbler (31)
  - Swainson's Thrush (18)
  - Hermit Thrush (18)
  - Lincoln Sparrow (15)
  - Chipping Sparrow (15)
  - Fox Sparrow (15)
  - American Robin(13)
- Most preferred:
  - Jack pine – white birch/feathermoss
  - Jack pine – black spruce/feathermoss
  - Black spruce/blueberry/lichen

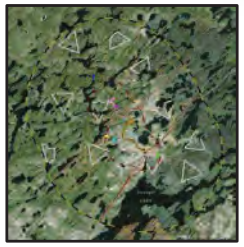


EIA Update: Baseline Environment

Denison Mines

Terrestrial: Pellet Counts

- Pellets/ scats of 7 Species were identified
  - Grouse/ptarmigan
  - Moose
  - Woodland caribou
  - Black bear
  - Red Fox
  - Mink
  - Marten
- Woodland Caribou (2 transects)
  - Winter: Jack pine/blueberry/lichen
  - Summer: Labrador tea shrubby bog
- Moose wide occurrence in region
  - Winter: black spruce/blueberry/lichen
  - Summer: black spruce/balsam poplar/river alder swamp



EIA Update: Baseline Environment

Denison Mines

Terrestrial: Winter Tracking

- January 25 and February 3, 2017
- 19 replicate transects completed
- Fresh snow tracks were identified
- 11 Species Identified
  - Snowshoe hare
  - Red squirrel
  - Grouse or Ptarmigan
  - Microtine
  - Marten
  - Canada Lynx
  - Ermine
  - Mink
  - Fisher
  - Moose
  - Woodland caribou

EIA Update: Baseline Environment

Denison Mines

Terrestrial: Aerial Waterfowl and Raptor Surveys

- 20 waterfowl/raptor(s) identified
- 10 most observed:
  - Ring-necked Duck
  - Common Merganser
  - Common Loon
  - Mallard
  - White-headed Gull
  - Bald Eagle
  - Canada Goose
  - Lesser Scaup
  - Yellowlegs Spp.
  - Bufflehead

EIA Update: Baseline Environment

Denison Mines

Terrestrial: Aquatic Furbearer Shoreline Survey

- Completed along shoreline 23 of creeks, lakes, and ponds
- 96 km total distance of shoreline surveyed
- Species identified:
  - Muskrat
  - Beaver
  - River otter

EIA Update: Baseline Environment

Denison Mines

Terrestrial: Small Mammal Trapping and Chemistry

- Indicator species (Bioindicators)
- 26 trap lines in 17 different vegetation cover
- Tissue Analysis – Metals and Radionuclides
- Habitat Characterization
- Small Mammals Captured:
  - Red-back Vole – 92% of trap lines
  - Meadow Vole – 38% of trap lines
  - Dusky Shrew – 26% of trap lines

EIA Update: Baseline Environment

Denison Mines

Terrestrial: Amphibian Surveys

- 61 sites surveyed
- Wood Frog identified in regional and local study area
- Boreal Chorus Frog identified in regional study area

EIA Update: Baseline Environment

Denison Mines

Terrestrial: Vegetation and Soil Collection

- Blueberries, lichens and soil samples collected
- Samples analyzed for metals and radionuclides
- Relatively consistent across site

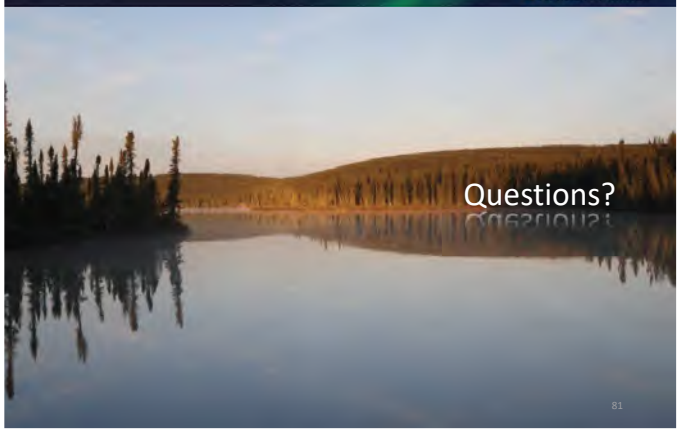
EIA Update: Baseline Environment

Denison Mines

- Overall regional and local environment around the project area is a normal and healthy ecosystem
- Future Work:
  - Majority of baseline data collection is complete
  - Continue to monitor conditions around site
  - Gather more detailed data on field conditions as key project decisions are made (i.e. treated water discharge location)
- If project launches an Environmental Assessment, baseline data will be used to predict potential project impacts and enable avoidance & mitigation of impacts.

Thank You

Denison Mines

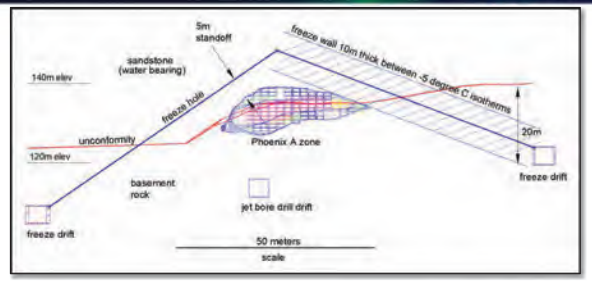


enison Mines

- Extra slides this point forward

Mining Method – Phoenix Options

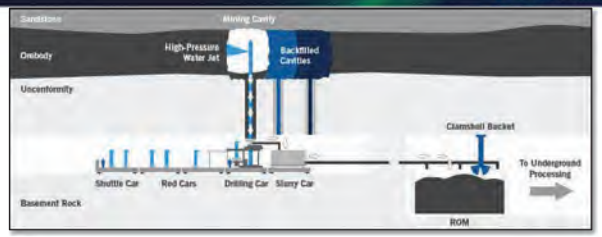
enison Mines



- **Freeze drifts excavated ~20m below unconformity in basement rock and well away from other infrastructure**
- 75m long freeze holes installed at 4m spacing along strike
- 16 months for initial freeze wall development

Mining Method – Phoenix Deposit

enison Mines

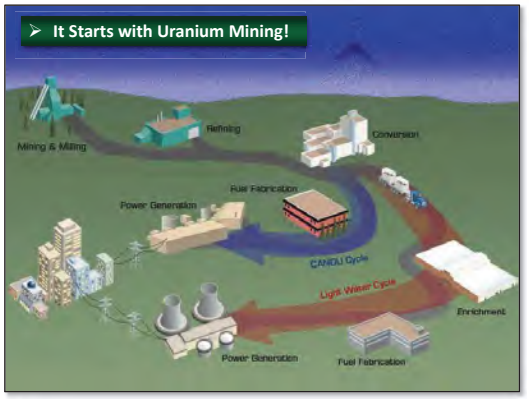


Source: Cigar Lake 2016 Technical Report

- Access drill drift in basement rock 30m below the mineralization
- Pilot hole drilled up into the deposit and a casing is installed
- High pressure rotating water jet cuts a cavity in the mineralization
- Slurry of water/broken rock flows out by gravity to receiving slurry car
- Mined out cavities are completely backfilled with concrete

Overview of the Nuclear Fuel Cycle

enison Mines



Transporting High-Grade Uranium Ore

enison Mines

Wheeler River: Long Road Ahead

enison Mines

Discharge Location Options

enison Mines

- Potential locations for treated water discharge were identified and assessed for:

1. Preliminary understanding of land uses
   - Traditional territories
   - Trails, trap lines, country food harvesting, angling
   - Cabins, camps
   - Industrial properties
2. Potential impacts to water quantity and quality
   - Avoid locations with low flows
   - Minimize increase in flows
   - Meet provincial and federal water quality guidelines
3. Potential impacts to fish and fish habitat
   - Avoid spawning habitat

Discharge Location Options *Identification*

enison Mines

- Preliminary factors:
  - Capacity
  - Watershed area
  - Connectivity
  - Distance to project

Discharge Location Options *Quantity and Quality Assessment*

enison Mines

- Preliminary factors:
  - Wheeler River historical flows (1973-2015)
  - Average flows from baseline (2016-2017)
  - Background water quality from baseline (2016-2017)
  - Estimated ranges of discharge flow and quality
  - 3 small watersheds eliminated

ROC3

Discharge Location Options
Fish and Fish Habitat Assessment

Denison Mines

- Preliminary factors:
  - Fish community, habitat, and spawning and depth surveys from baseline (2012-2014, 2016-2017)

Discharge Location Options
Preliminary Results

Denison Mines

- Preliminary results:
  - Avoid locations with low flows
  - Meet provincial and federal water quality guidelines
  - Avoid spawning habitat

Denison Mines Community Engagement
Wheeler River Project
Ile a la Crosse
Wednesday, January 17, 2018

In attendance:

Denison Mines: *Peter Longo, VP Operations; Lea Willemse, Senior Environmental Scientist, Sudbury.*
SRK Consulting: *Mark Liskowich, Principal Consultant, Environmental; Lee Christoffersen, Environmental Scientist, Vancouver.*
Recorder: *Gill Gracie, Aurora Communications Ltd.*
Community: *26 students, 24 adults*

Councillor Gerald Roy introduced the session, saying Denison has approached the municipality and the Métis Local to sign an MOU to work together collaboratively.

Mark Liskowich introduced himself and the team, and outlined the agenda for the day.

Presentation: Peter Longo

- Thanks for the welcome.
- Denison is an exploration and development company, still in the exploration stage. We had historical operations in Ontario from the 1950s-1990s, and have a variety of exploration properties throughout the Athabasca basin. Today we are talking about our flagship Wheeler River property.
- We are about 5% the size of Cameco. We have no operations or production. We are a minority partner (22.5%) in McClean Lake, and we plan to ship our Wheeler River ore to McClean Lake for processing.
- Our environmental services team of about 40 maintains our former Elliot Lake sites, now completely revegetated, and offers environmental services to governments and mining companies across Canada.
- In terms of community engagement and support, we're a small company but make each dollar count. In Saskatchewan we support AREVA's community initiatives. We do our best to hire people and procure goods from the north. In Elliot Lake we have a very good relationship with the Serpent River First Nation; we support employment, youth initiatives, and education. We were a key contributor in helping transform the community into a retirement village. We have sold our African properties, but while there we drilled water wells and supported schools for the education of youth.
- Location: 30 km north of Key Lake, six km west of the Key Lake-McArthur River haul road and the provincial power line. We now have a 20-30-person exploration camp and core storage area. It will cost $1 billion to turn it into a mine site.
- We have two deposits, Phoenix and Gryphon, about three km apart, totalling about 114 million pounds of uranium. McArthur River has already produced 300 million pounds and has 200 million pounds+ to go is it is 5x the size of our project. We are a little bigger than Rabbit Lake, which has about 70 million pounds left in the ground.
- Gryphon will have two shafts, with a lot of underground development. Phoenix would have one shaft. A pilot hole was drilled last year; we have done engineering studies around different mining methods and shaft sinking technologies, and looked at water treatment plant designs. We have done a lot of engineering work in the last couple of years.

- There would be no mill or tailings facility on site.
- We have done a lot of work on aquatic aspects, water quality and flows around the site, as well as the animals and fish. Environmentally, the intent is to understand what's there now before we build the mine so we can understand the potential impacts and avoid or mitigate them, and prove we are not harming the land and wildlife long-term.

Questions/Comments

As a representative of the Métis Nation I have to make sure this is engagement, not duty to consult.

- **M. Liskowich:** This is an informational meeting and part of Denison's community stakeholder engagement.

As a First Nations person, I heard about the MOU with the village and the Métis Local. There are a lot of First Nations people that live here as well who are not part of the MOU because they're not organizing.

- **P. Longo:** We will touch on the MOU later.

When you reclaim a site, you have experience from other companies; how much stuff will you bury? What's left behind?

- **P. Longo:** Every site is different. At a mill site, not much is left behind because there's no place to bury it. It would be hauled to landfills offsite; some might go into onsite landfills if available.
- **M. Liskowich:** It varies. In uranium mining, because it's radioactive, most stays at site. It's difficult to decontaminate a mill, so usually a landfill is constructed at site. CNSC allows very little to leave the site.

So it's only cosmetic.

- **M. Liskowich:** It changes from mine to mine, generation to generation, decade to decade. The the stuff buried at Cluff is less than what will be buried next year at Gunnar, for example. There are different levels of landfill and material. If we're trying to protect strictly from radiation, we create a cover that's thick enough that the radiation can't get through it. If it's hazardous material, you need a cover that keeps water out. It is handled differently depending on potential risk.

As a mining company, what regulations and policies do you follow under Section 35 of the Canadian Constitution? As a Métis rep I have never been informed about this project. I'm not sure where the MOU came from – it did not come to me as the director of the region. I'm confused as to what's happening. We are currently working on land claims. We are working on legal representation for our technical team, and we have to have our legal rep here when we hold community workshops; we have to follow government regulations when we come to meetings.

- **P. Longo:** We support whatever laws governments put in place. As far as discussions with communities, we're happy to do whatever works for the community.

Students don't understand "MOU"; we might have to explain it.

There's a draft of the MOU on the Métis Local agenda at 5 pm today – the meeting is open to the community. MOU means Memorandum of Understanding that we'll work together to build a partnership, nothing concrete, not an agreement or a treaty.

A MOU is a working living document with all parties.

Through the years I have learned that companies have offered us jobs. One semi of yellowcake was worth $4 million at one point. Jobs are great, training opportunities are great, but they only take you only so far. Prices have dropped but Cameco is not suffering as much as our communities will suffer with the 10-month layoff coming up, which may go longer. Would Denison Mines be open to share ownership on this project?

- **P. Longo:** Share ownership is possible; that topic has been raised before. We can certainly talk about it, but you should be aware of the risks. It's a big project, about $1 billion. If you're part of the ownership you need to contribute capital; that's $100 million for 10%. When McArthur shuts down there's no product, no income, but they're still paying wages and costs. As an owner you need to be prepared to pay that even when you're not producing. Decommissioning needs additional money; McArthur River would need $50 million to close it. There are risks involved in ownership. I don't know of any communities that do that.

Does the Wheeler River flow to Wollaston? At one time Ile a la Crosse was building trailers, and doing other things for the Cluff Lake mine. If this project is part of the Athabasca collaboration agreement, will we be told we're not part of the impact area? Patuanak and Pinehouse have collaboration agreements with other companies and are getting money already – we need to make sure when the mining starts that the agreement doesn't change because of land claims etc. All we're getting from the mines right now is through our ownership share in NRT, $12,000 per year. What kind of agreement is planned for Ile a la Crosse?

- **P. Longo:** The MOU is not a commitment on either side except to work together and talk. It's an expression that the company wants to support the community and the community wants to support the development of the project, assuming that we're doing it safely and legally. The specific points we talk about are environmental sustainability, education, employment and training, business opportunities and community investment. We have not defined these topics yet, but those are the four points we heard were important. If we need to add more, we will. Eventually there will be an impact benefit agreement and better understanding of the impacts. This is a separate project; we are talking to communities we feel are impacted. If another community feels they are impacted, we will talk with them too. It's difficult for us to talk to hundreds of different groups, so we started with the four groups but can expand as required. We've been discussing what we're doing with the province and the feds, so were open to whatever topics you want.

This is a Métis settlement; as we restructure the Métis Nation we don't have information about the MOU. With Cluff Lake, communities signed without proper negotiations or protocol. We didn't get much out of Cluff Lake, and that French company walked out with billions of dollars. We have to suffer from that, yet there's still radiation under ground and equipment buried and it's still seeping towards our lakes and animals. They just left it. We want to make sure we have technical people in place so those same mistakes are not made and make sure there's a better process for assessment.

- **M. Liskowich:** I recognize your concerns with Cluff Lake. As things evolve within the industry, practices change. We're here today, as we came before, to introduce the project and the company. We came to Ile a la Crosse because we believe it is one of the primary impact communities in the region. We did not distinguish between non-Aboriginal, treaty or Métis; we looked at the people who live here. We approached the mayor first. We worked through the MOU with mayor and council, and they also tabled it with fishers, trappers and the Métis Local. As this project progresses - and we're a long way away from construction - we felt it was important to get into communities early, before the permitting process or the government review, before the decisions are made, so people could have input into those decisions and are further informed when it's time to evaluate the environmental assessment process. The information from these sessions will help support whatever concerns they might have during that assessment process. We're not trying to do things the same as other companies did in the past; we will do them the way Denison believes they should be done going forward. We'd be happy to walk through the MOU with you at the Métis Local meeting. We don't want to isolate and divide.

When you're talking about procurement I see once again we have white folks coming to our community from a big corporation, telling us what they're going to do. It would be nice for you to bring some people here from Serpent River First Nation.

I have worked with Denison Environmental in the past at Cluff Lake. Is Ile a la Crosse considered a primary impact community?

- **P. Longo:** Yes.

I should put in a plug for Sakitawak Development Corp's joint venture with Major Drilling; we're bidding on these jobs at Wheeler River. Those benefits come back into the community. What kind of training do you have right now for exploration camps? Do you have any training opportunities that our students could take?

- **P. Longo:** That's coming up.

Companies and First Nations are working together to go further. Does Denison have good relations with First Nations and treaty organizations? Will you have an office like that? Are you willing to work together to prevent controversy?

- **P. Longo:** This is supposed to be a dialogue, a discussion. We want your input. That's why we're here today, to talk to you and develop relationships, and avoid problems.
- **M. Liskowich:** Once the project advances past the very early stages, the intent is to have community liaison people so you're not always talking to mooniases. We're in the early stages right now, and it's difficult to do that.

Can you give the students information about what type of high-level skilled positions will be available to train for? A 10-year operation does not give much time for training high-level positions. All we get is a shovel or an axe. We have no management jobs; people have to work 5-10 years beside another manager – it should only take one year instead of years to become a good manager. We got some management positions at Cluff Lake towards the end, but not at the beginning. That's how we get called lazy etc. so we don't feel like even applying for a job. We need management positions from the beginning. It's important that the students are here and heard.

- **M. Liskowich:** I asked the mayor to hold the meeting in the middle of the day; I also asked him to contact the high school principal and invite the students. We wanted heir input, because often they have a different opinion that we do. We also wanted them here for job awareness. We have a list of jobs at an underground uranium mine that we can email to whoever wants it. It outlines jobs and levels of education and expertise required, right from labourer or security guard to running the show.
- **P. Longo:** We have also come out to career days when invited.

If you partner with Cameco do you have a master plan? Just recently we lost a lot of jobs; those peoples' skills are only for mines. We would like to see those skills, like electricians and plumbers, adapted to the communities. When these people are laid off they have to retrain and some are in their 40s or later. Take that into consideration considering what happened.

- **P. Longo:** Electricians and plumbers should be transferable across the country, not just in mining. Some jobs in mining are tailored to mining – it's part of the risk you take. I've been forced to switch communities to find a job.

In northern Saskatchewan they did mill operator training; the other skills came from the south. The north should have some of those seats.

- **M. Liskowich:** It's tough to get a job as a radiation technician anywhere else than in a uranium mine.

I visited the Northlands College Mine School with my ADM as part of a northern tour. We now have that training in the north. People can train for any aspect of any mine, primarily uranium but also potash and others. They're looking at everything from environmental technician to - there are lots of transferable skills. I was blown away with what they have – simulators for all kinds of heavy equipment. There are new technologies coming on; you're looking at different ways of mining the minerals, like in situ, which means less equipment.

As an example to the students, please show where you're at on the life cycle of a mine, from exploration to decommissioning.

- **P. Longo:** We are at the prefeasibility stage, collecting baseline data and doing a prefeasibility study, building the business case for proceeding. The earliest production would be 2024-2025, so there's at least seven years of work to do. There would be 2-3 years of construction, so there could be shovels in the ground in 2021-2022 if things work out well. The estimated mine life is 15 years, but we are continuing to explore so we're hoping that expands. We're trying to look at new technologies in a way that we could operate at any price, even in today's market.
- **M. Liskowich:** We have had communications with Randy and others on the west side. Denison supported the Integrated Resource Management Program in Buffalo Narrows, which also supports mining.
- **P. Longo:** What we're doing now to support communities and help improve things: 1) historically our exploration camp was supplied from La Ronge, but that's not an impact community so we switched to Beauval. 2) We have worked with out major drill contractor to implement a training program. We trained two drillers who are working right now, and in February will train two more. Eventually we will train 20-30 jobs upfront, targetting our impact communities. 3) We have employed northerners in the field, and 4) support career days and training programs. We have to make sure new contracts are competitive in term of cost and performance, and we make sure the contractors maximize northern content. There's a preference for northern ownership of businesses.

What kind of infrastructure do you have for Wheeler River? There are a lot of potential operations that could happen in the north. There's a possibility of a gold mine, a possible copper mine and the Wheeler River uranium mine. There's a lack of infrastructure – roads, power. Can you work with the mining companies and the federal and provincial governments to look at infrastructure so development could happen. Cameco is laying off a bunch of people, so there's a need for more development in the region. We need employment. Let's look at infrastructure needs. How can we provide infrastructure so development can happen in an area of potential. It's expensive for mines to bring their own infrastructure.

- **M. Liskowich:** Peter will mention some of the infrastructure that's needed to support this project.

Any news on the proposed road from McArthur River to Cigar Lake?

- **P. Longo:** We have met with the province. If that road is not built, this project does not go ahead. They are adding that to the model; I understood they would come and talk to communities about it.
- **M. Liskowich:** That road needs to be built. As soon as the province does it, there's no reason why it should not be done by people from the north.

Will the ore be transported in slurry or rock form?

- **P. Longo:** Still working on the details; probably not in slurry form, but it will be shipped in a regulated container.

Mini-workshops: Mark Liskowich

1. Road access route

- Mark introduced three potential routes to Phoenix and two from Phoenix to GryphonThe present route is not up to the required standard.
- There are some constraints: The road has to be 10 metres wide so it's safe for haul trucks. If we're cutting slopes through a hill, the slopes can't be steep because of runoff. 3:1 is the preferred slope. Maximum grade must be 7%, the same as the Key Lake to McArthur River haul road.
- We did not want to cross many streams or rivers, to avoid building culverts or bridges. We didn't want to be too close to lakes.

- There's one recreational lease cabin in the area – not known if they want the road close or not.
- Mark explained details of the options.

Those attending formed groups based on age – over 20 and under 20 – to consider pros and cons of each option.

Questions/Comments

Which highway is it accessed from?

- **M. Liskowich**: The main access to the site is from Prince Albert through Pinehouse.

How far will you haul the ore? Which way – east or west? What's wrong with the route to Pinehouse through Beauval and Meadow Lake?

- **M. Liskowich:** It depends who's buying the yellowcake and where the product is going. Typically it goes to Elliot Lake and the Blind River refinery. I don't know if Denison has determined where their product will go or who their customer is. If it goes to Japan, it may go to the west coast and not through PA. The ore goes to McClean Lake.

Is there only one refinery in Canada? What about Chalk River?

- **M. Liskowich:** That's a medical isotope producer. Blind River is the refinery and Port Hope the enrichment and fuel fabrication plant.

Is the cabin owner in the area from Pinehouse?

- **M. Liskowich:** It's a recreation lease with two owners. It's not a TRU. The local trapper is Bobby John from Patuanak.

Pros & Cons – Community Input

Road alignment Highway – Phoenix:

Option 1:

Pros:

Youth Group 1:
- Intermediate (neutral) distance to the cabin
- Shortest distance
- Fill could be re-used

Youth Group 2:
- Shortest option; preferred option
- Road not that far and has least disturbance.

Adult Group
- Shortest road

Cons:

Youth Group 1:
- Hill means lots of material to move

Youth Group 2:
- Not that far; least disturbance
- Closest to the cabin.

Adult Group
- Needs the most dirt moved; likely biggest impact.

Option 2:

Pros:

Youth Group 1:
- Least amount of fill

Youth Group 2:
- Not that far; least disturbance.

Cons:

Youth Group 1:
- Closest to both water and cabin

Youth Group 2:
- Closest to cabin.

Adult Group:
- Closest to cabin

<u>Option 3:</u>

Pros:

Youth Group 1:
- Far from the lake and the cabin.
- Partial road there already

Youth Group 2:
- Farthest from cabin and lake.

Adult Group:
- Uses the existing road and is away from both water and cabin. Best option.

Cons:

Youth Group 1:
- Greatest distance.

Adult Group
- Not discussed.

Other discussion:
- What if cabin owner wants the road close?
- Need to understand impact on groundwater and lakes.
- Need an environmental study on proposed route.
- Do any wildlife transects cross the road?
- Need a stormwater management plan and a spill response plan.
- Local people would have the training to work on the road (including surveyors).
- Monitoring with elders and students should be considered, as part of a guardianship program.

<u>Road alignment Phoenix – Gryphon</u>

<u>Option 1:</u>

Pros:

Youth Group 1:
- Least amount of material

Youth Group 2:
- Shorter distance
- Less disturbance to land.

Adult Group
- Not discussed

Cons:

Youth Group 1:
- Close to the lake

Youth Group 2:
- Closer to water; worse for safety and environmental incidents.

Adult Group
- Not discussed

<u>Option 2:</u>

Pros:

Youth Group 1:
- Farthest from water.
- Shortest distance.

Youth Group 2:
- Unknown

Adult Group:
- Not discussed

Cons:

Youth Group 1:
- Much more material to be moved.

Youth Group 2:
- Unknown

Adult Group:
- Not discussed

2. Water treatment discharge.

- Mark introduced potential discharge points, and discussed potential constraints. Those attending formed groups based on age – over 20 and under 20 – to consider pros and cons of each option.
- We looked at traditional use, and quantity and quality of water. We will be treating and releasing according to limits, but how much can we add to a system without overpowering the natural flow? We also looked at fish spawning areas.
- There are 20 tourist camps on Russell Lake. We used a disposition map to note recreational, TRU and exploration leases.
- We looked at lakes draining to Russell Lake; we looked at the watershed areas to see how much runoff contributes to each lake. Each is part of 15-16 baseline studies. We looked at connectivity also, and eliminated a lot of smaller ponds.
- We estimated ranges and flows using electronic sensors, and eliminated small systems
- Fish and habitat: we mapped spawning habitat.
- We came up with five options: there are no final decisions.
- Groups were asked to identify pros and cons.

Questions/Comments

How do you sample streams underground?

- **M. Liskowich:** Groundwater is also assessed as part of the baseline studies.

Have you identified any mercury?

- **M. Liskowich:** One lake has elevated mercury. We have all the data on every lake we sampled. None is high enough to be problematic.

Pros & Cons – Community Input

LA-7: Pros:

Youth Group 1
- Largest & deepest lake

Youth Group 2
- Less disturbance
- Discharging to all lakes is the same.
- If treatment is good, any lake is OK.
- LA-7 is the best.

Adult Group
- Discharge to LA-7 because it's the shortest distance to the mine site, and there's the most dilution.

LA-7: Cons:

Youth Group 1
- Potential for (unknown word).
- Downstream impact.

Youth Group 2

Adult Group

- Whatever we out into LA-7 winds up everywhere
- Concerns about sensitive species and habitat.

LA-6: Pros:

Youth Group 1

- Faster flow, smaller lake

Youth Group 2

- No discussion

Adult Group

- No discussion

LA-6: Cons:

Youth Group 1

- Smallest lake.

Youth Group 2

- No discussion

Adult Group

- No discussion

LA-5: Pros

Youth Group 1

- No discussion

Youth Group 2

- No discussion

Adult Group

- No discussion

LA-5: Cons

Youth Group 1

- No discussion

Youth Group 2

- No discussion

Adult Group

- No discussion

LA-1: Pros

Youth Group 1

- Quick flow-through. Second biggest lake.

Youth Group 2

- No discussion

Adult Group

- No discussion

LA-1: Cons

Youth Group 1

- Far from site.

Youth Group 2

Adult Group

Russell Lake: Pros

Youth Group 1

- Biggest lake

Youth Group 2

- No discussion

Adult Group

- No discussion

Russell Lake: Cons

Youth Group 1

- Far from site.
- Recreational use.

Youth Group 2

- Don't discharge into Russell Lake due to fishing and cabins.
- It could potentially kill fish.

Adult Group

3. Mining Methods

Peter explained the options for each deposit, giving some context for each.

Gryphon: Longhole stoping

- Gryphon is about 500 metres down and about 4-500 metres long. The ore veins are in stacked lenses about three metres thick. about 200 metres high and 200 metres wide.
- Two shafts would come from surface, then we'd ramp down along the side of the deposit, with horizontal drifts at the mining levels.

- The proposed mining method is longhole stoping, using top & bottom tunnels about 20 metres apart vertically. We drill 3-4" diameter blast holes between the two, load them with explosives and blast, with everyone out of the mine for safety. The 1-2' chunks will be trucked to the hoist in scoops and skipped out. The stopes will be backfilled with waste rock or cemented waste rock.
- Considerations: We know it's safe, physically and from a radiation perspective. It's used at Rabbit Lake's Eagle Point mine, and approved by the Canadian Nuclear Safety Commission. Waste rock will go back into the empty stopes so it never comes to surface. The jobs are low-tech, with no high education or specialty expertise required. We can train a high school or college graduate.
- We know we can make money at $20/lb; we would be in operation at today's prices with this method.

Students left at this point

Pros & Cons: Community Input

Longhole Stoping

Pros:

- Have time to make this the best it can be and keep up with technology
- Workers seem to be safe from radiation

Cons:

- Potential harm to workers over the long term.
- Concern abut health of miners, related to ventilation, lighting and monitoring.
- Safety.
- Health inspectors need to visit the mine, and individuals should know their radiation readings.
- Community members need to sit on the safety committee.
- Look into real-time results for dose

Phoenix: Directional Drilling or ISR Mining

- The Phoenix deposit is 400 metres below surface. It occurs as a big pancake 30m wide and 6m thick, similar to Cigar Lake but a lot smaller. There are two zones: A is 400 metres long, B is 300m long. The average grade is 40%, higher than Cigar Lake but smaller.
- At this grade the ore is black and clayey, with some hard parts like pure metal.
- Ground conditions just above the ore body are poor, like beach sand. There is also 400m of water pressure in the sandstone above, similar to Cigar Lake. We cannot open any tunnels or use traditional mining methods.

- Cameco developed a jet bore system (JBS) to mine Cigar Lake, the only mine in the world similar to this. They encountered a lot of technical challenges that caused decades of delays. It was very expensive capital cost-wise. We did a business case and determined that operationally, it would cost about $30/lb to mine so it could not be done at today's prices. It's very complex, and requires high-end technical personnel and skill sets. So we walked away from JBS.
- After looking at other industries, we have two options:
    - **1) directional drilling,** used a lot in oil and gas. A parent hole would be drilled from surface vertically, then turned horizontally until it hit the ore body. It would have a steel casing from the ore body back to surface. A series of 17.5"diameter holes would excavate the ore and backfill the holes with concrete. The next hole would be drilled right beside it. After 4,300 drill holes, the deposit will be mined out.
    - We know it's safe to operate. It's never been done from a radiation perspective, but we know diamond drilling is safe; ore handling is remote.
    - There would be minimal surface disturbance, just a drill pad. This method would require about 150 personnel on surface, including technical, labourers, trades, management, camp services etc. High school and college graduates could do this.
    - There would be no water discharge; the water would be re-used in a closed system for drilling. The ore would still be shipped to McClean Lake, and it would still produce tailings.

    - **2) ISR – In Situ Recovery.** This has been used since the 1960s worldwide, although not for uranium in Canada. In 2011, almost 50% of the global uranium supply was mined through ISR. It's used in the States, Australia, and Kazakhstan. It's the trend of where things have gone.
    - Based on the regulations from the States, we think it will be doable.
    - Peter explained the ISR process, which uses injections wells and recovery wells. Monitoring holes ensure the mining solution does not escape the area. If it does, we can shut off injection, reverse it, or increase pumping from recovery wells. It's very flexible.
    - The plant is about one-third the size of a football field. Inside is piping and tanks. They add the reagents are similar to those used in mills up north, and precipitate yellowcake.
    - Once the deposit is mined out, we keep pumping and treating, and pump clean water back down, recycling it. This eventually, over years, restores the groundwater to its natural state.
    - At Wheeler River, the groundwater around the orebodies is already contaminated – not safe to drink of for wildlife, so it has to be treated before release. The amount of water released to the environment would be minimal. To be able to return the area to the natural state would be less challenging. In Wyoming they're pulling it from a drinking water aquifer so they have to return it to drinking water quality.
    - **Advantages:** We know it's safe; other countries are doing it. Radiation-wise it's safe because its done remotely. Environmentally it causes very low disturbance. The big thing: there are no tailings; the solution goes back down. It's low-cost and sustainable. We know we could operate at any price point. We should be able to do it without highly technically trained people.
    - It would be the first such method for uranium in Saskatchewan.

<u>Questions/Comments</u>

How many exploration camps do you have in our area?

- **P. Longo:** One at Wheeler River; about six around the eastern Athabasca region. Not all are permanent.

I have worked for contractors; we never could become shifters, or progress. We always had to work hard, but shifters always came from somewhere else. We have to look at it from a different perspective so we don't have to stay in one area and do one thing.

- **P. Longo:** If you can work on the training and development and get the experience, the sky's the limit on what you can do. I started at the bottom and worked my way up.

Today's kids are more technical so they can get more technical jobs.

- **P. Longo:** Absolutely. A lot of the work is done remotely on joysticks etc.

Is this company controlled by another country?

- **P. Longo:** We're a publicly traded Canadian company. I'm from Saskatoon; we have a team in Toronto. We've been here a long time. Cameco is also Canadian. There are dozens of uranium exploration companies that are Canadian.

What do you do with secondary mineral deposits – e.g. re-mine tailings for gold.

- **P. Longo:** There are secondary ones at both deposits, but it's primarily uranium.

Would it be an expensive site?

- **P. Longo:** Less than a JBS. In today's market we would still be running. We're sustainable.

Northlands College had an oil rig for training.

Which part of Africa are you in?

- **P. Longo:** None any more. We were in Mauretania, Tanzania. We sold our international assets.

How long is the training valid for? Is the training readily available in the region? We have to engage Northlands College or Northwest College; that might be another opportunity for Northlands College Mine School. Maybe we can form partnerships to buy equipment and train locally.

- **P. Longo:** We have years to work out these things.
- **M. Liskowich:** Right now this is at the infant stage. They're working out whether or not it's a feasible option. Even if it is, we still have the four-year environmental assessment process.

When will you sign a Surface Lease Agreement?

- **M. Liskowich:** That comes after the environmental assessment. Once we are approved by the minister to proceed, then the province and the company negotiate for a surface lease. Denison hopes to get it worked out with the impact communities before that.

There is confusion around the procurement policies in the province. I think they've done away with surface lease agreements.

- **M. Liskowich:** They're still there. The company makes commitments to the province within the surface lease regarding northern procurement northern employment and training. Industry is evolving and making agreements outside the SLAs, but one does not offset the other.

Are the SLAs within the NAD line?

- **M. Liskowich:** If it's south of the NAD line, you buy the land or make an agreement with the owner of the land.
- The Government Relations Northern Engagement Branch deals with surface leases.

With all the exploration claims, is there any policy regarding use it or lose it?

- **P. Longo:** We have to spend a certain amount on the property each year in order to maintain the claim. If we don't, it lapses and someone else can claim it. We have to report annually on how much we spend.
- **M. Liskowich:** It has to be justified spending.

There's no underground, so it seems better from a health and safety perspective.

It's cheaper, safer, cleaner – that's the future of drilling. But a lot of people don't know about it, so how do we educate our students who are looking at careers? Communication to the northern communities is important.

- **L. Willemse:** Communicate the ideas and the training information?

Multiple conversations – inaudible.
Discussion of radiation protection.

With all the procurement opportunities throughout your life cycle; look in your back yard first. The supply chain stuff is very important, and northerners can supply some of the goods and services needed. A plug for our local development corporation – they have a security contract, a joint venture through Flyer Electric, catering; we have a market garden where we sell $30,000 of fresh fruits and vegetables in the community; the fish processing plant sells fresh fish. You could use that now.

We were making coveralls for the mines at one time, sponsored by Sask Abilities.

- **P. Longo:** That's part of the MOU process. We can share what work is coming up for us. Let's buy what we're buying up north. It makes sense for us and for you.

There's also a land use framework – LUP – every community is going to be mapped, including traditional land use. Ile a la Crosse has one partially completed.

- **P. Longo:** We have incorporated the ones we've received. We're happy to be part of that, in conversation and financially, and to make sure our project respects the land uses that are there.

The one important pillar is community investment. I don't know if Cameco and AREVA do it enough, but we're looking at a new and different way. Community investment offers long-term solutions.

- **P. Longo:** That's the world today, and we're happy to do it. We have to run an economic business, and everyone can benefit from that.

What type of worker education is required for ISR mining?

- **P. Longo:** The plant we visited in Wyoming used high school or college grads. You don't need PhDs etc.

How similar is this to SAGD (steam-assisted gravity drainage), used in recovering oil?

- **P. Longo:** Very different. They pump steam in under pressure to liquefy the oil. We will be drilling 3" holes every 10-15 feet and using water at normal pressure.
- **M. Liskowich:** No rock is taken out of the ground. It's also used in uranium mining.
- **L. Willemse:** We pump in a solution to dissolve the uranium from the formation. It is then carried in the water that gets pumped out. In situ just means inside, so it means the recovery is happening within the deposit.

How close is it to fracking?

- **P. Longo:** Not at all. Fracking uses high pressure; there's no pressure in ISR except the natural water pressure.

Is the geology in Wyoming the same as at the Wheeler River site?

- **P. Longo:** They're similar, but different. They were 400-1200 feet below surface; we're 400 metres.

Why is the Wheeler River water not good?

- **M. Liskowich:** It's groundwater interacting with the ore body.
- **P. Longo:** This is not surface water; it's the natural groundwater flowing through the cracks in the ground. The Wheeler River is not affected.

You will write agreements for things like training? No small print?

- **P. Longo:** The intent, after the MOU, is to work out an agreement with every community.

Have there been any major safety issues?

- **M. Liskowich:** The studies are under way now to determine if it's a method that will work in this deposit. Every deposit is a little different. If it can be done, it's a good option. It would be

the first uranium deposit in Canada to be mined this way. A similar technique is use din southern Saskatchewan in three potash mines.

Would you need individual environmental assessments for Gryphon and Phoenix?

- **M. Liskowich:** You could do it separately or as one package.

Pros & Cons: Community Input

1. Directional drilling

Pros:

Adult Group

- People who were trained on oil and gas could transfer their skills. Northlands College has a relevant program.
- Does not have much of a footprint
- Cleaner and safer
- Can use the local supply chain.

Cons:

Adult Group

- Possible higher repair and maintenance costs.
- Concerned about skills transfer from the oil and gas industry (how long licenses last, local training).
- Have to educate people about the mining method and training that's needed.
- People don't know this is a career option.
- Uncertainty about radiation safety.

2. ISR (In Situ Recovery):

Pros:

Adult Group:

- We know it works in other places
- No major safety issues
- No waste piles.

Cons:

Adult Group

- Not enough information to understand the pros and cons.

Overview:

- People will have a lot of questions because it hasnlt been done in Canada.
- Lab work is still ongoing.

Baseline Environmental Data: Lea Willemse

- To establish whether we have an effect on the environment when we mine, we need to understand what's there now, to establish a baseline. In the past two years we have done a lot of studies. We hired terrestrial and aquatic biologists, archaeologists, hydrologists, geologists to use their expertise to give us that data to establish what's at site at present.
- **Heritage survey**: The Saskatchewan Conservation Branch required an archaeological assessment of the project areas to be impacted by development, and around areas with potential cultural significance. We did hundreds of surveys around proposed road routes and areas where your ancestors would have hunted and fished. We found one artifact. They assessed it and found it to be pre-contact and of little interpretive value. It led to a more detailed search of the area. It was not in the area we would develop on; it was next to a lake and we would never develop that close. The Conservation Branch issued clearance to proceed.
- We are actively monitoring atmospheric **radon** all around the project area. The analysis showed the highest level was less than 7 bq/m3 vs. Health Canada's indoor guideline of 200 bq/m3.

Denison Mines Community Engagement
Wheeler River Project
Ile a la Crosse
Wednesday, January 17, 2018

In attendance:

Denison Mines: *Peter Longo, VP Operations; Lea Willemse, Senior Environmental Scientist, Sudbury.*
SRK Consulting: *Mark Liskowich, Principal Consultant, Environmental; Lee Christoffersen, Environmental Scientist, Vancouver.*
Recorder: *Gill Gracie, Aurora Communications Ltd.*
Community: *26 students, 24 adults*

Councillor Gerald Roy introduced the session, saying Denison has approached the municipality and the Métis Local to sign an MOU to work together collaboratively.

Mark Liskowich introduced himself and the team, and outlined the agenda for the day.

Presentation: Peter Longo

- Thanks for the welcome.
- Denison is an exploration and development company, still in the exploration stage. We had historical operations in Ontario from the 1950s-1990s, and have a variety of exploration properties throughout the Athabasca basin. Today we are talking about our flagship Wheeler River property.
- We are about 5% the size of Cameco. We have no operations or production. We are a minority partner (22.5%) in McClean Lake, and we plan to ship our Wheeler River ore to McClean Lake for processing.
- Our environmental services team of about 40 maintains our former Elliot Lake sites, now completely revegetated, and offers environmental services to governments and mining companies across Canada.
- In terms of community engagement and support, we're a small company but make each dollar count. In Saskatchewan we support AREVA's community initiatives. We do our best to hire people and procure goods from the north. In Elliot Lake we have a very good relationship with the Serpent River First Nation; we support employment, youth initiatives, and education. We were a key contributor in helping transform the community into a retirement village. We have sold our African properties, but while there we drilled water wells and supported schools for the education of youth.
- Location: 30 km north of Key Lake, six km west of the Key Lake-McArthur River haul road and the provincial power line. We now have a 20-30-person exploration camp and core storage area. It will cost $1 billion to turn it into a mine site.
- We have two deposits, Phoenix and Gryphon, about three km apart, totalling about 114 million pounds of uranium. McArthur River has already produced 300 million pounds and has 200 million pounds+ to go is it is 5x the size of our project. We are a little bigger than Rabbit Lake, which has about 70 million pounds left in the ground.
- Gryphon will have two shafts, with a lot of underground development. Phoenix would have one shaft. A pilot hole was drilled last year; we have done engineering studies around different mining methods and shaft sinking technologies, and looked at water treatment plant designs. We have done a lot of engineering work in the last couple of years.

- There would be no mill or tailings facility on site.
- We have done a lot of work on aquatic aspects, water quality and flows around the site, as well as the animals and fish. Environmentally, the intent is to understand what's there now before we build the mine so we can understand the potential impacts and avoid or mitigate them, and prove we are not harming the land and wildlife long-term.

Questions/Comments

As a representative of the Métis Nation I have to make sure this is engagement, not duty to consult.

- **M. Liskowich:** This is an informational meeting and part of Denison's community stakeholder engagement.

As a First Nations person, I heard about the MOU with the village and the Métis Local. There are a lot of First Nations people that live here as well who are not part of the MOU because they're not organizing.

- **P. Longo:** We will touch on the MOU later.

When you reclaim a site, you have experience from other companies; how much stuff will you bury? What's left behind?

- **P. Longo:** Every site is different. At a mill site, not much is left behind because there's no place to bury it. It would be hauled to landfills offsite; some might go into onsite landfills if available.
- **M. Liskowich:** It varies. In uranium mining, because it's radioactive, most stays at site. It's difficult to decontaminate a mill, so usually a landfill is constructed at site. CNSC allows very little to leave the site.

So it's only cosmetic.

- **M. Liskowich:** It changes from mine to mine, generation to generation, decade to decade. The the stuff buried at Cluff is less than what will be buried next year at Gunnar, for example. There are different levels of landfill and material. If we're trying to protect strictly from radiation, we create a cover that's thick enough that the radiation can't get through it. If it's hazardous material, you need a cover that keeps water out. It is handled differently depending on potential risk.

As a mining company, what regulations and policies do you follow under Section 35 of the Canadian Constitution? As a Métis rep I have never been informed about this project. I'm not sure where the MOU came from – it did not come to me as the director of the region. I'm confused as to what's happening. We are currently working on land claims. We are working on legal representation for our technical team, and we have to have our legal rep here when we hold community workshops; we have to follow government regulations when we come to meetings.

- **P. Longo:** We support whatever laws governments put in place. As far as discussions with communities, we're happy to do whatever works for the community.

Students don't understand "MOU"; we might have to explain it.

There's a draft of the MOU on the Métis Local agenda at 5 pm today – the meeting is open to the community. MOU means Memorandum of Understanding that we'll work together to build a partnership, nothing concrete, not an agreement or a treaty.

A MOU is a working living document with all parties.

Through the years I have learned that companies have offered us jobs. One semi of yellowcake was worth $4 million at one point. Jobs are great, training opportunities are great, but they only take you only so far. Prices have dropped but Cameco is not suffering as much as our communities will suffer with the 10-month layoff coming up, which may go longer. Would Denison Mines be open to share ownership on this project?

- **P. Longo:** Share ownership is possible; that topic has been raised before. We can certainly talk about it, but you should be aware of the risks. It's a big project, about $1 billion. If you're part of the ownership you need to contribute capital; that's $100 million for 10%. When McArthur shuts down there's no product, no income, but they're still paying wages and costs. As an owner you need to be prepared to pay that even when you're not producing. Decommissioning needs additional money; McArthur River would need $50 million to close it. There are risks involved in ownership. I don't know of any communities that do that.

Does the Wheeler River flow to Wollaston? At one time Ile a la Crosse was building trailers, and doing other things for the Cluff Lake mine. If this project is part of the Athabasca collaboration agreement, will we be told we're not part of the impact area? Patuanak and Pinehouse have collaboration agreements with other companies and are getting money already – we need to make sure when the mining starts that the agreement doesn't change because of land claims etc. All we're getting from the mines right now is through our ownership share in NRT, $12,000 per year. What kind of agreement is planned for Ile a la Crosse?

- **P. Longo:** The MOU is not a commitment on either side except to work together and talk. It's an expression that the company wants to support the community and the community wants to support the development of the project, assuming that we're doing it safely and legally. The specific points we talk about are environmental sustainability, education, employment and training, business opportunities and community investment. We have not defined these topics yet, but those are the four points we heard were important. If we need to add more, we will. Eventually there will be an impact benefit agreement and better understanding of the impacts. This is a separate project; we are talking to communities we feel are impacted. If another community feels they are impacted, we will talk with them too. It's difficult for us to talk to hundreds of different groups, so we started with the four groups but can expand as required. We've been discussing what we're doing with the province and the feds, so were open to whatever topics you want.

This is a Métis settlement; as we restructure the Métis Nation we don't have information about the MOU. With Cluff Lake, communities signed without proper negotiations or protocol. We didn't get much out of Cluff Lake, and that French company walked out with billions of dollars. We have to suffer from that, yet there's still radiation under ground and equipment buried and it's still seeping towards our lakes and animals. They just left it. We want to make sure we have technical people in place so those same mistakes are not made and make sure there's a better process for assessment.

- **M. Liskowich:** I recognize your concerns with Cluff Lake. As things evolve within the industry, practices change. We're here today, as we came before, to introduce the project and the company. We came to Ile a la Crosse because we believe it is one of the primary impact communities in the region. We did not distinguish between non-Aboriginal, treaty or Métis; we looked at the people who live here. We approached the mayor first. We worked through the MOU with mayor and council, and they also tabled it with fishers, trappers and the Métis Local. As this project progresses - and we're a long way away from construction - we felt it was important to get into communities early, before the permitting process or the government review, before the decisions are made, so people could have input into those decisions and are further informed when it's time to evaluate the environmental assessment process. The information from these sessions will help support whatever concerns they might have during that assessment process. We're not trying to do things the same as other companies did in the past; we will do them the way Denison believes they should be done going forward. We'd be happy to walk through the MOU with you at the Métis Local meeting. We don't want to isolate and divide.

When you're talking about procurement I see once again we have white folks coming to our community from a big corporation, telling us what they're going to do. It would be nice for you to bring some people here from Serpent River First Nation.

I have worked with Denison Environmental in the past at Cluff Lake. Is Ile a la Crosse considered a primary impact community?

- **P. Longo:** Yes.

I should put in a plug for Sakitawak Development Corp's joint venture with Major Drilling; we're bidding on these jobs at Wheeler River. Those benefits come back into the community. What kind of training do you have right now for exploration camps? Do you have any training opportunities that our students could take?

- **P. Longo:** That's coming up.

Companies and First Nations are working together to go further. Does Denison have good relations with First Nations and treaty organizations? Will you have an office like that? Are you willing to work together to prevent controversy?

- **P. Longo:** This is supposed to be a dialogue, a discussion. We want your input. That's why we're here today, to talk to you and develop relationships, and avoid problems.
- **M. Liskowich:** Once the project advances past the very early stages, the intent is to have community liaison people so you're not always talking to mooniases. We're in the early stages right now, and it's difficult to do that.

Can you give the students information about what type of high-level skilled positions will be available to train for? A 10-year operation does not give much time for training high-level positions. All we get is a shovel or an axe. We have no management jobs; people have to work 5-10 years beside another manager – it should only take one year instead of years to become a good manager. We got some management positions at Cluff Lake towards the end, but not at the beginning. That's how we get called lazy etc. so we don't feel like even applying for a job. We need management positions from the beginning. It's important that the students are here and heard.

- **M. Liskowich:** I asked the mayor to hold the meeting in the middle of the day; I also asked him to contact the high school principal and invite the students. We wanted heir input, because often they have a different opinion that we do. We also wanted them here for job awareness. We have a list of jobs at an underground uranium mine that we can email to whoever wants it. It outlines jobs and levels of education and expertise required, right from labourer or security guard to running the show.
- **P. Longo:** We have also come out to career days when invited.

If you partner with Cameco do you have a master plan? Just recently we lost a lot of jobs; those peoples' skills are only for mines. We would like to see those skills, like electricians and plumbers, adapted to the communities. When these people are laid off they have to retrain and some are in their 40s or later. Take that into consideration considering what happened.

- **P. Longo:** Electricians and plumbers should be transferable across the country, not just in mining. Some jobs in mining are tailored to mining – it's part of the risk you take. I've been forced to switch communities to find a job.

In northern Saskatchewan they did mill operator training; the other skills came from the south. The north should have some of those seats.

- **M. Liskowich:** It's tough to get a job as a radiation technician anywhere else than in a uranium mine.

I visited the Northlands College Mine School with my ADM as part of a northern tour. We now have that training in the north. People can train for any aspect of any mine, primarily uranium but also potash and others. They're looking at everything from environmental technician to - there are lots of transferable skills. I was blown away with what they have – simulators for all kinds of heavy equipment. There are new technologies coming on; you're looking at different ways of mining the minerals, like in situ, which means less equipment.

As an example to the students, please show where you're at on the life cycle of a mine, from exploration to decommissioning.

- **P. Longo:** We are at the prefeasibility stage, collecting baseline data and doing a prefeasibility study, building the business case for proceeding. The earliest production would be 2024-2025, so there's at least seven years of work to do. There would be 2-3 years of construction, so there could be shovels in the ground in 2021-2022 if things work out well. The estimated mine life is 15 years, but we are continuing to explore so we're hoping that expands. We're trying to look at new technologies in a way that we could operate at any price, even in today's market.
- **M. Liskowich:** We have had communications with Randy and others on the west side. Denison supported the Integrated Resource Management Program in Buffalo Narrows, which also supports mining.
- **P. Longo:** What we're doing now to support communities and help improve things: 1) historically our exploration camp was supplied from La Ronge, but that's not an impact community so we switched to Beauval. 2) We have worked with out major drill contractor to implement a training program. We trained two drillers who are working right now, and in February will train two more. Eventually we will train 20-30 jobs upfront, targetting our impact communities. 3) We have employed northerners in the field, and 4) support career days and training programs. We have to make sure new contracts are competitive in term of cost and performance, and we make sure the contractors maximize northern content. There's a preference for northern ownership of businesses.

What kind of infrastructure do you have for Wheeler River? There are a lot of potential operations that could happen in the north. There's a possibility of a gold mine, a possible copper mine and the Wheeler River uranium mine. There's a lack of infrastructure – roads, power. Can you work with the mining companies and the federal and provincial governments to look at infrastructure so development could happen. Cameco is laying off a bunch of people, so there's a need for more development in the region. We need employment. Let's look at infrastructure needs. How can we provide infrastructure so development can happen in an area of potential. It's expensive for mines to bring their own infrastructure.

- **M. Liskowich:** Peter will mention some of the infrastructure that's needed to support this project.

Any news on the proposed road from McArthur River to Cigar Lake?

- **P. Longo:** We have met with the province. If that road is not built, this project does not go ahead. They are adding that to the model; I understood they would come and talk to communities about it.
- **M. Liskowich:** That road needs to be built. As soon as the province does it, there's no reason why it should not be done by people from the north.

Will the ore be transported in slurry or rock form?

- **P. Longo:** Still working on the details; probably not in slurry form, but it will be shipped in a regulated container.

Mini-workshops: Mark Liskowich

1. Road access route

- Mark introduced three potential routes to Phoenix and two from Phoenix to GryphonThe present route is not up to the required standard.
- There are some constraints: The road has to be 10 metres wide so it's safe for haul trucks. If we're cutting slopes through a hill, the slopes can't be steep because of runoff. 3:1 is the preferred slope. Maximum grade must be 7%, the same as the Key Lake to McArthur River haul road.
- We did not want to cross many streams or rivers, to avoid building culverts or bridges. We didn't want to be too close to lakes.

- There's one recreational lease cabin in the area – not known if they want the road close or not.
- Mark explained details of the options.

Those attending formed groups based on age – over 20 and under 20 – to consider pros and cons of each option.

Questions/Comments

Which highway is it accessed from?

- **M. Liskowich**: The main access to the site is from Prince Albert through Pinehouse.

How far will you haul the ore? Which way – east or west? What's wrong with the route to Pinehouse through Beauval and Meadow Lake?

- **M. Liskowich:** It depends who's buying the yellowcake and where the product is going. Typically it goes to Elliot Lake and the Blind River refinery. I don't know if Denison has determined where their product will go or who their customer is. If it goes to Japan, it may go to the west coast and not through PA. The ore goes to McClean Lake.

Is there only one refinery in Canada? What about Chalk River?

- **M. Liskowich:** That's a medical isotope producer. Blind River is the refinery and Port Hope the enrichment and fuel fabrication plant.

Is the cabin owner in the area from Pinehouse?

- **M. Liskowich:** It's a recreation lease with two owners. It's not a TRU. The local trapper is Bobby John from Patuanak.

Pros & Cons – Community Input

Road alignment Highway – Phoenix:

Option 1:

Pros:

Youth Group 1:
- Intermediate (neutral) distance to the cabin
- Shortest distance
- Fill could be re-used

Youth Group 2:
- Shortest option; preferred option
- Road not that far and has least disturbance.

Adult Group
- Shortest road

Cons:

Youth Group 1:
- Hill means lots of material to move

Youth Group 2:
- Not that far; least disturbance
- Closest to the cabin.

Adult Group
- Needs the most dirt moved; likely biggest impact.

Option 2:

Pros:

Youth Group 1:
- Least amount of fill

Youth Group 2:
- Not that far; least disturbance.

Cons:

Youth Group 1:
- Closest to both water and cabin

Youth Group 2:
- Closest to cabin.

Adult Group:
- Closest to cabin

<u>Option 3:</u>

Pros:

Youth Group 1:
- Far from the lake and the cabin.
- Partial road there already

Youth Group 2:
- Farthest from cabin and lake.

Adult Group:
- Uses the existing road and is away from both water and cabin. Best option.

Cons:

Youth Group 1:
- Greatest distance.

Adult Group
- Not discussed.

Other discussion:
- What if cabin owner wants the road close?
- Need to understand impact on groundwater and lakes.
- Need an environmental study on proposed route.
- Do any wildlife transects cross the road?
- Need a stormwater management plan and a spill response plan.
- Local people would have the training to work on the road (including surveyors).
- Monitoring with elders and students should be considered, as part of a guardianship program.

<u>Road alignment Phoenix – Gryphon</u>

<u>Option 1:</u>

Pros:

Youth Group 1:
- Least amount of material

Youth Group 2:
- Shorter distance
- Less disturbance to land.

Adult Group
- Not discussed

Cons:

Youth Group 1:
- Close to the lake

Youth Group 2:
- Closer to water; worse for safety and environmental incidents.

Adult Group
- Not discussed

<u>Option 2:</u>

Pros:

Youth Group 1:
- Farthest from water.
- Shortest distance.

Youth Group 2:
- Unknown

Adult Group:
- Not discussed

Cons:

Youth Group 1:
- Much more material to be moved.

Youth Group 2:
- Unknown

Adult Group:
- Not discussed

2. Water treatment discharge.

- Mark introduced potential discharge points, and discussed potential constraints. Those attending formed groups based on age – over 20 and under 20 – to consider pros and cons of each option.
- We looked at traditional use, and quantity and quality of water. We will be treating and releasing according to limits, but how much can we add to a system without overpowering the natural flow? We also looked at fish spawning areas.
- There are 20 tourist camps on Russell Lake. We used a disposition map to note recreational, TRU and exploration leases.
- We looked at lakes draining to Russell Lake; we looked at the watershed areas to see how much runoff contributes to each lake. Each is part of 15-16 baseline studies. We looked at connectivity also, and eliminated a lot of smaller ponds.
- We estimated ranges and flows using electronic sensors, and eliminated small systems
- Fish and habitat: we mapped spawning habitat.
- We came up with five options: there are no final decisions.
- Groups were asked to identify pros and cons.

Questions/Comments

How do you sample streams underground?

- **M. Liskowich:** Groundwater is also assessed as part of the baseline studies.

Have you identified any mercury?

- **M. Liskowich:** One lake has elevated mercury. We have all the data on every lake we sampled. None is high enough to be problematic.

Pros & Cons – Community Input

LA-7: Pros:

Youth Group 1
- Largest & deepest lake

Youth Group 2
- Less disturbance
- Discharging to all lakes is the same.
- If treatment is good, any lake is OK.
- LA-7 is the best.

Adult Group
- Discharge to LA-7 because it's the shortest distance to the mine site, and there's the most dilution.

LA-7: Cons:

Youth Group 1
- Potential for (unknown word).
- Downstream impact.

Youth Group 2

Adult Group

- Whatever we out into LA-7 winds up everywhere
- Concerns about sensitive species and habitat.

LA-6: Pros:

Youth Group 1

- Faster flow, smaller lake

Youth Group 2

- No discussion

Adult Group

- No discussion

LA-6: Cons:

Youth Group 1

- Smallest lake.

Youth Group 2

- No discussion

Adult Group

- No discussion

LA-5: Pros

Youth Group 1

- No discussion

Youth Group 2

- No discussion

Adult Group

- No discussion

LA-5: Cons

Youth Group 1

- No discussion

Youth Group 2

- No discussion

Adult Group

- No discussion

LA-1: Pros

Youth Group 1

- Quick flow-through. Second biggest lake.

Youth Group 2

- No discussion

Adult Group

- No discussion

LA-1: Cons

Youth Group 1

- Far from site.

Youth Group 2

Adult Group

Russell Lake: Pros

Youth Group 1

- Biggest lake

Youth Group 2

- No discussion

Adult Group

- No discussion

Russell Lake: Cons

Youth Group 1

- Far from site.
- Recreational use.

Youth Group 2

- Don't discharge into Russell Lake due to fishing and cabins.
- It could potentially kill fish.

Adult Group

3. Mining Methods

Peter explained the options for each deposit, giving some context for each.

Gryphon: Longhole stoping

- Gryphon is about 500 metres down and about 4-500 metres long. The ore veins are in stacked lenses about three metres thick. about 200 metres high and 200 metres wide.
- Two shafts would come from surface, then we'd ramp down along the side of the deposit, with horizontal drifts at the mining levels.

- The proposed mining method is longhole stoping, using top & bottom tunnels about 20 metres apart vertically. We drill 3-4" diameter blast holes between the two, load them with explosives and blast, with everyone out of the mine for safety. The 1-2' chunks will be trucked to the hoist in scoops and skipped out. The stopes will be backfilled with waste rock or cemented waste rock.
- Considerations: We know it's safe, physically and from a radiation perspective. It's used at Rabbit Lake's Eagle Point mine, and approved by the Canadian Nuclear Safety Commission. Waste rock will go back into the empty stopes so it never comes to surface. The jobs are low-tech, with no high education or specialty expertise required. We can train a high school or college graduate.
- We know we can make money at $20/lb; we would be in operation at today's prices with this method.

Students left at this point

Pros & Cons: Community Input

Longhole Stoping

Pros:

- Have time to make this the best it can be and keep up with technology
- Workers seem to be safe from radiation

Cons:

- Potential harm to workers over the long term.
- Concern abut health of miners, related to ventilation, lighting and monitoring.
- Safety.
- Health inspectors need to visit the mine, and individuals should know their radiation readings.
- Community members need to sit on the safety committee.
- Look into real-time results for dose

Phoenix: Directional Drilling or ISR Mining

- The Phoenix deposit is 400 metres below surface. It occurs as a big pancake 30m wide and 6m thick, similar to Cigar Lake but a lot smaller. There are two zones: A is 400 metres long, B is 300m long. The average grade is 40%, higher than Cigar Lake but smaller.
- At this grade the ore is black and clayey, with some hard parts like pure metal.
- Ground conditions just above the ore body are poor, like beach sand. There is also 400m of water pressure in the sandstone above, similar to Cigar Lake. We cannot open any tunnels or use traditional mining methods.

- Cameco developed a jet bore system (JBS) to mine Cigar Lake, the only mine in the world similar to this. They encountered a lot of technical challenges that caused decades of delays. It was very expensive capital cost-wise. We did a business case and determined that operationally, it would cost about $30/lb to mine so it could not be done at today's prices. It's very complex, and requires high-end technical personnel and skill sets. So we walked away from JBS.
- After looking at other industries, we have two options:
    - **1) directional drilling,** used a lot in oil and gas. A parent hole would be drilled from surface vertically, then turned horizontally until it hit the ore body. It would have a steel casing from the ore body back to surface. A series of 17.5"diameter holes would excavate the ore and backfill the holes with concrete. The next hole would be drilled right beside it. After 4,300 drill holes, the deposit will be mined out.
    - We know it's safe to operate. It's never been done from a radiation perspective, but we know diamond drilling is safe; ore handling is remote.
    - There would be minimal surface disturbance, just a drill pad. This method would require about 150 personnel on surface, including technical, labourers, trades, management, camp services etc. High school and college graduates could do this.
    - There would be no water discharge; the water would be re-used in a closed system for drilling. The ore would still be shipped to McClean Lake, and it would still produce tailings.

    - **2) ISR – In Situ Recovery.** This has been used since the 1960s worldwide, although not for uranium in Canada. In 2011, almost 50% of the global uranium supply was mined through ISR. It's used in the States, Australia, and Kazakhstan. It's the trend of where things have gone.
    - Based on the regulations from the States, we think it will be doable.
    - Peter explained the ISR process, which uses injections wells and recovery wells. Monitoring holes ensure the mining solution does not escape the area. If it does, we can shut off injection, reverse it, or increase pumping from recovery wells. It's very flexible.
    - The plant is about one-third the size of a football field. Inside is piping and tanks. They add the reagents are similar to those used in mills up north, and precipitate yellowcake.
    - Once the deposit is mined out, we keep pumping and treating, and pump clean water back down, recycling it. This eventually, over years, restores the groundwater to its natural state.
    - At Wheeler River, the groundwater around the orebodies is already contaminated – not safe to drink of for wildlife, so it has to be treated before release. The amount of water released to the environment would be minimal. To be able to return the area to the natural state would be less challenging. In Wyoming they're pulling it from a drinking water aquifer so they have to return it to drinking water quality.
    - **Advantages:** We know it's safe; other countries are doing it. Radiation-wise it's safe because its done remotely. Environmentally it causes very low disturbance. The big thing: there are no tailings; the solution goes back down. It's low-cost and sustainable. We know we could operate at any price point. We should be able to do it without highly technically trained people.
    - It would be the first such method for uranium in Saskatchewan.

<u>Questions/Comments</u>

How many exploration camps do you have in our area?

- **P. Longo:** One at Wheeler River; about six around the eastern Athabasca region. Not all are permanent.

I have worked for contractors; we never could become shifters, or progress. We always had to work hard, but shifters always came from somewhere else. We have to look at it from a different perspective so we don't have to stay in one area and do one thing.

- **P. Longo:** If you can work on the training and development and get the experience, the sky's the limit on what you can do. I started at the bottom and worked my way up.

Today's kids are more technical so they can get more technical jobs.

- **P. Longo:** Absolutely. A lot of the work is done remotely on joysticks etc.

Is this company controlled by another country?

- **P. Longo:** We're a publicly traded Canadian company. I'm from Saskatoon; we have a team in Toronto. We've been here a long time. Cameco is also Canadian. There are dozens of uranium exploration companies that are Canadian.

What do you do with secondary mineral deposits – e.g. re-mine tailings for gold.

- **P. Longo:** There are secondary ones at both deposits, but it's primarily uranium.

Would it be an expensive site?

- **P. Longo:** Less than a JBS. In today's market we would still be running. We're sustainable.

Northlands College had an oil rig for training.

Which part of Africa are you in?

- **P. Longo:** None any more. We were in Mauretania, Tanzania. We sold our international assets.

How long is the training valid for? Is the training readily available in the region? We have to engage Northlands College or Northwest College; that might be another opportunity for Northlands College Mine School. Maybe we can form partnerships to buy equipment and train locally.

- **P. Longo:** We have years to work out these things.
- **M. Liskowich:** Right now this is at the infant stage. They're working out whether or not it's a feasible option. Even if it is, we still have the four-year environmental assessment process.

When will you sign a Surface Lease Agreement?

- **M. Liskowich:** That comes after the environmental assessment. Once we are approved by the minister to proceed, then the province and the company negotiate for a surface lease. Denison hopes to get it worked out with the impact communities before that.

There is confusion around the procurement policies in the province. I think they've done away with surface lease agreements.

- **M. Liskowich:** They're still there. The company makes commitments to the province within the surface lease regarding northern procurement northern employment and training. Industry is evolving and making agreements outside the SLAs, but one does not offset the other.

Are the SLAs within the NAD line?

- **M. Liskowich:** If it's south of the NAD line, you buy the land or make an agreement with the owner of the land.
- The Government Relations Northern Engagement Branch deals with surface leases.

With all the exploration claims, is there any policy regarding use it or lose it?

- **P. Longo:** We have to spend a certain amount on the property each year in order to maintain the claim. If we don't, it lapses and someone else can claim it. We have to report annually on how much we spend.
- **M. Liskowich:** It has to be justified spending.

There's no underground, so it seems better from a health and safety perspective.

It's cheaper, safer, cleaner – that's the future of drilling. But a lot of people don't know about it, so how do we educate our students who are looking at careers? Communication to the northern communities is important.

- **L. Willemse:** Communicate the ideas and the training information?

Multiple conversations – inaudible.
Discussion of radiation protection.

With all the procurement opportunities throughout your life cycle; look in your back yard first. The supply chain stuff is very important, and northerners can supply some of the goods and services needed. A plug for our local development corporation – they have a security contract, a joint venture through Flyer Electric, catering; we have a market garden where we sell $30,000 of fresh fruits and vegetables in the community; the fish processing plant sells fresh fish. You could use that now.

We were making coveralls for the mines at one time, sponsored by Sask Abilities.

- **P. Longo:** That's part of the MOU process. We can share what work is coming up for us. Let's buy what we're buying up north. It makes sense for us and for you.

There's also a land use framework – LUP – every community is going to be mapped, including traditional land use. Ile a la Crosse has one partially completed.

- **P. Longo:** We have incorporated the ones we've received. We're happy to be part of that, in conversation and financially, and to make sure our project respects the land uses that are there.

The one important pillar is community investment. I don't know if Cameco and AREVA do it enough, but we're looking at a new and different way. Community investment offers long-term solutions.

- **P. Longo:** That's the world today, and we're happy to do it. We have to run an economic business, and everyone can benefit from that.

What type of worker education is required for ISR mining?

- **P. Longo:** The plant we visited in Wyoming used high school or college grads. You don't need PhDs etc.

How similar is this to SAGD (steam-assisted gravity drainage), used in recovering oil?

- **P. Longo:** Very different. They pump steam in under pressure to liquefy the oil. We will be drilling 3" holes every 10-15 feet and using water at normal pressure.
- **M. Liskowich:** No rock is taken out of the ground. It's also used in uranium mining.
- **L. Willemse:** We pump in a solution to dissolve the uranium from the formation. It is then carried in the water that gets pumped out. In situ just means inside, so it means the recovery is happening within the deposit.

How close is it to fracking?

- **P. Longo:** Not at all. Fracking uses high pressure; there's no pressure in ISR except the natural water pressure.

Is the geology in Wyoming the same as at the Wheeler River site?

- **P. Longo:** They're similar, but different. They were 400-1200 feet below surface; we're 400 metres.

Why is the Wheeler River water not good?

- **M. Liskowich:** It's groundwater interacting with the ore body.
- **P. Longo:** This is not surface water; it's the natural groundwater flowing through the cracks in the ground. The Wheeler River is not affected.

You will write agreements for things like training? No small print?

- **P. Longo:** The intent, after the MOU, is to work out an agreement with every community.

Have there been any major safety issues?

- **M. Liskowich:** The studies are under way now to determine if it's a method that will work in this deposit. Every deposit is a little different. If it can be done, it's a good option. It would be

the first uranium deposit in Canada to be mined this way. A similar technique is use din southern Saskatchewan in three potash mines.

Would you need individual environmental assessments for Gryphon and Phoenix?

- **M. Liskowich:** You could do it separately or as one package.

Pros & Cons: Community Input

1. Directional drilling

Pros:

Adult Group

- People who were trained on oil and gas could transfer their skills. Northlands College has a relevant program.
- Does not have much of a footprint
- Cleaner and safer
- Can use the local supply chain.

Cons:

Adult Group

- Possible higher repair and maintenance costs.
- Concerned about skills transfer from the oil and gas industry (how long licenses last, local training).
- Have to educate people about the mining method and training that's needed.
- People don't know this is a career option.
- Uncertainty about radiation safety.

2. ISR (In Situ Recovery):

Pros:

Adult Group:

- We know it works in other places
- No major safety issues
- No waste piles.

Cons:

Adult Group

- Not enough information to understand the pros and cons.

Overview:

- People will have a lot of questions because it hasnlt been done in Canada.
- Lab work is still ongoing.

Baseline Environmental Data: Lea Willemse

- To establish whether we have an effect on the environment when we mine, we need to understand what's there now, to establish a baseline. In the past two years we have done a lot of studies. We hired terrestrial and aquatic biologists, archaeologists, hydrologists, geologists to use their expertise to give us that data to establish what's at site at present.
- **Heritage survey**: The Saskatchewan Conservation Branch required an archaeological assessment of the project areas to be impacted by development, and around areas with potential cultural significance. We did hundreds of surveys around proposed road routes and areas where your ancestors would have hunted and fished. We found one artifact. They assessed it and found it to be pre-contact and of little interpretive value. It led to a more detailed search of the area. It was not in the area we would develop on; it was next to a lake and we would never develop that close. The Conservation Branch issued clearance to proceed.
- We are actively monitoring atmospheric **radon** all around the project area. The analysis showed the highest level was less than 7 bq/m3 vs. Health Canada's indoor guideline of 200 bq/m3.

- **Aquatic Environment:** We surveyed lakes, ponds and rivers for depths and elevation. The deepest was Krachkowski Lake, the shallowest Lake 6. The ponds were shallow. The data used in the hydrology assessment was used in our discharge location evaluation. They measured stream flows in 13 lakes, two ponds and 16 watercourses; currently, flow metres are installed at eight locations.
- **Water quality:** We analyzed a number of parameters, and established background levels for metals, including mercury. We know the surface water quality right now before we start working around and discharging to them.
- **Sediment:** We analyzed for metals, radionuclides; all were at or below Saskatchewan sediment quality guideline values. We assessed the type of sediments; silty clays and sandy silts.
- **Phytoplankton:** The algae in water and on rocks; food for bugs. We found 55 types of phytoplankton and 32 types of zooplankton, all consistent across the site. The waters are all flowing and connected.
- **Benthic invertebrates:** They feed on plankton. There is a very high number, 1000 to 10,000 per cubic metre. That's food for fish. Numbers and species are consistent around the site. We have a very healthy and sustainable ecosystem with low levels of metals and radionuclides.
- **Fish:** Northern assistants helped with this survey, which found 13 species of fish. Some prefer the streams vs. the lakes. We completed spawning surveys because we want to avoid those areas. We found a healthy fish community with a lot of food. It was catch and release except where they needed tissue samples. Lake trout, pike, arctic grayling and burbot.
- **Groundwater:** We looked at shallower groundwater around the project facility rather than the deeper groundwater around the orebody. There are level loggers in wells right now. We drilled four wells and analyzed for metals, dissolved metals, major ions, and radionuclides.
- **Terrestrial baseline:** Done on an area of 400 sq. km vs. 48 sq. km for the project area. The predominant land cover is 52% jackpine, blueberry, lichen; a smaller percentage water, then jackpine. The same in the local study area but different percentage, higher jackpine, blueberry, lichen coverage. Samples of blueberry, lichens and soil were tested for radionuclides.
- **Pellets:** We found grouse/ptarmigan, woodland caribou, moose. We counted scat to find out what type of vegetation was preferred and what time of year it was eaten. E.g. caribou and moose select boggy areas in summer where there's water and it's cooler.

Questions/Comments

I go to climate change meetings in different provinces; I hear the science. But the cultural side of it is never talked about, the plant uses etc. I would like to see them both come together.

- **L. Willemse:** It is taking place; there is a good documentary called Inuit Knowledge and Climate Change. They interviewed Baffin Island Inuit regarding their knowledge and the way they traditionally use the land, and changes they've seen over their lifetime. They incorporate traditional knowledge from their ancestors. I have a copy and you can download it.

We are going to do same thing; it's called guardianship. Mining should use that same model to work with cultural people.

- **M. Liskowich:** We're very cognizant of that. We are trying to get hold of existing TK information: English River gave us their territorial map, we are in contact with Pinehouse for their primary area map; we are happy to work with you and Beauval also. It's our intent to integrate all the tradition knowledge we can have access to into the document, to support our environmental studies. We did not include elders on the studies, but we had English River's maps, and much of that information was used. From being involved in other mining exercises in this area, we have a pretty decent understanding of most of the plants and animals that

have a hierarchy in terms of priorities – berry-picking, fishing and hunting areas, for example. We're happy to integrate that information.

Ile a la Crosse and Beauval went through that process with the logging industry.
At the same time, we're behind in the process; the projects are coming faster than ever because the federal government is providing the funding.
Do you have the environmental statistics? Who did the testing?

- **L. Willemse:** Yes. The team is called Ecometrics; they are based in Ontario.
- **M. Liskowich:** The four field assistants came from Patuanak. We had Saskatchewan companies bid but they were too high. We told the company to hire locally, and supplied resumés from English River, Ile a la Crosse, Pinehouse and Beauval.

Are caribou close to the mining area?

- **L. Willemse:** They were found in two transects.

Did you test wild meat?

- **L. Willemse:** No, we didn't want to kill them. The moose testing program is still active in the province. It's voluntary – hunters are asked to send in samples.

Copies of presentation handed out.

Denison Mines

Wheeler River Community Update

Community Workshop

January 16, 2018

AGENDA

Denison Mines

1. **Denison Introduction / Refresher**
2. **Workshop**
   A. **Site Access Road Route Options**
   B. **Treated Water Discharge Location Options**
   C. **Mining Method Options**
3. **Environmental Baseline Data Collection Update**

Denison – Who Are We?

Denison Mines

- **A Canadian uranium exploration & development Company**
  - Public company, but only 5% of the size of Cameco
  - A history of uranium mining, but no active mining operations
  - Several exploration properties in the eastern Athabasca Basin
  - 60% owner and the operator of the Wheeler River Project

Denison – Who Are We?

Denison Mines

- **A joint venture partner with Areva at McClean Lake**
  - Denison owns 22.5 % of the McClean Lake uranium deposits and the McClean Lake uranium mill (shown above) – Areva (70%) is operator
  - In our preliminary plans, Denison has assumed that the ore from Wheeler River will be processed at the McClean Lake mill

Denison – Who Are We?

Denison Mines

- **An operator of a Canadian environmental services business**
  - ~40 employees based in Elliot Lake, Ontario
  - Maintains Denison's closed and reclaimed mine site in Elliot Lake
  - Provides services to mining companies and governments across Canada

Denison – Who Are We?

Denison Mines

➢ A strong supporter of our local communities

- McClean Lake community programs
- Denison procurement from local vendors and personnel in northern communities

Saskatchewan

- Serpent River First Nations – employment, youth education initiative
- Supported creation of a retirement lifestyle community after mining was completed

Elliot Lake

- Supported construction of schools and health offices for local villages
- Drilled water wells
- Leadership roles for local technical & admin staff

Former African Assets

Location

Denison Mines

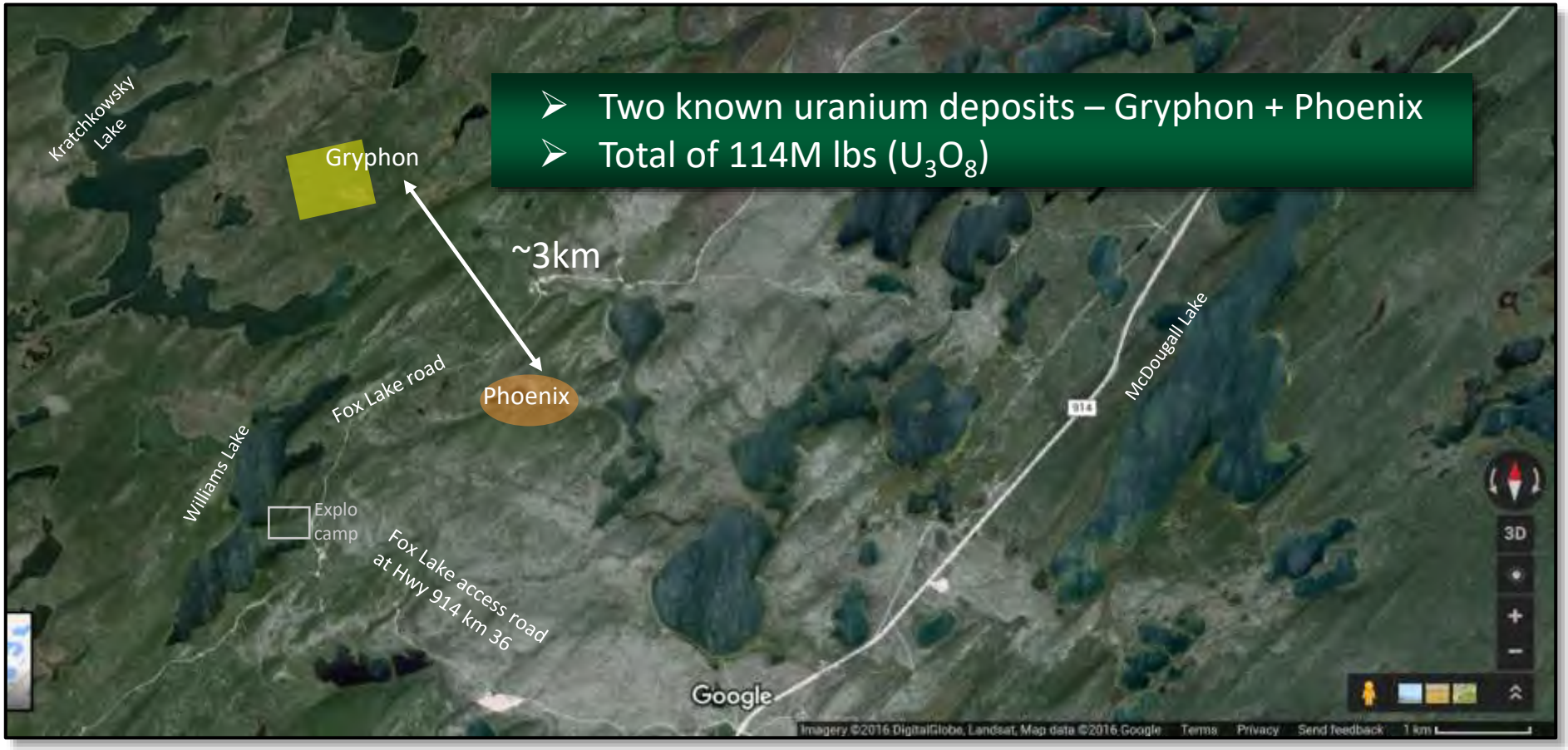
Wheeler River Today: Uranium Exploration

Denison Mines

- Exploration camp
- Drilling in winter & summer

Wheeler River Today

Denison Mines



- Two known uranium deposits – Gryphon + Phoenix
- Total of 114M lbs (U_3O_8)

In comparison

- McArthur River: Produced ~290M lbs, Reserves 234M lbs
- Rabbit Lake: Produced ~202M lbs, Resources: ~70M lbs

2017/2018 Activities

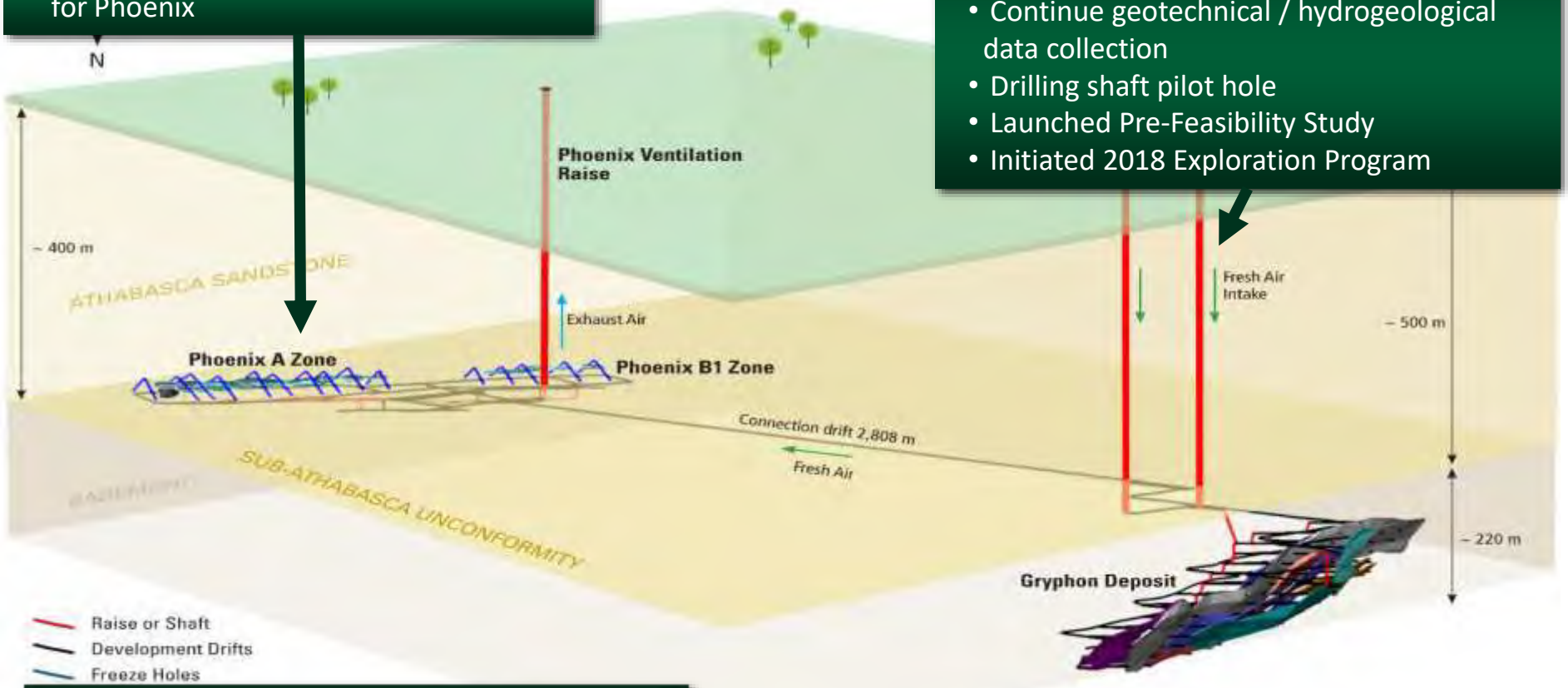
Denison Mines

Phoenix

- Investigating alternative mining methods for Phoenix

Gryphon

- Investigating shaft sinking methodologies
- Continue geotechnical / hydrogeological data collection
- Drilling shaft pilot hole
- Launched Pre-Feasibility Study
- Initiated 2018 Exploration Program



Other Work

- Conducting advanced metallurgical test work
- Complete Surface facilities design
- Complete Water treatment plant design

Wheeler River Future

Denison Mines

- Small footprint
- Mine, Camp, Water Treatment Plant

Wheeler River: A Long Term Proposition

Denison Mines

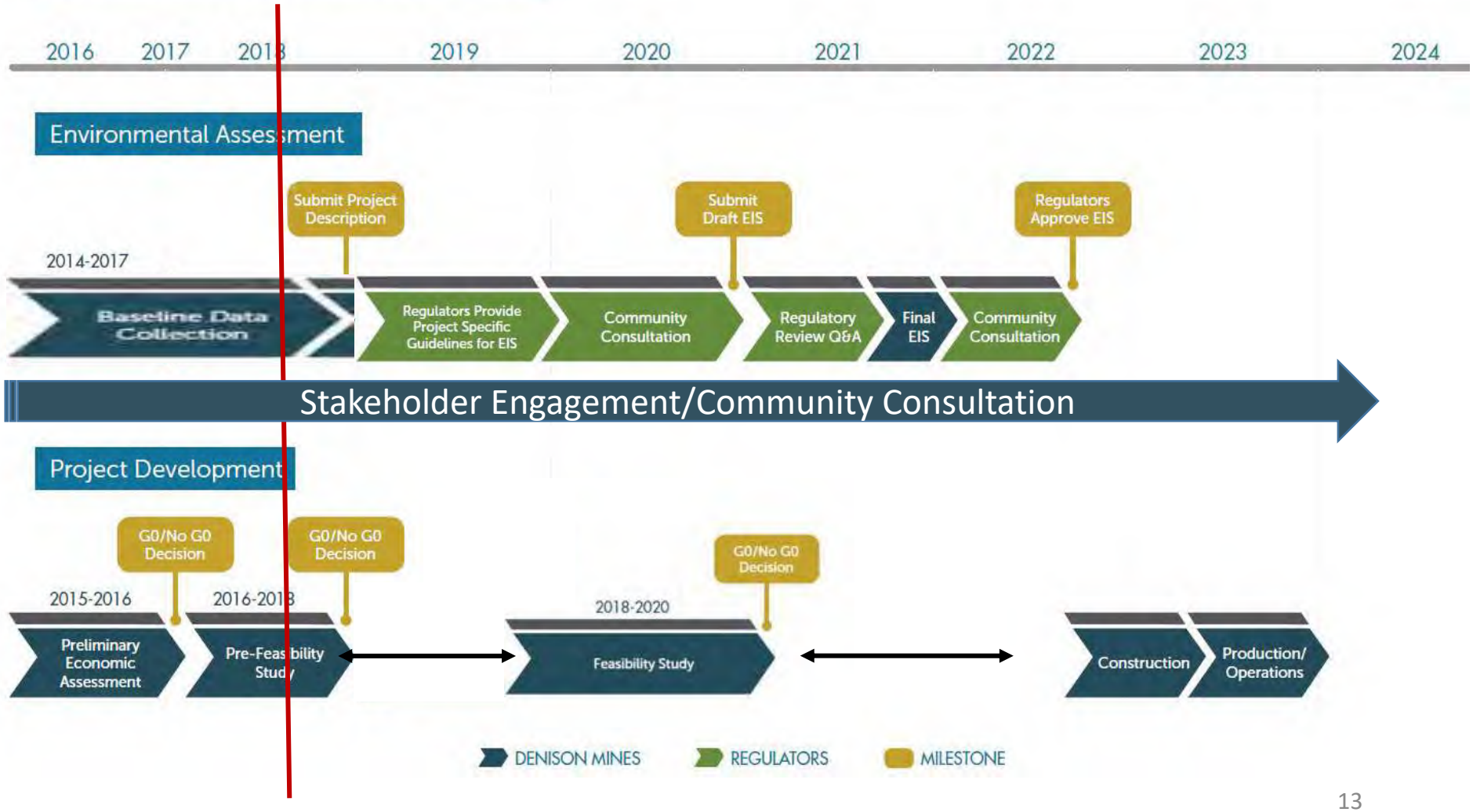
- Initial and sustaining capital costs ~CAD$1.13 billion
- First uranium production projected by 2025/2026
- Operating costs expected to average US$19/pound U_3O_8
- Uranium spot price quoted at ~US$20/pound U_3O_8

➢ **Denison believes in the future of nuclear energy and is investing in the people and the province of Saskatchewan, despite historic low uranium prices and difficult market conditions**

Wheeler River : A Long Road Ahead

Denison Mines

Wheeler River Project Timeline



Northern Capacity Development

Denison Mines

1. Denison
   - Drill camp supplied by the Beauval General Store
   - Worked with Drill Contractor to run a Drill Training Program, 2 northerners trained in fall, more to come
   - Employed northerners for baseline field program support
   - Supported career days last fall in Patuanak
   - Financially supported the IRM Program (BEAHR Program)

2. Denison Procurement: New contracts require
   - Competitive Costs & performance
   - Maximize northern employment and procurement of goods
   - Preference for northern ownership stake

Northern Capacity Development

Denison Mines

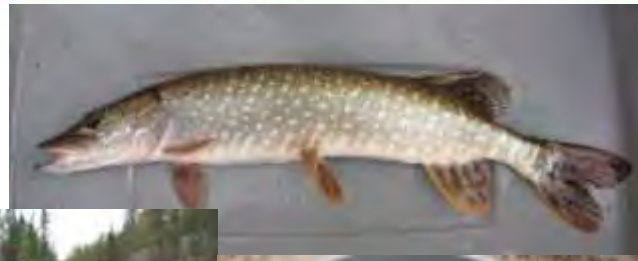
- Communities Requested Formal Agreements: Denison Issued Draft MOU (Memorandum of Understanding)
  - Formalize intent for Denison and Communities to work together in spirit of cooperation and respect
  - Sets the stage for an IBA (Impact Benefits Agreement) following the advancement of the project. Focus on 4 main areas:
    - Environmental Sustainability
    - Employment, Education and Training
    - Business Opportunities
    - Community Investment
- Draft issued to four communities/First Nations
  - Pinehouse, Ile a la Crosse, Beauval and ERFN
  - 2 signed, 2 remain under review

EIA Update: Baseline Environment

Denison Mines

Aquatics

- Hydrology ✓
- water quality ✓
- lake bathymetry ✓
- sediment quality ✓
- benthic invertebrate communities ✓
- benthic invertebrate chemistry ✓
- fish community ✓
- fish tissue chemistry ✓



EIA Update: Baseline Environment

Denison Mines

Terrestrial

- ecological land classification ✓
- breeding bird surveys ✓
- ungulate pellet counts ✓
- winter tracking surveys ✓
- aquatic furbearer shoreline surveys ✓
- small mammal trapping & chemistry ✓
- amphibian surveys ✓
- characterization of terrain and soil types ✓
- vegetation and soil chemistry ✓
- vegetation community ✓

Heritage

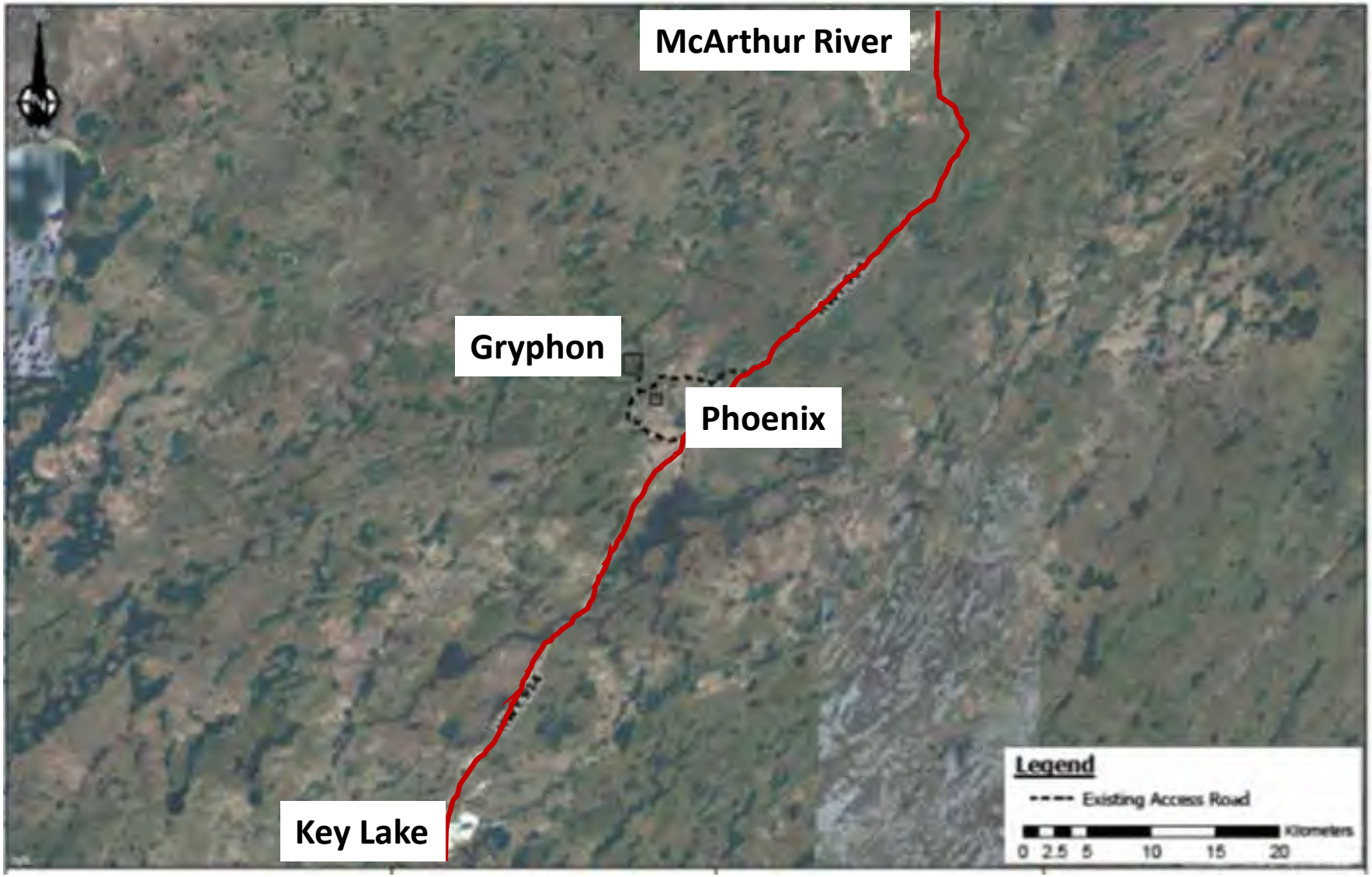
- heritage resources assessment ✓

Denison Mines

Site Access Road Options

Wheeler River Road Access Alignment

Denison Mines



Wheeler River Road Access Alignment

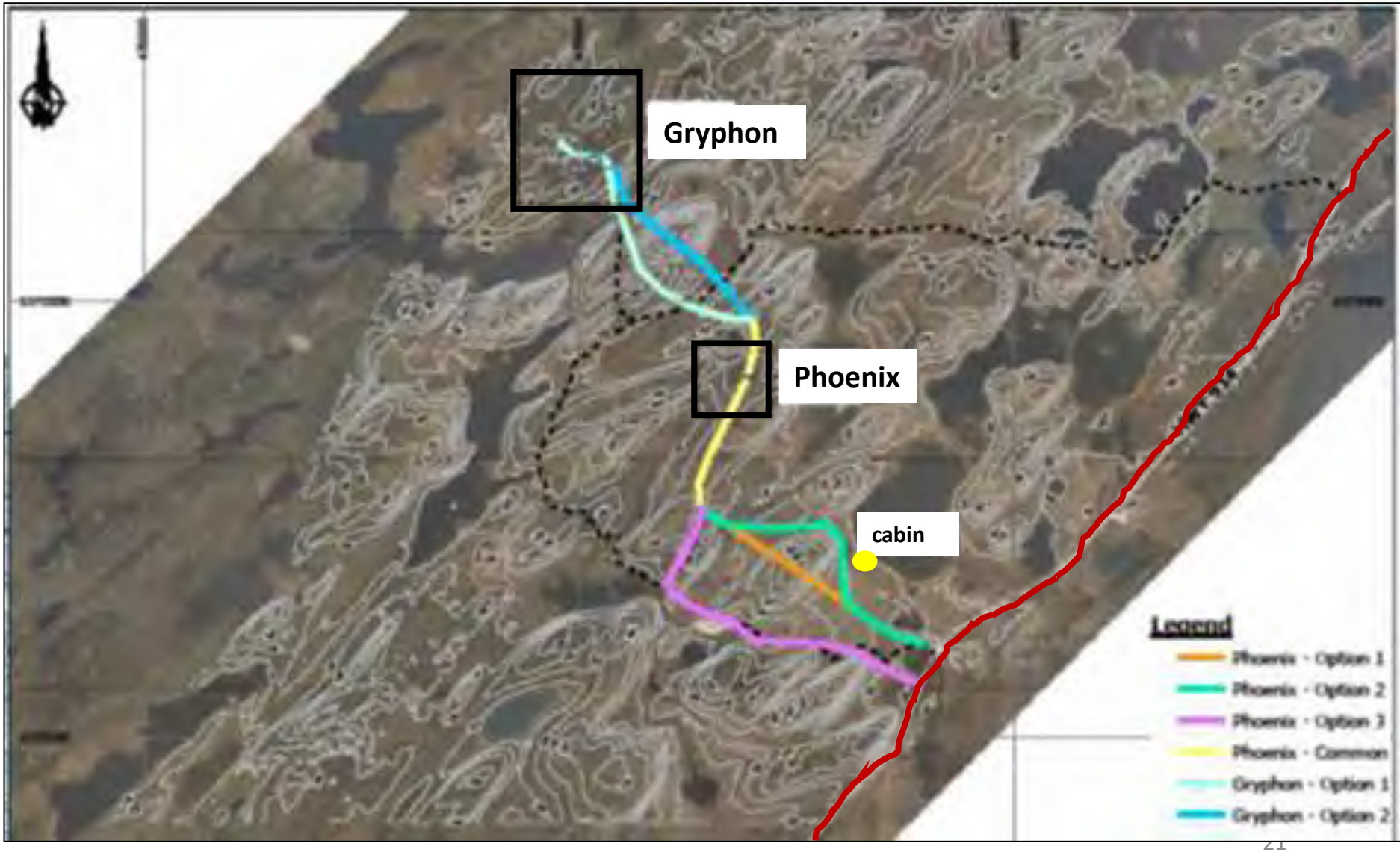
Denison Mines

- Constraints
  - 10 m wide
  - Slopes of cuts must be 3H:1V
  - Grade must not exceed 7%

- Considerations
  - Stream and river crossings, how many, how big
  - Proximity to lakes
  - Proximity to Cabin

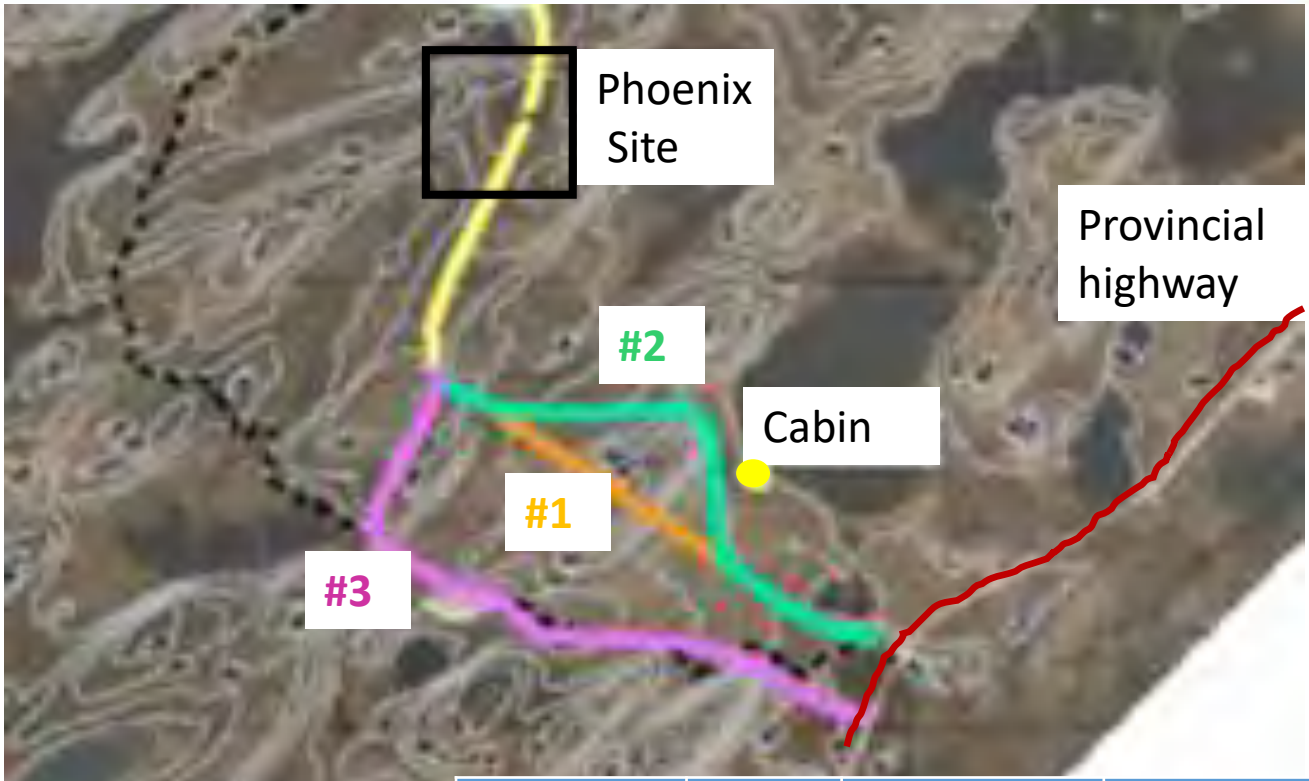
Wheeler River Road Access Alignment

Denison Mines



Wheeler River Road Access Alignment

Denison Mines



	Length	Dirt Moved	Streams	Distance to Water	Cabin
Phoenix Option 1	5.3 km	870,000 m^3	No crossings	200 m to lake	500 m
Phoenix Option 2	5.7 km	15,000 m^3	No crossings	140 m to lake	250 m
Phoenix Option 3	6.4 km	20,000 m^3	No crossings	200 m to lake	1000 m

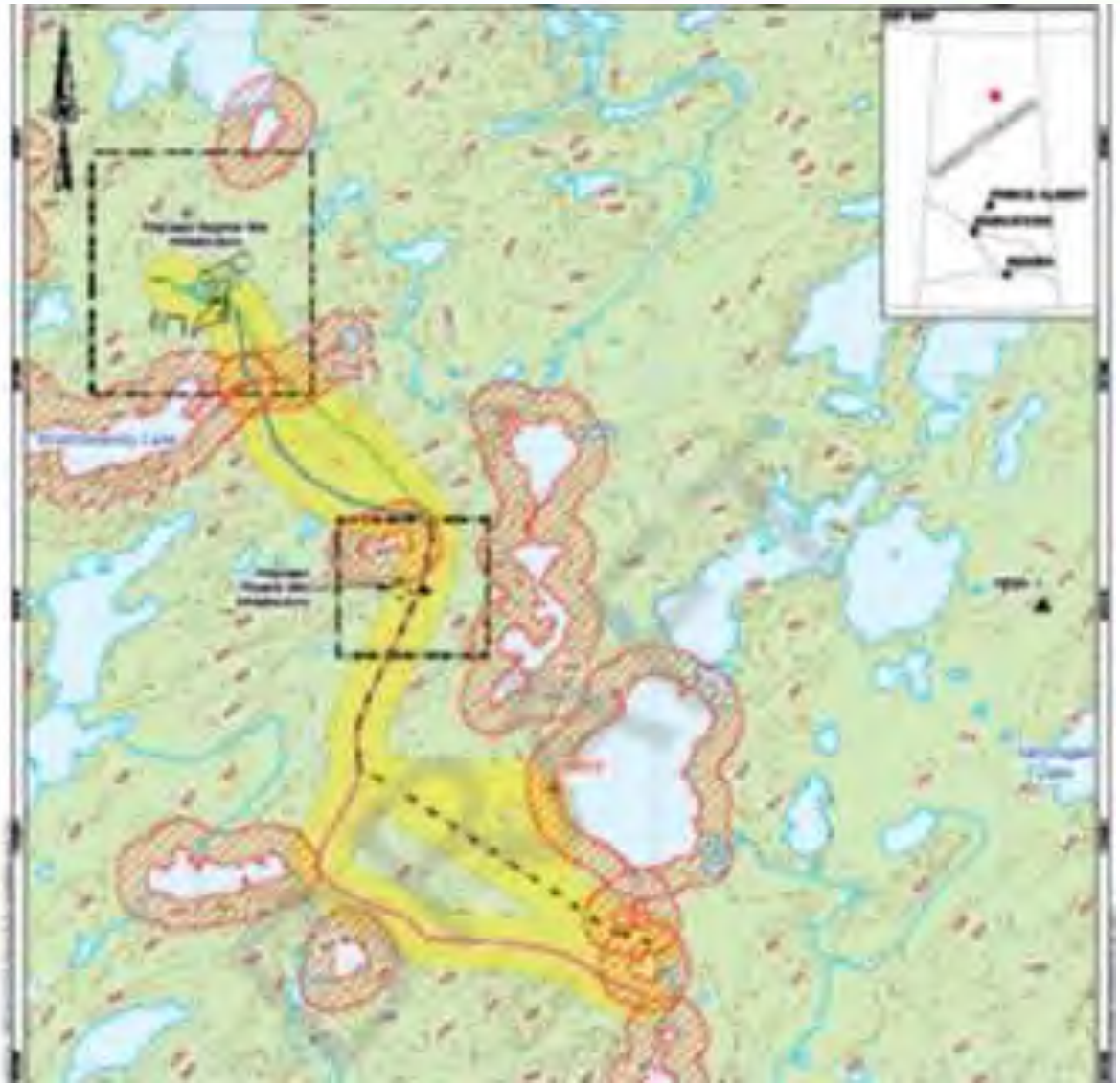
Wheeler River Road Access Alignment

Denison Mines

	Length Km	Dirt Moved	Streams	Distance To Water
Gryphon Option 1	3.3	265,000 m^3	1 crossing (existing bridge)	25 m
Gryphon Option 2	3.1	1,000,000 m^3	1 crossing (existing bridge)	200 m

Wheeler River Road Access Alignment

Denison Mines



Denison Mines

Treated Water Discharge Location Options

Discharge Location Options

Denison Mines

- Potential locations for treated water discharge were identified and assessed for:

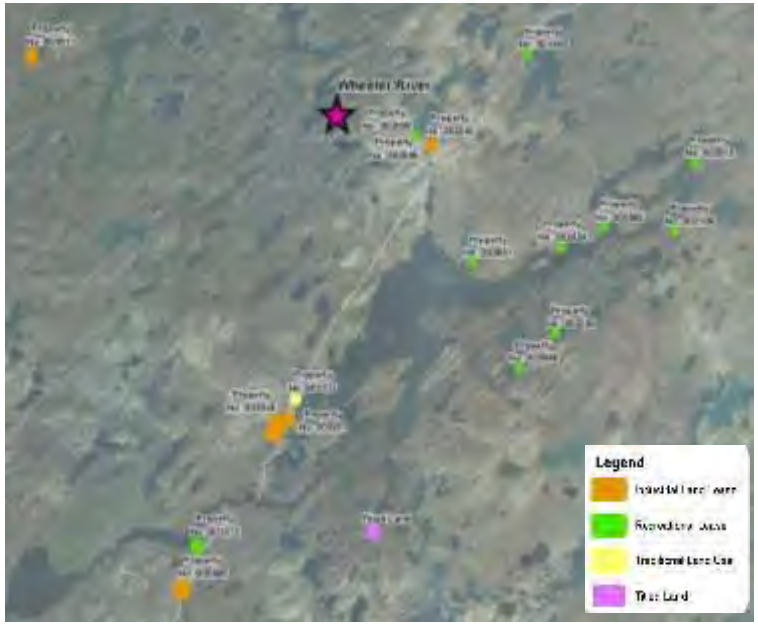
1. Preliminary understanding of land uses
   - Traditional territories
   - Trails, trap lines, country food harvesting, angling
   - Cabins, camps
   - Industrial properties
2. Potential impacts to water quantity and quality
   - Avoid locations with low flows
   - Minimize increase in flows
   - Meet provincial and federal water quality guidelines
3. Potential impacts to fish and fish habitat
   - Avoid spawning habitat

ROC4

Discharge Location Options
Traditional Knowledge and Land Use

Denison Mines

- Preliminary understanding of land uses from:
  - ERFN traditional territories map
  - Land disposition map
  - Observations during baseline (2016-2017)



Discharge Location Options
Identification

ROC4

Denison Mines

1. Preliminary factors:
   - Capacity (size of lake)
   - Watershed area (drainage)

2. Fish Spawning Grounds
   - Avoid

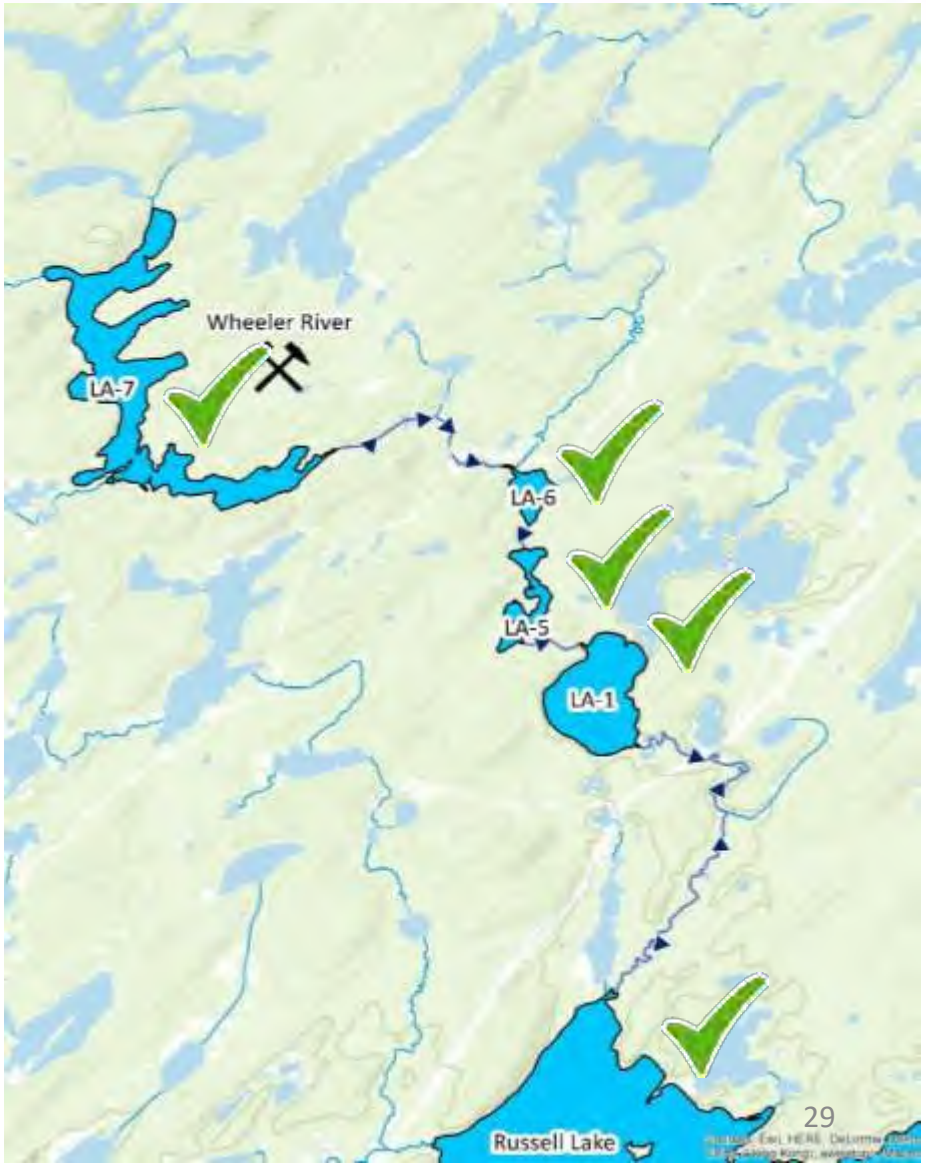
3. Flow Capacity
   - Can't be more than 50% treated

ROC4

Discharge Location Options
Preliminary Results

Denison Mines

- LA-7, LA-6, LA-5, LA-1 and Russel Lake
  - Are environmentally safe to discharge into
  - Meet provincial and federal water quality guidelines
  - Avoid spawning habitat
- Community Considerations:
  - Cabins & fishing on Russell lake
  - Length of pipeline and disturbance to land
  - Other?



Denison Mines

Mining Method Options

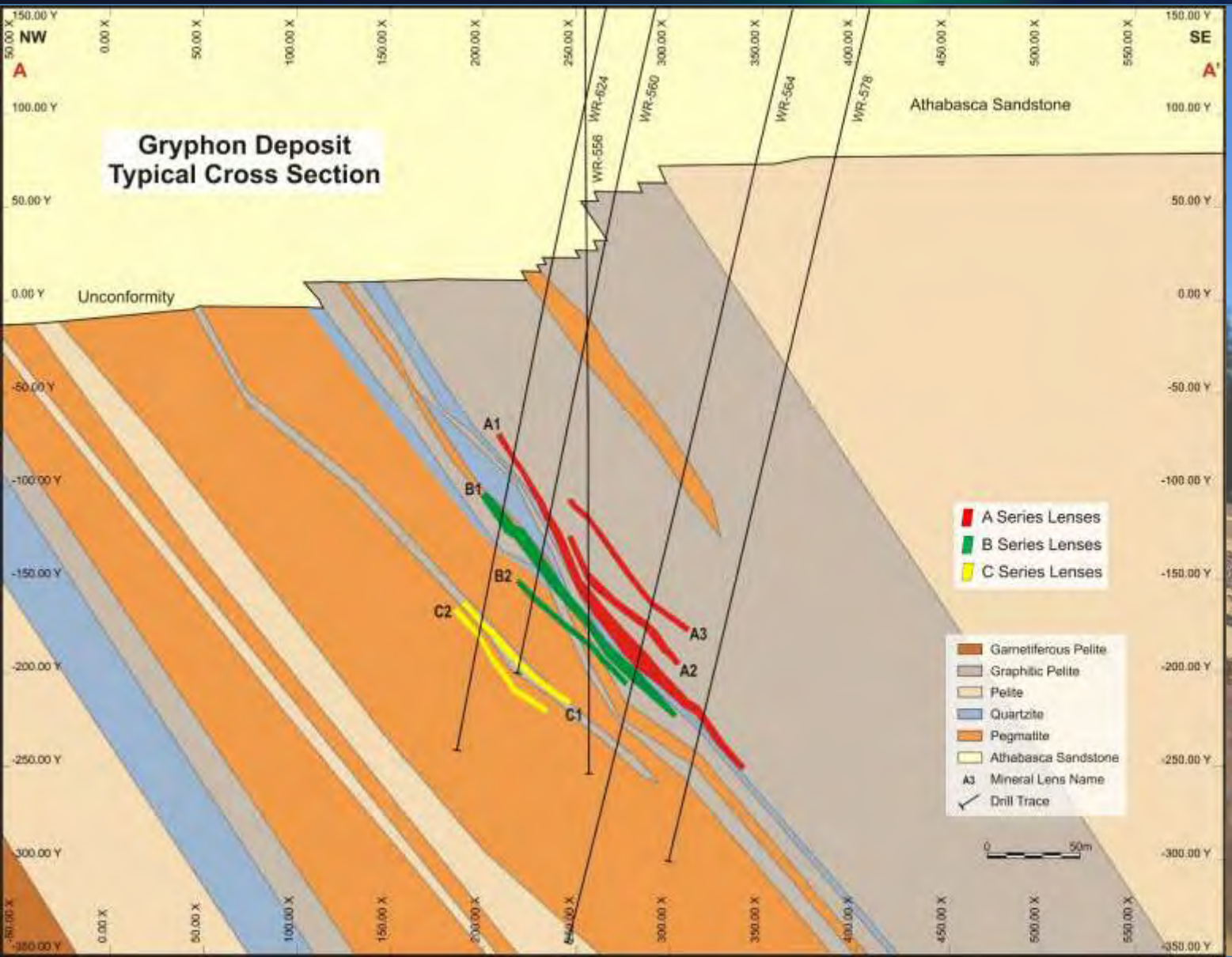
Mining Method Options

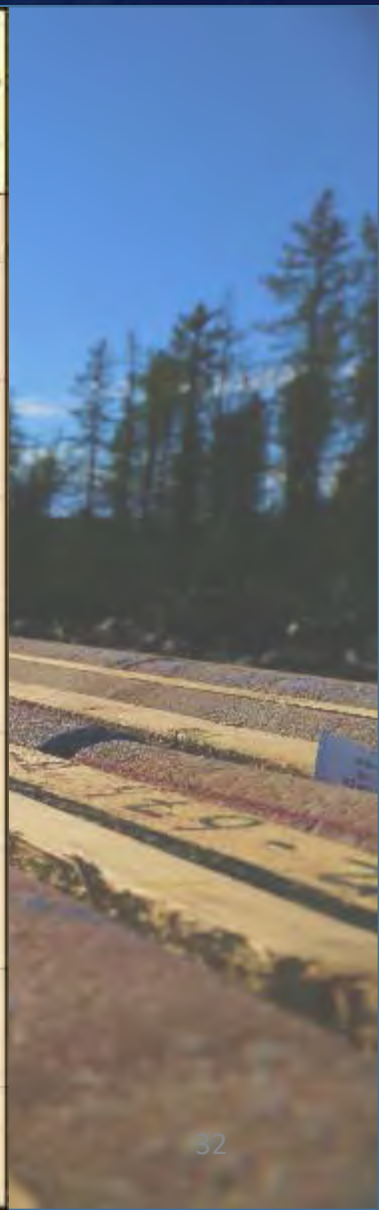
Denison Mines

Gryphon:	**Longhole Mining**
Phoenix:	**Directional Drilling**
	Insitu Recovery

Gryphon - Geology

Denison Mines





Mining Method – Gryphon Deposit

Denison Mines

Athabasca sandstone

Unconformity
(approximate)

Vent raise
550m

Production shaft
583m

Basement rock

Loading pocket

Main ramp

-43m elev

-60m elev

Exhaust raise
system

Connection drift to Phoenix
(foreshortened in this view)

15m mining
sublevels

Gryphon deposit
9 stacked lenses

Fresh air
raise system

-270m elev – mine bottom

Gryphon Longhole Mining Method

Denison Mines

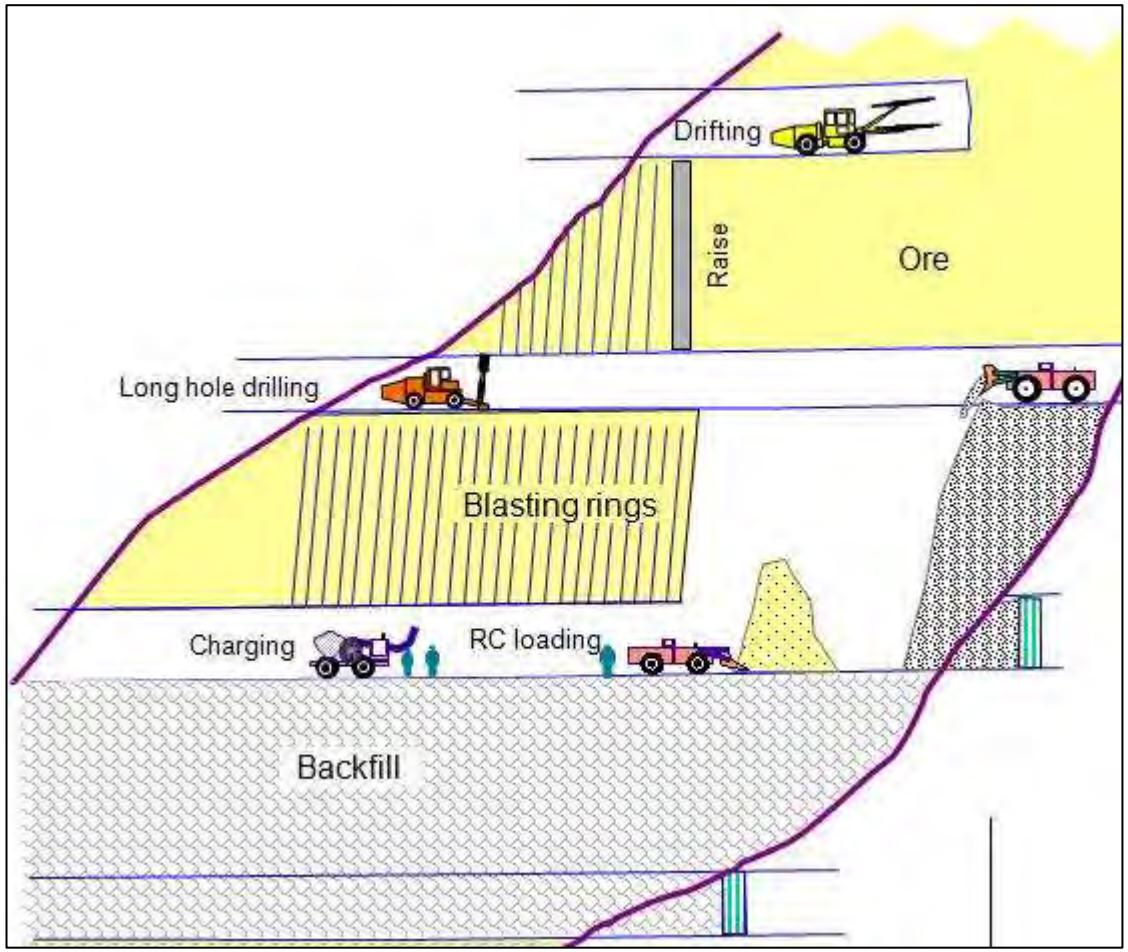
Step 1: Develop (drift) tunnels above and below the ore

Step 2: Drill holes between the two tunnels

Step 3: Load holes with explosives, blasting the ore

Step 4: Excavate (muck) out the ore

Step 5: Backfill opening



Gryphon: Longhole Mining Methods

Denison Mines

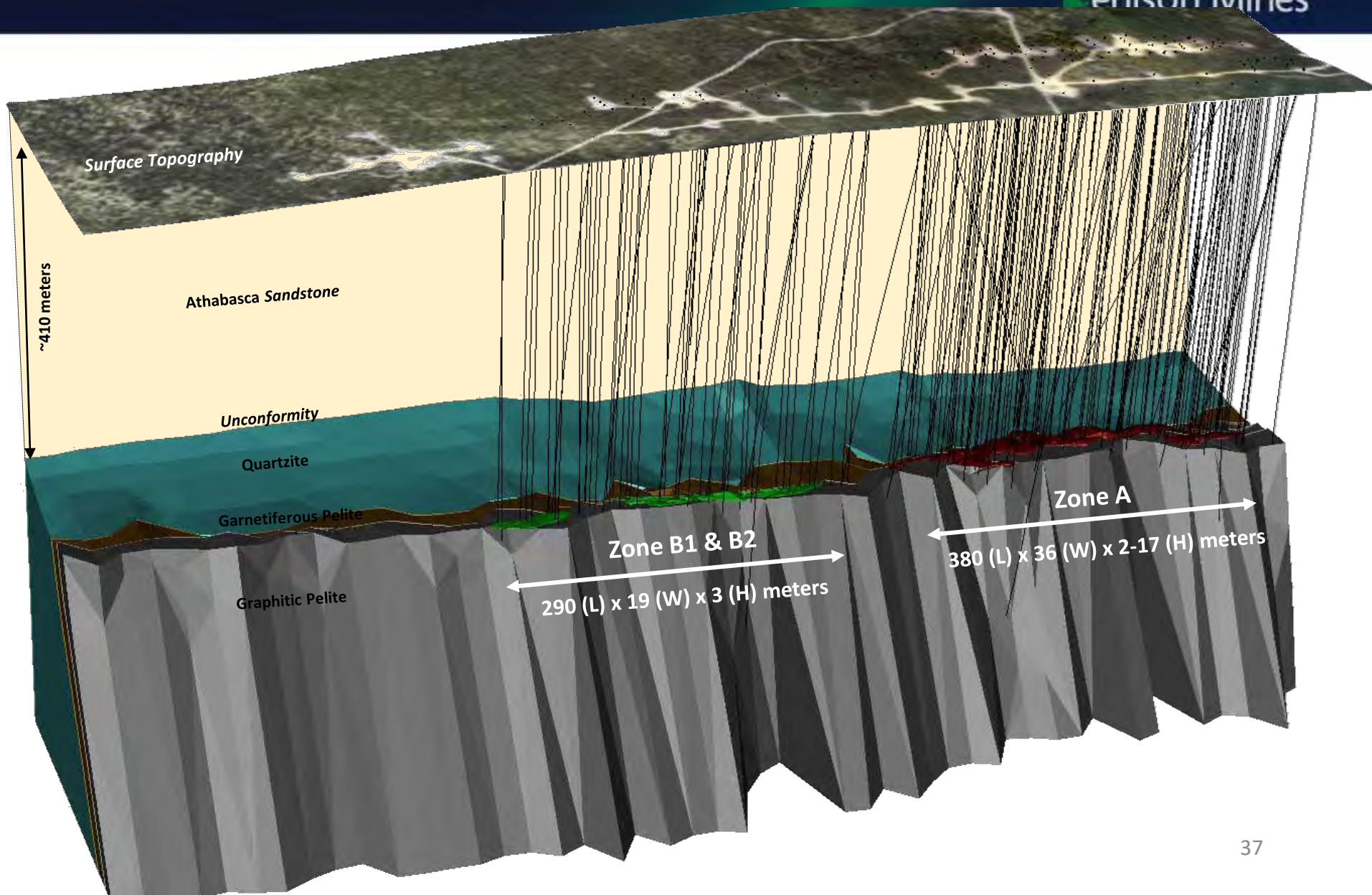
- Considerations:
  - Safety: Well established practices, equipment and procedures throughout Canada and the global mining industry
  - Radiation Safety: Proven safe, CNSN approved
  - Environmental: Minimizes waste rock on surface – can be used as backfill
  - Economics: Low cost, sustainable at current market prices
  - Industry Employment: No special skills / education required,

Mining Method Options

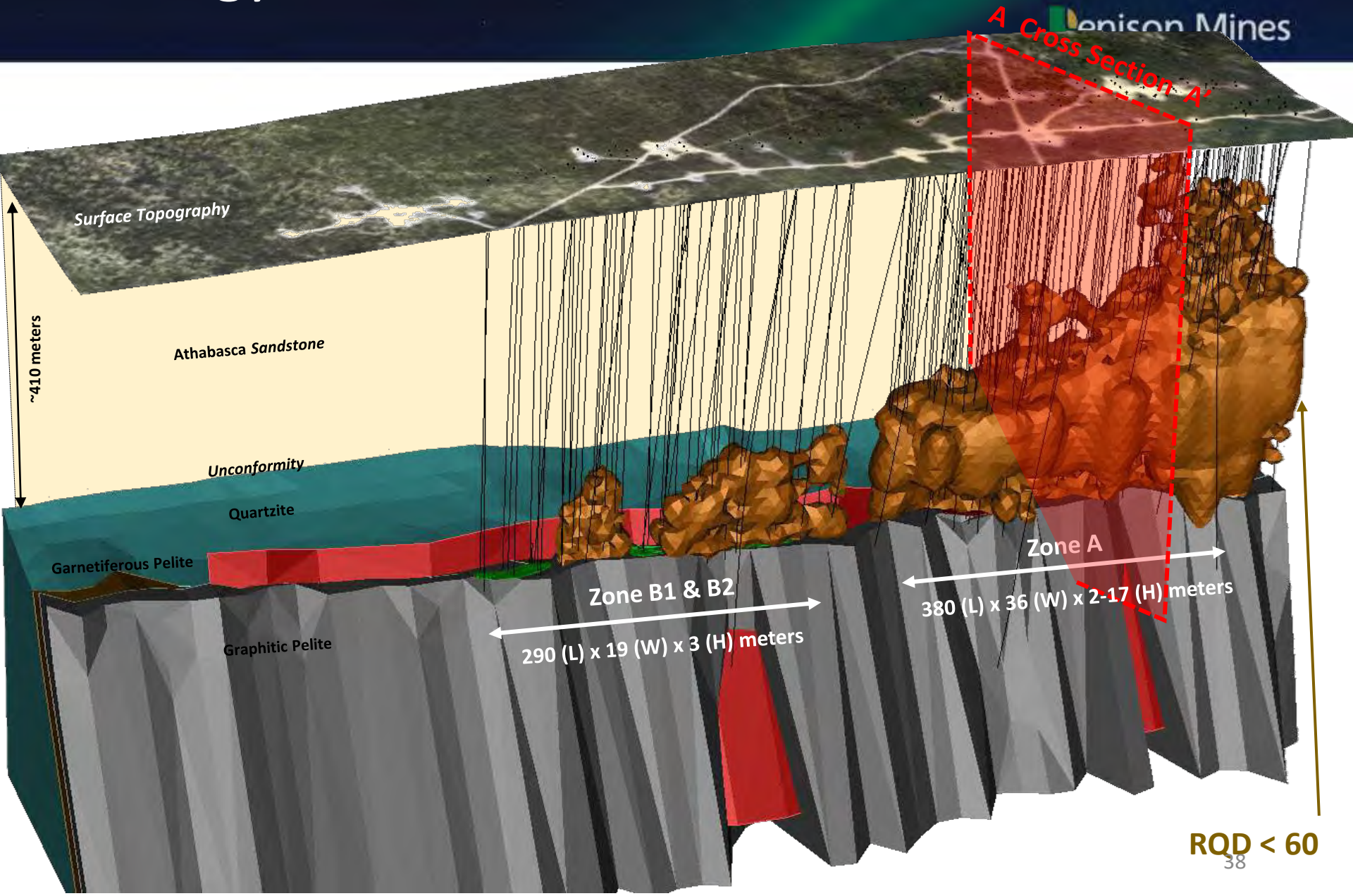
Denison Mines

Gryphon:	**Longhole Mining**
Phoenix:	**Directional Drilling**
	Insitu Recovery

Geology and Mineral Resources

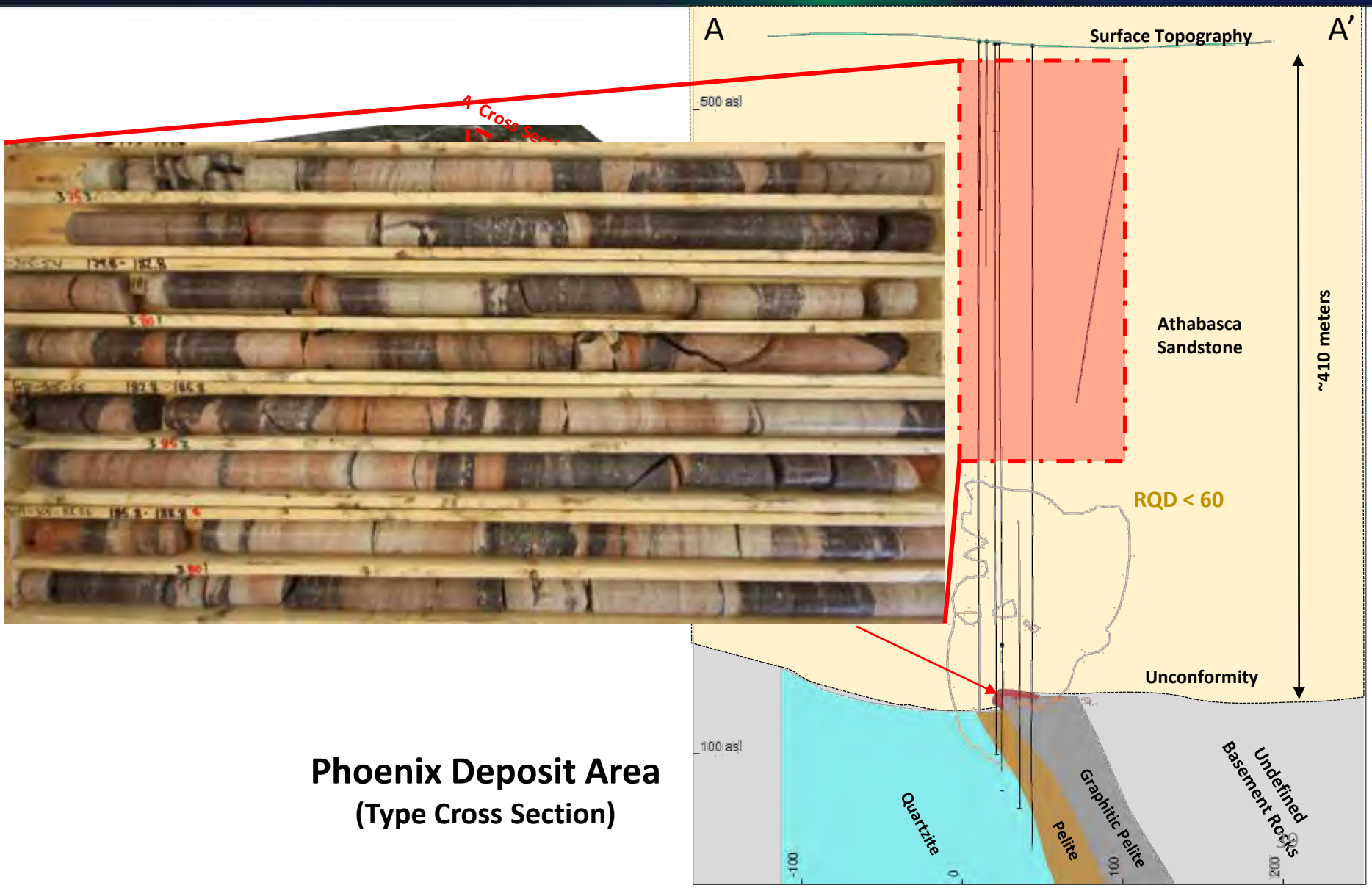


Geology and Mineral Resources



Geology and Mineral Resources

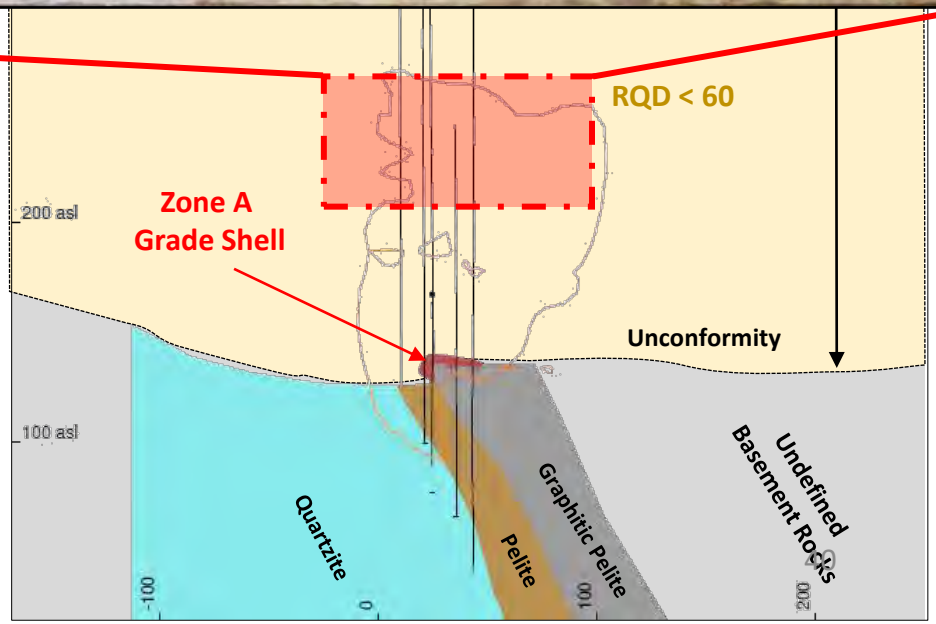
Denison Mines



Phoenix Deposit Area
(Type Cross Section)

Geology and Mineral Resources

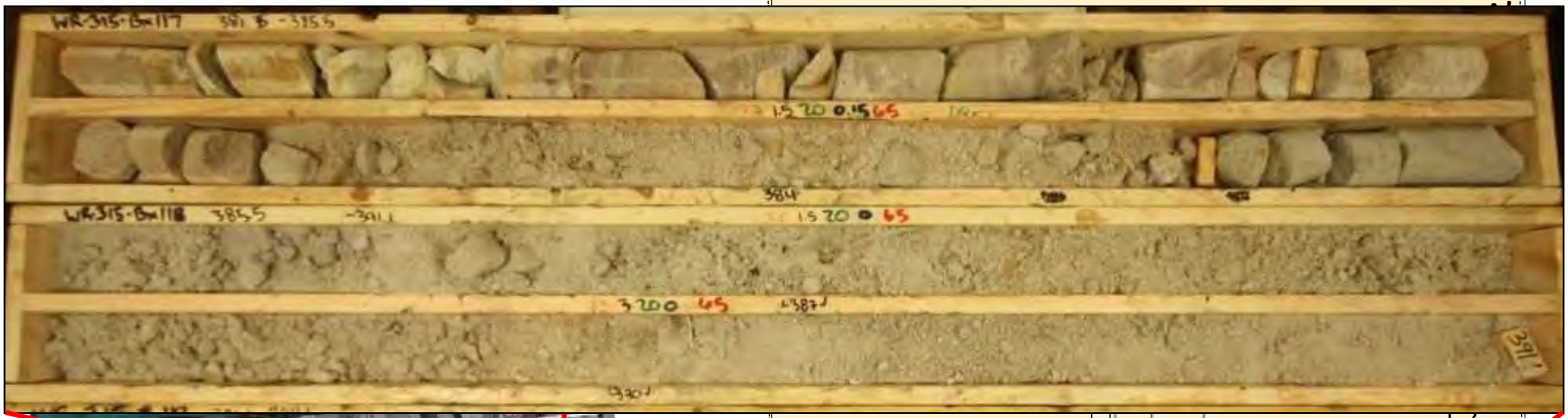
Denison Mines

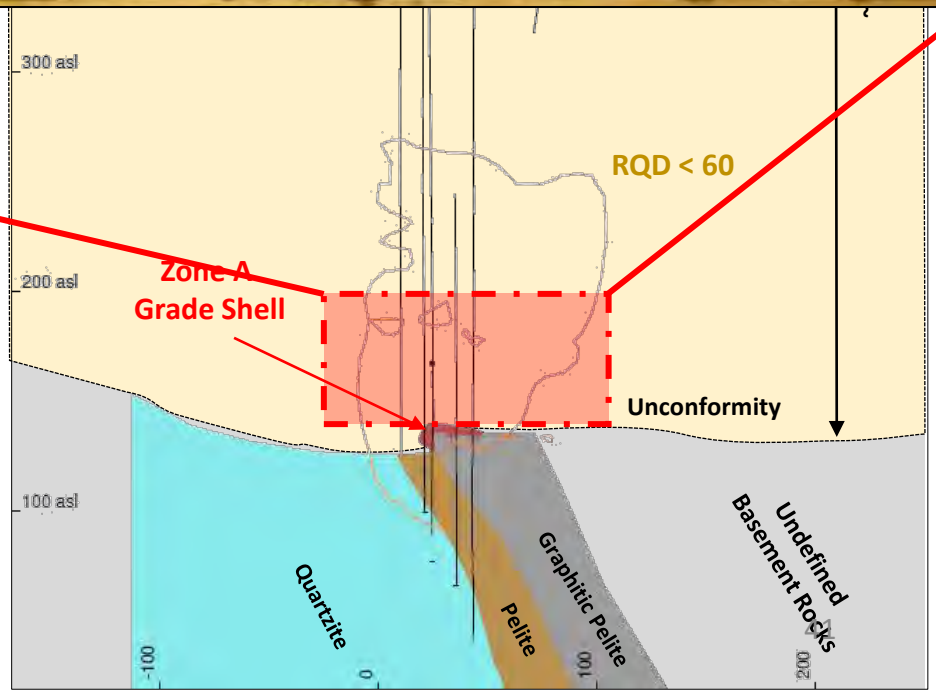


Phoenix Deposit Area
(Type Cross Section)

Geology and Mineral Resources

Denison Mines

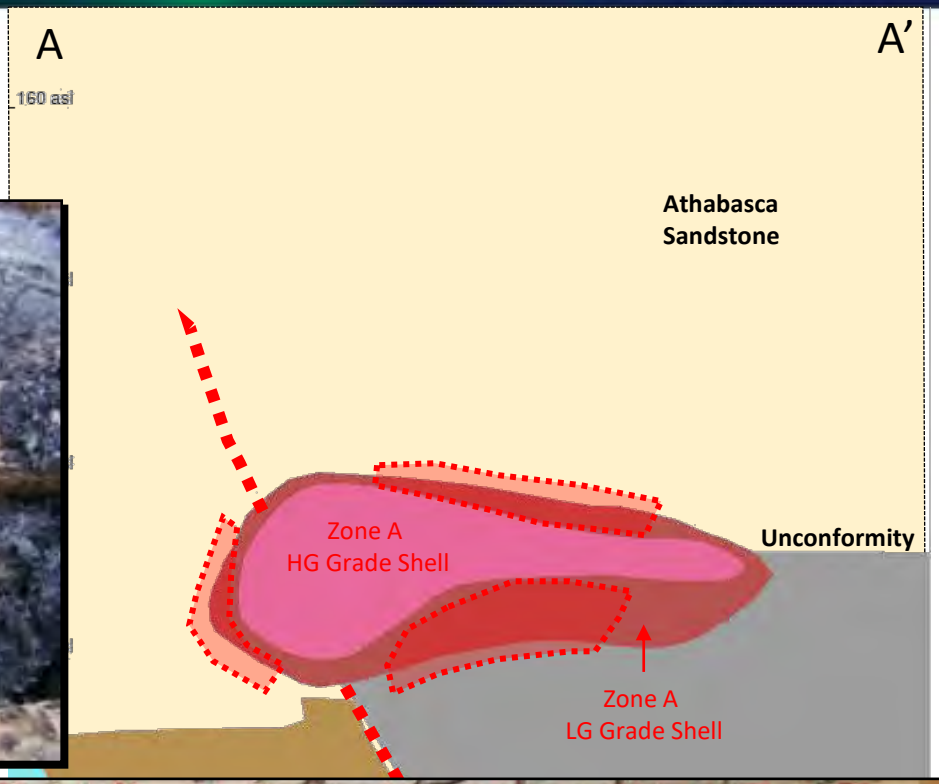




Phoenix Deposit Area
(Type Cross Section)

Geology and Mineral Resources

Denison Mines



Phoenix: Mining Methods

Denison Mines

- Due to poor ground conditions and high grade unable to use conventional mining methods
- Evaluated using Jet Boring System (i.e. Cigar Lake):
    - High Risk of technical challenges
    - Extreme Capital cost requirements
    - High operating cost
    - High degree of technical skills and education for employees
- Not profitable / sustainable in current market

Mining Method Options

Denison Mines

Gryphon:	**Longhole Mining**
Phoenix:	**Directional Drilling**
	Insitu Recovery

Phoenix Mining: Directional Drilling

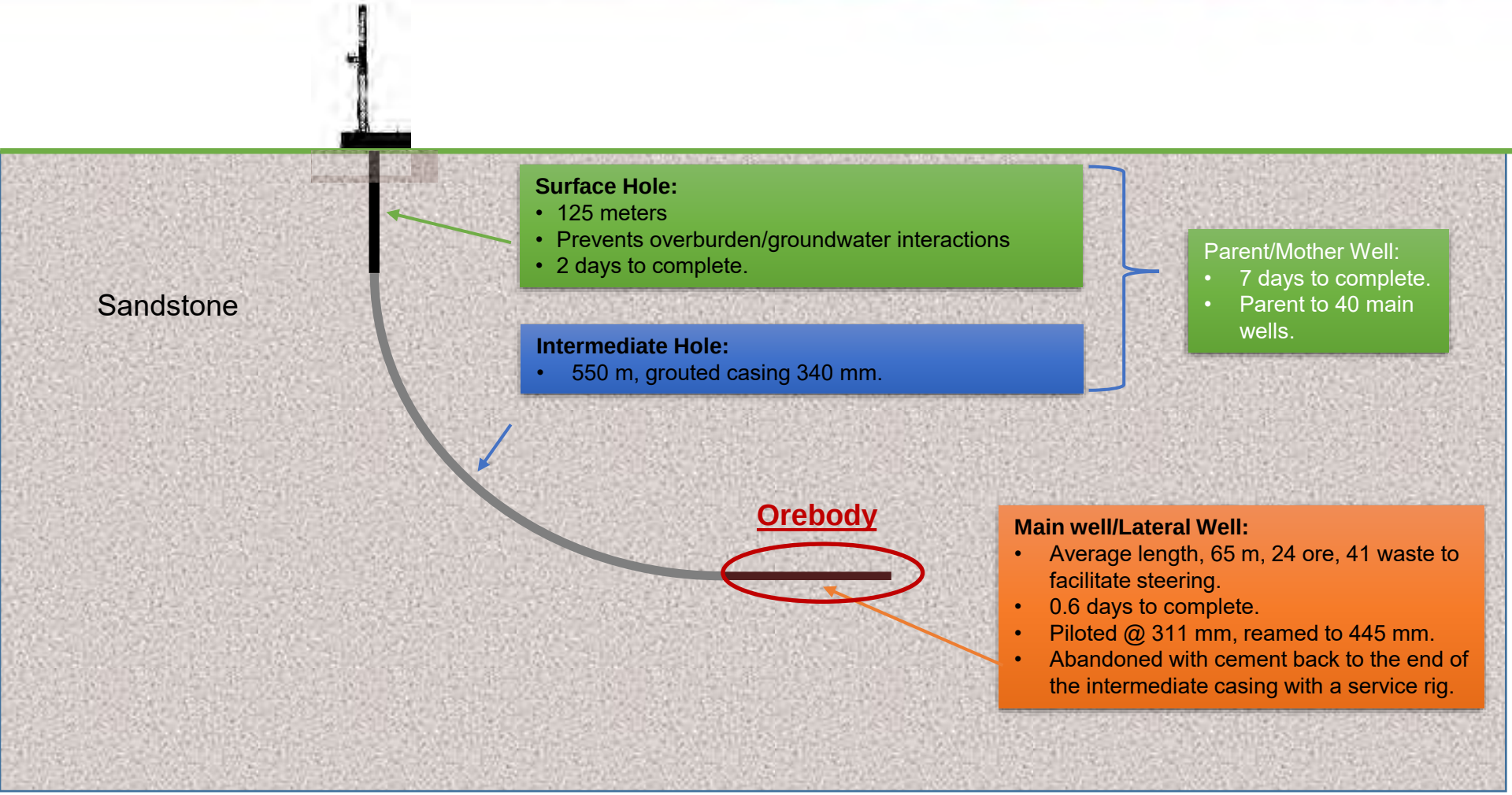
Denison Mines

Typical Surface Setup

- Technology available from oil and gas industry
- Site visit conducted Nov. 2, 2017 with positive results

Phoenix Mining: Surface Boring

Denison Mines

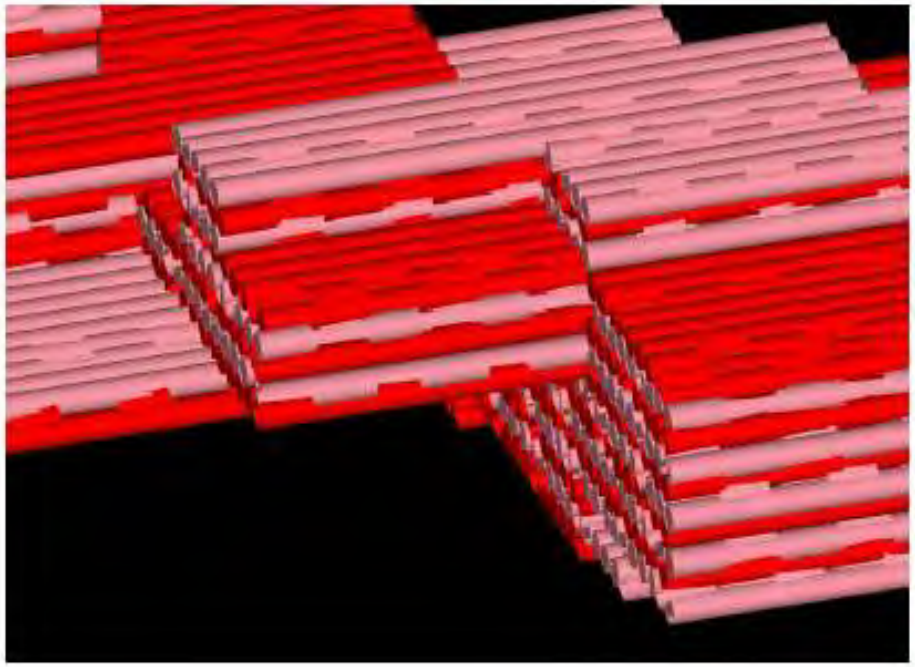


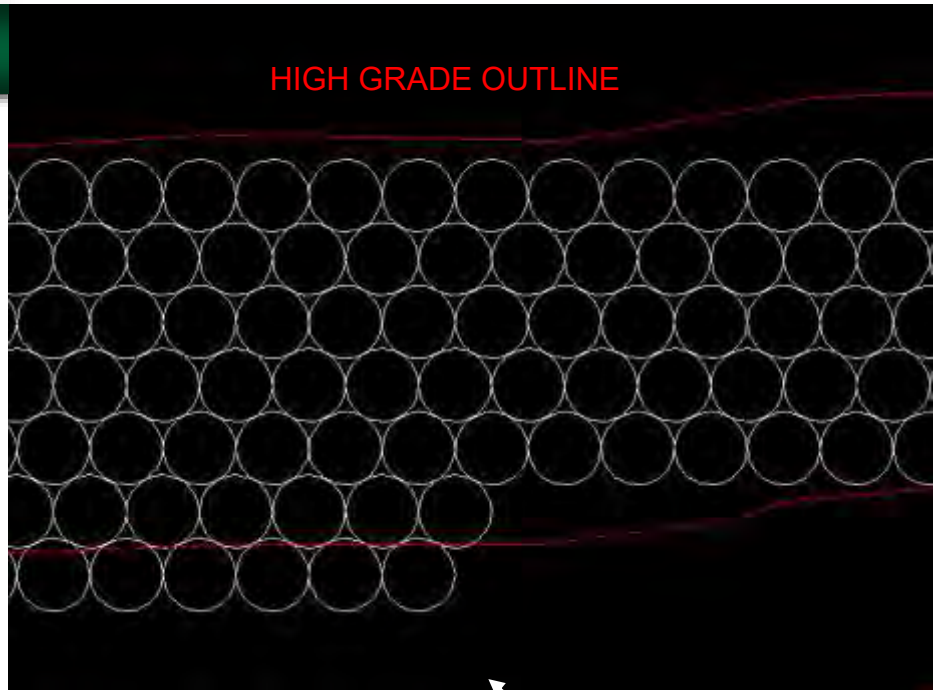
Phoenix Mining: Surface Boring - Recovery

Denison Mines

Phoenix Honeycomb Pattern

- 90% theoretical recovery
- ~4,300 boreholes through deposit (assuming 17.5” diameter)
- 340,000 meters of drilling





- 30-40m length holes in ore
- 30-40m length in waste / low grade
- Holes backfilled after drilled

Phoenix Directional Drilling

Denison Mines

- Considerations:
  - Safety: Well established practices, equipment and procedures established in Canada and the global industry
  - Radiation Safety: remote operation, no workers exposed to ore.
  - Environmental: Minimal surface and u/g disturbance, no water discharge,
  - Economics: Low cost, sustainable at current market prices
  - Industry Employment: No special skills / education required
- Material still needs to be trucked to McClean mill for processing
- Tailings are still produced

Mining Method Options

Denison Mines

Gryphon:	**Longhole Mining**
Phoenix:	**Directional Drilling**
	Insitu Recovery

Phoenix Options - ISR

Denison Mines

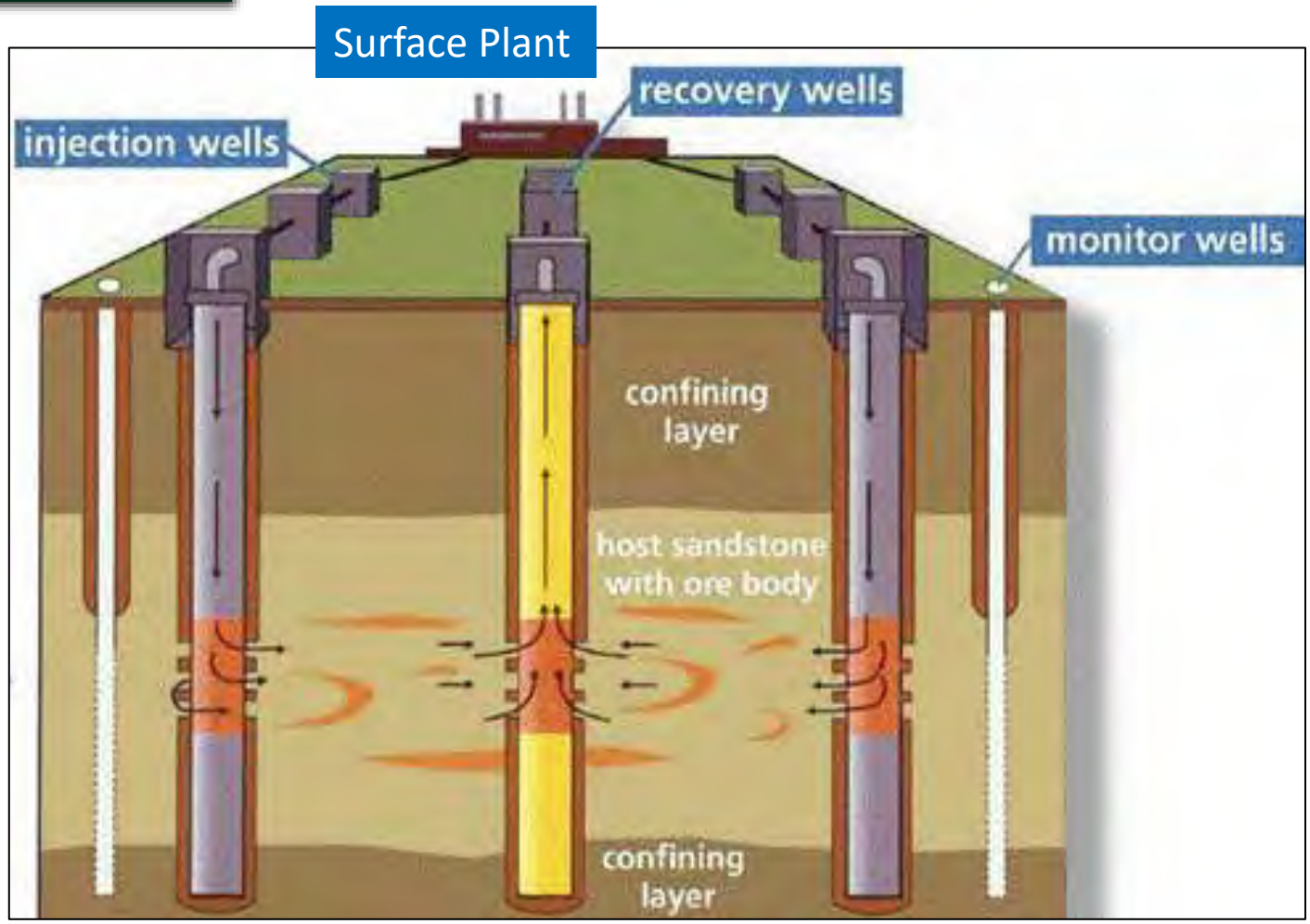
- Insitu Recovery has been utilized since the early 1960s
- Between 1961 and 2010 approximately 227, 700 t U was produced which equaled approximately 10% of historic global production
- In 2011 ISR production jumped to 46% of global production and is somewhere in this range today
- Production generally comes from 9 different jurisdictions
  - US and Australia would be considered the only two of these that host regulatory regimes similar in nature to Canada

Phoenix Mining: ISR

Denison Mines

ISR Process Overview

1. Inject solution into the orebody via injection wells
2. Recovery solution via recovery well and pump to plant
3. In Surface Plant surface uranium is separated from solution
4. Solution is re-injected to extract more uranium
5. Restoration



Phoenix Mining: ISR

Denison Mines

Surface Photo of Active ISR Operation

Phoenix Mining: ISR

Denison Mines

Phoenix Mining: ISR

Denison Mines

Phoenix Mining: ISR

Denison Mines

ISR Process Overview

- Uranium is stripped from the pregnant solution
- Peroxide or ammonia is then used to precipitate Uranium in solid
- Product is washed, dewatered and dried to form Yellowcake

Phoenix Mining: ISR

Denison Mines

- **Common Questions**
- Can we contain the mining solution during operations?
  - Monitoring / samples holes enable tracking of solution
  - Ability to increase / decrease pumping in/out of any individual hole
- Can we restore the groundwater conditions to baseline conditions following mining operations?
  - Continue treatment of water to adjust ph levels
  - Add lime or other basic element to increase ph
- At Wheeler we are currently gathering baseline information but we know the water quality now is not acceptable for use by humans or animals

Phoenix ISR

Denison Mines

- Considerations:
  - Safety: Well established practices, equipment and procedures established in the global industry
  - Radiation Safety: remote operation, no workers exposed to ore.
  - Environmental: Minimal surface and u/g disturbance
  - Environmental: No tailings production
  - Economics: Low cost, sustainable at current market prices
  - Industry Employment: No special skills / education required

Denison Mines

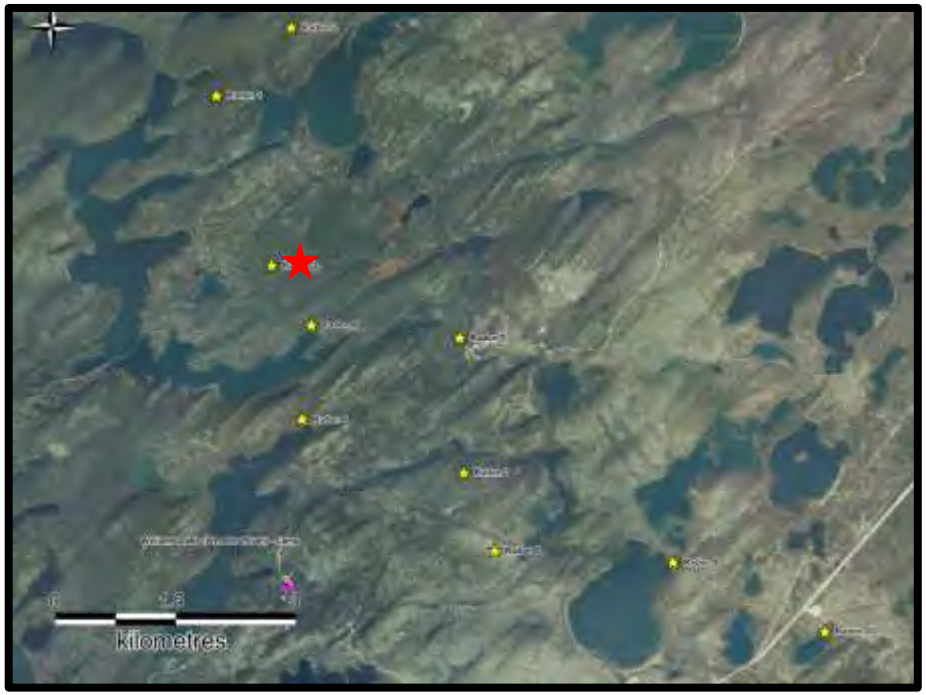
Environmental Baseline Data

EIA Update: Baseline Environment

Denison Mines

Atmospheric Radon Monitoring

- Radon detectors at 10 locations around Project Area
- Radon levels reported below <7.0 Bq/m^3
- Health Canada's radon guideline is 200 Bq/m^3

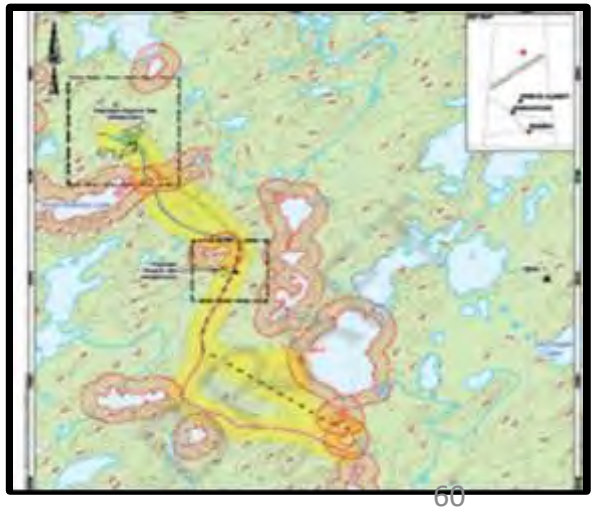


EIA Update: Baseline Environment

Denison Mines

Heritage

- Field program was completed in July 2017
  - Pedestrian reconnaissance and shovel probe/ tests
- One artifact HiNi-6 was discovered west of lake and deemed “limited interpretative value” by SK
- Clearance for project area received in Dec. 2017

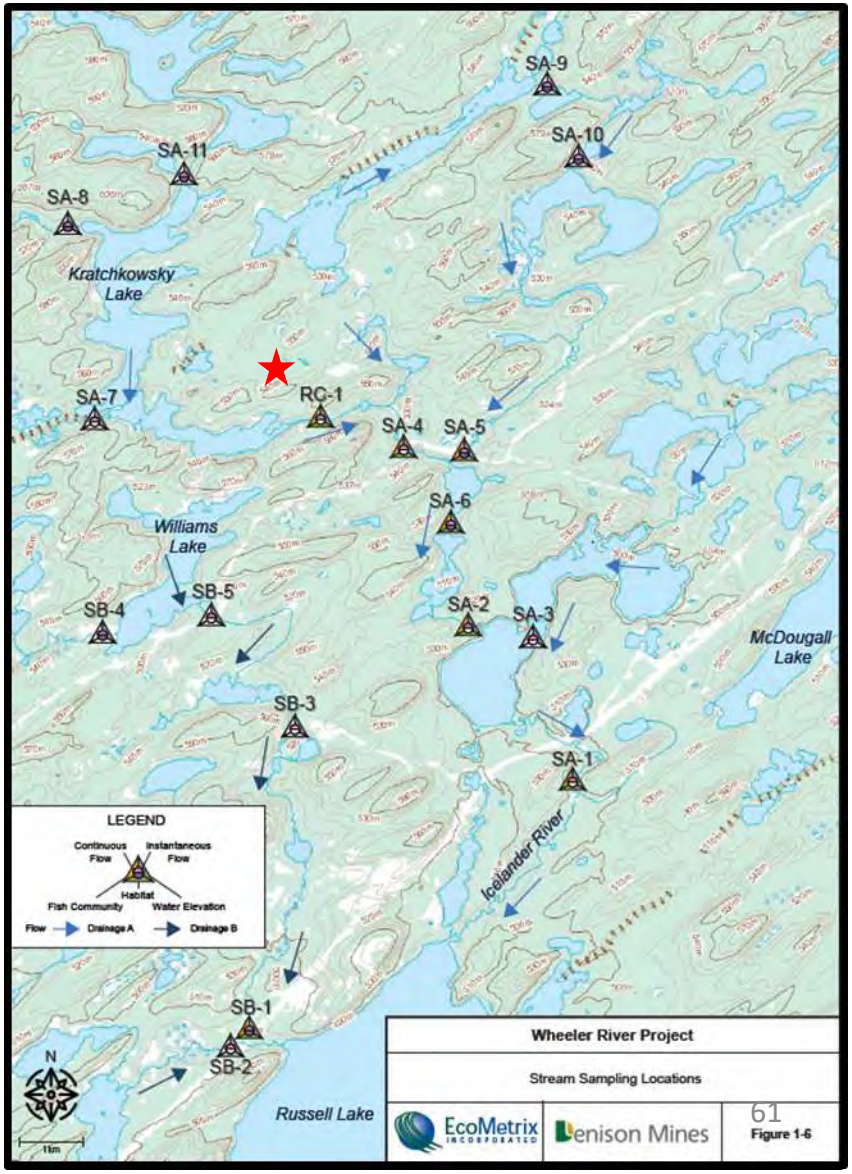


EIA Update: Baseline Environment

Denison Mines

Aquatic Environment

- Aquatic Habitat
- Bathymetry
- Hydrology
- Water Quality
- Sediment Quality
- Plankton Community
- Benthic Invertebrate Community
- Fish Community and Spawning



EIA Update: Baseline Environment

Denison Mines

Aquatics: Aquatic Habitat

- Lake Depth
  - Max. 21.8 m LA-7A
  - Min. 2.7 m LA-6
- Pond Depth:
  - Max. 3.2 m PA-2
  - Min. 2.7 m PA-1

EIA Update: Baseline Environment

Denison Mines

Aquatics: Hydrology

- Water level elevations measured at 13 lakes and 2 ponds
- Stream flow measurements measured at 16 watercourses
- Continuous monitoring equipment installed at 8 locations

EIA Update: Baseline Environment

Denison Mines

Aquatics: Water Quality

- Water quality evaluated at 17 lakes and 11 ponds
- Results indicate low levels of:
  - Specific conductance
  - Dissolved metals
  - Nutrient levels (nitrate and phosphorus)
  - Suspended and dissolved solids
  - Nitrogen (ammonia)
  - Total dissolved solids
  - Radionuclide (radium -226, thorium-230, thorium-232)
- Background levels for metals (Al, Cd, Fe)
- pH range 5.7 to 7.2

EIA Update: Baseline Environment

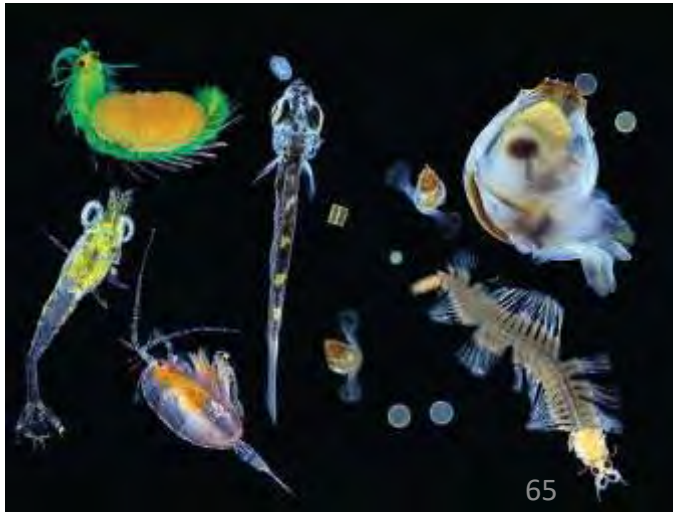
Denison Mines

Aquatics: Sediment Quality

- Comprised of silty-clays or sandy-silts
- Sediments collected from all lakes
- For parameters with sediment quality guidelines concentrations were at or below guideline value

Aquatics: Plankton Community

- Phytoplankton and Zooplankton
- Samples collected at 6 Locations
- Phytoplankton community 55 types
- Zooplankton community 32 types



EIA Update: Baseline Environment

Denison Mines

Aquatics: Benthic Invertebrate Community

- Collected at 10 locations
- 1,000 to 10,000 per m^2 of bottom surface area Insects most common
- Tissue collected at 9 locations and analyzed for metals and radionuclide contents
- Results were consistent throughout the study area
- Co and Ni were the most variable
- Radionuclides generally below Laboratory Detection limits

EIA Update: Baseline Environment

Denison Mines

Aquatics: Fish Community

- 13 fish species identified
- Spring and Fall Spawning Surveys at select locations
- Fish tissue samples collected
- Al and Se levels below guideline values
- Healthy fish community

EIA Update: Baseline Environment

Denison Mines

EIA Update: Baseline Environment

Denison Mines

Ground Water

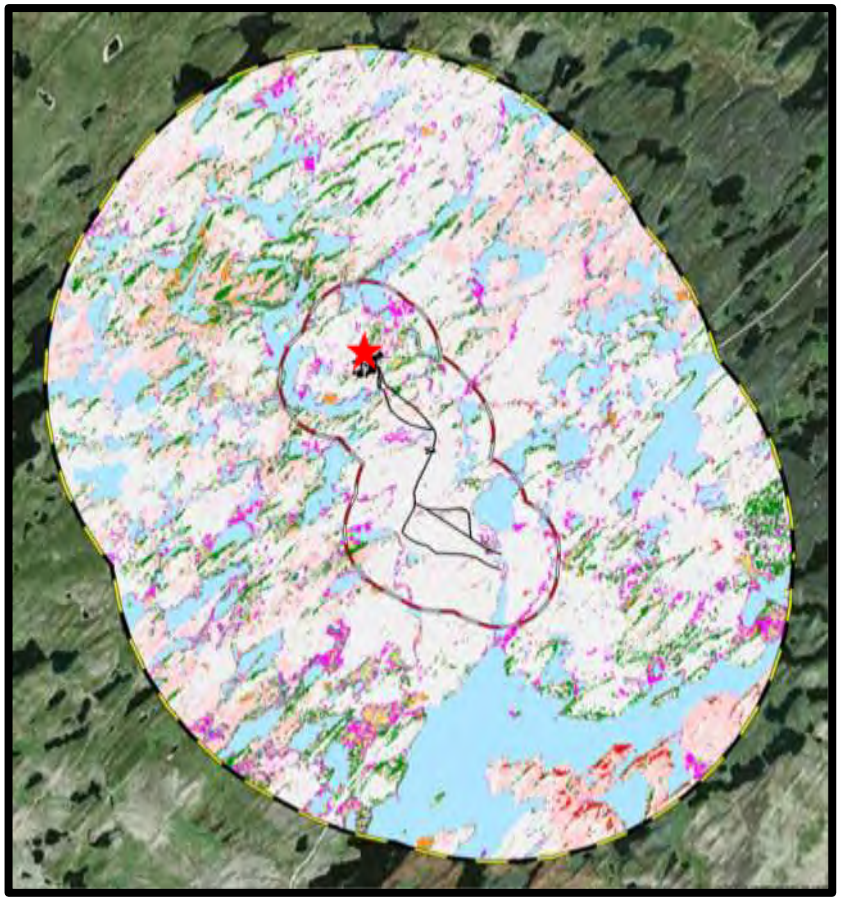
- 4 groundwater monitoring wells drilled to establish background levels of:
  - Total metals
  - Dissolved metals
  - Major ions
  - Radionuclides
- Groundwater monitoring will continue

EIA Update: Baseline Environment

Denison Mines

Terrestrial Baseline

- ✓ Ecological land classification
- ✓ Breeding bird surveys
- ✓ Ungulate pellet counts
- ✓ Winter tracking surveys
- ✓ Aquatic furbearer shoreline surveys
- ✓ Small mammal trapping and chemistry
- ✓ Amphibian surveys
- ✓ Characterization of terrain and soil types
- ✓ Vegetation and soil chemistry
- ✓ Vegetation community



EIA Update: Baseline Environment

Denison Mines

Terrestrial: Ecological Land Classification

- Regional Study Area
  - 52% - jack pine
    blueberry/lichen
  - 21% Waterbodies
  - 13%- jack pine
    black spruce/feathermoss

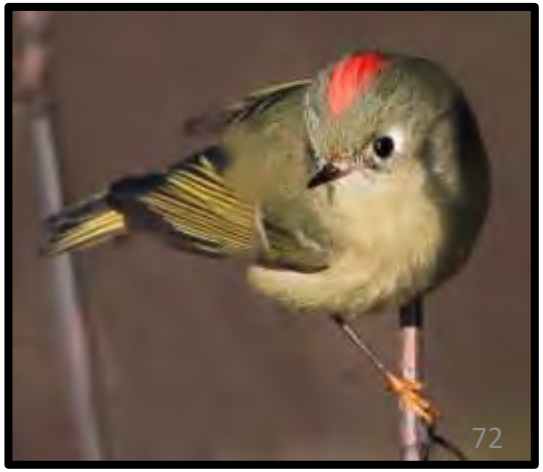
- Local Study Area
  - 70% - jack pine/
    blueberry/lichen
  - 13% Waterbodies
  - 5% jack pine
    black spruce/feathermoss

EIA Update: Baseline Environment

Denison Mines

Terrestrial: Breeding Bird Surveys

- Identified 36 species
- 10 most common:
  - Ruby-crowned Kinglet (51)
  - Dark-eyed Junco (40)
  - Gray Jay (34)
  - Yellow-rumped Warbler (31)
  - Swainson's Thrush (18)
  - Hermit Thrush (18)
  - Lincoln Sparrow (15)
  - Chipping Sparrow (15)
  - Fox Sparrow (15)
  - American Robin(13)
- Most preferred:
  - Jack pine – white birch/feathermoss
  - Jack pine – black spruce/feathermoss
  - Black spruce/blueberry/lichen



EIA Update: Baseline Environment

Denison Mines

Terrestrial: Pellet Counts

- Pellets/ scats of 7 Species were identified
  - Grouse/ptarmigan
  - Moose
  - Woodland caribou
  - Black bear
  - Red Fox
  - Mink
  - Marten
- Woodland Caribou (2 transects)
  - Winter: Jack pine/blueberry/lichen
  - Summer: Labrador tea shrubby bog
- Moose wide occurrence in region
  - Winter: black spruce/blueberry/lichen
  - Summer: black spruce/balsam poplar/river alder swamp

EIA Update: Baseline Environment

Denison Mines

Terrestrial: Winter Tracking

- January 25 and February 3, 2017
- 19 replicate transects completed
- Fresh snow tracks were identified
- 11 Species Identified
  - Snowshoe hare
  - Red squirrel
  - Grouse or Ptarmigan
  - Microtine
  - Marten
  - Canada Lynx
  - Ermine
  - Mink
  - Fisher
  - Moose
  - Woodland caribou

EIA Update: Baseline Environment

Denison Mines

Terrestrial: Aerial Waterfowl and Raptor Surveys

- 20 waterfowl/raptor(s) identified
- 10 most observed:
  - Ring-necked Duck
  - Common Merganser
  - Common Loon
  - Mallard
  - White-headed Gull
  - Bald Eagle
  - Canada Goose
  - Lesser Scaup
  - Yellowlegs Spp.
  - Bufflehead

EIA Update: Baseline Environment

Denison Mines

Terrestrial: Aquatic Furbearer Shoreline Survey

- Completed along shoreline 23 of creeks, lakes, and ponds
- 96 km total distance of shoreline surveyed
- Species identified:
  - Muskrat
  - Beaver
  - River otter

EIA Update: Baseline Environment

Denison Mines

Terrestrial: Small Mammal Trapping and Chemistry

- Indicator species (Bioindicators)
- 26 trap lines in 17 different vegetation cover
- Tissue Analysis – Metals and Radionuclides
- Habitat Characterization
- Small Mammals Captured:
  - Red-back Vole – 92% of trap lines
  - Meadow Vole – 38% of trap lines
  - Dusky Shrew – 26% of trap lines

EIA Update: Baseline Environment

Denison Mines

Terrestrial: Amphibian Surveys

- 61 sites surveyed
- Wood Frog identified in regional and local study area
- Boreal Chorus Frog identified in regional study area

EIA Update: Baseline Environment

Denison Mines

Terrestrial: Vegetation and Soil Collection

- Blueberries, lichens and soil samples collected
- Samples analyzed for metals and radionuclides
- Relatively consistent across site

EIA Update: Baseline Environment

Denison Mines

- Overall regional and local environment around the project area is a normal and healthy ecosystem

- Future Work:
  - Majority of baseline data collection is complete
  - Continue to monitor conditions around site
  - Gather more detailed data on field conditions as key project decisions are made (i.e. treated water discharge location)

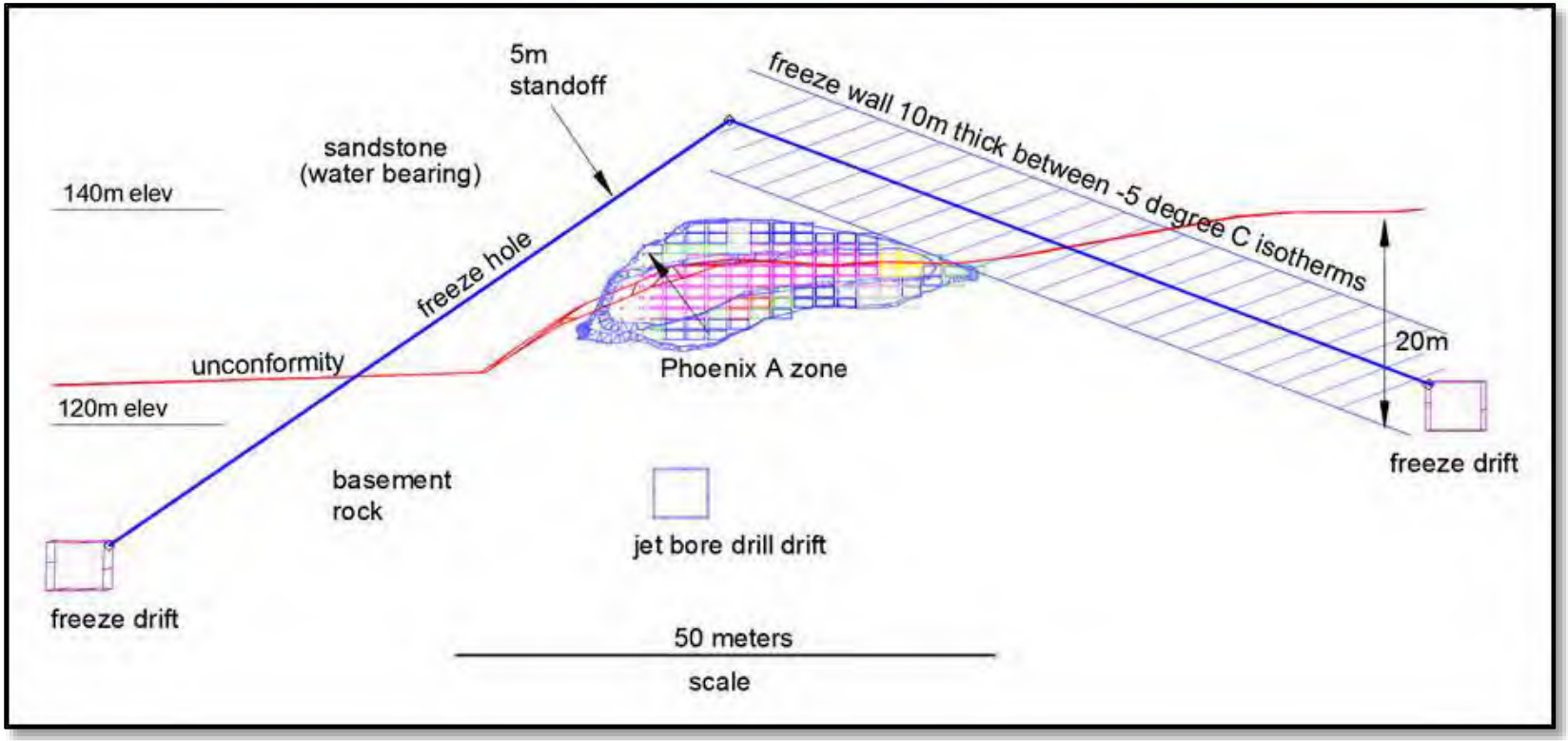
- If project launches an Environmental Assessment, baseline data will be used to predict potential project impacts and enable avoidance & mitigation of impacts.

Thank You

Denison Mines

- Extra slides this point forward

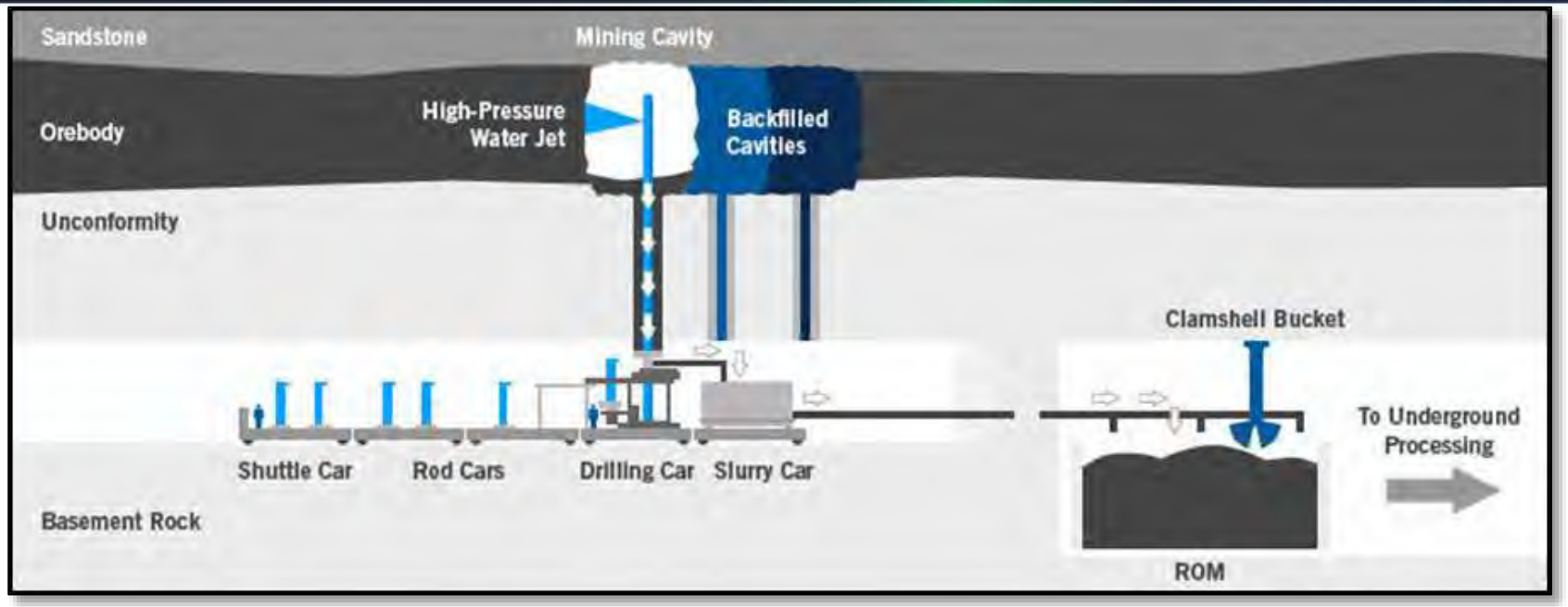
Mining Method – Phoenix Options



- **Freeze drifts excavated ~20m below unconformity in basement rock and well away from other infrastructure**
- 75m long freeze holes installed at 4m spacing along strike
- 16 months for initial freeze wall development

Mining Method – Phoenix Deposit

Denison Mines



Source: Cigar Lake 2016 Technical Report

- Access drill drift in basement rock 30m below the mineralization
- Pilot hole drilled up into the deposit and a casing is installed
- High pressure rotating water jet cuts a cavity in the mineralization
- Slurry of water/broken rock flows out by gravity to receiving slurry car
- Mined out cavities are completely backfilled with concrete

Overview of the Nuclear Fuel Cycle

Denison Mines

ROC4

Transporting High-Grade Uranium Ore

Denison Mines

Wheeler River: Long Road Ahead

Denison Mines

2016-2017

★PFS

2018

2021

2025

Preliminary Assessment → Feasibility Study → Project Construction → Production

2016 Evaluation Plan

- PEA completed during 1H/2016
- Initiated Pre-Feasibility Study ("PFS") 2H/2016
- Initiate environmental baseline studies

Discharge Location Options

Denison Mines

- Potential locations for treated water discharge were identified and assessed for:

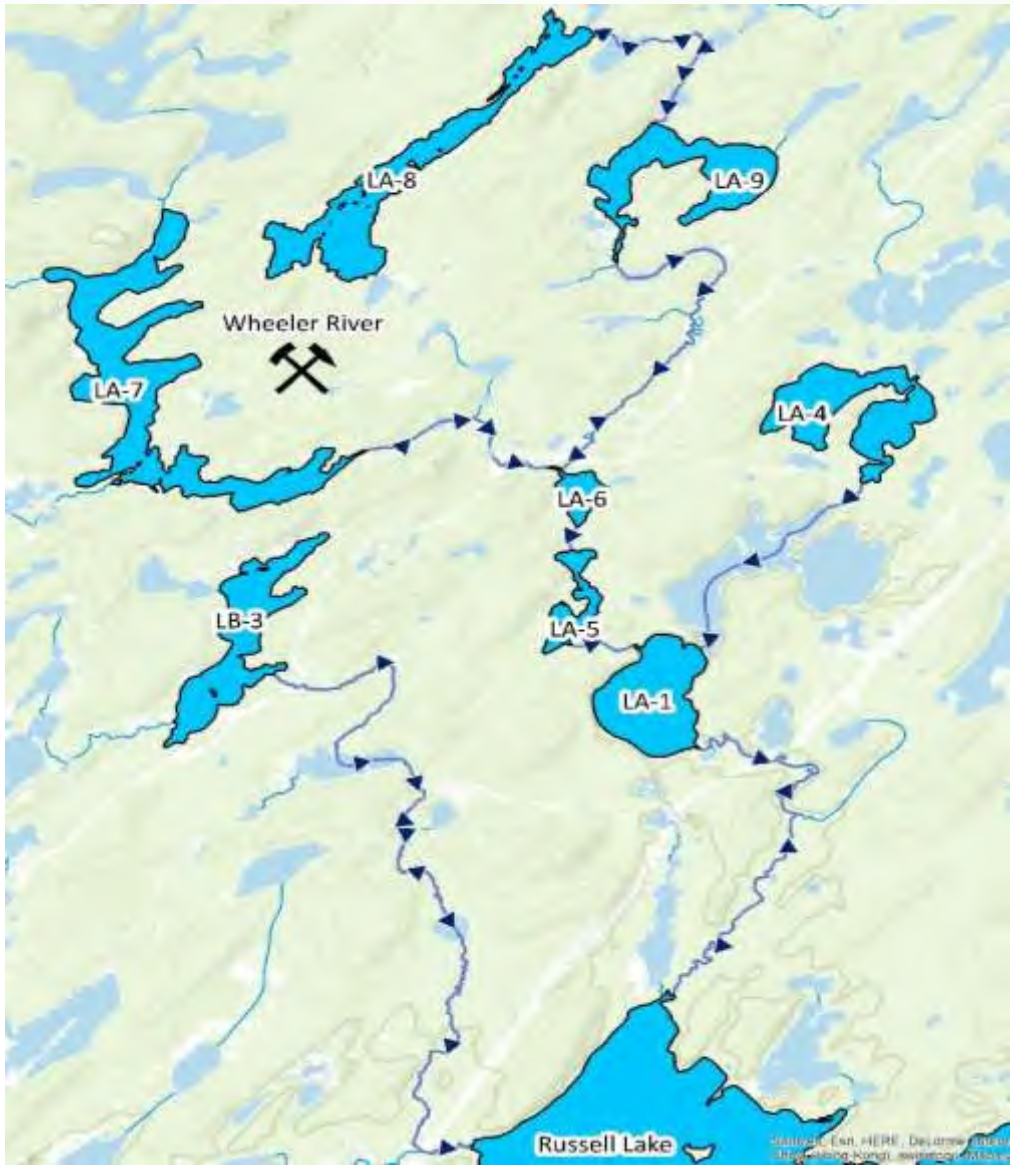
1. Preliminary understanding of land uses
   - Traditional territories
   - Trails, trap lines, country food harvesting, angling
   - Cabins, camps
   - Industrial properties
2. Potential impacts to water quantity and quality
   - Avoid locations with low flows
   - Minimize increase in flows
   - Meet provincial and federal water quality guidelines
3. Potential impacts to fish and fish habitat
   - Avoid spawning habitat

ROC4

Discharge Location Options
Identification

Denison Mines

- Preliminary factors:
  - Capacity
  - Watershed area
  - Connectivity
  - Distance to project

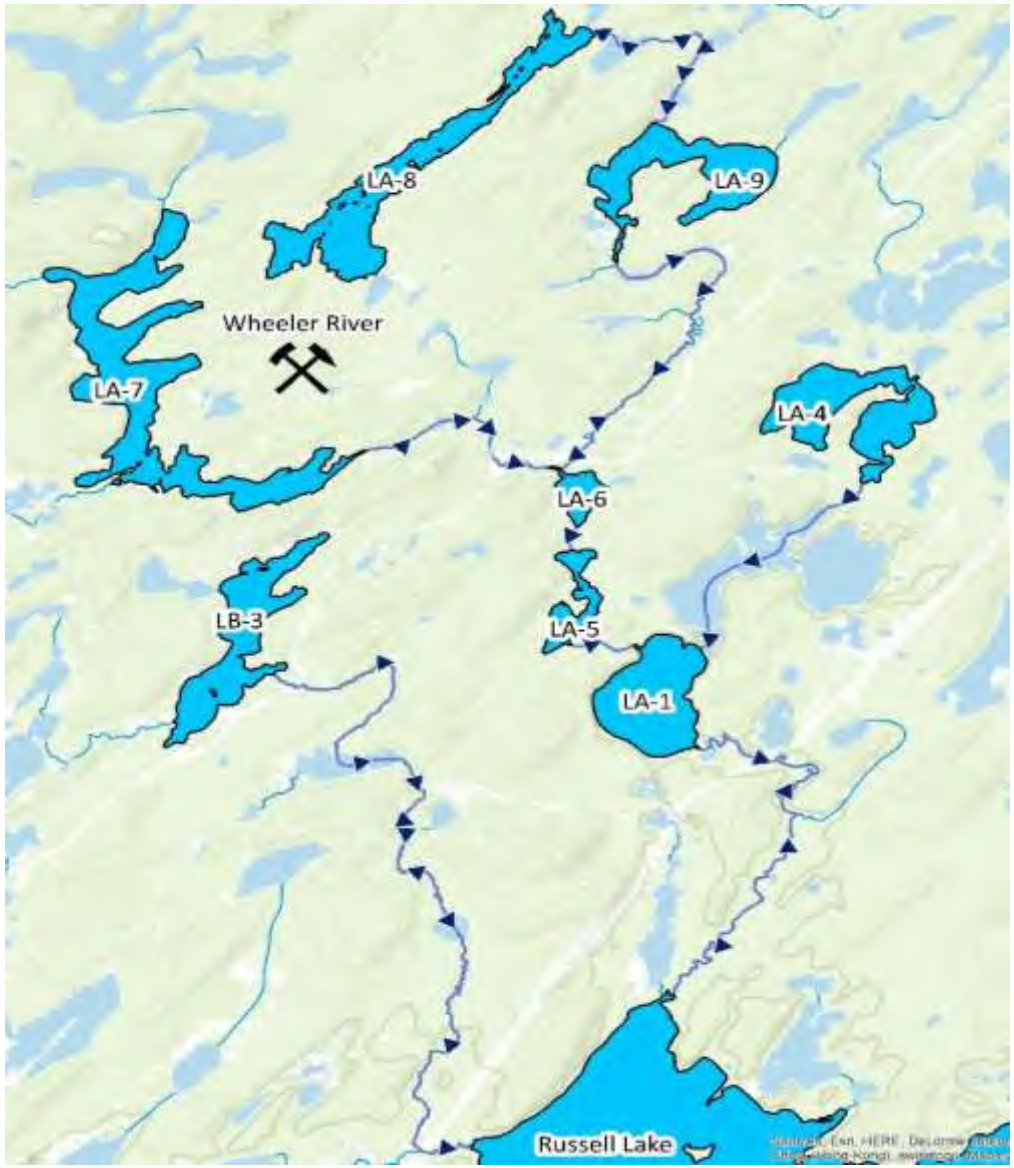


ROC4

Discharge Location Options
Quantity and Quality Assessment

Denison Mines

- Preliminary factors:
  - Wheeler River historical flows (1973-2015)
  - Average flows from baseline (2016-2017)
  - Background water quality from baseline (2016-2017)
  - Estimated ranges of discharge flow and quality
  - 3 small watersheds eliminated



ROC4

Discharge Location Options
Fish and Fish Habitat Assessment

Denison Mines

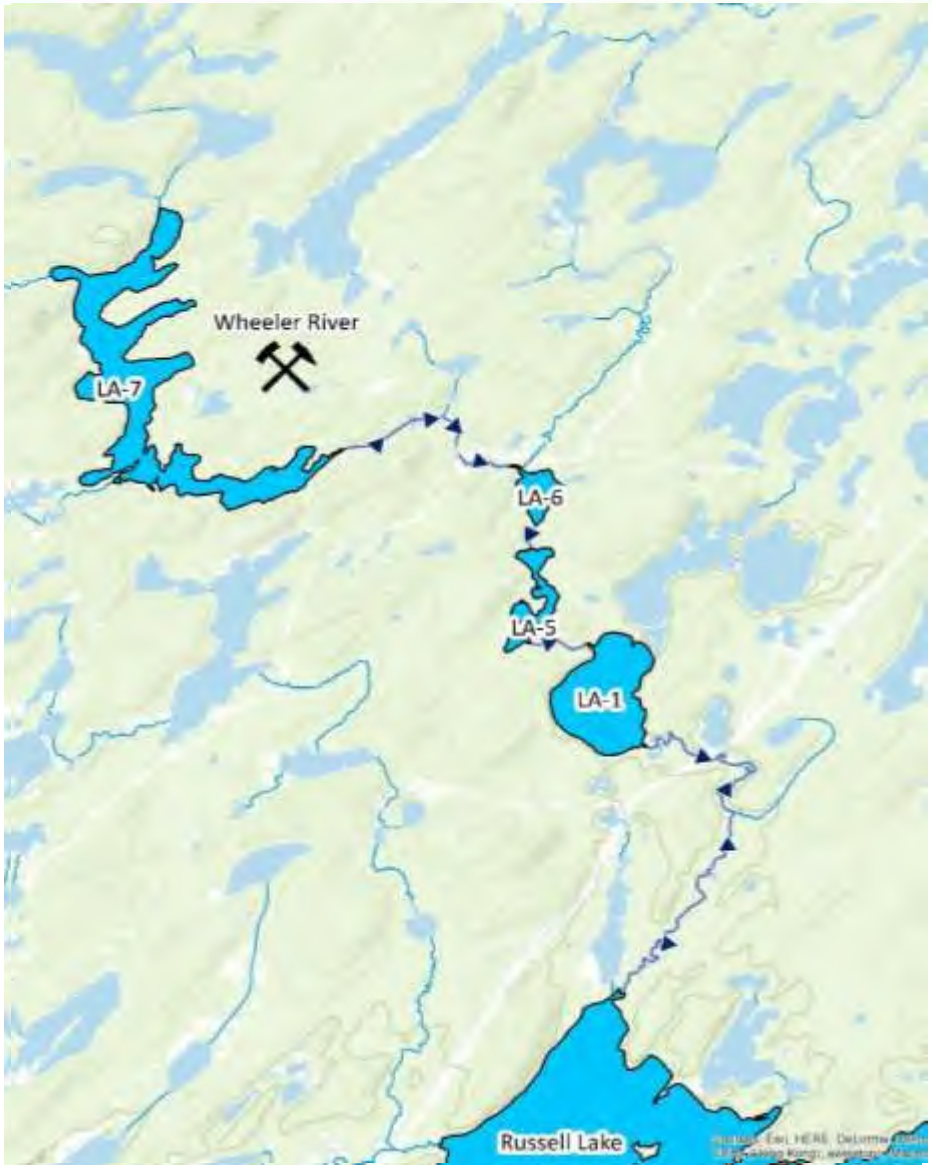
- Preliminary factors:
  - Fish community, habitat, and spawning and depth surveys from baseline (2012-2014, 2016-2017)

ROC4

Discharge Location Options
Preliminary Results

Denison Mines

- Preliminary results:
  - Avoid locations with low flows
  - Meet provincial and federal water quality guidelines
  - Avoid spawning habitat



Denison Mines
Community Engagement Workshop, Wheeler River Project
Beauval, SK.
Thursday January 18, 2018

In attendance:
Denison Mines: *Peter Longo, VP Operations; Lea Willemse, Senior Environmental Scientist, Environmental Manager for Wheeler River.*
SRK Consulting: *Mark Liskowich, Principal Consultant (Environmental); Lee Christoffersen, Environmental Scientist.*
Recorder: *Gill Gracie Aurora Communications Ltd*
Community: 8 people.

Introductions – Mark Liskowich.

We wanted to give you and update and information on the Wheeler River project. We would like your feedback on some options on two or three topics so we can include that feedback in the final decision-making process as we advance the engineering and environmental studies.

Presentation: Peter Longo

- Denison is a small exploration and development company. We don't currently have any operations; we're exploring for minerals, but we hope to develop a mine someday. We are about 1/5 the size of Cameco; we have 12 employees.
- We have historic operations at Elliot Lake from the 1950s to the 1990s. Otherwise all our properties are here in the basin; Wheeler River is our flagship property and the one we're currently trying to advance.
- We own 22.5% of McClean Lake; AREVA owns 70% so we are the minority partner. We plan to process our Wheeler River ore at McClean Lake.
- Our team at Elliot Lake looks after our decommissioned sites, which are completely decommissioned and reclaimed. This group Denison Environmental Services also contracts these services to other mines across Canada.
- Community support and development: We support AREVA's community work. We try to make every dollar count; we prefer to procure and hire from the north. In Elliot Lake, Serpent River First Nation is our closest community and we do a lot of work with youth and education initiatives within that community.
- Elliot Lake has about 5000 people. In 1990s when the mines closed down, we were a big part of working with the community to help them change from a mining community to retirement community. Now it's a retirement destination for Ontario. We're one of the bigger employers with 40 employees.
- We used to own a couple of African properties, however those have all been sold. When we were working in Africa, we work with the local communities, through efforts such as drilling water wells and the construction of schools in the community. We like to and try very hard to help the communities near our operations when we can.
- Our exploration camp, about 30 m north of Key Lake, has 20-30 beds; there's a maintenance shop and core storage. It's in a natural landscape, with roads to drill sites. We are six km west of the Key Lake-McArthur River haul road.
- We have two deposits, Phoenix and Gryphon, which are 3 km apart, totalling114 million pounds of uranium. That's about 1/5 the size of McArthur River and a little larger than Rabbit Lake. That's the lower end of the scale in terms of deposit size. Gryphon is in the basement

and will require two shafts; it will be an underground mine. We are planning a connection drift to Phoenix, where there will be another shaft this was the plan in 2016.

- We are looking at different ways to mine Phoenix, which is a challenging deposit, and different ways to sink shafts at Gryphon. We have done a lot of environmental baseline data collection as well as a number of engineering studies. We have drilled a 2-3" pilot hole down to about 600 metres to collect more information on ground conditions.
- We have launched a pre-feasibility study to understand the business case for building a mine. There would be headframes, warehouses, mine buildings, maintenance shop, a camp and kitchen area. Overall the site would have a very small footprint, maybe 200 x 400 metres. The ore would be shipped to McClean Lake for processing. There would be no tailings on the property; they would be managed at McClean Lake.
- Cost to build: Two years ago the cost to build was about $1.1B. First production will be in 2025 if things go well. Production cost was anticipated at $19 per pound.; with today's price at $20 per pound it's not worth it; it would take too long to pay back. We are looking forward to the mid-2020s when we believe the price of uranium will be higher, but we have to start working on it now.
- Timeline: The environmental assessment process will take 4-5 years; both governments will review our project. We are doing the pre-feasibility study; mid this year will be a big decision point. In 2023 we could start putting shovels in the ground. It's a long way ahead.
- Communities: We heard the message when we were here 18 months ago; we were suppling our drill camp out of La Ronge, and have since switched to the Beauval store after a competitive bidding process. We worked with our drilling contractor to set up a driller and drill helper training program. 2-3 times a year they will train 2-3 northern people as exploration drillers or drill helpers. The first two traines completed the program; there will be another program starting in February 2018. On site we have 20-30 positions; the goal over time is to keep running the program till everyone on that drill rig is from the north. Our field support workers needed for the environmental baseline programs were all northerners. We like to participate in education and training as much as we can, to make every dollar count.
- For procurement, you need to be competitive, but we have a preference for northern ownership and contractors.
- We also heard the communities wanted written agreements, so we drafted and presented MOUs to four communities. It expresses Denison's desire to work with the communities and the communities' desire to work with Denison. It is non-binding, and focuses on four topics: environment, employment, business opportunities and community investment. Two communities have signed two are still reviewing the MOU.
- Baseline update: We have done a lot of sampling of lakes, streams and rivers around the project area, looking at water quality, fish, vegetation, wildlife, birds etc. Lea will provide a bit more detail on those programs later.

<u>Questions/Comments</u>

Is English River one of the signatories?

- **P. Longo:** English River has not signed their MOU yet.

Where are the drillers you trained from? Was there a lot of response from the communities?

- **P. Longo:** One was from Pinehouse and one from Cole Bay.
- **M. Liskowich:** We had close to 60 resumés, from all over. Resumés went to the drilling contractor because they are directly responsible for their safety so they have to be comfortable with whom they bring to site.

What are some key qualifications? How do they get to site?

- **P. Longo:** There are no prerequisites except a driver's license, drug free and a willingness to work.

Is it Team Drilling?

- **P. Longo:** The company is Hi-Tech Drilling; their office is in Saskatoon. They've been with us for 5-6 years and have done a lot of work in the north for Cameco/AREVA as well. It's a two-week rotation; a truck drives up the road from Saskatoon and picks them up along the way. There's no airstrip there.

What is the grade of ore?

- **P. Longo:** Gryphon averages about 2%, Phoenix averages 19%.

Workshops – Mark Liskowich.

1. Site road options Session

- Mark outlined work done to date in identifying different potential options to access Phoenix and Gryphon from Highway 914. The access road needs to be 10m wide so haul trucks can pass; the side slopes can't be steep because of erosion - maximum 3:1, so if we're going through hills we have to move a lot of material. Maximum grade must be 7%.
- Considerations include staying away from stream and river crossings, stay back as far as possible from lakeshores, and there's a recreational lease cabin to consider.
- We have three potential options from the highway to Phoenix, and two options from Phoenix to Gryphon. Mark detailed the options for each, as explained in the slides.
- Part of the baseline was a heritage study. All rights-of-way were checked for archaeological significance. Nothing was identified as significant.
- The participants were then asked to discuss and provide pros and cons, from their perspective for each of the options available.

Pros & Cons – Community Input.

Road Alignment – Highway to Phoenix

All attendees

Option 1:

Pros:

- Shorter distance than Option 3

Cons:

- Road is too close to cabin, concerned about noise and dust.

Option 2:

Pros:

- No discussion

Cons:

- Road is too close to cabin, concerned about noise and dust.
- Too close to water.

Option 3:

Pros:

- Farthest from both cabin and any lakes.

Cons:

- Additional 0.7 km.

Road Alignment – Phoenix to Gryphon

All attendees

Option 1:

Pros:
- Less dirt needs to be moved

Cons:
- Really close to the lake

Option 2:

Pros:
- Farther from the lake.

Cons:
- A lot more dirt needs to be moved.

2. Treated water discharge options Session.

- For the second session the participants were provided an overview of the scientific selection process used to identify waterbodies that would be acceptable to receive treated effluent from the water treatment plant. The scientific process narrowed the options to 5 alternatives which was were the workshop participants started. The following describes the background information provided to the participants.
- Where will we discharge treated water? All of the lake options considered and remaining following the scientific studies drain into Russell Lake; the Wheeler River eventually drains to Wollaston Lake, which drains 25% to the Fond du Lac River and Lake Athabasca, and 75% to Reindeer Lake and the Churchill River.
- The size of volumes of the lakes was considered, the lake needs to be big enough to handle the quantity of water that needs to be discharged?
- We eliminated small systems with little freshwater runoff, so the quality of the discharge does not overpower the natural lake water quality. We looked at spawning beds identified in each of the lakes being considered, any discharge to them would require avoiding these more sensitive areas.
- We looked at capacity and flow, and eliminated several other lakes in the area; that left us with five option lakes that met the environmental criteria as good options. We still need to look at fishing/usage; the length of the pipeline (which also has an impact because of the road along it, etc.).
- The participants were then asked to discuss and provide pros and cons, from their perspective for each of the options available.

Questions/Comments:

Where did you sample?

- **L. Christoffersen:** All lakes were sampled as part of the baseline programs. Any potential discharge points will be sampled. Existing monitoring locations on lakes will continue to be sampled. All samples go to SRC (Saskatchewan Research Council - must be an accredited lab). It can't be done on site. Testing takes a week or so.

There are also action levels. LA-1 has high spawning levels.

- **L. Christoffersen:** All lakes have enough capacity to accept the discharge and we know that we can set up the discharge to avoid sensitive spawning habitat.

Pros & Cons – Community Input

All attendees

LA-1

Pros:
- None stated

Cons:

- Lots of spawning capacity and lots of walleye. Out of preference, would prefer to avoid this lake due to our uncertainty about what would happen.
- Concerned about the discharge causing stress to fish and animals, even if it seems like the discharge would not affect them.

Russell Lake

Pros:

- None stated

Cons:

- Don't want to discharge directly into Russell Lake.

General comments:

- Preference to discharge into swift-flowing water.
- There is a benefit in discharging into water flowing through the whole system to filter (dilute) it.
- All animals are affected by water quality.
- Ground freezing would reduce the amount of water that is needed to be discharged.

3. Mining Methods Session

- For the third workshop session Peter Longo provided an overview of the various mining methods being considered for the two deposits.

Gryphon: Longhole Stoping

- The planned mining method for Gryphon is longhole stoping, a popular mining method
- The deposit consists of three-metre wide veins, stacked, about 200m long and 200m high. It will be accessed by a spiral ramp from the bottom of the shaft. Drifts or access tunnels will be mined off of the ramp below and above the mining area to allow for the long holes stopes to be drilled, blasted as well as extraction of the blasted ore with remote controlled mining equipment.
- Peter outlined the considerations of using this method. It's well-used globally and we're confident we can operate it safely. Radiation-wise it's the same method used at Eagle Point; CNSC has approved it and we know it's safe. Environmentally, the waste rock stays underground; economically it's a very good method; we can train high school or college-educated people from this region or any region to mine with this method.
- The participants were then asked to discuss and provide pros and cons, from their perspective for each of the options available.

Questions/Comments

Will you use remote control scoops?

- **P. Longo:** Yes, because of the ore grade and for general safety. It's a well-used system, the same as Rabbit Lake's Eagle Point.

What is the rock type? Will the ground settle after mining?

- **P. Longo:** You're 500 metres below surface; it's competent rock down there, and once you backfill it, it's stable, so there should be little to no subsidence of the surface above the mine.

Pros and Cons: Community Input:

All attendees

Pros:

- Economic. Can operate in poor market conditions, so minimal impact on jobs. Seems economically sustainable.

- Won't notice there's a mine on surface since there is no subsidence.
- Best economic option for the deposit.

Cons:
Safety risk from blasting must be considered.
Following the discussion on the Gryphon deposit Peter presented the two mining options currently being considered for the Phoenix deposit

Phoenix Deposit Overview:

- The ore is like a big pancake 30 metres wide and 6 metres high. There are two zones, 300 metres to 400 metres long.
- Below the alteration halo, right on top of the ore body, the ground is like beach sand. It would be impossible to mine it conventionally here.
- The ore is black and soft, 50-60% uranium in places, clayey with solid chunks of metal.
- Because we can't use any conventional mining method we looked at jet boring (JBS). This was the mining method proposed in the 2016 engineering studies. Cigar Lake had a lot of challenges with it, the capital cost is very high and the Phoenix deposit is only about ½ the size of Cigar Lake so this method would not be economical for this deposit. We would also need highly trained technical people to use this mining method. Therefore, we had to look at other industries for different ideas of how we can mine this deposit and came up with two possibilities: Directional drilling and In-situ Recovery or ISR for short.

  1) Directional Drilling:
  - Commonly used in the oil and gas industry. We would drill a 17" diameter parent hole vertically from surface and turn it horizontally to the front of the ore body; then drill a series of smaller holes inside the casing of that parent hole through the ore. The ore would be pushed back to surface inside the parent hole. Once the ore is taken out the hole would be backfilled with concrete and another hole into the ore beside that hole would be drilled. We would repeat the process until the deposit is mined out. We would need 4,300 boreholes of varying lengths; this would take about 11.7 years of mining.
  - This is not new technology; it's never been used for uranium, but we do diamond drilling so we know how to handle radioactive core once it reaches surface. It's a remote operation so workers will be safe. There's a small surface footprint (200 metres square) and no water discharge since the water is recycled in a closed-loop system. It's good economically; we would be profitable in today's market if the system was up and running right now.
  - We would still need to truck ore to McClean Lake where it would be milled.

Questions/Comments:

How would you change the drill bits?

- **P. Longo:** It's done mechanically.

If it's never been done with uranium, you guys will be on the cutting edge. You're blowing our minds right now!

I was concerned about waste water, but a closed loop addresses that.

- **P. Longo:** It's cased right to surface and through a pipeline to where we separate the ore, and the water goes right back down.

That makes a lot of sense. Will it be slower extraction than other methods?

- **P. Longo:** No. It takes ½-1 day to drill; the concrete takes 48 hours to cure; once cured, we would drill beside it. We would mill at 6-7 million lbs per year; the production rate would be the same as with JBS.

Is this fracking?

- **P. Longo:** It's not fracking because there's no high pressure injection. We just use enough pressure to turn the bit. We would like to do a three-four-hole test in the next few years. We would have to get regulatory approval to test in ore; we may have to do it in waste above the ore, this will be something we discuss with the regulators.

Pros & Cons – Community Input

All attendees

Pros:

- Closed-loop system; water is treated at the end.
- Seems economically feasible.
- The technology makes a lot of sense.
- Saves time – no shaft needed.
- No direct exposure to radiation.

Cons*:*

- Never been done for uranium
- Drill bit will come back hot (radioactive)
- Reminds me of fracking – negative perception of the term.
- When will it be tested? When will it be proven?

2) In Situ Recovery (ISR):

- This method of mining for Uranium has been around since the 1960s in many countries. In 2011 it accounted for almost half the world's uranium production. It's been used in the US, Australia and Kazakhstan for the last 10 years, but never for uranium in Canada.
- Injection wells are cased from surface to the sides of the ore body, and a recovery well in the middle. The injected solution picks up the uranium as it travels through the ore, and is pumped back to a central plant for precipitation of the uranium. The solution goes back down; it's also a closed-loop system. Nothing is discharged.
- Monitoring holes outside the orebody are constantly sampled so if the solution escapes, we can shut off that well and pull it back.
- We have done some lab testing on the leaching solution. Probably we would use an acidic rather than an alkaline solution, since the surrounding water is already slightly acidic. The uranium would dissolve into the solution and be pulled back to surface in the recovery wells. There is still a lot of tests we need to complete in the lab but it looks promising.
- The plant is less than half the size of a football field. It's full of tanks and piping.
- Yellowcake is produced and shipped on site. There are no tailings, no ore shipment. The solution goes back underground.
- Restoration: We would likely be required to return the groundwater to baseline conditions, which is what is done in the states and Austrailia. To do this we would simply keep circulating water through the injection and recovery wells until the conditions returned to pre-mining conditions. We can add lime to increase the pH if we had to.

Questions/Comments:

Once mining is over, is the water drinking water quality?

- **P. Longo:** It will be returned to the quality that is at before mining, the same as it is today. Today this groundwater is no where close to drinking water quality because of the uranium deposit.
- **M. Liskowich:** It's 500m below surface. ISR mining is being done now; we know it's safe; environmentally there's not a lot of disturbance; there are no tailings; it's low cost; it employs

a local workforce at college and high school graduate levels. Employment levels would roughly be the same for both methods.

Are the orebodies under lakes? One crew drilled into the lake bed at one operation and didn't grout the holes. Cigar Lake flooded.

- **P. Longo:** No, they're both under land, 500m down. We're cognizant of that, certainly for Gryphon. We're well aware of the Cigar Lake situation.

What about relative employment levels?

- **P. Longo:** About the same for both methods – about 150 people. We would still need a camp and site facilities. In the States they have a crew drilling holes, a crew working on pipeline maintenance, crews in the plant, engineers, geologists, radiation techs and management on site.

Pros & Cons – Community Input

All attendees

Pros:

- No direct exposure to radiation.
- New opportunity for northern Saskatchewan.

Cons*:*

- No discussion.

General discussion:

- Safety would be one of the biggest concerns in either method. With either method you're breaking new ground.

Environmental Baseline Data – Lea Willemse

- To establish if we are impacting the environment, we need to establish what the levels are and how the ecosystem is functioning around the project area before we start. So baseline programs are developed and implemented to gather information of all aspects of the natural environment.
- Atmospheric radon: We deployed passive radon detectors, two "pucks" to a canister, and attach the canisters to trees at eye level. Air flows through; the pucks are later analyzed. So far we have found levels of less than 7 bq/m^3 compared to Health Canada's indoor guideline of 200 bq/m^3.
- Heritage: We are required by the Saskatchewan Conservation Branch to do a heritage impact assessment. Trained people walked the land; if they found something, they shovel-tested the area. They found one pre-contact artifact with little interpretive value. As a result the Conservation Branch issued clearance for the project to proceed.
- Aquatic: We test sediments, water, fish, soils, benthic invertebrates, and vegetation. We determine lake and pond depths. Krachkowski is the largest lake, and the deepest at 21.8 metres. We measure stream flows; there are eight continuous flow monitoring devices in streams now, deployed last spring. Data will be downloaded. We will continue it next year and throughout.
- Water quality: Measured in 17 lakes and 11 ponds. A number of parameters were tested to establish background levels; they are slightly acidic but it is very high quality water.
- Aquatic life: Sediments are silty clays, high quality, low contaminants. A lot of algae (55 types of phytoplankton and 32 types of zooplankton), plus small microorganisms and bacteria who feed on the algae.
- Benthic invertebrates like insects and worms showed huge numbers (1,000 – 10,000) per cubic metre, showing they are plentiful and have lots to eat; fish eat them.

- Fish: Fifteen species of fish were identified, from slimy sculpin to walleye, lake chub arctic grayling and burbot. We tested tissue samples for aluminum and selenium levels, which were low.
- Groundwater was sampled; monitoring wells are placed around the area. We deployed level loggers to assess water levels around the area. We will routinely test for a better understanding of water quality around the project site.
- Terrestrial surveys: We have a 48 sq. km project area within a 400 sq. km study area. In the larger area, over half the vegetation was jackpine/blueberry/lichen, waterbodies and jackpine forests. The same in the immediate project area, with a little different distribution.
- We identified and counted birds.
- While surveying for ungulates (moose and caribou) the biologists looked for black bear, fox, mink and all the other furbearers one would expect in a northern environment.
- Pellet counts were done and samples taken. They determined that the caribou and moose populations prefer to summer and winter in different locations depending on temperature and food availability. In summer they like shrubby bogs and swamps.
- We also did winter tracking, finding lynx in the area, along with other species.
- Aerial waterfowl and raptor surveys were done from the air.
- Aquatic furbearers: We did a shoreline survey over 96 km and found an abundance of muskrat, beaver and river otter.
- We trapped small mammals, for tissue analysis.
- We did an amphibian survey on 61 sites, identifying wood frogs and boreal chorus frogs.
- We did metal and radionuclide analyses on leaves and soils. We also tested berries.
- The regional and local environment is healthy and robust; we want to make sure we maintain that or mitigate any threat to that.
- Future work will involve continuous monitoring. We also need this information in support of our environmental assessment; it's critical that we continue to gain a thorough understanding of what is happening around the project area.

Questions/Comments

Our waterbodies up north change drastically; in the last two years we've even flooded over here, while a few years ago we were in drought mode.

- **L.Willemse:** Natural precipitation, ice and ice dams can cause changes. It depends on the climate and conditions. Flow can be spontaneous and erratic.

Denison Mines

Wheeler River Community Update

Community Workshop

January 16, 2018

AGENDA

Denison Mines

1. **Denison Introduction / Refresher**
2. **Workshop**
   A. **Site Access Road Route Options**
   B. **Treated Water Discharge Location Options**
   C. **Mining Method Options**
3. **Environmental Baseline Data Collection Update**

Denison – Who Are We?

Denison Mines

- **A Canadian uranium exploration & development Company**
  - Public company, but only 5% of the size of Cameco
  - A history of uranium mining, but no active mining operations
  - Several exploration properties in the eastern Athabasca Basin
  - 60% owner and the operator of the Wheeler River Project

Denison – Who Are We?

Denison Mines

- **A joint venture partner with Areva at McClean Lake**
  - Denison owns 22.5 % of the McClean Lake uranium deposits and the McClean Lake uranium mill (shown above) – Areva (70%) is operator
  - In our preliminary plans, Denison has assumed that the ore from Wheeler River will be processed at the McClean Lake mill

Denison – Who Are We?

Denison Mines

- **An operator of a Canadian environmental services business**
  - ~40 employees based in Elliot Lake, Ontario
  - Maintains Denison's closed and reclaimed mine site in Elliot Lake
  - Provides services to mining companies and governments across Canada

Denison – Who Are We?

Denison Mines

➢ A strong supporter of our local communities

- McClean Lake community programs
- Denison procurement from local vendors and personnel in northern communities

Saskatchewan

- Serpent River First Nations – employment, youth education initiative
- Supported creation of a retirement lifestyle community after mining was completed

Elliot Lake

- Supported construction of schools and health offices for local villages
- Drilled water wells
- Leadership roles for local technical & admin staff

Former African Assets

Location

Denison Mines

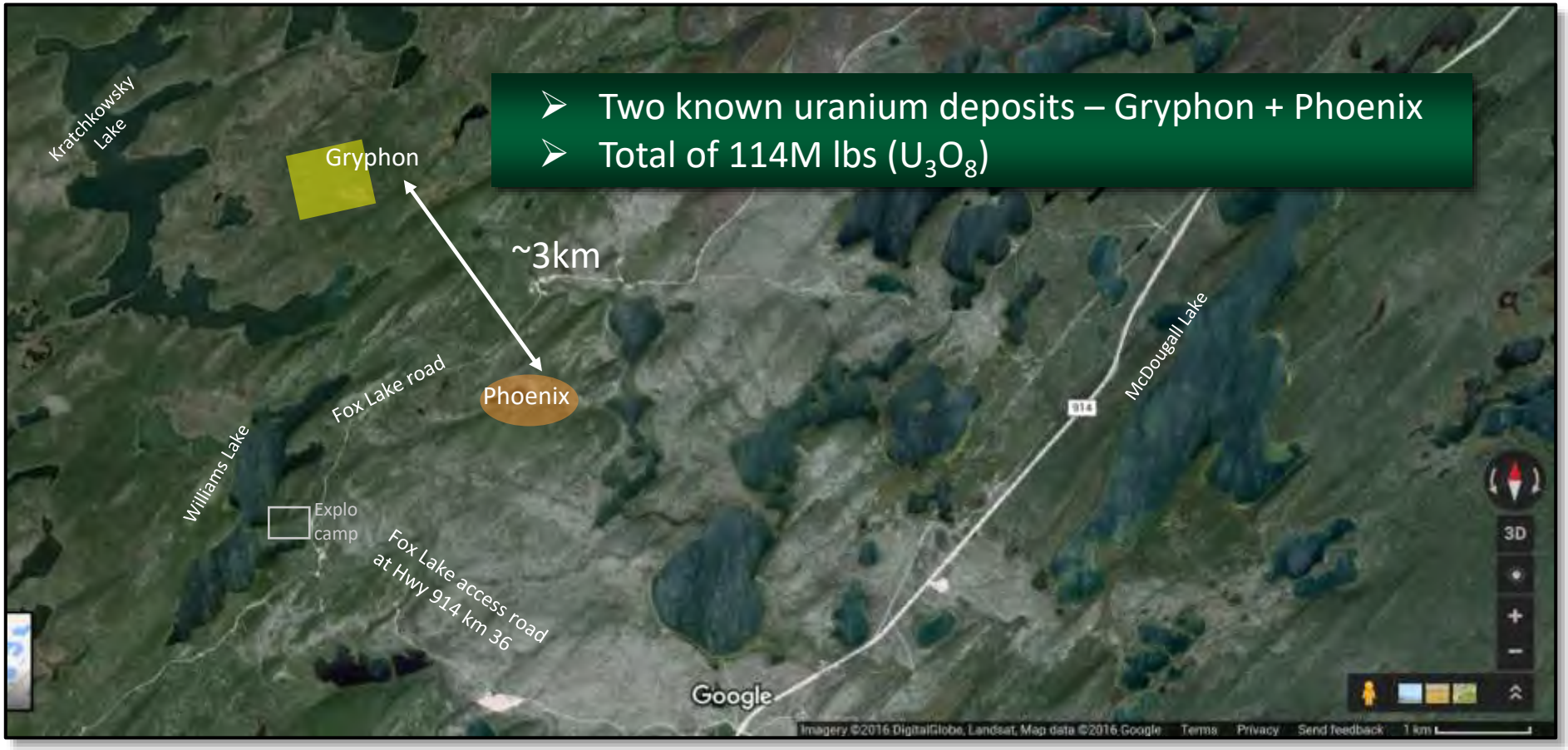
Wheeler River Today: Uranium Exploration

Denison Mines

- Exploration camp
- Drilling in winter & summer

Wheeler River Today

Denison Mines



- Two known uranium deposits – Gryphon + Phoenix
- Total of 114M lbs (U_3O_8)

In comparison

- McArthur River: Produced ~290M lbs, Reserves 234M lbs
- Rabbit Lake: Produced ~202M lbs, Resources: ~70M lbs

2017/2018 Activities

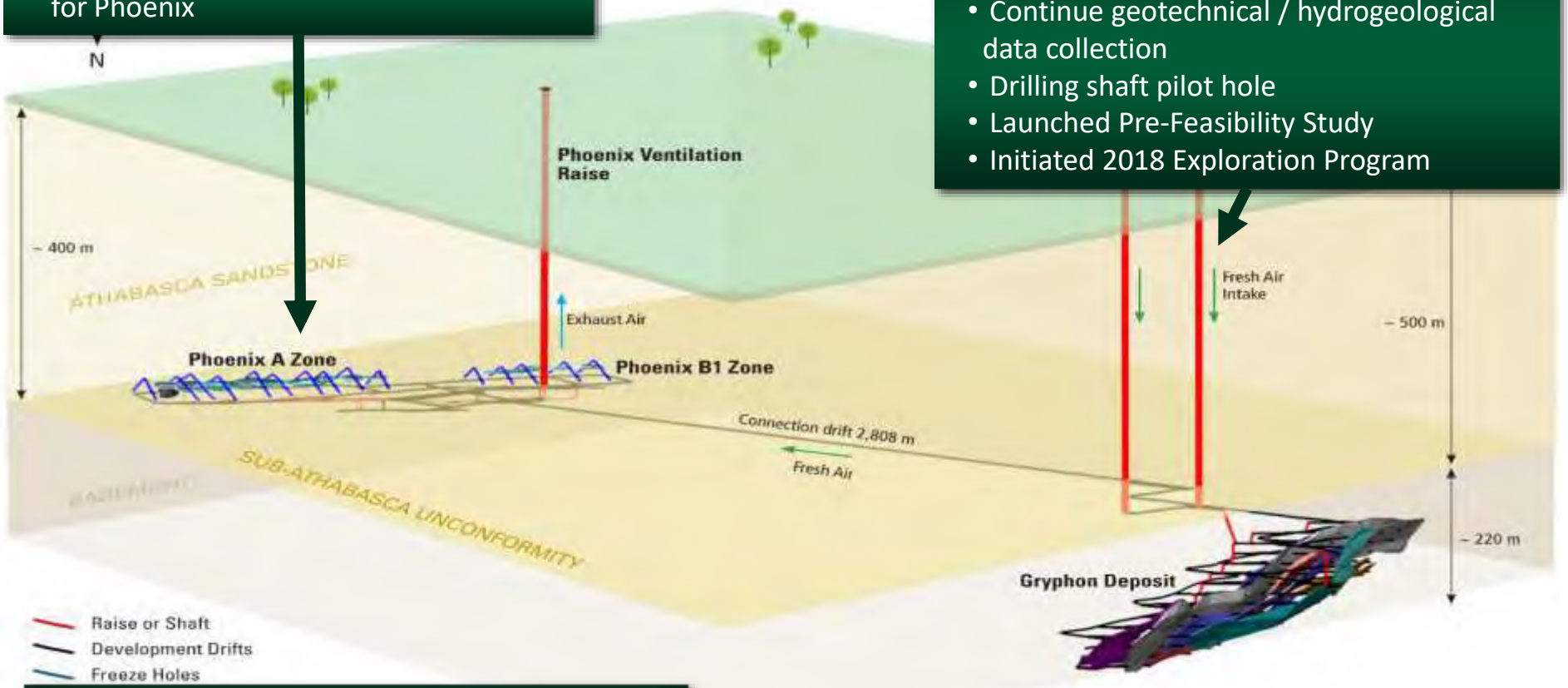
Denison Mines

Phoenix

- Investigating alternative mining methods for Phoenix

Gryphon

- Investigating shaft sinking methodologies
- Continue geotechnical / hydrogeological data collection
- Drilling shaft pilot hole
- Launched Pre-Feasibility Study
- Initiated 2018 Exploration Program



Other Work

- Conducting advanced metallurgical test work
- Complete Surface facilities design
- Complete Water treatment plant design

Wheeler River Future

Denison Mines

- Small footprint
- Mine, Camp, Water Treatment Plant

Wheeler River: A Long Term Proposition

Denison Mines

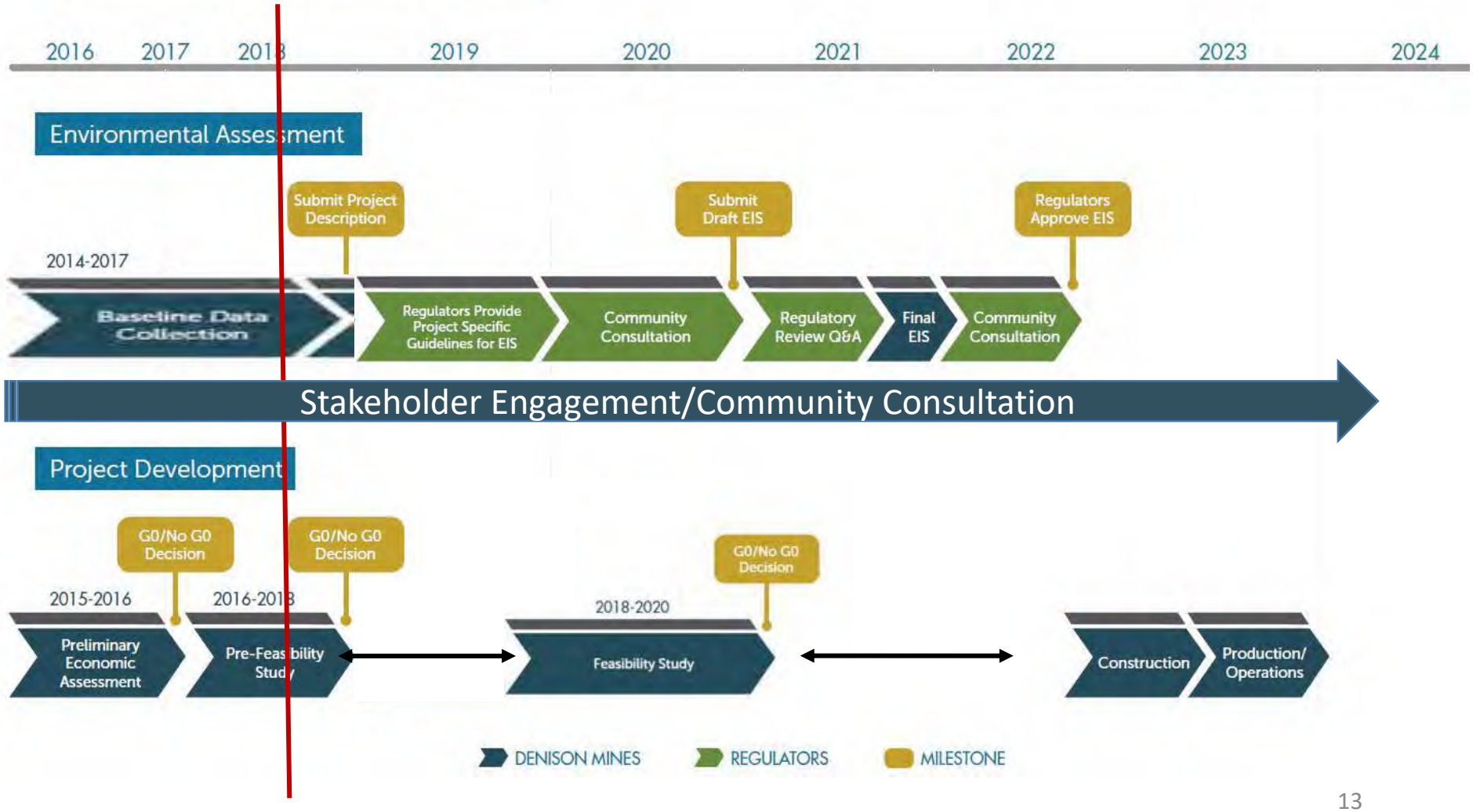
- Initial and sustaining capital costs ~CAD$1.13 billion
- First uranium production projected by 2025/2026
- Operating costs expected to average US$19/pound U_3O_8
- Uranium spot price quoted at ~US$20/pound U_3O_8

➢ **Denison believes in the future of nuclear energy and is investing in the people and the province of Saskatchewan, despite historic low uranium prices and difficult market conditions**

Wheeler River : A Long Road Ahead

Denison Mines

Wheeler River Project Timeline



Northern Capacity Development

Denison Mines

1. Denison
   - Drill camp supplied by the Beauval General Store
   - Worked with Drill Contractor to run a Drill Training Program, 2 northerners trained in fall, more to come
   - Employed northerners for baseline field program support
   - Supported career days last fall in Patuanak
   - Financially supported the IRM Program (BEAHR Program)

2. Denison Procurement: New contracts require
   - Competitive Costs & performance
   - Maximize northern employment and procurement of goods
   - Preference for northern ownership stake

Northern Capacity Development

Denison Mines

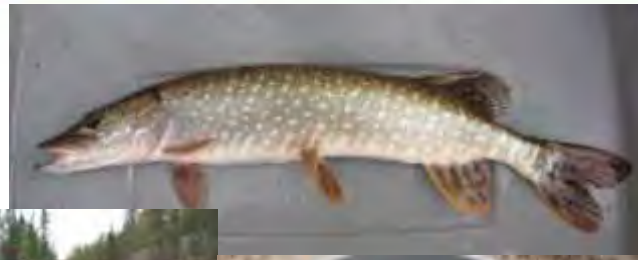
- Communities Requested Formal Agreements: Denison Issued Draft MOU (Memorandum of Understanding)
  - Formalize intent for Denison and Communities to work together in spirit of cooperation and respect
  - Sets the stage for an IBA (Impact Benefits Agreement) following the advancement of the project. Focus on 4 main areas:
    - Environmental Sustainability
    - Employment, Education and Training
    - Business Opportunities
    - Community Investment
- Draft issued to four communities/First Nations
  - Pinehouse, Ile a la Crosse, Beauval and ERFN
  - 2 signed, 2 remain under review

EIA Update: Baseline Environment

Denison Mines

Aquatics

- Hydrology ✓
- water quality ✓
- lake bathymetry ✓
- sediment quality ✓
- benthic invertebrate communities ✓
- benthic invertebrate chemistry ✓
- fish community ✓
- fish tissue chemistry ✓



EIA Update: Baseline Environment

Denison Mines

Terrestrial

- ecological land classification ✓
- breeding bird surveys ✓
- ungulate pellet counts ✓
- winter tracking surveys ✓
- aquatic furbearer shoreline surveys ✓
- small mammal trapping & chemistry ✓
- amphibian surveys ✓
- characterization of terrain and soil types ✓
- vegetation and soil chemistry ✓
- vegetation community ✓

Heritage

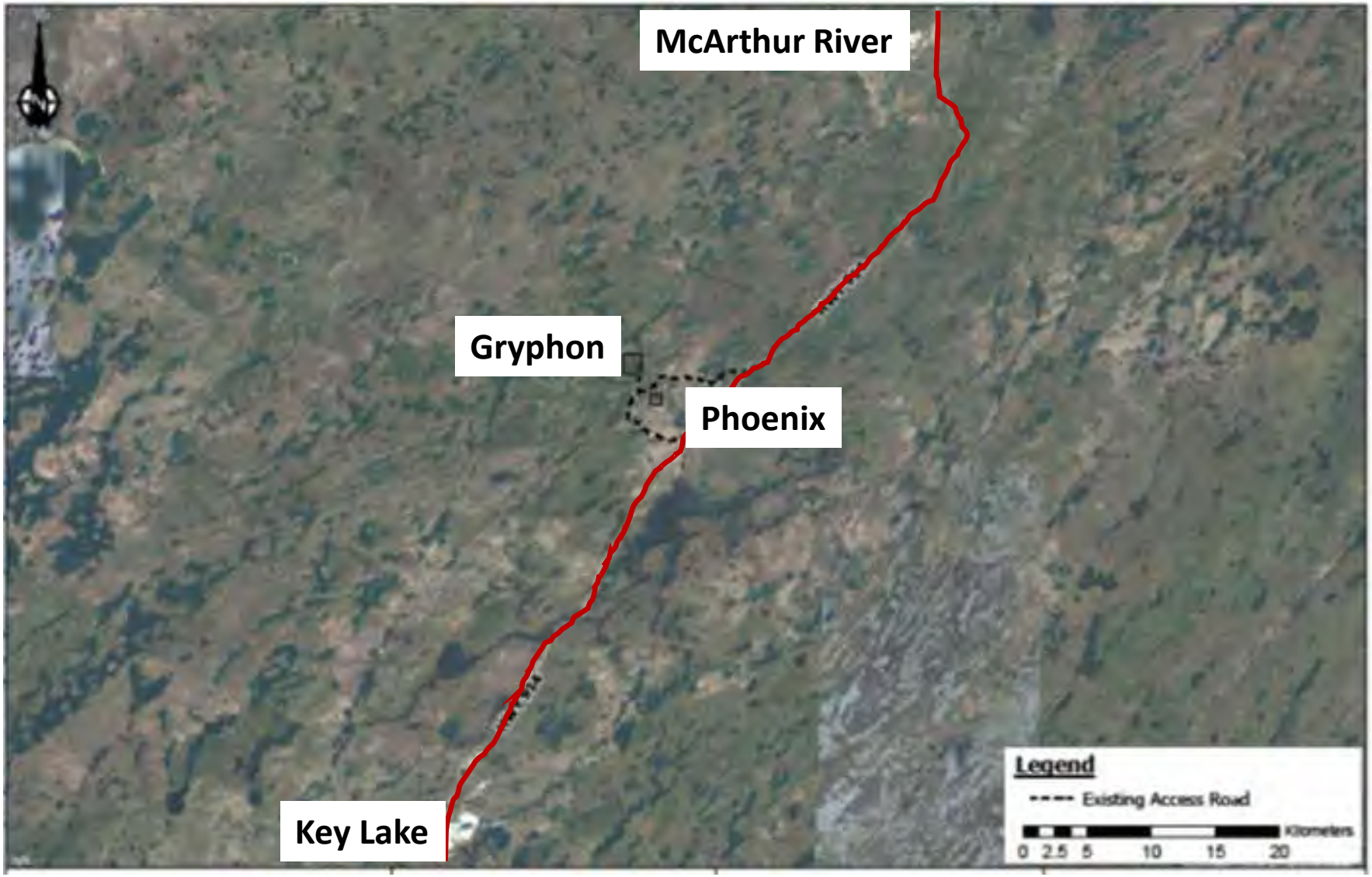
- heritage resources assessment ✓

Denison Mines

Site Access Road Options

Wheeler River Road Access Alignment

Denison Mines



Wheeler River Road Access Alignment

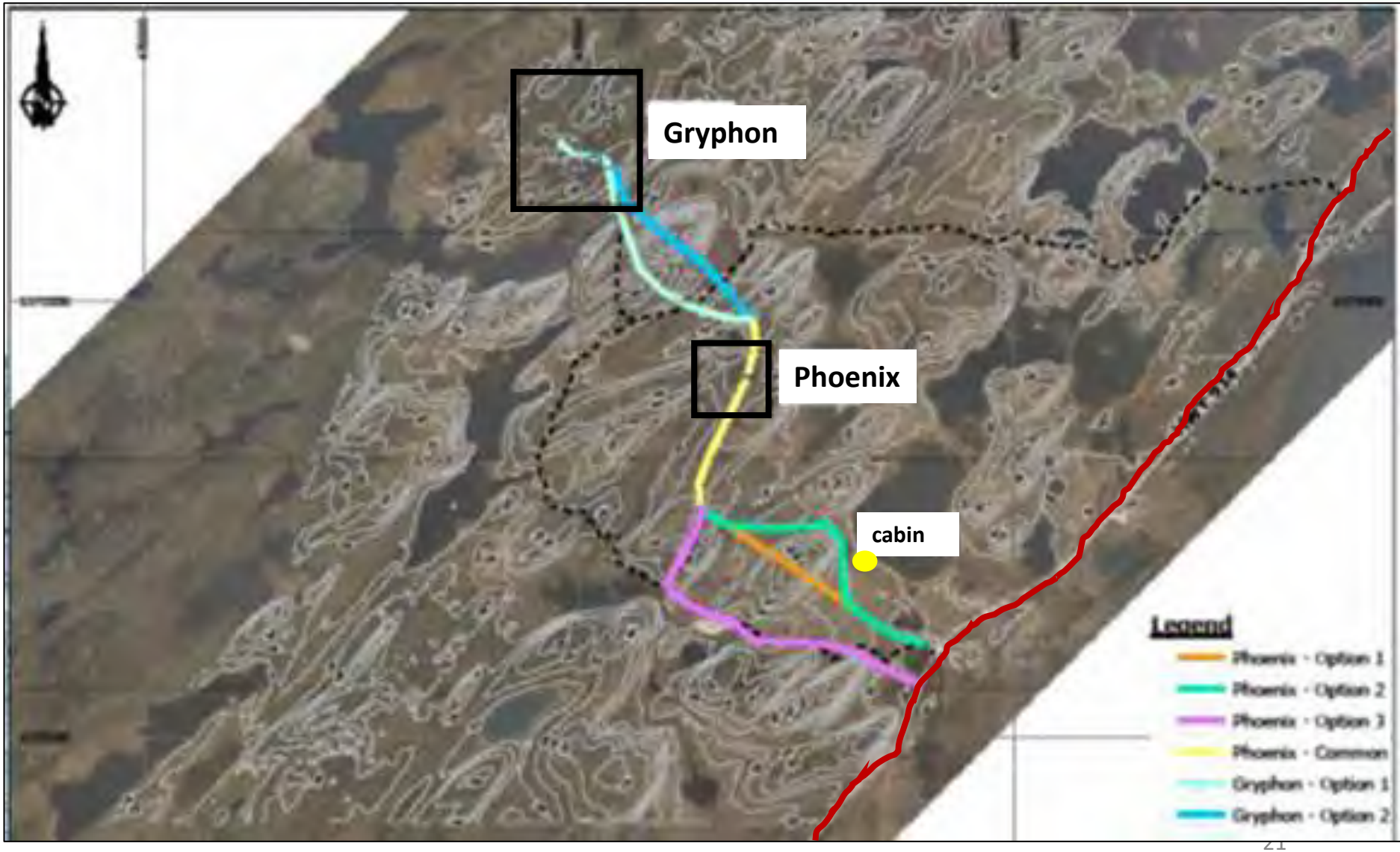
Denison Mines

- Constraints
  - 10 m wide
  - Slopes of cuts must be 3H:1V
  - Grade must not exceed 7%

- Considerations
  - Stream and river crossings, how many, how big
  - Proximity to lakes
  - Proximity to Cabin

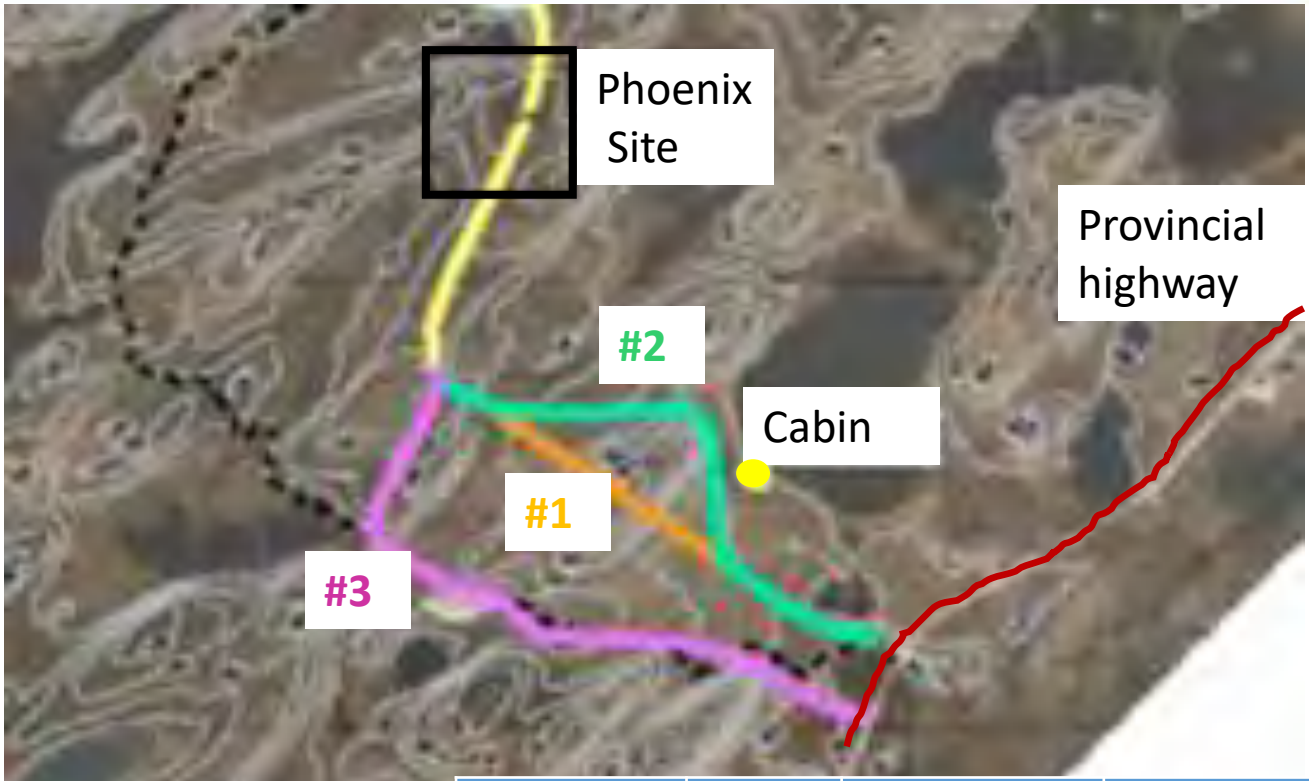
Wheeler River Road Access Alignment

Denison Mines



Wheeler River Road Access Alignment

Denison Mines



	Length	Dirt Moved	Streams	Distance to Water	Cabin
Phoenix Option 1	5.3 km	870,000 m^3	No crossings	200 m to lake	500 m
Phoenix Option 2	5.7 km	15,000 m^3	No crossings	140 m to lake	250 m
Phoenix Option 3	6.4 km	20,000 m^3	No crossings	200 m to lake	1000 m

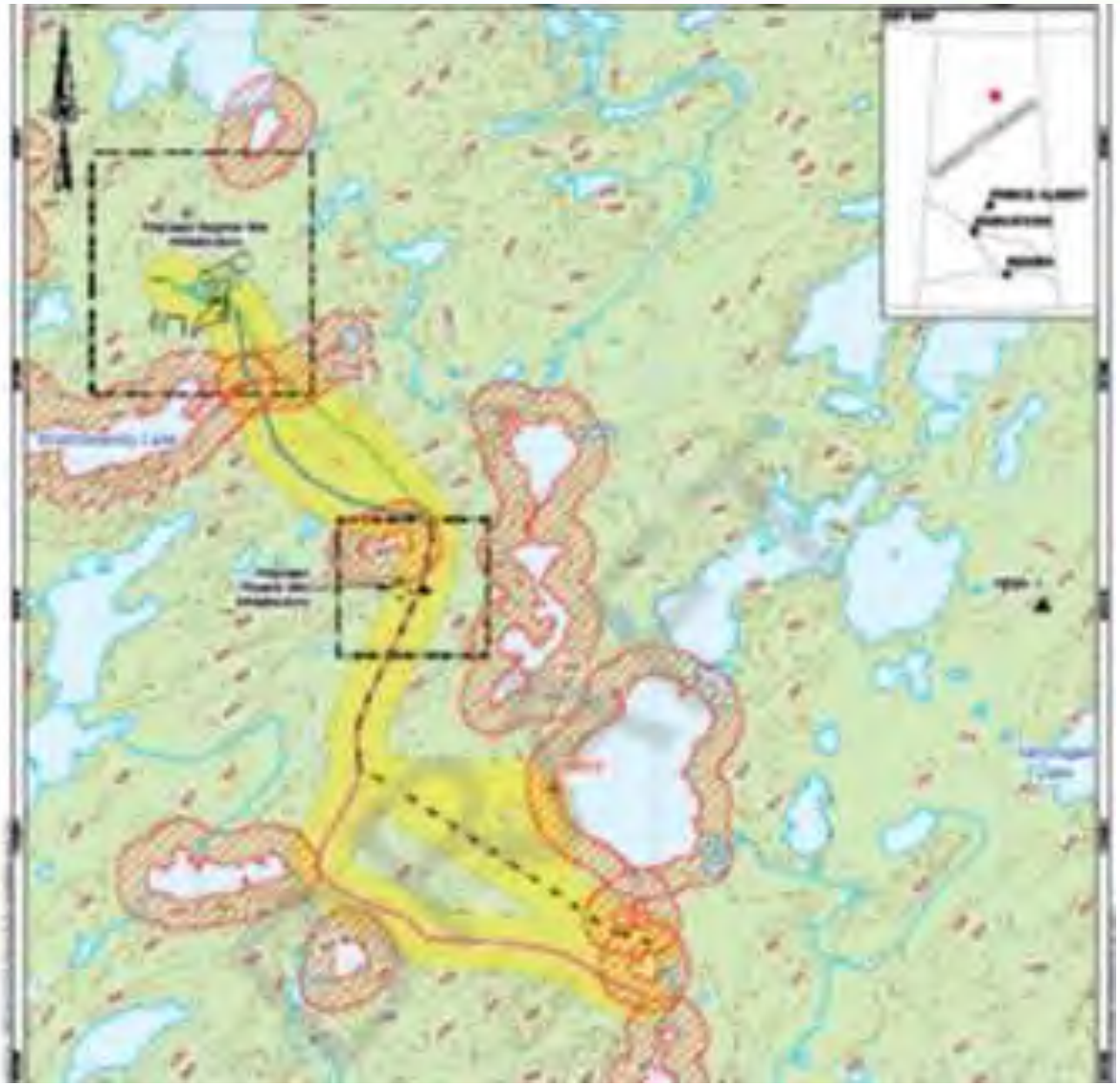
Wheeler River Road Access Alignment

Denison Mines

	Length Km	Dirt Moved	Streams	Distance To Water
Gryphon Option 1	3.3	265,000 m^3	1 crossing (existing bridge)	25 m
Gryphon Option 2	3.1	1,000,000 m^3	1 crossing (existing bridge)	200 m

Wheeler River Road Access Alignment

Denison Mines



Denison Mines

Treated Water Discharge Location Options

Discharge Location Options

Denison Mines

- Potential locations for treated water discharge were identified and assessed for:

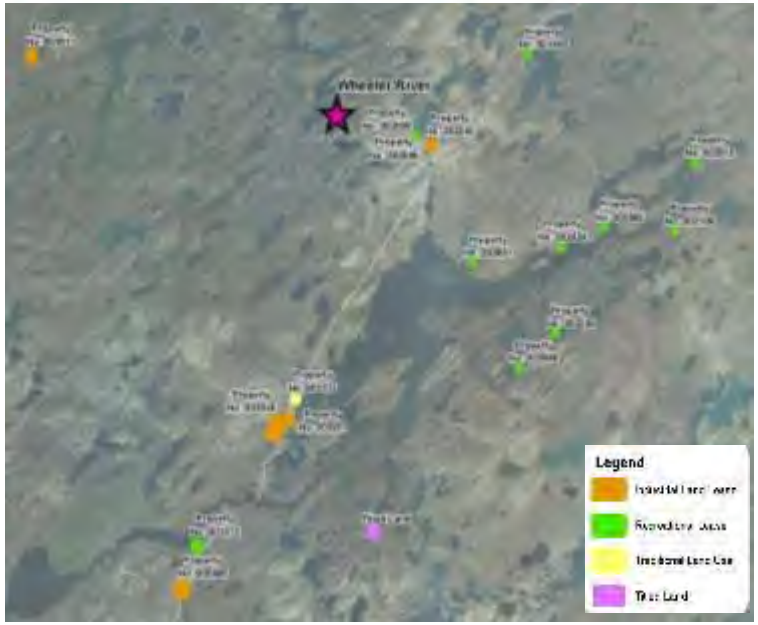
1. Preliminary understanding of land uses
   - Traditional territories
   - Trails, trap lines, country food harvesting, angling
   - Cabins, camps
   - Industrial properties
2. Potential impacts to water quantity and quality
   - Avoid locations with low flows
   - Minimize increase in flows
   - Meet provincial and federal water quality guidelines
3. Potential impacts to fish and fish habitat
   - Avoid spawning habitat

ROC5

Discharge Location Options
Traditional Knowledge and Land Use

Denison Mines

- Preliminary understanding of land uses from:
  - ERFN traditional territories map
  - Land disposition map
  - Observations during baseline (2016-2017)



Discharge Location Options
Identification

ROC5

Denison Mines

1. Preliminary factors:
   - Capacity (size of lake)
   - Watershed area (drainage)

2. Fish Spawning Grounds
   - Avoid

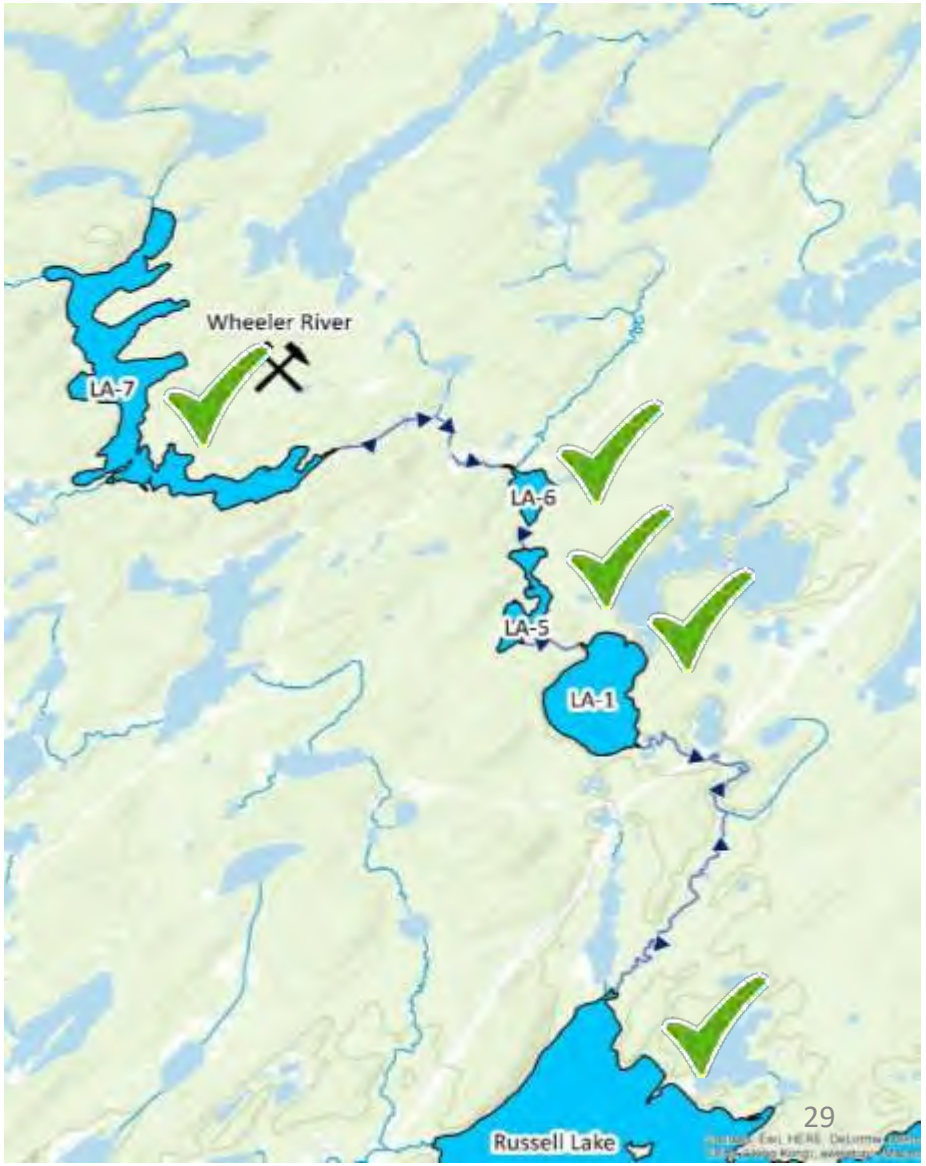
3. Flow Capacity
   - Can't be more than 50% treated

ROC5

Discharge Location Options
Preliminary Results

Denison Mines

- LA-7, LA-6, LA-5, LA-1 and Russel Lake
  - Are environmentally safe to discharge into
  - Meet provincial and federal water quality guidelines
  - Avoid spawning habitat
- Community Considerations:
  - Cabins & fishing on Russell lake
  - Length of pipeline and disturbance to land
  - Other?



Denison Mines

Mining Method Options

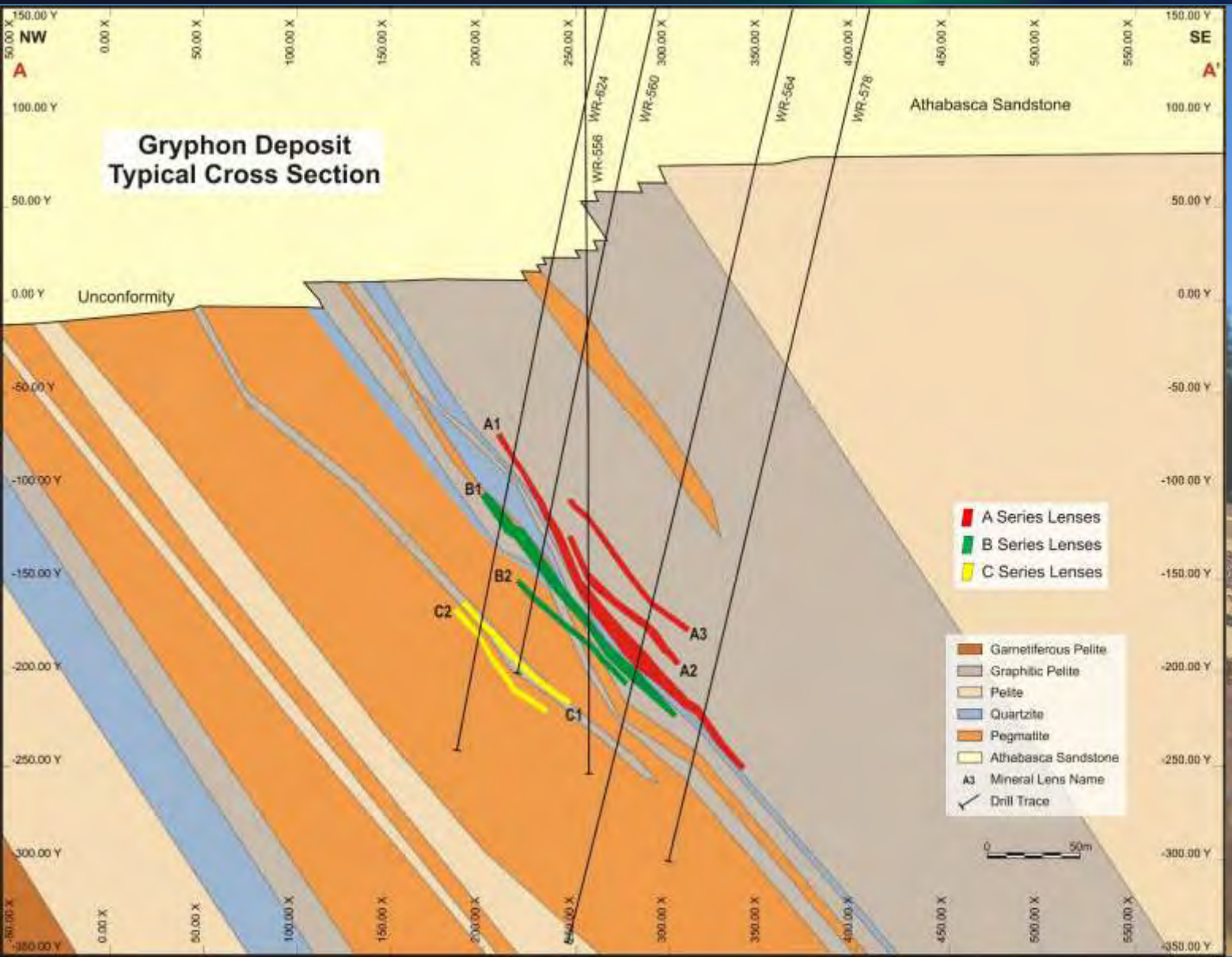
Mining Method Options

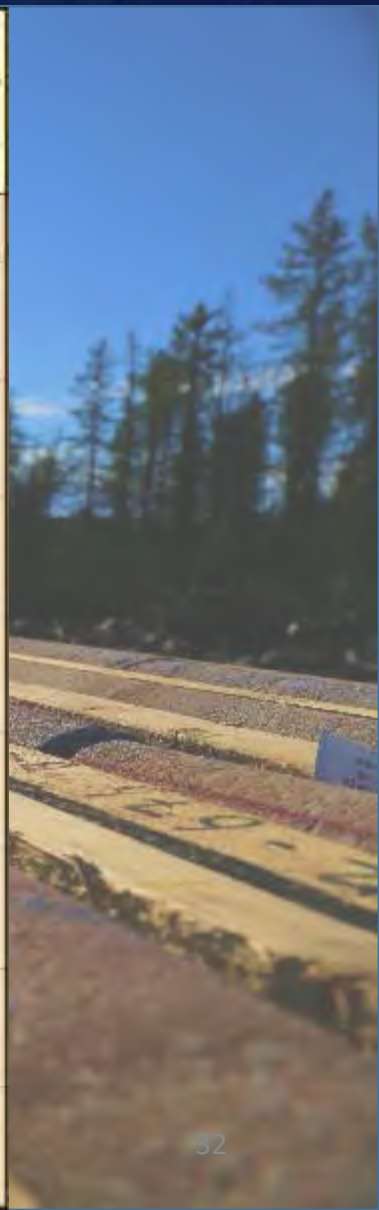
Denison Mines

Gryphon:	**Longhole Mining**
Phoenix:	**Directional Drilling**
	Insitu Recovery

Gryphon - Geology

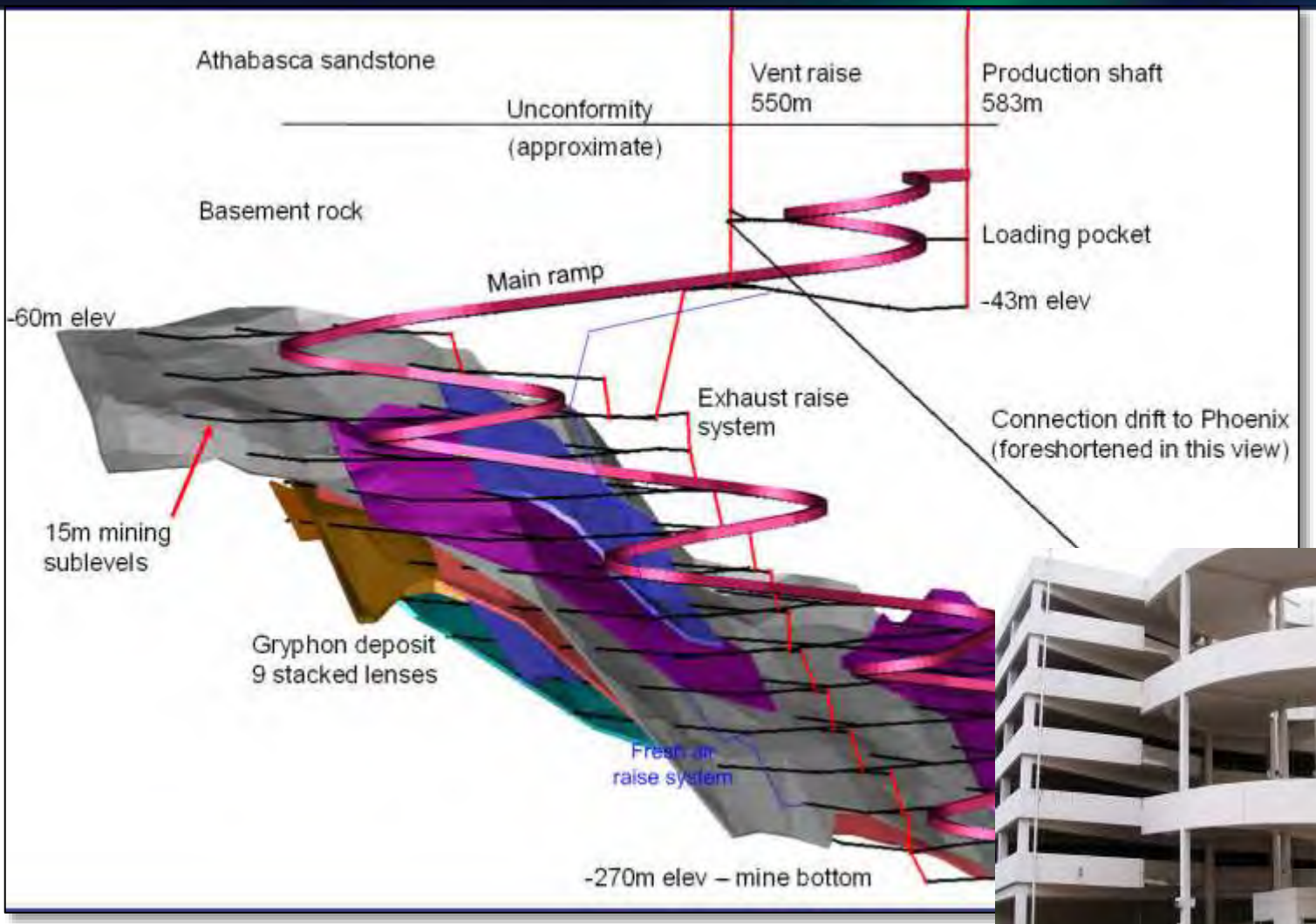
Denison Mines





Mining Method – Gryphon Deposit

Denison Mines



Gryphon Longhole Mining Method

Denison Mines

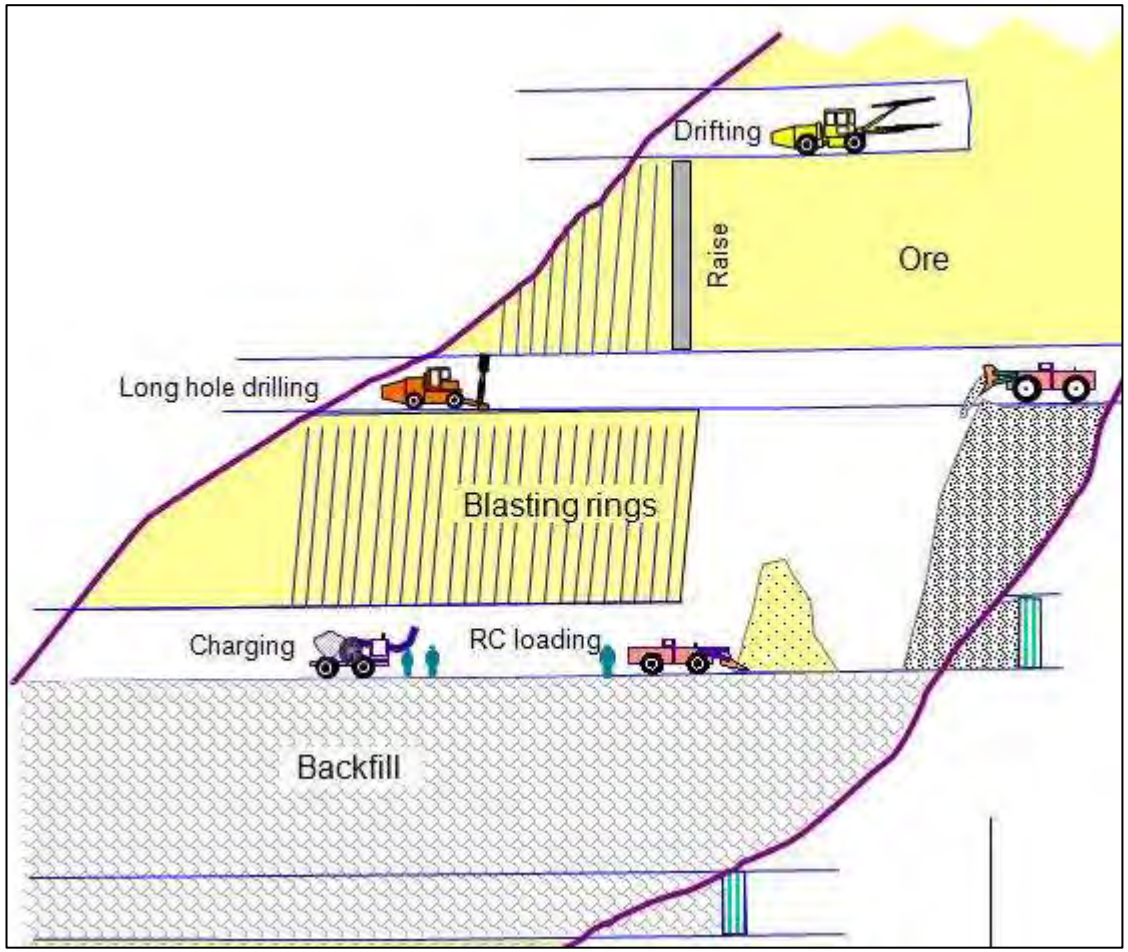
Step 1: Develop (drift) tunnels above and below the ore

Step 2: Drill holes between the two tunnels

Step 3: Load holes with explosives, blasting the ore

Step 4: Excavate (muck) out the ore

Step 5: Backfill opening



Gryphon: Longhole Mining Methods

Denison Mines

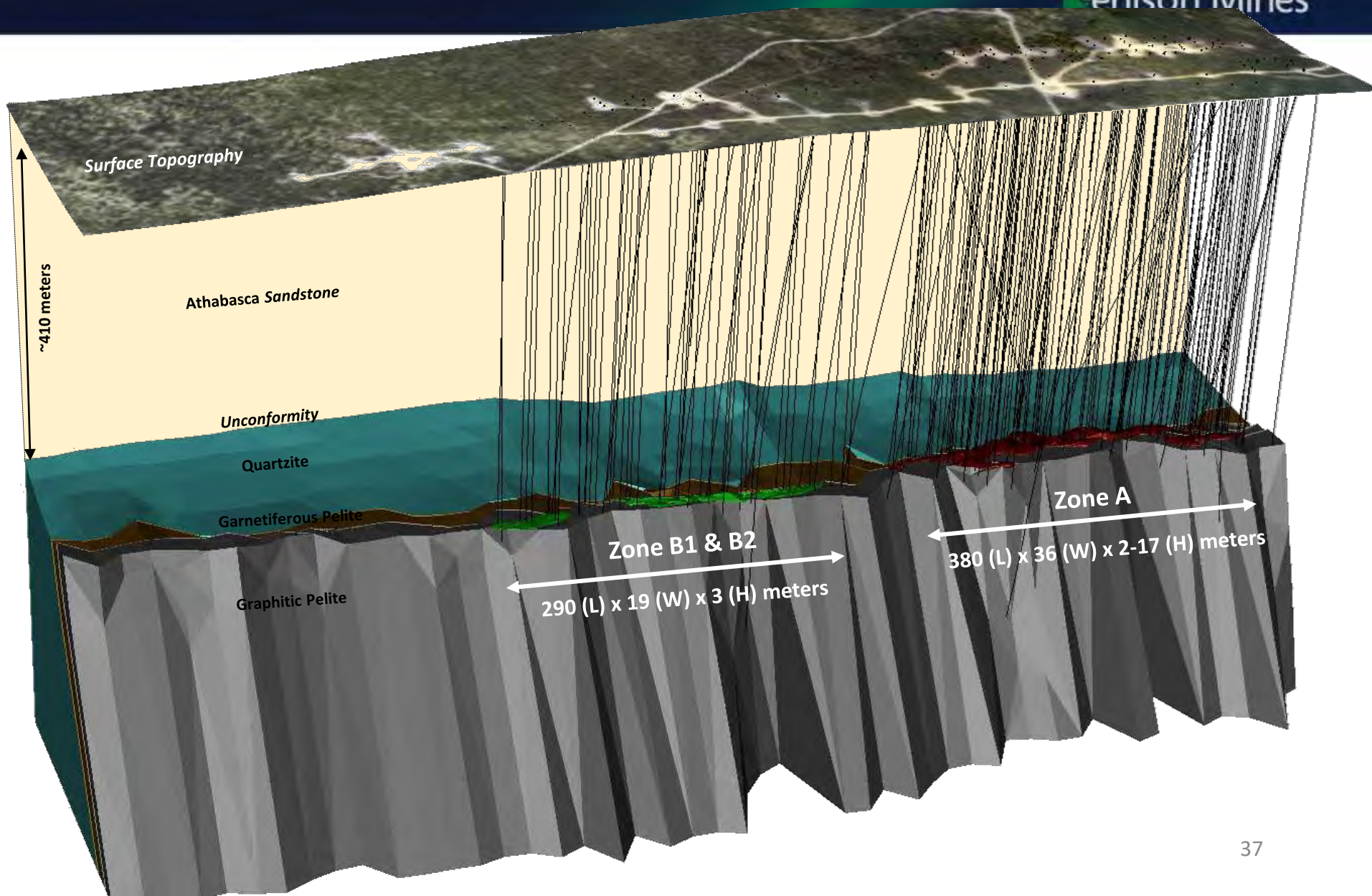
- Considerations:
  - Safety: Well established practices, equipment and procedures throughout Canada and the global mining industry
  - Radiation Safety: Proven safe, CNSN approved
  - Environmental: Minimizes waste rock on surface – can be used as backfill
  - Economics: Low cost, sustainable at current market prices
  - Industry Employment: No special skills / education required,

Mining Method Options

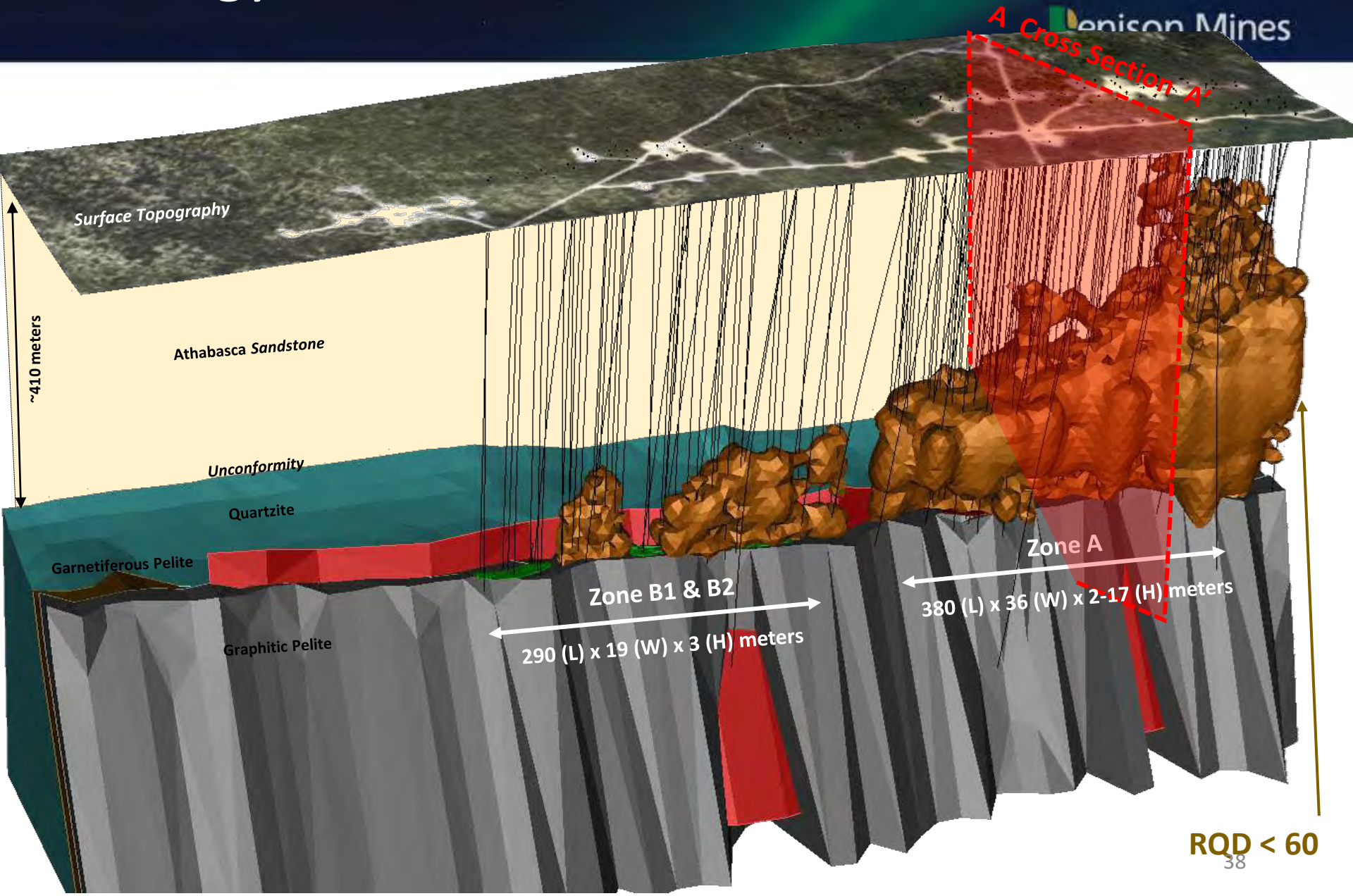
Denison Mines

Gryphon:	**Longhole Mining**
Phoenix:	**Directional Drilling**
	Insitu Recovery

Geology and Mineral Resources

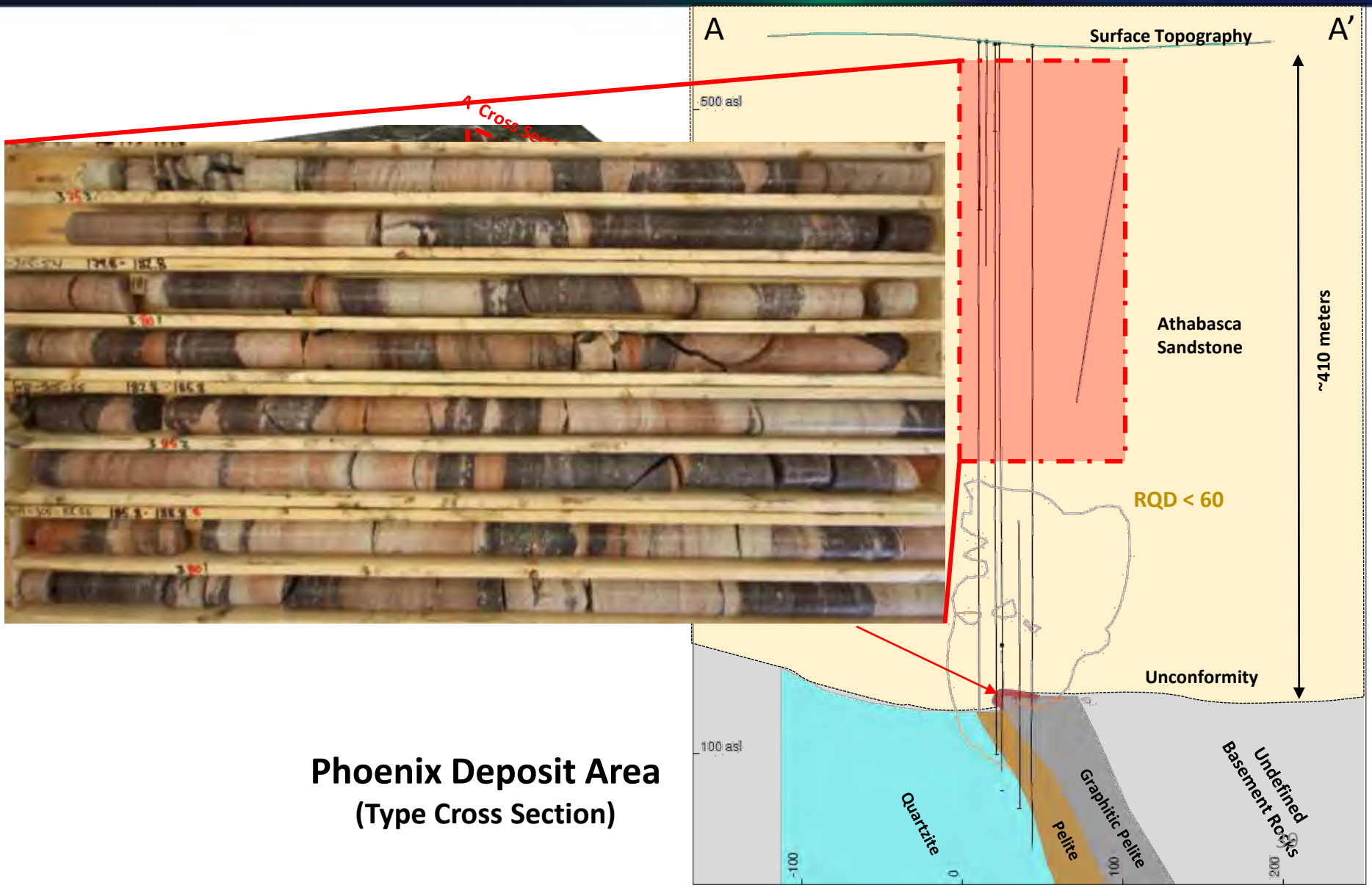


Geology and Mineral Resources



Geology and Mineral Resources

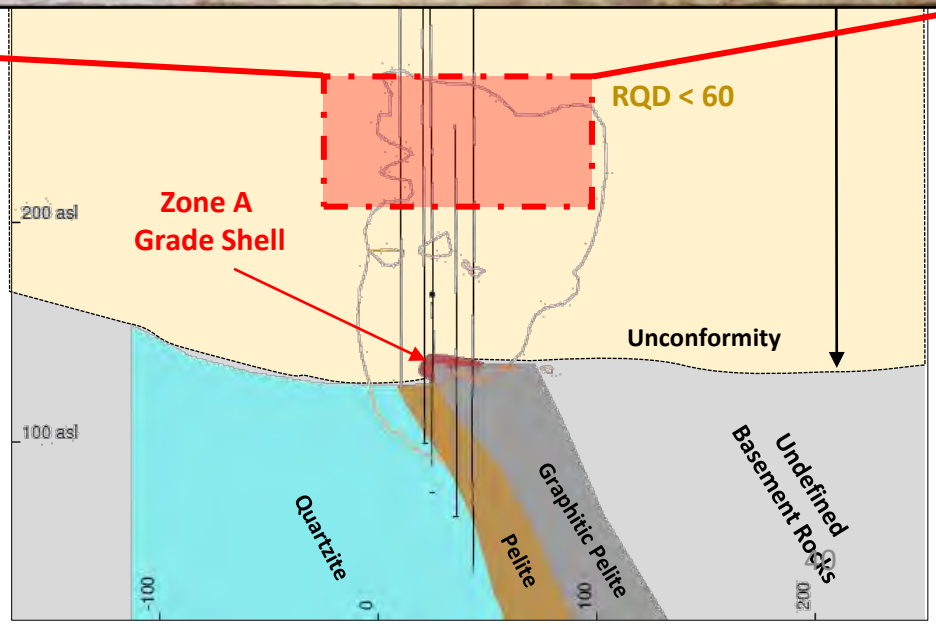
Denison Mines



Phoenix Deposit Area
(Type Cross Section)

Geology and Mineral Resources

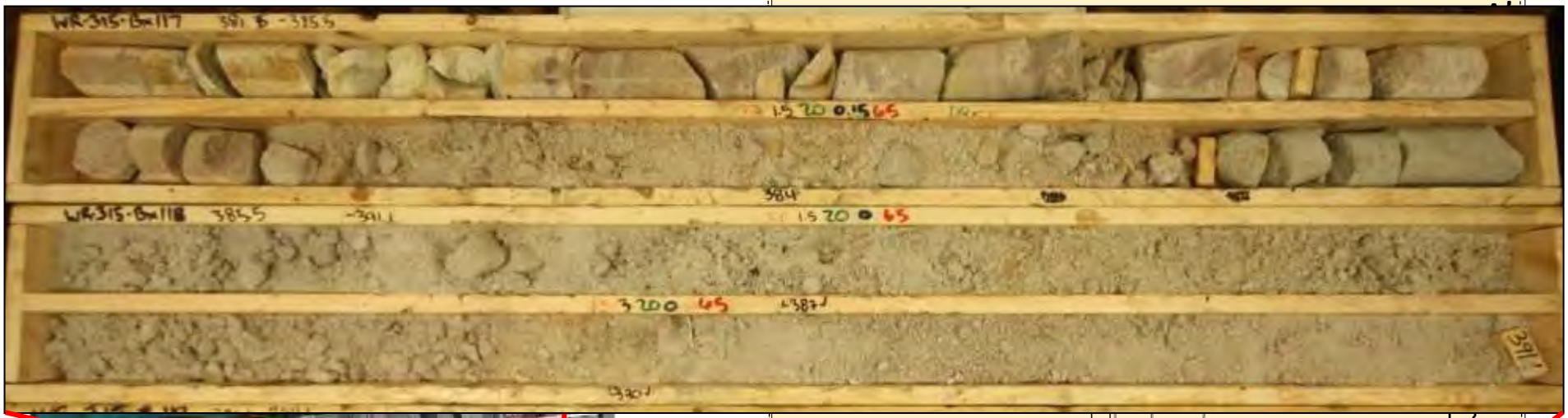
Denison Mines

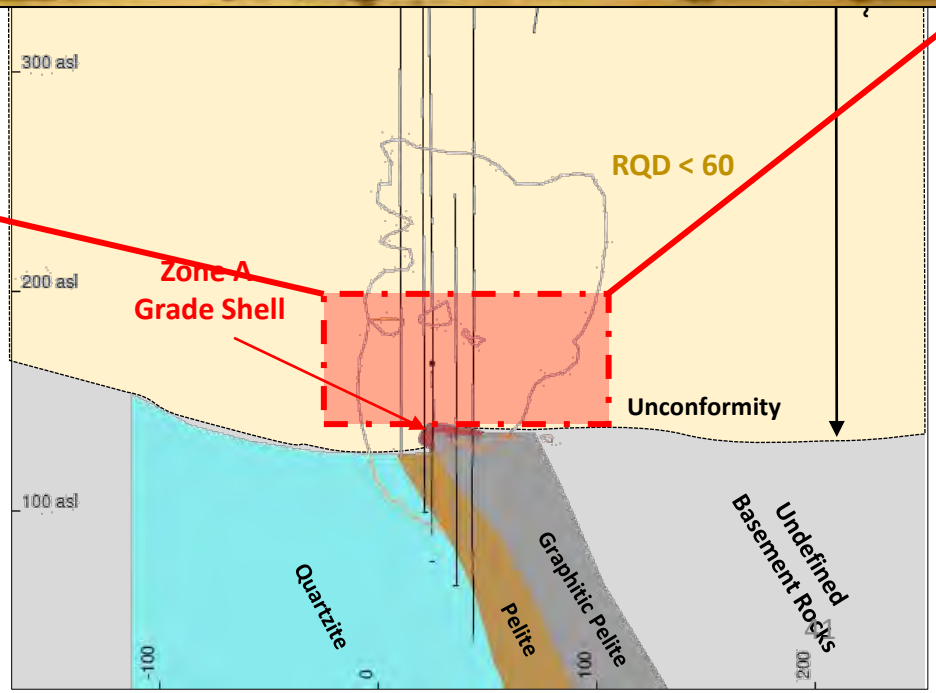


Phoenix Deposit Area
(Type Cross Section)

Geology and Mineral Resources

Denison Mines

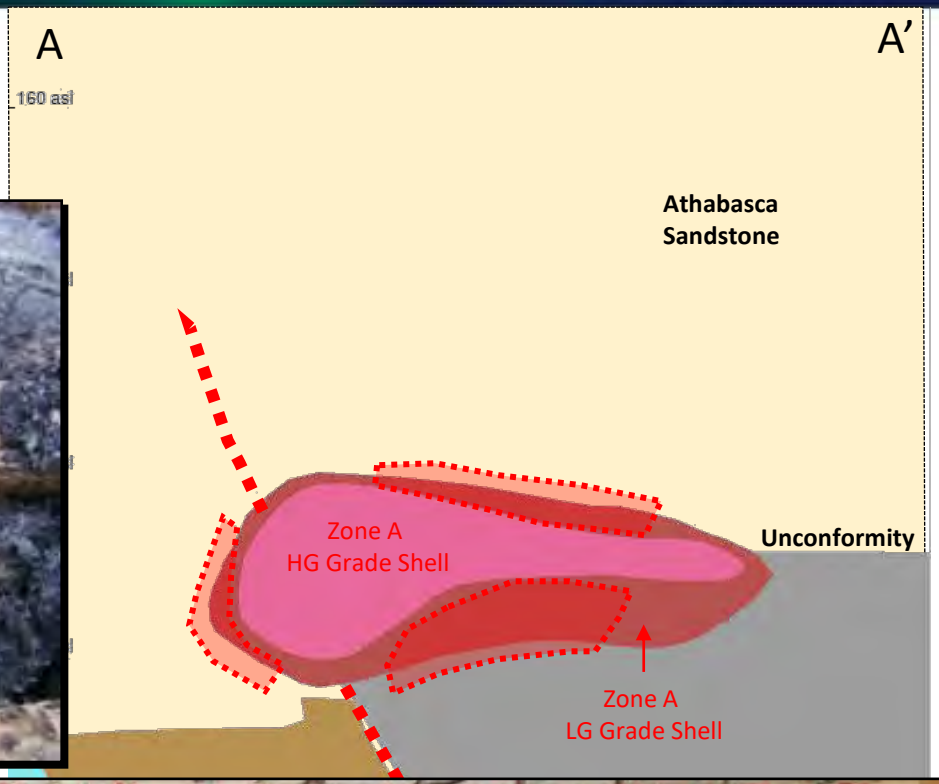




Phoenix Deposit Area
(Type Cross Section)

Geology and Mineral Resources

Denison Mines



Phoenix: Mining Methods

Denison Mines

- Due to poor ground conditions and high grade unable to use conventional mining methods
- Evaluated using Jet Boring System (i.e. Cigar Lake):
    - High Risk of technical challenges
    - Extreme Capital cost requirements
    - High operating cost
    - High degree of technical skills and education for employees
- Not profitable / sustainable in current market

Mining Method Options

Denison Mines

Gryphon:	**Longhole Mining**
Phoenix:	**Directional Drilling**
	Insitu Recovery

Phoenix Mining: Directional Drilling

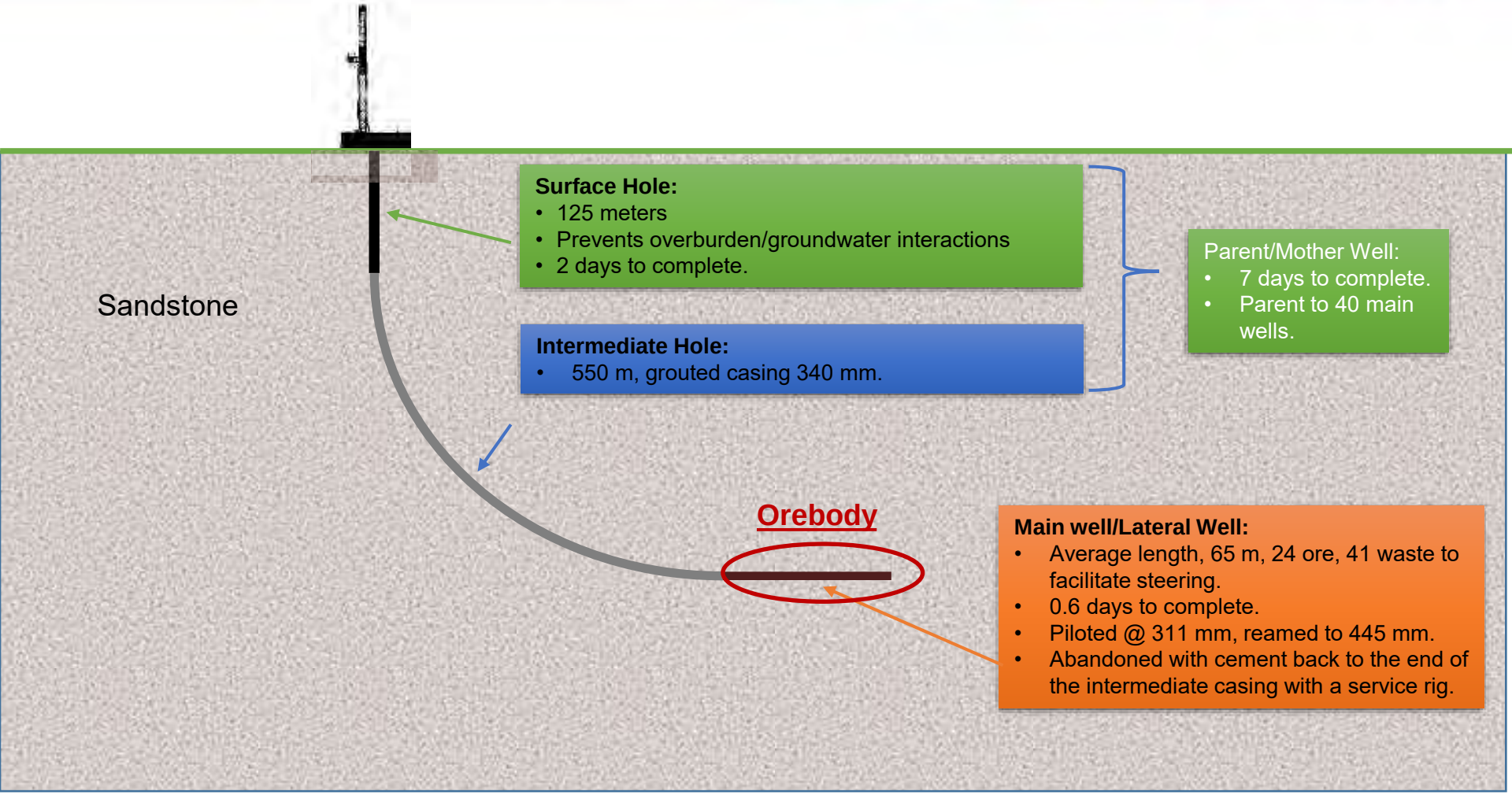
Denison Mines

Typical Surface Setup

- Technology available from oil and gas industry
- Site visit conducted Nov. 2, 2017 with positive results

Phoenix Mining: Surface Boring

Denison Mines

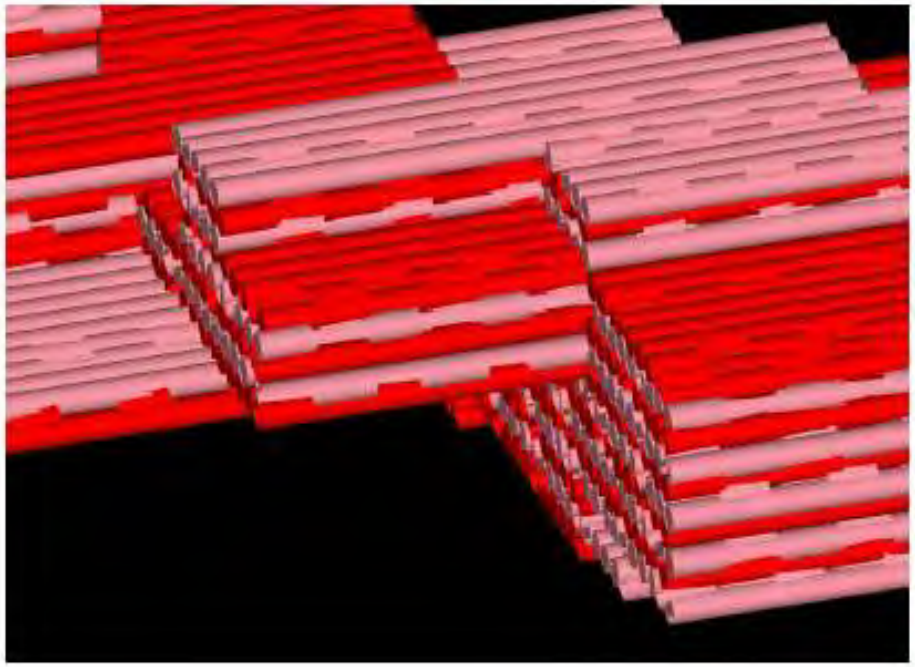


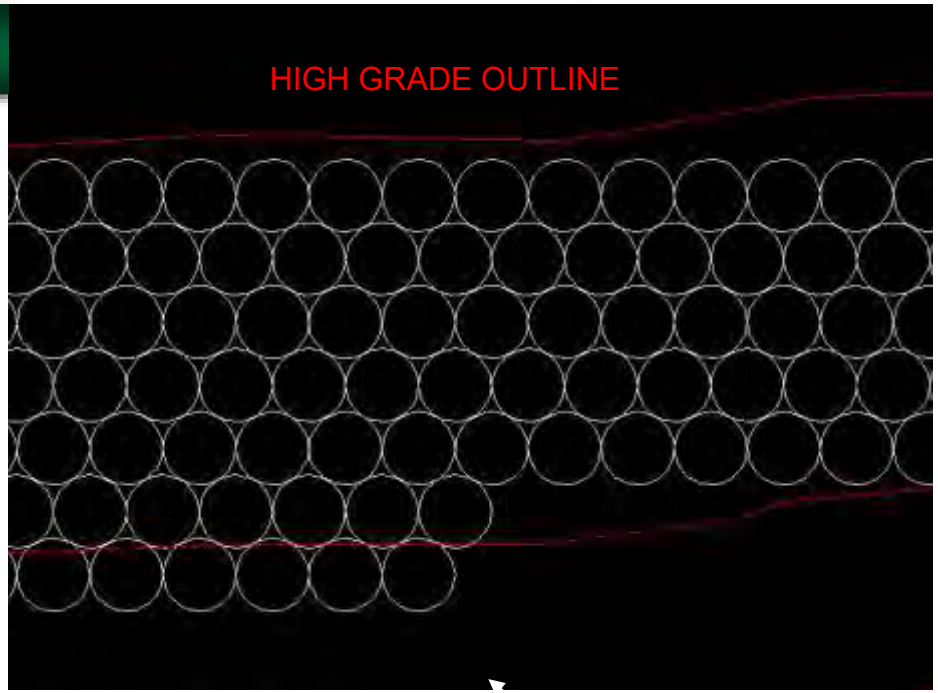
Phoenix Mining: Surface Boring - Recovery

Denison Mines

Phoenix Honeycomb Pattern

- 90% theoretical recovery
- ~4,300 boreholes through deposit (assuming 17.5” diameter)
- 340,000 meters of drilling





- 30-40m length holes in ore
- 30-40m length in waste / low grade
- Holes backfilled after drilled

Phoenix Directional Drilling

Denison Mines

- Considerations:
  - Safety: Well established practices, equipment and procedures established in Canada and the global industry
  - Radiation Safety: remote operation, no workers exposed to ore.
  - Environmental: Minimal surface and u/g disturbance, no water discharge,
  - Economics: Low cost, sustainable at current market prices
  - Industry Employment: No special skills / education required
- Material still needs to be trucked to McClean mill for processing
- Tailings are still produced

Mining Method Options

Denison Mines

Gryphon:	**Longhole Mining**
Phoenix:	**Directional Drilling**
	Insitu Recovery

Phoenix Options - ISR

Denison Mines

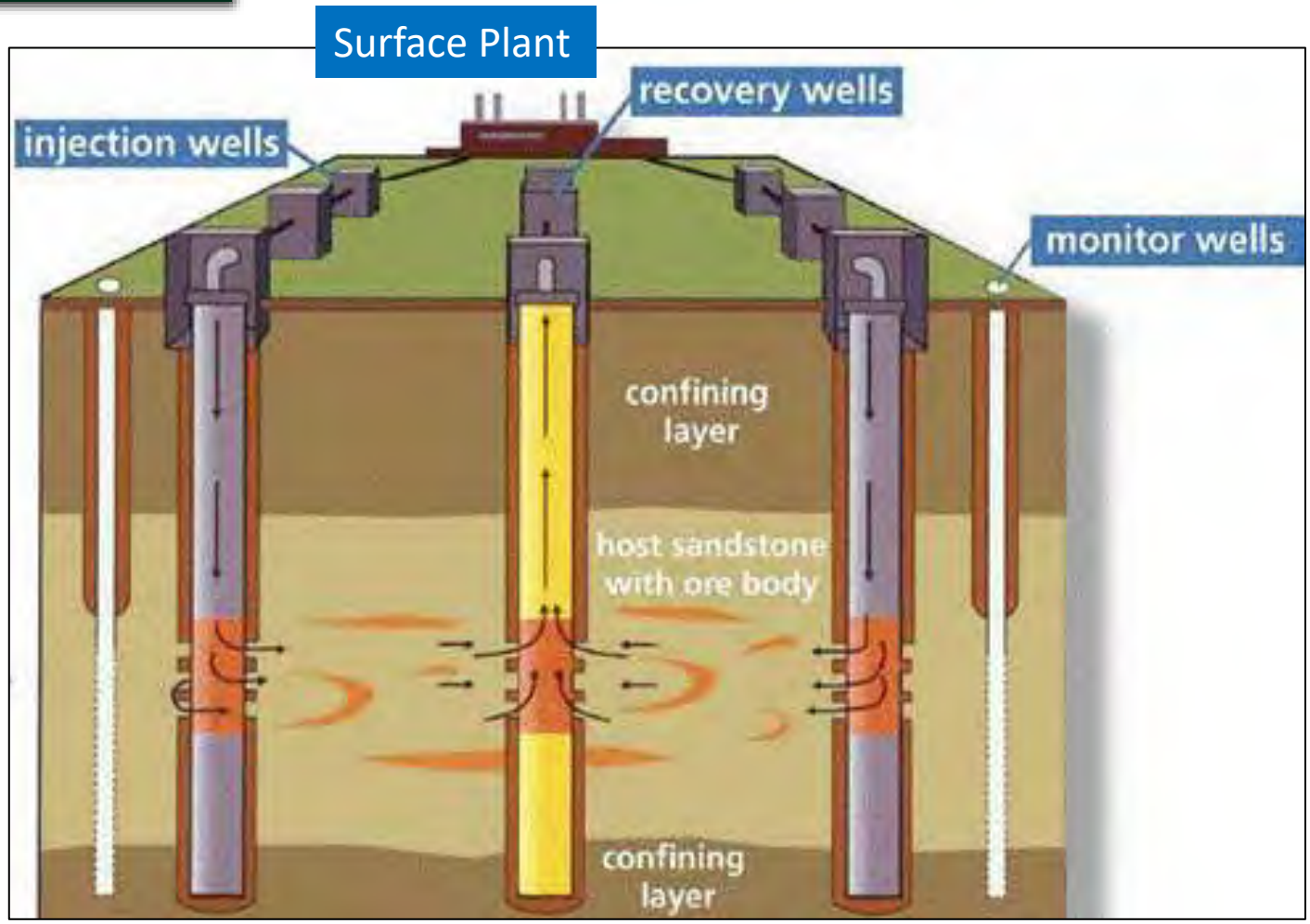
- Insitu Recovery has been utilized since the early 1960s
- Between 1961 and 2010 approximately 227, 700 t U was produced which equaled approximately 10% of historic global production
- In 2011 ISR production jumped to 46% of global production and is somewhere in this range today
- Production generally comes from 9 different jurisdictions
  - US and Australia would be considered the only two of these that host regulatory regimes similar in nature to Canada

Phoenix Mining: ISR

Denison Mines

ISR Process Overview

1. Inject solution into the orebody via injection wells
2. Recovery solution via recovery well and pump to plant
3. In Surface Plant surface uranium is separated from solution
4. Solution is re-injected to extract more uranium
5. Restoration



Phoenix Mining: ISR

Denison Mines

Surface Photo of Active ISR Operation

Phoenix Mining: ISR

Denison Mines

Phoenix Mining: ISR

Denison Mines

Phoenix Mining: ISR

Denison Mines

ISR Process Overview

- Uranium is stripped from the pregnant solution
- Peroxide or ammonia is then used to precipitate Uranium in solid
- Product is washed, dewatered and dried to form Yellowcake

Phoenix Mining: ISR

Denison Mines

- **Common Questions**
- Can we contain the mining solution during operations?
  - Monitoring / samples holes enable tracking of solution
  - Ability to increase / decrease pumping in/out of any individual hole
- Can we restore the groundwater conditions to baseline conditions following mining operations?
  - Continue treatment of water to adjust ph levels
  - Add lime or other basic element to increase ph
- At Wheeler we are currently gathering baseline information but we know the water quality now is not acceptable for use by humans or animals

Phoenix ISR

Denison Mines

- Considerations:
  - Safety: Well established practices, equipment and procedures established in the global industry
  - Radiation Safety: remote operation, no workers exposed to ore.
  - Environmental: Minimal surface and u/g disturbance
  - Environmental: No tailings production
  - Economics: Low cost, sustainable at current market prices
  - Industry Employment: No special skills / education required

Denison Mines

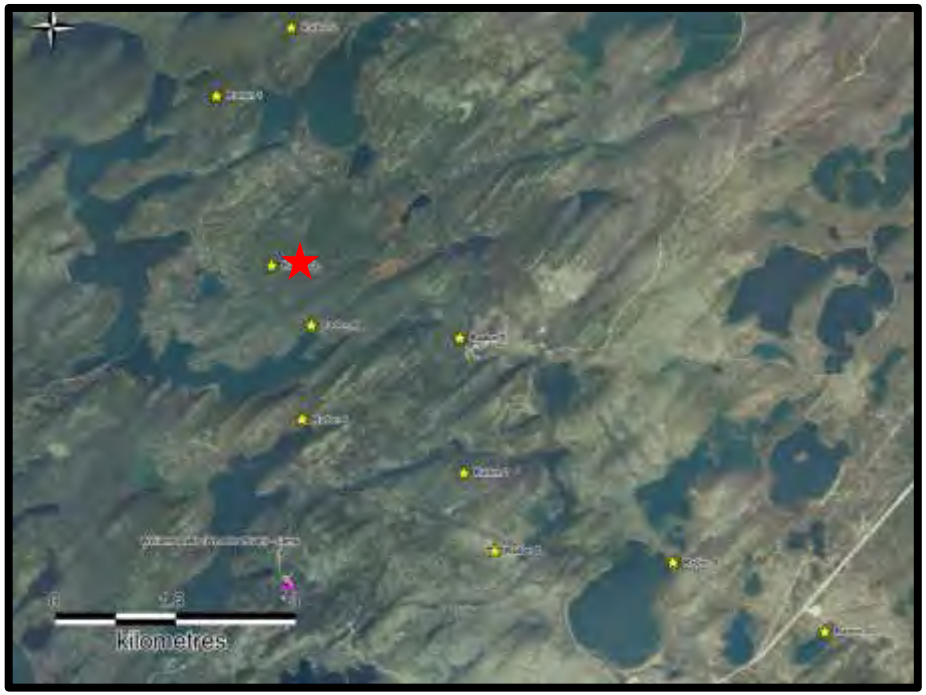
Environmental Baseline Data

EIA Update: Baseline Environment

Denison Mines

Atmospheric Radon Monitoring

- Radon detectors at 10 locations around Project Area
- Radon levels reported below <7.0 Bq/m^3
- Health Canada's radon guideline is 200 Bq/m^3

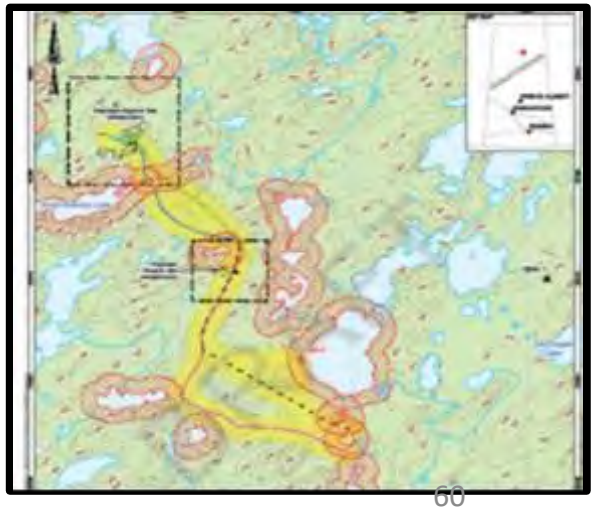


EIA Update: Baseline Environment

Denison Mines

Heritage

- Field program was completed in July 2017
  - Pedestrian reconnaissance and shovel probe/ tests
- One artifact HiNi-6 was discovered west of lake and deemed “limited interpretative value” by SK
- Clearance for project area received in Dec. 2017

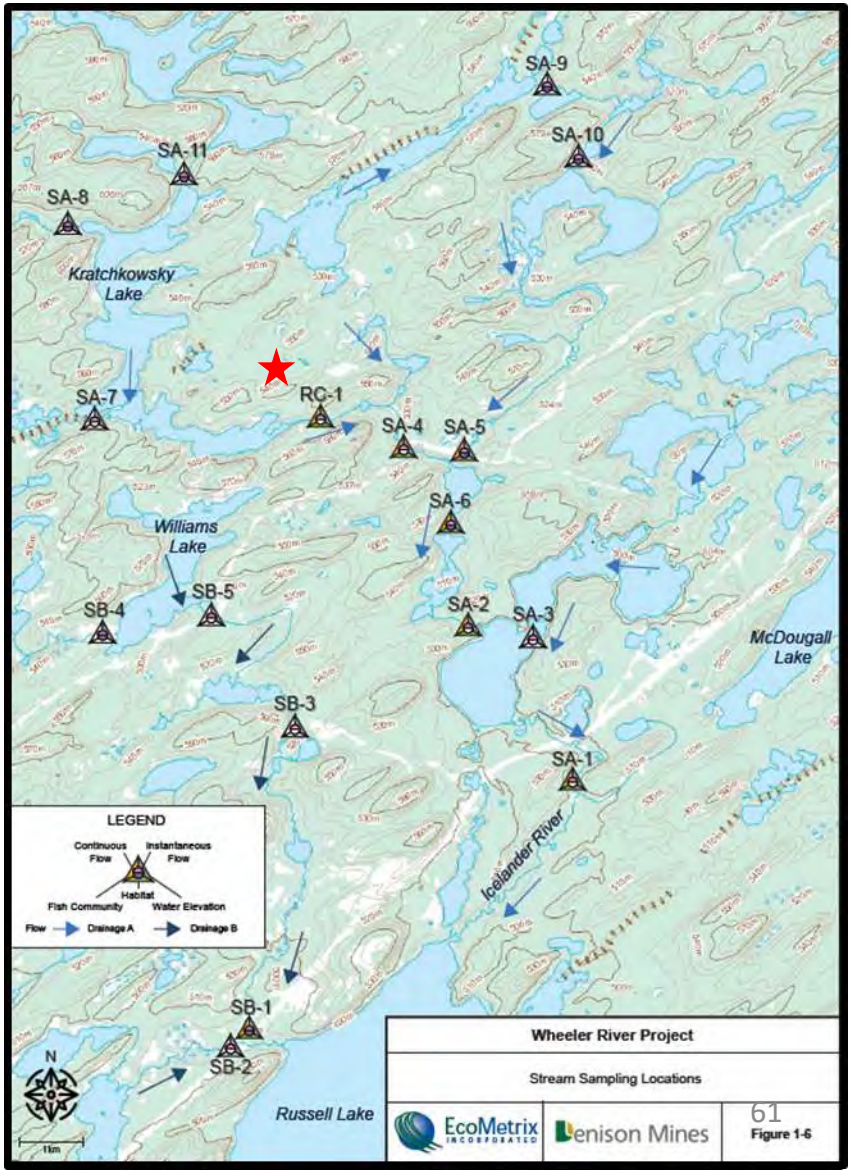


EIA Update: Baseline Environment

Denison Mines

Aquatic Environment

- Aquatic Habitat
- Bathymetry
- Hydrology
- Water Quality
- Sediment Quality
- Plankton Community
- Benthic Invertebrate Community
- Fish Community and Spawning



EIA Update: Baseline Environment

Denison Mines

Aquatics: Aquatic Habitat

- Lake Depth
  - Max. 21.8 m LA-7A
  - Min. 2.7 m LA-6
- Pond Depth:
  - Max. 3.2 m PA-2
  - Min. 2.7 m PA-1

EIA Update: Baseline Environment

Denison Mines

Aquatics: Hydrology

- Water level elevations measured at 13 lakes and 2 ponds
- Stream flow measurements measured at 16 watercourses
- Continuous monitoring equipment installed at 8 locations

EIA Update: Baseline Environment

Denison Mines

Aquatics: Water Quality

- Water quality evaluated at 17 lakes and 11 ponds
- Results indicate low levels of:
  - Specific conductance
  - Dissolved metals
  - Nutrient levels (nitrate and phosphorus)
  - Suspended and dissolved solids
  - Nitrogen (ammonia)
  - Total dissolved solids
  - Radionuclide (radium -226, thorium-230, thorium-232)
- Background levels for metals (Al, Cd, Fe)
- pH range 5.7 to 7.2

EIA Update: Baseline Environment

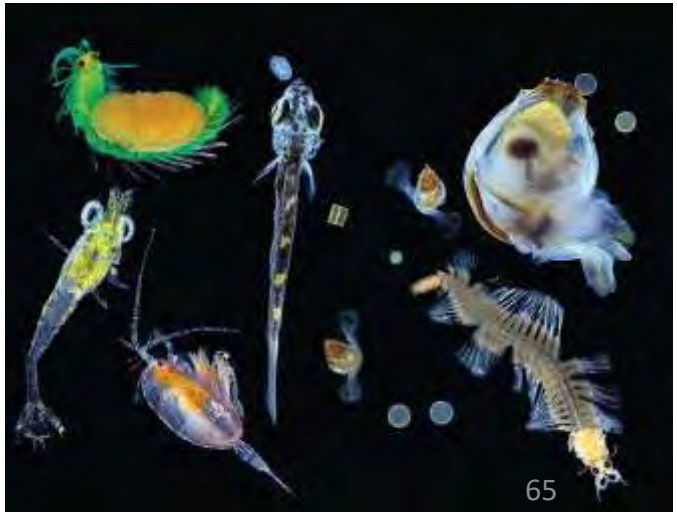
Denison Mines

Aquatics: Sediment Quality

- Comprised of silty-clays or sandy-silts
- Sediments collected from all lakes
- For parameters with sediment quality guidelines concentrations were at or below guideline value

Aquatics: Plankton Community

- Phytoplankton and Zooplankton
- Samples collected at 6 Locations
- Phytoplankton community 55 types
- Zooplankton community 32 types



EIA Update: Baseline Environment

Denison Mines

Aquatics: Benthic Invertebrate Community

- Collected at 10 locations
- 1,000 to 10,000 per m^2 of bottom surface area Insects most common
- Tissue collected at 9 locations and analyzed for metals and radionuclide contents
- Results were consistent throughout the study area
- Co and Ni were the most variable
- Radionuclides generally below Laboratory Detection limits

EIA Update: Baseline Environment

Denison Mines

Aquatics: Fish Community

- 13 fish species identified
- Spring and Fall Spawning Surveys at select locations
- Fish tissue samples collected
- Al and Se levels below guideline values
- Healthy fish community

EIA Update: Baseline Environment

Denison Mines

EIA Update: Baseline Environment

Denison Mines

Ground Water

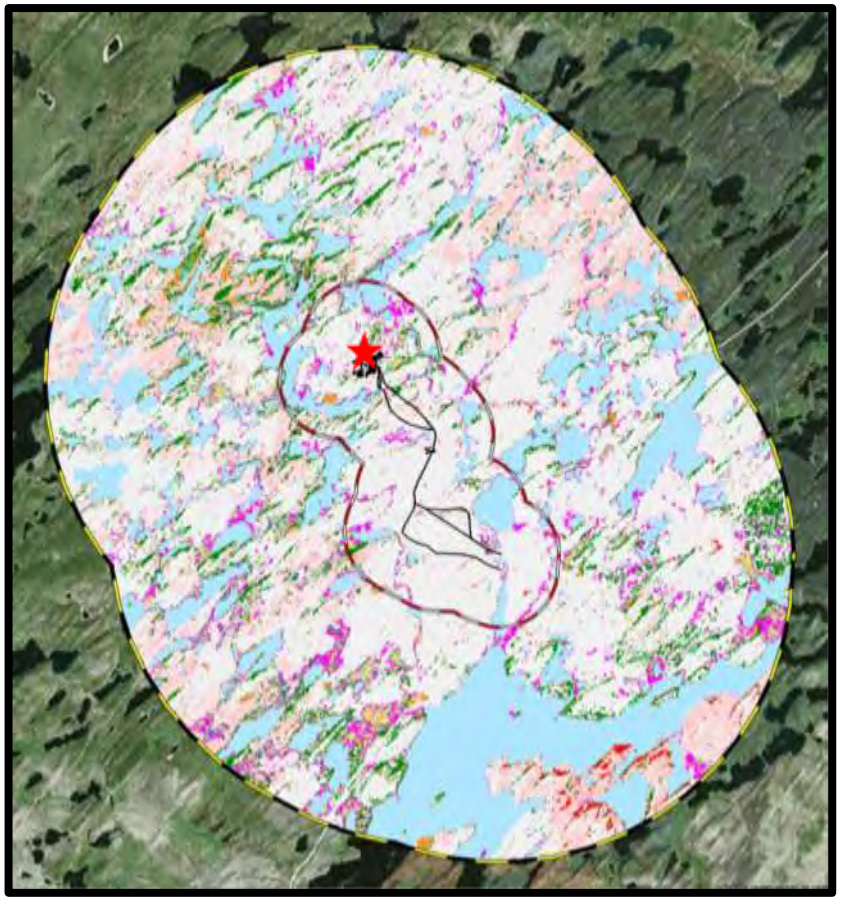
- 4 groundwater monitoring wells drilled to establish background levels of:
  - Total metals
  - Dissolved metals
  - Major ions
  - Radionuclides
- Groundwater monitoring will continue

EIA Update: Baseline Environment

Denison Mines

Terrestrial Baseline

- ✓ Ecological land classification
- ✓ Breeding bird surveys
- ✓ Ungulate pellet counts
- ✓ Winter tracking surveys
- ✓ Aquatic furbearer shoreline surveys
- ✓ Small mammal trapping and chemistry
- ✓ Amphibian surveys
- ✓ Characterization of terrain and soil types
- ✓ Vegetation and soil chemistry
- ✓ Vegetation community



EIA Update: Baseline Environment

Denison Mines

Terrestrial: Ecological Land Classification

- Regional Study Area
  - 52% - jack pine
    blueberry/lichen
  - 21% Waterbodies
  - 13%- jack pine
    black spruce/feathermoss

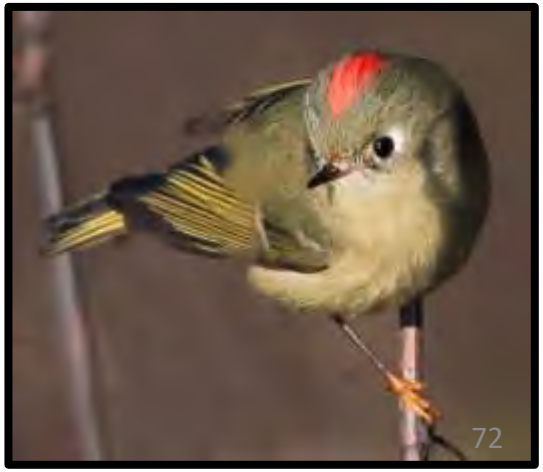
- Local Study Area
  - 70% - jack pine/
    blueberry/lichen
  - 13% Waterbodies
  - 5% jack pine
    black spruce/feathermoss

EIA Update: Baseline Environment

Denison Mines

Terrestrial: Breeding Bird Surveys

- Identified 36 species
- 10 most common:
  - Ruby-crowned Kinglet (51)
  - Dark-eyed Junco (40)
  - Gray Jay (34)
  - Yellow-rumped Warbler (31)
  - Swainson's Thrush (18)
  - Hermit Thrush (18)
  - Lincoln Sparrow (15)
  - Chipping Sparrow (15)
  - Fox Sparrow (15)
  - American Robin(13)
- Most preferred:
  - Jack pine – white birch/feathermoss
  - Jack pine – black spruce/feathermoss
  - Black spruce/blueberry/lichen



EIA Update: Baseline Environment

Denison Mines

Terrestrial: Pellet Counts

- Pellets/ scats of 7 Species were identified
  - Grouse/ptarmigan
  - Moose
  - Woodland caribou
  - Black bear
  - Red Fox
  - Mink
  - Marten
- Woodland Caribou (2 transects)
  - Winter: Jack pine/blueberry/lichen
  - Summer: Labrador tea shrubby bog
- Moose wide occurrence in region
  - Winter: black spruce/blueberry/lichen
  - Summer: black spruce/balsam poplar/river alder swamp

EIA Update: Baseline Environment

Denison Mines

Terrestrial: Winter Tracking

- January 25 and February 3, 2017
- 19 replicate transects completed
- Fresh snow tracks were identified
- 11 Species Identified
  - Snowshoe hare
  - Red squirrel
  - Grouse or Ptarmigan
  - Microtine
  - Marten
  - Canada Lynx
  - Ermine
  - Mink
  - Fisher
  - Moose
  - Woodland caribou

EIA Update: Baseline Environment

Denison Mines

Terrestrial: Aerial Waterfowl and Raptor Surveys

- 20 waterfowl/raptor(s) identified
- 10 most observed:
  - Ring-necked Duck
  - Common Merganser
  - Common Loon
  - Mallard
  - White-headed Gull
  - Bald Eagle
  - Canada Goose
  - Lesser Scaup
  - Yellowlegs Spp.
  - Bufflehead

EIA Update: Baseline Environment

Denison Mines

Terrestrial: Aquatic Furbearer Shoreline Survey

- Completed along shoreline 23 of creeks, lakes, and ponds
- 96 km total distance of shoreline surveyed
- Species identified:
  - Muskrat
  - Beaver
  - River otter

EIA Update: Baseline Environment

Denison Mines

Terrestrial: Small Mammal Trapping and Chemistry

- Indicator species (Bioindicators)
- 26 trap lines in 17 different vegetation cover
- Tissue Analysis – Metals and Radionuclides
- Habitat Characterization
- Small Mammals Captured:
  - Red-back Vole – 92% of trap lines
  - Meadow Vole – 38% of trap lines
  - Dusky Shrew – 26% of trap lines

EIA Update: Baseline Environment

Denison Mines

Terrestrial: Amphibian Surveys

- 61 sites surveyed
- Wood Frog identified in regional and local study area
- Boreal Chorus Frog identified in regional study area

EIA Update: Baseline Environment

Denison Mines

Terrestrial: Vegetation and Soil Collection

- Blueberries, lichens and soil samples collected
- Samples analyzed for metals and radionuclides
- Relatively consistent across site

EIA Update: Baseline Environment

Denison Mines

- Overall regional and local environment around the project area is a normal and healthy ecosystem

- Future Work:
  - Majority of baseline data collection is complete
  - Continue to monitor conditions around site
  - Gather more detailed data on field conditions as key project decisions are made (i.e. treated water discharge location)

- If project launches an Environmental Assessment, baseline data will be used to predict potential project impacts and enable avoidance & mitigation of impacts.

ROC5

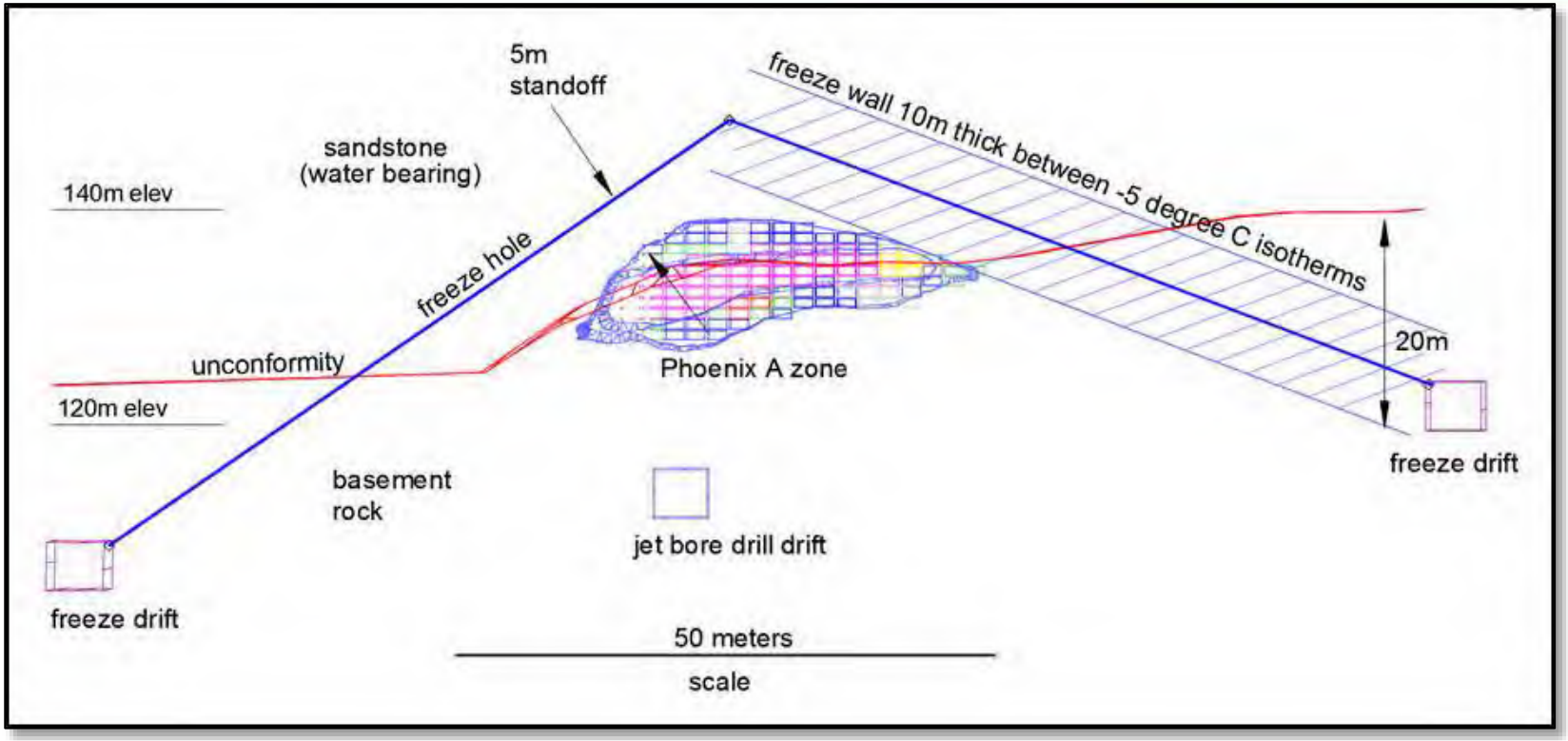
Thank You

Denison Mines

Questions?

- Extra slides this point forward

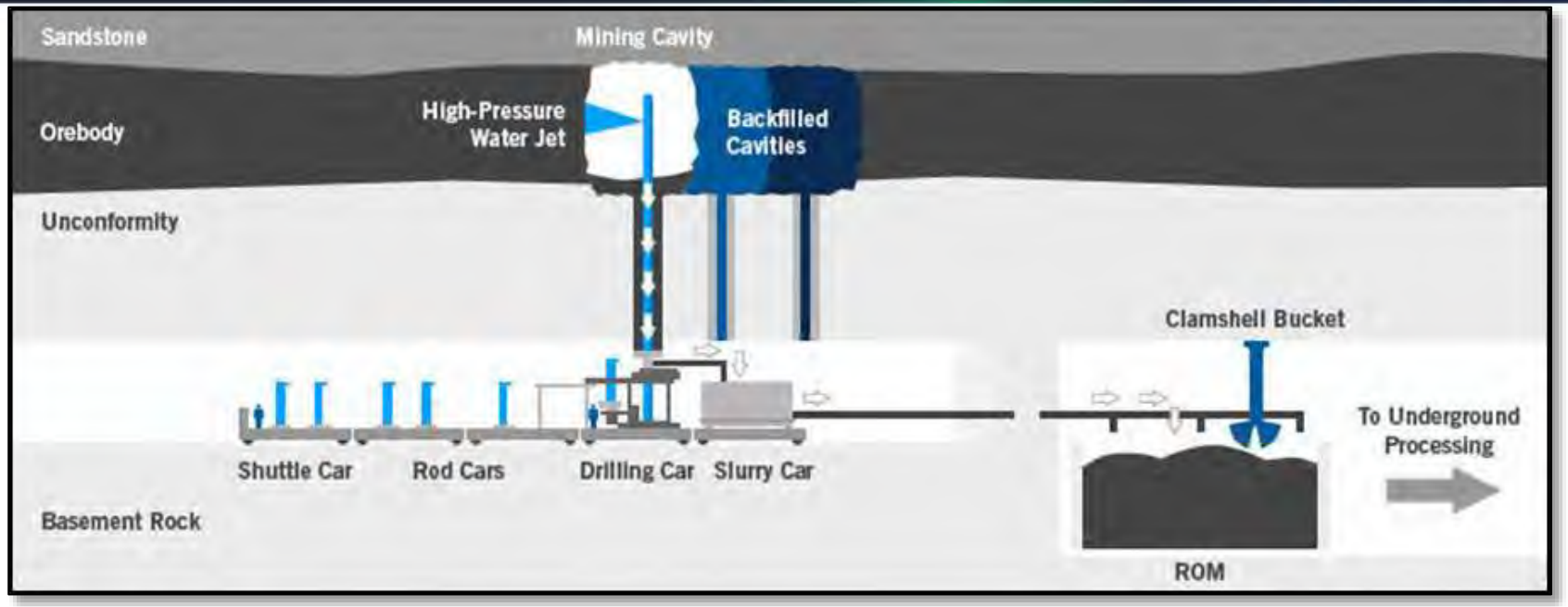
Mining Method – Phoenix Options



- **Freeze drifts excavated ~20m below unconformity in basement rock and well away from other infrastructure**
- 75m long freeze holes installed at 4m spacing along strike
- 16 months for initial freeze wall development

Mining Method – Phoenix Deposit

Denison Mines



Source: Cigar Lake 2016 Technical Report

- Access drill drift in basement rock 30m below the mineralization
- Pilot hole drilled up into the deposit and a casing is installed
- High pressure rotating water jet cuts a cavity in the mineralization
- Slurry of water/broken rock flows out by gravity to receiving slurry car
- Mined out cavities are completely backfilled with concrete

Overview of the Nuclear Fuel Cycle

Denison Mines

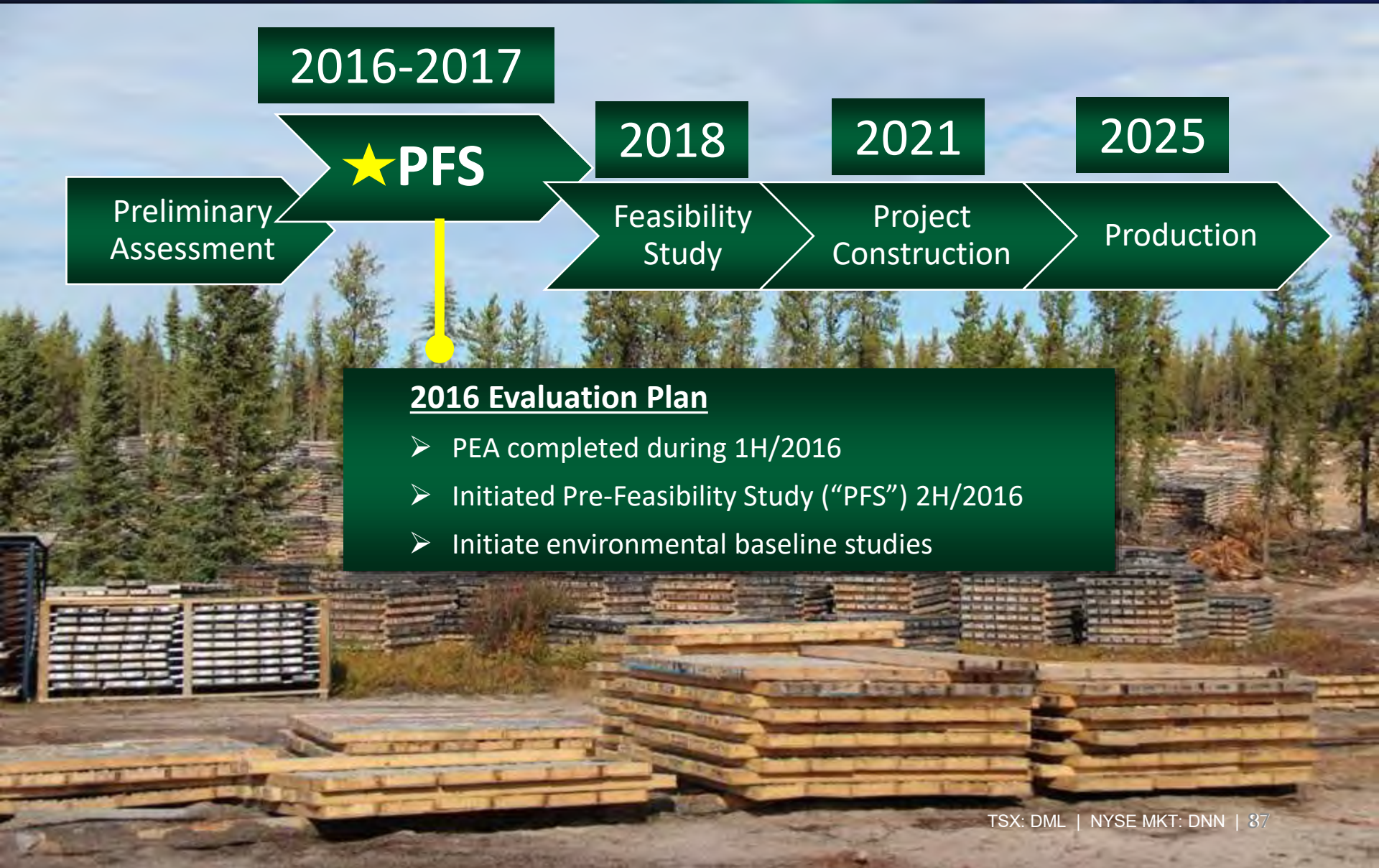
ROC5

Transporting High-Grade Uranium Ore

Denison Mines

Wheeler River: Long Road Ahead

Denison Mines



2016 Evaluation Plan

- PEA completed during 1H/2016
- Initiated Pre-Feasibility Study ("PFS") 2H/2016
- Initiate environmental baseline studies

Discharge Location Options

Denison Mines

- Potential locations for treated water discharge were identified and assessed for:

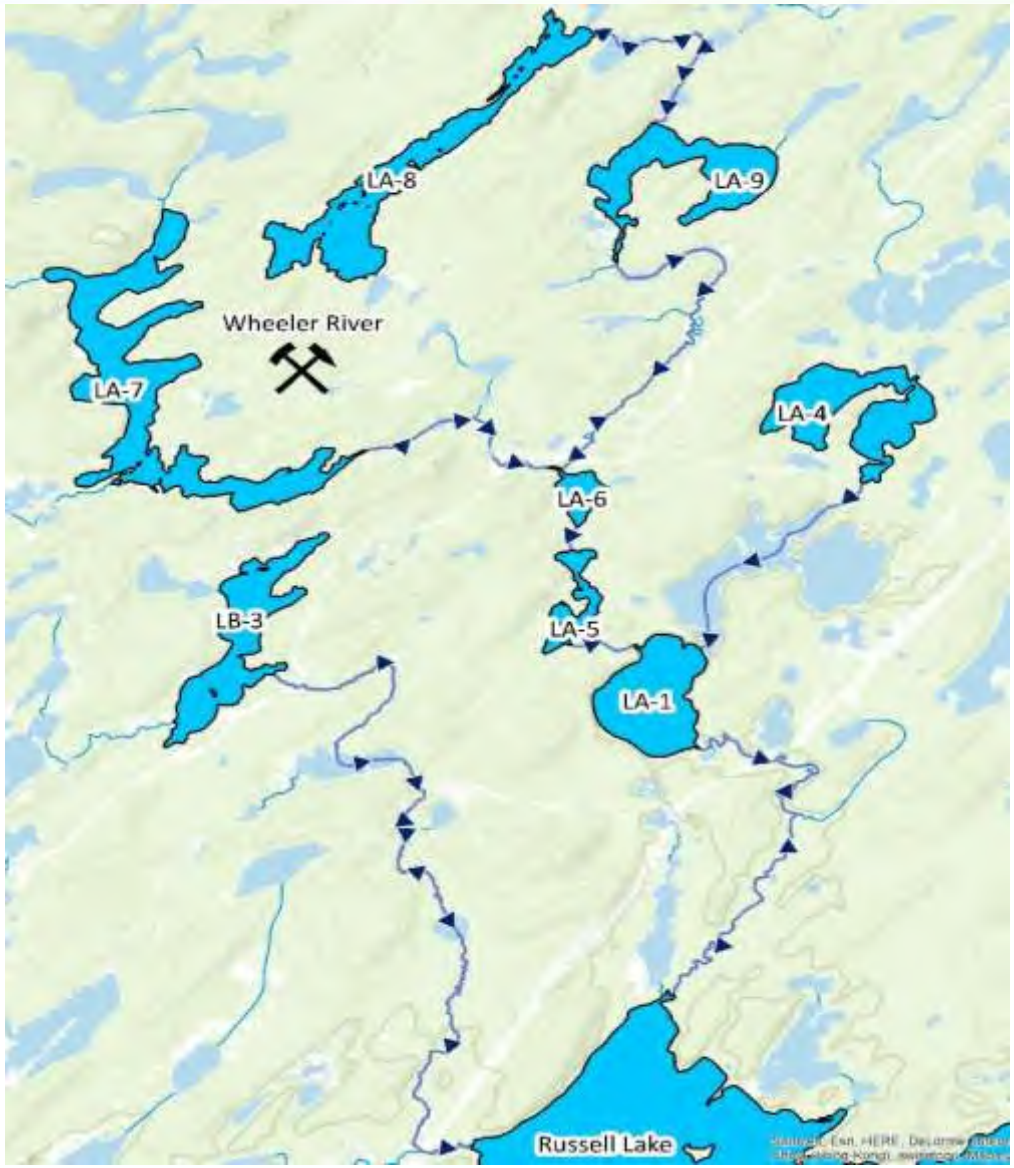
1. Preliminary understanding of land uses
   - Traditional territories
   - Trails, trap lines, country food harvesting, angling
   - Cabins, camps
   - Industrial properties
2. Potential impacts to water quantity and quality
   - Avoid locations with low flows
   - Minimize increase in flows
   - Meet provincial and federal water quality guidelines
3. Potential impacts to fish and fish habitat
   - Avoid spawning habitat

ROC5

Discharge Location Options
Identification

Denison Mines

- Preliminary factors:
  - Capacity
  - Watershed area
  - Connectivity
  - Distance to project

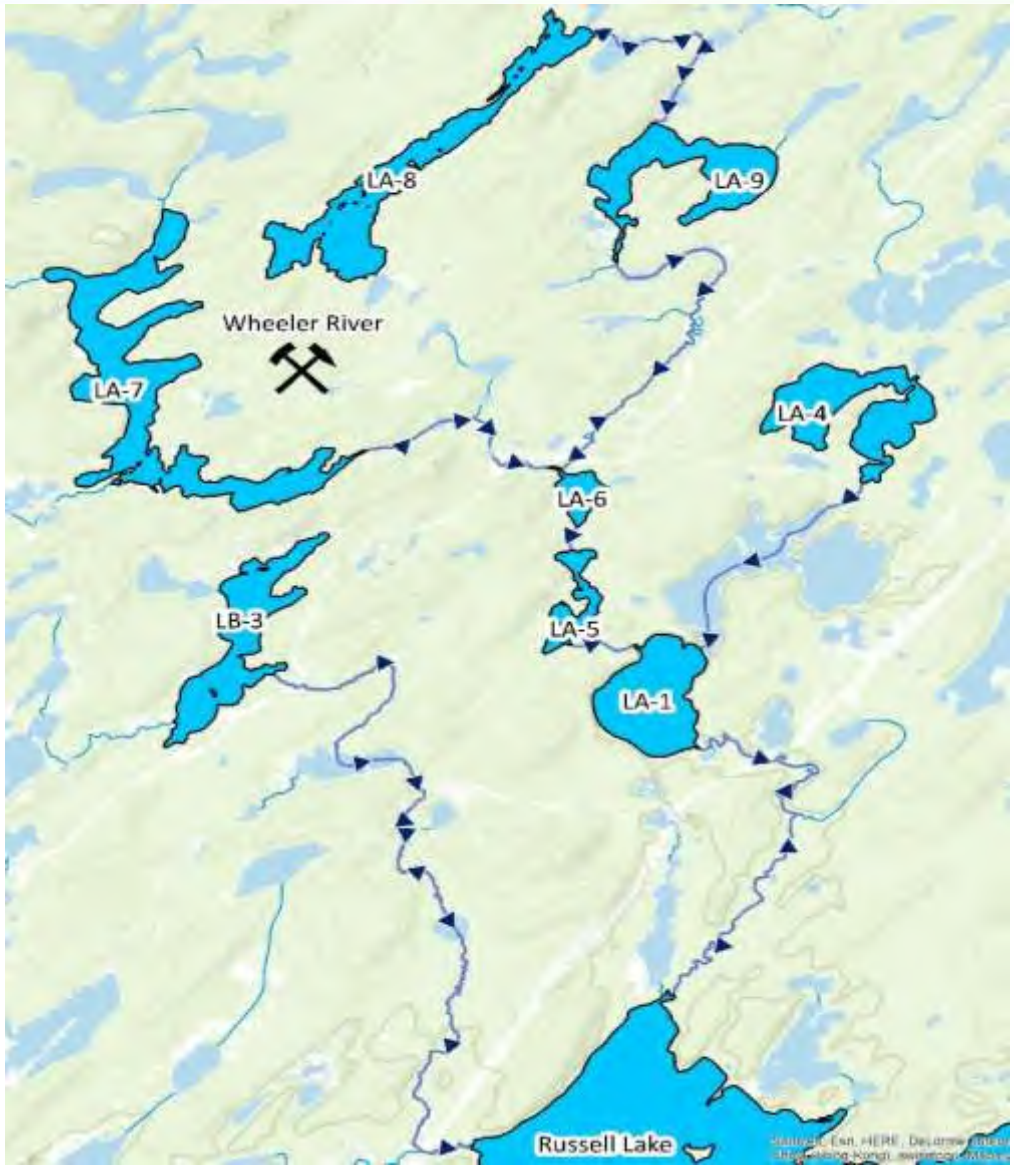


ROC5

Discharge Location Options
Quantity and Quality Assessment

Denison Mines

- Preliminary factors:
  - Wheeler River historical flows (1973-2015)
  - Average flows from baseline (2016-2017)
  - Background water quality from baseline (2016-2017)
  - Estimated ranges of discharge flow and quality
  - 3 small watersheds eliminated



ROC5

Discharge Location Options
Fish and Fish Habitat Assessment

Denison Mines

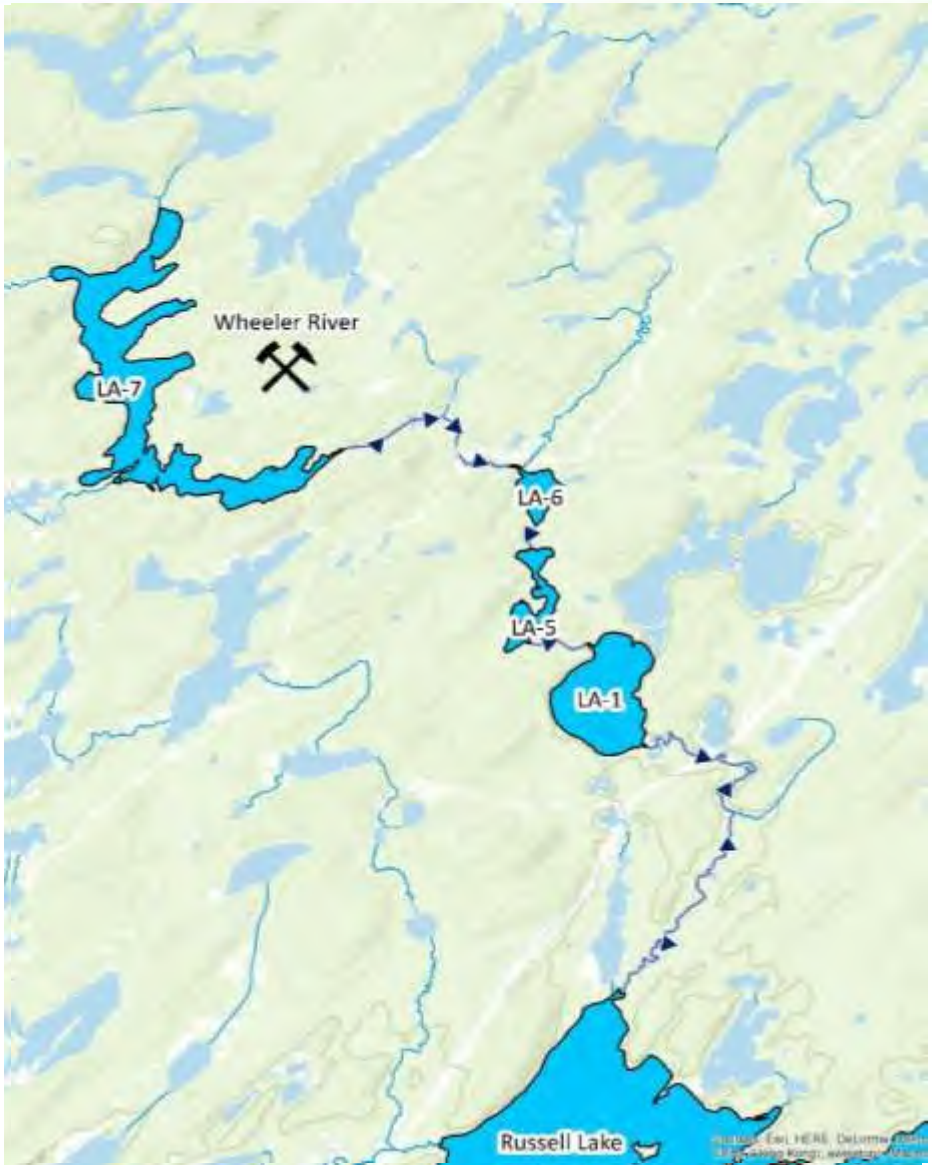
- Preliminary factors:
  - Fish community, habitat, and spawning and depth surveys from baseline (2012-2014, 2016-2017)

ROC5

Discharge Location Options
Preliminary Results

Denison Mines

- Preliminary results:
  - Avoid locations with low flows
  - Meet provincial and federal water quality guidelines
  - Avoid spawning habitat



Denison Mines Community Engagement
Wheeler River Project
English River First Nation, Patuanak
Thursday May 3, 2018

In attendance:
Denison Mines: ***Peter Longo****, VP Projects;* ***Lea Willemse****, Denison Environmental;*
SRK Consulting: ***Mark Liskowich****, Principal Consultant*
Hy-Tech Drilling: ***Dwayne Ross****, VP HR & Operational Systems*
Community: ***Chief Lawrence McIntyre;*** *Executive Assistant* ***Marlene Wolverine;*** *Economic Development Officer* ***Lisa Janvier****; Radio Station Announcer* ***David McIntyre****; School Principal* ***Geoff McFarlan****; Teacher* ***Frank Mullin.***
Recorder: ***Gill Gracie,*** *Aurora Communications Ltd.*

Chief McIntyre expressed regret at the many delays to the meeting. Today the meeting is held at the clinic instead of the school because of a regional power outage. No councillors available today.

Opening prayer: David McIntyre.

Introductions.

Presentation: P. Longo

Peter explained the format of the presentation. We're here to get your input and feedback.

- We're a small exploration and development company with no producing operations, 5% the size of Cameco. We're building ourselves to become a producer in the marketplace. Most of our properties are in the exploration stage – lots of drilling and geophysics but no production.
- We own 22.5% of the McClean Lake operation with partners Orano (70%) and OURD. From Wheeler River we plan to ship the ore up to McClean Lake for processing.
- We produced uranium at Elliot Lake in northern Ontario from the 1950s to the 1990s. We're still active there today, looking after the decommissioned sites. Today you would not know it was an active mine. Our biggest challenge is communication, making sure community members who hike and hunt on the property realize that it is an old mine site and that cabin builders realize there are old tailings in close proximity.
- We support our communities as much as possible; in Saskatchewan we fund activities as part of our McClean Lake ownership commitment. We work with local communities in Elliot Lake, including the Serpent River First Nation; we work with their youth, offer summer jobs, support their education. In our former African properties we built schools and water wells for the local communities. We try to make each dollar count and support the communities in things that are important to them.
- Wheeler River is about 300 km northeast of Patuanak, halfway between Key Lake and McArthur River. It's an exploration camp; drill core is stored there, there are roads to the rigs and our main camp. Otherwise it's pristine wilderness.
- Exploration activities occur from January through April; we shut down a few weeks ago and will start back up in June through September.
- We have about 10 geologists running our exploration activities across the basin. Typically, at Wheeler River we have one or two exploration geologists on site. Our contractors have

drillers, mechanics and others. There may be contract geologists for a few weeks here or there. In Saskatoon we have 12-13 people including myself, some geologists and one admin support.

- The site is located about 6 km off the main haul road. Our two deposits, Phoenix and Gryphon, total 132 million pounds – about 1/3-1/2 the size of Rabbit Lake and ¼ the size of McArthur River. **Phoenix** is a Cigar Lake-style deposit, complex and technically challenging with bad ground conditions. We are looking at engineering studies on different mining methods that we could use. **At Gryphon** we've been investigating shaft sinking technologies for the 500-metre shaft. Through exploration drilling we've collected a lot of geotechnical and groundwater information and drilled a shaft pilot hole.
- In mid-2017 we initiated a prefeasibility study to determine what kind of pricing and production rates would make money for us.
- Metallurgical tests by SRC indicate that the ore could be milled, the tailings stored and water treated safely at McClean Lake.
- We looked at different water discharge locations and the underground and surface activities, trying to picture the project if it came to fruition. At Gryphon there would be two shafts, a camp, mine buildings, offices, a water treatment plant and ponds, fuel storage – but no mill or tailings. A relatively small footprint.
- The estimated cost for development would be $1.13 billion. First production could be in 2025-26, at an operating cost of about $19 per pound. With today's spot price of $20, it would not be economic, so the price needs to come up. We also need to advance our environmental assessment work for the federal and provincial governments; we need our impact communities on board; we need to build local relationships; we need access to the financial markets to raise the capital. We're still 5-10 years away from something happening.
- The prefeasibility study will be done in 2-3 months time, and we'll have a good idea of the economics. We're advancing our environmental assessment work through collecting baseline studies, and we've started building our relationships with communities and governments.
- Life of production, with what we know today, might be 15-20 years, meaning people could have employment and business opportunities for their careers. As we identify new resources and expand, we hope to be looking at 25-30 years.
- In terms of working with communities over the last few years, we've tried to make each dollar count. Previously our exploration camp was supplied out of La Ronge; there was nothing wrong with that, but we heard that other communities in the area wanted business opportunities, so we moved that to the Beauval General Store.
- Our drill contractor, Hy-Tech, has developed a drill training program where they train two northerners to become part of the drill crew. The plan is to run it 2-3 times a year and increase the northern content on drill crews until 30-40 northerners are working on the rigs.
- We have prioritized the communities impacted by this project – yourselves, Pinehouse, Beauval and Ile a la Crosse. We brought Dwayne to target English River and Patuanak as a location for hiring. Hy-Tech is Denison's biggest contractor, and we're putting the pressure on him to hire from this community. He's here to show how important that is for him.
- We support career days when invited to participate. We've hired northerners for short-term environmental baseline projects, and financially supported training initiatives.
- In terms of procurement, we need to be cost-competitive though we're always happy to entertain new businesses. We prefer northern companies as long as they're cost-competitive. We can share a procurement forecast for the next year to give you a heads-up so you can provide a price for what we need.
- We heard that the communities wanted agreements on paper, so we shared a draft MOU with the communities as an intent for us to work with you. We identified four key areas:

environmental sustainability; employment, education and training; business opportunities; and community investment. So far, two of the four communities have signed the MOU.

- Environmental baseline studies: we have completed a full suite on aquatics, sediments, fish, and soils. On the terrestrial side birds, animals, soils, plants are all very healthy. Overall, it's a very healthy ecosystem; we don't see any concerns. On the heritage side we did an archaeological dig; no artifacts were found, nothing of concern. We are happy to share all the reports. All the work was done by independent third parties who are experts in what they do.

Discussion

Chief McIntyre: ***I always come from the elders' perspective. Since 1906, the area where you're working has been Treaty 10 land. The first chief of English River was William Apesis. Those lands were the primary area of ERFN and contain burial sites and birth sites of ERFN members. The Dené name of the Wheeler River, Russell Lake and Cree Lake all come from the Denésuliné of English River. The elders have always expressed that it's a primary area of EFRN. One of our late elders was born north of there in 1922. Our traditional gathering place is there.***

In the 1800s and early 1900s, our ancestors lived off those lands. They used the river systems - Mudjatik, Foster, Wheeler, Churchill. Ile a la Crosse, Beauval and Pinehouse have never known that area – north of the Churchill was always Denésuliné territory. That was respected. That showed in 1947 when the fur blocks were assigned by the province – N16 on the north side and N18 on the south – Costigan, Haultain River, Highrock, all those areas. This information was passed on to me from 1991 – 2000 from late elders who gathered and trapped in the area.

We also interviewed elders when we were making our traditional map in 1991. I'm passing on that knowledge. We never want English River to be edged out – we are the primary impacted group. We are currently battling with the province, with communities, edging them back.

For many years I've invited (the media) to come to our gathering on the Key Lake road, to showcase and impress on the world that we're still using those areas. If you really want to work with us, you need to work with our council right from Day 1.

In that area there are moose calving areas, whitefish spawning areas – a lot of creeks, inlets and outlets. The drilling – as a former driller back in the 80s, for water wells and diamond drilling – it may not impact underground hydrology right away but maybe 15-20 years down the road. Even the pH of the water changes with time with things that are happening. The ecosystem becomes disrupted. Those are some of the things we wanted to express.

There are too many MOUs – they are passed out like candy. English River is the primary area – it's unique – we're 70% Dené and 30% Cree. We've occupied a lot of land, as far north as Pipestone, north of Cree Lake; down the Mudjatik; McArthur has a Dené name that means "the river that goes no place". All those lakes have Dené names. We have relatives in Black Lake.

When we seem to be abrasive, we're trying to make you understand where we're coming from. Maybe that's why this meeting didn't come together. I hear from the elders "They won't listen to us, they never listen to us".

One of our elders who's passed on was a medicine woman who saw things that would happen, including a lot of division.

We want to participate, but we want you to see the importance of us being involved. Our ancestors were the first in that area. They lived off the land. I respect your coming to the community, and when nobody shows up when invited, that shows lack of respect, that they don't care.

The community and the elders asked me when they voted me in as chief to speak on their behalf. My grandfather, who's been gone for 54 years, also expressed that.

You say the life of mine will be 15-20 years; we would like to participate from the outset, not as benchwarmers, but actively. Thank you for using Beauval General Store. I was upset when Hy-Tech selected Pinehouse and Canoe Lake personnel. I was telling council and membership that these guys mean well and want to work with us. The next thing we knew, two trainees not even from the territory were hired. A lot of members said they would not go to the meeting because of that – saying it's all words, sweet nothings. That territory is English River First Nation and has been for many many many years. We embrace the serenity in the pristine regions there.

I thank you for this meeting; there's not too many of us, but hopefully we can go on the right path. I know the uranium industry is at a low point, but maybe things will change. Hopefully we can get something concrete, like we did with the Beauval General Store. From this river north, it's all Denésuliné territory. I was recently looking at old pictures of guys who were hunting and trapping, families who were living in that territory in 1965. Those are facts.

I love your presentation, but I want to extend it from where it's at. I want the elders' voices to be heard, not buried. English River First Nation is the primary impact area. We can go into the field sites too, campsites, all along those roads. The elders are very passionate about that area.

P. Longo: Thank you for your comments. You provided us the traditional land use map; it's posted at camp so everyone there knows they're on ERFN Territory, and we've incorporated it into our environmental baseline studies and in looking at historical sites to make sure present or future plans avoid those areas that are special to you. We're trying as best we can to respect that. If in the past we made a mistake in terms of employment, there was no insult intended. We heard you crystal-clear from our last meeting; that's why we brought Dwayne up and made it clear to him that the priorities for hiring are here. We need your help to get the good employees for Dwayne. If we can work together, we can all win. We mean that. We want to work together; if there's something that's very important to you, let's keep the communication lines open so we can do our best to make it happen.

Chief McIntyre: ***People want to work. We had 46 applications for 15 20-week fire suppression positions. They have to pass a drug and alcohol test before they get hired. Safety is one of the first things. We had 25 applicants for seven positions on a slashing crew along the highway. If you need hand slashers, we have qualified, ticketed people. We have operators.***

A small project, a transfer station for the landfill, will start in May about six miles north. Trinity Excavating has the contract, so we may get some hiring. We have students who work at our gas bars (here, Beauval and Saskatoon) or the Northern store. They want to work; they want the experience. We want Elders in Residence at the mine site, as a liaison for the language.

I could have translated your presentation into Dené. We also work with Catholic schools in Saskatoon to incorporate the Dené language.

How deep is Gryphon? Key Lake was about 100 metres; I worked in that area drilling water wells. They drained a lake in June 1978. No mill there; how big will the camp be?

P. Longo: The closest lake is Krachkowski Lake. The ore body at Gryphon is about 550 metres; Phoenix is at 400 metres. Camp size: for Gryphon 2-300 people; for Phoenix, depending on the mining method, about 100. Phoenix is very high-grade ore, similar to Cigar Lake in parts; it will be mined differently than conventional methods.

G. McFarlan: ***You're projecting to start production in 2025. What type of jobs – I'm looking at building capacity in the community and in the school. What can Denison do to build capacity in elementary and middle school students now so they're ready when you are in seven years? What other things besides geologists, can we shoot for?***

L. Willems: Environmental Technology. We employ environmental technicians in the field to collect environmental data with the consultants. We had great success with Daniel; he's in the field regularly collecting data. In future they will continue to need environmental technicians both through the baseline studies and into production. They should focus on maths and sciences.

P. Longo: It depends on what the students want to do. If they want to operate heavy equipment, they don't need a higher level of education. There will be jobs like that available. If they want to get into technical positions like engineering or geology, they will need maths and sciences. If they're looking into management and supervision, that requires maths and sciences plus experience. If they graduate today they would need to go to post-secondary, get a job for a few years, then come in at a senior level when the job starts. You can't graduate and become a manager that day! It takes years of experience. Supervisory courses help, along with a good mix of training and experience.

G. McFarlan: ***What about summer programs to get them thinking about working for Denison? Building a partnership between the school and Denison to build capacity within the students so when they do graduate there's a clear path towards employment?***

P. Longo: Today, the best we could offer would be geology or environmental technicians. We could offer a summer program for a geologist - they would get a feel for it and see if they actually like it or not.

M. Liskowich: We ran a GeoFocus course through SMDC in the 1980s which had good success in introducing youth to geology positions. We also produced a matrix of all mining positions, from security guards to secretaries to cooks, mine managers, engineers, nurses, CEOs etc., along with the level of education and experience required for each. This was handed out last year at career days. I will send it to you as a starting point.

G. McFarlan: ***What about tours?***

P. Longo: You can tour our site, but there are no active operations.

G. McFarlan: ***What are the prospects for small scholarships for some of our overachievers?***

P. Longo: We created a scholarship with another company in honour of the Humboldt Broncos accident. We're open to something like that.

W. Ross: Hy-Tech also has a scholarship program; we will forward you the details. We can make sure it's extended up here.

G. McFarlan: ***What about general labourers? Are you only active half the year, in the exploration season?***

P. Longo: We have current long-term employees doing general labour around camp. Our core group of geologists plan in between working seasons so they're year-round. The rest are laid off. We're only talking one or two jobs right now, not 10s of jobs.

M. Wolverine: ***Is that cabin a TRU cabin?***

M. Liskowich: It's a recreational use cabin belonging to people from the Meadow Lake area or North Battleford.

Access Road Routes: M. Liskowich

1. Highway to Phoenix; Phoenix to Gryphon

- We are looking for feedback on route of project road (map provided). The Phoenix site is the first deposit. The road must be 10m wide, grade no more than 7°, as few river crossings as possible and no lakes in the way. There are three potential routes from the highway to Phoenix, derived from English River's traditional use map and Sask Environment's land disposition map. The handout showed implications of each for earth moving, stream crossings, distance to water and proximity to a recreational cabin. Phoenix to Gryphon has only two options, with one existing bridge across a creek.

Discussion

G. McFarlan: ***Get the elders to act as consultants, as the chief mentioned.***

Chief McIntyre: ***We're in the development stage of the land use plan. We have retained legal counsel, Shoshanna Paul, and used Norman Wolverine in the past. He's retired, but we can bring him in.***

L. Janvier: ***When out hunting in fall, there was a sign indicating the Denison mine, so we went in; there was an abandoned truck etc. and a mess. We hunt there, have picnics up there.***

> **P. Longo:** That's Rio Tinto's – close to km 35. It's been abandoned at least 10-15 years. That's our access road.
>
> **M. Liskowich:** It's Rio Tinto's responsibility to clean it up, but the province would have to push them.

Chief McIntyre: ***We need to review this with more people than the five here. There's a lot of slow water there. Did you check for fish there – are they small or big – cutters or export?***

> **M. Liskowich:** For the baseline program study we only investigate what species are there now, so we can see any differences before, during and after mining. The samplers may have noticed if there were parasites in the whitefish or not but determining whether the fish are export quality is not part of their study.
>
> **L. Willems:** We do take small samples of fish tissue and send it to the lab, to sample metals and radionuclides.

Chief McIntyre: ***On my lake, Millson Lake, there's nothing right now. The drilling affected the water 15 years after – they did 35-40 holes around that lake.***

Water Treatment Process: Selection of Discharge Point.

- In Canada, treated mine water is discharged back into the most appropriate lake. We treat the water so it meets all environmental regulations, its clean, you could drink it, but there are still restrictions as to where you can discharge it.
- We look at the size of the lake, how much water naturally passes through it – you want more natural water than treated water, and a large catch basin that feeds runoff into that system.
- We look at the fishery – is there a variety of species, where are the spawning beds, etc.
- All the lakes (on the map) have been sampled for water quality, volume, sediment, depth etc. They were screened to see if they would be acceptable to receive the volume of water we will treat. We ended up with five options. Lakes 5, 6, 1 and Russell all meet the criteria we must meet to ensure we can discharge into those lakes without harming anything. Krachkowski is close but shallower, so in drier years it could be a problem; probably not the best option.
- We consider the distance from the mine in term of pipeline and service road disturbance to put the water into that lake.
- What's your feeling about potential impacts?

Discussion

Chief McIntyre: ***There's a lot of natural filtration in that area because of the muskegs etc. I don't know if there's beaver habitat; those things have to be taken into consideration. Another mine in the area will impact Russell Lake, the river and the ecosystem. The water from Key Lake flows into the Wheeler River; will there be a double impact if you discharge to Russell? There's a lot of iron in the groundwater in that area; how will that react with discharge water when it eventually comes up? Some of the lakes on the north side have good pickerel; some small lakes have trout; Russell Lake has a good fishery. The John brothers use that area quite a bit – you could connect with Bobby John. Those are some of the considerations.***

> **M. Liskowich:** The cumulative effect will be considered. Everything on the map sheet reports to Russell Lake and flows out east then north to Wollaston Lake. We have the information for all of the lakes.

Chief McIntyre: ***The biggest body of water to be impacted is Russell Lake – "Big Poor Fish Lake" in Dené. A lot of Scandinavians and Norwegians went up there in the 1930s and partnered with First Nations in that territory.***
A lot of those lakes would not be immediately impacted, but what about down the road? It changes. One lake (Lanspur Lake) about three years ago had no pickerel. In the last 2-3 years, with high water, that lake now has an abundance of pickerel. Those are some of the changes that happen. That comes from our elders, not from me.

M. Liskowich: That would be monitored.

M. Liskowich: There's a much bigger distribution of cabins on Russell Lake.

Chief McIntyre: ***We call them squatters! A lot of them are drillers from Alberta. Some take fish at 2-3 am. We go to Resources, who say they don't have enough men to police it. We tell them you should hire our guys to monitor those lakes, because we know the area. To me, they don't have permission but they just squat.***
There are also flippers who get a recreational permit from the province, develop it and sell it after five years. Then they get a new permit and do it again. I've also presented that to Resources. Since we got legal counsel, they have backed off. Ever since the roads were built, people with money can drive in. They don't do the process. It may be less this summer because of the mine shutdowns – the road won't be maintained as well. This weekend there was only one truck.

M. Liskowich: Right now we're leaning towards using Lake 6 as an area to discharge to.

L. Willems: There's really good flow through Lake 6 and Lake 5. This March, the streams flowing into Lake 6 weren't frozen over.

Chief McIntyre: ***That would allow some natural filtration. We would have to see what the other members think of it. Because it's further away, there would be more filtration by the time it reached Russell Lake. What about spawning areas, caribou and moose calving areas? Caribou and moose eat low bush cranberries and lichen; lichen takes many years to grow and recover. There may be other things to consider, like medicinal areas - the elders will know.***

G. McFarlan: ***How long would the pipeline and its service road be for Lake 6?***

M. Liskowich: 1-2 km. The road would be a minimal road for pipeline maintenance. It would be a 6" pipeline.

Mining Methods – P. Longo

1. Gryphon

- The Gryphon deposit is in granite basement rock. The top of the ore body is about 550 metres, and it goes down another 200-300 metres. There will be two shafts.
- It will be mined by drifting into the top and bottom of the ore from a ramp. Between the drifts we drill a 3-4" diameter hole to connect them, load it with explosives and blast it out. Equipment underground mucks it out. This is the same mining method as at Eagle Point. It's used around the world – it's a proven method and it's safe.
- We can train people to do this – there are no high-tech jobs

Discussion:

Chief McIntyre: ***Are there any major faults? Is there a lot of water?***

P. Longo: The whole ore body is inside a fault. There's not a lot of water at these depths; you're sealed off from the unconformity. The drilling we've done to date supports that.

Chief McIntyre: ***We have 30-35 people who are trained to work underground, with experience in both potash and hardrock mines. We have guys working in western Canada We sank the McArthur River shaft through our contractor, Mudjatik-Thyssen.***

P. Longo: We're looking at 2-300 people working at a mine like this, so all those people could be employed.

Chief McIntyre: ***We're developing a corporation that spearheads a lot of these programs through our companies.***

2. Phoenix: Directional Drilling

- Over the last couple of years we've done a lot of work on Phoenix to look at different ways of mining it.
- One way is directional drilling, used in Alberta in SAGD oil deposits. A drill on surface would drill a 17 ½-inch diameter hole to just in front of the ore body, cased all the way. Then we would drill a 17 ½-inch diameter hole right through the ore body. The cuttings come back to surface through the cased hole, are put into a container and shipped to McClean for processing. A lot of water is used to move the material. It's a closed system – the water is never discharged to the environment – we reuse that water again and again. No water gets outside the cased pipe. If it does, no cuttings come to surface.
- We should be able to drill 30-40 holes through the ore body. The drill cuts the ore up and moves it to surface. We would drill one hole, fill it with cement and drill another hole beside it.
- The drill site on surface would be a couple hundred metres square, so a small surface impact. It would take about 4,300 holes to drill out the deposit and take 5-10 years depending on the production rate.

Discussion

Chief McIntyre: ***Are you using 1,500 GPM, or higher? What kind of casing? What kind of cement?***

> **P. Longo:** I don't know the GPM. It would be steel casing. The drillers call it whipstock cement. We would develop it; we might incorporate some aggregate to reduce our costs.

Chief McIntyre: ***Where would you mill this? Not at Key Lake? McClean Lake is pretty far. The closer it is, the lower the cost and the lower the impact on the environment. The risk would be minimized. Impacted people would say we should minimize it. The longer you haul, the more impact on the people that live there. Companies should be working together.***

> **P. Longo:** We plan to mill at McClean Lake. It's about 160 km, but it's available. We could look at Key Lake if the owners were interested in it. We have asked them, and they have said no. I agree about the cost, but it's not our decision to make. We would be happy to work with them.
>
> **M. Liskowich:** Cameco is saving Key Lake for McArthur River and other ore.

Chief McIntyre: ***If for some reason you decide to sell or merge, what happens to the agreements you made?***

> **P. Longo:** When someone buys us out, they would take over the contracts. It would be like any business transaction; we have a contract in place and they are responsible to honour that. If they don't, you could force that through the courts.

Phoenix: ISR

- We are looking at another method called in situ recovery (ISR). This is a mining method used throughout the world for uranium, particularly in the States and Australia. You drill a series of injection wells into the ore body and inject a mining solution. In the middle is a recovery well where you pull that solution back out. As that solution is travelling through the ore, it leaches the ore (picks up the uranium in solution) and pulls it out of the ground. It is shipped to the mill for processing.
- In the Athabasca Basin we would incorporate a freeze wall around the ore body to help confine the mining solution. Outside the freeze wall we would have monitoring wells to monitor the natural ground water.

- The benefit of this scenario is that you produce the final product on site; no shipping of ore to a mill and no tailings. All the byproducts stay in the ground. The mining solution takes out the uranium, you precipitate it, treat the water and recycle it again and again. At the end of mining you treat that water back to its natural pre-mining state, turn off the freeze wall, and nature takes over.
- It requires minimal surface disturbance; some drill holes. The freeze wall would go in first.
- *Chief McIntyre described the method in Dené.*

Discussion

Chief McIntyre: ***That would take a lot of engineering and monitoring. I was there when they hit the Cigar deposit in August of 1978. I saw that excitement. They were using choppers to move the rigs. Later I worked at McClean for three months.***

> **P. Longo:** A lot of engineering; about the same number of employees as the other option. We looked at mining it by jet boring like at Cigar Lake; although the geology is similar, it's not economic.
>
> **M. Liskowich:** These two methods are strictly for the Phoenix deposit, because it can't be mined conventionally.

Chief McIntyre: ***This type of mining is interesting – where is it done? What kind of impact has it had?***

> **P. Longo:** In the States they drill shallow, lower-grade deposits in a lot of drinking water aquifers. We will be deeper, at 400 metres. We know the water around Phoenix is already contaminated with the high-grade deposit. No one's using it for drinking water – its uranium content is to high.
>
> **M. Liskowich:** ISR is done in Wyoming, Nevada, New Mexico. The well fields are mile-by-mile, 10-15 km long, whereas this deposit is only about a kilometre long.

Chief McIntyre: ***The solution is a flotation solution? How many times do you use it? Do you need dryers? They deep-injected brine 20-25 years ago in Toronto. This sounds safe; it's all in containment.***

> **P. Longo:** We have tested many different kinds; ours would be an acidic solution. We would constantly reuse it. We precipitate the uranium, filter it to take out particles and return it to the original mining solution state before pumping it back down. We do it again and again for 15-20 years. We use dryers to dry the yellowcake. A lot of the same things that happen in the mills would happen in this plant.
>
> **M. Liskowich:** Every drop that goes down comes back up. It contacts the uranium, dissolves and oxidizes it. About 45% of the world's uranium is produced this way. The same type of mining is used in potash mines in southern Saskatchewan. The beauty of it is, no tailings, no mill.
>
> **P. Longo:** The biggest concern is containing the solution. That's why we would use the freeze wall. When we're done mining we flush it with water, treat the water, and reverse the process. In this scenario we would not ship to McClean Lake, but process the final product in a plant on site.

Chief McIntyre: ***You would have to have engineers on their tippy toes.***

> **P. Longo:** Everything would be instrumented; you would know exactly which hole the solution was going down and how much is coming back up. It would all be measured, metered, monitored. We visited an operation in Wyoming – nice and neat and clean.

Chief McIntyre: ***How would it be powered? Would a solar system be able to do it? One of the biggest potentials for turbine wind is at Close Lake, just a stone's throw away. We are environmentally conscious, but we also want to see what's available in terms of renewable resources. Just a thought.***

P. Longo: We would draw power right off the grid, probably for both sites. Solar would probably not work up north. If you did a combination of wind, solar, battery, it might meet our power needs but it would not be as cost-effective as off the grid.

M. Liskowich: You can use solar and wind to charge your batteries as part of a supplemental program, but it's not enough. I spend a fair bit of time dealing with this at other mines in other jurisdictions. The power demands are usually significant to the point where you can't generate enough through solar or wind unless you have miles of windmills. Solar and wind generate power to charge the batteries, then you run everything off batteries. Every component in the solar panel, or the wind tower, is made from metals and mining products. We would be creating mines just to be able to make solar and wind power generating equipment. You don't get enough energy out of pure solar and wind to run a full sized mine.

Chief McIntyre: ***Regarding the grid, we're talking about having a transfer station right in that area, just north of Key Lake, to use for this and any other mines that are developing. How much power will you require?***

P. Longo: If you're into generation, we'd be happy to talk about buying the power from you. Some options would need less because we would not have a mill on site, but we'd probably need in the 4- 5 mW range, not 10-12 mW like Key Lake is. We'll know better in a few months when we size our main substation.

M. Wolverine: ***Is there cell service up there?***

P. Longo: No.

Chief McIntyre: ***As long as you have a booster you'll have cell service, or from Key Lake on a high hill. With all the changing technology, you'll probably have it eventually.***
We want to be part of the project, not benchwarmers – build the road, get the students in here. That's so significant.

M. Wolverine: ***What's in the MOU?***

Chief McIntyre: ***We're sitting on it. I know we are the primary. Whatever MOUs have been signed out there, I respect that, but at the same time, the primary is English River First Nation. The council and the elders will support that. It sounds like something that could be done in time; some of the things you've shown, like using our Beauval General Store, are positives in the right direction. We want to see other things.***
I was upset and emotional that Hy-Tech hired from other communities – it was like someone came in the back door and ransacked our place.

P. Longo: Is there language in the MOU that we can change?

Chief McIntyre: ***I gave it to our legal counsel. We suggested some areas – change "First Nation" to "English River First Nation," for example. We wanted the elders involved in some things right from Day 1. We want to be an active part of the development. The perception is that the communities you are signing MOUs with are more important than us.***

P. Longo: Keep in mind the MOU doesn't distribute benefits. It's non-binding; if you don't like it, you can rip it up. It's a way for us to put our words on paper so we're meeting expectations, so you know what we expect and we know what you want, it's clear so there's no miscommunication. That's all.

Hy-Tech Drilling – Dwayne Ross

- We take some ownership in the miscommunication.
- We've been in operation for 27 years, and we plan to stick around.
- Any opportunities that we can make available for anybody - we're trying to establish people in a career. Diamond drilling is somewhat of a niche trade. We appreciate bringing someone on from the beginning, for example students.

- Everyone has a different path. The trades are an honourable occupation. You can come from an entry-level spot and with proper training – we get our best success from organic growth inside our company. We really want to encourage youth to come to our company. We would prefer to bring people in, train them the way we need to, offer them career advancement and continued employment beyond any one project.

Discussion

G. MacFarlan: ***What would they need as an entry-level employee – a pre-employment course? What would be the lowest standard?***

D. Ross: There are prerequisites all focused around safety. When we bring people into our company we are responsible for keeping them safe by introducing them to a safe working environment, but also making sure anyone who comes into or company has been properly trained and is safety-focused. A Class 5 driver's license is very important because they're driving company vehicles.

P. Longo: If they don't have their license they can't get insurance, so they can't do the work.

D. Ross: We also have a physical assessment and pre-employment testing for drugs and alcohol; that's very important not just for our industry but for most industries now. We stay in step with what's required by the client and the legislation. We will train them from that point on.

Training for us is big; we've always done a fair amount, but just recently, with demand, we're taking that training a little more seriously in-house. We've always offered one-week drillers helper training programs once a year, but now we find more benefit in making it more flexible to meet our clients' requirements and the timing in the industry. We can now train where we want, when we want. We could train in the community; we have in the past. We generally like to get them around our facility where we have our equipment and personnel; it makes things a little easier. We will do an in-house training at one of our facilities; part of that training would be to be right on site to shadow one of our drillers' helpers and be around a drilling operation in a controlled environment, so they get trained properly in a safe manner.

G. MacFarlan: ***How many people, and what's the timeline?***

D. Ross: We like to keep the numbers at two or three participants in this flexible training program. It's usually about three days in our facility, then we would bring them to the field to shadow for another three or four days, or less depending on the individual. We generally do that around a crew change time, so they would go right from training, once they have all the tickets and requirements, to working on the drill the next day. We're talking 10 days of training all told, with First Aid etc., before actually being on the drill. We sponsor everything – training, housing, living allowance for days in town, training, the trainer, First Aid courses, the in-house trainer. The training is transferable to anywhere in the country; we do all the common core training. We certify them so they get recognized in other mining establishments.

G. MacFarlan: ***Do you have that in writing? Do you provide an offer letter? A poster for the school?***

M. Liskowich: We have a Denison/Hy-Tech brochure that explains all the certification courses.

G. MacFarlan: ***When's your next program? We have some people graduating – are there any slots open?***

D. Ross: We have a 5-day course at our head office in Smithers, B.C. starting May 25. That's our flagship training program. We'll probably train 10-12 people there. We'll also bring the program to other locations to accommodate projects or clients. Safety is the biggest thing. There may be slots, if they can meet the requirements and are 18.

Experience around a drill environment is always good; they should be good with equipment. There are risks, although we have a lot of procedures in place.

Chief McIntyre: ***New guys get hurt because they take things for granted. Whets your turnaround shift?***

D. Ross: We are four weeks (28 days) in the field and two weeks out until the job is done. We have a fatigue management plan in place. Canada-wide, our crew change dates are on the same day so we can transfer people from one project to another seamlessly.

Chief McIntyre: ***Everything is safety-centred now. No more highballing. There's a safety person on every rig. Does Hy-Tech have that? Everything is hydraulics now. It's split tubes now, and your core boxes are shorter. What's the starting rate for your helpers?***

D. Ross: We don't have a safety person on every rig; we have three safety coordinators moving between the jobs. Some are split tube cores. We use five-foot core boxes. We start trainees at $19 per hour. A novice driller is $26.50 an hour, an experienced driller $30.50, with bonus on top of $2 per foot.

Chief McIntyre: ***We got $7.50 an hour plus $2/foot after 4,000 feet in 1979! If you're going to be a driller you have to put your social life aside until the job is done. 28 days is not long.***

D. Ross: A competent driller is equalling almost a doctor's wage today. It's 12-hour days. There's a bit of flexibility; in the Wheeler River project we change crew every two weeks; I don't encourage that because they could work at Wheeler River have opportunities all across Canada in the off-season. We're into Europe as well, so we offer opportunities elsewhere. In November we shipped two rigs to South America, and we have some Saskatchewan people working in Ecuador.

Chief McIntyre: ***You were drilling for Cameco north of Cree Lake this winter? I was hoping you would hire some of us from here. The job was done before we knew about it. In future maybe you could contact our office. We have people who were trained by Boart Longyear – they were down east for two months, some underground and some surface.***
Do you offer rigging as well? After the training, are they helpers for life? Do they learn about pumps, different types of bits, etc.?
What if we want to send two people to Smithers?

D. Ross: We were working at Dawn Lake. We do not offer rigging - there are no more cables. I would have to make sure the program is not full. We intend to do another one in Saskatchewan very soon, because we need people. The program we developed here with Denison is by far the best, because it's more hands-on, smaller, more one-on-one training. It includes shadowing on the project and on the drill. I would rather have the smaller program for my kids.

Our best success is organic, so we want to advance people through their career; there's a good sense of accomplishment to advancement.

G. MacFarlan: ***Do you need Grade 12?***

D. Ross: I always want to encourage education; it's not mandatory, but we don't say that. We hope they would want to take this as a career, advance and take advantage of other opportunities Hy-Tech has as well. It's no longer such a strenuous occupation – better equipment, better safety and guarding.

Chief McIntyre: ***If you're mechanically inclined, hands-on and you want to be a lifer, yes. But if you want to do something else, Grade 12 is good. It's always a good experience; you get to travel all over. You have to like it, and you have to like outdoors. It's not a pencil-pusher's job.***

G. MacFarlan: ***What is the fatigue program?***

D. Ross: With 12-hour shifts for 28 days, weather conditions, travel time, we monitor our crews. We have open communication with regard to soreness, tired, alertness, and awareness. If things show up we make adjustments - shorter rotations, day shift-night shift changes, temperatures at the drill, hydration etc. The biggest thing is awareness.

It's good money, but it's hard work and a different lifestyle from what people are used to. There may not be good Internet service depending on the camp.

G. MacFarlan: ***I would like something more concrete, and something written down. We have some kids that would love the opportunity.***

P. Longo: The MOU is drafted for your input and editing.

M. Liskowich: Put a CV together for those students and send them to me or to Hy-Tech.

Environmental baseline update deferred to next meeting when hopefully there will be power.

Denison Mines Corp.
200 – 230 22nd St. East
Saskatoon, SK S7K 0E9

T: 306-652-8200
F: 306-652-8202

www.denisonmines.com

Darren Thomas
Manager
Northern Saskatchewan Environmental Quality Committee
PO Box 113
La Ronge, SK S0J 1L0

RE: Commencement of the Provincial and Federal Environmental Assessment Processes for the Wheeler River Project

Dear Darren:

My name is Pamela Bennett, and I am the Environment Manager for Denison Mines. Denison Mines is the majority owner of the Wheeler River Project, which is a *proposed* uranium mine and processing plant in northern Saskatchewan. It is located about 4 km off of Highway 914 and approximately 35 km north-northeast of the Key Lake uranium operation.

The proposed Wheeler Project includes an innovative approach to uranium mining in Canada called in situ recovery (ISR). The use of ISR mining at Wheeler means that there will be no need for a large open pit mining operation or multiple shafts to access underground mine workings; no workers will be underground as the ISR process is conducted from surface facilities; and no tailings will be generated. More details about other aspects of the Wheeler River Project are included with this letter and are also available in French, Dene and Cree on Denison's website at www.denisonmines.com.

I am writing to you to let you know that the Wheeler River Project has begun the environmental assessment processes with the Provincial and Federal Governments, which will involve a detailed assessment of the potential environmental effects of the proposed Project. More details about the Federal regulatory process can be found here: https://www.ceaa.gc.ca/050/evaluations/document/130095?culture=en-CA. The Federal Regulatory process includes a 30-day public review period on Denison's Project Description, which has started and will conclude on **June 30, 2019.**

The final Provincial Terms of Reference (which will serve as the guide for the information that Denison will prepare for the environmental assessment) can be found here: *http://www.saskatchewan.ca/business/environmental-protection-and-sustainability/environmental-assessment/projects*

Denison has started various studies and assessments as part of the environmental assessment process, which is intended to culminate in the preparation of the Project Environmental Impact Statement. Denison is expecting to have the Environmental Impact Statement document drafted by the end of 2020. Members of the public will also have an opportunity to review and comment on the draft Environmental Impact Statement through a formal comment period coordinated by the both the Provincial and Federal Governments.

If you have any questions regarding the Wheeler Project, please do not hesitate to contact me at 306-652-8201 ext. 107 – or my colleague Carolanne Inglis-McQuay, Denison's Corporate Social Responsibility Manager at 306-652-8201 ext. 128.

Sincerely,

Pamela Bennett
Environment Manager, Denison Mines

Encl. Wheeler River Project – Executive Summary

Denison Mines

Métis Nation Saskatchewan

Métis Nation – Saskatchewan
Denison Mines Corp.
Meeting

November 5, 2019, 9:00am until 12noon

Lunch served for all- Room available for MN-S immediately following lunch for private debrief

Location

Hilton Garden Inn, 90 22 St E, Saskatoon, SK S7K 3X6

Attendees

Métis Nation - Saskatchewan	Denison Mines Corp.
Glen McCallum (President MN-S)	David Cates (President & CEO)
Brennan Merasty (Executive Assistant to President MN-S)	David Bronkhorst (Vice President Operations)
Alex Ross (Executive Director Kineepik Métis)	Carolanne Inglis-McQuay (Corporate Social Responsibility Manager)
Joe Daigneault (Local President Sipisishik Métis)	Pam Bennett (Environment Manager)
Eugenie Lafleur (Local President Métis #67)	Roy Millen (External Legal Counsel)
Tex Bouvier (Northern Region III President)	
Mark Callette (Senior Director Administration MN-S)	
Arendt Hoekstra (External Legal Counsel)	
William Caisse (Local Ile a la Crosse)	
Nathan Favel (Assistant to Northern Region III President)	
Verna McCallum	
Percy Kenney (Local President #82)	

Agenda

1. Opening Prayer / Ceremony (G. McCallum)
2. Opening Remarks (G. McCallum / D. Cates)
3. Introductions (All)
4. Wheeler River Project overview (D. Cates / D. Bronkhorst / P. Bennett)
5. Denison – Métis engagement to date & proposed (D. Cates / C. Inglis-McQuay)
6. Overview of Métis interests in Wheeler River Project area (G. McCallum)
7. MN-S and Métis Local engagement process (TBD)
8. Next Steps (All)

Notes

The MN-S is focused on supporting the Locals, speaking with one voice, and finding capacity within the organization to support efforts going forward with Denison. Denison understands the MN-S as the single point of contact on the file and welcomes the single voice that builds in relationships that have been developed for more than 3 years with the Local Presidents.

MN-S noted that they provided direction to legal counsel to seek an exploration agreement with Denison. Denison indicated it was open to discussions on this.

Questions were asked regarding location of Denison sites and focused interests, what would occur should the Denison / the Wheeler Project change ownership with a potential Impact Benefit Agreement and the relationship developed between Denison and MN-S, costs assessment of the Wheeler River Project, the relationship of share price and community investment expenditures, and the challenges related to securing business opportunities at sites for smaller communities.

Technical questions were asked regarding the In Situ Recovery (ISR) Mining Method, employment related to the ISR operation, the potential for other deposits in the Athabasca Basin to be mined using ISR, clarification that ISR is not the same as fracking, as fracking uses very high pressures to break the rock apart, the consequence of various types of accidents that could occur, such as a pumping or injection well breaking, the volume of acid required and requirement for transportation of the acid, and the transportation requirements for yellowcake.

Logistical questions were asked regarding the mining of Gryphon deposit, which were focused on the location for milling of Gryphon ore and whether the road connection between McArthur River and Cigar Lake would be part of the project, which it would be.

Questions related to the environment and protection of people were asked, such as those focused on water sampling conducted to date, methodology of dealing with treated effluent, environmental monitoring in general, the interest of the Métis regarding transparent environmental monitoring data and access to such data and understanding the potential for radiation doses from the operation.

The MN-S identified their interest in understanding the traditional knowledge collected for the Project (from Kineepik Métis Local #9), if Denison was conducting further work in this area, and if Denison would consider doing so. Denison indicated that Indigenous Knowledge, including Land Use data, is an integral part of the environmental impact statement development, and expects to receive direction from the MN-S on this front as the process moves forward.

Discussion occurred regarding the concern about racism occurring at sites, include the Wheeler River site today, and how to ensure that all people are treated with respect at the working sites, now and in the future. It was mutually expressed that the MN-S and Denison have a shared interest towards ensuring values of respect are embedded into the Project development.

The MN-S identified that the land in which Wheeler is located is subject to a land claim and the resources within the land claim area are claimed by the Métis, and removal of the resources claimed by the Métis must result in a portion of the revenue going back to the Métis. The MN-S has a desire to create a legacy and generate wealth for its people.

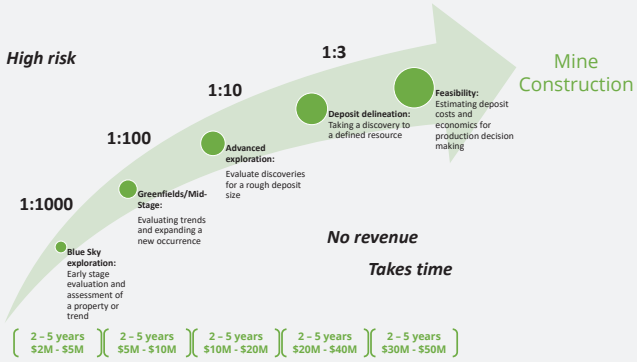
Denison Mines

2020 Exploration Programs

The Athabasca Basin, Northern Saskatchewan

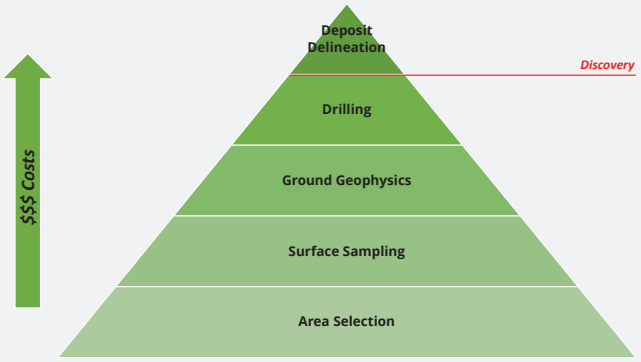
December 2019 |

The Exploration Process: An inherently risky proposition



Denison Mines

Exploration Techniques

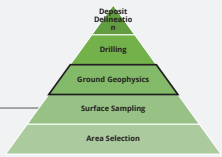


Denison Mines

Exploration Techniques: Ground geophysics

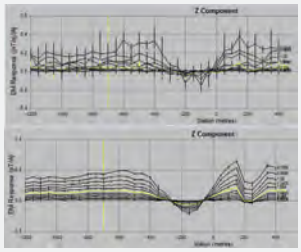
Ground geophysics

- Used to provide detailed assessment of targets of interest.
- Generally higher resolution data compared to airborne datasets



Denison Mines

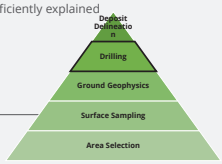
Denison Exploration Activities: 2020
Geophysical Surveying on Other Projects



Exploration Techniques:
Diamond drilling

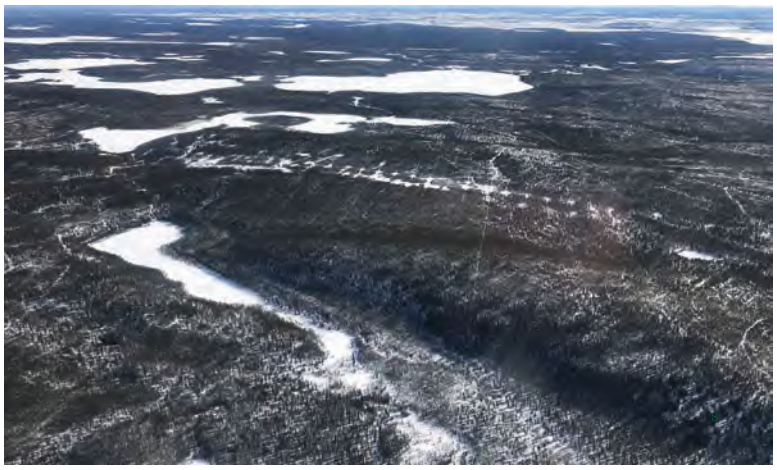
Diamond drilling

- Performed after targets have been identified through a combination of favourable geophysical and geochemical results
- Involves drilling of approximately 2" wide hole into the ground to retrieve core for examination
- Targets are drilled until a deposit has been located or anomaly sufficiently explained

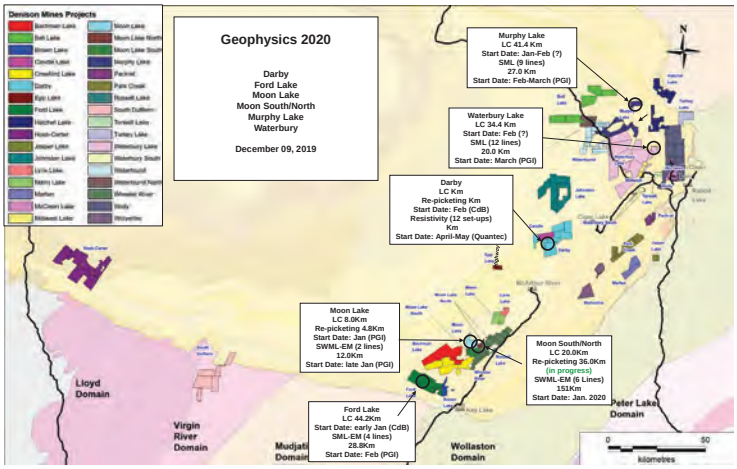


Denison Mines

Denison Exploration Activities: 2020
Diamond Drilling at Wheeler



2020 Geophysics Overview



Moon Lakes – 2020 Exploration Program Location

Moon Lakes – Exploration 2020

Line-Cutting and Geophysics Surveys

- In 2020, the Moon Lakes exploration program is planned to consist of a line-cutting program followed up by a 9-line (40 line-km) step-wise moving loop EM geophysical survey program
- The line-cutting program began December 6th, 2019 and will be followed up with the geophysics in early 2020, and expected to be completed by April-May, 2020.

Denison Mines

Darby Lake – 2020 Exploration Program Location

Darby Lake – Exploration 2020

Line-Cutting and Geophysics Survey

- In 2020, the Ford Lake exploration program is planned to consist of a line-cutting program followed up by 66 line-kilometre resistivity geophysical survey program
- The line-cutting program is expected to begin as early as late December, 2019 followed up the geophysics in early 2020, and expected to be completed by April-May, 2020.

Denison Mines

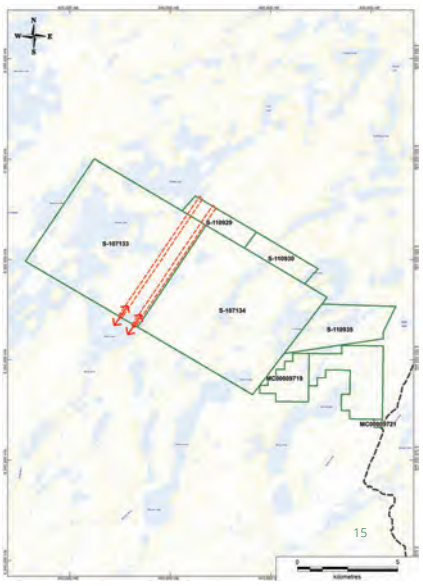
Ford Lake– 2020 Exploration Program Location

Ford Lake – Exploration 2020

Line-Cutting and Geophysics Survey

- In 2020, the Ford Lake exploration program is planned to consist of a line-cutting program followed up by 2 line; 14.4 line-kilometre small moving loop EM geophysical survey program
- The line-cutting program is expected to begin as early as late December, 2019 followed up the geophysics in early 2020, and expected to be completed by April-May, 2020.

Denison Mines



Murphy Lake – 2020 Exploration Program Location

Murphy Lake – Exploration 2020

Line-Cutting and Geophysics Survey

- In 2020, the Murphy Lake exploration program is planned to consist of a line-cutting program followed up by a 9 line; 18 line-kilometre small moving loop EM geophysical survey program
- The line-cutting program is expected to begin as early as late December, 2019 followed up the geophysics in early 2020, and expected to be completed by April-May, 2020.

Denison Mines

Waterbury Lake – 2020 Exploration Program Location

Waterbury Lake – Exploration 2020

Line-Cutting and Geophysics Survey

- In 2020, the Waterbury Lake exploration program is planned to consist of a line-cutting program followed up by 12 line small moving loop EM geophysical survey program
- The line-cutting program is expected to begin as early as late December, 2019 followed up the geophysics in early 2020, and expected to be completed by April-May, 2020.

Denison Mines

Wheeler River – 2020 Exploration Program Location

Wheeler River - Exploration 2020

Diamond Drilling Program

- In 2020, the Wheeler River exploration program is planned to consist of 21 diamond drill holes, in the Phoenix and Gryphon areas, as well as other, more distal, areas
- Exploration diamond drilling is expected to begin early January and continue through until April, 2020. Any remaining drilling will be completed between June and Ocotber 2020, in coordination with the advanced exploration program.

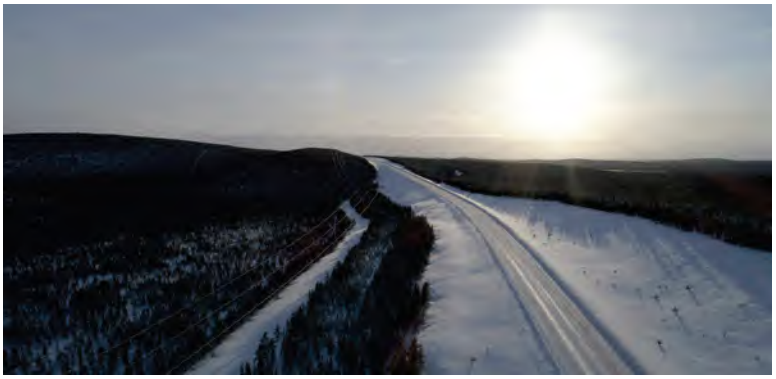
Denison Mines

Denison Mines

Uranium Development & Exploration

Wheeler River Project, Northern Saskatchewan

Ya'thi Nene Lands and Resource Office | 2020 Project Development Plans | December 13th, 2019



Project Development

Presentation Outline

- **2020 Planned Field Program**
  - **Coring Drill Program**
    - **Monitoring Wells**
    - **Recharge Well**
  - **Non-Coring Drill Program**
  - **Horizontal Hole Drill Program**
  - **Hydrogeological Testing**

Novel Mining Approach

Application of low-cost ISR mining method to the high-grade Athabasca Basin

Fundamental Requirements

1. **PERMEABILITY** (of the deposit)
2. **CONTAINMENT** (of the mining solution)
3. **LEACHABILITY** (of the mineralization)

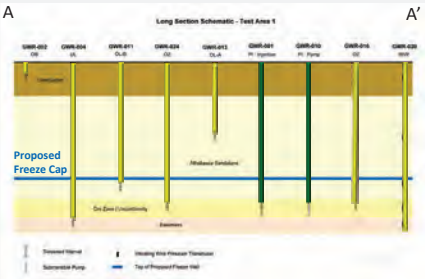
2020 Planned Field Program: *Coring Drill Program*

ISR field testing at Wheeler River Phoenix Deposit, Summer 2019

Monitoring Wells

- Coring up to 15 PQ diameter wells (122.6 mm)
- All whole rock core stored at the Wheeler River Project Site
- Wells Lined with PVC and well screen
- Fitted with Pressure monitoring Devices
- PVC Wellheads installed on surface to ensure groundwater containment
- Bentonite chips installed within the annulus of overburden to ensure rainwater and groundwater confinement
- Overpack drums installed on surface

2020 Planned Field Program:
Coring Drill Program



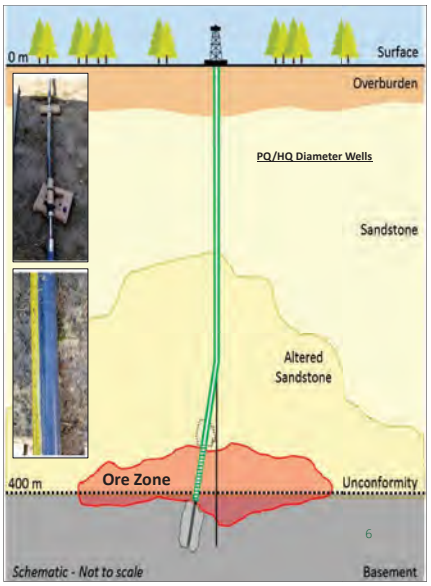
Borehole Installation

- Wells installed at various horizons to evaluate hydrologic conditions at the Phoenix deposit
  - Pump/Injection Wells (PQ Diameter)
  - Observation Wells (HQ Diameter)

2020 Planned Field Program:
Coring Drill Program

Borehole Installation [1]

- **Utilizing existing exploration drill holes** (where possible) for installation of tests wells
- All wells completed with **inflatable packer systems installed directly above the well-screens** to ensure isolation of the test formation being evaluated.



NOTES: (1) See Denison's news release dated June 26, 2019 for additional details.

ISR field testing at Wheeler River Phoenix Deposit, Summer 2019

2020 Planned Field Program:
Coring Drill Program

Re-Charge Wells

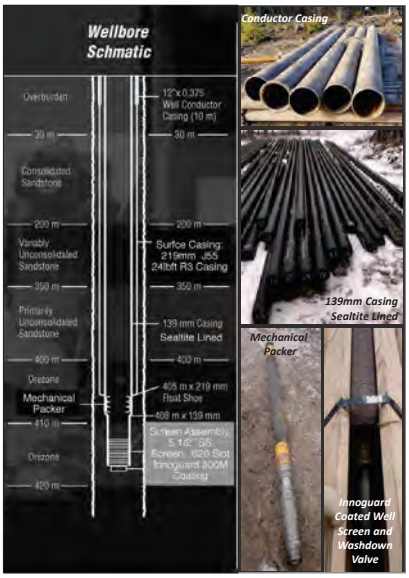
- 1 Hole (PQ Diameter – 122.6mm)
- Developed into a re-charge well for the purposes of:
  - Water management during hydrogeological testing
  - Recharge of waters from surface cleaning and possible radiological contamination
- Well to be screened at ore zone depth
  - Re-charging water into a pre-existing area of high uranium concentrations
  - Will not introduce new contaminants

2020 Planned Field Program: Non-*Coring Drill Program*

Commercial Scale Wells

- 7 wells to be drilled
- Destructive drilling (no core recovered)
- Ranging in diameter from 190.5 to 304.8mm
- Building upon the wells installed in 2019
- Similar in size to those that will eventually be utilized for commercials scale use during production
- Steel construction
- Grouted in place

Denison Mines



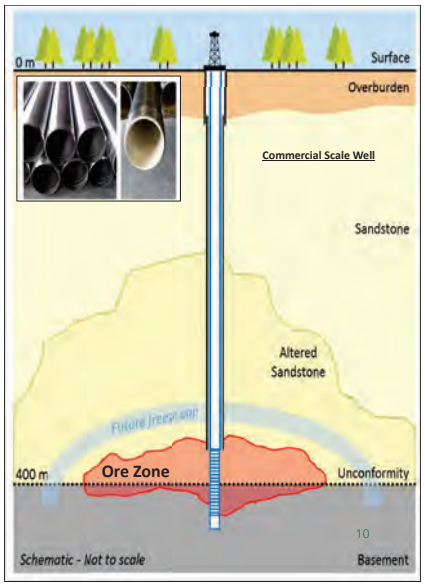
2020 Planned Field Program: Non-*Coring Drill Program*

Borehole Installation [1]

- Completion of each CSW included:
  - **The drilling of a large-diameter vertical borehole** (~12 inches in diameter) approximately 400 metres from surface
  - **Directional drilling in conjunction with Measurement-While-Drilling ("MWD")** surveying employed for borehole accuracy
    - Destructive drilling of sandstone
    - Coring of ore zone
  - Well materials **designed to meet expected environmental and regulatory standards for eventual ISR mining**
    - Double walled-and fully-sealed piping system
    - Outer casing successfully grouted in place providing an additional seal

Denison Mines

NOTES: (1) See Denison's news release dated Oct. 31, 2019 for additional details.



11

CSW installed at Wheeler River Phoenix Deposit, Summer 2019

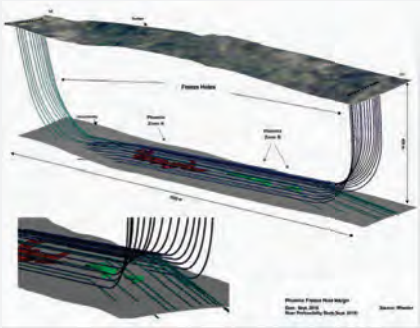
2020 Planned Field Program: Non-*Coring Drill Program*

12

Installation of Commercial Scale Wells as part of ISR Field test work at Wheeler River Phoenix Deposit, Summer 2019

2020 Planned Field Program: Non-*Coring Drill Program*

2020 Planned Field Program: *Horizontal Hole Drill Program*



Freeze Test Hole

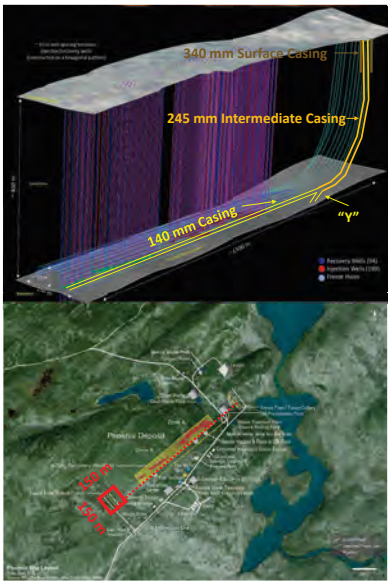
- 1 hole proposed (1.7km in length)
- Utilizing a conventional horizontal drill rig (SAGD or Slant Drilling)
- Only testing the drilling methodology
- "Fracking" or "Perforating Blasts" will not be utilized

2020 Planned Field Program: *Horizontal Hole Drill Program*

Test Execution

- 600 linear meters of Vertical Section / Curved Section
  - 340 mm surface casing
  - 245 mm intermediate casing
    - Capable of containing 2 freeze horizontal freeze pipes at 89mm
- 900 m Horizontal Section (with key to basement rock)
  - Approximately 400m below surface, 30 m above the unconformity
  - Single 140mm casing with "Y"
  - **89mm freeze pipes (a.k.a "strings", "annulus")*

**not included as part of the 2020 field tests*



2020 Planned Field Program: *Hydrogeological Program*

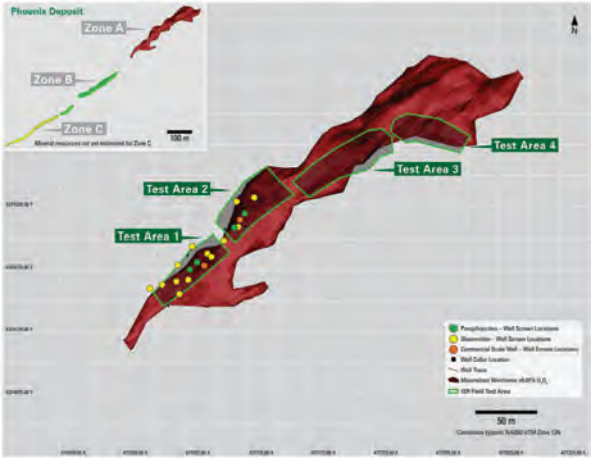
Hydrogeological Testing

- Continue work form 2019
- Enables Denison to understand the permeability, hydraulic conductivity and fluid pathways of the deposit
- Conducted using the newly constructed PQ diameter and Commercial Scale Wells
  - Pump and/or Injection Tests using natural groundwater
  - Additional anion (salt) tracer tests will be utilized to further determined the hydrogeological characteristics of the deposit
  - Formation waters are captured within holding tanks on surface

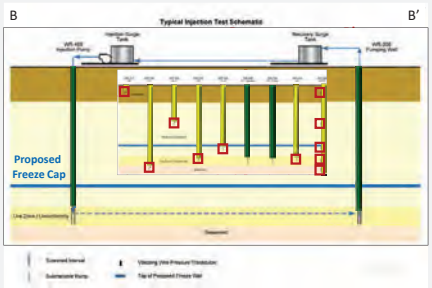
2020 Planned Field Program:
Hydrogeological Program

ISR field testing at Wheeler River Phoenix Deposit, Summer 2019

2020 Planned Field Program:
Hydrogeological Program



Phoenix ISR Field Test Program
Preliminary Test Work



Hydrogeological Investigation

- The larger diameter P/I wells allow for the completion of various **pump and injection tests** within the Test Area
- Observation wells allow for the **collection of an extensive database of hydrogeological data** in order to evaluate the ISR mining conditions
- Focused on in-situ testing of the orebody **using water** to evaluate hydraulic conditions that can be used to assess mining solution flow between a series of wells

Denison Mines

NOTES: (1) See Denison's news release dated June 26, 2019 for additional details.

ISR field testing at Wheeler River Phoenix Deposit, Summer 2019

Meeting
December 13, 2019
Ya'thi Nene Lands and Resources Office & Denison Mines

Garrett Schmidt (YTNLRO)
Shea Shirley (YTNLRO)
Dene Robillard (YTNLRO)

Dale Verran (Denison)
Chad Sorba (Denison)
Carolanne Inglis-McQuay (Denison)
Denis Goulet (Denison)

Agenda

1) Provide overview of all 2020 Denison Exploration Activities (recently permitted)
    a. Details of activities
    b. Planning for 2020 activities with providing notice to YTNLRO prior to permit submission
2) Provide overview of advanced Exploration Activities contained within draft permit application shared with YTNLRO on December 6, 2019
    a. Details of activities
    b. Questions / comments remaining from presentation
3) Discuss activities to support YTNLRO in relation to Wheeler River Project Environmental Assessment
    a. Site tour summer 2020
    b. Land use data collection

Presentations

See attached

General Notes and Discussion

General Exploration 2020:

YTLNRO asked if the geophysics would be performed in 2020. Denison answered affirmatively, also explaining that the Moon Lake line cutting has already begun.

YTLNRO inquired as to the distance between Gryphon and Phoenix, as well as if Phoenix is the main deposit. Denson answered that Gryphon and Phoenix are 3 kilometres apart as the crow flies, and that Denison has not yet made the decision to advance Gryphon yet.

YTNLRO raised the importance of sharing information with communities about general exploration activities. Denison committed to working together with the YTNLRO to find the best way to do so given the small-scale nature of the exploration activities.

Advanced Exploration Activities:

It was appreciated that Denison is trialling a new method of sharing information in advance of meeting and in advance of filing the permit application with the Province.

YTNLRO asked as to the procedure for radiation scanning procedures. Denison explained the various procedures in place to track radiation exposures as well as new procedures and equipment to be brought in 2020 as well as differences in tracking at the Wheeler Advanced Exploration Site versus typical exploration programs.

YTNLRO asked what would happen to test waters if the water could not be pumped back into the formation, if it would be pumped back into a different formation. Denison answered that if the water can be pumped out of a formation, it can be pumped back in, that Denison does not want to draw water from one area and pump it back into a different area or formation. YTNLRO asked if the water tests were normal procedure for exploration. Denison answered that the test are not normal procedure in exploration, that the tests are Wheeler (Phoenix) specific. YTNLRO also inquired as to whether fracking would be needed. Denison answered that fracking is not being used.

YTNLRO asked if the hydrogeology has been modelled. Denison answered that they are currently testing hydraulic connections, to verify that water can move through the deposit. Denison further explained that the model is undergoing multiple iterations, with the current extents of the model continually being refined. Denison further explained that the tracer tests, to be performed in 2020, will determine the breakthrough times across connections and increase confidence in where future mining solutions will go.

Advanced information sharing was discussed. Denison stated their objective is to ensure that information is provided in advance to the YTNLRO prior to the submission of the permit application to the Province of Saskatchewan, wherever possible. The timing can be a challenge, given that the optimal field season for exploration activities is in the winter, but Denison and YTNLRO agreed to work together over the coming year to determine the ideal time to share information between each other.

It was further discussed that the YTNLRO provides information to the Province that Denison rarely (if ever) sees, such as maps of land use activities of interest, etc. It was discussed that it would be ideal if Denison could be copied on this information – or have it shared in advance – such that it could enable Denison to confirm that activities are not causing potential adverse impacts to land use activities.

Wheeler River Project: Engagement and Environmental Assessment Data

Denison expressed its interest to YTNLRO towards working together to identify the right people to attend a site tour in the summer of 2020. Very preliminary discussions indicated perhaps it would be members from Hatchet Lake and some from Black Lake. To be further discussed.

Denison also asked the YTNLRO whether they have considered what is required in order to complete their land use dataset – and offered to work together to develop a scope of work, subject to acceptability by both parties, where Denison would support these efforts. The YTNLRO indicated they would think about it and both parties would connect in the new year to further discuss.

Denison Mines

Uranium Development & Exploration

The Athabasca Basin, Northern Saskatchewan

October 3, 2019 | Introduction to the Athabasca Dénesuline First Nations and Athabasca Communities

Cautionary Statements & Technical References

FOR MORE INFORMATION PLEASE VISIT DENISONMINES.COM

Additional information about Denison and its projects is contained in Denison's Annual Information Form dated March 12, 2019 (the "AIF") and other public disclosure documents, which are available on its website and under its profile on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

TECHNICAL REFERENCES:

Qualified Persons
The disclosure of a scientific or technical nature, including the results of the PFS, was prepared and approved by Dale Verran, Denison's Vice-President Exploration or David Bronkhorst, Denison's Vice-President Operations, who are each a Qualified Person in accordance with the requirements of NI 43-101.

Technical Reports
Further details regarding the Wheeler River project and the results of the PFS are provided in the Technical Report for the Wheeler River project titled 'Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada' with an effective date of September 24, 2018. Copies are available on Denison's website and under its profile on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

IMPORTANT CAUTIONS: READERS SHOULD NOT PLACE UNDUE RELIANCE ON ANY INFORMATION CONTAINED IN THIS PRESENTATION.

This presentation and the information contained herein is designed to help you understand management's current views, and may not be appropriate for other purposes. This presentation contains information relating to other companies and provincial infrastructure, and the plans and availability thereof, derived from third-party publications and reports which Denison believes are reliable but has not independently verified.

This presentation contains forward looking information regarding the business, operations and financial performance and condition of Denison, such as the results of, and estimates, assumptions and projections provided in, the PFS, including future development methods and plans, market prices, costs and capital expenditures; assumptions regarding Denison's ability to obtain all necessary regulatory approvals to commence development; Denison's percentage interest in its projects and its agreements with its joint venture partners; and the availability of services to be provided by third parties. 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 AIF.

Denison Mines 2

Agenda

- Introductions
- Company Overview
- **Wheeler River Project** – development stage project in the south eastern portion of the Athabasca Basin
- **Waterbury Lake Project** – exploration stage project in the north eastern portion of the Athabasca Basin
- Questions & Answers

Denison Mines 3

Diversified Athabasca Basin Asset Base with Superior Development Leverage

Strategic Project Portfolio:

- 90% interest in Flagship **Wheeler River** project [(1)] – largest undeveloped uranium project in infrastructure rich eastern Athabasca Basin
- 22.5% interest in operating **McClean Lake Uranium Mill** – excess licensed capacity, +12% of global uranium production
- Interests in uranium resources at McClean Lake, Midwest, and **Waterbury Lake**
- ~305,000 hectares of prospective exploration ground in the Athabasca Basin

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

Denison Mines 4

NOTES: (1) See Denison' news releases from January 17, 2017 and September 4, 2018 for additional details, as well as the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018.

~305,000 Hectares of Prospective Exploration & Development Ground Focused in the Infrastructure Rich Eastern Athabasca Basin

All Season Highway / Haul Road

Provincial Power Grid

Denison Mines 5

Wheeler River Project Advancing to Permitting[(1)]

Highlights:

- PFS included selection of **In-Situ Recovery ("ISR") mining method** for Phoenix with onsite processing at Wheeler River[2]
- **Phoenix** estimated to have exceptionally low operating costs for an undeveloped uranium deposit globally – **US$3.33/lb U_3O_8**
- Conventional UG **Gryphon** contributes additional low cost pounds – **US$11.70/lb U_3O_8**
- **109.4M** lbs U_3O_8 Probable Reserves
- **14** year mine life (7.8m lbs U_3O_8/year on avg.)
- Base-case pre-tax $NPV_{8\%}$ (100%) of **$1.31B**
- Base-case pre-tax IRR of **38.7%**
- Initial CAPEX of **$322.5M** (100%)

✓**Ownership: 90% Denison, 10% JCU[(2)]**

Denison Mines 6

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018; (2) See Denison's news release from October 29, 2018 for additional details.

Phoenix Operation: Proposed site layout highlighting ISR wellfield and site infrastructure[(1)]

Key Site Elements:

- ~150 person camp facility
- Site operations centre
- ISR wellfield
- Freeze plants
- Processing plant / WTP
- Potential WTP holding ponds and treated effluent discharge point
- Warehousing and fuel storage facilities
- Back-up power generators
- Wash bay, scanning and weight scale facilities
- Potable and waste water treatment / storage

Denison Mines

NOTES: (1) Refer to the "Wheeler River Project Provincial Technical Proposal and Federal Project Description", dated May 2019.

7

Phoenix Geology: Unique uranium deposit with exceptionally high grades

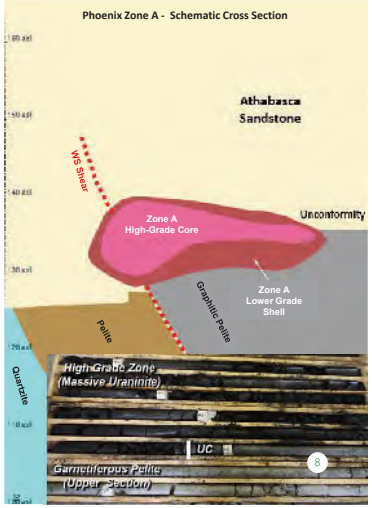
Highlights[(1)]:

- Mineralization is situated at or immediately above the unconformity ("UC")
- Two distinct ore zones – Phoenix A + B
- Approximately 400 m below surface
- World's highest-grade undeveloped uranium deposit
- Indicated Mineral Resources 70.2 M lbs U_3O_8 (166,000 tonnes at **19.1% U_3O_8**)
  - ➢ Includes 59.9 M lbs U_3O_8 estimated for Phoenix Zone A High-Grade Core (62,900 tonnes at **43.2% U_3O_8**)
- Inferred Mineral Resources 1.1 M lbs U_3O_8 (9,000 tonnes at 5.8% U_3O_8)
- Cut-off grade of 0.8% U_3O_8

✓Geological setting expected to be amenable to ISR mining, with **~90% of the mineral resource (contained metal) hosted in sandstone**

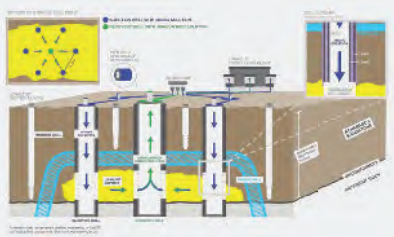
Denison Mines

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018 for further details regarding the mineral resources estimated for the Phoenix deposit.



8

Bringing the world's lowest cost uranium mining method to the jurisdiction hosting the world's highest-grade uranium deposits



ISR Mining Process[(1)]:

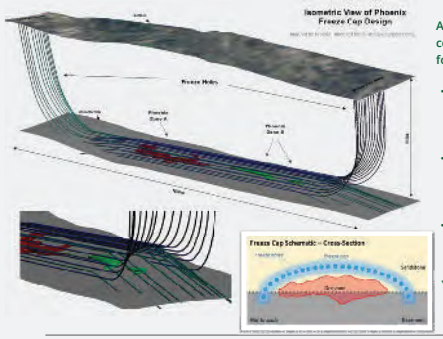
1. Mining solution (also known as "lixiviant") is pumped through a permeable orebody via injection well;
2. Lixiviant dissolves the uranium as it travels through the orebody;
3. Uranium rich mining solution (also known as uranium bearing solution or "UBS") is pumped back to surface via recovery well;
4. UBS is sent to a processing plant on surface for chemical separation of the uranium and reconditioning of lixiviant;
5. Lixiviant is returned back to well field for further production

Denison Mines

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018.

9

Phoenix Freeze Cap:
Novel concept to contain lixiviant, using established technology



Artificial freeze cap replicates confining layer typically required for ISR mining operations[1]

- Parallel cased holes drilled from surface and anchored into impermeable basement rock surrounding the Phoenix deposit
- Circulation of low-temperature brine solution through cased pipes will freeze groundwater in sandstone surrounding the deposit
- 10 metre thick freeze wall, together with basement rocks will encapsulate Phoenix deposit

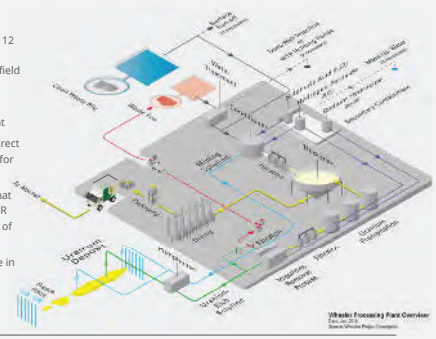
✓ **Eliminates common environmental concerns with ISR mining and facilitates controlled reclamation**

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018.

On-site processing to Yellowcake Uranium:
Closed loop system and simplified plant design reduces the need for discharge

On-Site Processing Plant[1]

- Annual production between 6 and 12 million lbs U_3O_8 – depending on uranium concentrations from wellfield (10 g/L → 6M lbs U_3O_8 / year)
- No crushing or grinding circuits required – results in small footprint
- Low impurity solution allows for direct precipitation and eliminates need for ion exchange or solvent extraction
- Potential for closed loop system that recycles mining solution back to ISR wellfield with little to no discharge of effluents
- Drying/calcining to be done on-site in preparation for market
- Plant to be powered by provincial power grid



NOTES: (1) Indicative design only. Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018.

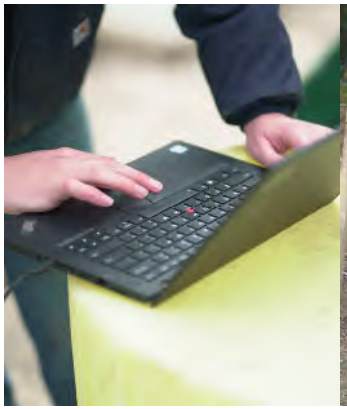
Wheeler River Field Work in 2019:
First of its kind ISR field test in the Athabasca Basin

ISR Field Test Objectives:

- In-situ field work is necessary to increase the confidence / reduce the risks associated with application of the ISR mining method at Phoenix
  - ✓ Data required for detailed hydrogeological modelling
  - ✓ Forms the basis for ISR wellfield and freeze dome design necessary for the FS and to support the EIA process.
- Phoenix deposit divided into four (4) representative test areas
  - ✓ Intended to cover each of the various fluid flow domains expected within the deposit
  - ✓ Test areas expected to cover ~65% of the Indicated Mineral Resources estimated for the Phoenix deposit

NOTES: For further details regarding the ISR field testing and results for 2019 refer to Denison's press releases dated August 27, 2019 and September 19, 2019.

Wheeler River Field Work in 2019:
Collecting hydrogeological data from test wells installed in Phoenix Zone A



Wheeler River Field Work in 2019:
Collecting hydrogeological data from test wells installed in Phoenix Zone A

Wheeler River ISR:
Different mining method and a different type of operation[1]

Advantages of ISR mining compared to existing uranium mining in Canada:

- ✓ Small surface footprint
- ✓ Lower water consumption
- ✓ Lower energy consumption
- ✓ Potentially near zero CO_2 emissions
- ✓ Small volume (potentially zero) treated effluent released to surface water bodies
- ✓ Potential for lower radiation doses to workers
- ✓ No tailings production
- ✓ Very small volumes of clean waste rock (sandstone core from wellfield development)

NOTES: (1) Refer to the "Wheeler River Project Provincial Technical Proposal and Federal Project Description", dated May 2019.

Wheeler River ISR:
Different mining method and a different type of operation

Comparison to Precedent Athabasca Basin uranium mining operations:

Project Element	Existing AB Operations	Wheeler River Project	Observation
Annual jobs during operation	~1,050 – McArthur/Key Lake ~ 800 – Cigar / McClean	100 - 150	Wheeler work-force is <15% of existing operations; fewer opportunities to share benefits.
Estimated uranium resources amenable to selected mining method	~400 M lbs U_3O_8 (remaining) at McArthur ~180 M lbs U_3O_8 (remaining) at Cigar	~70 M lbs U_3O_8 amenable to ISR mining	Wheeler ISR resources are <20% of the remaining uranium resources at McArthur, despite a decade plus of mining;
Annual production	~18M lbs U_3O_8 at each of McArthur & Cigar	~6-12 M lbs U_3O_8	Wheeler annual production expected to be 1/3rd to 2/3rds of each of McArthur and Cigar + small resource base means shorter mining life, and fewer years / opportunities to share benefits.
Initial costs of construction / initial capital costs	Estimated ~$3B for Cigar	Estimated at $325M per PFS	Building Wheeler is expected to cost ~10% of Cigar; fewer opportunities to share benefits

Other important considerations:

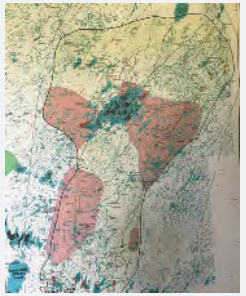
- On-site processing to yellowcake product: no trucking of mine production to off-site processing plant;
- All jobs for ISR operation are above ground

Engagement Considerations:
Committed to collaborative engagement with all interested parties

Denison's Approach:

1. Present meaningful and relevant information in culturally appropriate format and language
2. Incorporate comments and recommendations into project decisions to minimize project impacts
3. Engage interested parties in a variety of ways and in a manner that respects local traditions, culture, timeframes and decision making processes
4. Provide frequent feedback, monitoring and evaluation related to the project and engagement activities

Engagement Considerations:
Known land use in Wheeler River project area



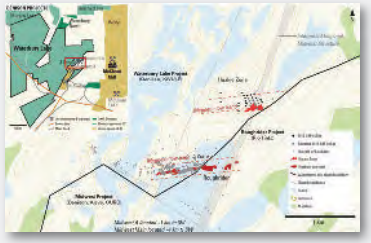
- One Commercial Trapper (ERFN) very active in area
- No other strong presence of current land users
- Heritage surveys conducted to date identified one Artifact Find of Precontact cultural affiliation with limited interpretive potential
- Wheeler River project is located within the boundaries of Treaty 10 – with established ties to known English River & Métis Traditional Territory
  - ➢ Strong communal relationship to the land
- Seeking other sources of information related to current land uses from Indigenous communities
- ***What Treaty and / or Indigenous Rights are currently being practiced by Athabasca Basin community members (First Nations and / or Métis) in or around the Wheeler River Project?***

~305,000 Hectares of Prospective Exploration & Development Ground Focused in the Infrastructure Rich Eastern Athabasca Basin

All Season Highway / Haul Road

Provincial Power Grid

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:** 66.51% Denison, 33.49% KHNP

Deposit	Classification	Tonnes	Grade	Lbs U_3O_8	Denison Share
J-Zone(1)	Indicated	291,000	2.0% U_3O_8	12.8M	8.5M
Huskie(2)	Inferred	268,000	0.96% U_3O_8	5.7M	3.8M

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; Mineral Resources for the J Zone deposit are reported above a cut-off grade of 0.1% U_3O_8; (2) The Huskie Mineral Resource estimate was prepared by the Company and audited by SRK Consulting (Canada) Inc. in accordance with CIM Definition Standards (2005) and NI 43-101; Mineral Resources for the Huskie deposit are reported above a cut-off grade of 0.1% U_3O_8

Source: Technical Report with an Updated Mineral Resource Estimate for the Waterbury Lake Property, Northern Saskatchewan, Canada, dated December 21, 2018

Waterbury Lake Uranium Project: A brief history

40 years of exploration activity

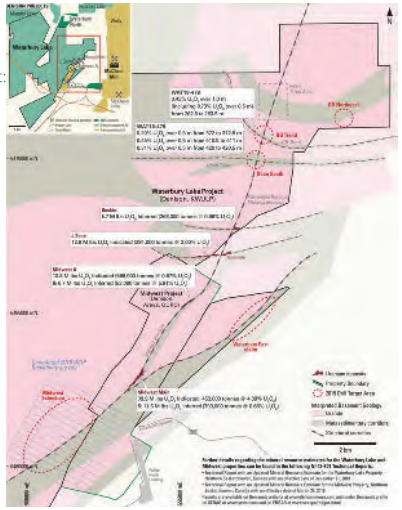
- Current claims staked by Strathmore Minerals Corp. in 2004
- Strathmore spun out Canadian assets to Fission Energy Corp. ("Fission") in 2007
- Fission signs earn in with KEPCO in 2008 and forms WLULP to hold property
- Denison acquires Fission in 2013, including Fission's interest in WLULP
- Currently, Denison holds a 66.51% interest in the WLULP, with KHNP (subsidiary of KEPCO) holding remaining interest
- **J Zone** uranium deposit discovered in 2010, following Hathor's discovery of the Roughrider Uranium deposit under the northern limb of McMahon Lake in 2008.
- **Huskie** uranium deposit was discovered by Denison in June 2017

Waterbury Lake Uranium Project: Recent exploration activities

2019 winter drilling program

- GB Trend — 8 drill holes (3,240 metres)
- Oban South — 3 drill holes (1,320 metres)
- Midwest Ext. — 5 drill holes (2,000 metres)
- GB Northeast — 1 drill hole (450 metres)
- Waterbury East — 1 drill hole (350 metres)

✓ ***2020 budget planning in progress***



Denison Mines

Waterbury Lake Uranium Project: Core yard

Waterbury Lake Uranium Project: On-site logging facilities

Waterbury Lake Uranium Project: Core yard clean-up

Business and Employment Opportunities: Identifying opportunities for Athabasca enterprises to work with Denison

In 2019:

- Drilling company employed member from Hatchet Lake First Nation
- Westwind Aviation
- Athabasca Security / Medical (for paramedic onsite 24 hours/day at Wheeler River Site)

For 2020:

- Procurement list will be developed once budgets are approved and will be sent to YTNLRO
- May include opportunities such as:
  - Diamond drilling
  - Medical services
  - Camp services
  - Air charters
  - Line cutting

Companies Denison is familiar with:

- Team Drilling (51% owned by ABDLP)
- Yathi Koe (Fond du Lac and Hardrock Drilling)
- Athabasca Basin Security / Medical
- Westwind Aviation
- Athabasca Catering
- Others?

Denison Mines 26

Questions?

Denison Mines meeting with Athabasca Dénésuline Leaders and Directors of Ya'thi Néné Land and Resource Office (YTNLRO)

Date: October 3, 2019
Location: Ramada, Saskatoon
In attendance:

Denison	**YTNLRO**
David Cates (President & CEO)	Garrett Schmidt (Executive Director)
David Bronkhorst (VP Operations)	Tina Giroux (Advisor)
Pam Bennett (Environment Manager)	Shae Shirley (Land Use Planning Advisor)
Carolanne Inglis-McQuay (CSR Manager)	Corrine Sayazie (Chief, Black Lake)
	Bart Tsannie (Chief, Hatchet Lake)
	Louis Mercredi (Chief, Fond du Lac)
	Al Sayne (Director, YTNLRO)
	Ray MacDonald (Director, YTNLRO)
	Delbert Bouvier (Councillor, Black Lake)
	Paul Denechezhe (Councillor, Hatchet Lake)
	Mary Denechezhe (Director, YTNLRO)
	Dene Cree Robillard (YTNLRO)

Presentation: See Above
General Questions

The following general types of questions were asked by the attendees:

1. Nature of the mining solution and containment methods for the mining solution, including contingency measures if excursions occur outside of freeze dome
2. Details regarding the freeze dome concept
3. Details regarding groundwater in the area and number and location of the monitoring wells
4. Details on the type of ore body (grade, impurities, percentage recovered)
5. Lifespan of the operation and opportunities for employment, training, and business
6. Quality of treated effluent
7. Use of in-situ recovery (ISR) methodology and relationship to other deposits in the area, such as Midwest

Specific Land Use Questions

The following question was posed to the attendees:

- ***What Treaty and / or Indigenous Rights are currently being practiced by Athabasca Basin community members (First Nations and / or Métis) in or around the Wheeler River Project?***

In response to this question, Denison staff captured these comments:

YTNLRO *The whole area of the Athabasca Basin was historically used by the Dene Nation. There were no boundaries to where we travelled. Although there may not be anyone active in the Wheeler area now, it is part of our historical land use area. Not many people trap now even close to our communities because it is not economical. The other mines on either end of your project are including us [Key Lake and McArthur River]. We have land use data, although I am not sure how far back it goes. It may show use around Wheeler.*
Denison: Thank you. All of your points have been noted. It is not our place to determine whose traditional territory is whose. We want to make sure we understand the current traditional land use in the Wheeler Project area for fishing, hunting, trapping, and medicinal purposes.
Denison: Thank you for sharing your experiences and we appreciate and value your comments.
YTNLRO: *An Elder [described] travelling from Hatchet Lake to Russell Lake, Highrock River and the Geike River. The area close to Russell Lake and Highrock River – we have historical connections here. The area along the Treaty 10/Treaty 8 boundary towards Cree Lake and Gieke River are areas Dene travelled around. Could you bring our Elders to the Wheeler area to get their input on land use and ask them questions? Could you give our Elders a site tour? You should consult with our Elders.*
YTNLRO: *Speaking for the YTNLRO we don't feel as though the Traditional Land Use information from the early 2000s is complete. We are looking into this; work is underway.*
Victor Fern: *We have Black Lake members in Ile a la Crosse and Beauval. Band members from Black Lake used to travel to Ile a la Crosse, Beauval etc. There was always interaction between the West Side communities and the northern communities. We would travel through Cree Lake.*
YTNLRO *Cree River connects to Black Lake; we would be the first people impacted; you should give us site tours*
Denison: The Project as designed is not predicted to have off-site impacts that would adversely impact your communities. The Project is more than 50km from Cree Lake.
YTNLRO*: You should offer an Elder tour at site*
Denison: We have a commitment to communicate all opportunities to all those interested, for the Wheeler River Project and for exploration activities.
Commitments:

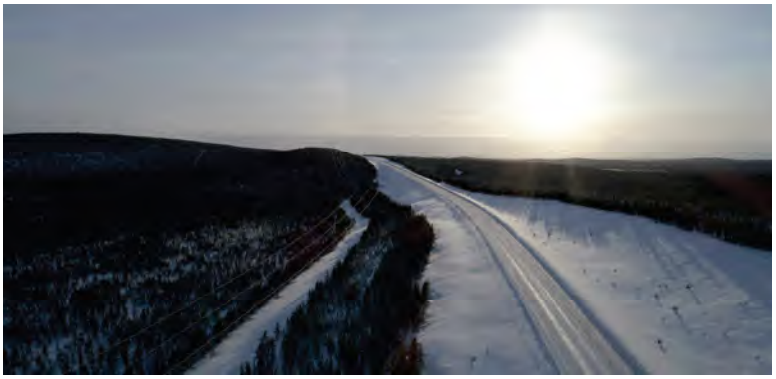
1) As soon as budgets are set for 2020 exploration, Denison will share the list of Projects and the procurement needs with YTNLRO
2) YTNLRO is currently undertaking a review of existing data related to land use activities
3) Denison is constantly revising and updating the Engagement Plan and will consider the request to conduct a site tour for Elders.

Denison Mines

Uranium Development & Exploration

The Athabasca Basin, Northern Saskatchewan

August 7, 2019 | Wheeler River Project and Denison Exploration Sites



Cautionary Statements & References

FOR MORE INFORMATION PLEASE VISIT DENISONMINES.COM

Additional information about Denison and its projects is contained in Denison's Annual Information Form dated March 12, 2019 (the "AIF") and other public disclosure documents, which are available on its website and under its profile on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

TECHNICAL REFERENCES:

Qualified Persons
The disclosure of a scientific or technical nature, including the results of the PFS, 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.

Technical Reports
Further details regarding the Wheeler River project and the results of the PFS are provided in the Technical Report for the Wheeler River project titled 'Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada' with an effective date of September 24, 2018. Copies are available on Denison's website and under its profile on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

IMPORTANT CAUTIONS:

READERS SHOULD NOT PLACE UNDUE RELIANCE ON ANY INFORMATION CONTAINED IN THIS PRESENTATION.

This presentation and the information contained herein is designed to help you understand management's current views, and may not be appropriate for other purposes. This presentation contains information relating to other companies and provincial infrastructure, and the plans and availability thereof, derived from third-party publications and reports which Denison believes are reliable but has not independently verified.

This presentation contains forward looking information regarding the business, operations and financial performance and condition of Denison, such as the results of, and estimates, assumptions and projections provided in, the PFS, including future development methods and plans, market prices, costs and capital expenditures; assumptions regarding Denison's ability to obtain all necessary regulatory approvals to commence development; Denison's percentage interest in its projects and its agreements with its joint venture partners; and the availability of services to be provided by third parties. 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 AIF.

Agenda

- Company Overview
- Wheeler River Project Overview
- Denison Exploration Activities in Athabasca Basin

Denison: Diversified Athabasca Basin Asset Base with Superior Development Leverage

Strategic Project Portfolio:

- 90% interest in Flagship **Wheeler River Project** [(1)] – largest undeveloped uranium project in the infrastructure rich eastern Athabasca Basin
- 22.5% interest in operating **McClean Lake Uranium Mill** – excess licensed capacity, +12% of global uranium production
- Interests in uranium resources at McClean Lake, Midwest, and Waterbury Lake
- ~310,000 hectares of prospective exploration ground in the Athabasca Basin
- Internal sources of **cash flow** from management services contract with Uranium Participation Corp. (TSX-U), and Environmental Consulting Services from Denison Environmental Services (DES)

NOTES: (1) Refer to the Wheeler River Technical Report Titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018.

~310,000 Hectares of Prospective Exploration & Development Ground Focused in the Infrastructure Rich Eastern Athabasca Basin

Denison Mines

All Season Highway / Haul Road **Provincial Power Grid**

Wheeler River Project Advancing to Permitting[1]

Highlights:

- PFS included selection of **In-Situ Recovery ("ISR") mining method** for Phoenix with onsite processing at Wheeler River[2]
- **Phoenix** estimated to have exceptionally low operating costs for an undeveloped uranium deposit globally – **US$3.33/lb U_3O_8**
- Conventional UG **Gryphon** contributes additional low cost pounds – **US$11.70/lb U_3O_8**
- **109.4M** lbs U_3O_8 Probable Reserves
- **14** year mine life (7.8m lbs U_3O_8/year on avg.)
- Base-case pre-tax $NPV_{8\%}$ (100%) of **$1.31B**
- Base-case pre-tax IRR of **38.7%**
- Initial CAPEX of **$322.5M** (100%)

✓ **Ownership: 90% Denison, 10% JCU[2]**

Denison Mines

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018; (2) See Denison's news release from October 29, 2018 for additional details.

Phoenix Geology: Unique uranium deposit with exceptionally high grades

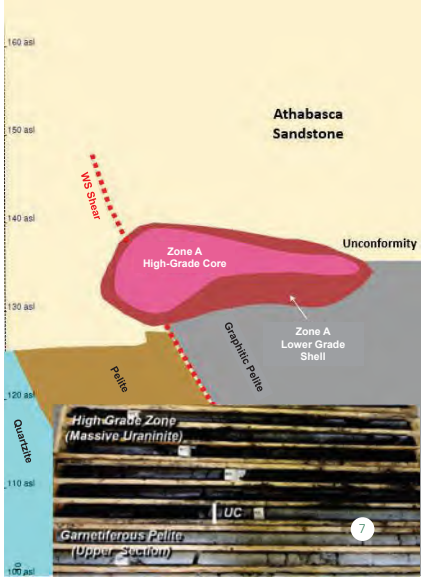
Highlights[1]:

- Mineralization is situated at or immediately above the unconformity("UC")
- Two distinct zones – Phoenix A + B
- Approximately 400m below surface
- **70.2 million pounds U_3O_8 @ 19.14% U_3O_8** Indicated mineral resources (166,400 tonnes)[2]
  - ➢World's highest grade undeveloped uranium deposit
  - ➢Cut-off grade of 0.8% U_3O_8
  - ➢1.1M lbs U_3O_8 in Inferred resources (8,600 tonnes @ 5.8% U_3O_8)[3]

✓ Geological setting is amenable to **ISR mining**

Denison Mines

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018; (2) Indicated mineral resources are inclusive of Reserves; (3) The PFS does not include any economic analysis based on estimated inferred mineral resources.



Phoenix ISR Operation: Selection of ISR mining method

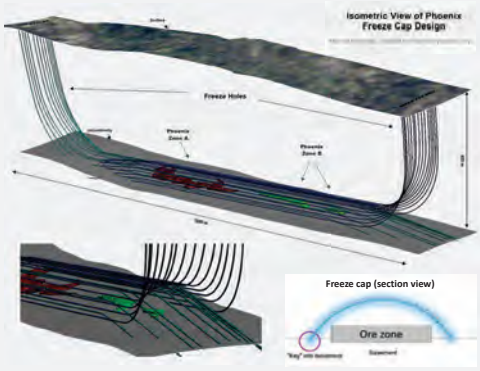
ISR Mining Process[1]:

1. Mining solution (also known as "lixiviant") is pumped through a permeable orebody via injection well;
2. Lixiviant dissolves the uranium as it travels through the orebody;
3. Uranium bearing mining solution ("UBS") is pumped back to surface via recovery well;
4. UBS is sent to a processing plant on surface for chemical separation of the uranium and reconditioning of lixiviant;
5. Lixiviant is returned back to well field for further production

Denison Mines

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018.

Phoenix Freeze Cap:
Novel concept to contain lixiviant, using established technology



Artificial freeze cap replicates confining layer typically required for ISR mining operations[1]

- Parallel cased holes drilled from surface and anchored into impermeable basement rock surrounding the Phoenix deposit
- Circulation of low-temperature brine solution through cased pipes will freeze groundwater in sandstone surrounding the deposit
- 10 metre thick freeze wall, together with basement rocks will encapsulate Phoenix deposit

✓ **Eliminates common environmental concerns with ISR mining and facilitates controlled reclamation**

Denison Mines

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018.

Phoenix Test Work[1]:
Confirms suitability of ISR mining method

Field and laboratory work included drill hole injection, permeability, metallurgical leach, agitated leach and column testing

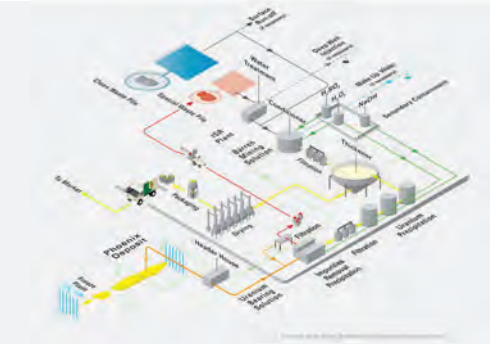
- **Excellent Recoveries:** High rates of recovery in extraction (+90%) and processing (98.5%)
- **High Grade:** Agitated leach and column tests returned uranium concentrations of 12 to 20 grams per litre (g/L) – significantly higher than conventional low-grade ISR operations
- High uranium concentrations in the mining solution, plus low level of impurities (deleterious elements), allows for **direct precipitation of uranium**

✓ **No need for ion exchange or solvent extraction circuits = reduced costs**

Denison Mines

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018.

Phoenix ISR Processing Plant:
Closed loop system and simplified plant design eliminates the need for discharge



On-Site Processing Plant[1]

- Designed for UBS concentrations of 10 g/L
- Throughput of 500 litres per min
- Annual production of up to 6 million lbs U_3O_8
- Closed loop system recycles mining solution and eliminates need for discharge of effluent
- No ion exchange or solvent extraction circuits

✓ **Powered by Provincial power grid**

Denison Mines

NOTES: (1) Indicative design only. Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018.

Phoenix Operation:
Proposed site layout highlighting ISR wellfield

Wheeler River ISR Operation:
Different Mining Method and a Different Type of Operation

Potentially one of the world's most environmentally friendly mining operations

Phoenix ISR Site: Proposed Layout

Key Lake Mill Site (ref. Google Earth)

- **No production of tailings**
- Closed loop system requires potentially **no treated water discharge** to environment
- Contained mining chamber eliminates groundwater interactions and allows for controlled remediation
- Limited fossil fuel requirements – powered by provincial grid: **Near zero carbon emissions**
- Small surface disturbance of a temporary nature (~20 years) (see comparison to Key Lake)

Wheeler River ISR Operation:
Different Mining Method and a Different Type of Operation

Comparison to Precedent Athabasca Basin uranium mining operations:

Project Element	Existing AB Operations	Wheeler River Project	Observation
Annual jobs during operation	~1,050 – McArthur/Key Lake ~ 800 – Cigar / McClean	100 - 150	Wheeler work-force is <15% of existing operations; fewer opportunities to share benefits.
Estimated uranium resources amenable to selected mining method	~400 M lbs U_3O_8 (remaining) at McArthur ~180 M lbs U_3O_8 (remaining) at Cigar	~70 M lbs U_3O_8 amenable to ISR mining discovered at Wheeler to date (Phoenix)	Wheeler ISR resources are <20% of the remaining uranium resources at McArthur, despite a decade plus of mining;
Annual production	~18M lbs U_3O_8 at each of McArthur & Cigar	~6-12 M lbs U_3O_8	Wheeler annual production expected to be 1/3rd to 2/3rds of each of McArthur and Cigar; taken together with small resource base means shorter mining life, and thus fewer years / opportunities to share benefits.
Initial costs of construction / initial capital costs	Estimated ~$3B for Cigar	Estimated at $325M per PFS	Building Wheeler is expected to cost ~10% of Cigar; fewer opportunities to share benefits

Other important considerations:

- Surface area disturbance at Wheeler not expected to affect any known collective exercising of Rights;
- Limited environmental interactions (no tailings, no waste rock and minimal water effluent) from ISR operation;
- On-site processing to yellowcake product: no trucking of mine production to off-site processing plant (which would increase physical footprint of "operation" to include roads and separate mill and mine sites);
- All jobs for ISR operation are above ground

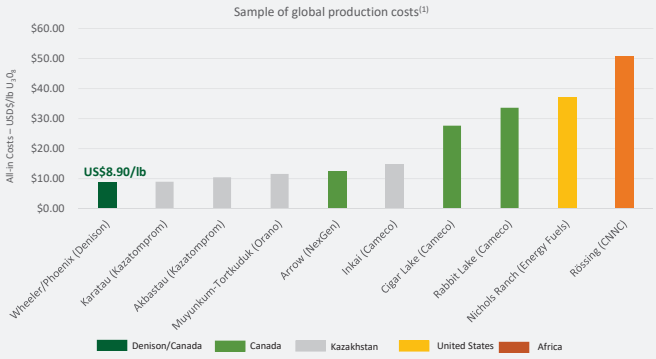
Phoenix Operation:
ISR mining method delivers industry leading cost per pound U_3O_8

Phoenix Operation	PFS Result(1)
Mine life	**10 years** (6.0 million lbs U_3O_8 per year on average)
Average cash operating costs	**$4.33 (US$3.33) per lb U_3O_8**
Initial capital costs (100% basis)	**$322.5 million**
Operating margin(4)	**89.0%** at US$29/lb U_3O_8
All-in cost(2)	**$11.57 (US$8.90) per lb U_3O_8**

Assumptions / Results	Base Case	High Case
Uranium selling price	UxC Spot Price(3)	US$65/lb U_3O_8
Operating margin(4)	**91.4%**	**95.0%**
Pre-tax $NPV_{8\%}$(5) (100%)	**$930.4 million**	**$1.91 billion**
Pre-tax IRR(5)	43.3%	71.5%
Pre-tax payback period(6)	~ 21 months	~ 11 months

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018; (2) All-in cost is estimated on a pre-tax basis and includes all project operating costs and capital costs, divided by the estimated number of total pounds U_3O_8 to be produced; (3) Spot Price is based on the "Composite Midpoint" spot price scenario from UxC's UMO; (4) Operating profit margin is calculated as uranium revenue less operating costs, divided by uranium revenue. Operating costs exclude all royalties, surcharges and income taxes; (5) NPV and IRR are calculated to the start of pre-production activities for the Phoenix operation in 2021; (6) Payback period is stated as number of years to pay-back from the start of uranium production.

Wheeler River Phoenix Operation:
Potential to be the lowest cost uranium mining operation this cycle



NOTES: (1) Chart data, including all-in costs, have been taken from UxC's estimates on Worldwide Production Costs as of September, 2017. Wheeler/Phoenix costs are per Denison's Pre-Feasibility Study for the project, available at www.denisonmines.com or on SEDAR and EDGAR

U_3O_8 Spot Prices On The Rise Again:
Phoenix operating costs remain well below industry's 20 year low

NOTES: (1) Phoenix operating costs are per Denison's September 24, 2018 Pre-Feasibility Study for the project, available at www.denisonmines.com or on SEDAR and EDGAR

Environmental Impact Assessment:
Multi-year process on critical path of project schedule

Environmental efforts are ongoing:

- Comprehensive baseline data collection program initiated in 2016 and ongoing
- Current data indicates healthy ecosystem
- Preliminary evaluations indicate mining will not cause significant adverse environmental impacts
- Advancing the preparation of the Environmental Impact Statement

Stakeholder Engagement Program:
Ongoing since 2016, focused on ensuring meaningful exchange of information

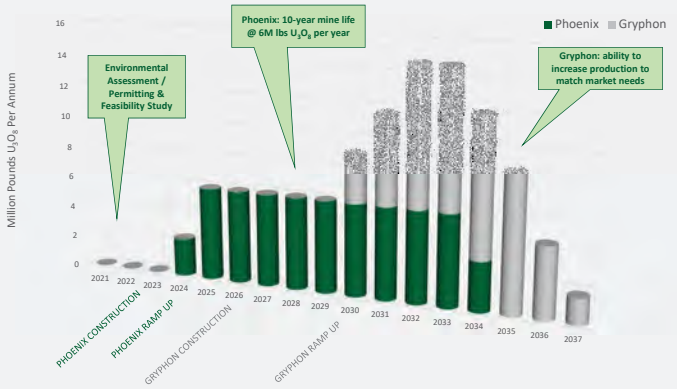
Engagement efforts are ongoing:

- Initiated in 2016
- Documented in Project Description
- Focused on Indigenous communities, general public & regulators
- Engagement program continues to evolve / adapt:
  - Broader list of groups and organizations
  - Goal to ensure those interested in the Project have a good understanding about the Project
  - Different audiences have different interests and needs

Stakeholder Engagement Program:
Known land use in Wheeler River project area

- One Commercial Trapper (ERFN) very active in area
  - Regularly using land in and around Wheeler River site (lives about 15km away)
  - Denison connects with all who seek permission to move through or use the Wheeler Project site
- No other strong presence of current land users
- Heritage surveys conducted to date identified one Artifact Find of Precontact cultural affiliation with limited interpretive potential
- Wheeler River project is located with the "heart" of known English River & Métis Traditional Territory
  - Strong contemporary relationship to the land
- Seeking other sources of information related to current land uses from Indigenous communities

Wheeler River PFS:
14-year mine life producing +7.5M lbs U_3O_8 per year on average[1]



Denison Mines

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018.

Athabasca Basin Exploration Activities

Denison Mines

~310,000 Hectares of Prospective Exploration & Development Ground Focused in the Infrastructure Rich Eastern Athabasca Basin

Denison Mines

All Season Highway / Haul Road **Provincial Power Grid**

Waterbury Lake

A Brief History

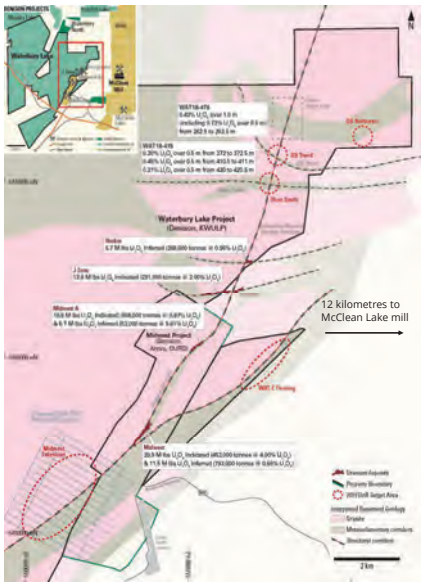
- Uranium exploration activities have been conducted over various portions of Waterbury Lake Project claims over the past 40 years.
- The current Waterbury Lake Project dispositions were originally staked in Strathmore Minerals Corp. in 2004.
- Strathmore subsequently spun out all of its Canadian assets to Fission Energy Corp. ("Fission") in 2007.
- An earn-in agreement was signed between Fission and the KWULP in 2008; the earn-in was met by 2010. In 2010, the WLULP was formed by agreement between Fission Energy Corp. and KWULP.
- Effective April 26, 2018, Denison acquired Fission's interest in the Waterbury Lake property as part of a plan of arrangement (the "Arrangement") with Fission, completed pursuant to the *Business Corporations Act* (Canada). As part of the Arrangement, Denison also acquired a portfolio of other properties in the eastern part of the Athabasca Basin, Quebec and Nunavut, and Fission's interest in two joint ventures in Namibia.
- The Waterbury Lake property is 100% owned by the WLULP, a jointly controlled limited partnership between Denison (65.92%) and KWULP (34.06%), as limited partners, and WLUC (0.02%), as general partner. Denison and KWULP are the only shareholders of WLUC and Denison is the operator of the project.
- The Waterbury Lake uranium project is comprised of two deposits on the Waterbury Lake property: the J Zone deposit and Huskie deposit.
- The J Zone uranium deposit was discovered during the winter 2010 drill program at Waterbury Lake. The J Zone deposit discovery was made after Hathor Uranium had discovered the Roughrider Uranium deposit under the northern limb of McMahon Lake in 2008.
- Denison first discovered mineralization at the Huskie zone in June 2017 and a maiden mineral resource estimate completed in October 2018.

Denison Mines

Waterbury Lake: Current Exploration Activities

2019 winter drilling program

- GB Trend 8 drill holes (3,240 metres)
- Oban South 3 drill holes (1,320 metres)
- Midwest Extension 5 drill holes (2,000 metres)
- GB Northeast 1 drill hole (450 metres)
- Waterbury East 1 drill hole (350 metres)



Denison Mines

Waterbury Lake: Core Yard

Denison Mines

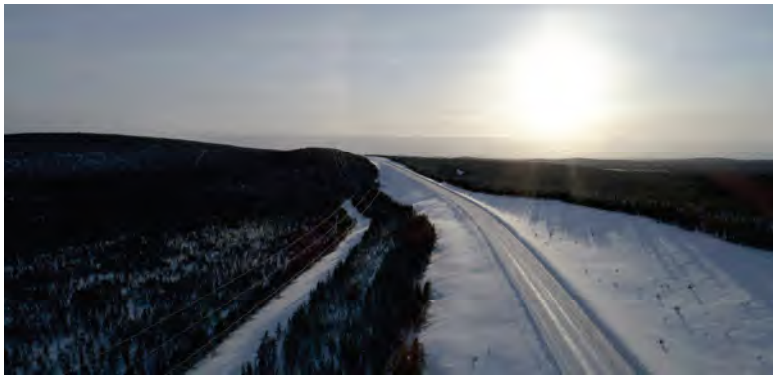
Waterbury Lake: Logging Facilities

Waterbury Lake: Core Yard Clean-Up

Waterbury Lake: Diamond Drilling

Denison Mines

Questions?



August 7, 2019
Meeting on Wheeler River and Denison Exploration Projects
Meeting Notes

Garrett Schmidt (YTNLRO)
Shea Shirley (YTNLRO)
David Cates (Denison)
Dale Verran (Denison)
Chad Sorba (Denison)
Carolanne Inglis-McQuay (Denison)
Pam Bennett (Denison)

Denison hosted YTNLRO with the identified goal being to share information about the Wheeler River Project and the Denison Exploration Activities in the north part of the Athabasca Basin.

Wheeler River Project

- Denison provided a presentation overview of the Project (attached as pdf)
- General technical questions were asked regarding the freezing aspect of the Wheeler Project, along with the ISR methodology.
- YTNLRO provided Denison with the information that the land use data collected by the Athabasca Basin communities is presently not available for review, but that discussions with Basin leadership have indicated there is potential overlapping land use.
- ACTION: Denison to work with YTNLRO to set out next steps for exploring the land use information further.
- Denison noted that they will be engaging with the YTNLRO as they are interested in the Project, and the next steps will reflect that interest.

Denison's Waterbury Exploration

- Denison confirmed that Waterbury was worked on in the winter of 2019, but definite plans for 2020 have not been finalized.
- YTNLRO: Requested that, once plans are finalized for exploration activities, that the YTNLRO Office is provided a presentation / overview. Denison agreed with this.
- ACTION: Denison to provide annual update to YTNLRO for exploration activities taking place within the Athabasca Basin region.

August 26, 2019
Post-Meeting Follow Up between YTNLRO and Denison

Denison emailed YTNLRO requesting that they look at the meeting notes from August 7, 2019 and indicate whether these notes accurately reflect the meeting from the perspective of YNTLRO.

YTNLRO confirmed that the meeting notes reflect their perspective of the meeting.

Date: June 18th, 2019
Event: Denison meeting with Ya' thi Néné Lands and Resource consultant

Denison met with Ya' thi Néné Lands and Resource (YNLR) staff in the Denison office. Denison provided an overview of The Wheeler River Project. Denison went through a general presentation on The Wheeler River Project (Denison used the same presentation that was given to the Canadian Nuclear Safety Commission in November 2018) This presentation included the basics on ISR and high-level project plans. The main questions from YNLR staff were about the project in general; they hadn't done a lot of reading into the project details yet/ was getting the Wheeler Project mixed up with NexGen's. YNLR staff was very positive and complimentary about the minimal environmental effects (no tailings, small volumes of waste rock) associated with ISR. Denison showed YNLR staff a figure from the Project Description: a photo of an operating ISR mine in the USA – YNLR staff was surprised how minimal the surface disturbance was and that the injection/recovery wells were not too high density. YNLR staff suggested these types of visuals (photos) are good context when presenting to the communities. Denison gave YNLR staff a contact card with contact info for any additional questions. YNLR consultant said the office will be submitting a letter to the CNSC on the Project Description as part of the 30-day public review period.

SRK Consulting (Canada) Inc.
Suite 205 - 2100 Airport Drive
Saskatoon, SK S7L 6M6

T: +1.306.955.4778
F: +1.306.955.4750
saskatoon@srk.com
www.srk.com

Meeting Notes
July 7, 2016

Participants
Denison Mines Corp: Dave Cates, Peter Longo, Mark Liskowich (SRK)
English River First Nation: Chief Lawrence McIntyre

Introduction:
This meeting was the inaugural meeting between members of the senior management team of Denison Mines Corp.'s Wheeler River project and the Chief of English River First Nation, set up to serve as an opportunity for both groups to meet.

Meeting Notes:
- English River First Nation (ERFN) is open to welcoming Denison to their community for the purpose of developing a relationship between the two groups.
- Chief McIntyre stated that he has previously been to the Wheeler River property and that some community members may currently or were previously employed during some of the recent exploration programs.
- Chief McIntyre indicated that ERFN is interested in having additional involvement with the project through direct employment, as well as through some of the existing businesses currently owned by ERFN.
- Chief McIntyre cited two ERFN businesses he felt would be well suited to support the Wheeler River project.
    - Minetec Industrial Supply http://www.minetecsales.com/about-us/ which is a supply house catering to mining industry as well as other heavy industries.
    - Beauval General Store, Gas Bar & Restaurant, located at the Beauval Forks. This business is capable to handling all expediting needs of exploration camps, from fuel to groceries. As well as dry goods, the business is equipped with a bakery and a butcher shop.
- Denison indicated including these businesses on their list of preferred suppliers, for future opportunities should not be a problem.
- Denison also indicated they would look for opportunities of direct employment through service providers Denison was considering for upcoming activities necessary to advance the Wheeler River project.
- A follow up meeting was scheduled for the July 27, 2016. This meeting will be hosted by ERFN in the community of Patuanak.
- Liskowich will work with Chief McIntyre's executive assistant to arrange the logistics of this meeting.
- The general theme of the July 27th meeting is to allow Denison the opportunity to introduce the Wheeler River Project and members of its senior management team to ERFN community members.

Notes Taken By: Mark Liskowich

Denison Mines

Wheeler River Project – Stakeholder Engagement
English River First Nation/Patuanak
Wednesday July 27, 2016, 1 pm.

In attendance:
David Cates, President and CEO, Denison Mines
Peter Longo, Vice President, Project Development, Denison Mines
Mark Liskowich, SRK Consulting
Gill Gracie, Aurora Communications Ltd., (Recorder)
Chief Lawrence McIntyre and several councillors, English River First Nation
About 30 band members.

Meeting called to order 1 pm.

Chief Lawrence McIntyre welcomed the Denison Mines representatives to the English River First Nation (EFRN) and the community of Patuanak, and briefly explained the project: Denison is exploring for uranium between Key Lake and McArthur River. McArthur River in Dené is the "river that goes nowhere". The economy is really down, but Denison with their strategic plan are still doing exploration this summer and hopefully in the future as well.
Chief McIntyre switched back and forth between English and Dené throughout his introductory comments, and concluded by introducing the Denison representatives.

Presentations

1. Denison Mines – Dave Cates.

My name is Dave Cates and I'm president and CEO of Denison. Thank you for coming to our presentation. We want to achieve two things. I will explain who we are. Chief McIntyre's done a good job of explaining why we're still around; the market is not good for uranium but we have had a strategy and we are trying to save our money and at the same time spend it, because we really believe in the future of uranium mining and nuclear energy in the world.

I will then hand over to Peter Longo, our vice president of project development, in charge of developing Wheeler River and, if the opportunity exists, turning it into a mine. He has a technical background, with a degree in mine engineering as well as business. He'll tell you what's happening at Wheeler River and where we hope the project might go.

- We are here to answer questions; we want you to participate.

Denison is a uranium exploration and development company, based and focused in Canada. We are publicly traded on the Toronto Stock Exchange (TSX) and the New York Stock Exchange (NYSE). We are a small company, about 5% of the size of Cameco – Cameco is 20x bigger. We're the small fish in the lake.

We used to be a producing company. Denison was a big company at one time – we had mining operations in Elliot Lake, Ontario and the USA (Arizona, Colorado, Utah) – but not any more. Those mines were mined out. That means we have no cash flow or profit right now from any mines. We struggle compared to some other public companies.

We are focused strategically in Saskatchewan, specifically the Athabasca Basin. Our project portfolio covers about 350,000 hectares (ha) in the eastern part of the Athabasca Basin. We're most known for the Wheeler River Project, which we have operated since 2005-2006. We've been successful at finding uranium.

However, there is more to us than that: we are a 22.5% partner in AREVA's McClean Lake mill. We see the McClean Lake mill, which is where we plan to process the ore if we are successful at developing the project, as a critical component to the success of the Wheeler River project.

The third part is Denison Environment Services, which is still based in Elliot Lake even though we haven't mined there since the mid-1990s. We have 30-40 people in that office taking care of our decommissioned mine site that we shut down in the 90s. We have been quite responsible in maintaining the site since it closed, and we've supported the community as it transformed from a mining community to a retirement community. We also provide environmental services such as minesite care and maintenance and environmental consulting to other mining companies and governments across Canada.

We are a strong supporter of communities. We support northern communities through the McClean Lake Joint Venture. Any special project that McClean is supporting, Denison is supporting, because we are funding our share even though it is not our name on the headline. At Wheeler River we are trying to procure as much locally as we can, and we are doing our best to hire locally to support our current programs. In Elliot Lake we have a strong relationship with the Serpent River First Nations; they've been a partner of ours for many years as we mined, and throughout the decommissioning and reclamation of our Elliot Lake operations. We're supporting them from an employment standpoint but also through other initiatives.

Elliot Lake was essentially a mine town. When the mines closed, Denison was involved in supporting the conversion of Elliot Lake from a mine town to a retirement community. It is now known was a retirement destination for many Canadians.

In addition, we used to have a presence in projects located in Africa. However, as part of Denison's reaction to a downturn in the price of uranium, we sold our interests there. It is important to mention that when we were there we committed to supporting the communities we were in by supporting the construction of schools, health centres, water supply wells and other community infrastructure needs. We consider that as just part of our business. We understand that we need to partner with and support the communities we're active in. It's a question of maintaining a social license but also a question of partnering; we can't do this alone.

Question: ***What are you looking for at Wheeler River? What is the mineral resource? I know there's a vein there but how big is this vein?*** **D. Cates:** We're looking for uranium. Peter will answer this in more detail in his presentation.

Question: ***Rio Tinto made agreements with communities – we're here, we will listen to you but ultimately we would like an agreement. I've been following this from Day 1 – one day I knew something like this would happen. It's important that English River, because of its traditional lands, has an agreement before the province steps in.*** **D. Cates:** We're a long way away from building a mine. This is the first meeting in the first step of a process. We can look at doing those sorts of things. Rio Tinto is a big company; we will go through a similar process. We're here even though the market is bad. We are committed to building a uranium mine in this region for the benefit of the region and our shareholders. Rio Tinto started that process but is not building a

mine now. That's why we wanted to have this meeting at this early stage of the development of the Wheeler River project.

2. Wheeler River Project – Peter Longo

Thank you for the warm welcome.

What's happening today at Wheeler River is exploration – we run programs January to March and June to August or September each year. When these programs are running, there are about 30 people on site, mostly diamond drillers and geologists. We are drilling the deposit to further define the ore body. We've been running exploration programs at the Wheeler River property for about 10 years – 10 years of hard work to get to where we are today, which is essentially just the starting point of the next phase.

The Wheeler River project is made up of two deposits, the Gryphon and Phoenix. They are located about 500m below the surface, and are about 3 km apart. They are about 6 km west of the main haul road between McArthur River and Key Lake, near the Fox Lake road.

Should we be able to advance the project to development, we will not have a lot on surface; most of the operation will be underground. We will need two shafts to carry people, supplies and the ore, and at least one additional vent raise to move fresh air to the mine workings.

As the project is currently understood, it would have a 15-year mine life. Our intent is to ship all of our ore to McClean Lake, where it will be processed. Essentially what we will have at Wheeler River is a camp, an administration building, a water treatment plant and holding ponds, a clean waste rock storage facility as well as roads, warehouses and service shops. There will be no mill or tailings at the Wheeler River site; all of this will be at the McClean Lake site. The site will look similar to what you see at the McArthur River mine.

If all goes well, we are about 10 years away from actual construction and mining activities. We completed a preliminary assessment earlier this year, which focuses on building a business case to see if it makes economic sense to build a mine based on the resources we have identified at this stage of the exploration activities. The results of this study were encouraging. We will do more work for the next year and a half or so to strengthen the business case as well as gain more confidence in the process, while at the same time keep a close eye on the global price and demand for uranium in an effort to predict where it will be in about 10 years from now.

If we're successful in this next phase of studies and evaluation, we will initiate the next level of engineering studies, a feasibility study, in 2018. This study is generally the last stage necessary to finalizing a business case to advance the project to production. The feasibility study could take could take about two years to complete. So following this process and if everything looks good, we could be looking at construction activities by 2021. We anticipate about four years of construction, which means production theoretically begins in the mid-2020s.

It's a long road ahead. Right now we are continuing to drill on the property. We are starting to talk with communities and other stakeholders, and we are gathering the engineering and environmental data necessary to advance the studies and our understanding of what work is needed and how much that work will cost in order to move the project to an operating mine.

With respect to the environment, we are starting to gather environmental baseline data, which will be used to understand the potential impacts the operation may have and what we will need to do

to limit those potential impacts. Currently, we're collecting groundwater samples. From diamond drill core we will take samples from 500m underground to understand what's in that rock and the potential impact on the surface environment. If we see potential impacts, then we can plan mitigation measures in order to avoid these impacts.

You can download the preliminary assessment from our website. That study indicated it will take about $1 billion dollars to advance the project to an operating mine, which is far more than our company is worth. So you can see it will be a challenging process. The same study indicates we can produce uranium at the Wheeler River project for about $19 per pound. Right now uranium sells for $25 to $26 a pound. The difference between $19 and $26 per pound is not that much, so we will want the price of uranium to go up in order to increase the range of profit. That being said, Denison believes the price of uranium will increase in the mid-2020s. However, as we said earlier, moving an exploration project to a producing mine is a long process, which is why we have to start the work now in order to get the project to s stage that it is ready for production in the 2020s.

Question: ***What percentage, what kind of deal are you prepared to make for the community of Patuanak – the whole community, not just chief and council? 20 years is a long time. In one year how much will you give the band?*** **P. Longo:** We want to be a good corporate citizen, but I can't give you a specific answer to that question. We will have to talk about that. Today is the start of a process to discuss questions like that.

Question: ***Making a mine is not just fun and games – we have uranium mines everywhere. There are a lot of decisions to deal with. You have to deal with federal and provincial governments.*** **D. Cates:** You're right, it's a big process. Nobody's asking for decisions today – it's the beginning of a long road. We are here to start the discussion. It's not a one question one answer point in the project. We are committed to pursuing this and working with the community. That's why we are here. It's a long road.
Community member: Denison is not there yet. You're asking for a percentage of "what" - we don't know "what" yet. The mine may not even happen.

Question: ***You're starting drilling and so on – can you share your environmental work with this community to show you're committed to this community and providing employment at the start of the process, whatever you're doing – drilling, environmental? We have seasonal workers who go on EI, welfare recipients who always try to work. We need help to find more work for these people. That will show us that you care.***
D. Cates: We're on board with that. This is our first meeting The environmental work is just starting. **P. Longo:** We will be starting environmental work in the next month or so – we've made it a condition with our consultants to maximize northern employment on their crews. You can expect us to be looking for people from here to help us. Chief McIntyre can expect some contact from Denison.

Question: ***How many employees have you had from English River over the 10 years you've been working at Wheeler River?*** **P. Longo:** From our records, about seven.

Question: ***You've been on English River Treaty 10 territory for 10 years – how much has your company made off our territory that you have not shared with this community? How much have your investors made?*** **D. Cates:** We haven't made any money. We've spent a lot of money. We have no money coming in from the project – we are investing in the ground for the future

possibilities. To date, our investors have not made much either. Not many people have made much money on what we've been doing.
Questioner: ***The World Nuclear Association report doesn't agree.*** **D. Cates:** The WNA projects the price will rise by 2025-26; we believe that. Right now the price is very low. We saw Rabbit Lake close because it can't make money. We believe it will get better; but it's really difficult to convince investors to give us money right now, in this market.

Question: ***At what point do the investors give up?*** **D. Cates:** A lot have given up. We're fortunate to still be here. A lot of the companies in this market have not survived. We have a professional team that our investors trust. Those who would give up probably have given up.

Question: ***If you've been established almost 10 years and have a mining company up north, you have places that employ people for cooking meals, environment cleanup – how many ERFN do you have employed? Who are they?*** **D. Cates:** At least seven. **P. Longo:** On site right now we have 25 people. None of the previous ERFN employees have returned to the Wheeler River project this year (names of previous employees were provided).
Community Member: ***Noted that those names were from past years. I'm a "young man" like you, willing to work – I know cooking etc. I will go into camp for 5-6 months and not come back. Not too many people will do that. You hire young people, a week later they want out. I will stay as long as needed.*** **P. Longo:** Most of the jobs on site require specialty training and experience. In camp we have two cooks; one is from one of the other communities in northern Saskatchewan. We will do our best to make sure we benefit all communities; we can't direct 100% of the benefits to one, but want to share that benefit across the board. **D. Cates:** We're here to introduce ourselves, build relationships. We know that you want to work. Thanks.

Question: ***We live in Beauval. It's not that I'm interested or not interested in what's been happening between you and the band, the information has not quite reached me until we started looking. I take it this is consultation?*** **D. Cates:** It's the beginning of the process; you haven't missed anything. We are not anywhere yet – we have some drill holes that tell us there's some uranium on the Wheeler River project but we're nowhere near having a mine, nowhere near disrupting the surface. We finally think we might have enough at Wheeler River to justify the next stage, that's why we're starting this process now.

Question: ***It's going to take me awhile to catch up to the whole thing. Some of us here have developed a list of questions, from interactions I had with people that are gone now, my father and his friends when they were in their 60s and 70s.***

- ***What kind of cleanup do you have?***
- ***Are you receiving any government funding or tax breaks?***
- ***What are your annual profits?***
- ***What health and safety concerns are your main strength?***
- ***What is your emergency cleanup plan? Mines are shutting down right now, and according to the scientists that we're interacting with, those places will be contaminated for ever. I want to see that answered. I don't make money off mining companies; I don't want to bother with them. I'm not against jobs but we can innovate our own jobs through helping you guys.***
- ***What assurance can you give people about the long-term effects of uranium tailings so they will pose no danger to future generations?***
- ***What countries are buying uranium, and is the uranium being used to make weapons in these countries?***

- ***Do you agree with environmentalists that uranium mining is safe and has no environment impact to waters, and animals?***
- ***What, in your opinion, constitutes a safe level of pollution?***
- ***Do you have statistics on worker mortality in other uranium mines?***
- ***What guarantee your product will stay out of the weaponry program.***

That's reflecting what our old people have said. We have to think about that before we take jobs. They have to ask us because we are the Dené. We always need to remind every company that this is Treaty 10 land.

D. Cates*:* We can take your questions and come back with answers. We welcome the questions. I will offer a few quick answers to your questions. The fact that we're here tells you we know advancing this project will require a partnership with EFRN. If the project goes ahead, we need to do it together. Regarding where the uranium goes, it cannot go to nuclear weapons; the government protects us from that. Finally, there will be no tailings at Wheeler River – the ore will be milled at the McClean Lake mill, which is at the McClean Lake mine, which is a licensed facility. We will come back with responses to all of your questions.

Question: ***Would you sell to the United States (US)? They are spending on nuclear weapons.***
D. Cates: We have no uranium to sell right now. The US does a lot of trade with Canada, and I don't see why we wouldn't sell to the US. The uranium that's mined here is for green nuclear energy only.

Chief McIntyre: ***In that territory near the Wheeler River there are a lot of spawning and calving areas for moose, caribou; those creeks are for whitefish spawning. There's lots of heavy muskeg there. A lot of us have been there, and we'd like to know there'll still be access to the area.***
Being a smaller company – what are the chances that you finish the exploration stage and sell off your interests to a larger company? If uranium prices rise, investors may want to sell their shares.
There are already two mills in the vicinity; what are the chances of one of those mills taking on the development 10 years from now?
These are still grey areas, but I believe it's important to leave people with positives. Talk of uranium and nuclear scares a lot of people but I'm a cancer survivor, I took 20 treatments of radiation; the isotopes required come from that. How much is world medicine behind that exploration.
(Community member: ***Isotopes can be made in a cyclotron without the risks of mining).***

Chief McIntyre: ***In terms of the future, alternate energy such as wind is being discussed. As a former driller in the early 80s, when you drill and you go 500-600 metres, you're already moving earth so the after-effects don't take place until later. A GPS uses 1500 gallons of water per minute – how do you retain it. I have a cabin on Millson Lake – they drilled there 10-15 years ago with no immediate effects. Today because of climate change, things are starting to happen that normally didn't happen. Even the permafrost is now further down. In the Wheeler River area, where there's some permafrost, have your environment guys seen a change? Will there be a change? These are some of the questions that need to be answered in order to come out with a positive spin.*** **P. Longo:** We don't have answers to everything but we are taking notes. We want everyone in this community to be comfortable with what we're doing. Thanks to everyone for mentioning their concerns. We will continue to come back with responses.

Question: ***Will the Moore Lake property on Russell Lake continue to increase in value? That's also in our territory.*** **P. Longo:** Moore Lake is just east of Wheeler River, but has no

specific bearing on what's happening at Wheeler River. We continue to try to find ways to explore Moore Lake.

Chief McIntyre: ***You have a summer program right now; will your winter program go up or be status quo? What about the chances of future selloffs?*** **P. Longo:** I'm not sure about winter, we have not set the budget yet for next year. We'll likely spend a little more at Wheeler, and less elsewhere. **D. Cates:** I can't speak for the future. Pete and I are young, and we will stay with the project for a long time. It may take a long time, and our plan is to be the guys to take this project forward. We hope to come back many times and update this and other communities. We can't tell the future.

Question: ***I'm glad to hear all these questions coming up. Some are for, some against. When I say we want an agreement with the company, these questions should come up again; we should hold many more meetings like this so we can have a good agreement and everybody's involved. We were never ready in the past. Let's try to be ready, get together and have good discussion on many things. It's the best way.***
Right now we're in the presence of Denison Mines; they are in a partnership with AREVA as well. AREVA is exploring right next to Denison at Wheeler River, maybe even together. AREVA will probably come to you in the future. Each company talks about what it is doing. They do their own work.
Denison told us they have 22.5% at McClean; they want to extract an ore body from Wheeler River. They will do it together, but they will need a road from McArthur to McClean to haul the ore. The province will come to you for approval on the road, but they will do it anyway regardless of what you think. That's the way things have gone so far. About five years ago I spoke against the road at the EQC because Wollaston needs a road more, although they are now working on it.
We need more meetings like this to come up with a good agreement – our agreement, not the mines' or the province's. All your questions could be included in that agreement. That way, you'll be ready for any kind of development in our traditional lands. You guys will make that agreement. We're looking 20 years down the line. Let's think ahead together; let's not fight or argue. Let's think positive and do it together, put all our minds together. If we work together, we'll do it.

Chief McIntyre: ***Thank you for your concerns. There will be a lot of other people come in; there will be concerns we need to address. Safety is always a priority. ERFN membership has concerns in terms of employment. When I met with Denison in Saskatoon, I told them at a Saskatoon meeting that their current expediter is not the only guy that can do stuff. We have a store in Beauval where they can purchase their groceries. They don't have to go to La Ronge – we're the closest. I told them that they have to come to ERFN since it's our traditional territory they're working in. That's why I asked these people to come, to meet directly with some of the people that have concerns about employment, that want to see what's happening, how they can be involved, and the environmental concerns. Some of you are hunters and trappers, some of you live off the land. We want to maintain that longevity that's dear to our hearts – to our children, grandchildren and great grandchildren. We want to see sustainability. That's why I thank them for coming to speak with the people, young and old. You guys know the country more than I do. Some of you are there constantly. Some of you are hunters; I haven't shot a moose in 10 years. Animals and water are critical. Some is groundwater; there's millions of gallons flowing down in the ground, more than on surface, and that's a safety concern for shaft sinking. Norman is right when he says the Government of Saskatchewan is giving out permits without consulting First Nations. We need to tell the province to quit doing***

that. I thank you for being here. **D. Cates:** We're here because we want to hear from English River. We met with the Chief in Saskatoon and wanted to introduce ourselves to your community. We're recording everything you're saying and will take it to heart. It's worth noting that I've only been President/CEO of Denison for just over a year; I can't comment on the past. This project is important to us and to the communities. We're hoping to create a dialogue; this will be the first of many meetings so we can work together and see this as a partnership. Thank you! Thank you for participating; we'll make sure we respond.
Chief McIntyre: We'll make sure we include ERFN in what's happening and what's coming next.

Note: This is an optimized transcript, edited for clarity and to avoid excessive verbiage and repeat comments. Third-party individual names mentioned during the meeting, were not recorded to these notes in order to respect the privacy of those individuals. Although the session was sound-recorded, some off-mic comments were not audible to the recorder or the tape.

SRK Consulting (Canada) Inc.
Suite 205 - 2100 Airport Drive
Saskatoon, SK S7L 6M6

T: +1.306.955.4778
F: +1.306.955.4750
saskatoon@srk.com
www.srk.com

Meeting Notes

September 26, 2016

Participants:

Denison Mines Corp: Peter Longo (Vice President-Project Development)

Dale Verran (Vice President-Exploration)

Mark Liskowich (SRK Consulting)

Des Nedhe Development: President and COO Gary Merasty

Meeting Notes:

- Purpose of the meeting was to provide an opportunity for representatives of Denison Mines management team to introduce themselves and the Wheeler River Project to Gary Merasty, President and COO of Des Nedhe Corporation, an English River First Nations Company and afford him the opportunity to provide the same level of introduction of Des Nedhe Development to Denison's management team representatives.
- Mr. Merasty indicated that Des Nedhe was interested in any future business opportunities that may be available as Denison advances their Wheeler River Project.
- He also indicated there may be additional means of supporting the relationship between the two businesses, such as providing Denison with access to the Des Nedhe potential employee database.
- Mr. Longo and Mr. Verran indicated that Denison are interested in providing Des Nedhe opportunities to bid on goods and services contracts supporting Denison's activities in the Athabasca basin, as they became available.
- It was mutually agreed to keep an open dialogue between the two companies moving forward.

srk consulting

SRK Consulting (Canada) Inc.
Suite 205 - 2100 Airport Drive
Saskatoon, SK S7L 6M6

T: +1.306.955.4778
F: +1.306.955.4750
saskatoon@srk.com
www.srk.com

Meeting Notes

November 30, 2016

Participants:

SRK Consulting (on behalf of Denison Mines Corp): Mark Liskowich (SRK)

English River First Nation: Lands Manager

Introduction:

The purpose of the meeting was to update ERFN Lands manager on the proposed schedule of events, planned by Denison for the 2017 calendar year, with respect to community engagement and the continuation of the collection of environmental baseline data for the Wheeler River project.

Meeting Notes:

- SRK, on behalf of Denison, provided a verbal description of Denison's plan to continue to gather environmental baseline data for the Wheeler River project through the spring, summer and fall of 2017. SRK also indicated the intent was to go back to the community, following permission from ERFN leadership to do, in order to engage in discussions focused on obtaining, with permission, some additional understanding of ERFN Traditional Knowledge that could be integrated into the planning of the 2017 environmental baseline data collection.
- The ERFN Lands Manager was receptive to the idea of incorporating ERFN Tradition Knowledge in the design of these upcoming programs but felt this information was already documented by ERFN. The ERFN Lands Manager indicated that this report was currently being updated to reflect some of the Urban reserve initiatives of ERFN. The ERFN Lands Manager also indicated that they were going to pursue the availability of this data in order to allow Denison to incorporate it into the design of their upcoming field programs.
- The ERFN Lands Manager was receptive to Denison's plans to continue to engage the community with updates on the Wheeler River project activities as they progressed throughout 2017.
- It was agreed that SRK would follow up with the ERFN Lands Manager in January 2017 with respect to obtaining some of the existing Traditional Knowledge data currently documented by ERFN

Notes taken by: Mark Liskowich

srk consulting

SRK Consulting (Canada) Inc.
Suite 205 - 2100 Airport Drive
Saskatoon, SK S7L 6M6

T: +1.306.955.4778
F: +1.306.955.4750
saskatoon@srk.com
www.srk.com

Meeting Notes

March 3, 2017

Participants:

Denison Mines Corp: Mark Liskowich (SRK)

English First River Nation: Lands Manager

Meeting Notes:

- The purpose of the meeting was to discuss the traditional territory boundaries of the English River First Nations.
- ERFN Lands Manager supplied a hard copy and electronic copy of ERFN traditional territory map.
- The meeting then focused on discussions of key areas within the map sheet, historical stories of individuals and events that have transpired throughout the traditional areas.
- ERFN Lands Manager suggested we obtain a book that was written about the traditional ways of the people of English River First Nation called "The Trappers of Patuanak: Toward a Spatial Ecology of Modern Hunters" by Robert Jarvenpa.
- Some of the discussions:
    - Medicine Stick – a form of medicinal plant is found at the north end of Cree Lake and the south east end of the lake as well.
    - ERFN Trapper is currently looking for employment – Denison should reach out to them if possible.
    - In addition to ERFN Trapper's trapping in the area, they have relatives with cabins in the area.
    - According to Patuanak, since particular ERFN member employment, there has not been anyone hired at the camp from the community
    - A copy of the Traditional Territories map supplied by ERFN Lands Manager should be posted at the Wheeler River Camp.
    - There is a new bridge built by Cameco over Davis Creek (known locally as the Wheeler River). According to ERFN Lands Manager, this bridge was built for ERFN by Cameco therefore it is ERFN's bridge and if Denison wishes to use this bridge for heavy equipment, they should seek approval from ERFN, through ERFN Lands Manager
- ERFN Lands Manager received a mileage payment from Denison to cover expenses for him to make the trip to Saskatoon in order to participate in the meeting.

Denison Mines

Introduction to the Wheeler River Project

Pinehouse

Sept 7, 2016

ROC105

Denison – Who Are We?

Denison Mines

- **A Canadian uranium exploration & development Company**
  - Public company, but only 5% of the size of Cameco
  - A history of uranium mining, but no active mining operations
  - Several exploration properties in the eastern Athabasca Basin
  - 60% owner and the operator of the Wheeler River Project

Denison – Who Are We?

Denison Mines

- **A joint venture partner with Areva at McClean Lake**
  - Denison owns 22.5 % of the McClean Lake uranium deposits and the McClean Lake uranium mill (shown above) – Areva (70%) is operator
  - In our preliminary plans, Denison has assumed that the ore from Wheeler River will be processed at the McClean Lake mill

ROC105

Denison – Who Are We?

Denison Mines

- **An operator of a Canadian environmental services business**
  - ~40 employees based in Elliot Lake, Ontario
  - Maintains Denison's closed and reclaimed mine site in Elliot Lake
  - Provides services to mining companies and governments across Canada

ROC105

Denison – Who Are We?

Denison Mines

➢ A strong supporter of our local communities

- McClean Lake community programs
- Denison procurement from local vendors and personnel in northern communities

Saskatchewan

- Serpent River First Nations – employment, youth education initiative
- Supported creation of a retirement lifestyle community after mining was completed

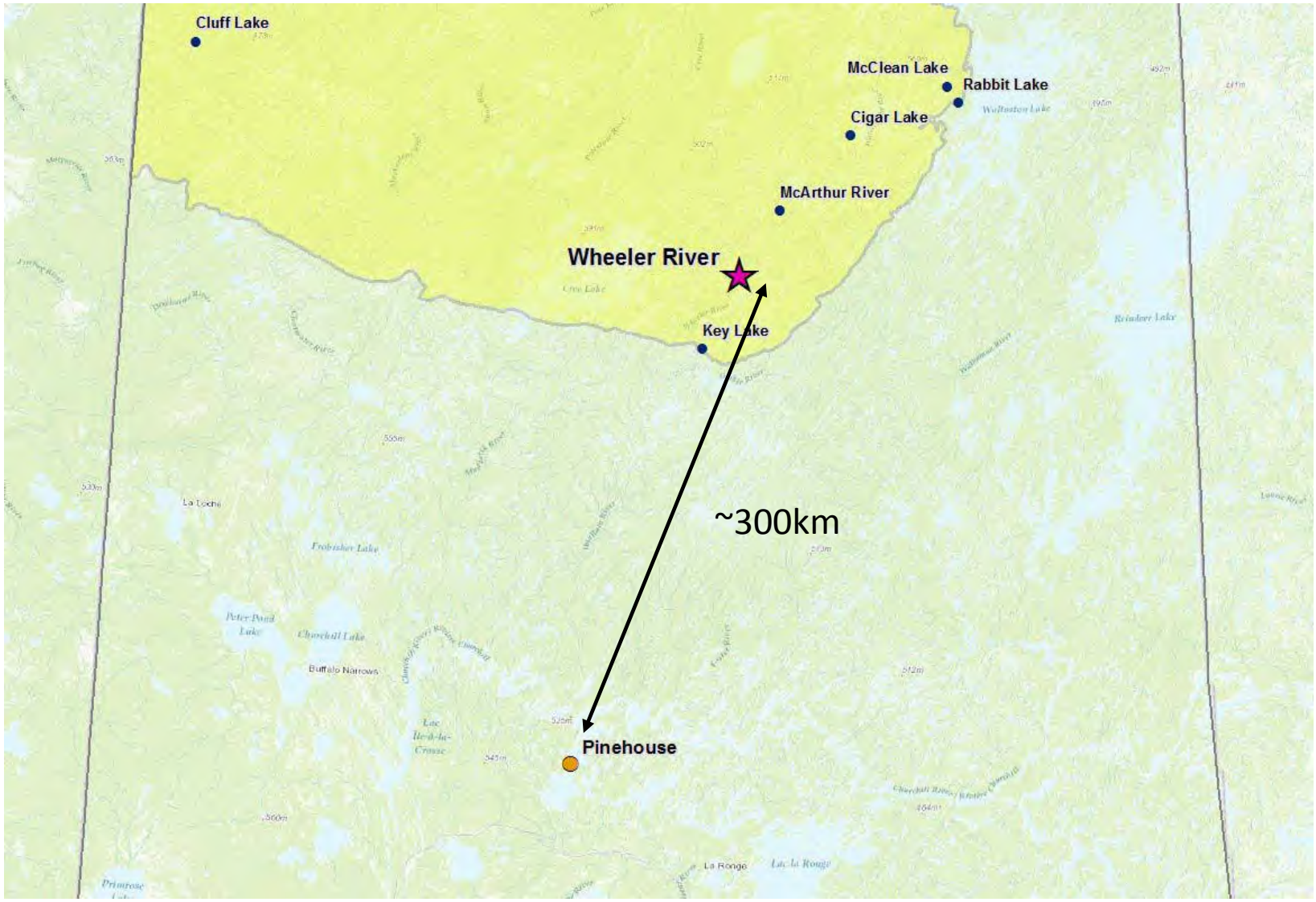
Elliot Lake

- Supported construction of schools and health offices for local villages
- Drilled water wells
- Leadership roles for local technical & admin staff

Former African Assets

Welcome to the Wheeler River Project

Denison Mines



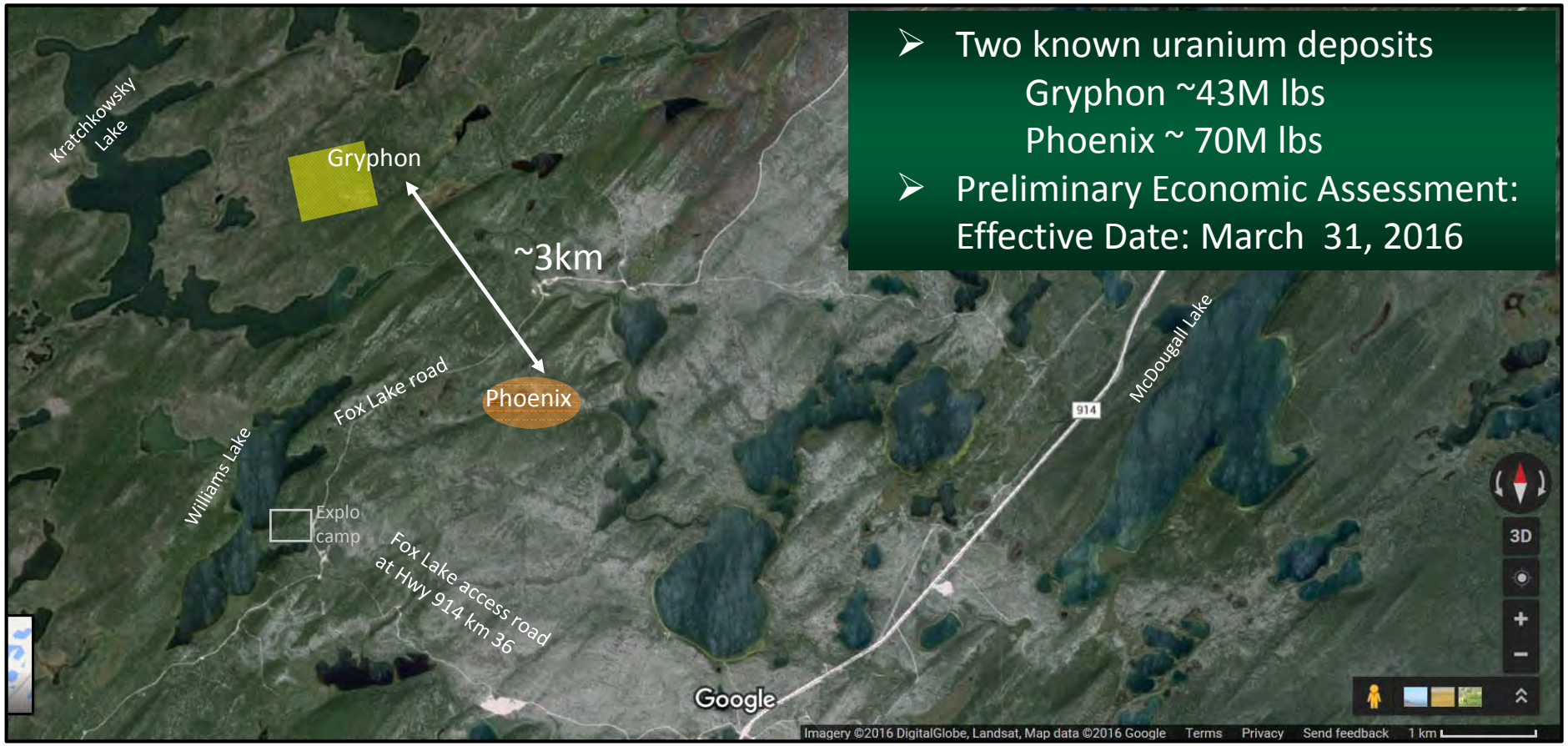
Wheeler River Today: Uranium Exploration

Denison Mines

- Exploration camp
- Drilling in winter & summer

Wheeler River Today

Denison Mines



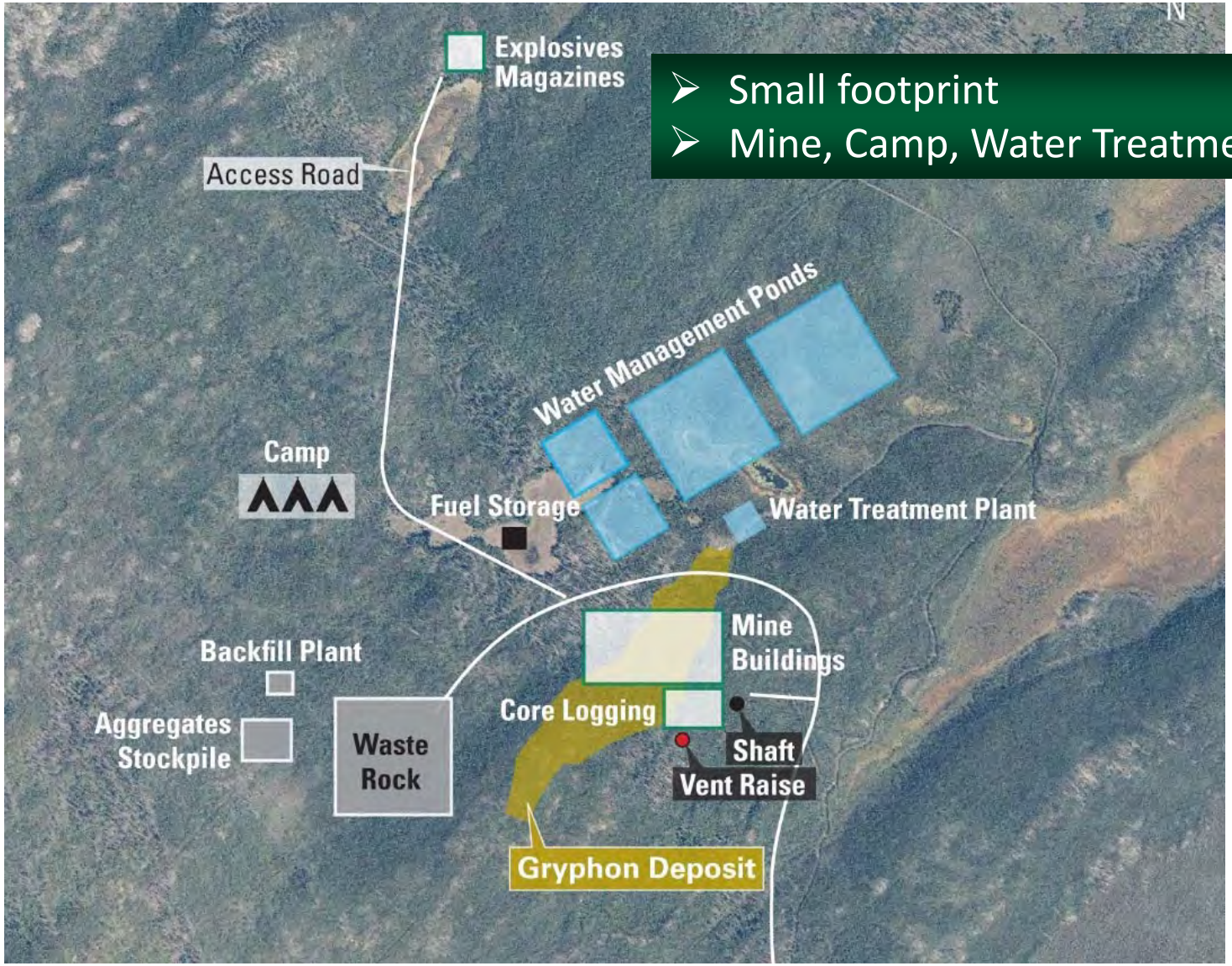
- Two known uranium deposits
  - Gryphon ~43M lbs
  - Phoenix ~ 70M lbs
- Preliminary Economic Assessment: Effective Date: March 31, 2016

In comparison

- McArthur River: Produced ~290M lbs, Reserves 234M lbs
- Rabbit Lake: Produced ~202M lbs, Resources: ~70M lbs

Wheeler River Future

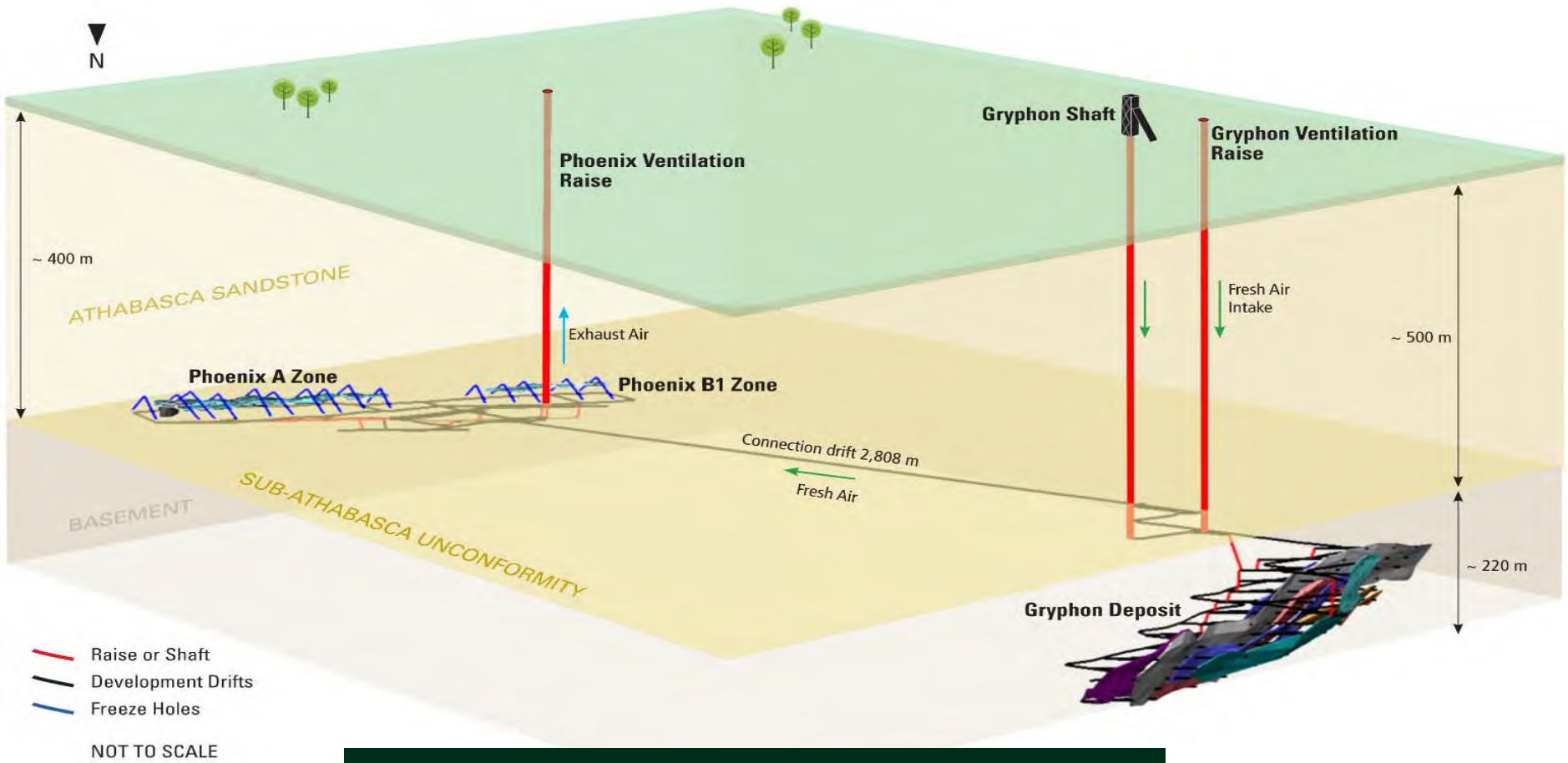
Denison Mines



- Small footprint
- Mine, Camp, Water Treatment Plant

Wheeler River Future

Denison Mines



- Mine life of 16 years
- Underground mining ~500m deep
- Ore processing at McClean

ROC105

Wheeler River: Long Road Ahead

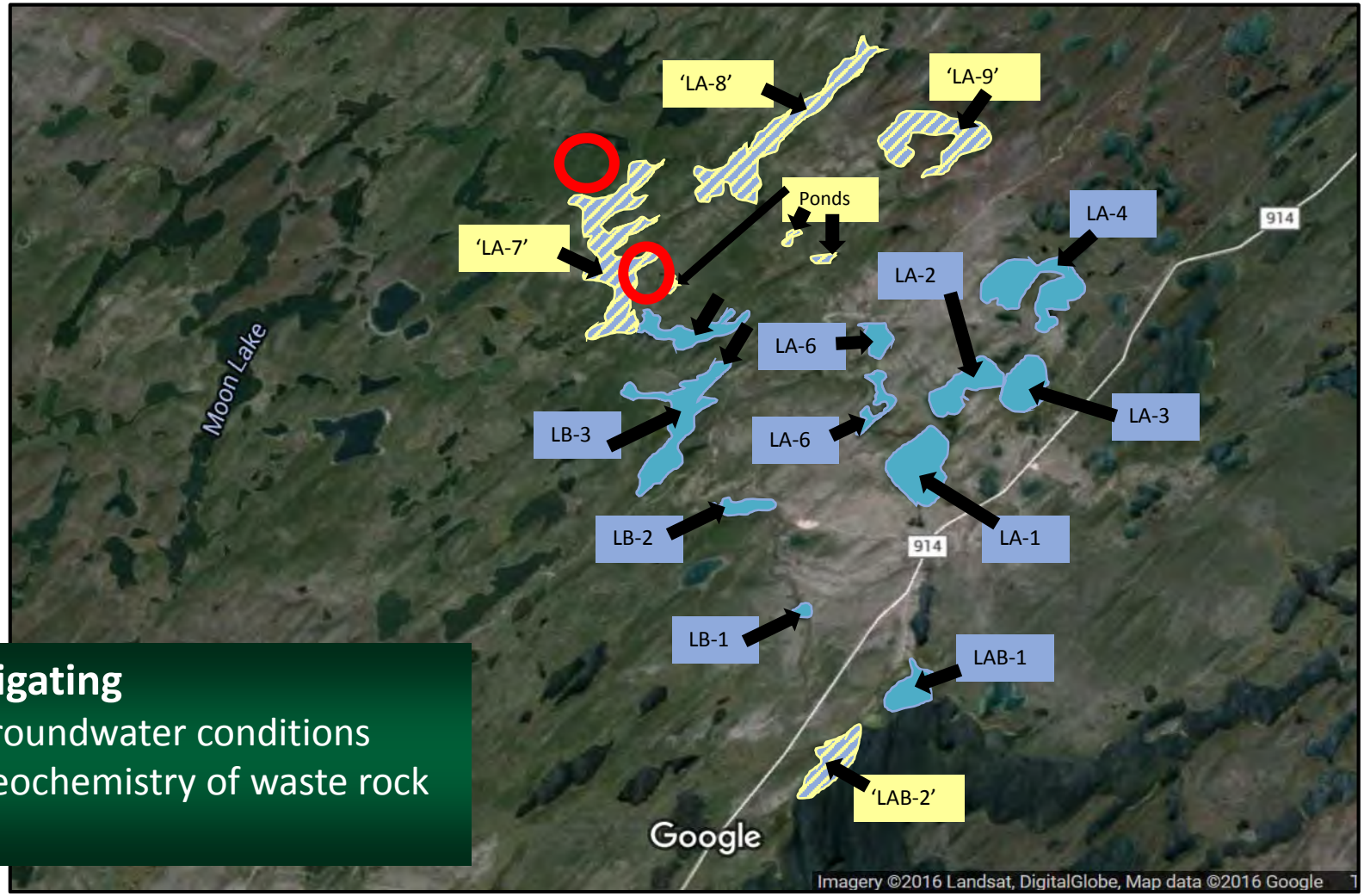
Denison Mines

2016 Evaluation Plan

- PEA completed during 1H/2016
- Initiated Pre-Feasibility Study ("PFS") 2H/2016
- Initiate environmental baseline studies

Wheeler River: Environmental Data Collection

Denison Mines



- **Investigating**
  - Groundwater conditions
  - Geochemistry of waste rock

Wheeler River: A Long Term Proposition

Denison Mines

- Initial and sustaining capital costs ~CAD$1.13 billion
- First uranium production projected by 2025/2026
- Operating costs expected to average US$19/pound U_3O_8
- Uranium spot price quoted at ~US$25/pound U_3O_8

➢ **Denison believes in the future of nuclear energy and is investing in the people and the province of Saskatchewan, despite historic low uranium prices and difficult market conditions**

We Want Your Input!

Denison Mines

- **We can't build Wheeler River without you!**
  - We want your input on the project
  - We want to build a positive relationship

Thank You / Tiniki

Denison Mines

Denison Mines
Wheeler River Project - Stakeholder Engagement - Pinehouse
Wed. Sept. 7, 2016, 1 pm.

In attendance:
David Cates, *President and CEO, Denison Mines*
Peter Longo, *Vice President, Project Development, Denison Mines*
Mark Liskowich**,** *SRK Consulting*
Mike Natomagan, *Mayor and PBN President, Pinehouse*
Walter Smith*, CEO, Pinehouse Business North (PBN)*
About 20 community members
Recorder*: Gill Gracie, Aurora Communications Ltd.*
MC: *Walter Smith.*

Introductions and welcome: Walter introduced several community members present by name.

1. Presentation - Dave Cates

Thanks for the welcome. Our objective is to help people understand who Denison is, and what's going on at Wheeler River. We have changed the business over the last several years to focus solely on uranium mining in Saskatchewan. I will talk about Denison the company; Peter will cover specifics on the Wheeler River property.

Today we're a uranium exploration company. Five years ago we had producing mines in the US and a mill in Utah, a development project in Mongolia, and we acquired a project in Zambia in 2006. Then the Fukushima incident put the industry into a tailspin, so now we focus on our core best assets. We sold our US business to Energy Fuels; sold Mongolia to a Czech company. This year we sold the African assets to Goviex Uranium (in which Denison holds about 25% of shares).

We are now a uranium-focused public company, about 5% the size of Cameco. Our name has been around a long time, but we're small now. We have projects in the eastern Athabasca basin, including 60% of Wheeler River (with our partner Cameco holding 40%), and 22.5% of the McClean Lake mill, operated by AREVA.

We also have an environmental services business in Elliot Lake, where we used to have a large-scale uranium mine. We maintained the site and decommissioned it fully, and continue to monitor it. We use that skill set to offer environmental services, along with care and maintenance services, to other sites. There are now 40 people in the Elliot Lake office, which is a separate division.

We believe in supporting local communities. We fund 22.5% of AREVA initiatives, and procure from local vendors where we can. We have close ties with the Serpent River First Nation in Ontario. With our help, Elliot Lake has been transformed from a mining to a retirement community. In Africa, we were involved in building schools, water wells and other infrastructure.

2. Presentation – Peter Longo

Peter described the Wheeler River exploration site, which is about six km from the McArthur River-Key Lake haul road. The deposit as we know it now is about 20-25% the size of McArthur River, 1/3 the size of Rabbit Lake. We think we can make it economic, but there's a long way to go yet.

- **Question from the floor:** ***What is the grade of the ore?***
  P. Longo: Phoenix has a 19% grade, and is at the unconformity, similar to Cigar Lake. Gryphon is approximately 2% grade and is a deposit similar to Rabbit Lake's Eagle Point deposit. It's at 580 metres depth, about 100 metres below the unconformity in basement rock. Our deepest drill hole yet is 850 metres.

The surface facilities will have a small site footprint. The site will look similar to Cigar Lake and McArthur River. Ore will go to McClean Lake for milling.

We anticipate a 15-16 year mine life, plus 3-4 years construction. We would sink two shafts (a shaft and a vent raise) at the Gryphon deposit, which would use a Rabbit Lake-style mining method. We would then drift the three kms across to the Phoenix deposit and add another vent raise there.

Timeline: We did a preliminary economic assessment last year, and started a preliminary feasibility study in the second half of 2016. In 2016 we have engineering companies on site to determine what the groundwater conditions are; geochemical studies on the ore and waste rock have been initiated, and collection of environment data is just starting. A full feasibility study would follow in 2018, with construction in 2021 and if all goes well, production would begin in 2025. But it's not a slam-dunk.

- **Question from the floor:** ***What are you doing environment baseline collection on? Any Cumulative Effects Monitoring?***
  P. Longo: We are looking locally and regionally – we hope to use some of the existing Cameco and provincial government data that has already been gathered in the region.
  M. Liskowich: The Cumulative Effects Monitoring component is a necessary part of the EIS. The initial step is gathering local baseline information, which is what we are currently doing.
- **Statement from the floor:** ***We as a community want to start to understand the science involved so we can create local capacity – our area will always have commodities and mining and require services.***
- **Question from the floor:** ***How do current markets affect your decisions?***
  D. Cates: It's a progression. The preliminary assessment tells us we have potential with a reasonable uranium price assumption. By 2025, if the price of uranium is not very different, something is not right. Some people think we're crazy to move the ball at a tough time in the uranium market, but we know it takes time; we're trying to be smart. It's not for sure right now that the project will go straight through to production.
  P. Longo: We did our preliminary assessment based on a uranium price of $44/lb. We can justify spending a bit more to get to the prefeasibility level.
  D. Cates: It depends on a lot of things. The degree of complexity builds up as we understand more about the project. If we're not moving forward, we're not putting the company and our stakeholders in the best position, and that is what we're trying to do.

Denison's P. Longo returned to the presentation: Capital costs for the project are estimated at $1.13B, with first production in 2025/26; the operational cost will average $19US per pound. Today the short-term price is $25-26US per pound, so we are working on the assumption that this price will increase by the time we are ready to move to production.
D. Cates: We currently have no uranium sales; we earn $10-12M from environment services. The capital cost is a big number. We believe in the future of nuclear energy, in building a uranium mine and operating it in a responsible way, but it's not an easy proposition. Peter's main job is to see this project through those steps – can we justify building a mine, and once we build it, make sure we deliver.
We would not be here if we did not believe in the fundamental case that nuclear energy and uranium is a good place to invest.
P. Longo: We have the two deposits; we're still drilling, and there are still opportunities to increase the size. We're very optimistic about the property. We have a good base. SMDC did some work in the 1970s on the property; we are now circling back to some of those areas.
D. Cates: There have been more recent discoveries. In 2008 we found and drilled Phoenix. As we wrapped that up, we found Gryphon. There's more mineralization north of Gryphon. There are so many targets we have not yet had time to test them all.
M. Liskowich: There is additional potential at depth. Drilling from surface currently goes 500 metres down and Gryhpon is still open at depth; it's the same type of deposit as Eagle Point,

which initially looked small but is still producing. It's difficult and expensive to target from 500m above. There's a lot more opportunity by exploring from the underground, but that needs a shaft, which is expensive.

- **Question from the floor:** ***What is the market cap for Denison?***
  D. Cates: About $370M Cdn. At $50-$60 per pound we would reach just shy of $1.5B potential value of the project.
- **Question from the floor:** ***Do you have revenue from the joint venture?***
  D. Cates: We have revenue from Cigar Lake ore milled at McClean. That and our environmental services are our only two sources of income. We also make a little from managing Uranium Participation Corp. (UPC).
  P. Longo: It's great that we're not completely reliant on the market to raise money; we have reasonable cash flow and we're sustainable and not totally susceptible to the market. That's why we can advance this project now.
  D. Cates: We have more latitude than most. Although we are small, we have a more complete company than a lot of single-project juniors. We have more tools in our toolkit – environmental services, toll milling revenue and UPC. We have a Saskatchewan office with 12 geologists and engineers. We have a 25% interest in Goviex Uranium, and 12% in Skyharbour Resources. I'm a shareholder and a director in both.

D. Cates: We're excited about where this project can go, but we can't do it without support. We want input from this community in terms of where the project's going, and want to engage the community. We appreciate your time. Thank you for participating.

Statement from the floor, W. Smith: We're in a very good place. Thanks for coming early in your project, and coming in and giving us a chance to understand your initial philosophy on this project. We're quite excited in terms of what we can do together, whatever that might be.

3. Presentation: Pinehouse Business North Capacity Statement - Walter Smith

You're aware of our collaboration agreement with a project right beside yours (Cameco's Millennium Project). We have lots to build on and a lot of history already. We'd like to let you know what we have done as a result of that agreement.

Structure: The Village owns 99% of Pinehouse Business North (PBN); PBN is a Limited Partner with 1%. We have an independent board of directors, with four local representatives and three external ones. We presently have a CEO and a committee that governs the company: a CFO, a board chair and a president.

Each division has its own project manager, and we have an operations manager here in Pinehouse. Our major projects are civil operations; our waste management division is currently working at all Cameco sites; our highways division maintains the highway up to the Key Lake mine site; our commercial construction division built our local arena and is building the seniors facility, and we have a joint venture mechanical partner.

Focus: Our focus is tying our interests with the industry active in our local areas, and building capacity based on that. It's important for us to be in charge of our own future. We don't want to be reliant on governments or exclusively on industry; we want to be in partnership with both entities to build our future the way we see fit. You also have a property called Duddridge Lake located to the south of us, correct?
D. Cates: No, we no longer have any involvement with that property. We let those claims lapse.

Future with Denison: There's a lot of potential; we have liquid capital, and what we do with it will be determine over the next few years. We also follow the markets, and we have some good shareholdings.

We look at participation agreements, but with the timelines you've given us we can be more than participation agreements if the market and conditions are there. We can look at potential

ownership, operations management, construction, maybe underground mining. The future depends on the market but also on the relationship we build. This could be the best agreement ever!

We have a young workforce getting trained today – we have an engineer at school in Calgary. We monitor all 180 of our students (graduates). We want to think big for our young growing population.

We have several pieces of equipment; we have infrastructure to support that equipment including the trades services to maintain it and we have contracts at most of the major mine sites. We're at Cigar in a big way. We maintain the road to some of these mines. We do waste management work at most sites. We can do a lot, confidently, and get lots of great reviews on the work we do; our maintenance of the road to the north of us is a good example of this.

We're not sure where we want to take waste management, but we're always conscious of companies that want to develop things around us. It would be great to clean up (decommission and reclaim) projects when they are ready for cleanup activities, because we will be here a lot longer than the operators of those projects. If we have that expertise we could also do the long-term monitoring.

- **Question from the floor, P. Longo:** What type of cleanup?
  W. Smith: We have vegetation management, tree planting, brush cutting, herbicides etc. That's one avenue; there are others as well, like decontamination and recycling of scrap piles. We are doing this at McArthur River.

We want to become a CNSC-certified environmental decommissioning company as well. Right now we're in construction and civil. But in the long term we live in the area so we want to say it's clean, and we will be able to definitively say that if we are in charge of the cleanup.

Why are we so optimistic? Pinehouse is the largest user of government funding for apprenticeship – 40 in our community right now are in apprenticeship trades. We are currently developing mechanical trades; construction trades are well in hand. We are targeting industry-type things as well as what we need in our community. We have good heavy-duty mechanics, carpenters, construction craft workers, and electrical. We have some of the best and most experienced heavy equipment operators because of our long history with industry. We went with civil construction because we knew we could roll that into something profitable and well managed because of the skill set we have here.

Training: All of our trainees are fully certified, and industry-recognized through every proper channel, no shortcuts. Our construction sites follow all safety protocols. We are COR [1] certified, on all the right lists. Our Workers Compensation and insurance are up to date. We are well run, and well managed.

- We have 12 industrial mechanics in training; they'll be done at the end of January. We're targeting industry and our own mechanical contractors for some of them. Those guys will be journeymen in four years, just in time to start building whatever you need!
- We have a high school program and GED going on since these are the prerequisites to be fully qualified. We take no shortcuts; we jump the extra foot. We are a fully recognized certified safety training company in our community; so far we do it mostly for ourselves. We have about 400 residents with OHS-level St John's Ambulance, and some First Responders are in EMR training. You will need first responders as your project proceeds. We follow OHS regulations to a tee.
- We're a third party provider to SaskPoly for fall protection and confined space training, so we pay them a small fee. We do the training; they have audited us and they're very satisfied.
- We do fire extinguisher, WHMIS, TDG, ground disturbance, hoisting and rigging, OHS supervisory training to make sure our supervisors are trained to the highest standards.

- Just-in-time training to increase our capacity. In waste management, every year something new comes up like torch cutting, brush saw training, plasma cutting, Hilti gun, ATV training, and contractor training. 50% of our population is under 25.
- Safety culture is really high in Pinehouse, but we have to make sure we continue to follow OHS standards. As an example, we don't work on roofs any more without fall protection. We follow all the new rules.

We do have issues:

- We could use a bigger industrial training centre as we prepare our people for more industry, with proper cement floors, building units, grinders etc. so they become accustomed to what you would expect in industry. We have a huge potential workforce coming but it's a higher cost to train them. We slow the training down but it costs us more money.
- We have a professional deficit in our community. Economic leakage has caused us not to be prepared for industry. We need accounting, project management, environment, and engineers to do that. We need a solid partnership so they understand what the skills are for. There's a computer skill deficit in the type of skills available. We're aware of these things and that's why we want to work with you to find out your needs.
- Drawing maps of the underground is a program. We need to learn those things so we're not left out.
- We have a replacement workforce problem. Industry steals our trained workforce, so there's always a need to train. This year we have 122 people from town working. We understand that industry is more consistent work and that we're more seasonal.

Statement from the floor, D. Cates: Thank you for the presentation; it was very informative.

General Discussion:

- **Question from community member:** ***Is there any work at the exploration site right now?***
  P. Longo: Most of the work we're doing on site – we have our drill contractors and we've talked to them – we know they are willing to run training programs; you can't just drill 800 metres without training. There's a process for that. Most of the people we have on site are geologists. We would support engineering and geological programs. It takes years to get the knowledge. Some started with us straight from school; some of our exploration team has been with us 10-12 years.
  M. Liskowich: Everyone starts out as a junior engineer or a junior geologist somewhere.
- **Question from community member:** ***How many at camp?***
  P. Longo: Maximum 30, mostly contractors - drillers and Denison employees as geologists. Only a couple of cooks and a camp manager.
  D. Cates: We were looking at doing some upgrades to our roads this year; however, the quotes we got suggested we didn't have the budget to do the work we were hoping to do. It was a lot more than we thought it would be, so we are working on a budget for another season. **P. Longo:** Snake Lake Contracting was contacted and provided a bid for that work.
- **Question from community member:** ***Will you build the road across to McClean Lake? Will it be a partnership? I've heard that the province is looking at a P3 initiative.***
  P. Longo: It's part of the process we have to go through – we need a commitment to complete Highway 914 between McArthur River and Cigar Lake. Cameco was part of an industry working group in discussions with the province a few years ago on this topic. We want to find out the status from the province, see if the provincial commitment is still there and decide how to push it forward again.
- **Statement from community member:** ***Thanks for being here; I liked your presentation. I'd like to see that working relationship/partnership develop from here on in so we have success in the future.***

D. Cates: That's why we're here. I'm glad to hear that and the energy around that. We're like small business owners – we're entrepreneurs and we need partnership and support. This is the first step – take this as a strong signal we want to do that with this community.

- **Statement from community member:** ***When it comes to input, one of the reasons we created PBN is for the ability to handle this. Work out jobs and contracts with PBN***.
  P. Longo: From a project development perspective, it doesn't make sense for us to partner with a company from far away. We like to procure as close to the mine site as possible.
  D. Cates: That's why we're here. You guys know we're trying to be in business and there's no reason why we can't work together. PBN should have an advantage because of the proximity to our project.
- **Statement from community member:** ***As we start our relationship – we have learned historical lessons the hard way that we are polite when we visit each other. We realize the best way to have a relationship is much like a marriage, where you sign a contract. That's where we want to go with Denison. We want to start the discussion, then have an agreement – maybe initially an exploration agreement, then a partnership agreement. From that, develop what our partnership should look like. It means something to us that the president would come to the community. Now let's take serious next steps and follow up with yourself. How do we take it to the next level so the words come to something?***
  D. Cates: We equate this to the first date; if you're already talking marriage, I guess it's gone OK! We have no problem with that. We support coming together for a way to do business and work out what would be right for both of us.
  P. Longo: We're just starting the process, not making any firm commitments. We're both saying let's work together.
  D. Cates: It's positive that we're talking about it; it shows an interest from both sides.
- **Statement from community member: Mayor M. Natomagan:** ***I appreciate your first steps by being here today to look for a future for all of us. We started PBN in 2007. Pinehouse was fly-in till 1979, then came the road. At the time, our community didn't understand about mining, we lived in the bush in the middle of nowhere and people came with proposals. Some people tried to stop mining, but since then we have watched five mines come into existence. I worked in the industry for 12 years and appreciate that opportunity I got to understand about uranium mining and how regulated it is. That's how I explained it to the community and from there we built a collaboration agreement with Cameco and AREVA. We want to earn our dollar, not a hand out – we're here to help you make money; we just want to participate. We want to continue building this relationship. It's all win-win for us.***
  D. Cates: Thanks for welcoming us. It's been a great opportunity for us to talk about what we spend our lives doing!

Meeting was concluded at 1:50 pm.

[1] COR™: The Certificate of Recognition program (COR™) is an occupational health and safety accreditation program that verifies a fully implemented safety & health program which meets national standards. The objectives of COR™ are to provide industry employers with an effective safety and health management system to reduce incidents, accidents and injuries as well as their associated human and financial costs. COR™ is now frequently used as a pre-qualifying and/or condition of contract by public and private project owners across Canada.
COR™ is nationally trademarked and endorsed by participating members of the Canadian Federation of Construction Safety Associations (CFCSA). Although COR™ is the national standard, COR™ must be attained in the province or territory you are working in.

Note: This is an optimized transcript, edited for clarity and to avoid excessive verbiage and repeat comments. Third-party individual names mentioned during the meeting were not recorded to these notes in order to respect the privacy of those individuals. Although the session was sound-recorded, some off-mic comments were not audible to the recorder or the tape.

SRK Consulting (Canada) Inc.
Suite 205 - 2100 Airport Drive
Saskatoon, SK S7L 6M6

T: +1.306.955.4778
F: +1.306.955.4750
saskatoon@srk.com
www.srk.com

Meeting Notes

November 29, 2016

Participants:

Denison Mines Corp: Peter Longo, Mark Liskowich (SRK)

Village of Pinehouse: Mayor of Pinehouse/President of KML, Pinehouse Business North Representatives

Introduction:

The purpose of the meeting was to discuss (with the leadership of the community of Pinehouse) Denison's proposed schedule of activities with respect to community engagement and the continuation of the collection of environmental baseline data in the 2017 calendar year.

Meeting Notes:

- Denison indicated that the intent was to continue the collection of environmental baseline data within the project area during the spring, summer and fall of 2017.
- Denison raised the question with Pinehouse representatives as to whether or not they felt there was any benefit to engaging an independent contractor to carry out a series of focus group sessions in the community in order to gather additional information with respect to areas of importance that should form a foundation for a future memo of understanding between the community and Denison Mines. Pinehouse representatives indicated they did not see the benefit of completing a focus group survey at this time. Pinehouse representatives indicated that the main pillars of the recent agreement with Cameco would be a reasonable starting point for a future agreement between Denison and Pinehouse.
- Pinehouse representatives also indicated that they had previously completed a fairly extensive Traditional knowledge study covering their traditional territories. Denison indicated a desire to obtain this information from the community in order to integrate this Traditional Knowledge information into the design of the Wheeler River environmental baseline data acquisition rather than attempt to gather this information through a separate community engagement exercise. Pinehouse representatives agreed that recollecting existing information did not seem like a valuable exercise. Pinehouse representatives indicated that access to this information could be gained through [redacted] and they would discuss access to this data with them.
- Denison's proposed schedule of activities for 2017 was presented and discussed with Pinehouse representatives. The scheduled activities appeared to seem reasonable to The Mayor. The importance of obtaining any of the existing Traditional Knowledge data (previously collected by Pinehouse) early in 2017 to allow adjustments to the baseline environmental data collection program was emphasized by Denison.
- Denison and Pinehouse representatives agreed that update meetings such as this meeting were useful and efforts will be made in 2017 to maintain an open line of communication between Denison and the community of Pinehouse through its leadership.

Notes Taken By: Mark Liskowich

ROC107

Denison Mines

Introduction to the Wheeler River Project

Beauval

December 6, 2016

ROC107

Denison – Who Are We?

Denison Mines

- **A Canadian uranium exploration & development Company**
  - Public company, but only 5% of the size of Cameco
  - A history of uranium mining, but no active mining operations
  - Several exploration properties in the eastern Athabasca Basin
  - 60% owner and the operator of the Wheeler River Project

Denison – Who Are We?

Denison Mines

- **A joint venture partner with Areva at McClean Lake**
  - Denison owns 22.5 % of the McClean Lake uranium deposits and the McClean Lake uranium mill (shown above) – Areva (70%) is operator
  - In our preliminary plans, Denison has assumed that the ore from Wheeler River will be processed at the McClean Lake mill

Denison – Who Are We?

Denison Mines

- **An operator of a Canadian environmental services business**
  - ~40 employees based in Elliot Lake, Ontario
  - Maintains Denison's closed and reclaimed mine site in Elliot Lake
  - Provides services to mining companies and governments across Canada

Denison – Who Are We?

Denison Mines

➢ A strong supporter of our local communities

- McClean Lake community programs
- Denison procurement from local vendors and personnel in northern communities

Saskatchewan

- Serpent River First Nations – employment, youth education initiative
- Supported creation of a retirement lifestyle community after mining was completed

Elliot Lake

- Supported construction of schools and health offices for local villages
- Drilled water wells
- Leadership roles for local technical & admin staff

Former African Assets

Welcome to the Wheeler River Project

Denison Mines

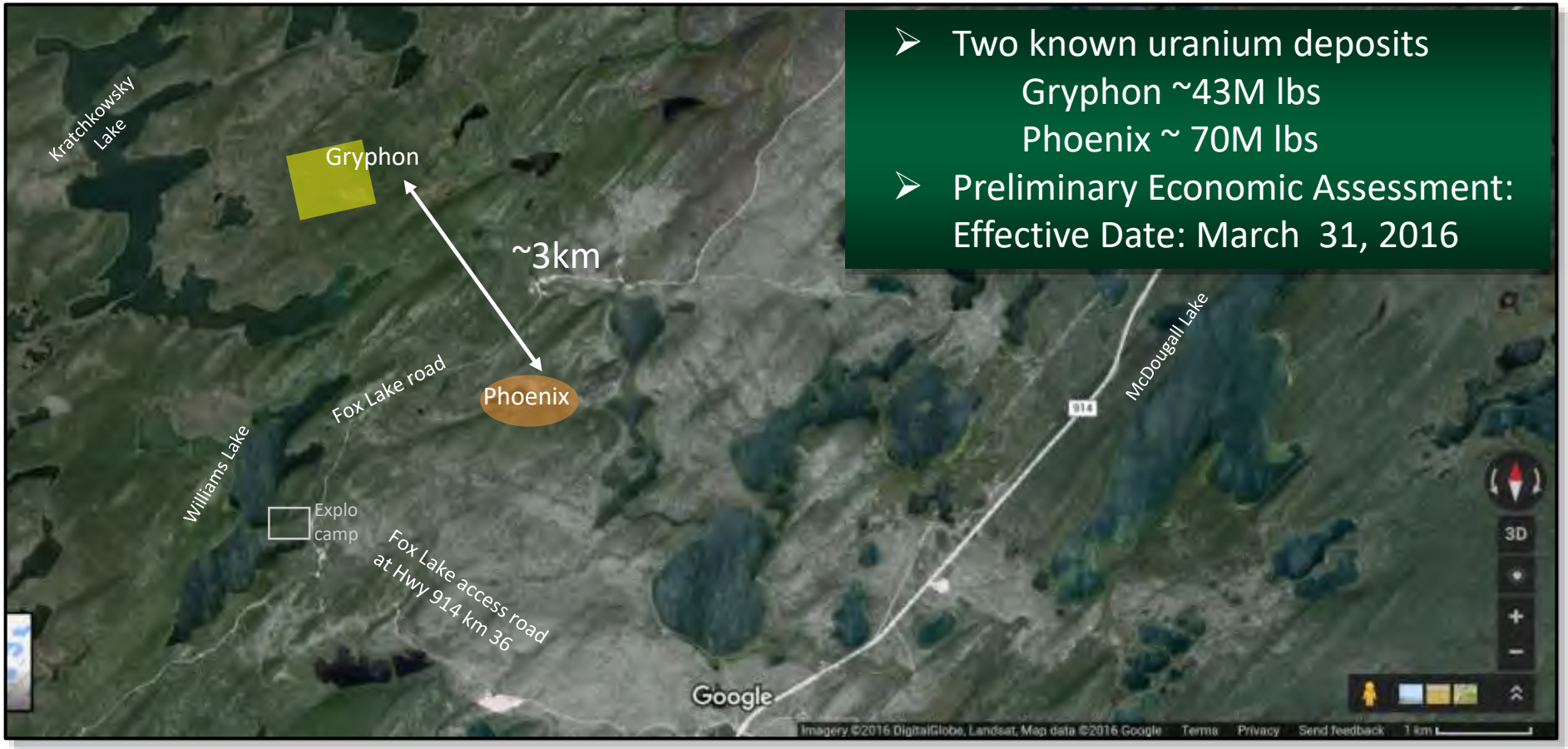
Wheeler River Today: Uranium Exploration

Denison Mines

- Exploration camp
- Drilling in winter & summer

Wheeler River Today

Denison Mines



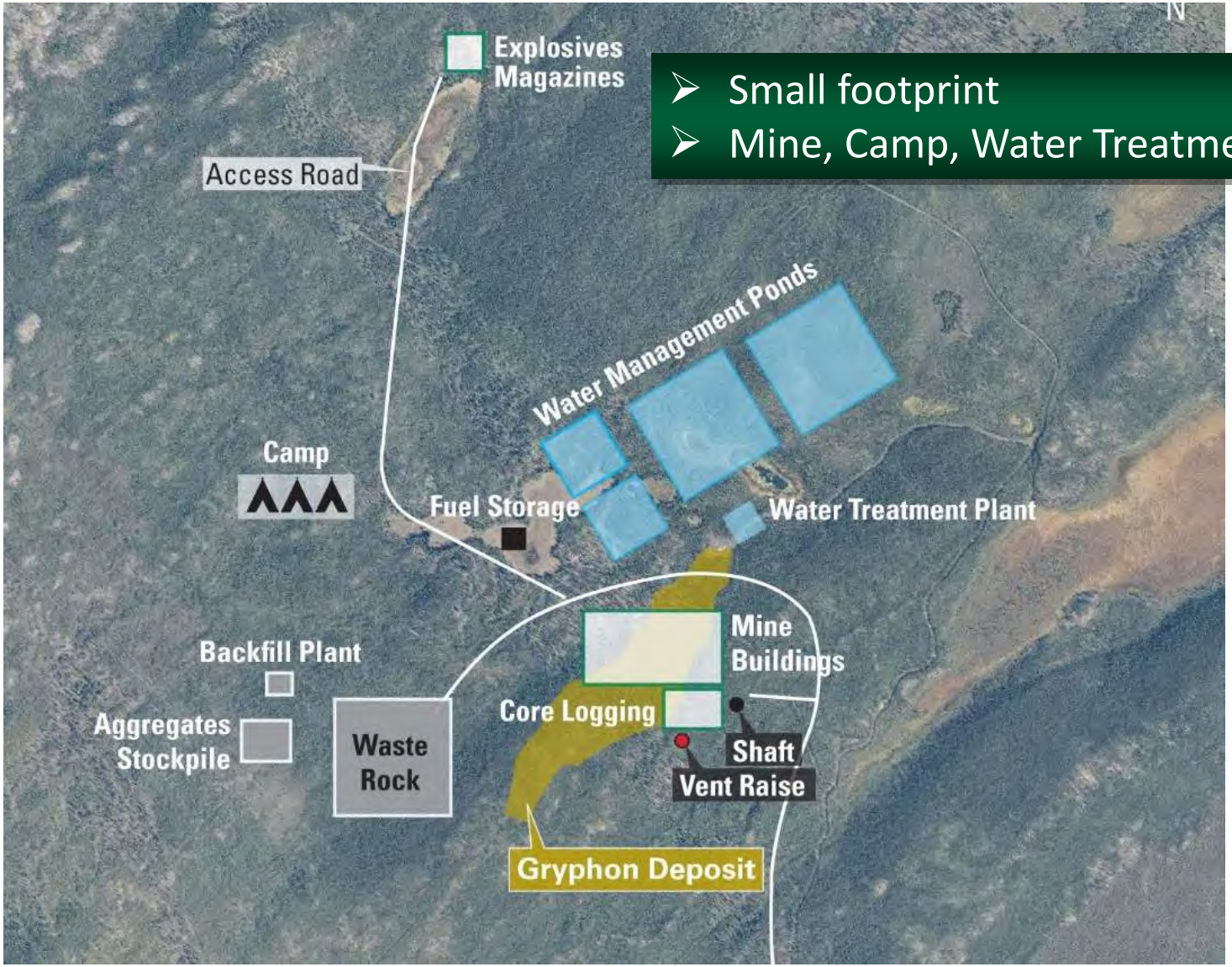
- Two known uranium deposits
  - Gryphon ~43M lbs
  - Phoenix ~ 70M lbs
- Preliminary Economic Assessment: Effective Date: March 31, 2016

In comparison

- McArthur River: Produced ~290M lbs, Reserves 234M lbs
- Rabbit Lake: Produced ~202M lbs, Resources: ~70M lbs

Wheeler River Future

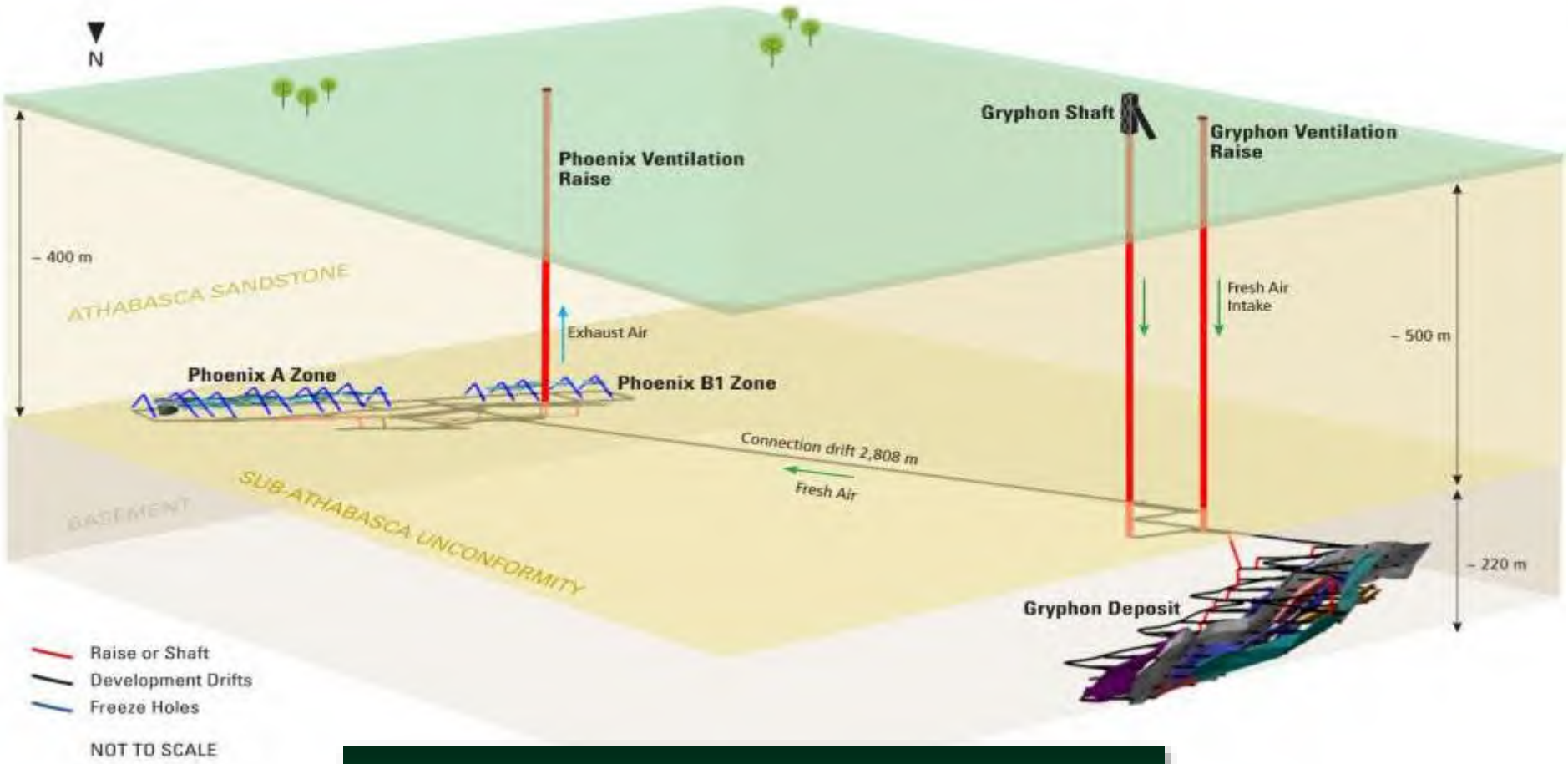
Denison Mines



- Small footprint
- Mine, Camp, Water Treatment Plant

Wheeler River Future

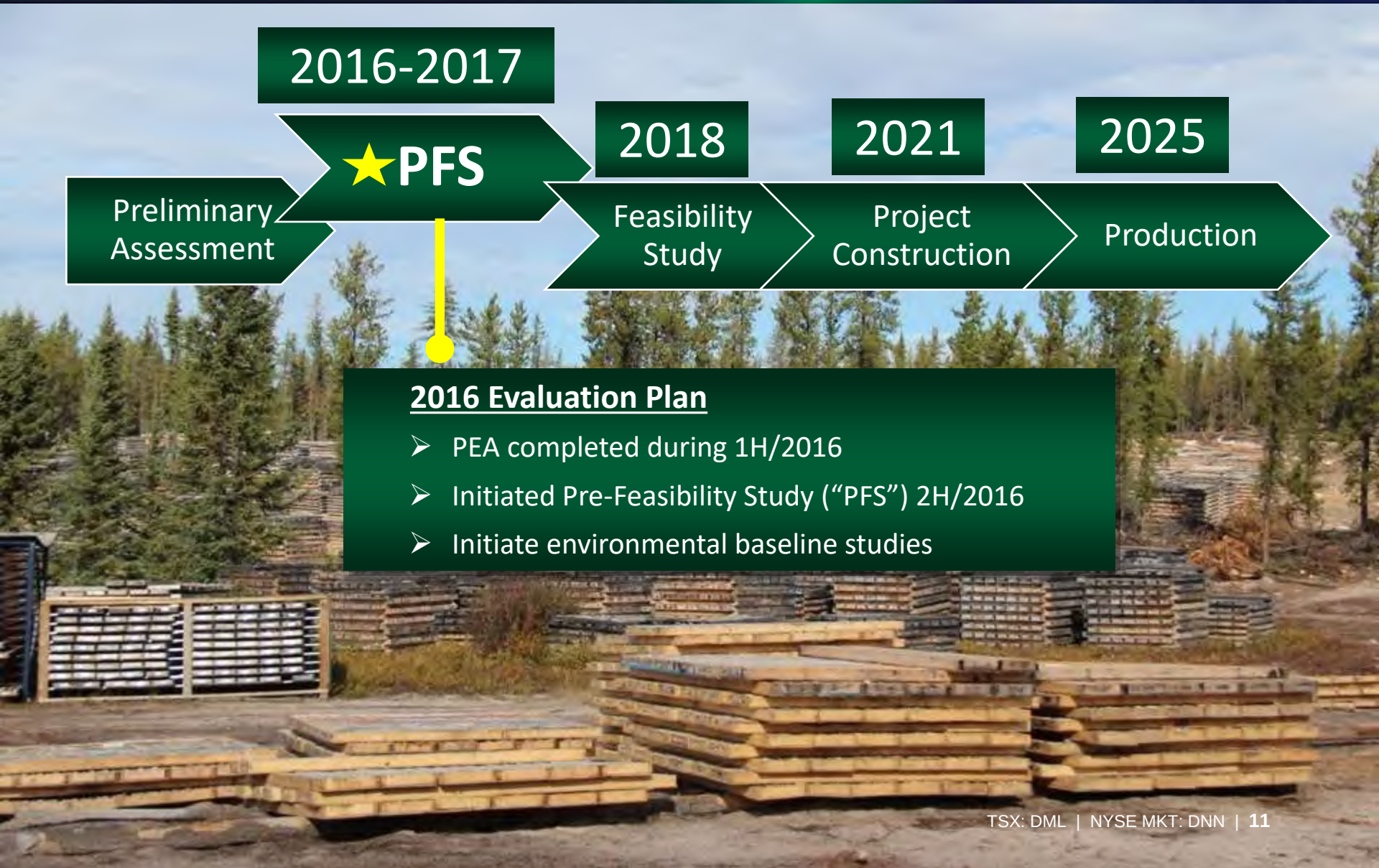
Denison Mines



- Mine life of 16 years
- Underground mining ~500m deep
- Ore processing at McClean

Wheeler River: Long Road Ahead

Denison Mines

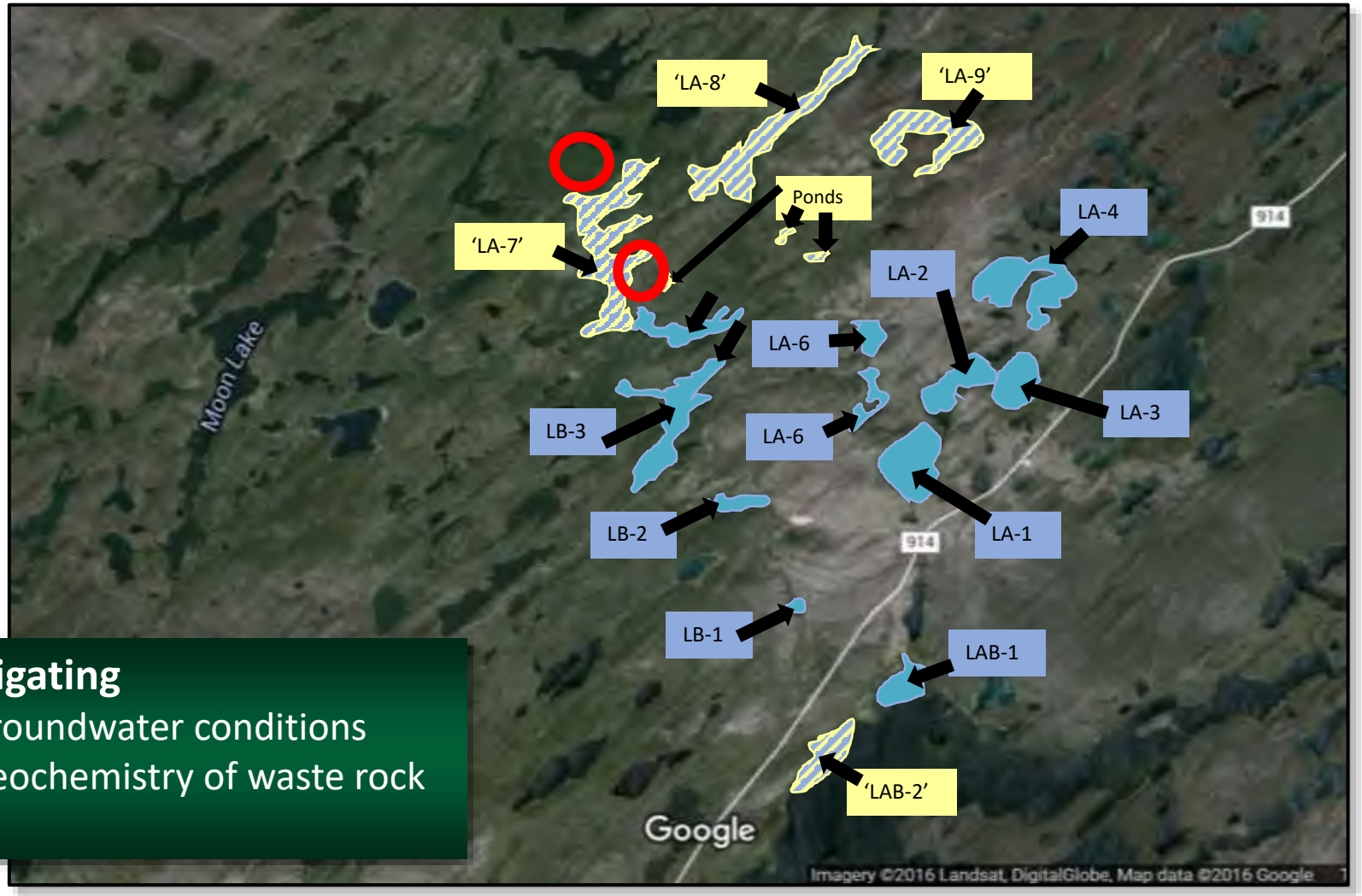


2016 Evaluation Plan

- PEA completed during 1H/2016
- Initiated Pre-Feasibility Study ("PFS") 2H/2016
- Initiate environmental baseline studies

Wheeler River: Environmental Data Collection

Denison Mines



- **Investigating**
  - Groundwater conditions
  - Geochemistry of waste rock

Wheeler River: A Long Term Proposition

Denison Mines

- Initial and sustaining capital costs ~CAD$1.13 billion
- First uranium production projected by 2025/2026
- Operating costs expected to average US$19/pound U_3O_8
- Uranium spot price quoted at ~US$25/pound U_3O_8

➢ **Denison believes in the future of nuclear energy and is investing in the people and the province of Saskatchewan, despite historic low uranium prices and difficult market conditions**

We Want Your Input!

Denison Mines

- **We can't build Wheeler River without you!**
  - We want your input on the project
  - We want to build a positive relationship

Thank You / Tiniki/ Merci cho

Denison Mines

Overview of the Nuclear Fuel Cycle

Denison Mines

Transporting High-Grade Uranium Ore

Denison Mines

Denison Mines
Wheeler River Project – Stakeholder Engagement
Beauval
Tuesday December 6, 2016, 5 pm

In attendance:
Denison Mines: *David Cates, President & CEO*
Peter Longo, Vice President, Project Development
SRK Consulting: *Mark Liskowich*
Community: *Mayor Nick Daigneault, Councillor Joe Daigneault, MLA Buckley Belanger, Nap Gardiner (North West W Communities), Gerry Morin, Shirley Bell Morin and other members of the co-management board.*
Recorder: *Gill Gracie, Aurora Communications.*

Meeting called to order 6 pm by Co-Management Board President Gerry Morin.

Denison was an agenda item for the local co-management board meeting. Other presentations preceded and followed.

Company Presentation: David Cates

The plan is to introduce ourselves and our project. Dave introduced himself and Peter, saying that he would explain the company and Pete would explain the Wheeler River project. This is a forum for discussion.

Denison is a Canadian junior mining company, listed on the Toronto Stock Exchange. We're public but not big – about 5% the size of Cameco.

We have a long and unique history. We have a history of uranium mining in the US and in Elliot Lake, Ontario, but we are not currently mining anything. We have refocused our business in the last five years on the Athabasca Basin region. We have sold a number of international assets and are left with a portfolio of projects in the Athabasca. Wheeler River is our flagship asset.

We are also a partner in the McClean Joint Venture, where we own 22.5%; AREVA is the operator and majority partner. We plan to use the McClean Lake mill to process Wheeler River ore.

In Elliot Lake we have operated, closed and reclaimed a uranium mine, and now we carry on a profitable environmental services business with about 40 employees, who provide care and maintenance and other environmental consulting services for our own site, other sites in the Elliot Lake area, and also in Quebec, the Yukon, and other parts of Ontario. It's part of our history and we're proud of it.

In Elliot Lake we have good relationships with the First Nations in the area, and we've been part of the process of turning that community from a uranium mining camp to a retirement community. It's become a destination for people retiring in Ontario; we supported that community to make sure it still had an economic engine driving it long after the uranium mining stopped.

We are a strong supporter of local communities. As a 22.5% owner at McClean, we contribute whenever AREVA contributes something on behalf of the McClean Lake Joint Venture, although our name is not usually mentioned. We procure staff and supplies in the Athabasca region.

We sold our African assets earlier this year. Social license is about being a partner with the community and being part of the community. In Zambia and Mali we did not bring in outside workers, but hired local professionals to run our operations, and we contributed to the communities. Even when the uranium market was weak, we did not cut community support in our budgets, whether it was building health centres or buying supplies. We knew if we wanted a long relationship with those communities we could not pull the plug on those activities. Just an example of the way we do business.

Project Presentation: Peter Longo

Peter explained his personal background: He is from Saskatoon, has worked at the Seabee mine and for AREVA, and with Cameco on an exchange program. He is familiar with several northern sites. He has three kids, and is a Montreal Canadiens fan!

The Wheeler River project is about 300 km NE of Beauval as the crow flies, between Key Lake and McArthur River.

We have a small exploration camp of about 30+ rooms. We have 25-30 people on site for three months in winter and three months in summer - drill crews from January-March and June-September, plus geological staff, mechanics, caterers and camp maintenance people. We usually have 3-4 drill rigs turning. Our camp is about 6.5 km as the crow flies from the Key-McArthur haul road, just off the Fox Lake road.

Phoenix is a Cigar Lake-style unconformity deposit. At 72 million (M) pounds it is about one fifth the size of Cigar. Gryphon contains 43 M pounds at a 2% grade, more like a Rabbit Lake-style deposit. It is located in the basement rock, below the unconformity. Together they contain about 115 M pounds of mineral resource. By comparison, McArthur River has produced 300 M pounds and still has 200M pounds + to go. Our resource is bigger than the original Rabbit Lake, smaller than McArthur River.

Timelines: We did our preliminary economic assessment (PEA) earlier this year and have launched a prefeasibility study (PFS) that will take about 18 months to complete. If that is positive we will move into a feasibility study from 2018 to 2021. We will do our environmental assessment work in the next few years, and construction will start in 2021. Each step takes a long time. We have started environment baseline data collection. (**M. Liskowich** pointed out the difference between collecting baseline environmental data, which takes 1-2 years, and the environmental assessment process which takes about four years).
The PEA was based on a uranium price of $44 per pound (the long-term price at the time), and it came back positive enough for us to justify spending millions of dollars on a PFS from 2016-17. If that study is successful, we will need to spend tens of millions on a full feasibility study in 2018-2019, and hopefully hundreds of millions on construction in 2021. We need the business results from one stage to justify moving to the next.
D. Cates: 2025 is when we see uranium as a very good business to be in. We see the supply/demand imbalance fixing itself. But to get there, we have to do the groundwork now. We can't just shut it down and pick it up again in 2022. We will be flexible, but move along the

timeline so we can actually be ready to sell uranium when market says it makes good business sense to do so.

Site infrastructure at Wheeler River will be minimal, with no tailings and a small surface footprint. The initial plan is to sink two shafts from surface, one for fresh air, one for exhaust, and start mining the Gryphon deposit, which would take 7-8 years. While mining Gryphon, we would drift across to the Phoenix deposit, establish another ventilation raise to surface and start mining that deposit, probably using jet boring technology. This would take another 7-8 years. Total mine life with current resources is about 16 years at 6-7 M pounds per year (about one third the annual rate of Cigar Lake). We are looking to expand that through continued exploration.

Financial: The cost will be about $1.13 billion in initial and sustaining capital, without a mill. That will be hard to find. Once producing, we expect to be very competitive, even at today's price. If this mine were already built we would survive with current uranium prices.

Community Question: ***Where do you get your core boxes? We have a post plant here that we are thinking of expanding into different areas.***
P. Longo: I believe our core boxes are currently supplied by JP Enterprises in La Ronge.

Community Question: ***How feasible is it to move this project forward given the current price of uranium?***
P. Longo: It would be tough with the current price. We're starting this process to get to production in the mid-2020s, hoping the market has turned around by then. We would not build it on today's price, but it's worthwhile to advance it. It takes time to do the engineering and the environmental work.
D. Cates: This has been a tough year for uranium prices – we started at $35US per pound, and the spot price is now just under $18 per pound. At the beginning of the year the answer was much more likely yes; now, not so much. But we don't think this is a real representation of the uranium market going forward.

Community Question: ***Is there other potential in that immediate area?*** **D. Cates:** Absolutely.

Community Question: ***Who does your projections on market price and feasibility of projects?*** **D. Cates:** Pete & I are the tag team on those two topics. We look at market research, and firms focused on uranium research, and use it to drive our expectation of future price. The contract market is down too, but it's at $32 per pound. Most of the material is sold under contract, not on the spot market.

Community Question: ***How does the grade compare?*** **P. Longo:** The grade is lower than at Cigar – 19% before dilution compared to 23-24% in the ground at Cigar Lake. It's very high-grade but a smaller deposit.

Community Question: ***If the prices go up earlier will you shorten your timeline?*** **P. Longo:** I can't see us going faster than we are. These steps are all necessary to ensure the deposit is economically viable.
D. Cates: We can't shorten up the process by much.

Community Question: ***Will there be any jobs in any of these phases?*** **P. Longo:** Right now we have drill crews – Hy-Tech is our drilling company. If northern communities have people with the interest and experience we can introduce them to the contractor. We can open doors. Our own staff includes six geologists; we contract geology field staff (loggers etc.); there may be environment baseline work in collecting samples of water, fish, plants, soils etc.
M. Liskowich: Other studies include groundwater, soil and rock geochemistry, vegetation surveys, heritage surveys and air surveys.
P. Longo: We started the sampling program in the fall of 2016. We use specialized environmental companies, but they have to hire northern field staff as well. A new program will start in spring. The programs run a couple of weeks at a time. There may be opportunities for employment supporting these programs as well.

Community: ***Does your company have an HR Department? There is a potential for Métis subsidies if you hire indigenous individuals or apprentices.*** **P. Longo:** Yes. Our environmental team also helps identify opportunities to hire locally to support the environmental programs. Environmental fieldwork is short duration, but for someone who wants to get into the field, this is a way in the door with the environmental companies.
Most of the current work involves data collection through our exploration and environment programs. Once we have the data we turn it over to an engineering company with technical specialists who can design a shaft or an underground mine. We can open doors for anyone interested. Denison will probably hire one or two technical people to support building a business case.
When we go to the feasibility stage, we'll hire safety people and an environmental team. I envisage maybe 10-12 people at Denison. I don't see a huge office in Saskatoon.
The construction phase is when we get to the big dollars, and employment and business opportunities. There would be a fly-in schedule. There would be 3-4 years of construction before the first production – sinking shafts, developing the underground**.** Once in operation we get into a routine with 250-300 people working at the site.
M. Liskowich: There would also be a lot of earthworks – water treatment ponds, roads, power lines, clearing, development of a sewage facility etc., which is all related to the construction phase.

Community Question: ***When you start production you will haul from McArthur to Cigar and over to McClean? We'd be looking at some earth moving and long-term road maintenance contracts?*** **D. Cates:** Yes, that's based on connecting the road. We are not sure how the road would be managed, or by whom.
P. Longo: The province has the lead on developing the highway between McArthur River and Cigar Lake. We will work on that with the province, who announced support for the 914 extension.

Community Question: ***Are you planning to mill on site?*** **P. Longo:** We plan to ship our ore for processing to McClean Lake, where we own 22.5%. Cameco is also a partner in Wheeler River; they may take their share of the ore and mill it at Key Lake. Each partner can choose where they send their ore.
The McClean Lake mill will process 18 M pounds from Cigar Lake for the next 10-12 years, and probably more after that, but it's licensed to produce 24 M pounds so there's 6M pounds of spare capacity, which is the production rate we are currently using in the Wheeler River project design.

D. Cates: There are few better places in the world to invest in than Saskatchewan. We're in the business of uranium exploration and development. We believe in nuclear energy, the value of responsibly mining uranium. We would not be moving forward in this market if we were not the true believers in the future of the uranium industry in Saskatchewan.

Community Question: ***Is there anyone up there now?*** **D. Longo:** We have exploration crews in winter and summer. We will mobilize in late December-January for the winter drill program.
D. Cates: It's a long-term proposition; the prize is 10 years away. There's not a lot of opportunity right now. We want input and the opportunity to develop a positive relationship with the communities. If you understand what we're trying to do with our business, as things ramp up we can lean on each other for everyone's benefit. We can't do this without the support of the communities and we won't try to. That's why we're here today, and we want your input.
P. Longo: We want the project to benefit the people of Saskatchewan and northern Saskatchewan.

Community Question: ***Where is your main office?*** We have an office in Saskatoon with 12-15 people, and a corporate head office in Toronto with 7 people. Our largest office is in Elliot Lake, where we have the environmental services office with about 40 people.

Community Comment: ***The people at Keewatin Career Development Corp. (KCDC) do human resources analyses of northern Saskatchewan across sectors. I asked (CEO) Randy Johns what number would allow employment of everyone in the north. He says we need to create 1000 jobs a year for 10 years. It's refreshing to be at the starting level of this project, enabling us to see the potential of a significant investment. At the same time, we need a more sophisticated human resource development strategy attached to this, so that with the timelines we can begin to bring young people out of high school and attract them into some of these careers, whether environment, geologists or managers. We're trying to make a more sophisticated strategy somehow; otherwise we're exporting some of our best potential. Someone might have that conversation with you in the future, to provide that opportunity for growing and mentoring.***
P. Longo: We're happy to be part of that process.
D. Cates: That's a smart observation. Giving someone a Denison pen today could inspire someone to seek a career later. Knowing who we are and what we do helps advertise the opportunities that will exist in the future. People are seeing us, but are not necessarily in the market for a job today. We are just starting this process. Geologists are happy to talk about what they do.
M. Liskowich: There have been presentations to school classes in the past on geology, and Denison is prepared to support these moving forward. We have had early communications with Randy Johns and discusses ways Denison might be able to support some of the KCDC programs and initiatives.

Community Comment: ***The north is getting more sophisticated, whether its forestry or mining, but there's still a trust gap regarding development and peoples' relationship to the land. We have lived here for thousands of years, and it's more than just an economy for our aboriginal people. There's a growing need for industry to begin building environment monitoring liaisons of some sort that can suggest to the***

communities that "these guys are trustworthy and are following environmental rules, and this is how we can communicate what's happening so each side hears what the other is saying". In some instances the gap is wider than in others. We're getting into training at the entry level of environmental monitoring, so people can understand how to be much more officially capacitated to enable them to do more environmental monitoring.
We talk about NWC, which is not really in wood fibre as it used to be; we lost most of our Term Supply License. We're more into the management of process and business and facilitating northerners to participate in business and training in the resource sector. We're a group of seven large Métis communities, from Green Lake to La Loche and east to Pinehouse, willing to do what we can to enable things to happen for the benefit of our communities and businesses.

Community Question: ***It's important as we move forward to the 2020s to stay in constant communication with our HR. Besides NWC we also have PLEDCO (Primrose Lake Economic Development Corporation) representing four communities. One of them, Jans Bay, has a training facility. As we work on our HR strategy we like to pair up with GDI, apprenticeship training, using all our resources to prepare for future opportunities for those who are losing their jobs and those still coming up. We need everyone in the mix and use all their resources and facilities.***
P. Longo: We will need that help if this moves forward. We would rather have local people that know the project than bring in outside help. It makes business sense.
D. Cates: It's the only formula that works on a sustainable basis. In Africa we started with expatriate workers running the operations, but it was not effective in the countries we were in. We found that model did not work very well. We went to a local community-based management team, and got better results for less money.

Community Question: ***What is the potential of northern communities to invest? It's usually much easier at the startup of a junior company to allow that to happen. The other thing is a legacy – this is where we missed the boat in the past with mining companies coming to the north, for the companies to consider setting up some sort of legacy for the north – some sort of infrastructure, or a fund. A good example is Mistik, a forestry company who set aside a stumpage fee that goes directly to the impacted community. You need to consider that, and it's much easier to do early, when you know a small fraction has to go to that fund, rather than later trying to convince the shareholders who might not be in favour of it. We run into that scenario with some of the established companies. I recommend you begin that sort of setaside for the north, for legacy purposes.***
D. Cates: That's the next stage of discussion, to start to explore those options. If there's money to invest, we're happy to be part of figuring it out. Since we're not so big we can be more creative – we don't have the same bureaucracy yet, and the shareholders are different.

Community Question: ***We are Métis communities, we have access to funds – may not be a whole pile of money at this stage, but if we were able to break into investing potential . . . take heavy equipment as an example; if we had a coalition within the region to supply heavy equipment even at the exploration stage, that might be a foot in the door.***

D. Cates: To me, there's no minimum. We're open to that. Making the introduction is the first step. We do need capital; my job is to find capital on the markets for development. Dollars are dollars, and I'd sooner they come from a community we will later spend money in. If that means the community is now aligned with us as a partner, all the better.
P. Longo: Down the road, I would rather have local employees, contractors and business people doing that work as long as they are competitive.

Community Question: ***Do you have a margin?*** **P. Longo:** That would have to be part of the discussions. It's hard to put a figure on it.

Community Question: ***This scenario has repeated itself so many times with indigenous communities being impacted by development, whatever the size and distance. The question in some minds is, we know you're not banging the table. If we do bang the table we had better come up with what we have in terms of assets and human resources, equipment capacities and capabilities. It's no use just to say we want a piece of the action. We need to plan those incremental pieces. We're trying to do that; other things are happening besides the Wheeler River project***.
D. Cates: That's the power of these discussions – we tell you what we're doing so you take this in as data. You see what might be happening, and then we have a dialogue together and vector into something that works for our business and your communities.
M. Liskowich: First we wanted to go into the communities and speak to the leaders. The next phase, next year, is presenting at places like the Northern Labour Market Committee (NLMC) and its various components, seeding that opportunity; if the Multi-Party Training Plan is still in place, it could be the vehicle for training, or is there a better vehicle? We will introduce Dave and Pete to those types of venues, and get the story out on a broader basis. We didn't want the NLMC or New North to be the first time you heard about it; we wanted to bring it to the leadership first, and then take that step.

Community Comment: ***We were younger when we started talking about Key Lake; the Cluff Lake Board of Inquiry was a huge conversation with huge expectations; people still go through the book and mark the promises made. Some still didn't come to fruition.***

Session adjourned.

Denison Mines

Introduction to the Wheeler River Project

Ile a la Crosse

December 7, 2016

Denison – Who Are We?

Denison Mines

- **A Canadian uranium exploration & development Company**
  - Public company, but only 5% of the size of Cameco
  - A history of uranium mining, but no active mining operations
  - Several exploration properties in the eastern Athabasca Basin
  - 60% owner and the operator of the Wheeler River Project

Denison – Who Are We?

Denison Mines

- **A joint venture partner with Areva at McClean Lake**
  - Denison owns 22.5 % of the McClean Lake uranium deposits and the McClean Lake uranium mill (shown above) – Areva (70%) is operator
  - In our preliminary plans, Denison has assumed that the ore from Wheeler River will be processed at the McClean Lake mill

Denison – Who Are We?

Denison Mines

- **An operator of a Canadian environmental services business**
  - ~40 employees based in Elliot Lake, Ontario
  - Maintains Denison's closed and reclaimed mine site in Elliot Lake
  - Provides services to mining companies and governments across Canada

Denison – Who Are We?

Denison Mines

➢ **A strong supporter of our local communities**

- McClean Lake community programs
- Denison procurement from local vendors and personnel in northern communities

Saskatchewan

- Serpent River First Nations – employment, youth education initiative
- Supported creation of a retirement lifestyle community after mining was completed

Elliot Lake

- Supported construction of schools and health offices for local villages
- Drilled water wells
- Leadership roles for local technical & admin staff

Former African Assets

Welcome to the Wheeler River Project

Denison Mines

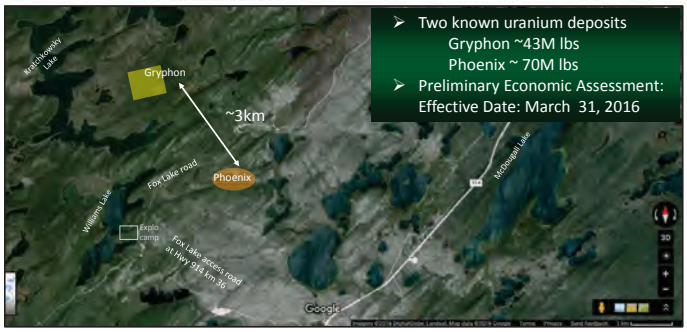
Wheeler River Today: Uranium Exploration

Denison Mines

- ➢ Exploration camp
- ➢ Drilling in winter & summer

Wheeler River Today

Denison Mines



- ➢ Two known uranium deposits
  Gryphon ~43M lbs
  Phoenix ~ 70M lbs
- ➢ Preliminary Economic Assessment: Effective Date: March 31, 2016

In comparison

- ➢ McArthur River: Produced ~290M lbs, Reserves 234M lbs
- ➢ Rabbit Lake: Produced ~202M lbs, Resources: ~70M lbs

Wheeler River Future

Denison Mines

- Small footprint
- Mine, Camp, Water Treatment Plant

Wheeler River Future

Denison Mines

- Mine life of 16 years
- Underground mining ~500m deep
- Ore processing at McClean

Wheeler River: Long Road Ahead

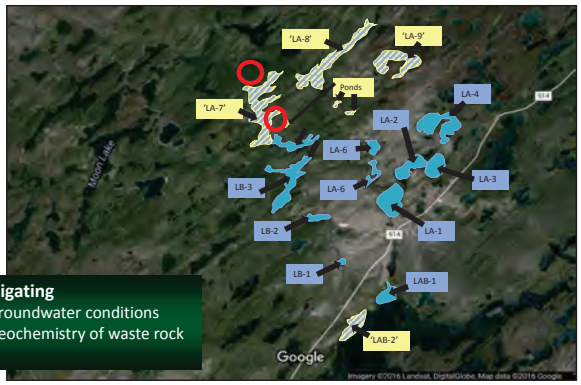
Denison Mines

2016 Evaluation Plan

- PEA completed during 1H/2016
- Initiated Pre-Feasibility Study ("PFS") 2H/2016
- Initiate environmental baseline studies

Wheeler River: Environmental Data Collection

Denison Mines



- **Investigating**
  - Groundwater conditions
  - Geochemistry of waste rock

Wheeler River: A Long Term Proposition

Denison Mines

- Initial and sustaining capital costs ~CAD$1.13 billion
- First uranium production projected by 2025/2026
- Operating costs expected to average US$19/pound U_3O_8
- Uranium spot price quoted at ~US$25/pound U_3O_8

➢ **Denison believes in the future of nuclear energy and is investing in the people and the province of Saskatchewan, despite historic low uranium prices and difficult market conditions**

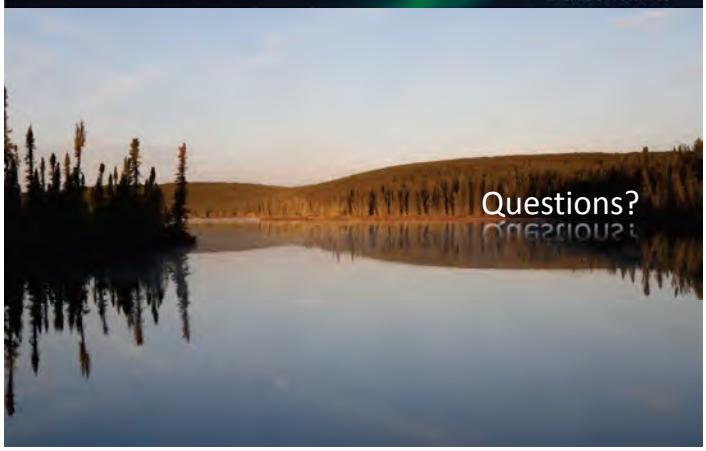
We Want Your Input!

Denison Mines

➢ **We can't build Wheeler River without you!**
- We want your input on the project
- We want to build a positive relationship

Thank You / Tiniki

Denison Mines



Denison Mines
Wheeler River Project – Stakeholder Engagement
Ile a la Crosse, SK.
Wednesday December 7, 2016 11 am

In attendance:
Denison: *David Cates, President & CEO; Peter Longo, Vice-President, Project Development*
SRK: *Mark Liskowich*
Community: Mayor Duane Favel and about 15 local people.
Recorder: Gill Gracie, Aurora Communications Ltd.

Meeting called to order at 11:40 am.

Welcome and Introductions
Mayor Duane Favel welcomed the group and about 15 local attendees, representing the Métis Local, a contractor, elders, a social development worker, councillors, the local development corporation, the MLA and his assistant, and interested individuals. About 16 community members total. Denison's Dave Cates introduced his group.

Company Presentation: Dave Cates

Dave explained that the main purpose of the meeting was to introduce the company and its main project, Wheeler River. He would present on the company, and Peter Longo would provide a presentation on the project.

We're a junior public company involved in uranium exploration and development. We used to be a global company with assets in the US, Africa and Mongolia, but in the last five years we've changed our strategy and are now focused exclusively on Canada, particularly the Athabasca Basin. We are a Canadian company, listed on the Toronto Stock Exchange (TSX). Our shareholders are largely Canadian. We're about 5% the size of Cameco. We're run like an owner-managed business – we're entrepreneurial and take on a wide range of tasks.

Our main asset is the Wheeler River project, where we are a 60% owner. We also own 22.5% of the McClean Lake mill, where we are partners with AREVA. We are active in the region through this partnership.

We used to operate a uranium mine in Elliot Lake, Ontario, which has been fully reclaimed. It took a lot of work to reclaim the site, but we built skills in reclamation and running closed mines. We built a business from that, with about 40 employees who provide care and maintenance and other environmental consulting services to other miners and to governments in Ontario, Quebec and the Yukon. That's our Canadian profile – uranium exploration and development in Saskatchewan, our interest in the McClean Lake mill, and an environmental services business.

We're a strong supporter of the local communities we operate in. When McClean Lake gets involved with a community-based activity, you generally only hear AREVA's name mentioned because they are the operator, but we, as a 22.5% owner of that mill, contribute to those community support initiatives. We're more of the quiet partner.

We are also looking for opportunities for local procurement of staff and supplies for our northern operations. In Elliot Lake we have a long, solid relationship with the Serpent River First Nation, and have also partnered with the community in turning it from a mining community into a very successful retirement community. It's become an economic engine by being a destination for retirees from all over Ontario, and we've helped with that process.
Our former African assets are a good illustration of how we like to do business. A lot of other companies bring in expatriates from Canada, the US and/or Australia to run their operations. We tried that many years ago, and went away from it – it's not a good model. We're focused on having local leadership, local managers, local staff. That was really successful for us in Africa. Another part of that program was to always support our communities. We cut our budgets down to nothing but we would not cut our community support budgets. We realized that for anything to happen long-term in those African jurisdictions where we had properties, we would need support from our communities. That was the budget we were not going to cut. It's the same idea here. We know we need to be in partnership with our communities; we need your support, and we need to support you.

Project Presentation: Peter Longo:

Peter gave some personal background.

The project is about 300 km by air from Ile a la Crosse.

The site currently has a 25-30-room camp and core storage. We're doing mostly exploration drilling, so we have 3-4 drills turning with 18-20 drillers employed by Hy-Tech Drilling. We have 6-10 geological staff, so about 25-30 people on site. The exploration programs run from January-March and June-September, so for about six months of the year we have an active site.

We have two deposits: The Phoenix deposit is like Cigar Lake but about 20% of the size, very high grade, in challenging ground conditions. The Gryphon deposit is lower grade, basement-hosted, more like Eagle Point at Rabbit Lake. Together they contain about 115 million (M) pounds uranium.

Other projects in the basin: McArthur River has already produced approximately 290M pounds, and has about another 230M pounds still in the ground. Rabbit Lake has produced 200M pounds and has about 70M pounds in the ground. We're closer to Rabbit Lake in size. Our ore is all still in the ground; we're not mining anything yet.

The site will have a small surface footprint, like Cigar Lake or McArthur River – a camp, offices, dry, warehouse, water treatment plant and ponds, waste rock storage, a backfill plant. There will be no mill or tailings. We plan to send ore to the McClean Lake mill and have tailings stored in their facility.

The deposits are about 500 metres below surface. The idea is to mine Gryphon first, at a rate of about 6M pounds per year over 7-8 years, then drift over to the Phoenix deposit, about 3 km away, and mine at the same rate for 7-8 years. With the mineralization we know we have today, we expect 15-16 years of mine life.

Timeline: We did a preliminary assessment (PEA) of the business case around the project earlier this year; it was reasonable enough to move us to the next stage. Right now we're in a PFS (pre-feasibility study) which will take18 months -2 years to complete. On the environmental side, we have recently initiated our environmental baseline data collection, collecting data on the lakes, water quality, fish, vegetation, soil samples, wildlife, air quality etc. On the engineering side we will start collecting other information such as what the ground conditions are like, how much water we might expect in the underground mine. These activities will continue during the spring, summer and fall of 2017.

In late 2017, if the business case is there, we will advance to a feasibility study, which takes approximately a year to complete. Including more detailed information on the project costs and development strategy. If that works out well, we would start construction in the early 2020s. That's where the major contracting work and construction jobs come in.

This year we spent hundreds of thousands on the PEA; the PFS will cost $2-3 million. If the results of a PFS suggest the project can still be economical, then we will complete a Feasibility Study (FS). At each step we check to make sure it makes sense to move on to the next step.

We're looking at $1.13 billion to build and run the mine for it's the full duration of about 16 years. Even at today's prices, once it's built it will be relatively low-cost to produce, about $19US per pound of U_3O_8. Even in todays' market, if it were already built we would still be running it. We anticipate things will improve in 5-10 years, that's why we're investing today, expecting the price of uranium to be much higher when we are actually ready to start producing uranium from the mine.
D. Cates: Our business is uranium exploration and development – if we don't believe in it, why are we in that business? We think Saskatchewan is one of the best jurisdictions in the world to do business in, and we think there are tremendous resources here that can be competitive even in a tough market. That's why we have focused our business here; the community is also a key part of it.

We can't do this without our northern communities supporting us. It's not an easy proposition; we couldn't build a mine today, but tomorrow we hope we can, but we cannot do it alone. That's why we're starting this process early – it's so important to us to have the community and the company both pulling on the same rope in the same direction.

Community Question: ***Where do you hire your contractors from?***
P. Longo: Preferably from local northern businesses. The last thing I want to do is bring in someone from B.C. or Ontario; I'd much rather hire locally. It makes sense from a business perspective. It should be cheaper than bringing people in from out of province. If we can keep the knowledge here, and have the same people doing the work year after year . . .

Community Question: ***You hire your drillers from B.C. yet there are two companies in La Ronge. Doesn't that say something about the future of this development?***
P. Longo: Hy-Tech is from B.C. but some of their employees are local. They also have to be competitive. We do competitive bids; we have invited Team Drilling and other local drilling companies to tender; it's our preference to hire locally.
D. Cates: Hy-Tech has brought business to the region, invested some of their capital, and is hiring employees from Saskatchewan. It's not indicative of where it will go. We have to watch every dollar at this stage of the project.

Community Question: ***Can we get a copy of your prefeasibility study and the baseline data?***
P. Longo: It will be a public document available to anyone interested in reviewing it.

Community Question: ***Are you going to schools to tell students what's available in 5-10 years, if they want to go for training? We get the lowest jobs no matter what mine it is. Very few get to be lead hand or foreman; they're just shoveling snow or in a lower job on a machine. We need technical jobs, and that's not happening. We have Northlands College training, but I don't see any technicians or engineers here. Our youth are smart, they're trainable, but they'd rather import people from the east or from overseas. Our population is growing, but the jobs are depleting. We need to get our students involved now so they're ready by the time the project is built. I wish our Grade 11s and 12s were here to listen. You have to mix elders and students together.***
P. Longo: That's why we're here to introduce ourselves; we're more than happy to be part of that process.
D. Cates: That's a great idea. This is a first introduction. We would be happy to come back and talk to the school. You're right, this is a long-term proposition and there's time for students in school today to aspire to have a job when this mine gets built, and to build their skills to do that. That's what this is about – building a partnership with our communities. We support that 100%.

Community Question: ***How do you keep yourselves afloat – have you made money in other mines? Do you have offshore bank accounts? Do you sell shares?***
D. Cates: We have not made money on the Wheeler River project. We're not a for-profit operation yet! Part of my job is to market what the company could become. With that view of where the uranium industry might go, and developing a uranium mine in the Athabasca region, that's the

sales pitch. I constantly try to collect new money from investors who want to be exposed to a uranium mining story. I'm always selling them on the future. We're always bringing in new money; we need to bring in a whole bunch of new money to get the project constructed and pay the bills. Once we get there, we can generate a return for our shareholders by having a profitable operation.
P. Longo: We do have some revenue streams – we own a portion of the McClean Lake mill, they toll mill Cigar Lake ore and we get a portion of those fees. It's not huge dollars but it keeps the lights on. Our environmental services group generates a little profit tat comes back to us. It's all available in our financial statements, which are public documents.
D. Cates: Our cash sources don't pay the big bills. For that we have to go to global capital markets in North America, Europe, or Asia. My job is to find people who want to invest in Canada and Saskatchewan.

Community Question: ***How much are you investing in the north? We had Key Lake, Cluff Lake, and Cigar Lake – do you research each mine to see how much investment they made in the north?***
P. Longo: It's tough to get that detailed specific information. We will be talking to each community to try to work that out. This meeting is the first step in a long process.

Community Question: ***Last year 500 jobs were cut in the mining industry, and more are proposed in the New Year. Temporary shutdowns are planned over the summer, so how could this project be feasible?***
D. Cates: We're talking about building a new mine and creating new jobs, which seems at odds with what's happening right now. They are different stories. We're in this for the long run; we're taking about having a mine by 2025-26. It's a long-term commitment; it takes time to get there. We believe in nuclear energy and uranium mining in Saskatchewan, and that's why we're doing the work now to get there. We can't build a mine overnight, or on our own so we need these relationships with our communities, we need those kids coming out of school with skills to be able to take jobs. That's why we're doing it now; even though it seems at odds with the current market, we believe the market will change for the better in the next few years.
We're in a bit of a different business; we're in the future business. The companies operating now are in the "now" business. They're selling uranium; the market is not good, at a 12-year low price. We're happy to be in the future business; we wouldn't want to be in the now business.
P. Longo: If we had to decide today whether to build the mine, the answer would be no. It does not make sense today; we are hoping in 7-8 years from now, the story changes. We are optimistic.
D. Cates: We have done our research on the industry, we believe in it, and we are taking measured steps. At each step we check to see if it still makes sense to move forward. If the answer is yes, we will go to the next step.

Community Comment: ***Even with all the talk of a global shift away from uranium, nuclear, reactors?***
D. Cates: The world is actually moving towards more nuclear energy, especially in Asia (China, India, South Korea), because it's cleaning up their air. China and India have very poor air quality and they're looking to nuclear as an emission-free source, green energy that can allow their families to breathe clean air. China is already building nuclear reactors at a remarkable rate. That's why we think the future is bright for nuclear.

Community Question: ***With China and India's environmentally crappy record, do they have a plan to deal with their nuclear waste – if not, is it responsible to let them have this? Are they planning to dump it on someone else's land, like Mongolia?***
D. Cates: I can't answer regarding China's plans, but they do have to play by international rules. To have nuclear energy, they have to sign international treaties which deal with how they treat waste, how they operate their facilities. The world takes nuclear energy very seriously; not anyone can just enter the nuclear energy business.

Community Comment: ***Right now there's only one country on the planet that has approved nuclear waste storage and that approval only came last week - Finland. They initiated it, but it took them 30 years to figure out how, and they haven't finished figuring it out yet. The responsibility lies on your shoulders.***
D. Cates: The industry is quite aware that it has to be responsible, but I hear what you're saying.

Community Comment: ***You talk about the life span of the mine, but you don't include reclamation.***
Regarding the supply chain to procure goods and services from northerners – I also work for the province of Saskatchewan. Last year I was at a meeting about a supply chain strategy and I met someone from Denison there.
The economy is in a hole right now, but we have reached out to 500 businesses from northern Saskatchewan regarding what types of services they could provide to exploration and mining companies, from exploration to decommissioning. We are developing a database that you can access to find out who can supply specific goods and services, who has specialized products, and where they are located. Even small stuff like core boxes. We will continuously monitor it.
It's a specialized field; mining companies have to come together and decide how to mentor and train people coming out of high school. Graduation rates now are much better than in the 1980s.
At each step in the process you have to assess whether to move forward, or at what speed – if prices are down is it feasible to move forward, or put it on hold? Do you have any other sites at the feasibility stage?
D. Cates: Wheeler River is our most advanced project. We have other pure exploration properties. We recently made a move into the west side, at Hook-Carter on the Patterson Lake trend, but our primary focus is the eastern Athabasca. I am encouraged to hear about the database. It's good to know what's happening, and for the community to know what we're up to.

Community Question: ***Is this part of the consultation phase?***
M. Liskowich: Officially, the environmental process has not started. It will start near the end of the PFS stage. The baseline work started last fall, and we will do more this coming summer. The environmental assessment process is a minimum 4-year process. Once Denison decides to go to the feasibility level, the project description would be written and submitted to the regulatory agencies to start the environmental process and the formal consultations that the CNSC and the province require.

P. Longo: We're currently in the middle of the PFS stage.
D. Cates: We're being very proactive. We'd much rather have already met and talked to the community ahead of time. This is a first date.

P. Longo: Our baseline studies will try to characterize the environment before anything happens. This will feed back into the environmental assessment (EA) process and will appear in a public document.

Community Comment: ***Is it possible to see that EA before it goes to government for approval? It often goes to government for approval before the public sees it.***
P. Longo: We're open to that. I don't have the information now!
M. Liskowich: It will be a back-and-forth process. There will be a lot of discussions with the community as the data's collected. Part of the discussions in the next few months will be where and what data should be added that's not currently being collected. That information will hopefully be provided from the communities. Once the formal process starts there will be many meetings and opportunities for the baseline data to be reviewed by community members or by anybody that's interested or concerned. That will all be fed into the process before it is submitted to government.

Community Question: ***In the construction and production stages, who determines hiring services, contracts etc. We're outside the affected area, but we are affected too, in one way or another. We have a good company, Sakitawak Development Corporation, that could do a lot for the mining companies. I'm very concerned that with all the mining, we can't get our foot in there.***
The more successful we get with our local company, the more we will be dealing with surrounding communities. We're the same as other communities and organizations except they're closer to the mine. We just want to make sure we get our fair share.
P. Longo: I can't speak to the past, but we're here now to talk about our properties and your concerns. Hopefully we can work something out as we go forward that benefits the community as well as the project in a win-win scenario.
D. Cates: I hear what you're saying. Peter will likely make the decisions. It's tricky for us because there are many communities and they all take that view, so we have to weigh a lot of things and be fair. We want to help our communities because we want to be partners. This is a real positive first step, that we're here at this first stage introducing ourselves. We do want to have a connection with this community.

Community Comment: ***Why not have someone experienced from the north working with your HR on hiring? I have 15 years experience in the mines, and others have 30 years. They can do the jobs – yet greenhorns from the south come in. It may take a little training, but it doesn't take a university person to do most of the jobs up there.***
P. Longo: If there are people in the community with experience, or who want to be drillers, please send them our way. However, that is the extent of the activities at this phase of the project. We have influence over our contractors and we can make that happen. If there are people with geological training, or who want to get that training, we can hire them ourselves and do the training.
D. Cates: Bear in mind the stage we're at – it's early, there's not a lot of activity. This is about investing in relationships so that as things move along the timeline we can develop a good partnership.
P. Longo: Environmental data collection is tough because it's not full-time. If someone is interested, we can try to make that happen for our projects and get them a foot in the door with other companies that do this kind of work. We're happy to do that.

Community Comment: ***When the uranium industry started 30-40 years ago, I was being influenced by other people from the south saying no uranium mines. Now when I look around northern Saskatchewan today, I feel like an a__hole when I said was against it. I think other people should start looking at themselves. I haven't seen anything negative about uranium mines, and I used to be real hard-core against it. Half my family is working there, and I worked at McClean Lake. I would never want to take those jobs away. I see a lot of northern people working there. I see the development in the north.***
There's a book out there called Voices from Wollaston Lake, and we were the proponents in writing that book with Miles Goldstick. I have to say I think the anti-nuclear movement is wrong when they come up here and tell us to eat nettle soup and not have steak and lobster suppers.
There's no alternative. Everyone is trying to get away from fossil fuels, to what alternative? Wind and sun are good for the small stuff. We need to run the big stuff. That's how I look at it.
Look at Pinehouse – I'd like to bring the 5th Estate back to Pinehouse and show them what's happened (since their documentary of 34 years ago) and ask what do you think now? Has uranium mining benefitted Pinehouse, the First Nations, the north? The Athabasca is Dené country, they can do what they want. Here we'll do uranium mines and oilfields. When it comes to the north and talking about treaty and indigenous rights – my treaty rights are more important than the rights of somebody from the north who's not really from the north. Show me anything horrible that's happened in uranium mines in the last 40 years. We had a flood at Cigar Lake, that's about it. We can learn from that.
D. Cates: There's no more regulated mining in this country than uranium mining. Thanks for that comment.

Community Question: ***Impact Management Agreements for certain communities put other communities at an economic disadvantage when jobs become available. I hope you will deal with the entire north. Do you have a corporate (social responsibility) policy regarding reinvestment in communities?***
D. Cates: It's not as developed as, for example, Cameco; that's the next stage of discussions. It would be great if northern communities could come together and make it a little easier for a company to put those things together with a group rather than one by one. That is a challenging proposition. Take this meeting as a signal we consider this community to be part of this story.

Community Question: ***Where is your head office?***
D. Cates: Our corporate head office is in Toronto, where I'm based, with about seven people. We have 12-15 people in Saskatoon; Elliot Lake has 35-40 people for the environmental services business.

Community Question: ***You said they're building new reactors in China – are those Candu reactors?***
D. Cates: Not in China – they are Westinghouse technology. The Candus are getting some traction in India. The whole nuclear reactor business is a whole other business; it's expensive, complicated and highly regulated. We're happy to pull uranium out of the ground to feed that business.

Community Question: ***Are there still investment possibilities for First Nations, development corporations or individuals?***
D. Cates: Investing in a project is difficult because it's already split between a number of companies. We're only one partner at 60%; we have two other partners. The door is never closed for investment into a company like Denison. We're focused in this region and we need investment. If there's an interest in investing in Denison, I'm the guy to talk to. We're listed on the TSX.

Community Question: ***How many communities have you gone to?***
D. Cates: Patuanak, Pinehouse, Beauval and here today at Ile a la Crosse.

Community Question: ***You mentioned the ore would be processed at McClean Lake? Why not Key Lake, since it's closer? There are more employees from Ile a la Crosse at Key Lake. I just toured Key Lake and McArthur River – it was not as busy as I expected underground. I thought hundreds of people – I saw 10-15 people underground.***
P. Longo: Our share of the ore will go to McClean Lake. Cameco may take their 30% to Key Lake. Ours would go to the mill we own. Each company can decide what to do with their source.

Community Question: ***Our power bills are going up and there's no employment, some don't know what to do - would nuclear power increase or decrease the cost of power? Give us a break up north. We have electric furnaces – how will we pay our bills in 10 years?***
D. Cates: That's a political decision. We'd love nothing more than for Saskatchewan to adopt nuclear energy.
P. Longo: If we move ahead, we can be part of the solution by providing jobs etc.

Community Question: ***I don't think you'll find too much resistance to uranium mining or to getting this project going. I recommend strongly - we had hearings a few years ago – the Bayda and Mitchell reports talk about the environment, reclamation, revenue-sharing – all those concepts are in those reports. Northerners thought they would get a piece of the action through development and offshoots, or contracting work. We want to make sure we're part of that. We talked about ownership and how we could buy our way in, or what kind of a deal could we make. We have issues we need to deal with. We have a lot of young people, and a lot of suicides happening in our northern communities – there's a reason for that. We're trying our best to deal with those issues, and we need some help, some funding. Governments are not doing anything, either federal or provincial. That's why we have to take ownership and fix our problems ourselves. That's hard to do without resources. We have to fight with the civil servants who most of the time are blocking and making rules and regulations, because they have control. We need a different point of view. I like that you're here in the beginning before you take any of our resources. It's a good thing; I appreciate that. We need you to start listening. Governments have always had a problem: they don't listen, or they listen part way, or until the government changes and everything changes again.***
I am prepared to work with you, see what your plans are. I want to see some of our young people – see some kind of a fund in northern Saskatchewan, and don't fall for the impact area or regional argument. It impacts everyone in northern Saskatchewan. We need you to take your blinders off and look at the whole situation. That's all I ask. Make sure we leave our land and country and resources - in 20 years when it's all finished, the land should be just as you found it, if that's a possibility. Thanks for coming right at the outset.
D. Cates: Thank you for your passion. We're here for the right reasons, and thank you for seeing that.
P. Longo: Reclamation is what we do in Elliot Lake. We were mining there from the 50s through the 90s. Today you wouldn't know it's an old minesite – it's natural vegetation, trees, grass etc.

Community Comment: ***All you have to do is look at the mess that's left in Uranium City. A lot of stuff will hit the lakes because some of those drums that are underground and flooded will start deteriorating, and who will clean it up? The mining companies are gone. If you guys come and do the same thing – we're very cautious.***
D. Cates: We can't speak to the past. We are a smaller, more nimble and more creative company. We're open to lots of things; we're not tied up like the big companies might be. We might be nimble enough to be better, and we want to be. We want to be a responsible and valued part of the community. I hope when we're mining in 2025 we're all still here and can celebrate together.

Community Question: ***Is your environment, geotechnical and drilling work done in-house?***
P. Longo: Our drilling contractor does the drilling; SRK Consulting has helped with testing in the past. Our own geologists log the core. We hire specialists to do the environmental work.

Community Question: ***I sat on the EQC myself and noticed the companies tend to show water sampling results when there's no snow compared to when it's six feet deep; the drainage is different and sometimes you don't get the proper results. That's why I asked if it was independent.***
P. Longo: We will be open about it, and learn from the past. We don't want to create a problem for ourselves. There's only one piezometer in the ground right now to help monitor underground water flows. We will include more monitoring as we move through the process.
M. Liskowich: The project has not advanced enough yet to being it to the EQC table, but that will be one of the audiences.

Community Question: ***When in the timeline will the application be submitted to CNSC?***
P. Longo: By the end of the PFS we will have a good set of baseline data and a good idea of the project, and we can look at the interaction between the two. If it looks good enough to proceed, then we will submit a project description to CNSC and the province, and initiate the EA process. We are targeting PFS for 2017-18, so sometime mid-2018.

Community Comment: ***This building*** *(meeting hall)* ***was built by AMOK to build trailers for the Cluff Lake mine. What happened to that initiative? We were given a chance to prove ourselves. We went in the hole - everyone was flying but no one was taking care of the office.***
The Surface Lease Agreements did not cover revenue-sharing, and we can't go back and rewrite them now. Who will stand up for us on that? There aren't too many activists any more.

Community Question: ***How familiar are you with the Northern Procurement Policy? I've been in business for 35 years and never really benefitted. Seems you have to be there at the time.***
P. Longo: Not at all. We procure as many of our goods from the north as possible.
Comment: Northern Engagement Branch handles that file from La Ronge (Terri Franks). In Cameco, Darrell Burnouf has that role.

Community Question: ***We want to minimize the involvement of governments. You're right in coming to the communities. Come to the communities, don't go visit governments.***

Community Comment: ***[redacted] hit the nail on the head regarding which communities are chosen. When you pick some, it creates problems and resentment between communities. The north is the north. It's not deserved, nor is it proper. People bite their tongue because it's their own people. Did the mining companies anticipate that? They shouldn't be doing that, and I urge Denison to get away from that.***
The other option is in relationships with local businesspeople: a lot of times the companies deal with local development corporations but they are not the only answer. Some don't have the capacity to provide some of these services and business skills. The business sector needs more and better engagement than even our local development corporations, because in some instances they add more to the economy of the community. There is a thriving private sector. Don't pick and choose winners; certainly don't only go through development corporations if you have a business opportunity. Businesses deserve to be part of the opportunity as well. Why should businesses compete with tax-funded development corporations – they're competing against their own tax dollars, which is not fair to them.
Where you have the opportunity, look at the private contractor as long as they're based in the north. There has to be a capacity process in how you build up these companies. Companies are not given the opportunities because nobody's listening.
These meetings are really productive. A lot of us have opinions, and everyone has a right to express themselves in these meetings.
D. Cates: I'm encouraged. Our challenge is that we do not know the businesses in the communities. We need the community to help us with that. At the end of the day we are just trying to move a business ahead. If there's a business we don't know about that helps our business, if it makes sense, why wouldn't we do it?

Meeting adjourned.

denison Mines

Introduction to the Wheeler River Project

Northern Saskatchewan Environmental Quality Committee

November 29, 2017

Denison – Who Are We?

denison Mines

- **A Canadian uranium exploration & development Company**
  - Public company, but only 5% of the size of Cameco
  - A history of uranium mining, but no active mining operations
  - Several exploration properties in the eastern Athabasca Basin
  - 60% owner and the operator of the Wheeler River Project

Denison – Who Are We?

denison Mines

- **A joint venture partner with Areva at McClean Lake**
  - Denison owns 22.5 % of the McClean Lake uranium deposits and the McClean Lake uranium mill (shown above) – Areva (70%) is operator
  - In our preliminary plans, Denison has assumed that the ore from Wheeler River will be processed at the McClean Lake mill

Denison – Who Are We?

denison Mines

- **An operator of a Canadian environmental services business**
  - ~40 employees based in Elliot Lake, Ontario
  - Maintains Denison's closed and reclaimed mine site in Elliot Lake
  - Provides services to mining companies and governments across Canada

Denison – Who Are We?

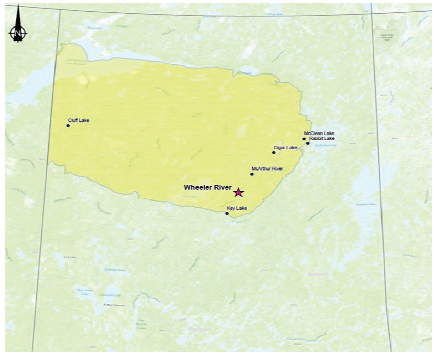
denison Mines

- **A strong supporter of our local communities**

Saskatchewan	Elliot Lake	Former African Assets
• McClean Lake community programs • Denison procurement from local vendors and personnel in northern communities	• Serpent River First Nations – employment, youth education initiative • Supported creation of a retirement lifestyle community after mining was completed	• Supported construction of schools and health offices for local villages • Drilled water wells • Leadership roles for local technical & admin staff

Welcome to the Wheeler River Project

denison Mines



Wheeler River Today: Uranium Exploration

denison Mines

- Exploration camp
- Drilling in winter & summer

Wheeler River Today

denison Mines

- Two known uranium deposits – Gryphon + Phoenix
- Total of 114M lbs (U_3O_8)

In comparison
- McArthur River: Produced ~290M lbs, Reserves 234M lbs
- Rabbit Lake: Produced ~202M lbs, Resources: ~70M lbs

Wheeler River Future

denison Mines

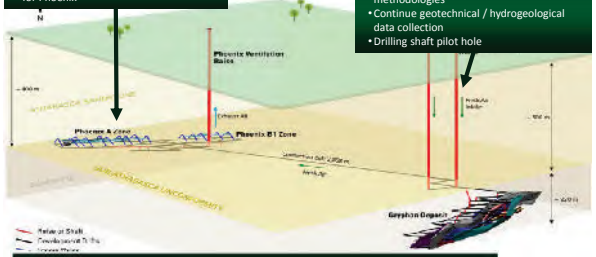
- Small footprint
- Mine, Camp, Water Treatment Plant

2017 Engineering Activities

Denison Mines

Phoenix
- Investigating alternative mining methods for Phoenix

Gryphon
- Investigating alternative shaft sinking methodologies
- Continue geotechnical / hydrogeological data collection
- Drilling shaft pilot hole



Other Work
- Conducting advanced metallurgical test work
- Complete Surface facilities design
- Complete Water treatment plant design
- Complete Mine Design

Wheeler River: A Long Term Proposition

Denison Mines

- Initial and sustaining capital costs ~CAD$1.13 billion
- First uranium production projected by 2025/2026
- Operating costs expected to average US$19/pound U3O8
- Uranium spot price quoted at ~US$20/pound U_3O_8

➢ **Denison believes in the future of nuclear energy and is investing in the people and the province of Saskatchewan, despite historic low uranium prices and difficult market conditions**

EIA Update: Baseline Environment

Denison Mines

Aquatics (EcoMetrix Incorporated)

- Hydrology ✓
- water quality ✓
- lake bathymetry ✓
- sediment quality ✓
- benthic invertebrate communities ✓
- benthic invertebrate chemistry ✓
- fish community ✓
- fish tissue chemistry ✓

EIA Update: Baseline Environment

Denison Mines

Terrestrial (Omnia Ecological Services)

- ecological land classification ✓
- breeding bird surveys ✓
- ungulate pellet counts ✓
- winter tracking surveys ✓
- aquatic furbearer shoreline surveys ✓
- small mammal trapping & chemistry ✓
- amphibian surveys ✓
- characterization of terrain and soil types ✓
- vegetation and soil chemistry ✓
- vegetation community ✓

Heritage (Golder Associates)

- heritage resources assessment ✓

Northern Capacity Development

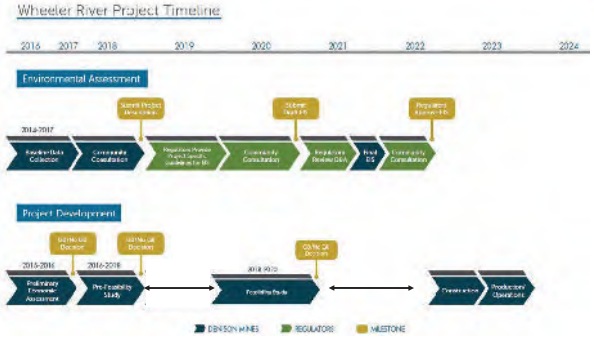
Denison Mines

Denison Activities

- Insisting our contractors maximize northern employment and procurement of goods
  - Drill camp supplied by the Beauval General Store
  - Worked with Drill Contractor to run a Drill Training Program, 2 northerners trained in fall, more to come
  - Employed northerners for baseline field program support
- Supported career days last fall in Patuanak
- Financially supported the IRM Program (BEAHR Program)
- Continue to develop relationships with northern Communities

Wheeler River : A Long Road Ahead

Denison Mines



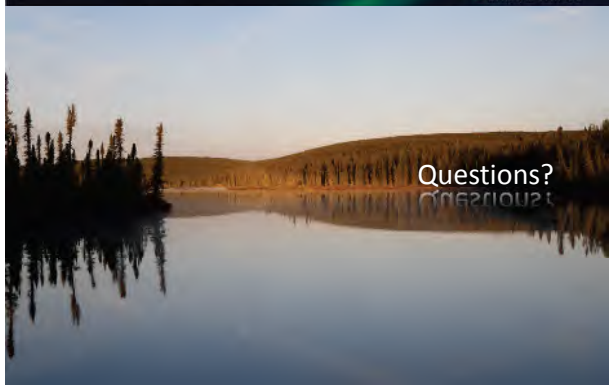
We Want Your Input!

Denison Mines

➢ **We can't build Wheeler River without you!**
- We want your input on the project
- We want to build a positive relationship
- Make positive impacts as a result of those relationships

Thank You

Denison Mines



Denison Mines Presentation to
Northern Saskatchewan Environmental Quality Committee
La Ronge, Sask. Nov. 29, 2017.

Denison Mines – Peter Longo ***PowerPoint Presentation***

- Peter outlined the background of Denison as a small exploration and former uranium mining company, and its current activities in environmental services and as a 22.5% partner in the McClean Lake operation. They try to engage with their local communities.
- He explained the company's Wheeler River project, a potential mine in the Key Lake area. We have 20-25 people in camp, mostly drillers and geologists.
- The road extension from McArthur River and Cigar Lake is key to this project. We have had discussions with some communities and government agencies around this; if the road does not go ahead, the project does not advance.
- 14 million pounds (lbs) of uranium has been identified in two deposits, Phoenix and Gryphon, separated by about 3 direct kms. Gryphon is in basement rock, Phoenix at the unconformity between the basement and the Athabasca sandstone. The plan is to connect the two with a drift, seeking more ore along the route. At Gryphon we're evaluating different technologies for shaft-sinking. At Phoenix we're investigating different techniques to try to avoid challenges encountered with water at McArthur River and Cigar Lake.
- Peter detailed the expected site facilities, and said metallurgical test work is under way.
- **Investment:** Developing the project would cost over $1 billion. We're advancing the project, looking forward to the mid-20s when we expect the market will improve. Production is forecast for the mid-2020s. We think production costs would be about $19 per lb.
- **Environment:** We are doing aquatic, terrestrial and archaeological baseline studies in the area, to understand what is there now. We employed northerners as best we could for data collection. We will incorporate these studies into our knowledge base so we can avoid sensitive areas. We're also learning about subsurface water flows.
- **Northern capacity:** We have procured goods from the Beauval store. We helped develop a driller training program, producing two new permanent employees from the north; we will run another one every quarter, leading to 20-30 permanent jobs for as long as drilling is happening, for any exploration company.
- **Timeline:** We're currently in the pre-feasibility study stage until mid-2018. That will be a big decision point for the company. The next step would be to launch an EA process. If all goes well, we anticipate construction in the mid-20s. It's a long road and we're at the beginning stages. I'm optimistic.

Discussion

- ***What kind of rock?***
  - **P. Longo:** The upper part is sandstone, with granitic basement below.
- ***What license or permits are you under now – any license from CNSC?***
  - **P. Longo:** We're not producing any ore so it's an exploration permit so far. We'll begin discussions with CNSC soon.
- ***Is anyone telling you what your baseline studies should be?***
  - **P. Longo:** We don't have formal procedures, but we're using knowledgeable consultants who have done this work before for existing sites. If we need more information when we go through the assessment process, we'll get it.
- ***Would Denison be the operator, or would that change?***
  - **P. Longo:** We're the operator and the majority owner. Cameco is a minority partner, along with a Japanese utility.
- ***Why not mill at Key Lake? I assume it's because of your interest in McClean Lake.***
  - **P. Longo:** Key Lake was discussed, but is not currently available. The McClean Lake ownership position is part of it. Each option has its own challenges. We're trying to find what works best for the project.
- ***What is the status of the road between McArthur River and Cigar Lake?***
  - **P. Longo:** The Minister of Highways said the EA is expected to be done in Q1 of 2018. Then it will go into the queue for funding. I suspect our project will fund a portion of that.
- ***Is there a highways committee for that route? I chair the northwest highways committee and it would be nice to exchange some information. I'm not sure which region it's in.***
  - **P. Longo:** I don't know of any formal group; it's years away from ever happening.
- ***It would open up a large area for hunting and fishing. Right now the road between Key Lake and McArthur is a closed road. If this road is built, a person will be able to drive from Pinehouse and Beauval all the way up and across and down 102. It will open up a tremendous area. But you don't hear much about the EA.***
- ***How long is the road?***
  - **P. Longo:** About 50 km. It's a provincial project, not ours. We'll know the answers when our baseline study is done.
- ***That's a huge impact. That's where the caribou migrate.***

SRK Consulting (Canada) Inc.
Suite 205 - 2100 Airport Drive
Saskatoon, SK S7L 6M6

T: +1.306.955.4778
F: +1.306.955.4750
saskatoon@srk.com
www.srk.com

Denison – Pinehouse Leadership Meeting

Meeting Notes

September 6, 2017

Time: 1:00 – 3:00 pm

Participants:

Denison Mines Corp: Peter Longo, Mark Liskowich (SRK)

Community of Pinehouse, Pinehouse Business North (PBN) and Kineepik Metis Local Inc. Leadership: Pinehouse mayor, seven additional representatives.

Location: Village Office Pinehouse, Saskatchewan

Meeting Notes:

- The purpose of the meeting was twofold:
  - to provide a general update on the progress to date of the Wheeler River project with respect to Denison's Exploration activities, project development, engineering and environmental baseline collection activities, procurement activities, and their capacity building activities.
  - Allow Denison the opportunity to present a draft Memorandum of Understanding (MOU) between Denison and the Village of Pinehouse and the Kineepik Metis Local Inc. to the leadership for their review.
- Denison provided an update on the exploration activities, engineering activities associated with the PFS as well as their progress on the collection of baseline data. Each baseline collection program completed during the summer of 2017 was supported with a local hire from English River First Nation (ERFN).
- Denison reminded the Leadership that access to any Traditional Knowledge studies completed to date by the community would be extremely helpful. This information if provided would be integrated into the baseline data collection program. Pinehouse leadership indicated Denison's request to access this information would be discussed at the next Kineepik Metis Local Inc. board meeting.
- Denison also provided feedback on key points and messages that were gathered during the 2016 community meetings with Pinehouse as well as other northern communities.
  - Northern Procurement: Denison informed the leadership that they had changed their food supplier for the Wheeler River camp from their previous supplier in La Ronge to the Beauval General Store. An analysis was done and costs were competitive so the change in procurement was made.
  - Community Investment: Denison informed the leadership that they had provided financial support to the Northwest Communities Economic Development Corporation Integrated Resource Management program scheduled to be run in Buffalo Narrows beginning in the fall of 2017.
  - Employment and Training:
    - Denison provided an update on the development and progress of the Wheeler River Project Driller's Helper Training Program.

SRK Consulting (Canada) Inc.
Suite 205 - 2100 Airport Drive
Saskatoon, SK S7L 6M6

T: +1.306.955.4778
F: +1.306.955.4750
saskatoon@srk.com
www.srk.com

        - Denison indicated that there were approximately 40 applicants for the Driller's Helper Training Program and the selection process was the sole responsibility of the drilling Contractor, given the program is run under their control they needed to have the confidence in the individuals selected for training in order to ensure the safety of all workers at the training site.
        - For the first round of training Hy-Tech Drilling selected one individual from the community of Pinehouse and one from Cole Bay, Saskatchewan.
        - Denison indicated that a second round of trainees will be selected this fall with the intent if running the program again in conjunction with the winter 2018 drill program.
    - Formal Agreement: The leadership was then presented with the draft MOU.
        - The leadership was informed that similar MOUs were being presented to the communities of Beauval and Ile a la Crosse and that one had been presented to ERFN on August 30, 2017.
        - A general discussion took place around the overlying theme of the draft MOU. Pinehouse Leaders indicated that they had a strong interest in holding an equity position in Denison Mining Corp.
        - The Leaders indicated that an equity position could be defined differently than simply equity in the company. Suggestions such as allowing Pinehouse the ability to own the camp and/or access road to the camp with an unfettered access clause to Denison Mines Corp. was discussed as an alternative form of equity position.
        - Denison commented that an equity position in Denison is possible as when the project advances Denison will need to seek out external funding. However, Denison commented that Pinehouse needs to be aware that Denison should be considered a high risk investment as a junior mining company and it may not be desired to invest community funds.
- Pinehouse Leadership also indicated that PBN was looking at additional options such as bulk fuel and/or warehousing at the highway 914 junction and there may be opportunities to work with Denison on these ventures.
- Pinehouse Leadership again reiterated they were happy and encouraged by Denison's proactive approach and desire to develop a healthy working relationship with the community, illustrated by Denison's early engagement with the community.
- The Leadership also indicated they look forward to Denison's request to have follow up meetings with leadership representatives as well as hosting Denison at a community meeting during the fall of 2017 to provide a project update and obtain community input on project aspects such as the location of the site access road and potential discharge points for a water treatment plant that will be required to support the project in the future.

SRK Consulting (Canada) Inc.
Suite 205 - 2100 Airport Drive
Saskatoon, SK S7L 6M6

T: +1.306.955.4778
F: +1.306.955.4750
saskatoon@srk.com
www.srk.com

Denison – Ile a la Crosse Leadership Meeting
Meeting Notes
September 7, 2017
Time: 9:00 – 11:00 am

Participants:

Denison Mines Corp: Peter Longo, Mark Liskowich (SRK)

Community of Ile a la Crosse Leadership: Mayor of Ile a La Crosse, one additional representative

Location: Village Office Ile a la Crosse, Saskatchewan

Meeting Notes:

- The purpose of the meeting was twofold:
  - to provide a general update on the progress to date of the Wheeler River project with respect to Denison's Exploration activities, project development, engineering and environmental baseline collection activities, procurement activities, and their capacity building activities.
  - Allow Denison the opportunity to present a draft Memorandum of Understanding (MOU) between Denison and the Village of Ile a la Crosse and the La Baie Metis Local 21, to the leadership for their review.
- Denison provided an update on the exploration activities, engineering activities associated with the PFS as well as their progress on the collection of baseline data. Each baseline collection program completed during the summer of 2017 was supported with a local hire from English River First Nation (ERFN).
- Denison reminded the Leadership that access to any Traditional Knowledge studies completed to date by the community would be extremely helpful. This information if provided, would be integrated into the baseline data collection program. Ile a la Crosse leadership indicated some previous efforts to formalize a TK map for the community had been completed by others and an effort to source this information would be made. It was mentioned that the Traditional Territory of the people of Ile a la Crosse did stretch up into the general project region, with [redacted] indicating that his grandfather had a trappers cabin on the original lake drained in order to mine the Gaertner orebody at Cameco's Key Lake mine.
- Denison also provided feedback on key points and messages that were gathered during the 2016 community meetings with Ile a la Crosse as well as other northern communities.
  - <u>Northern Procurement:</u> Denison informed the leadership that they had changed their food supplier for the Wheeler River camp from their previous supplier in La Ronge to the Beauval General Store. An analysis was done and costs were competitive so the change in procurement was made.

SRK Consulting (Canada) Inc.
Suite 205 - 2100 Airport Drive
Saskatoon, SK S7L 6M6

T: +1.306.955.4778
F: +1.306.955.4750
saskatoon@srk.com
www.srk.com

- Community Investment: Denison informed the leadership that they had provided financial support to the Northwest Communities Economic Development Corporation Integrated Resource Management program scheduled to be run in Buffalo Narrows beginning in the fall of 2017.
- Employment and Training:
  - Denison provided an update on the development and progress of the Wheeler River Project Driller's Helper Training Program.
  - Denison indicated that there were approximately 40 applicants for the Driller's Helper Training Program and the selection process was the sole responsibility of the drilling Contractor, given the program is run under their control they needed to have the confidence in the individuals selected for training in order to ensure the safety of all workers at the training site.
  - For the first round of training Hy-Tech Drilling selected one individual from the community of Pinehouse and one from Cole Bay, Saskatchewan.
  - Denison indicated that a second round of trainees will be selected this fall with the intent if running the program again in conjunction with the winter 2018 drill program.
- Formal Agreement: The leadership was then presented with the draft MOU.
  - The leadership was informed that similar MOUs had been presented to the communities of Beauval, Pinehouse, and English River First Nation.
  - A general discussion took place around the overlying theme of the draft MOU. Ile a la Crosse Leaders indicated they were eager to review the document and looked forward to working with Denison for the benefit of both the community and the project.
- Both groups agreed to continue to work together to identify areas the community maybe able to support the project activities from a business development perspective.
- Ile a la Crosse Leadership indicated they would discuss the MOU and its contents at their next ICS4 meeting which is a local organization consisting of the Fishermen, Trappers, Metis local and Village.

- Ile a la Crosse Leadership reiterated they were happy and encouraged by Denison's proactive approach and desire to develop a healthy working relationship with the community, illustrated by Denison's early engagement with the community.
- The Leadership also indicated they look forward to Denison's request to have follow up meetings with leadership representatives as well as hosting Denison at a community meeting during the fall of 2017 to provide a project update and obtain community input on project aspects such as the location of the site access road and potential discharge points for a water treatment plant that will be required to support the project in the future.
- The meeting concluded with a tour of the community.

SRK Consulting (Canada) Inc.
Suite 205 - 2100 Airport Drive
Saskatoon, SK S7L 6M6

T: +1.306.955.4778
F: +1.306.955.4750
saskatoon@srk.com
www.srk.com

Meeting Notes: Denison – Beauval Leadership Meeting
September 6, 2017, 3:30 – 4:30 pm

Participants:
Denison Mines Corp: Peter Longo, Mark Liskowich (SRK)
Community of Beauval Leadership: Mayor, Councillor
Location: Village Office Beauval, Saskatchewan
Meeting Notes- The purpose of the meeting was twofold:
- To provide a general update on the progress to date of the Wheeler River project with respect to Denison's Exploration activities, project development, engineering and environmental baseline collection activities, procurement activities, and their capacity building activities.

-Allow Denison the opportunity to present a draft Memorandum of Understanding (MOU) between Denison and the Village of Beauval and the Sipishik Metis Local 37, to the leadership for their review.

Denison provided an update on the exploration activities, engineering activities associated with the PFS as well as their progress on the collection of baseline data. Each baseline collection program completed during the summer of 2017 was supported with a local hire from English River First Nation (ERFN).

Denison reminded the Leadership that access to any Traditional Knowledge studies completed to date by the community would be extremely helpful. This information if provided would be integrated into the baseline data collection program. Beauval leadership indicated to date there had not been a lot of effort placed on formalizing a TK map for the community given a limited community budget and lots of funding pressures. It was mentioned that the Traditional Territory of the people of Beauval was typically described to reach from Tippo Lake east of Beauval to the Primrose Air Weapons Range to the west and north to Patterson Lake area.

Denison also provided feedback on key points and messages that were gathered during the 2016 community meetings with Beauval as well as other northern communities.

Northern Procurement: Denison informed the leadership that they had changed their food supplier for the Wheeler River camp from their previous supplier in La Ronge to the Beauval General Store. An analysis was done and costs were competitive so the change in procurement was made. Beauval Leadership indicated that although the Beauval General Store was owned by English River First Nation(ERFN) there is still economic benefits to Beauval from this store through direct employment of community members and given the store's proximity to Beauval it generally brings people to the community.

Community Investment: Denison informed the leadership that they had provided financial support to the Northwest Communities Economic Development Corporation Integrated Resource Management program scheduled to be run in Buffalo Narrows beginning in the fall of 2017.

Employment and Training:

- Denison provided an update on the development and progress of the Wheeler River Project Driller's Helper Training Program.
- Denison indicated that there were approximately 40 applicants for the Driller's Helper Training Program and the selection process was the sole responsibility of the drilling Contractor, given the program is run under their control they needed to have the confidence in the individuals selected for training in order to ensure the safety of all workers at the training site.
- For the first round of training Hy-Tech Drilling selected one individual from the community of Pinehouse and one from Cole Bay, Saskatchewan.
- Denison indicated that a second round of trainees will be selected this fall with the intent if running the program again in conjunction with the winter 2018 drill program.

Formal Agreement: The leadership was then presented with the draft MOU.

-The leadership was informed that similar MOUs were being presented to the community of Ile a la Crosse and that one had been presented earlier to the community of Pinehouse and to ERFN on August 30, 2017.

-A general discussion took place around the overlying theme of the draft MOU. Beauval Leaders indicated they were eager to review the document and looked forward to working with Denison for the benefit of both the community and the project.

- Beauval Leadership indicated as a community they have access to additional funding for training activities that could be used to augment Denison and Beauval training initiatives in the future.
- Both groups agreed to continue to work together to identify areas the community maybe able to support the project activities from a business development perspective.

Beauval Leadership again reiterated they were happy and encouraged by Denison's proactive approach and desire to develop a healthy working relationship with the community, illustrated by Denison's early engagement with the community.

The Leadership also indicated they look forward to Denison's request to have follow up meetings with leadership representatives as well as hosting Denison at a community meeting during the fall of 2017 to provide a project update and obtain community input on project aspects such as the location of the site access road and potential discharge points for a water treatment plant that will be required to support the project in the future.

SRK Consulting (Canada) Inc.
Suite 205 - 2100 Airport Drive
Saskatoon, SK S7L 6M6

T: +1.306.955.4778
F: +1.306.955.4750
saskatoon@srk.com
www.srk.com

Denison – English River First Nation Leadership Meeting
Meeting Notes
August 30, 2017
Time: ~11:45am-1:00pm

Participants:
Denison Mines Corp: Peter Longo, Mark Liskowich (SRK)
English First River Nation: ERFN Chief
Location: SRK office, Saskatoon, Saskatchewan
Meeting Notes: The purpose of the meeting was twofold:

- to provide a general update on the progress to date of the Wheeler River project with respect to Denison's Exploration activities, environmental baseline collection activities, procurement activities, and their capacity building activities.
- Allow Denison the opportunity to present a draft Memorandum of Understanding (MOU) between Denison and English River First Nation to ERFN Chief for ERFN's review.

- Denison provided an update on the exploration activities, engineering activities associated with the PFS as well as their progress on the collection of baseline data.
- Denison also provided feedback on key points and messages that were gathered during the 2016 community meetings with ERFN as well as other northern communities.
  - Northern Procurement: Denison informed ERFN Chief that they had changed their food supplier for the Wheeler River camp from their previous supplier in La Ronge to the ERFN Beauval General Store. An analysis was done and costs were competitive so the change in procurement was made.
  - Community Investment: Denison informed ERFN Chief that they had provided financial support to the Northwest Communities Economic Development Corporation Integrated Resource Management program.
  - Employment and Training:
    - Denison provided an update on the development and progress of the Wheeler River Project Driller's Helper Training Program.
    - Denison indicated that there were approximately 40 applicants for the Driller's Helper Training Program and the selection process was the sole responsibility of the drilling Contractor, given the program is run under their control they needed to have the confidence in the individuals selected for training in order to ensure the safety of all workers at the training site.
    - ERFN Chief was extremely upset to find out that neither of the two candidates selected were members of ERFN.
    - The majority of the remaining discussion in the meeting consisted of ERFN Chief reiterating that Denison must provide members of the ERFN with all employment opportunities first prior to contacting any other communities.
- Formal Agreement: ERFN Chief was then presented with the draft MOU which he accepted and agreed to take back to his councilors for review.
  - ERFN Chief was extremely vocal and expressed numerous times in strong language that no other communities need to be consulted as the land around the project is within their traditional territory.
  - In terms of benefits, the Chief re-iterated numerous times that priority of benefits should be directed towards ERFN. The Chief indicated he doesn't want to see IBA (impact benefit agreements) with other communities. ERFN is the only community that requires one.
- Denison commented that by law it is required to consult with all potentially impacted communities and they will continue with those discussions. Failure to do so would likely result in rejection of the project by regulatory agencies.

srk consulting

SRK Consulting (Canada) Inc.
Suite 205 - 2100 Airport Drive
Saskatoon, SK S7L 6M6

T: +1.306.955.4778
F: +1.306.955.4750
saskatoon@srk.com
www.srk.com

Meeting Notes
November 15, 2017, Saskatoon

Participants:
Denison Mines Corp: Peter Longo, Mark Liskowich (SRK)
Pinehouse: Pinehouse Leadership

Meeting Notes:
The meeting was the initial follow up meeting between Pinehouse and Denison following the execution of their Cooperation MOU.

- Denison provided an update on the status of the project. Commenting that the engineering studies on various aspects of the project are underway, with the intent of producing a prefeasibility study for the project at some time in the 2nd quarter of 2018.
- The prefeasibility study when completed will define the business case for the project. Denison's board will determine at that time the fate of the project. The studies to date look positive, but there are no guarantees at this time.
- Denison indicated that any "significant" business development opportunities associated with the project were at least 2 – 4 years in the future, assuming the progress of the engineering studies continue to produce positive results.
- Denison then explained that Denison was currently reviewing potential drill contractor bids, indicating that one would be chosen to complete the 2018 drill program that will be similar in scale to the program completed in 2017.
- Pinehouse Leadership indicated that Pinehouse has developed a relationship with Boart drilling and that they expect that both parties will be entering into a joint venture agreement shortly.
- In terms of the environmental baseline activities Denison provided an overview of the status of these studies, indicating that the majority of the terrestrial, aquatic and heritage baseline studies have been completed. Some follow up to these programs will occur over the course of the next year.
- Denison indicated their desire to return to the community to hold another public meeting in order to discuss the current progress of the project but as well to seek input into aspects of the project such as the preferred location of the water treatment discharge as well as the siting of the access road from highway 914 to the Wheeler River site. The data will be ready for presentation to the community in early January 2018.
- Denison also described a desire to integrate whatever TK data Pinehouse and the Kineepik metis Local had collected into the environmental baseline dataset being collected. Indicating that it is Denison's desire to integrate this information into the decision making process for the project as well as the environmental assessment.
- Pinehouse Leadership indicated that mapping of the primary areas was completed and work was underway for the secondary areas and the tertiary areas would follow.
- Denison indicated that Denison is willing to support the completion of the TK mapping under the premise that doing so is also of benefit to Denison and the Wheeler River project.
- A general discussion took place with respect to the method of future communication between representatives of Pinehouse and Denison as the process moves forward.
- Denison offered to provide information on upcoming work on a regular basis (quarterly / annually). This will allow Pinehouse the ability to assess the needs and prepare themselves to best capitalize on supporting these activities. Pinehouse agreed with this in principle and agreed to work out specifics (i.e. method of communication) in the future.
- The meeting was concluded with an agreement that the future communications would proceed as described above on an ad hoc nature until the parties felt a more formal structure was required.

Denison Mines Corp.
200 – 230 22nd St. East
Saskatoon, SK S7K 0E9

T: 306-652-8200
F: 306-652-8202

www.denisonmines.com

Denison Wheeler River Project Update to Ile a la Crosse Leadership

January 18, 2019
Denison Saskatoon Office
Meeting Notes

In attendance:
Denison Mines Corp.: Peter Longo (Vice President-Project Development), Mark Liskowich (SRK Consulting)
Ile A la Crosse: Mayor (Ile a La Crosse), CEO (Sakitawak Development Corporation (SDC))

Purpose of the meeting:

- **Introduce new CEO of SDC**
- **Inform the leadership of Ile a la Crosse that Denison was preparing a Project Description for submission to the CNSC and Saskatchewan Environmental Assessment in order to initiate the environmental assessment of the Wheeler River Project.**
- **Provide an overview of the details of the pending environmental assessment submission.**

Notes: Denison provided a presentation focused on:

- An overview of the global uranium market;
- A recap describing Denison Mines Corporation, the company and current holdings;
- An overview of the Wheeler River project;
- Denison's next steps for the Wheeler River project.
- An estimate of schedule and forecasted procurement needs for the Project moving forward.

A question-and-answer session followed the presentation.

- Mayor was curious to know how many jobs the project would generate and for how long. Denison indicated they expected approximately 300 employees would be required throughout the estimated 2 years of construction for the project. Following construction it is estimated that approximately 100 to 150 full time positions would be required throughout the life of the mine, approximately 10 years.
- Denison indicated the importance of taking the opportunity now to establish new businesses either organically or through the development of partnerships. Gaining experience over the course of the next 3-4 years will be important to Denison so that the businesses are qualified and capable to take on major construction contracts at Wheeler when construction of the project begins.
- Denison is willing to work with the community to help advance their ability to be ready.
- Mayor indicated that SDC has 25% ownership in Flyer Electric, an electrical contractor based in Birch Hills SK.
- Denison indicated that a couple of contracts supporting the exploration activities had been awarded to an Ile a la Crosse based business.
- Both parties agreed to meet on a regular basis moving forward. Denison indicated they are willing to meet with the Leadership at their request.
- Denison suggested they would be interested in coming back to the community to provide an update on the project at a community meeting near the end of the first quarter of 2019, tentatively in March 2019 after the project description had been submitted.

The meeting was adjourned.

Denison Mines

Denison Mines Corp.
200 – 230 22nd St. East
Saskatoon, SK S7K 0E9

T: 306-652-8200
F: 306-652-8202

www.denisonmines.com

Denison Wheeler River Project Update to Beauval Leadership
February 1, 2019
Denison Saskatoon Office
Meeting Notes

In attendance:
Denison Mines Corp.: Dave Cates, President and CEO, Peter Longo, Vice President Project Development, Mark Liskowich, SRK Consulting
Beauval: Mayor

Purpose of the meeting:

- Inform the leadership of Beauval that Denison was preparing a Project Description for submission to the CNSC and Saskatchewan Environmental Assessment in order to initiate the environmental assessment of the Wheeler River Project.
- Provide an overview of the details of the pending environmental assessment submission.

Notes: *Denison provided a presentation focused on:*

- An overview of the global uranium market.
- A recap describing Denison Mines Corporation, the company and current holdings.
- An overview of the Wheeler River project.
- Denison's next steps for the Wheeler River project.
- An estimate of schedule and forecasted procurement needs for the Project moving forward.

A question-and-answer session followed the presentation.

- The Mayor suggested that the sizable construction crew required to meet the needs of the Wheeler project during the construction phase was going to be a difficult task for Beauval to take on. They would like to be involved to whatever extent possible and would need to start looking for ways of maximizing this involvement. The Mayor indicated Beauval was willing to work with Denison to prepare the community and be ready to maximize opportunities to the extent that he was able to do so.
- The Mayor suggested there may be an opportunity to maximize apprenticeship programs during the construction phase that could turn into northerners being trained and certified as Journeyman trades people ready to take on the permanent positions at Wheeler following the construction phase.
- The Mayor suggested working with the broader leadership group on the west side with an effort to pool resources and work together with Denison as one entity to the extent possible. The Mayor was supportive of having one agreement between Denison and the Wheeler River project impact communities, but indicated it may be difficult to achieve.
- The Mayor also indicated intentions to continue to work with other west side communities to pool their resources in an effort to identify the current human resources pool available in the north.
- Denison indicated that preliminary conversations with [redacted], Northwest Communities had taken place and [redacted] was developing a position paper on this topic that would be provided to Denison.
- The Mayor appreciated the opportunity to speak with Denison and was encourage by Denison's efforts to involve the communities of the north, in particular Beauval.
- Denison indicated they would like to come back to the community to provide an update on the project, tentatively scheduled for around the end of march.

The meeting was adjourned.

Denison Mines Wheeler River Project
Key Person Interview with Bobby John

Summary

Meeting date: *October 29, 2019*
Meeting location: Denison's Wheeler River Project exploration camp
Interviewees: *Pam Bennett (Denison) and Mike Charlebois (Omnia)*
Version of meeting notes: *Final notes of meeting notes. These notes which were initially compiled October 29, 2019, by Pam and Mike and sent to Bobby for his review on November 15, 2019. Bobby reviewed the notes, and this version contains his edits and revisions. Bobby's revisions were sent to Denison on January 2, 2020. The review was undertaken to have Bobby check that we have accurately captured his comments and our discussion.*

Informed Consent

- Explained the purpose of the interview is to the support the environmental impact assessment for the proposed Wheeler River Project, and that the information shared will be included in summary format in the EIS
- Bobby confirmed that he provides Denison his consent to use this information for these purposes
- Ask whether he would like to verify the notes you've taken when completed
- Yes, the notes were verified by Bobby. Draft meeting notes were provided to Bobby for his review and comment. See information in 'version of meeting notes' above.

Cabins

- Can you confirm the location of your cabins in the area? Which is your primary cabin?
  - My main cabin is on the Wheeler River at Bobby's Pond. Secondary cabins on Russell Lake,
  - Philips Lake and family cabin on Cree Lake (Figure 1).
- Have the number of cabins in the area increased in the last 5-10 years? If yes, how has this affected you?
  - Yes, there have been more recreational leases granted/cabins put up around Russell Lake. There are too many cabins.
  - Property 300601 and Property 302955 (Figure 2) on Russell and Property 301072 and Property 301493 on McDougall are the older leases; the other cabins are newer.
  - Have you talked with [redacted] who is from [redacted] and has a cabin on McGowan? They have been trying to buy my cabin on Russell.
- Response: Yes, we have met with [redacted] about access road options. They have come into camp to talk about the project
  - The PA lands branch asked me about an application for a recreational lease (cabin) on [redacted] and my feedback was "no you shouldn't approve a lease here." But the Province went ahead & approved the application & there is a cabin there now.
  - There is now a hold on recreational leases in the area and maybe even in the north in general.
  - This has affected me because there are more boats on the lakes. More boats on the lakes leads to more overfishing, anglers also cut access trails to lakes, access trails impact caribou by increasing wolf traffic.
  - The recreational users are generally here for a few weeks in the summer; they effectively use cabins like a summer home. One cabin owner is around in the winter for ice fishing, etc.
  - Concern that the recreational users' fishing catch is not regulated the same way a commercial fisher is. The conservation officers have not come out to this area for years. He would like to see an increased presence of conservation officers in the area to enforce limits.
  - Some recreational users have criticized me for commercial fishing – almost accusing me of overfishing.
  - Some cabin owners run illegal outfitting camps such as [redacted].

Outfitting

- Which outfitters are active in the area?
  - Russell Lake Lodge – active since 1950s; he knows the owners well (Figure 2).
  - Wheeler River Lodge – he doesn't know this operator very well.
- Where are their lodges and/or outcamps?
  - Russell Lake Lodge is on the SE end of Russell with an outcamp at Kowalchuk Lake (Figure 2).
  - Wheeler River Lodge is on Moore Lake.
- Has the amount of outfitting in the area changed at all in the last 5-10 years? If yes, why do you think that is? How has this affected you?
  - No big changes in outfitting in recent years.
  - He has not noticed temporary wall camps being set-up.
  - The main activity in the area is fishing. Although some unknown individual was trying to bait bears in an area beside Russell Lake. The black barrels with bait are still there.

- Again, the issue of illegal outfitting: hard to prove but amount of people at cabins and boats indicates that there is more than just recreational use.

Trapping

- Confirm the extent of his trapping area – does he continue to use area along Moon Creek, up the Wheeler River to Russell Lake, back to Kratchkowsky Lake and onto Williams Lake?
  - Yes, he traps in the same general area (Figure 1).
- How has the area been recovering since the forest fires in the early 2000's?
  - No specific comment from Bobby on this question. Assume natural recovery following fire, as expected.
  - Bobby notes this fire was the result of the Elmer fire in 2007. The fire was started at an illegal cabin on [redacted]. Ref. Ken Ness, Sask. Environment, Meadow Lake office.
- What species does he target for trapping? Why?
  - Marten. Marten has gotten the best prices as of late. But even the price for marten is going down in recent years.
  - Right now, it is more worthwhile to fish commercially than it is to spend time trapping because fur prices, except for marten, are poor.
- Confirm timing is still between November and February?
  - Yes, this is the general trapping window.
- Does he eat anything off his trapline?
  - Mr. John will consume small lynx, beaver, and muskrat from his trapline but there are fewer around than in the past.

Commercial Fishing

- Where do you commercially fish? What species are targeted? Do you know the catch limits off hand?
  - In the area around Wheeler, I fish at Russell, McDougal, Moore, Kratchkowsky, and Moon lakes. I have other locations further from your site.
- Bobby also has summer fishing limits on the following lakes: Holgar, Morin, MacIntyre, Einarson, Phillips and Cree Lake
  - I generally pulse fish – fish for one year at a lake and do not fish it the following two years.
  - Fish using nets.
  - Target walleye as these currently have the best prices; also get jack, whitefish, trout. Although trout prices are lowest over the last 5 years.
  - Individual catch, limits are by weight.
- What time of year do you fish?
  - Winter fishing from ice on in the fall until April
- How many days of the year would you say you commercially fish?
  - Hard to say as it depends on fishing success and overall catch amounts. During the winter I may take a break around Christmas and in January if it is really cold. Otherwise, I check the nets every 24 hours.
- Who do you currently sell your fish to?
  - Sell gutted fish to the plant in Pinehouse. From there they go to Winnipeg, possibly Freshwater Fish Company.
- General notes:
  - Fishing is a big part of my income. Right now, it is more worthwhile to fish commercially than it is to spend time trapping because fur prices, except for marten, are poor.
  - Bobby licenses these lakes. The provincial resource/conservation staff will give information on applications to Bobby. If someone applies to fish one of these lakes commercially, and he isn't using the lake he may give a license.
  - Have tried fishing Williams Lake but it was very low in walleye so he doesn't fish there regularly.
  - Walleye is the most valuable catch => highest price per kilo at the fish plant

Country Food

- For the Millennium Mine, the assumptions used were that about half of your diet was country food, and half was store bought. Is this still the case? (If there has been a change, why?)
  - Yes, this is still accurate
- For the Millennium Mine, of the country food you eat, you said about half was fish and half was meat? Is this still the case? (If there has been a change, why?)
  - Yes, this is still accurate
- For the Millennium Mine, you indicated that jackfish were your preferred fish species. Is this still the case?
  - Yes, pike/jackfish is my preferred fish species.
- For the Millennium Mine, you indicated that you prefer moose over caribou. Is this still the case?
  - I don't think I ever said this. I prefer caribou to moose.
- Other species you indicate that you eat regularly are ducks/geese in the Spring, grouse/ptarmigan in the Winter, and rabbit. Is this accurate?
  - Yes, this is still accurate. I will eat these animals if they are available.
- Are you still hauling water directly from the lakes near your cabins? Can you show me where on the map?

  - Yes, this is still accurate. I haul water from the lake closest to each of my cabins.
- Do you swim in any lakes in the area?
  - Yes, I swim in many different lakes
- Do you gather berries or any plants? If so, from what and from where.
  - I might eat some berries while I am walking around but I don't gather berries. I don't drink Labrador Tea.

Aquatic Baseline

- Can you check this list (Aquatic baseline report Table 3-9 and 4-3; lakes: lake chub, spottail shiner, longnose sucker, white sucker, lake whitefish, lake trout, northern pike, burbot, ninespine stickleback, yellow perch, walleye. Streams: lake chub, spottail shiner, longnose sucker, white sucker, arctic grayling, norther pike, burbot, ninespine stickleback, slimy sculpin, yellow perch, walleye) and see if you can validate the species here – have our biologists missed anything?
  - Sounds like you have identified all the fish species in the area. Even those little ones with the spiny backs.
- Can you validate the fish spawning areas we have identified in this figure? Do you agree? Are there any other spawning areas we have not identified?
  - Northern pike spawning area in creek south of Williams Lake (Figure 3).
  - Lake whitefish spawn in creeks/rivers.
  - Trout spawning areas in Russell Lake: one south of LAB area (Figure 3); around island and rocky shoals to both north and south of island (Figure 3).
- Do you have any feedback on the fish community and fish habitat figures in 3-11 (Kratchkowsky) and 3-16 (LAB-2: Russell)?
  - Added two rocky areas (potential spawning areas) in Kratchkowsky Lake (Figure 4)
  - Aquatic habitat in Russell Lake at LAB-2 area looks accurate, it is straight sand here, no rocky areas, emergent veg along the edge (Figure 5).
- What fish species are collected for:
  - Food – natives prefer jackfish, whitefish, trout; whites go for walleye
  - Ceremonial purposes – don't know of any
  - commercial purposes (e.g., bait fish) – mullet (white sucker) collected for bait. Walleye is the most valuable catch => highest price per kilo at the fish plant
- Any specific locations that you or other fishers access/fish for:
  - Food – Bobby fishes at the same locations where he commercial fishes
  - Ceremonial purposes – not applicable.
  - Commercial purposes (e.g., bait fish) – see commercial fishing notes in separate section.
- Are there any current barriers that limit where people can go, where people can get to (i.e., how far people will venture off the readily accessible trails/paths)
  - I have noticed people (individuals with cabin leases) are cutting quad trails into further away lakes. There is one north of [redacted].
- General notes
  - The only place I have noticed different fish is at Moon Lake. The jackfish in Moon Lake are straight silver with no markings. It is quite distinctive.
  - Some walleye on Russell Lake have some large cysts.

Terrestrial Baseline

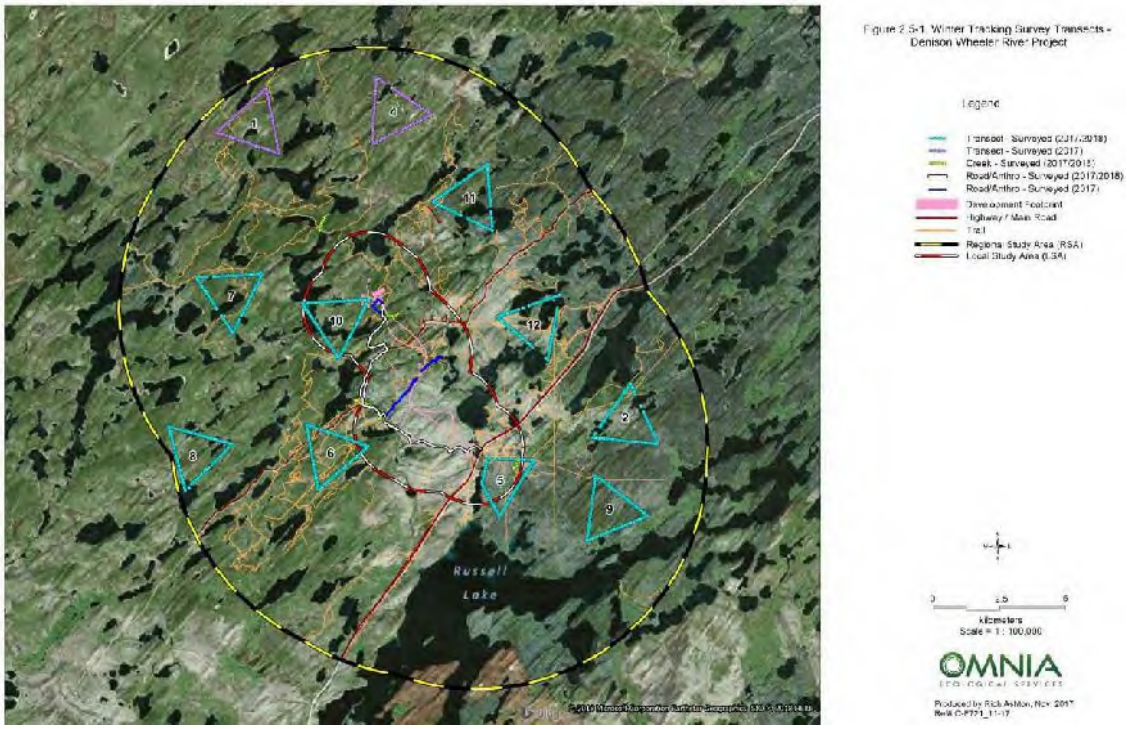
Moose

- The area to the north of the Wheeler River Project regional study area (from maps) has generally been better for moose than the local project area. The area east and north of Three Mile Lake, and Omnia winter tracking transects #11 and 4 (see Omnia Terrestrial Baseline Report, Figure 2.5-1; and image included below).
- He sees more caribou and less moose. He believes this is a natural change and moose are moving further south.

Caribou

- Woodland caribou use of the area has changed since highway 914 (Key-McArthur Road) was built. Caribou don't seem to be bothered by visual sightings of vehicles (smaller trucks) but seem to react to regular traffic of larger bigger vehicles and are sensitive to the vibrations.
- He sees more caribou and less moose. When he goes out to check his traplines in the winter he sees caribou quite regularly. He also sees caribou in the summer.
- Caribou do travel through areas of younger forest and burns to get to areas that are more desired
- Caribou travel on bush roads. Often see tracks on roads, trails and handcuts.
- Identified area east of Highway 914 and NE of Russell Lake, sort of between Russell Lake and McDougall Lake (corresponding with Omnia winter tracking transects #5 and #9 [see Omnia Terrestrial Baseline Report, Figure 2.5-1; and image included below]) as an area where caribou are commonly seen in the winter. There are tall trees here, some small hills with protected valley areas, and it seems sheltered. There is caribou moss in this area.

- Caribou will utilize areas of younger forest with pine regeneration and in tougher years, especially deep snow, will eat the tips of fresh growth off the younger pine trees; this is especially the case when there are years with a bad snow crust. Bobby discussed this with his uncle who is in his 80s and he confirmed he has seen caribou eat tips of branches. Moose will also do this
- Overall, there are the same number of caribou in the area over the years but there is less moose
- Caribou will utilize lake ice in late winter when the snow is shallow/compacted, and it is sunnier
- Barren ground caribou were last seen in the north Cree Lake area around 1983. Mr. John believes they no longer come as far south because of the large fires that have burned across the north. He felt these fires may have created a barrier in search of food.



Wolves

- Wolves travel on bush roads.
- Saw a pack of about 18 wolves recently.

Marten, Fisher and Wolverine

- In recent memory, marten is much more commonly observed compared to fisher. Probably 9 or 10 out of 10 would be marten. In fact, last year Mr. John caught 90 marten and no fisher
- Marten are typically caught during the winter months (Nov to April) using a tree mounted box with bait and a snap trap (conibear?)
- Wolverines are observed in the area occasionally but are not around consistently. He has not observed a change in wolverine over the years.

Prey Species

- In recent years, there are fewer rabbits (snowshoe hare) and bush chickens (grouse species). Also, way less ptarmigan in winter. Less mallards and Canada geese, more surf scoters (*Melanitta perspicillata*).
- In recent years, the number of squirrels has been high. Too many in fact.

Birds

- There are fewer loons on Cree Lake even though the number of fish caught here remains unchanged. There are still loons at Russell Lake. Russell Lake also has a growing population of Red Throated Loons (*Gavia stellata*).
- Also, way less ptarmigan in winter. Less mallards and Canada geese, more surf scoters (*Melanitta perspicillata*).
- An increase in American pelican occurrence, in the Cree Lake area in particular, has been observed
- Whooping cranes have been observed along the Wheeler River and probably nest along Moore Lake based on behaviour (nest defence / return to specific after being disturbed) Sandhill cranes are observed along the Wheeler River
- There have also been some reports of whooping cranes along the Cree River too

Amphibians

- [Listened to wood and chorus frog calls on Mike's phone]
- In early spring he regularly hears wood frogs near his cabin on Bobby's Lake. So many in fact that he has to close his windows.
- He has not heard chorus frogs.
- He is curious about where the frogs go – there seems to be so many frogs in the spring, but then they are not noticeable and hard to see after springtime.

Land Use and Lake Names

- Do you know of a local name for some of these lakes? (show aquatic baseline overview map, specifically LA-5, LA-6)?
  - LA-5/LA-6 is Whitefish Lake
  - What Denison has referred to as LA-5 and LA-6 Bobby considers one lake. There is a narrows between these basins and not a rapids connecting them.
- Can you comment on the notations on the ERFN land use map? Do you know the timeline for when these notes/data were collected? Are they historic use or current use? Can you explain who some of these people are?
  - He doesn't agree with a lot of what is on these maps. Agrees to provide Denison an annotated map to outline similar features, special areas, trapping areas, wildlife sightings, etc. (see action items at end of document)
  - He explains who one of these people are, where they are from, where they moved, and whom they married.
- Can you comment on who is using the area (besides cabin owners), what they are doing, any access concerns, etc.
  - If the gate at Key Lake is removed or the road is redesigned to go around Key Lake allowing unimpeded access to the north, there would be lots of concerns about the increase in the number of people coming north into this area.
  - However, many people can currently bypass the Key Lake gate and drive along the Fox Lake road. There is a bridge in place (near the south part of Fox Lake road) for access to a drilling camp and this bridge is over a fairly deep river. If this bridge came out, it would restrict access further north along the road.
  - More people have quads these days.
- Feedback on trails, cut lines, road use in the area
  - Mr. John prefers using trails that he has created for accessing fishing, trapping and hunting locations
  - Mr. John is not opposed to reducing the overall footprint in the area and closing off some access (this discussion was in the context of improving caribou habitat integrity)
  - However, Mr. John also noted that wolves, caribou and black bears use the trails/lines and wonders why we would decommission something they use
  - Mr. John would be in favour of closing off or fully decommissioning the Fox Lake Road to general public travel. Includes pulling bridges and making stream crossings impossible to pass through with a truck or ATV.
- Other general comments on land use:
  - Bobby noted there is an area with old core boxes with NW end of Kratchkowsky
  - Bobby wants the abandoned exploration camp (the old Kinetex camp; west of Highway 914 on the road towards Wheeler) cleaned up.
  - He also wants the pit at km 212 oh Highway 914 cleaned up and backfilled, he has talked to the environment guys about this many times but nothing happens, Drillers and campers keep throwing garbage there.

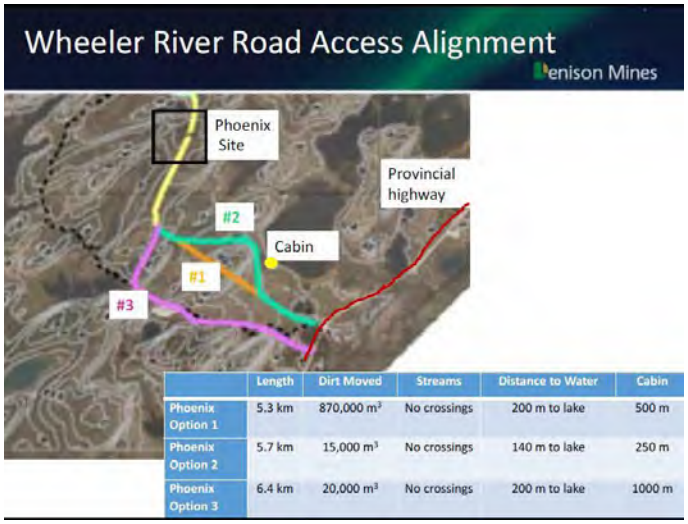
Climate Change

- Have you noticed any environmental changes that may be related to climate change?
  - I believe in climate change.
  - I have noticed some changes in what animals are here and changes over time including:
    - Some species are disappearing. In the past bear and moose were much more common than they are now. I think moose are moving further south.
    - There are fewer loons on Cree Lake even though the number of fish caught here remains unchanged. There are still loons at Russell Lake.
    - There are American pelican at Cree Lake now. They were not here in the past.

Wheeler Project Options and General Discussion

- Road access routes from Highway 914 into Phoenix area:
  - Of the three options, Bobby prefers option #1 (image below). If he was the company this is what he would do, since it is the straightest line and maybe lowest cost.

- Thinks the power line will come straight in&not follow the road alignment (if the preferred option for Denison is #3).



	Length	Dirt Moved	Streams	Distance to Water	Cabin
Phoenix Option 1	5.3 km	870,000 m³	No crossings	200 m to lake	500 m
Phoenix Option 2	5.7 km	15,000 m³	No crossings	140 m to lake	250 m
Phoenix Option 3	6.4 km	20,000 m³	No crossings	200 m to lake	1000 m

- Water treatment options: Presented the discharge location options (figure below)& the following comments are from Bobby:
  - My problem with these options is that all of these lakes flow towards Russell. Fish travel. If there are effects in one of the smaller lakes, like Whitefish Lake, fish can easily move from here downstream into Russell Lake.
  - If you discharge water into Whitefish Lake, I would like to see someone drink water out of McGowan Lake.
  - Russell is one lake where I commercially fish. How will this effluent impact the water quality, fish health? Will I be able to sell fish from here?
  - If there is going to water pollution, I just want to know.
  - What will be the frequency of water quality monitoring downstream? I want to know this as a sampling plan becomes more developed.
  - Information sharing is important to me. I want to be kept up to date.
  - Key Lake effluent comes into the SW part of Russell Lake and Cameco tests the water here & they tell me the water is ok.
  - Mr. John is less concerned with the downstream effects of effluent on terrestrial animals compared to the potential effects on fish which would directly affect commercial fishing sales.

- Project Mining methods - Directional drilling versus ISR
  - Denison needs to be much more clear that the mining solution is acidic. This is really important. When I was here in August (for the site tour) everyone was talking about water and there as not much mention of acid.
    - ➢ Denison's response: perhaps this was because the summer hydrogeological work was all done using water. But yes, we need to make sure everyone knows the solution we are proposing to use for mining is an acid. In terms of strength it is between stomach acid and battery acid. We heard your comments in August during the site tours and have made conscious efforts to improve our communication on this topic so it is more clear.
  - Is that acid going to stay in the ground?
    - ➢ Denison's response: after mining is complete, the freeze wall will remain in place while decommissioning is completed.

This will include neutralizing and cleaning the area in the mining chamber. Only after the groundwater in the mining chamber has been adequately cleaned up will the freeze wall be turned off and the natural groundwater flow re-established. Also the mining chamber is 400m below ground and the general groundwater flow is that deep groundwater will stay deep; it doesn't move upwards and downwards.

- How will the ground be frozen?
  - Denison's response: explained the freeze holes will have a low temperature brine circulated in enclosed tubes. The lower temperature brine will freeze groundwater (water in the small spaces of the rock). We expect the freeze wall will be about 10m thick.

- General comments:
  - At this time, Mr. John felt a discussion, at the Wheeler Camp, was sufficient and that he would like to visit the site later in the winter 2020 or spring 2020 when things have changed and/or ongoing work was underway.
  - He wants to be included in future updates. As the environmental assessment advances and there are more details to share about the technical work, opportunities to provide feedback on monitoring programs, etc. he wants to be an active participant in the process.

List of Figures

Figure 1: Overview map with cabin locations, settlements, land use information
Figure 2: Regional lakes, leases
Figure 3: Regional spawning areas
Figure 4: Spawning areas:
Figure 5: Russell Lake (north area)

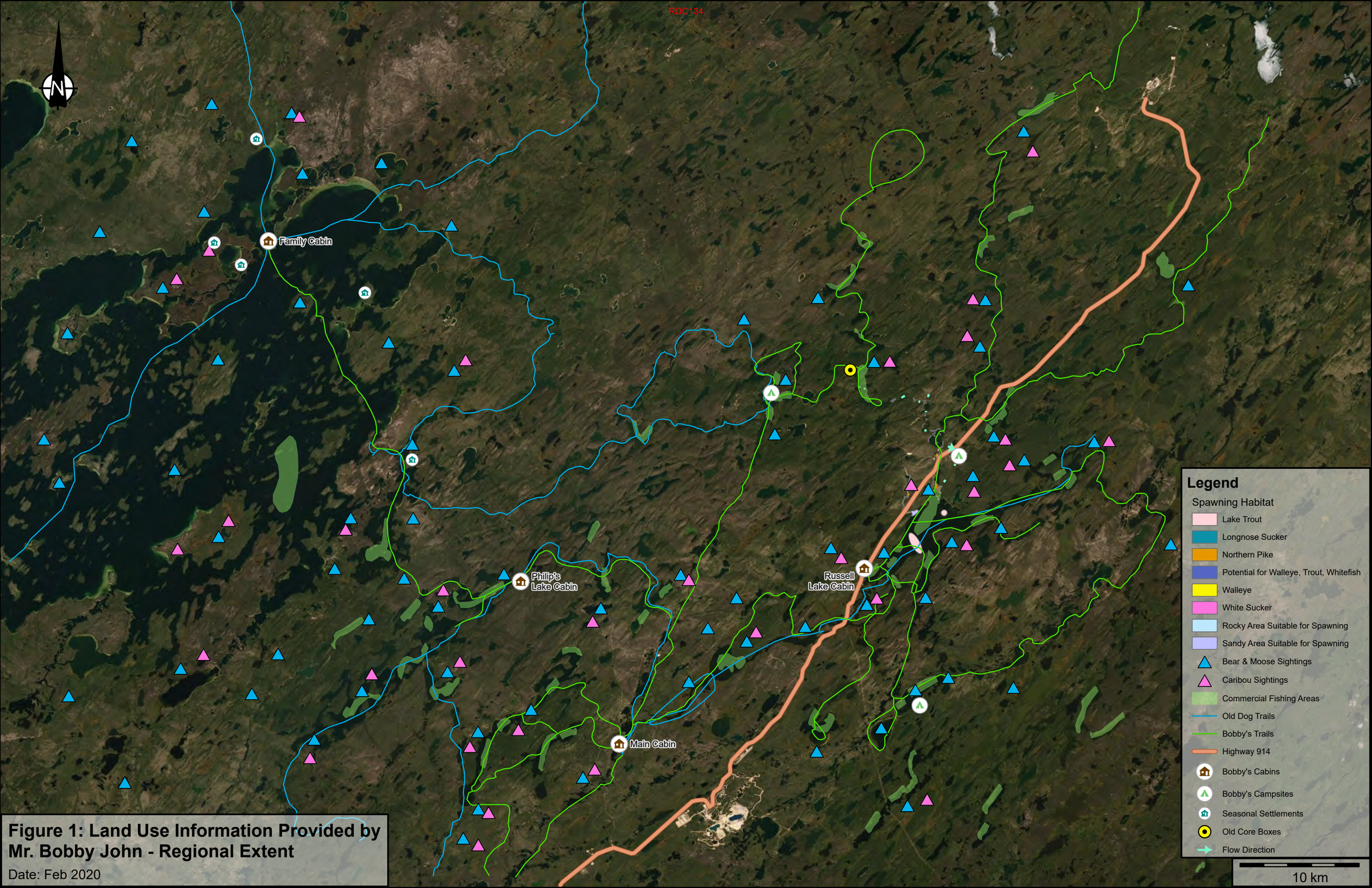
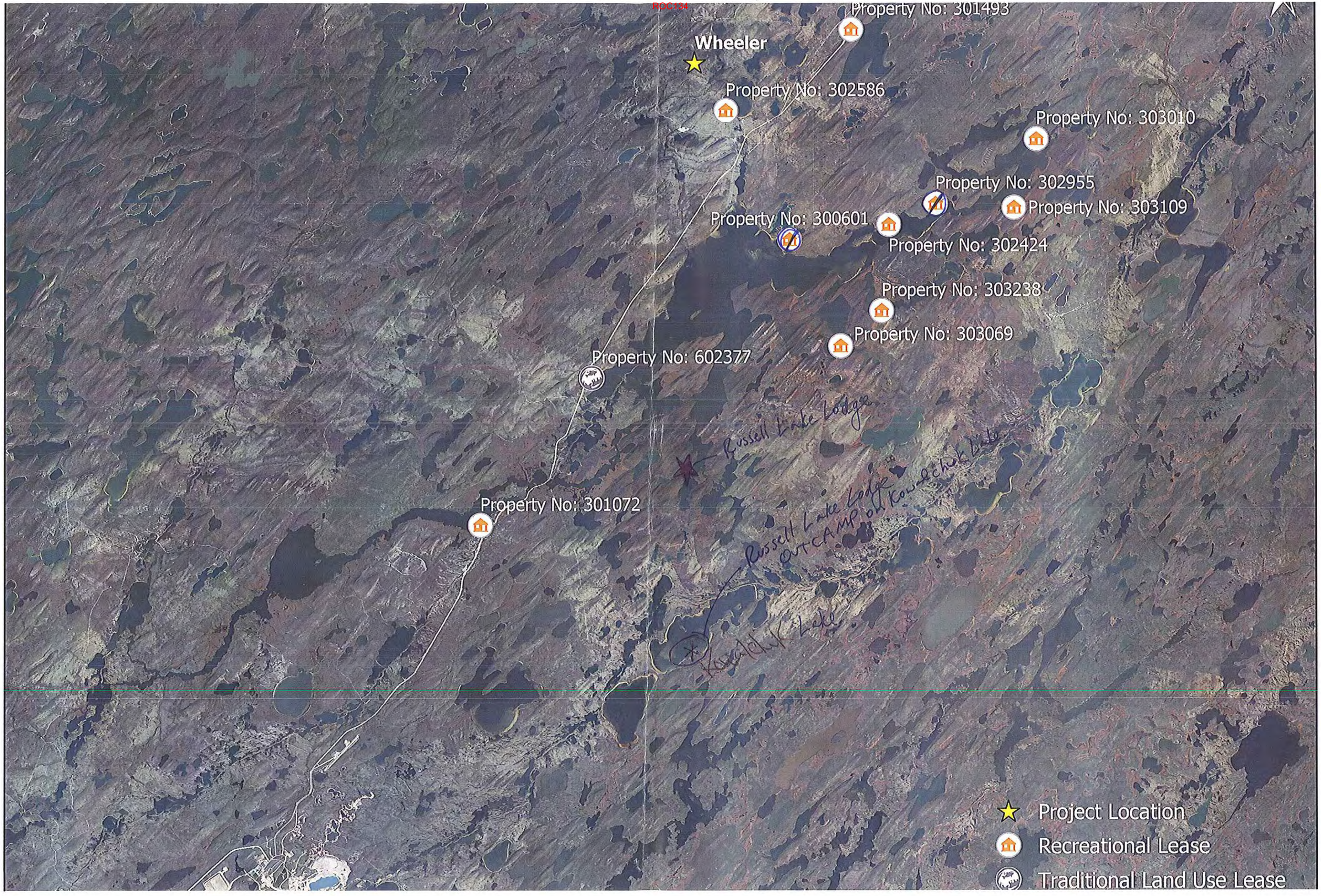


Figure 1: Land Use Information Provided by Mr. Bobby John - Regional Extent

Date: Feb 2020



Ø - these two cabins have been here longest.

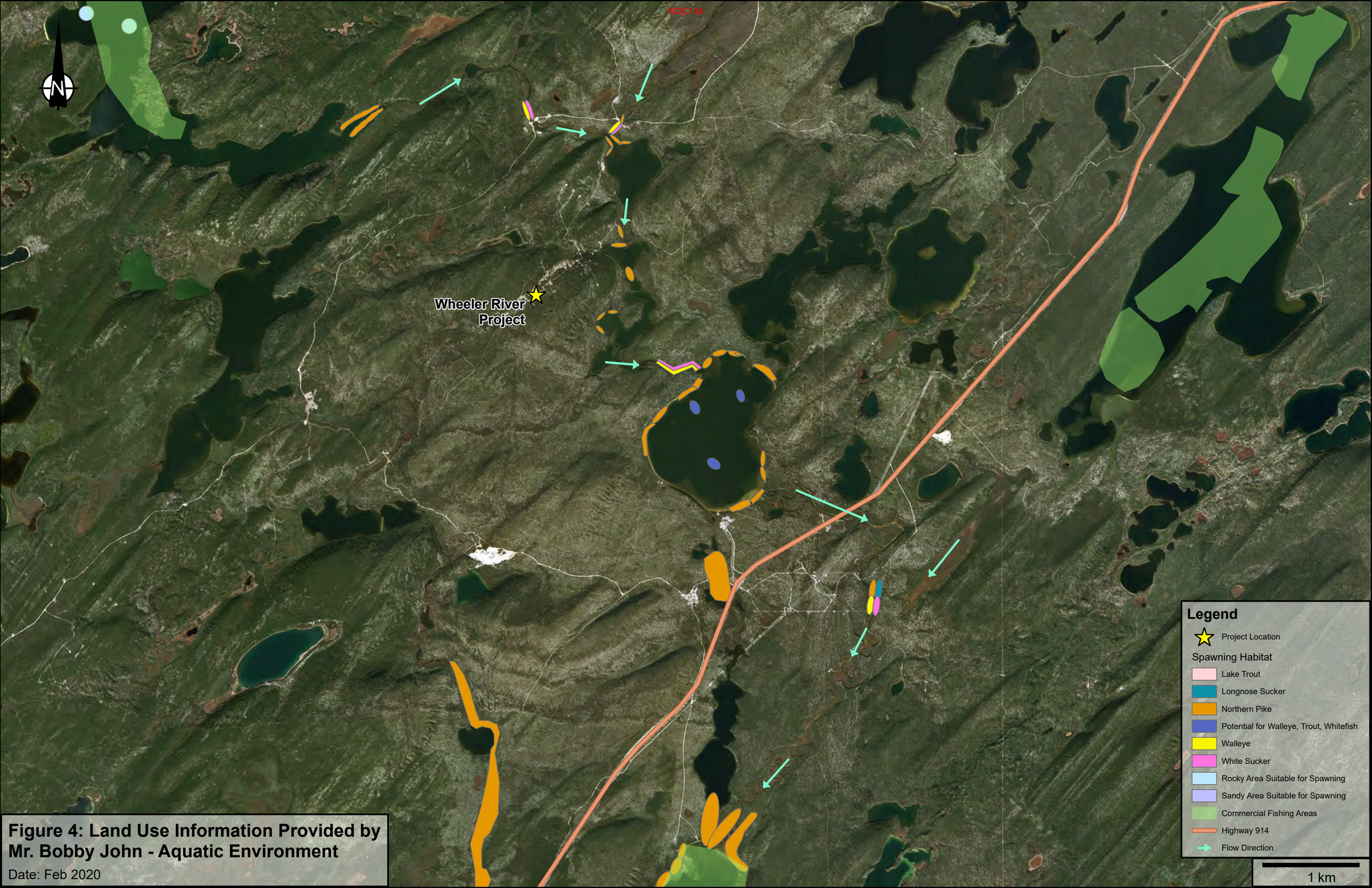


Figure 4: Land Use Information Provided by Mr. Bobby John - Aquatic Environment

Date: Feb 2020

ROC134
Legend
Spawning Habitat
Northern Pike
White Sucker
Walleye
Longnose Sucker
Lake Trout
Potential for Walleye, Lake Trout, Lake Whitefish
Rocky Areas
Old Core Boxes
Flow Direction
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

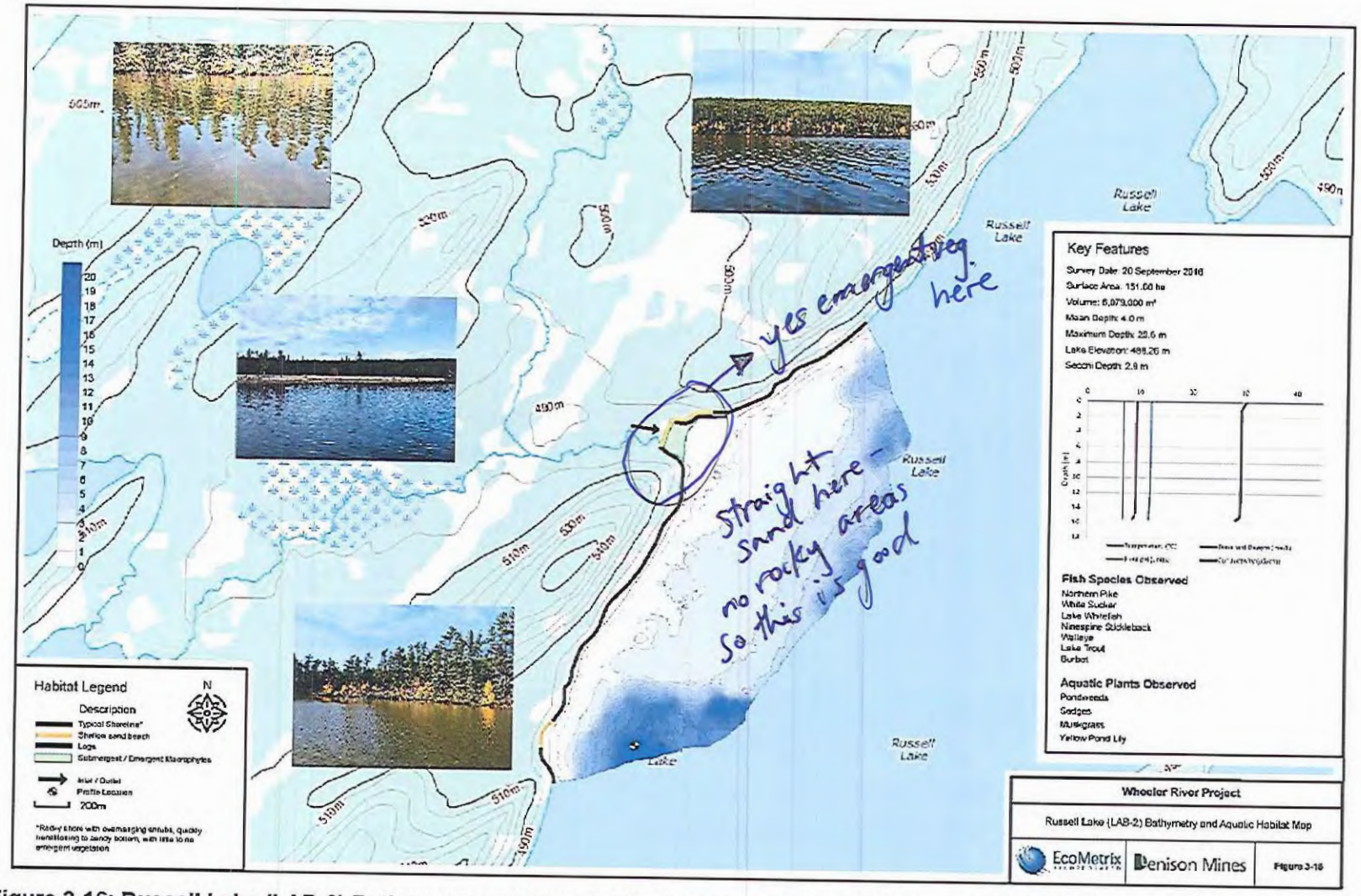


Figure 3-16: Russell Lake (LAB-2) Bathymetry and Aquatic Habitat Map. Typical shorelines are depicted with photograph taken within the vicinity of the Lake.

ROC135

Denison Mines

Uranium Development & Exploration

The Athabasca Basin, Northern Saskatchewan

January 2019 | Wheeler River Update

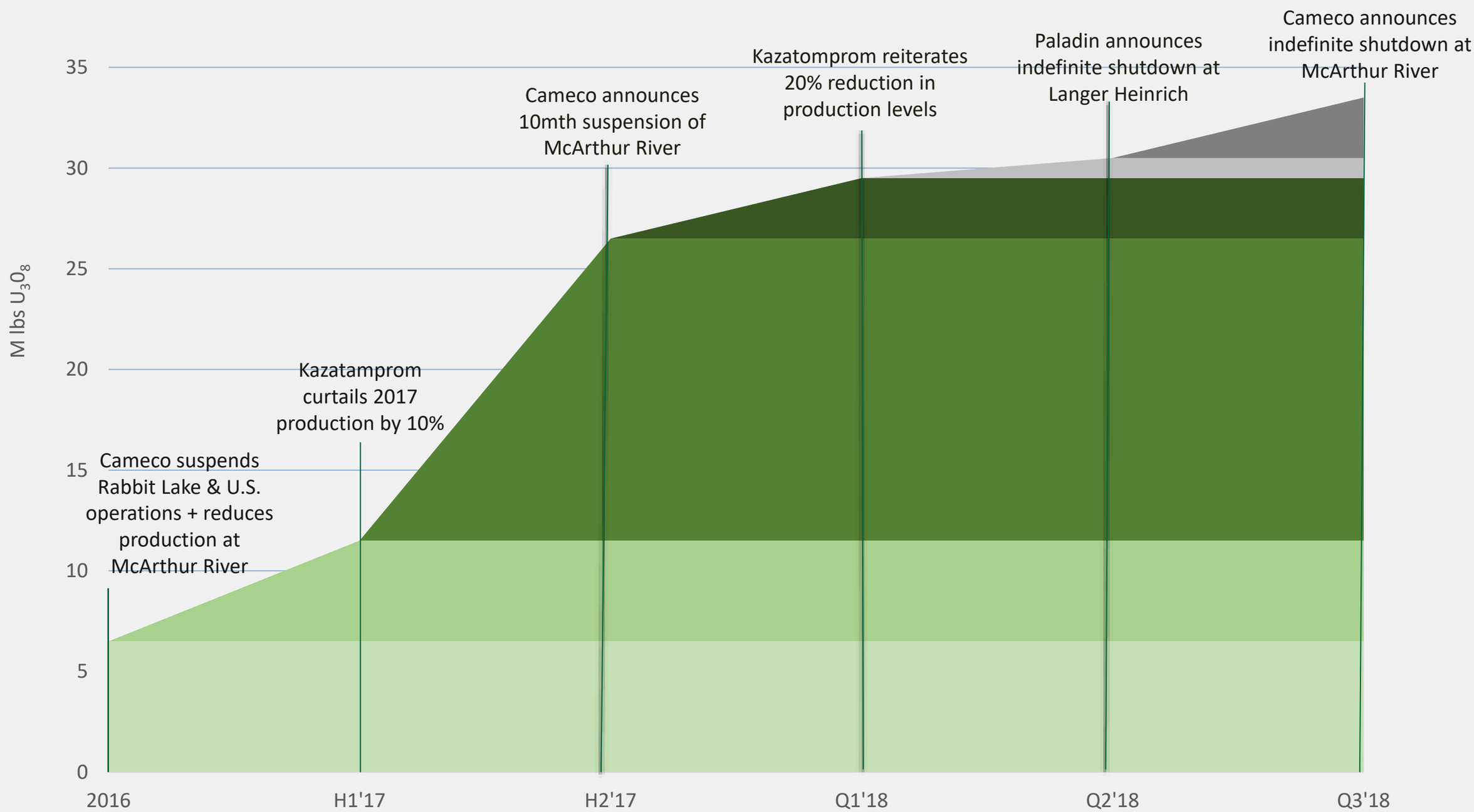
Agenda

- **Market Update**
- Company Update
- Wheeler River Project Update

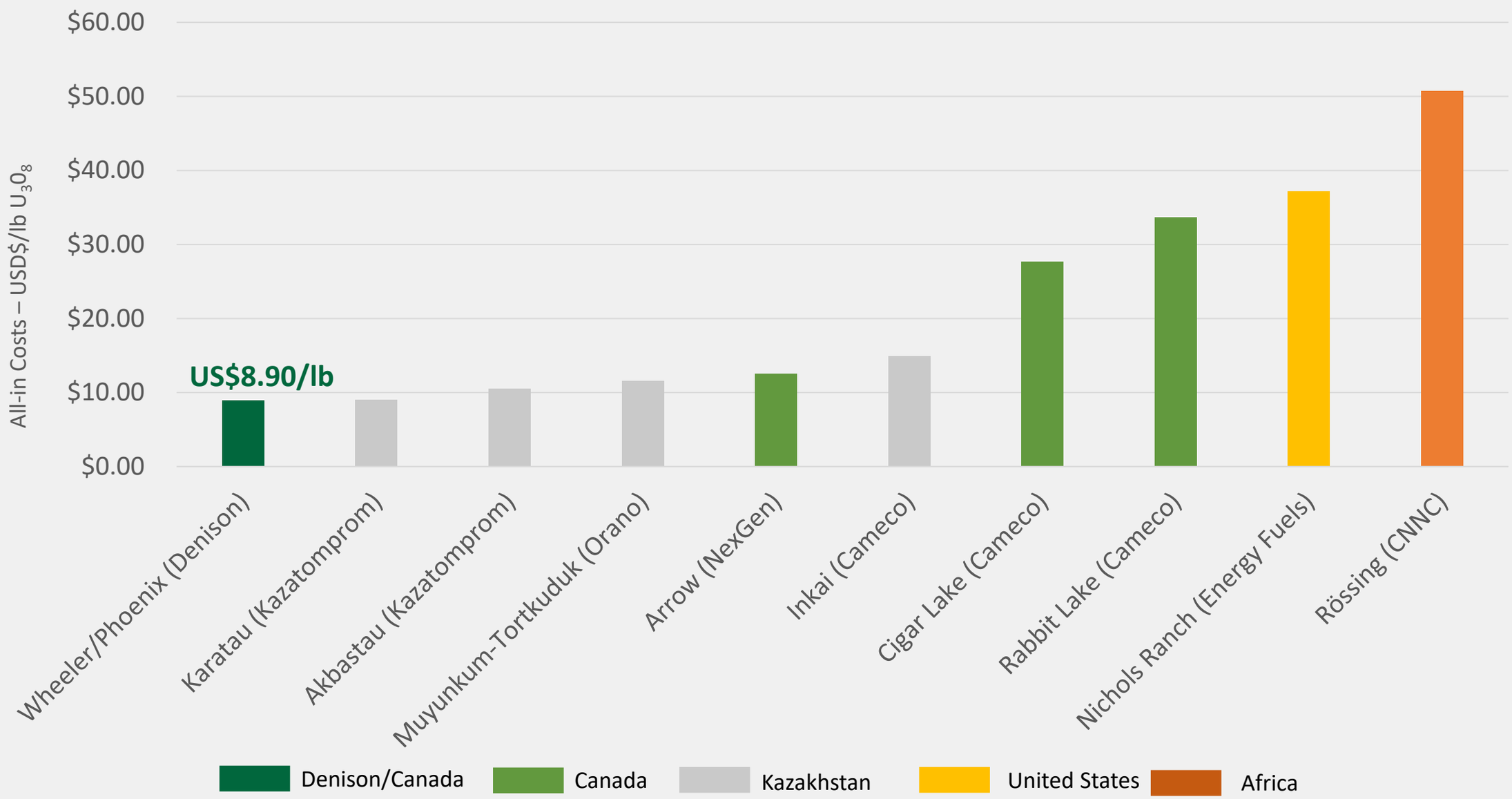
Current themes in the nuclear energy / uranium mining industry

1. Future demand narrative remains positive, despite several recent challenges
2. Significant decisions to curtail production have been made by largest uranium producers to balance an over-supplied market
3. Long-term contract coverage from the previous uranium bull cycle is coming to an end, removing a “lifeline” that has helped high-cost mines
4. Dysfunctional project pipeline may not be able to deliver new production in time to replace mines that will drop off
5. Utilities are complacent about need to contract and paralyzed by uncertainty created by Section 232 Trade Petition

Production Curtailments:
Close to 35M lbs U_3O_8 per annum removed from market



Sample of global production costs[1]: All-in costs for select producing & planned uranium mines



Denison Mines

NOTES: (1) Chart data, including all-in costs, have been taken from UxC's estimates on Worldwide Production Costs as of September, 2017. Wheeler/Phoenix costs are per Denison's Pre-Feasibility Study for the project, available at www.denisonmines.com or on SEDAR and EDGAR

U_3O_8 Spot Prices On The Rise Again
Phoenix Operating Costs Remain Well Below Industry's 20 Year Low

Denison Mines

NOTES: (1) Phoenix operating costs are per Denison's Pre-Feasibility Study for the project, available at www.denisonmines.com or on SEDAR and EDGAR

ROC135

Agenda

- Market Update
- **Company Update**
- Wheeler River Project Update

Denison Mines

ROC135

Diversified Athabasca Basin Asset Base with Superior Development Leverage

Strategic Project Portfolio:

- 90% interest in Flagship **Wheeler River** project [1] – largest undeveloped uranium project in infrastructure rich eastern Athabasca Basin
- 22.5% interest in operating **McClean Lake Uranium Mill** – 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 services contract with Uranium Participation Corp. (TSX-U), and Denison Environmental Services (DES)

Denison Mines

NOTES: (1) See Denison' news releases from January 17, 2017 and September 4, 2018 for additional details.

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

Denison Mines

All Season Highway / Haul Road

Provincial Power Grid

ROC135

Disciplined plan for 2019[1]: Highlights & potential catalysts

- **Wheeler River - $10.3M budget (100% basis)**
  - Initiation of the Environmental Assessment
  - Commencement of ISR wellfield tests
  - Initiation of metallurgical ISR pilot plant
  - Discovery focused exploration program targeting ISR amenable satellite deposits
- **Waterbury Lake - $1.8M budget (DML funded)**
  - 7,300 metres of diamond drilling in 18 holes,
  - Focused on Midwest regional structure, including follow-up on mineralization discovered in 2018 at the GB Trend
- **Hook-Carter - $1.4M budget (DML funded)**
  - 3,900 metres of diamond drilling in 6 holes,
  - Focused on completing the first phase of reconnaissance exploration along the 7.5km of the Patterson Lake Corridor

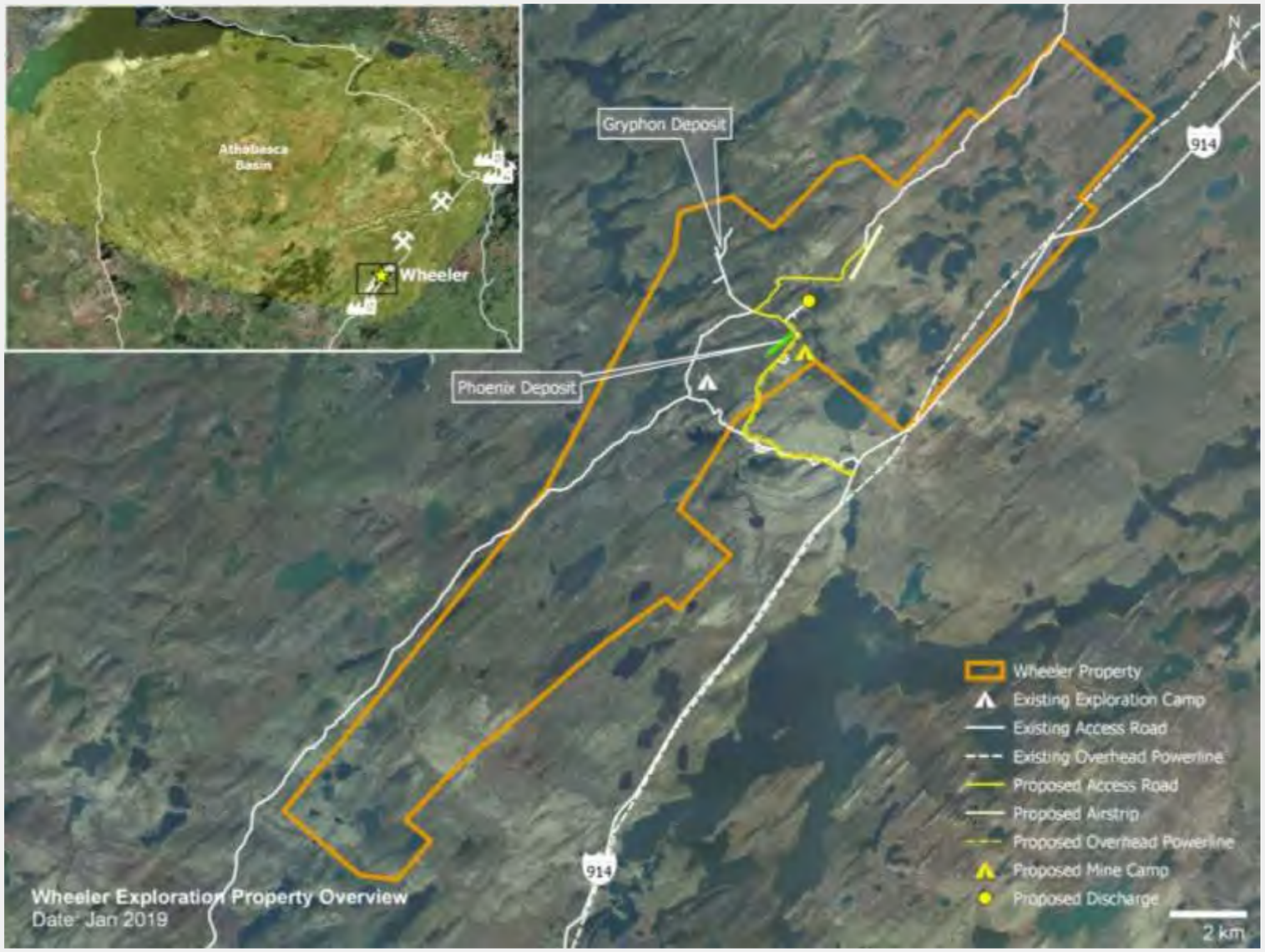
Denison Mines

NOTES: (1) See Denison' news releases from December 18, 2018 and January 9, 2019 for additional details.

Agenda

- Market Update
- Company Update
- **Wheeler River Project Update**

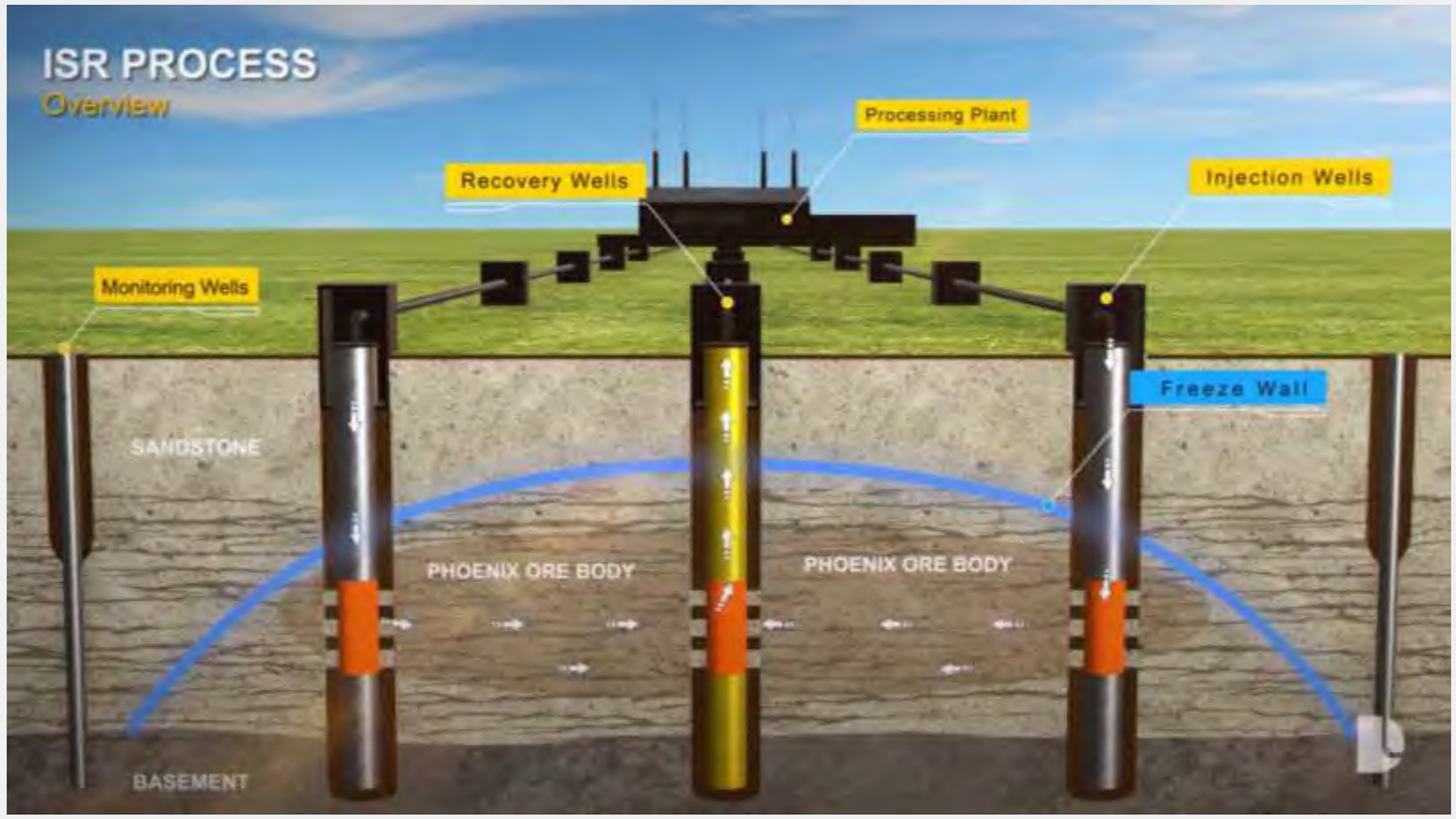
Wheeler River Project Update: Positive Results from Pre-Feasibility Study ("PFS")



2018 Highlights:

1. **Phoenix Deposit:** Mining via In-Situ Recovery ("ISR") with on site processing
2. **Gryphon Deposit:** Mining via UG longhole stoping with ore processing at McClean Lake
3. **Advancement Approved:** Unanimous support from Denison Board of Directors and Wheeler Joint Venture partners to advance the Phoenix deposit to the Environmental Assessment ("EA") process and Feasibility Study ("FS") stage
4. **Gryphon Deposit:** Investigate additional opportunities for improvement at the PFS level

Phoenix Operation:
Selection of ISR mining method

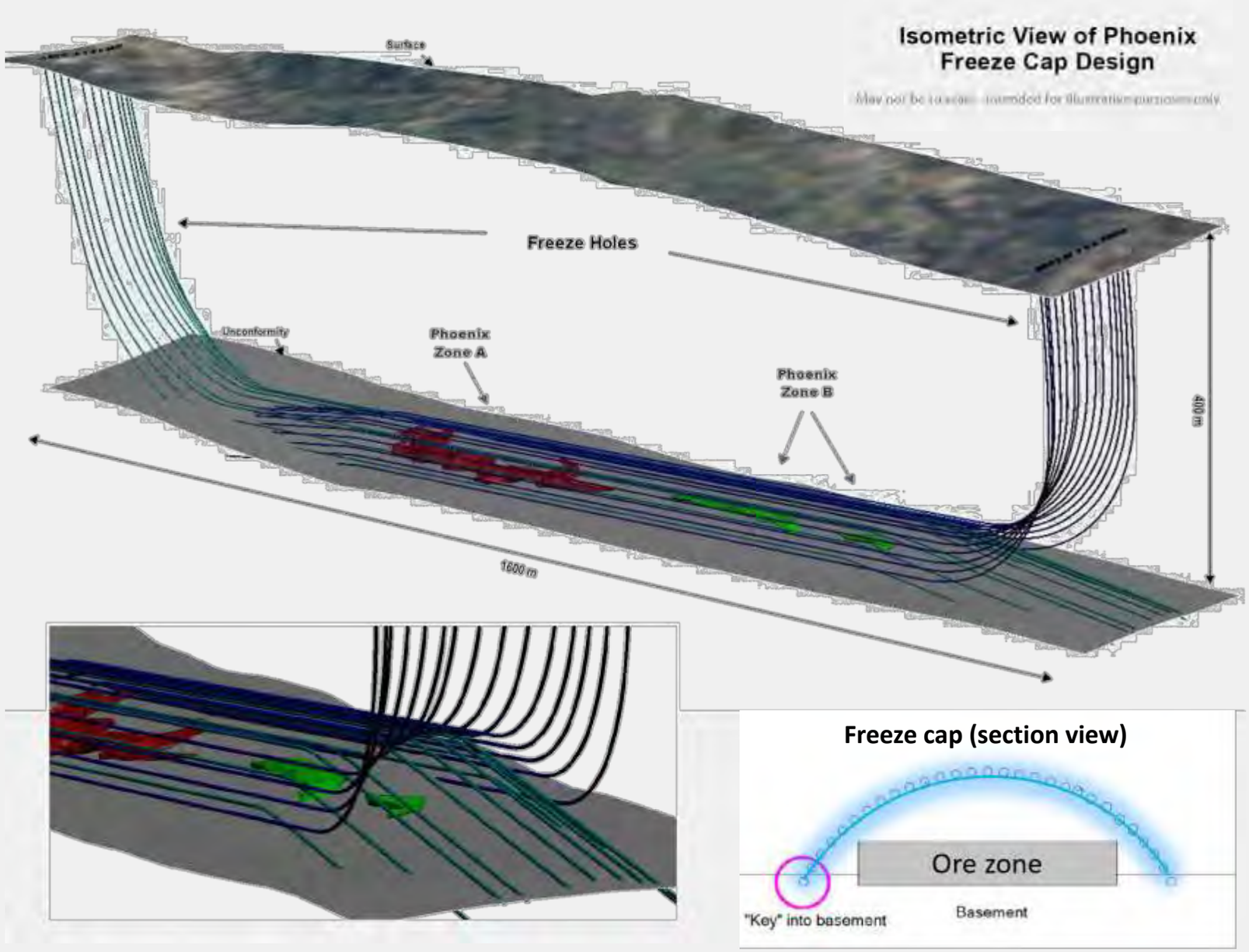


ISR Mining Process[1]:

1. Mining solution (low pH or acidic for Phoenix) is pumped through the orebody via cased injection well;
2. Solution dissolves the uranium as it travels through the orebody;
3. Solution – now containing disolved uranium is pumped back to surface via cased recovery well;
4. Solution is sent to a processing plant on surface for recovery of the uranium;
5. Solution is re-conditioned and returned back to well field for further production

NOTES: (1) See Denison news release dated September 24, 2018 for additional details regarding the PFS results.

Phoenix Freeze Cap:
Novel concept to contain mining solution using established technology



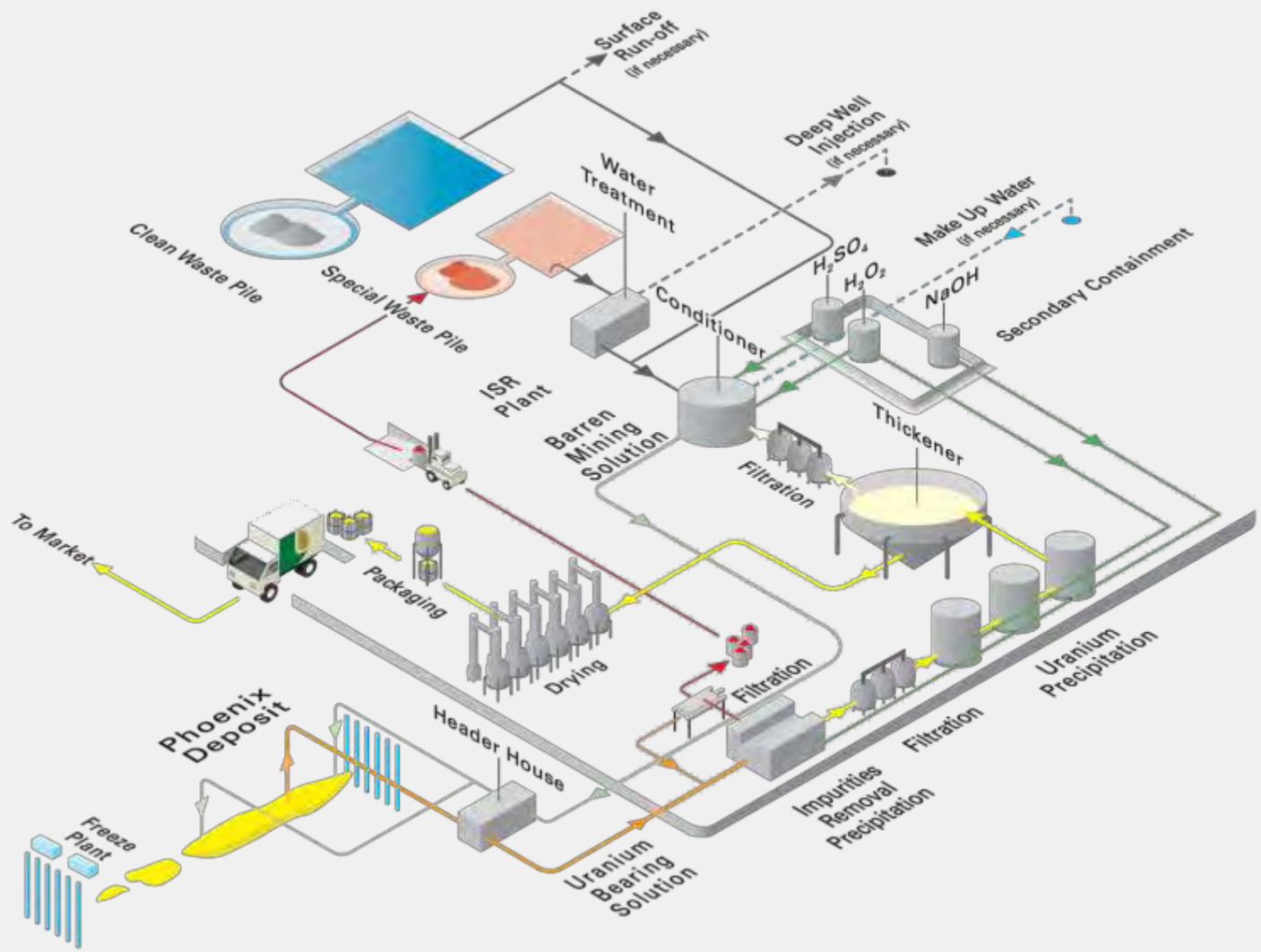
Artificial freeze cap replicates confining layer typically required for ISR mining operations[1]

- Parallel cased holes drilled from surface and anchored into impermeable basement rock surrounding the Phoenix deposit
- Circulation of low-temperature brine solution through cased pipes will freeze groundwater in sandstone surrounding the deposit
- Up to 10 metre thick freeze wall, together with basement rocks will encapsulate Phoenix deposit

✓ **Eliminates common environmental concerns with ISR mining and facilitates controlled reclamation**

NOTES: (1) See Denison news release dated September 24, 2018 for additional details regarding the PFS results.

Phoenix ISR Processing Plant:
Closed loop system and simplified plant design eliminates the need for discharge



May not be to scale. Intended for illustrative purposes only.

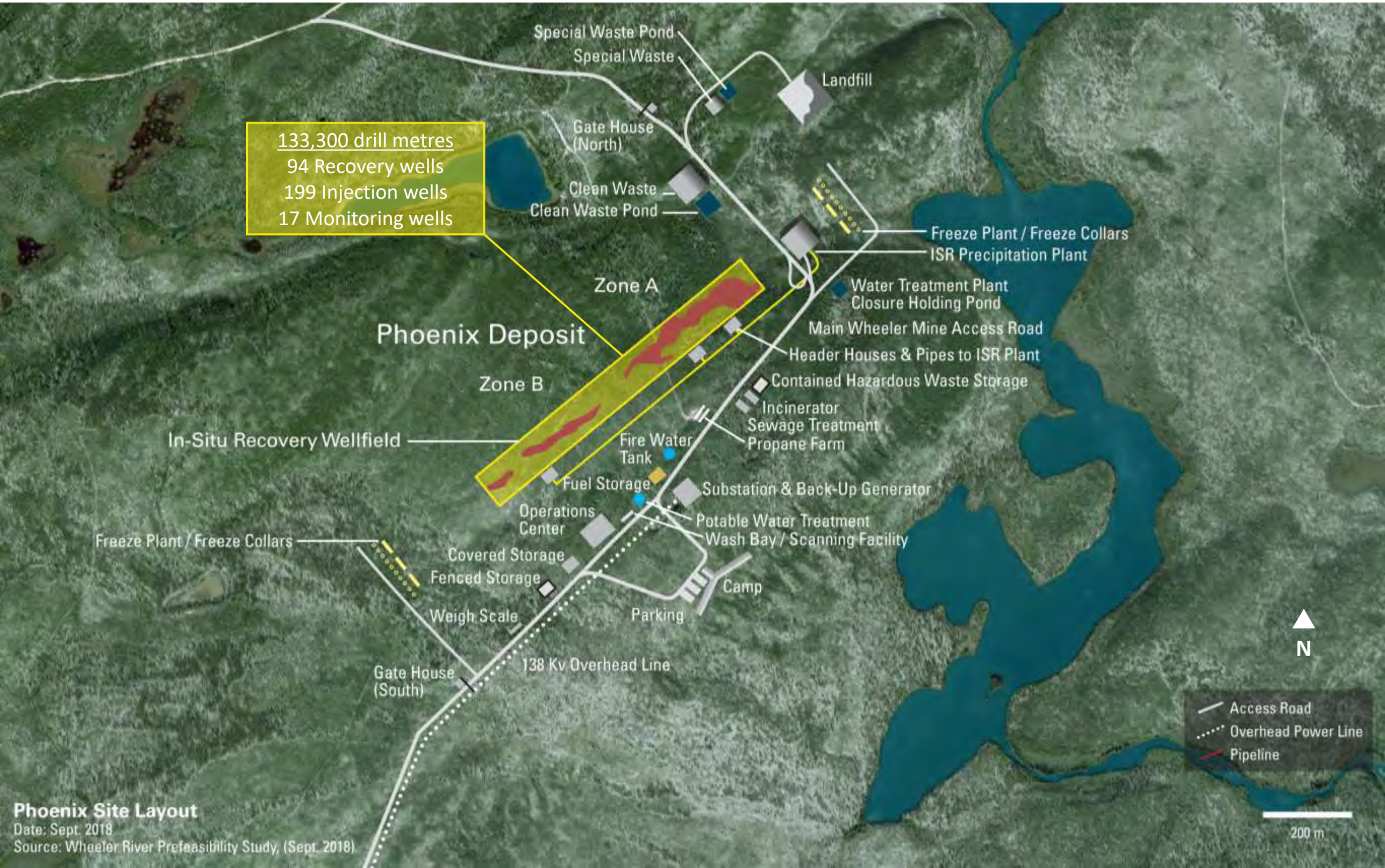
On-Site Processing Plant[1]

- Simplified process compared to existing SK mills
- Building size smaller then a hockey rink
- Closed loop system recycles mining solution
- Eliminates need for discharge of effluent to the environment
- Minor amounts of make-up water to be sourced from site run-off or small groundwater well

✓ **Powered by Provincial power grid**

NOTES: (1) See Denison news release dated September 24, 2018 for additional details regarding the PFS results.

Phoenix Operation:
Proposed site layout highlighting ISR wellfield



Phoenix ISR
Potentially one of the world's most environmentally friendly mining operation

Benefits

- Limited fossil fuel requirements – powered by provincial grid: **Near zero carbon emissions**
- **No production of tailings**
- Closed loop system requires potentially **no treated water discharge** to environment
- Contained mining chamber eliminates groundwater interactions and allows for controlled remediation to pre-mining conditions
- Small surface disturbance of a temporary nature (~20 years)

Phoenix Operation:
ISR mining method delivers industry leading cost per pound U_3O_8

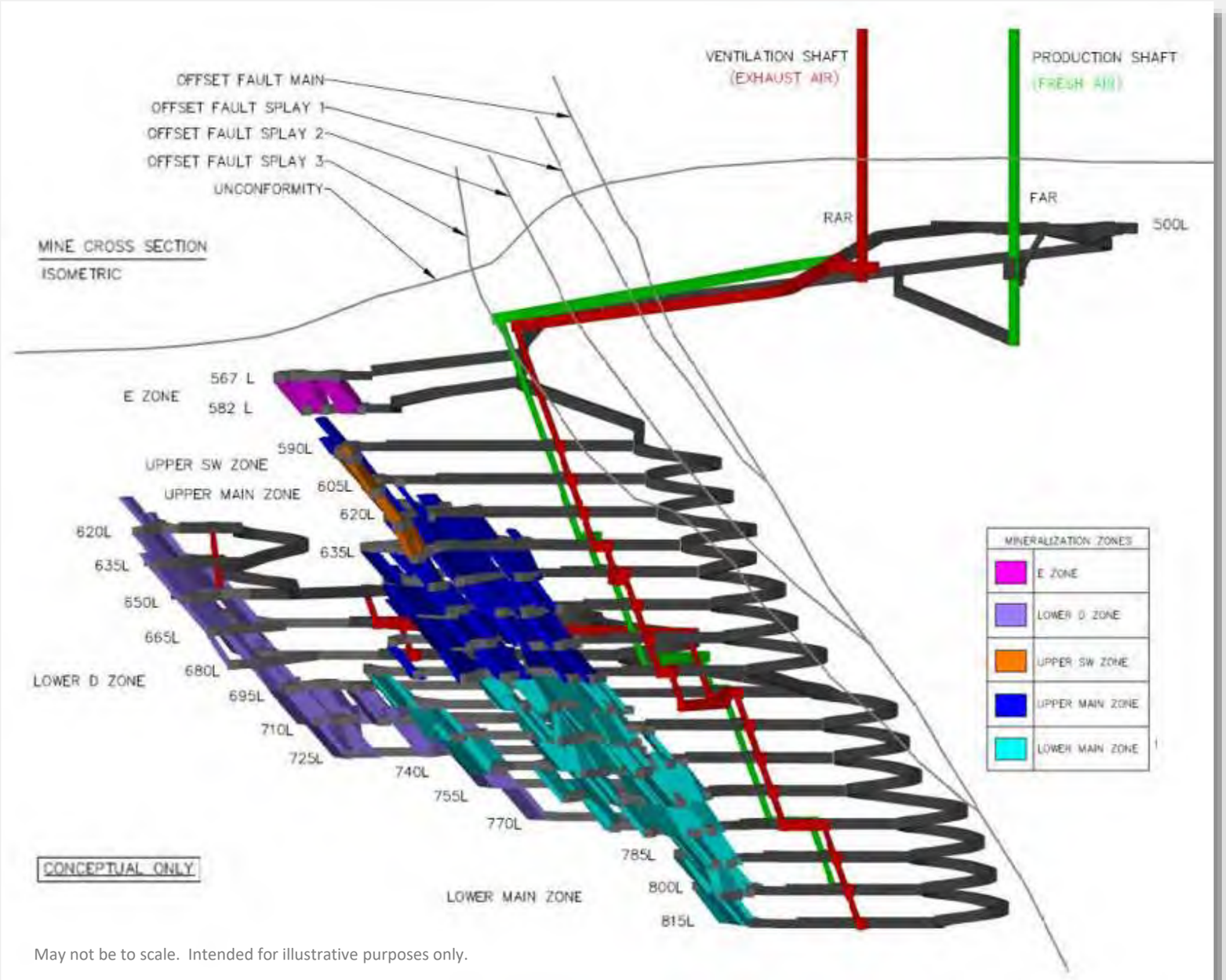
Phoenix Operation	PFS Result[1]
Mine life	**10 years** (6.0 million lbs U_3O_8 per year on average)
Average cash operating costs	**$4.33 (US$3.33) per lb U_3O_8**
Initial capital costs (100% basis)	**$322.5 million**
Operating margin[4]	**89.0%** at US$29/lb U_3O_8
All-in cost[2]	**$11.57 (US$8.90) per lb U_3O_8**

Assumptions / Results	Base Case	High Case
Uranium selling price	UxC Spot Price[3]	US$65/lb U_3O_8
Operating margin[4]	**91.4%**	**95.0%**
Pre-tax $NPV_{8\%}$[5] (100%)	**$930.4 million**	**$1.91 billion**
Pre-tax IRR[5]	43.3%	71.5%
Pre-tax payback period[6]	~ 21 months	~ 11 months

Denison Mines

NOTES: (1) See Denison news release dated September 24, 2018 for additional details regarding the PFS results; (2) All-in cost is estimated on a pre-tax basis and includes all project operating costs and capital costs, divided by the estimated number of total pounds U_3O_8 to be produced; (3) Spot Price is based on the "Composite Midpoint" spot price scenario from UxC's UMO; (4) Operating profit margin is calculated as uranium revenue less operating costs, divided by uranium revenue. Operating costs exclude all royalties, surcharges and income taxes; (5) NPV and IRR are calculated to the start of pre-production activities for the Phoenix operation in 2021; (6) Payback period is stated as number of years to pay-back from the start of uranium production.

Gryphon Operation:
Additional low-cost production with conventional UG mining



May not be to scale. Intended for illustrative purposes only.

Moderate grades and style of mineralization allows for conventional UG mining

- Mineralization is hosted in basement rock, located 520 to 850 metres below surface
- Requires Production and Ventilation shafts
- Longitudinal retreat longhole stoping with 15 metre sub-level intervals
- 600 tonnes per day production
- Generally constrained by available capacity at McClean Lake mill

NOTES: (1) Indicated mineral resources are inclusive of Reserves; (2) The PFS does not include any economic analysis based on estimated Inferred mineral resources.

Gryphon Operation: Minimal site infrastructure owing to toll milling & Phoenix site

Gryphon Site Layout
Date: Sept. 2018
Source: Wheeler River Prefeasibility Study, (Sept. 2018)

Gryphon Operation: 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 / year
- PFS assumes Cigar Lake production will decline to 15M lbs U_3O_8/year (Phase 2) at time of co-processing with Gryphon
  - ➢ Up to 9M lbs U_3O_8/year excess capacity
- **98.2% estimated recovery** from Gryphon under current McClean operating conditions
- **Required upgrades:** expansion of leaching circuit, addition of filtration system and tailings thickener, expansion of acid plant, various misc. upgrades, plus Highway 914 extension.

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

Denison Mines

NOTES: (1) See Denison news release dated September 24, 2018 for additional details regarding the PFS

Gryphon Operation:
Additional low-cost production with conventional UG mining

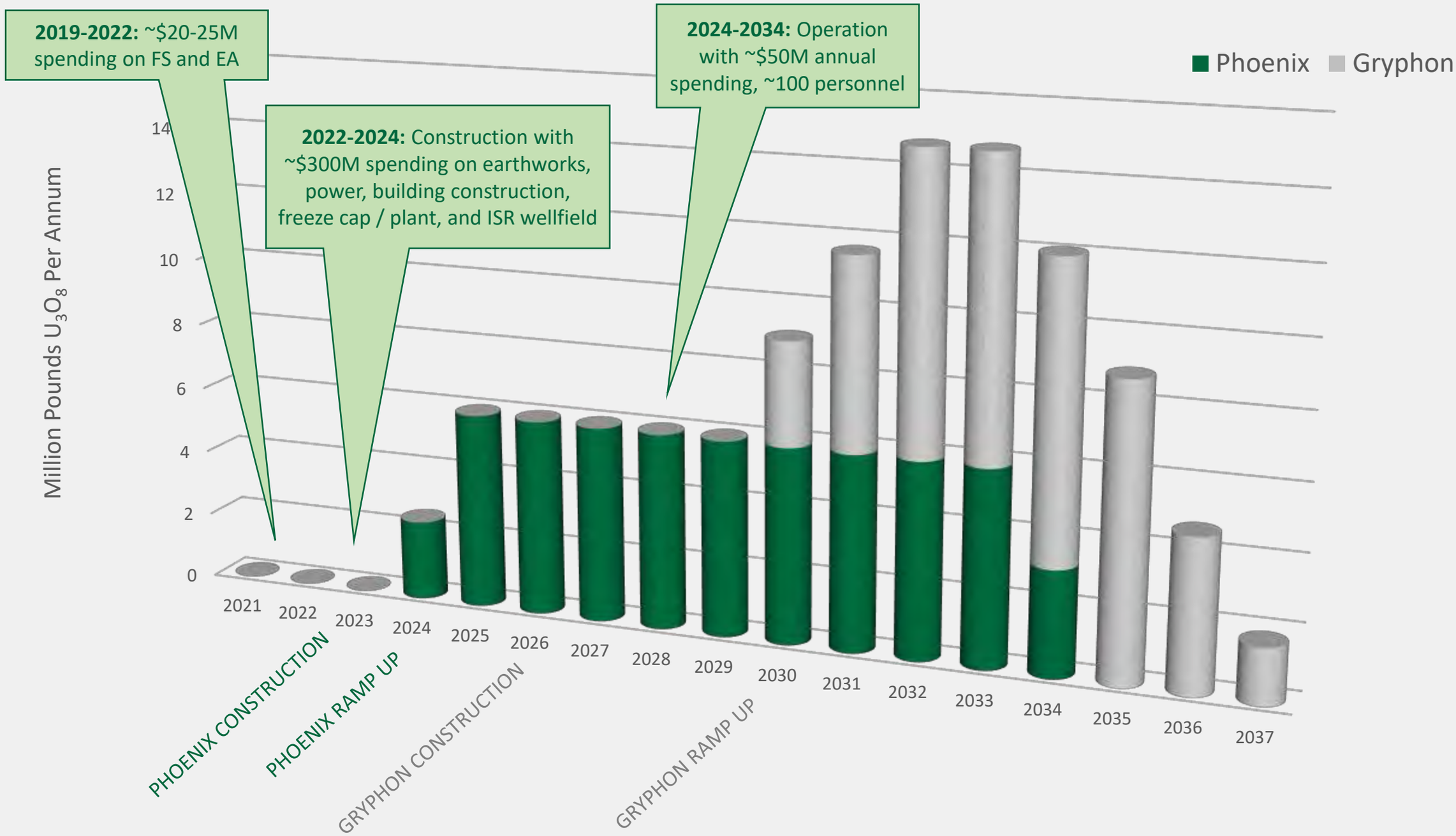
Gryphon Operation	PFS Result[1]
Mine life	**6.5 years** (7.6 million lbs U_3O_8 per year on average)
Average cash operating costs	**$15.21 (US$11.70) per lb U_3O_8**
Initial capital costs (100% basis)	**$623.1 million**
Operating margin[3]	**77.0%** at US$50/lb U_3O_8
All-in cost[2]	**$29.67 (US$22.82) per lb U_3O_8**

Assumptions / Results	Base Case	High Case
Uranium selling price	US$50/lb U_3O_8	US$65/lb U_3O_8
Operating margin[3]	**77.0%**	**82.3%**
Pre-tax $NPV_{8\%}$[4] (100%)	**$560.6 million**	**$998.8 million**
Pre-tax IRR[4]	23.2%	31.0%
Pre-tax payback period[5]	~ 37 months	~ 31 months

Denison Mines

NOTES: (1) See Denison news release dated September 24, 2018 for additional details regarding the PFS results; (2) All-in cost is estimated on a pre-tax basis and includes all project operating costs and capital costs, divided by the estimated total number of pounds U_3O_8 to be produced; (3) Operating profit margin is calculated as uranium revenue less operating costs, divided by uranium revenue. Operating costs exclude all royalties, surcharges and income taxes; (4) NPV and IRR are calculated to the start of pre-production activities for the Gryphon operation in 2026; (5) Payback period is stated as number of years to pay-back from the start of uranium production.

Wheeler River PFS:
14 year mine life producing +7.5M lbs U_3O_8 per year on average[1]



Next Steps for Advancement: Environmental Assessment and project permitting

Critical path of the project schedule

- Denison will be submitting the Project Description in February triggering the Environmental Assessment with Federal and Provincial Governments
- **2019:** Continue to collect baseline (pre-mining) data from the region
- Current data indicates healthy ecosystem
- Preliminary evaluations indicate mining will not cause significant adverse environmental impacts

Next Steps for Advancement: Continuation of stakeholder engagement activities

- Community engagement
  - Incorporated traditional knowledge into environmental data collection
  - Incorporated community feedback into project designs (mining methods, access road and treated effluent discharge locations)
  - Employment opportunities with baseline data collection programs and driller training programs on-going
  - Business opportunities via Denison 2019 Procurement forecast:
    - Food supply contract to Beauval General store
    - Camp maintenance
    - Camp supplies
- ERFN support is important to Denison
  - During EA process will be actively asking for community support
  - MOU is starting point for discussions and does not provide for distribution of benefits
  - Benefits to be determined / agreed through **Impact Benefit Agreement** to be signed following completion of the **Environmental Impact Assessment**

Next Steps for Advancement: Continuation of stakeholder engagement activities

- Denison and Communities need to engage over the next 3-4 years to maximize Business and Employment benefits during Construction and Operation:
- Construction
  - Unique one-time procurement for good and services
  - Employment opportunities with contractors (not with Denison)
  - PFS identified construction period of 2 year and +$300M in spending with production occurring at end of 2 years
  - Construction is a time of intense pressure and activity
  - Denison will be reliant on contractors to be competent to safely complete quality work, on budget, schedule and in a competitive market
  - Construction is not the time to learn!
- Operations
  - More repetitive procurement for goods and services
  - Employment opportunities with Denison
  - Ability to train and development knowledge and skills for long term employment

Denison Mines

Questions?

Denison Mines Corp.
200 – 230 22nd St. East
Saskatoon, SK S7K 0E9

T: 306-652-8200
F: 306-652-8202

www.denisonmines.com

Meeting Notes

Date: February 1, 2019
Event: Denison Wheeler River Project Update to Pinehouse Leadership
Location: Denison Saskatoon Office

In attendance:

Denison Mines Corp.: Dave Cates (President and CEO) Peter Longo (Vice President Project Development) Mark Liskowich (SRK Consulting)
Pinehouse: Mayor / President of KML, Pinehouse Business North (PBN) representative

Purpose of the meeting:

-Inform the leadership of Pinehouse that Denison was preparing a Project Description for submission to the CNSC and Saskatchewan Environmental Assessment in order to initiate the environmental assessment of the Wheeler River Project.
-Provide an overview of the details of the pending environmental assessment submission.

Notes:

Denison provided a presentation focused on:

- An overview of the global uranium market.
- A recap describing Denison Mines Corporation, the company, and current holdings.
- An overview of the Wheeler River project.
- Denison's next steps for the Wheeler River project.
- An estimate of schedule and forecasted procurement needs for the Project moving forward.

A question-and-answer session followed the presentation.

- Denison requested an update on the traditional territories mapping project results. The PBN Representative indicated the information was in hand but there was some concerns with confidentiality of the information. Denison indicated they would only release information and data from the study that Pinehouse agreed to be released. Denison also indicated they had developed two maps for inclusion in the Project Description that they were hoping to include an outline of Pinehouse's traditional territory as well as some data of some of their traditional activities in the surrounding area of the Wheeler River project. Denison committed to providing these maps to Pinehouse for their review prior to their inclusion in the Project Description.
- Mayor indicated Pinehouse would be looking for support from Denison in order to explain the ISR method to community at large given that it is new. He expects there will be a lot of questions about it.
- Mayor inquired as to what benefits would be in it for Pinehouse and that the community is in desperate need for support. Denison responded as part of their commitments they will work towards maximizing benefits for the communities.
- P.Longo inquired as to the feedback PBN received on their recent exploration drilling proposal they provided for exploration drilling on the Wheeler River property. PBN indicated the communication was well received and was valuable for Pinehouse to advance their relationship with Boart (JV) and potentially create a more beneficial and meaningful relationship.
- PBN inquired into the different levels of education that would be required for the various permanent positions coming out of the project. Denison indicated a number of typical mining positions such as mineral processing and mine geology positions would be required as well as a number of trades people, such as plumbers, electricians, pipe fitters, instrumentation technicians, etc. Technical skills would enhance northerners' abilities to advance to management positions at the site. Indicating further that the best way to prepare the youth for the jobs available in the future was to encourage all high school students strive to complete all of their sciences and maths, these courses would prepare them for post-secondary training they would need to access these future jobs, whether they be trades or university degree programs.
- Denison also indicated that they were willing to look at ways of helping support the training to the extent possible.
- Pinehouse indicated that they were willing to work with other stakeholder communities together towards a single agreement that works for all, and that Mayor has had early conversations with representatives of other communities.
- Denison reiterated the importance of developing businesses either through partnerships or by growing them from the ground up now so that these businesses are well established and capable of successfully bidding on the construction contracts that will be tendered for the construction phase of the project. There will be a lot of construction activities required over a very short time frame. Denison committed to continue to have an open dialogue with representatives of the leadership to try and make this growth in business development a success.
- Denison committed to meet with the leadership at their convenience and suggested a broader community meeting in Pinehouse could be tentatively set up for sometime in March.
- PBN inquired about the potential for Denison to make introductions between Pinehouse and potential external suppliers of goods and services for Wheeler in order to develop relationships with the vendor. Denison responded it is possible but it might not be possible to identify the preferred vendor at that point in time due to a competitive bidding process. Discussions to be continued.

The Meeting was Adjourned

Date: June 13, 2019
Denison: Carolanne Inglis-McQuay (Corporate Social Responsibility Manager)

English River First Nation: Lands and Resource Manager

Meeting Notes:

- ERFN hasn't intervened in other Projects because those projects aren't occurring in the lands most connected to ERFN members. It is an appropriate time to state this.
- Discussed the potential of ERFN comments on the Project Description; To highlight traditional territory of ERFN; To affirm regions as ERFN territory.
- Discussed possibility of working with [redacted] to help develop Indigenous Knowledge workshops for the Environmental Assessment.

Date: June 14, 2019
Event: Meeting
Participants: Denison Representatives, English River First Nation Chief.

Meeting Notes:
Furblock N-18 and N-16 were amalgamated into management by English River First Nation a while back, under a co-management regime. Denison can work with the band directly by contacting ERFN member about (smaller) opportunities for band members or band businesses. English River First Nation people regularly went to Black Lake and Wollaston Lake – will find name ties to English River there. ERFN members would also travel all the way to Carswell Lake to trap, and then come back to their area. The Basin people would occasionally come down, but didn't ever live in the area. ERFN Trapper has stated that PBN is taking jobs away from him – need to find out if this is Denison or Rio Tinto

Date: June 24, 2019
Participants: Denison Representative, Cabin Leaseholder
Event: 30 Minute Phone Discussion

In response to the Project Description letters Denison sent out to nearby leaseholders in June 2019.

Cabin Leaseholder:

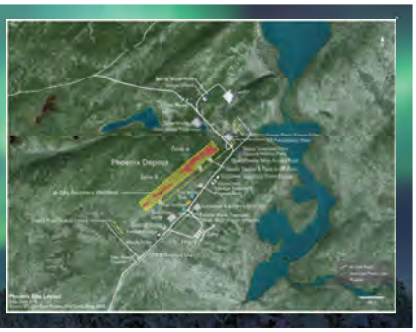
-Has a cabin in the area around Wheeler.
-Has no concerns about the mine proceeding.
-Has not had any major negative issues with Key or McArthur
-Main concern is that the gate stays in place at Key Lake. Prefers controlled access to the area north of Key. Concerned that no gate will allow for vandalism and theft. Less concerned that no gate will lead to overfishing.
-Would consider selling cabin if gate were to be removed.
-Under impression that road north of Key is privately owned by Cameco.
-Requested updates, specifically as they relate to gate access.

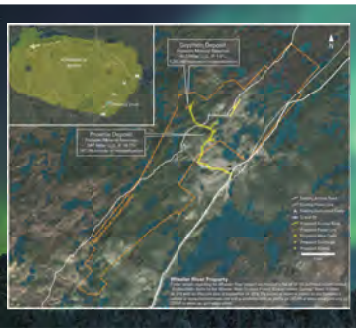
Denison:

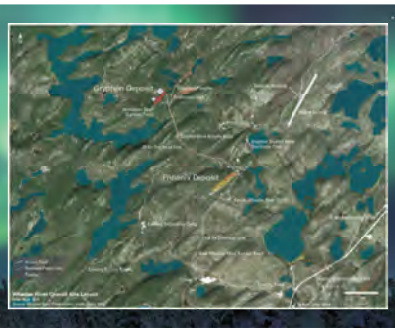
-Acknowledged concerns.
-Denison not certain about the access and any potential changes related to Wheeler proceeding.
-Noted Denison is currently planning to build a new road but wants to use Highway 914 (in response to leaseholder question)
-Denison will need to ensure access for our staff and suppliers.
-Road north of Cameco provincial and maintained by Cameco.
-Any changes to access would be years away 3-5 after EA approval, licensing, etc.
-Key Lake gate control. No change in the near term.
-Will provide updates.

denison Mines

Future home of the Phoenix ISR uranium mining operation





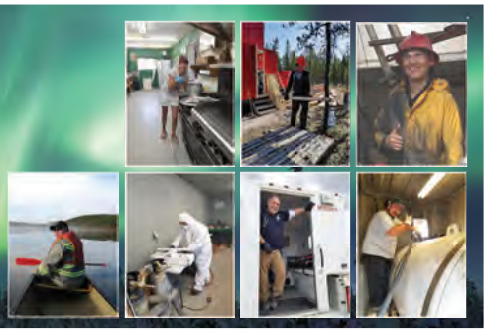


denison Mines

Camp and Employment Opportunities

Potential Employment Opportunities – Phoenix:

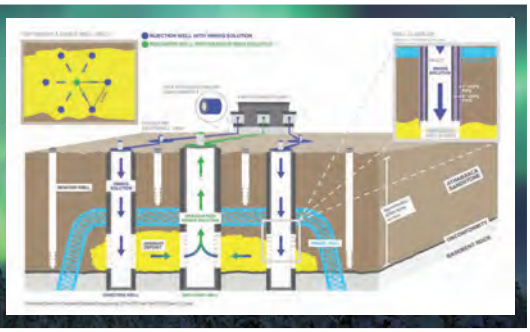
- Targeted to Wheeler Partner Communities
- Up to 300 jobs during ~2 years of construction
- Approximately 100 jobs during operation
- Wide variety of expected employment opportunities including ISR wellfield development, ISR mining processing plant, camp, security and EH&S
- ISR mining positions are all surface based
- Specific training expected for unique skills associated with Phoenix ISR development



denison Mines

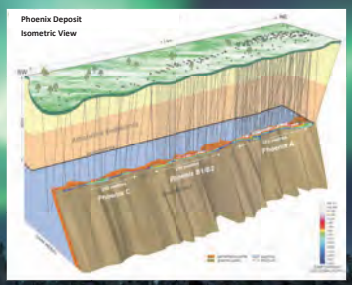
Application of ISR mining to the Athabasca Basin

- Bringing the world's lowest cost uranium mining method to the jurisdiction hosting the world's highest grade uranium deposits



Phoenix Uranium Deposit

- Phoenix is the world's highest grade undeveloped uranium deposit
- Estimated Indicated Resources of 70.2M lbs U_3O_8 at 19.1% U_3O_8 (166,000 tonnes)
- High grade core of Phoenix Zone A estimated to contain 62,900 tonnes at 43.2% U_3O_8 for 59.9M lbs U_3O_8



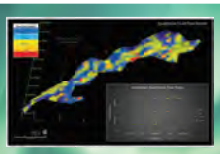
denison Mines

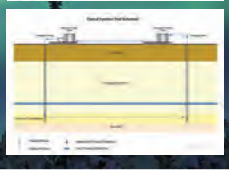
ISR Field Test

Program Objectives:

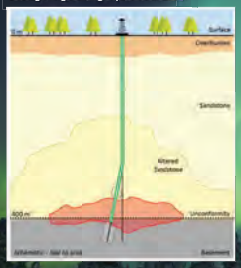
Collect an extensive database of hydrogeological data in order to evaluate the ISR mining conditions present at the Phoenix uranium deposit.

- Focused on in-situ testing in the orebody, using water to evaluate hydraulic conditions that can be used to assess mining solution flow between a series of test wells
- The information collected through this process is expected to increase the overall confidence of the application of ISR and facilitate detailed mine planning as necessary for the FS and to support the EIA process

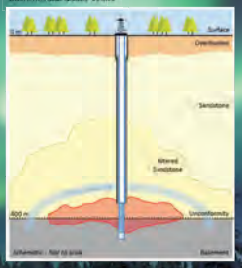




Testing using existing exploration holes



Commercial Scale Wells

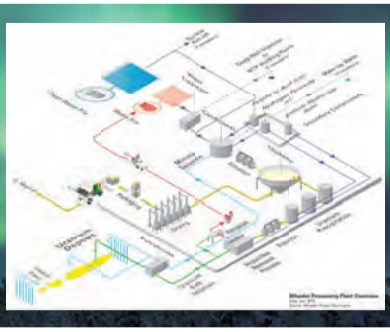


denison Mines

On site processing to Yellowcake Uranium

Highlights:

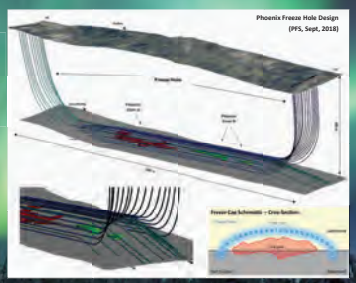
- No crushing, grinding or leach circuits – small footprint
- Potential for closed-loop system with limited / no discharge to the environment
- Mining solution is reconditioned and recycled to ISR wellfield for repeated mining
- High grade and low impurity solution allows for direct precipitation without solvent extraction or ion exchange
- On site drying / calcining in preparation for market
- No tailings generation or disposal

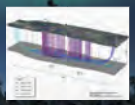


denison Mines

Freeze Design: Eliminates common environmental concerns with ISR mining

Directional Drilling
(currently used in the oil & gas industry)
+
Ground Freezing
(currently used in other mining operations in the Athabasca Basin)
=
Novel Concept to Contain ISR Mining Solution
(mining chamber created by freeze cap tied into basement rock)



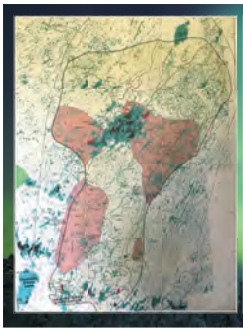


denison Mines

Committed to collaborative engagement with all interested parties

Guiding Principles:

- Present meaningful and relevant information in culturally appropriate format and language
- Incorporate comments and recommendations into project decisions to minimize project impacts
- Engage interested parties in a variety of ways and in a manner that respects local traditions, culture, timeframes and decision making processes
- Provide frequent feedback, monitoring and evaluation related to the project and engagement activities



Respect for Indigenous Communities and Knowledge

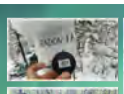
- We acknowledge and respect that we are working within Treaty 10 and the traditional territory of the English River First Nation and the Métis
- We wish to share the land together and work in partnership, to return maximum benefits from the Project to the communities
- We aim to ensure Indigenous Knowledge is deeply respected by our Company and within the environmental assessment process
- We understand the importance of protecting the area in which we are working – the land, the water, the animals, the air, the history
- We have designed the Project to have minimal adverse impacts to Indigenous and Treaty Rights, as well as to the environment

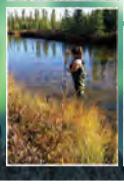
denison Mines

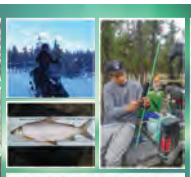
Environmental Baseline Studies

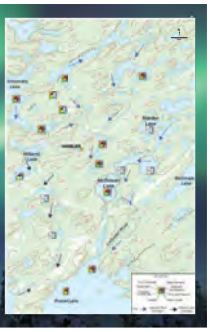
2012 – Present:

- Terrestrial environment (soil, vegetation, wildlife habitat, wildlife)
- Aquatic environment (hydrology, water quality, sediment quality, plankton, benthic invertebrates, fish communities, fish habitat)
- Groundwater quality & hydrogeology
- Heritage resources
- Air quality & noise
- Waste rock geochemistry
- Indigenous land use



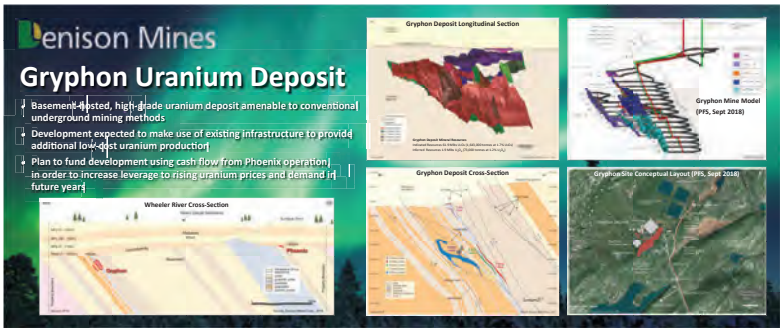


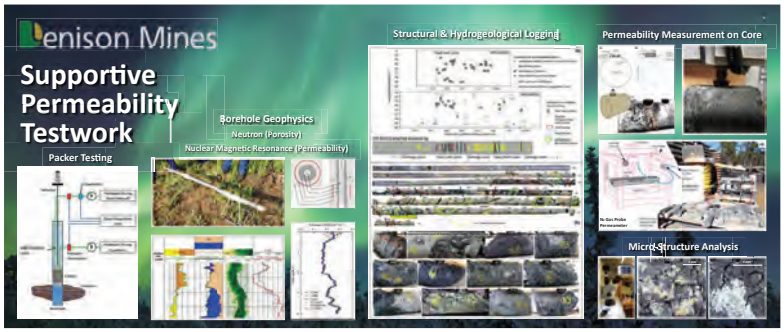




ROC140

Cigar Lake
McClean Lake
Wheeler River - Proposed
(Phoenix infrastructure as proposed in the PFS, Sept 2018)
McArthur River
Rabbit Lake
Key Lake
Environmental Benefits of ISR
Compared to traditional uranium mining and milling in Canada:
Relatively small surface footprint
Lower water & energy consumption
Potentially near zero CO_2 emissions
Small volume (potentially zero) treated effluent released to surface water bodies
Potential for lower radiation doses to workers
No tailings production or storage
Very small volumes of clean waste rock (sandstone core from wellfield development)


Denison Mines
Gryphon Uranium Deposit
Basement-hosted, high-grade uranium deposit amenable to conventional underground mining methods
Development expected to make use of existing infrastructure to provide additional low-cost uranium production
Plan to fund development using cash flow from Phoenix operation in order to increase leverage to rising uranium prices and demand in future years
Wheeler River Cross-Section
Gryphon Deposit Longitudinal Section
Gryphon Mine Model (PFS, Sept 2018)
Gryphon Deposit Cross-Section
Gryphon Site Conceptual Layout (PFS, Sept 2018)


Denison Mines
Supportive Permeability Testwork
Borehole Geophysics
Neutron (Porosity)
Nuclear Magnetic Resonance (Permeability)
Packer Testing
Structural & Hydrogeological Logging
Permeability Measurement on Core
Micro-Structure Analysis

Denison Mines
Wheeler River Exploration
Under or unexplored target areas
Multiple historic intercepts that warrant follow-up
Focus on the discovery of additional high-grade deposits with the potential to form satellite ISR operations
Gryphon Deposit
Phoenix Deposit

Denison Mines
Welcome
Hoʔą
Tânsi pihtikwī
Tânisi pihtikwî
Wheeler River Uranium Project
A Joint Venture between Denison Mines Corp (90%) and JCU (Canada) Exploration Company Limited (10%)
We acknowledge and respect that we are working within the boundaries of Treaty 10 and the traditional territory of the English River First Nation and the Métis - who have a strong and significant relationship to this land
Saskatoon Office Contact Details:
t: 306-652-8200 x101 | f: 306-652-8202
230 22nd St. East, Suite 200
Saskatoon, SK, Canada, S7K 0E9
Project Manager | Clark Gamelin | c: 306-715-0759 | cgamelin@denisonmines.com
TSX: DML | NYSE American: DNN | www.denisonmines.com | @DenisonMinesCo

ROC140

Name:

Denison Mines

Uranium Development & Exploration

The Athabasca Basin, Northern Saskatchewan

August 2019 | Wheeler River Site Visit

Notes...

Denison Mines 2

Wheeler River Site Visit
August 2019

Agenda:

- Arrive at Wheeler River
- Welcome to the Wheeler River Uranium Project
- Denison Mines overview
- Introductions
- Camp orientation & safety
- Depart for Field Tour of Stations #1-9
- Snacks / refreshments (Station #6)
- Return to camp for late lunch
- Wrap-up Q&A
- Depart Wheeler River

Denison Mines 3

Diversified Athabasca Basin Asset Base with Superior Development Leverage

Strategic Project Portfolio:

- 90% interest in Flagship **Wheeler River** project [1] – largest undeveloped uranium project in infrastructure rich eastern Athabasca Basin
- 22.5% interest in operating **McClean Lake Uranium Mill** – excess licensed capacity, +12% of global uranium production
- Interests in uranium resources at McClean Lake, Midwest, and Waterbury Lake
- ~305,000 hectares of prospective exploration ground in the Athabasca Basin

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

Denison Mines 4

NOTES: (1) See Denison's news release from January 17, 2017 and September 2, 2014 for additional details, as well as the Wheeler River Technical Report titled "Pre-Feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018

~305,000 Hectares of Prospective Exploration & Development Ground Focused in the Infrastructure Rich Eastern Athabasca Basin

Denison Mines 5

Wheeler River Project Advancing to Permitting[1]

Pre-Feasibility Study Highlights[2]:

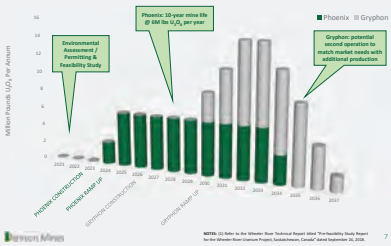
- PFS included selection of **In-Situ Recovery ("ISR") mining method** for Phoenix with onsite processing at Wheeler River
- **Phoenix** estimated to have exceptionally low operating costs for an undeveloped uranium deposit globally – **US$3.33/lb U_3O_8**
- Conventional UG **Gryphon** contributes additional low cost pounds – **US$11.70/lb U_3O_8**
- **109.4M** lbs U_3O_8 Probable Reserves
- **14** year mine life (7.8m lbs U_3O_8/year on avg.)
- Base-case pre-tax $NPV_{8\%}$ (100%) of **$1.31B**
- Base-case pre-tax IRR of **38.7%**
- Initial CAPEX of **$322.5M** (100%)

✓**Ownership[3]: 90% Denison, 10% JCU**

Denison Mines 6

NOTES: (1) See Denison's news releases from December 18, 2018 for additional details. (2) Refer to the Wheeler River Technical Report titled "Pre-Feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018. (3) See Denison's news releases from October 29, 2018

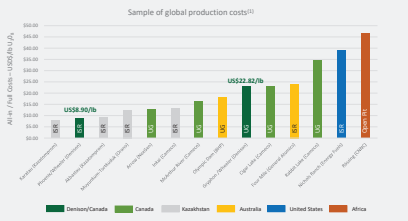
Wheeler River PFS:
14-year mine life producing +7.5M lbs U_3O_8 per year on average[1]



Denison Mines 7

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-Feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018

Phoenix ISR Operation:
Potential to be one of the lowest cost uranium mining operations



Denison Mines 8

NOTES: (1) Chart data, including all-in costs, have been derived from UxC's estimates of Worldwide Production Costs as of August 2018. Phoenix and Gryphon costs are per Denison's Pre-Feasibility Study for the project, available at www.denisonmines.com on SEDAR and EDGAR

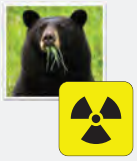
Wheeler River Site Visit
Introductions

Management & Technical Team:

- David Cates – President & CEO
- Mac McDonald – VP Finance & CFO
- Tim Gabruch – VP Commercial
- Dale Verran – VP Exploration
- Chad Sorba – Technical Services Manager
- Carolanne Inglis-McQuay – CSR Manager
- Pam Bennett – Environment Manager
- Jared Orynik – Project Manager, Project Dev.
- Clark Gamelin – Project Manager, Exploration
- Shae Frosst – Corp. Dev. & IR Manager

Denison Mines 9

Wheeler River Site Visit:
Safety and site orientation



Side by side ATVs:	Wear seatbelts, maintain safe speeds, beware of oncoming traffic and surroundings.
Wildlife:	Stay calm, slowly back away to vehicle, follow your Denison host
Rough terrain:	Tripping hazards, uneven surfaces
UV exposure:	Wear hat, apply sunscreen, stay hydrated
Radiation safety:	Time, Distance, Shielding ALARA (As Low As Reasonably Achievable) PPE (Personal Protective Equipment) Personal Decontamination

IMPORTANT: During the visit, the project site will be active. Accordingly, there are hazards that you may need to be made aware of during the field tour. Always listen to and follow instructions from your Denison hosts during the visit.

Denison Mines 10

Wheeler River 2019 Field Tour

Station #1 – Gate House
Future home of the Phoenix ISR uranium mining operation

Site Location

- 35 km north-northeast of the Key Lake mill and 35 km southwest of the McArthur River uranium mine in the southeastern portion of the Athabasca Basin region

Existing Regional Infrastructure

- Highway 914 - eastern edge of property
- Provincial power grid – SaskPower transmission line along Highway 914

Planned Site Infrastructure

- ~7km site road connection to Highway 914 outlined in Project Description
- Powerline connection to SaskPower transmission line
- Airstrip (1600 m length) and associated site road to allow for transport of staff

Denison Mines 12

Station #1 – Gate House
Future home of the Phoenix ISR uranium mining operation

Evolution of Site Design

- Site infrastructure design from PFS (September, 2018) shown opposite
- Updated site infrastructure design submitted for the Project Description shown on next page
- Ongoing efforts to optimize site layout to minimize capital expenditure requirements and impacts to the environment

Denison Mines 13

Station #1 – Gate House
Future home of the Phoenix ISR uranium mining operation

Key Site Elements:

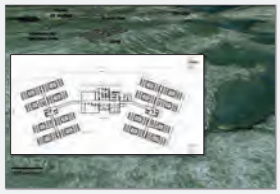
- ~150 person camp facility
- Site operations centre
- ISR wellfield
- Freeze plants
- Processing plant / WTP
- Potential WTP holding ponds and treated effluent discharge point
- Warehousing and fuel storage facilities
- Back-up power generators
- Wash bay, scanning and weight scale facilities
- Potable and waste water treatment / storage

Denison Mines 14

Notes...

Denison Mines 15

Station #2 – Phoenix Camp
Designing a home away from home



Preliminary Camp Design Features:

- ✓ ~150-person capacity
- ✓ Pre-fabricated design
- ✓ Single-occupancy units
- ✓ Kitchen & recreation facilities
- ✓ Situated within walking distance to work sites
- ✓ Common areas for relaxing, using the computer, doing laundry
- ✓ Layout to promote healthy lifestyle and enjoyment of the surrounding setting (lake view, fishing, etc.)

Denison Mines 16

Station #2 – Phoenix Camp
Building a local workforce

Potential employment opportunities associated with ISR mining operation:

- Targeted to Wheeler Partner Communities
- Up to 300 jobs during ~2 years of construction
- Approximately 100 jobs during operation of the planned ISR mining operation
- Opportunities similar to other uranium mining operations (processing plant, camp, security and EH&S roles)
- Various unique opportunities specific to an ISR mining operation, which will require diploma or technical certification available in Saskatchewan. Examples:
  - ✓ Process Operation Technician (SIIT in Meadow Lake)
  - ✓ Chemical Technology (Sask Polytechnic)
- In-house training programs can be developed once operations begin
- ISR mining positions are all surface-based
- Expected to operate as a fly-in / fly-out operation from planned Wheeler River airstrip

Denison Mines 17

Station #3 – ISR Wellfield
Bringing the world's lowest cost uranium mining method to the jurisdiction hosting the world's highest-grade uranium deposits

ISR Mining Process[1]:

1. Mining solution (also known as "lixiviant") is pumped through a permeable orebody via injection well;
2. Lixiviant dissolves the uranium as it travels through the orebody;
3. Uranium rich mining solution (also known as uranium bearing solution or "UBS") is pumped back to surface via recovery well;
4. UBS is sent to a processing plant on surface for chemical separation of the uranium and reconditioning of lixiviant;
5. Lixiviant is returned back to well field for further production

Denison Mines 18

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-Feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018.

Station #3 – ISR Wellfield

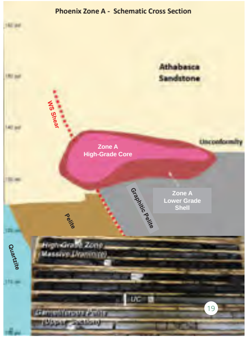
Phoenix Geology:
Unique uranium deposit
with exceptionally high grades

Highlights[(1)]:

- Mineralization is situated at or immediately above the unconformity ("UC")
- Two distinct ore zones – Phoenix A + B
- Approximately 400 m below surface
- World's highest-grade undeveloped uranium deposit
- Indicated Mineral Resources 70.2 M lbs U_3O_8 (166,000 tonnes at **19.1% U_3O_8**)
  - ➢ Includes 59.9 M lbs U_3O_8 estimated for Phoenix Zone A High-Grade Core (62,900 tonnes at **43.2% U_3O_8**)
- Inferred Mineral Resources 1.1 M lbs U_3O_8 (9,000 tonnes at 5.8% U_3O_8)
- Cut-off grade of 0.8% U_3O_8

✓ Geological setting expected to be amenable to ISR mining, with ~90% of the mineral resource (contained metal) hosted in sandstone

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018 for further details regarding the mineral resources estimated for the Phoenix deposit.

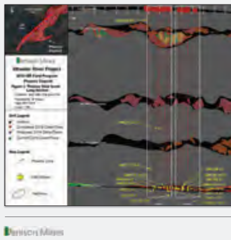


Station #3 – ISR Wellfield
First of its kind ISR Field Test in the Athabasca Basin

ISR Field Test Objectives:

- In-situ field work is necessary to increase the confidence / reduce the risks associated with application of the ISR mining method at Phoenix
  - ✓ Data required for detailed hydrogeological modelling
  - ✓ Forms the basis for ISR wellfield and freeze dome design necessary for the FS and to support the EIA process.
- Phoenix deposit divided into four (4) representative test areas
  - ✓ Intended to cover each of the various fluid flow domains expected within the deposit
  - ✓ Test areas expected to cover ~65% of the Indicated Mineral Resources estimated for the Phoenix deposit

Station #3 – ISR Wellfield
First of its kind ISR Field Test in the Athabasca Basin



Summer 2019 ISR Field Test:

- Designed to acquire data from Test Areas 1 and Test Area 2
- In-situ testing in the orebody, and surrounding areas, using water to evaluate hydraulic conditions
- 29 wells (17 Phoenix wells + 12 regional wells) installed to allow for preliminary testing
- Existing exploration holes used for installation of near vertical wells, where possible
- One large-diameter well (commercial-scale) planned for each Test Area following preliminary evaluations
- Possible evaluation of certain permeability enhancement techniques

Station #4 – ISR Processing Plant

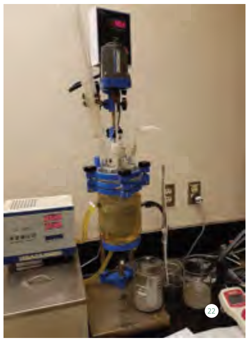
Phoenix PFS Test Work[(1)]:
Confirms suitability of
ISR mining method

Field and laboratory work included drill hole injection, permeability, metallurgical leach, agitated leach and column testing

- **Excellent Recoveries:** High rates of recovery in extraction (+90%) and processing (98.5%)
- **High Grade:** Agitated leach and column tests returned uranium concentrations of 12 to 20 grams per litre (g/L) – significantly higher than conventional low-grade ISR operations
- High uranium concentrations in the mining solution, plus low level of impurities (deleterious elements), allows for **direct precipitation of uranium**

✓ **No need for ion exchange or solvent extraction circuits = reduced costs**

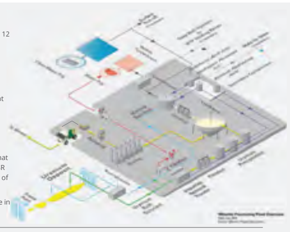
NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018.



Station #4 – ISR Processing Plant
On-site processing to Yellowcake Uranium

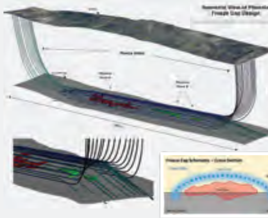
On-Site Processing Plant[(1)]

- Annual production between 6 and 12 million lbs U_3O_8 – depending on uranium concentrations from wellfield (10 g/L → 6M lbs U_3O_8 / year)
- No crushing or grinding circuits required – results in small footprint
- Low impurity solution allows for direct precipitation and eliminates need for ion exchange or solvent extraction
- Potential for closed loop system that recycles mining solution back to ISR wellfield with little to no discharge of effluents
- Drying/calcining to be done on-site in preparation for market
- Plant to be powered by provincial power grid



NOTES: (1) Indicative design only. Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018.

Station #5 - Freeze Plant & Collars
Novel concept to contain lixiviant, using established technology



Artificial freeze cap replicates confining layer typically required for ISR mining operations[(1)]

- Parallel cased holes drilled from surface and anchored into impermeable basement rock surrounding the Phoenix deposit
- Circulation of low-temperature brine solution through cased pipes will freeze groundwater in sandstone surrounding the deposit
- 10 metre thick freeze wall, together with basement rocks will encapsulate Phoenix deposit

✓ **Eliminates common environmental concerns with ISR mining and facilitates controlled reclamation**

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018.

Notes...

Station #6 – Environment & Community
Environmental benefits of ISR mining

Advantages of ISR mining compared to existing uranium mining in Canada:

- ✓ Small surface footprint
- ✓ Lower water consumption
- ✓ Lower energy consumption
- ✓ Potentially near zero CO_2 emissions
- ✓ Small volume (potentially zero) treated effluent released to surface water bodies
- ✓ Potential for lower radiation doses to workers
- ✓ No tailings production
- ✓ Very small volumes of clean waste rock (sandstone core from wellfield development)

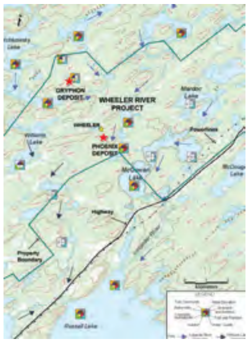
Station #6 – Environment and Community

Environmental
baseline studies

Foundation of the environmental impact assessment

- Environmental baseline studies provide an understanding of current or existing conditions
- Overlay the proposed Project with the existing environment
- Identify where Project activities or components could interact with the environment

✓ **Having a robust baseline dataset allows Denison to more accurately predict potential environmental effects**



Station #6 – Environment and Community
The environmental impact assessment process

Environmental Baseline Studies
- ➢ Terrestrial environment
- ➢ Aquatic environment
- ➢ Groundwater
- ➢ Heritage resources
- ➢ Air quality
- ➢ Noise
- ➢ Waste rock geochemistry
- ➢ Indigenous land use

2012 - Present

Initiate EIA Process: Wheeler Provincial Technical Proposal and Federal Project Description accepted — ***May 2019***

Environmental Impact Assessment (EIA) Process

Work with Indigenous communities, the public and technical experts to:
- ➢ Identify Valued Components
- ➢ Predict project life-cycle interactions with environment
- ➢ List potential effects of the Project on the environment
- ➢ Describe mitigation measures
- ➢ Assess significance of residual effects
- ➢ Consider cumulative effects and potential effects of accidents
- ➢ Propose monitoring programs to demonstrate compliance with regulations and predictions

2019-2020

Denison submits draft Environmental Impact Statement (EIS) — ***Targeted for end of 2020***

Provincial and Federal governments and the public review and provide comments on the EIS ⇅ Denison revises the EIS

Final EIS approved by Provincial and Federal governments ***+ Proceed to next steps****

Community Engagement and Indigenous Consultation (ongoing throughout)

**Following final EIS approval, next steps involve commencement of detailed engineering, licensing, permitting, approvals to operate, and ultimately construction*

Station #6 – Environment and Community
Committed to collaborative engagement with all interested parties

Project design informed by collaborative engagement:

- ✓ Evaluation of alternative mining methods for the Phoenix deposit (ISR mining method)
- ✓ Selection of preferred route for the site access road and power line from existing provincial highway and transmission line
- ✓ Selection of preferred location for possible effluent discharge to surface water bodies

Station #6 – Environment and Community
Committed to collaborative engagement with all interested parties

Denison's Approach:

1. Present meaningful and relevant information in culturally appropriate format and language
2. Incorporate comments and recommendations into project decisions to minimize project impacts
3. Engage interested parties in a variety of ways and in a manner that respects local traditions, culture, timeframes and decision making processes
4. Provide frequent feedback, monitoring and evaluation related to the project and engagement activities

Station #6 – Environment and Community
Respect for Indigenous communities and knowledge

Denison's Guiding Principles:

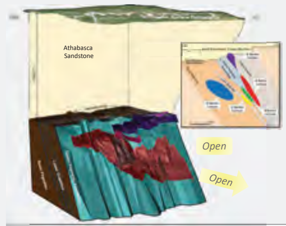
- We acknowledge and respect that we are working within Treaty 10 and the traditional territory of the English River First Nation and the Métis
- We wish to share the land together and work in partnership, to return maximum benefits from the Project to the communities
- We aim to ensure Indigenous Knowledge is deeply respected by our Company and within the environmental assessment process
- We understand the importance of protecting the area in which we are working – the land, the water, the animals, the air, the history
- We have designed the Project to have minimal adverse impacts to Indigenous and Treaty Rights, as well as to the environment

Station #7 – Gryphon Deposit Turnoff
Gryphon uranium deposit

Highlights:

- Basement-hosted, high-grade uranium deposit amenable to conventional underground mining methods
- Not currently approved for advancement, given market conditions – potential to be developed as uranium prices and demand rise in future
- Development expected to make use of existing infrastructure to provide additional low-cost uranium production
- Cash flow from Phoenix operation may be available to fund development

Station #7 – Gryphon Deposit Turnoff
Gryphon uranium deposit



Gryphon Geology & Estimated Mineral Resources

- 'Ingress-style' deposit occurring dominantly within crystalline basement rocks below the sub-Athabasca unconformity
- Consists of numerous stacked lenses of mineralization which are parallel to the dominant foliation and fault structures
- Indicated Mineral Resources 61.9 Mlbs U_3O_8 (1,643,000 tonnes at 1.7% U_3O_8)
- Inferred Mineral Resources 1.9 Mlbs U_3O_8 (73,000 tonnes at 1.2% U_3O_8)
- Cut-off grade of 0.2% U_3O_8

✓ **Deposit remains open for resource expansion down-plunge and within certain areas along strike to northeast**

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018 for further details regarding the mineral resources estimated for the Gryphon deposit.

Station #8 - Hot Shack
Supportive permeability test work & metallurgical sampling

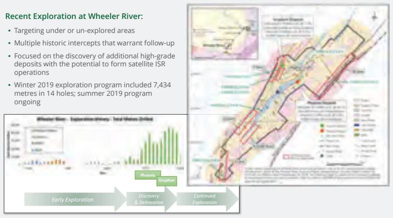
Summer 2019 ISR Field Program designed to facilitate various additional test work:

- Hydraulic conductivity tests (packer testing)
- Downhole geophysics (nuclear magnetic resonance and neutron), where borehole conditions allow.
- Additional mineralized core samples from the orebody, obtained from new drill holes or by wedging from existing boreholes, expected to be subject to the following:
  - ➢ Detailed onsite geological and geotechnical (structural & hydrogeological) logging
  - ➢ Permeability (permeameter) testing
- Specialized sample collection procedures in place and on-going to allow for metallurgical testing of undisturbed core in future metallurgical test programs

Station #9 – Core Yard
Considerable exploration potential remains at Wheeler River

Recent Exploration at Wheeler River:

- Targeting under or un-explored areas
- Multiple historic intercepts that warrant follow-up
- Focused on the discovery of additional high-grade deposits with the potential to form satellite ISR operations
- Winter 2019 exploration program included 7,434 metres in 14 holes; summer 2019 program ongoing



NOTES: Historic intercepts of uranium mineralization at Wheeler River are publically disclosed on the Company's website at www.denisonmines.com and/or on SEDAR (at www.sedar.com) and/or in the mineral assessment files in the Saskatchewan Mineral Assessment Database. https://www.saskatchewan.ca/business/agriculture-natural-resources-and-industry/mineral-exploration-and-mining/saskatchewan-geological-survey/saskatchewan-mineral-assessment-database-smad

Appendix: Pre-Feasibility Study (PFS) Economics

ROC140

Wheeler River PFS: Uranium price assumptions, and sensitivities

Assumptions / Result[4]	Base Case	PEA Ref. Case	High Case
Uranium selling price	As above	US$44/lb U_3O_8	US$65/lb U_3O_8
Pre-tax $NPV_{8\%}$[4] (100% Basis)	**$1.31 billion**	**$1.41 billion**	**$2.59 billion**
Pre-tax IRR[5]	38.7%	47.4%	67.4%
Pre-tax payback period[5]	~24 months	~ 15 months	~ 11 months

Base Case Price Assumptions:

- **Phoenix Operation:**
  - ~US$29/lb U_3O_8 to US$45/lb U_3O_8
  - UxC Spot price forecast
  - "Composite Midpoint" scenario
  - Stated in "constant" 2018 dollars
- **Gryphon Operation:**
  - US$50/lb U_3O_8 fixed price

Comparison to 2016 PEA

- 2016 PEA provided pre-tax project $NPV_{8\%}$ of $513 million at fixed uranium price of US$44/lb U_3O_8
  - PFS equivalent $NPV_{8\%}$ at US$44/lb U_3O_8 ($1.4 billion) represents **+275% of pre-tax project NPV from PEA**

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 26, 2018; (2) NPV and IRR are calculated to the start of pre-production activities for the application operation; (3) Payback period is stated as number of years to pay-back from the start of commercial production.

Phoenix Operation: ISR mining method delivers industry leading cost per pound U_3O_8

Phoenix Operation	PFS Result[1]
Mine life	**10 years** (6.0 million lbs U_3O_8 per year on average)
Average cash operating costs	**$4.33 (US$3.33) per lb U_3O_8**
Initial capital costs (100% basis)	**$322.5 million**
Operating margin[4]	**89.0%** at US$29/lb U_3O_8
All-in cost[2]	**$11.57 (US$8.90) per lb U_3O_8**

Assumptions / Results	Base Case	High Case
Uranium selling price	UxC Spot Price[3]	US$65/lb U_3O_8
Operating margin[4]	**91.4%**	**95.0%**
Pre-tax $NPV_{8\%}$[4] (100%)	**$930.4 million**	**$1.91 billion**
Pre-tax IRR[5]	43.3%	71.5%
Pre-tax payback period[5]	~ 21 months	~ 11 months

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 26, 2018; (2) All-in cost is estimated on a per-lb basis and includes all project operating costs and capital costs, divided by the estimated number of total pounds (U_3O_8) to be produced; (3) Spot Price is based on the "Composite Midpoint" spot price scenario from UxC's USAC; (4) Operating profit margin is calculated as uranium revenue less operating costs, divided by uranium revenue. Operating costs exclude all royalties, surcharges and income taxes; (5) NPV and IRR are calculated to the start of pre-production activities for the Phoenix operation in 2031; (6) Payback period is stated as number of years to pay-back from the start of uranium production.

Gryphon Operation: Additional low-cost production with conventional UG mining

Gryphon Operation	PFS Result[1]
Mine life	**6.5 years** (7.6 million lbs U_3O_8 per year on average)
Average cash operating costs	**$15.21 (US$11.70) per lb U_3O_8**
Initial capital costs (100% basis)	**$623.1 million**
Operating margin[3]	**77.0%** at US$50/lb U_3O_8
All-in cost[2]	**$29.67 (US$22.82) per lb U_3O_8**

Assumptions / Results	Base Case	High Case
Uranium selling price	US$50/lb U_3O_8	US$65/lb U_3O_8
Operating margin[3]	**77.0%**	**82.3%**
Pre-tax $NPV_{8\%}$[4] (100%)	**$560.6 million**	**$998.8 million**
Pre-tax IRR[4]	23.2%	31.0%
Pre-tax payback period[5]	~ 37 months	~ 31 months

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 26, 2018; (2) All-in cost is estimated on a per-lb basis and includes all project operating costs and capital costs, divided by the estimated total number of pounds (U_3O_8) to be produced; (3) Operating profit margin is calculated as uranium revenue less operating costs, divided by uranium revenue. Operating costs exclude all royalties, surcharges and income taxes; (4) NPV and IRR are calculated to the start of pre-production activities for the Gryphon operation in 2026; (5) Payback period is stated as number of years to pay-back from the start of uranium production.

Wheeler River PFS[1]: Statement of Reserves and Denison indicative post-tax results

Reserves[2, 3, 4, 7, 8]

Deposit	Class.	Tonnes	Grade	Lbs U_3O_8	Denison (90%)
Phoenix[6]	Probable	141,000	19.1% U_3O_8	59.7M	53.7M
Gryphon[5]	Probable	1,257,000	1.8% U_3O_8	49.7M	44.7M
Total	**Probable**	**1,398,000**	**3.5%**	**109.4M**	**98.4M**

Indicative Denison post-tax results

Financial Results	Denison (90%)
Initial capital costs	**$290.3 million**
Base case post-tax IRR[9]	32.7%
Base case post-tax $NPV_{8\%}$[9]	$755.9 million
Base case post-tax payback period[10]	~ 26 months
High case post-tax IRR[9]	**55.7%**
High case post-tax $NPV_{8\%}$[9]	**$1.48 billion**
High case post-tax payback period[10]	**~12 months**

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 26, 2018; (2) Mineral reserves for the Phoenix deposit are reported at the mineral resource cut-off grade of 0.8% U_3O_8. The mineral reserves are based on the block model generated for the May 28, 2014 mineral resource estimate. A mining recovery factor of 95% has been applied to the mineral resource above the cut-off grade; (3) Mineral reserves for the Gryphon deposit are estimated at a cut-off grade of 1.0% U_3O_8. The mineral reserves are based on the block model generated for the May 28, 2014 mineral resource estimate. A mining recovery factor of 95% has been applied to the mineral resource above the cut-off grade; (4) Mineral reserves for the Gryphon deposit are estimated at a cut-off grade of 1.0% U_3O_8. The mineral reserves are based on the block model generated for the May 28, 2014 mineral resource estimate. The cut-off grade is based on an operating cost of C$207/tonne, milling recovery of 95%, and C$10/tonne for Saskatchewan royalties. Mineral reserves include for diluting material and mining losses; (5) Mineral reserves are stated at a processing plant feed reference point; (6) Numbers may not add due to rounding; (7) NPV and IRR are calculated to the start of pre-production for the Phoenix operation in 2031; (10) Payback period is stated as number of months to pay-back from the start of uranium production.

Notes…

Appendix: Wheeler River 2019 Field Tour Maps

Date: August 28, 2019
Event: English River First Nation (ERFN): Wheeler River Project Site Tour
In Attendance:

David Cates *Denison President and CEO*
Catherine Stefan *Chair of Denison Board*
Carolanne Inglis-McQuay *Denison*
Dale Verran *Denison*
Chad Sorba *Denison*
Mark Liskowich SRK Consulting

Chief Lawrence McIntyre *ERFN*
Norman Wolverine *ERFN*
Archie Campbell *ERFN*
Louis Wolverine *ERFN*
Bobby John *ERFN*

Notes

ERFN: Denison land acknowledgement doesn't go far enough; we want to see concrete action; you need to do more in employing ERFN members.
ERFN: These are not [redacted]'s traditional lands; ERFN should be getting the work here; The smaller businesses can provide the services, like [redacted]
ERFN: ISR is shortcutting the mining method; you are going to affect a lot of things up here. Why are the other mines not doing this too?
DENISON: Not all geologic deposits are potentially amenable to ISR technology
ERFN: The life of Phoenix is only 10 years; 10 years is a major impact to English River**.** The people who have worked at Key Lake and McArthur River have come back to get cabins on Russell Lake, in our territory, we've become strangers in our own backyard**.** Everyone can get through the gate now; we don't like this**.** We need Denison to support our position on this**.** There are bird sites, burial sites
ERFN: What percentage of your profits are you going to share with ERFN? The aftermath of mining will be on ERFN.
ERFN: We want the First Nation harvesters involved in planning
DENISON: You can talk to us directly; we have a budget in place and planning to include people like [redacted] and other harvesters in our understanding of the potential impacts of the Project.
ERFN: Are you going to block the Fox Lake road?
DENISON: No
ERFN: Do the freeze plants use lots of power? Where would the power come from?
DENISON: Assessing power usage now. Would tap into the existing power infrastructure, which is largely sourced from hydro
ERFN: Is exploration continuing at Wheeler? You need to keep [redacted] working.
DENISON: Yes.
ERFN: What will be the impact to water from the operation? Those freeze plants could affect the groundwater
DENISON: Not predicted to be any impact to groundwater. The freeze holes will be in double walls to prevent the brine from leaking.
ERFN: What is the PSI going down the wells (test phase)?
DENISON: About 60 right now during the test phase
ERFN: The mining solution; what is it made of?
DENISON: It is a low ph solution
ERFN: What would replace the ore body once the uranium is mined out? Is it like taking a tooth out and leaving a hole?
DENISON: Sort of. Depending on the concentration of the uranium, it could leave some holes in areas where there is really high concentration of uranium. The freeze dome would remain in place, however, until the water in the entire cavity was returned back to conditions that were similar to pre-mining state.
ERFN: Where are you getting the water for this pump test?
DENISON: Groundwater, from right here. Water saturates much of the ground that we are currently standing on. It is not coming from a lake.
ERFN: How much water is used in this test? Why are you using PVC for the well screen?
DENISON: PVC is being used just for the testing phase with these PQ and HQ sized holes – as a cost effective way of testing the approach. Stainless steel is being used on the commercial scale wells.
ERFN: What would be the drawdown in the other pumps?
DENISON: We are seeing that the other wells go up and down in response to the test; that generally reflects how they are connected within the ore body.
ERFN: How can you drill the wells if you have no EA approval?
DENISON: Just testing phase, necessary for the EA.
ERFN: What would be the impact on air?
DENISON: We are currently assessing the emissions – but there will be no diesel plant, a small plant, and the uranium will be in solution only – no dust from traditional mining activities.
ERFN: How much concrete will you use?
DENISON: Not presently sure.
ERFN: What is your reclamation plan? How will you deal with the hot items from the mining activities?
DENISON: The freeze dome will be kept in place while reclamation of the ground water within the cavity is complete – meaning it is back to water that is reflective of pre-mining activities.
ERFN: What about the permafrost?
DENISON: There is no permafrost around here.
ERFN: Type of piping for the freeze drill?
DENISON: L80 steel
ERFN: Generally opposed to any reference that the Metis used the land here. This is our traditional territory.

Date: August 13, 2019
Participants: Denison Representative, Cabin Leaseholder Event: In office meeting

Cabin Leaseholder:
-Concerned about changes to access. Specifically concerned about changes to Key Lake gate.
-Worries that removing Key Lake gate as a control to access will lead to increased vandalism and theft.
-Did not specify additional concerns.

-**Denison:**
-Provided Summary of project.
-Provided printed out Project Description executive summary.

Meeting, September 18, 2019
Participants:
Carolanne Inglis-McQuay (Denison), Hamlet of Patuanak, Patuanak Local #80 President

Notes:

- Prior to the community meeting, had a pre-meeting with a representative of the Hamlet of Patuanak and the Patuanak Local #80 President
- The Hamlet / Metis feel left out of the Agreements made with the mining companies.
- They use the same land, and most of their community members are ERFN members.
- They would like to create a vision of working together, in the long term.
- Discussed things like a tire shop, elders / seniors center, little tourist cabins.
- There is interest in signing an similar MOU to what was signed in the other communities.

August 1, 2019, Meeting outside the Pilgrimage
Denison: Carolanne Inglis-McQuay
English River First Nation: ERFN Elder

Notes:

Denison met with ERFN Elder. Topics of discussion were the Wheeler River Project, the Canadian Nuclear Safety Commission, who the CNSC are consulting with (concerning to ERFN), and some particulars about the site tour on August 28.

ROC172

Date: June 18, 2019
Denison: Pam Bennett, Environment Manager
English River First Nation: Trapper

Phone Call Notes:
Denison and ERFN Trapper had a phone discussion. ERFN Trapper received a letter from Denison and was interested in meeting to discuss the Project. ERFN Trapper had not heard about the Project prior and expressed dissatisfaction regarding this, stating that although they are a member of ERFN, they don't get much information from ERFN. Denison confirmed that they will phone ERFN Trapper by the end of the week.

ROC173

Date: June 21, 2019
Denison: Carolanne Inglis-McQuay, Corporate Social Responsibility Manager
English River First Nation: Trapper

Phone Call Notes
Denison called ERFN Trapper offering to provide a site tour in August. ERFN Trapper requested calling one week in advance of tour and stated that they would like to have a site tour. ERFN Trapper appreciated the phone call.

Phone Call

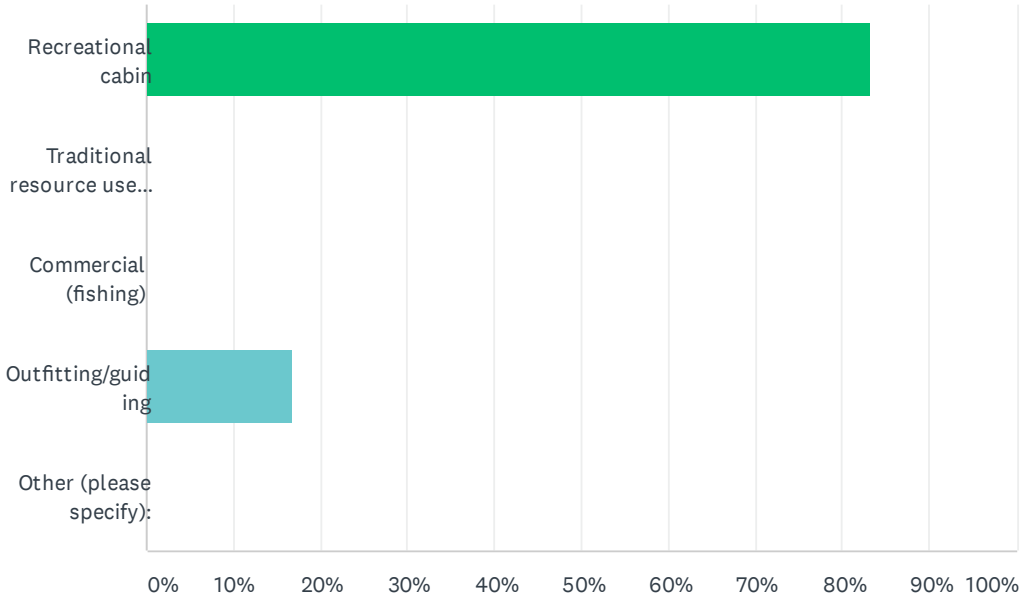
Date: September 17, 2019
Denison: Carolanne Inglis-McQuay (Corporate Social Responsibility Manager)
A La Baie: Leadership

Notes:

- A La Baie Leadership appreciated the site tour
- Is impressed that Denison is community oriented
- Likes the way Denison is doing things.
- Is impressed with ISR and likes the technology.
- Offered to help wherever possible.

Q1 What is your Crown Resource Land Lease used for?

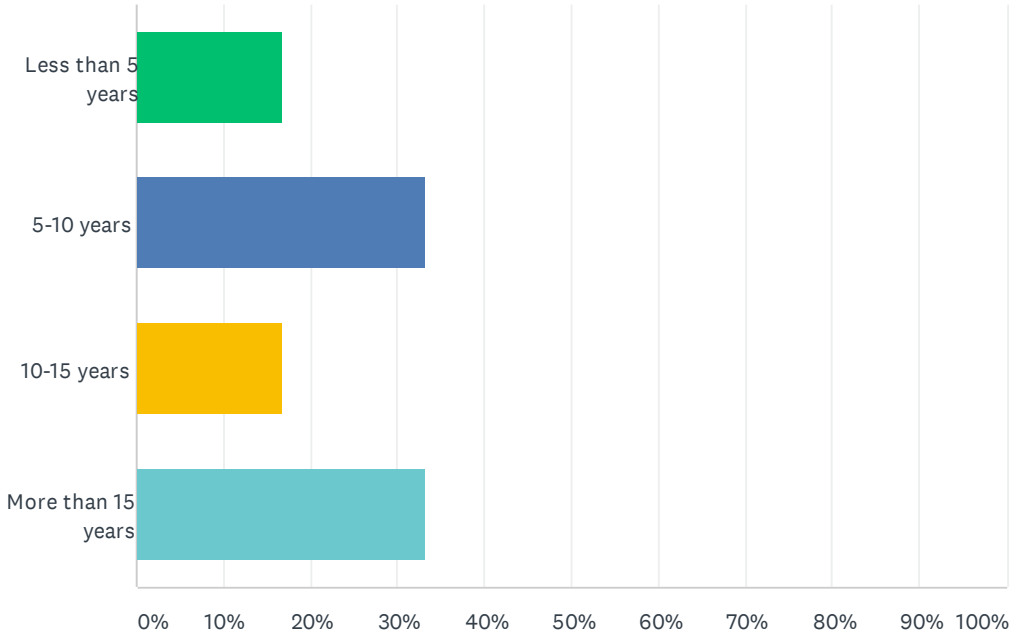
Answered: 6 Skipped: 0



ANSWER CHOICES	RESPONSES	
Recreational cabin	83.33%	5
Traditional resource use cabin	0.00%	0
Commercial (fishing)	0.00%	0
Outfitting/guiding	16.67%	1
Other (please specify):	0.00%	0
TOTAL		6

Q2 How long have you had your lease?

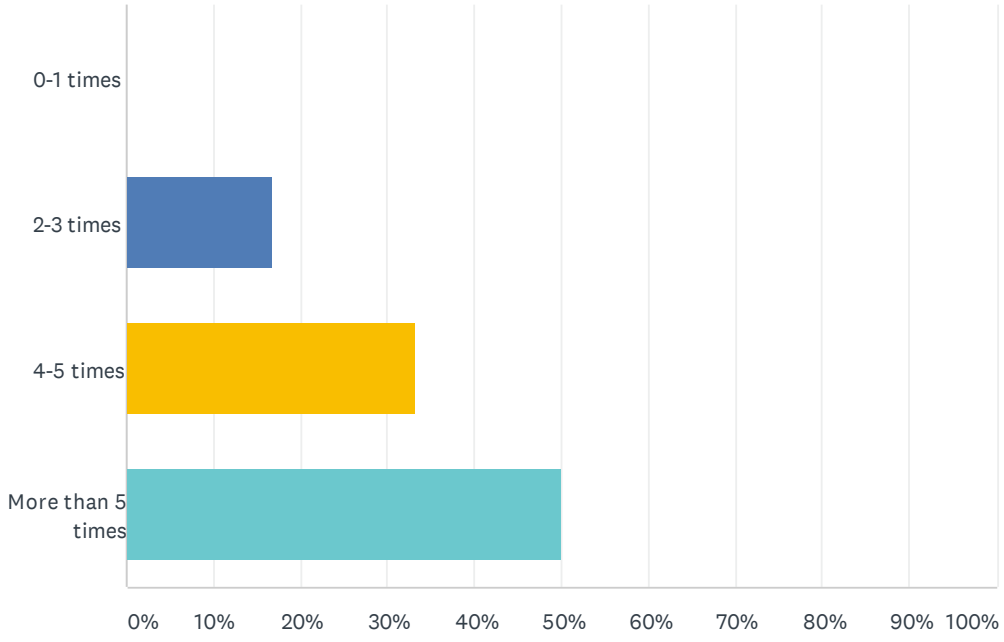
Answered: 6 Skipped: 0



ANSWER CHOICES	RESPONSES	
Less than 5 years	16.67%	1
5-10 years	33.33%	2
10-15 years	16.67%	1
More than 15 years	33.33%	2
TOTAL		6

Q3 How many times do you go to your cabin or land each year?

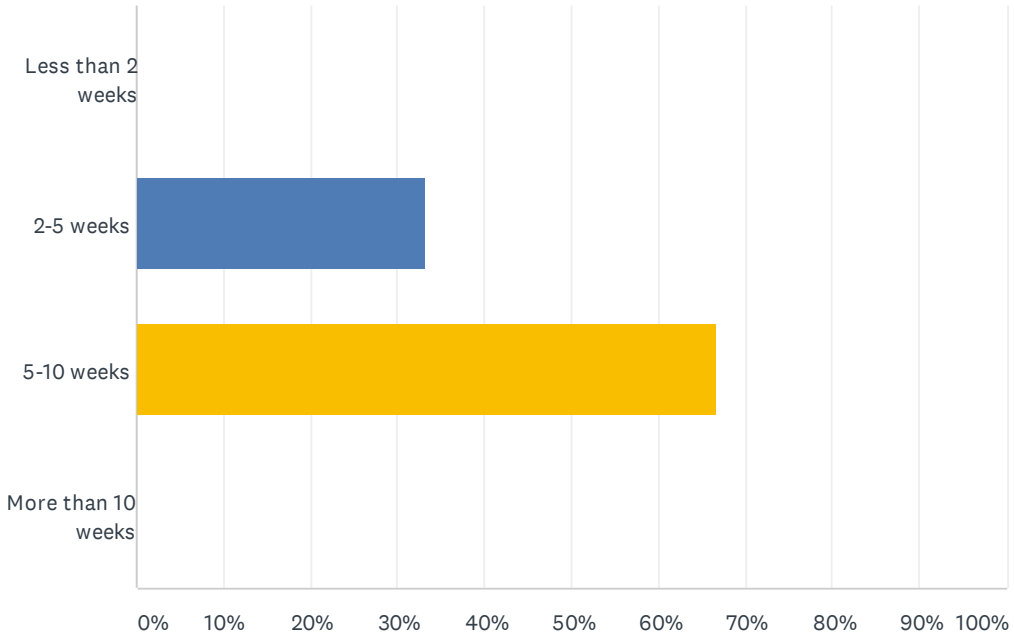
Answered: 6 Skipped: 0



ANSWER CHOICES	RESPONSES	
0-1 times	0.00%	0
2-3 times	16.67%	1
4-5 times	33.33%	2
More than 5 times	50.00%	3
TOTAL		6

Q4 How much time in total do you normally spend at your cabin or land each year?

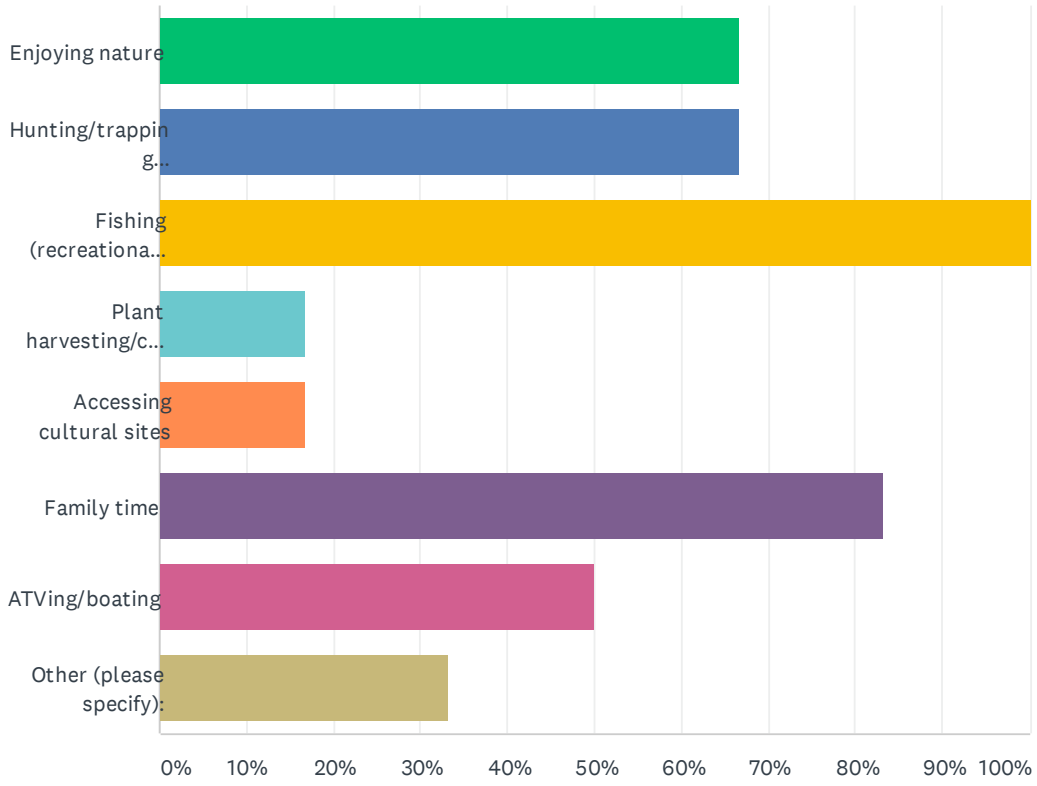
Answered: 6 Skipped: 0



ANSWER CHOICES	RESPONSES	
Less than 2 weeks	0.00%	0
2-5 weeks	33.33%	2
5-10 weeks	66.67%	4
More than 10 weeks	0.00%	0
TOTAL		6

Q5 What do you use your cabin or land for mostly? (Please check all that apply)

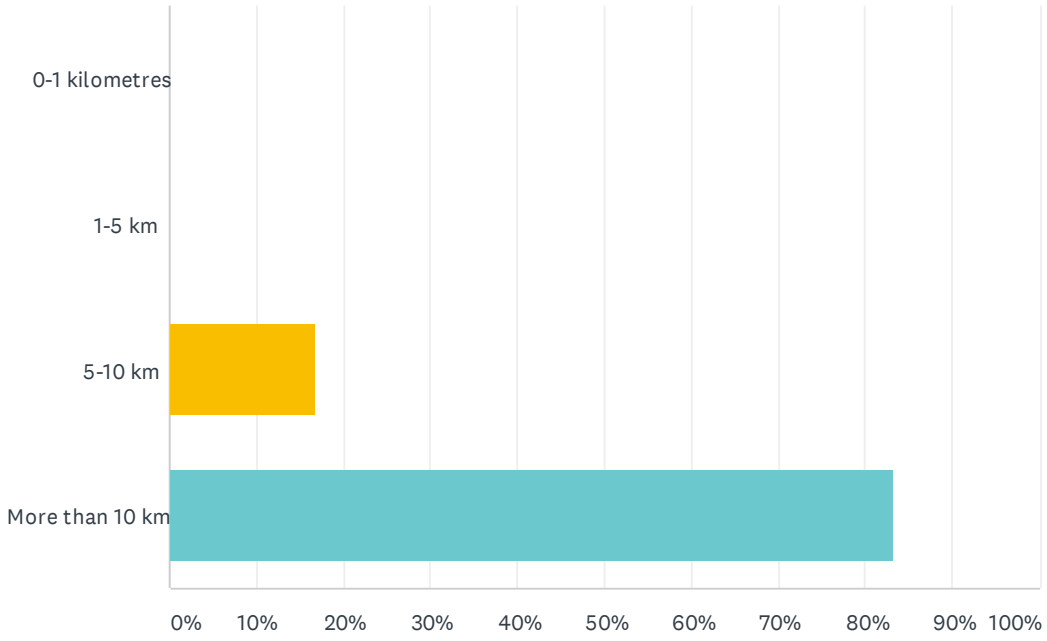
Answered: 6 Skipped: 0



ANSWER CHOICES	RESPONSES	
Enjoying nature	66.67%	4
Hunting/trapping (recreational/commercial)	66.67%	4
Fishing (recreational/commercial)	100.00%	6
Plant harvesting/collecting	16.67%	1
Accessing cultural sites	16.67%	1
Family time	83.33%	5
ATVing/boating	50.00%	3
Other (please specify):	33.33%	2
Total Respondents: 6		

Q6 In relation to your cabin or land,how far do you travel in the area to conduct the activities you selected in Question 5 above?

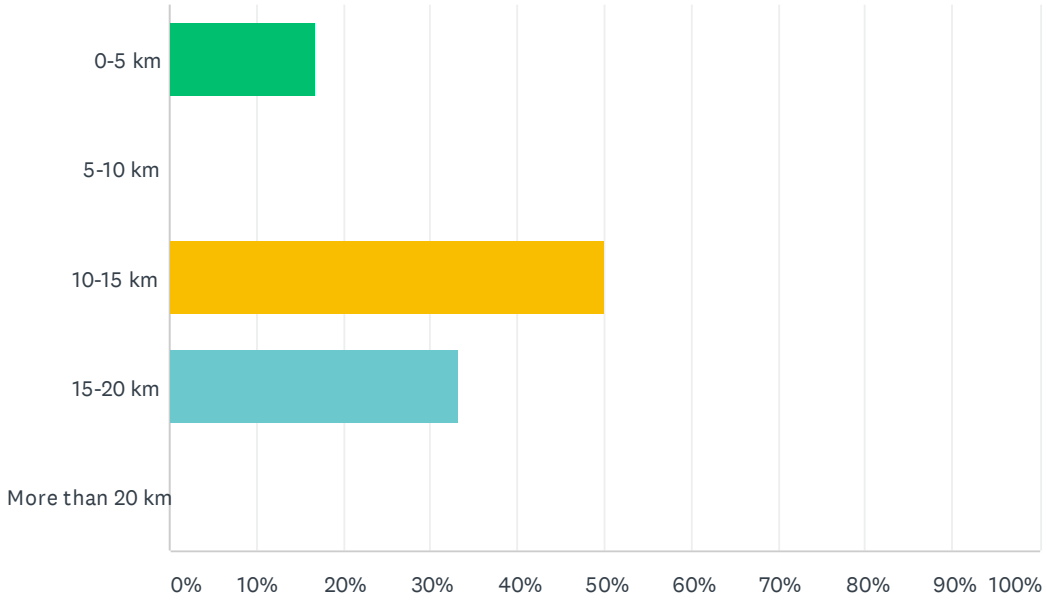
Answered: 6 Skipped: 0



ANSWER CHOICES	RESPONSES	
0-1 kilometres	0.00%	0
1-5 km	0.00%	0
5-10 km	16.67%	1
More than 10 km	83.33%	5
TOTAL		6

Q7 How far is your cabin or land from the Project site? (See map)

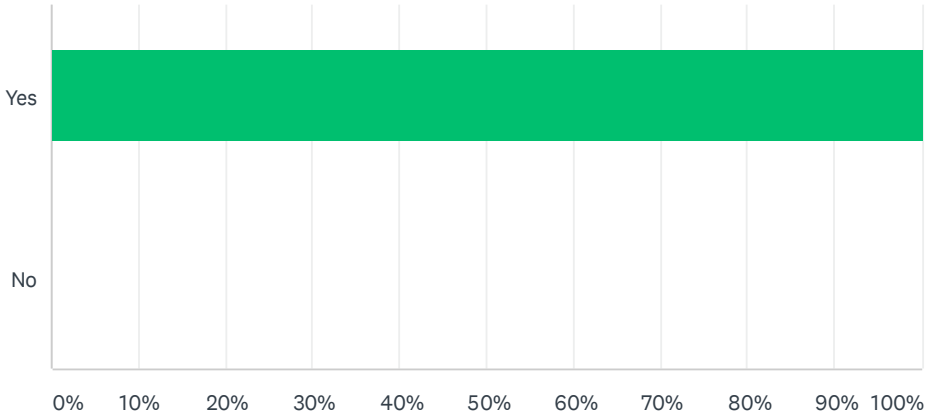
Answered: 6 Skipped: 0



ANSWER CHOICES	RESPONSES	
0-5 km	16.67%	1
5-10 km	0.00%	0
10-15 km	50.00%	3
15-20 km	33.33%	2
More than 20 km	0.00%	0
TOTAL		6

Q8 Have you heard about the Project?

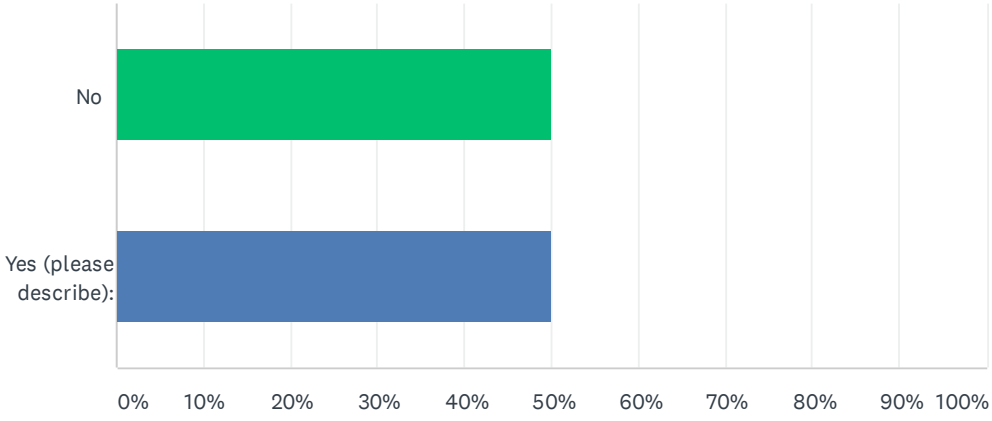
Answered: 6 Skipped: 0



ANSWER CHOICES	RESPONSES	
Yes	100.00%	6
No	0.00%	0
TOTAL		6

Q9 Based on what was shared in the Project Fact Sheet, do you have any questions today about the Project?

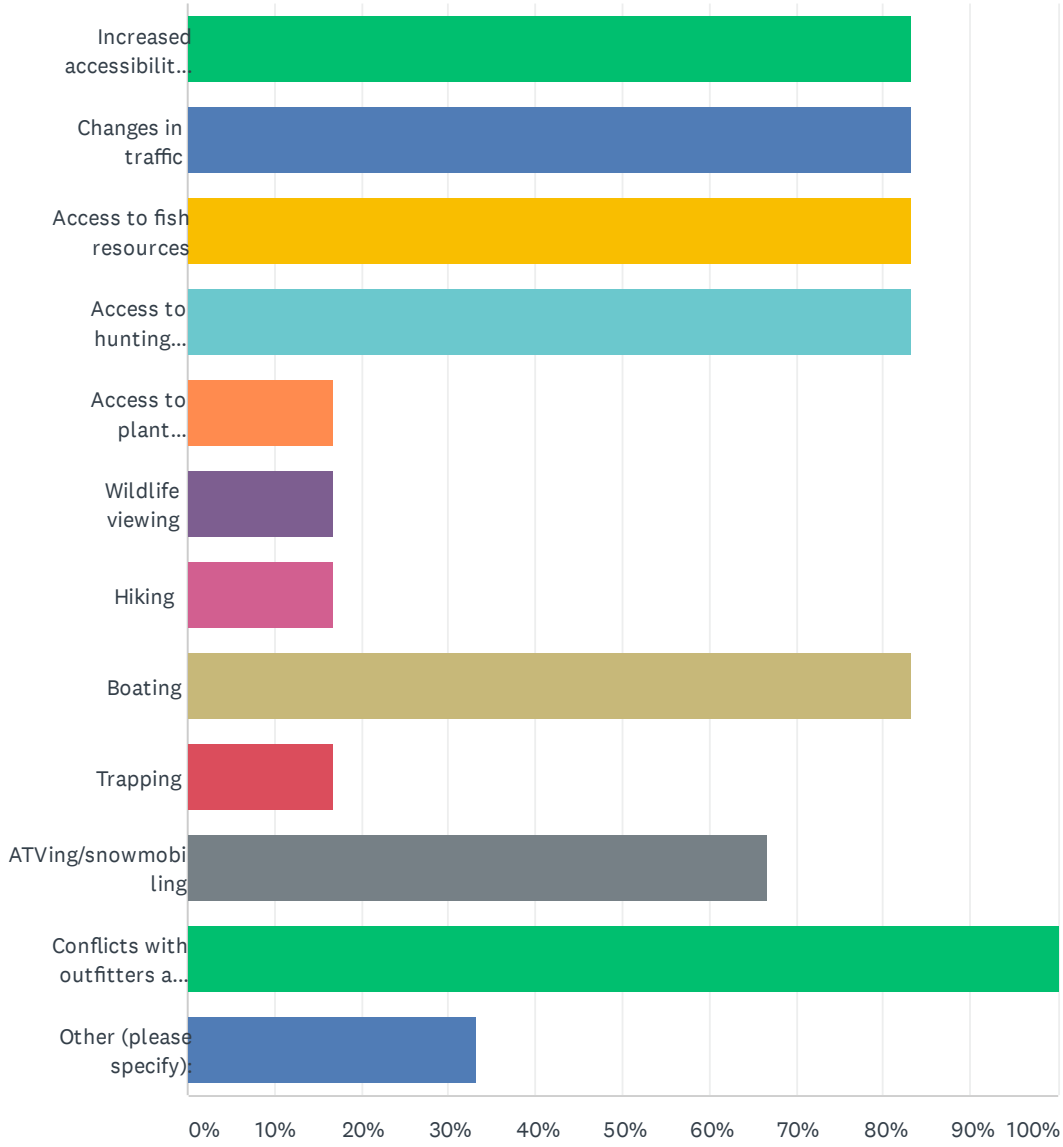
Answered: 6 Skipped: 0



ANSWER CHOICES	RESPONSES	
No	50.00%	3
Yes (please describe):	50.00%	3
TOTAL		6

Q10 What issues or concerns are of particular interest to you? What do you feel should be considered in the Project Environmental Impact Assessment? Check all that apply:

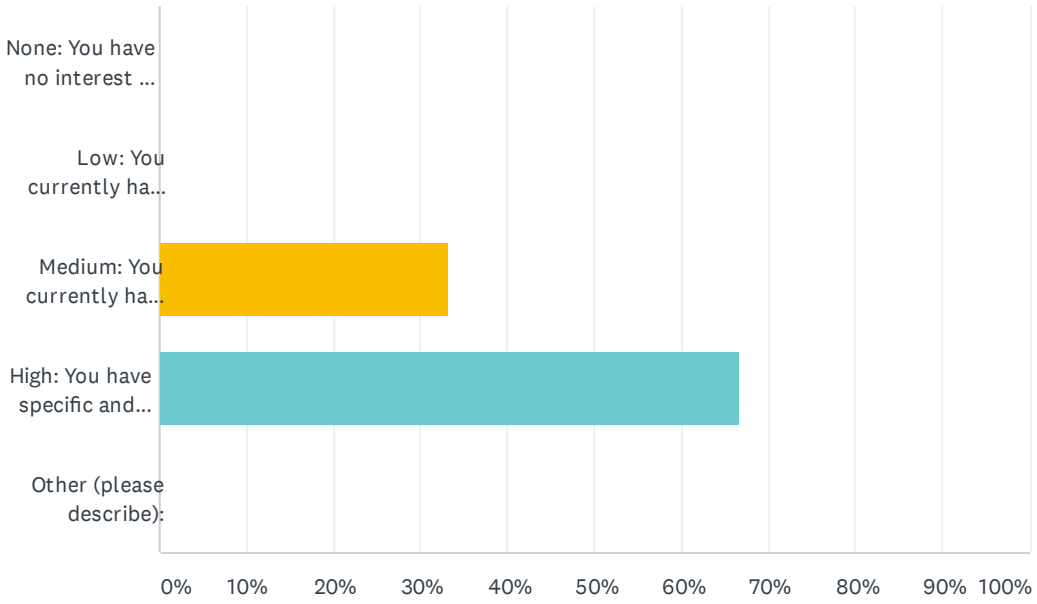
Answered: 6 Skipped: 0



ANSWER CHOICES	RESPONSES	
Increased accessibility to the area	83.33%	5
Changes in traffic	83.33%	5
Access to fish resources	83.33%	5
Access to hunting resources	83.33%	5
Access to plant harvesting/collecting resources	16.67%	1
Wildlife viewing	16.67%	1
Hiking	16.67%	1
Boating	83.33%	5
Trapping	16.67%	1
ATVing/snowmobiling	66.67%	4
Conflicts with outfitters and cabin owners	100.00%	6
Other (please specify):	33.33%	2
Total Respondents: 6		

Q11 We are committed to ensuring you have access to Project-related information in a format that best meets your interests and preferences. We will continue to provide Project updates on our website (www.denisonmines.com/projects/core-projects/wheeler-river-project/) but would also like to let you know when these updates occur including information that may be of interest to you.You would best describe your level of interest with the Project as:

Answered: 6 Skipped: 0



ANSWER CHOICES	RESPONSES	
None: You have no interest in the Project or the assessment process and would not like to be updated on project status as the process advances.	0.00%	0
Low: You currently have a few concerns or questions about the project but would like to receive regular updates about the status of the Project.	0.00%	0
Medium: You currently have some concerns or questions with the Project and would like to receive regular information about these areas of interest and the project in general.	33.33%	2
High: You have specific and important concerns or questions with the Project and would like to be actively involved throughout the process to ensure these issues receive appropriate consideration.	66.67%	4
Other (please describe):	0.00%	0
TOTAL		6

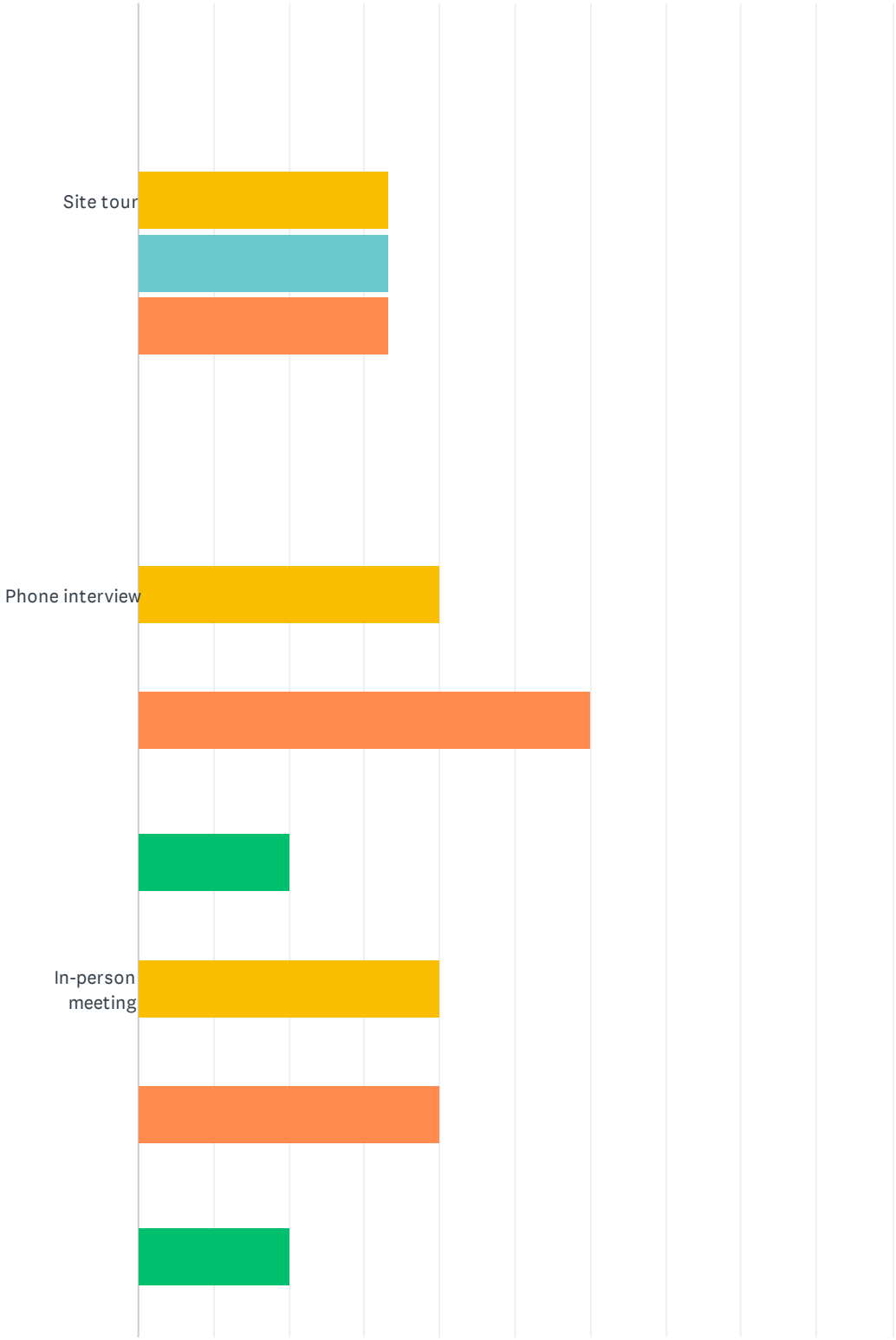
Q12 How would you prefer to receive future Project information?

Answered: 6 Skipped: 0

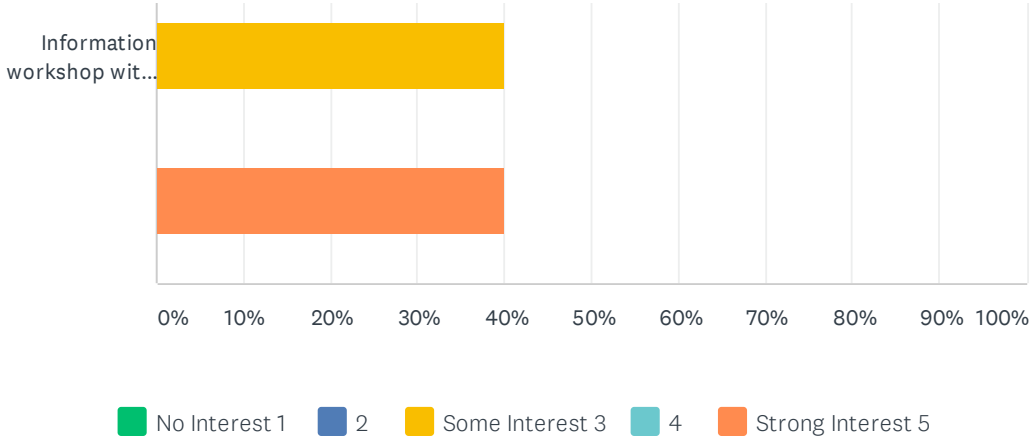
ANSWER CHOICES	RESPONSES	
Email:	66.67%	4
Mail:	66.67%	4
Phone:	66.67%	4
Other:	0.00%	0

Q13 We are currently looking at opportunities to directly interact with lease holders and would like to know your interest level for any of the following? Please indicate your preference for each of the following. If you have suggestions or other ideas, please provide them as well:

Answered: 6 Skipped: 0

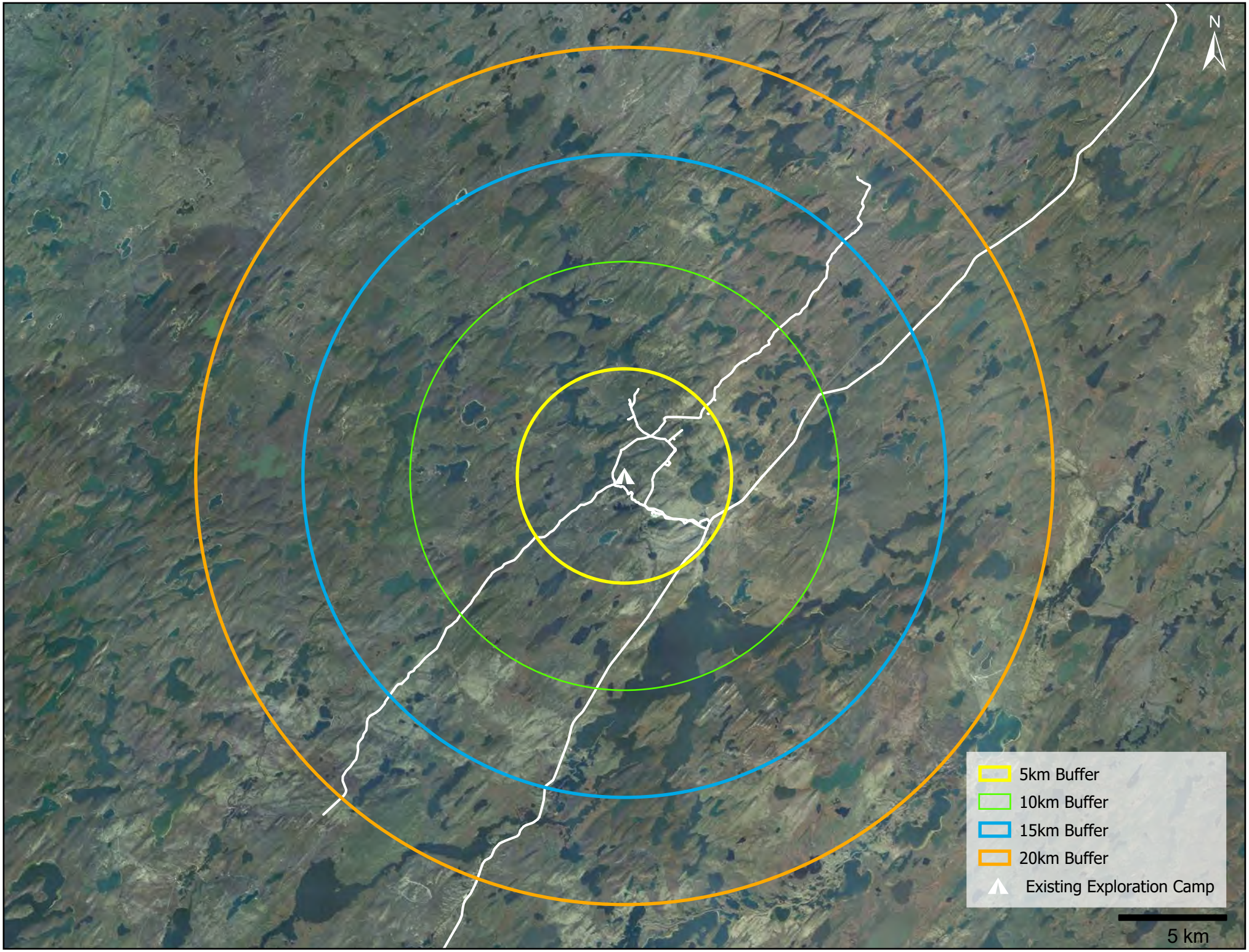


Wheeler River Mine Project



	NO INTEREST 1	2	SOME INTEREST 3	4	STRONG INTEREST 5	TOTAL
Site tour	0.00% 0	0.00% 0	33.33% 2	33.33% 2	33.33% 2	6
Phone interview	0.00% 0	0.00% 0	40.00% 2	0.00% 0	60.00% 3	5
In-person meeting	20.00% 1	0.00% 0	40.00% 2	0.00% 0	40.00% 2	5
Information workshop with other lease holders	20.00% 1	0.00% 0	40.00% 2	0.00% 0	40.00% 2	5

ROC267


N
5km Buffer
10km Buffer
15km Buffer
20km Buffer
Existing Exploration Camp
5 km

Record Summary
Denison and ERFN Trapper email correspondence, relating to ERFN Trapper interview on October 29, 2019, and the annotated material that followed. Text below highlights email subject matter in detail, with sensitive information removed.

Denison to ERFN Trapper, Nov 15, 2019
Denison and a Terrestrial Biologist met with ERFN Trapper on October 29th at Denison's Wheeler River camp. Denison and the Terrestrial Biologist compiled notes from our meeting with ERFN Trapper. Denison mailing printed hardcopies of the draft meeting notes, along with three larger maps, markers, blank sheets of paper, and return postage. The package is going to ERFN Trapper's mailing address and should arrive next week or early the following week. Denison has attached PDFs of the draft meeting notes and a list of action items here. The action items include some guidance on the land use mapping we discussed with ERFN Trapper. Denison wanted to give ERFN Trapper the file electronically in case this is easier to review. If there are any questions about the review and additional land use mapping once you receive the box, please let Denison know.

ERFN Trapper to Denison, Jan 02, 2020
ERFN Trapper forwarded Denison a copy of ERFN Trapper's interview notes with the annotated changes. All of these interview notes have been reviewed, with changes added that ERFN Trapper has identified. ERFN Trapper will send the maps and the hard copy shortly.

Denison to ERFN Trapper, Jan 02, 2020
Denison extends thanks to ERFN Trapper for taking the time to thoroughly go through this material. Denison will connect with ERFN Trapper in the in the near future to maintain communication, keep ERFN Trapper informed, and determine next stages.

Date: January 31, 2020
Event: In Person Discussion
Participants: Denison Representative, Cabin Leaseholder

Cabin Leaseholder:
Concerned with increase in lease fees, unable to establish contact with province about this.
Interested in regulatory process.
Inquired over potential for change to haul road.
Stated people find ways around Key Lake gate along Old Fox Road.
Hasn't had issues related to theft.
Hears drilling noise at cabin. Unconcerned about noise from The Wheeler River Project, if it goes ahead.
Inquired about air quality

Main concern:

Treated effluent release to Whitefish Lake, flowing into McGowan Lake.
Denison staff overfishing on McGowan Lake, in future if project were approved.

Denison Representative:
Presented general information on the Wheeler River Project.
Noise assessment will include various human and animal receptors.

Explained mine water source, treatment, limits, and inclusion in the EA.
Stated that controls are in place to prevent overfishing.

Phone Call

Date: July 6, 2020
Denison: Carolanne Inglis-McQuay (CSR Manager), Janna Switzer (Environmental Manager)
Ile a La Crosse: Mayor

Notes:

Denison explained that the main purpose of the work this summer is to ensure that we really understand the groundwater movement patterns; groundwater movement understanding is key. Part of the plan is to drill some holes close to the lake so that we can make sure we understand what is happening with water movement near the close lakes.

- Mayor: Are there aquifers in the area?
- Denison: Yes, the ore body is 400m below the sandstone, which is a water-laden sandstone, that can be considered an aquifer. The water around the ore body is extremely slow moving and very old water – it doesn't flow freely.
- Mayor: Will you open up / restart in January?
- Denison: Right now, that is part of the plan, but we will formally announce it when we are ready. Discussions on the predicted effects will be the first part of the communications plan.

ROC382

Denison Mines

Uranium Development & Exploration

The Athabasca Basin, Northern Saskatchewan

December 2020 | Project Update

Cautionary Statements & References

Qualified Persons

The disclosure of a scientific or technical nature within this presentation, including the disclosure of mineral resources, mineral reserves, as well as the results of the Wheeler PFS and Waterbury PEA, was reviewed and approved by David Bronkhorst, P.Eng., who is a Qualified Person in accordance with the requirements of NI 43-101.

Technical Reports

- For further details regarding the Wheeler River project, please refer to the Company's press release dated September 24, 2018 and the technical report titled "*Prefeasibility Study for the Wheeler River Uranium Project, Saskatchewan, Canada*" with an effective date of September 24, 2018 ("Wheeler PFS").
- For further details regarding the Waterbury Lake project, please refer to the Company's press release dated November 17, 2020 and, with respect to mineral resource estimates, the technical report titled "*Technical Report with an Updated Mineral Resource Estimate for the Waterbury Lake Property, Northern Saskatchewan, Canada – Mineral Resource Estimate*" dated December 21, 2018. ("Waterbury PEA"). **The PEA is a preliminary analysis of the potential viability of the Project's mineral resources, and should not be considered the same as a Pre-Feasibility or Feasibility Study, as various factors are preliminary in nature. There is no certainty that the results from the PEA will be realized. Mineral resources are not mineral reserves and do not have demonstrated economic viability. Scheduled tonnes and grade do not represent an estimate of mineral reserves.**

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 13, 2020. Copies of the foregoing are available on Denison's website and under its profile on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

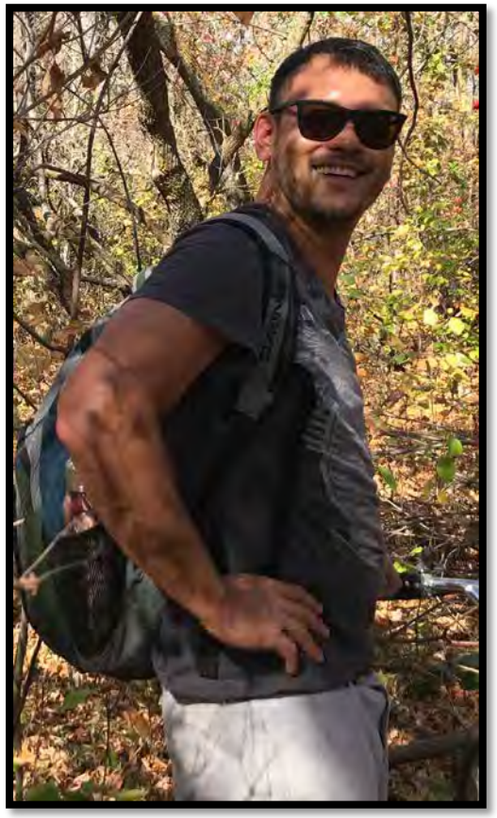
ROC382

Agenda

- Introductions
- Denison Mines Corp.
  - Brief overview and ties to Athabasca Basin
- Wheeler River Project
  - Location, type of deposit
  - In Situ Recovery Mining
  - Status of Project
  - New and improved designs
- What's Next?

Denison Team

- Dave Bronkhorst, VP Operations
- Janna Switzer, Environment Manager
- Chad Sorba, Technical Manager
- Carolanne Inglis-McQuay, Corporate Social Responsibility Manager
- Xavier Lu Dac, Senior Engineer



Denison Mines / Wheeler River:
Overview – building an Athabasca Basin focused uranium mining business

ROC382

Denison: Focused on opportunities within northern Saskatchewan

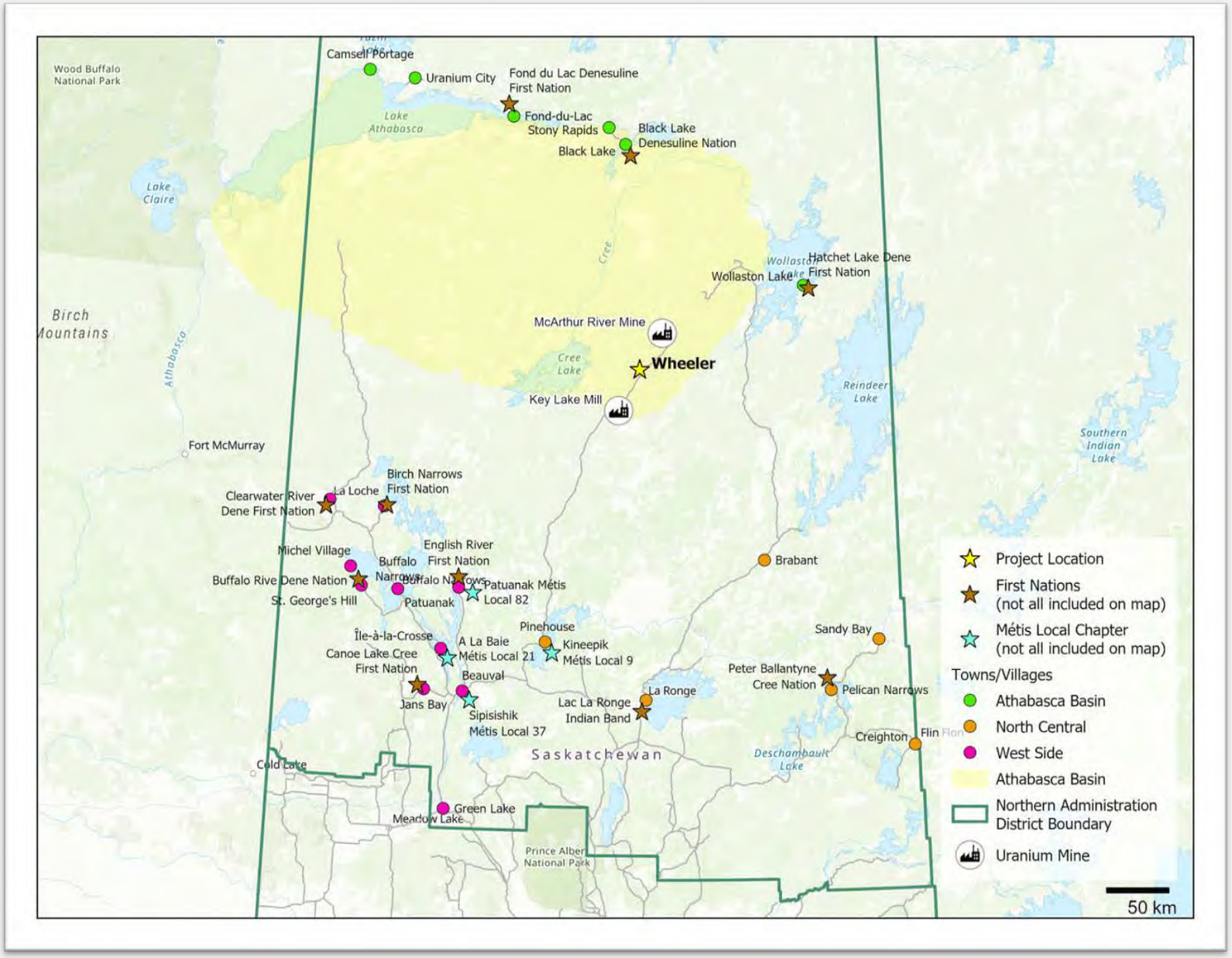
Strategic Asset Portfolio:

- 22.5% interest in **McClean Lake Uranium Mill**
- 90% interest in Flagship **Wheeler River** project
  - Advancing through development process
  - Largest undeveloped uranium project in the infrastructure rich eastern Athabasca Basin
  - Environmental Assessment ("EA") initiated
  - Innovative approach to mining using In Situ Recovery ("ISR") method
- 66.9% in the **Waterbury Lake Property**, hosting the Tthe Heldeth Tué (formerly J Zone) deposit
  - Recently completed Preliminary Economic Assessment ("PEA")
  - Amenable to ISR mining method
- Additional leverage to the uranium price
  - **McClean Lake, Midwest,** and **Waterbury Lake** all in close proximity to McClean mill
  - **+250,000 hectares** of exploration ground

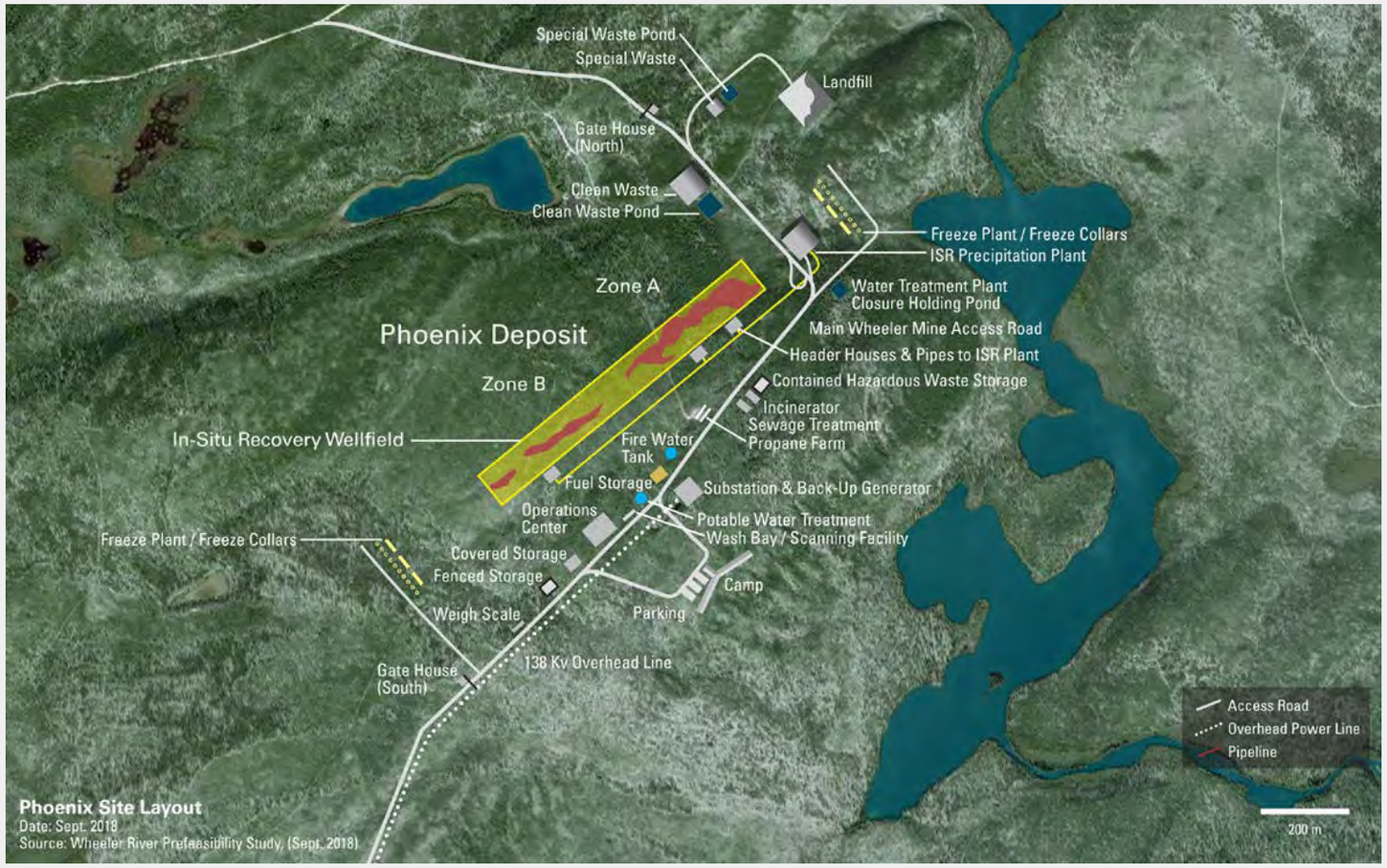
Denison Mines

Tthe Heldeth Tué Deposit Area

The Wheeler River Project: Location within northern Saskatchewan

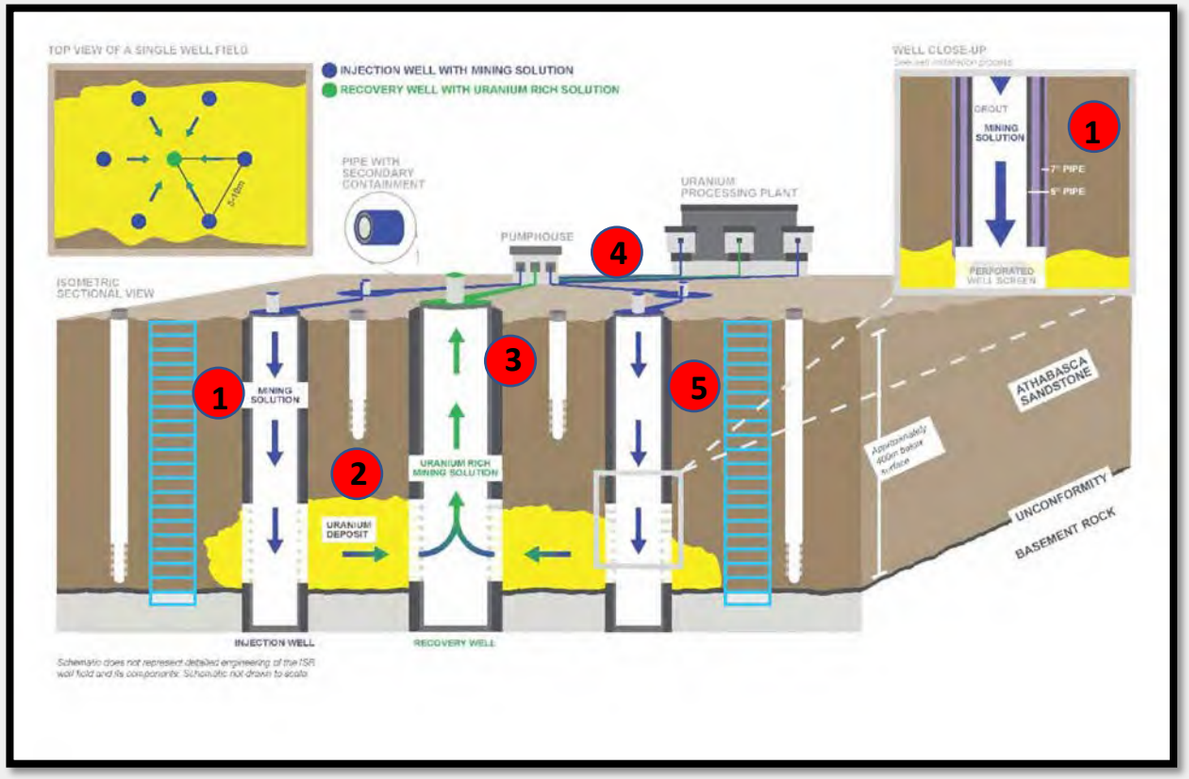


Overview of Wheeler River Project:
Future home of the Phoenix ISR uranium mining operation



- ~200 person camp facility
- ISR wellfield & freeze plant
- Processing plant / Process Water Treatment Plant
- Water Treatment Plant holding ponds and treated effluent discharge point
- Clean and Special waste storage areas
- Plant Precipitates storage areas
- Warehousing and fuel storage facilities
- Back-up power generators
- Wash bay, scanning and weight scale facilities
- Potable and waste water treatment / storage

In Situ Recovery Mining
Introducing a proven mining technique to the Athabasca region

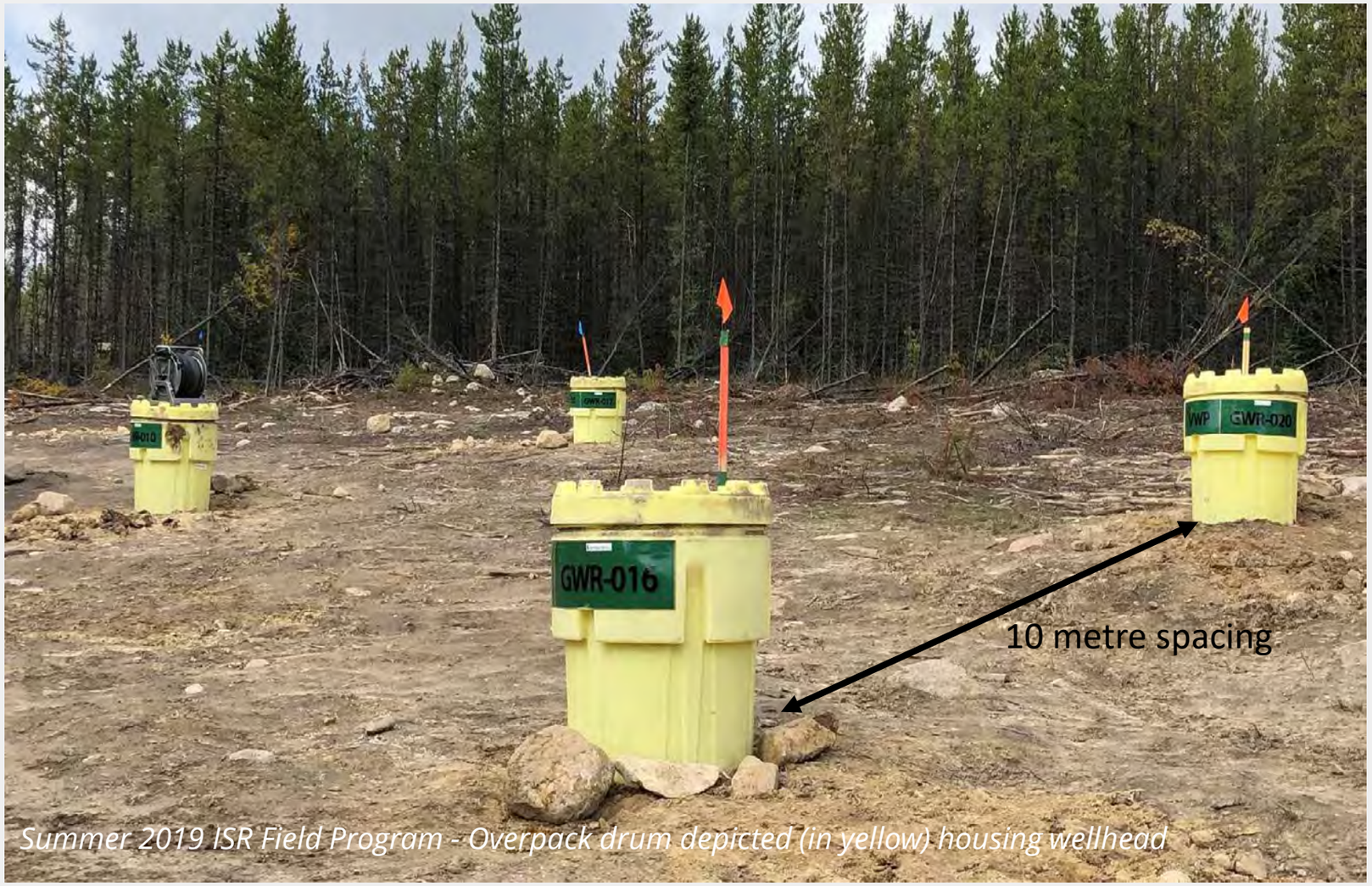


ISR is an Established Mining Method

- In Situ Recovery ("ISR") was first used in the 1960s and ISR produces more than half the world's uranium

How Does ISR Work?

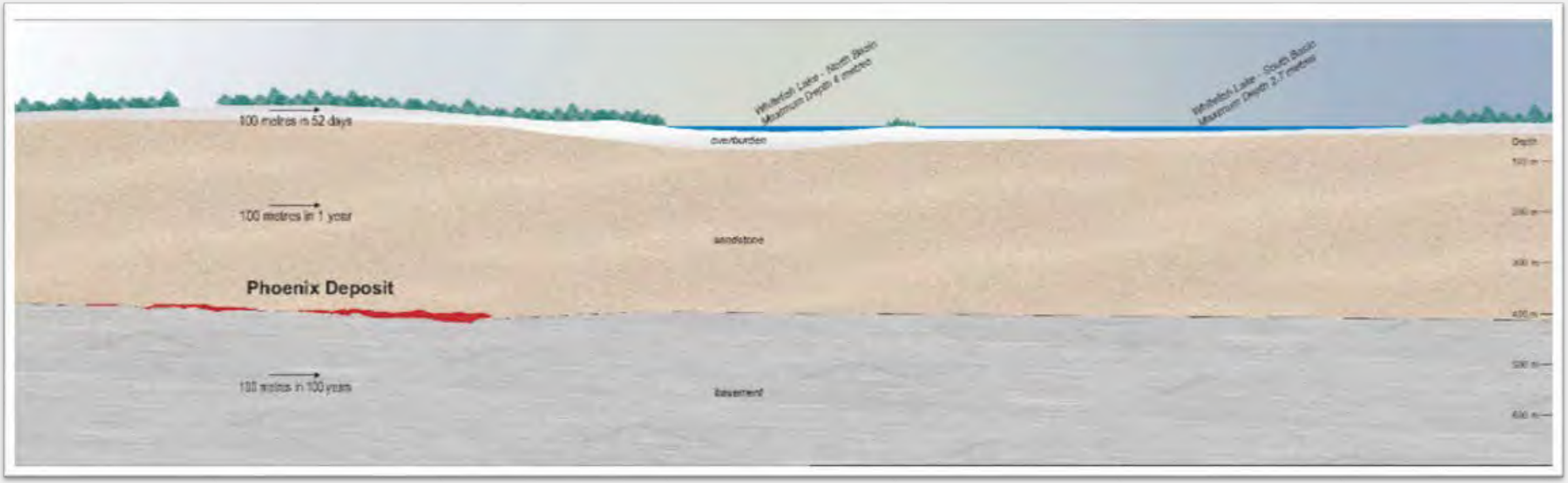
ISR mining:
A progressive approach to mining uranium in the region



Summer 2019 ISR Field Program - Overpack drum depicted (in yellow) housing wellhead

- All activities occur at surface; there are no traditional underground workings
- The ISR mining area has only wells (see picture to left) and pipes to plant; no open pits or major earthworks
- There is no tailings production, no large waste rock piles

ISR mining:
What goes down, stays down



- The ore body is more than 400m below the lakes and river systems (almost height of CN Tower)
- The groundwater in the sandstone around the ore body is not directly connected to surface water
- Recent research shows that groundwater stays at depth; doesn't move upward and moves very slowly at depth

Wheeler River / Phoenix ISR: Different mining method and a different type of operation(1)

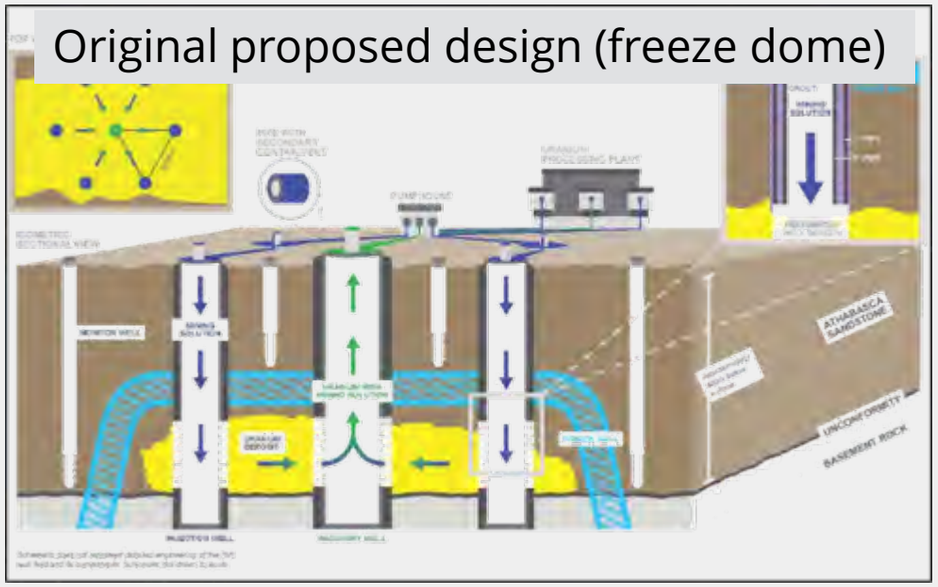
- ✓ Small surface footprint
- ✓ Lower water consumption
- ✓ Lower energy consumption
- ✓ Lower CO_2 emissions
- ✓ Small volume treated effluent released to surface water bodies
- ✓ Potential for lower radiation doses to workers
- ✓ No tailings production
- ✓ Very small volumes of clean waste rock (sandstone core from wellfield development)

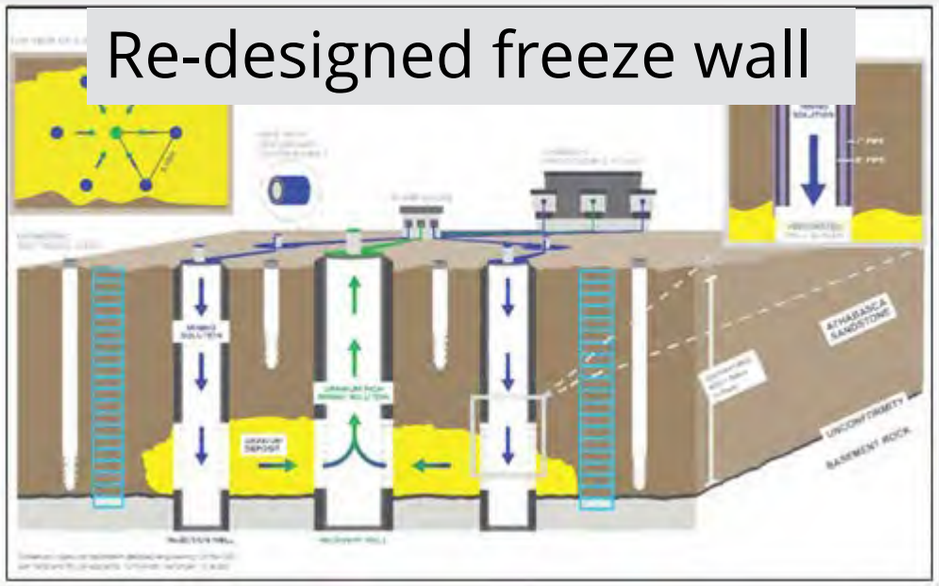
NOTES: (1) Refer to the "Wheeler River Project Provincial Technical Proposal and Federal Project Description", dated May 2019.

Denison Mines / Wheeler River:
Transitioning from exploration to project development focus

- Completed NI 43-101 Pre-Feasibility Study ("PFS") in October 2018
- Board and WRJV approved advancement of Phoenix ISR Project
- Initiated Environmental Assessment ("EA") process with filing of Project Description in early 2019
- Completed first significant field program designed to reduce technical risk
- March 2020 – Global pandemic declared – EA temporarily suspended
- Key desktop study undertaken regarding the freezing containment

Freezing Containment Improvements
Adapting to freezing configuration commonly used in the Athabasca Basin





- Freezing from surface is used at Cigar Lake and McArthur River to enable safe mining activities
  - Standard exploration drill is used
  - Freezing technology well understood in the Athabasca Basin

What Does Freezing do for the ISR Operation?

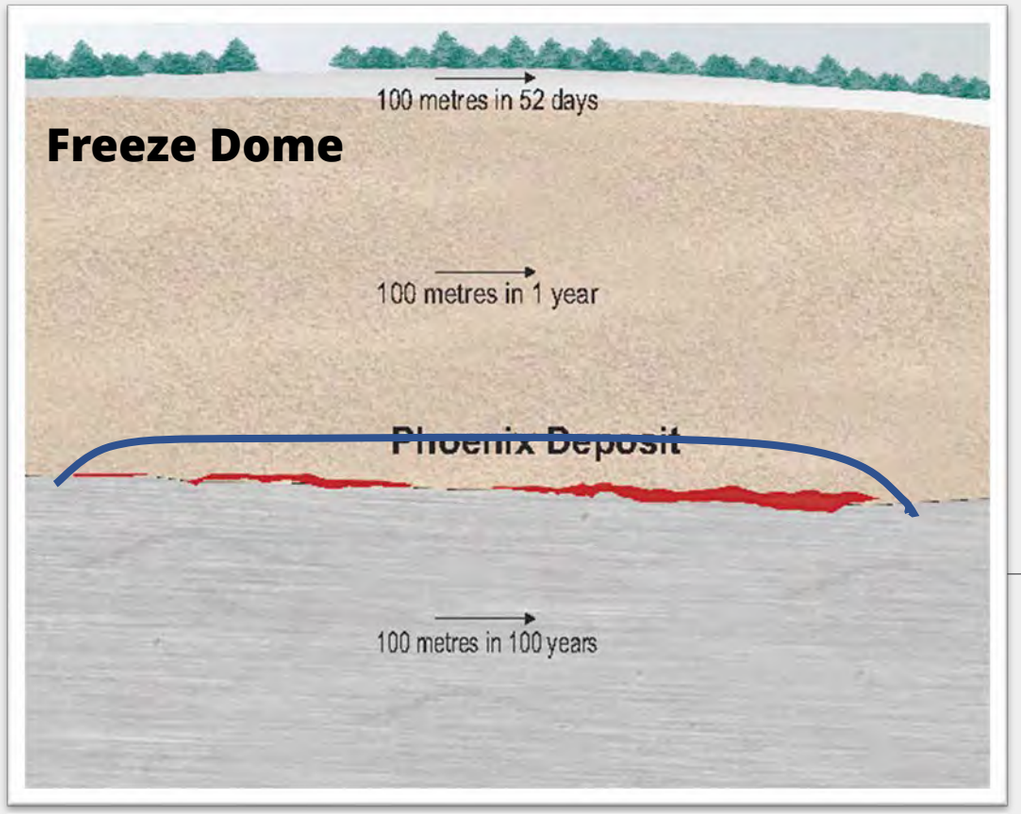
- A freeze wall or dome creates a barrier between solution in the mining chamber and the receiving environment; creates a contained cavity for the mining solution to extract the uranium from the ore
- Freeze containment is an additional layer of protection to the controls in place of: water pressure above, pumping controls, double-walled pipes and monitoring wells
- ISR is new to uranium mining in Canada and the freeze containment provides an additional layer of protection

What is the Change?

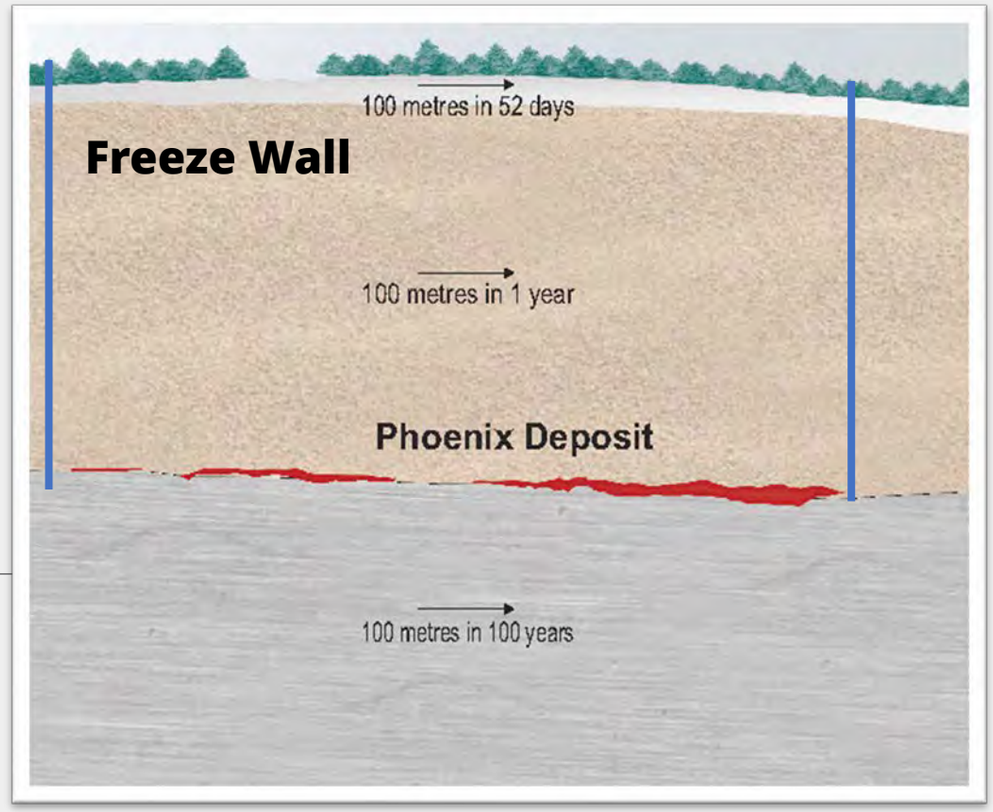
- Drilling vertical freeze holes from surface directly above the ore body, that will surround the mining area
    - Preliminary modelling shows that mining solution would not move upwards greater than 10-13m (under upset conditions)

What is the Benefit?

- There are several northern SK / Indigenous-owned vertical drilling companies; significant positive direct economic impact to northern SK / Indigenous-owned business; the freeze drilling represents many tens of millions of dollars over the life of the Project
- Significant and sustainable indirect employment benefits
- Phased approach to freeze hole drilling will enable Denison to connect back with Interested Parties on a continual basis regarding success / challenges, etc



Change to



Where are we now?
COVID-19: The global pandemic has impacted all of us

- March, 2020: Denison temporarily suspended the environmental assessment process, postponed all community engagement activities
- Immediately undertook to provide hand sanitizer and other safety products to ERFN, Beauval, Ile a la Crosse, Patuanak, Ya'thi Néné Lands and Resources Office and the Métis Nation – Saskatchewan
- Developed COVID-19 specific work instructions for Wheeler River activities
- Developed a northern-Saskatchewan specific travel protocol in consultation with the Northwest Communities Incident Command Centre ("NWCICC")
- Financially supported the NWCICC; broadened the financial support to other exploration companies

Looking to the Future
Adapting to change and finding improvements

- Exploration activities are occurring at Wheeler River now, planned to be completed within a month – these were delayed from earlier this winter
- Installed a number of sampling wells near Whitefish Lake to improve understanding of groundwater movement
- Conducted desktop work, which resulted in a re-evaluation of the freezing containment method
- Formally re-starting the EA process in January, 2021
- Planning for commencing engagement activities in Q1, 2021using virtual platforms and means

Thank you

Date: December 9, 2020: 12:00pm to 1:00pm
Event: Meeting with Beauval Mayor and Council

Beauval Mayor and Council

- Mayor Nick Daigneault
- Melvin Roy
- Thomas Durocher
- Wendy Eldridge
- Alvina Aubichon

Denison

- Dave Bronkhorst
- Carolanne Inglis-McQuay
- Xavier Lu Dac
- Janna Switzer
- Chad Sorba

Overview:

Denison team and Beauval Mayor and Council met via Zoom. Denison provided a presentation with a brief overview of the Wheeler River Project, what In Situ Recovery Mining is, and an update on recent activities including the change in configuration of the freezing component of the Project – from a freeze dome to a freeze wall

Questions / Comments:

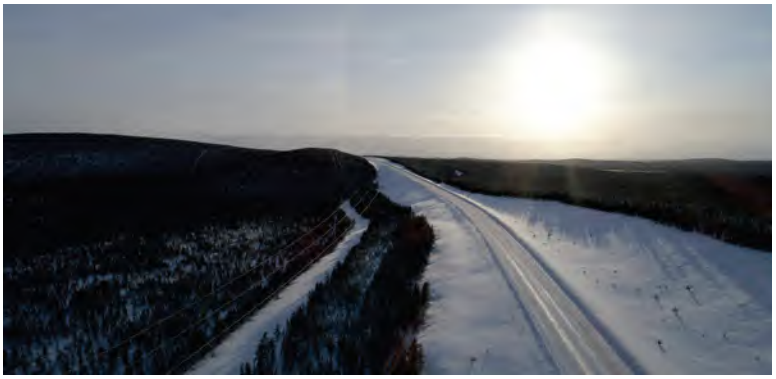
Q: Will you have an agreement similar to the ones that Cameco and Orano have? Will you have employment and training targets?
A: We will have a Surface Lease Agreement with the Province that will likely have specified goals regarding employment and training. And we will be going forward pursuing agreements with Indigenous communities as well. Those are in progress.
Q: What are the estimates for employment during construction and operation?
A: During construction, 200 – 300, during operation 150 – 200. We will be able to train people for the ISR positions in Meadow Lake and in Saskatoon, and also the training programs run like the one that Hy-Tech runs is applicable to the Project, because drillers will be needed for the freeze holes and also the wellfield.
Q: Do you have the Hy-Tech Driller Helper training program numbers over the past years?
A: Not handy but I will get them to you. Follow up to Nick D. on Hy-Tech numbers
Q. You are using Hy-Tech? Not Team Drilling?
A. We are using Hy-Tech for drilling at Wheeler. We are also connecting with other drilling companies in particular, for some research work related to the possibility of using a regular diamond drill and adapting it to use for the ISR well-field.
Q. Can we have a site tour next summer?
A. Yes
Q. Team Drilling and Northlands College have a drilling training program. Would you bring something like this to our region?
A. Yes, we would and we would capitalize on the success they have had with delivering training programs to different regions in the north.
Q. What about the HR Database that was being worked on for the region by Nap Gardiner? We want to re-ignite that process to get a database going that will be helpful for us all, including Denison.
A. We've been in discussions with Nap, and I can bring this back up to him.

Denison Mines

Uranium Development & Exploration

The Athabasca Basin, Northern Saskatchewan

December 2020 | Project Update



Cautionary Statements & References

This presentation and the information contained herein is designed to help you understand management's current views, and may not be appropriate for other purposes. This presentation contains information relating to the uranium market, third party and provincial infrastructure, and the plans and availability thereof, derived from third-party publications and reports which Denison believes are reliable but have not been independently verified by the Company.

Certain information contained in this presentation 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 presentation contains forward-looking information pertaining to the results of, and estimates, assumptions and projections provided in, the Wheeler PFS and the Waterbury PEA, including future development methods and plans, market prices, costs and capital expenditures; assumptions regarding Denison's ability to obtain all necessary regulatory approvals to commence development at Wheeler; Denison's percentage interest in its projects and its agreements with its joint venture partners; and the availability of services to be provided by third parties. 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 faces certain risks, including the current and potential impacts of the COVID-19 pandemic, use of mining methods which are novel and untested in the Athabasca basin, the inability to permit or develop its projects as currently planned, the inability to secure sufficient financing to pursue its business objectives, the unpredictability of market prices, events that could materially increase costs, changes in the regulatory environment governing the project lands, and unanticipated claims against title and rights to the project. 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 13, 2020 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.

Readers should not place undue reliance on forward-looking statements. The forward-looking information contained in this presentation is expressly qualified by this cautionary statement. Any forward-looking information and the assumptions made with respect thereto speaks only as of March 13, 2020. Denison does not undertake any obligation to publicly update or revise any forward-looking information after such date 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 presentation 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.**

Qualified Persons

The disclosure of a scientific or technical nature within this presentation, including the disclosure of mineral resources, mineral reserves, as well as the results of the Wheeler PFS and Waterbury PEA, was reviewed and approved by David Bronkhorst, P.Eng., who is a Qualified Person in accordance with the requirements of NI 43-101.

Technical Reports

- For further details regarding the Wheeler River project, please refer to the Company's press release dated September 24, 2018 and the technical report titled "*Prefeasibility Study for the Wheeler River Uranium Project, Saskatchewan, Canada*" with an effective date of September 24, 2018 ("Wheeler PFS").
- For further details regarding the Waterbury Lake project, please refer to the Company's press release dated November 17, 2020 and, with respect to mineral resource estimates, the technical report titled "*Technical Report with an Updated Mineral Resource Estimate for the Waterbury Lake Property, Northern Saskatchewan, Canada – Mineral Resource Estimate*" dated December 21, 2018. ("Waterbury PEA"). **The PEA is a preliminary analysis of the potential viability of the Project's mineral resources, and should not be considered the same as a Pre-Feasibility or Feasibility Study, as various factors are preliminary in nature. There is no certainty that the results from the PEA will be realized. Mineral resources are not mineral reserves and do not have demonstrated economic viability. Scheduled tonnes and grade do not represent an estimate of mineral reserves.**

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 13, 2020. Copies of the foregoing are available on Denison's website and under its profile on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

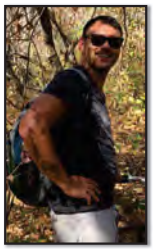
Agenda

- Introductions
- Denison Mines Corp.
  - Brief overview and ties to Athabasca Basin
- Wheeler River Project
  - Location, type of deposit
  - In Situ Recovery Mining
  - Status of Project
  - New and improved designs
- What's Next?

Site visit at the Wheeler River camp in August 2019

Denison Team

- Dave Bronkhorst, VP Operations
- Janna Switzer, Environment Manager
- Chad Sorba, Technical Manager
- Carolanne Inglis-McQuay, Corporate Social Responsibility Manager
- Xavier Lu Dac, Senior Engineer



Denison Mines / Wheeler River:
Overview – building an Athabasca Basin focused uranium mining business

Denison: Focused on opportunities within northern Saskatchewan

Strategic Asset Portfolio:

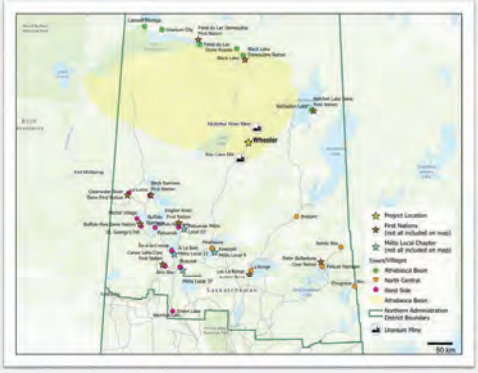
- 22.5% interest in **McClean Lake Uranium Mill**
- 90% interest in Flagship **Wheeler River** project
  - Advancing through development process
  - Largest undeveloped uranium project in the infrastructure rich eastern Athabasca Basin
  - Environmental Assessment ("EA") initiated
  - Innovative approach to mining using In Situ Recovery ("ISR") method
- 66.9% in the **Waterbury Lake Property**, hosting the Tthe Heldeth Tué (formerly J Zone) deposit
  - Recently completed Preliminary Economic Assessment ("PEA")
  - Amenable to ISR mining method
- Additional leverage to the uranium price
  - **McClean Lake, Midwest,** and **Waterbury Lake** all in close proximity to McClean mill
  - **+250,000 hectares** of exploration ground

Denison Mines

Tthe Heldeth Tué Deposit Area

Phoenix Deposit Area

The Wheeler River Project:
Location within northern Saskatchewan

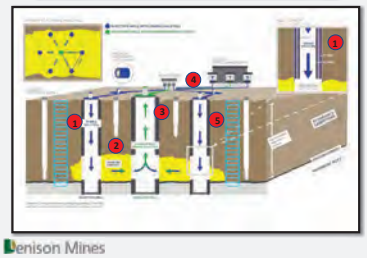


Overview of Wheeler River Project:
Future home of the Phoenix ISR uranium mining operation

Key Site Elements:

- ~200 person camp facility
- ISR wellfield & freeze plant
- Processing plant / Process Water Treatment Plant
- Water Treatment Plant holding ponds and treated effluent discharge point
- Clean and Special waste storage areas
- Plant Precipitates storage areas
- Warehousing and fuel storage facilities
- Back-up power generators
- Wash bay, scanning and weight scale facilities
- Potable and waste water treatment / storage

In Situ Recovery Mining
Introducing a proven mining technique to the Athabasca region



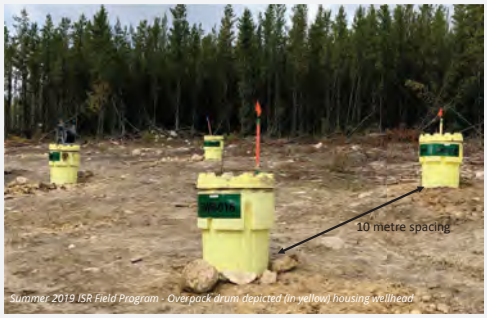
ISR is an Established Mining Method

- In Situ Recovery ("ISR") was first used in the 1960s and ISR produces more than half the world's uranium

How Does ISR Work?

1. A mining solution is injected into the orebody using an Injection Well
2. Uranium is dissolved "in situ" (or, in place) as the mining solution travels through the orebody
3. The same solution carrying dissolved uranium is pumped to surface using a Recovery Well
4. The dissolved uranium is extracted from the solution on surface at a Processing Plant
5. The mining solution is returned to the Injection Wells for further production in a closed loop system

ISR mining:
A progressive approach to mining uranium in the region

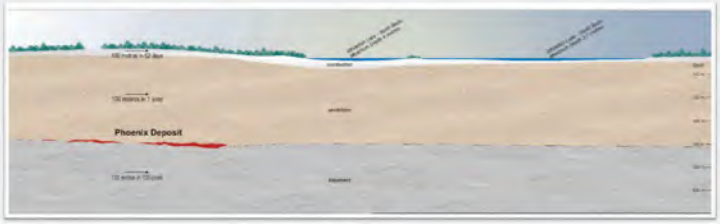


Summer 2019 ISR Field Program - Overpack drum depicted (in yellow) housing wellhead

How is ISR Different?

- All activities occur at surface; there are no traditional underground workings
- The ISR mining area has only wells (see picture to left) and pipes to plant; no open pits or major earthworks
- There is no tailings production, no large waste rock piles

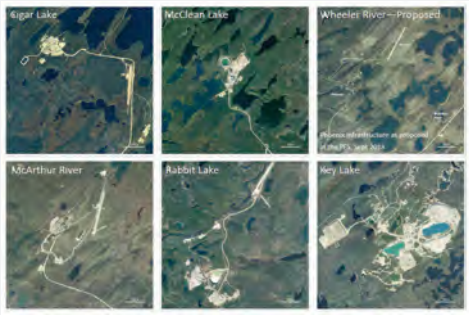
ISR mining:
What goes down, stays down



Similar to other mining methods, understanding groundwater is important

- The ore body is more than 400m below the lakes and river systems (almost height of CN Tower)
- The groundwater in the sandstone around the ore body is not directly connected to surface water
- Recent research shows that groundwater stays at depth; doesn't move upward and moves very slowly at depth

Wheeler River / Phoenix ISR:
Different mining method and a different type of operation[1]



Advantages of ISR mining compared to existing uranium mining in Canada:

- ✓ Small surface footprint
- ✓ Lower water consumption
- ✓ Lower energy consumption
- ✓ Lower CO_2 emissions
- ✓ Small volume treated effluent released to surface water bodies
- ✓ Potential for lower radiation doses to workers
- ✓ No tailings production
- ✓ Very small volumes of clean waste rock (sandstone core from wellfield development)

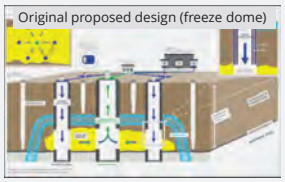
NOTES: (1) Refer to the "Wheeler River Project Provincial Technical Proposal and Federal Project Description", dated May 2019.

Denison Mines / Wheeler River:
Transitioning from exploration to project development focus

Key Milestones for Project

- Completed NI 43-101 Pre-Feasibility Study ("PFS") in October 2018
- Board and WRJV approved advancement of Phoenix ISR Project
- Initiated Environmental Assessment ("EA") process with filing of Project Description in early 2019
- Completed first significant field program designed to reduce technical risk
- March 2020 – Global pandemic declared – EA temporarily suspended
- Key desktop study undertaken regarding the freezing containment

Freezing Containment Improvements
Adapting to freezing configuration commonly used in the Athabasca Basin



Freezing Concept Exists in Athabasca Basin

- Freezing from surface is used at Cigar Lake and McArthur River to enable safe mining activities
  - Standard exploration drill is used
  - Freezing technology well understood in the Athabasca Basin

What Does Freezing do for the ISR Operation?

- A freeze wall or dome creates a barrier between solution in the mining chamber and the receiving environment; creates a contained cavity for the mining solution to extract the uranium from the ore
- Freeze containment is an additional layer of protection to the controls in place of: water pressure above, pumping controls, double-walled pipes and monitoring wells
- ISR is new to uranium mining in Canada and the freeze containment provides an additional layer of protection

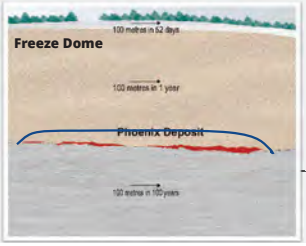
Freezing Containment Improvements
Benefits of Change

What is the Change?

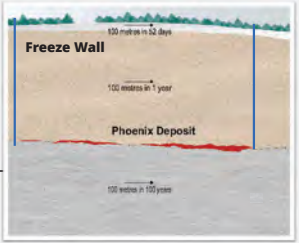
- Drilling vertical freeze holes from surface directly above the ore body, that will surround the mining area
  - Preliminary modelling shows that mining solution would not move upwards greater than 10-13m (under upset conditions)

What is the Benefit?

- There are several northern SK / Indigenous-owned vertical drilling companies; significant positive direct economic impact to northern SK / Indigenous-owned business; the freeze drilling represents many tens of millions of dollars over the life of the Project
- Significant and sustainable indirect employment benefits
- Phased approach to freeze hole drilling will enable Denison to connect back with Interested Parties on a continual basis regarding success / challenges, etc



Change to



Where are we now?
COVID-19: The global pandemic has impacted all of us

Immediate COVID-19 Impact

- March, 2020: Denison temporarily suspended the environmental assessment process, postponed all community engagement activities
- Immediately undertook to provide hand sanitizer and other safety products to ERFN, Beauval, Ile a la Crosse, Patuanak, Ya'thi Néné Lands and Resources Office and the Métis Nation – Saskatchewan
- Developed COVID-19 specific work instructions for Wheeler River activities
- Developed a northern-Saskatchewan specific travel protocol in consultation with the Northwest Communities Incident Command Centre ("NWCICC")
- Financially supported the NWCICC; broadened the financial support to other exploration companies

Looking to the Future
Adapting to change and finding improvements

Working While Keeping Safe From COVID

- Exploration activities are occurring at Wheeler River now, planned to be completed within a month – these were delayed from earlier this winter
- Installed a number of sampling wells near Whitefish Lake to improve understanding of groundwater movement
- Conducted desktop work, which resulted in a re-evaluation of the freezing containment method
- Formally re-starting the EA process in January, 2021
- Planning for commencing engagement activities in Q1, 2021using virtual platforms and means

Thank you

December 9, 2020: 5:00PM to 5:45PM

Meeting with Pinehouse Mayor and Council

Pinehouse Mayor and Council

- Mayor Mike Natomagan
- Acting CAO Stephanie
- Councillor Betty Ann Durocher
- Councillor Billie Jo Natomagan
- Councillor Hannah Smith

Denison

- Dave Bronkhorst
- Carolanne Inglis-McQuay
- Xavier Lu Dac
- Janna Switzer
- Chad Sorba

Overview:

Denison team and Mayor and Council met via Zoom. Denison provided a presentation with a brief overview of the Wheeler River Project, what In Situ Recovery Mining is, and an update on recent activities including the change in configuration of the freezing component of the Project – from a freeze dome to a freeze wall

Questions / Comments:

Q: Since we are the primary impact community, we need to make sure our community members understand In-Situ Recovery mining method – the community will question it and they need to understand it.

During the inquiry, our partner, Cameco, was missing, wasn't supportive of us anymore. We are supportive of the industry but we need support back and in return.

What kind of training and business opportunities will there be?

A. Training for process operators (ISR wellfield operators) and usual other training. On business side we will be able to offer benefits for both construction and operation, which will be an unusual things for the industry to be in a position to do.

Denison Mines

Uranium Development & Exploration

The Athabasca Basin, Northern Saskatchewan

February 2020 | Lac La Ronge Indian Band Lands & Resources Committee

Cautionary Statements & References

This presentation and the information contained herein is designed to help you understand management's current views, and may not be appropriate for other purposes. This presentation contains information relating to other companies and provincial infrastructure, and the plans and availability thereof, derived from third-party publications and reports which Denison believes are reliable but have not been independently verified by the Company.

Certain information contained in this presentation 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 presentation contains forward-looking information pertaining to the results of, and estimates, assumptions and projections provided in, the PFS, including future development methods and plans, market prices, costs and capital expenditures; assumptions regarding Denison's ability to obtain all necessary regulatory approvals to commence development; Denison's percentage interest in its projects and its agreements with its joint venture partners; and the availability of services to be provided by third parties. 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 faces certain risks, including the inability to permit or develop the project as currently planned, the unpredictability of market prices, the use of mining methods which are novel and untested in the Athabasca basin, events that could materially increase costs, changes in the regulatory environment governing the project lands, and unanticipated claims against title and rights to the project. 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 27, 2018 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.

Readers should not place undue reliance on forward-looking statements. The forward-looking information contained in this presentation 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 the September 24, 2018 press release to which this presentation relates. Denison does not undertake any obligation to publicly update or revise any forward-looking information after such date 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 presentation 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.**

Qualified Persons

The disclosure of a scientific or technical nature within this presentation, including the disclosure of mineral resources and reserves and PFS results, was reviewed and approved by Dale Verran, MSc, P.Geo., Pr.Sci.Nat., Denison's Vice President Exploration, who is a Qualified Person in accordance with the requirements of NI 43-101.

Wheeler River Technical Reports

For further details regarding the Wheeler River project, please refer to the Company's press release dated September 24, 2018 and the technical report titled "Prefeasibility Study for the Wheeler River Uranium Project, Saskatchewan, Canada" with an effective date of September 24, 2018. 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 12, 2019. Copies of the foregoing are available on Denison's website and under its profile on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

ROC392

Agenda

- Denison Mines / Wheeler River
  - Overview
  - Phoenix ISR operation
- Opportunities
  - Contractor Employment
  - Future Opportunities

Métis leaders on site at the Wheeler River camp in August 2019

Denison Mines / Wheeler River:
Overview – building an Athabasca Basin focused uranium mining business

Diversified Athabasca Basin Asset Base with Superior Development Leverage

Strategic Asset Portfolio:

- 90% interest in Flagship **Wheeler River** project
  - Development stage project
  - Largest undeveloped uranium project in the infrastructure rich eastern Athabasca Basin
  - Environmental Assessment ("EA") initiated
- 22.5% interest in **McClean Lake Uranium Mill**
  - Processing +12% of global uranium production
  - Excessed licensed capacity
- Additional leverage to the uranium price from interests in undeveloped uranium resources at **McClean Lake, Midwest,** and **Waterbury Lake**
- **~305,000 hectares** of prospective exploration ground in the Athabasca Basin

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

Denison Mines

22.5% Denison owned McClean Lake uranium mill

~305,000 Hectares of Prospective Exploration & Development Ground Focused in the Infrastructure Rich Eastern Athabasca Basin

Denison Mines

All Season Highway / Haul Road

Provincial Power Grid

Flagship Wheeler River Development Project

Highlights[1]:

- Host to two high-grade uranium deposits
- NI 43-101 compliant Pre-Feasibility Study ("PFS") considers staged development plan
- **Phoenix** estimated to potentially have lowest costs of any undeveloped uranium deposit globally
  - **In-Situ Recover ("ISR") mining method**
  - On-site processing to finished yellow cake
  - Initiation of EA approved by Board & JV
  - All-in costs of **US$8.90/lb U_3O_8**
  - Operating costs of **US$3.33/lb U_3O_8**
- **Gryphon** contributes additional low-cost pounds
  - Conventional underground mining approach
  - Assumes toll-milling at McClean Lake mill
  - All-in cost of **US$22.82/lb U_3O_8**
  - Operating costs of **US$11.70/lb U_3O_8**
- Combined **109.4M** lbs U_3O_8 Probable Reserves
- Combined **14** year mine life
- Initial CAPEX (Phoenix) of **$322.5M** (100%)

✓ **Ownership: 90% Denison, 10% JCU**

Denison Mines

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018;

ISR test well head installed at Wheeler River Phoenix Deposit, Summer 2019

ROC392

Denison Mines / Wheeler River:
Phoenix – combining the world's lowest-cost uranium mining method with the world's highest-grade undeveloped uranium deposit

ISR test wells installed at Wheeler River Phoenix Deposit, Summer 2019

Denison Mines / Wheeler River:
Transitioning from exploration to project development focus

Current Project Status

- Completed NI 43-101 Pre-Feasibility Study ("PFS") in October 2018
- Board and WRJV approved advancement of Phoenix ISR operation
- Initiated Environmental Assessment ("EA") process with filing of Project Description in early 2019
- Completing first significant field program designed to reduce technical risk
- Developing plans for future field programs designed to further de-risk

NOTES: (1) Refer to Denison's news releases dated 26 June 2019, 27 August 2019, 19 September 2019 & 31 October, 2019 for further details.

Overview of Project Location:
Future home of the Phoenix ISR uranium mining operation

Key Site Elements:

- ~150 person camp facility
- Site operations centre
- ISR wellfield
- Freeze plants
- Processing plant / Water Treatment Plant
- Potential Water Treatment Plant holding ponds and treated effluent discharge point
- Special waste storage area
- Warehousing and fuel storage facilities
- Back-up power generators
- Wash bay, scanning and weight scale facilities
- Potable and waste water treatment / storage

ROC392

Phoenix Geology: Unique uranium deposit with exceptionally high grades

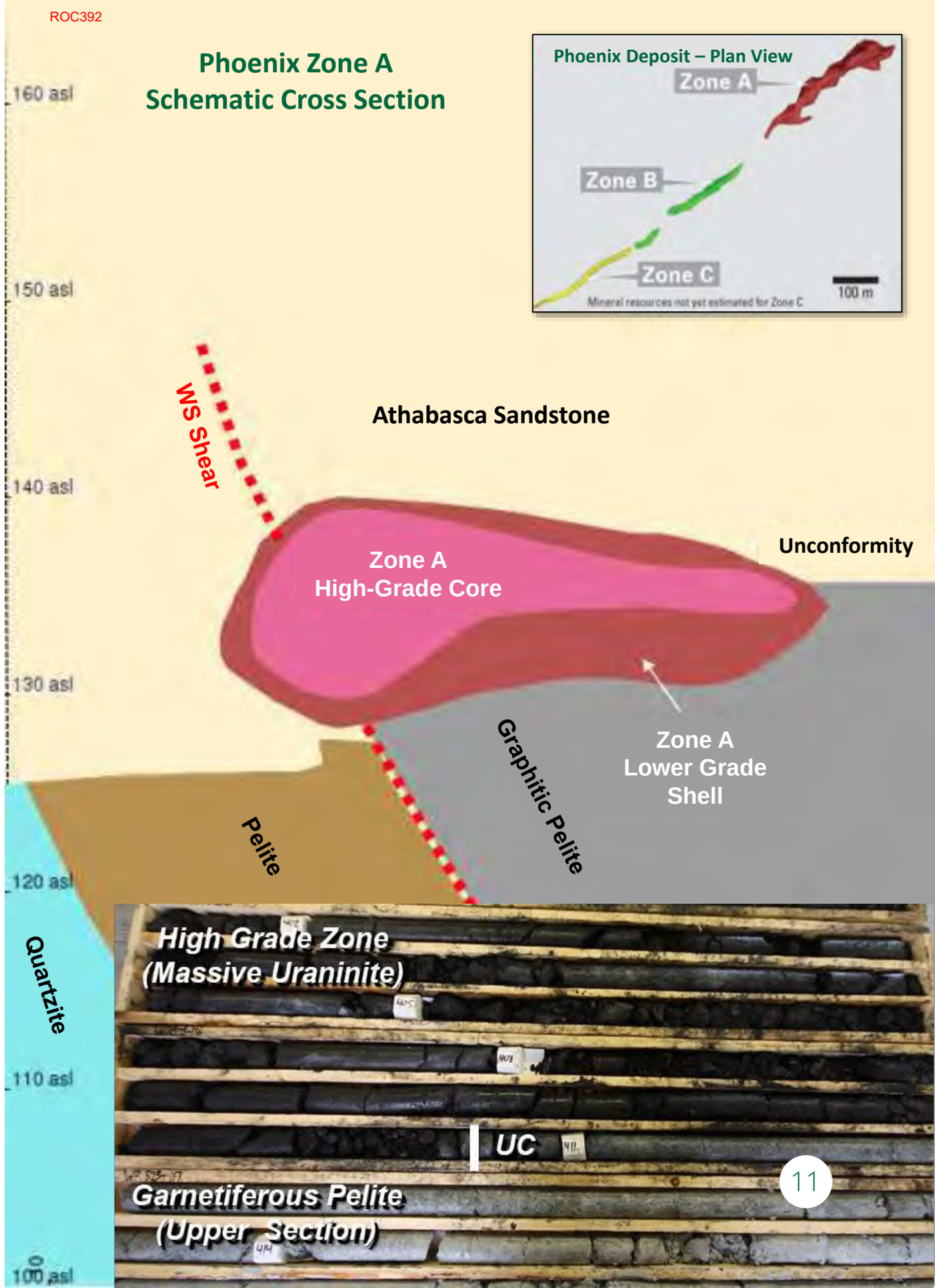
Highlights[1]:

- Mineralization is situated at or immediately above the unconformity("UC")
- Two distinct zones – Phoenix A + B
- Approximately 400m below surface
- World's highest-grade undeveloped uranium deposit
- **70.2 million pounds U_3O_8 @ 19.14% U_3O_8** Indicated mineral resources (166,400 tonnes)[2]
  - Zone A High-Grade Core contains an estimated **59.9 M lbs U_3O_8 @ 43.2% U_3O_8** (62,900 tonnes)
  - Cut-off grade of 0.8% U_3O_8
  - 1.1M lbs U_3O_8 in Inferred mineral resources (8,600 tonnes @ 5.8% U_3O_8)[3]

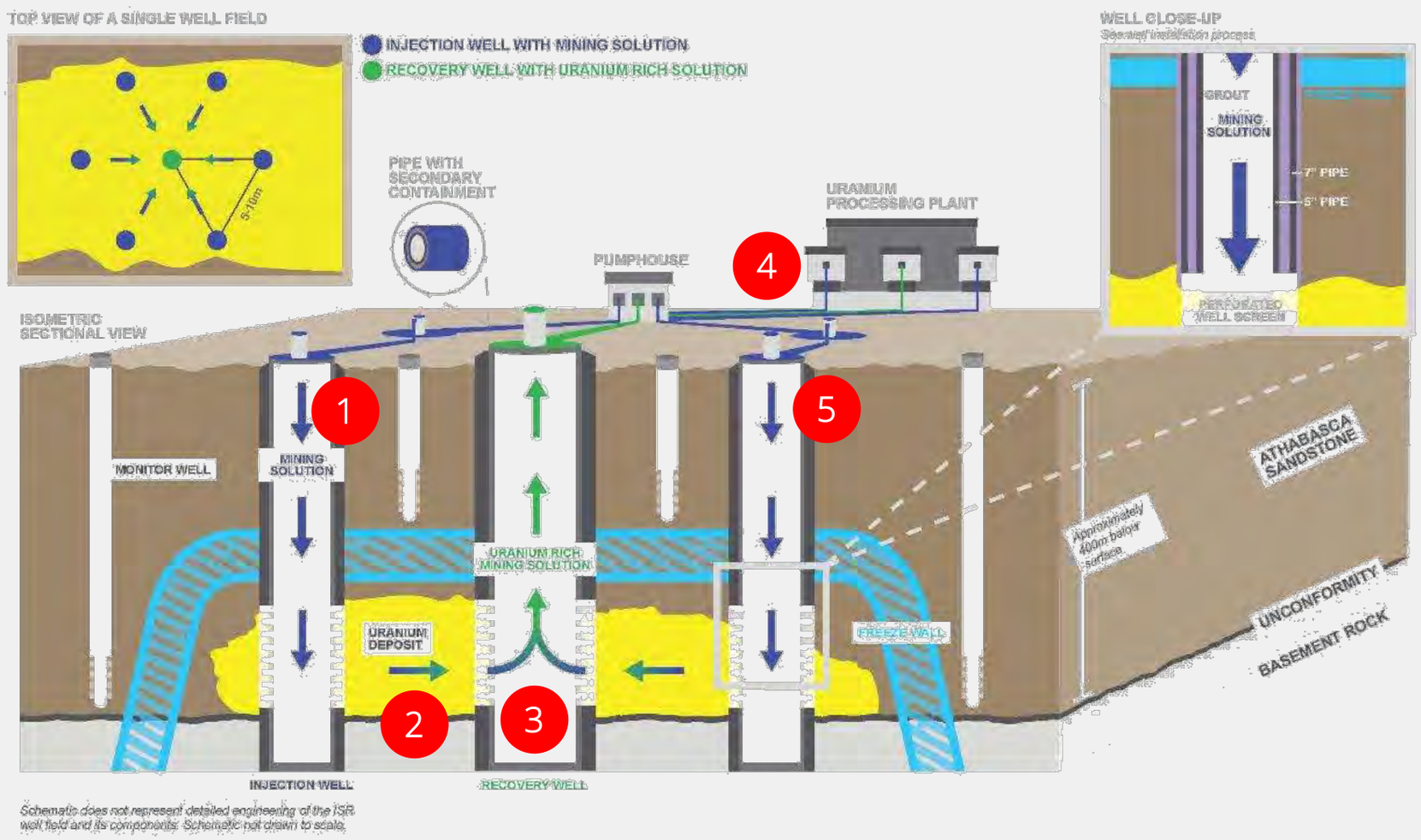
✓ **Geological setting expected to be amenable to ISR mining, with ~90% of the mineral resource (contained metal) hosted in sandstone**

Denison Mines

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018; (2) Indicated resources are inclusive of Reserves; (3) The PFS does not include any economic analysis based on estimated Inferred resources.



Phoenix Operation:
Application of low-cost ISR mining method to high-grade Athabasca Basin

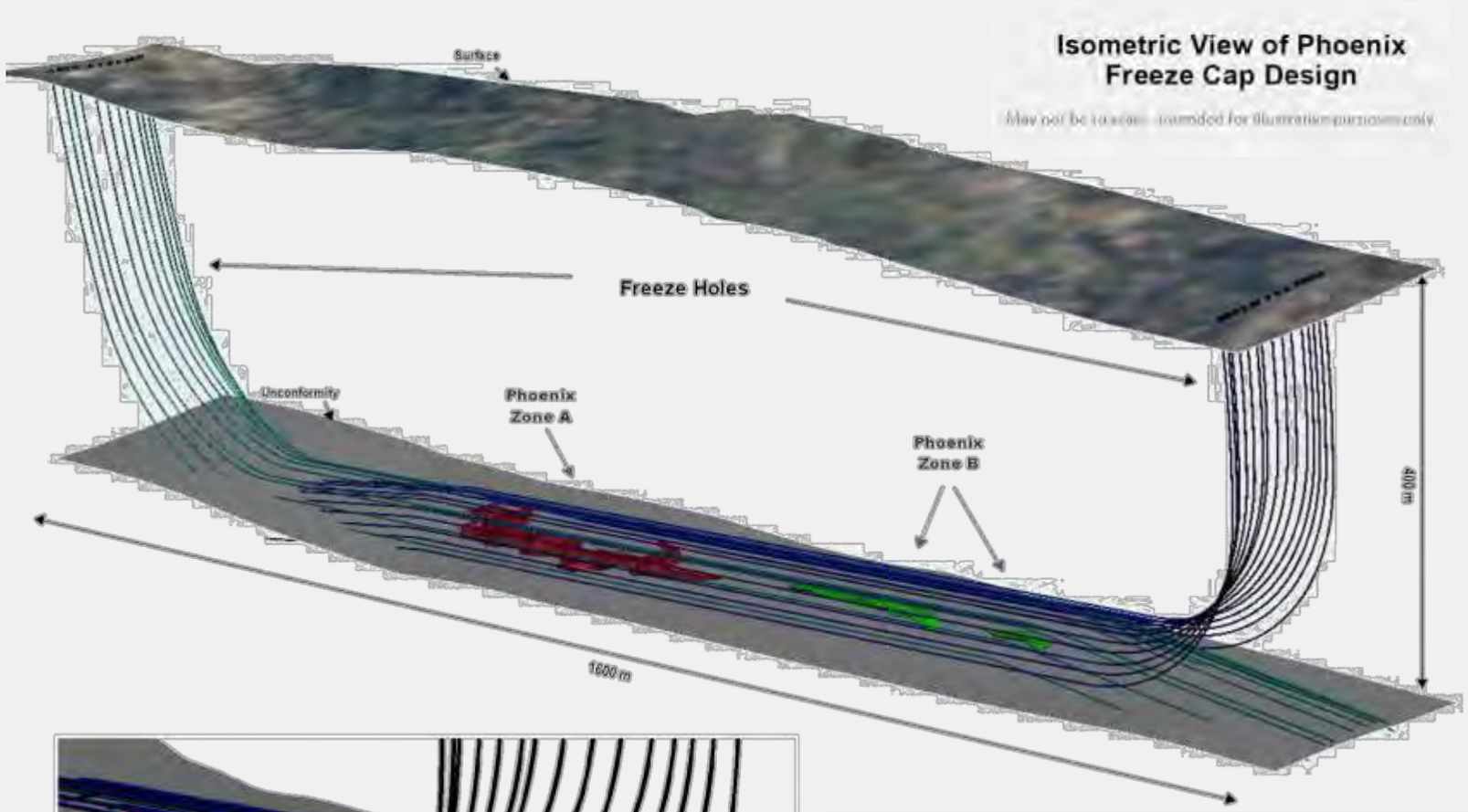


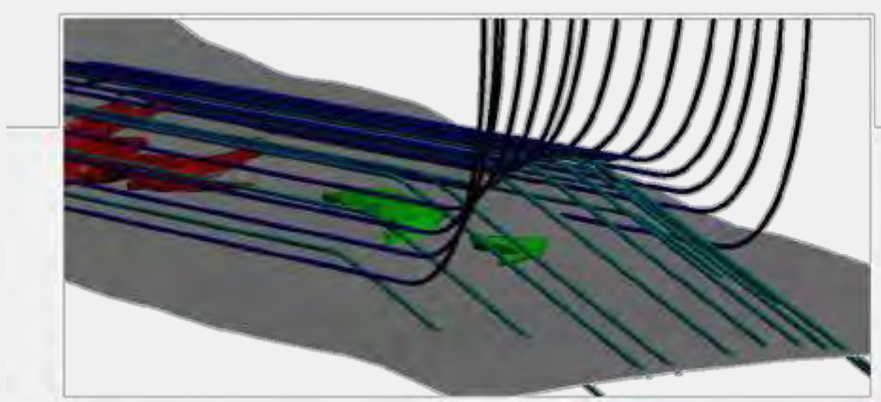
ISR Mining Process[1]:

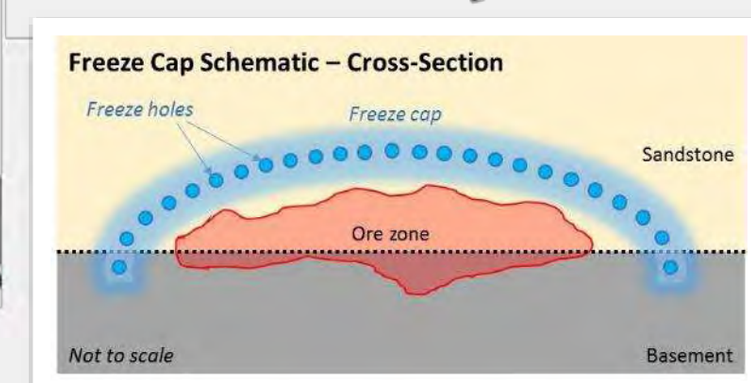
1. Mining solution (also known as "lixiviant") is pumped through a permeable orebody via injection well
2. Lixiviant dissolves the uranium as it travels through the orebody
3. Uranium bearing mining solution ("UBS") is pumped back to surface via recovery well
4. UBS is sent to a processing plant on surface for chemical separation of the uranium and reconditioning of lixiviant
5. Lixiviant is returned back to well field for further production

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018.

Phoenix Freeze Cap:
Novel concept to contain mining solution, using established technology







Artificial freeze cap replicates confining layer typically required for ISR mining operations[1]

- Parallel cased holes drilled from surface and anchored into impermeable basement rock surrounding the Phoenix deposit
- Circulation of low-temperature brine solution through cased pipes will freeze groundwater in sandstone surrounding the deposit
- 10 metre thick freeze wall, together with basement rocks will encapsulate Phoenix deposit

✓ **Eliminates common environmental concerns with ISR mining and facilitates controlled reclamation**

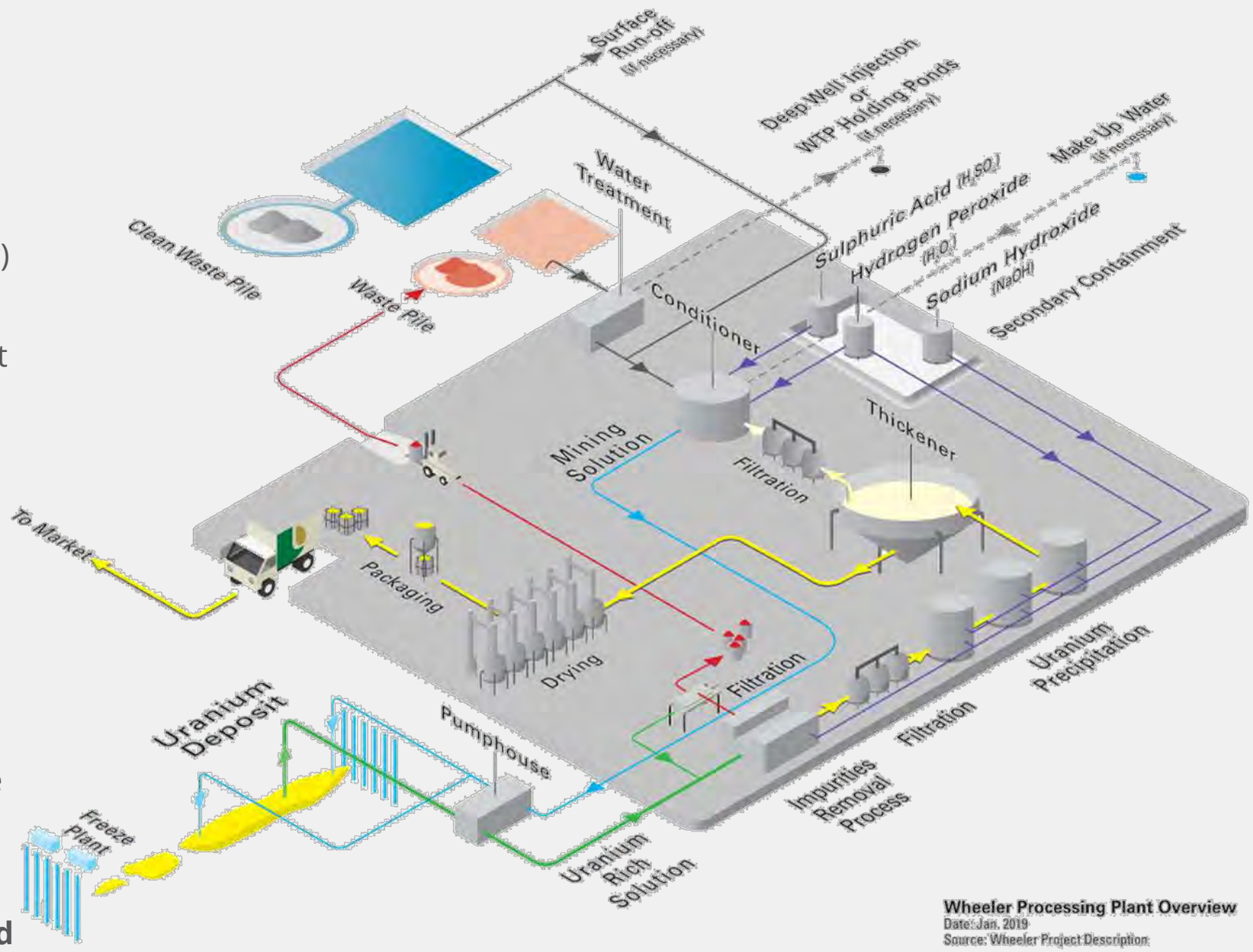
NOTES: (1) Indicative design only. Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018.

Phoenix ISR Processing Plant:
Closed loop system and simplified plant design reduces the need for discharge

On-Site Processing Plant[1]

- Annual production between 6 and 12 million lbs U_3O_8 – depends on uranium concentrations from wellfield (10 g/L → 6M lbs U_3O_8 / yr)
- No crushing or grinding circuits required – results in small footprint
- Low impurity solution allows for direct precipitation and eliminates need for ion exchange or solvent extraction circuits
- Potential for closed loop system that recycles mining solution with little to no discharge of treated effluent
- Drying/calcining to be done on-site in preparation for market

✓**Powered by Provincial power grid**



NOTES: (1) Indicative design only. Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018.

Multimedia:
Bringing the Wheeler River project to life

Wheeler River / Phoenix ISR:
Different mining method and a different type of operation

Comparison to Precedent Athabasca Basin uranium mining operations:

Project Element	Existing Operations	Wheeler River Project	Observation
Annual jobs during operation	~1,050 – McArthur/Key Lake ~ 800 – Cigar / McClean	100 - 150	Wheeler work-force is <15% of existing operations; fewer opportunities to share benefits.
Estimated uranium resources amenable to selected mining method	~400 M lbs U_3O_8 (remaining) at McArthur ~180 M lbs U_3O_8 (remaining) at Cigar	~70 M lbs U_3O_8 amenable to ISR mining	Wheeler ISR resources are <20% of the remaining uranium resources at McArthur, despite a decade plus of mining;
Annual production	~18M lbs U_30_8 at each of McArthur & Cigar	~6-12 M lbs U_3O_8	Wheeler annual production expected to be 1/3rd to 2/3rds of each of McArthur and Cigar + small resource base means shorter mining life, and fewer years / opportunities to share benefits.
Initial costs of construction / initial capital costs	Estimated ~$3B for Cigar	Estimated at $325M per PFS	Building Wheeler is expected to cost ~10% of Cigar; fewer opportunities to share benefits

Other important considerations:

- On-site processing to yellowcake product: no trucking of mine production to off-site processing plant;
- All jobs for ISR operation are above ground

Wheeler River / Phoenix ISR: Different mining method and a different type of operation[1]

Advantages of ISR mining compared to existing uranium mining in Canada:

- ✓ Small surface footprint
- ✓ Lower water consumption
- ✓ Lower energy consumption
- ✓ Potentially near zero CO_2 emissions
- ✓ Small volume (potentially zero) treated effluent released to surface water bodies
- ✓ Potential for lower radiation doses to workers
- ✓ No tailings production
- ✓ Very small volumes of clean waste rock (sandstone core from wellfield development)

NOTES: (1) Refer to the "Wheeler River Project Provincial Technical Proposal and Federal Project Description", dated May 2019.

Denison Mines / Wheeler River:
Maximizing current opportunities with a long-term view

ROC392

Building a local workforce and supply chain: Maximizing current opportunities

Efforts by Denison Contractors

- Main contractors at Wheeler Project site are contractually required to employ from Wheeler Partner communities and focus expenditures within Northern Administrative District (where possible)
- **Hy-Tech Drilling**
  - In 2019, 46% of employees from NAD and Wheeler Partner communities
  - In 2019, 37% of expenditures with companies from NAD
- **Pinehouse Business North**
  - In 2019, 100% of employees (working on Wheeler Project) from Pinehouse
- **Catering service provider from Ile a la Crosse**
  - 66% of employees from Wheeler Partner communities

Exploration drill rig at Wheeler River, Summer 2019

ROC392

Supporting local business and investing in the community

Denison's Continual Efforts to Expand Business Opportunities

- Pinehouse Business North
- Beauval General Store (English River First Nation)
- Catering / camp services from Ile a la Crosse
- Pinehouse Photography Club
- Athabasca Basin Security / Medical
- CanNorth (Supporting EIS Preparation)

Community Investment

- Denison supports initiatives the communities consider important
  - Elders Gatherings; wellness and healing events; cultural and hunting camps
- Budget is reflective of early development / advanced exploration stage of the project
- Denison is open to innovative and different ideas to support communities

Denison Mines

Building a local workforce

Potential employment opportunities associated with ISR mining operation:

- Targeted to Wheeler Partner Communities
- Up to 300 jobs during ~2 years of construction
- Approximately 100 jobs during operation of the planned ISR mining operation
- Opportunities similar to other uranium mining operations (processing plant, camp, security and EH&S roles)
- Various unique opportunities specific to an ISR mining operation, which will require diploma or technical certification available in Saskatchewan:
  - ✓ Process Operation Technician (SIIT in Meadow Lake)
  - ✓ Chemical Technology (Sask Polytechnic)
- In-house training programs can be developed once operations begin
- ISR mining positions are all surface-based
- Expected to operate as a fly-in / fly-out operation from planned Wheeler River airstrip
- Denison expects to support communities in efforts to build future workforce

Denison Mines

Typical ISR Header House in the United States

ROC392

Denison Mines / Wheeler River: Questions?

February 13, 2020: 1PM
Denison Mines Corp. Wheeler River Project
Presentation to Lac La Ronge Indian Band Lands and Resources Subcommittee

Attendees:

1. Elder Grace Cook
2. Councillor Sam Roberts - Chair
3. Councillor Norman Ross
4. Councillor Dennis Sanderson
5. Councillor Larry Charles
6. Gladys Christiansen7.
7. Wilma Ratt
8. Karen Adam
9. Jeanine Patterson
10. Carolanne Inglis-McQuay
11. Janna Switzer
12. Chad Sorba

Meeting Objective

Lac La Ronge Indian Band ("LLRIB") Lands and Resources Subcommittee requested Denison Mines Corp. ("Denison") to attend a scheduled meeting for an update on the Wheeler River Project ("The Project"). Denison provided a presentation to outline the In-Situ Recovery ("ISR") mining process and freeze dome containment envisioned for the Project deposit. An update on future well bore testing and intent to complete an Environmental Impact Statement was also provided.

List of Questions / Comments

Q – How did Denison get the property from Cameco
A – Denison has been a minority owner in the Project since 1984, owning a 40% equity stake in the Project with Cameco Corp. ("Cameco") as majority owner and operator among other partners. In 2006, Denison earned additional 20% equity stake in the Project from Cameco and Japanese Canada Uranium ("JCU") by way of exploration expenditures. As a result Denison became operator of the property and had a 60% equity interest. In 2018, Denison earned subsequent equity in the Project from Cameco. At present ownership in the Project in Denison 90%, JCU, 10%.
Q – How is ISR working so far?
A – Denison is taking a staged disciplined de-risking approach to the Project. De-risking the Project hinges on the testing of three main parameter (permeability, containment and leachability). The 2019 field program aimed to de-risk the permeability aspect of the project. To date results show that the deposit is permeable and have confirmed the ability to achieve bulk hydraulic conductivity values (a measure of permeability) consistent with the Pre-Feasibility Study ("PFS") released in 2018.
Q – Is it the same extraction method as oil? Is fracking involved?
A – No. Fracking is not involved in this. It is not the same extraction method as oil well removal. The extraction technique is more akin to Potash solution mining in Southern Saskatchewan. Denison has tested other permeability enhancement techniques as part of the 2019 field program that are mechanical in nature and do not involve 'fracking' of the rock.
Q – What about employment? If there are no underground workers then there will be less workers.
A – Yes, there are a reduced number of workers required at the operation because it is a different mining method. There won't be the same as the other operations. Those working with the ISR wellfield will have a different skill set, that is attainable at SIIT in Meadow Lake.
Q – Is this a more environmentally friendly mining method?
A – Generally speaking, yes. It will still have waste streams that have to be managed, but they will be different, as this is a different kind of mining. There won't be a tailings management area as northern Saskatchewan is presently familiar with.
Q – So no uranium tailings left behind?
A – Not in the traditional sense. There will have to be waste streams managed from the processing facility and the volumes will be much less than traditional tailings.
Q – How many wells would you need on surface?
A – At this point we've planned for 310.
Q – Where would the yellowcake be shipped?
A – Generally speaking to a refinery as dictated by our customers.
Q – How are you going to protect the water quality? We are concerned about mercury in fish, other animals, etc. Is there mercury or arsenic in the uranium solution?
A – The ore is very clean relative to other existing unconformity deposits in the Athabasca Basin (i.e.: Midwest, Cigar Lake etc.), and so levels of contaminants like mercury and arsenic are very low, if not completely absent. The water quality will meet all surface water quality guidelines.
Q – Is there any ammonia in the solution?
A – No.
Q – When are you aiming to construct?
A – 2024. This guideline is as per 2018 PFS report assumptions.
Q – Are you doing an individual Environmental Assessment? Do you need a permit for road construction?
A – We are doing our own Environmental Assessment for the Project, which would include any of the road work.
Q- Will the Wheeler River Project fall under the "Blanket Permit" of Cameco?
A- No. Denison will be required to obtain our own individual permits for the Project
Q – How many employees do you presently have with exploration?
A – Our camp can hold 40 people at one time. Many of the people on site are contractors for the drilling company or other companies. Denison does not have many direct employees.
Q – How much lower (in percentage form) are you in terms of environmental impacts? Are you 50% less impacts than the other operations? 60%? 30%?
A – It's hard to say specifically. We can look at our air emissions, water discharged, and surface area disturbed and come up with an estimate. At present we can't say. The environmental assessment will predict the effects of the project.

Phone Call, March 1, 2021

Denison: Carolanne Inglis-McQuay

Ile A la Crosse: Member of the Public

Notes:

The Member of the Public from Ile A la Crosse stated that monitoring should be done by northern Saskatchewan people / company; northern Saskatchewan people/companies have a focus on groundwater protection and a northern business would be the best to do this.

The Member of the Public from Ile A la Crosse stated that they have friends who work at Key Lake; they do testing for the companies.

The Member of the Public from Ila A la Crosse stated that Denison could start this company up now and return benefits back to the north. They stated that Northerners have the capability to do this. This could employ people over time; 20-30 people over the years

Denison and the Member of the Public from Ile A la Crosse discussed how these things were part of a vision for Denison over time, but it takes time to enact.

Denison Mines

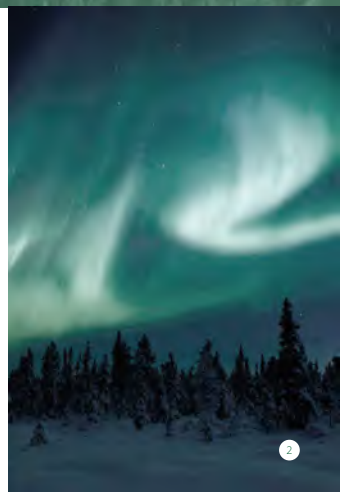
Uranium Development & Exploration

The Wheeler River Project

February, 2021 Ile a la Crosse Mayor and Council Meeting

Agenda

- Opening
- Introductions (Denison, Province, CNSC)
- Wheeler River Project Overview
- Environmental Assessment Process
- Valued Components
- Next Steps from Denison



Cautionary Statements & References

This presentation and the information contained herein is designed to help you understand management's current views, and may not be appropriate for other purposes. This presentation contains information relating to the uranium market, third party and provincial infrastructure, and the plans and availability thereof, derived from third-party publications and reports which Denison believes are reliable but have not been independently verified by the Company.

Certain information contained in this presentation 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 presentation contains forward-looking information pertaining to the results of, and estimates, assumptions and projections provided in, the Wheeler PFS and the Waterbury PEA, including future development methods and plans, market prices, costs and capital expenditures; assumptions regarding Denison's ability to obtain all necessary regulatory approvals to commence development at Wheeler; Denison's percentage interest in its projects and its agreements with its joint venture partners; and the availability of services to be provided by third parties. 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 faces certain risks, including the current and potential impacts of the COVID-19 pandemic, use of mining methods which are novel and untested in the Athabasca basin, the inability to permit or develop its projects as currently planned, the inability to secure sufficient financing to pursue its business objectives, the unpredictability of market prices, events that could materially increase costs, changes in the regulatory environment governing the project lands, and unanticipated claims against title and rights to the project. 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 13, 2020 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.

Readers should not place undue reliance on forward-looking statements. The forward-looking information contained in this presentation is expressly qualified by this cautionary statement. Any forward-looking information and the assumptions made with respect thereto speaks only as of February 8, 2021. Denison does not undertake any obligation to publicly update or revise any forward-looking information after such date 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 Mineral Resources and Mineral Reserves: This presentation may use terms such as "measured", "indicated" and/or "inferred" mineral resources and "proven" or "probable" mineral reserves, which are terms defined with reference to the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") CIM Definition Standards on Mineral Resources and Mineral Reserves ("CIM Standards"). The Company's descriptions of its projects using CIM Standards may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements under the United States federal securities laws and the rules and regulations thereunder.

Qualified Persons

The disclosure of a scientific or technical nature within this presentation, including the disclosure of mineral resources, mineral reserves, as well as the results of the Wheeler PFS and Waterbury PEA, was reviewed and approved by David Bronkhorst, P.Eng., who is a Qualified Person in accordance with the requirements of NI 43-101.

Technical Reports

- For further details regarding the Wheeler River project, please refer to (a) the Company's press releases dated December 1, 2020, regarding the adoption of the freeze wall design for ISR at Phoenix, and September 24, 2018, regarding the Prefeasibility Study, and (b) the technical report titled "*Prefeasibility Study for the Wheeler River Uranium Project, Saskatchewan, Canada*" with an effective date of September 24, 2018 ("Wheeler PFS").
- For further details regarding the Waterbury Lake project, please refer to the Company's press release dated November 17, 2020 and the technical report titled "*Preliminary Economic Assessment for the The Heldeth Túé (J Zone) Deposit, Waterbury Lake Property, Northern Saskatchewan, Canada*" with an effective date of October 30, 2020. ("Waterbury PEA"). **The Waterbury PEA is a preliminary analysis of the potential viability of the Project's mineral resources, and should not be considered the same as a Pre-Feasibility or Feasibility Study, as various factors are preliminary in nature. There is no certainty that the results from the PEA will be realized. Mineral resources are not mineral reserves and do not have demonstrated economic viability. Scheduled tonnes and grade do not represent an estimate of mineral reserves.**

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 13, 2020. Copies of the foregoing are available on Denison's website and under its profile on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

Denison Team

- Dave Bronkhorst, VP Operations
- Janna Switzer, Environment Manager
- Chad Sorba, Technical Manager
- Carolanne Inglis-McQuay, CSR Manager
- Xavier Lu Dac, Senior Engineer
- Dana Harris, Project Services Coordinator
- Mike Dawe, Environment and CSR Coordinator
- Jenn Skilnick, Environment Coordinator

Mr. Aimann Sadik
Senior Environmental Assessment Administrator

Ms. Brianne England
Manager, Applications

Government of Saskatchewan

Ms. Marcelle Phaneuf
Environmental Assessment Specialist

Mr. Doug Wylie
Environmental Assessment Specialist

CNSC CCSN
nuclearsafety.gc.ca
Canada

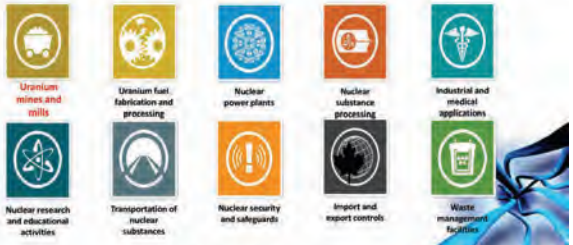
CNSC Mandate

- Regulate the use of nuclear energy and materials to protect health, safety, security and the environment
- Implement Canada's international commitments on the peaceful use of nuclear energy
- Disseminate objective scientific, technical and regulatory information to the public

nuclearsafety.gc.ca 2

Introductions: CNSC

CNSC Regulates All Nuclear Facilities and Activities



nuclearsafety.gc.ca 3

Introductions: CNSC

CNSC Staff

- Perform technical assessments and reviews
- Presents staff's assessment findings and recommendations
- Implement Commission decisions
- Conduct compliance inspections and oversight of the licensees facilities and activities
- Verify and enforce compliance with regulatory requirements
- Develop regulatory requirements and guidance
- Engage the public and Indigenous groups through outreach

nuclearsafety.gc.ca 4

Introductions: CNSC

Responsibilities

CNSC Responsibilities:

- Make independent, objective, science based and risk-informed decisions
- Set requirements
- Verify compliance

Licensee Responsibilities:

- Manage regulated activities in a manner that protects health, safety, security and the environment, while respecting Canada's international obligations
- Responsible and accountable for the safe operation of facilities and activities

nuclearsafety.gc.ca

5

Introductions: CNSC

Environmental Assessment

- Opportunities for public and Indigenous consultation are continuous
- Federal and provincial agencies are involved and contribute their expertise in Impact Assessments and Environmental Assessments
- Decisions are independent, transparent and evidence-based

nuclearsafety.gc.ca

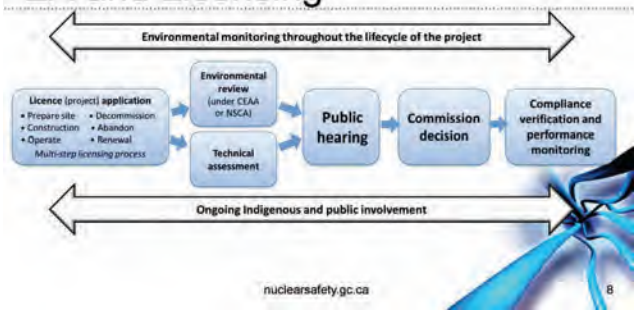
6

Introductions: CNSC

7

Introductions: CNSC

EA and Licensing



nuclearsafety.gc.ca

8

Company Overview:

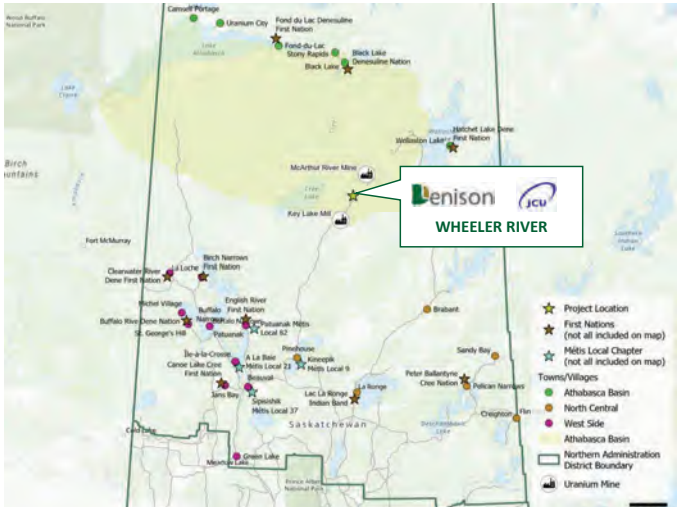
Denison is focused on opportunities in northern Saskatchewan

- 22.5% interest in **McClean Lake Uranium Mill**
- 90% interest in Flagship **Wheeler River** project
  - Advancing through development process
  - Largest undeveloped uranium project in the infrastructure rich eastern Athabasca Basin
  - Environmental Assessment ("EA") initiated
  - Progressive approach to mining using In Situ Recovery ("ISR") method
- 66.9% in the **Waterbury Lake Property**, hosting the Tthe Heldeth Túé (formerly J Zone) deposit
  - Recently completed Preliminary Economic Assessment ("PEA")[1]
  - Amenable to ISR mining method
- Several other interests in the Athabasca Basin region
  - **McClean Lake, Midwest,** and **Waterbury Lake** properties, all in close proximity to McClean mill
  - **+250,000 hectares** of exploration ground

NOTES: (1) See Denison's news release dated Nov. 17, 2020; The PEA is a preliminary analysis and should not be considered the same as a Pre-Feasibility or Feasibility Study; see Cautionary Statements slide for details

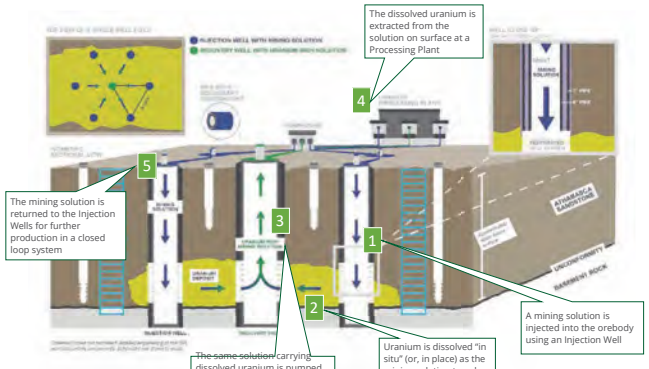
ISR field testing at Wheeler River - Phoenix deposit, Summer 2019

15



In Situ Recovery ("ISR") Mining[1]:

Introducing a proven mining technique to the Athabasca Basin



NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018. (2) Figure reflects Denison's decision to adopt a freeze wall approach (see press release dated December 01, 2020)

ISR Mining:

A progressive approach to uranium mining uranium in the Athabasca Basin

How is ISR Different?[1]

- All activities occur at surface; there are no traditional underground workings
- The ISR mining area has only wells and pipes to plant; no open pits, head-frame, or major earthworks
- There is no tailings production or long-term tailings storage, plus no large waste rock piles

Waste Management Vision

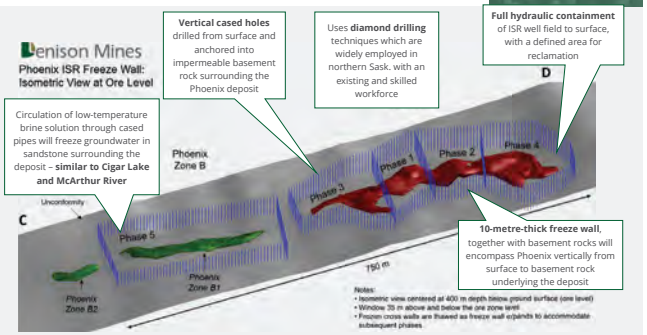
- Two main waste streams expected:
  - Gypsum (non-radioactive) – remediated on site
  - Radium/Iron precipitates (radioactive) – removed from surface
- No long term waste management expected to be required after mine closure

19

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018.

Freeze Containment :
Established method to create frozen barrier around mining area[1]

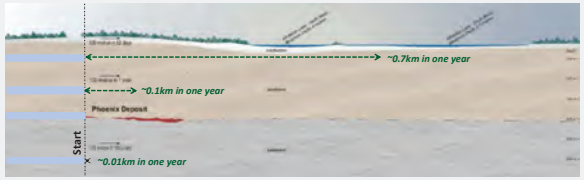
Key Components for the Project



NOTES: (1) See Denison's news release dated December 1, 2020 for additional information on the freeze wall design for Phoenix.

Athabasca Basin Ground Water Modelling:
Ground water at depth stays at depth[1]

Key Components for the Project

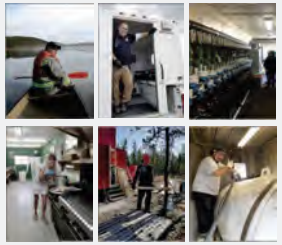


- ✓ The ore body (i.e. Phoenix) is more than 400 metres below the surface / lakes and river systems
- ✓ Groundwater in the sandstone around the ore body ***is not directly*** connected to surface water bodies
- ✓ Field testing in 2019 and 2020, as well as detailed hydrogeologic modelling shows that ground water stays at depth – it doesn't move upward towards surface, and only moves laterally (at a very slow rate) at the depth of the ore body
- ✓ The freeze wall / fence is the ultimate contingency method to contain mining solution within mining area

NOTES: (1) See Denison's news release from June 4, 2020 for details

Socio-economic Considerations:
Relatively small operation with opportunity to use existing skills

Key Components for the Project



Denison is committed to maximizing opportunities

- Up to **300 jobs during ~2 years of construction**
- Approximately **100 jobs during operation for 10 years**
- Targeted efforts to **Communities of Interest**, with a broad focus on northern Saskatchewan and Indigenous communities
- **Similar job types** to those at existing uranium operations
  - Trades, surface, environment, radiation, safety, camp, security
  - ISR operators are similar to process operators (training can be done in Meadow Lake)
- **Specific ISR training will be provided**
- Pre-requisite training will include **diploma or technical certification available in Saskatchewan**. Examples:
  - Process Operation Technician (SIIT in Meadow Lake)
  - Chemical Technology (Sask. Polytechnic)
- Construction and operation activities targeted to **Northern Saskatchewan / Indigenous-owned businesses**

Community Engagement Survey Completion:
We are looking for your feedback

Step 1 – Click link or scan QR code

CLICK HERE TO START SURVEY!

The survey link will be posted in the chat function of the Zoom meeting, as well as posted on your community Facebook page after the meeting

Step 2 – Complete the survey by February 18, 2021

Step 3 – Cross your fingers...
for a chance to win 1 of 10 VISA Gift Cards ($100)

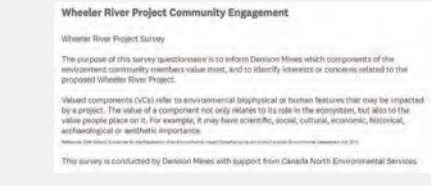
Community Engagement Survey Completion:
We are looking for your feedback

1. Open the camera on your phone or a QR scanning app
2. Hold it over the QR code
3. A link to the online survey online will pop up on your phone
4. Click on the link
5. Complete the survey

Survey closes on February 18, 2021

Community Engagement Survey Completion:
We are looking for your feedback

https://www.surveymonkey.com/r/WheelerRiverCommunityEngagementFeb2020



Community Engagement Survey Completion:
We are looking for your feedback

https://www.surveymonkey.com/r/WheelerRiverCommunityEngagementFeb2020

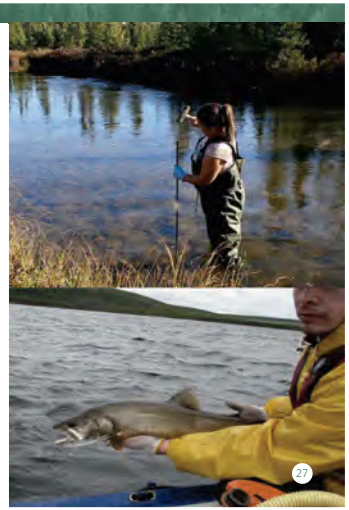
Environmental Assessment:
Understanding the Project's interactions with human and biophysical environment

Baseline Studies

- Environmental baseline studies have been ongoing since 2012
  - Denison needs to understand the current environmental conditions within and around the Wheeler River Project area

Environmental Assessment

- Initiated the federal and provincial environmental assessment processes in May 2019 with the Wheeler River Project Description
  - **Lead federal regulator**: Canadian Nuclear Safety Commission
  - **Lead provincial regulator:** Saskatchewan Ministry of Environment, Environmental Assessment Branch
- Technical studies designed to understand potential effects of the Project on the biophysical and human environments



Valued Components:
Understanding effects on the things that are important

- **Gain an understanding** of what is important to the people who use the area and to the people who may be affected by project activities.
- **Gather information** through research, from regulator feedback and through engagement with communities and Indigenous groups communities
- **Design the environmental** studies to predict how the VC's may change and what measures can be put in place to minimize and monitor the changes
- **Monitoring and reporting** of the changes to VC's will carry on throughout all phases of the project into decommissioning and post closure

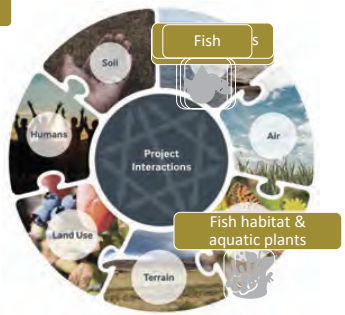
Economy

Land and Resource Use, Cultural Continuity

Quality of Life

Terrestrial

Aquatic



Groundwater

Atmosphere & Acoustic

Next Steps:
Keeping conversation going and community informed

Conversation Channels

- Denison will be continually improving communication channels
- Denison will use information shared with us to inform environmental assessment
- Denison will share information back with the community and leadership regarding what we heard from these sessions
- Contact us at WheelerRiverInfo@denisonmines.com

Meeting with Leadership of Ile a La Crosse
February 10, 2021

Denison Team	**CNSC**	**Province of Saskatchewan**	**Ile a la Crosse Municipal Leaders**
Dave Bronkhorst	Doug Wylie	Aimann Sadik	Mayor Duane Favel
Janna Switzer	Ryan Froess	Breanne England	Donny Favel (CAO)
Chad Sorba		Jeff Dereniwski	Councillor Gerald Roy
Xavier Lu Dac			Councillor Vince Ahenakew
Carolanne Inglis-McQuay			Councillor Myra Malboeuf
			Councillor Kevin Favel

Denison showed the video of the updated Wheeler River Project and confirmed it remained acceptable for Denison to go ahead with the virtual meeting for the municipality in the evening, given the concerns raised by the Metis Nation – Saskatchewan

Leadership confirmed this was appropriate, as the village represents all residents, including Status, non-Status, Metis, non-Indigenous, etc.

Leadership asked if MNS had contacted the Village asking to cancel the meeting.

Another member of leadership responded by saying that MNS had contacted the Village and had asked if it was appropriate for the MNS to attend, to which Leadership indicated the meeting was open to everyone, including the MNS.

A question was asked about Denison's recent press release regarding high grade discovery at the Wheeler Project and its impact on the Project.

Denison noted that it was good to have these kind of results but that they need to be looked at in the bigger picture in terms of exploration to support the Project.

A question was asked of the CNSC whether or not the MNS or the Village can get intervener status for the Project and associated funding.

Response was that anyone can get intervener status for the Project; they just have to apply at the right time to the right agency.

Leadership asked about the timelines for the Project, in terms of getting the communities ready.

Denison responded by saying that overall, once the Project receives approval, it is likely about a 20-year Project. Timeline to begin construction has not yet been publicly released.

Email

Date: February 11, 2021
Denison: Carolanne Inglis-McQuay (Corporate Social Responsibility Manager)
Ile a La Crosse: Member of the Public

Notes:

Denison received a follow-up question after a virtual community presentation in Ile a La Crosse. The email stated:

Just want to say it was an excellent presentation
I have some questions for follow up. Once production begins it was said that there would be 100 employees. Would you be able to break that down a bit more so we can let our high school students know and to get some training happening. I am assuming this is 50 people per shift. Could you break down the numbers to

Upper managemen &engineering
Office staff
Catering staff is this contracted?
Environmental monitoring
Mill operators
Radiation technicians
Other fields I might not know about
Labourers

We can then make some strategic training plans around these numbers
Thanks

Wheeler River Project information presentation for Beauval residents

Denison Mines

February 9, 2021
rescheduled to 6pm tonight

Win Door Prizes

Listen to Local Entertainment During Breaks

Use the link provided in the body of this post to access the Zoom session.
Meeting ID: 852 9113 9517 - Passcode: 12345

The Wheeler River Project Team looks forward to seeing you and hearing from you on Zoom.

This community meeting was planned in collaboration with the Mayor and staff of the Northern Village of Beauval to provide information and seek feedback with respect to Denison's proposed Wheeler River Project. This is a public meeting, which is open to all residents of the Village and surrounding areas.

Denison is also working with Métis Nation-Saskatchewan to arrange separate meetings with Métis leadership and citizens to understand the distinct interests of the Métis in respect of the project.

www.denisonmines.com

Join the Wheeler River Project team for an online information presentation.

ON ZOOM

February 9
Northern Village of Beauval
The Beauval meeting has been rescheduled to 6:00pm - 7:30pm tonight.

February 10
Northern Village of Ile-à-la-Crosse
6:30pm - 8:00pm

February 11
Northern Village of Pinehouse
6:30pm - 8:00pm

The link to join each presentation and feedback session is available on your community's Facebook page and Denison's.

Or use the following Zoom Login Information:

Beauval Meeting ID: 852 9113 9517 - Passcode: 12345

Ile-a-la-Crosse Meeting ID: 880 7924 4502 - Passcode: 12345

Pinehouse Meeting ID: 810 9625 9594 - Passcode: 12345

Win **door prizes** from local companies and others.
Listen to **local entertainment** during breaks.

We look forward to meeting with you via Zoom.

This community meeting was planned in collaboration with the Mayor and staff of the Northern Village of Beauval, Ile-à-la-Crosse and Pinehouse to provide information and seek feedback with respect to Denison's proposed Wheeler River Project. This is a public meeting, which is open to all residents of the Village and surrounding areas.

Denison is also working with Métis Nation-Saskatchewan to arrange separate meetings with Métis leadership and citizens to understand the distinct interests of the Métis in respect of the project.

Denison Mines
www.denisonmines.com

Denison Public Meetings FB Post

Beauval Facebook Page

Residents of Beauval are invited to attend a public meeting with Denison's Wheeler River Project team next week.

The meeting will take place virtually via Zoom **at 6pm**. There will be entertainment from local artists during the breaks and the opportunity to win door prizes and participation prizes during the meeting. All of the details are below:

Rescheduled to 6:00pm – 7:30pm Tuesday, February 9, 2021
Zoom Link:
https://us02web.zoom.us/j/85291139517?pwd=NUJqWVlzdzVkczhaMHRKM092NFhwdz09
Meeting ID: 852 9113 9517
Meeting Passcode: 12345

To join by phone; 1 647-374-4685

Enter Meeting ID: 852 9113 9517#

Password: 12345#

Entertainment

Ernestine!

Doors Prizes

Five $100 gift certificates to Beauval General Store

Five $100 gift certificates to Mdeez

Survey Participation Prizes

Two $250 gift certificates to Beauval General Store

Denison Mines

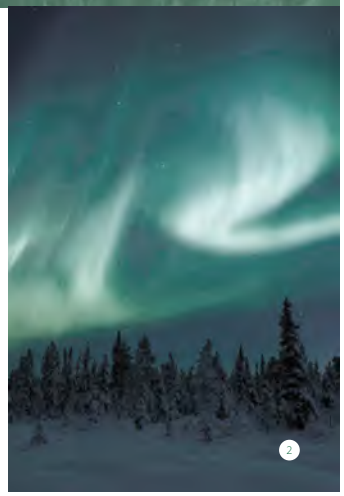
Uranium Development & Exploration

The Wheeler River Project

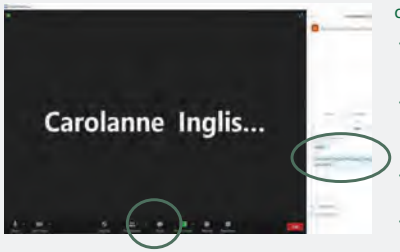
February, 2021 Beauval Public Information Meeting

Agenda

- Opening
- How to Use Zoom
- 'Virtual' Meal – Support to the High Schools
- Introductions (Denison, Province, CNSC)
- Wheeler River Project Overview
- **Door prize draws and entertainment**
- Environmental Assessment Process
- Valued Components
- Questions and Answers
- Next Steps from Denison
- **Final door prize draws and entertainment**



How to Participate using Zoom Features



Chat and Video Function

- Enter your name and community in the chat function if you'd like to be entered to win a prize for attendance
- The chat function is also where we will have you answer questions we pose throughout the presentation to be entered to win a prize for participation
- The chat function is a place to ask us questions, as the microphones will be muted
- Video – you can turn your video on or off (video off often improves quality of video conference)

Denison Mines

This community meeting was planned in collaboration with the Mayor of the Northern Village of Beauval to provide information and seek feedback with respect to Denison's proposed Wheeler River Project. **This is a public meeting** which is open to all residents of the Village and surrounding areas.

Denison respects the Delegation of the Duty to Consult Responsibilities signed by the Métis Local Presidents in August 2019, delegating consultation matters to the Métis Nation-Saskatchewan (MNS). In accordance with that delegation, **Denison has been requested to direct all local Métis-related consultation to the MNS leadership and designated negotiators.**

Denison is working with MNS to arrange separate meetings with Métis leadership and Citizens in the coming weeks to understand the distinct interests of the Métis in respect of the project.

Cautionary Statements & References

This presentation and the information contained herein is designed to help you understand management's current views, and may not be appropriate for other purposes. This presentation contains information relating to the uranium market, third party and provincial infrastructure, and the plans and availability thereof, derived from third-party publications and reports which Denison believes are reliable but have not been independently verified by the Company.

Certain information contained in this presentation 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 presentation contains forward-looking information pertaining to the results of, and estimates, assumptions and projections provided in, the Wheeler PFS and the Waterbury PEA, including future development methods and plans, market prices, costs and capital expenditures; assumptions regarding Denison's ability to obtain all necessary regulatory approvals to commence development at Wheeler; Denison's percentage interest in its projects and its agreements with its joint venture partners; and the availability of services to be provided by third parties. 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 faces certain risks, including the current and potential impacts of the COVID-19 pandemic, use of mining methods which are novel and untested in the Athabasca basin, the inability to permit or develop its projects as currently planned, the inability to secure sufficient financing to pursue its business objectives, the unpredictability of market prices, events that could materially increase costs, changes in the regulatory environment governing the project lands, and unanticipated claims against title and rights to the project. 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 13, 2020 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.

Readers should not place undue reliance on forward-looking statements. The forward-looking information contained in this presentation is expressly qualified by this cautionary statement. Any forward-looking information and the assumptions made with respect thereto speaks only as of February 8, 2021. Denison does not undertake any obligation to publicly update or revise any forward-looking information after such date 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 Mineral Resources and Mineral Reserves: This presentation may use terms such as "measured", "indicated" and/or "inferred" mineral resources and "proven" or "probable" mineral reserves, which are terms defined with reference to the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") CIM Definition Standards on Mineral Resources and Mineral Reserves ("CIM Standards"). The Company's descriptions of its projects using CIM Standards may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements under the United States federal securities laws and the rules and regulations thereunder.

Qualified Persons

The disclosure of a scientific or technical nature within this presentation, including the disclosure of mineral resources, mineral reserves, as well as the results of the Wheeler PFS and Waterbury PEA, was reviewed and approved by David Bronkhorst, P.Eng., who is a Qualified Person in accordance with the requirements of NI 43-101.

Technical Reports

- For further details regarding the Wheeler River project, please refer to (a) the Company's press releases dated December 1, 2020, regarding the adoption of the freeze wall design for ISR at *Phoenix*, and September 24, 2018, regarding the *Prefeasibility Study*, and (b) the technical report titled "*Prefeasibility Study for the Wheeler River Uranium Project, Saskatchewan, Canada*" with an effective date of September 24, 2018 ("*Wheeler PFS*").
- For further details regarding the Waterbury Lake project, please refer to the Company's press release dated November 17, 2020 and the technical report titled "*Preliminary Economic Assessment for the Tthe Heldeth Túé (I Zone) Deposit, Waterbury Lake Property, Northern Saskatchewan, Canada*" with an effective date of October 30, 2020. ("*Waterbury PEA*"). **The Waterbury PEA is a preliminary analysis of the potential viability of the Project's mineral resources, and should not be considered the same as a Pre-Feasibility or Feasibility Study, as various factors are preliminary in nature. There is no certainty that the results from the PEA will be realized. Mineral resources are not mineral reserves and do not have demonstrated economic viability. Scheduled tonnes and grade do not represent an estimate of mineral reserves.**

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 13, 2020. Copies of the foregoing are available on Denison's website and under its profile on SEDAR at *www.sedar.com* and on EDGAR at *www.sec.gov/edgar.shtml*.

Denison's Guiding Principles

- Denison recognizes and is deeply respectful of the fact the that Wheeler River project is located within the boundaries of **Treaty 10**, and is in the heart of the **traditional territory of the English River First Nation**, and in the **homeland of the Métis of Saskatchewan**
- Denison has the utmost **respect** for Indigenous communities, Indigenous Rights, and Indigenous knowledge
- We wish to **share the land** and to work in partnership
- Denison understands the importance of **protecting the area** in which we are working

'Virtual Meal' to Support High School Fundraising

- Denison is proud to make a **$2,500 donation** to the school for a 'virtual' meal to support high school fundraising efforts
- **Thank you** to all staff working so hard in the schools – teachers, janitors, bus drivers, librarians, maintenance and administration

Denison Team

- Dave Bronkhorst, VP Operations
- Janna Switzer, Environment Manager
- Chad Sorba, Technical Manager
- Carolanne Inglis-McQuay, CSR Manager
- Xavier Lu Dac, Senior Engineer
- Dana Harris, Project Services Coordinator
- Mike Dawe, Environment and CSR Coordinator
- Jenn Skilnick, Environment Coordinator

Province of Saskatchewan

Ms. Brianne England
Manager, Applications

Mr. Aimann Sadik
Senior Environmental Assessment Administrator

Government of Saskatchewan

Canadian Nuclear Safety Commission

Marcelle Phaneuf
Environmental Assessment Specialist

CNSC Mandate

- Regulate the use of nuclear energy and materials to protect health, safety, security and the environment
- Implement Canada's international commitments on the peaceful use of nuclear energy
- Disseminate objective scientific, technical and regulatory information to the public

nuclearsafety.gc.ca

Introductions: CNSC

Responsibilities

CNSC Responsibilities:

- Make independent, objective, science based and risk-informed decisions
- Set requirements
- Verify compliance

Licensee Responsibilities:

- Manage regulated activities in a manner that protects health, safety, security and the environment, while respecting Canada's international obligations
- Responsible and accountable for the safe operation of facilities and activities

nuclearsafety.gc.ca

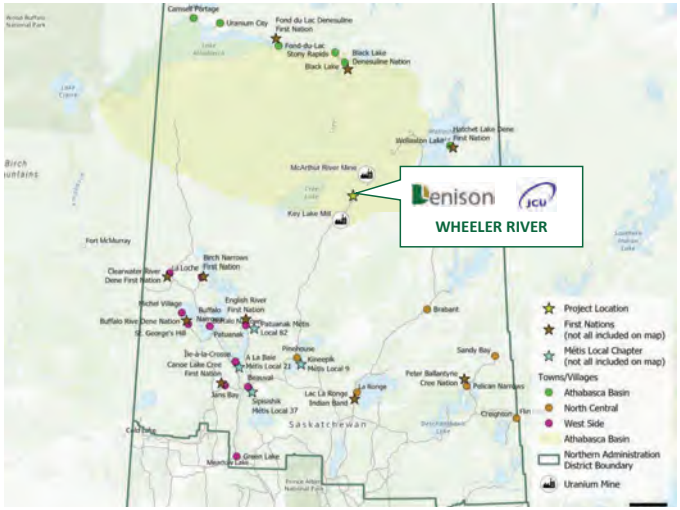
Introductions: CNSC

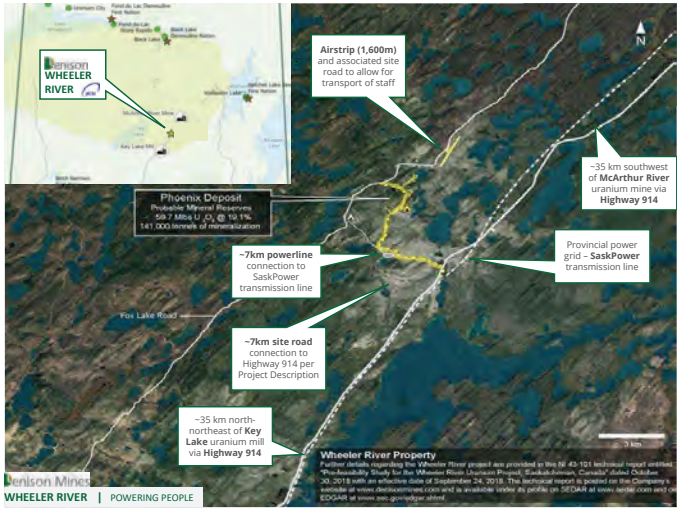
Company Overview:
Denison is focused on opportunities in northern Saskatchewan

- 22.5% interest in **McClean Lake Uranium Mill**
- 90% interest in Flagship **Wheeler River** project
  - Advancing through development process
  - Largest undeveloped rich uranium project in the infrastructure rich eastern Athabasca Basin
  - Environmental Assessment ("EA") initiated
  - Progressive approach to mining using In Situ Recovery ("ISR") method
- 66.9% in the **Waterbury Lake Property**, hosting the Tthe Heldeth Túé (formerly J Zone) deposit
  - Recently completed Preliminary Economic Assessment ("PEA")[1]
  - Amenable to ISR mining method
- Several other interests in the Athabasca Basin region
  - **McClean Lake, Midwest,** and **Waterbury Lake** properties, all in close proximity to McClean mill
  - **+250,000 hectares** of exploration ground

NOTES: (1) See Denison's news release dated Nov. 17, 2020; The PEA is a preliminary analysis and should not be considered the same as a Pre-Feasibility or Feasibility Study; see Cautionary Statements slide for details

ISR field testing at Wheeler River - Phoenix deposit, Summer 2019





In Situ Recovery ("ISR") Mining:
Introducing a proven mining technique to the Athabasca Basin

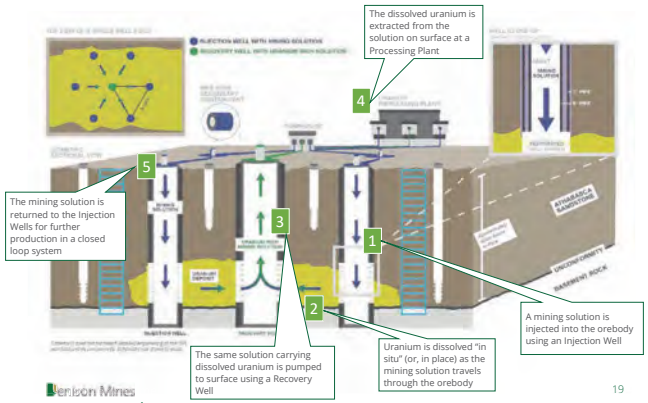
Key Components for the Project

ISR is an established mining method[1]

- In Situ Recovery ("ISR") was first used in the 1960s and currently accounts for more than half the world's annual uranium production

NOTES: (1) Refer to the IAEA "Manual of acid in situ leach uranium mining technology", dated August 2001.

In Situ Recovery ("ISR") Mining[1]:
Introducing a proven mining technique to the Athabasca Basin



NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018. (2) Figure reflects Denison's decision to adopt a freeze wall approach (see press release dated December 01, 2020)

ISR Mining:
A progressive approach to uranium mining uranium in the Athabasca Basin

How is ISR Different?[1]

- All activities occur at surface; there are no traditional underground workings
- The ISR mining area has only wells and pipes to plant; no open pits, head-frame, or major earthworks
- There is no tailings production or long-term tailings storage, plus no large waste rock piles

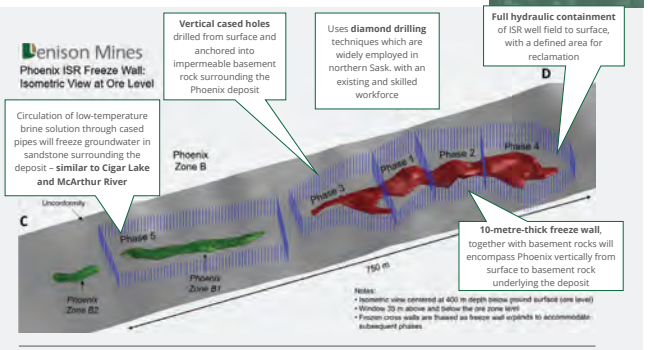
Waste Management Vision

- Two main waste streams expected:
  - Gypsum (non-radioactive) – remediated on site
  - Radium/Iron precipitates (radioactive) – removed from surface
- No long term waste management expected to be required after mine closure

NOTES: (1) Refer to the IAEA "Manual of acceptable practices for in situ uranium mining technology", dated August 2020.

Freeze Containment :
Established method to create frozen barrier around mining area[1]

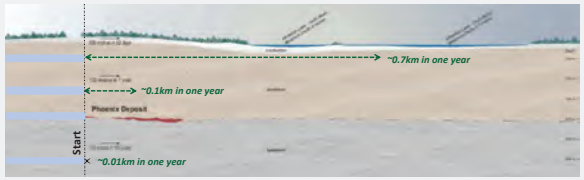
Key Components for the Project



NOTES: (1)) See Denison's news release dated December 1, 2020 for additional information on the freeze wall design for Phoenix.

Athabasca Basin Ground Water Modelling:
Ground water at depth stays at depth[1]

Key Components for the Project

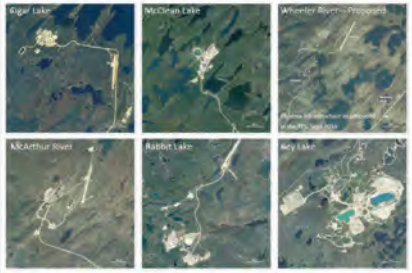


- ✓ The ore body (i.e. Phoenix) is more than 400 metres below the surface / lakes and river systems
- ✓ Groundwater in the sandstone around the ore body ***is not directly*** connected to surface water bodies
- ✓ Field testing in 2019 and 2020, as well as detailed hydrogeologic modelling shows that ground water stays at depth – it doesn't move upward towards surface, and only moves laterally (at a very slow rate) at the depth of the ore body
- ✓ The freeze wall / fence is the ultimate contingency method to contain mining solution within mining area

NOTES: (1) See Denison's news release from June 4, 2020 for details

Wheeler River / Phoenix ISR:
Different mining method and a different type of operation[1]

Key Components for the Project



Advantages of ISR mining compared to existing uranium mining in Canada:

- ✓ Small surface footprint
- ✓ Lower water consumption
- ✓ Lower energy consumption
- ✓ Lower CO_2 emissions
- ✓ Small volume treated effluent released to surface water bodies
- ✓ Potential for lower radiation doses to workers
- ✓ No tailings production; storage of precipitated by-products
- ✓ Very small volumes of clean waste rock (sandstone core from wellfield development)

NOTES: (1) Refer to the "Wheeler River Project Provincial Technical Proposal and Federal Project Description", dated May 2019.

Socio-economic Considerations:
Relatively small operation with opportunity to use existing skills

Key Components for the Project

Denison is committed to maximizing opportunities

- Up to **300 jobs during ~2 years of construction**
- Approximately **100 jobs during operation for 10 years**
- Targeted efforts to **Communities of Interest,** with a broad focus on northern Saskatchewan and Indigenous communities
- **Similar job types** to those at existing uranium operations
  - Trades, surface, environment, radiation, safety, camp, security
  - ISR operators are similar to process operators (training can be done in Meadow Lake)
- **Specific ISR training will be provided**
- Pre-requisite training will include **diploma or technical certification available in Saskatchewan**. Examples:
  - Process Operation Technician (SIIT in Meadow Lake)
  - Chemical Technology (Sask. Polytechnic)
- Construction and operation activities targeted to **Northern Saskatchewan / Indigenous-owned businesses**

15 Minute Break

Door Prizes

- ✓ 3 x $100 Gift Certificate to the Beauval General Store
- ✓ 3 x $100 Gift Certificate to Mdeez Confectionary

Prizes at end of Presentation

- ✓ 2 x $100 Gift Certificate to Beauval General Store
- ✓ 2 x $100 Gift Certificate to Mdeez Confectionary
- ✓ 2 x $250 Gift Certificate to Beauval General Store

Community Engagement Survey Completion:
We are looking for your feedback

Step 1 – Click link or scan QR code

CLICK HERE TO START SURVEY!

The survey link will be posted in the chat function of the Zoom meeting, as well as posted on your community Facebook page after the meeting

Step 2 – Complete the survey by February 18, 2021

Step 3 – Cross your fingers…
for a chance to win 1 of 10 VISA Gift Cards ($100)

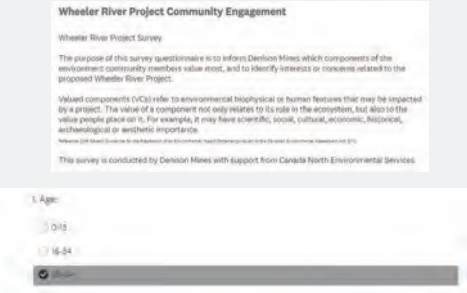
Community Engagement Survey Completion:
We are looking for your feedback

1. Open the camera on your phone or a QR scanning app
2. Hold it over the QR code
3. A link to the online survey online will pop up on your phone
4. Click on the link
5. Complete the survey

Survey closes on February 18, 2021

Community Engagement Survey Completion:
We are looking for your feedback

https://www.surveymonkey.com/r/WheelerRiverCommunityEngagementFeb2020



Community Engagement Survey Completion:
We are looking for your feedback

https://www.surveymonkey.com/r/WheelerRiverCommunityEngagementFeb2020

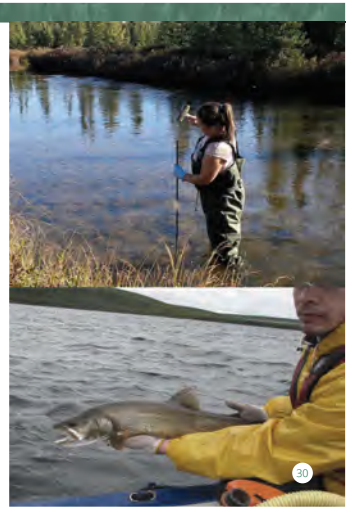
Environmental Assessment:
Understanding the Project's interactions with human and biophysical environment

Baseline Studies

- Environmental baseline studies have been ongoing since 2012
  - Denison needs to understand the current environmental conditions within and around the Wheeler River Project area

Environmental Assessment

- Initiated the federal and provincial environmental assessment processes in May 2019 with the Wheeler River Project Description
  - **Lead federal regulator**: Canadian Nuclear Safety Commission
  - **Lead provincial regulator:** Saskatchewan Ministry of Environment, Environmental Assessment Branch
- Technical studies designed to understand potential effects of the Project on the biophysical and human environments



Valued Components:
Understanding effects on the things that are important

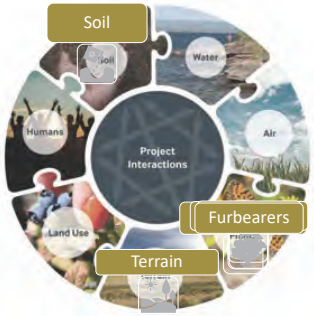
- **Gain an understanding** of what is important to the people who use the area and to the people who may be affected by project activities.
- **Gather information** through research, from regulator feedback and through engagement with communities and Indigenous groups communities
- **Design the environmental** studies to predict how the VC's may change and what measures can be put in place to minimize and monitor the changes
- **Monitoring and reporting** of the changes to VC's will carry on throughout all phases of the project into decommissioning and post closure

Economy

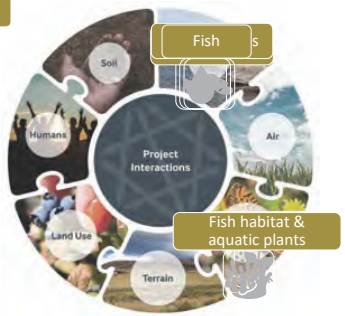
Land and Resource Use, Cultural Continuity

Quality of Life

Terrestrial



Aquatic



Groundwater

Atmosphere & Acoustic

Questions / Comments

Summary of questions

Next Steps:

Keeping conversation going and community informed

Conversation Channels

- Denison will be continually improving communication channels
- Denison will use information shared with us to inform environmental assessment
- Denison will share information back with the community and leadership regarding what we heard from these sessions
- Contact us at WheelerRiverInfo@denisonmines.com

Conclusion:

Thank you for attending!

- 2 x $100 Gift Certificate to Beauval General Store
- 2 x $100 Gift Certificate to MDeez Confectionary
- 2 x $250 Gift Certificate to Beauval General Store

ROC442

Wheeler River Project Community Engagement

Wheeler River Project Survey

The purpose of this survey questionnaire is to inform Denison Mines which components of the environment community members value most, and to identify interests or concerns related to the proposed Wheeler River Project.

Valued components (VCs) refer to environmental biophysical or human features that may be impacted by a project. The value of a component not only relates to its role in the ecosystem, but also to the value people place on it. For example, it may have scientific, social, cultural, economic, historical, archaeological or aesthetic importance.

Reference: 2016 Generic Guidelines for the Preparation of an Environmental Impact Statementpursuant to the Canadian Environmental Assessment Act, 2012

This survey is conducted by Denison Mines with support from Canada North Environmental Services.

The survey results will be used to help Denison Mines determine which valued components should be studied in detail as part of the Wheeler River effects assessment. Results of the survey will also help Denison Mines understand which valued components the community would like to receive updates on once the early results of the effects assessment are ready to be shared.

A summary of the survey results will be shared on the Denison Mines website in March 2021. There are several benefits of sharing your thoughts in the survey questionnaire. Your input will help Denison Mines focus on environmental components, concerns or topics that matter most to your community. If you choose to leave your name and contact information at the conclusion of the survey, you will be entered into a prize draw for one of ten $100 VISA gift cards. Participation in the draw is optional and only those who complete the survey will be entered in the draw.

Participation in this survey is voluntary. If you agree to participate it will require a minimum of 15 minutes of your time to answer questions about components of the environment that you value, and any interests or concerns you have related to the Wheeler River Project. During the survey we will ask you some questions including your age, residence, if you identify as an Aboriginal person, and how you heard about the survey. Finally in order to be entered into the prize draw, you must provide your name and contact information.

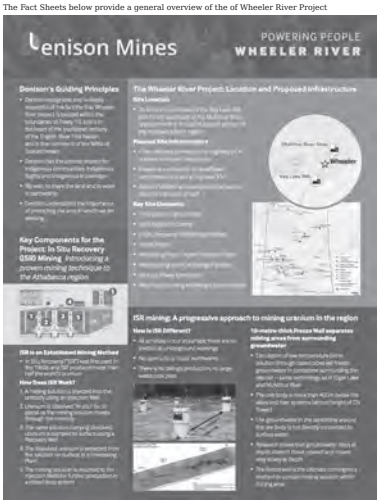
Providing your name and contact information is optional. All information you share in this survey questionnaire will be kept strictly confidential and your name will not be associated with the data we collect. Your identity will remain confidential in all publications and public presentations related to this research.

If you have any questions or concerns about this survey questionnaire, please contact WheelerRiverInfo@denisonmines.com

* 1. By checking this box, you confirm that you understand the purpose of the survey, how the information you share will be used, and that participation in the survey is voluntary.

- ◯ I confirm that I understand the purpose of this survey, how the information will be shared, and that participation is voluntary
- ◯ I DO NOT feel comfortable proceeding with this survey and would like to exit

The Fact Sheets below provide a general overview of the of Wheeler River Project



Wheeler River Project Community Engagement

Section 1: Tell us about yourself!

We want to make sure we are hearing from a diverse group of people from your community, please fill out the following questions to help us determine if there are any voices we haven't heard from yet.

2. Age:
- ◯ 0-15
- ◯ 16-34
- ◯ 35-64
- ◯ 65+

3. Do you identify as an Indigenous person (First Nations, Métis, or Inuit?) Answers to this question are entirely voluntary and not required.
- ◯ Prefer not to answer
- ◯ Yes (if yes, then: Please select from the following which best applies to you.)
- ◯ First Nation
- ◯ Métis
- ◯ Inuit
- ◯ Non-status
- ◯ No

4. Where do you live most of the year:
- ◯ Beauval
- ◯ Ile a la Crosse
- ◯ Pinehouse
- ◯ Other
- ◯ Prefer not to say

Please identify which other community you are from

5. How did you hear about this survey?
- ◯ Facebook
- ◯ Poster
- ◯ Radio
- ◯ Word of Mouth
- ◯ Other

6. Which of the following presentations did you attend? Check all that apply.
- ◯ Virtual Community Meeting
- ◯ Virtual Leadership Meeting
- ◯ High-school Presentation
- ◯ Prefer not to say
- ◯ None of the above

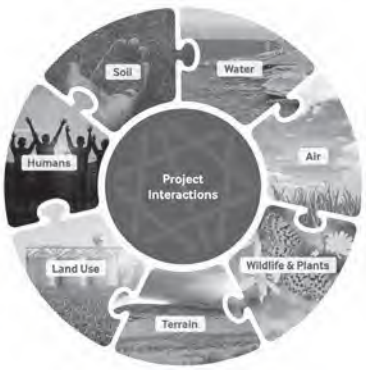
Wheeler River Project Community Engagement

Section 2: Valued Components

Valued components (VCs) refer to environmental biophysical or human features that may be impacted by a project. The value of a component not only relates to its role in the ecosystem, but also to the value people place on it.

In previous engagement events, we heard that the valued components provided in the list below are important to community members. During the environmental impact assessment process, we plan to study these valued components to better understand if and how the Wheeler Project may impact them.

Valued Components Circle



7. From the list below, please click on the valued components that you feel are most important for us to study as part of the impact assessment.

- [ ] Local economy
- [ ] Employment
- [ ] Business activity
- [ ] Training
- [ ] Industry use
- [ ] Outfitting tourism
- [ ] Traditional land and resource use
- [ ] Cultural expression
- [ ] Heritage resources
- [ ] Community well-being
- [ ] Public safety
- [ ] Infrastructure and services
- [ ] Terrain
- [ ] Soil
- [ ] Vegetation
- [ ] Ungulates
- [ ] Birds
- [ ] Furbearers
- [ ] Surface water
- [ ] Sediment
- [ ] Invertebrates
- [ ] Fish
- [ ] Fish habitat and aquatic plants
- [ ] Groundwater quality
- [ ] Air quality
- [ ] Noise level
- [ ] Why did you choose these valued components?

8. Are there any valued components that are important to you that are missing from this list? If so, please list them below. Why are these important to you?

9. Are there any valued components on the list that are not important to you? If so, please select the valued components from the list below that you feel should be removed.

- [ ] Local economy
- [ ] Employment
- [ ] Business activity
- [ ] Training
- [ ] Industry use
- [ ] Outfitting tourism
- [ ] Traditional land and resource use
- [ ] Cultural expression
- [ ] Heritage resources
- [ ] Community well-being
- [ ] Public safety
- [ ] Infrastructure and services
- [ ] Terrain
- [ ] Soil
- [ ] Vegetation
- [ ] Ungulates
- [ ] Birds
- [ ] Furbearers
- [ ] Surface water
- [ ] Sediment
- [ ] Invertebrates
- [ ] Fish
- [ ] Fish habitat and aquatic plants
- [ ] Groundwater quality
- [ ] Air quality
- [ ] Noise level

Wheeler River Project Community Engagement

Section 3: Interests and Concerns

10. Based on what you know so far about the Wheeler Project, what aspects of the project could benefit, or work well for your community?

11. Based on what you know so far about the Wheeler Project, what aspects of the project could be challenging or cause concern for your community?

12. Are there questions you have about the Wheeler Project that you would like to see addressed in future updates or communications? If, so please list your questions in the space below.

13. Is there anything else you would like us to know related to the Wheeler Project?

Wheeler River Project Community Engagement

Section 5: Prize Draw Entry

If you would like your name entered into a draw prize, please provide the following information

14. Name

15. Phone number

16. Email address

17. Would you like us to add your email address to our mailing list to receive project updates? Yes/No

- ◯ Yes
- ◯ No

Wheeler River Project Community Engagement

Thank You!

Thank you for completing the Wheeler River Project Community Engagement Survey. If you have any additional comments, questions or concerns please email WheelerRiverInfo@denisonmines.com

Beauval Community Presentation – Questions and Comments

February 9, 2021

Questions

- How long do you anticipate for this EIA to go through the whole process?
- Would Denison mines be open to signing a collaboration agreement with Beauval and surrounding communities? Kinda like the one Pinehouse and Patuanak have with Cameco/Orano.
- Where are you planning on processing this ore, are you planning on trucking it to an existing mill similar to the Cigar process?
- Sounds like a lot of drilling, Is Denison mines planning to partner up with Northlands College or other training organizations to offer some training courses to get our people trained and ready for employment?
- What is the percentage U308 of this ore body and is this fairly clean ore, are you anticipating any arsenic in this ore?

Community comments from the chat

- "Thanks Denison Mines for the great presentation. This is my second presentation from Denison mines I've attended, and I appreciate the great communication. Cheers"
- "Thanks guys excellent presentation have a great night"

Denison Mines

POWERING PEOPLE
WHEELER RIVER

WHAT WE HEARD FROM RESIDENTS OF BEAUVAL AND REGION

Thank You for Attending

Denison's Wheeler River Project team thanks everyone who attended its municipal presentation via Zoom or 94.1FM Beauval radio on February 9, 2021, and for responding to the follow-up survey.

Although we are not sure how many of you listened on the radio, we counted 15 participants logged into Zoom to attend this online event, while some of you had others watching with you at home. Seventy percent (70%) of the people who attended and answered our post event survey were between the ages of 16 and 34 years old, while 35 to 64-year-olds accounted for 30%, and there were none who identified as being 65 and over.

Thank you also to Jordyn Burnouf for being the emcee for the evening, to Elder Mabel Morin for the prayer and Ernestine for the entertainment.

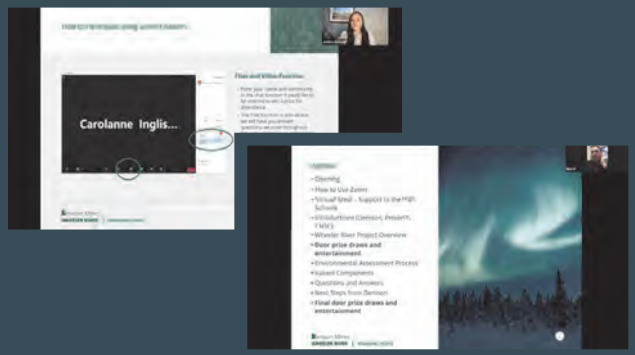
The Purpose of This Municipal Presentation

We wanted to make sure that community members and leadership are aware of the proposed project, the plans for the future, the opportunities for the community, and to also give an opportunity to the project's provincial (Saskatchewan Ministry of Environment) and federal (Canadian Nuclear Safety Commission) regulators to participate and introduce themselves.

Wheeler River Project in a nutshell

The Wheeler River Project is located 35 km north-east of the Key Lake mill and 35 km southwest of the McArthur River uranium mine in the south-eastern portion of the Athabasca Basin region.

This proposed uranium mining project will use the In Situ Recovery (ISR) mining method, which is different than any of the existing uranium mines in the Athabasca Basin region - all activities occur at the surface, meaning there are no shafts/underground workings, no open pits, and no major earthworks. While new to the Athabasca Basin, ISR mining is the most common uranium mining method globally. A 10-metre-thick freeze wall separates the mining areas from the surrounding ground water. A solution is injected into the orebody to dissolve the uranium in place (in situ) and the solution carrying the dissolved uranium is pumped to surface where the uranium is extracted from the solution. The same solution is then pumped back into the ground to dissolve more uranium and so on in a closed loop. With this method there is no production of tailings and no large waste rock piles.



Read the Wheeler River Fact Sheet **here**

Watch the Wheeler River ISR Method Video **here**

Watch the mobilization at the Phoenix Deposit in April 2021 **here**

Community Insight

During the meeting participants asked many questions and also provided valuable insight in responding to the follow-up survey. Here are the main points made by community members:

Of all 26 interconnected valued components (VCs), which are the environmental or social aspects that may be impacted by a project, you indicated that the following were most important:

- Air quality
- Birds
- Employment and training
- Fish, their habitat and aquatic plants
- Local Economy
- Soil
- Surface water and Groundwater quality
- Traditional land and resource use

> **"Continue involving communities through public sessions as well as correspondence to community leaders."**
>
> – Beauval Community Member

You also told us some of your worries and concerns about the project. These are the main points:

- The performance of environmental monitoring and the importance of having an outside, impartial body conducting the monitoring to ensure that the results can be trusted by the community
- The mistrust between community members and regulatory bodies and industry
- The impacts to mental health due to the development of the land
- The potential damage to the land as many people still live off the land
- The community's safety in view of the increase in traffic

You acknowledged some of the opportunities you are looking forward to with this project, including the potential for:

- Training and increased employment and reduced unemployment
- Employee transportation to the site from the communities
- Establishing a legacy fund for the impacted communities

The Next Steps

The information gathered by Denison through community engagement activities will be included in future value components studies when possible, and in our formal report to the regulators.

The Wheeler River Project team will continue community engagement through future meetings with community leadership and residents as required, and will continue to share information via our Wheeler River dedicated website.

We also anticipate that the regulators will inform community leadership and residents of opportunities to participate in the project regulatory review process when appropriate.

Denison is also working with Métis Nation-Saskatchewan to arrange separate meetings with Métis leadership and citizens to understand the distinct interests of the Métis in respect of the project.

Tell Us More

Denison is committed to engaging with our neighbours and invite you to contact us to share ideas or concerns with the Wheeler River Project team. You can also contact our team to request information or offer your services.

Email: **WheelerRiverInfo@denisonmines.com**

Tel: 306-652-8200

Website: **www.denisonmines.com**

Copyright @DenisonMines - May 2021

Wheeler River Project information presentation for Ile-à-la-Crosse residents

Denison Mines

February 10, 2021
6:30pm - 8:00pm

Win Door Prizes

Listen to Local Entertainment During Breaks

Use the link provided in the body of this post to access the Zoom session.
Meeting ID: 880 7924 4502 - Passcode: 12345

The Wheeler River Project Team looks forward to seeing you and hearing from you on Zoom.

This community meeting was planned in collaboration with the Mayor and staff of the Northern Village of Ile-à-la-Crosse to provide information and seek feedback with respect to Denison's proposed Wheeler River Project. This is a public meeting, which is open to all residents of the Village and surrounding areas.

Denison is also working with Métis Nation-Saskatchewan to arrange separate meetings with Métis leadership and citizens to understand the distinct interests of the Métis in respect of the project.

www.denisonmines.com

Join the Wheeler River Project team for an online information presentation.

ON ZOOM

February 9
Northern Village of Beauval
The Beauval meeting has been rescheduled to 6:00pm - 7:30pm tonight.

February 10
Northern Village of Ile-à-la-Crosse
6:30pm - 8:00pm

February 11
Northern Village of Pinehouse
6:30pm - 8:00pm

The link to join each presentation and feedback session is available on your community's Facebook page and Denison's.

Or use the following Zoom Login Information:

Beauval Meeting ID: 852 9113 9517 - Passcode: 12345

Ile-a-la-Crosse Meeting ID: 880 7924 4502 - Passcode: 12345

Pinehouse Meeting ID: 810 9625 9594 - Passcode: 12345

Win **door prizes** from local companies and others.
Listen to **local entertainment** during breaks.

We look forward to meeting with you via Zoom.

This community meeting was planned in collaboration with the Mayor and staff of the Northern Village of Beauval, Ile-à-la-Crosse and Pinehouse to provide information and seek feedback with respect to Denison's proposed Wheeler River Project. This is a public meeting, which is open to all residents of the Village and surrounding areas.

Denison is also working with Métis Nation-Saskatchewan to arrange separate meetings with Métis leadership and citizens to understand the distinct interests of the Métis in respect of the project.

Denison Mines
www.denisonmines.com

Denison Public Meetings FB Post

Ile a la Crosse Facebook Page

Residents of Ile a la Crosse are invited to attend a public meeting with Denison's Wheeler River Project team next week.

The meeting will take place virtually via Zoom. There will be entertainment from local artists during the breaks and the opportunity to win door prizes and participation prizes during the meeting. All of the details are below:

Wednesday, February 10, 2021 at 6:30pm.
Zoom Link:
https://us02web.zoom.us/j/88079244502?pwd=RjVpOEpxakNsNTBTRFBJSkFsck1ZQT09
Meeting ID: 880 7924 4502
Meeting Passcode: 12345

Doors Prizes

Ten $50 gift certificates to Yewr-Way

Survey Participation Prizes

One $250 gift certificate to Yewr-Way

One $250 gift certificate to Northern

ROC443

Wheeler River Project Community Engagement

Wheeler River Project Survey

The purpose of this survey questionnaire is to inform Denison Mines which components of the environment community members value most, and to identify interests or concerns related to the proposed Wheeler River Project.

Valued components (VCs) refer to environmental biophysical or human features that may be impacted by a project. The value of a component not only relates to its role in the ecosystem, but also to the value people place on it. For example, it may have scientific, social, cultural, economic, historical, archaeological or aesthetic importance.

Reference: 2016 Generic Guidelines for the Preparation of an Environmental Impact Statementpursuant to the Canadian Environmental Assessment Act, 2012

This survey is conducted by Denison Mines with support from Canada North Environmental Services.

The survey results will be used to help Denison Mines determine which valued components should be studied in detail as part of the Wheeler River effects assessment. Results of the survey will also help Denison Mines understand which valued components the community would like to receive updates on once the early results of the effects assessment are ready to be shared.

A summary of the survey results will be shared on the Denison Mines website in March 2021. There are several benefits of sharing your thoughts in the survey questionnaire. Your input will help Denison Mines focus on environmental components, concerns or topics that matter most to your community. If you choose to leave your name and contact information at the conclusion of the survey, you will be entered into a prize draw for one of ten $100 VISA gift cards. Participation in the draw is optional and only those who complete the survey will be entered in the draw.

Participation in this survey is voluntary. If you agree to participate it will require a minimum of 15 minutes of your time to answer questions about components of the environment that you value, and any interests or concerns you have related to the Wheeler River Project. During the survey we will ask you some questions including your age, residence, if you identify as an Aboriginal person, and how you heard about the survey. Finally in order to be entered into the prize draw, you must provide your name and contact information.

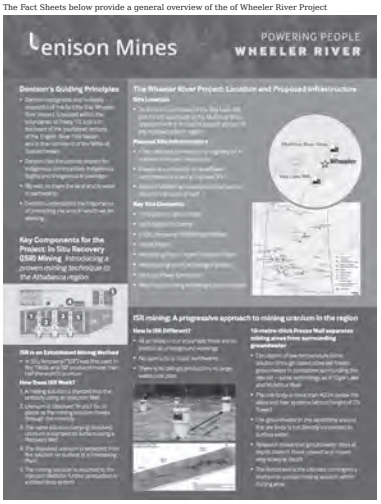
Providing your name and contact information is optional. All information you share in this survey questionnaire will be kept strictly confidential and your name will not be associated with the data we collect. Your identity will remain confidential in all publications and public presentations related to this research.

If you have any questions or concerns about this survey questionnaire, please contact WheelerRiverInfo@denisonmines.com

* 1. By checking this box, you confirm that you understand the purpose of the survey, how the information you share will be used, and that participation in the survey is voluntary.

- ◯ I confirm that I understand the purpose of this survey, how the information will be shared, and that participation is voluntary
- ◯ I DO NOT feel comfortable proceeding with this survey and would like to exit

The Fact Sheets below provide a general overview of the of Wheeler River Project



Wheeler River Project Community Engagement

Section 1: Tell us about yourself!

We want to make sure we are hearing from a diverse group of people from your community, please fill out the following questions to help us determine if there are any voices we haven't heard from yet.

2. Age:
- ◯ 0-15
- ◯ 16-34
- ◯ 35-64
- ◯ 65+

3. Do you identify as an Indigenous person (First Nations, Métis, or Inuit?) Answers to this question are entirely voluntary and not required.
- ◯ Prefer not to answer
- ◯ Yes (if yes, then: Please select from the following which best applies to you.)
- ◯ First Nation
- ◯ Métis
- ◯ Inuit
- ◯ Non-status
- ◯ No

4. Where do you live most of the year:
- ◯ Beauval
- ◯ Ile a la Crosse
- ◯ Pinehouse
- ◯ Other
- ◯ Prefer not to say

Please identify which other community you are from

5. How did you hear about this survey?
- ◯ Facebook
- ◯ Poster
- ◯ Radio
- ◯ Word of Mouth
- ◯ Other

6. Which of the following presentations did you attend? Check all that apply.
- ◯ Virtual Community Meeting
- ◯ Virtual Leadership Meeting
- ◯ High-school Presentation
- ◯ Prefer not to say
- ◯ None of the above

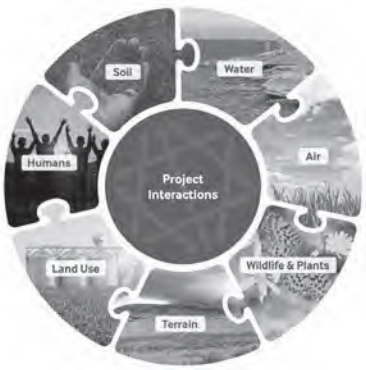
Wheeler River Project Community Engagement

Section 2: Valued Components

Valued components (VCs) refer to environmental biophysical or human features that may be impacted by a project. The value of a component not only relates to its role in the ecosystem, but also to the value people place on it.

In previous engagement events, we heard that the valued components provided in the list below are important to community members. During the environmental impact assessment process, we plan to study these valued components to better understand if and how the Wheeler Project may impact them.

Valued Components Circle



7. From the list below, please click on the valued components that you feel are most important for us to study as part of the impact assessment.

- [ ] Local economy
- [ ] Employment
- [ ] Business activity
- [ ] Training
- [ ] Industry use
- [ ] Outfitting tourism
- [ ] Traditional land and resource use
- [ ] Cultural expression
- [ ] Heritage resources
- [ ] Community well-being
- [ ] Public safety
- [ ] Infrastructure and services
- [ ] Terrain
- [ ] Soil
- [ ] Vegetation
- [ ] Ungulates
- [ ] Birds
- [ ] Furbearers
- [ ] Surface water
- [ ] Sediment
- [ ] Invertebrates
- [ ] Fish
- [ ] Fish habitat and aquatic plants
- [ ] Groundwater quality
- [ ] Air quality
- [ ] Noise level
- [ ] Why did you choose these valued components?

8. Are there any valued components that are important to you that are missing from this list? If so, please list them below. Why are these important to you?

9. Are there any valued components on the list that are not important to you? If so, please select the valued components from the list below that you feel should be removed.

- [ ] Local economy
- [ ] Employment
- [ ] Business activity
- [ ] Training
- [ ] Industry use
- [ ] Outfitting tourism
- [ ] Traditional land and resource use
- [ ] Cultural expression
- [ ] Heritage resources
- [ ] Community well-being
- [ ] Public safety
- [ ] Infrastructure and services
- [ ] Terrain
- [ ] Soil
- [ ] Vegetation
- [ ] Ungulates
- [ ] Birds
- [ ] Furbearers
- [ ] Surface water
- [ ] Sediment
- [ ] Invertebrates
- [ ] Fish
- [ ] Fish habitat and aquatic plants
- [ ] Groundwater quality
- [ ] Air quality
- [ ] Noise level

Wheeler River Project Community Engagement

Section 3: Interests and Concerns

10. Based on what you know so far about the Wheeler Project, what aspects of the project could benefit, or work well for your community?

11. Based on what you know so far about the Wheeler Project, what aspects of the project could be challenging or cause concern for your community?

12. Are there questions you have about the Wheeler Project that you would like to see addressed in future updates or communications? If, so please list your questions in the space below.

13. Is there anything else you would like us to know related to the Wheeler Project?

Wheeler River Project Community Engagement

Section 5: Prize Draw Entry

If you would like your name entered into a draw prize, please provide the following information

14. Name

15. Phone number

16. Email address

17. Would you like us to add your email address to our mailing list to receive project updates? Yes/No

- ◯ Yes
- ◯ No

Wheeler River Project Community Engagement

Thank You!

Thank you for completing the Wheeler River Project Community Engagement Survey. If you have any additional comments, questions or concerns please email WheelerRiverInfo@denisonmines.com

Denison Mines

Uranium Development & Exploration

The Wheeler River Project

February, 2021 Ile a la Crosse Public Meeting

Denison's Land Recognition

- Denison recognizes and is deeply respectful of the fact the that Wheeler River project is located within the boundaries of **Treaty 10**, and is in the heart of the **traditional territory of the English River First Nation**, and in the **homeland of the Métis of Saskatchewan**
- Denison understands the importance of **protecting the area** in which we are working

Denison Mines

Public Meeting

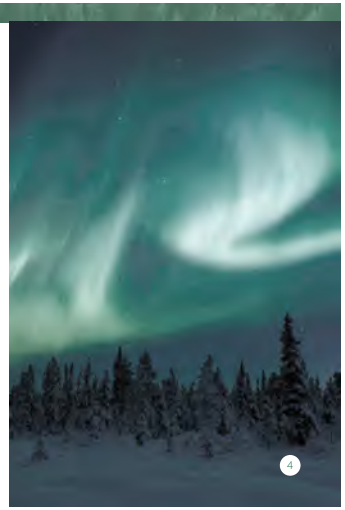
This public meeting was planned in collaboration with the Mayor of the Northern Village of Ile a la Crosse to provide information and seek feedback with respect to Denison's proposed Wheeler River Project. **This is a public meeting** which is open to all residents of the Village and surrounding areas.

Denison respects the Delegation of the Duty to Consult Responsibilities signed by the Métis Local Presidents in August 2019, delegating consultation matters to the Métis Nation-Saskatchewan (MNS). In accordance with that delegation, **Denison has been requested to direct all local Métis-related consultation to the MNS leadership and designated negotiators.**

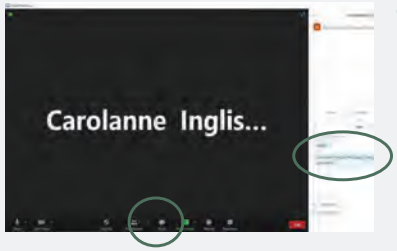
Denison has been working with MNS to arrange separate meetings with Métis leadership and Citizens to understand the distinct interests of the Métis in respect of the project.

Agenda

- Opening
- How to Use Zoom
- 'Virtual' Meal – Support to the High Schools
- Introductions (Denison, Province, CNSC)
- Wheeler River Project Overview
- **Door prize draws and entertainment**
- Environmental Assessment Process
- Valued Components
- Questions and Answers
- Next Steps from Denison
- **Final door prize draws and entertainment**



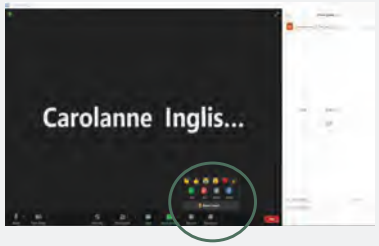
How to Participate using Zoom Features



Chat and Video Function

- Enter your name and community in the chat function if you'd like to be entered to win a prize for attendance
- The chat function is also where we will have you answer questions we pose throughout the presentation to be entered to win a prize for participation
- The chat function is a place to ask us questions, as the microphones will be muted
- Video – you can turn your video on or off (video off often improves quality of video conference)

How to Participate using Zoom Features



Reactions Function

- You can give us feedback as we go along to let us know if the presentation is too fast, too slow, going well

'Virtual Meal' to Support High School Fundraising

- Denison is proud to make a **$2,500 donation** to the school for a 'virtual' meal to support high school fundraising efforts
- **Thank you** to all staff working so hard in the schools – teachers, janitors, bus drivers, librarians, maintenance and administration

Denison Team

- Dave Bronkhorst, VP Operations
- Janna Switzer, Environment Manager
- Chad Sorba, Technical Manager
- Carolanne Inglis-McQuay, CSR Manager
- Xavier Lu Dac, Senior Engineer
- Dana Harris, Project Services Coordinator
- Mike Dawe, Environment and CSR Coordinator
- Jenn Skilnick, Environment Coordinator

Mr. Aimann Sadik
Senior Environmental Assessment Administrator

Ms. Brianne England
Manager, Applications

Mr. Jeff Dereniwski
Senior Environmental Assessment Administrator

Government of Saskatchewan

Ms. Marcelle Phaneuf
Environmental Assessment Specialist

Mr. Doug Wylie
Environmental Assessment Specialist

CNSC Mandate

- Regulate the use of nuclear energy and materials to protect health, safety, security and the environment
- Implement Canada's international commitments on the peaceful use of nuclear energy
- Disseminate objective scientific, technical and regulatory information to the public

nuclearsafety.gc.ca 2

Introductions: CNSC

Responsibilities

CNSC Responsibilities:

- Make independent, objective, science based and risk-informed decisions
- Set requirements
- Verify compliance

Licensee Responsibilities:

- Manage regulated activities in a manner that protects health, safety, security and the environment, while respecting Canada's international obligations
- Responsible and accountable for the safe operation of facilities and activities

nuclearsafety.gc.ca 5

Introductions: CNSC

Cautionary Statements & References

This presentation and the information contained herein is designed to help you understand management's current views, and may not be appropriate for other purposes. This presentation contains information relating to the uranium market, third party and provincial infrastructure, and the plans and availability thereof, derived from third-party publications and reports which Denison believes are reliable but have not been independently verified by the Company.

Certain information contained in this presentation 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 presentation contains forward-looking information pertaining to the results of, and estimates, assumptions and projections provided in, the Wheeler PFS and the Waterbury PEA, including future development methods and plans, market prices, costs and capital expenditures; assumptions regarding Denison's ability to obtain all necessary regulatory approvals to commence development at Wheeler; Denison's percentage interest in its projects and its agreements with its joint venture partners; and the availability of services to be provided by third parties. 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 faces certain risks, including the current and potential impacts of the COVID-19 pandemic, use of mining methods which are novel and untested in the Athabasca basin, the inability to permit or develop its projects as currently planned, the inability to secure sufficient financing to pursue its business objectives, the unpredictability of market prices, events that could materially increase costs, changes in the regulatory environment governing the project lands, and unanticipated claims against title and rights to the project. 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 13, 2020 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.

Readers should not place undue reliance on forward-looking statements. The forward-looking information contained in this presentation is expressly qualified by this cautionary statement. Any forward-looking information and the assumptions made with respect thereto speaks only as of February 8, 2021. Denison does not undertake any obligation to publicly update or revise any forward-looking information after such date 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 Mineral Resources and Mineral Reserves: This presentation may use terms such as "measured", "indicated" and/or "inferred" mineral resources and "proven" or "probable" mineral reserves, which are terms defined with reference to the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") CIM Definition Standards on Mineral Resources and Mineral Reserves ("CIM Standards"). The Company's descriptions of its projects using CIM Standards may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements under the United States federal securities laws and the rules and regulations thereunder.

Qualified Persons

The disclosure of a scientific or technical nature within this presentation, including the disclosure of mineral resources, mineral reserves, as well as the results of the Wheeler PFS and Waterbury PEA, was reviewed and approved by David Bronkhorst, P.Eng., who is a Qualified Person in accordance with the requirements of NI 43-101.

Technical Reports

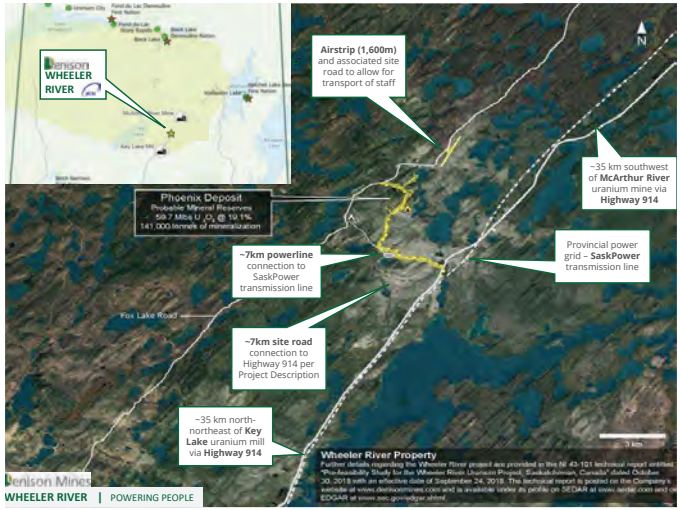
- For further details regarding the Wheeler River project, please refer to (a) the Company's press releases dated December 1, 2020, regarding the adoption of the freeze wall design for ISR at Phoenix, and September 24, 2018, regarding the Prefeasibility Study, and (b) the technical report titled "*Prefeasibility Study for the Wheeler River Uranium Project, Saskatchewan, Canada*" with an effective date of September 24, 2018 ("Wheeler PFS").
- For further details regarding the Waterbury Lake project, please refer to the Company's press release dated November 17, 2020 and the technical report titled "*Preliminary Economic Assessment for the Tthe Heldeth Túé (I Zone) Deposit, Waterbury Lake Property, Northern Saskatchewan, Canada*" with an effective date of October 30, 2020. ("Waterbury PEA"). **The Waterbury PEA is a preliminary analysis of the potential viability of the Project's mineral resources, and should not be considered the same as a Pre-Feasibility or Feasibility Study, as various factors are preliminary in nature. There is no certainty that the results from the PEA will be realized. Mineral resources are not mineral reserves and do not have demonstrated economic viability. Scheduled tonnes and grade do not represent an estimate of mineral reserves.**

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 13, 2020. Copies of the foregoing are available on Denison's website and under its profile on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

Company Overview:
Denison is focused on opportunities in northern Saskatchewan

- 22.5% interest in **McClean Lake Uranium Mill**
- 90% interest in Flagship **Wheeler River** project
  - Advancing through development process
  - Largest undeveloped uranium project in the infrastructure rich eastern Athabasca Basin
  - Environmental Assessment ("EA") initiated
  - Progressive approach to mining using In Situ Recovery ("ISR") method
- 66.9% in the **Waterbury Lake Property**, hosting the Tthe Heldeth Túé (formerly J Zone) deposit
  - Recently completed Preliminary Economic Assessment ("PEA")[1]
  - Amenable to ISR mining method
- Several other interests in the Athabasca Basin region
  - **McClean Lake, Midwest,** and **Waterbury Lake** properties, all in close proximity to McClean mill
  - **+250,000 hectares** of exploration ground

NOTES: (1) See Denison's news release dated Nov. 17, 2020; The PEA is a preliminary analysis and should not be considered the same as a Pre-Feasibility or Feasibility Study, see Cautionary Statements slide for details



In Situ Recovery ("ISR") Mining:
Introducing a proven mining technique to the Athabasca Basin

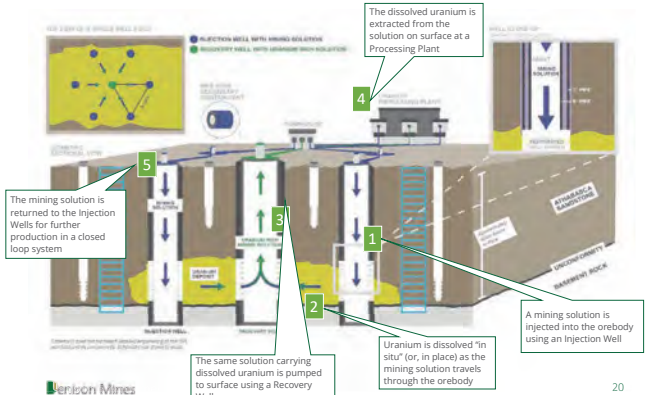
Key Components for the Project

ISR is an established mining method[1]

- In Situ Recovery ("ISR") was first used in the 1960s and currently accounts for more than half the world's annual uranium production

NOTES: (1) Refer to the IAEA "Manual of acid in situ leach uranium mining technology", dated August 2001.

In Situ Recovery ("ISR") Mining[1]:
Introducing a proven mining technique to the Athabasca Basin



NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018. (2) Figure reflects Denison's decision to adopt a freeze wall approach (see press release dated December 01, 2020)

ISR Mining:
A progressive approach to uranium mining uranium in the Athabasca Basin

How is ISR Different?[1]

- All activities occur at surface; there are no traditional underground workings
- The ISR mining area has only wells and pipes to plant; no open pits, head-frame, or major earthworks
- There is no tailings production or long-term tailings storage, plus no large waste rock piles

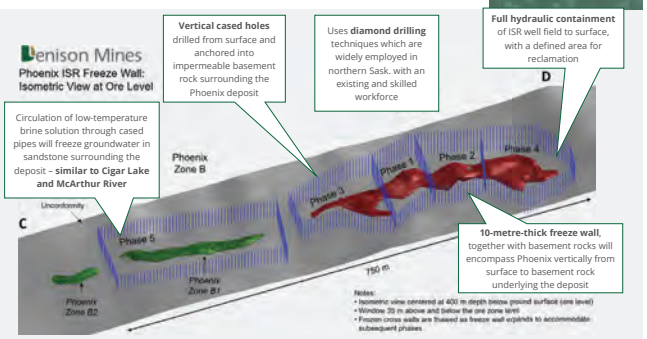
Waste Management Vision

- Two main waste streams expected:
  - Gypsum (non-radioactive) – remediated on site
  - Radium/Iron precipitates (radioactive) – removed from surface
- No long term waste management expected to be required after mine closure

NOTES: (1) Refer to the IAEA "Manual of acid in situ leach uranium mining technology", dated August 2001.

Freeze Containment :
Established method to create frozen barrier around mining area[1]

Key Components for the Project



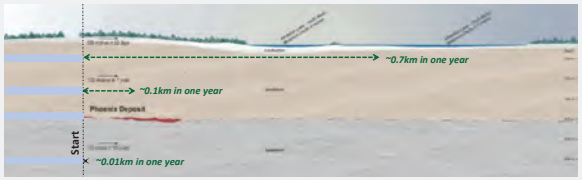
NOTES: (1) See Denison's news release dated December 1, 2020 for additional information on the freeze wall design for Phoenix.

Denison 2021 Phoenix

[redacted]

Athabasca Basin Ground Water Modelling:
Ground water at depth stays at depth[1]

Key Components for the Project

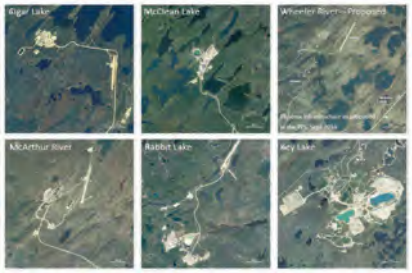


- ✓ The ore body (i.e. Phoenix) is more than 400 metres below the surface / lakes and river systems
- ✓ Groundwater in the sandstone around the ore body ***is not directly*** connected to surface water bodies
- ✓ Field testing in 2019 and 2020, as well as detailed hydrogeologic modelling shows that ground water stays at depth – it doesn't move upward towards surface, and only moves laterally (at a very slow rate) at the depth of the ore body
- ✓ The freeze wall / fence is the ultimate contingency method to contain mining solution within mining area

NOTES: (1) See Denison's news release from June 4, 2020 for details

Wheeler River / Phoenix ISR:
Different mining method and a different type of operation[1]

Key Components for the Project



Advantages of ISR mining compared to existing uranium mining in Canada:

- ✓ Small surface footprint
- ✓ Lower water consumption
- ✓ Lower energy consumption
- ✓ Lower CO_2 emissions
- ✓ Small volume treated effluent released to surface water bodies
- ✓ Potential for lower radiation doses to workers
- ✓ No tailings production; storage of precipitated by-products
- ✓ Very small volumes of clean waste rock (sandstone core from wellfield development)

NOTES: (1) Refer to the "Wheeler River Project Provincial Technical Proposal and Federal Project Description", dated May 2019.

Socio-economic Considerations:
Relatively small operation with opportunity to use existing skills

Key Components for the Project

Denison is committed to maximizing opportunities

- Up to **300 jobs during ~2 years of construction**
- Approximately **100 jobs during operation for 10 years**
- Targeted efforts to **Communities of Interest,** with a broad focus on northern Saskatchewan and Indigenous communities
- **Similar job types** to those at existing uranium operations
  - Trades, surface, environment, radiation, safety, camp, security
  - ISR operators are similar to process operators (training can be done in Meadow Lake)
- **Specific ISR training will be provided**
- Pre-requisite training will include **diploma or technical certification available in Saskatchewan**. Examples:
  - Process Operation Technician (SIIT in Meadow Lake)
  - Chemical Technology (Sask. Polytechnic)
- Construction and operation activities targeted to **Northern Saskatchewan / Indigenous-owned businesses**

15 Minute Break

Door Prizes

- ✓6 x $50 Gift Certificate to Yewr-Way
- ✓6 x $50 Gift Certificate to Northern Sunset Motel

Community Engagement Survey Completion:
We are looking for your feedback

Step 1 – Click link or scan QR code

CLICK HERE TO START SURVEY!

The survey link will be posted in the chat function of the Zoom meeting, as well as posted on your community Facebook page after the meeting

Step 2 – Complete the survey by February 18, 2021

Step 3 – Cross your fingers…
for a chance to win 1 of 10 VISA Gift Cards ($100)

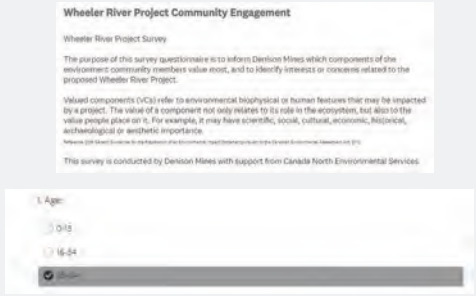
Community Engagement Survey Completion:
We are looking for your feedback

1. Open the camera on your phone or a QR scanning app
2. Hold it over the QR code
3. A link to the online survey online will pop up on your phone
4. Click on the link
5. Complete the survey

Survey closes on February 18, 2021

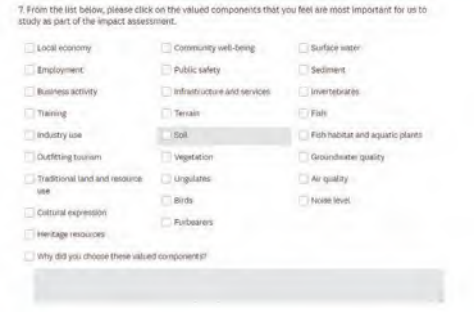
Community Engagement Survey Completion:
We are looking for your feedback

https://www.surveymonkey.com/r/WheelerRiverCommunityEngagementFeb2020



Community Engagement Survey Completion:
We are looking for your feedback

https://www.surveymonkey.com/r/WheelerRiverCommunityEngagementFeb2020



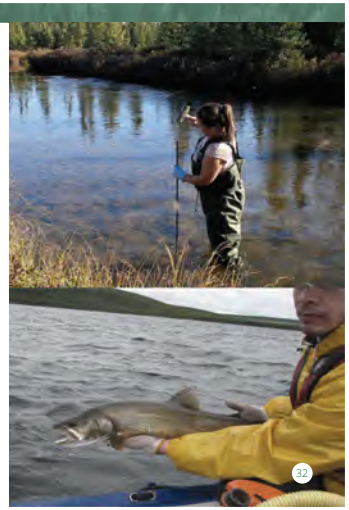
Environmental Assessment:
Understanding the Project's interactions with human and biophysical environment

Baseline Studies

- Environmental baseline studies have been ongoing since 2012
  - Denison needs to understand the current environmental conditions within and around the Wheeler River Project area

Environmental Assessment

- Initiated the federal and provincial environmental assessment processes in May 2019 with the Wheeler River Project Description
  - **Lead federal regulator**: Canadian Nuclear Safety Commission
  - **Lead provincial regulator:** Saskatchewan Ministry of Environment, Environmental Assessment Branch
- Technical studies designed to understand potential effects of the Project on the biophysical and human environments



Valued Components:
Understanding effects on the things that are important

- **Gain an understanding** of what is important to the people who use the area and to the people who may be affected by project activities.
- **Gather information** through research, from regulator feedback and through engagement with communities and Indigenous groups communities
- **Design the environmental** studies to predict how the VC's may change and what measures can be put in place to minimize and monitor the changes
- **Monitoring and reporting** of the changes to VC's will carry on throughout all phases of the project into decommissioning and post closure

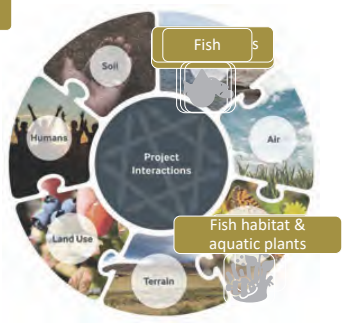
Economy

Land and Resource Use, Cultural Continuity

Quality of Life

Terrestrial

Aquatic



Groundwater

Atmosphere & Acoustic

Questions / Comments

Summary of questions

Next Steps:

Keeping conversation going and community informed

Conversation Channels

- Denison will be continually improving communication channels
- Denison will use information shared with us to inform environmental assessment
- Denison will share information back with the community and leadership regarding what we heard from these sessions
- Contact us at WheelerRiverInfo@denisonmines.com

Conclusion:

Thank you for attending!

Door Prizes

- ✓ 4 x $50 Gift Certificate to Yewr-Way
- ✓1 x $250 Gift Certificate to Yewr-Way
- ✓4 x $50 Gift Certificate to Northern Sunset Motel
- ✓1 x $250 Gift Certificate to Northern

Ile a la Crosse Community Presentation
Questions and Comments – February 10th, 2021

Environment

- Who is monitoring the environment throughout the project? Will you hire a Northern owned company?
- Will the northern people have assurances that the people's interests will be protected?
- Is the environment monitored after the closure of the mine? Who monitors it?
- What is the plan for storing and cleaning the water and where does it flow? What is the impact of this mining on water quality?
- What happens when the freeze wall melts? Will there be monitoring of ground water?
- What happens to the waste that goes back into the ground?
- Will any migration routes or critical habitat areas be impacted by the project?
- Will the Northern people have confidence that the environment is being looked after?
- I imagine there will be a huge amount of water utilized in this venture; what is the plan for cleaning, storing, and where does the water flow from this and surrounding mine sites? More concerned with water quality and assurance that the impact on this is minimal.
- With two other mines in the area what's the need for another airstrip in the area? Another airstrip will cause more environmental disturbance
- What routes will the yellowcake take? Will it travel right by the communities? Is there any monitoring along the highway for radioactivity?

Mining

- How many years is the mine expected to be in operation? What is its lifespan?
- Why is ISR mining only being introduced to Canada at this point if it has been a proven technique around the world for over 60 years?
- What type of solution is pumped down the wells?
- When you pump up the Uranium with the solution how is the uranium isolated (removed) from the solution?
- Is this presentation only for the Phoenix site? What will happen at the Gryphon site?
- With all the testing done, is the ISR method going to work or is there a backup plan to have a shaft/open pit mine?
- What are the timelines for the project? When do you think you will be in construction/production?

Economy

- Will Northerners be hired in upper-level positions or simply technical and entry level positions?
- What legacy are you going to be leaving behind for the people of the North?
- What is the difference between Denison and all other Uranium companies in terms of employment for northern people and revenue sharing?
- Is there a possibility for the village and other towns to get revenue sharing?
- What legacy are you leaving behind for people in the north.
- Is there an opportunity for joint ventures between northern companies and Denison? Will northern companies have an opportunity to bid on contracts?
- Can you quantify Denison's level of commitment to doing business with northern and aboriginally owned businesses? Does Denison currently have a minimum target percentage that they are committed to achieving/exceeding? Does Denison currently employ or do business with anyone/company from Ile-a-la-Crosse?
- Can training take place locally?
- Will there be an agreement in place that Dennison will hire locals as apprentices?
- What percentage of aboriginals does Denison intend to employ/have on the company payroll? Specifically, are there opportunities to work directly for Denison, not just for companies that are contracted by Denison.
- What is the likelihood for communities in the identified impact areas to have ownership or equity in future projects including the Wheeler River project?

Questions for the CNSC

- Does CNSC acknowledge UNDRIP in the EA and review process?
- How does Bill C-69 impact the Wheeler River project?

Follow up Question (received after the presentation)

- Once production begins Denison has stated that there will be about 100 employees. What is the breakdown of these positions? We would like to provide our high school students with information about employment opportunities and arrange for training. Assuming it is 50 people per shift could you please break down the jobs into the following categories:
    - Upper management & engineering
    - Office staff
    - Environmental monitoring
    - Mill operators
    - Radiation technicians
    - Labourers
    - Catering staff - is this contracted out?
    - Other fields I might not know about

Denison Mines

POWERING PEOPLE
WHEELER RIVER

WHAT WE HEARD FROM RESIDENTS OF ILE-A-LA-CROSSE AND REGION

Thank You for Attending

Denison's Wheeler River Project team thanks everyone who attended its municipal presentation via Zoom or 92.5FM Beauval radio on February 10, 2021, and for responding to the follow-up survey.

Although we are not sure how many of you listened on the radio, we counted 34 participants logged into Zoom to attend this online event, while some of you had others watching with you at home. It was great to see so many young people in attendance as 67% of the participants that evening were between the ages of 16 and 34 years old (30% between 35 and 64, and 3% 65 and over).

Thank you for welcoming us to engage with your students and teachers. Thanks also to Jordyn Burnouf for being the emcee for the evening, to Elder Dorothy Debrule for the prayer and Ernestine for the entertainment.

The Purpose of This Municipal Presentation

We wanted to make sure that community members and leadership are aware of the proposed project, the plans for the future, the opportunities for the community, and to also give an opportunity to the project's provincial (Saskatchewan Ministry of Environment) and federal (Canadian Nuclear Safety Commission) regulators to participate and introduce themselves.

Wheeler River Project in a nutshell

The Wheeler River Project is located 35 km north-east of the Key Lake mill and 35 km southwest of the McArthur River uranium mine in the south-eastern portion of the Athabasca Basin region.

This proposed uranium mining project will use the In Situ Recovery (ISR) mining method, which is different than any of the existing uranium mines in the Athabasca Basin region - all activities occur at the surface, meaning there are no shafts/underground workings, no open pits, and no major earthworks. While new to the Athabasca Basin, ISR mining is the most common uranium mining method globally. A 10-metre-thick freeze wall separates the mining areas from the surrounding ground water. A solution is injected into the orebody to dissolve the uranium in place (in situ) and the solution carrying the dissolved uranium is pumped to surface where the uranium is extracted from the solution. The same solution is then pumped back into the ground to dissolve more uranium and so on in a closed loop. With this method there is no production of tailings and no large waste rock piles.

Read the Wheeler River Fact Sheet **here**

Watch the Wheeler River ISR Method Video **here**

Watch the mobilization at the Phoenix Deposit in April 2021 **here**

Community Insight

During the meeting participants asked many questions and also provided valuable insight in responding to the follow-up survey. Here are the main points made by community members:

Of all 26 interconnected valued components (VCs), which are the environmental or social aspects that may be impacted by a project, you indicated that the following were most important:

- Air quality
- Employment
- Local economy
- Traditional land and resource use
- Training

You also mentioned that you would like the Wheeler River Project team to consider the following additional VCs during its assessment:

- Connection to the land, language, culture and traditions
- Youth involvement and Elders' experience and knowledge sharing with youth
- Opportunities specific to northern businesses

> **"Keep us posted on the development and progress of permits. If need be, involve community members/ leadership in meetings with provincial and federal governments and regulators."**
>
> – Ile-a-la-Crosse Community Member

You also told us some of your worries and concerns about the project. These are the main points:

- The potential impacts to the environment and the need for transparency about the actual impacts, including the potential for spills, pollution and water contamination
- The safe transportation of uranium to avoid impacts on the environment and the communities
- The after mine issues, such as the decline in employment, which raises mental health concerns for the region
- The need for communities to work in partnership to benefit the region
- The lack of knowledge and understanding about the potential benefits of the uranium industry for the community

You acknowledged some of the opportunities you are looking forward to with this project, including:

- Training and education
- Employment for community members throughout the life of the mine
- Donations from the company to the communities
- Involvement of northern companies in environmental monitoring and other business partnerships, joint ventures
- Potential for northern communities to work together

You invited the Wheeler project team to continue its engagement activities with the community and consider bringing all the region's communities together to share ideas and discuss opportunities amongst themselves and with the company.

The Next Steps

The information gathered by Denison through community engagement activities will be included in future value components studies when possible, and in our formal report to the regulators.

The Wheeler River Project team will continue community engagement through future meetings with community leadership and residents as required, and will continue to share information via our Wheeler River dedicated website.

We also anticipate that the regulators will inform community leadership and residents of opportunities to participate in the project regulatory review process when appropriate.

Denison is also working with Métis Nation-Saskatchewan to arrange separate meetings with Métis leadership and citizens to understand the distinct interests of the Métis in respect of the project.

Tell Us More

Denison is committed to engaging with our neighbours and invite you to contact us to share ideas or concerns with the Wheeler River Project team. You can also contact our team to request information or offer your services.

Email: **WheelerRiverInfo@denisonmines.com**

Tel: 306-652-8200

Website: **www.denisonmines.com**

Copyright @DenisonMines - May 2021

Wheeler River Project information presentation for Pinehouse residents

Denison Mines

February 11, 2021
6:30pm - 8:00pm

Win Door Prizes

Listen to Local Entertainment During Breaks

Use the link provided in the body of this post to access the Zoom session.
Meeting ID: 810 9625 9594 - Passcode: 12345

The Wheeler River Project Team looks forward to seeing you and hearing from you on Zoom.

This community meeting was planned in collaboration with the Mayor and staff of the Northern Village of Pinehouse to provide information and seek feedback with respect to Denison's proposed Wheeler River Project. This is a public meeting, which is open to all residents of the Village and surrounding areas.

Denison is also working with Métis Nation-Saskatchewan to arrange separate meetings with Métis leadership and citizens to understand the distinct interests of the Métis in respect of the project.

www.denisonmines.com

Join the Wheeler River Project team for an online information presentation.

ON ZOOM

February 9
Northern Village of Beauval
The Beauval meeting has been rescheduled to 6:00pm - 7:30pm tonight.

February 10
Northern Village of Ile-à-la-Crosse
6:30pm - 8:00pm

February 11
Northern Village of Pinehouse
6:30pm - 8:00pm

The link to join each presentation and feedback session is available on your community's Facebook page and Denison's.

Or use the following Zoom Login Information:

Beauval Meeting ID: 852 9113 9517 - Passcode: 12345

Ile-a-la-Crosse Meeting ID: 880 7924 4502 - Passcode: 12345

Pinehouse Meeting ID: 810 9625 9594 - Passcode: 12345

Win **door prizes** from local companies and others.
Listen to **local entertainment** during breaks.

We look forward to meeting with you via Zoom.

This community meeting was planned in collaboration with the Mayor and staff of the Northern Village of Beauval, Ile-à-la-Crosse and Pinehouse to provide information and seek feedback with respect to Denison's proposed Wheeler River Project. This is a public meeting, which is open to all residents of the Village and surrounding areas.

Denison is also working with Métis Nation-Saskatchewan to arrange separate meetings with Métis leadership and citizens to understand the distinct interests of the Métis in respect of the project.

Denison Mines
www.denisonmines.com

Denison Public Meetings FB Post

Pinehouse Facebook Page

Residents of Pinehouse are invited to attend a public meeting with Denison's Wheeler River Project team next week.

The meeting will take place virtually via Zoom. There will be entertainment from local artists during the breaks and the opportunity to win door prizes and participation prizes during the meeting. All of the details are below:

Thursday, February 11, 2021 at 6:30pm.
Zoom Link:
https://us02web.zoom.us/j/81096259594?pwd=djdqRUt1WXlOWFlWSHgvZEFuTEdEdz09
Meeting ID: 810 9625 9594
Meeting Passcode: 12345

Entertainment

Frank Natomagan

Doors Prizes

Five $100 gift certificates to Northern Store Trading Post

2 ladders and a cutting board from LakeShore Custom Builders

Five $100 gift certificates to Co-op Gas Bar

Survey Participation Prizes

Two $250 gift certificates to Co-op Gas Bar

Denison Mines

Uranium Development & Exploration

The Wheeler River Project

February, 2021 Pinehouse Public Meeting

Denison's Guiding Principles

- Denison recognizes and is deeply respectful of the fact the that Wheeler River project is located within the boundaries of **Treaty 10**, and is in the heart of the **traditional territory of the English River First Nation**, and in the **homeland of the Métis of Saskatchewan**
- Denison understands the importance of **protecting the area** in which we are working

Denison Mines

Public Meeting

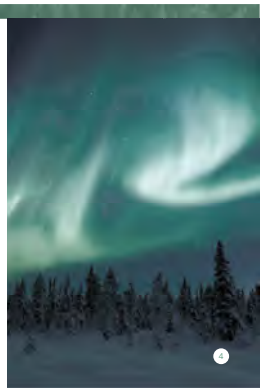
This community meeting was planned in collaboration with the Mayor of the Northern Village of Pinehouse to provide information and seek feedback with respect to Denison's proposed Wheeler River Project. This is a public meeting which is open to all residents of the Village and surrounding areas.

Denison respects the Delegation of the Duty to Consult Responsibilities signed by the Métis Local Presidents in August 2019, delegating consultation matters to the Métis Nation-Saskatchewan (MNS). In accordance with that delegation, Denison has been requested to direct all local Métis-related consultation to the MNS leadership and designated negotiators.

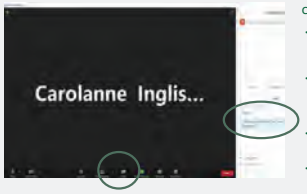
Denison has been working with MNS to arrange separate meetings with Métis leadership and Citizens to understand the distinct interests of the Métis in respect of the project.

Agenda

- Opening
- How to Use Zoom
- 'Virtual' Meal – Support to the High Schools
- Introductions (Denison, Province, CNSC)
- Wheeler River Project Overview
- **Door prize draws and entertainment**
- Environmental Assessment Process
- Valued Components
- Questions and Answers
- Next Steps from Denison
- **Final door prize draws and entertainment**



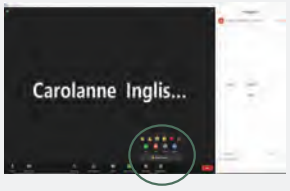
How to Participate using Zoom Features



Chat and Video Function

- Enter your name and community in the chat function if you'd like to be entered to win a prize for attendance
- The chat function is also where we will have you answer questions we pose throughout the presentation to be entered to win a prize for participation
- The chat function is a place to ask us questions, as the microphones will be muted
- Video – you can turn your video on or off (video off often improves quality of video conference)

How to Participate using Zoom Features



Reactions Function

- You can give us feedback as we go along to let us know if the presentation is too fast, too slow, going well

'Virtual Meal' to Support High School Fundraising

- Denison is proud to make a **$2,500 donation** to the school for a 'virtual' meal to support high school fundraising efforts
- **Thank you** to all staff working so hard in the schools – teachers, janitors, bus drivers, librarians, maintenance and administration

Denison Team

- Dave Bronkhorst, VP Operations
- Janna Switzer, Environment Manager
- Chad Sorba, Technical Manager
- Carolanne Inglis-McQuay, CSR Manager
- Xavier Lu Dac, Senior Engineer
- Dana Harris, Project Services Coordinator
- Mike Dawe, Environment and CSR Coordinator
- Jenn Skilnick, Environment Coordinator

Mr. Aimann Sadik
Senior Environmental Assessment Administrator

Ms. Brianne England
Manager, Applications

Mr. Jeff Dereniwski
Senior Environmental Assessment Administrator

Government of Saskatchewan

ROC444

Ms. Marcelle Phaneuf
Environmental Assessment Specialist

Mr. Ryan Froess
Senior Policy Advisor

CNSC Mandate

- Regulate the use of nuclear energy and materials to protect health, safety, security and the environment
- Implement Canada's international commitments on the peaceful use of nuclear energy
- Disseminate objective scientific, technical and regulatory information to the public

nuclearsafety.gc.ca

Introductions: CNSC

Responsibilities

CNSC Responsibilities:

- Make independent, objective, science based and risk-informed decisions
- Set requirements
- Verify compliance

Licensee Responsibilities:

- Manage regulated activities in a manner that protects health, safety, security and the environment, while respecting Canada's international obligations
- Responsible and accountable for the safe operation of facilities and activities

nuclearsafety.gc.ca

Introductions: CNSC

Environmental Assessment

- Opportunities for public and Indigenous consultation are continuous
- Federal and provincial agencies are involved and contribute their expertise in Impact Assessments and Environmental Assessments
- Decisions are independent, transparent and evidence-based

nuclearsafety.gc.ca

Introductions: CNSC

Cautionary Statements & References

This presentation and the information contained herein is designed to help you understand management's current views, and may not be appropriate for other purposes. This presentation contains information relating to the uranium market, third party and provincial infrastructure, and the plans and availability thereof, derived from third-party publications and reports which Denison believes are reliable but have not been independently verified by the Company.

Certain information contained in this presentation 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 presentation contains forward-looking information pertaining to the results of, and estimates, assumptions and projections provided in, the Wheeler PFS and the Waterbury PEA, including future development methods and plans, market prices, costs and capital expenditures; assumptions regarding Denison's ability to obtain all necessary regulatory approvals to commence development at Wheeler; Denison's percentage interest in its projects and its agreements with its joint venture partners; and the availability of services to be provided by third parties. 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 faces certain risks, including the current and potential impacts of the COVID-19 pandemic, use of mining methods which are novel and untested in the Athabasca basin, the inability to permit or develop its projects as currently planned, the inability to secure sufficient financing to pursue its business objectives, the unpredictability of market prices, events that could materially increase costs, changes in the regulatory environment governing the project lands, and unanticipated claims against title and rights to the project. 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 13, 2020 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.

Readers should not place undue reliance on forward-looking statements. The forward-looking information contained in this presentation is expressly qualified by this cautionary statement. Any forward-looking information and the assumptions made with respect thereto speaks only as of February 8, 2021. Denison does not undertake any obligation to publicly update or revise any forward-looking information after such date 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 Mineral Resources and Mineral Reserves: This presentation may use terms such as "measured", "indicated" and/or "inferred" mineral resources and "proven" or "probable" mineral reserves, which are terms defined with reference to the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") CIM Definition Standards on Mineral Resources and Mineral Reserves ("CIM Standards"). The Company's descriptions of its projects using CIM Standards may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements under the United States federal securities laws and the rules and regulations thereunder.

Qualified Persons
The disclosure of a scientific or technical nature within this presentation, including the disclosure of mineral resources, mineral reserves, as well as the results of the Wheeler PFS and Waterbury PEA, was reviewed and approved by David Bronkhorst, P.Eng., who is a Qualified Person in accordance with the requirements of NI 43-101.

Technical Reports

- For further details regarding the Wheeler River project, please refer to (a) the Company's press releases dated December 1, 2020, regarding the adoption of the freeze wall design for ISR at Phoenix, and September 24, 2018, regarding the Prefeasibility Study, and (b) the technical report titled "*Prefeasibility Study for the Wheeler River Uranium Project, Saskatchewan, Canada*" with an effective date of September 24, 2018 ("Wheeler PFS").
- For further details regarding the Waterbury Lake project, please refer to the Company's press release dated November 17, 2020 and the technical report titled "*Preliminary Economic Assessment for the Tthe Heldeth Túé (J Zone) Deposit, Waterbury Lake Property, Northern Saskatchewan, Canada*" with an effective date of October 30, 2020. ("Waterbury PEA"). **The Waterbury PEA is a preliminary analysis of the potential viability of the Project's mineral resources, and should not be considered the same as a Pre-Feasibility or Feasibility Study, as various factors are preliminary in nature. There is no certainty that the results from the PEA will be realized. Mineral resources are not mineral reserves and do not have demonstrated economic viability. Scheduled tonnes and grade do not represent an estimate of mineral reserves.**

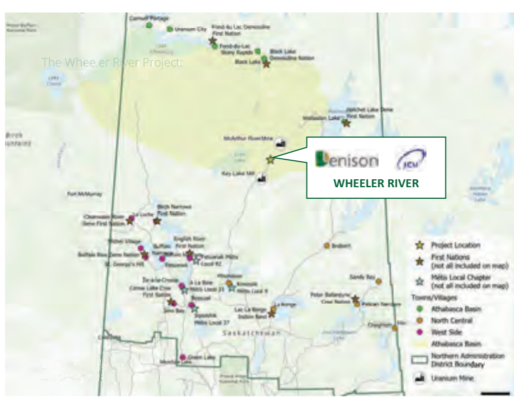
For a description of the data verification, assay procedures and the quality assurance program and quality control measures applied by Denison, please see Denison's Annual Information Form dated March 13, 2020. Copies of the foregoing are available on Denison's website and under its profile on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

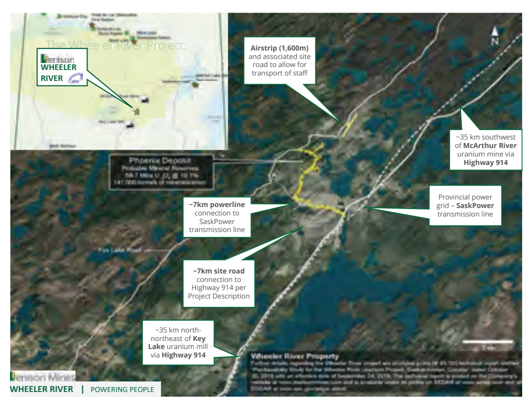
Company Overview:
Denison is focused on opportunities in northern Saskatchewan

- 22.5% interest in **McClean Lake Uranium Mill**
- 90% interest in Flagship **Wheeler River** project
  - Advancing through development process
  - Largest undeveloped uranium project in the infrastructure rich eastern Athabasca Basin
  - Environmental Assessment ("EA") initiated
  - Progressive approach to mining using In Situ Recovery ("ISR") method
- 66.9% in the **Waterbury Lake Property**, hosting the Tthe Heldeth Túé (formerly J Zone) deposit
  - Recently completed Preliminary Economic Assessment ("PEA")[1]
  - Amenable to ISR mining method
- Several other interests in the Athabasca Basin region
  - **McClean Lake, Midwest,** and **Waterbury Lake** properties, all in close proximity to McClean mill
  - **+250,000 hectares** of exploration ground

NOTES: (1) See Denison's news release dated Nov. 17, 2020; The PEA is a preliminary analysis and should not be considered the same as a Pre-Feasibility or Feasibility Study, see Cautionary Statements slide for details

ISR field testing at Wheeler River Phoenix Deposit, Summer 2019





ROC444

In Situ Recovery ("ISR") Mining:
Introducing a proven mining technique to the Athabasca Basin

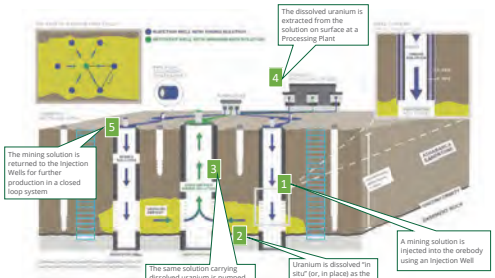
Key Components for the Project

ISR is an established mining method[1]

- In Situ Recovery ("ISR") was first used in the 1960s and currently accounts for more than half the world's annual uranium production

NOTES: (2) Refer to the IAEA "Manual of acid in situ leach uranium mining technology", dated August 2001.

In Situ Recovery ("ISR") Mining[1]:
Introducing a proven mining technique to the Athabasca Basin



NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018. (2) Figure reflects Denison's decision to adopt a freeze wall approach (see press release dated December 01, 2020)

ISR Mining:
A progressive approach to uranium mining uranium in the Athabasca Basin

How is ISR Different?[1]

- All activities occur at surface; there are no traditional underground workings
- The ISR mining area has only wells and pipes to plant; no open pits, head-frame, or major earthworks
- There is no tailings production or long-term tailings storage, plus no large waste rock piles

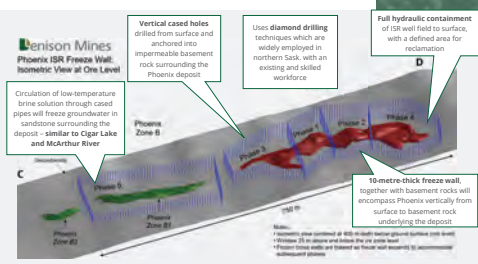
Waste Management Vision

- Two main waste streams expected:
  - Gypsum (non-radioactive) – remediated on site
  - Radium/iron precipitates (radioactive) – removed from surface
- No long term waste management expected to be required after mine closure

NOTES: (1) Refer to the IAEA "Manual of acid in situ leach uranium mining technology", dated August 2001.

Freeze Containment :
Established method to create frozen barrier around mining area[1]

Key Components for the Project



NOTES: (1) | See Denison's news release dated December 1, 2020 for additional information on the freeze wall design for Phoenix.

Denison 2021 Phoenix

Athabasca Basin Ground Water Modelling:
Ground water at depth stays at depth[1]

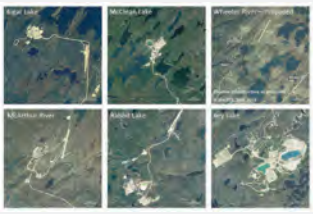
Key Components for the Project

- ✓ The ore body (i.e. Phoenix) is more than 400 metres below the surface / lakes and river systems
- ✓ Groundwater in the sandstone around the ore body ***is not directly*** connected to surface water bodies
- ✓ Field testing in 2019 and 2020, as well as detailed hydrogeologic modelling shows that ground water stays at depth – it doesn't move upward towards surface, and only moves laterally (at a very slow rate) at the depth of the ore body
- ✓ The freeze wall / fence is the ultimate contingency method to contain mining solution within mining area

NOTES: (1) See Denison's news release from June 4, 2020 for details.

Wheeler River / Phoenix ISR:
Different mining method and a different type of operation[1]

Key Components for the Project



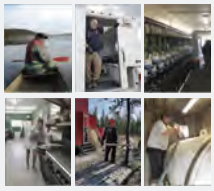
Advantages of ISR mining compared to existing uranium mining in Canada:

- ✓ Small surface footprint
- ✓ Lower water consumption
- ✓ Lower energy consumption
- ✓ Lower CO_2 emissions
- ✓ Small volume treated effluent released to surface water bodies
- ✓ Potential for lower radiation doses to workers
- ✓ No tailings production; storage of precipitated by-products
- ✓ Very small volumes of clean waste rock (sandstone core from wellfield development)

NOTES: (1) Refer to the "Wheeler River Project Provincial Technical Proposal and Federal Project Description", dated May 2019.

Socio-economic Considerations:
Relatively small operation with opportunity to use existing skills

Key Components for the Project



Denison is committed to maximizing opportunities

- Up to **300 jobs during ~2 years of construction**
- Approximately **100 jobs during operation for 10 years**
- Targeted efforts to **Communities of Interest**, with a broad focus on northern Saskatchewan and Indigenous communities
- **Similar job types** to those at existing uranium operations
  - Trades, surface, environment, radiation, safety, camp, security
  - ISR operators are similar to process operators (training can be done in Meadow Lake)
- **Specific ISR training will be provided**
- Pre-requisite training will include **diploma or technical certification available in Saskatchewan**. Examples:
  - Process Operation Technician (SIIT in Meadow Lake)
  - Chemical Technology (Sask. Polytechnic)
- Construction and operation activities targeted to **Northern Saskatchewan / Indigenous-owned businesses**

ROC444

15 Minute Break

- ✓3 x $100 Gift Certificate to Northern Shores
- ✓1 Handmade wooden cutting board by Lakeshore Custom Builders
- ✓1 Handmade wooden ladder by Lakeshore Custom Builders
- ✓3 x $100 Gift Certificate to Co-Op Gas Bar

Community Engagement Survey Completion:
We are looking for your feedback

Step 1 – Click link or scan QR code

CLICK HERE TO START SURVEY!

The survey link will be posted in the chat function of the Zoom meeting, as well as posted on your community Facebook page after the meeting

Step 2 – Complete the survey by February 18, 2021

Step 3 – Cross your fingers…
for a chance to win 1 of 10 VISA Gift Cards ($100)

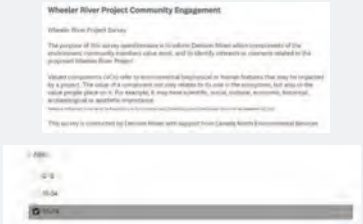
Community Engagement Survey Completion:
We are looking for your feedback

1. Open the camera on your phone or a QR scanning app
2. Hold it over the QR code
3. A link to the online survey online will pop up on your phone
4. Click on the link
5. Complete the survey

Survey closes on February 18, 2021

Community Engagement Survey Completion:
We are looking for your feedback

https://www.surveymonkey.com/r/WheelerRiverCommunityEngagementFeb2020



Community Engagement Survey Completion:
We are looking for your feedback

https://www.surveymonkey.com/r/WheelerRiverCommunityEngagementFeb2020

Environmental Assessment:
Understanding the Project's interactions with human and biophysical environment

Baseline Studies

- Environmental baseline studies have been ongoing since 2012
  - Denison needs to understand the current environmental conditions within and around the Wheeler River Project area

Environmental Assessment

- Initiated the federal and provincial environmental assessment processes in May 2019 with the Wheeler River Project Description
  - **Lead federal regulator**: Canadian Nuclear Safety Commission
  - **Lead provincial regulator:** Saskatchewan Ministry of Environment, Environmental Assessment Branch
- Technical studies designed to understand potential effects of the Project on the biophysical and human environments

Valued Components:
Understanding effects on the things that are important

- **Gain an understanding** of what is important to the people who use the area and to the people who may be affected by project activities.
- **Gather information** through research, from regulator feedback and through engagement with communities and Indigenous groups communities
- **Design the environmental** studies to predict how the VC's may change and what measures can be put in place to minimize and monitor the changes
- **Monitoring and reporting** of the changes to VC's will carry on throughout all phases of the project into decommissioning and post closure

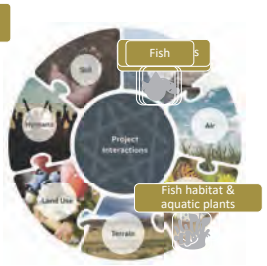
Economy

Land and Resource Use, Cultural Continuity

Quality of Life

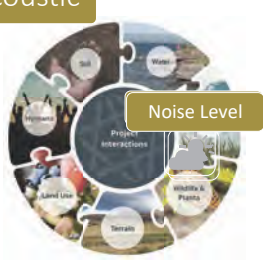
Terrestrial

Aquatic



Groundwater

Atmosphere & Acoustic



Questions / Comments

Summary of questions

Next Steps:

Keeping conversation going and community informed

Conversation Channels

- Denison will be continually improving communication channels
- Denison will use information shared with us to inform environmental assessment
- Denison will share information back with the community and leadership regarding what we heard from these sessions
- Contact us at WheelerRiverInfo@denisonmines.com

Conclusion:

Thank you for attending!

- ✓2 x $100 Gift Certificate to Northern Shores
- ✓1 Handmade wooden ladder by Lakeshore Custom Builders
- ✓2 x $100 Gift Certificate to the Co-Op Gas Bar
- ✓2 x $250 Gift Certificate to the Co-Op Gas Bar

ROC444

Wheeler River Project Community Engagement

Wheeler River Project Survey

The purpose of this survey questionnaire is to inform Denison Mines which components of the environment community members value most, and to identify interests or concerns related to the proposed Wheeler River Project.

Valued components (VCs) refer to environmental biophysical or human features that may be impacted by a project. The value of a component not only relates to its role in the ecosystem, but also to the value people place on it. For example, it may have scientific, social, cultural, economic, historical, archaeological or aesthetic importance.

Reference: 2016 Generic Guidelines for the Preparation of an Environmental Impact Statementpursuant to the Canadian Environmental Assessment Act, 2012

This survey is conducted by Denison Mines with support from Canada North Environmental Services.

The survey results will be used to help Denison Mines determine which valued components should be studied in detail as part of the Wheeler River effects assessment. Results of the survey will also help Denison Mines understand which valued components the community would like to receive updates on once the early results of the effects assessment are ready to be shared.

A summary of the survey results will be shared on the Denison Mines website in March 2021. There are several benefits of sharing your thoughts in the survey questionnaire. Your input will help Denison Mines focus on environmental components, concerns or topics that matter most to your community. If you choose to leave your name and contact information at the conclusion of the survey, you will be entered into a prize draw for one of ten $100 VISA gift cards. Participation in the draw is optional and only those who complete the survey will be entered in the draw.

Participation in this survey is voluntary. If you agree to participate it will require a minimum of 15 minutes of your time to answer questions about components of the environment that you value, and any interests or concerns you have related to the Wheeler River Project. During the survey we will ask you some questions including your age, residence, if you identify as an Aboriginal person, and how you heard about the survey. Finally in order to be entered into the prize draw, you must provide your name and contact information.

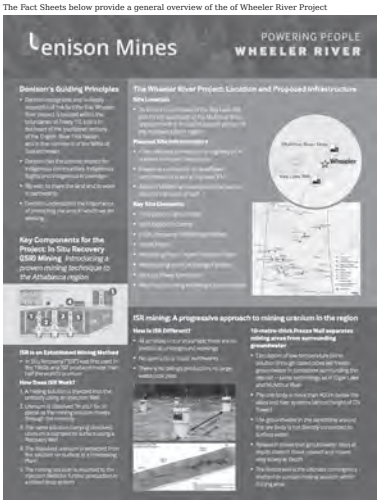
Providing your name and contact information is optional. All information you share in this survey questionnaire will be kept strictly confidential and your name will not be associated with the data we collect. Your identity will remain confidential in all publications and public presentations related to this research.

If you have any questions or concerns about this survey questionnaire, please contact WheelerRiverInfo@denisonmines.com

* 1. By checking this box, you confirm that you understand the purpose of the survey, how the information you share will be used, and that participation in the survey is voluntary.

- ◯ I confirm that I understand the purpose of this survey, how the information will be shared, and that participation is voluntary
- ◯ I DO NOT feel comfortable proceeding with this survey and would like to exit

The Fact Sheets below provide a general overview of the of Wheeler River Project



Wheeler River Project Community Engagement

Section 1: Tell us about yourself!

We want to make sure we are hearing from a diverse group of people from your community, please fill out the following questions to help us determine if there are any voices we haven't heard from yet.

2. Age:
- ◯ 0-15
- ◯ 16-34
- ◯ 35-64
- ◯ 65+

3. Do you identify as an Indigenous person (First Nations, Métis, or Inuit?) Answers to this question are entirely voluntary and not required.
- ◯ Prefer not to answer
- ◯ Yes (if yes, then: Please select from the following which best applies to you.)
- ◯ First Nation
- ◯ Métis
- ◯ Inuit
- ◯ Non-status
- ◯ No

4. Where do you live most of the year:
- ◯ Beauval
- ◯ Ile a la Crosse
- ◯ Pinehouse
- ◯ Other
- ◯ Prefer not to say

Please identify which other community you are from

5. How did you hear about this survey?
- ◯ Facebook
- ◯ Poster
- ◯ Radio
- ◯ Word of Mouth
- ◯ Other

6. Which of the following presentations did you attend? Check all that apply.
- ◯ Virtual Community Meeting
- ◯ Virtual Leadership Meeting
- ◯ High-school Presentation
- ◯ Prefer not to say
- ◯ None of the above

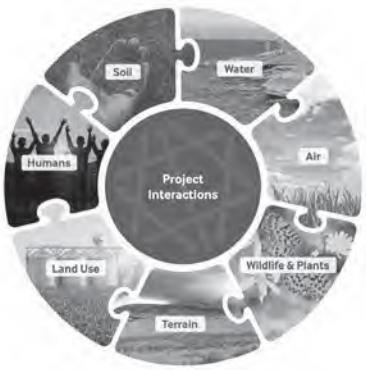
Wheeler River Project Community Engagement

Section 2: Valued Components

Valued components (VCs) refer to environmental biophysical or human features that may be impacted by a project. The value of a component not only relates to its role in the ecosystem, but also to the value people place on it.

In previous engagement events, we heard that the valued components provided in the list below are important to community members. During the environmental impact assessment process, we plan to study these valued components to better understand if and how the Wheeler Project may impact them.

Valued Components Circle



ROC444

7. From the list below, please click on the valued components that you feel are most important for us to study as part of the impact assessment.

- [ ] Local economy
- [ ] Employment
- [ ] Business activity
- [ ] Training
- [ ] Industry use
- [ ] Outfitting tourism
- [ ] Traditional land and resource use
- [ ] Cultural expression
- [ ] Heritage resources
- [ ] Community well-being
- [ ] Public safety
- [ ] Infrastructure and services
- [ ] Terrain
- [ ] Soil
- [ ] Vegetation
- [ ] Ungulates
- [ ] Birds
- [ ] Furbearers
- [ ] Surface water
- [ ] Sediment
- [ ] Invertebrates
- [ ] Fish
- [ ] Fish habitat and aquatic plants
- [ ] Groundwater quality
- [ ] Air quality
- [ ] Noise level
- [ ] Why did you choose these valued components?

8. Are there any valued components that are important to you that are missing from this list? If so, please list them below. Why are these important to you?

9. Are there any valued components on the list that are not important to you? If so, please select the valued components from the list below that you feel should be removed.

- [ ] Local economy
- [ ] Employment
- [ ] Business activity
- [ ] Training
- [ ] Industry use
- [ ] Outfitting tourism
- [ ] Traditional land and resource use
- [ ] Cultural expression
- [ ] Heritage resources
- [ ] Community well-being
- [ ] Public safety
- [ ] Infrastructure and services
- [ ] Terrain
- [ ] Soil
- [ ] Vegetation
- [ ] Ungulates
- [ ] Birds
- [ ] Furbearers
- [ ] Surface water
- [ ] Sediment
- [ ] Invertebrates
- [ ] Fish
- [ ] Fish habitat and aquatic plants
- [ ] Groundwater quality
- [ ] Air quality
- [ ] Noise level

Wheeler River Project Community Engagement

Section 3: Interests and Concerns

10. Based on what you know so far about the Wheeler Project, what aspects of the project could benefit, or work well for your community?

11. Based on what you know so far about the Wheeler Project, what aspects of the project could be challenging or cause concern for your community?

12. Are there questions you have about the Wheeler Project that you would like to see addressed in future updates or communications? If, so please list your questions in the space below.

13. Is there anything else you would like us to know related to the Wheeler Project?

Wheeler River Project Community Engagement

Section 5: Prize Draw Entry

If you would like your name entered into a draw prize, please provide the following information

14. Name

15. Phone number

16. Email address

17. Would you like us to add your email address to our mailing list to receive project updates? Yes/No

- ◯ Yes
- ◯ No

Wheeler River Project Community Engagement

Thank You!

Thank you for completing the Wheeler River Project Community Engagement Survey. If you have any additional comments, questions or concerns please email WheelerRiverInfo@denisonmines.com

Meeting Notes
Date: February 11, 2021
Event: Pinehouse Community Meeting

Mining

- How much water is used during the injection process?
- Are there current studies on the freeze wall method and climate change?

Environment

- Will Denison collaborate with Pinehouse in the eventual reclamation and decommissioning once the Wheeler River Operations cease?
- Will chemicals be hauled on the 914 highway, either to or from the Wheeler River Camp? If so, what chemicals are they? What potential harms to they present to surface plants and animals? And, if these chemicals present a danger to surface water, or plants and animals, will Denison develop an emergency response team to respond to any potential accidents that may occur on the highway? My concern is the Churchill River system that is adjacent to the road in many areas en route to the camp. What preventative measures are being developed with this in mind? Would training opportunities be given to those individuals who already have existing traditional ecological knowledge of the land base - like those in Pinehouse?
- Will Denison partner with Pinehouse to create an emergency response teams in Pinehouse?
- Does Denison anticipate climate change will potentially affect the EA baseline information? If so, is Denison flexible - in collaboration with Pinehouse - to continually redefine "baseline" information and expectations?

Economy

- Will there be an opportunity for people from Pinehouse to be employed at the mine?
- As per the existing Human Resources Development Agreement that Cameco & Orano have (which they have failed to meet) is Denison Mines willing to commit to 53% RSN in its workforce once Wheeler River Operations Commence
- Will Denison offer in-house training for jobs?
- As the Wheeler River Project is located on Kineepik Métis Local's territory (as illustrated through mapping) is Denison wiling to enter into a Collaborative Agreement (similar to the one with Cameco) with Kineepik Métis Local once operations commence?
- There will be significant opportunities for contract work at the mine. Does Denison have plans to have contracts with Northern Indigenous companies, especially those from impacted/rights bearing communities? Will there be contracts for northern businesses for the life of the mine?
- Will Denison consider development for community-based opportunities at the Junction at Pinehouse that can support the mining operations where community members will have access to those opportunities? This could benefit personnel that are not comfortable working at the sites, specifically single parents.
- Will there be a Denison Mines "representative" residing in Pinehouse? Possibly an office?
- Will Denison offer specific apprenticeship opportunities to Pinehouse residents?
- Will Denison commit to ensure that technical opportunities are being offered to Pinehouse residents and that those training programs are hosted in the community where the trainees are fully supported?
- Will Denison entertain a partnership for an industrial training centre in Pinehouse?
- Will Denison possibly contribute into our Recovery Lake Program?

Comments

- I hope Denison gives every northern contractor a fair chance at contract work without too much politics - "other users"
- Its great with these mega projects that it is mandatory to hold public meetings and duty to consult however consultation should happen throughout the entire process, combining land-based knowledge (Traditional Knowledge) with science.

Denison Mines

POWERING PEOPLE
WHEELER RIVER

WHAT WE HEARD FROM RESIDENTS OF PINEHOUSE AND REGION

Thank You for Attending

Denison's Wheeler River Project team thanks everyone who attended its municipal presentation via Zoom or CFNK-FM 89.9 radio on February 11, 2021, and for responding to the follow-up survey.

Although we are not sure how many of you listened on the radio, we counted 52 participants logged into Zoom to attend this online event, while some of you had others watching with you at home. Seventy percent (70%) of the people who attended and answered our post event survey were between the ages of 35 and 64 years old, while 16 to 34 year old accounted for 30%, and there were none who identified as being 65 and over.

Thank you also to Jordyn Burnouf for being the emcee for the evening, to Elder Emil Natomagan for the prayer and Frank Natomagan for the entertainment.

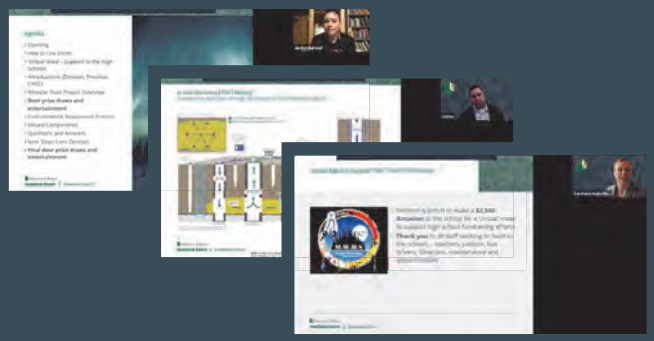
The Purpose of This Municipal Presentation

We wanted to make sure that community members and leadership are aware of the proposed project, the plans for the future, the opportunities for the community, and to also give an opportunity to the project's provincial (Saskatchewan Ministry of Environment) and federal (Canadian Nuclear Safety Commission) regulators to participate and introduce themselves.

Wheeler River Project in a nutshell

The Wheeler River Project is located 35 km north-east of the Key Lake mill and 35 km southwest of the McArthur River uranium mine in the south-eastern portion of the Athabasca Basin region.

This proposed uranium mining project will use the In Situ Recovery (ISR) mining method, which is different than any of the existing uranium mines in the Athabasca Basin region - all activities occur at the surface, meaning there are no shafts/underground workings, no open pits, and no major earthworks. While new to the Athabasca Basin, ISR mining is the most common uranium mining method globally. A 10-metre-thick freeze wall separates the mining areas from the surrounding ground water. A solution is injected into the orebody to dissolve the uranium in place (in situ) and the solution carrying the dissolved uranium is pumped to surface where the uranium is extracted from the solution. The same solution is then pumped back into the ground to dissolve more uranium and so on in a closed loop. With this method there is no production of tailings and no large waste rock piles.



Read the Wheeler River Fact Sheet **here**

Watch the Wheeler River ISR Method Video **here**

Watch the mobilization at the Phoenix Deposit in April 2021 **here**

Community Insight

During the meeting participants asked many questions and also provided valuable insight in responding to the follow-up survey. Here are the main points made by community members:

Of all 26 interconnected valued components (VCs), which are the environmental or social aspects that may be impacted by a project, you indicated that the following were most important:

- Air quality
- Birds
- Employment
- Fish habitat and aquatic plants
- Groundwater quality
- Local economy
- Public Safety
- Surface water
- Traditional land and resource use

> **"It would be refreshing to see a mining company actively engaged and legitimately concerned about addressing our concerns and hearing our voices."**
>
> – Pinehouse Community Member

You also mentioned that you would like the Wheeler River Project team to consider the following additional VCs during its assessment:

- Housing
- Community participation

You also told us some of your worries and concerns about the project. These are the main points:

- The potential to impact the environment (contamination), displace wildlife and interrupt traditional land users access to the land
- Being asked to choose between the land and economic opportunities
- An increase in traffic impacting road quality
- The transportation of dangerous chemicals to and from the mine
- The possibility that residents won't be able to take advantage of the opportunities presented to them by the project due to existing social issues like the lack of housing.

You acknowledged some of the opportunities you are looking forward to with this project, including the potential for:

- Training and increased Employment
- Jobs in Pinehouse that could benefit community members who can't work away from home
- Funding to the community
- Collaboration agreements
- Denison to form a partnership with the community
- Increased opportunities for community improvement and participation

You invited the Wheeler project team to continue its engagement activities with the community and to consider having a Denison representative residing in Pinehouse. Another idea was to develop community-based employment opportunities to offer work to people who can't leave the community for work (such as single parents).

The Next Steps

The information gathered by Denison through community engagement activities will be included in future value components studies when possible, and in our formal report to the regulators.

The Wheeler River Project team will continue community engagement through future meetings with community leadership and residents as required, and will continue to share information via our Wheeler River dedicated website.

We also anticipate that the regulators will inform community leadership and residents of opportunities to participate in the project regulatory review process when appropriate.

Denison is also working with Métis Nation-Saskatchewan to arrange separate meetings with Métis leadership and citizens to understand the distinct interests of the Métis in respect of the project.

Tell Us More

Denison is committed to engaging with our neighbours and invite you to contact us to share ideas or concerns with the Wheeler River Project team. You can also contact our team to request information or offer your services.

Email: **WheelerRiverInfo@denisonmines.com**

Tel: 306-652-8200

Website: **www.denisonmines.com**

Copyright @DenisonMines - May 2021

Denison Mines

Uranium Development & Exploration

The Wheeler River Project

February, 2021 High School Workshop

Cautionary Statements & References

This presentation and the information contained herein is designed to help you understand management's current views, and may not be appropriate for other purposes. This presentation contains information relating to the uranium market, third party and provincial infrastructure, and the plans and availability thereof, derived from third-party publications and reports which Denison believes are reliable but have not been independently verified by the Company.

Certain information contained in this presentation 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 presentation contains forward-looking information pertaining to the results of, and estimates, assumptions and projections provided in, the Wheeler PFS and the Waterbury PEA, including future development methods and plans, market prices, costs and capital expenditures; assumptions regarding Denison's ability to obtain all necessary regulatory approvals to commence development at Wheeler; Denison's percentage interest in its projects and its agreements with its joint venture partners; and the availability of services to be provided by third parties. 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 faces certain risks, including the current and potential impacts of the COVID-19 pandemic, use of mining methods which are novel and untested in the Athabasca basin, the inability to permit or develop its projects as currently planned, the inability to secure sufficient financing to pursue its business objectives, the unpredictability of market prices, events that could materially increase costs, changes in the regulatory environment governing the project lands, and unanticipated claims against title and rights to the project. 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 13, 2020 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.

Readers should not place undue reliance on forward-looking statements. The forward-looking information contained in this presentation is expressly qualified by this cautionary statement. Any forward-looking information and the assumptions made with respect thereto speaks only as of February 8, 2021. Denison does not undertake any obligation to publicly update or revise any forward-looking information after such date 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 Mineral Resources and Mineral Reserves: This presentation may use terms such as "measured", "indicated" and/or "inferred" mineral resources and "proven" or "probable" mineral reserves, which are terms defined with reference to the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") CIM Definition Standards on Mineral Resources and Mineral Reserves ("CIM Standards"). The Company's descriptions of its projects using CIM Standards may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements under the United States federal securities laws and the rules and regulations thereunder.

Qualified Persons

The disclosure of a scientific or technical nature within this presentation, including the disclosure of mineral resources, mineral reserves, as well as the results of the Wheeler PFS and Waterbury PEA, was reviewed and approved by David Bronkhorst, P.Eng., who is a Qualified Person in accordance with the requirements of NI 43-101.

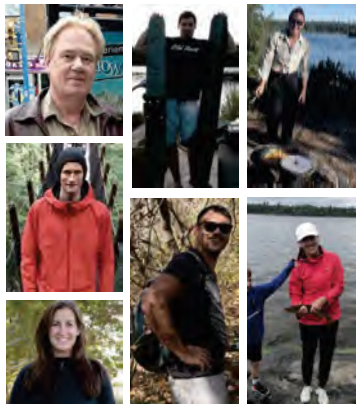
Technical Reports

- For further details regarding the Wheeler River project, please refer to (a) the Company's press releases dated December 1, 2020, regarding the adoption of the freeze wall design for ISR at Phoenix, and September 24, 2018, regarding the Prefeasibility Study, and (b) the technical report titled "*Prefeasibility Study for the Wheeler River Uranium Project, Saskatchewan, Canada*" with an effective date of September 24, 2018 ("Wheeler PFS").
- For further details regarding the Waterbury Lake project, please refer to the Company's press release dated November 17, 2020 and the technical report titled "*Preliminary Economic Assessment for the Tthe Heldeth Túé (J Zone) Deposit, Waterbury Lake Property, Northern Saskatchewan, Canada*" with an effective date of October 30, 2020. ("Waterbury PEA"). **The Waterbury PEA is a preliminary analysis of the potential viability of the Project's mineral resources, and should not be considered the same as a Pre-Feasibility or Feasibility Study, as various factors are preliminary in nature. There is no certainty that the results from the PEA will be realized. Mineral resources are not mineral reserves and do not have demonstrated economic viability. Scheduled tonnes and grade do not represent an estimate of mineral reserves.**

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 13, 2020. Copies of the foregoing are available on Denison's website and under its profile on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

Denison Team

- Dave Bronkhorst, VP Operations
- Janna Switzer, Environment Manager
- Chad Sorba, Technical Manager
- Carolanne Inglis-McQuay, CSR Manager
- Xavier Lu Dac, Senior Engineer
- Dana Harris, Project Services Coordinator
- Mike Dawe, Environment and CSR Coordinator
- Jenn Skilnick, Environment Coordinator



Canadian Nuclear Safety Commission

Marcelle Phaneuf
Environmental Assessment Specialist

Doug Wylie
Environmental Assessment Specialist

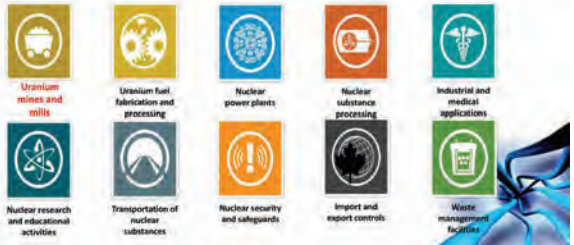
CNSC Mandate

- Regulate the use of nuclear energy and materials to protect health, safety, security and the environment
- Implement Canada's international commitments on the peaceful use of nuclear energy
- Disseminate objective scientific, technical and regulatory information to the public

nuclearsafety.gc.ca 2

Introductions: CNSC

CNSC Regulates All Nuclear Facilities and Activities



nuclearsafety.gc.ca 3

Introductions: CNSC

CNSC Staff

- Perform technical assessments and reviews
- Presents staff's assessment findings and recommendations
- Implement Commission decisions
- Conduct compliance inspections and oversight of the licensees facilities and activities
- Verify and enforce compliance with regulatory requirements
- Develop regulatory requirements and guidance
- Engage the public and Indigenous groups through outreach

nuclearsafety.gc.ca 4

Introductions: CNSC

Responsibilities

CNSC Responsibilities:

- Make independent, objective, science based and risk-informed decisions
- Set requirements
- Verify compliance

Licensee Responsibilities:

- Manage regulated activities in a manner that protects health, safety, security and the environment, while respecting Canada's international obligations
- Responsible and accountable for the safe operation of facilities and activities

nuclearsafety.gc.ca 5

Introductions: CNSC

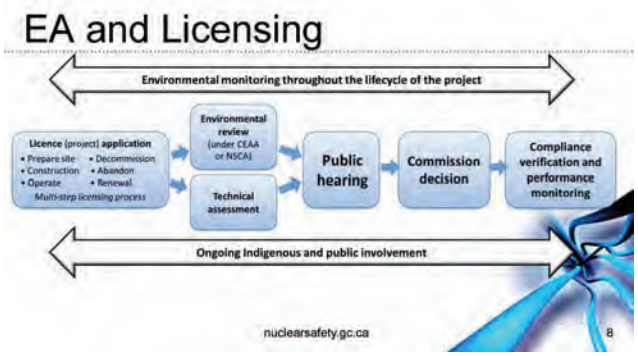
Environmental Assessment

- Opportunities for public and Indigenous consultation are continuous
- Federal and provincial agencies are involved and contribute their expertise in Impact Assessments and Environmental Assessments
- Decisions are independent, transparent and evidence-based

nuclearsafety.gc.ca 6

Introductions: CNSC

Introductions: CNSC

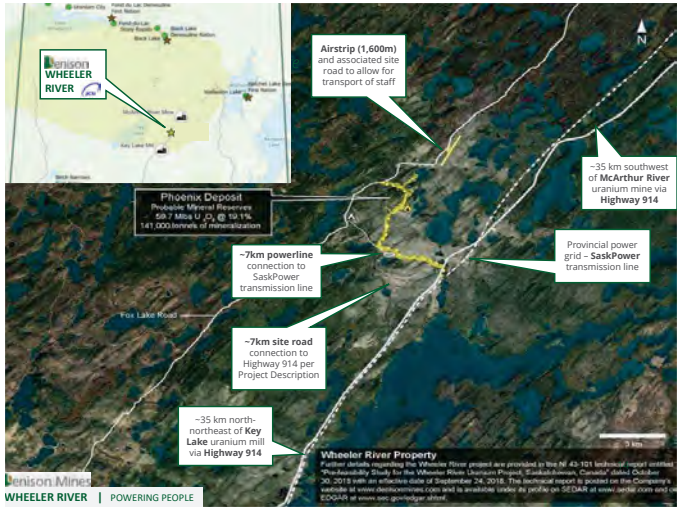


Company Overview:
Denison is focused on opportunities in northern Saskatchewan

- 22.5% interest in **McClean Lake Uranium Mill**
- 90% interest in Flagship **Wheeler River** project
  - Advancing through development process
  - Largest undeveloped uranium project in the infrastructure rich eastern Athabasca Basin
  - Environmental Assessment ("EA") initiated
  - Progressive approach to mining using In Situ Recovery ("ISR") method
- 66.9% in the **Waterbury Lake Property**, hosting the Thelon Túé (formerly J Zone) deposit
  - Recently completed Preliminary Economic Assessment ("PEA")[1]
  - Amenable to ISR mining method
- Several other interests in the Athabasca Basin region
  - **McClean Lake, Midwest,** and **Waterbury Lake** properties, all in close proximity to McClean mill
  - **+250,000 hectares** of exploration ground

ISR field testing at Wheeler River – Phoenix Deposit, Summer 2019

NOTES: (1) See Denison's news release dated Nov. 17, 2020; The PEA is a preliminary analysis and should not be considered the same as a Pre-Feasibility or Feasibility Study, see Cautionary Statements slide for details



In Situ Recovery ("ISR") Mining:
Introducing a proven mining technique to the Athabasca Basin

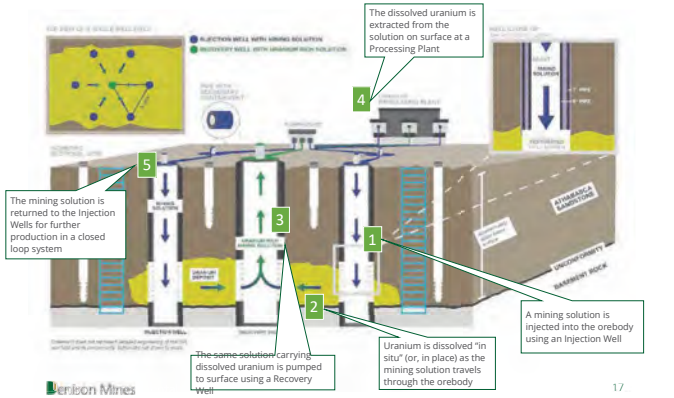
Key Components for the Project

ISR is an established mining method[1]

- In Situ Recovery ("ISR") was first used in the 1960s and currently accounts for more than half the world's annual uranium production

NOTES: (1) Refer to the IAEA "Manual of acid in situ leach uranium mining technology", dated August 2001.

In Situ Recovery ("ISR") Mining[1]:
Introducing a proven mining technique to the Athabasca Basin



NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018. (2) Figure reflects Denison's decision to adopt a freeze wall approach (see press release dated December 01, 2020)

ISR Mining:
A progressive approach to uranium mining uranium in the Athabasca Basin

How is ISR Different?[1]

- All activities occur at surface; there are no traditional underground workings
- The ISR mining area has only wells and pipes to plant; no open pits, head-frame, or major earthworks
- There is no tailings production or long-term tailings storage, plus no large waste rock piles

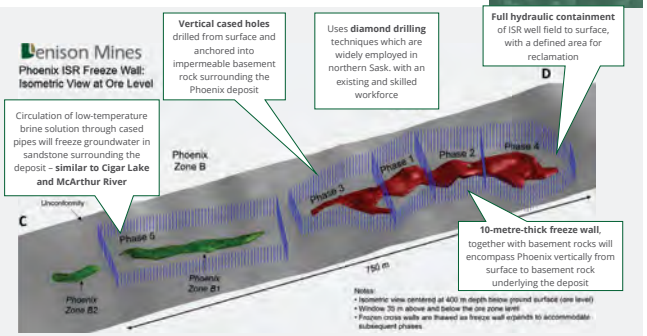
Waste Management Vision

- Two main waste streams expected:
  - ➢ Gypsum (non-radioactive) – remediated on site
  - ➢ Radium/Iron precipitates (radioactive) – removed from surface
- No long term waste management expected to be required after mine closure

NOTES: (1) Refer to the IAEA "Manual of acid in situ leach uranium mining technology", dated August 2001.

Freeze Containment :
Established method to create frozen barrier around mining area[1]

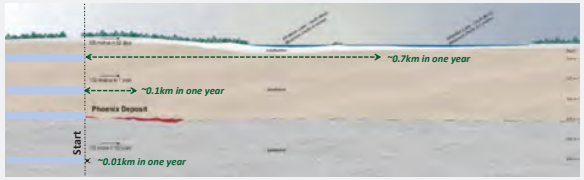
Key Components for the Project



NOTES: (1) See Denison's news release dated December 1, 2020 for additional information on the freeze wall design for Phoenix.

Athabasca Basin Ground Water Modelling:
Ground water at depth stays at depth[1]

Key Components for the Project

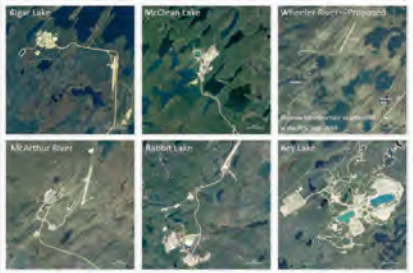


- ✓ The ore body (i.e. Phoenix) is more than 400 metres below the surface / lakes and river systems
- ✓ Groundwater in the sandstone around the ore body ***is not directly*** connected to surface water bodies
- ✓ Field testing in 2019 and 2020, as well as detailed hydrogeologic modelling shows that ground water stays at depth – it doesn't move upward towards surface, and only moves laterally (at a very slow rate) at the depth of the ore body
- ✓ The freeze wall / fence is the ultimate contingency method to contain mining solution within mining area

NOTES: (1) See Denison's news release from June 4, 2020 for details

Wheeler River / Phoenix ISR:
Different mining method and a different type of operation[1]

Key Components for the Project



Advantages of ISR mining compared to existing uranium mining in Canada:

- ✓ Small surface footprint
- ✓ Lower water consumption
- ✓ Lower energy consumption
- ✓ Lower CO_2 emissions
- ✓ Small volume treated effluent released to surface water bodies
- ✓ Potential for lower radiation doses to workers
- ✓ No tailings production; storage of precipitated by-products
- ✓ Very small volumes of clean waste rock (sandstone core from wellfield development)

NOTES: (1) Refer to the "Wheeler River Project Provincial Technical Proposal and Federal Project Description", dated May 2019.

Socio-economic Considerations:
Relatively small operation with opportunity to use existing skills

Key Components for the Project

Denison is committed to maximizing opportunities

- Up to **300 jobs during ~2 years of construction**
- Approximately **100 jobs during operation for 10 years**
- Targeted efforts to **Communities of Interest**, with a broad focus on northern Saskatchewan and Indigenous communities
- **Similar job types** to those at existing uranium operations
  - Trades, surface, environment, radiation, safety, camp, security
  - ISR operators are similar to process operators (training can be done in Meadow Lake)
- **Specific ISR training will be provided**
- Pre-requisite training will include **diploma or technical certification available in Saskatchewan**. Examples:
  - Process Operation Technician (SIIT in Meadow Lake)
  - Chemical Technology (Sask. Polytechnic)
- Construction and operation activities targeted to **Northern Saskatchewan / Indigenous-owned businesses**

Community Engagement Survey Completion:
We are looking for your feedback

Step 1 – Click link or scan QR code

CLICK HERE TO START SURVEY!

The survey link will be posted in the chat function of the Zoom meeting, as well as posted on your community Facebook page after the meeting

Step 2 – Complete the survey by February 18, 2021

Step 3 – Cross your fingers...
for a chance to win 1 of 10 VISA Gift Cards ($100)

Community Engagement Survey Completion:
We are looking for your feedback

1. Open the camera on your phone or a QR scanning app
2. Hold it over the QR code
3. A link to the online survey online will pop up on your phone
4. Click on the link
5. Complete the survey

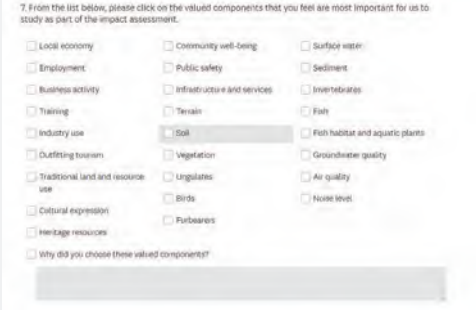
Survey closes on February 18, 2021

Community Engagement Survey Completion:
We are looking for your feedback

https://www.surveymonkey.com/r/WheelerRiverCommunityEngagementFeb2020

Community Engagement Survey Completion:
We are looking for your feedback

https://www.surveymonkey.com/r/WheelerRiverCommunityEngagementFeb2020



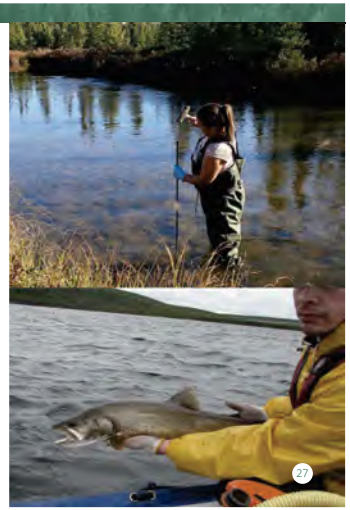
Environmental Assessment:
Understanding the Project's interactions with human and biophysical environment

Baseline Studies

- Environmental baseline studies have been ongoing since 2012
  - Denison needs to understand the current environmental conditions within and around the Wheeler River Project area

Environmental Assessment

- Initiated the federal and provincial environmental assessment processes in May 2019 with the Wheeler River Project Description
  - **Lead federal regulator**: Canadian Nuclear Safety Commission
  - **Lead provincial regulator:** Saskatchewan Ministry of Environment, Environmental Assessment Branch
- Technical studies designed to understand potential effects of the Project on the biophysical and human environments



Valued Components:
Understanding effects on the things that are important

- **Gain an understanding** of what is important to the people who use the area and to the people who may be affected by project activities.
- **Gather information** through research, from regulator feedback and through engagement with communities and Indigenous groups communities
- **Design the environmental** studies to predict how the VC's may change and what measures can be put in place to minimize and monitor the changes
- **Monitoring and reporting** of the changes to VC's will carry on throughout all phases of the project into decommissioning and post closure

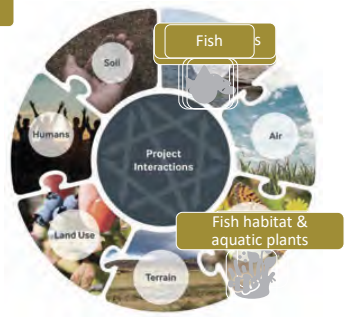
Economy

Land and Resource Use, Cultural Continuity

Quality of Life

Terrestrial

Aquatic



Groundwater

Atmosphere & Acoustic

Next Steps:
Keeping conversation going and community informed

Conversation Channels

- Denison will be continually improving communication channels
- Denison will use information shared with us to inform environmental assessment
- Denison will share information back with the community and leadership regarding what we heard from these sessions
- Contact us at WheelerRiverInfo@denisonmines.com

Presentation Notes

Event: High School Presentations

Valley View, Rossignol , Minahik Waskahigan

Date: February 10, 2021

Notes

• Curious about how an environmental assessment protects the trees, rivers, soil, and air.

• Wondering if the other mines are closed (or slowed production), how is this one moving forward?

• Wondering about the freeze wall - based on the difficulties that Cigar Lake had.

• Would like to know if the injected material is steam water (like in the oil patch) or some type of chemical pumped into the ground?

• What happens to the "leftovers" when the solution comes back to the surface? And what exactly is in this solution?

• Isn't it correct to say the Brine is in a closed loop system? Like in an artificial ice rink? The brine doesn't actually go into the environment. Is this correct?

• A few years ago, Denison came to Ile a La Crosse asking for input on the location of road construction. Input was given but can't make out the location of that road. Please discuss.

• At the meeting in Ile a La Crosse, a plan to mitigate thermal pollution of the water bodies was discussed. At the time, the plan was not available. Please detail the plan and how that relates to the mine site.

• Are Surface Lease Agreements being formulated with the Northern Communities that align with the life of the mine plan? Being educational institutions; will we be given workforce development plans for this project? In this way Northern Saskatchewan communities, and the appropriate educational institutions from the North, will have ample time to train Northerners to fill these upcoming positions.

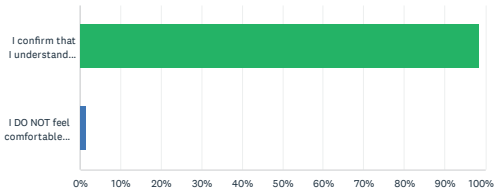
• Is the brine, I believe this is what is used to freeze the walls, environmentally friendly once the freeze walls come down?

• Can you explain what an Impact Benefit Agreement (IBA) is, and if there is one in place? If so, what are the benefits to our students here today?

ROC446

Q1 By checking this box, you confirm that you understand the purpose of the survey, how the information you share will be used, and that participation in the survey is voluntary.

Answered: 66 Skipped: 0

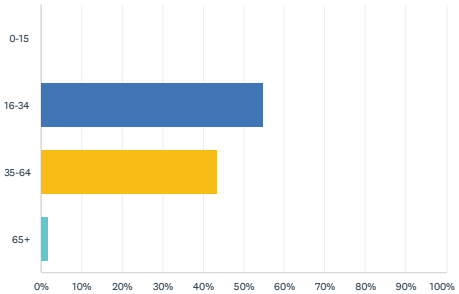


ANSWER CHOICES	RESPONSES	
I confirm that I understand the purpose of this survey, how the information will be shared, and that participation is voluntary	98.48%	65
I DO NOT feel comfortable proceeding with this survey and would like to exit	1.52%	1
TOTAL		66

Wheeler River Project Community Engagement

Q2 Age:

Answered: 62 Skipped: 4

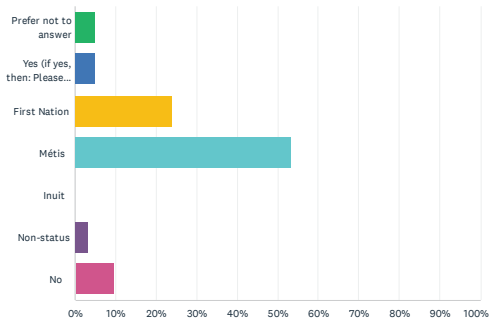


ANSWER CHOICES	RESPONSES	
0-15	0.00%	0
16-34	54.84%	34
35-64	43.55%	27
65+	1.61%	1
TOTAL		62

ROC446

Q3 Do you identify as an Indigenous person (First Nations, Métis, or Inuit?) Answers to this question are entirely voluntary and not required.

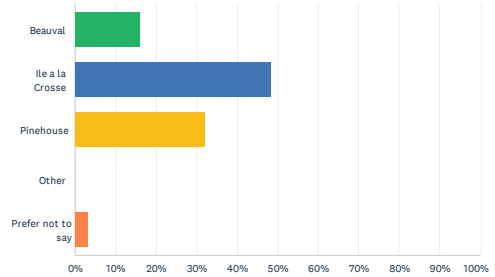
Answered: 62 Skipped: 4



ANSWER CHOICES	RESPONSES	
Prefer not to answer	4.84%	3
Yes (if yes, then: Please select from the following which best applies to you.)	4.84%	3
First Nation	24.19%	15
Métis	53.23%	33
Inuit	0.00%	0
Non-status	3.23%	2
No	9.68%	6
TOTAL		62

Q4 Where do you live most of the year:

Answered: 62 Skipped: 4



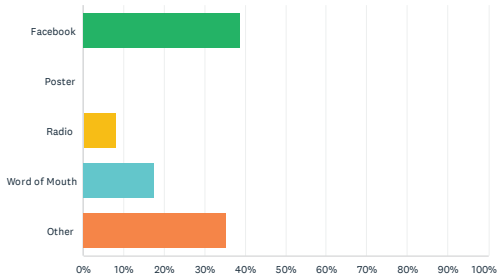
ANSWER CHOICES	RESPONSES	
Beauval	16.13%	10
Ile a la Crosse	48.39%	30
Pinehouse	32.26%	20
Other	0.00%	0
Prefer not to say	3.23%	2
TOTAL		62

#	PLEASE IDENTIFY WHICH OTHER COMMUNITY YOU ARE FROM	DATE
1	none	2/11/2021 7:55 PM
2	shellbrook this year, changes every fall	2/10/2021 10:20 PM

ROC446

Q5 How did you hear about this survey?

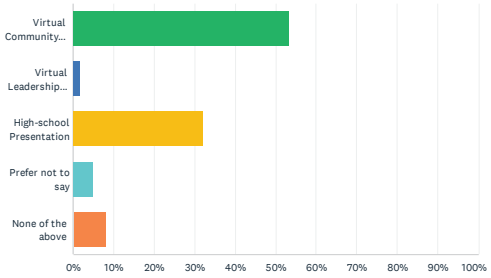
Answered: 62 Skipped: 4



ANSWER CHOICES	RESPONSES	
Facebook	38.71%	24
Poster	0.00%	0
Radio	8.06%	5
Word of Mouth	17.74%	11
Other	35.48%	22
TOTAL		62

Q6 Which of the following presentations did you attend? Check all that apply.

Answered: 62 Skipped: 4

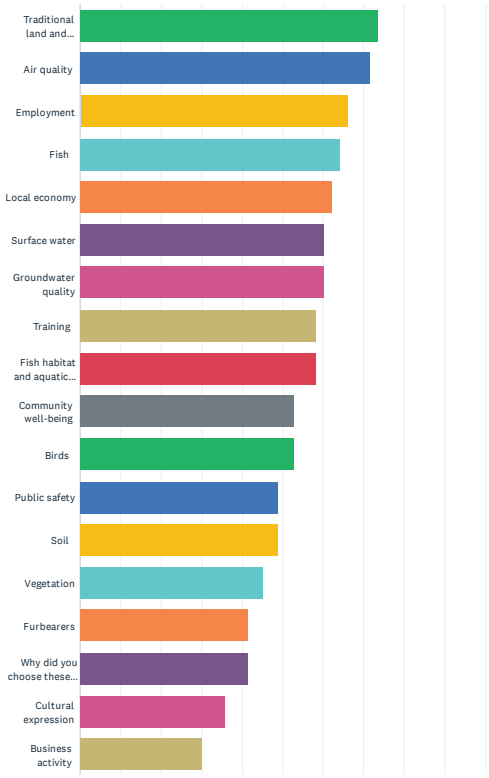


ANSWER CHOICES	RESPONSES	
Virtual Community Meeting	53.23%	33
Virtual Leadership Meeting	1.61%	1
High-school Presentation	32.26%	20
Prefer not to say	4.84%	3
None of the above	8.06%	5
TOTAL		62

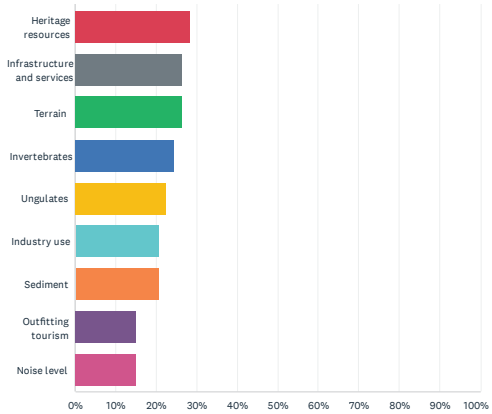
ROC446

Q7 From the list below, please click on the valued components that you feel are most important for us to study as part of the impact assessment.

Answered: 53 Skipped: 13



Wheeler River Project Community Engagement



ROC446

Wheeler River Project Community Engagement

ANSWER CHOICES	RESPONSES	
Traditional land and resource use	73.58%	39
Air quality	71.70%	38
Employment	66.04%	35
Fish	64.15%	34
Local economy	62.26%	33
Surface water	60.38%	32
Groundwater quality	60.38%	32
Training	58.49%	31
Fish habitat and aquatic plants	58.49%	31
Community well-being	52.83%	28
Birds	52.83%	28
Public safety	49.06%	26
Soil	49.06%	26
Vegetation	45.28%	24
Furbearers	41.51%	22
Why did you choose these valued components?	41.51%	22
Cultural expression	35.85%	19
Business activity	30.19%	16
Heritage resources	28.30%	15
Infrastructure and services	26.42%	14
Terrain	26.42%	14
Invertebrates	24.53%	13
Ungulates	22.64%	12
Industry use	20.75%	11
Sediment	20.75%	11
Outfitting tourism	15.09%	8
Noise level	15.09%	8
Total Respondents: 53		

#	WHY DID YOU CHOOSE THESE VALUED COMPONENTS?	DATE
1	These components are vital to the well being of LIFE on our planet.	2/18/2021 10:00 AM
2	Because this is what we disturb when we explore	2/17/2021 2:31 PM
3	They r the most important	2/12/2021 7:06 PM
4	Important to put low impact on environment plus jobs for people on communities affected.	2/12/2021 1:46 PM

Wheeler River Project Community Engagement

5	Because i feel that they are most important to the well being of every human individual.	2/12/2021 1:10 PM
6	Because Pinehouse is one of the surrounding communities, we rely a lot on our traditional resources, such as fishing, hunting, gathering. This project would also open up a lot of opportunities for pinehouse residents and surrounding communities.	2/11/2021 8:03 PM
7	We are given a lot of assurances about how environmentally safe this energy source can be it still has a LARGE impact on the land. I feel that the land and water are our best resources and in the not too distant future they will be incredibly valuable. Compromising them seems dangerous.	2/11/2021 7:58 PM
8	to protect our way of life	2/11/2021 7:53 PM
9	They will always be needed in order to survive	2/11/2021 7:36 PM
10	Economy is important for jobs/employment of northerners. Water, land and animals are all connected. We still use the land for livelihood.	2/10/2021 8:14 PM
11	Id pick them all because all are important but these are the top of my list.	2/10/2021 8:08 PM
12	We need to have a vested interest in this project	2/10/2021 8:06 PM
13	They are all important topics	2/10/2021 8:06 PM
14	Building for future community health and growth	2/10/2021 8:06 PM
15	I chose these because i feel like we should value our earth and our beliefs heavily, Indigenous most of our cultural practices and beliefs come from mother earth, which we highly appreciate and value	2/10/2021 11:29 AM
16	The environment is more important that businesses and money.	2/10/2021 11:25 AM
17	I feel that they are important	2/10/2021 11:08 AM
18	i don't want our land to be damaged	2/10/2021 10:52 AM
19	All of them are reasonable and none should be bypassed.	2/10/2021 10:50 AM
20	I feel that these components are valuable because this project shouldn't harm the surrounding environment. However I do believe it is a good idea because it'll bring more job opportunities to our northern communities	2/10/2021 10:50 AM
21	I teach to vocation and trades in a high school setting.	2/10/2021 10:49 AM
22	i believe they're important for my future	2/10/2021 10:47 AM

Q8 Are there any valued components that are important to you that are missing from this list? If so, please list them below. Why are these important to you?

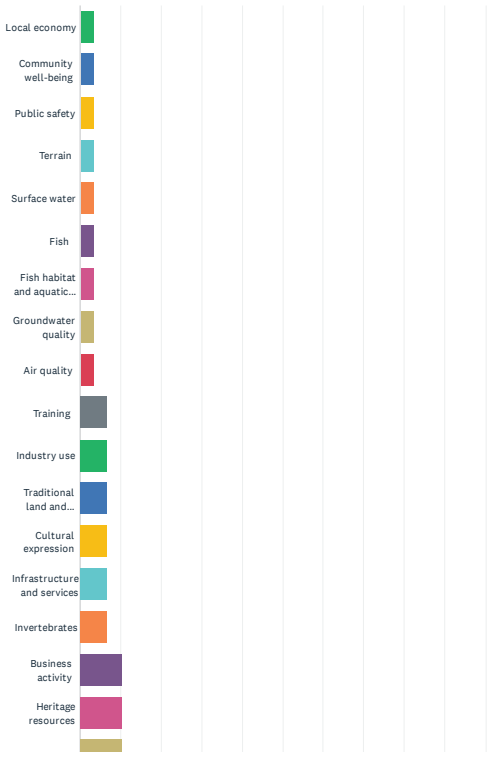
Answered: 28 Skipped: 38

#	RESPONSES	DATE
1	Truly involving Northern's in the development by providing opportunities and assisting with setting up a environmental monitoring management company owned by impacted communities. The living environment is most important and must be priority.	2/18/2021 10:00 AM
2	No other valued components	2/17/2021 2:53 PM
3	Nope	2/12/2021 7:06 PM
4	None that I could think of.	2/12/2021 1:46 PM
5	Housing. People need to feel safe and secure in their surroundings.	2/12/2021 1:10 PM
6	NO	2/11/2021 7:58 PM
7	No	2/11/2021 7:36 PM
8	Community participation	2/11/2021 6:00 PM
9	No	2/11/2021 4:30 PM
10	Language and connections to the land. Traditional resource users and Elders need to share there experience and knowledge with our young people. Connection to the land, language , culture and traditions.	2/10/2021 8:14 PM
11	We need our youth involved	2/10/2021 8:08 PM
12	Nil	2/10/2021 8:06 PM
13	No	2/10/2021 8:06 PM
14	No	2/10/2021 8:05 PM
15	Opportunities for northern businesses	2/10/2021 8:04 PM
16	Nothing is missing	2/10/2021 11:21 AM
17	yeah	2/10/2021 11:18 AM
18	Traditional Values!	2/10/2021 11:16 AM
19	cultural land	2/10/2021 11:11 AM
20	there is none missing	2/10/2021 11:08 AM
21	well being of the land and any living beings around the mine.	2/10/2021 10:52 AM
22	I just think everything is important for the safety for health	2/10/2021 10:50 AM
23	N/a	2/10/2021 10:50 AM
24	No	2/10/2021 10:49 AM
25	no	2/10/2021 10:47 AM
26	No	2/9/2021 7:38 PM
27	No	2/9/2021 7:35 PM
28	No	2/9/2021 7:34 PM

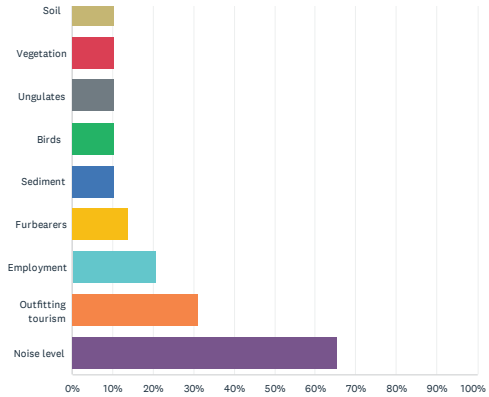
ROC446

Q9 Are there any valued components on the list that are not important to you? If so, please select the valued components from the list below that you feel should be removed.

Answered: 29 Skipped: 37



Wheeler River Project Community Engagement



ROC446

Wheeler River Project Community Engagement

ANSWER CHOICES	RESPONSES	
Local economy	3.45%	1
Community well-being	3.45%	1
Public safety	3.45%	1
Terrain	3.45%	1
Surface water	3.45%	1
Fish	3.45%	1
Fish habitat and aquatic plants	3.45%	1
Groundwater quality	3.45%	1
Air quality	3.45%	1
Training	6.90%	2
Industry use	6.90%	2
Traditional land and resource use	6.90%	2
Cultural expression	6.90%	2
Infrastructure and services	6.90%	2
Invertebrates	6.90%	2
Business activity	10.34%	3
Heritage resources	10.34%	3
Soil	10.34%	3
Vegetation	10.34%	3
Ungulates	10.34%	3
Birds	10.34%	3
Sediment	10.34%	3
Furbearers	13.79%	4
Employment	20.69%	6
Outfitting tourism	31.03%	9
Noise level	65.52%	19
Total Respondents: 29		

Q10 Based on what you know so far about the Wheeler Project, what aspects of the project could benefit, or work well for your community?

Answered: 36 Skipped: 30

#	RESPONSES	DATE
1	Setting aside a legacy fund to benefit impacted communities now and into the future. Ensure employment is available to my community including a pick up point so that there is no undue hardship for workers.	2/18/2021 10:13 AM
2	Employment for our people.	2/17/2021 3:03 PM
3	Training and employment	2/17/2021 2:54 PM
4	employment, environmental impacts and legacy projects,	2/17/2021 2:35 PM
5	Jobs	2/12/2021 7:07 PM
6	Jobs and funding	2/12/2021 1:48 PM
7	This community does very well with communication. I believe once something is said it will will shortly become done. Projects are always finished within our community.	2/12/2021 1:16 PM
8	Economy	2/11/2021 8:05 PM
9	Potential jobs. That is it. All this fancy stuff is just for people hoping they will get work in a place where work is limited and scarce.	2/11/2021 8:00 PM
10	continued communication knowing the opportunity	2/11/2021 7:58 PM
11	Developing an agreement to acknowledge the importance of positive relationships with indigenous communities - who are directly impacted - by mining industry. This has often overlooked by industry, and creates an oppositional relationship with communities. Please do not do this, like other companies have.	2/11/2021 7:57 PM
12	I think it would be good to bring jobs into community	2/11/2021 7:53 PM
13	Employment and contract opportunities	2/11/2021 6:01 PM
14	Employment opportunities	2/11/2021 4:32 PM
15	Employment at all intervals of the lifespan of the mine ie construction, security etc. We have a very active economic development corporation. Ile a la crosse also has a lot of people who have various capacities and skill sets that can be used at your mine. Keep the discussions and engagement going throughout all aspects of the mine development	2/10/2021 8:26 PM
16	Every aspect would benefit because we live at a 80% poverty rate.	2/10/2021 8:24 PM
17	Create more employment opportunities	2/10/2021 8:11 PM
18	Employment Partnerships Business opportunities	2/10/2021 8:08 PM
19	Employment and business involvement	2/10/2021 8:08 PM
20	Training and employment and joint ventures	2/10/2021 8:07 PM
21	Employment,Training	2/10/2021 8:07 PM
22	Employment	2/10/2021 8:06 PM
23	Would create jobs for the community	2/10/2021 8:05 PM
24	Creates jobs for people	2/10/2021 11:23 AM
25	yup	2/10/2021 11:19 AM
26	Donations to school groups!	2/10/2021 11:17 AM

27	employment for more northern people. there's quite a bit of people unemployed that would work hard and well at the mine site.	2/10/2021 10:57 AM
28	the employment rates would rise	2/10/2021 10:56 AM
29	I could make a lot of money and help my family.	2/10/2021 10:52 AM
30	Employment	2/10/2021 10:52 AM
31	Job opportunities	2/10/2021 10:51 AM
32	It will give more jobs for those in my community. Even I can work there	2/10/2021 10:49 AM
33	having employment and having the education of these types of programs	2/10/2021 10:48 AM
34	Employment, training, wellness	2/9/2021 7:41 PM
35	Collaboration agreement between Denison and Beauval	2/9/2021 7:36 PM
36	Job opportunities, business opportunities	2/9/2021 7:35 PM

Q11 Based on what you know so far about the Wheeler Project, what aspects of the project could be challenging or cause concern for your community?

Answered: 33 Skipped: 33

#	RESPONSES	DATE
1	Direct benefits and positive impact to community. Environmental monitoring.	2/18/2021 10:13 AM
2	Traditional land users & wildlife interruption	2/17/2021 3:03 PM
3	Unsure	2/17/2021 2:54 PM
4	Vehicles ruining the road	2/12/2021 7:07 PM
5	None	2/12/2021 1:48 PM
6	The well being of people. Without adequate housing, there are many people that can not amount to their full potential if they can not even safely rest their head at night.	2/12/2021 1:16 PM
7	Contamination	2/11/2021 8:05 PM
8	Environmental issues. The feeling of 'selling your soul' (the land)	2/11/2021 8:00 PM
9	environmental impact	2/11/2021 7:58 PM
10	The transportation of dangerous chemicals concerns me. Also the opportunity to overlook the concerns of our community concerns me. It would be refreshing to see a mining company actively engaged and legitimately concerned about addressing our concerns and hearing our voices.	2/11/2021 7:57 PM
11	The affects on the land	2/11/2021 7:53 PM
12	Lack of mutually beneficial agreements	2/11/2021 6:01 PM
13	The impact of mining on the natural habitat and the displacement of the animals that currently inhabit the proposed site.	2/11/2021 4:32 PM
14	Dealing with opposing agencies/organizations/political parties. Jurisdictional challenges, MNS/Métis Local/Muncipal not being able to work in a healthy partnership for the benefit of all community members. Also, First Nations working with Métis communities needs to be encouraged/emphasized. Educate our elementary and High School students about uranium and the good that comes from this type of industry, in the north.	2/10/2021 8:26 PM
15	The depression that follows after the mines pack up and leave with the $$$	2/10/2021 8:24 PM
16	Environment impact due to air quality and transportation of uranium	2/10/2021 8:11 PM
17	Environment Legacy Parity with other communities	2/10/2021 8:08 PM
18	Non transparency in regards to spills	2/10/2021 8:08 PM
19	Not being an impact community	2/10/2021 8:07 PM
20	Lack of employment	2/10/2021 8:07 PM
21	N/A	2/10/2021 8:06 PM
22	When the mine eventually closes a lot of people are going to loose jobs	2/10/2021 11:23 AM
23	yup	2/10/2021 11:19 AM
24	Water contamination	2/10/2021 11:17 AM
25	any damage done to the ground and living animals. a lot of people still live off that land.	2/10/2021 10:57 AM

26	The mental health of how the people will react when the land is being damaged.	2/10/2021 10:52 AM
27	No concerns	2/10/2021 10:52 AM
28	The quality of the water if something were to leak. Ile a la crosse is a basin where all of the rivers meet, so if something were to spill into the water system it would be concerning for our community	2/10/2021 10:51 AM
29	Just pollutions	2/10/2021 10:49 AM
30	having lots of information and using it to better ourselves	2/10/2021 10:48 AM
31	Work Safety, community safety from through traffic (semi trucks etc)	2/9/2021 7:41 PM
32	None	2/9/2021 7:36 PM
33	None	2/9/2021 7:35 PM

Q12 Are there questions you have about the Wheeler Project that you would like to see addressed in future updates or communications? If, so please list your questions in the space below.

Answered: 25 Skipped: 41

#	RESPONSES	DATE
1	Monitoring activity from start to finish of the project and who is monitoring is important to me. I feel an independent monitoring management company is critical for credibility, otherwise reports are meaningless to me if they come from industry or from the provincial government. There are trust issues, as a Metis citizen I would like to see a company owned by Metis communities doing this work.	2/18/2021 10:13 AM
2	Nothing right now.	2/17/2021 2:54 PM
3	None	2/12/2021 7:07 PM
4	Are you building your own airport?	2/12/2021 1:48 PM
5	NO	2/11/2021 8:00 PM
6	Please sit with the community to HEAR and not only to SPEAK TO. :)	2/11/2021 7:57 PM
7	None	2/11/2021 7:53 PM
8	Future collaboration efforts	2/11/2021 6:01 PM
9	No	2/11/2021 4:32 PM
10	I noticed you have some very good questions posted during this evenings engagement session. I would encourage Denison to continue engagement of the communities you are currently engaging. Maybe some time in the future, Denison can bring all the communities together at a regional area such as South Bay War Beterans Park, to share ideas, share culture and discuss amongst community members and leadership, Muncipal, MNS, Métis Locals, First Nations, Yourh, Elders etc.	2/10/2021 8:26 PM
11	The possibility of having 80% northern SK employment rate on the mine site.	2/10/2021 8:24 PM
12	Impacts on environment	2/10/2021 8:07 PM
13	What is the percentage of employment gonna be for northern people	2/10/2021 8:05 PM
14	I have no questions	2/10/2021 11:23 AM
15	yup	2/10/2021 11:19 AM
16	i have no questions.	2/10/2021 10:57 AM
17	what is in the freezing solution?	2/10/2021 10:56 AM
18	I don't have any questions	2/10/2021 10:52 AM
19	None	2/10/2021 10:52 AM
20	N/a	2/10/2021 10:51 AM
21	No questions	2/10/2021 10:49 AM
22	no	2/10/2021 10:48 AM
23	Not right now	2/9/2021 7:41 PM
24	Training courses	2/9/2021 7:36 PM
25	Will there be local hiring?	2/9/2021 7:35 PM

Q13 Is there anything else you would like us to know related to the Wheeler Project?

Answered: 21 Skipped: 45

#	RESPONSES	DATE
1	Continue involving communities through public sessions as well as correspondence to community leaders. Leave a legacy by setting aside a fund once processing begins and not based on profit alone, in other words we want a share on the profits to go toward developing communities in all aspects.	2/18/2021 10:13 AM
2	No	2/17/2021 2:54 PM
3	Nope	2/12/2021 7:07 PM
4	No	2/12/2021 1:48 PM
5	Not particularly.	2/11/2021 8:00 PM
6	No	2/11/2021 7:53 PM
7	NA	2/11/2021 6:01 PM
8	Not at this time.	2/11/2021 4:32 PM
9	Keep us posted on the development and progress of permits. If need be, involve community members/leadership in meetings with provincial and federal governments and regulators.... thank you I really enjoyed the engagement session. Keep up the great work Carolann and the Denison team!	2/10/2021 8:26 PM
10	Our wild life and aquatic life should be top priority	2/10/2021 8:24 PM
11	Requirements for partnerships and use of Northern workforce	2/10/2021 8:08 PM
12	Nothing in particular	2/10/2021 11:23 AM
13	yup	2/10/2021 11:19 AM
14	No thank you.	2/10/2021 10:52 AM
15	None	2/10/2021 10:52 AM
16	No	2/10/2021 10:51 AM
17	Nope	2/10/2021 10:49 AM
18	no	2/10/2021 10:48 AM
19	Not at the moment	2/9/2021 7:41 PM
20	No	2/9/2021 7:36 PM
21	No	2/9/2021 7:35 PM

Wheeler River Project information presentation for English River First Nation

Denison Mines

March 31
6:30pm - 8:30pm

Use the link provided in the body of this post to access the Zoom session.
Meeting ID: 881 0342 2958 - Passcode: 12345

The Wheeler River Project Team looks forward to seeing you and hearing from you on Zoom.

Win door prizes and listen to local entertainment during breaks

Meeting MC: Tara "T-Rhyme" Campbell

This community meeting was planned in collaboration with English River First Nation to provide information and seek feedback with respect to Denison's proposed Wheeler River Project. This is a public meeting, which is open to all residents of the community.

Denison is also working with Métis Nation-Saskatchewan to arrange separate meetings with Métis leadership and citizens to understand the distinct interests of the Métis in respect of the project.

www.denisonmines.com

Join the Wheeler River Project team for an online information presentation.

ON ZOOM

March 31
English River First Nation
6:30pm - 8:30pm

The link to join the presentation and feedback session is available on your community's Facebook page and Denison's.

Or use the following Zoom Login Information:

Meeting ID: 881 0342 2958 - Passcode: 12345

Phone: 1 (647) 558-0588

Win **door prizes** and listen to **local entertainment** during breaks

Meeting MC: **Tara "T-Rhyme" Campbell**

We look forward to meeting with you via Zoom.

This community meeting was planned in collaboration with English River First Nation to provide information and seek feedback with respect to Denison's proposed Wheeler River Project. This is a public meeting, which is open to all residents of the community.

Denison is also working with Métis Nation-Saskatchewan to arrange separate meetings with Métis leadership and citizens to understand the distinct interests of the Métis in respect of the project.

Denison Mines
www.denisonmines.com

Denison Public Meetings Facebook Post

English River Facebook Page

Residents of English River are invited to attend a public meeting with Denison's Wheeler River Project team next week.

The meeting will take place virtually via Zoom **at 630pm**. There will be entertainment from local artists during the breaks and the opportunity to win door prizes and participation prizes during the meeting. All of the details are below:

6:30pm – 8:30pm Wednesday, March 31, 2021

Zoom Link:
https://us02web.zoom.us/j/88103422958?pwd=Yld3dmZXZXRGQndYSTg2S09NYkNnZz09

Meeting ID: 881 0342 2958

Meeting Passcode: 12345

To join by phone; +1 (647)558-0588

Enter Meeting ID: 881 0342 2958#

Password: 12345#

Entertainment

Comedian Dakota Hebert

Prizes

Gift cards to the Beauval General Store

Gift cards to the Patuanak Gas Bar

Copies of Tenille Campbell's newest book

Denison Mines

Uranium Development & Exploration

The Wheeler River Project

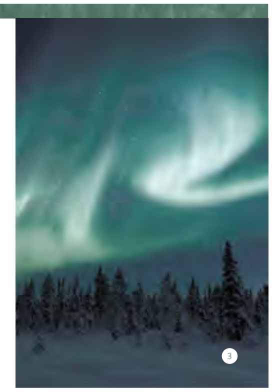
March, 2021 English River Public Meeting

Denison's Guiding Principles

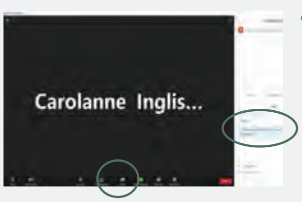
- Denison recognizes and is deeply respectful of the fact the that Wheeler River project is located within the boundaries of **Treaty 10**, and is in the heart of the **traditional territory of the English River First Nation**, and in the **homeland of the Métis of Saskatchewan**
- Denison understands the importance of **protecting the area** in which we are working

Agenda

- Opening
- How to Use Zoom
- 'Virtual' Meal – Support to the High Schools
- Introductions (Denison, Province, CNSC)
- Wheeler River Project Overview
- **Door prize draws and entertainment**
- Environmental Assessment Process
- Valued Components
- Questions and Answers
- Next Steps from Denison
- **Final door prize draws and entertainment**



How to Participate using Zoom Features



Chat and Video Function

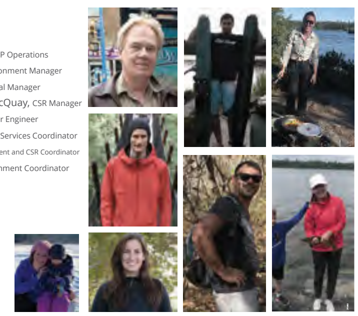
- Enter your name and community in the chat function if you'd like to be entered to win a prize for attendance
- The chat function is also where we will have you answer questions we pose throughout the presentation to be entered to win a prize for participation
- The chat function is a place to ask us questions, as the microphones will be muted
- Video – you can turn your video on or off (video off often improves quality of video conference)

'Virtual Meal' to Support High School Fundraising

- Denison is proud to make a **$2,500 donation** to the school for a 'virtual' meal to support high school fundraising efforts
- **Thank you** to all staff working so hard in the schools – teachers, janitors, bus drivers, librarians, maintenance and administration

Denison Team

- Dave Bronkhorst, VP Operations
- Janna Switzer, Environment Manager
- Chad Sorba, Technical Manager
- Carolanne Inglis-McQuay, CSR Manager
- Xavier Lu Dac, Senior Engineer
- Dana Harris, Project Services Coordinator
- Mike Dawe, Environment and CSR Coordinator
- Jenn Skilnick, Environment Coordinator



Mr. Aimann Sadik
Senior Environmental
Assessment Administrator

Ms. Brianne England
Manager, Applications

Government of Saskatchewan

Ms. Marcelle Phaneuf
Environmental Assessment Specialist

Mr. Ryan Froess
Senior Policy Advisor

Cautionary Statements & References

This presentation and the information contained herein is designed to help you understand management's current views, and may not be appropriate for other purposes. This presentation contains information relating to the uranium market, third party and provincial infrastructure, and the plans and availability thereof, derived from third-party publications and reports which Denison believes are reliable but have not been independently verified by the Company.

Certain information contained in this presentation 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 presentation contains forward-looking information pertaining to the results of, and estimates, assumptions and projections provided in, the Wheeler PFS and the Waterbury PEA, including future development methods and plans, market prices, costs and capital expenditures; assumptions regarding Denison's ability to obtain all necessary regulatory approvals to commence development at Wheeler; Denison's percentage interest in its projects and its agreements with its joint venture partners; and the availability of services to be provided by third parties. 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 faces certain risks, including the current and potential impacts of the COVID-19 pandemic, use of mining methods which are novel and untested in the Athabasca basin, the inability to permit or develop its projects as currently planned, the inability to secure sufficient financing to pursue its business objectives, the unpredictability of market prices, events that could materially increase costs, changes in the regulatory environment governing the project lands, and unanticipated claims against title and rights to the project. 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 13, 2020 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.

Readers should not place undue reliance on forward-looking statements. The forward-looking information contained in this presentation is expressly qualified by this cautionary statement. Any forward-looking information and the assumptions made with respect thereto speaks only as of February 8, 2021. Denison does not undertake any obligation to publicly update or revise any forward-looking information after such date 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 Mineral Resources and Mineral Reserves: This presentation may use terms such as "measured", "indicated" and/or "inferred" mineral resources and "proven" or "probable" mineral reserves, which are terms defined with reference to the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") CIM Definition Standards on Mineral Resources and Mineral Reserves ("CIM Standards"). The Company's descriptions of its projects using CIM Standards may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements under the United States federal securities laws and the rules and regulations thereunder.

Qualified Persons

The disclosure of a scientific or technical nature within this presentation, including the disclosure of mineral resources, mineral reserves, as well as the results of the Wheeler PFS and Waterbury PEA, was reviewed and approved by David Bronkhorst, P.Eng., who is a Qualified Person in accordance with the requirements of NI 43-101.

Technical Reports

- For further details regarding the Wheeler River project, please refer to (a) the Company's press releases dated December 1, 2020, regarding the adoption of the freeze wall design for ISR at Phoenix, and September 24, 2018, regarding the Prefeasibility Study, and (b) the technical report titled "*Prefeasibility Study for the Wheeler River Uranium Project, Saskatchewan, Canada*" with an effective date of September 24, 2018 ("Wheeler PFS").
- For further details regarding the Waterbury Lake project, please refer to the Company's press release dated November 17, 2020 and the technical report titled "*Preliminary Economic Assessment for the Tthe Heldeth Túé (J Zone) Deposit, Waterbury Lake Property, Northern Saskatchewan, Canada*" with an effective date of October 30, 2020. ("Waterbury PEA"). **The Waterbury PEA is a preliminary analysis of the potential viability of the Project's mineral resources, and should not be considered the same as a Pre-Feasibility or Feasibility Study, as various factors are preliminary in nature. There is no certainty that the results from the PEA will be realized. Mineral resources are not mineral reserves and do not have demonstrated economic viability. Scheduled tonnes and grade do not represent an estimate of mineral reserves.**

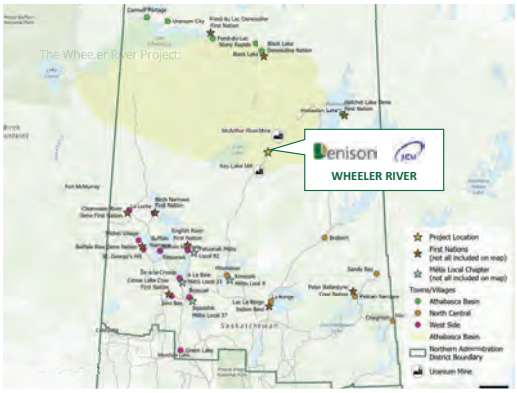
For a description of the data verification, assay procedures and the quality assurance program and quality control measures applied by Denison, please see Denison's Annual Information Form dated March 13, 2020. Copies of the foregoing are available on Denison's website and under its profile on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

Company Overview:
Denison is focused on opportunities in northern Saskatchewan

- 22.5% interest in **McClean Lake Uranium Mill**
- 90% interest in Flagship **Wheeler River** project
  - Advancing through development process
  - Largest undeveloped uranium project in the infrastructure rich eastern Athabasca Basin
  - Environmental Assessment ("EA") initiated
  - Progressive approach to mining using In Situ Recovery ("ISR") method
- 66.9% in the **Waterbury Lake Property**, hosting the Tthe Heldeth Tüé (formerly J Zone) deposit
  - Recently completed Preliminary Economic Assessment ("PEA")
  - Amenable to ISR mining method
- Several other interests in the Athabasca Basin region
  - **McClean Lake, Midwest,** and **Waterbury Lake** properties, all in close proximity to McClean mill
  - **+250,000 hectares** of exploration ground

Denison Mines
WHEELER RIVER | POWERING PEOPLE

NOTES: (1) See Denison's news release dated May 17, 2020. The PEA is a preliminary analysis and should not be considered the same as a Pre-Feasibility or Feasibility Study, see Cautionary Statement slide for details.



Denison Mines
WHEELER RIVER | POWERING PEOPLE

Denison Mines
WHEELER RIVER | POWERING PEOPLE

In Situ Recovery ("ISR") Mining:
Introducing a proven mining technique to the Athabasca Basin

Key Components for the Project

ISR is an established mining method[1]

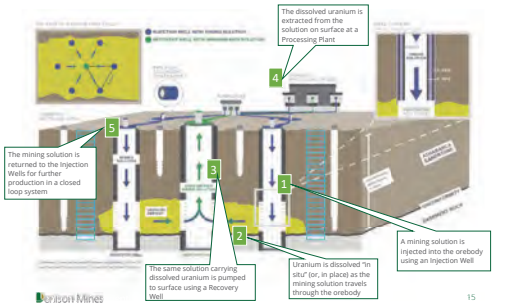
- In Situ Recovery ("ISR") was first used in the 1960s and currently accounts for more than half the world's annual uranium production

Denison Mines
WHEELER RIVER | POWERING PEOPLE

NOTES: (1) Refer to the IAEA "Manual of acid in situ leach uranium mining technology", dated August 2001.

14

In Situ Recovery ("ISR") Mining[1]:
Introducing a proven mining technique to the Athabasca Basin



Denison Mines
WHEELER RIVER | POWERING PEOPLE

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-Feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018. (2) Figure reflects Denison's decision to adopt a freeze wall approach (see press release dated December 01, 2020).

15

ISR Mining:
A progressive approach to uranium mining uranium in the Athabasca Basin

How is ISR Different?[1]

- All activities occur at surface; there are no traditional underground workings
- The ISR mining area has only wells and pipes to plant; no open pits, head-frame, or major earthworks
- There is no tailings production or long-term tailings storage, plus no large waste rock piles

Waste Management Vision

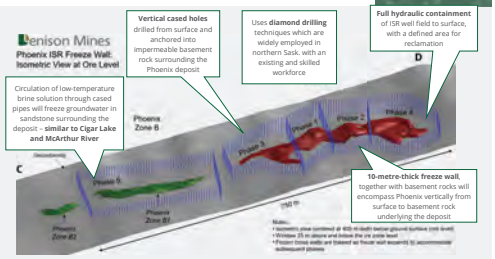
- Two main waste streams expected:
  - Gypsum (non-radioactive) – remediated on site
  - Radium/Iron precipitates (radioactive) – removed from surface
- No long term waste management expected to be required after mine closure

Denison Mines
WHEELER RIVER | POWERING PEOPLE

16

Freeze Containment :
Established method to create frozen barrier around mining area[1]

Key Components for the Project



Denison Mines
WHEELER RIVER | POWERING PEOPLE

NOTES: (1) See Denison's news release dated December 1, 2020 for additional information on the freeze wall design for Phoenix.

17

Denison 2021 Phoenix

[redacted]

Denison Mines
WHEELER RIVER | POWERING PEOPLE

18

Athabasca Basin Ground Water Modelling:
Ground water at depth stays at depth[1]

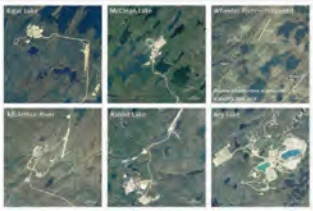
Key Components for the Project

- ✓ The ore body (i.e. Phoenix) is more than 400 metres below the surface / lakes and river systems
- ✓ Groundwater in the sandstone around the ore body ***is not directly*** connected to surface water bodies
- ✓ Field testing in 2019 and 2020, as well as detailed hydrogeologic modelling shows that ground water stays at depth – it doesn't move upward towards surface, and only moves laterally (at a very slow rate) at the depth of the ore body
- ✓ The freeze wall / fence is the ultimate contingency method to contain mining solution within mining area

NOTES: (1) See Denison's news release from June 4, 2020 for details

Wheeler River / Phoenix ISR:
Different mining method and a different type of operation[1]

Key Components for the Project



Advantages of ISR mining compared to existing uranium mining in Canada:

- ✓ Small surface footprint
- ✓ Lower water consumption
- ✓ Lower energy consumption
- ✓ Lower CO_2 emissions
- ✓ Small volume treated effluent released to surface water bodies
- ✓ Potential for lower radiation doses to workers
- ✓ No tailings production; storage of precipitated by-products
- ✓ Very small volumes of clean waste rock (sandstone core from wellfield development)

NOTES: (2) Refer to the "Wheeler River Project Provincial Technical Proposal and Federal Project Description", dated May 2019.

Socio-economic Considerations:
Relatively small operation with opportunity to use existing skills

Key Components for the Project

Denison is committed to maximizing opportunities

- Up to **300 jobs during ~2 years of construction**
- Approximately **100 jobs during operation for 10 years**
- Targeted efforts to **Communities of Interest**, with a broad focus on northern Saskatchewan and Indigenous communities
- **Similar job types** to those at existing uranium operations
  - Trades, surface, environment, radiation, safety, camp, security
  - ISR operators are similar to process operators (training can be done in Meadow Lake)
- **Specific ISR training will be provided**
- Pre-requisite training will include **diploma or technical certification available in Saskatchewan**. Examples:
  - Process Operation Technician (SIIT in Meadow Lake)
  - Chemical Technology (Sask. Polytechnic)
- Construction and operation activities targeted to **Northern Saskatchewan / Indigenous-owned businesses**

15 Minute Break

- ✓ 7 copies of Tenille Campbell's newest book: *Nedi Nezu: Good Medicine*
- ✓ 3 x $100 Gift Certificate to the Beauval General Store
- ✓ 3 x $100 Gift Certificate to the Patuanak Gas Bar

Community Engagement Survey Completion:
We are looking for your feedback

Step 1 – Click link or scan QR code

https://www.surveymonkey.com/r/ERFN2021

The survey link will be posted in the chat function of the Zoom meeting, as well as posted on your community Facebook page after the meeting

Step 2 – Complete the survey by April 7, 2021

Step 3 – Cross your fingers…
for a chance to win 1 of 7 VISA Gift Cards ($100)

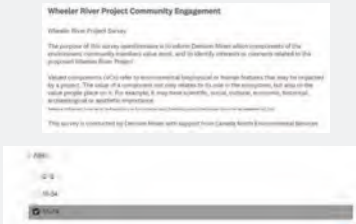
Community Engagement Survey Completion:
We are looking for your feedback

1. Open the camera on your phone or a QR scanning app
2. Hold it over the QR code
3. A link to the online survey online will pop up on your phone
4. Click on the link
5. Complete the survey

Survey closes on April 7, 2021

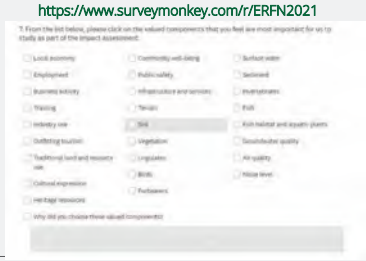
Community Engagement Survey Completion:
We are looking for your feedback

https://www.surveymonkey.com/r/ERFN2021



Community Engagement Survey Completion:
We are looking for your feedback

https://www.surveymonkey.com/r/ERFN2021



Environmental Assessment:
Understanding the Project's interactions with human and biophysical environment

Baseline Studies

- Environmental baseline studies have been ongoing since 2012
  - Denison needs to understand the current environmental conditions within and around the Wheeler River Project area

Environmental Assessment

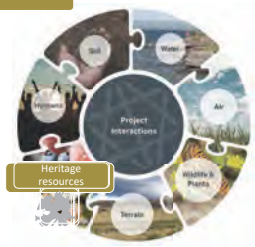
- Initiated the federal and provincial environmental assessment processes in May 2019 with the Wheeler River Project Description
  - **Lead federal regulator**: Canadian Nuclear Safety Commission
  - **Lead provincial regulator:** Saskatchewan Ministry of Environment, Environmental Assessment Branch
- Technical studies designed to understand potential effects of the Project on the biophysical and human environments

Valued Components:
Understanding effects on the things that are important

- **Gain an understanding** of what is important to the people who use the area and to the people who may be affected by project activities.
- **Gather information** through research, from regulator feedback and through engagement with communities and Indigenous groups communities
- **Design the environmental** studies to predict how the VC's may change and what measures can be put in place to minimize and monitor the changes
- **Monitoring and reporting** of the changes to VC's will carry on throughout all phases of the project into decommissioning and post closure

Economy

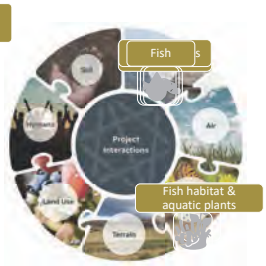
Land and Resource Use, Cultural Continuity



Quality of Life

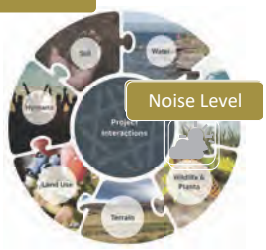
Terrestrial

Aquatic



Groundwater

Atmosphere & Acoustic



Questions / Comments
Summary of questions

Conclusion:
Thank you for attending!

- ✓8 copies of Tenille Campbell's newest book: *Nedi Nezy: Good Medicine*
- ✓2 x $100 Gift Certificate to the Beauval General Store
- ✓2 x $100 Gift Certificate to the Patuanak Gas Bar
- ✓2 x $250 Gift Certificate to the Beauval General Store

Next Steps:
Keeping conversation going and community informed

Conversation Channels

- Denison will be continually improving communication channels
- Denison will use information shared with us to inform environmental assessment
- Denison will share information back with the community and leadership regarding what we heard from these sessions
- Contact us at WheelerRiverInfo@denisonmines.com

Wheeler River Project Community Engagement

Wheeler River Project Survey

The purpose of this survey questionnaire is to inform Denison Mines which components of the environment community members value most, and to identify interests or concerns related to the proposed Wheeler River Project.

Valued components (VCs) refer to environmental biophysical or human features that may be impacted by a project. The value of a component not only relates to its role in the ecosystem, but also to the value people place on it. For example, it may have scientific, social, cultural, economic, historical, archaeological or aesthetic importance.

Reference: 2016 Generic Guidelines for the Preparation of an Environmental Impact Statementpursuant to the Canadian Environmental Assessment Act, 2012

This survey is conducted by Denison Mines with support from Canada North Environmental Services.

The survey results will be used to help Denison Mines determine which valued components should be studied in detail as part of the Wheeler River effects assessment. Results of the survey will also help Denison Mines understand which valued components the community would like to receive updates on once the early results of the effects assessment are ready to be shared.

A summary of the survey results will be shared on the Denison Mines website in March 2021. There are several benefits of sharing your thoughts in the survey questionnaire. Your input will help Denison Mines focus on environmental components, concerns or topics that matter most to your community. If you choose to leave your name and contact information at the conclusion of the survey, you will be entered into a prize draw for one of ten $100 VISA gift cards. Participation in the draw is optional and only those who complete the survey will be entered in the draw.

Participation in this survey is voluntary. If you agree to participate it will require a minimum of 15 minutes of your time to answer questions about components of the environment that you value, and any interests or concerns you have related to the Wheeler River Project. During the survey we will ask you some questions including your age, residence, if you identify as an Aboriginal person, and how you heard about the survey. Finally in order to be entered into the prize draw, you must provide your name and contact information.

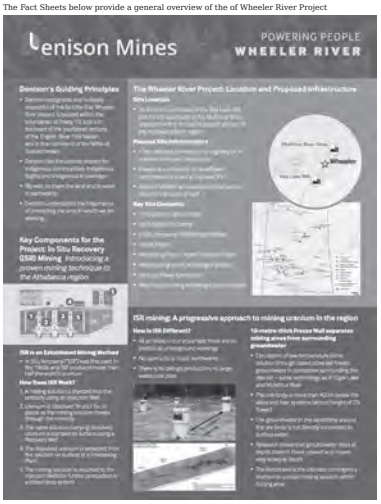
Providing your name and contact information is optional. All information you share in this survey questionnaire will be kept strictly confidential and your name will not be associated with the data we collect. Your identity will remain confidential in all publications and public presentations related to this research.

If you have any questions or concerns about this survey questionnaire, please contact WheelerRiverInfo@denisonmines.com

* 1. By checking this box, you confirm that you understand the purpose of the survey, how the information you share will be used, and that participation in the survey is voluntary.

- ◯ I confirm that I understand the purpose of this survey, how the information will be shared, and that participation is voluntary
- ◯ I DO NOT feel comfortable proceeding with this survey and would like to exit

The Fact Sheets below provide a general overview of the of Wheeler River Project



Wheeler River Project Community Engagement

Section 1: Tell us about yourself!

We want to make sure we are hearing from a diverse group of people from your community, please fill out the following questions to help us determine if there are any voices we haven't heard from yet.

2. Age:
- ◯ 0-15
- ◯ 16-34
- ◯ 35-64
- ◯ 65+

3. Do you identify as an Indigenous person (First Nations, Métis, or Inuit?) Answers to this question are entirely voluntary and not required.
- ◯ Prefer not to answer
- ◯ Yes (if yes, then: Please select from the following which best applies to you.)
- ◯ First Nation
- ◯ Métis
- ◯ Inuit
- ◯ Non-status
- ◯ No

4. Where do you live most of the year:
- ◯ Beauval
- ◯ Ile a la Crosse
- ◯ Pinehouse
- ◯ Other
- ◯ Prefer not to say

Please identify which other community you are from

5. How did you hear about this survey?
- ◯ Facebook
- ◯ Poster
- ◯ Radio
- ◯ Word of Mouth
- ◯ Other

6. Which of the following presentations did you attend? Check all that apply.
- ◯ Virtual Community Meeting
- ◯ Virtual Leadership Meeting
- ◯ High-school Presentation
- ◯ Prefer not to say
- ◯ None of the above

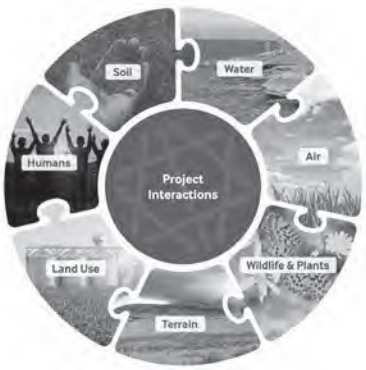
Wheeler River Project Community Engagement

Section 2: Valued Components

Valued components (VCs) refer to environmental biophysical or human features that may be impacted by a project. The value of a component not only relates to its role in the ecosystem, but also to the value people place on it.

In previous engagement events, we heard that the valued components provided in the list below are important to community members. During the environmental impact assessment process, we plan to study these valued components to better understand if and how the Wheeler Project may impact them.

Valued Components Circle



7. From the list below, please click on the valued components that you feel are most important for us to study as part of the impact assessment.

- [ ] Local economy
- [ ] Employment
- [ ] Business activity
- [ ] Training
- [ ] Industry use
- [ ] Outfitting tourism
- [ ] Traditional land and resource use
- [ ] Cultural expression
- [ ] Heritage resources
- [ ] Community well-being
- [ ] Public safety
- [ ] Infrastructure and services
- [ ] Terrain
- [ ] Soil
- [ ] Vegetation
- [ ] Ungulates
- [ ] Birds
- [ ] Furbearers
- [ ] Surface water
- [ ] Sediment
- [ ] Invertebrates
- [ ] Fish
- [ ] Fish habitat and aquatic plants
- [ ] Groundwater quality
- [ ] Air quality
- [ ] Noise level
- [ ] Why did you choose these valued components?

8. Are there any valued components that are important to you that are missing from this list? If so, please list them below. Why are these important to you?

9. Are there any valued components on the list that are not important to you? If so, please select the valued components from the list below that you feel should be removed.

- [ ] Local economy
- [ ] Employment
- [ ] Business activity
- [ ] Training
- [ ] Industry use
- [ ] Outfitting tourism
- [ ] Traditional land and resource use
- [ ] Cultural expression
- [ ] Heritage resources
- [ ] Community well-being
- [ ] Public safety
- [ ] Infrastructure and services
- [ ] Terrain
- [ ] Soil
- [ ] Vegetation
- [ ] Ungulates
- [ ] Birds
- [ ] Furbearers
- [ ] Surface water
- [ ] Sediment
- [ ] Invertebrates
- [ ] Fish
- [ ] Fish habitat and aquatic plants
- [ ] Groundwater quality
- [ ] Air quality
- [ ] Noise level

Wheeler River Project Community Engagement

Section 3: Interests and Concerns

10. Based on what you know so far about the Wheeler Project, what aspects of the project could benefit, or work well for your community?

11. Based on what you know so far about the Wheeler Project, what aspects of the project could be challenging or cause concern for your community?

12. Are there questions you have about the Wheeler Project that you would like to see addressed in future updates or communications? If, so please list your questions in the space below.

13. Is there anything else you would like us to know related to the Wheeler Project?

Wheeler River Project Community Engagement

Section 5: Prize Draw Entry

If you would like your name entered into a draw prize, please provide the following information

14. Name

15. Phone number

16. Email address

17. Would you like us to add your email address to our mailing list to receive project updates? Yes/No

- ◯ Yes
- ◯ No

Wheeler River Project Community Engagement

Thank You!

Thank you for completing the Wheeler River Project Community Engagement Survey. If you have any additional comments, questions or concerns please email WheelerRiverInfo@denisonmines.com

Meeting Notes

Date: March 31, 2021

Event: English River Community Meeting

- What happens to the solution once you are done mining?
- Why is this type of mining method being used compared to methods used at other mines (like McArthur River)?
- How far is the closest underground river?
- Will the freeze wall remain frozen into perpetuity? If so how?
- Ice Lander River is close to the project if a spill would happen would it reach or contaminate the river?
- What is the mine life of this ore deposit? Is this a worthwhile project if the mine life is so short?
- With all of this construction and noise, how will this affect the moose and caribou population?
- From experience working at McArthur, there were issues with water and radiation passing Cameco's target. They also used a lot of water and there were containment issues? How will this be different?
- Will there be any restrictions for hunters and ERFN members to access the area?
- Once the mine is closed how will the community know that the environment is restored?
- Who is responsible for restoring the environment?
- There looks to be environmental issues in the area caused by exploration drilling. Who will fix this?
- Have you already started drilling?
- Will Denison have an office in Pinehouse
- Will locals get opportunities?
- Will Denison take people on a tour of the site before the mine starts up? People from the community may be able to see good/bad things before they occur.
- How will you get opinions/talk to elders and people who don't use technology? Their opinions are very important.
- Would Denison hire a local person to run an office in Patuanak? People would be more comfortable speaking to a local person who's employed by Denison.
- Will this method (ISR) work? Has it been used by other uranium mines?
- What happens to the cavity when you are done mining?
- If Uranium prices ever go down will the mine shut down like Key and McArthur have?
- Have other mines that use this mining method had environmental issues/impacts?
- What would be the main benefits for the community of Patuanak?
- Is the product going to be milled at Key Lake?
- What happens if the environment gets contaminated? How can you restore it to its original state?
- Who is responsible for cleaning up contaminants?
- Is production at Key or McArthur? Will there be minimal buildings at the site? Is there a slurry plant?
- Are there tailings?
- Will Tron and Des Nedhe get opportunities to have contracts?
- Will local companies (Tron, Des Nedhe) and local community members get priority for contracts/employment? Will there be opportunities for negotiations between ERFN and Denison so our community members don’t lose out on opportunities?
- If there is no underground shaft how will the freeze pipes be connected?
- Will Denison pay for schooling and training? Specifically trades/tickets. Will they give site specific training or training that can be transferrable?
- Will copies of the EIS be made available to the public before the hearing starts?
- Will the EIS have an executive summary?
- It is important that Elders concerns are heard. They have concerns with the mining project and need to be consulted.
- Are there reservoirs for water treatment?
- The Cameco collaboration agreement was not successful. What will you do about jobs?
- You need to talk to the elders.
- Key Lake has had situations with birds and removing them. How will you deal with this?
- There is a lot of pressure to deal with when drilling (water, clay, sand). There could be issues with this and this will need to be monitored closely.
- Will the reservoirs hold contaminated water, or will it be treated before it gets put in the reservoirs?
- Where will the radium iron material go?

Denison Mines

POWERING PEOPLE
WHEELER RIVER

WHAT WE HEARD FROM RESIDENTS OF ENGLISH RIVER FIRST NATION AND REGION

Thank You for Attending

Denison's Wheeler River Project team thanks everyone who attended its presentation via Zoom or on La Plonge's radio station (93.1 FM) on March 31, 2021, and for responding to the follow-up survey.

Although we are not sure how many of you listened on the radio, we counted 24 participants logged into Zoom to attend this online event, while some of you had others watching with you at home.

Thank you to the 22 participants who completed the survey. Seventy six percent (76%) of the people who answered our post event survey were between the ages of 35 and 64 years old, while 16 to 34-year-olds accounted for 19%, and 5% identified as being 65 and over.

Thank you for welcoming us to engage with your students and teachers. Thanks also to Tara "T-Rhyme" Campbell for being the emcee for the evening, to Elder Isidore Campbell for the prayer, and Dakota Ray Hebert for the entertainment.

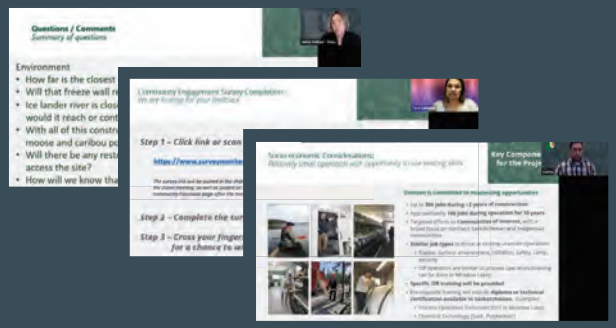
The Purpose of This Municipal Presentation

We wanted to make sure that community members and leadership are aware of the proposed project, the plans for the future, the opportunities for the community, and to also give an opportunity to the project's provincial (Saskatchewan Ministry of Environment) and federal (Canadian Nuclear Safety Commission) regulators to participate and introduce themselves.

Wheeler River Project in a nutshell

The Wheeler River Project is located 35 km north-east of the Key Lake mill and 35 km southwest of the McArthur River uranium mine in the south-eastern portion of the Athabasca Basin region.

This proposed uranium mining project will use the In Situ Recovery (ISR) mining method, which is different than any of the existing uranium mines in the Athabasca Basin region - all activities occur at the surface, meaning there are no shafts/underground workings, no open pits, and no major earthworks. While new to the Athabasca Basin, ISR mining is the most common uranium mining method globally. A 10-metre-thick freeze wall separates the mining areas from the surrounding ground water. A solution is injected into the orebody to dissolve the uranium in place (in situ) and the solution carrying the dissolved uranium is pumped to surface where the uranium is extracted from the solution. The same solution is then pumped back into the ground to dissolve more uranium and so on in a closed loop. With this method there is no production of tailings and no large waste rock piles.



Read the Wheeler River Fact Sheet **here**

Watch the Wheeler River ISR Method Video **here**

Watch the mobilization at the Phoenix Deposit in April 2021 **here**

Community Insight

During the meeting participants asked many questions and also provided valuable insight in responding to the follow-up survey. Here are the main points made by ERFN members:

Of all 26 interconnected valued components (VCs), which are the environmental or social aspects that may be impacted by a project, you indicated that the following were most important:

- Air quality
- Community well-being
- Employment
- Fish
- Fish habitat and aquatic plants
- Groundwater quality
- Surface water
- Traditional land and resource use
- Vegetation

You also mentioned that you would like the Wheeler River Project team to consider the following additional VCs during its assessment:

- Consultation
- Joint ventures
- Knowledge of resource management
- Longevity of the land
- Traditional food
- Working relationships (particularly between ERFN and Denison)

Communication with all levels of membership (not just leaders) is important.
– ERFN Member

Keep those living on their traditional lands as a top priority.
– ERFN Member

As a First Nation person I feel it's very important for the habitat and aquatic life to thrive for future purposes.
– ERFN Member

You also told us some of your worries and concerns about the project. These are the main points:

- Use of acids in ISR mining
- Storage and shipping of the yellowcake and other harmful substances
- Impact on wildlife in the area around the mine
- Potential negative impacts to community health
- Possibility of the groundwater or the land being impacted
- Concerns about residual uranium leaking into the groundwater after the removal of the freeze wall
- Concerns about inadequate reclamation being completed
- Potential impacts to the people who use the area for traditional activities, and
- Potential for long-term impacts to the land – not helpful for the community as it will harm the earth, which is needed for survival

You acknowledged some of the opportunities you are looking forward to with this project, including:

- Employment opportunities
- Opportunities for local companies (TRON and Des Nedhe)
- Possibility of royalties for the community
- Potential for community development and a collaborative agreement
- Training opportunities

You invited the Wheeler project team to continue its engagement activities with ERFN members and leadership with more consistent communication and updates to ensure that the project is being completed with integrity and respect. And more specifically you mentioned that "increased communications (quarterly) would be beneficial to the community, possibly through a community liaison."

You indicated that the use of online engagement is a concern for many community members, particularly given that Elders may not be comfortable with online engagement and their opinions are very important. You also mentioned that for engagement to be inclusive a translator should be made available.

The Next Steps

The information gathered by Denison through community engagement activities will be included in future value components studies when possible, and in our formal report to the regulators.

The Wheeler River Project team will continue community engagement through future meetings with community leadership and residents as required, and will continue to share information via our Wheeler River dedicated website.

We also anticipate that the regulators will inform community leadership and residents of opportunities to participate in the project regulatory review process when appropriate.

Denison is also working with Métis Nation-Saskatchewan to arrange separate meetings with Métis leadership and citizens to understand the distinct interests of the Métis in respect of the project.

Tell Us More

Denison is committed to engaging with our neighbours and invite you to contact us to share ideas or concerns with the Wheeler River Project team. You can also contact our team to request information or offer your services.

Email: **WheelerRiverInfo@denisonmines.com**
Tel: 306-652-8200
Website: **www.denisonmines.com**

Copyright @DenisonMines - May 2021

Denison Mines

Uranium Development & Exploration

The Wheeler River Project

March, 2021 St. Louis High School

Denison's Guiding Principles

- Denison recognizes and is deeply respectful of the fact the that Wheeler River project is located within the boundaries of **Treaty 10**, and is in the heart of the **traditional territory of the English River First Nation**, and in the **homeland of the Métis of Saskatchewan**
- Denison understands the importance of **protecting the area** in which we are working

Denison Team

- Dave Bronkhorst, VP Operations
- Janna Switzer, Environment Manager
- Chad Sorba, Technical Manager
- Carolanne Inglis-McQuay, CSR Manager
- Xavier Lu Dac, Senior Engineer
- Dana Harris, Project Services Coordinator
- Mike Dawe, Environment and CSR Coordinator
- Jenn Skilnick, Environment Coordinator

Mr. Aimann Sadik
Senior Environmental Assessment Administrator

Ms. Brianne England
Manager, Applications

Government of Saskatchewan

Ms. Marcelle Phaneuf
Environmental Assessment Specialist

Mr. Ryan Froess
Senior Policy Advisor

Cautionary Statements & References

This presentation and the information contained herein is designed to help you understand management's current views, and may not be appropriate for other purposes. This presentation contains information relating to the uranium market, third party and provincial infrastructure, and the plans and availability thereof, derived from third-party publications and reports which Denison believes are reliable but have not been independently verified by the Company.

Certain information contained in this presentation 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 presentation contains forward-looking information pertaining to the results of, and estimates, assumptions and projections provided in, the Wheeler PFS and the Waterbury PEA, including future development methods and plans, market prices, costs and capital expenditures; assumptions regarding Denison's ability to obtain all necessary regulatory approvals to commence development at Wheeler; Denison's percentage interest in its projects and its agreements with its joint venture partners; and the availability of services to be provided by third parties. 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 faces certain risks, including the current and potential impacts of the COVID-19 pandemic, use of mining methods which are novel and untested in the Athabasca basin, the inability to permit or develop its projects as currently planned, the inability to secure sufficient financing to pursue its business objectives, the unpredictability of market prices, events that could materially increase costs, changes in the regulatory environment governing the project lands, and unanticipated claims against title and rights to the project. 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 13, 2020 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.

Readers should not place undue reliance on forward-looking statements. The forward-looking information contained in this presentation is expressly qualified by this cautionary statement. Any forward-looking information and the assumptions made with respect thereto speaks only as of February 8, 2021. Denison does not undertake any obligation to publicly update or revise any forward-looking information after such date 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 Mineral Resources and Mineral Reserves: This presentation may use terms such as "measured", "indicated" and/or "inferred" mineral resources and "proven" or "probable" mineral reserves, which are terms defined with reference to the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") CIM Definition Standards on Mineral Resources and Mineral Reserves ("CIM Standards"). The Company's descriptions of its projects using CIM Standards may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements under the United States federal securities laws and the rules and regulations thereunder.

Qualified Persons

The disclosure of a scientific or technical nature within this presentation, including the disclosure of mineral resources, mineral reserves, as well as the results of the Wheeler PFS and Waterbury PEA, was reviewed and approved by David Bronkhorst, P.Eng., who is a Qualified Person in accordance with the requirements of NI 43-101.

Technical Reports

- For further details regarding the Wheeler River project, please refer to (a) the Company's press releases dated December 1, 2020, regarding the adoption of the freeze wall design for ISR at Phoenix, and September 24, 2018, regarding the Prefeasibility Study, and (b) the technical report titled "*Prefeasibility Study for the Wheeler River Uranium Project, Saskatchewan, Canada*" with an effective date of September 24, 2018 ("Wheeler PFS").
- For further details regarding the Waterbury Lake project, please refer to the Company's press release dated November 17, 2020 and the technical report titled "*Preliminary Economic Assessment for the Tthe Heldeth Túé (J Zone) Deposit, Waterbury Lake Property, Northern Saskatchewan, Canada*" with an effective date of October 30, 2020. ("Waterbury PEA"). **The Waterbury PEA is a preliminary analysis of the potential viability of the Project's mineral resources, and should not be considered the same as a Pre-Feasibility or Feasibility Study, as various factors are preliminary in nature. There is no certainty that the results from the PEA will be realized. Mineral resources are not mineral reserves and do not have demonstrated economic viability. Scheduled tonnes and grade do not represent an estimate of mineral reserves.**

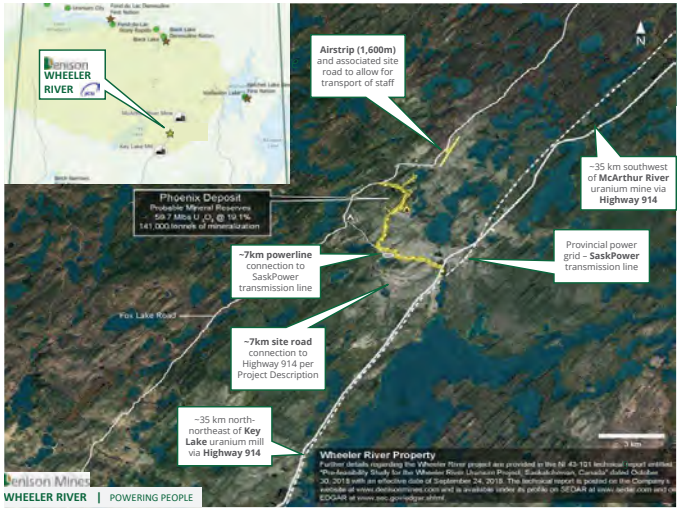
For a description of the data verification, assay procedures and the quality assurance program and quality control measures applied by Denison, please see Denison's Annual Information Form dated March 13, 2020. Copies of the foregoing are available on Denison's website and under its profile on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

Company Overview:
Denison is focused on opportunities in northern Saskatchewan

- 22.5% interest in **McClean Lake Uranium Mill**
- 90% interest in Flagship **Wheeler River** project
  - Advancing through development process
  - Largest undeveloped uranium project in the infrastructure rich eastern Athabasca Basin
  - Environmental Assessment ("EA") initiated
  - Progressive approach to mining using In Situ Recovery ("ISR") method
- 66.9% in the **Waterbury Lake Property**, hosting the Tthe Heldeth Túé (formerly J Zone) deposit
  - Recently completed Preliminary Economic Assessment ("PEA")[1]
  - Amenable to ISR mining method
- Several other interests in the Athabasca Basin region
  - **McClean Lake, Midwest,** and **Waterbury Lake** properties, all in close proximity to McClean mill
  - **+250,000 hectares** of exploration ground

ISR field testing at Wheeler River - Phoenix Deposit, Summer 2021

NOTES: (1) See Denison's news release dated Nov. 17, 2020, The PEA is a preliminary analysis and should not be considered the same as a Pre-Feasibility or Feasibility Study, see Cautionary Statements slide for details



ROC448

Denison Mines
WHEELER RIVER | POWERING PEOPLE

In Situ Recovery ("ISR") Mining:
Introducing a proven mining technique to the Athabasca Basin

Key Components for the Project

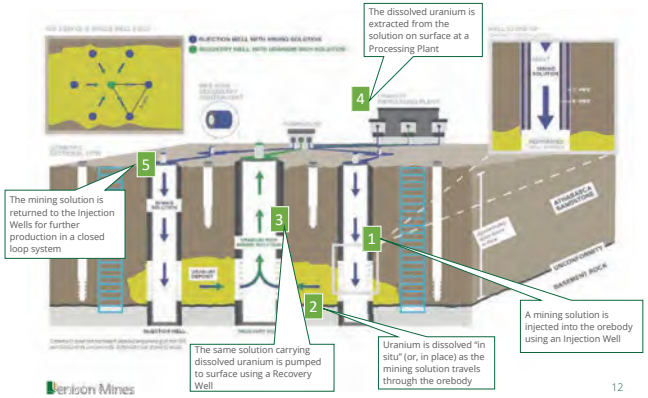
ISR is an established mining method[1]

- In Situ Recovery ("ISR") was first used in the 1960s and currently accounts for more than half the world's annual uranium production

Denison Mines
WHEELER RIVER | POWERING PEOPLE

NOTES: (1) Refer to the IAEA "Manual of acid in situ leach uranium mining technology", dated August 2001.

In Situ Recovery ("ISR") Mining[1]:
Introducing a proven mining technique to the Athabasca Basin



Denison Mines
WHEELER RIVER | POWERING PEOPLE

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018. (2) Figure reflects Denison's decision to adopt a freeze wall approach (see press release dated December 01, 2020)

ISR Mining:
A progressive approach to uranium mining uranium in the Athabasca Basin

How is ISR Different?[1]

- All activities occur at surface; there are no traditional underground workings
- The ISR mining area has only wells and pipes to plant; no open pits, head-frame, or major earthworks
- There is no tailings production or long-term tailings storage, plus no large waste rock piles

Waste Management Vision

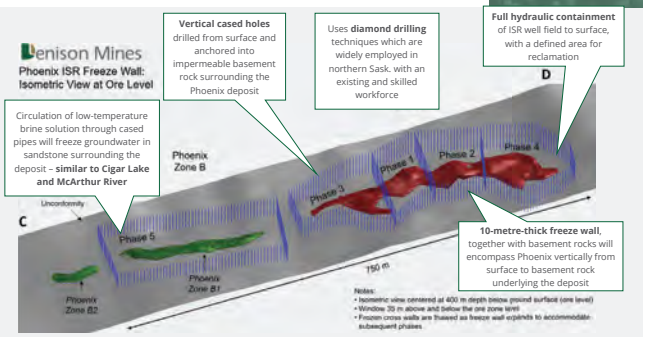
- Two main waste streams expected:
  - Gypsum (non-radioactive) – remediated on site
  - Radium/Iron precipitates (radioactive) – removed from surface
- No long term waste management expected to be required after mine closure

Denison Mines
WHEELER RIVER | POWERING PEOPLE

NOTES: (1) Refer to the IAEA "Manual of acid in situ leach uranium mining technology", dated August 2001.

Freeze Containment :
Established method to create frozen barrier around mining area[1]

Key Components for the Project



Denison Mines
WHEELER RIVER | POWERING PEOPLE

NOTES: (1)) See Denison's news release dated December 1, 2020 for additional information on the freeze wall design for Phoenix.

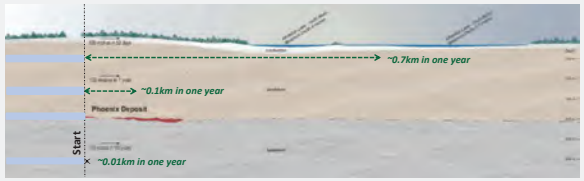
Denison 2021 Phoenix

[redacted]

Denison Mines
WHEELER RIVER | POWERING PEOPLE

Athabasca Basin Ground Water Modelling:
Ground water at depth stays at depth[1]

Key Components for the Project



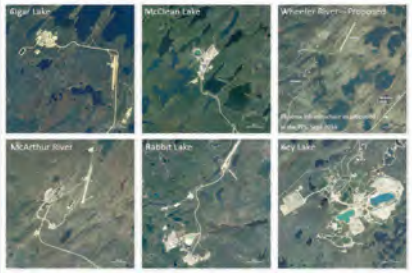
- ✓ The ore body (i.e. Phoenix) is more than 400 metres below the surface / lakes and river systems
- ✓ Groundwater in the sandstone around the ore body ***is not directly*** connected to surface water bodies
- ✓ Field testing in 2019 and 2020, as well as detailed hydrogeologic modelling shows that ground water stays at depth – it doesn't move upward towards surface, and only moves laterally (at a very slow rate) at the depth of the ore body
- ✓ The freeze wall / fence is the ultimate contingency method to contain mining solution within mining area

Denison Mines
WHEELER RIVER | POWERING PEOPLE

NOTES: (1) See Denison's news release from June 4, 2020 for details

Wheeler River / Phoenix ISR:
Different mining method and a different type of operation[1]

Key Components for the Project



Advantages of ISR mining compared to existing uranium mining in Canada:

- ✓ Small surface footprint
- ✓ Lower water consumption
- ✓ Lower energy consumption
- ✓ Lower CO_2 emissions
- ✓ Small volume treated effluent released to surface water bodies
- ✓ Potential for lower radiation doses to workers
- ✓ No tailings production; storage of precipitated by-products
- ✓ Very small volumes of clean waste rock (sandstone core from wellfield development)

Denison Mines
WHEELER RIVER | POWERING PEOPLE

NOTES: (1) Refer to the "Wheeler River Project Provincial Technical Proposal and Federal Project Description", dated May 2019.

Socio-economic Considerations:
Relatively small operation with opportunity to use existing skills

Key Components for the Project

Denison is committed to maximizing opportunities

- Up to **300 jobs during ~2 years of construction**
- Approximately **100 jobs during operation for 10 years**
- Targeted efforts to **Communities of Interest,** with a broad focus on northern Saskatchewan and Indigenous communities
- **Similar job types** to those at existing uranium operations
  - Trades, surface, environment, radiation, safety, camp, security
  - ISR operators are similar to process operators (training can be done in Meadow Lake)
- **Specific ISR training will be provided**
- Pre-requisite training will include **diploma or technical certification available in Saskatchewan**. Examples:
  - Process Operation Technician (SIIT in Meadow Lake)
  - Chemical Technology (Sask. Polytechnic)
- Construction and operation activities targeted to **Northern Saskatchewan / Indigenous-owned businesses**

Denison Mines
WHEELER RIVER | POWERING PEOPLE

Community Engagement Survey Completion:
We are looking for your feedback

Step 1 – Click link or scan QR code

https://www.surveymonkey.com/r/ERFN2021

The survey link will be posted in the chat function of the Zoom meeting, as well as posted on your community Facebook page after the meeting

Step 2 – Complete the survey by April 7, 2021

Step 3 – Cross your fingers…
for a chance to win 1 of 7 VISA Gift Cards ($100)

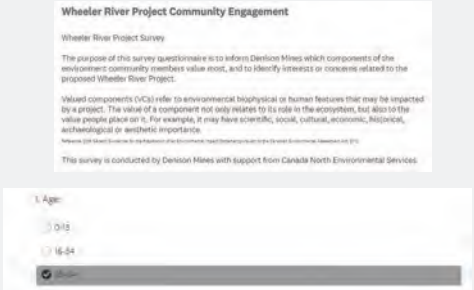
Community Engagement Survey Completion:
We are looking for your feedback

1. Open the camera on your phone or a QR scanning app
2. Hold it over the QR code
3. A link to the online survey online will pop up on your phone
4. Click on the link
5. Complete the survey

Survey closes on April 7, 2021

Community Engagement Survey Completion:
We are looking for your feedback

https://www.surveymonkey.com/r/ERFN2021



Community Engagement Survey Completion:
We are looking for your feedback

https://www.surveymonkey.com/r/ERFN2021

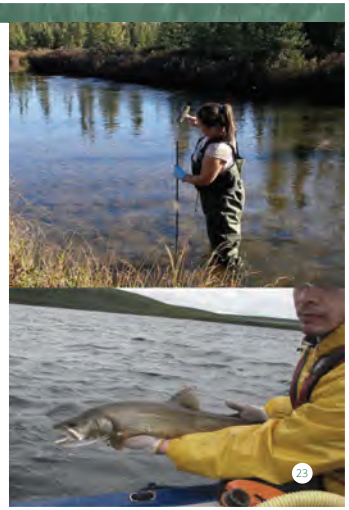
Environmental Assessment:
Understanding the Project's interactions with human and biophysical environment

Baseline Studies

- Environmental baseline studies have been ongoing since 2012
  - Denison needs to understand the current environmental conditions within and around the Wheeler River Project area

Environmental Assessment

- Initiated the federal and provincial environmental assessment processes in May 2019 with the Wheeler River Project Description
  - **Lead federal regulator**: Canadian Nuclear Safety Commission
  - **Lead provincial regulator:** Saskatchewan Ministry of Environment, Environmental Assessment Branch
- Technical studies designed to understand potential effects of the Project on the biophysical and human environments



Valued Components:
Understanding effects on the things that are important

- **Gain an understanding** of what is important to the people who use the area and to the people who may be affected by project activities.
- **Gather information** through research, from regulator feedback and through engagement with communities and Indigenous groups communities
- **Design the environmental** studies to predict how the VC's may change and what measures can be put in place to minimize and monitor the changes
- **Monitoring and reporting** of the changes to VC's will carry on throughout all phases of the project into decommissioning and post closure

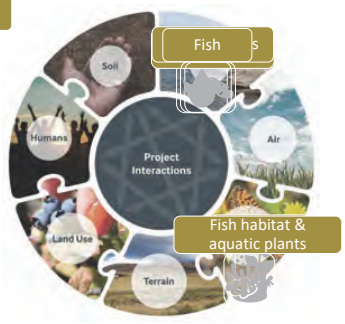
Economy

Land and Resource Use, Cultural Continuity

Quality of Life

Terrestrial

Aquatic



Groundwater

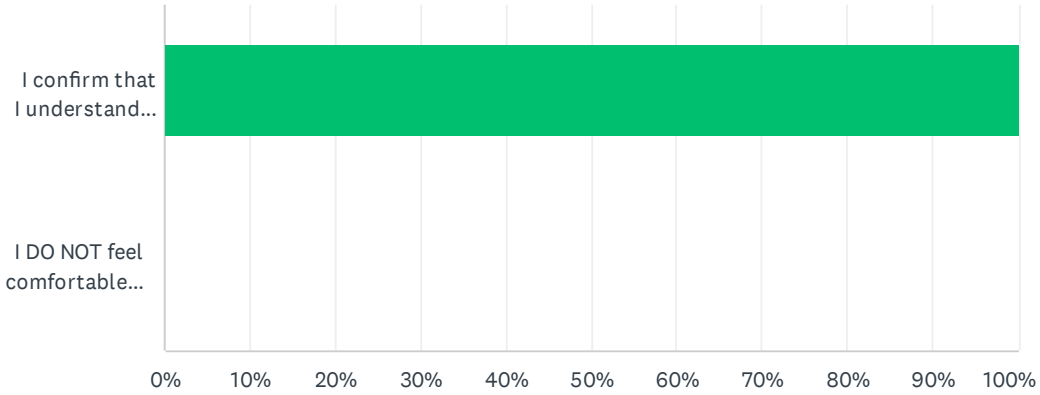
Atmosphere & Acoustic

High School Presentation
English River First Nation
March 31, 2021

- Any chance of the wells blowing and contaminating the ground around it?
    - The well design will be designed significantly above the rupture pressure, so the risk of this occurring is pretty low. Additionally, we will be casing all of the wells and putting grout around the well (concrete barrier). And the freeze wall will surround the wells to make sure no ground contamination can occur.
- Are the mines filled in when the mining is done?
    - Yes, we will be looking at what the requirements are to make sure the ISR wells and freeze wells are properly decommissioned.
- Are the wells capped when it's done?
    - Yes, we will be looking at what the requirements are to make sure the ISR wells and freeze wells are properly decommissioned.
- Will the project be close to some cabins that are up there?
    - The wheeler river project is located about 10 km from a cabin. An ERFN member has a few cabins and we have been working quite closely with this member of ERFN to make sure that they understand what we are doing and how we are doing it. This ERFN member local knowledge expert on the names of the lake and where the fish move, and they have shared the information with us and it will be used in our EIS.
- When will construction begin on this project?
    - We can't disclose that at this point in time as we are still going through a lot of processes like the EIS and feasibility study. As soon as those are done and approved and then we will start. It can take about 2 to 3 years. So that is a rough time frame.
- How will the radium precipitates be stored?
    - They will be stored at first into a double lined pond with leak detection. The precipitates won't be there permanently. They will be removed. The amount of precipitate will be lower than other mines in the north.
- What kind of impact will the project have on wildlife?
    - Short answer is that is what the EIS will determine, all of the impacts on the wildlife, etc. This will be given to a 3rd party expert to determine. I don't think we would be moving forward with a project that we thought would have a long-term impact on the wildlife or any species for that matter. Our project footprint is very small compared to some of the other operations in the north. We anticipate our impacts if any will be short term, and isolated to a small area. We don't have a conclusive answer right now, but we will get an answer. We are also working quite closely with ERFN and making sure ERFN does their own work on this question which would be incorporated into the EIS.

Q1 By checking this box, you confirm that you understand the purpose of the survey, how the information you share will be used, and that participation in the survey is voluntary.

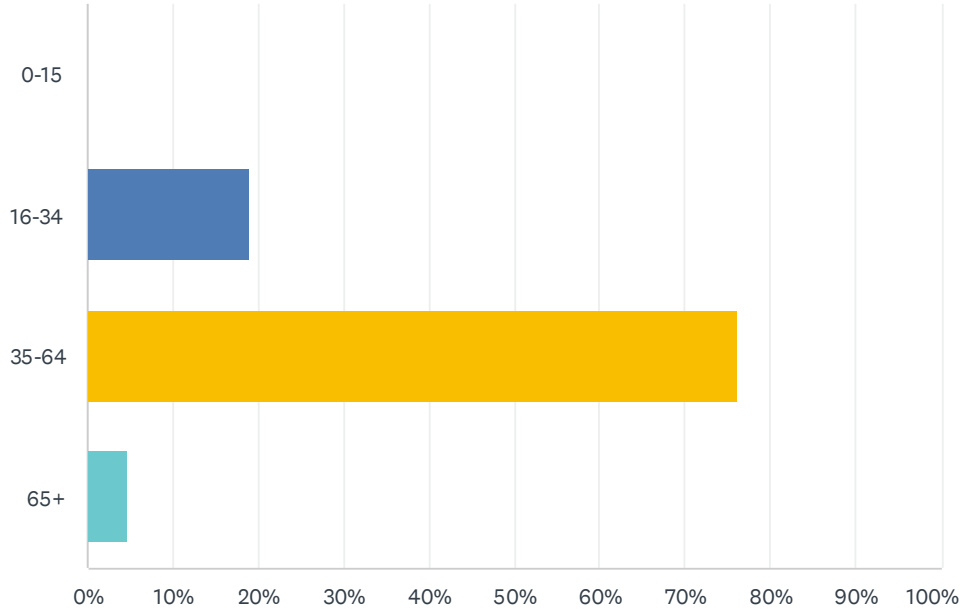
Answered: 23 Skipped: 0



ANSWER CHOICES	RESPONSES	
I confirm that I understand the purpose of this survey, how the information will be shared, and that participation is voluntary	100.00%	23
I DO NOT feel comfortable proceeding with this survey and would like to exit	0.00%	0
TOTAL		23

Q2 Age:

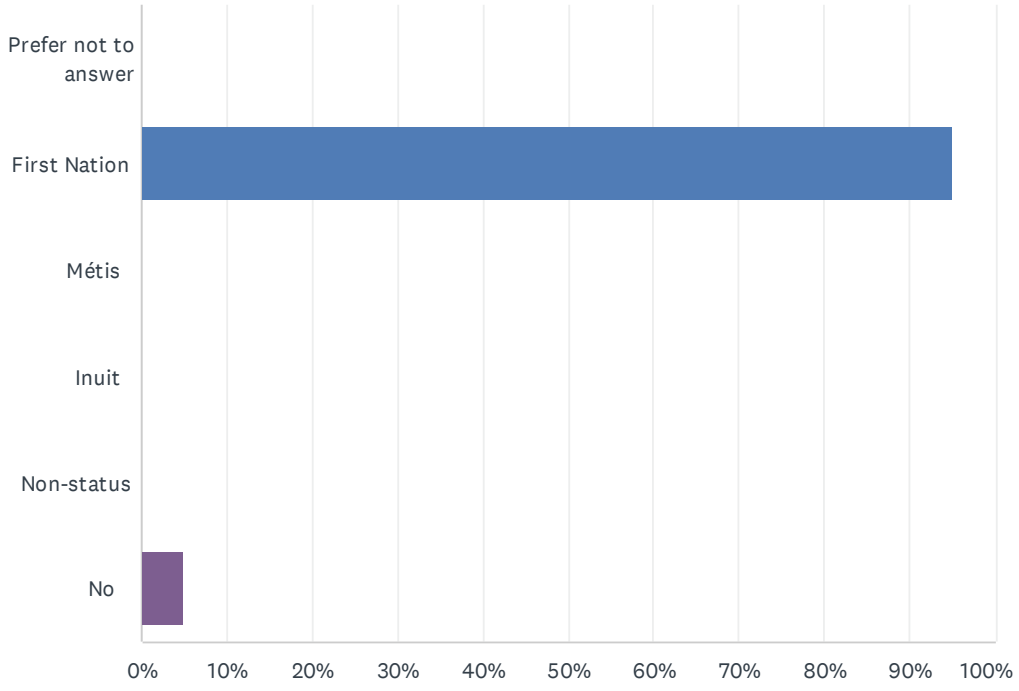
Answered: 21 Skipped: 2



ANSWER CHOICES	RESPONSES	
0-15	0.00%	0
16-34	19.05%	4
35-64	76.19%	16
65+	4.76%	1
TOTAL		21

Q3 Do you identify as an Indigenous person (First Nations, Métis, or Inuit?) Answers to this question are entirely voluntary and not required.

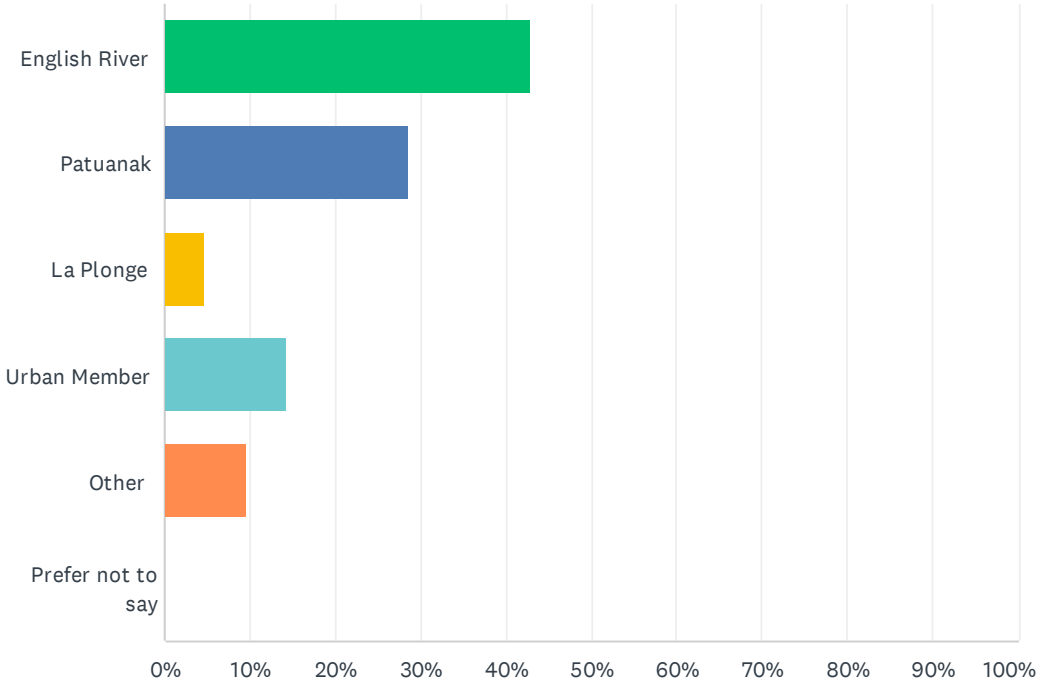
Answered: 20 Skipped: 3



ANSWER CHOICES	RESPONSES	
Prefer not to answer	0.00%	0
First Nation	95.00%	19
Métis	0.00%	0
Inuit	0.00%	0
Non-status	0.00%	0
No	5.00%	1
TOTAL		20

Q4 Where do you live most of the year:

Answered: 21 Skipped: 2

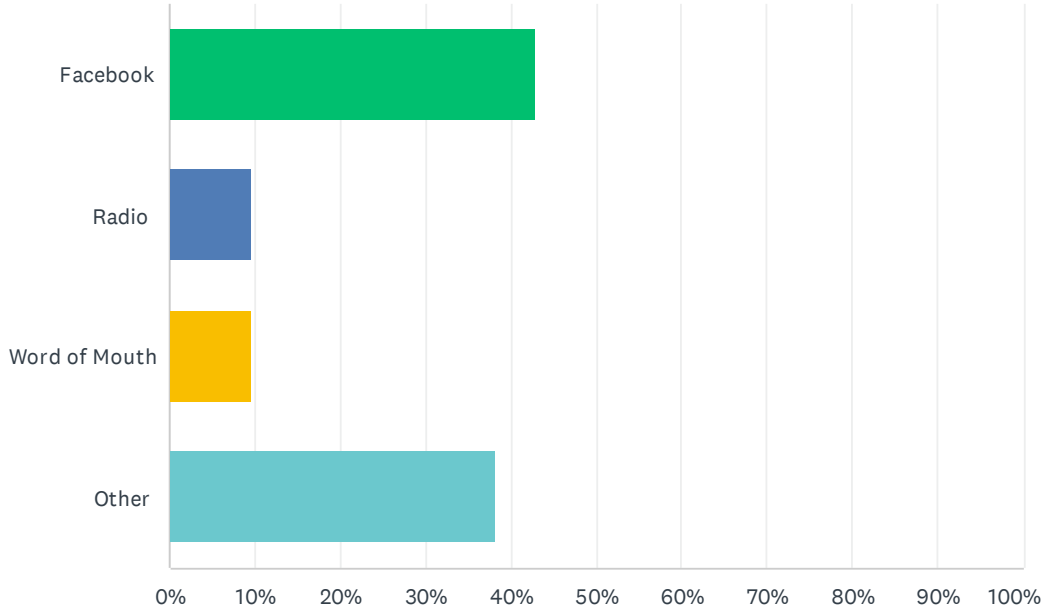


ANSWER CHOICES	RESPONSES	
English River	42.86%	9
Patuanak	28.57%	6
La Plonge	4.76%	1
Urban Member	14.29%	3
Other	9.52%	2
Prefer not to say	0.00%	0
TOTAL		21

#	PLEASE IDENTIFY WHICH OTHER COMMUNITY YOU ARE FROM	DATE
1	Patuanak	4/7/2021 9:24 AM
2	Patuanak Reserve	3/31/2021 7:43 PM
3	Saskatoon	3/31/2021 7:42 PM
4	Meadow lake	3/31/2021 7:42 PM
5	Wahnapitae First Nation	3/31/2021 1:34 PM

Q5 How did you hear about this survey?

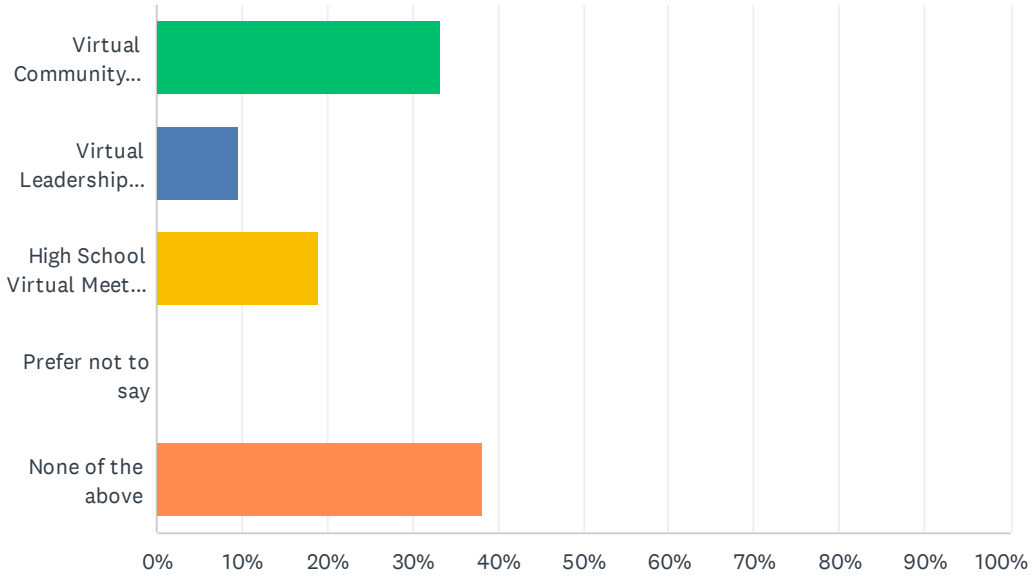
Answered: 21 Skipped: 2



ANSWER CHOICES	RESPONSES	
Facebook	42.86%	9
Radio	9.52%	2
Word of Mouth	9.52%	2
Other	38.10%	8
TOTAL		21

Q6 Which of the following presentations did you attend? Check all that apply.

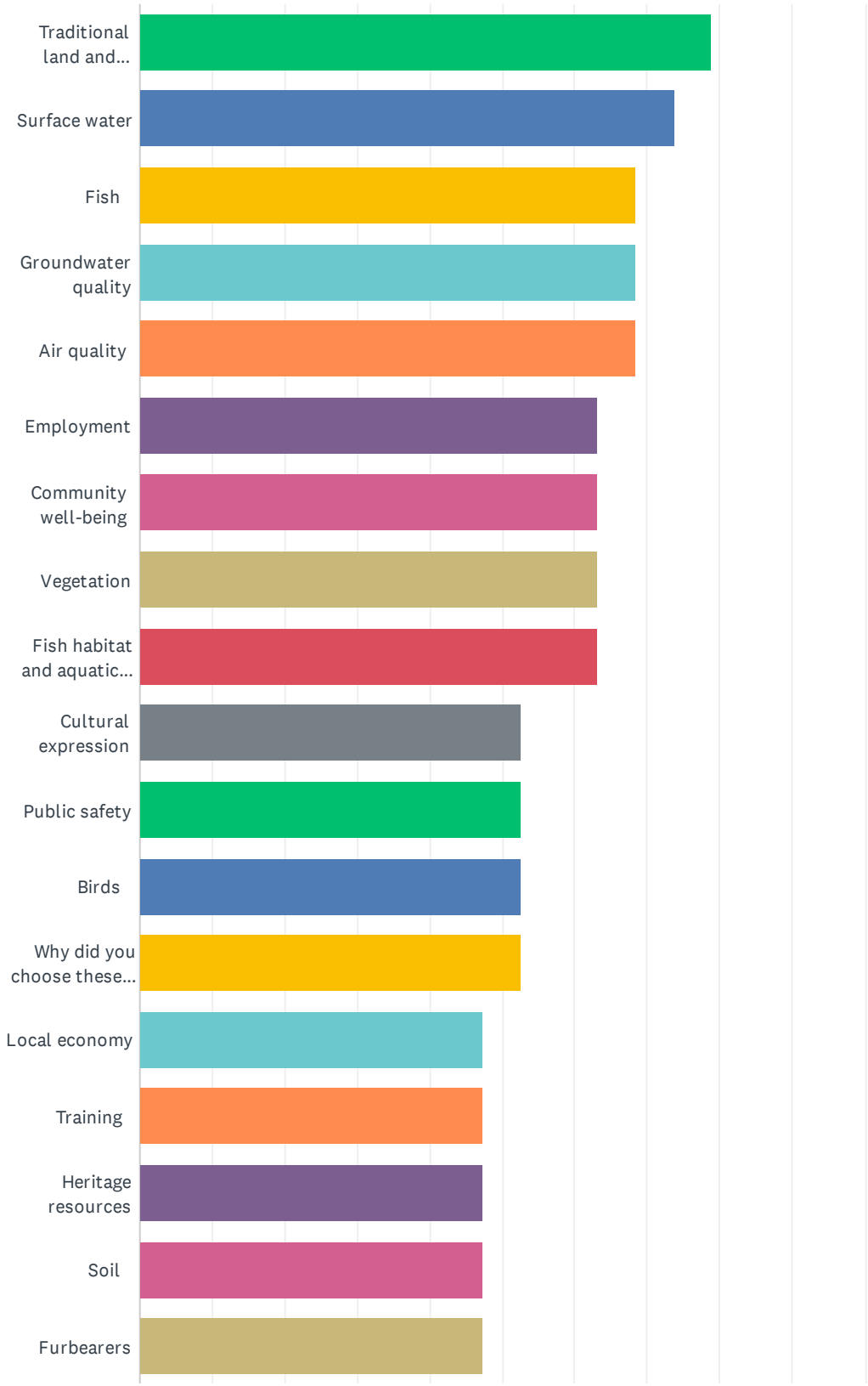
Answered: 21 Skipped: 2



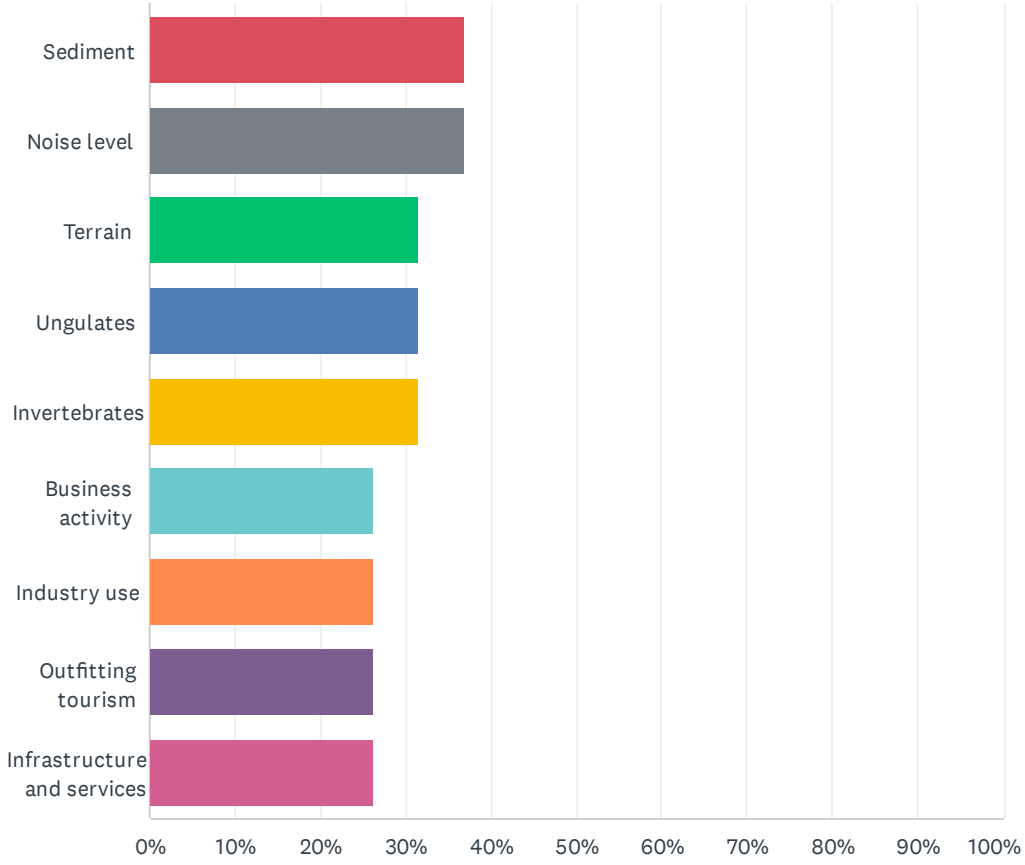
ANSWER CHOICES	RESPONSES	
Virtual Community Meeting	33.33%	7
Virtual Leadership Meeting	9.52%	2
High School Virtual Meeting	19.05%	4
Prefer not to say	0.00%	0
None of the above	38.10%	8
TOTAL		21

Q7 From the list below, please click on the valued components that you feel are most important for us to study as part of the impact assessment.

Answered: 19 Skipped: 4



Wheeler River Project - ERFN Members Engagement



ANSWER CHOICES	RESPONSES	
Traditional land and resource use	78.95%	15
Surface water	73.68%	14
Fish	68.42%	13
Groundwater quality	68.42%	13
Air quality	68.42%	13
Employment	63.16%	12
Community well-being	63.16%	12
Vegetation	63.16%	12
Fish habitat and aquatic plants	63.16%	12
Cultural expression	52.63%	10
Public safety	52.63%	10
Birds	52.63%	10
Why did you choose these valued components?	52.63%	10
Local economy	47.37%	9
Training	47.37%	9
Heritage resources	47.37%	9
Soil	47.37%	9
Furbearers	47.37%	9
Sediment	36.84%	7
Noise level	36.84%	7
Terrain	31.58%	6
Ungulates	31.58%	6
Invertebrates	31.58%	6
Business activity	26.32%	5
Industry use	26.32%	5
Outfitting tourism	26.32%	5
Infrastructure and services	26.32%	5
Total Respondents: 19		

#	WHY DID YOU CHOOSE THESE VALUED COMPONENTS?	DATE
1	i chose those to emphasize how we value our eco system and to protect our traditional territory and please try to establish a resource management camp at KM 160 ON KEY LAKE ROAD, to have young teen agers get to know about wildlife and names and characteristics of each wildlife , forestry and know all the names and traditional use of each trees and all the plants, fish species amd aquatic ... these are important for all young people to know... get ahold of integrated resource management to assist with how they teach resource management	4/7/2021 9:40 AM

2	All living things r important n that's out inherited lands,when r u planning to do a real consulation with our members.our elderes have alot of questions	4/6/2021 5:15 PM
3	There are hardly any employment opportunity for members	4/6/2021 4:56 PM
4	As a First Nation person, I feel it’s very important for the habitat and aquatic life to thrive for future purposes	4/6/2021 4:56 PM
5	I wish traditional livelihood to continue by the future generations in these areas	4/6/2021 4:45 PM
6	A clean environment is totally a value of survival and overall health for indigenous persons.	4/6/2021 1:26 PM
7	Cause I’m a hunter and I always use the land	4/6/2021 1:07 PM
8	Community concerns and requirements for the future of our children's, grandchildren's, great grandchildren's connection to the land and utilization of renewable resources by future generations.	4/1/2021 1:45 PM
9	All are a valued process for the community members of Patuanak	4/1/2021 1:44 PM
10	Water and soil	3/31/2021 7:46 PM

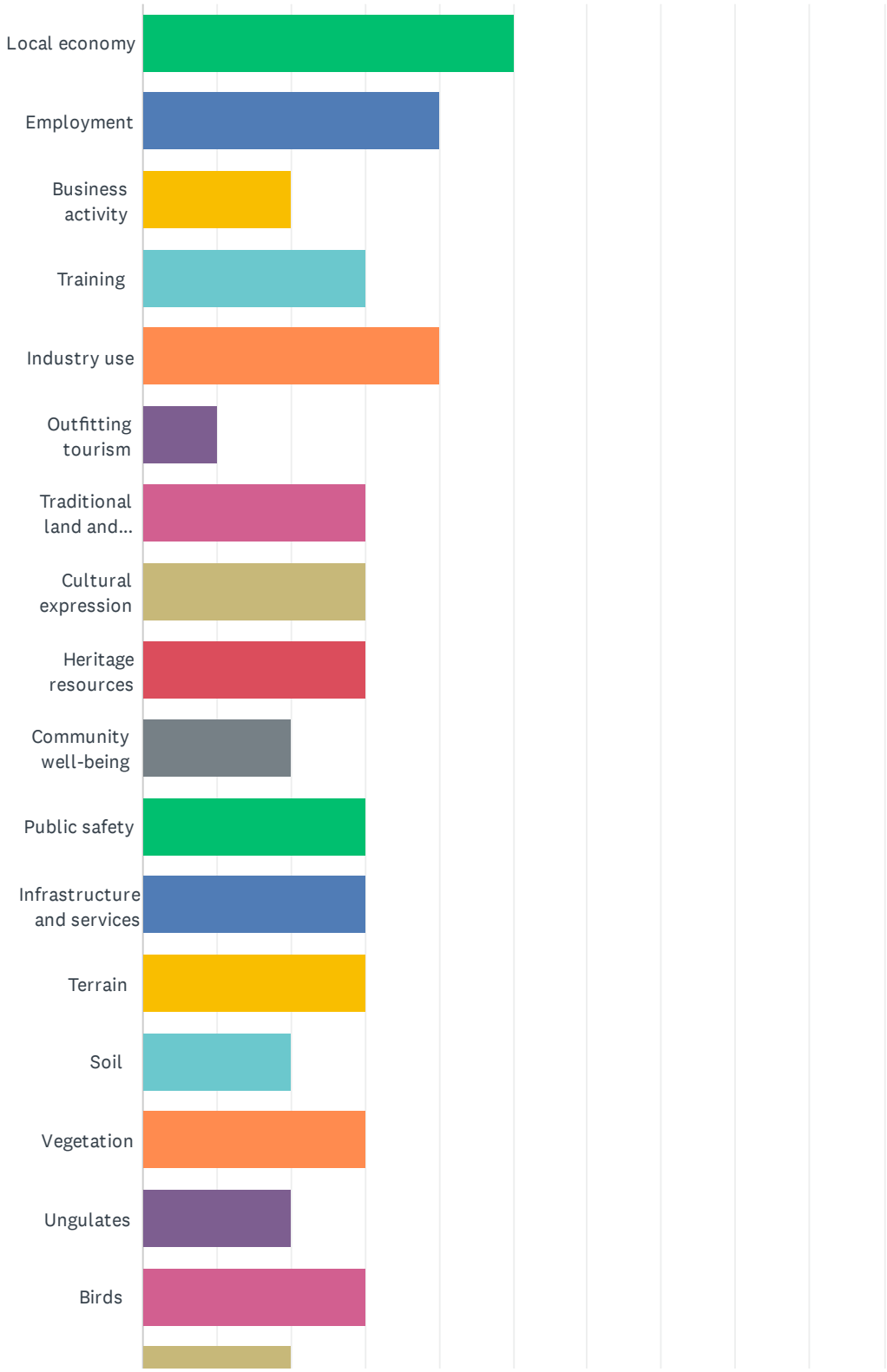
Q8 Are there any valued components that are important to you that are missing from this list? If so, please list them below. Why are these important to you?

Answered: 14 Skipped: 9

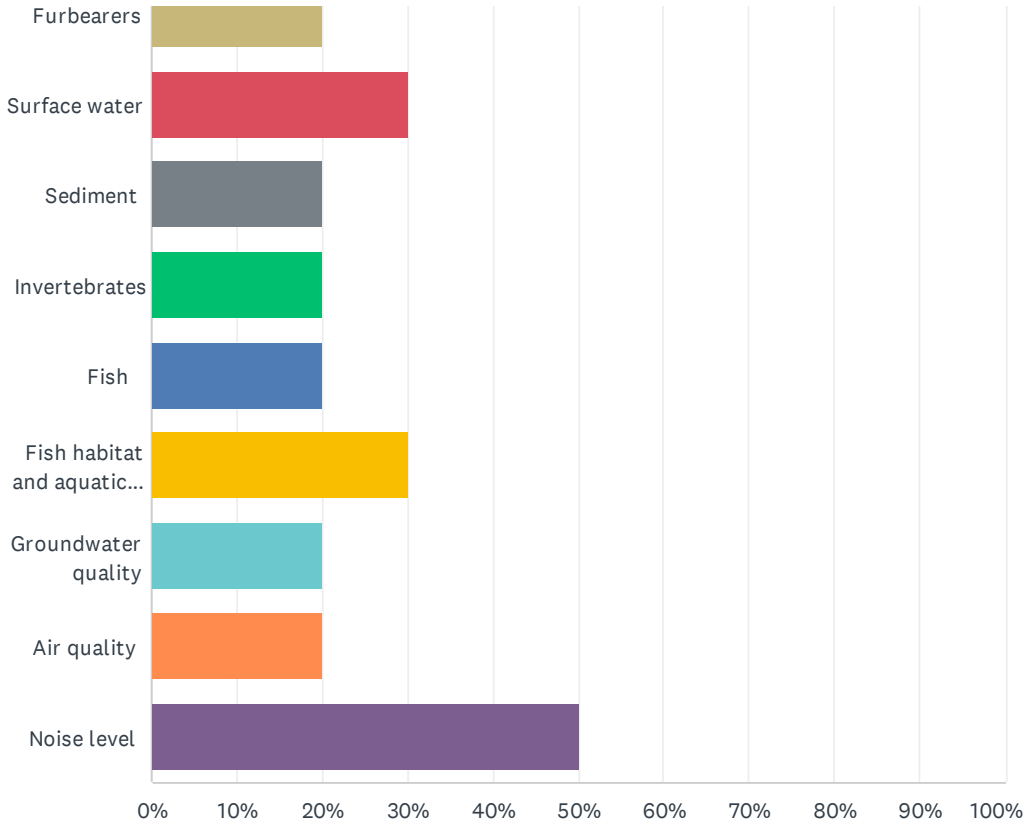
#	RESPONSES	DATE
1	people to know more knowledge of how to do resource management	4/7/2021 9:40 AM
2	No	4/7/2021 3:42 AM
3	Your consulotion is important,not video,not sure y but your visit would be	4/6/2021 5:15 PM
4	No	4/6/2021 4:56 PM
5	Traditional food	4/6/2021 4:45 PM
6	No	4/6/2021 2:51 PM
7	No	4/6/2021 1:22 PM
8	None	4/6/2021 1:07 PM
9	Good working relationship between ERFN membership & Denison Mines	4/1/2021 1:45 PM
10	The longevity of the land after 50 or so years after the mine has been done operation?	4/1/2021 1:44 PM
11	Traplines fish.tourism be a promotion part of Dennison mines &joint ventures to patuanak.erfn	3/31/2021 7:49 PM
12	None	3/31/2021 7:46 PM
13	All of them	3/31/2021 7:44 PM
14	yes they are important	3/31/2021 2:39 PM

Q9 Are there any valued components on the list that are not important to you? If so, please select the valued components from the list below that you feel should be removed.

Answered: 10 Skipped: 13



Wheeler River Project - ERFN Members Engagement



ANSWER CHOICES	RESPONSES	
Local economy	50.00%	5
Employment	40.00%	4
Business activity	20.00%	2
Training	30.00%	3
Industry use	40.00%	4
Outfitting tourism	10.00%	1
Traditional land and resource use	30.00%	3
Cultural expression	30.00%	3
Heritage resources	30.00%	3
Community well-being	20.00%	2
Public safety	30.00%	3
Infrastructure and services	30.00%	3
Terrain	30.00%	3
Soil	20.00%	2
Vegetation	30.00%	3
Ungulates	20.00%	2
Birds	30.00%	3
Furbearers	20.00%	2
Surface water	30.00%	3
Sediment	20.00%	2
Invertebrates	20.00%	2
Fish	20.00%	2
Fish habitat and aquatic plants	30.00%	3
Groundwater quality	20.00%	2
Air quality	20.00%	2
Noise level	50.00%	5
Total Respondents: 10		

Q10 Based on what you know so far about the Wheeler Project, what aspects of the project could benefit, or work well for your community?

Answered: 17 Skipped: 6

#	RESPONSES	DATE
1	i believe including ERFN in training and having members employed but each member has to be notified that they have to consider holistic well being for them selves, family ans strive for wellness of community. the new technique of mining seems to be a new way and i hope they don't have any spills. please communicate more with the ERFN members quarterly and have a liason person, some one out going to translate	4/7/2021 10:07 AM
2	Work	4/7/2021 3:43 AM
3	To deal with c a agreement before u do more damage to our beautiful land	4/6/2021 5:19 PM
4	E.R.F.N members should be priority employees at Denison mines	4/6/2021 4:58 PM
5	Employment	4/6/2021 4:57 PM
6	Proper management mainly consultations with all members of ERFN	4/6/2021 4:52 PM
7	None	4/6/2021 2:52 PM
8	None- the long term affects will seriously harm our 'Mother Earth' of which we need to survive.	4/6/2021 1:30 PM
9	No	4/6/2021 1:22 PM
10	Jobs	4/6/2021 1:08 PM
11	Employment and regular updates	4/1/2021 1:58 PM
12	Royalties for the community	4/1/2021 1:46 PM
13	Training and comunity development should be under way and planning be underway to have a separate office for wheeler only and not solely through tron	3/31/2021 7:58 PM
14	Employment	3/31/2021 7:51 PM
15	Communication	3/31/2021 7:48 PM
16	Don’t know enough	3/31/2021 7:44 PM
17	Providing jobs	3/31/2021 1:40 PM

Q11 Based on what you know so far about the Wheeler Project, what aspects of the project could be challenging or cause concern for your community?

Answered: 16 Skipped: 7

#	RESPONSES	DATE
1	probably the new technique of putting acid in the ground to extract the uranium, and probably the storage and shipping out and overall safety	4/7/2021 10:07 AM
2	Hunting	4/7/2021 3:43 AM
3	I no your part of ca agreement.n isidore should retire	4/6/2021 5:19 PM
4	Weekly and monthly updates	4/6/2021 4:58 PM
5	None so far	4/6/2021 4:57 PM
6	Integrity, accountability, and respect by both parties	4/6/2021 4:52 PM
7	Health and well-being of humans and wildlife	4/6/2021 2:52 PM
8	Health	4/6/2021 1:30 PM
9	Employment	4/6/2021 1:22 PM
10	Groundwater and the Land affected	4/6/2021 1:08 PM
11	Contamination of the land by not looking far enough into the future and making it useless for future generations looking forward 500 years.	4/1/2021 1:58 PM
12	Cultural way of life for people who utilize the area for survival	4/1/2021 1:46 PM
13	Members be 100% solely involved	3/31/2021 7:58 PM
14	Environmental areas	3/31/2021 7:51 PM
15	Information	3/31/2021 7:48 PM
16	Maybe the company doesn't fulfill cleanup efforts after the mine is closed.	3/31/2021 1:40 PM

Q12 Are there questions you have about the Wheeler Project that you would like to see addressed in future updates or communications? If, so please list your questions in the space below.

Answered: 13 Skipped: 10

#	RESPONSES	DATE
1	1st of all a Translator for the elderly. 1. how to closely work with with ERFN 2. COMMUNICATION IS A PRIORITY AND COMMUNICATION NOT TO ONLY LEADERS, BECAUSE THEY GET 1ST HAND INFORMATION AND ONLY CHOSE RELATIVES BUDGET COMMUNICATION STATION AND ASSIST OTHER DEPARTMENTS SPECIALLY HOLISTIC WELLNESS	4/7/2021 10:07 AM
2	No	4/7/2021 3:43 AM
3	[Redacted] asked questions n meeting was done,y?	4/6/2021 5:19 PM
4	Who is first priority on the hiring process ?	4/6/2021 4:58 PM
5	No	4/6/2021 4:57 PM
6	Information presentations to both on and off reserve members	4/6/2021 4:52 PM
7	No	4/6/2021 2:52 PM
8	Keep those living on their traditional lands as a top priority for any and all gain from you displacing their life line.	4/6/2021 1:30 PM
9	No	4/6/2021 1:22 PM
10	How will ALL uranium be extracted from the mine site? How will you determine that it has been accomplished?There will be residual uranium in liquid form after the mine has been "depleted" and can you guarantee that none will find it's way into the ground water once the freezing has thawed?	4/1/2021 1:58 PM
11	as time goes	4/1/2021 1:46 PM
12	Employ norther sask residents and agreed by erfn leaving no imports from out of province workers .	3/31/2021 7:58 PM
13	None	3/31/2021 7:48 PM

Q13 Is there anything else you would like us to know related to the Wheeler Project?

Answered: 12 Skipped: 11

#	RESPONSES	DATE
1	WE ARE DENESULINA PEOPLE AND ARE DIFFERENT THEN CAUCASIAN, SO PLEASE BE LENIENT TO US	4/7/2021 10:07 AM
2	No	4/7/2021 3:43 AM
3	Ca agreement is related to your plan.I have documents	4/6/2021 5:19 PM
4	No	4/6/2021 4:57 PM
5	Agreement to go through a ratification vote	4/6/2021 4:52 PM
6	No	4/6/2021 2:52 PM
7	No	4/6/2021 1:30 PM
8	No	4/6/2021 1:22 PM
9	We will proceed slowly to make sure we have covered all the bases.	4/1/2021 1:58 PM
10	Sub contract to erfn	3/31/2021 7:58 PM
11	Will this project affect the water quality of Cree Lake?	3/31/2021 7:51 PM
12	Nil	3/31/2021 7:48 PM

Denison Mines

Uranium Development & Exploration

The Wheeler River Project

April 22, 2021 Ya'thi Néné Lands and Resources Staff

Cautionary Statements & References

This presentation and the information contained herein is designed to help you understand management's current views, and may not be appropriate for other purposes. This presentation contains information relating to the uranium market, third party and provincial infrastructure, and the plans and availability thereof, derived from third-party publications and reports which Denison believes are reliable but have not been independently verified by the Company.

Certain information contained in this presentation 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 presentation contains forward-looking information pertaining to the results of, and estimates, assumptions and projections provided in, the Wheeler PFS and the Waterbury PEA, including future development methods and plans, market prices, costs and capital expenditures; assumptions regarding Denison's ability to obtain all necessary regulatory approvals to commence development at Wheeler; Denison's percentage interest in its projects and its agreements with its joint venture partners; and the availability of services to be provided by third parties. 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 faces certain risks, including the current and potential impacts of the COVID-19 pandemic, use of mining methods which are novel and untested in the Athabasca basin, the inability to permit or develop its projects as currently planned, the inability to secure sufficient financing to pursue its business objectives, the unpredictability of market prices, events that could materially increase costs, changes in the regulatory environment governing the project lands, and unanticipated claims against title and rights to the project. 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 13, 2020 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.

Readers should not place undue reliance on forward-looking statements. The forward-looking information contained in this presentation is expressly qualified by this cautionary statement. Any forward-looking information and the assumptions made with respect thereto speaks only as of February 8, 2021. Denison does not undertake any obligation to publicly update or revise any forward-looking information after such date 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 Mineral Resources and Mineral Reserves: This presentation may use terms such as "measured", "indicated" and/or "inferred" mineral resources and "proven" or "probable" mineral reserves, which are terms defined with reference to the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") CIM Definition Standards on Mineral Resources and Mineral Reserves ("CIM Standards"). The Company's descriptions of its projects using CIM Standards may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements under the United States federal securities laws and the rules and regulations thereunder.

Qualified Persons

The disclosure of a scientific or technical nature within this presentation, including the disclosure of mineral resources, mineral reserves, as well as the results of the Wheeler PFS and Waterbury PEA, was reviewed and approved by David Bronkhorst, P.Eng., who is a Qualified Person in accordance with the requirements of NI 43-101.

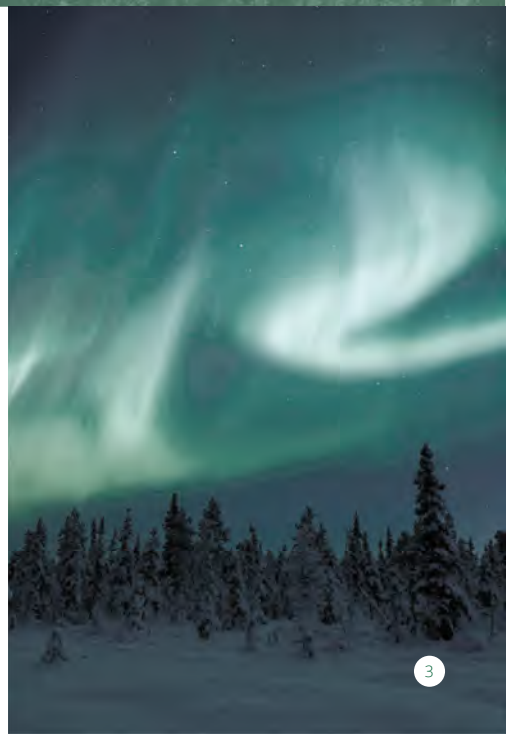
Technical Reports

- For further details regarding the Wheeler River project, please refer to (a) the Company's press releases dated December 1, 2020, regarding the adoption of the freeze wall design for ISR at Phoenix, and September 24, 2018, regarding the Prefeasibility Study, and (b) the technical report titled "*Prefeasibility Study for the Wheeler River Uranium Project, Saskatchewan, Canada*" with an effective date of September 24, 2018 ("Wheeler PFS").
- For further details regarding the Waterbury Lake project, please refer to the Company's press release dated November 17, 2020 and the technical report titled "*Preliminary Economic Assessment for the Thе Heldeth Túé (J Zone) Deposit, Waterbury Lake Property, Northern Saskatchewan, Canada*" with an effective date of October 30, 2020. ("Waterbury PEA"). **The Waterbury PEA is a preliminary analysis of the potential viability of the Project's mineral resources, and should not be considered the same as a Pre-Feasibility or Feasibility Study, as various factors are preliminary in nature. There is no certainty that the results from the PEA will be realized. Mineral resources are not mineral reserves and do not have demonstrated economic viability. Scheduled tonnes and grade do not represent an estimate of mineral reserves.**

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 13, 2020. Copies of the foregoing are available on Denison's website and under its profile on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

Agenda

- **Wheeler River Project**
  - Brief overview
  - Update to Project
  - Geotechnical drilling program (2021)
- **Status of Wheeler River Environmental Assessment**
  - Environmental Assessment process to date
  - Valued Components
- **Next Steps with Athabasca Basin**
  - Overview of virtual meetings



Denison Team

- Dave Bronkhorst, VP Operations
- Janna Switzer, Environment Manager
- Chad Sorba, Technical Manager
- Carolanne Inglis-McQuay, CSR Manager
- Xavier Lu Dac, Senior Engineer
- Dana Harris, Project Services Coordinator
- Mike Dawe, Environment and CSR Coordinator
- Jenn Skilnick, Environment Coordinator

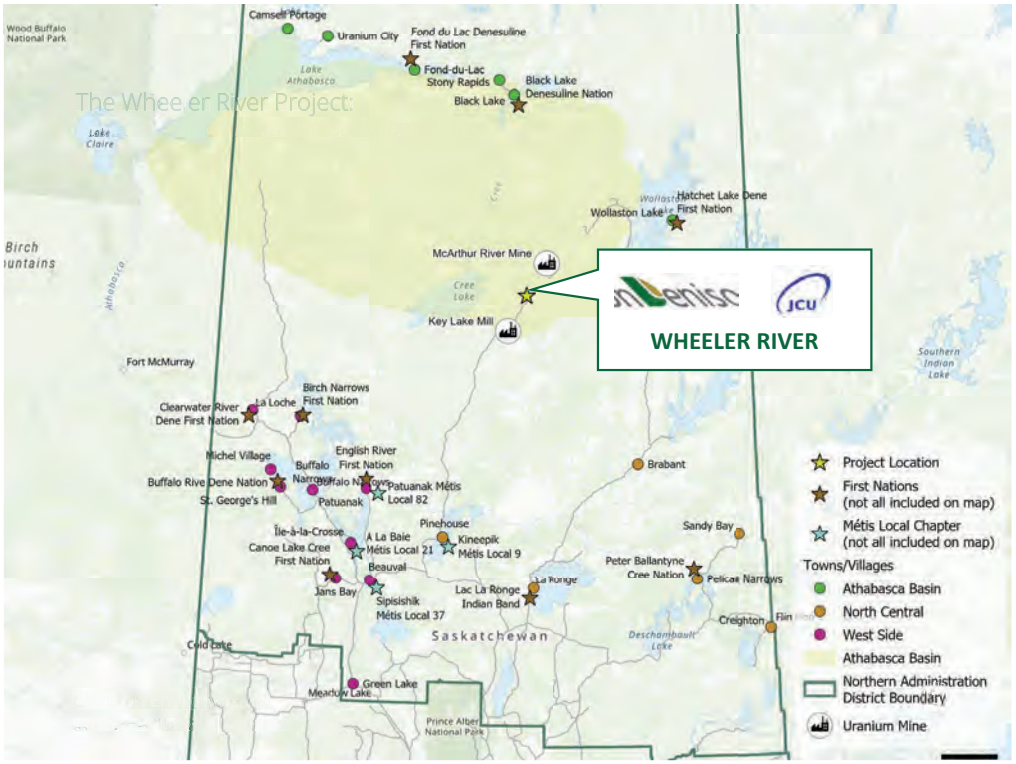
Company Overview:
Denison is focused on opportunities in northern Saskatchewan

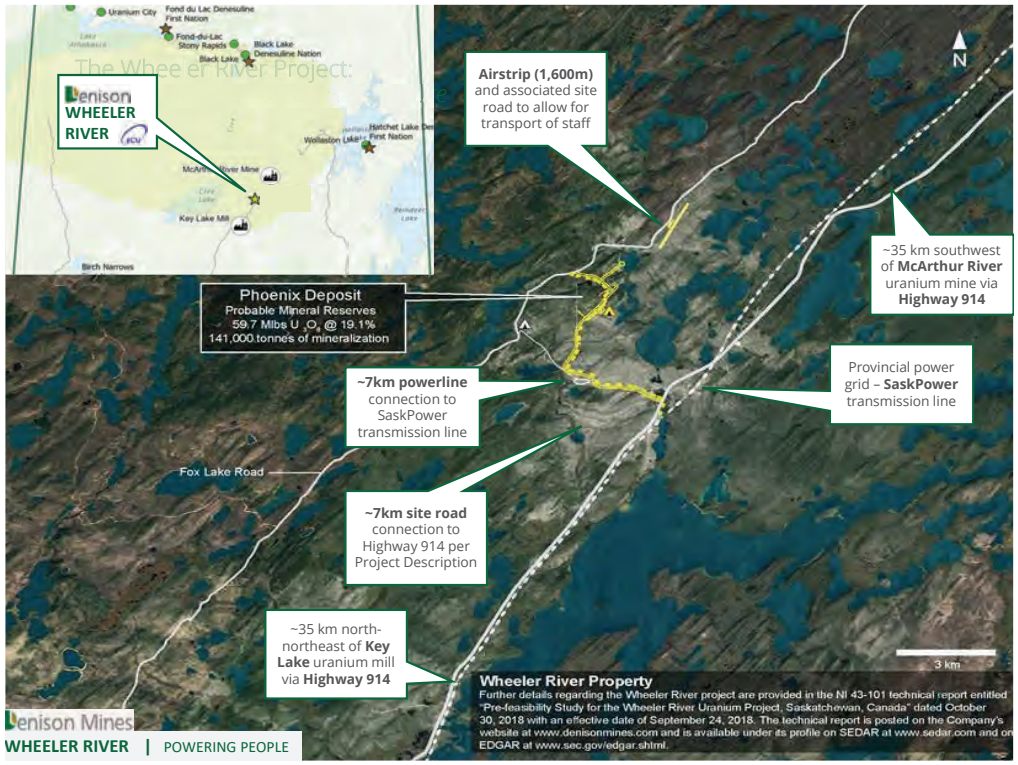
- 22.5% interest in **McClean Lake Uranium Mill**
- 90% interest in Flagship **Wheeler River** project
  - Advancing through development process
  - Largest undeveloped uranium project in the infrastructure rich eastern Athabasca Basin
  - Environmental Assessment ("EA") initiated
  - Progressive approach to mining using In Situ Recovery ("ISR") method
- 66.9% in the **Waterbury Lake Property**, hosting the Tthe Heldeth Túé (formerly J Zone) deposit
  - Recently completed Preliminary Economic Assessment ("PEA")[1]
  - Amenable to ISR mining method
- Several other interests in the Athabasca Basin region
  - **McClean Lake, Midwest,** and **Waterbury Lake** properties, all in close proximity to McClean mill
  - **+250,000 hectares** of exploration ground

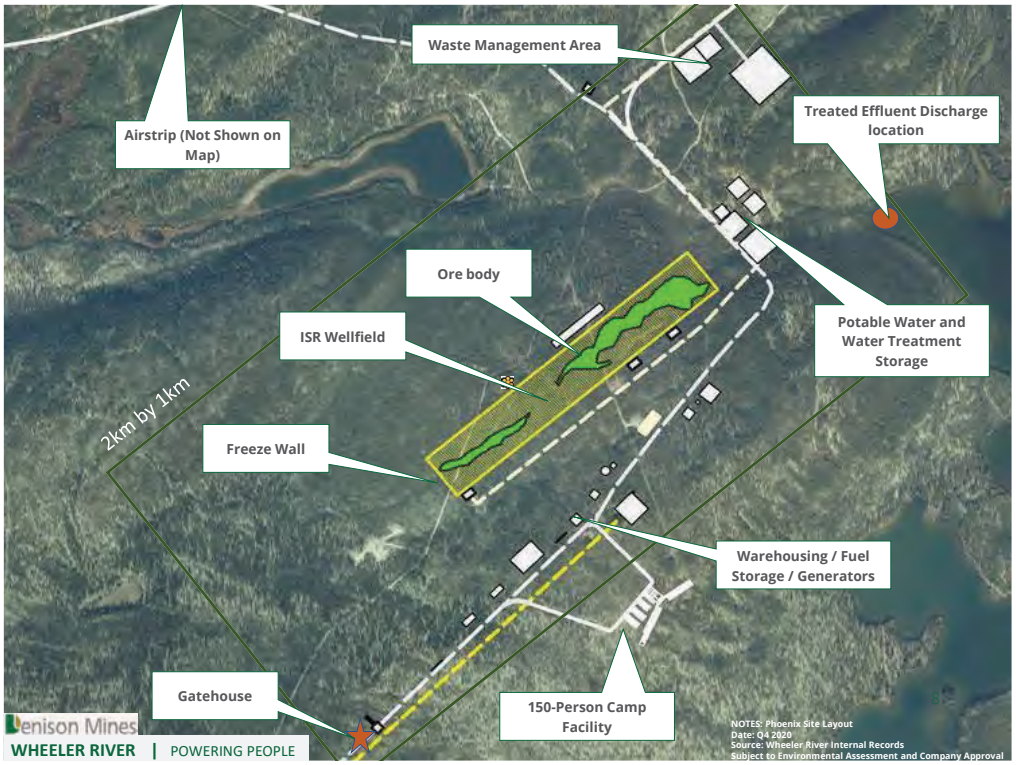
Denison Mines
WHEELER RIVER | POWERING PEOPLE

NOTES: (1) See Denison's news release dated Nov. 17, 2020; The PEA is a preliminary analysis and should not be considered the same as a Pre-Feasibility or Feasibility Study, see Cautionary Statements slide for details

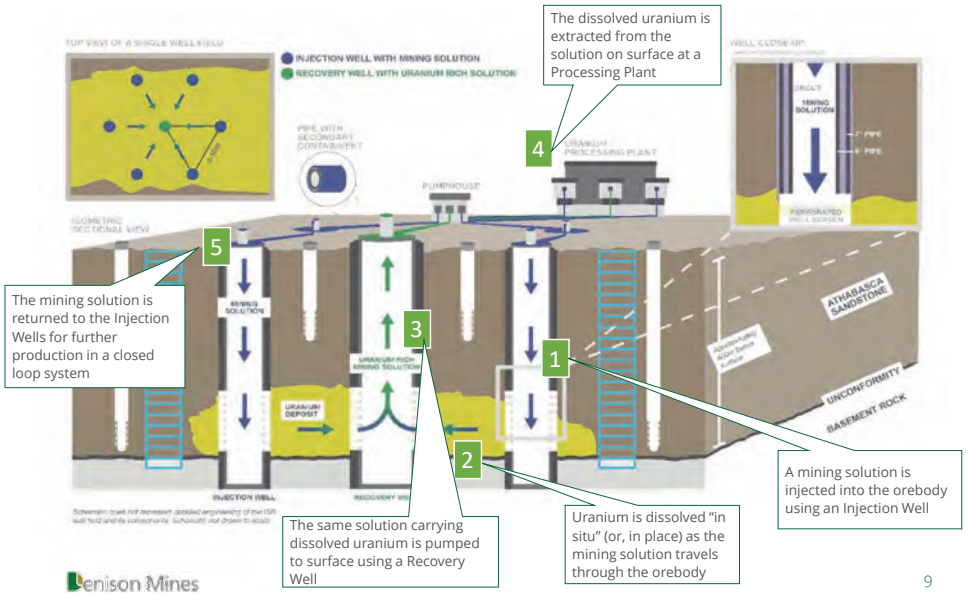
ISR field testing at Wheeler River Phoenix Deposit, Summer 2019







In Situ Recovery ("ISR") Mining[1]:
Introducing a proven mining technique to the Athabasca Basin



NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018. (2) Figure reflects Denison's decision to adopt a freeze wall approach (see press release dated December 01, 2020)

ISR Mining:
A progressive approach to uranium mining uranium in the Athabasca Basin

How is ISR Different?[1]

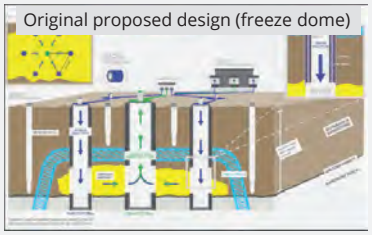
- All activities occur at surface; there are no traditional underground workings
- The ISR mining area has only wells and pipes to plant; no open pits, head-frame, or major earthworks
- There is no tailings production or long-term tailings storage, plus no large waste rock piles

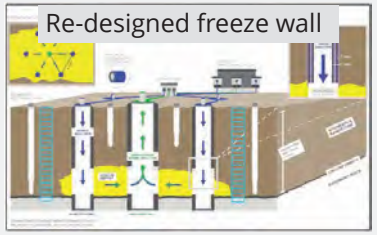
Waste Management Vision

- Two main waste streams expected:
  - Gypsum (non-radioactive) – remediated on site
  - Radium/Iron precipitates (radioactive) – removed from surface
- No long term waste management expected to be required after mine closure

NOTES: (1) Refer to the IAEA "Manual of acid in situ leach uranium mining technology", dated August 2001

Freezing Containment Improvements:
Adapting to freezing configuration commonly used in the Athabasca Basin





Freezing Concept Exists in Athabasca Basin

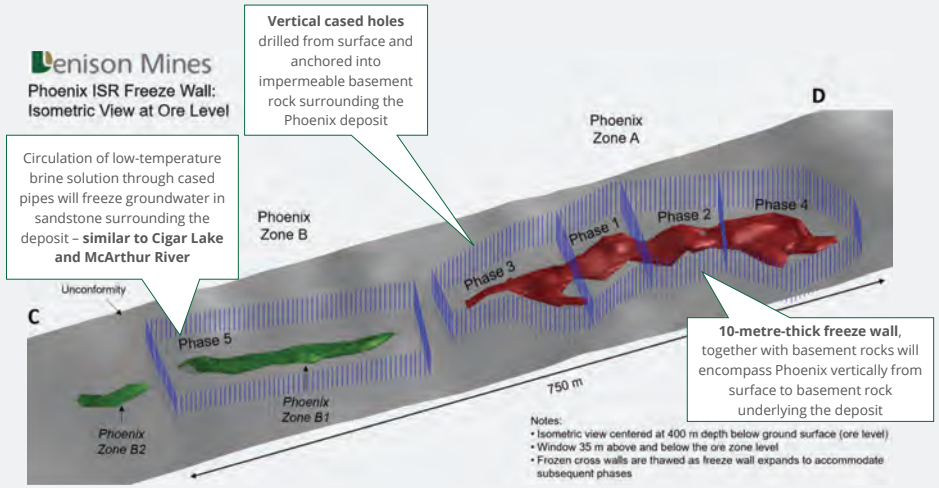
- Freezing from surface is used at Cigar Lake and McArthur River to enable safe mining activities
  - Standard exploration drill is used
  - Freezing technology well understood in the Athabasca Basin

What Does Freezing do for the ISR Operation?

- A freeze wall or dome creates a barrier between solution in the mining chamber and the receiving environment; creates a contained cavity for the mining solution to extract the uranium from the ore
- Freeze containment is an additional layer of protection to the controls in place of: water pressure above, pumping controls, double-walled pipes and monitoring wells
- ISR is new to uranium mining in Canada and the freeze containment provides an additional layer of protection

Freeze Containment :
Established method to create frozen barrier around mining area[1]

Key Components for the Project



NOTES: (1)) See Denison's news release dated December 1, 2020 for additional information on the freeze wall design for Phoenix.

Video

2021 Geotechnical Drilling Program

Action: Denison sent YNLR the *draft* application for the permit for advanced review

Location: Wheeler River Project site

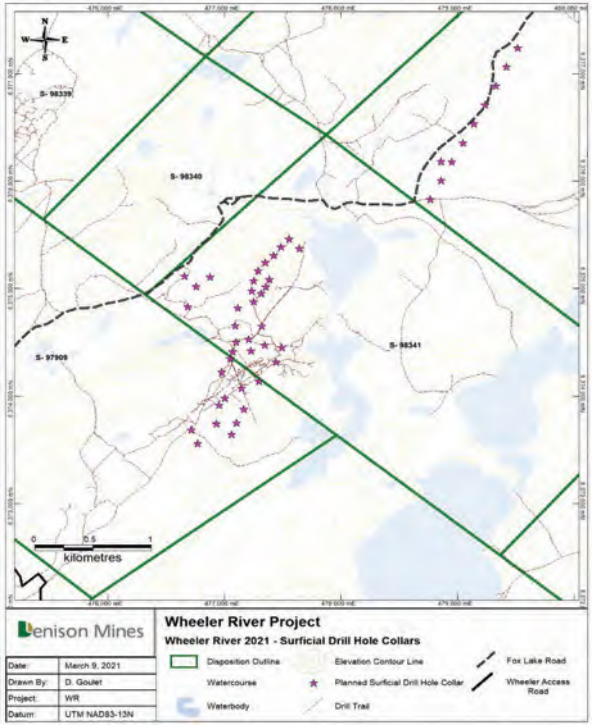
Purpose of Activities: Shallow drilling to understand the ground conditions in the area to advance infrastructure site design

Total Number of Permitted Drill Holes: 48, ranging in depth from 3m to 15m; 50% of drilling is anticipated to occur in previously disturbed area; drill pads no to exceed 6m by 15m (significantly smaller than diamond drilling); no core recovered; completed holes to be back-filled unless monitoring of water levels occurs

Proposed Timing: 2 weeks, end of summer, early fall (should no other delays occur)

Trail and Water Crossings: Existing to be used wherever possible; approximately 2km may be required; no need to install new permanent water crossings

Example Truck-Mounted Drill Rig



Environmental Assessment:
Understanding the Project's interactions with human and biophysical environment

Baseline Studies

- Environmental baseline studies have been ongoing since 2012
  - Denison needs to understand the current environmental conditions within and around the Wheeler River Project area

Environmental Assessment

- Initiated the federal and provincial environmental assessment processes in May 2019 with the Wheeler River Project Description
  - **Lead federal regulator**: Canadian Nuclear Safety Commission
  - **Lead provincial regulator:** Saskatchewan Ministry of Environment, Environmental Assessment Branch
- Technical studies designed to understand potential effects of the Project on the biophysical and human environments

Valued Components:
Understanding effects on the things that are important

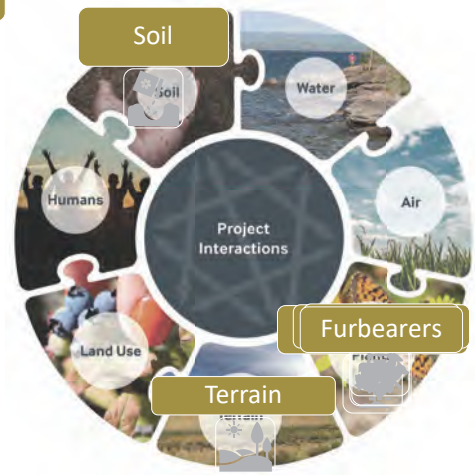
- **Gain an understanding** of what is important to the people who use the area and to the people who may be affected by project activities.
- **Gather information** through research, from regulator feedback and through engagement with communities and Indigenous groups communities
- **Design the environmental** studies to predict how the VC's may change and what measures can be put in place to minimize and monitor the changes
- **Monitoring and reporting** of the changes to VC's will carry on throughout all phases of the project into decommissioning and post closure

Economy

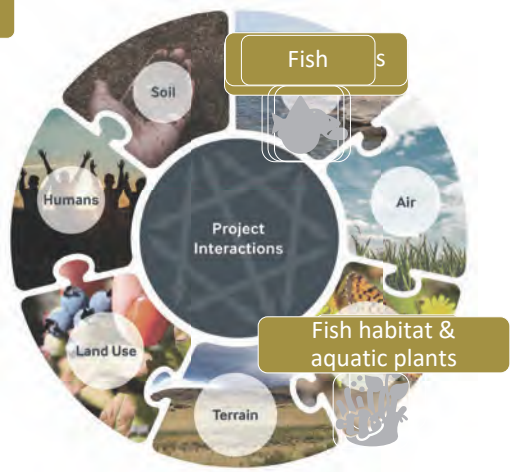
Land and Resource Use, Cultural Continuity

Quality of Life

Terrestrial



Aquatic



Groundwater

Atmosphere & Acoustic

Upcoming Denison Virtual Meetings

- All leadership / all Athabasca Residents
- Use of Zoom
  - Mute / video disabled
  - Chat function used extensively
  - Denison team answers all questions
- Link to YNLR Facebook page?
- Translations
- Online survey
- Donations to high schools
- Local door prizes
- Local MC

Ya' thi Néné Meeting

Date: April 22, 2021
Attendees:
Denison: Dave Bronkhorst, Carolanne Inglis-McQuay, Janna Switzer, Chad Sorba, Xavier Lu Dac, Mike Dawe
YNLR: Staff

Notes:
- General introductions
- Presentation
- Denison ISR video

Questions:

ISR

- Where would you be pulling the water from, and how much?
    - Displacing current groundwater, pulling UBS back to surface, refortify and push back underground in a closed loop
    - 30m3 per/hr (?) need confirmation on that number
    - Water will be pulled from either an underground aquifer, the other is white fish lake, near site
    - The goal is to minimize discharge

Environmental

- Uranium process at McClean?
    - Processed at site

Denison Mines

Uranium Development & Exploration

The Wheeler River Project

April 22, 2021 Nuhtsiye-kwi Benéne Committee (Ancestral Lands Committee)

Cautionary Statements & References

This presentation and the information contained herein is designed to help you understand management's current views, and may not be appropriate for other purposes. This presentation contains information relating to the uranium market, third party and provincial infrastructure, and the plans and availability thereof, derived from third-party publications and reports which Denison believes are reliable but have not been independently verified by the Company.

Certain information contained in this presentation 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 presentation contains forward-looking information pertaining to the results of, and estimates, assumptions and projections provided in, the Wheeler PFS and the Waterbury PEA, including future development methods and plans, market prices, costs and capital expenditures; assumptions regarding Denison's ability to obtain all necessary regulatory approvals to commence development at Wheeler; Denison's percentage interest in its projects and its agreements with its joint venture partners; and the availability of services to be provided by third parties. 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 faces certain risks, including the current and potential impacts of the COVID-19 pandemic, use of mining methods which are novel and untested in the Athabasca basin, the inability to permit or develop its projects as currently planned, the inability to secure sufficient financing to pursue its business objectives, the unpredictability of market prices, events that could materially increase costs, changes in the regulatory environment governing the project lands, and unanticipated claims against title and rights to the project. 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 13, 2020 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.

Readers should not place undue reliance on forward-looking statements. The forward-looking information contained in this presentation is expressly qualified by this cautionary statement. Any forward-looking information and the assumptions made with respect thereto speaks only as of February 8, 2021. Denison does not undertake any obligation to publicly update or revise any forward-looking information after such date 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 Mineral Resources and Mineral Reserves: This presentation may use terms such as "measured", "indicated" and/or "inferred" mineral resources and "proven" or "probable" mineral reserves, which are terms defined with reference to the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") CIM Definition Standards on Mineral Resources and Mineral Reserves ("CIM Standards"). The Company's descriptions of its projects using CIM Standards may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements under the United States federal securities laws and the rules and regulations thereunder.

Qualified Persons

The disclosure of a scientific or technical nature within this presentation, including the disclosure of mineral resources, mineral reserves, as well as the results of the Wheeler PFS and Waterbury PEA, was reviewed and approved by David Bronkhorst, P.Eng., who is a Qualified Person in accordance with the requirements of NI 43-101.

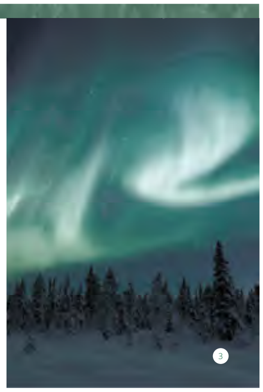
Technical Reports

- For further details regarding the Wheeler River project, please refer to (a) the Company's press releases dated December 1, 2020, regarding the adoption of the freeze wall design for ISR at Phoenix, and September 24, 2018, regarding the Prefeasibility Study, and (b) the technical report titled *"Prefeasibility Study for the Wheeler River Uranium Project, Saskatchewan, Canada"* with an effective date of September 24, 2018 ("Wheeler PFS").
- For further details regarding the Waterbury Lake project, please refer to the Company's press release dated November 17, 2020 and the technical report titled *"Preliminary Economic Assessment for the Tthe Heldeth Túé (J Zone) Deposit, Waterbury Lake Property, Northern Saskatchewan, Canada"* with an effective date of October 30, 2020. ("Waterbury PEA"). **The Waterbury PEA is a preliminary analysis of the potential viability of the Project's mineral resources, and should not be considered the same as a Pre-Feasibility or Feasibility Study, as various factors are preliminary in nature. There is no certainty that the results from the PEA will be realized. Mineral resources are not mineral reserves and do not have demonstrated economic viability. Scheduled tonnes and grade do not represent an estimate of mineral reserves.**

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 13, 2020. Copies of the foregoing are available on Denison's website and under its profile on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

Agenda

- **Prayer / Introductions**
- **Overview of Committee**
- **Wheeler River Project**
  - Brief overview
  - Update to Project
  - Geotechnical drilling program (2021)
- **Status of Wheeler River Environmental Assessment**
  - Environmental Assessment process to date
  - Valued Components
- **Next Meeting Date and Topics**

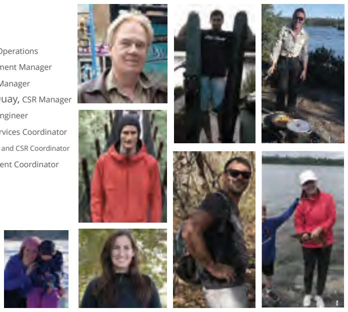


Overview of Committee

- Perspectives of Committee Members
  - Purpose
  - Vision
  - Expectations
- House-keeping
- Logo Contest?

Denison Team

- Dave Bronkhorst, VP Operations
- Janna Switzer, Environment Manager
- Chad Sorba, Technical Manager
- Carolanne Inglis-McQuay, CSR Manager
- Xavier Lu Dac, Senior Engineer
- Dana Harris, Project Services Coordinator
- Mike Dawe, Environment and CSR Coordinator
- Jenn Skilnick, Environment Coordinator



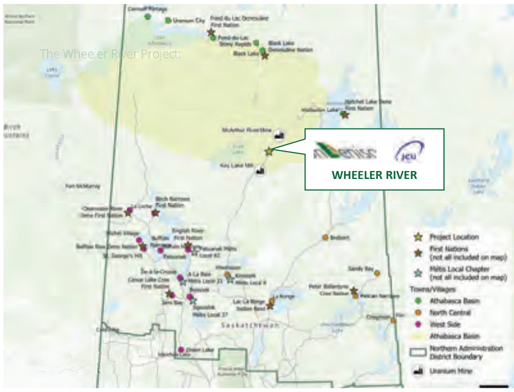
Company Overview:

Denison is focused on opportunities in northern Saskatchewan

- 22.5% interest in **McClean Lake Uranium Mill**
- 90% interest in Flagship **Wheeler River** project
  - Advancing through development process
  - Largest undeveloped uranium project in the infrastructure rich eastern Athabasca Basin
  - Environmental Assessment ("EA") initiated
  - Progressive approach to mining using In Situ Recovery ("ISR") method
- 66.9% in the **Waterbury Lake Property**, hosting the Tthe Heldeth Túé (formerly J Zone) deposit
  - Recently completed Preliminary Economic Assessment ("PEA")[1]
  - Amenable to ISR mining method
- Several other interests in the Athabasca Basin region
  - **McClean Lake, Midwest,** and **Waterbury Lake** properties, all in close proximity to McClean mill
  - **+250,000 hectares** of exploration ground

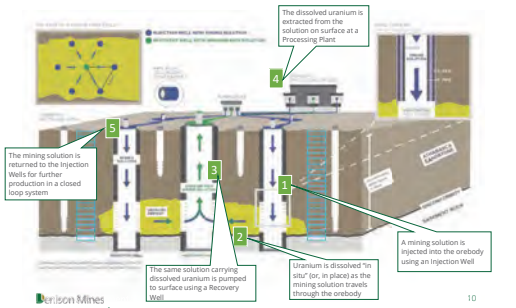
NOTES: (1) See Denison's news release dated Nov. 17, 2020; The PEA is a preliminary analysis and should not be considered the same as a Pre-Feasibility or Feasibility Study, see Cautionary Statements slide for details

ISR field testing at Wheeler River Phoenix Deposit, Summer 2019



NOTES: Phoenix Site Layout
Date: Q4 2020
Source: Wheeler River Internal Records
Subject to Environmental Assessment and Company Approval

In Situ Recovery ("ISR") Mining[1]:
Introducing a proven mining technique to the Athabasca Basin



NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018. (2) Figure reflects Denison's decision to adopt a freeze wall approach (see press release dated December 01, 2020)

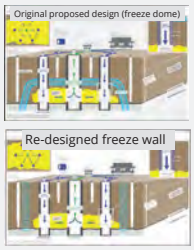
ISR Mining:
A progressive approach to uranium mining uranium in the Athabasca Basin

How is ISR Different?[1]
- All activities occur at surface; there are no traditional underground workings
- The ISR mining area has only wells and pipes to plant; no open pits, head-frame, or major earthworks
- There is no tailings production or long-term tailings storage, plus no large waste rock piles

Waste Management Vision
- Two main waste streams expected:
  - Gypsum (non-radioactive) – remediated on site
  - Radium/Iron precipitates (radioactive) – removed from surface
- No long term waste management expected to be required after mine closure

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018.

Freezing Containment Improvements:
Adapting to freezing configuration commonly used in the Athabasca Basin

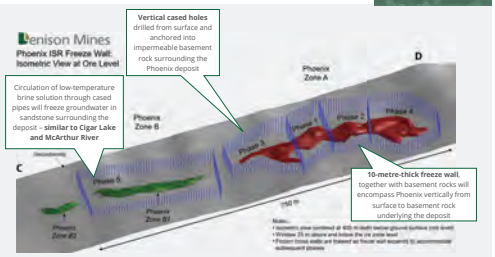


Freezing Concept Exists in Athabasca Basin
- Freezing from surface is used at Cigar Lake and McArthur River to enable safe mining activities
  - Standard exploration drill is used
  - Freezing technology well understood in the Athabasca Basin

What Does Freezing do for the ISR Operation?
- A freeze wall or dome creates a barrier between solution in the mining chamber and the receiving environment; creates a contained cavity for the mining solution to extract the uranium from the ore
- Freeze containment is an additional layer of protection to the controls in place of: water pressure above, pumping controls, double-walled pipes and monitoring wells
- ISR is new to uranium mining in Canada and the freeze containment provides an additional layer of protection

Freeze Containment :
Established method to create frozen barrier around mining area[1]

Key Components for the Project



NOTES: (1) See Denison's news release dated December 1, 2020 for additional information on the freeze wall design for Phoenix.

Video

2021 Geotechnical Drilling Program

Action: Denison sent YNLR the *draft* application for the permit for advanced review

Location: Wheeler River Project site

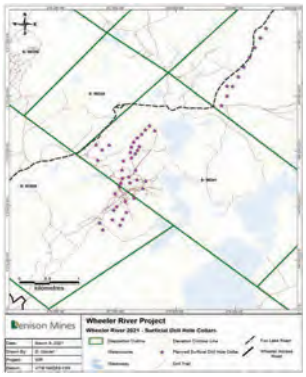
Purpose of Activities: Shallow drilling to understand the ground conditions in the area to advance infrastructure site design

Total Number of Drill Holes: 48, ranging in depth from 3m to 15m; 50% of drilling is anticipated to occur in previously disturbed area; drill pads no to exceed 6m by 15m (significantly smaller than diamond drilling); no core recovered; completed holes to be back-filled unless monitoring of water levels occurs

Proposed Timing: 2 weeks, end of summer, early fall (should no other delays occur)

Trail and Water Crossings: Existing to be used wherever possible; approximately 2km may be required; no need to install new permanent water crossings

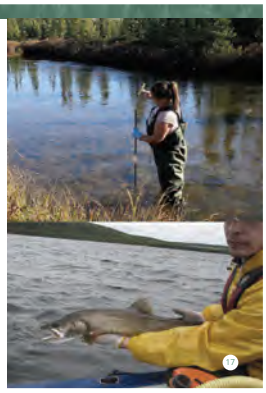
Example Truck-Mounted Drill Rig



Environmental Assessment:
Understanding the Project's interactions with human and biophysical environment

Baseline Studies
- Environmental baseline studies have been ongoing since 2012
  - Denison needs to understand the current environmental conditions within and around the Wheeler River Project area

Environmental Assessment
- Initiated the federal and provincial environmental assessment processes in May 2019 with the Wheeler River Project Description
  - **Lead federal regulator**: Canadian Nuclear Safety Commission
  - **Lead provincial regulator:** Saskatchewan Ministry of Environment, Environmental Assessment Branch
- Technical studies designed to understand potential effects of the Project on the biophysical and human environments



Valued Components:
Understanding effects on the things that are important

- **Gain an understanding** of what is important to the people who use the area and to the people who may be affected by project activities.
- **Gather information** through research, from regulator feedback and through engagement with communities and Indigenous groups communities
- **Design the environmental** studies to predict how the VC's may change and what measures can be put in place to minimize and monitor the changes
- **Monitoring and reporting** of the changes to VC's will carry on throughout all phases of the project into decommissioning and post closure

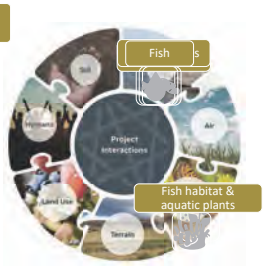
Economy

Land and Resource Use, Cultural Continuity

Quality of Life

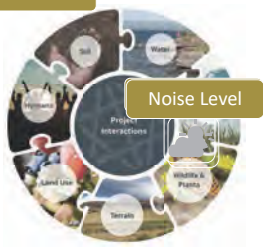
Terrestrial

Aquatic



Groundwater

Atmosphere & Acoustic



Event: Nuhtsiye-kwi Benéne Committee (Ancestral Lands Committee) Zoom Meeting
Date: April 22, 2021, 1:30pm to 3:30pm
Info: Meeting called by Denison and English River First Nation. Denison's presentation on Wheeler River was shared in advance. Zoom meeting recorded.
In Attendance: ***Denison*** Carolanne Inglis-McQuay, Janna Switzer, Chad Sorba
Committee Members and Invited Guests 6 attendees

Opening in a Good Way

Prayer offered by Committee Member- Introductions
Committee Member: shared the pronunciation of the committee's name in Dene.
Group discussed: Adding the name of the committee and description to the website. Can also introduce over Facebook.
Committee Member suggested incorporating a youth component that another Committee Member could lead to share words in Dene and Cree related to the committee's process and learnings.
Overview of Committee – Gain Perspectives of Committee Members on Purpose, Vision, Expectations

Brainstorm/Open Discussion

Committee Member (CM) and Denison (DEN):

CM- Shared that the intention of the committee is to respect the land. *If you respect the land – the land will respect you. ERFN holds the land in high regard.*
CM- Said the committee needs to represent the nation with and its varied perspectives…leadership, youth, Elder/Lands, land-user.
CM- *Our purpose is to let Denison know how we feel, giving a voice to the people in a community in a respectful way, share information – two-way sharing.*
CM- *We are a land use nation – land base and traplines that have been used for generations and is still being used…it has changed over the years, and we want to share how that change impacts us – but realizing that land use does change. ERFN still uses the land as a mode of subsistence. Hunters and trappers are still ways of living for some. Denison is visitors of our land. The land is here for us to use and respect. We are here to make sure everyone respects the land.*
CM- *There were no committees back then when McArthur and Key started – and that area is quite demolished. We used to meet with the Ministry of the Environment and there was no regard. We have built a good relationship with Denison – and we must continue to talk. We might have some disagreements. I feel strongly about the land – moose, berries, etc. The way you did it last year – worked well. You came to the camp and we shared whatever you wanted to know. That was a good way. Companies must realize this – this is part of our lives and how we teach our children. It is a lot to keep giving the information over and over, but I appreciate there is a better of understand. We have been here for generations, and we want the land to be here for our children.*
CM- *I'm concerned about the forest fires. I was told if a fire goes through companies don't need to get a permit. Dufferin (exploration area) + [other comments made, hard to hear]*

DEN- We want to understand your perspective and how we can work together. I've heard this from many that Province's burn policy is deeply concerning to many.

CM- *It is great we have a youth because we will be the voice of the community. Our youth rep can help educate the youth. And having an Elder and land-user is valuable too – having a variety of concerns and perspectives means we can do better*.
CM- *The Chief and Council asked me, and I felt like I need to speak for my peers. I've been to the area before.*

DEN- My perspective on these committees has changed. I used to think it was about giving information out and trying to prove the safety. I do want to build this mine with the least impact to the environment, but I am here to learn to. I do not live in the area and I want it to be equal sharing. I want you to feel comfortable and trust that we will answer questions.

CM- *Government policies have really hindered our lifestyles and rights. We might object to certain things and that's because of the land use in certain areas.*

DEN- Active listening is really important – I'm trying to do more of that – to really take what I hear and incorporate into the project.

CM- *I like that we have technical people (Denison) on this committee. I want scientific information presented in a way that is easy to digest and understand. ISR is super confusing, and it hasn't been done in the basin. It sounds super cool, and too good to be true in a way. I don't want these meetings to be a social gathering – or a reassurance committee – but real meat and potatoes.*

Discussion Surrounding Access

DEN- What do we consider about having access to site for ERFN members and non-members. What would you recommend that show respect for the land and the Nation?

CM- *That super important – especially during hunting season. We want you to be mindful of your activities during critical times for us.*
CM- Gate check-in works for ERFN (Fox Lake Road). We have a lot of lessons learned already to draw on. Should be able to think of things that are easier

DEN- Right now, our access road goes right through, but the old road might work to go around. We want people to be able to have access to what they need to but be safe. It would be good to look at map and those plans together and talk through to get your feedback.

NEXT MEETING: Discussion about Access to the site (generally) for inclusion into decision-making about final access roads, locations, policies, etc

Housekeeping (honoraria, etc.)

CM- provided an update to committee. Honoria will be paid by ERFN/DNG and will be in touch to set up either cheque payments or direct deposits.

Logo Contest: Brief discussion about a logo contest being launched to help share more about the committee and the negotiation process during this announcement phase to the community. A Committee Member suggested having posters at the school, announcing it on the radio station and through Facebook would be an effective way to share the contest details. Committee Members will work together on the details.

Wheeler River Project 101 (Who, what, where, when, why?)

DEN- shared Power Point slides to walk through the basics of the project made of Griffin/Phoenix deposits, with a focus on the Phoenix deposit. Griffin is in the long-term plans. The deposit is in between Key Lake and McArthur. About 100kms from camp. The deposit is 2kms long, 20kms wide. It is a compact site, a lot smaller than the traditional frame of reference. The freeze wall contains the operation and prevents leaching to groundwater. Monitoring wells are planned on all sides of the operation. With this method, no tailings facility is needed.

CM - *What is the life span of Phoenix*?

DEN-About a ten-year mine life.

CM - *ERFN has 19 reserves, would be nice to see those shown on the map as well.*

ACTION: Denison to update map with all ERFN Reserves on it - i.e., Slush Lake reserve, Haultain, etc.

CM - *Is the rock all the same between zones? The effect the same?*

DEN-The rock changes ever so slightly, but drilling is the same. Once the holes are installed the change comes with the time for the freeze wall to develop. IE. One year to 14 months.

CM - *Does the freezing change the rock?*

DEN-It changes the water in the rock, freezing it – to create the wall. The sandstone is permeable.

CM - *When you fill the holes, it will be the same as before?*

DEN-The solution will be taken out and backfilled so there is no connection to groundwater.

Are the holes lined?

DEN-They are standard diamond drill holes – steel casings, capped after. The drilling is done by companies owned by northern communities. It will take one year to drill and one year to freeze. This means sustainable business opportunities over an eight-year period. This is a lot more sustainable than one big job. This change came about when plans moved from a freeze dome to a freeze well. moved from dome to wall. It's not fracking, we have heard people are worried about this.

CM - *I didn't realize there was these outside tines coming in (permeability enhancement). When you are reclaiming, will there still be open holes?*

DEN-They will be closed. We will fill the main drill holes and that will cut off the tines (permeability enhancement).

CM - *What is the name of the solution?*

DEN-Lixiviant. It is a combination of peroxide, iron, and sulphuric acid. It was important to [ERFN member] that we are clear about the fact that it is an acidic mining solution – to be transparent with people about the nature of the solution. When you inject it into the ground, as part of the process, it dissolves. We use the acidic solution to extract uranium, and it's recovered when you pull it up to recover the uranium. It is described as a leaching process, similar to what is done at the front-end of the mill at McClean Lake.

CM - *What do the monitoring wells do?*

DEN-They are an extra layer of protection. We have the recovery well that is double lined with two layers of steel, and a layer of cement, then a freeze wall – same technology as Cigar and McArthur – freezes water in the rock.

CM - *Why hasn't it been used elsewhere?*

DEN-We have a better understanding of ISR now. This technology has advanced over time. You have to have the right conditions to use ISR.

CM - *Has uranium been mined with ISR in other places?*

DEN-Yes, it has been used in several places, including the US, Kazakhstan and Mongolia. It has also been used with copper and other deposits. However, we are looking at a much higher grade, 19%, compared to other operations. In other operations they have been working with an aquitard (impermeable layer on the top and bottom of the deposits). In this case we are creating an aquitard with a freeze wall on the sides and using pumping pressures to keep the lixiviant at depth at the ore body.

CM - *Has it gone sideways other places?*

DEN-No, I'm not aware of other ISR projects failing. There are pump and injection tests with groundwater to understand the deposit and where the water goes before introducing acid. It takes a lot of baby steps over many years. The Environmental Assessment (EA) focuses on what happens outside the freeze walls. That includes looking at what comes to the surface with the groundwater. We are more concerned about the freeze wall getting too big versus it not working. We will run it to see what happens if it came down. But what we are hearing is it's a 0% chance. The monitoring wells exist so everything can be tracked. You can also install pumps to draw anything out should something break down which allows us to flush the system. So, what we are planning is above and beyond what traditional ISR sites have for safety.

CM - *Although it hasn't been done here, I agree with this kind of mining. I feel it is a better method. The only thing is that our youth – is there training for the types of jobs that will be there? I like it*

Brief overview of the Environmental Assessment Project
Discussion of Valued Components – tabled for next meeting.
Permits for the Geotechnical Drilling for the Project (summer 2021)
Permit up to 48 small holes (won't do that many); small program over two weeks to test the ground conditions at Wheeler for the planning process related to the infrastructure (like the process plant, the airstrip, etc)
Environmental and Cultural Monitor (Summer position)
Would like the monitor to be part of the test this summer.
Committee Member would like the committee to meet at the site this summer if all is well.
Dension would like to include Chief and Council too in the site visit.
Committee Member would like to see that Denison team have vaccines before visiting community/camp or ERFN going to the site.
Would like to talk about decommissioning -not just underground but from on top too. What will the land look like? Will trees be back in the air strip?

NEXT MEETING: Include discussion about decommissioning process – surface and subsurface; include discussion about the studies recently conducted on ore body collapse and / or subsidence

---

Next Meeting Date and Topics

Set next meeting date – June 8, 2021 (1:30 to 3:30) via Zoom
Zoom Link: https://us02web.zoom.us/j/81163352282?pwd=YUJUTkkxVTE2S1JXeERnOFgxdjNKQT09
Topics to discuss:

- Heritage management
- Access to site
- Decommissioning concepts

Action Items

Action	Responsibility	Timing
Logo Contest for committee to engage community members	ERFN Communications [redacted]	May
Add committee description to website including pronunciation	ERFN Communications [redacted]	Beginning of May
Share name with community via FB post	ERFN [redacted]	Align with website – so post can direct people to the site for more information
Add all 19 reserve lands to project map	Denison	ASAP
Provide Denison vaccine policy to committee	Denison	Prior to summer camp/site visits
Align on agenda/topics for June 8 meeting	Denison to provide to ERFN for review	Mid May

Meeting adjourned at 3:45 p.m.

Denison Mines

Uranium Development & Exploration

The Wheeler River Project

June 15, 2021 Nuhtsiye-kwi Benéne Committee (Ancestral Lands Committee)

Cautionary Statements & References

This presentation and the information contained herein is designed to help you understand management's current views, and may not be appropriate for other purposes. This presentation contains information relating to the uranium market, third party and provincial infrastructure, and the plans and availability thereof, derived from third-party publications and reports which Denison believes are reliable but have not been independently verified by the Company.

Certain information contained in this presentation 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 presentation contains forward-looking information pertaining to the results of, and estimates, assumptions and projections provided in, the Wheeler PFS and the Waterbury PEA, including future development methods and plans, market prices, costs and capital expenditures; assumptions regarding Denison's ability to obtain all necessary regulatory approvals to commence development at Wheeler; Denison's percentage interest in its projects and its agreements with its joint venture partners; and the availability of services to be provided by third parties. 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 faces certain risks, including the current and potential impacts of the COVID-19 pandemic, use of mining methods which are novel and untested in the Athabasca basin, the inability to permit or develop its projects as currently planned, the inability to secure sufficient financing to pursue its business objectives, the unpredictability of market prices, events that could materially increase costs, changes in the regulatory environment governing the project lands, and unanticipated claims against title and rights to the project. 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 13, 2020 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.

Readers should not place undue reliance on forward-looking statements. The forward-looking information contained in this presentation is expressly qualified by this cautionary statement. Any forward-looking information and the assumptions made with respect thereto speaks only as of February 8, 2021. Denison does not undertake any obligation to publicly update or revise any forward-looking information after such date 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 Mineral Resources and Mineral Reserves: This presentation may use terms such as "measured", "indicated" and/or "inferred" mineral resources and "proven" or "probable" mineral reserves, which are terms defined with reference to the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") CIM Definition Standards on Mineral Resources and Mineral Reserves ("CIM Standards"). The Company's descriptions of its projects using CIM Standards may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements under the United States federal securities laws and the rules and regulations thereunder.

Qualified Persons

The disclosure of a scientific or technical nature within this presentation, including the disclosure of mineral resources, mineral reserves, as well as the results of the Wheeler PFS and Waterbury PEA, was reviewed and approved by David Bronkhorst, P.Eng., who is a Qualified Person in accordance with the requirements of NI 43-101.

Technical Reports

- For further details regarding the Wheeler River project, please refer to (a) the Company's press releases dated December 1, 2020, regarding the adoption of the freeze wall design for ISR at Phoenix, and September 24, 2018, regarding the Prefeasibility Study, and (b) the technical report titled "*Prefeasibility Study for the Wheeler River Uranium Project, Saskatchewan, Canada*" with an effective date of September 24, 2018 ("Wheeler PFS").
- For further details regarding the Waterbury Lake project, please refer to the Company's press release dated November 17, 2020 and the technical report titled "*Preliminary Economic Assessment for the Tthe Heldeth Túé (J Zone) Deposit, Waterbury Lake Property, Northern Saskatchewan, Canada*" with an effective date of October 30, 2020. ("Waterbury PEA"). **The Waterbury PEA is a preliminary analysis of the potential viability of the Project's mineral resources, and should not be considered the same as a Pre-Feasibility or Feasibility Study, as various factors are preliminary in nature. There is no certainty that the results from the PEA will be realized. Mineral resources are not mineral reserves and do not have demonstrated economic viability. Scheduled tonnes and grade do not represent an estimate of mineral reserves.**

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 13, 2020. Copies of the foregoing are available on Denison's website and under its profile on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

Agenda

- **Prayer / Introductions**
- **Wheeler River Project**
  - Geotechnical drilling program (2021)
- **Update on Environmental & Cultural Monitor**
- **Site Access Considerations**
- **Surface Subsidence Assessment**
- **Linear Feature Reclamation Pilot Program**
- **Next Meeting Date and Topics**

2021 Geotechnical Drilling Program

Action: Denison sent ERFN the *draft* application for the permit for advanced review

Location: Wheeler River Project site

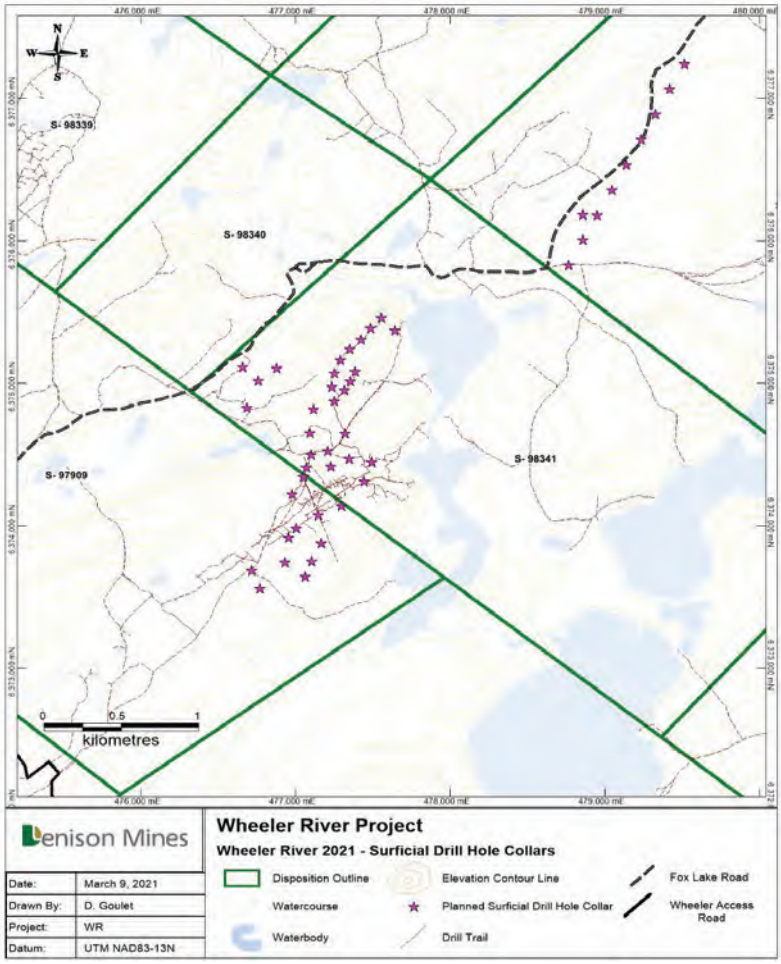
Purpose of Activities: Shallow drilling to understand the ground conditions in the area to advance infrastructure site design

Total Number of Drill Holes: 48, ranging in depth from 3m to 15m; 50% of drilling is anticipated to occur in previously disturbed area; drill pads no to exceed 6m by 15m (significantly smaller than diamond drilling); no core recovered; completed holes to be back-filled unless monitoring of water levels occurs

Proposed Timing: 2 weeks, end of summer, early fall (should no other delays occur)

Trail and Water Crossings: Existing to be used wherever possible; approximately 2km may be required; no need to install new permanent water crossings

Example Truck-Mounted Drill Rig

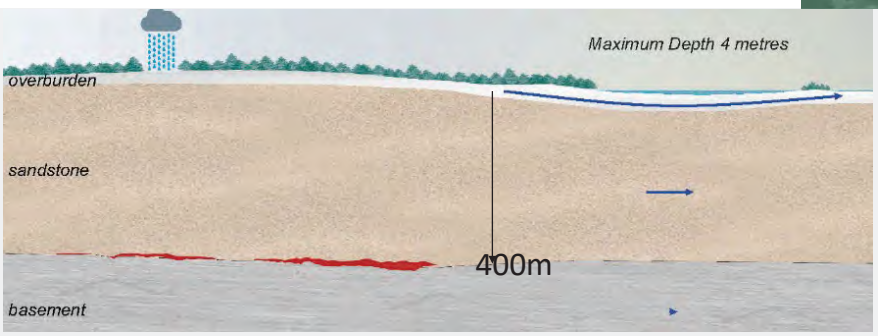


Environment & Cultural Monitor – Update

- Job Description – Advertised for May 5 to May 21
- 8 Applicants
- Denison and ERFN collectively reviewed the applicants information and selected Walter Janvier
- He happily accepted the offer
- Currently:
  - Working on a contract
  - Providing Walter with overview of exploration activities and associated requirements
  - Planning for his presence this summer at Wheeler and other sites

Site Layout Considerations

Decommissioning Planning and Approach: Considering Potential Surface Disturbance



For planning purposes, Denison wished to understand:

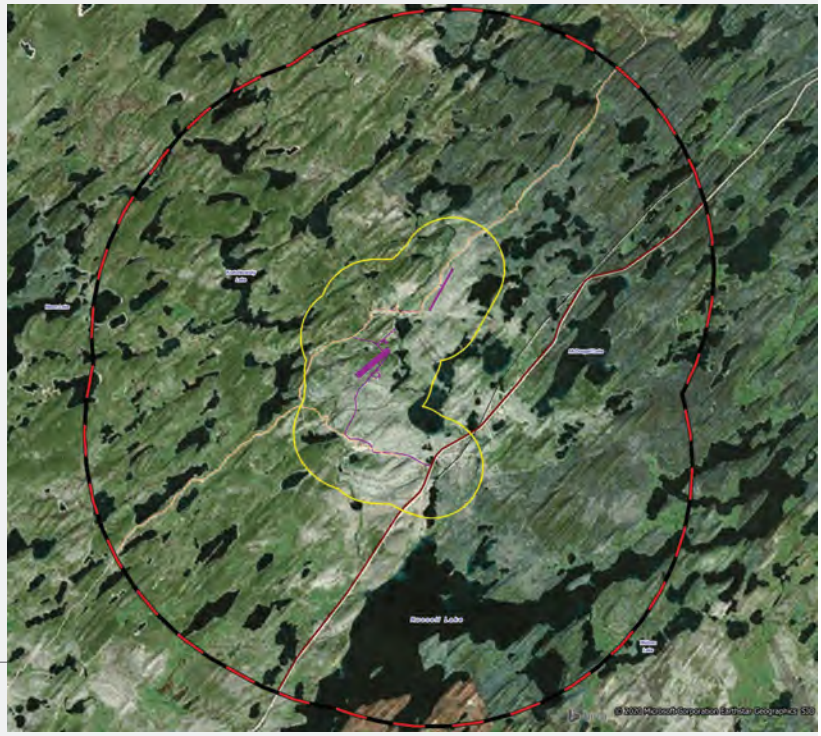
1) if there might be any potential surface subsidence (sinking) due to the removal of the uranium from the ore body and
2) The risk of mining cavity collapse during operations

Third party expert undertook this assessment:

1) The maximum potential surface subsidence would be 7.5cm (shorter than a pencil)
2) The risk of mining cavity collapse during operations is minimal

Linear Feature Reclamation Pilot Program

- The Wheeler River Project falls within the Boreal Shield Region of Saskatchewan - for Saskatchewan woodland caribou planning this is the SK1 unit
- In 2018, Environment Canada (ECCC) indicated that total buffered anthropogenic disturbance should not exceed 5% and total disturbance (natural + buffered anthropogenic) should not exceed 40%
- The idea is that < than this = sustainable caribou populations



Linear Feature Reclamation Pilot Program

The best guidance available for northern Saskatchewan (SK1) can be derived from the SK2 West Draft Range Plan, where five land management strategies have been outlined:

- avoidance
- reclamation/restoration
- mitigation offsets for new disturbances
- forest harvesting patterns
- access management

Several steps to the baseline data collection have brought us to this point.

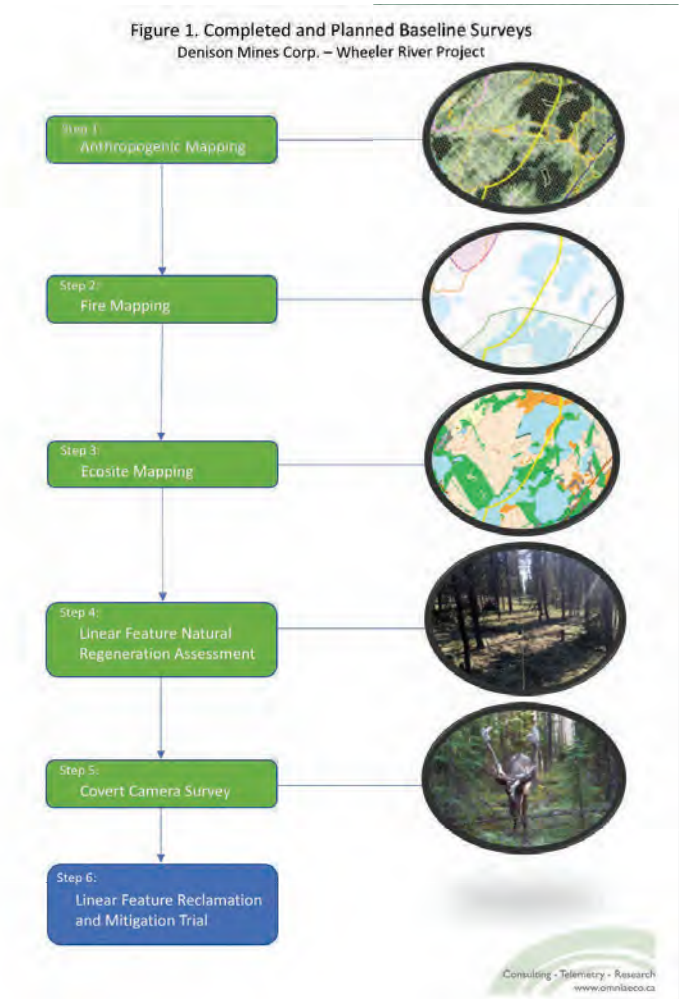


Figure 1. Completed and Planned Baseline Surveys
Denison Mines Corp. – Wheeler River Project

Linear Feature Reclamation Pilot Program

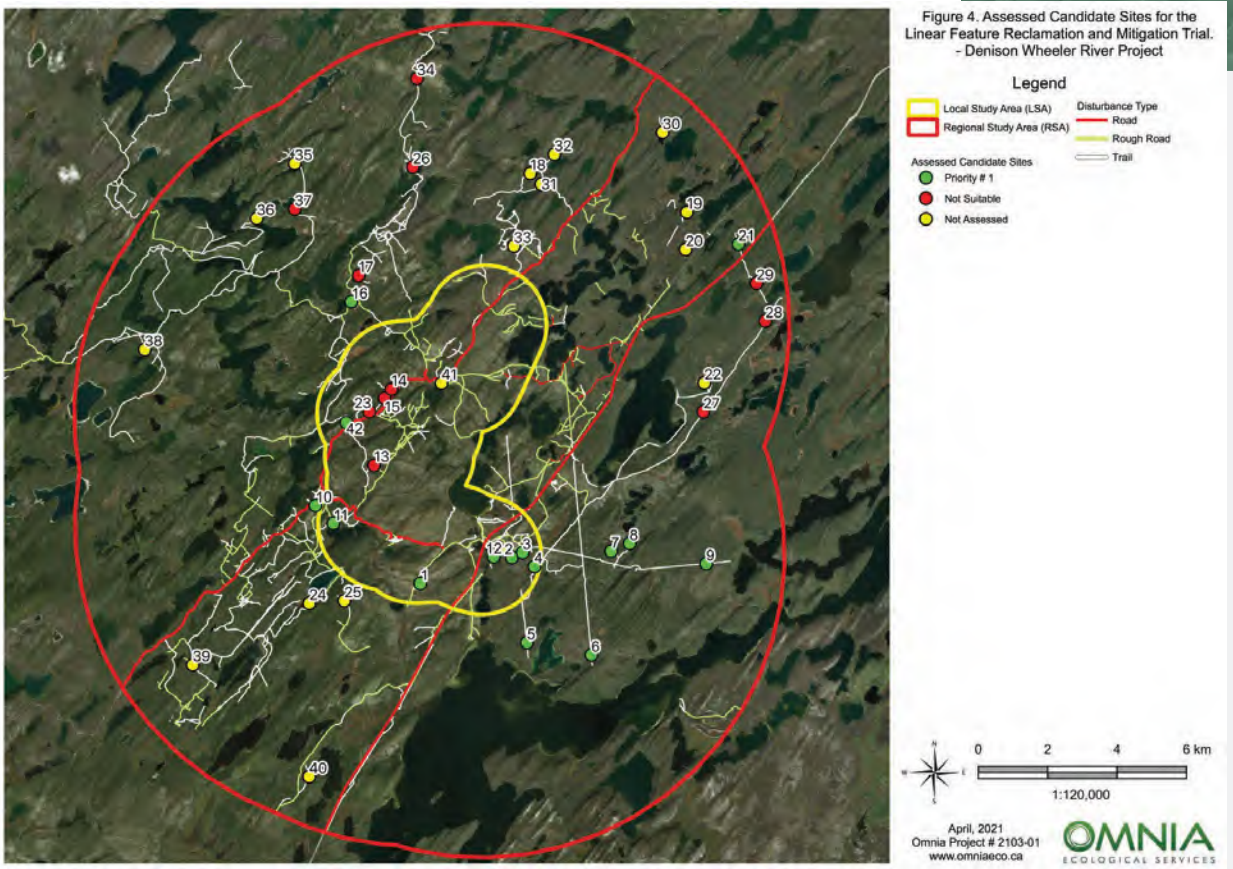
Photograph 2.3-1 Area burned after line creation.

Photograph 2.3-2 Area burned before line creation.

Denison Mines

WHEELER RIVER | POWERING PEOPLE

Linear Feature Reclamation Pilot Program



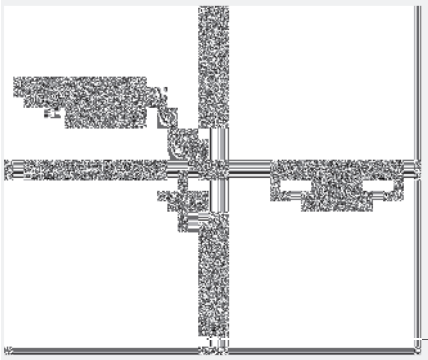
Linear Feature Reclamation Pilot Program

Suggested treatment types.

Type	Treatment 1	Treatment 2	Treatment 3
Seeding/planting	√	√	√
Coarse Woody Debris*	√	√	
Tree Tipping**	√	√	
Fencing		√	√
Mounding			√

* Ease of installation (i.e. lots of potential CWD), repeat methods proposed by Keim et al. 2019.

** When tree buffer height to feature width ratio is > 0.5 (Jean 2017).



Event: Nuhtsiye-kwi Benéne Committee (Ancestral Lands Committee)
Date: June 15, 2021, 1:30pm to 3:30pm
In attendance: ***Denison*** Carolanne Inglis-McQuay, Janna Switzer, Xavier Lu Dac
Committee Members and Invited Guests 12 attendees (ERFN, SVS, Omnia)

Introductions:

Elder prayer
Committee Member: proposed using the Dene name for the committee to avoid white-washing; get in habit of pronouncing it.
Denison: Agreed

Geotechnical Permit Conclusion

Denison: Reviewed the pending permit that was discussed last meeting. *It involves shallow drilling to better understand the nature of the ground conditions. 48 holes are planned to be completed for the end of summer. The permit will be filed towards the end of the week, so can expect to see it coming from the Ministry.*
Committee Member: Asked about the timeline.
Denison: The drilling program for this permit will be two weeks long at the end of summer or early fall.
A map was displayed.
Committee Member: Requested to have the reserve communities overlayed. She asked if this planned activity could it impact or disturb game – where we will be hunting during the cultural camp.
Janna clarified that this is right at the Wheeler River site where the work will be done. The camp is Kilometer 167, and the site is Kilometer 232. She also noted that the map is a small area, 5kms across.
Committee Member: Would like to see traditional lands areas included as well on the maps.
SVS: That will come out in the SVS work and that drafts will be coming out from [redacted].

Actions from Last Meeting

The ERFN reserves were laid over the map. This will be good to share with the community.
One video clip was filmed on the pronunciation – working through a few technical issues.

Update on Environmental and Cultural Monitor

Nine applications were received (one late); eight were reviewed. The committee landed on an individual to hire– this person has accepted the offer. Once everything is finalized it will be good to introduce the hired person's position publicly.

Site Access Considerations

Denison has several factors to be considered related to access to the Wheeler River site so wanted to present to the committee to get feedback and address questions and concerns.
- Fox Lake Road is the existing access road that comes out of the 914 highway – currently it is not in great shape. Denison is proposing straightening and extending it a little to access the airstrip.

It was explained that Denison would prefer to work with Cameco and not build this airstrip with two others being in the area. But right now, Denison must prepare the assessment with the airstrip going in. This means there is a need to re-establish the Fox Lake Road and upgrade it. Restrictions to access at the active well would occur for safety reasons only, as well as A restriction to the north end as well.
Committee Member– is there any area not in green that's restricted?
Denison– no, the green shows the industrial machinery. If they are in the area, we'd be happy to have them check in just to alert to areas of concern – especially in the winter.
Committee Member- there hasn't been a problem with the access set-up with Cameco, so I don't anticipate one with this. I know a few areas where there is a good hunting and berry picking. I don't go through the gate, I go via the old Fox Lake road – you wouldn't even know I was around there. I don't think there will be a problem.
Denison: given that these 2 bridges don't currently exist, do people use this segment of road?
Committee Member -we do, but we don't go further – we use that trail to Cree Lake. It goes right by a little cabin at Calhoun Lake. We go around that area – but we try to stay out of the old Fox Lake Road.
Denison: if these bridges go back in, which we would need to for the airstrip, would it be an opportunity or concern, or both for ERFN? We want to design to your interests and also for being safe. This won't be the only time we talk about it – but it's the point of the committee is that we can bring it to you early.
Denison- we can alter the gatehouse plans as needed.
Denison: you don't need to have the answers now, just something to keep in mind as we go.

Subsidence Study

Denison: said Denison wanted to make sure they responded to the concerns about surface disturbance due to activities underground. *Subsidence occurs when ground shifts due to activity underground. We've worked with third-party experts to help determine what is happening because what we are doing underground is quite different with our mining method. What we are taking out is quite minimal. Max amount of subsidence is 7.5 cms – shorter than a pencil. The third-party also found that the risk of mining cavity collapse is minimal. A graphic was shown as part of the presentation to illustrate what it would look like underground.*
Committee Member -thank you for that. It is a lot less of anthill maze than what we had envisioned.

Linear Feature Reclamation Pilot Program

Denison: introduced attendees from Omnia.
Omnia: Explained the government is guiding the planning to make sure caribou habitat is reclaimed.
Said Omnia's role in mapping was to understand the wildlife elements. Said it's known that disturbance to the environment is a determinant to cows and calves in particular. This includes natural disturbance and people-created influences. Environment Canada has provided some guidance for thresholds: disturbance, including buffers – should not exceed 5% of the area (anthropogenic), specific calving areas have not been incorporated

Committee Member – that might be something we'd like to see added, we've done some of that work – there is a little pocket that is for calving specifically. Even though you are following the guidelines, we'd like to see the pocket included – so, there's less disturbance in that particular area. Always better to go beyond the standard.

Omnia- calving is important part of the life cycle as is strong access to lichen etc. in the winter.

Committee Member – I'd like to see something a little more tailored to the area and review the maps developed with MLTC, ERFN and the government.

Committee Member -There is a calving pocket in there.

Omnia- that information would be helpful. And what you will see in the next slide is a test pilot program aimed at mitigating any negative impacts. That information could guide us and help us target areas.

Denison: this likely won't be in the EA – but it is happening in parallel, as early work, pre-licensing.

Committee Member - as long as work doesn't happen, before this work is done.

Denison: we want to have that information for sure, I am just wanted to be clear you might not see the results in the EA because the work will continue over the next couple of years.

SVS- we will go back and look, and we will be asking these questions in the land use study too to support this work.

Omnia: moved to the next study and explained it as a refining of the province's work around fire mapping. Said they are trying to understand how the wolves, bears and caribou are using the land features and different habitats to help set up the mitigation trial – trying to "fix" the landscape to support caribou population – i.e., avoid what you can that's important to caribou, adapting footprint, and customizing reclamation. **Omnia:** Not all areas need help – but [redacted]said they will look at areas with the best aspects without blocking areas for travel. Block one line, monitor the other in terms finding a balance. Plan to implement mitigation and monitor by using cameras to see how well the features are working. We want to discourage predators from using the features to restore the balance – studies show that wolves travel 2-3X faster on trails.

Committee Member - how long does the lichen grow back post fire?

Omnia: We found that a lot of the regrowth happens quite early – very slow in the first ten years, then really fast, peaking at about 25 years until the blanket of pine trees get denser making for less lichen. After 70,80,90 years you are back to full thick lichen map. This can take 100 years.

Committee Member - Elders said after natural disasters it could take 35 years. This land that Denison is on is pretty burnt except for some patches thar are areas for caribou. The moose are coming back slowly. Would be easier to see the habitats marked on a map to play it safe. We can keep it simpler than what you are proposing.

Omnia: it will have to coincide with the ore. Historically there have been a lot of fire, but there has always been caribou. We found they still do use burned areas, sometimes they will access muskeg or fingers of land that were missed. They come in and pick the residual areas – and this is even in very recent burns, like a year later. They must be somewhat adapted. But as soon as we put a road in etc., that changes the balance. I'm just saying I'm not sure how bad the fire is for caribou.

Denison: Have you noticed certain areas the caribou are using?

Committee Member - I've seen a couple in the patches not burned.

Denison: The lines that are cut, that essentially make a highway for the wolves to chase down caribou, has that been a concern?

Committee Member - We hunt around that Brown Lake area – we have seen wolf tracks but there is caribou there because of the green areas. We haven't been concerned about the wolves. Moose is more our mainstay.

Committee Member - That's what we have in our freezer. Moose has the same concern and affect for ERFN – not just the government protected caribou. We want to know how moose would be impacted.

Omnia - part of our baseline studies took pictures of all wildlife. So, we have a baseline of which animals are using the trails and how much compared to each other. Now want to block some of the trails to monitor results. The results will let us know how bears, wolves, caribou, and moose are reacting. Predators can travel more ground – so it increases their odds of them coming across something – moose or caribou.

Omnia – We will see the effect on moose, but the study is still on caribou. (Showing on map – sites visited.) Green – ones they could access Yellow-not accessed, Red-not suitable. Have 12-13 good sites they can set up in. Have tried to evaluate the best approach given the area – dragging deadfall in to block lines, tree tipping next to line, biodegradable fence (burlap) – more of visual barrier than physical, and if close to the mine site could do some pitting to make it hard to access the area.

Seeding or planting is last on the list to form a longer-term natural barrier. The intention is to be practical, something that can be done by hand. The expectation will be if you disturb you will have to mitigate. This is a very local, small sample sites to see what works first before being employed on a larger scale.

Denison: Can you speak about your conversation with ERFN member.

Omnia- We don't want to cause conflict with people. We are biologists and we sometimes get buried in that and we don't want to block someone like ERFN member, so we sat down and talked. ERFN member helped sketch out people's trapping areas, cabins, etc. The why, where, and where not to.

Denison: This is the science side – but we want to capture more Elder and land user information too – we want to combine it all into something that really works.

Omnia exited the line

Denison Mines

Uranium Development & Exploration

The Wheeler River Project

June, 2021 English River First Nation / Shared Value Solution

Denison's Guiding Principles

- Denison recognizes and is deeply respectful of the fact the that Wheeler River project is located within the boundaries of **Treaty 10**, and is in the heart of the **traditional territory of the English River First Nation**, and in the **homeland of the Métis of Saskatchewan**
- Denison understands the importance of **protecting the area** in which we are working

Denison Team

- Dave Bronkhorst, VP Operations
- Janna Switzer, Environment Manager
- Chad Sorba, Technical Manager
- Carolanne Inglis-McQuay, CSR Manager
- Xavier Lu Dac, Senior Engineer
- Dana Harris, Project Services Coordinator
- Mike Dawe, Environment and CSR Coordinator
- Jenn Skilnick, Environment Coordinator

Cautionary Statements & References

This presentation and the information contained herein is designed to help you understand management's current views, and may not be appropriate for other purposes. This presentation contains information relating to the uranium market, third party and provincial infrastructure, and the plans and availability thereof, derived from third-party publications and reports which Denison believes are reliable but have not been independently verified by the Company.

Certain information contained in this presentation 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 presentation contains forward-looking information pertaining to the results of, and estimates, assumptions and projections provided in, the Wheeler PFS and the Waterbury PEA, including future development methods and plans, market prices, costs and capital expenditures; assumptions regarding Denison's ability to obtain all necessary regulatory approvals to commence development at Wheeler; Denison's percentage interest in its projects and its agreements with its joint venture partners; and the availability of services to be provided by third parties. 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 faces certain risks, including the current and potential impacts of the COVID-19 pandemic, use of mining methods which are novel and untested in the Athabasca basin, the inability to permit or develop its projects as currently planned, the inability to secure sufficient financing to pursue its business objectives, the unpredictability of market prices, events that could materially increase costs, changes in the regulatory environment governing the project lands, and unanticipated claims against title and rights to the project. 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 13, 2020 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.

Readers should not place undue reliance on forward-looking statements. The forward-looking information contained in this presentation is expressly qualified by this cautionary statement. Any forward-looking information and the assumptions made with respect thereto speaks only as of February 8, 2021. Denison does not undertake any obligation to publicly update or revise any forward-looking information after such date 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 Mineral Resources and Mineral Reserves: This presentation may use terms such as "measured", "indicated" and/or "inferred" mineral resources and "proven" or "probable" mineral reserves, which are terms defined with reference to the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") CIM Definition Standards on Mineral Resources and Mineral Reserves ("CIM Standards"). The Company's descriptions of its projects using CIM Standards may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements under the United States federal securities laws and the rules and regulations thereunder.

Qualified Persons
The disclosure of a scientific or technical nature within this presentation, including the disclosure of mineral resources, mineral reserves, as well as the results of the Wheeler PFS and Waterbury PEA, was reviewed and approved by David Bronkhorst, P.Eng., who is a Qualified Person in accordance with the requirements of NI 43-101.

Technical Reports
- For further details regarding the Wheeler River project, please refer to (a) the Company's press releases dated December 1, 2020, regarding the adoption of the freeze wall design for ISR at Phoenix, and September 24, 2018, regarding the Prefeasibility Study, and (b) the technical report titled *"Prefeasibility Study for the Wheeler River Uranium Project, Saskatchewan, Canada"* with an effective date of September 24, 2018 ("Wheeler PFS").
- For further details regarding the Waterbury Lake project, please refer to the Company's press release dated November 17, 2020 and the technical report titled *"Preliminary Economic Assessment for the Tthe Heldeth Túé (J Zone) Deposit, Waterbury Lake Property, Northern Saskatchewan, Canada"* with an effective date of October 30, 2020. ("Waterbury PEA"). **The Waterbury PEA is a preliminary analysis of the potential viability of the Project's mineral resources, and should not be considered the same as a Pre-Feasibility or Feasibility Study, as various factors are preliminary in nature. There is no certainty that the results from the PEA will be realized. Mineral resources are not mineral reserves and do not have demonstrated economic viability. Scheduled tonnes and grade do not represent an estimate of mineral reserves.**

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 13, 2020. Copies of the foregoing are available on Denison's website and under its profile on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

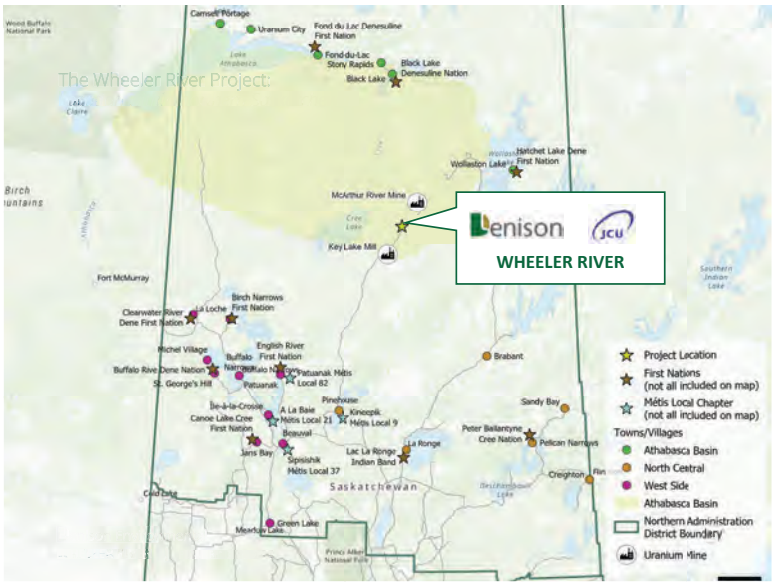
Company Overview:
Denison is focused on opportunities in northern Saskatchewan

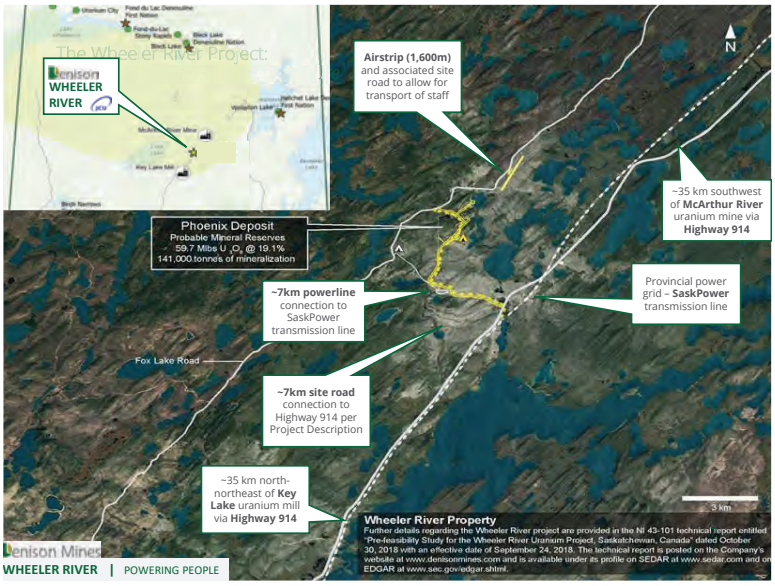
- 22.5% interest in **McClean Lake Uranium Mill**
- 90% interest in Flagship **Wheeler River** project
  - Advancing through development process
  - Largest undeveloped uranium project in the infrastructure rich eastern Athabasca Basin
  - Environmental Assessment ("EA") initiated
  - Progressive approach to mining using In Situ Recovery ("ISR") method
- 66.9% in the **Waterbury Lake Property**, hosting the Tthe Heldeth Túé (formerly J Zone) deposit
  - Recently completed Preliminary Economic Assessment ("PEA")[1]
  - Amenable to ISR mining method
- Several other interests in the Athabasca Basin region
  - **McClean Lake**, **Midwest**, and **Waterbury Lake** properties, all in close proximity to McClean mill
  - **+250,000 hectares** of exploration ground

Denison Mines
WHEELER RIVER | POWERING PEOPLE

NOTES: (1) See Denison's news release dated Nov. 17, 2020; The PEA is a preliminary analysis and should not be considered the same as a Pre-Feasibility or Feasibility Study, see Cautionary Statements slide for details

ISR field testing of Wheeler River's Phoenix Deposit, Summer 2019





In Situ Recovery ("ISR") Mining:
Introducing a proven mining technique to the Athabasca Basin

Key Components for the Project

ISR is an established mining method[1]

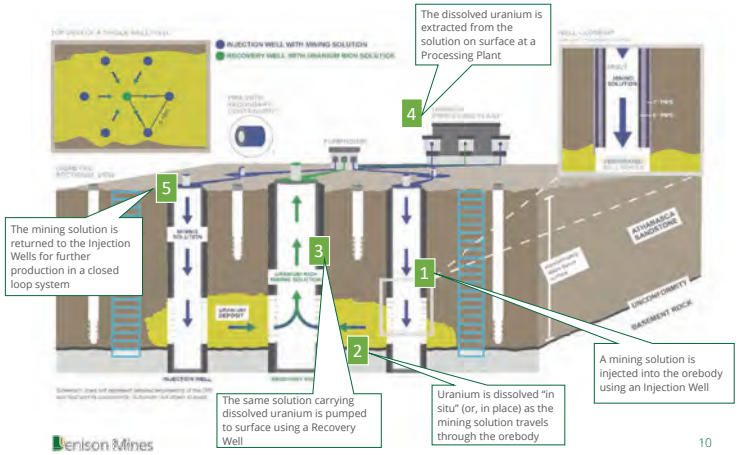
- In Situ Recovery ("ISR") was first used in the 1960s and currently accounts for more than half the world's annual uranium production

Denison Mines
WHEELER RIVER | POWERING PEOPLE

9

NOTES: (1) Refer to the IAEA "Manual of acid in situ leach uranium mining technology", dated August 2001.

In Situ Recovery ("ISR") Mining[1]:
Introducing a proven mining technique to the Athabasca Basin



Denison Mines
WHEELER RIVER | POWERING PEOPLE

10

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018. (2) Figure reflects Denison's decision to adopt a freeze wall approach (see press release dated December 01, 2020)

ISR Mining:
A progressive approach to uranium mining uranium in the Athabasca Basin

How is ISR Different?[1]

- All activities occur at surface; there are no traditional underground workings
- The ISR mining area has only wells and pipes to plant; no open pits, head-frame, or major earthworks
- There is no tailings production or long-term tailings storage, plus no large waste rock piles

Waste Management Vision

- Two main waste streams expected:
  - Gypsum (non-radioactive) – remediated on site
  - Radium/Iron precipitates (radioactive) – removed from surface
- No long term waste management expected to be required after mine closure

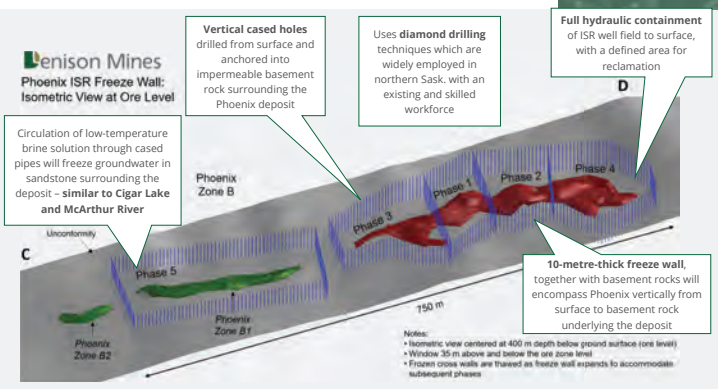
Denison Mines
WHEELER RIVER | POWERING PEOPLE

11

NOTES: (1) Refer to the IAEA "Manual of acid in situ leach uranium mining technology", dated August 2001.

Freeze Containment :
Established method to create frozen barrier around mining area[1]

Key Components for the Project



Denison Mines
WHEELER RIVER | POWERING PEOPLE

12

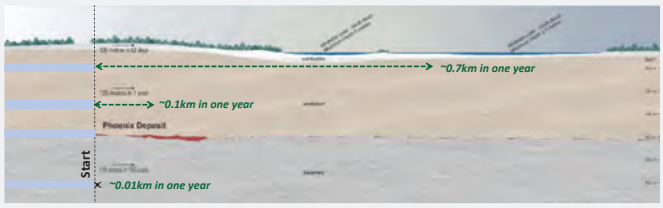
NOTES: (1)) See Denison's news release dated December 1, 2020 for additional information on the freeze wall design for Phoenix.

Denison 2021 Phoenix

[redacted]

Athabasca Basin Ground Water Modelling:
Ground water at depth stays at depth[1]

Key Components for the Project



- ✓ The ore body (i.e. Phoenix) is more than 400 metres below the surface / lakes and river systems
- ✓ Groundwater in the sandstone around the ore body ***is not directly*** connected to surface water bodies
- ✓ Field testing in 2019 and 2020, as well as detailed hydrogeologic modelling shows that ground water stays at depth – it doesn't move upward towards surface, and only moves laterally (at a very slow rate) at the depth of the ore body
- ✓ The freeze wall / fence is the ultimate contingency method to contain mining solution within mining area

NOTES: (1) See Denison's news release from June 4, 2020 for details

Wheeler River / Phoenix ISR:
Different mining method and a different type of operation[1]

Key Components for the Project

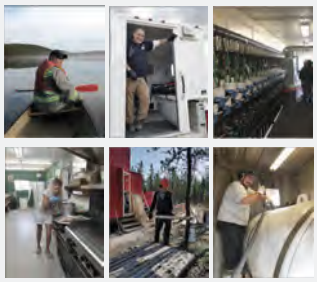
Advantages of ISR mining compared to existing uranium mining in Canada:

- ✓ Small surface footprint
- ✓ Lower water consumption
- ✓ Lower energy consumption
- ✓ Lower CO_2 emissions
- ✓ Small volume treated effluent released to surface water bodies
- ✓ Potential for lower radiation doses to workers
- ✓ No tailings production; storage of precipitated by-products
- ✓ Very small volumes of clean waste rock (sandstone core from wellfield development)

NOTES: (1) Refer to the "Wheeler River Project Provincial Technical Proposal and Federal Project Description", dated May 2019.

Socio-economic Considerations:
Relatively small operation with opportunity to use existing skills

Key Components for the Project



Denison is committed to maximizing opportunities

- Up to **300 jobs during ~2 years of construction**
- Approximately **100 jobs during operation for 10 years**
- Targeted efforts to **Communities of Interest,** with a broad focus on northern Saskatchewan and Indigenous communities
- **Similar job types** to those at existing uranium operations
  - Trades, surface, environment, radiation, safety, camp, security
  - ISR operators are similar to process operators (training can be done in Meadow Lake)
- **Specific ISR training will be provided**
- Pre-requisite training will include **diploma or technical certification available in Saskatchewan**. Examples:
  - Process Operation Technician (SIIT in Meadow Lake)
  - Chemical Technology (Sask. Polytechnic)
- Construction and operation activities targeted to **Northern Saskatchewan / Indigenous-owned businesses**

Wheeler River Project

Economy

Land and Resource Use

Quality of Life

June 30, 2021

- **Project Area:** the area within which the Project and all components/activities are located (i.e., the Project footprint; the area of maximum physical disturbance). This area is not VC-specific, but consistent throughout the EA for all VCs.
- **Local Study Area:** the area that surrounds the Project Area where both direct and indirect effects resulting from Project activities can be reasonably measured. The LSA is established to assess the potential, largely direct effects of the Project and represents the extent to which there is a reasonable potential for the Project or Project-related activities to interact with and potentially adversely effect the VC.
- **Regional Study Area:** the area that surrounds and includes the LSA, established to assess the potential, largely indirect effects of the Project in a regional context. The RSA is large enough to capture the extent of potential effects (i.e., zone of influence) on a VC and defines the area within which cumulative effects may occur (i.e., cumulative effects assessment boundary).

ROC474

Consideration of future project interactions:

- Changes to the biophysical environment associated with project activities (e.g., changes to vegetation, wildlife, water quality or quantity);
- Changes associated with participation in a fly-in/out commuter rotation system;
- Changes associated with project employment and contracting (e.g., changes to the local labour force, income levels, opportunities for training);
- Changes associated with project-related investments or other commitments to communities; and
- Project-related traffic.

Economics		
VC	Rationale	Linkages to other VCs
Economy	The Project may affect current income levels and/or revenues to the local and provincial economies. The Project may affect current employment, training, and educational opportunities. The Project may affect current business levels and opportunities that would affect local communities and potentially provincial market sectors.	Indigenous Land and Resource Use Other Land and Resource Use Transportation Infrastructure and Services Community Well-being Human Health and Safety

Land and Resource Use		
VC	Rationale	Linkages to other VCs
Indigenous Land and Resource Use	Project activities may result in a real or perceived change of the natural landscape which may affect how the area in proximity to the Project is used for current traditional land use and resource use by Indigenous people.	Fish Habitat Fish Health Aquatic Habitat Wetlands Vegetation and Ecosystems Plant Species at Risk Ungulates Furbearers Woodland Caribou Small Mammals Raptors Migratory Breeding Birds Bird Species at Risk Community Well-being Human Health and Safety
Other Land and Resource Use	Project activities may result in a real or perceived change of the natural landscape which may affect additional resource uses, such as tourism, guided outfitting, protected areas, mining, and forestry. Navigation could be altered as a result of the Project.	
Heritage Resources	Project activities may result in a real or perceived change of the natural landscape which may affect how the area in proximity to the Project is used for current traditional land use and resource use by Indigenous people.	

Wheeler River Project

Quality of Life		
VC	Rationales	Linkages to other VCs
Community Infrastructure and Services	Project activities may affect demands on local infrastructure (e.g., roads/highways) and services.	Economy Indigenous Land and Resource Use Other Land and Resource Use
Community Well-being	Project activities may affect changes in community cohesion and population demographics.	

Category	Valued Component	Key Indicator
Economic	• Economy	Income Government Revenues Employment and Training Business Opportunities
Land and Resource Use	• Indigenous Land and Resource Use	Resource availability Land availability Perceived suitability
	• Other Land and • Resource Use	Resource availability Land availability Perceived suitability
Quality of Life	• Community Infrastructure and Services (including traffic) • Community Well-being	Community Infrastructure and Services Community Well-being

Meeting with Intergroup / Shared Value Solutions
June 30th, 2021

- Presentation on Project Scope by Denison
- Presentation by Intergroup on Socioeconomic Valued Components

Attendees

Denison: Carolanne Inglis-McQuay, Janna Switzer, Chad Sorba
Intergroup(IG): 3 attendees
Shared Value Solutions(SVS): 2 attendees
English River First Nation(ERFN): 1 attendee

Dialogue

SVS- Any differences on spills for ISR relative different from other standard mining operations?
Response- Spill monitoring points at the connection points. Spill assessment will be determined on the effects assessment - developed in response to what the EA shows. Four layers of containment. Monitoring wells outside can also pump to surface

SVS- Turbo prop or Jet aircraft and proposed fuel storage?
Response- Just like Key Lake

Intergroup Presentation

SVS- Looking at the interactions from all communities and reflecting Indigenous perspective?
Response: Yes, on a community-by-community basis.

SVS- Perceived use of land? What do you mean by this?
Response: Perception vs actual scientific data

ERFN- Profile information - could be included into economic assessment. Can you integrate Indigenous land use into economic assessment? Find a value to put this into income? Fit within?
Response: Traditional economy could be included into the regular economic section**.** Integration into EIS; add this as a Valued Component**.** IG to connect with SVS on this**.**

SVS- Can we review the supporting information that is being used by Intergroup? Community Vitality studies?
Response: Yes

SVS- Gender-based analysis at this point?
Response: Not from a methodological perspective, but do understand that different workers feel things differently

Birch Narrows Dene Nation
General Delivery
Turnor Lake, SK
S0M 3E0

May 10, 2021

Marcelle Phaneuf
Environmental Assessment Officer, Environmental Assessment Division
Canadian Nuclear Safety Commission
marcelle.phaneuf@canada.ca

Re: Denison Mines Wheeler River Project

Dear Ms. Phaneuf:

I am writing on behalf of Birch Narrows Dene Nation (BNDN) regarding the proposed Wheeler River Project (the Project) by Denison Mines (Denison). Since the Project falls within our Traditional Territory, BNDN must be meaningfully consulted and accommodated by the Crown and Denison. BNDN has concerns related to environmental, cultural, and socioeconomic impacts associated with the Project. BNDN is interested in engaging with the Crown in the Environmental Assessment (EA) and licensing process under the Nuclear Safety and Control Act (NSCA) for the Wheeler River Project. This will help us to understand the potential impacts of the Project and work to mitigate those impacts with Denison and the Crown.

Our ancestors have lived on our Traditional Territory since time immemorial; there are cultural sites and artifacts left throughout the region that are significant for our members. Our community continues to hunt, fish, gather and trap on the lands throughout our Traditional Territory where the impacts of this Project will occur. Any direct or cumulative impacts from this Project could negatively affect our ability to exercise Aboriginal and Treaty rights, including the livelihoods of those who live off the land. We wish to participate in the regulatory process to gain an understanding of how we can be involved in the process so that meaningful consultation and accommodation can occur.

Our first priority is to make sure that this Project will not adversely impact the environment or our rights. BNDN has recently developed a Consultation Protocol which outlines the steps required for the Crown and proponents to engage with BNDN. This document will be shared with CNSC and Denison in the coming months. CNSC and Denison will need to work with BNDN to develop a Consultation Process Agreement so the terms for consultation are clear for all parties. In order to facilitate our meaningful participation in the regulatory process it is critical that BNDN be provided resources to support BNDN's ability to participate, gather traditional knowledge and land use data, and review technical documents. This work should occur as early as possible so that mitigation and accommodation strategies can be considered during the EA process to protect culturally or ecologically sensitive sites.

Based on the level of detail included in the Project Description it is not possible to fully evaluate BNDN's concerns or the degree of potential impacts associated with the Project. Based on a preliminary review of Denison's Project, we would like to highlight the following areas of interest to BNDN:

- Impacts to surface water quality/quantity from effluent release and water taking
- Impacts to groundwater quality
- Hazardous waste storage on-site
- Impacts to wildlife and wildlife habitat from construction and operations, caribou in particular are at risk from loss of habitat and disturbance
- Impacts to fish and fish habitat
- Impacts to vegetation and wetlands, including overprinting
- Increased air contaminant emissions including greenhouse gases from Project-related infrastructure (e.g., mill, power generating equipment and vehicles)
- Impacts to Aboriginal and Treaty rights
    - Exclusion of BNDN members from the Project site
    - Avoidance of the Project site from BNDN members due to disturbance and fears
    - Impacts on hunting, trapping and gathering and the availability of traditionally important species
    - Impacts to Aboriginal fisheries associated with changes to the existing aquatic ecosystem including potential disruption of spawning sites
- Cumulative effects associated with the construction of a processing facility and the potential to accept material from other deposits or companies
- Ensure adequate consideration of BNDN Indigenous Knowledge and Traditional Ecological Knowledge
- Ensure that Denison provides business and procurement opportunities to BNDN members and businesses
- Ensure that training and employment opportunities for BNDN members are available and accessible
- Ensure adequate consideration of socioeconomic effects related to the Project that may impact BNDN (e.g., work camp, temporary workers, increased traffic, etc.)

We will be submitting a participant funding program application to support our involvement in the EA and NSCA licensing processes. Thank you for your time and the opportunity to participate, we look forward to your response. Please include Eric Sylvestre and Vern Bachiu on all communications related to this file. Note that we are including Denison Mines in this communication.

Respectfully,

Chief Jonathon Sylvestre

cc:
Eric Sylvestre, eric.sylvestre@birchnarrows.ca
Vern Bachiu vern.bachiu@triallconsulting.com
Carolanne Inglis-McQuay cinglismcquay@denisonmines.com

May 19, 2021

Chief Jonathon Sylvestre
Birch Narrow Dene Nation
General Delivery
Turnor Lake, SK S0M 3E0

Sent via email: chief1@birchnarrows.ca

Re: Birch Narrows First Nation Correspondence to Canadian Nuclear Safety Commission (May 10, 2021)

Dear Chief Sylvestre:

Denison Mines Corp. ("Denison") is in receipt of the copy of your letter sent to the Canadian Nuclear Safety Commission ("CNSC") expressing Birch Narrow Dene Nation's (BNDN) interest in the Wheeler River Project ("the Project").

Denison has been working on the Project and in the area since 2005 and has worked hard to understand the Aboriginal and / or Treaty rights and interests currently being exercised in the local and regional study area by various Indigenous communities, with the goal being to design the Project in such a manner that the potential for adverse impacts to Aboriginal and / or Treaty rights is minimized. Denison originally reached out to BNDN on December 16, 2019 notifying BNDN of the Project's development, including the status of the Project in relation to the environmental assessment process with CNSC and the Province of Saskatchewan. In March 2020 Denison notified BNDN of the temporary suspension of the Project's environmental assessment owing to the global crisis caused by the COVID-19 pandemic, and more recently on January 20, 2021, we advised BNDN of the formal restart of the environmental assessment process for the Project.

As expressed in previous correspondence, Denison remains interested in meeting with you and your leadership team to provide an overview of the Project, in order to better understand your interests in relation to the Project, and more specifically, whether or not there is the potential for the Project to cause adverse impacts to BNDN Aboriginal and / or Treaty rights. Given the continued challenges and concerns related to COVID-19, Denison would be pleased to meet with you virtually, provided this is an appropriate mechanism that works for your community. If this is of interest, please don't hesitate to contact me by phone (306-716-6986) or by email (cinglismcquay@denisonmines.com).

Sincerely,

Carolanne Inglis-McQuay
Corporate Social Responsibility Manager

Cc: Vern Bachiu: Triall Consulting
Eric Sylvestre:
Marcelle Phaneuf: CNSC

Event: Phone Call Discussion between ERFN Trapper and Denison
Date: June 4, 2021

Notes:

Denison provided ERFN Trapper with an overview of the trail mitigation trial program.
ERFN Trapper provided feedback that was positive overall.

ERFN Trapper Comments:

> *"…know wolves like to use the lines to hunt caribou. This is concerning because the wolves are becoming a problem. [I] would like to see the wolf numbers reduced"*
>
> *"Any treatment would have to be fairy tall because caribou can jump high."*
>
> *"The number of cutlines in the area (all the way to Cree Lake) is extensive and [I] would like to see more reclaimed."*

Event: Site Visit with ERFN Trapper and ERFN Environment/Cultural Monitor
Date: August 18, 2021
Notes:
Denison received feedback from ERFN Trapper and ERFN Monitory relating to the linear feature restoration trial.

- Mounding Trial
    - Dislikes because of the appearance and because of destruction / movement of earth by machinery.
    - Thinks wolves and caribou will be able to get over them.
    - Suggests one or two big mounds at the entrance of linear features and the planting of trees.
    - Thinks wolves would be dissuaded from using mounds during winter.
    - Interested in trial results.
- Burlap Trial
    - Thinks a better trial area would have a longer line of sight.

Denison Mines

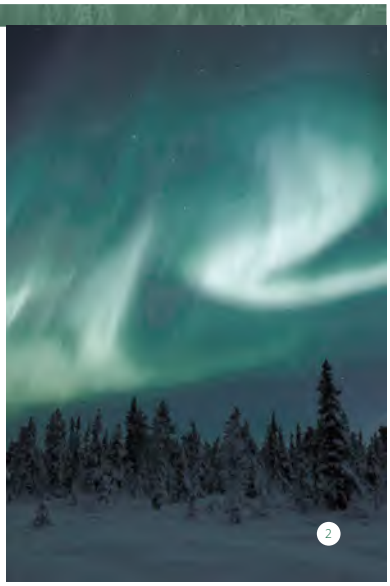
Uranium Development & Exploration

The Wheeler River Project

September, 2021 Leadership Presentation

Agenda

- Opening
- Wheeler River Project Overview
- Environmental Assessment Process
- Valued Components



Denison's Guiding Principles

- Denison recognizes and is deeply respectful of the fact the that Wheeler River project is located within the boundaries of **Treaty 10**, and is in the heart of the **traditional territory of the English River First Nation**, in the **Traditional Territory of the Athabasca Dene**, and in the **homeland of the Métis of Saskatchewan**
- Denison has the utmost **respect** for Indigenous communities, Indigenous Rights, and Indigenous knowledge
- We wish to **share the land** and to work in partnership
- Denison understands the importance of **protecting the area** in which we are working

Cautionary Statements & References

This presentation and the information contained herein is designed to help you understand management's current views, and may not be appropriate for other purposes. This presentation contains information relating to the uranium market, third party and provincial infrastructure, and the plans and availability thereof, derived from third-party publications and reports which Denison believes are reliable but have not been independently verified by the Company.

Certain information contained in this presentation 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 presentation contains forward-looking information pertaining to the results of, and estimates, assumptions and projections provided in, the Wheeler PFS and the Waterbury PEA, including future development methods and plans, market prices, costs and capital expenditures; assumptions regarding Denison's ability to obtain all necessary regulatory approvals to commence development at Wheeler; Denison's percentage interest in its projects and its agreements with its joint venture partners; and the availability of services to be provided by third parties. 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 faces certain risks, including the current and potential impacts of the COVID-19 pandemic, use of mining methods which are novel and untested in the Athabasca basin, the inability to permit or develop its projects as currently planned, the inability to secure sufficient financing to pursue its business objectives, the unpredictability of market prices, events that could materially increase costs, changes in the regulatory environment governing the project lands, and unanticipated claims against title and rights to the project. 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 13, 2020 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.

Readers should not place undue reliance on forward-looking statements. The forward-looking information contained in this presentation is expressly qualified by this cautionary statement. Any forward-looking information and the assumptions made with respect thereto speaks only as of February 8, 2021. Denison does not undertake any obligation to publicly update or revise any forward-looking information after such date 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 Mineral Resources and Mineral Reserves: This presentation may use terms such as "measured", "indicated" and/or "inferred" mineral resources and "proven" or "probable" mineral reserves, which are terms defined with reference to the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") CIM Definition Standards on Mineral Resources and Mineral Reserves ("CIM Standards"). The Company's descriptions of its projects using CIM Standards may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements under the United States federal securities laws and the rules and regulations thereunder.

Qualified Persons

The disclosure of a scientific or technical nature within this presentation, including the disclosure of mineral resources, mineral reserves, as well as the results of the Wheeler PFS and Waterbury PEA, was reviewed and approved by David Bronkhorst, P.Eng., who is a Qualified Person in accordance with the requirements of NI 43-101.

Technical Reports

- For further details regarding the Wheeler River project, please refer to (a) the Company's press releases dated December 1, 2020, regarding the adoption of the freeze wall design for ISR at Phoenix, and September 24, 2018, regarding the Prefeasibility Study, and (b) the technical report titled "*Prefeasibility Study for the Wheeler River Uranium Project, Saskatchewan, Canada*" with an effective date of September 24, 2018 ("Wheeler PFS").
- For further details regarding the Waterbury Lake project, please refer to the Company's press release dated November 17, 2020 and the technical report titled "*Preliminary Economic Assessment for the Tthe Heldeth Túé (J Zone) Deposit, Waterbury Lake Property, Northern Saskatchewan, Canada*" with an effective date of October 30, 2020. ("Waterbury PEA"). **The Waterbury PEA is a preliminary analysis of the potential viability of the Project's mineral resources, and should not be considered the same as a Pre-Feasibility or Feasibility Study, as various factors are preliminary in nature. There is no certainty that the results from the PEA will be realized. Mineral resources are not mineral reserves and do not have demonstrated economic viability. Scheduled tonnes and grade do not represent an estimate of mineral reserves.**

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 13, 2020. Copies of the foregoing are available on Denison's website and under its profile on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

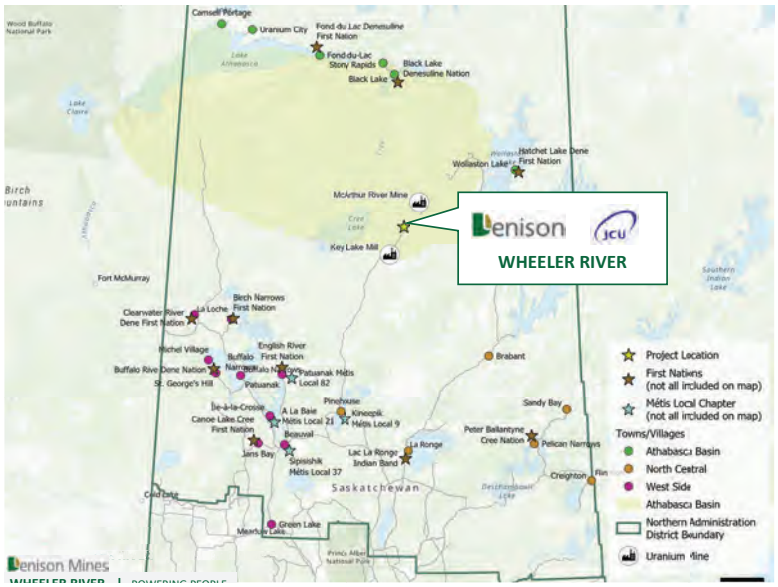
Denison Team

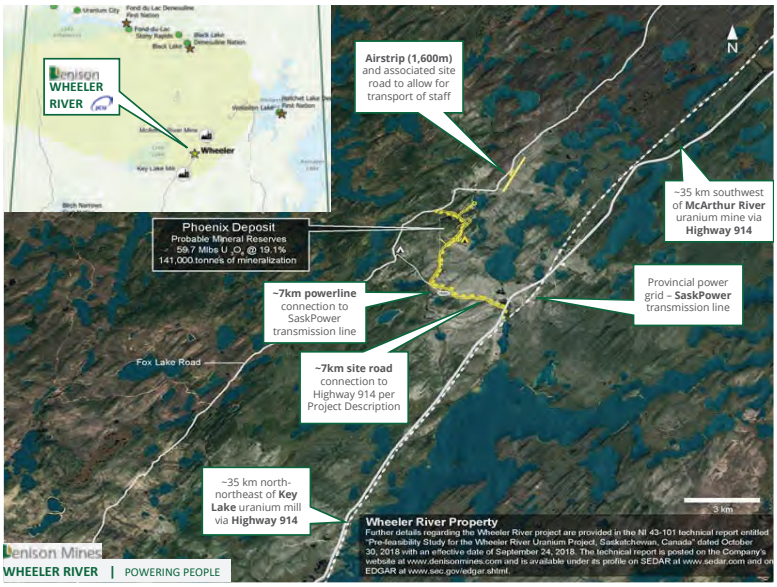
- Dave Bronkhorst, VP Operations
- Janna Switzer, Environment Manager
- Chad Sorba, Technical Manager
- Carolanne Inglis-McQuay, CSR Manager
- Xavier Lu Dac, Senior Engineer
- Dana Harris, Senior Project Coordinator
- Mike Dawe, Environment and CSR Coordinator
- Jenn Skilnick, Environment Coordinator

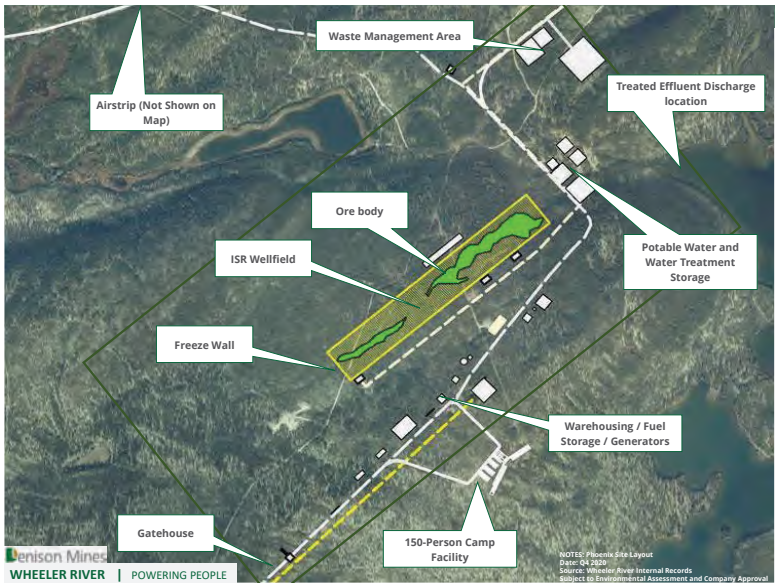
Company Overview:
Denison is focused on opportunities in northern Saskatchewan

- 22.5% interest in **McClean Lake Uranium Mill**
- An effective 95% interest in Flagship **Wheeler River** project
  - Advancing through development process
  - Largest undeveloped uranium project in the infrastructure rich eastern Athabasca Basin
  - Environmental Assessment ("EA") initiated
  - Progressive approach to mining using In Situ Recovery ("ISR") method
- 66.9% in the **Waterbury Lake Property**, hosting the Tthe Heldeth Túé (formerly J Zone) deposit
  - Recently completed Preliminary Economic Assessment ("PEA")[1]
  - Amenable to ISR mining method
- Several other interests in the Athabasca Basin region
  - **McClean Lake, Midwest,** and **Waterbury Lake** properties, all in close proximity to McClean mill
  - **+250,000 hectares** of exploration ground

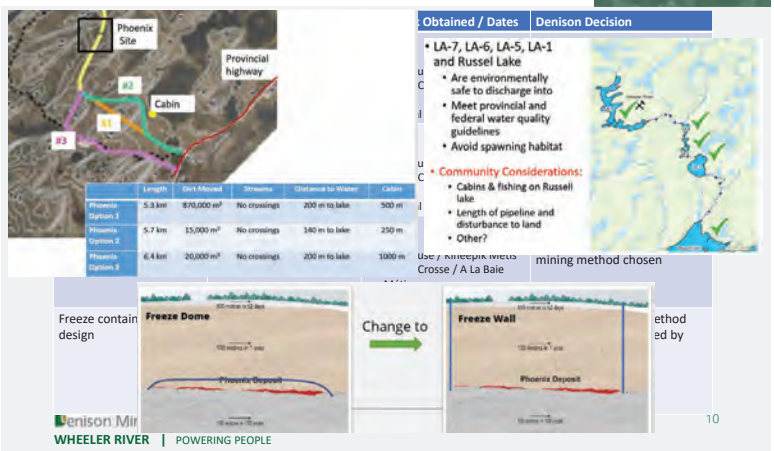
NOTES: (1) See Denison's news release dated Nov. 17, 2020; The PEA is a preliminary analysis and should not be considered the same as a Pre-Feasibility or Feasibility Study, see Cautionary Statements slide for details







Alternatives Assessments for the Project:
Adapting over the years



In Situ Recovery ("ISR") Mining:
Introducing a proven mining technique to the Athabasca Basin

Key Components for the Project

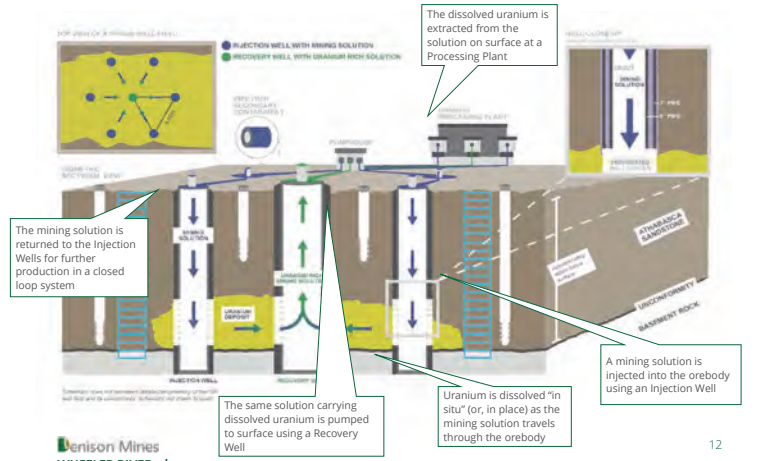
ISR is an established mining method[1]

- In Situ Recovery ("ISR") was first used in the 1960s and currently accounts for more than half the world's annual uranium production

Denison Mines
WHEELER RIVER | POWERING PEOPLE
11

NOTES: (1) Refer to the IAEA "Manual of acid in situ leach uranium mining technology", dated August 2001.

In Situ Recovery ("ISR") Mining[1]:
Introducing a proven mining technique to the Athabasca Basin



Denison Mines
WHEELER RIVER | POWERING PEOPLE
12

NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018. (2) Figure reflects Denison's decision to adopt a freeze wall approach (see press release dated December 01, 2020)

ISR Mining:
A progressive approach to uranium mining uranium in the Athabasca Basin

How is ISR Different?[1]

- All activities occur at surface; there are no traditional underground workings
- The ISR mining area has only wells and pipes to plant; no open pits, head-frame, or major earthworks
- There is no tailings production or long-term tailings storage, plus no large waste rock piles

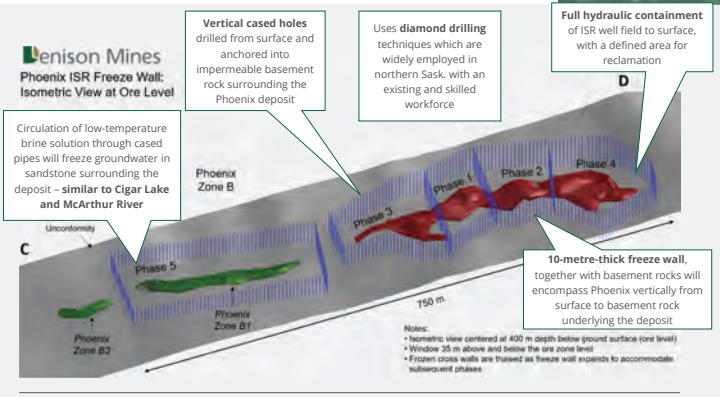
Waste Management Vision

- Two main waste streams expected:
  - Gypsum (non-radioactive) – remediated on site
  - Radium/Iron precipitates (radioactive) – removed from surface
- No long term waste management expected to be required after mine closure

NOTES: (1) Refer to the IAEA "Monitoring and control of in-situ leach uranium mining technology", dated August 2016.

Freeze Containment :
Established method to create frozen barrier around mining area[1]

Key Components for the Project

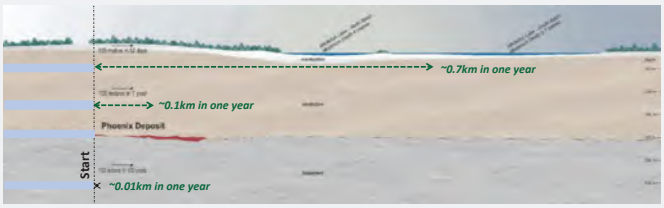


NOTES: (1)) See Denison's news release dated December 1, 2020 for additional information on the freeze wall design for Phoenix.

Denison 2021 Phoenix

Athabasca Basin Ground Water Modelling:
Ground water at depth stays at depth[1]

Key Components for the Project

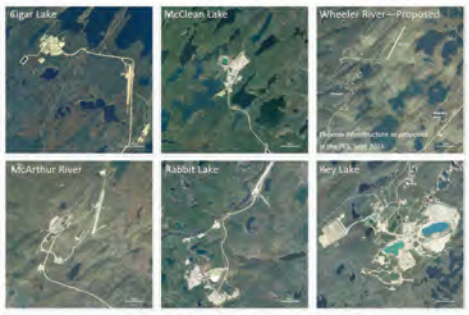


- ✓ The ore body (i.e. Phoenix) is more than 400 metres below the surface / lakes and river systems
- ✓ Groundwater in the sandstone around the ore body ***is not directly*** connected to surface water bodies
- ✓ Field testing in 2019 and 2020, as well as detailed hydrogeologic modelling shows that ground water stays at depth – it doesn't move upward towards surface, and only moves laterally (at a very slow rate) at the depth of the ore body
- ✓ The freeze wall / fence is the ultimate contingency method to contain mining solution within mining area

NOTES: (1) See Denison's news release from June 4, 2020 for details

Wheeler River / Phoenix ISR:
Different mining method and a different type of operation[1]

Key Components for the Project



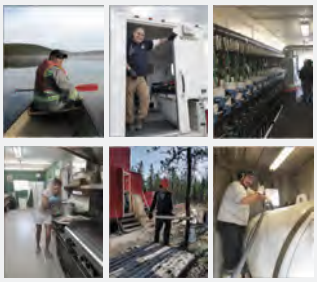
Advantages of ISR mining compared to existing uranium mining in Canada:

- ✓ Small surface footprint
- ✓ Lower water consumption
- ✓ Lower energy consumption
- ✓ Lower CO_2 emissions
- ✓ Small volume treated effluent released to surface water bodies
- ✓ Potential for lower radiation doses to workers
- ✓ No tailings production; storage of precipitated by-products
- ✓ Very small volumes of clean waste rock (sandstone core from wellfield development)

NOTES: (1) Refer to the "Wheeler River Project Provincial Technical Proposal and Federal Project Description", dated May 2019.

Socio-economic Considerations:
Relatively small operation with opportunity to use existing skills

Key Components for the Project



Denison is committed to maximizing opportunities

- Up to **300 jobs during ~2 years of construction**
- Approximately **100 jobs during operation for 10 years**
- Targeted efforts to **Communities of Interest,** with a broad focus on northern Saskatchewan and Indigenous communities
- **Similar job types** to those at existing uranium operations
  - Trades, surface, environment, radiation, safety, camp, security
  - ISR operators are similar to process operators (training can be done in Meadow Lake)
- **Specific ISR training will be provided**
- Pre-requisite training will include **diploma or technical certification available in Saskatchewan**. Examples:
  - Process Operation Technician (SIIT in Meadow Lake)
  - Chemical Technology (Sask. Polytechnic)
- Construction and operation activities targeted to **Northern Saskatchewan / Indigenous-owned businesses**

Community Engagement Survey Completion:
We are looking for your feedback

Step 1 – Click link or scan QR code

The survey link will be posted in the chat function of the Zoom meeting, as well as posted on your community Facebook page after the meeting

Step 2 – Complete the survey by <u>October 7, 2021</u>

Step 3 – Cross your fingers…
for a chance to win 1 of 5 VISA Gift Cards ($100)

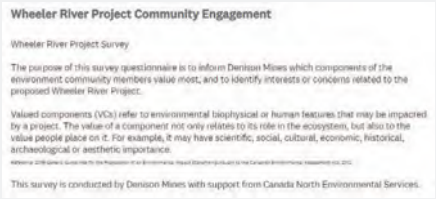
Community Engagement Survey Completion:
We are looking for your feedback

1. Open the camera on your phone or a QR scanning app
2. Hold it over the QR code
3. A link to the online survey online will pop up on your phone
4. Click on the link
5. Complete the survey

Survey closes on <u>October 7, 2021</u>

Community Engagement Survey Completion:
We are looking for your feedback

https://www.surveymonkey.com/r/HZCDN2L



Wheeler River Project Community Engagement

Wheeler River Project Survey

The purpose of this survey questionnaire is to inform Denison Mines which components of the environment community members value most, and to identify interests or concerns related to the proposed Wheeler River Project.

Valued components (VCs) refer to environmental biophysical or human features that may be impacted by a project. The value of a component not only relates to its role in the ecosystem, but also to the value people place on it. For example, it may have scientific, social, cultural, economic, historical, archaeological or aesthetic importance.

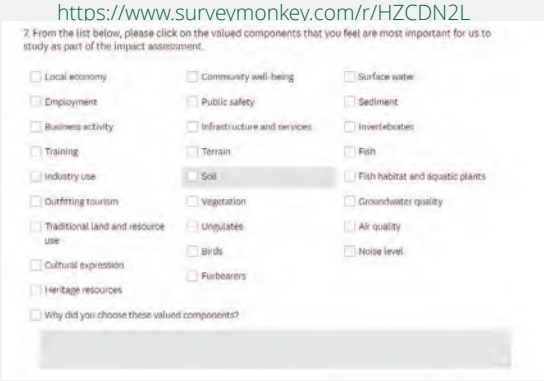
This survey is conducted by Denison Mines with support from Canada North Environmental Services.

1. Age:

- 0-15
- 16-34
- 35-64

Community Engagement Survey Completion:
We are looking for your feedback

https://www.surveymonkey.com/r/HZCDN2L



7. From the list below, please click on the valued components that you feel are most important for us to study as part of the impact assessment.

Local economy	Community well-being	Surface water
Employment	Public safety	Sediment
Business activity	Infrastructure and services	Invertebrates
Training	Terrain	Fish
Industry use	Soil	Fish habitat and aquatic plants
Outfitting tourism	Vegetation	Groundwater quality
Traditional land and resource use	Ungulates	Air quality
	Birds	Noise level
Cultural expression	Furbearers	
Heritage resources		

Why did you choose these valued components?

Environmental Assessment:
Understanding the Project's interactions with human and biophysical environment

Baseline Studies

- Environmental baseline studies have been ongoing since 2012
  - Denison needs to understand the current environmental conditions within and around the Wheeler River Project area

Environmental Assessment

- Initiated the federal and provincial environmental assessment processes in May 2019 with the Wheeler River Project Description
  - **Lead federal regulator**: Canadian Nuclear Safety Commission
  - **Lead provincial regulator:** Saskatchewan Ministry of Environment, Environmental Assessment Branch
- Technical studies designed to understand potential effects of the Project on the biophysical and human environments

Valued Components:
Understanding effects on the things that are important

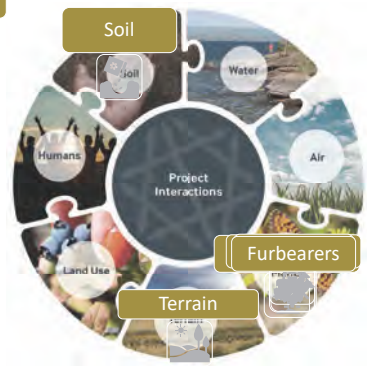
- **Gain an understanding** of what is important to the people who use the area and to the people who may be affected by project activities.
- **Gather information** through research, from regulator feedback and through engagement with communities and Indigenous groups communities
- **Design the environmental** studies to predict how the VC's may change and what measures can be put in place to minimize and monitor the changes
- **Monitoring and reporting** of the changes to VC's will carry on throughout all phases of the project into decommissioning and post closure

Economy

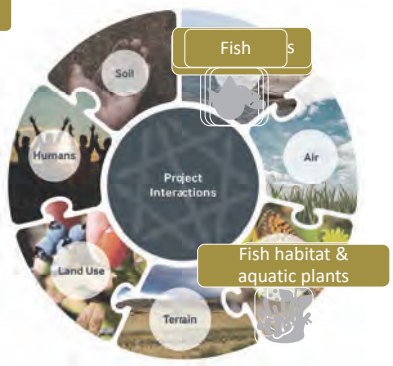
Land and Resource Use, Cultural Continuity

Quality of Life

Terrestrial



Aquatic



Groundwater

Atmosphere & Acoustic

Noise Level

Next Steps:
Keeping conversation going and community informed

Conversation Channels

- Denison will be continually improving communication channels
- Denison will use information shared with us to inform environmental assessment
- Denison will share information back with the community and leadership regarding what we heard from these sessions

Contact us at WheelerRiverInfo@denisonmines.com

Wednesday September 29, 2021: 10 – 11:30
Virtual Meeting: Leadership of Athabasca Basin
Organized by Ya'thi Nene Lands and Resources Office
Via Zoom

Attendees:

Dave Bronkhorst	Linda McNabb (YNLR)
Carolanne Inglis-McQuay	Chief Bart Tsannie (Hatchet Lake)
Chad Sorba	Dean Classen (Uranium City)
Xavier Lu Dac	Al Sayne (Stony Rapids)
Janna Switzer	Chief Kevin Mercredi (Fond du Lac)
Garrett Schmidt (YNLR)	Raymond MacDonald (Black Lake)
Shea Shirley (YNLR)	Fred Martin
Ian Donard (YNLR CLT)	Louise Bougie (Uranium City)
Jean Tsannie (YNLR CLT)	Terri Daniels (Wollaston)
Derek Cook (YNLR CLT)	Clare Laroque (Camsell Portage)
Chris Tousaint (YNLR CLT)	Daniel Powder (Stony Rapids)
Elder George St. Pierre (Hatchet Lake)	Freddie Throassie (Black Lake First Nation)
Councillor Peter Gazandlare (Hatchet Lake)	

Q: This is a new method of mining, community consultation is important.

A: Denison will be holding a meeting with all the Athabasca Basin, where we will share information. We're also working with YNLR on another round of engagement, virtually.

Q: I suggest that we include the homeland of the Dene and the Metis in the opening acknowledgement. It's important to include both.

Q: The Cluff Lake group came into the community and made promises, but those were not kept. The people in the area do not get jobs and opportunity. I'd like to see that this doesn't happen.

Q: The Key Lake Mine gate access, I had to go through English River and the Saskatoon office to get to Russell Lake. I don't think it should be an issue for the people. Are you going to be using Key Lake Mine gate to access the mine site?

A: We hear your point on the homeland of the Dene, we will include that in the land acknowledgement. Denison's project is quite small, when in operation we will be working with about 150 people, and we'll work hard to employ throughout the north.

A: Denison also has to seek permission to get through the Key Lake gate. The question should be put toward the Province and Cameco.

Q: Are you aware of the Collaboration Agreement with Orano and Cameco?

A: Yes we are familiar with the agreement.

Q: Would the new mine be a part of that?

A: No, the Denison project would not be a part of that agreement, as we are a separate company. We're working with YNLR on various elements, looking to make sure we understand the connection to the area. That helps inform the relationship as we go forward, this is step #1.

Q: Has this kind of mining been done anywhere else? What are the results?

A: ISR is popular in the United States. 50% of all uranium produced is through the ISR method. There are strict rules about where ISR mining can take place, Wheeler has the proper containment (bedrock) to allow for this type of mining.

Q: Regarding the wells and reusing the water, is there a liner in the well?

A: There are double layer in the wells. It's a rigorous design, in total there's triple layer containment. The water is kept within the system.

Q: Hopefully we'll get better royalties, hopefully we can come up with an agreement

A: Thanks for your comments. They have been noted.

Q: Is there going to be any education for the Athabasca people? Or training?

A: Job requirements would be very similar to McArthur River or to be a process operator. A lot of that training is already available in the province. There are a number of people in the north that are already trained, and can adapt to this type of mining.

A: We're actively thinking of making training available when we're closer to production.

Q: It's important to showcase who we are. Miners come from other places, they don't know what's important to us. I hope Denison will do something for the people

A: Noted

Q: How much water is used? How much is used on a daily basis? Is it treated and where does it go?

A: 40 cubic meters is the maximum amount we would use at any time. The water is recycled through the system, anything that cannot be recycled goes to the water treatment plant and is discharged to the environment, white fish lake.

Q: What's the long-term impact to the land?

A: The water that will be released will be treated prior to release. This is to ensure minimal impact.

Q: For employment, is there new types of job we should be training for?

A: One of the benefits of ISR is that the methods (jobs/training) are similar to other mines. There's a work force out there that has already been trained. There are people in the area that already have experience. We will be building out training programs as we advance. That work is ongoing and will be shared with the communities. We'll be preparing for that over the next 4-5 years

Q: Are you Unionized?

A: Because construction is more than 4 years away, we don't have a workforce to do thinking about being unionized.

Q: For opportunities, are we going to be treated the same as other communities? Or will we have first opportunity? How are we justified in those areas, for opportunities? It needs to be fair for the Dene.

Sent for confirmation on October 1, 2021

A: We're working with the Athabasca communities in a regional fashion and are working closely with ERFN, Pinehouse, Beauval etc, owing to the nature of the location of our project. We'll assess as we move forward and we understand that there are multiple territories throughout the region. This is something that we're working on. Again, it's a smaller operation and we will insure we are maximizing opportunities to the communities

Q: At what stage is there discussions about exploration agreements and collaboration agreements with the Athabasca communities?

A: We've been in discussion with the YNLR office about exploration agreements. Those are ongoing.

Q: Are you involved with the northern training institutions?

A: Not yet - it's a little too early. We're aware of them.

Email
Denison to YNLR
September 30, 2021

There are two things I need to clarify in response to our leadership call yesterday. Please see below.

1. Slide 6 had an incorrect ownership amount for Denison of Wheeler River. The slide should have stated that Denison has an effective 95% interest in Wheeler River. This change occurred only very recently and as a result, was missed in updating the slide (updated slide is at the bottom of this email)
2. There were many comments made in respect of Collaboration Agreements, agreements in general, will Denison be negotiating an agreement with us, etc. I want to take a moment to pull all the various answers together and provide your leadership with one answer in respect of this.

Denison intends to advance the Wheeler River Project in a manner which respects Indigenous and Treaty rights and provides economic opportunities and other benefits to impacted Indigenous communities. To that end, Denison is following the following process in respect of determining and / or negotiating agreements with communities:

a. Understanding the various Indigenous territories in which the Project is located
b. Conducting an assessment of the potential effects of the Project on the land, water, wildlife, etc. and determining whether those potential effects may cause adverse impacts to the exercise of Indigenous and / or Treaty Rights by local rightsholders
c. Denison will be seeking to enter into agreements with local rights holders which reflect the degree of potential adverse impacts to Indigenous and / or Treaty Rights and to provide benefits to the communities and peoples who live in close proximity to the Project. Denison has been working with YNLR to fund and facilitate work which will support our assessment of the potential effects of the Wheeler River Project on the Athabasca communities, and we look forward to continuing this important work as we advance the Project.

If you could please share this email with those who were on the call today, I would appreciate it.

Company Overview:
Denison is focused on opportunities in northern Saskatchewan

- 22.5% interest in **McClean Lake Uranium Mill**
- An effective 95% interest in Flagship **Wheeler River** project
  - Advancing through development process
  - Largest undeveloped uranium project in the infrastructure rich eastern Athabasca Basin
  - Environmental Assessment ("EA") initiated
  - Progressive approach to mining using In Situ Recovery ("ISR") method
- 66.9% in the **Waterbury Lake Property**, hosting the Tthe Heldeth Túé (formerly J Zone) deposit
  - Recently completed Preliminary Economic Assessment ("PEA")[1]
  - Amenable to ISR mining method
- Several other interests in the Athabasca Basin region
  - **McClean Lake, Midwest,** and **Waterbury Lake** properties, all in close proximity to McClean mill
  - **+250,000 hectares** of exploration ground

Denison Mines
WHEELER RIVER | POWERING PEOPLE

TES: (1) See Denison's news release dated Nov. 17, 2020; The PEA is a preliminary analysis and should not be considered e same as a Pre-Feasibility or Feasibility Study, see Cautionary Statements slide for details

Sent for confirmation on October 1, 2021

Denison Mines

Wheeler River Project information presentation for the Athabasca Communities of Black Lake, Camsell Portage, Fond du Lac, Hatchet Lake, Stony Rapids, Uranium City and Wollaston Lake

Sept 29 - On Zoom

6:00pm - 8:00pm

Use the following Zoom Login Information:

853 7635 7151 - Passcode: 12345
Phone: (647) 374-4685 (English only)

Win door prizes! $100 and $250 Gift Certificates for your Local Stores!

Prizes also available for completing the feedback survey provided during the meeting.

Entertainment during meeting breaks.

www.wheelerriverproject.ca

Wheeler River Project information presentation for the Athabasca Communities of Black Lake, Camsell Portage, Fond du Lac, Hatchet Lake, Stony Rapids, Uranium City and Wollaston Lake

This is a public meeting, which is open to all residents of the Athabasca Basin

This meeting will be translated by Rosalie Tsannie-Burseth

Sept 29 - Zoom Meeting

6:00pm - 8:00pm

Use the following Zoom Login Information:

853 7635 7151 - Passcode: 12345 Phone: (647) 374-4685 (English only)

The Wheeler River Project Team looks forward to seeing you and hearing from you on Zoom.

Win door prizes! $100 and $250 Gift Certificates for your Local Stores!

Prizes also available for completing the feedback survey provided during the meeting.

Entertainment during meeting breaks.

Denison Mines

www.wheelerriverproject.ca

ROC571

Wheeler River Project information presentation for the Athabasca Communities of Black Lake, Camsell Portage, Fond du Lac, Hatchet Lake, Stony Rapids, Uranium City and Wollaston Lake

SEPT 29
On Zoom
6:00pm - 8:00pm

Use the following Zoom Login Information:

853 7635 7151- Passcode: 12345
Phone: (647) 374-4685 (English only)

This is a public meeting, which is open to all residents of the Athabasca Basin

This meeting will be translated by Rosalie Tsannie-Burseth

Win door prizes! $100 and $250 Gift Certificates for your Local Stores!
Prizes also available for completing the feedback survey provided during the meeting. Entertainment will be provided during meeting breaks.

The Wheeler River Project Team looks forward to seeing you and hearing from you on Zoom.

POWERING PEOPLE
WHEELER RIVER

Denison Mines
https://wheelerriverproject.ca/

Denison Mines

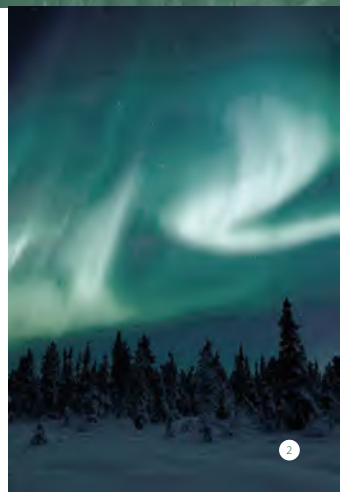
Uranium Development & Exploration

The Wheeler River Project

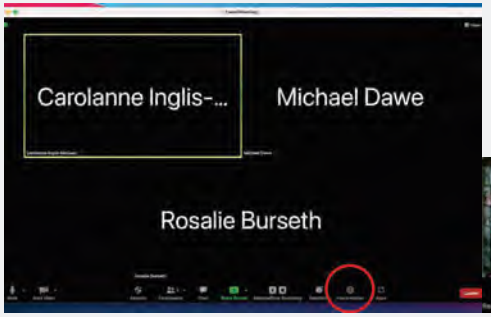
September, 2021 Athabasca-wide Community Presentation

Agenda

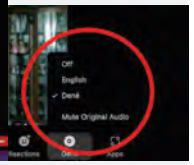
- Opening
- How to Use Zoom
- 'Virtual' Meal – Support to the High Schools
- Introductions (Denison, Province, CNSC)
- Wheeler River Project Overview
- **Door prize draws and entertainment**
- Environmental Assessment Process
- Valued Components
- Questions and Answers
- Next Steps from Denison
- **Final door prize draws and entertainment**



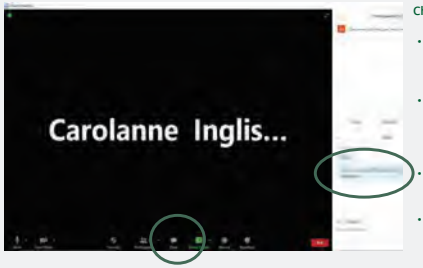
How to Use the Dené Translation



- Click the Interpretation button
- Select your preferred language, Dené or English



How to Participate using Zoom Features



Chat and Video Function

- Enter your name and community in the chat function if you'd like to be entered to win a prize for attendance
- The chat function is also where we will have you answer questions we pose throughout the presentation to be entered to win a prize for participation
- The chat function is a place to ask us questions, as the microphones will be muted
- Video – you can turn your video on or off (video off often improves quality of video conference)

Denison's Guiding Principles

- Denison recognizes and is deeply respectful of the fact the that Wheeler River project is located within the boundaries of **Treaty 10**, and is in the heart of the **traditional territory of the English River First Nation**, and in the **homeland of the Métis of Saskatchewan**
- Denison has the utmost **respect** for Indigenous communities, Indigenous Rights, and Indigenous knowledge
- We wish to **share the land** and to work in partnership
- Denison understands the importance of **protecting the area** in which we are working

Donations to Support Athabasca High Schools

$1,500 Donation to Each School

- Father Porte (Black Lake)
- Father Megret (Hatchet Lake)
- Father Gamache (Fond du Lac)

Cautionary Statements & References

This presentation and the information contained herein is designed to help you understand management's current views, and may not be appropriate for other purposes. This presentation contains information relating to the uranium market, third party and provincial infrastructure, and the plans and availability thereof, derived from third-party publications and reports which Denison believes are reliable but have not been independently verified by the Company.

Certain information contained in this presentation 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 presentation contains forward-looking information pertaining to the results of, and estimates, assumptions and projections provided in, the Wheeler PFS and the Waterbury PEA, including future development methods and plans, market prices, costs and capital expenditures; assumptions regarding Denison's ability to obtain all necessary regulatory approvals to commence development at Wheeler; Denison's percentage interest in its projects and its agreements with its joint venture partners; and the availability of services to be provided by third parties. 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 faces certain risks, including the current and potential impacts of the COVID-19 pandemic, use of mining methods which are novel and untested in the Athabasca basin, the inability to permit or develop its projects as currently planned, the inability to secure sufficient financing to pursue its business objectives, the unpredictability of market prices, events that could materially increase costs, changes in the regulatory environment governing the project lands, and unanticipated claims against title and rights to the project. 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 13, 2020 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.

Readers should not place undue reliance on forward-looking statements. The forward-looking information contained in this presentation is expressly qualified by this cautionary statement. Any forward-looking information and the assumptions made with respect thereto speaks only as of February 8, 2021. Denison does not undertake any obligation to publicly update or revise any forward-looking information after such date 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 Mineral Resources and Mineral Reserves: This presentation may use terms such as "measured", "indicated" and/or "inferred" mineral resources and "proven" or "probable" mineral reserves, which are terms defined with reference to the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") CIM Definition Standards on Mineral Resources and Mineral Reserves ("CIM Standards"). The Company's descriptions of its projects using CIM Standards may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements under the United States federal securities laws and the rules and regulations thereunder.

Qualified Persons

The disclosure of a scientific or technical nature within this presentation, including the disclosure of mineral resources, mineral reserves, as well as the results of the Wheeler PFS and Waterbury PEA, was reviewed and approved by David Bronkhorst, P.Eng., who is a Qualified Person in accordance with the requirements of NI 43-101.

Technical Reports

- For further details regarding the Wheeler River project, please refer to (a) the Company's press releases dated December 1, 2020, regarding the adoption of the freeze wall design for ISR at Phoenix, and September 24, 2018, regarding the Prefeasibility Study, and (b) the technical report titled "*Prefeasibility Study for the Wheeler River Uranium Project, Saskatchewan, Canada*" with an effective date of September 24, 2018 ("Wheeler PFS").
- For further details regarding the Waterbury Lake project, please refer to the Company's press release dated November 17, 2020 and the technical report titled "*Preliminary Economic Assessment for the Tthe Heldeth Túé (I Zone) Deposit, Waterbury Lake Property, Northern Saskatchewan, Canada*" with an effective date of October 30, 2020. ("Waterbury PEA"). **The Waterbury PEA is a preliminary analysis of the potential viability of the Project's mineral resources, and should not be considered the same as a Pre-Feasibility or Feasibility Study, as various factors are preliminary in nature. There is no certainty that the results from the PEA will be realized. Mineral resources are not mineral reserves and do not have demonstrated economic viability. Scheduled tonnes and grade do not represent an estimate of mineral reserves.**

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 13, 2020. Copies of the foregoing are available on Denison's website and under its profile on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

Denison Team

- Dave Bronkhorst, VP Operations
- Janna Switzer, Environment Manager
- Chad Sorba, Technical Manager
- Carolanne Inglis-McQuay, CSR Manager
- Xavier Lu Dac, Senior Engineer
- Dana Harris, Senior Project Coordinator
- Mike Dawe, Environment and CSR Coordinator
- Jenn Skilnick, Environment Coordinator

Canadian Nuclear Safety Commission | Commission canadienne de sûreté nucléaire

CANADIAN NUCLEAR SAFETY COMMISSION

CNSC CCSN

- Protect communities and the environment
- Ensure the peaceful use of nuclear energy
- Share information and engage

Canada's Nuclear Regulator

RESPONSIBILITIES

CNSC Responsibilities:

- Independent, objective, science based and risk-informed decisions
- Set requirements
- Verify compliance

Licensee Responsibilities:

- Manage regulated activities to protect health, safety, security and the environment, while respecting Canada's international obligations
- Responsible and accountable for the safe operation of facilities and activities

ENVIRONMENTAL ASSESSMENT

- Opportunities for public and Indigenous consultation are continuous
- Federal and provincial agencies are involved and contribute their expertise in Impact Assessments and Environmental Assessments
- Decisions are independent, transparent and evidence-based

Province of Saskatchewan

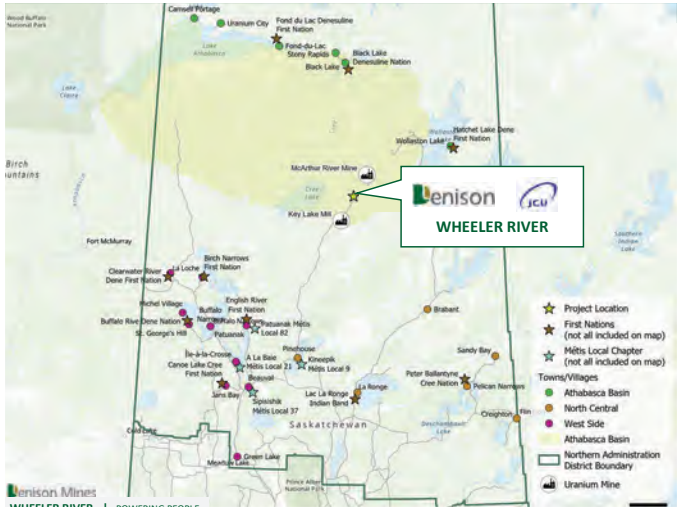
Province of Saskatchewan: Ministry of Environment

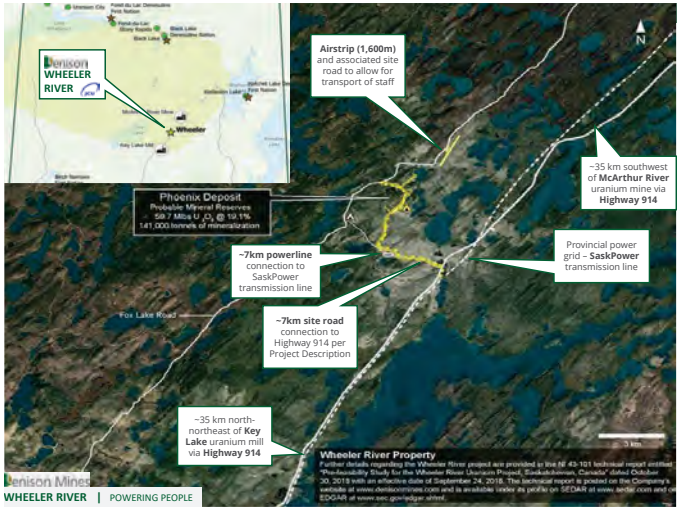
Mr. Aimann Sadik: Senior Environmental Assessment Administrator

Company Overview:
Denison is focused on opportunities in northern Saskatchewan

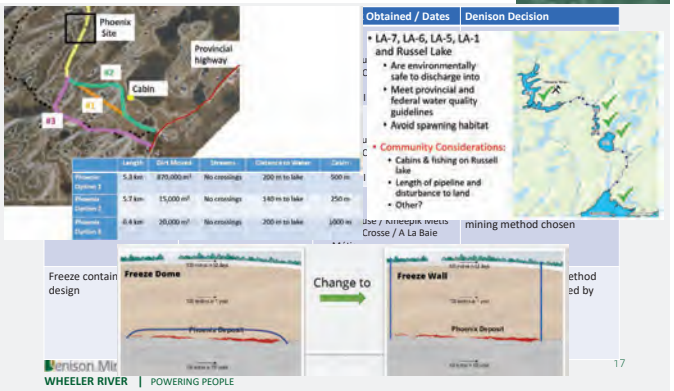
- 22.5% interest in **McClean Lake Uranium Mill**
- An effective 95% interest in Flagship **Wheeler River** project
  - Advancing through development process
  - Largest undeveloped uranium project in the infrastructure rich eastern Athabasca Basin
  - Environmental Assessment ("EA") initiated
  - Progressive approach to mining using In Situ Recovery ("ISR") method
- 66.9% in the **Waterbury Lake Property**, hosting the Tthe Heldeth Túé (formerly J Zone) deposit
  - Recently completed Preliminary Economic Assessment ("PEA")[1]
  - Amenable to ISR mining method
- Several other interests in the Athabasca Basin region
  - **McClean Lake, Midwest,** and **Waterbury Lake** properties, all in close proximity to McClean mill
  - **+250,000 hectares** of exploration ground

NOTES: (1) See Denison's news release dated Nov. 17, 2020; The PEA is a preliminary analysis and should not be considered the same as a Pre-Feasibility or Feasibility Study, see Cautionary Statements slide for details



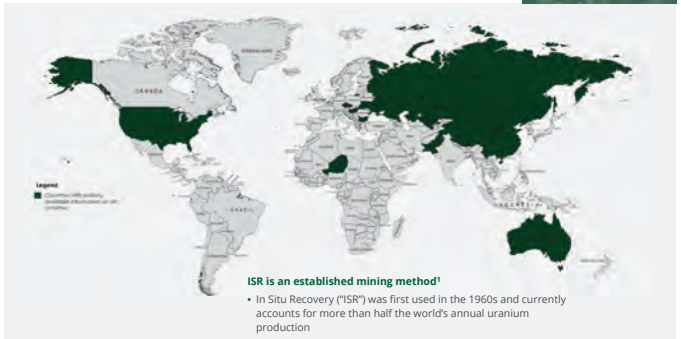


Alternatives Assessments for the Project:
Adapting over the years



In Situ Recovery ("ISR") Mining:
Introducing a proven mining technique to the Athabasca Basin

Key Components for the Project

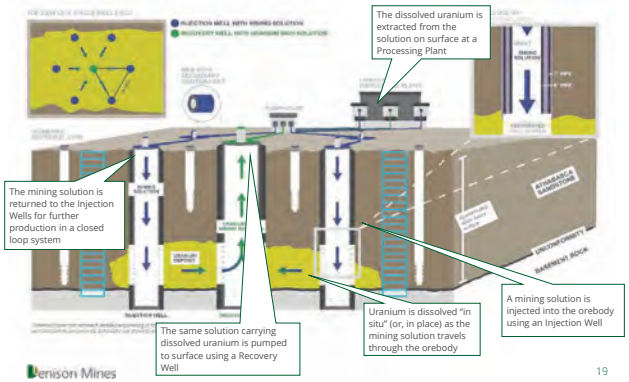


ISR is an established mining method[1]

- In Situ Recovery ("ISR") was first used in the 1960s and currently accounts for more than half the world's annual uranium production

NOTES: (1) Refer to the IAEA "Manual of acid in situ leach uranium mining technology", dated August 2001.

In Situ Recovery ("ISR") Mining[1]:
Introducing a proven mining technique to the Athabasca Basin



NOTES: (1) Refer to the Wheeler River Technical Report titled "Pre-feasibility Study Report for the Wheeler River Uranium Project, Saskatchewan, Canada" dated September 24, 2018. (2) Figure reflects Denison's decision to adopt a freeze wall approach (see press release dated December 01, 2020)

ISR Mining:
A progressive approach to uranium mining uranium in the Athabasca Basin

How is ISR Different?[1]

- All activities occur at surface; there are no traditional underground workings
- The ISR mining area has only wells and pipes to plant; no open pits, head-frame, or major earthworks
- There is no tailings production or long-term tailings storage, plus no large waste rock piles

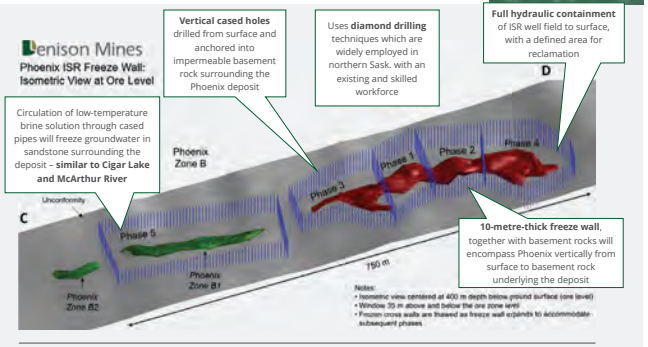
Waste Management Vision

- Two main waste streams expected:
  - Gypsum (non-radioactive) – remediated on site
  - Radium/Iron precipitates (radioactive) – removed from surface
- No long term waste management expected to be required after mine closure

NOTES: (1) Refer to the WRA "Method of mining low-tech uranium mining technology" - dated August 2020

Freeze Containment :
Established method to create frozen barrier around mining area[1]

Key Components for the Project



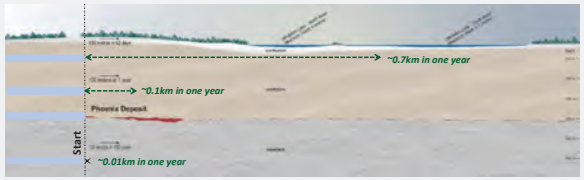
NOTES: (1)) See Denison's news release dated December 1, 2020 for additional information on the freeze wall design for Phoenix.

Denison 2021 Phoenix

[redacted]

Athabasca Basin Ground Water Modelling

Key Components for the Project

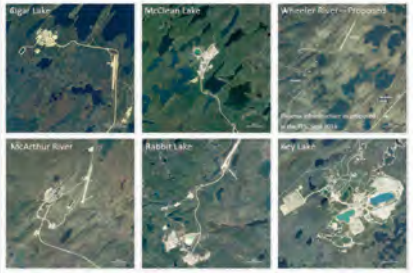


- ✓ The ore body (i.e. Phoenix) is more than 400 metres below the surface / lakes and river systems
- ✓ Field testing in 2019 and 2020, as well as detailed hydrogeologic modelling shows that ground water stays at depth – it doesn't move upward towards surface, and only moves laterally (at a very slow rate) at the depth of the ore body[1]
- ✓ Further assessment is ongoing
- ✓ The freeze wall / fence is the ultimate contingency method to contain mining solution within mining area

NOTES: (1) See Denison's news release from June 4, 2020 for details

Wheeler River / Phoenix ISR:
Different mining method and a different type of operation[1]

Key Components for the Project



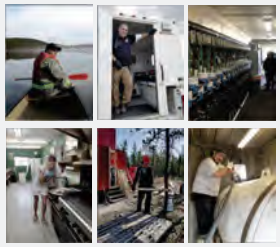
Advantages of ISR mining compared to existing uranium mining in Canada:

- ✓ Small surface footprint
- ✓ Lower water consumption
- ✓ Lower energy consumption
- ✓ Lower CO_2 emissions
- ✓ Small volume treated effluent released to surface water bodies
- ✓ Potential for lower radiation doses to workers
- ✓ No tailings production; storage of precipitated by-products
- ✓ Very small volumes of clean waste rock (sandstone core from wellfield development)

NOTES: (1) Refer to the "Wheeler River Project Provincial Technical Proposal and Federal Project Description", dated May 2019.

Socio-economic Considerations:
Relatively small operation with opportunity to use existing skills

Key Components for the Project



Denison is committed to maximizing opportunities

- Up to **300 jobs during ~2 years of construction**
- Approximately **100 jobs during operation for 10 years**
- Targeted efforts to **Communities of Interest,** with a broad focus on northern Saskatchewan and Indigenous communities
- **Similar job types** to those at existing uranium operations
  - Trades, surface, environment, radiation, safety, camp, security
  - ISR operators are similar to process operators (training can be done in Meadow Lake)
- **Specific ISR training will be provided**
- Pre-requisite training will include **diploma or technical certification available in Saskatchewan**. Examples:
  - Process Operation Technician (SIIT in Meadow Lake)
  - Chemical Technology (Sask. Polytechnic)
- Construction and operation activities targeted to **Northern Saskatchewan / Indigenous-owned businesses**

15 Minute Break

7 x $100 Gift Certificates to your local store

1. **Hatchet Lake Band Store**
2. **Black Lake Northern Store**
3. **Fond du Lac Northern Store**

Northern NorthMART

Community Engagement Survey Completion:
We are looking for your feedback

Step 1 – Click link or scan QR code

The survey link will be posted in the chat function of the Zoom meeting, as well as posted on your community Facebook page after the meeting

Step 2 – Complete the survey by October 7, 2021

Step 3 – Cross your fingers…
for a chance to win 1 of 5 VISA Gift Cards ($100)

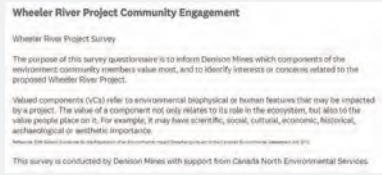
Community Engagement Survey Completion:
We are looking for your feedback

1. Open the camera on your phone or a QR scanning app
2. Hold it over the QR code
3. A link to the online survey online will pop up on your phone
4. Click on the link
5. Complete the survey

Survey closes on October 7, 2021

Community Engagement Survey Completion:
We are looking for your feedback

https://www.surveymonkey.com/r/HZCDN2L



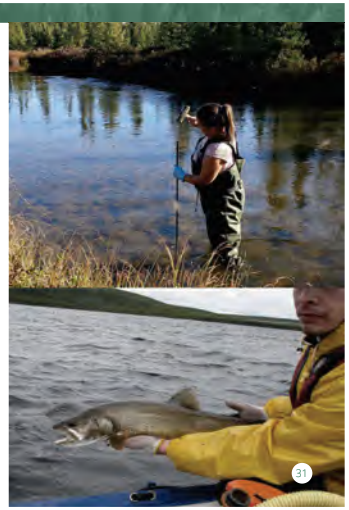
Community Engagement Survey Completion:
We are looking for your feedback

https://www.surveymonkey.com/r/HZCDN2L

Environmental Assessment:
Understanding the Project's interactions with human and biophysical environment

Baseline Studies
- Environmental baseline studies have been ongoing since 2012
  - Denison needs to understand the current environmental conditions within and around the Wheeler River Project area

Environmental Assessment
- Initiated the federal and provincial environmental assessment processes in May 2019 with the Wheeler River Project Description
  - **Lead federal regulator**: Canadian Nuclear Safety Commission
  - **Lead provincial regulator:** Saskatchewan Ministry of Environment, Environmental Assessment Branch
- Technical studies designed to understand potential effects of the Project on the biophysical and human environments



Valued Components:
Understanding effects on the things that are important

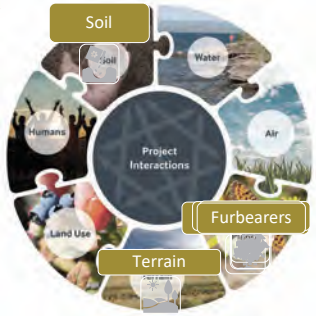
- **Gain an understanding** of what is important to the people who use the area and to the people who may be affected by project activities.
- **Gather information** through research, from regulator feedback and through engagement with communities and Indigenous groups communities
- **Design the environmental** studies to predict how the VC's may change and what measures can be put in place to minimize and monitor the changes
- **Monitoring and reporting** of the changes to VC's will carry on throughout all phases of the project into decommissioning and post closure

Economy

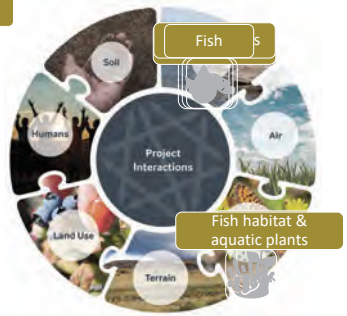
Land and Resource Use, Cultural Continuity

Quality of Life

Terrestrial



Aquatic



Groundwater

Atmosphere & Acoustic

Questions / Comments
Summary of questions

Next Steps:
Keeping conversation going and community informed

Conversation Channels

- Denison will be continually improving communication channels
- Denison will use information shared with us to inform environmental assessment
- Denison will share information back with the community and leadership regarding what we heard from these sessions

Contact us at WheelerRiverInfo@denisonmines.com

Conclusion:
Thank you for attending!

3 x $100 Gift Certificates to your local store

2 x $250 Gift Certificates to your local store

1. **Hatchet Lake Band Store**
2. **Black Lake Northern Store**
3. **Fond du Lac Northern Store**

ROC571

Wheeler River Project - Athabasca Basin Members Engagement

Wheeler River Project Survey

The purpose of this survey questionnaire is to inform Denison Mines which components of the environment community members value most, and to identify interests or concerns related to the proposed Wheeler River Project.

Valued components (VCs) refer to environmental biophysical or human features that may be impacted by a project. The value of a component not only relates to its role in the ecosystem, but also to the value people place on it. For example, it may have scientific, social, cultural, economic, historical, archaeological or aesthetic importance.

Reference: 2016 Generic Guidelines for the Preparation of an Environmental Impact Statementpursuant to the Canadian Environmental Assessment Act, 2012

The survey results will be used to help Denison Mines determine which valued components should be studied in detail as part of the Wheeler River effects assessment. Results of the survey will also help Denison Mines understand which valued components the community would like to receive updates on once the early results of the effects assessment are ready to be shared.

A summary of the survey results will be shared on the Denison Mines website in March 2021. There are several benefits of sharing your thoughts in the survey questionnaire. Your input will help Denison Mines focus on environmental components, concerns or topics that matter most to your community. If you choose to leave your name and contact information at the conclusion of the survey, you will be entered into a prize draw for one of ten $100 VISA gift cards. Participation in the draw is optional and only those who complete the survey will be entered in the draw. This survey is conducted by Denison Mines with support from Canada North Environmental Services.

Participation in this survey is voluntary. If you agree to participate it will require a minimum of 15 minutes of your time to answer questions about components of the environment that you value, and any interests or concerns you have related to the Wheeler River Project. During the survey we will ask you some questions including your age, residence, if you identify as an Aboriginal person, and how you heard about the survey. Finally in order to be entered into the prize draw, you must provide your name and contact information.

Providing your name and contact information is optional. All information you share in this survey questionnaire will be kept strictly confidential and your name will not be associated with the data we collect. Your identity will remain confidential in all publications and public presentations related to this research.

If you have any questions or concerns about this survey questionnaire, please contact WheelerRiverInfo@denisonmines.com

Wheeler River Project - Athabasca Basin Members Engagement

Section 1: Tell us about yourself!

We want to make sure we are hearing from a diverse group of people from your community, please fill out the following questions to help us determine if there are any voices we haven't heard from yet.

2. Age:
   - 0-15
   - 16-34
   - 35-64
   - 65+

3. Do you identify as an Indigenous person (First Nations, Métis, or Inuit?) Answers to this question are entirely voluntary and not required.

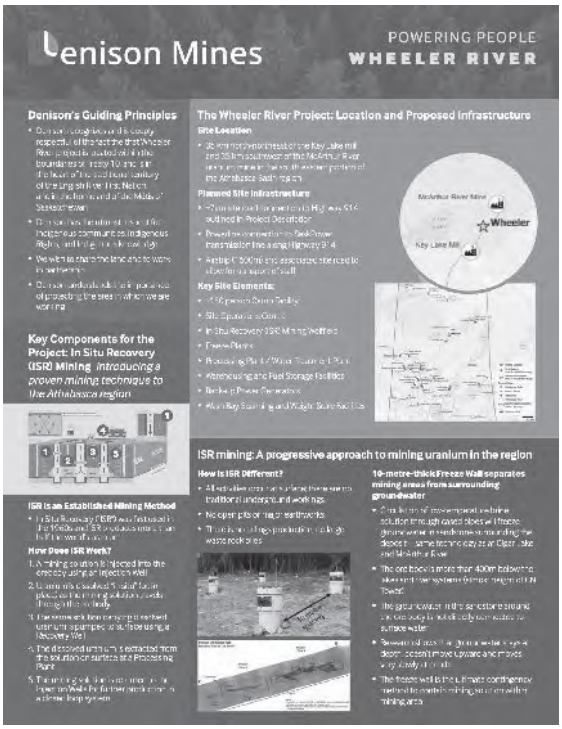
4. Where do you live most of the year:
   - Hatchet Lake
   - Wollaston Lake
   - Fond du Lac
   - Black Lake
   - Stony Rapids
   - Uranium City
   - Camsell Portage
   - Other
   - Prefer not to say
   - Please identify which other community you are from

5. How did you hear about this survey?
   - [ ] Facebook
   - [ ] Radio
   - [ ] Posters
   - [ ] Word of Mouth
   - [ ] Other

6. Which of the following presentations did you attend? Check all that apply.
   - Virtual Community Meeting
   - Virtual Leadership Meeting
   - Virtual Ya' thi Nene Lands & Resource Office Meeting
   - Prefer not to say
   - None of the above

* 1. By checking this box, you confirm that you understand the purpose of the survey, how the information you share will be used, and that participation in the survey is voluntary.
   - I confirm that I understand the purpose of this survey, how the information will be shared, and that participation is voluntary
   - I DO NOT feel comfortable proceeding with this survey and would like to exit

The Fact Sheets below provide a general overview of the of Wheeler River Project



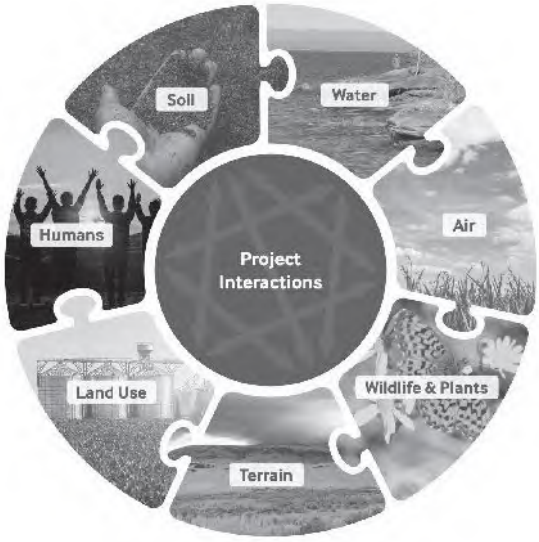
Wheeler River Project - Athabasca Basin Members Engagement

Section 2: Valued Components

Valued components (VCs) refer to environmental biophysical or human features that may be impacted by a project. The value of a component not only relates to its role in the ecosystem, but also to the value people place on it.

In previous engagement events, we heard that the valued components provided in the list below are important to community members. During the environmental impact assessment process, we plan to study these valued components to better understand if and how the Wheeler Project may impact them.

Valued Components Circle



7. From the list below, please click on the valued components that you feel are most important for us to study as part of the impact assessment.

- [ ] Local economy
- [ ] Employment
- [ ] Business activity
- [ ] Training
- [ ] Industry use
- [ ] Outfitting tourism
- [ ] Traditional land and resource use
- [ ] Cultural expression
- [ ] Heritage resources
- [ ] Community well-being
- [ ] Public safety
- [ ] Infrastructure and services
- [ ] Terrain
- [ ] Soil
- [ ] Vegetation
- [ ] Ungulates
- [ ] Birds
- [ ] Furbearers
- [ ] Surface water
- [ ] Sediment
- [ ] Invertebrates
- [ ] Fish
- [ ] Fish habitat and aquatic plants
- [ ] Groundwater quality
- [ ] Air quality
- [ ] Noise level
- [ ] Why did you choose these valued components?

8. Are there any valued components that are important to you that are missing from this list? If so, please list them below. Why are these important to you?

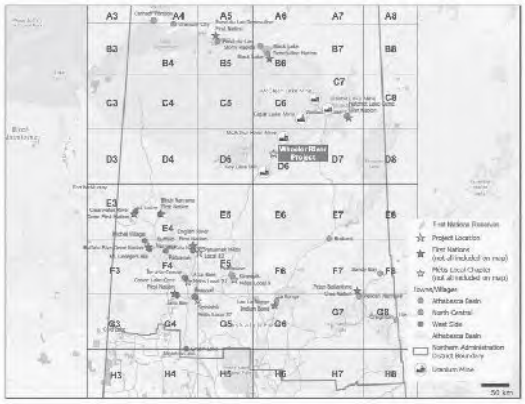
9. Are there any valued components on the list that are not important to you? If so, please select the valued components from the list below that you feel should be removed.

- [ ] Local economy
- [ ] Employment
- [ ] Business activity
- [ ] Training
- [ ] Industry use
- [ ] Outfitting tourism
- [ ] Traditional land and resource use
- [ ] Cultural expression
- [ ] Heritage resources
- [ ] Community well-being
- [ ] Public safety
- [ ] Infrastructure and services
- [ ] Terrain
- [ ] Soil
- [ ] Vegetation
- [ ] Ungulates
- [ ] Birds
- [ ] Furbearers
- [ ] Surface water
- [ ] Sediment
- [ ] Invertebrates
- [ ] Fish
- [ ] Fish habitat and aquatic plants
- [ ] Groundwater quality
- [ ] Air quality
- [ ] Noise level

Wheeler River Project - Athabasca Basin Members Engagement

Section 3: Project Location and Quadrant Map

Wheeler River Project Location and Quadrant Map. The location of the Wheeler River project is denoted by a yellow star in the Quadrant D6



10. Using the quadrant map for reference, please select which quadrant(s) you and your family members (including Elders) travel (both directly or travel through) and perform land use activities. Land use activities can include, but are not limited to, hunting, fishing, trapping, harvesting medicine, education, recreation etc.

- [ ] A3
- [ ] A4
- [ ] A5
- [ ] A6
- [ ] A7
- [ ] A8
- [ ] B3
- [ ] B4
- [ ] B5
- [ ] B6
- [ ] B7
- [ ] B8
- [ ] C3
- [ ] C4
- [ ] C5
- [ ] C6
- [ ] C7
- [ ] C8
- [ ] D3
- [ ] D4
- [ ] D5
- [ ] D6
- [ ] D7
- [ ] D8
- [ ] E3
- [ ] E4
- [ ] E5
- [ ] E6
- [ ] E7
- [ ] E8
- [ ] F3
- [ ] F4
- [ ] F5
- [ ] F6
- [ ] F7
- [ ] F8
- [ ] G3
- [ ] G4
- [ ] G5
- [ ] G6
- [ ] G7
- [ ] G8
- [ ] H3
- [ ] H4
- [ ] H5
- [ ] H6
- [ ] H7
- [ ] H8
- [ ] Other (please specify activity and quadrant)

11. Please select which of the following land use activities you and your family perform in the quadrants selected from question #10

- [ ] Hunting
- [ ] Fishing
- [ ] Trapping
- [ ] Harvesting Plants or Medicines
- [ ] Recreation
- [ ] Traveling through to other locations
- [ ] Other (please specify)
- [ ] Cultural Purposes
- [ ] Experiencing Nature
- [ ] Culture Camps
- [ ] Camping
- [ ] None of the above

Wheeler River Project - Athabasca Basin Members Engagement

Section 4: Interests and Concerns

12. Based on what you know so far about the Wheeler Project, what aspects of the project could benefit, or work well for your community?

13. Based on what you know so far about the Wheeler Project, what aspects of the project could be challenging or cause concern for your community?

14. Are there questions you have about the Wheeler Project that you would like to see addressed in future updates or communications? If, so please list your questions in the space below.

15. Is there anything else you would like us to know related to the Wheeler Project?

Wheeler River Project - Athabasca Basin Members Engagement

Section 5: Prize Draw Entry

If you would like your name entered into a draw prize, please provide the following information

16. Name

17. Phone number

18. Email address

19. Would you like us to add your email address to our mailing list to receive project updates? Yes/No

- Yes
- No

Wheeler River Project - Athabasca Basin Members Engagement

Thank You!

Thank you for completing the Wheeler River Project Community Engagement Survey. If you have any additional comments, questions or concerns please email WheelerRiverInfo@denisonmines.com

Denison Mines

Uranium Development & Exploration

The Wheeler River Project

October 14, 2021 Nuhtsiye-kwi Benéne Committee (Ancestral Lands Committee); English River Chief and Council

Cautionary Statements & References

This presentation and the information contained herein is designed to help you understand management's current views, and may not be appropriate for other purposes. This presentation contains information relating to the uranium market, third party and provincial infrastructure, and the plans and availability thereof, derived from third-party publications and reports which Denison believes are reliable but have not been independently verified by the Company.

Certain information contained in this presentation 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 presentation contains forward-looking information pertaining to the results of, and estimates, assumptions and projections provided in, the Wheeler PFS and the Waterbury PEA, including future development methods and plans, market prices, costs and capital expenditures; assumptions regarding Denison's ability to obtain all necessary regulatory approvals to commence development at Wheeler; Denison's percentage interest in its projects and its agreements with its joint venture partners; and the availability of services to be provided by third parties. 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 faces certain risks, including the current and potential impacts of the COVID-19 pandemic, use of mining methods which are novel and untested in the Athabasca basin, the inability to permit or develop its projects as currently planned, the inability to secure sufficient financing to pursue its business objectives, the unpredictability of market prices, events that could materially increase costs, changes in the regulatory environment governing the project lands, and unanticipated claims against title and rights to the project. 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 13, 2020 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.

Readers should not place undue reliance on forward-looking statements. The forward-looking information contained in this presentation is expressly qualified by this cautionary statement. Any forward-looking information and the assumptions made with respect thereto speaks only as of February 8, 2021. Denison does not undertake any obligation to publicly update or revise any forward-looking information after such date 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 Mineral Resources and Mineral Reserves: This presentation may use terms such as "measured", "indicated" and/or "inferred" mineral resources and "proven" or "probable" mineral reserves, which are terms defined with reference to the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") CIM Definition Standards on Mineral Resources and Mineral Reserves ("CIM Standards"). The Company's descriptions of its projects using CIM Standards may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements under the United States federal securities laws and the rules and regulations thereunder.

Qualified Persons

The disclosure of a scientific or technical nature within this presentation, including the disclosure of mineral resources, mineral reserves, as well as the results of the Wheeler PFS and Waterbury PEA, was reviewed and approved by David Bronkhorst, P.Eng., who is a Qualified Person in accordance with the requirements of NI 43-101.

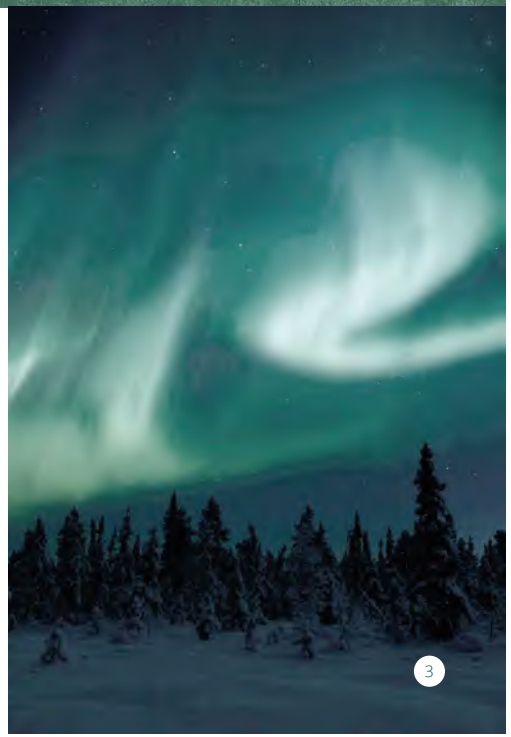
Technical Reports

- For further details regarding the Wheeler River project, please refer to (a) the Company's press releases dated December 1, 2020, regarding the adoption of the freeze wall design for ISR at Phoenix, and September 24, 2018, regarding the Prefeasibility Study, and (b) the technical report titled "*Prefeasibility Study for the Wheeler River Uranium Project, Saskatchewan, Canada*" with an effective date of September 24, 2018 ("Wheeler PFS").
- For further details regarding the Waterbury Lake project, please refer to the Company's press release dated November 17, 2020 and the technical report titled "*Preliminary Economic Assessment for the Tthe Heldeth Túé (J Zone) Deposit, Waterbury Lake Property, Northern Saskatchewan, Canada*" with an effective date of October 30, 2020. ("Waterbury PEA"). **The Waterbury PEA is a preliminary analysis of the potential viability of the Project's mineral resources, and should not be considered the same as a Pre-Feasibility or Feasibility Study, as various factors are preliminary in nature. There is no certainty that the results from the PEA will be realized. Mineral resources are not mineral reserves and do not have demonstrated economic viability. Scheduled tonnes and grade do not represent an estimate of mineral reserves.**

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 13, 2020. Copies of the foregoing are available on Denison's website and under its profile on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

Agenda

- **Prayer / Introductions**
- **Overview of 2022 Exploration Permits**
- **Presentation by Environment & Cultural Monitor on 2021 Monitoring Activities**
- **Wheeler River Project**
  - General Update
- **Wheeler River Project – Heritage Management Protocols**
- **Reporting Back to ERFN from March, 2021 Meetings**
- **Next Meeting Date and Topics**



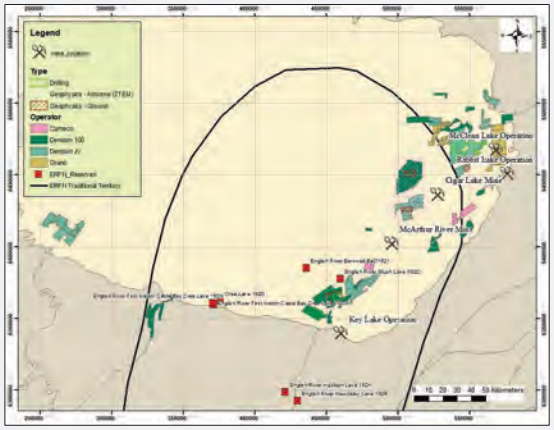
2022 Exploration Activities – Advance Review of Applications

Action: Denison submitted *draft* permit applications to ERFN for advanced review on September 17, 2021

1. Ford Lake
   - Diamond Drilling
2. Bachman Lake
   - Linecutting, Ground Geophysics (SML-EM), Diamond Drilling
3. Darby
   - Airborne Geophysics (ZTEM) +/- linecutting and Ground Geophysics (MT)
4. Candle Lake
   - Airborne geophysics (ZTEM)
5. Johnston Lake
   - Airborne Geophysics (ZTEM) +/- linecutting and Ground Geophysics (MT)
6. Waterbury Lake (outside of ERFN Traditional Territory)
   - Linecutting, Ground Geophysics (SML-EM)

Requesting: Feedback by October 16, 2021

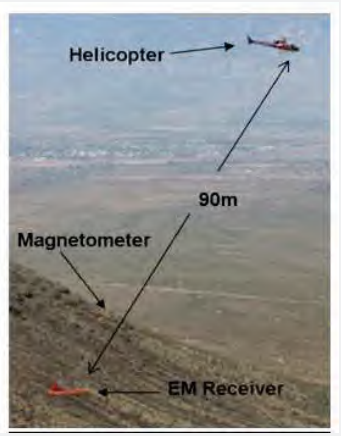
Plan to File with Province: October 21, 2021



Airborne Geophysical Surveys

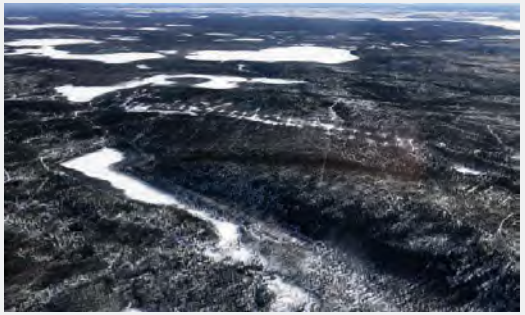
- First steps in grassroots exploration
- No land-based activities
- Surveys flown using helicopter or fixed wing
- Collect magnetic, radiometry or electromagnetic data

- Denison plans to run a *ZTEM* platform on several projects in 2022
  - ZTEM is a helicopter-borne electromagnetic survey system which detects anomalies in the earth's natural magnetic field.
  - These disruptions are caused by zones of rock that conduct or resist electrical current more than the surrounding rock, like ore deposits.



Line-Cutting

- Hand-cutting a grid to use as a reference to set up geophysical surveys; allow personnel and equipment to move more easily
- Width of lines is approximately 1.5m wide



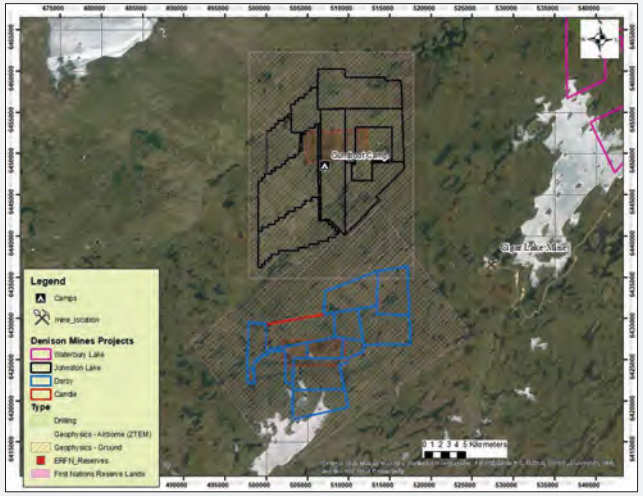
Ground Geophysical Surveys

- Electromagnetic surveys commonly used methods in exploration
- Generally higher resolution data compared to airborne datasets
- Involves laying large wire loops along previously-cut grid
  - Conducts electricity into the subsurface rocks and a series of receivers measure the magnetic and electrical response of the rocks

Diamond Drilling

- Core drilling using rotary drill with diamond bit attached
- Skid-mounted diamond drill
- Drill pads to not exceed 30m x 30m
- Use of existing trails wherever possible
- No installation of new permanent water crossings

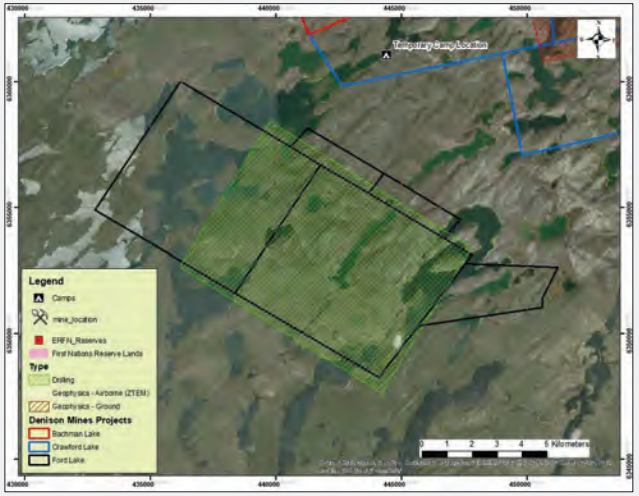
Johnston Lake, Candle Lake, Darby



- Airborne geophysical survey (ZTEM)
  - Supplemented by ground MT surveys
  - Will require a total of 38 km of linecutting and 42 km of grid refurbishing
  - Crews will be based out of Points North

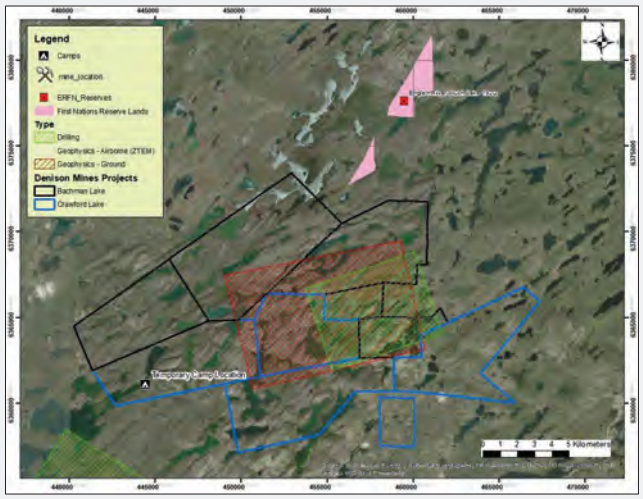
Preferred timing is winter of 2022 to allow for work on frozen lakes and swamps

Ford Lake



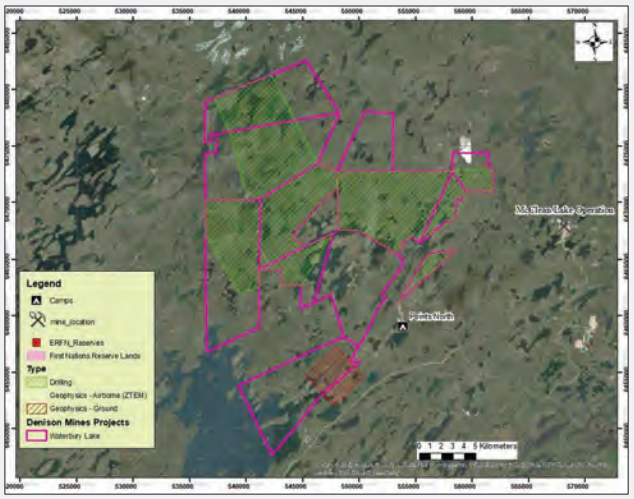
- Diamond drilling – 12 holes for a total of 6,000m
- Proposed for winter 2022
- Anticipated to take approximately 10-12 weeks
- Based out of Wheeler River camp OR temporary camp along shore of Phillips Lake
  - Same location as camp from 2021 geophysical program
  - 12-14 person camp

Bachman Lake and Crawford Lake



- Ground geophysical survey
  - No linecutting – existing grid
  - 51 km grid refurbishing
  - 25.2 km SML-EM surveying
- Planned for winter 2022
- Based out of Wheeler River camp OR temporary camp established at the site of decommissioned Slush Lake camp OR camp at Phillips Lake
  - 10-14 person camp
- Potential for Diamond Drilling Program on Bachman
  - 6 holes for 3,600 m
- Denison is seeking feedback on the draft applications by **October 15, 2021**

Waterbury Lake

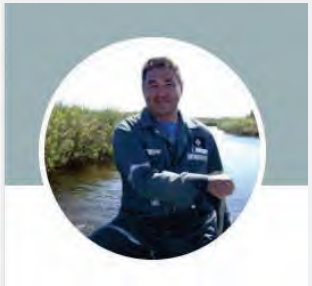


- Planned Geophysical Survey
  - 24 km linecutting
  - 18 km of SML-EM surveying
  - Crews will be housed at Points North
- Potential for diamond drill program
  - 20 drill holes; ~5,000 m

Outside of ERFN Traditional Territory

Environment & Cultural Monitor

- Attended Wheeler River Project site from August 10 to August 25, and September 7 to September 25
- Conducted the following monitoring activities:
  - Wheeler River Evaluation Project (Field activities supporting the advancement of the Wheeler Project)
  - Wheeler River Exploration Activities
- Provided ongoing observations during time onsite
- List of observations and Denison's response can be found in Report
- List of Recommendations



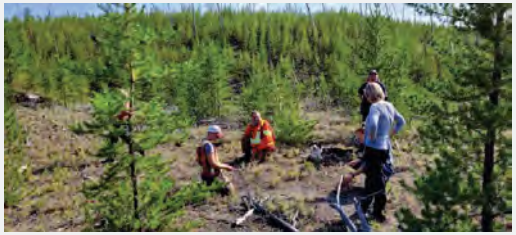
Recommendations

- Long term contractors should imply the same moto as Denison and work with a collaborative agreement with northern communities. Environmental concerns and employment is always the fore front for every community.
  - Denison agrees, and works to ensure these elements are included in contracts with contractors; Denison does not require contractors to have Collaboration Agreements, but is actively negotiating one between Denison and ERFN
- Revegetation plan, why are we using modeling/studies that are used at other mine sites in other provinces. The flora and fauna is unique to the site as are the studies applicable to this site. Bobby John demonstrated the mounding and fencing will work, however with limited use. Local expert advice seems to be placed at the back versus someone with a degree not indicative to the area.
  - Denison's plan is to directly involve the Communities of Interest (including ERFN, Bobby John, etc) into the partnership work that will commence with the U of S in 2022; **site-specific** information is at the core of the work to be undertaken
- Denison site visits from the environment department should not be limited to the field work intentionally planned. Additional time should be allotted to inspect camp and deposits for any environment concerns
  - Noted for 2022; Denison has an environment team reflective of the state of the Project.

Recommendations

- As for archeological sites and areas of importance, they were not identified during my field visits. In order to exclude archeological sites, in my opinion, a thorough field investigation may be required. The archeological map of Saskatchewan indicates several sites in and around Russell Lake.
  - Field investigations have been conducted in all areas where the Wheeler River Project infrastructure will be located.
  - **Two** newly recorded archaeological sites: Artifact Finds of unknown Precontact cultural affiliation
- Additional resources to assist the maintenance person would be an asset in maintaining the camp and equipment.
  - Noted for 2022
- Reassurance that indigenous content be included in all Environmental Impact Statements.
  - Denison is actively working with ERFN and Shared Value Solutions to ensure that ERFN content will be included in the Environmental Impact Statement

Thank you, Walter!

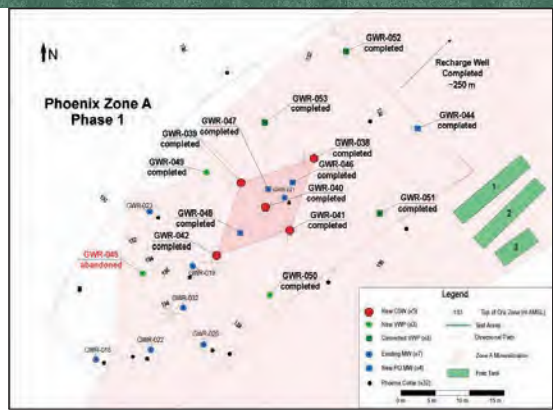


Wheeler River Project – General Update

Field Activities

2021

- Installation of Test Pattern and Monitoring Wells
- Deployment of Permeability Enhancement Methods
- Hydrogeological and Tracer Tests

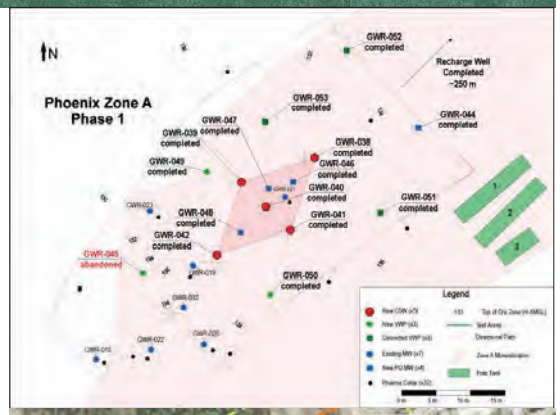


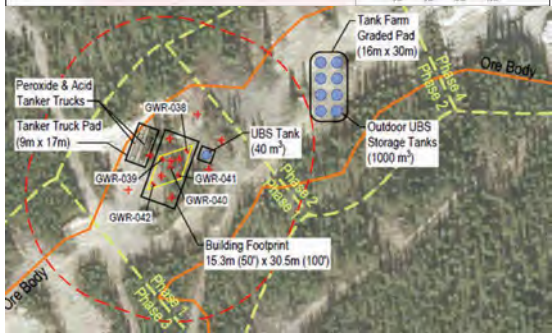
Wheeler River Project – General Update

Field Activities

2022

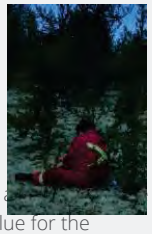
- Installation of Additional Test and Monitoring Wells
- Retrofitting of Existing Commercial Scale Wells
- Further Hydrogeological Tests (using formation waters)
- In-ground Lixiviant Test





Wheeler River Project – Heritage Management Plan and Protocols

Patrick D'Jonaire (ERFN)



- An "Archaeological Object" means any object showing evidence of manufacture, a by humans that is found in or taken from land in Saskatchewan and that is of value for the information that it may give about historic human activity in Saskatchewan (*The Heritage Property Act* (Saskatchewan)).
- In 2017, Heritage Resource Impact Assessment was conducted more generally; one site found
- In 2019, a refined Project footprint was submitted for heritage screening
  - Heritage Resource Impact Assessment was required
  - ERFN Traditional Territory maps were carefully reviewed (no burial or sacred sites are identified within the Project footprint
  - Between July 8 and July 12, further work was undertaken; 212 shovel probes and five shovel tests
  - **One** newly recorded archaeological site: Artifact Find of unknown Precontact cultural affiliation
  - Further work was done in the area and no more archaeological sites were found

Chance Find Procedure – In the Exploration Agreement

- Mutually agreed-upon process between Denison and ERFN regarding the finding of any archaeological objects
- Relevant for the Wheeler River Project
- Involves the stopping of work immediately, involvement of the ERFN Monitor and ultimately, a professional archaeologist to assess the significance of the object and adequate protection measures are in place
  - Avoidance
  - Mitigation
  - Further testing
- The finding of human remains immediately involve the RCMP
- Measures for protecting Archaeological Objects and any mitigation measures would be developed by the professional archaeologist, in consultation with Denison, ERFN, the Monitor and the Heritage Branch, including how to recommence work in the area
- Artifacts are the property of the crown and are stored at the Royal Saskatchewan Museum
  - Storage of the artifacts can be discussed; how to store, where to store, protocols to follow for storage

Virtual Community Engagement Sessions – March, 2021

- Thank you to Tara "T-Rhyme" Campbell, Elder Isidore Campbell; Dakota Ray Hebert
- 24 participants by Zoom
- Played on the La Plonge (93.1) radio station
- Many questions asked during the meeting; Denison staff answered them all
- 22 people completed the online survey
- Identified the following Valued Components were most important:
- Air quality, community well-being, employment, fish, fish habitat and aquatic plants, groundwater quality, surface water, traditional land and resource use, vegetation
- Invited us back to keep the community informed

Next Meetings / Things Happening with ERFN

- Agreement negotiation meeting end of October:
  - Financials, business, environment
  - Keep momentum moving forward
- Annual information to ERFN about success / challenges with the Exploration Agreement implementation
- Proposed engagement meeting in January, 2022 regarding predicted environmental effects from the Project
- Ongoing work with Shared Value Solutions / English River First Nation and inputs into the Environmental Impact Statement

Event: English River First Nation Chief and Council & Nuhtsiye-kwi Benéne Committee (Ancestral Lands Committee)
Date: October 14, 2021, 10:00am to 11:30
Attendees: ***Denison:*** Andy Yackulic, Carolanne Inglis-McQuay, Janna Switzer, Chad Sorba, Mike Dawe
***ERFN*:** Chief and Councillors, Environment and culture monitor
Committee members
***Denison invited guest*:** CanNorth

Via Zoom: https://us02web.zoom.us/j/84767630538?pwd=R3dXbFRpYVUyeGVhb3ErTFI0QXlpZz09
Meeting Notes

Topics

- Overview of 2022 Exploration Permits Applications: Denison
- Presentation by Environment & Cultural Monitor on 2021 Monitoring Activities: ERFN
- Update on Wheeler River Project: Denison
- Reporting Back to ERFN on Community Meeting in March, 2021: Denison
- Wheeler River Project - Heritage Management Protocols: CanNorth
- Next Meeting, next topics

2022 Exploration Permits

The following proposed activities were presented:

1) Ford Lake Denison
   - Based out of Wheeler River camp or temp camp
   - Same location as '21 geophysical program
   - 12-14 people
   - Potential for daily helicopter flights
   - No agreements signed for contracts
   - Groceries/fuel from Beauval
2) Bachman/Crawford Lake Denison
   - Ground geo survey
   - Winter 2022
   - Likely camp at Phillips Lake
   - 10-14 persons
   - No agreements signed for contracts
   - Groceries/fuel from Beauval
3) Waterbury Lake Denison
   - Geo survey
   - 24 km line cutting - 18km surveying - crews at Points North
   - Likely diamond drill
   - 20 drill holes
   - Outside ERFN territory
   - No agreements signed for contracts

ERFN Identified Areas of Concern / Interest

1) For airborne geophysics work, key area of ERFN concerns / interest is:
   a. Understanding the flight paths (location) and timing to confirm that the activities are not happening within 100km of the ERFN culture camp (km167 on highway 914) during the end of August / September when moose hunting is occurring around km167 on highway 914
   b. Confirmation that the fuel storage is primarily located at the flight centre (Points North or other) and that all temporary fuel storage is on lined containment and is removed at the end of the activities
2) For line-cutting activities, key area of ERFN concerns / interest is:
   a. Ensuring all line-cutting contractors are utilizing ERFN members for labour on the activities, where appropriate
3) Generally, key area of ERFN concerns / interest is:
   a. Use of ERFN-owned businesses wherever possible (i.e. Beauval General Store, Polar oils, etc)

Denison response to the above-identified areas of ERFN concern / interest:

1. a) All proposed airborne geophysics work is planned to occur outside the identified August / September moose -------hunting timeframe, in addition to being located more than 100km away from the ERFN Culture Camp at km167

b) All primary fuel storage for airborne activities is located at the flight centre. Any temporary fuel storage is located ---------in accordance with the Best Management Practices for temporary fuel storage, on secondary containment and ----------removed following the activities

2. a) Denison will continue to ensure that contractors connect with ERFN regarding potential line-cutting labour opportunities, in a similar fashion to the efforts made during the 2021 season. Further, Denison will continue to work with ERFN to identify future opportunities regarding ownership of line-cutting companies, recognizing this is a longer-term goal.

3. a) Denison has a general commitment to maximize the use of ERFN-owned businesses, and more specifically, the Beauval General Store where it makes sense to do so. This is ongoing and memorialized between the Parties

Presentation by Environment & Cultural Monitor on 2021 Monitoring Activities: ERFN

- Recommendations and observations can be found in the Report prepared by ERFN Environmental and Cultural Monitor.
- Denison thanks Environmental and Cultural Monitory for being the first to 'blaze the trail' for us

- ERFN should congratulate Denison for minimal environmental disturbance. The limiting of disturbance and having spill kits available quickly.
- Some recommendations made by Environmental and Cultural Monitor are more reflective of an operating site, and Denison is somewhere between general exploration and an operating site, so we consider some of the recommendations as being appropriate for guiding us when we become an operating site

Wheeler River 2021 and Planned 2022 Activities: Denison

- Overview provided of the work undertaken in the field during 2021 and planned for 2022, including an in-ground lixiviant test
- 2022 is planned to include the Environment & Cultural Monitor as a significant role

Wheeler River Project - Heritage Management Protocols: CanNorth

An overview was provided regarding the history of work undertaken at the Wheeler River site area (once done in 2017; further work done in 2019) – overall two artifacts were found

- Question: Artifacts become property of the Crown? That doesn't seem right, that the Nation doesn't get to keep the artifact
    - Response: Yes, this is the case. But the Province is open to Indigenous protocols regarding storage of the artifact, including permanent loan to the Nation
- Question: What's the process for repatriation?
    - Response: It would begin with discussions between the Professional Archaeologist, ERFN, the Monitor and Denison
    - The previous curator of the Royal Saskatchewan Museum has been open to FN protocols and repatriation protocols, and actively pursuing repatriation
    - Commitment: ERFN and Denison's Consultant to discuss potential plan of action if any artifact discovery/repatriation

General Comments

ERFN is still looking forward to a site tour

Denison and Pinehouse Correspondence Notes

November 24, 2021

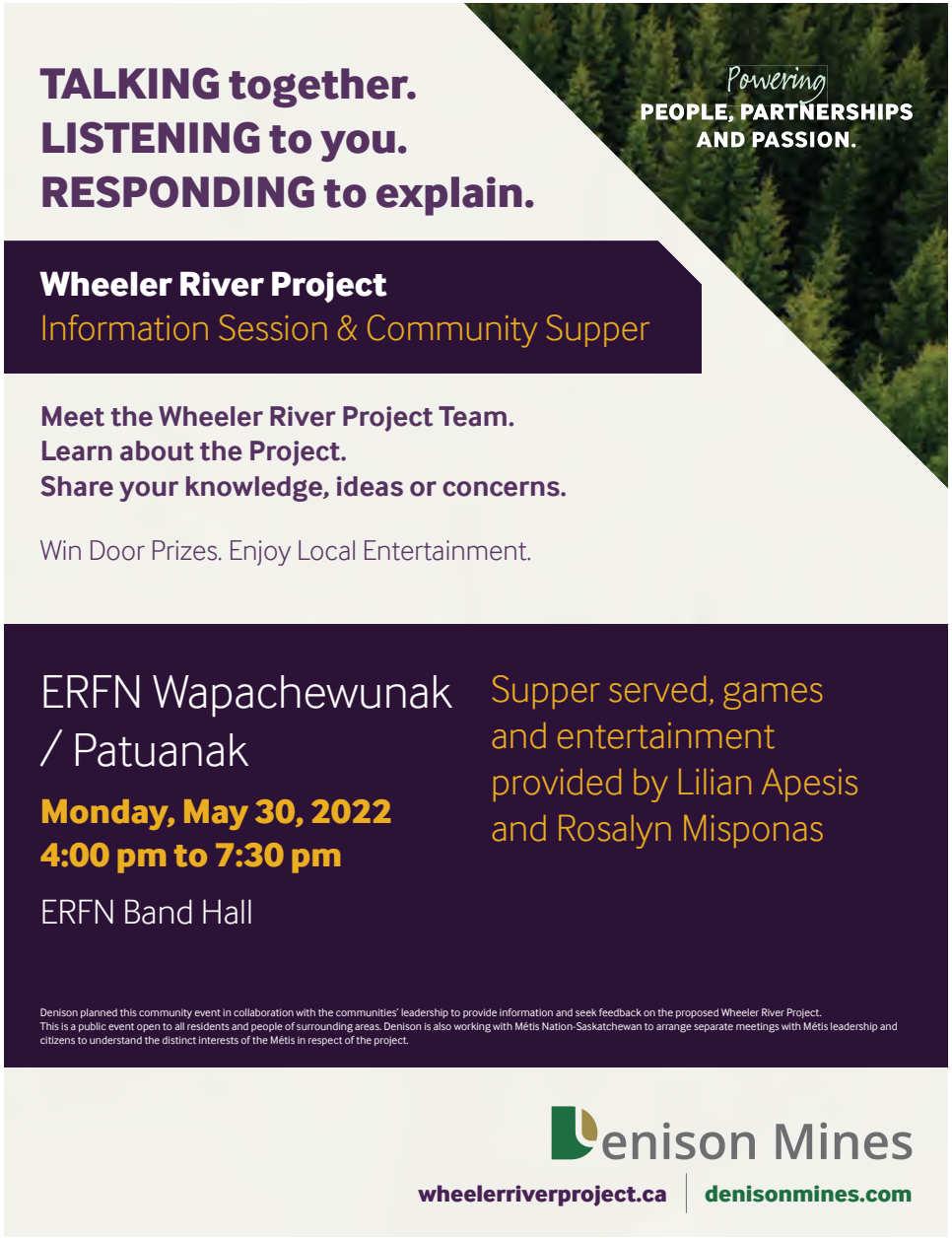
Denison: Please find attached correspondence from Mr. David Cates, President and CEO of Denison Mines regarding next steps between Denison Mines and Kineepik Métis Local #9. We look forward to your response at your convenience.

KML Environment, Education, and Training Manager: Thank you for this. First question about milling ore. I asked about the McArthur River to Cigar Road and you indicated this project was not part of that process. Should this project move to production where is Denison planning to mill the ore? I notice the province is starting consultation for the 914 road extension.

November 25, 2021

Denison: All ore produced from the ISR operation at Wheeler will be produced onsite in a production facility. It will be smaller than a full mill, primarily just the back end of a conventional mill. For the ISR operation, no need for the road between McArthur and Cigar.

Poster Ad



Facebook Ad

TV Ad

At the door handout

Denison Mines

POWERING PEOPLE
WHEELER RIVER

What we heard from residents of English River First Nation and Region

We wanted to make sure that community members and leadership are aware of the proposed project, the plans for the future, the opportunities for the community, and to also give an opportunity to the project's provincial (Saskatchewan Ministry of Environment) and federal (Canadian Nuclear Safety Commission) regulators to participate and introduce themselves.

Wheeler River Project in a nutshell

The Wheeler River Project is located 35 km north-east of the Key Lake mill and 35 km southwest of the McArthur River uranium mine in the south-eastern portion of the Athabasca Basin region.

This proposed uranium mining project will use the In Situ Recovery (ISR) mining method, which is different than any of the existing uranium mines in the Athabasca Basin region - all activities occur at the surface, meaning there are no shafts/underground workings, no open pits, and no major earthworks. While new to the Athabasca Basin, ISR mining is the most common uranium mining method globally. A 10-metre-thick freeze wall separates the mining areas from the surrounding ground water. A solution is injected into the orebody to dissolve the uranium in place (in situ) and the solution carrying the dissolved uranium is pumped to surface where the uranium is extracted from the solution. The same solution is then pumped back into the ground to dissolve more uranium and so on in a closed loop. With this method there is no production of tailings and no large waste rock piles.

Tell Us More

Denison is committed to engaging with our neighbours and invite you to contact us to share ideas or concerns with the Wheeler River Project team. You can also contact our team to request information or offer your services.

Email: **WheelerRiverInfo@denisonmines.com**
Tel: 306-652-8200
Website: www.denisonmines.com

Copyright @DenisonMines - May 2021

Community Insight

During the meeting participants asked many questions and also provided valuable insight in responding to the follow-up survey. Here are the main points made by ERFN members:

Of all 26 interconnected valued components (VCs), which are the environmental or social aspects that may be impacted by a project, you indicated that the following were most important:

- Air quality
- Community well-being
- Employment
- Fish
- Fish habitat and aquatic plants
- Groundwater quality
- Surface water
- Traditional land and resource use
- Vegetation

You also mentioned that you would like the Wheeler River Project team to consider the following additional VCs during its assessment:

- Consultation
- Joint ventures
- Knowledge of resource management
- Longevity of the land
- Traditional food
- Working relationships (particularly between ERFN and Denison)

You also told us some of your worries and concerns about the project. These are the main points:

- Use of acids in ISR mining
- Storage and shipping of the yellowcake and other harmful substances
- Impact on wildlife in the area around the mine
- Potential negative impacts to community health
- Possibility of the groundwater or the land being impacted
- Concerns about residual uranium leaking into the groundwater after the removal of the freeze wall
- Concerns about inadequate reclamation being completed
- Potential impacts to the people who use the area for traditional activities, and
- Potential for long-term impacts to the land – not helpful for the community as it will harm the earth, which is needed for survival

You acknowledged some of the opportunities you are looking forward to with this project, including:

- Employment opportunities
- Opportunities for local companies (TRON and Des Nedhe)
- Possibility of royalties for the community
- Potential for community development and a collaborative agreement
- Training opportunities

You invited the Wheeler project team to continue its engagement activities with ERFN members and leadership with more consistent communication and updates to ensure that the project is being completed with integrity and respect. And more specifically you mentioned that "increased communications (quarterly) would be beneficial to the community, possibly through a community liaison." You indicated that the use of online engagement is a concern for many community members, particularly given that Elders may not be comfortable with online engagement and their opinions are very important. You also mentioned that for engagement to be inclusive a translator should be made available.

Tell Us More

Denison is committed to engaging with our neighbours and invite you to contact us to share ideas or concerns with the Wheeler River Project team. You can also contact our team to request information or offer your services.

Email: **WheelerRiverInfo@denisonmines.com**
Tel: 306-652-8200
Website: www.denisonmines.com

Copyright @DenisonMines - May 2021

Display Boards

Wheeler River
Project Overview

Powering PEOPLE, PARTNERSHIPS AND PASSION.

We acknowledge and respect the fact that Denison's flagship Wheeler River Uranium Project is located in northern Saskatchewan within the boundaries of Treaty 10, in the traditional territory of English River First Nation, in the homeland of the Métis and within Nuhenéné.

Key Project Components	Construction (Year 1 to 3)	Operation (Year 3 to 18)	Decommissioning (Year 18 to 23)	Post-Decommissioning (Year 23 to 38)
	Develop access roads and air strip		Facility removal	Active environmental monitoring of vegetation growth; monitoring of surface water and groundwater quality; monitoring of wildlife site
	Site preparation and earthworks			
	ISR wellfield drilling	Operation of the ISR wellfield ISR wellfield drilling	Process water treatment and release Mining horizon remediation	
	Freeze hole drilling and ground freezing	Freeze hole drilling and ground freezing	Thawing of freeze wall	
	Development of surface infrastructure (camp, operations centre, plants, ponds, pads and support facilities)	Operation of processing plant and production of uranium concentrate	Decontamination of surface facilities, injection, recovery and monitoring wells Facility removal	
		Water withdrawal from groundwater or surface water body		
		Treated effluent release to surface water body	Site water management, treatment and release	
		Waste management		
	Active environmental monitoring of vegetation growth; monitoring of surface water and groundwater quality; monitoring of wildlife site			

Key Advantages of ISR Mining
- Small surface footprint
- No conventional tailings facility
- No underground workings - mining done from surface
- Low energy consumption
- Small volume of treated effluent
- Small volumes of clean waste rock (sandstone drill cores from wellfield drilling)
- Small volume of treated water precipitates
- Small volumes of waste rock (mineralized drill cuttings from wellfield development)
- Introduces opportunity to develop potential mineral deposits not considered economically viable by conventional mining methods

Considerations of ISR Mining
- Protection of surrounding groundwater regime
- Significant evaluation efforts required to confirm ISR mining method is viable for high grade Phoenix deposit

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Project Technologies

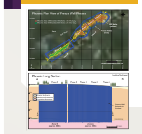
Powering PEOPLE, PARTNERSHIPS AND PASSION.

In Situ Recovery
- Use an acidic or low pH mining solution to leach uranium ores from the ground
- Mining solution is a mixture of sulphuric acid, hydrogen peroxide and ferric sulphate
- Freshwater obtained from shallow groundwater or surface water
- Mining solution expected to be reused over and over, wherever possible
- Use mud rotary drilling to create wellfield – most common method of well drilling in Saskatchewan

ISR Process Overview

Ground Freezing – Freeze Wall
- Ground freezing used to prevent groundwater in the sandstone from flowing through the uranium deposit
- Uranium deposit will be surrounded by an engineered freeze wall to isolate mining area from groundwater flow
- Freeze wall surrounding deposit from the basement rock to surface
- Use of groundwater wells for monitoring of the mining solution, groundwater level, ground pressure and temperature
- Freeze wall established by +300 freeze holes 6m apart from surface to low permeability basement rock
- Freeze wall holes made using diamond drilling method
- Chilled brine solution (calcium chloride brine) will circulate in the steel encased holes to remove the heat from the ground
- Warm brine solution flows out to surface to be re-chilled in a closed loop system - similar to how a community ice rink is kept frozen
- Commonly used technology at McArthur River and Cigar Lake

Proposed Freeze Wall



Typical Freeze Pipe

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Regulatory Process

Powering PEOPLE, PARTNERSHIPS AND PASSION.

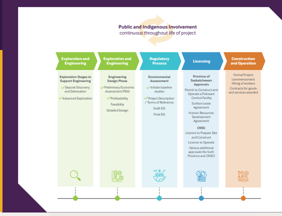
Federal Regulators
Lead: Canadian Nuclear Safety Commission
- Reviews and approves Environmental Impact Statement (EIS) and licence applications
- Mandate to protect health, safety and security of Canadians and the environment

Main authorizations granted include:
- Licence to Prepare Site and Construct
- Licence to Operate

Provincial Regulators
Lead: Saskatchewan Ministry of Environment
- Understand and evaluate potential environmental impacts of a project before any irreversible decisions are taken that may lead to negative effects on the environment, natural resources, or public health and safety
- Grant regulatory permits or licences
- Review and approve Environmental Impact Statement (EIS)

Main authorizations granted include:
- Permit to Operate a Pollutant Control Facility
- Surface Lease Agreement

Wheeler River Project Process Status
- Environmental baseline studies ongoing since 2012
- Federal and provincial EA process initiated in May 2019 with submission of Project Description
- Environmental studies are completed to inform engineering design and mitigate potential effects of the project on the biophysical and human environments



Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Understanding Environmental Assessment (EA)

Powering PEOPLE, PARTNERSHIPS AND PASSION.

Valued components
What are VCs?

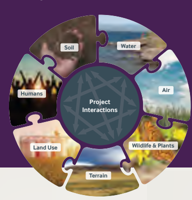
It stands for Valued components. These are elements that are important to humans or the environment. Because viewpoints can vary, it was important to consult with northern communities to identify appropriate valued components.

When determining VCs, we used input from multiple northern communities:
- English River First Nation,
- Kineepik Métis Local #9,
- Pinehouse Lake,
- Beauval,
- Ile a la Crosse,
- Patuanak, and
- the seven Athabasca Communities represented by the Ya'thi Néné Lands and Resources Office

VCs were determined to be Air, Humans, Indigenous Land and Resource Use, Ground/Terrain/Soil, Vegetation, Water, and Wildlife.

Project Interactions
How will the project impact VCs? The project has several phases and activities that can interact with VCs. These are:
- Preparation
- Operation
- Decommission
- Waste Management
- Water Management

We undertake actions to eliminate or reduce negative project impacts on VCs. These actions are called mitigation measures.



Significance
Can the impacts to VCs be effectively managed?

We study many considerations before making conclusions on whether impacts are significant. Residual adverse effects must be determined. These are the effects left after mitigation measures. Then, we answer questions about the residual adverse effect of each VC:
- Magnitude- How big is the effect?
- Geographic extent- Where do the effects occur?
- Time- When do the effects occur?
- Frequency- How often do the effects occur?
- Duration- How long do the effects last?
- Reversibility- Can the effects be undone?
- Context- Are there environmental or social factors to consider?

Surrounding projects, laws, policies, communities, practices, land use, reliability of mitigation, multiple sources of knowledge, and many other factors can influence VC conditions. These factors are evaluated, considering the baseline conditions, to make a conclusion on significance.

A conclusion of "not significant" does not mean that an adverse effect won't occur or isn't important relative to people or the environment – it is simply a conclusion that the potential changes can be effectively managed.

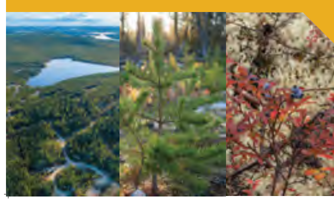
Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VCs: Vegetation, Ecosystems and Wetlands

Powering PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations
- Abundance of vegetation
- Chemical make-up of the constituents
- Listed Plant Species

Potential Effects
Activities that could reduce or disturb vegetation, listed plant species, and wetlands:
- Introduction of weeds
- Generation and deposition of dust
- Changes to water quality
- Storage, handling, and transport of waste
- Reclamation of disturbed areas



Mitigation Measures
- Limit the area of disturbance
- Use of existing clearings and previously disturbed land
- Cleared bush will be stockpiled and used in progressive reclamation
- Implementation of controls to limit dust generation
- Secondary containment of tanks and pipelines to contain accidental leaks and spills
- Minimize risk of accidental spills through the Fuel Management and Spill Control Plan
- Mining solution and process water will be reused whenever possible to reduce water required for the Project and to reduce treated water released to the environment

Conclusions
Effects are anticipated to be:
- Low magnitude - less than 0.1% of wetlands lost; about 2.9% of habitat types potentially affected in the local area
- Local - limited to areas disturbed by the project
- Long term – throughout the project life cycle
- Not significant – residual effects are not expected to alter vegetation and ecosystems integrity (sustainability)

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

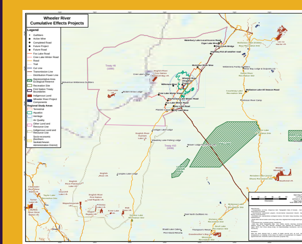
Wheeler River
Cumulative Effects Assessment

Powering PEOPLE, PARTNERSHIPS AND PASSION.

A Cumulative Effects Assessment (CEA) is completed to ensure that the incremental effects from multiple activities in an area (environment, human health, land use, etc.) are considered together. Project activities can interact with Valued Components; when interactions cause Valued Components' conditions to change, it is known as an "effect". The combined effects may be significant even though the effects of each independent activity is not significant.

Cumulative Effects Considerations
- The cumulative effects (overlapping effects) were characterized to inform the CEA
- The significance of the cumulative effect was determined for each Valued Component
- The Cumulative effects for all of the Valued Components were predicted to be Not Significant

Key Points of a CEA
- Completed for each of the selected Valued Components.
- Uses established assessment methods.
- Includes Indigenous, local and scientific knowledge.
- Conducted at the regional level for each Valued Component.
- Baseline conditions of the Valued Components reflect the effects from past and present projects and activities.
- Identifies overlapping residual effects (such as time and space) from the Project, with residual effects from known projects and/or activities from past, present, and future projects and/or activities.
- Considers all known projects and activities, and climate change.



Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VCs: Ground, Terrain and Soil

Powering PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations
- Land stability
- Soil quantity, quality and nutrients

Potential Effects
Activities that could impact land stability, surface drainage patterns, surface erosion potential, soil quality, and soil quantity:
- Clearing, grading, and construction
- Unexpected spills, leaks
- Release of water to groundwater and/or surface water bodies

Reclamation of disturbed areas may result in similar Project-related effects, but to a lesser extent.

Mitigation Measures
- Limit the area of disturbance
- Construction strategies to eliminate or reduce impacts
- Use of existing clearings and previously disturbed land
- Reusing disturbed sources of soil nutrients, generated during construction, for the reclamation process
- Installation of sediment/erosion controls and surface water management features
- Monitoring of open-source dust associated with major earthworks and equipment travel
- Fuel Management and Spill Control Plan in place to respond to unexpected leaks, spills, and releases of materials
- Wherever possible, progressive reclamation will be conducted throughout the life of the Project in relation to landscape features (slope, aspect) and surface drainage patterns
- Decommissioning phase to restore the landscape to safe, stable and self-sustaining landscape

Conclusions
Effects are anticipated to be:
- Low magnitude – within range of natural variations
- Local - limited to areas disturbed by the project
- Medium term – up to, but not including post-decommissioning
- Not significant – residual effects are not expected to alter VCs integrity and sustainability nor their availability to contribute to the environment

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VCs: Wildlife and Birds

Powering PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations
Populations and health of wildlife including:
- Ungulates: Moose, Woodland Caribou
- Furbearers: Wolverine, Mink, Muskrat
- Birds: Bald Eagle, Osprey, Common Nighthawk, Short-Eared Owl, Waterbirds, Game Birds, Songbirds, Yellow Rail, Rusty Blackbird, Olive-Sided Flycatcher

Potential Effects
Activities that could reduce or disturb species of wildlife, birds, or habitats include:
- Vehicles, equipment, and aircraft traffic
- Dust
- Human presence
- Collisions with equipment and vehicles
- Entrapment in facilities
- Exposure to substances in dust
- Release of Project-related treated effluent
- Spills of hazardous materials
- More efficient hunter, trapper, and predator access to the Project area via new access routes

Changes to surface water quality could affect wildlife habitat and health from water management practices.

Decommissioning of Project site may result in a continued alteration of wildlife habitat and/or mortality from vehicle wildlife collisions.

Mitigation Measures – Wildlife Management Plan
- Limit the area of disturbance
- Use of existing clearings and previously disturbed land
- Site clearing scheduled to avoid times when animal and birds are denning, calving, breeding
- Nesting surveys conducted before clearing to identify and establish measures to protect dens, burrows, lodges, nests, and other habitat
- Measures and practices to reduce the generation of dust
- Secondary containment of tanks and pipelines to contain accidental leaks and spills
- Implementation of Fuel Management and Spill Control Plan
- Fencing and monitoring contaminated areas – waste ponds and pads, landfill
- Implementation of Woodland Caribou Management Plan
- Employees trained to minimize their impact on wildlife, such as no littering, respect for wildlife, etc
- Implementation of speed limits to reduce risk of collision with wildlife
- Waste and hazardous materials collected and temporarily stored in wildlife-proof containers.

Conclusions
Effects are anticipated to be:
- Low magnitude – risk of mortality within range of natural variations
- Regional effect on habitat loss – limited to Project area
- Local effect on mortality – direct mortality within Project area from vehicle-wildlife collisions, but indirect mortality could extend beyond Project area
- Medium term for ungulate – highest loss of habitat and and mortality (vehicle-wildlife collisions) expected during construction and operation, but may continue during other phases of the project
- Medium to long term for furbearers, raptors and at-risk bird species – loss of habitat and and mortality (vehicle/aircraft-wildlife collisions) expected during all phases of the project
- Long term for woodland caribou and migratory breeding birds – Alteration of habitat and and mortality (vehicle/aircraft-wildlife collisions) through all phases of project – highest mortality potential during construction and operation
- Not significant – residual effects not expected to alter habitat integrity nor wildlife and bird regional populations sustainability

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VC: Aquatic Environment

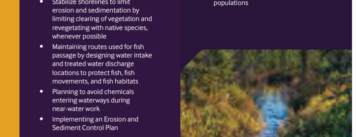
Powering PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations
- Fish habitat availability and distribution
- Fish survival and reproduction
- Surface water levels and flow
- Concentration of chemicals and metals in surface water
- Concentration of chemical and metals in aquatic sediments
- Distribution and survival of snails, worms, dragonfly larvae, and other benthic invertebrates

Potential Effects
Activities that could reduce or disturb aquatic environments, species, or habitats:
- Modification of fish habitat from disturbances around surface water
- Erosion and transport of sediments into surface water
- Water withdrawal from Whitefish Lake
- Releasing effluent to Whitefish Lake.
- Water management could result in changes to water quality affecting fish, fish habitat, and benthic invertebrates.
- Water management could alter stream flow or lake levels required for fish mobility and productivity
- Reclamation of disturbed areas could increase sediments in water and change fish habitat

Mitigation Measures
- Limiting duration of in-water working (conducting work during low flow periods, and conducting work away from flows when possible)
- Avoiding activities in windy or rainy conditions to limit erosion and sedimentation
- Plan activities in waterbodies to limit loss or disturbance to aquatic and sensitive habitat
- Limit shoreline degradation when operating machinery
- Stabilize shorelines to limit erosion and sedimentation by limiting clearing of vegetation and revegetating with native species, whenever possible
- Maintaining routes used for fish passage by designing water intake and treated water discharge locations to protect fish, fish movements, and fish habitats
- Planning to avoid chemicals entering waterways during near-water work
- Implementing an Erosion and Sediment Control Plan

Conclusions
Effects are anticipated to be:
- Low magnitude – no loss of habitat and fish population
- Local – limited to Project area
- Long term for habitat availability – throughout construction and operation
- Short term for habitat distribution – fish movement protected throughout life of the project
- Not significant – residual effects not expected to alter local fish populations



Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Display Boards

ROC618

Wheeler River
VC: Relationship to the Land

Powering PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations
- Resources availability
- Land availability
- Suitability of land and resources

Potential Effects
The presence of the project and its activities may result in changes to:
- Water, vegetation, fish, and wildlife
- Access to the area
- Land area available
- Noise level, traffic, dust, and other disturbances associated with Project activities
- Quality of the experience using resources
- Opportunities for Indigenous land use activities
- Opportunities for non-Indigenous land use

Mitigation Measures
- Implementation of measures to protect plants, fish, and wildlife
- Limit the area of disturbance
- Use of noise reducing equipment
- Reduce dust and air emissions
- Enforce speed limits for traffic
- Implement radiological clearance of equipment before exiting Project site
- Implement progressive reclamation of disturbed areas
- Establish community agreements
- Establish trappers' compensation
- Implement Indigenous People's Policy, including ongoing communication with Indigenous Communities of Interest

Conclusions
Effects are anticipated to be:
- Low magnitude – no loss of habitat and fish population
- Local – Project area (in and around the local and regional study area)
- Long term – until reclamation is complete
- Not significant – continuous in frequency, low in context, and fully reversible following decommissioning

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VCs: Community, Culture and Economy

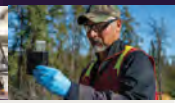
Powering PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations
- Populations, traffic, community infrastructure and services
- Income, employment, training, government revenues, business opportunities
- Community cohesion and traditional economy
- Employment and training (generally delivered through institutions connected to northern Saskatchewan)

Potential Effects
Activities that could interact with community, culture, and economy:
- Population numbers and population characteristics
- Up to 300 jobs created during construction and more than 100 direct and contract roles during the operation phase
- Supervisory, trades, professional, technical, and foundational (entry level) positions available during operations
- Availability and increased opportunities for business and training
- Participation in traditional economic activities
- Abundance of Traffic
- Increased demand on community infrastructure and services

Mitigation Measures
- Implementation of agreements with communities (support)
- Prioritize Indigenous and non-Indigenous Communities of Interest (employment, training, and business, wherever possible)
- Implement procurement approach focused on communities
- Implementation of education and other support services for workers and in some cases their families
- Planned pick-up points in alignment with employment practices
- Implementation of Emergency Response Plan

Conclusions
Effects on community well-being, infrastructure, services and economy are currently being assessed, and are anticipated to be:
- Minimal adverse and/or positive
- Low to moderate magnitude – during construction and operation, and low during reclamation
- Local – primarily in the Project area
- Short to medium – based on Project phases
- Not significant – continuous in frequency, moderate in context, and fully reversible following decommissioning



Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Risk Assessment

Powering PEOPLE, PARTNERSHIPS AND PASSION.

To evaluate and understand if people, plants, and animals will be exposed to substances at amounts above what is known to be safe after the planned mitigation measures have been applied.

It incorporates the movement of substances through the food chain as well as direct exposure to substances (soil, air, water, etc) to appropriately capture risk.

Human Health Risk Assessment
People who access the project site are considered in the risk assessment. They include:
- Camp workers
- Seasonal resident/lodge operator – seasonal access
- People fishing/hunting/trapping/gathering firewood/picking berries – traditional and recreational access
- Neighbouring residents fishing/hunting/trapping
- Future permanent residents-access to Project site after its decommissioning.

Assessment Results and Mitigation
- Low overall health risk to people using the area
- Expected radiation doses to people below public dose limit
- Low risk of exposure of people to metals in the environment (below benchmarks for metals)
- Ongoing monitoring during all Project phases

Ecological Risk Assessment
Considers ecological receptors such as:
- Terrestrial Mammals – Woodland Caribou, hare, moose, black bear, lynx, etc.
- Riparian Mammals – Muskrat, mink
- Terrestrial Birds – Bald eagle, robin, Canada goose, etc.
- Riparian Birds – Mallard, loon,
- Fish – Northern pike, white sucker
- Terrestrial Invertebrates – Earthworm
- Aquatic Invertebrates – Zooplankton, benthic invertebrates
- Terrestrial Vegetation – Lichen, blueberry, Labrador tea
- Aquatic Vegetation – Phytoplankton, Macrophyte

These can be exposed to substances through direct exposure in water, sediment, soil, air or through the food chain.

Assessment Results and Mitigation
- Low overall health risk to animals, plants, and invertebrates
- Expected radiation doses to ecological receptors below benchmarks.
- No risk of exposure to ecological receptors to non-radionuclides hazards
- Ongoing monitoring during all Project phases

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Project People

Powering PEOPLE, PARTNERSHIPS AND PASSION.

At the Wheeler River Project site, we strive to employ as many Northerners as possible. We also strive to hire most of the contractors and services we need from northern and Indigenous people owned businesses.

Here are some of the people who have been on site in the past few years; some have moved on while others continue to help advance the Project.

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Building Relationsips

Powering PEOPLE, PARTNERSHIPS AND PASSION.

Denison and the Wheeler River Project team are committed to meaningful engagement with Indigenous people, communities, residents, and organizations with an interest in our Project.

TALKING together. LISTENING to you. RESPONDING to explain.

Engagement With Indigenous and Non-Indigenous Communities of Interest
- English River First Nation
- Kinewpik Métis Local 9 (Pinehouse)
- Métis Nation - Saskatchewan
- A La Baie Métis Local 21 (Ile a la Crosse)
- Sipnihk Métis Local 37 (Beauval)
- Patuanak Métis Local 92 (Patuanak)
- Northern Hamlet of Patuanak
- Northern Village of Pinehouse
- Northern Village of Ile a la Crosse
- Northern Village of Beauval

Other communities, organizations and groups of interest:
- Lac la Ronge Indian Band
- Birch Narrows Dene Nation
- Buffalo River Dene Nation
- Hatchet Lake First Nation
- Black Lake First Nation
- Fond du Lac First Nation
- Métis Nation – Saskatchewan
- Ya'thi Néné Land and Resource Office
- Prince Albert Grand Council
- Meadow Lake Tribal Council
- Commercial trappers
- Commercial fishers
- Commercial lodges
- Cabin and lease owners

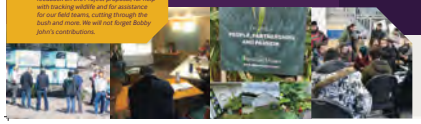
Thank You, Bobby John
Bobby John lived, trapped, fished and hunted in the Wheeler River Project area long before Denison and its predecessors started exploring the site. Over the years, Bobby John became someone our Project team relied on for insight on the area, for feedback on the Project proposal, for help with tracking wildlife and for assistance for our field teams, cutting through the bush and more. We will not forget Bobby John's contributions.

Since 2016 and every year after, Denison has met with community members and leadership through workshops, site tours, public meetings, and even virtual community meetings to hear concerns, receive knowledge and input, and share Project information.

Subjects of workshops and meetings have included:
- Wheeler River Project components:
  - Access road
  - Treated water (effluent) discharge location
  - Mining method
  - Design change to freezing containment method
- Environmental considerations:
  - Water bodies - fishing
  - Fish habitat
  - Species at risk
  - Land disturbance

Our Support of Communities
Denison's support of communities can take various forms:
- Donations to community organizations
- Sponsorships of community events
- Scholarships or in-kind support of education and field trips
- Direct agreements with specific Indigenous communities

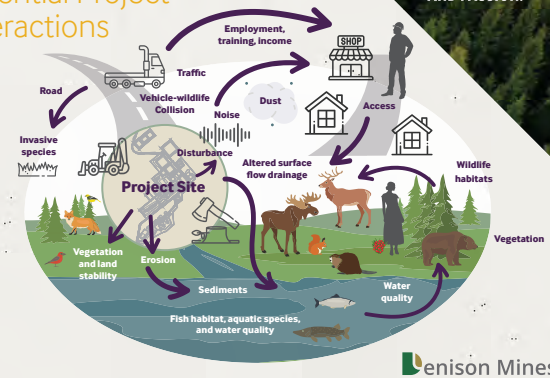
Here are some examples of Denison's support in 2021:
- Entered into an Exploration Agreement with English River First Nation
- Métis Nation Saskatchewan Region 3 South Bay Gathering
- Sakitawak Elders Group and their market garden initiative
- Pinehouse Lake hockey tournament
- Improvements to the English River First Nation Culture Camp at the Mawdsley Reserve at 160km
- Many Christmas initiatives in the region, including those in in Beauval, Ile a la Crosse, and the Hamlet of Patuanak



Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Potential Project Interactions

Powering PEOPLE, PARTNERSHIPS AND PASSION.



Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Denison Open House in Patuanak English River First Nation
Date: May 30, 2022
Dialogue Notes

Comment: I used to work as a prospector; I know those lands up there all over the place. You need to make sure you protect the land.

Comment: At km 60 (of the Key Lake Road), last summer there were all sorts of pipes along the road. Was that related to your Project?

> **Denison:** No, not sure what that was about but it was not related to our Project.

Comment: Would you treat the Indigenous people as if they owned the land? We don't own the land technically but it is our land. You need to treat us as if we own the land.

> **Denison:** We are working with ERFN understanding that we are operating in ERFN traditional territory, and aim to develop a relationship that reflects our respect of the land.

Comment: How long is the Project?

> **Denison:** 2 years construction, 10 years operation, 5 years decommissioning. The Environmental Assessment is assessing as if the operations will be 15 years, to be conservative.

Comment: I worked at [redacted]; I saw how they dealt with the contaminated waste, they just put it into an open pit and buried it. What are you going to do with the materials left over that are waste?

> **Denison:** As much as possible we will be removing materials off site because we don't have open pits to put materials into. We will have a contaminated landfill that will remain and will have some materials left behind

Comment: You need to consider more Dene in your meetings. These posters are intimidating to people who are Dene speakers or are illiterate.

> **Denison:** I hear you. We've translated the video into Dene, and have a Dene translator here but we know we can do more about this.

Comment: Who is benefitting from the operation? Is ERFN going to benefit from this Project?

> **Denison:** Our plan is to work collaboratively with ERFN to ensure that ERFN feels as though this is a good project for the Nation.

Comment: What is your plan for training and for young people? Are you going to hire people who don't have their Grade 12

> **Denison:** Our plan is to ensure that we don't encourage people not to complete high school. So yes, our overall objective will be for them to complete Grade 12. If we have people who are older and haven't completed high school, we will evaluate that on a case by case basis.

Comment: What happens after the freeze wall is turned off?

> **Denison:** The freeze wall will stay on for the duration of the operational phases and into the reclamation phases to ensure proper restoration of the contained groundwater prior to turning the freeze wall off and restoring the natural groundwater flow to the area.

Comment: How are all the ponds lined? Is there concern for breaches of solutions to near surface groundwaters?

> **Denison:** Ponds are double lined with HDPE liners with leak detection and collection systems which allow for collection of any migrating fluids prior to any form leak.

Comment: How do you contain the brine solution in the freeze holes?

> **Denison:** The CaCl brine if fully contained within a double lined piping system. Each well will have integrity pressure tests prior to commissioning to ensure containment. Additional leak detection and monitoring systems are in place within and surrounding the freeze holes which can be instrumented with pumps to collect any brine fluid migrations.

Comment: What is going on with the laydown of pipes at KM 65 north of Pinehouse? Is this associated with the Wheeler River Project?

> **Denison:** Denison is unaware of the activities at Km 65 but can confirm that they are not associated with the Wheeler River Project.

Comment: Which drilling company do you use and why?

> **Denison:** Denison has primarily used Hy-Tech drilling and River Drilling on the Wheeler River Project. (The individual asking the question complimented the use of Hy-tech and said that they have an excellent safety and environmental reputation).

Comment: Do you need to backfill the ore zone after it is mined to prevent ground subsidence?

> **Denison:** The mining cavity itself it not backfilled. The individual wells that intersect the deposit are grouted upon decommissioning which in turn act as rock bolts to further stabilize the area around the deposit. Further ground subsidence modelling was conducted which demonstrated that in a conservative scenario the deposit area may see a 7-10cm subsidence over the 400 meter vertical profile. Effects were determined to be negligible.

Comment: Subsurface reclamation modelling: How accurate is it?

Denison: Modelling and field programs go hand in hand; where Denison has gradually conducted field investigation to collect physical measurements from the ground which aid in calibrating a model, further verifying its results. Additional field calibrated models continue to provide more and more confidence in the reclamation models as they occur.

Comment: Is ISR just like the other mines in the north? If so, they are grouped and considered to have the same environmental liability.

Denison: Individual commented that a road closure south of Key Lake would be going up to halt operations in a few weeks unless his previous unaddressed are attended to.

Comment: Many community members are illiterate, or do not speak English. You should consider printing the handouts in languages other than English, and simplifying the language used on the posters

Denison: Noted

Comment: "How was the ore body found?"

Comment: Should consider having headphones down on a table for the video that is playing on the TV.

Denison: Noted

Comment: How will training for jobs be implemented?

Denison: Training methodology will be determined through consultation and collaboration with communities of interest.

Comment: Complaints about Cameco. Mention of road block. Mention of dissatisfaction with chief and council.

Comment: After uranium is removed, how do you fill the voids?

Denison: Back fill holes with concrete.

Comment: Will the ground collapse from the voids?

Denison: It's a long way down. 7400m, would only see small movements at surface, if any.

Comment: Community member reflected on family history and land use.

Denison: Indicated that we obtained land use information from the community and working with band council on how compensation for land use would work.

Comment: What's the compensation for family? Mother is still alive and would like to see her get compensation.

Denison: Not sure how we would work through that as our main conduit to community is through the Council.

Comment: What’s the location of the project?

Denison: The Wheeler project is located just off highway 914 between Key Lake and McArthur River.

Comment: What’s the timeline (construction and operation)

Denison: Construction is estimated to take 2 years, and production is estimated to last for 10-15 years.

Comment: How long will it take until you’re in production?

Denison: Likely occurring in approximately 5-7 years.

Comment: What’s the grade of the uranium?

Denison: High 19.1%

Comment: Can you show proof that ISR works?

Denison: ISR has successful in Russia and throughout the US. At the Wheeler River site Denison has been running various field tests to ensure the ISR method will work. We’re received positive results on our testing.

Comment: What about agreements? The communities deserve more equity, resource sharing and employment. "There's big money in the ground and the communities deserve more, it’s our land. If not, I'll block the road. That's what my father told me to do"

Denison: Denison continues to discuss aspects of agreements with your Chief and Council.

Comment: If you pump out the water (water cycling through the ISR system) what happens?

Denison: Any water pumped will be sent through the water treatment plant on site.

Denison Mines

Wheeler River Project-Community Engagement Spring 2022

Wheeler River Project Survey

This survey follows a survey conducted in March 2021 regarding the Wheeler River Project and the valued components to be assessed as part of the environmental assessment.

The purpose of this 2022 survey is to offer the opportunity to provide feedback to Denison Mines on the preliminary findings for the Wheeler River Project environmental assessment. Results will be used to help Denison Mines ensure they are meeting community needs and interests in relation to the assessment outcomes. Your feedback helps us understand what is most important to you, what the community values, and what topics people are most interested in in relation to the Wheeler River Project environmental assessment.

There are several benefits of sharing your thoughts in the survey questionnaire. Your input will help Denison Mines focus on environmental components, concerns or topics in relation to the Wheeler River Project environmental assessment that matter most to you.

If you choose to leave your name and contact information at the conclusion of the survey, you will be entered into a prize draw for one of five $100 VISA gift cards. Participation in the draw is optional and only those who complete the survey will be entered in the draw.

Participation is voluntary, and you may choose to exit the survey at any point. If you agree to participate, it will require approximately 10 minutes of your time to provide feedback on the preliminary findings of the Wheeler River Project environmental assessment. During the survey we will ask you some questions including your age, residence, if you identify as an Indigenous person, and how you heard about the survey. Finally, in order to be entered into the prize draw, you must provide your name and contact information.

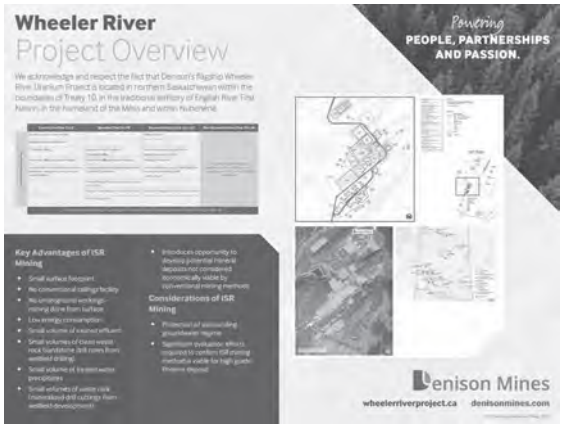
Providing your name and contact information is optional. All information you share in this survey questionnaire will be kept strictly confidential and your name will not be associated with the data we collect. Your identity will remain confidential in all publications and public presentations related to this research.

If you have any questions or concerns about this survey questionnaire, please contact WheelerRiverInfo@denisonmines.com

* 1. By checking this box, you confirm that you understand the purpose of the survey, how the information you share will be used, and that participation in the survey is voluntary.

- ◯ I confirm that I understand the purpose of this survey, how the information will be shared, and that participation is voluntary
- ◯ I DO NOT feel comfortable proceeding with this survey and would like to exit

The Fact Sheets below provide a general overview of the of Wheeler River Project and the related environmental assessment.



Denison Mines

Wheeler River Project-Community Engagement Spring 2022

Section 1: Tell us about yourself!

We want to make sure we are hearing from a diverse group of people from your community, please fill out the following questions to help us determine if there are any voices we haven't heard from yet.

2. Age:

- ◯ 0-15
- ◯ 16-34
- ◯ 35-64
- ◯ 65+

3. Do you identify as an Indigenous person (First Nations, Métis, or Inuit?) Answers to this question are entirely voluntary and not required.

- ◯ Prefer not to answer
- ◯ Yes (if yes, then: Please select from the following which best applies to you.)
- ◯ First Nation
- ◯ Métis
- ◯ Inuit
- ◯ Non-status
- ◯ No

4. Where do you live most of the year:

- ◯ ERFN Patuanak
- ◯ Hamlet of Patuanak
- ◯ ERFN La Plonge
- ◯ Village of Beauval
- ◯ Village of Pinehouse Lake
- ◯ Other
- ◯ Prefer no to answer

Please identify which other community you are from

5. How did you hear about this survey?

- ◯ Facebook
- ◯ Poster
- ◯ Radio
- ◯ Word of Mouth
- ◯ Other

6. Which of the following presentations did you attend? Check all that apply.

- ◯ Community Meeting
- ◯ Leadership Meeting
- ◯ Prefer not to say
- ◯ None of the above

Denison Mines

Wheeler River Project-Community Engagement Spring 2022

Section 2: Provide your feedback

Denison is in the process of completing its environmental assessment for the Wheeler River Project and would like your feedback on its preliminary findings. In the following pages, you will find a summary of the key conclusions of the assessment, and several questions.

The assessment considered the potential effects to the following topics and components:

Soil
Soil Nutrients, Soil Quantity and Quality

Water
Surface Water Quality, Surface Water Quantity, Aquatic and Fish Habitats, Fish Health, Sediment Quality, Sediment Quantity, Benthic Invertebrates, Groundwater Quality, Groundwater Quantity

Air
Air Quality, Greenhouse Gas Emissions, Noise

Wildlife and Plants
Vegetation and Ecosystems, Plant Species at Risk, Wetlands, Hoofed Mammals, Fur Bearing Animals, Small Mammals, Raptors, Migratory Breeding Birds, Bird Species at Risk

Terrain
Landform, Ground, Soil, Geology

Land Use
Indigenous Land and Resource Use, Other Land and Resource Use, Heritage Resources

Humans
Human Health and Safety, Worker Health and Safety, Cultural Expression, Community Services and Infrastructure, Community Well-Being, Economy

Overall, through Project design to avoid potential impacts to the environment, and well understood mitigation measures to minimize the predicted effects, Denison's assessment has concluded that the <u>effects to Valued Components can be effectively managed (i.e. Not Significant)</u>. Some of the key mitigations include:

Reducing
-The area of disturbance caused by the project
-The amount of water that is treated and released to the environment by reusing mining solution and process water

Developing
-Management plans for waste, water, fuel, Woodland Caribou, sediment and erosion, and emergencies
-Agreements with communities to maximize Project benefits, consideration of independent community monitoring, and provide support for community priorities

Using
-Noise reducing equipment
-Secondary containment of tanks and pipelines in the event of an accidental leak or spill
-Sediment and erosion controls and surface water management features
-Dust controls and emission reduction measures

Avoiding
-Periods critical to wildlife (denning, breeding, calving, and migration) through scheduling of project activities

Progressive Reclamation
-Of the site including stockpiling and reusing materials disturbed during construction

7. Are there any topics of particular concern that Denison needs to pay special attention to?

8. Are there any things missing that Denison should consider to reduce the effects of the Project to the environment?

9. Are there any topics that you would like to see including in monitoring plans?

10. What additional information would be helpful for you to understand the Project and its potential impacts to people and the environment?

Denison Mines

Wheeler River Project-Community Engagement Spring 2022

Section 3: Prize Draw Entry

If you would like your name entered into a draw prize, please provide the following information

11. Name

12. Phone number

13. Email address

14. Would you like us to add your email address to our mailing list to receive project updates? Yes/No

- Yes
- No

Denison Mines

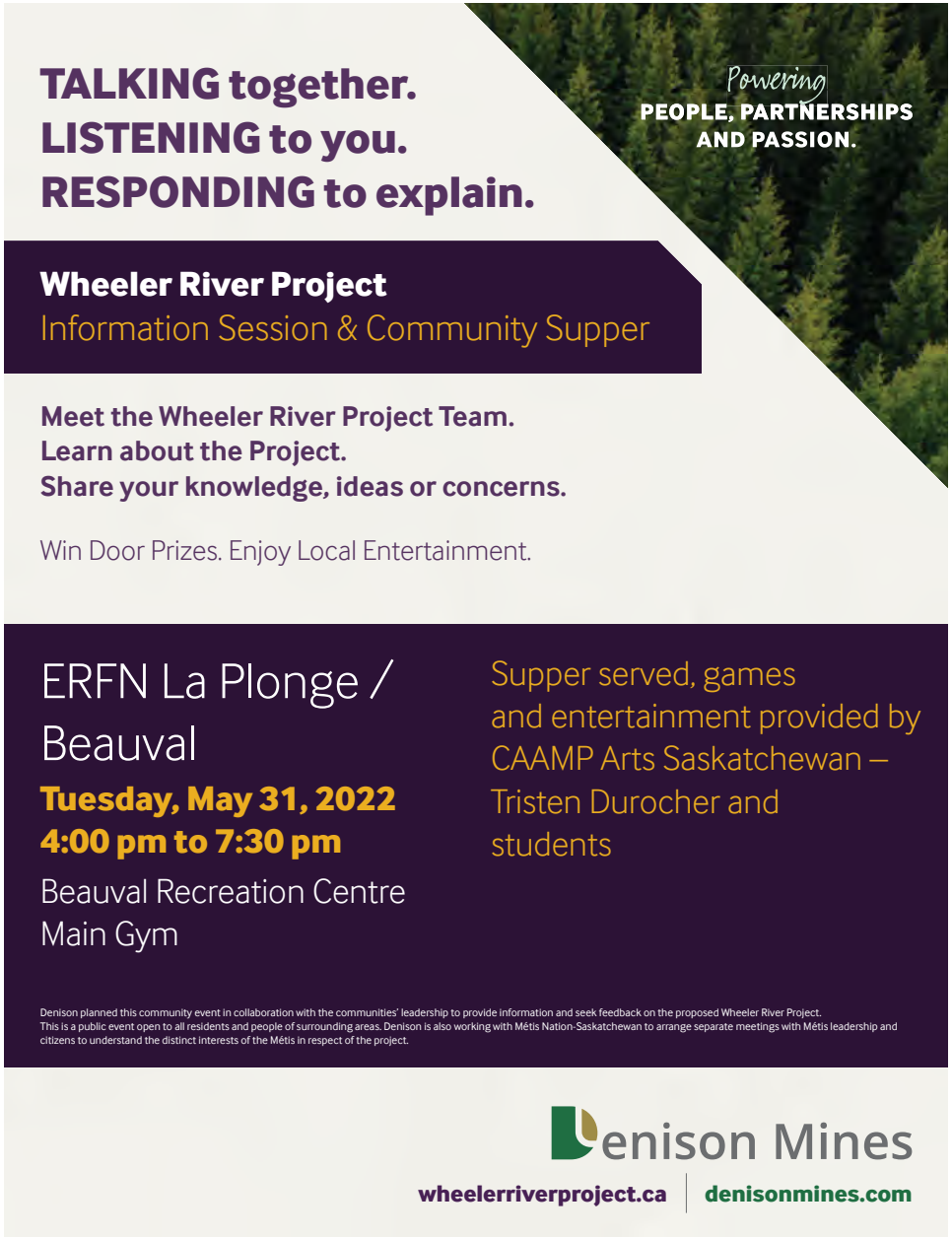
Wheeler River Project-Community Engagement Spring 2022

Thank You!

Thank you for completing the Wheeler River Project Community Engagement Survey. If you have any additional comments, questions or concerns please email WheelerRiverInfo@denisonmines.com

Powering
PEOPLE, PARTNERSHIPS
AND PASSION.
Wheeler River Project
Information Session & Community Supper
ERFN Wapachewunak / Patuanak
Monday, May 30, 2022
4:00 pm to 7:30 pm
ERFN Band Hall
If you missed it!
Denison planned this community event in collaboration with the communities' leadership to provide information and seek feedback on the proposed Wheeler River Project.
This is a public event open to all residents and people of surrounding areas. Denison is also working with Métis Nation-Saskatchewan to arrange separate meetings with Métis leadership and citizens to understand the distinct interests of the Métis in respect of the project.
Denison Mines

Poster Ad



Facebook Ad

TV Ad

Denison Mines

POWERING PEOPLE
WHEELER RIVER

What we heard from residents of Beauval and region

We wanted to make sure that community members and leadership are aware of the proposed project, the plans for the future, the opportunities for the community, and to also give an opportunity to the project's provincial (Saskatchewan Ministry of Environment) and federal (Canadian Nuclear Safety Commission) regulators to participate and introduce themselves.

Wheeler River Project in a nutshell

The Wheeler River Project is located 35 km north-east of the Key Lake mill and 35 km southwest of the McArthur River uranium mine in the south-eastern portion of the Athabasca Basin region.

This proposed uranium mining project will use the In Situ Recovery (ISR) mining method, which is different than any of the existing uranium mines in the Athabasca Basin region - all activities occur at the surface, meaning there are no shafts/underground workings, no open pits, and no major earthworks. While new to the Athabasca Basin, ISR mining is the most common uranium mining method globally. A 10-metre-thick freeze wall separates the mining areas from the surrounding ground water. A solution is injected into the orebody to dissolve the uranium in place (in situ) and the solution carrying the dissolved uranium is pumped to surface where the uranium is extracted from the solution. The same solution is then pumped back into the ground to dissolve more uranium and so on in a closed loop. With this method there is no production of tailings and no large waste rock piles.

Tell Us More

Denison is committed to engaging with our neighbours and invite you to contact us to share ideas or concerns with the Wheeler River Project team. You can also contact our team to request information or offer your services.

Email: **WheelerRiverInfo@denisonmines.com**
Tel: 306-652-8200
Website: www.denisonmines.com

Community Insight

During the meeting participants asked many questions and also provided valuable insight in responding to the follow-up survey. Here are the main points made by community members:

Of all 26 interconnected valued components (VCs), which are the environmental or social aspects that may be impacted by a project, you indicated that the following were most important:

- Air quality
- Birds
- Employment and training
- Fish, their habitat and aquatic plants
- Local economy
- Soil
- Surface water and Groundwater quality
- Traditional land and resource use
- Vegetation

You acknowledged some of the opportunities you are looking forward to with this project, including the potential for:

- Training and increased employment and reduced unemployment
- Employee transportation to the site from the communities
- Establishing a legacy fund for the impacted communities

You also told us some of your worries and concerns about the project. These are the main points:

- The performance of environmental monitoring and the importance of having an outside, impartial body conducting the monitoring to ensure that the results can be trusted by the community
- The mistrust between community members and regulatory bodies and industry
- The impacts to mental health due to the development of the land
- The potential damage to the land as many people still live off the land
- The community's safety in view of the increase in traffic

Tell Us More

Denison is committed to engaging with our neighbours and invite you to contact us to share ideas or concerns with the Wheeler River Project team. You can also contact our team to request information or offer your services.

Email: **WheelerRiverInfo@denisonmines.com**
Tel: 306-652-8200
Website: www.denisonmines.com

Wheeler River
Project Overview

Powering **PEOPLE, PARTNERSHIPS AND PASSION.**

We acknowledge and respect the fact that Denison's flagship Wheeler River Uranium Project is located in northern Saskatchewan within the boundaries of Treaty 10, in the traditional territory of English River First Nation, in the homeland of the Métis and within Nuhenéné.

Key Project Components	Construction (Year 1 to 3)	Operation (Year 3 to 18)	Decommissioning (Year 18 to 23)	Post-Decommissioning (Year 23 to 38)
	Develop access roads and air strip		Facility removal	Active environmental monitoring of vegetation growth; monitoring of surface water and groundwater quality; monitoring of wildlife site
	Site preparation and earthworks			
	ISR wellfield drilling	Operation of the ISR wellfield ISR wellfield drilling	Process water treatment and release Mining horizon remediation	
	Freeze hole drilling and ground freezing	Freeze hole drilling and ground freezing	Thawing of freeze wall	
	Development of surface infrastructure (camp, operations centre, plants, ponds, pads and support facilities)	Operation of processing plant and production of uranium concentrate	Decontamination of surface facilities, injection, recovery and monitoring wells Facility removal	
		Water withdrawal from groundwater or surface water body		
		Treated effluent release to surface water body	Site water management, treatment and release	
		Waste management		
	Active environmental monitoring of vegetation growth; monitoring of surface water and groundwater quality; monitoring of wildlife site			

Key Advantages of ISR Mining

- Small surface footprint
- No conventional tailings facility
- No underground workings - mining done from surface
- Low energy consumption
- Small volume of treated effluent
- Small volumes of clean waste rock (sandstone drill cores from wellfield drilling)
- Small volume of treated water precipitates
- Small volumes of waste rock (mineralized drill cuttings from wellfield development)
- Introduces opportunity to develop potential mineral deposits not considered economically viable by conventional mining methods

Considerations of ISR Mining

- Protection of surrounding groundwater regime
- Significant evaluation efforts required to confirm ISR mining method is viable for high grade Phoenix deposit

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Project Technologies

Powering **PEOPLE, PARTNERSHIPS AND PASSION.**

In Situ Recovery

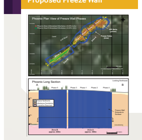
- Use an acidic or low pH mining solution to leach uranium ores from the ground
- Mining solution is a mixture of sulphuric acid, hydrogen peroxide and ferric sulphate
- Freshwater obtained from shallow groundwater or surface water
- Mining solution expected to be reused over and over, wherever possible
- Use mud rotary drilling to create wellfield – most common method of well drilling in Saskatchewan

ISR Process Overview

Ground Freezing – Freeze Wall

- Ground freezing used to prevent groundwater in the sandstone from flowing through the uranium deposit
- Uranium deposit will be surrounded by an engineered freeze wall to isolate mining area from groundwater flow
- Freeze wall surrounding deposit from the basement rock to surface
- Use of groundwater wells for monitoring of the mining solution, groundwater level, ground pressure and temperature
- Freeze wall established by +300 freeze holes 6m apart from surface to low permeability basement rock
- Freeze wall holes made using diamond drilling method
- Chilled brine solution (calcium chloride brine) will circulate in the steel encased holes to remove the heat from the ground
- Warm brine solution flows out to surface to be re-chilled in a closed loop system - similar to how a community ice rink is kept frozen
- Commonly used technology at McArthur River and Cigar Lake

Proposed Freeze Wall



Typical Freeze Pipe

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Regulatory Process

Powering **PEOPLE, PARTNERSHIPS AND PASSION.**

Federal Regulators

Lead: Canadian Nuclear Safety Commission

- Reviews and approves Environmental Impact Statement (EIS) and licence applications
- Mandate to protect health, safety and security of Canadians and the environment

Main authorizations granted include:

- Licence to Prepare Site and Construct
- Licence to Operate

Provincial Regulators

Lead: Saskatchewan Ministry of Environment

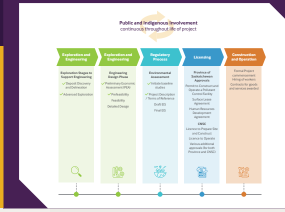
- Understand and evaluate potential environmental impacts of a project before any irreversible decisions are taken that may lead to negative effects on the environment, natural resources, or public health and safety
- Grant regulatory permits or licences
- Review and approve Environmental Impact Statement (EIS)

Main authorizations granted include:

- Permit to Operate a Pollutant Control Facility
- Surface Lease Agreement

Wheeler River Project Process Status

- Environmental baseline studies ongoing since 2012
- Federal and provincial EA process initiated in May 2019 with submission of Project Description
- Environmental studies are completed to inform engineering design and mitigate potential effects of the project on the biophysical and human environments



Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Understanding Environmental Assessment (EA)

Powering **PEOPLE, PARTNERSHIPS AND PASSION.**

Valued components

What are VCs?

It stands for Valued components. These are elements that are important to humans or the environment. Because viewpoints can vary, it was important to consult with northern communities to identify appropriate valued components.

When determining VCs, we used input from multiple northern communities:

- English River First Nation,
- Kineepik Métis Local #9,
- Pinehouse Lake,
- Beauval,
- Ile a la Crosse,
- Patuanak, and
- the seven Athabasca Communities represented by the Ya'thi Néné Lands and Resources Office

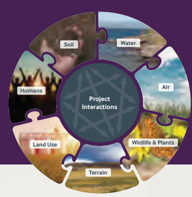
VCs were determined to be Air, Humans, Indigenous Land and Resource Use, Ground/Terrain/Soil, Vegetation, Water, and Wildlife.

Project Interactions

How will the project impact VCs? The project has several phases and activities that can interact with VCs. These are:

- Preparation
- Operation
- Decommission
- Waste Management
- Water Management

We undertake actions to eliminate or reduce negative project impacts on VCs. These actions are called mitigation measures.



Significance

Can the impacts to VCs be effectively managed?

We study many considerations before making conclusions on whether impacts are significant. Residual adverse effects must be determined. These are the effects left after mitigation measures. Then, we answer questions about the residual adverse effect of each VC:

- Magnitude- How big is the effect?
- Geographic extent- Where do the effects occur?
- Time- When do the effects occur?
- Frequency- How often do the effects occur?
- Duration- How long do the effects last?
- Reversibility- Can the effects be undone?
- Context- Are there environmental or social factors to consider?

Surrounding projects, laws, policies, communities, practices, land use, reliability of mitigation, multiple sources of knowledge, and many other factors can influence VC conditions. These factors are evaluated, considering the baseline conditions, to make a conclusion on significance.

A conclusion of "not significant" does not mean that an adverse effect won't occur or isn't important relative to people or the environment – it is simply a conclusion that the potential changes can be effectively managed.

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VCs: Vegetation, Ecosystems and Wetlands

Powering **PEOPLE, PARTNERSHIPS AND PASSION.**

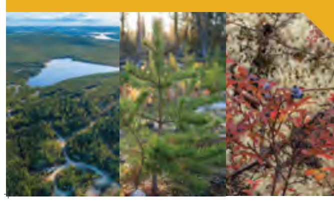
Environmental Assessment Considerations

- Abundance of vegetation
- Chemical make-up of the constituents
- Listed Plant Species

Potential Effects

Activities that could reduce or disturb vegetation, listed plant species, and wetlands:

- Introduction of weeds
- Generation and deposition of dust
- Changes to water quality
- Storage, handling, and transport of waste
- Reclamation of disturbed areas



Mitigation Measures

- Limit the area of disturbance
- Use of existing clearings and previously disturbed land
- Cleared bush will be stockpiled and used in progressive reclamation
- Implementation of controls to limit dust generation
- Secondary containment of tanks and pipelines to contain accidental leaks and spills
- Minimize risk of accidental spills through the Fuel Management and Spill Control Plan
- Mining solution and process water will be reused whenever possible to reduce water required for the Project and to reduce treated water released to the environment

Conclusions

Effects are anticipated to be:

- Low magnitude - less than 0.1% of wetlands lost; about 2.9% of habitat types potentially affected in the local area
- Local - limited to areas disturbed by the project
- Long term – throughout the project life cycle
- Not significant – residual effects are not expected to alter vegetation and ecosystems integrity (sustainability)

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Cumulative Effects Assessment

Powering **PEOPLE, PARTNERSHIPS AND PASSION.**

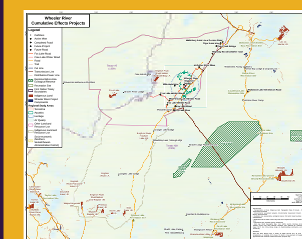
A Cumulative Effects Assessment (CEA) is completed to ensure that the incremental effects from multiple activities in an area (environment, human health, land use, etc.) are considered together. Project activities can interact with Valued Components; when interactions cause Valued Components' conditions to change, it is known as an "effect". The combined effects may be significant even though the effects of each independent activity is not significant.

Cumulative Effects Considerations

- The cumulative effects (overlapping effects) were characterized to inform the CEA
- The significance of the cumulative effect was determined for each Valued Component
- The Cumulative effects for all of the Valued Components were predicted to be Not Significant

Key Points of a CEA

- Completed for each of the selected Valued Components.
- Uses established assessment methods.
- Includes Indigenous, local and scientific knowledge.
- Conducted at the regional level for each Valued Component.
- Baseline conditions of the Valued Components reflect the effects from past and present projects and activities.
- Identifies overlapping residual effects (such as time and space) from the Project, with residual effects from known projects and/or activities from past, present, and future projects and/or activities.
- Considers all known projects and activities, and climate change.



Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VCs: Ground, Terrain and Soil

Powering **PEOPLE, PARTNERSHIPS AND PASSION.**

Environmental Assessment Considerations

- Land stability
- Soil quantity, quality and nutrients

Potential Effects

Activities that could impact land stability, surface drainage patterns, surface erosion potential, soil quality, and soil quantity:

- Clearing, grading, and construction
- Unexpected spills, leaks
- Release of water to groundwater and/or surface water bodies

Reclamation of disturbed areas may result in similar Project-related effects, but to a lesser extent.

Mitigation Measures

- Limit the area of disturbance
- Construction strategies to eliminate or reduce impacts
- Use of existing clearings and previously disturbed land
- Reusing disturbed sources of soil nutrients, generated during construction, for the reclamation process
- Installation of sediment/erosion controls and surface water management features
- Monitoring of open-source dust associated with major earthworks and equipment travel
- Fuel Management and Spill Control Plan in place to respond to unexpected leaks, spills, and releases of materials
- Wherever possible, progressive reclamation will be conducted throughout the life of the Project in relation to landscape features (slope, aspect) and surface drainage patterns
- Decommissioning phase to restore the landscape to safe, stable and self-sustaining landscape

Conclusions

Effects are anticipated to be:

- Low magnitude – within range of natural variations
- Local - limited to areas disturbed by the project
- Medium term – up to, but not including post-decommissioning
- Not significant – residual effects are not expected to alter VCs integrity and sustainability nor their availability to contribute to the environment

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VCs: Wildlife and Birds

Powering **PEOPLE, PARTNERSHIPS AND PASSION.**

Environmental Assessment Considerations

Populations and health of wildlife including:

- Ungulates: Moose, Woodland Caribou
- Furbearers: Wolverine, Mink, Muskrat
- Birds: Bald Eagle, Osprey, Common Nighthawk, Short-Eared Owl, Waterbirds, Game Birds, Songbirds, Yellow Rail, Rusty Blackbird, Olive-Sided Flycatcher

Potential Effects

Activities that could reduce or disturb species of wildlife, birds, or habitats include:

- Vehicles, equipment, and aircraft traffic
- Dust
- Human presence
- Collisions with equipment and vehicles
- Entrapment in facilities
- Exposure to substances in dust
- Release of Project-related treated effluent
- Spills of hazardous materials
- More efficient hunter, trapper, and predator access to the Project area via new access routes

Changes to surface water quality could affect wildlife habitat and health from water management practices.

Decommissioning of Project site may result in a continued alteration of wildlife habitat and/or mortality from vehicle wildlife collisions.

Mitigation Measures – Wildlife Management Plan

- Limit the area of disturbance
- Use of existing clearings and previously disturbed land
- Site clearing scheduled to avoid times when animal and birds are denning, calving, breeding
- Nesting surveys conducted before clearing to identify and establish measures to protect dens, burrows, lodges, nests, and other habitat
- Measures and practices to reduce the generation of dust
- Secondary containment of tanks and pipelines to contain accidental leaks and spills
- Implementation of Fuel Management and Spill Control Plan
- Fencing and monitoring contaminated areas – waste ponds and pads, landfill
- Implementation of Woodland Caribou Management Plan
- Employees trained to minimize their impact on wildlife, such as no littering, respect for wildlife, etc
- Implementation of speed limits to reduce risk of collision with wildlife
- Waste and hazardous materials collected and temporarily stored in wildlife-proof containers.

Conclusions

Effects are anticipated to be:

- Low magnitude – risk of mortality within range of natural variations
- Regional effect on habitat loss – limited to Project area
- Local effect on mortality – direct mortality within Project area from vehicle-wildlife collisions, but indirect mortality could extend beyond Project area
- Medium term for ungulate – highest loss of habitat and and mortality (vehicle-wildlife collisions) expected during construction and operation, but may continue during other phases of the project
- Medium to long term for furbearers, raptors and at-risk bird species – loss of habitat and and mortality (vehicle/aircraft-wildlife collisions) expected during all phases of the project
- Long term for woodland caribou and migratory breeding birds – Alteration of habitat and and mortality (vehicle/aircraft-wildlife collisions) through all phases of project – highest mortality potential during construction and operation
- Not significant – residual effects not expected to alter habitat integrity nor wildlife and bird regional populations sustainability

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VC: Aquatic Environment

Powering **PEOPLE, PARTNERSHIPS AND PASSION.**

Environmental Assessment Considerations

- Fish habitat availability and distribution
- Fish survival and reproduction
- Surface water levels and flow
- Concentration of chemicals and metals in surface water
- Concentration of chemical and metals in aquatic sediments
- Distribution and survival of snails, worms, dragonfly larvae, and other benthic invertebrates

Potential Effects

Activities that could reduce or disturb aquatic environments, species, or habitats:

- Modification of fish habitat from disturbances around surface water
- Erosion and transport of sediments into surface water
- Water withdrawal from Whitefish Lake
- Releasing effluent to Whitefish Lake.
- Water management could result in changes to water quality affecting fish, fish habitat, and benthic invertebrates.
- Water management could alter stream flow or lake levels required for fish mobility and productivity
- Reclamation of disturbed areas could increase sediments in water and change fish habitat

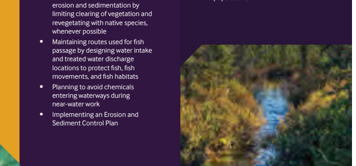
Mitigation Measures

- Limiting duration of in-water working (conducting work during low flow periods, and conducting work away from flows when possible)
- Avoiding activities in windy or rainy conditions to limit erosion and sedimentation
- Plan activities in waterbodies to limit loss or disturbance to aquatic and sensitive habitat
- Limit shoreline degradation when operating machinery
- Stabilize shorelines to limit erosion and sedimentation by limiting clearing of vegetation and revegetating with native species, whenever possible
- Maintaining routes used for fish passage by designing water intake and treated water discharge locations to protect fish, fish movements, and fish habitats
- Planning to avoid chemicals entering waterways during near-water work
- Implementing an Erosion and Sediment Control Plan

Conclusions

Effects are anticipated to be:

- Low magnitude – no loss of habitat and fish population
- Local – limited to Project area
- Long term for habitat availability – throughout construction and operation
- Short term for habitat distribution – fish movement protected throughout life of the project
- Not significant – residual effects not expected to alter local fish populations



Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Display Boards

ROC619

Wheeler River
VC: Relationship to the Land

Powering PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations
- Resources availability
- Land availability
- Suitability of land and resources

Potential Effects

The presence of the project and its activities may result in changes to:
- Water, vegetation, fish, and wildlife
- Access to the area
- Land area available
- Noise level, traffic, dust, and other disturbances associated with Project activities
- Quality of the experience using resources
- Opportunities for Indigenous land use activities
- Opportunities for non-Indigenous land use

Mitigation Measures
- Implementation of measures to protect plants, fish, and wildlife
- Limit the area of disturbance
- Use of noise reducing equipment
- Reduce dust and air emissions
- Enforce speed limits for traffic
- Implement radiological clearance of equipment before exiting Project site
- Implement progressive reclamation of disturbed areas
- Establish community agreements
- Establish trappers' compensation
- Implement Indigenous People's Policy, including ongoing communication with Indigenous Communities of Interest

Conclusions

Effects are anticipated to be:
- Low magnitude – no loss of habitat and fish population
- Local – Project area (in and around the local and regional study area)
- Long term – until reclamation is complete
- Not significant – continuous in frequency, low in context, and fully reversible following decommissioning

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VCs: Community, Culture and Economy

Powering PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations
- Populations, traffic, community infrastructure and services
- Income, employment, training, government revenues, business opportunities
- Community cohesion and traditional economy
- Employment and training (generally delivered through institutions connected to northern Saskatchewan)

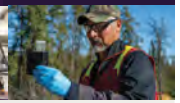
Potential Effects

Activities that could interact with community, culture, and economy:
- Population numbers and population characteristics
- Up to 300 jobs created during construction and more than 100 direct and contract roles during the operation phase
- Supervisory, trades, professional, technical, and foundational (entry level) positions available during operations
- Availability and increased opportunities for business and training
- Participation in traditional economic activities
- Abundance of Traffic
- Increased demand on community infrastructure and services

Mitigation Measures
- Implementation of agreements with communities (support)
- Prioritize Indigenous and non-Indigenous Communities of Interest (employment, training, and business, wherever possible)
- Implement procurement approach focused on communities
- Implementation of education and other support services for workers and in some cases their families
- Planned pick-up points in alignment with employment practices
- Implementation of Emergency Response Plan

Conclusions

Effects on community well-being, infrastructure, services and economy are currently being assessed, and are anticipated to be:
- Minimal adverse and/or positive
- Low to moderate magnitude – during construction and operation, and low during reclamation
- Local – primarily in the Project area
- Short to medium – based on Project phases
- Not significant – continuous in frequency, moderate in context, and fully reversible following decommissioning



Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Risk Assessment

Powering PEOPLE, PARTNERSHIPS AND PASSION.

To evaluate and understand if people, plants, and animals will be exposed to substances at amounts above what is known to be safe after the planned mitigation measures have been applied.

It incorporates the movement of substances through the food chain as well as direct exposure to substances (soil, air, water, etc) to appropriately capture risk.

Human Health Risk Assessment

People who access the project site are considered in the risk assessment. They include:
- Camp workers
- Seasonal resident/lodge operator – seasonal access
- People fishing/hunting/trapping/gathering firewood/picking berries – traditional and recreational access
- Neighbouring residents fishing/hunting/trapping
- Future permanent residents-access to Project site after its decommissioning.

Assessment Results and Mitigation
- Low overall health risk to people using the area
- Expected radiation doses to people below public dose limit
- Low risk of exposure of people to metals in the environment (below benchmarks for metals)
- Ongoing monitoring during all Project phases

Ecological Risk Assessment

Considers ecological receptors such as:
- Terrestrial Mammals – Woodland Caribou, hare, moose, black bear, lynx, etc.
- Riparian Mammals – Muskrat, mink
- Terrestrial Birds – Bald eagle, robin, Canada goose, etc.
- Riparian Birds – Mallard, loon,
- Fish – Northern pike, white sucker
- Terrestrial Invertebrates – Earthworm
- Aquatic Invertebrates – Zooplankton, benthic invertebrates
- Terrestrial Vegetation – Lichen, blueberry, Labrador tea
- Aquatic Vegetation – Phytoplankton, Macrophyte

These can be exposed to substances through direct exposure in water, sediment, soil, air or through the food chain.

Assessment Results and Mitigation
- Low overall health risk to animals, plants, and invertebrates
- Expected radiation doses to ecological receptors below benchmarks.
- No risk of exposure to ecological receptors to non-radionuclides hazards
- Ongoing monitoring during all Project phases

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Project People

Powering PEOPLE, PARTNERSHIPS AND PASSION.

At the Wheeler River Project site, we strive to employ as many Northerners as possible. We also strive to hire most of the contractors and services we need from northern and Indigenous people owned businesses.

Here are some of the people who have been on site in the past few years; some have moved on while others continue to help advance the Project.

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Building Relationsips

Powering PEOPLE, PARTNERSHIPS AND PASSION.

Denison and the Wheeler River Project team are committed to meaningful engagement with Indigenous people, communities, residents, and organizations with an interest in our Project.

TALKING together. LISTENING to you. RESPONDING to explain.

Engagement With Indigenous and Non-Indigenous Communities of Interest
- English River First Nation
- Kinewpik Métis Local 9 (Pinehouse)
- Métis Nation - Saskatchewan
- A La Baie Métis Local 21 (Ile a la Crosse)
- Sipnihk Métis Local 37 (Beauval)
- Patuanak Métis Local 92 (Patuanak)
- Northern Hamlet of Patuanak
- Northern Village of Pinehouse
- Northern Village of Ile a la Crosse
- Northern Village of Beauval

Other communities, organizations and groups of interest:
- Lac la Ronge Indian Band
- Birch Narrows Dene Nation
- Buffalo River Dene Nation
- Hatchet Lake First Nation
- Black Lake First Nation
- Fond du Lac First Nation
- Métis Nation – Saskatchewan
- Ya'thi Néné Land and Resource Office
- Prince Albert Grand Council
- Meadow Lake Tribal Council
- Commercial trappers
- Commercial fishers
- Commercial lodges
- Cabin and lease owners

Thank You, Bobby John

Bobby John lived, trapped, fished and hunted in the Wheeler River Project area long before Denison and its predecessors started exploring the site. Over the years, Bobby John became someone our Project team relied on for insight on the area, for feedback on the Project proposal, for help with tracking wildlife and for assistance for our field teams, cutting through the bush and more. We will not forget Bobby John's contributions.

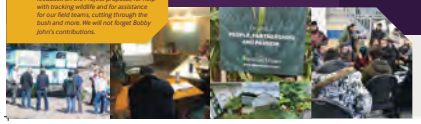
Since 2016 and every year after, Denison has met with community members and leadership through workshops, site tours, public meetings, and even virtual community meetings to hear concerns, receive knowledge and input, and share Project information.

Subjects of workshops and meetings have included:
- Wheeler River Project components:
  - Access road
  - Treated water (effluent) discharge location
  - Mining method
  - Design change to freezing containment method
- Environmental considerations:
  - Water bodies - fishing
  - Fish habitat
  - Species at risk
  - Land disturbance

Our Support of Communities

Denison's support of communities can take various forms:
- Donations to community organizations
- Sponsorships of community events
- Scholarships or in-kind support of education and field trips
- Direct agreements with specific Indigenous communities

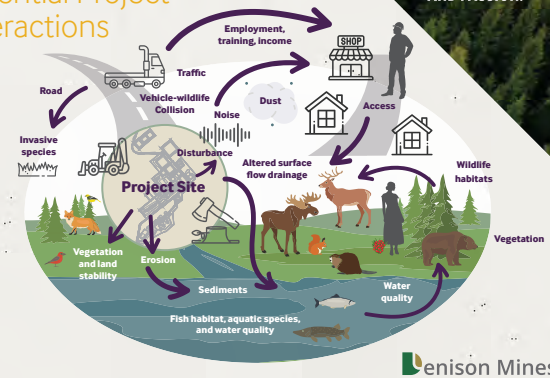
Here are some examples of Denison's support in 2021:
- Entered into an Exploration Agreement with English River First Nation
- Métis Nation Saskatchewan Region 3 South Bay Gathering
- Sakitawak Elders Group and their market garden initiative
- Pinehouse Lake hockey tournament
- Improvements to the English River First Nation Culture Camp at the Mawdsley Reserve at 160km
- Many Christmas initiatives in the region, including those in in Beauval, Ile a la Crosse, and the Hamlet of Patuanak



Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Potential Project Interactions

Powering PEOPLE, PARTNERSHIPS AND PASSION.



Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Denison Open House in La Plonge English River First Nation
Date: May 31, 2022
Dialogue Notes

Comment: How does the freeze wall affect the natural groundwater flow?

> **Denison:** The freeze wall is temporary in nature. During operations the groundwater will naturally divert around the freeze wall itself. Once decommissioned the free wall will be turned off and allow the groundwater to establish its original flow pathway directly through the deposit area.

Comment: If the ground water quality does not meet acceptable standards at the point of the defined reclamation phase ,how do we ensure monitoring will continue?

> **Denison:** Modelling is completed well in advance to project approvals which guide the reclamation targets and timelines. If targets are not met during the defined periods additional groundwater reclamation will continue until acceptable standards are met.

Comment: Do you need to backfill the ore zone after it is mined to prevent ground subsidence?

> **Denison:** The mining cavity itself it not backfilled. The individual wells that intersect the deposit are grouted upon decommissioning which in turn act as rock bolts to further stabilize the area around the deposit. Further ground subsidence modelling was conducted which demonstrated that in a conservative scenario the deposit area may see a 7-10cm subsidence over the 400-meter vertical profile. Effects were determined to be negligible.

Comment: What kind of revenue are you going to generate? How much will go back to the Nation?

> **Denison:** We are going through the Feasibility Report now which will further refine the ranges of expected profits / revenue from the operation. For what will go back to the Nation, we are actively working on this in negotiations right now on with ERFN, so the answer is to be determined.

Comment: Will you be using fracking?

> **Denison:** No. No fracking will be used. It is a different process than fracking that doesn’t involve high pressures (such as with fracking)

Comment: This doesn't tell me much! (directed at potential project interactions poster/diagram)

> **Denison:** It is a generalization. It graphically shows interactions between the project, environment, and other aspects. It is meant for people that don't understand the general concepts.

Comment: Questions asked surrounding project schedule, state of project, approximate time when operation will begin- in relation to regulatory processes

> **Denison:** Utilized "Regulatory Process" poster board to explain-indicated the "Wheeler River Project Process Status" to where Denison is in the process.

Comment: Questions asked surrounding the Saskatchewan Ministry of Environment and Canadian Nuclear Safety Commission (steps involved and licenses required)

> **Denison:** Utilized "Regulatory Process" poster board to explain regulators, significant licenses, and requirements to fulfill. Referred to SkMOE and CNSC regulators that were present.

Denison Mines

Wheeler River Project-Community Engagement Spring 2022

Wheeler River Project Survey

This survey follows a survey conducted in March 2021 regarding the Wheeler River Project and the valued components to be assessed as part of the environmental assessment.

The purpose of this 2022 survey is to offer the opportunity to provide feedback to Denison Mines on the preliminary findings for the Wheeler River Project environmental assessment. Results will be used to help Denison Mines ensure they are meeting community needs and interests in relation to the assessment outcomes. Your feedback helps us understand what is most important to you, what the community values, and what topics people are most interested in in relation to the Wheeler River Project environmental assessment.

There are several benefits of sharing your thoughts in the survey questionnaire. Your input will help Denison Mines focus on environmental components, concerns or topics in relation to the Wheeler River Project environmental assessment that matter most to you.

If you choose to leave your name and contact information at the conclusion of the survey, you will be entered into a prize draw for one of five $100 VISA gift cards. Participation in the draw is optional and only those who complete the survey will be entered in the draw.

Participation is voluntary, and you may choose to exit the survey at any point. If you agree to participate, it will require approximately 10 minutes of your time to provide feedback on the preliminary findings of the Wheeler River Project environmental assessment. During the survey we will ask you some questions including your age, residence, if you identify as an Indigenous person, and how you heard about the survey. Finally, in order to be entered into the prize draw, you must provide your name and contact information.

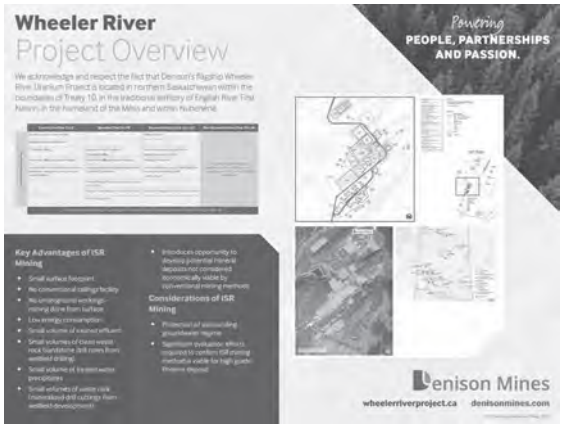
Providing your name and contact information is optional. All information you share in this survey questionnaire will be kept strictly confidential and your name will not be associated with the data we collect. Your identity will remain confidential in all publications and public presentations related to this research.

If you have any questions or concerns about this survey questionnaire, please contact WheelerRiverInfo@denisonmines.com

* 1. By checking this box, you confirm that you understand the purpose of the survey, how the information you share will be used, and that participation in the survey is voluntary.

- ◯ I confirm that I understand the purpose of this survey, how the information will be shared, and that participation is voluntary
- ◯ I DO NOT feel comfortable proceeding with this survey and would like to exit

The Fact Sheets below provide a general overview of the of Wheeler River Project and the related environmental assessment.



Denison Mines

Wheeler River Project-Community Engagement Spring 2022

Section 1: Tell us about yourself!

We want to make sure we are hearing from a diverse group of people from your community, please fill out the following questions to help us determine if there are any voices we haven't heard from yet.

2. Age:

- ◯ 0-15
- ◯ 16-34
- ◯ 35-64
- ◯ 65+

3. Do you identify as an Indigenous person (First Nations, Métis, or Inuit?) Answers to this question are entirely voluntary and not required.

- ◯ Prefer not to answer
- ◯ Yes (if yes, then: Please select from the following which best applies to you.)
- ◯ First Nation
- ◯ Métis
- ◯ Inuit
- ◯ Non-status
- ◯ No

4. Where do you live most of the year:

- ◯ ERFN Patuanak
- ◯ Hamlet of Patuanak
- ◯ ERFN La Plonge
- ◯ Village of Beauval
- ◯ Village of Pinehouse Lake
- ◯ Other
- ◯ Prefer no to answer

Please identify which other community you are from

5. How did you hear about this survey?

- ◯ Facebook
- ◯ Poster
- ◯ Radio
- ◯ Word of Mouth
- ◯ Other

6. Which of the following presentations did you attend? Check all that apply.

- ◯ Community Meeting
- ◯ Leadership Meeting
- ◯ Prefer not to say
- ◯ None of the above

Denison Mines

Wheeler River Project-Community Engagement Spring 2022

Section 2: Provide your feedback

Denison is in the process of completing its environmental assessment for the Wheeler River Project and would like your feedback on its preliminary findings. In the following pages, you will find a summary of the key conclusions of the assessment, and several questions.

The assessment considered the potential effects to the following topics and components:

Soil
Soil Nutrients, Soil Quantity and Quality

Water
Surface Water Quality, Surface Water Quantity, Aquatic and Fish Habitats, Fish Health, Sediment Quality, Sediment Quantity, Benthic Invertebrates, Groundwater Quality, Groundwater Quantity

Air
Air Quality, Greenhouse Gas Emissions, Noise

Wildlife and Plants
Vegetation and Ecosystems, Plant Species at Risk, Wetlands, Hoofed Mammals, Fur Bearing Animals, Small Mammals, Raptors, Migratory Breeding Birds, Bird Species at Risk

Terrain
Landform, Ground, Soil, Geology

Land Use
Indigenous Land and Resource Use, Other Land and Resource Use, Heritage Resources

Humans
Human Health and Safety, Worker Health and Safety, Cultural Expression, Community Services and Infrastructure, Community Well-Being, Economy

Overall, through Project design to avoid potential impacts to the environment, and well understood mitigation measures to minimize the predicted effects, Denison's assessment has concluded that the <u>effects to Valued Components can be effectively managed (i.e. Not Significant)</u>. Some of the key mitigations include:

Reducing
-The area of disturbance caused by the project
-The amount of water that is treated and released to the environment by reusing mining solution and process water

Developing
-Management plans for waste, water, fuel, Woodland Caribou, sediment and erosion, and emergencies
-Agreements with communities to maximize Project benefits, consideration of independent community monitoring, and provide support for community priorities

Using
-Noise reducing equipment
-Secondary containment of tanks and pipelines in the event of an accidental leak or spill
-Sediment and erosion controls and surface water management features
-Dust controls and emission reduction measures

Avoiding
-Periods critical to wildlife (denning, breeding, calving, and migration) through scheduling of project activities

Progressive Reclamation
-Of the site including stockpiling and reusing materials disturbed during construction

7. Are there any topics of particular concern that Denison needs to pay special attention to?

8. Are there any things missing that Denison should consider to reduce the effects of the Project to the environment?

9. Are there any topics that you would like to see including in monitoring plans?

10. What additional information would be helpful for you to understand the Project and its potential impacts to people and the environment?

Denison Mines

Wheeler River Project-Community Engagement Spring 2022

Section 3: Prize Draw Entry

If you would like your name entered into a draw prize, please provide the following information

11. Name

12. Phone number

13. Email address

14. Would you like us to add your email address to our mailing list to receive project updates? Yes/No

- Yes
- No

Denison Mines

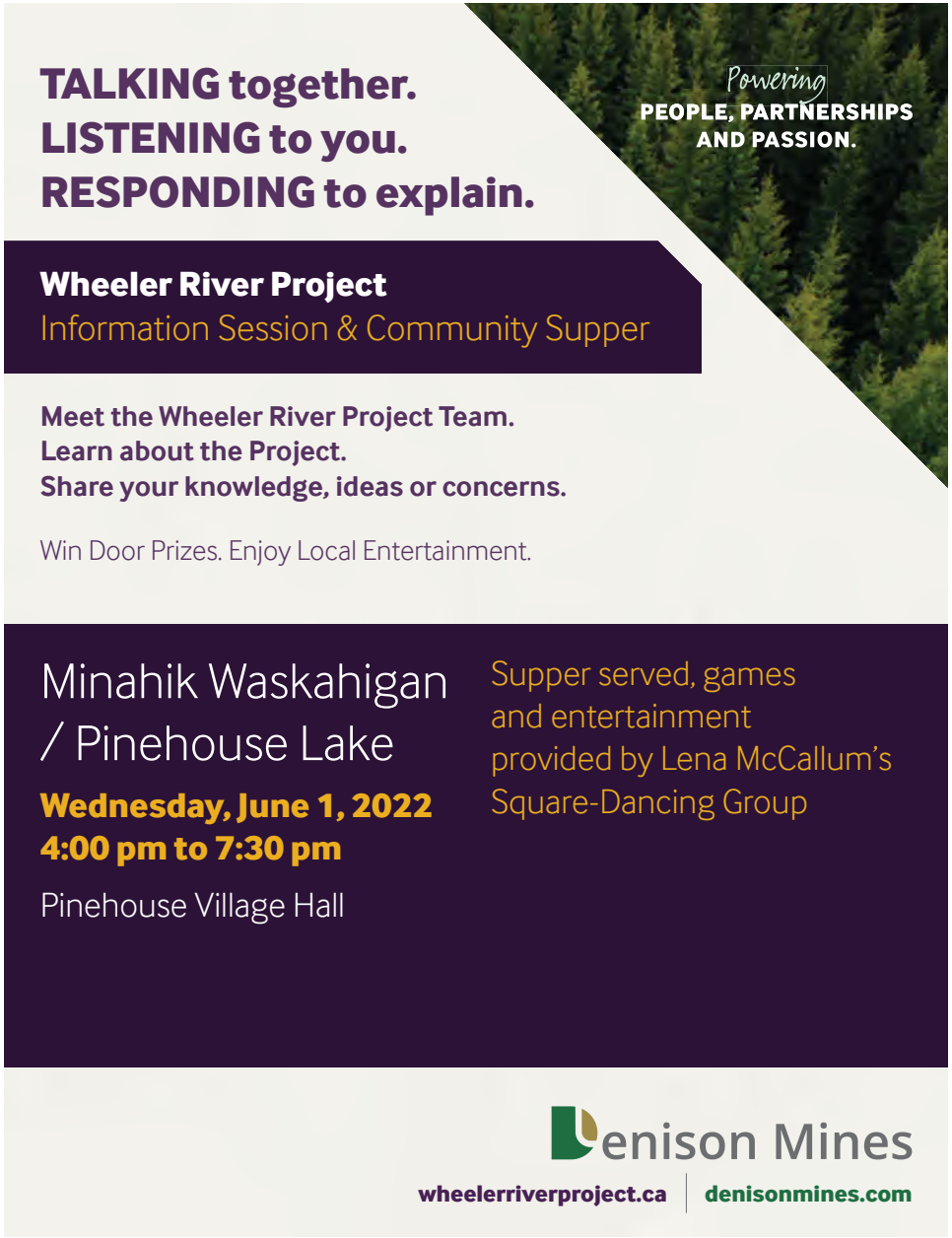
Wheeler River Project-Community Engagement Spring 2022

Thank You!

Thank you for completing the Wheeler River Project Community Engagement Survey. If you have any additional comments, questions or concerns please email WheelerRiverInfo@denisonmines.com

If you missed it!

Poster Ad



Facebook Ad

TV Ad

At the door handout

Denison Mines

POWERING PEOPLE
WHEELER RIVER

What we heard from residents of Pinehouse and region

We wanted to make sure that community members and leadership are aware of the proposed project, the plans for the future, the opportunities for the community, and to also give an opportunity to the project's provincial (Saskatchewan Ministry of Environment) and federal (Canadian Nuclear Safety Commission) regulators to participate and introduce themselves.

Wheeler River Project in a nutshell

The Wheeler River Project is located 35 km north-east of the Key Lake mill and 35 km southwest of the McArthur River uranium mine in the south-eastern portion of the Athabasca Basin region.

This proposed uranium mining project will use the In Situ Recovery (ISR) mining method, which is different than any of the existing uranium mines in the Athabasca Basin region - all activities occur at the surface, meaning there are no shafts/underground workings, no open pits, and no major earthworks. While new to the Athabasca Basin, ISR mining is the most common uranium mining method globally. A 10-metre-thick freeze wall separates the mining areas from the surrounding ground water. A solution is injected into the orebody to dissolve the uranium in place (in situ) and the solution carrying the dissolved uranium is pumped to surface where the uranium is extracted from the solution. The same solution is then pumped back into the ground to dissolve more uranium and so on in a closed loop. With this method there is no production of tailings and no large waste rock piles.

Tell Us More

Denison is committed to engaging with our neighbours and invite you to contact us to share ideas or concerns with the Wheeler River Project team. You can also contact our team to request information or offer your services.

Email: **WheelerRiverInfo@denisonmines.com**
Tel: 306-652-8200
Website: www.denisonmines.com

Copyright @DenisonMines, May 2021

Community Insight

During the meeting participants asked many questions and also provided valuable insight in responding to the follow-up survey. Here are the main points made by community members:

Of all 26 interconnected valued components (VCs), which are the environmental or social aspects that may be impacted by a project, you indicated that the following were most important:

- Air quality
- Birds
- Employment
- Fish habitat and aquatic plants
- Groundwater quality
- Local economy
- Public safety
- Surface water
- Traditional land and resource use

You also mentioned that you would like the Wheeler River Project team to consider the following additional VCs during its assessment:

- Housing
- Community participation

You also told us some of your worries and concerns about the project. These are the main points:

- The potential to impact the environment (contamination), displace wildlife and interrupt traditional land users access to the land
- Being asked to choose between the land and economic opportunities
- An increase in traffic impacting road quality
- The transportation of dangerous chemicals to and from the mine
- The possibility that residents won't be able to take advantage of the opportunities presented to them by the project due to existing social issues like the lack of housing

You acknowledged some of the opportunities you are looking forward to with this project, including the potential for:

- Training and increased Employment
- Jobs in Pinehouse that could benefit community members who can't work away from home
- Funding to the community
- Collaboration agreements
- Denison to form a partnership with the community
- Increased opportunities for community improvement and participation

You invited the Wheeler project team to continue its engagement activities with the community and to consider having a Denison representative residing in Pinehouse. Another idea was to develop community-based employment opportunities to offer work to people who can't leave the community for work (such as single parents).

Tell Us More

Denison is committed to engaging with our neighbours and invite you to contact us to share ideas or concerns with the Wheeler River Project team. You can also contact our team to request information or offer your services.

Email: **WheelerRiverInfo@denisonmines.com**
Tel: 306-652-8200
Website: www.denisonmines.com

Copyright @DenisonMines, May 2021

Wheeler River
Project Overview

Powering **PEOPLE, PARTNERSHIPS AND PASSION.**

We acknowledge and respect the fact that Denison's flagship Wheeler River Uranium Project is located in northern Saskatchewan within the boundaries of Treaty 10, in the traditional territory of English River First Nation, in the homeland of the Métis and within Nuhenéné.

Key Project Components	Construction (Year 1 to 3)	Operation (Year 3 to 18)	Decommissioning (Year 18 to 23)	Post-Decommissioning (Year 23 to 38)
	Develop access roads and air strip		Facility removal	Active environmental monitoring of vegetation growth, monitoring of surface water and groundwater quality, monitoring of wildlife site
	Site preparation and earthworks			
	ISR wellfield drilling	Operation of the ISR wellfield ISR wellfield drilling	Process water treatment and release Mining horizon remediation	
	Freeze hole drilling and ground freezing	Freeze hole drilling and ground freezing	Thawing of freeze wall	
	Development of surface infrastructure (camp, operations centre, plants, ponds, pads and support facilities)	Operation of processing plant and production of uranium concentrate	Decontamination of surface facilities, injection, recovery and monitoring wells Facility removal	
		Water withdrawal from groundwater or surface water body		
		Treated effluent release to surface water body	Site water management, treatment and release	
		Waste management		
	Active environmental monitoring of vegetation growth; monitoring of surface water and groundwater quality; monitoring of wildlife site			

Key Advantages of ISR Mining

- Small surface footprint
- No conventional tailings facility
- No underground workings - mining done from surface
- Low energy consumption
- Small volume of treated effluent
- Small volumes of clean waste rock (sandstone drill cores from wellfield drilling)
- Small volume of treated water precipitates
- Small volumes of waste rock (mineralized drill cuttings from wellfield development)
- Introduces opportunity to develop potential mineral deposits not considered economically viable by conventional mining methods

Considerations of ISR Mining

- Protection of surrounding groundwater regime
- Significant evaluation efforts required to confirm ISR mining method is viable for high grade Phoenix deposit

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Project Technologies

Powering **PEOPLE, PARTNERSHIPS AND PASSION.**

In Situ Recovery

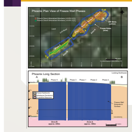
- Use an acidic or low pH mining solution to leach uranium ores from the ground
- Mining solution is a mixture of sulphuric acid, hydrogen peroxide and ferric sulphate
- Freshwater obtained from shallow groundwater or surface water
- Mining solution expected to be reused over and over, wherever possible
- Use mud rotary drilling to create wellfield – most common method of well drilling in Saskatchewan

ISR Process Overview

Ground Freezing – Freeze Wall

- Ground freezing used to prevent groundwater in the sandstone from flowing through the uranium deposit
- Uranium deposit will be surrounded by an engineered freeze wall to isolate mining area from groundwater flow
- Freeze wall surrounding deposit from the basement rock to surface
- Use of groundwater wells for monitoring of the mining solution, groundwater level, ground pressure and temperature
- Freeze wall established by +300 freeze holes 6m apart from surface to low permeability basement rock
- Freeze wall holes made using diamond drilling method
- Chilled brine solution (calcium chloride brine) will circulate in the steel encased holes to remove the heat from the ground
- Warm brine solution flows out to surface to be re-chilled in a closed loop system - similar to how a community ice rink is kept frozen
- Commonly used technology at McArthur River and Cigar Lake

Proposed Freeze Wall



Typical Freeze Pipe

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Regulatory Process

Powering **PEOPLE, PARTNERSHIPS AND PASSION.**

Federal Regulators

Lead: Canadian Nuclear Safety Commission

- Reviews and approves Environmental Impact Statement (EIS) and licence applications
- Mandate to protect health, safety and security of Canadians and the environment

Main authorizations granted include:

- Licence to Prepare Site and Construct
- Licence to Operate

Provincial Regulators

Lead: Saskatchewan Ministry of Environment

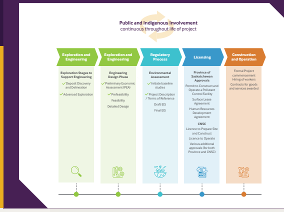
- Understand and evaluate potential environmental impacts of a project before any irreversible decisions are taken that may lead to negative effects on the environment, natural resources, or public health and safety
- Grant regulatory permits or licences
- Review and approve Environmental Impact Statement (EIS)

Main authorizations granted include:

- Permit to Operate a Pollutant Control Facility
- Surface Lease Agreement

Wheeler River Project Process Status

- Environmental baseline studies ongoing since 2012
- Federal and provincial EA process initiated in May 2019 with submission of Project Description
- Environmental studies are completed to inform engineering design and mitigate potential effects of the project on the biophysical and human environments



Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Understanding Environmental Assessment (EA)

Powering **PEOPLE, PARTNERSHIPS AND PASSION.**

Valued components

What are VCs?

It stands for Valued components. These are elements that are important to humans or the environment. Because viewpoints can vary, it was important to consult with northern communities to identify appropriate valued components.

When determining VCs, we used input from multiple northern communities:

- English River First Nation,
- Kineepik Métis Local #9,
- Pinehouse Lake,
- Beauval,
- Ile a la Crosse,
- Patuanak, and
- the seven Athabasca Communities represented by the Ya'thi Néné Lands and Resources Office

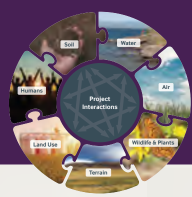
VCs were determined to be Air, Humans, Indigenous Land and Resource Use, Ground/Terrain/Soil, Vegetation, Water, and Wildlife.

Project Interactions

How will the project impact VCs? The project has several phases and activities that can interact with VCs. These are:

- Preparation
- Operation
- Decommission
- Waste Management
- Water Management

We undertake actions to eliminate or reduce negative project impacts on VCs. These actions are called mitigation measures.



Significance

Can the impacts to VCs be effectively managed?

We study many considerations before making conclusions on whether impacts are significant. Residual adverse effects must be determined. These are the effects left after mitigation measures. Then, we answer questions about the residual adverse effect of each VC:

- Magnitude- How big is the effect?
- Geographic extent- Where do the effects occur?
- Time- When do the effects occur?
- Frequency- How often do the effects occur?
- Duration- How long do the effects last?
- Reversibility- Can the effects be undone?
- Context- Are there environmental or social factors to consider?

Surrounding projects, laws, policies, communities, practices, land use, reliability of mitigation, multiple sources of knowledge, and many other factors can influence VC conditions. These factors are evaluated, considering the baseline conditions, to make a conclusion on significance.

A conclusion of "not significant" does not mean that an adverse effect won't occur or isn't important relative to people or the environment – it is simply a conclusion that the potential changes can be effectively managed.

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VCs: Vegetation, Ecosystems and Wetlands

Powering **PEOPLE, PARTNERSHIPS AND PASSION.**

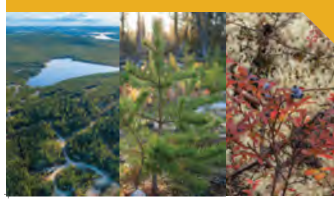
Environmental Assessment Considerations

- Abundance of vegetation
- Chemical make-up of the constituents
- Listed Plant Species

Potential Effects

Activities that could reduce or disturb vegetation, listed plant species, and wetlands:

- Introduction of weeds
- Generation and deposition of dust
- Changes to water quality
- Storage, handling, and transport of waste
- Reclamation of disturbed areas



Mitigation Measures

- Limit the area of disturbance
- Use of existing clearings and previously disturbed land
- Cleared bush will be stockpiled and used in progressive reclamation
- Implementation of controls to limit dust generation
- Secondary containment of tanks and pipelines to contain accidental leaks and spills
- Minimize risk of accidental spills through the Fuel Management and Spill Control Plan
- Mining solution and process water will be reused whenever possible to reduce water required for the Project and to reduce treated water released to the environment

Conclusions

Effects are anticipated to be:

- Low magnitude - less than 0.1% of wetlands lost; about 2.9% of habitat types potentially affected in the local area
- Local - limited to areas disturbed by the project
- Long term – throughout the project life cycle
- Not significant – residual effects are not expected to alter vegetation and ecosystems integrity (sustainability)

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Cumulative Effects Assessment

Powering **PEOPLE, PARTNERSHIPS AND PASSION.**

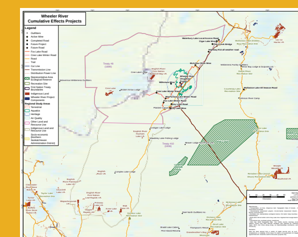
A Cumulative Effects Assessment (CEA) is completed to ensure that the incremental effects from multiple activities in an area (environment, human health, land use, etc.) are considered together. Project activities can interact with Valued Components; when interactions cause Valued Components' conditions to change, it is known as an "effect". The combined effects may be significant even though the effects of each independent activity is not significant.

Cumulative Effects Considerations

- The cumulative effects (overlapping effects) were characterized to inform the CEA
- The significance of the cumulative effect was determined for each Valued Component
- The Cumulative effects for all of the Valued Components were predicted to be Not Significant

Key Points of a CEA

- Completed for each of the selected Valued Components.
- Uses established assessment methods.
- Includes Indigenous, local and scientific knowledge.
- Conducted at the regional level for each Valued Component.
- Baseline conditions of the Valued Components reflect the effects from past and present projects and activities.
- Identifies overlapping residual effects (such as time and space) from the Project, with residual effects from known projects and/or activities from past, present, and future projects and/or activities.
- Considers all known projects and activities, and climate change.



Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VCs: Ground, Terrain and Soil

Powering **PEOPLE, PARTNERSHIPS AND PASSION.**

Environmental Assessment Considerations

- Land stability
- Soil quantity, quality and nutrients

Potential Effects

Activities that could impact land stability, surface drainage patterns, surface erosion potential, soil quality, and soil quantity:

- Clearing, grading, and construction
- Unexpected spills, leaks
- Release of water to groundwater and/or surface water bodies

Reclamation of disturbed areas may result in similar Project-related effects, but to a lesser extent.

Mitigation Measures

- Limit the area of disturbance
- Construction strategies to eliminate or reduce impacts
- Use of existing clearings and previously disturbed land
- Reusing disturbed sources of soil nutrients, generated during construction, for the reclamation process
- Installation of sediment/erosion controls and surface water management features
- Monitoring of open-source dust associated with major earthworks and equipment travel
- Fuel Management and Spill Control Plan in place to respond to unexpected leaks, spills, and releases of materials
- Wherever possible, progressive reclamation will be conducted throughout the life of the Project in relation to landscape features (slope, aspect) and surface drainage patterns
- Decommissioning phase to restore the landscape to safe, stable and self-sustaining landscape

Conclusions

Effects are anticipated to be:

- Low magnitude – within range of natural variations
- Local - limited to areas disturbed by the project
- Medium term – up to, but not including post-decommissioning
- Not significant – residual effects are not expected to alter VCs integrity and sustainability nor their availability to contribute to the environment

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VCs: Wildlife and Birds

Powering **PEOPLE, PARTNERSHIPS AND PASSION.**

Environmental Assessment Considerations

Populations and health of wildlife including:

- Ungulates: Moose, Woodland Caribou
- Furbearers: Wolverine, Mink, Muskrat
- Birds: Bald Eagle, Osprey, Common Nighthawk, Short-Eared Owl, Waterbirds, Game Birds, Songbirds, Yellow Rail, Rusty Blackbird, Olive-Sided Flycatcher

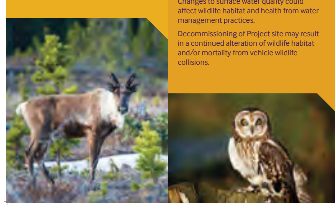
Potential Effects

Activities that could reduce or disturb species of wildlife, birds, or habitats include:

- Vehicles, equipment, and aircraft traffic
- Dust
- Human presence
- Collisions with equipment and vehicles
- Entrapment in facilities
- Exposure to substances in dust
- Release of Project-related treated effluent
- Spills of hazardous materials
- More efficient hunter, trapper, and predator access to the Project area via new access routes

Changes to surface water quality could affect wildlife habitat and health from water management practices.

Decommissioning of Project site may result in a continued alteration of wildlife habitat and/or mortality from vehicle wildlife collisions.



Mitigation Measures – Wildlife Management Plan

- Limit the area of disturbance
- Use of existing clearings and previously disturbed land
- Site clearing scheduled to avoid times when animal and birds are denning, calving, breeding
- Nesting surveys conducted before clearing to identify and establish measures to protect dens, burrows, lodges, nests, and other habitat
- Measures and practices to reduce the generation of dust
- Secondary containment of tanks and pipelines to contain accidental leaks and spills
- Implementation of Fuel Management and Spill Control Plan
- Fencing and monitoring contaminated areas – waste ponds and pads, landfill
- Implementation of Woodland Caribou Management Plan
- Employees trained to minimize their impact on wildlife, such as no littering, respect for wildlife, etc
- Implementation of speed limits to reduce risk of collision with wildlife
- Waste and hazardous materials collected and temporarily stored in wildlife-proof containers.

Conclusions

Effects are anticipated to be:

- Low magnitude – risk of mortality within range of natural variations
- Regional effect on habitat loss – limited to Project area
- Local effect on mortality – direct mortality within Project area from vehicle-wildlife collisions, but indirect mortality could extend beyond Project area
- Medium term for ungulate – highest loss of habitat and and mortality (vehicle-wildlife collisions) expected during construction and operation, but may continue during other phases of the project
- Medium to long term for furbearers, raptors and at-risk bird species – loss of habitat and and mortality (vehicle/aircraft-wildlife collisions) expected during all phases of the project
- Long term for woodland caribou and migratory breeding birds – Alteration of habitat and and mortality (vehicle/aircraft-wildlife collisions) through all phases of project – highest mortality potential during construction and operation
- Not significant – residual effects not expected to alter habitat integrity nor wildlife and bird regional populations sustainability

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VC: Aquatic Environment

Powering **PEOPLE, PARTNERSHIPS AND PASSION.**

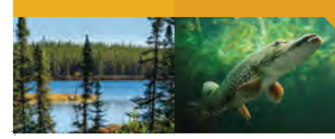
Environmental Assessment Considerations

- Fish habitat availability and distribution
- Fish survival and reproduction
- Surface water levels and flow
- Concentration of chemicals and metals in surface water
- Concentration of chemical and metals in aquatic sediments
- Distribution and survival of snails, worms, dragonfly larvae, and other benthic invertebrates

Potential Effects

Activities that could reduce or disturb aquatic environments, species, or habitats:

- Modification of fish habitat from disturbances around surface water
- Erosion and transport of sediments into surface water
- Water withdrawal from Whitefish Lake
- Releasing effluent to Whitefish Lake.
- Water management could result in changes to water quality affecting fish, fish habitat, and benthic invertebrates.
- Water management could alter stream flow or lake levels required for fish mobility and productivity
- Reclamation of disturbed areas could increase sediments in water and change fish habitat



Mitigation Measures

- Limiting duration of in-water working (conducting work during low flow periods, and conducting work away from flows when possible)
- Avoiding activities in windy or rainy conditions to limit erosion and sedimentation
- Plan activities in waterbodies to limit loss or disturbance to aquatic and sensitive habitat
- Limit shoreline degradation when operating machinery
- Stabilize shorelines to limit erosion and sedimentation by limiting clearing of vegetation and revegetating with native species, whenever possible
- Maintaining routes used for fish passage by designing water intake and treated water discharge locations to protect fish, fish movements, and fish habitats
- Planning to avoid chemicals entering waterways during near-water work
- Implementing an Erosion and Sediment Control Plan

Conclusions

Effects are anticipated to be:

- Low magnitude – no loss of habitat and fish population
- Local – limited to Project area
- Long term for habitat availability – throughout construction and operation
- Short term for habitat distribution – fish movement protected throughout life of the project
- Not significant – residual effects not expected to alter local fish populations

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Display Boards

ROC620

Wheeler River
VC: Relationship to the Land

Powering PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations
- Resources availability
- Land availability
- Suitability of land and resources

Potential Effects
The presence of the project and its activities may result in changes to:
- Water, vegetation, fish, and wildlife
- Access to the area
- Land area available
- Noise level, traffic, dust, and other disturbances associated with Project activities
- Quality of the experience using resources
- Opportunities for Indigenous land use activities
- Opportunities for non-Indigenous land use

Mitigation Measures
- Implementation of measures to protect plants, fish, and wildlife
- Limit the area of disturbance
- Use of noise reducing equipment
- Reduce dust and air emissions
- Enforce speed limits for traffic
- Implement radiological clearance of equipment before exiting Project site
- Implement progressive reclamation of disturbed areas
- Establish community agreements
- Establish trappers' compensation
- Implement Indigenous People's Policy, including ongoing communication with Indigenous Communities of Interest

Conclusions
Effects are anticipated to be:
- Low magnitude – no loss of habitat and fish population
- Local – Project area (in and around the local and regional study area)
- Long term – until reclamation is complete
- Not significant – continuous in frequency, low in context, and fully reversible following decommissioning

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VCs: Community, Culture and Economy

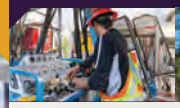
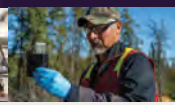
Powering PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations
- Populations, traffic, community infrastructure and services
- Income, employment, training, government revenues, business opportunities
- Community cohesion and traditional economy
- Employment and training (generally delivered through institutions connected to northern Saskatchewan)

Potential Effects
Activities that could interact with community, culture, and economy:
- Population numbers and population characteristics
- Up to 300 jobs created during construction and more than 100 direct and contract roles during the operation phase
- Supervisory, trades, professional, technical, and foundational (entry level) positions available during operations
- Availability and increased opportunities for business and training
- Participation in traditional economic activities
- Abundance of Traffic
- Increased demand on community infrastructure and services

Mitigation Measures
- Implementation of agreements with communities (support)
- Prioritize Indigenous and non-Indigenous Communities of Interest (employment, training, and business, wherever possible)
- Implement procurement approach focused on communities
- Implementation of education and other support services for workers and in some cases their families
- Planned pick-up points in alignment with employment practices
- Implementation of Emergency Response Plan

Conclusions
Effects on community well-being, infrastructure, services and economy are currently being assessed, and are anticipated to be:
- Minimal adverse and/or positive
- Low to moderate magnitude – during construction and operation, and low during reclamation
- Local – primarily in the Project area
- Short to medium – based on Project phases
- Not significant – continuous in frequency, moderate in context, and fully reversible following decommissioning

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Risk Assessment

Powering PEOPLE, PARTNERSHIPS AND PASSION.

To evaluate and understand if people, plants, and animals will be exposed to substances at amounts above what is known to be safe after the planned mitigation measures have been applied.

It incorporates the movement of substances through the food chain as well as direct exposure to substances (soil, air, water, etc) to appropriately capture risk.

Human Health Risk Assessment
People who access the project site are considered in the risk assessment. They include:
- Camp workers
- Seasonal resident/lodge operator – seasonal access
- People fishing/hunting/trapping/gathering firewood/picking berries – traditional and recreational access
- Neighbouring residents fishing/hunting/trapping
- Future permanent residents-access to Project site after its decommissioning.

Assessment Results and Mitigation
- Low overall health risk to people using the area
- Expected radiation doses to people below public dose limit
- Low risk of exposure of people to metals in the environment (below benchmarks for metals)
- Ongoing monitoring during all Project phases

Ecological Risk Assessment
Considers ecological receptors such as:
- Terrestrial Mammals – Woodland Caribou, hare, moose, black bear, lynx, etc.
- Riparian Mammals – Muskrat, mink
- Terrestrial Birds – Bald eagle, robin, Canada goose, etc.
- Riparian Birds – Mallard, loon,
- Fish – Northern pike, white sucker
- Terrestrial Invertebrates – Earthworm
- Aquatic Invertebrates – Zooplankton, benthic invertebrates
- Terrestrial Vegetation – Lichen, blueberry, Labrador tea
- Aquatic Vegetation – Phytoplankton, Macrophyte

These can be exposed to substances through direct exposure in water, sediment, soil, air or through the food chain.

Assessment Results and Mitigation
- Low overall health risk to animals, plants, and invertebrates
- Expected radiation doses to ecological receptors below benchmarks.
- No risk of exposure to ecological receptors to non-radionuclides hazards
- Ongoing monitoring during all Project phases

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Project People

Powering PEOPLE, PARTNERSHIPS AND PASSION.

At the Wheeler River Project site, we strive to employ as many Northerners as possible. We also strive to hire most of the contractors and services we need from northern and Indigenous people owned businesses.

Here are some of the people who have been on site in the past few years; some have moved on while others continue to help advance the Project.

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Building Relationsips

Powering PEOPLE, PARTNERSHIPS AND PASSION.

Denison and the Wheeler River Project team are committed to meaningful engagement with Indigenous people, communities, residents, and organizations with an interest in our Project.

TALKING together. LISTENING to you. RESPONDING to explain.

Engagement With Indigenous and Non-Indigenous Communities of Interest
- English River First Nation
- Kinewpik Métis Local 9 (Pinehouse)
- Métis Nation - Saskatchewan
- A La Baie Métis Local 21 (Ile a la Crosse)
- Sipnihk Métis Local 37 (Beauval)
- Patuanak Métis Local 92 (Patuanak)
- Northern Hamlet of Patuanak
- Northern Village of Pinehouse
- Northern Village of Ile a la Crosse
- Northern Village of Beauval

Other communities, organizations and groups of interest:
- Lac la Ronge Indian Band
- Birch Narrows Dene Nation
- Buffalo River Dene Nation
- Hatchet Lake First Nation
- Black Lake First Nation
- Fond du Lac First Nation
- Métis Nation – Saskatchewan
- Ya'thi Néné Land and Resource Office
- Prince Albert Grand Council
- Meadow Lake Tribal Council
- Commercial trappers
- Commercial fishers
- Commercial lodges
- Cabin and lease owners

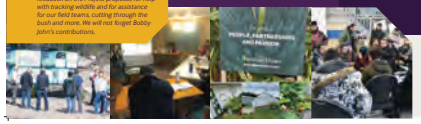
Thank You, Bobby John
Bobby John lived, trapped, fished and hunted in the Wheeler River Project area long before Denison and its predecessors started exploring the site. Over the years, Bobby John became someone our Project team relied on for insight on the area, for feedback on the Project proposal, for help with tracking wildlife and for assistance for our field teams, cutting through the bush and more. We will not forget Bobby John's contributions.

Since 2016 and every year after, Denison has met with community members and leadership through workshops, site tours, public meetings, and even virtual community meetings to hear concerns, receive knowledge and input, and share Project information.

Subjects of workshops and meetings have included:
- Wheeler River Project components:
  - Access road
  - Treated water (effluent) discharge location
  - Mining method
  - Design change to freezing containment method
- Environmental considerations:
  - Water bodies - fishing
  - Fish habitat
  - Species at risk
  - Land disturbance

Our Support of Communities
Denison's support of communities can take various forms:
- Donations to community organizations
- Sponsorships of community events
- Scholarships or in-kind support of education and field trips
- Direct agreements with specific Indigenous communities

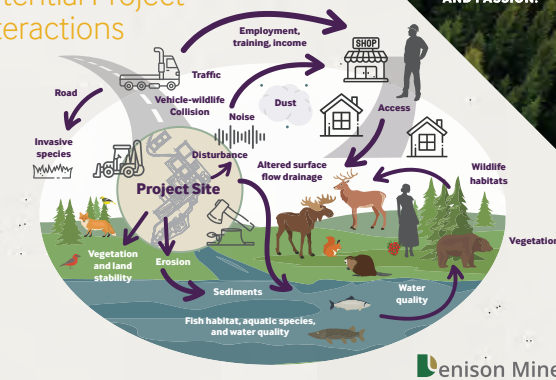
Here are some examples of Denison's support in 2021:
- Entered into an Exploration Agreement with English River First Nation
- Métis Nation Saskatchewan Region 3 South Bay Gathering
- Sakitawak Elders Group and their market garden initiative
- Pinehouse Lake hockey tournament
- Improvements to the English River First Nation Culture Camp at the Mawdsley Reserve at 160km
- Many Christmas initiatives in the region, including those in in Beauval, Ile a la Crosse, and the Hamlet of Patuanak



Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Potential Project Interactions

Powering PEOPLE, PARTNERSHIPS AND PASSION.



Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Denison Open House in The Village of Pinehouse Lake
Date: June 1, 2022
Dialogue Notes

Comment: How does CaCl cool and freeze the ground

Denison: [Provided with technical details in subsequent email.]

Comment: How does sulphuric acid leach the uranium?

Denison: [Provided with technical details in subsequent email.]

Comment: Do you need to backfill the ore zone after it is mined to prevent ground subsidence?

Denison: The mining cavity itself it not backfilled. The individual wells that intersect the deposit are grouted upon decommissioning which in turn act as rock bolts to further stabilize the area around the deposit. Further ground subsidence modelling was conducted which demonstrated that in a conservative scenario the deposit area may see a 7-10cm subsidence over the 400-meter vertical profile. Effects were determined to be negligible.

Comment: What type of containment do you have on surface when you move UBS?

Denison: At minimum all piping will be double walled with leak detection systems.

Comment: When the freeze wall is established will it put pressure on the ISR wellfield by squeezing clays and ground? Seen similar things at McArthur

Denison: The freeze wall will have a 25 meter standoff distance from the active ISR wellfield to mitigate and avoid any connection and affects.

Comment: How long will your operation be running?

Denison: 2 years construction, 10 years operation, 5 years decommissioning

Comment: How does ISR mining work?

Denison: Injection of mining solution underground through pipes to 400m depth, moves through the ore body, dissolves the uranium and brings to surface, pumped to a processing plant. Planned freeze wall around the wellfield to ensure complete containment of the mining solution

Comment: Why has Cameco not done this?

Denison: Need to have the right type of ore body in the right location with the right conditions; not all conditions are perfect for this method.

Comment: How does the freezing technology work?

Denison: Like a local ice rink. Pipes will circulate brine solution that gradually freeze the water in the area surrounding the pipe.

Comment: The drills that are using water. Is the water contaminated? Where does the water go that is used in the drilling process?

Denison: The water that is used to make up the drilling muds is essentially recirculated as much as possible, and can be released to the environment as it is not generally considered to be contaminated.

Comment: Where will the drinking water (for the camp) come from?

Denison: Groundwater wells nearby.

Comment: What kind of worker turn-around (shift) schedule are you thinking about? 1 and 1 is much better. I work 1 week on 1 week off with Cameco, then they changed to 2 weeks on 2 weeks off. I had to quit because it was too difficult for the family.

Denison: This hasn't been confirmed yet, we're still considering options and evaluating the industry standard.

Comment: Questions surrounding the scheduling and current state of the project overall. Community members did ask about the Regulatory process and the steps involved. Specifically, they did ask for an indication of approximately when the mine would be in operation.

Denison: Informed community members of the process. Used the 'Regulatory Process' poster for assistance – particularly the 'Wheeler River Project Process Status'.

Comment: Members requested to view the Project Overview video in Cree.

Denison: Played the video in Cree for the members and they gave positive feedback after watching.

Denison Mines

Wheeler River Project-Community Engagement Spring 2022

Wheeler River Project Survey

This survey follows a survey conducted in March 2021 regarding the Wheeler River Project and the valued components to be assessed as part of the environmental assessment.

The purpose of this 2022 survey is to offer the opportunity to provide feedback to Denison Mines on the preliminary findings for the Wheeler River Project environmental assessment. Results will be used to help Denison Mines ensure they are meeting community needs and interests in relation to the assessment outcomes. Your feedback helps us understand what is most important to you, what the community values, and what topics people are most interested in in relation to the Wheeler River Project environmental assessment.

There are several benefits of sharing your thoughts in the survey questionnaire. Your input will help Denison Mines focus on environmental components, concerns or topics in relation to the Wheeler River Project environmental assessment that matter most to you.

If you choose to leave your name and contact information at the conclusion of the survey, you will be entered into a prize draw for one of five $100 VISA gift cards. Participation in the draw is optional and only those who complete the survey will be entered in the draw.

Participation is voluntary, and you may choose to exit the survey at any point. If you agree to participate, it will require approximately 10 minutes of your time to provide feedback on the preliminary findings of the Wheeler River Project environmental assessment. During the survey we will ask you some questions including your age, residence, if you identify as an Indigenous person, and how you heard about the survey. Finally, in order to be entered into the prize draw, you must provide your name and contact information.

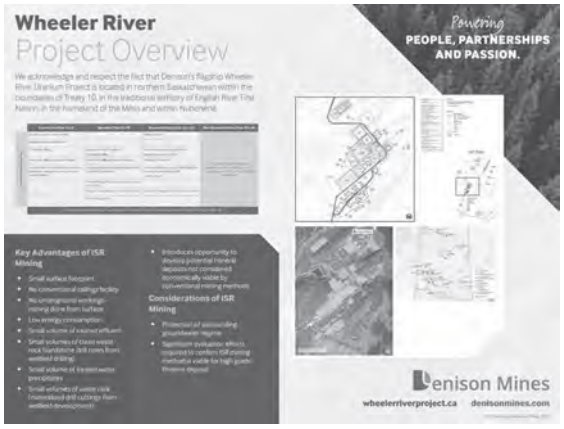
Providing your name and contact information is optional. All information you share in this survey questionnaire will be kept strictly confidential and your name will not be associated with the data we collect. Your identity will remain confidential in all publications and public presentations related to this research.

If you have any questions or concerns about this survey questionnaire, please contact WheelerRiverInfo@denisonmines.com

* 1. By checking this box, you confirm that you understand the purpose of the survey, how the information you share will be used, and that participation in the survey is voluntary.

- ◯ I confirm that I understand the purpose of this survey, how the information will be shared, and that participation is voluntary
- ◯ I DO NOT feel comfortable proceeding with this survey and would like to exit

The Fact Sheets below provide a general overview of the of Wheeler River Project and the related environmental assessment.



Denison Mines

Wheeler River Project-Community Engagement Spring 2022

Section 1: Tell us about yourself!

We want to make sure we are hearing from a diverse group of people from your community, please fill out the following questions to help us determine if there are any voices we haven't heard from yet.

2. Age:

- ◯ 0-15
- ◯ 16-34
- ◯ 35-64
- ◯ 65+

3. Do you identify as an Indigenous person (First Nations, Métis, or Inuit?) Answers to this question are entirely voluntary and not required.

- ◯ Prefer not to answer
- ◯ Yes (if yes, then: Please select from the following which best applies to you.)
- ◯ First Nation
- ◯ Métis
- ◯ Inuit
- ◯ Non-status
- ◯ No

4. Where do you live most of the year:

- ◯ ERFN Patuanak
- ◯ Hamlet of Patuanak
- ◯ ERFN La Plonge
- ◯ Village of Beauval
- ◯ Village of Pinehouse Lake
- ◯ Other
- ◯ Prefer no to answer

Please identify which other community you are from

5. How did you hear about this survey?

- ◯ Facebook
- ◯ Poster
- ◯ Radio
- ◯ Word of Mouth
- ◯ Other

6. Which of the following presentations did you attend? Check all that apply.

- ◯ Community Meeting
- ◯ Leadership Meeting
- ◯ Prefer not to say
- ◯ None of the above

Denison Mines

Wheeler River Project-Community Engagement Spring 2022

Section 2: Provide your feedback

Denison is in the process of completing its environmental assessment for the Wheeler River Project and would like your feedback on its preliminary findings. In the following pages, you will find a summary of the key conclusions of the assessment, and several questions.

The assessment considered the potential effects to the following topics and components:

Soil
Soil Nutrients, Soil Quantity and Quality

Water
Surface Water Quality, Surface Water Quantity, Aquatic and Fish Habitats, Fish Health, Sediment Quality, Sediment Quantity, Benthic Invertebrates, Groundwater Quality, Groundwater Quantity

Air
Air Quality, Greenhouse Gas Emissions, Noise

Wildlife and Plants
Vegetation and Ecosystems, Plant Species at Risk, Wetlands, Hoofed Mammals, Fur Bearing Animals, Small Mammals, Raptors, Migratory Breeding Birds, Bird Species at Risk

Terrain
Landform, Ground, Soil, Geology

Land Use
Indigenous Land and Resource Use, Other Land and Resource Use, Heritage Resources

Humans
Human Health and Safety, Worker Health and Safety, Cultural Expression, Community Services and Infrastructure, Community Well-Being, Economy

Overall, through Project design to avoid potential impacts to the environment, and well understood mitigation measures to minimize the predicted effects, Denison's assessment has concluded that the <u>effects to Valued Components can be effectively managed (i.e. Not Significant)</u>. Some of the key mitigations include:

Reducing
-The area of disturbance caused by the project
-The amount of water that is treated and released to the environment by reusing mining solution and process water

Developing
-Management plans for waste, water, fuel, Woodland Caribou, sediment and erosion, and emergencies
-Agreements with communities to maximize Project benefits, consideration of independent community monitoring, and provide support for community priorities

Using
-Noise reducing equipment
-Secondary containment of tanks and pipelines in the event of an accidental leak or spill
-Sediment and erosion controls and surface water management features
-Dust controls and emission reduction measures

Avoiding
-Periods critical to wildlife (denning, breeding, calving, and migration) through scheduling of project activities

Progressive Reclamation
-Of the site including stockpiling and reusing materials disturbed during construction

7. Are there any topics of particular concern that Denison needs to pay special attention to?

8. Are there any things missing that Denison should consider to reduce the effects of the Project to the environment?

9. Are there any topics that you would like to see including in monitoring plans?

10. What additional information would be helpful for you to understand the Project and its potential impacts to people and the environment?

Denison Mines

Wheeler River Project-Community Engagement Spring 2022

Section 3: Prize Draw Entry

If you would like your name entered into a draw prize, please provide the following information

11. Name

12. Phone number

13. Email address

14. Would you like us to add your email address to our mailing list to receive project updates? Yes/No

- Yes
- No

Denison Mines

Wheeler River Project-Community Engagement Spring 2022

Thank You!

Thank you for completing the Wheeler River Project Community Engagement Survey. If you have any additional comments, questions or concerns please email WheelerRiverInfo@denisonmines.com

Powering
PEOPLE, PARTNERSHIPS
AND PASSION.
Wheeler River Project
Information Session & Community Supper
Minahik Waskahigan / Pinehouse Lake
Wednesday, June 1, 2022
4:00 pm to 7:30 pm
Pinehouse Village Hall
If you missed it!
Denison Mines

May 30, 2022
English River First Nation Patuanak
Leadership Meeting

In attendance

English River First Nation Leadership: Chief and Council

Denison: Kevin Kimbeault, Chad Sorba, Janna Switzer, Stephanie Lukowski, Mike Dawe, Ryan Nagel, Carolanne Inglis-McQuay

Regulators: Saskatchewan Ministry of Environment, Canadian Nuclear Safety Commission

Meeting Notes

Denison
- Shared plan on community open house.
- Provided update on Wheeler River Project and general project overview.
- Provided information on ISR and the Phoenix deposit
- Discussed small project size, impact, and footprint.
- Explained that Denison is currently in the Environmental Assessment process; licensing will follow.

Questions/Answers
Q: 'Experimental' is this new technology, is it done anywhere else in the world?
A: Need optimal conditions, the freeze wall shouldn't be considered experimental.
Q: What about decommissioning? The uranium can last a long time. And what about the monitoring wells?
A: You can start decommissioning as you move into a new phase. Monitoring wells are used to ensure we maintain containment. They monitor groundwater.
Q: What about the bedrock?
A: Combination of hard rock. Quartz and granite.
Q: What about safety? That's going to be a concern for the membership. We're going to still be here, what going to happen to the environment, the streams?
A: Environmental safety is extremely important to Denison. We've studied ground water movement extensively. Tracer tests. Feasibility Field testing and collecting more data gives us confidence that we can contain the uranium and any material pumped down.

Denison
- Provided overview of the project Valued Components, and significance determination.
- What is that change, how big is it and how long will it last? That's significance determination.
- All technical assessments are back, returning no significant change.

Q: Is climate change considered?
A: Climate change is factored into the impact assessment. It's a piece of the EA. Project is estimated at 10 years, difficult to integrate climate change study in 10 years.
Q: What about small quakes
A: We maintain a balanced flow or state underground. Seismic activity isn't expected at all. Northern Saskatchewan is pretty stable.

Denison
- Mention of the environmental monitor position. Denison actively looking to fill that role after 2021 field work.

Q: Employment and training opportunities
A: Active components of ongoing negotiations. Best to establish training programs together.
Q: What are you doing for the community? Donations and housing
A: Active components of ongoing negotiations. A key measure of success is how successful our (Denison) relationship has and will be with ERFN
Q: Rough timeline until first uranium?
A: Approx. 5-7 Years
Q: Work co-ops for youth and students? Something to plan for
A: Timelines. Closer to production/construction. Something to plan for with ERFN, asking what interests exist. Project needs approval before employment can scale up

ERFN Leadership
- "We're passionate about the land, water and the medicines." Shared stories heard from Elders.
  - *"How much (space) are we going to have left. Sure, it's good money, but it comes at a sacrifice"- Elder*
  - *"The government is going to give them approval. I just wish they'd treat the area like they would their own backyard"- Elder*

May 31, 2022
Northern Village of Beauval
Leadership Meeting

In attendance

Northern Village of Beauval: Mayor and Municipal Leaders

Denison: Kevin Kimbeault, Chad Sorba, Janna Switzer, Stephanie Lukowski, Mike Dawe, Ryan Nagel, Carolanne Inglis-McQuay

Regulators: Saskatchewan Ministry of Environment

Meeting Notes

Denison

- Shared plan on community open house.
- Provided update on Wheeler River Project and general project overview.
- Provided information on ISR and the Phoenix deposit
- Discussed small project size, impact, and footprint.
- Explained that Denison is currently in the Environmental Assessment process; licensing will follow.

Questions/Answers

Q: Time and schedule?

A: Working through federal and provincial approval timelines. Schedule pushed back, planning on submitting EA summer 2022

Q: Any partnership with Cameco or Orano?

A: No, Denison budget total interest in the project .

Q: How would workers get to site?

A: We've scooped an airstrip into the plan. Presently driving

Denison

- Interest in bringing in students/employees for the Feasibility Field Test. Sharing postings in the future.
- Willingness to understand the community/local/employment connections
- Mention of agreements and searching for local business opportunities

June 1, 2022
Northern Village of Pinehouse Lake
Leadership Meeting

In attendance

Pinehouse: Municipal Leadership

Denison: Kevin Kimbeault, Chad Sorba, Janna Switzer, Stephanie Lukowski, Mike Dawe, Ryan Nagel, Carolanne Inglis-McQuay

Regulators: Saskatchewan Ministry of Environment, Canadian Nuclear Safety Commission

Meeting Notes

Denison

- Shared plan on community open house.
- Provided update on Wheeler River Project and general project overview.
- Provided information on ISR and the Phoenix deposit
- Discussed license to construct, small project size, impact, and footprint.
- Explained that Denison is currently in the Environmental Assessment process; licensing will follow.

Questions/Answers

Q: Why would you need to do an extra test after the ion tracer test?

A: The ion tracer test was successful, but we need to ensure we don't clog the hydraulic connections. We can know that but only using the tracer tests. We need to do this for economic model, can we hit 15g/L of uranium - to prove feasibility

Q: Have you mapped the ends of the ore body?

A: The ore zone has been very well delineated since 2008. (dimensions provided) .

Q: Can this method be used for other smaller ore deposits?

A: ISR is good for certain deposits and conditions.

Q: What does the freeze wall do for containment?

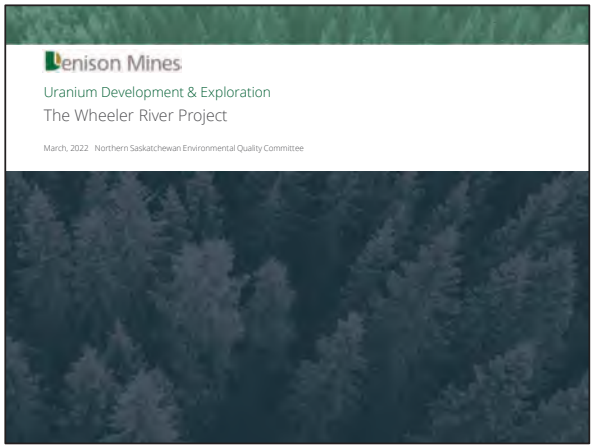
A: As long as the pumps are going, the lixiviant and uranium are being pulled to the recovery wells. The first containment is piping, the second containment is pumping, the freeze wall is the third layer of containment.

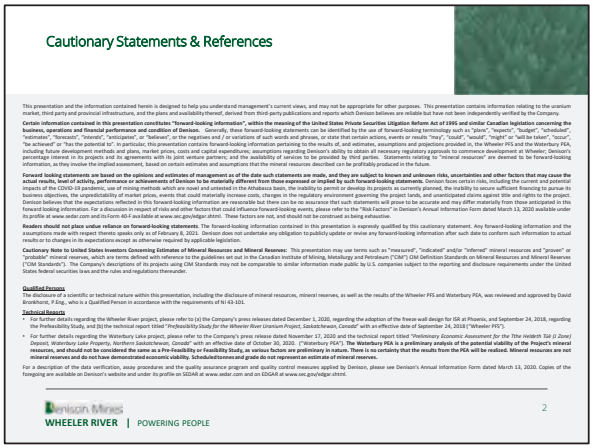
Q: Need education and training model that fit within our community structure. A mix of western and traditional learning. Once a job posting goes up its too late, we need to know before hand, as partners we should and deserve to know before hand. To prioritize our people

A: Training is critical. A lot of people being employed during construction can also be employed during production. The same skillset can be used throughout the lifecycle.

Q: What are the opportunities? A new (smaller, less impactful) method can reduce jobs for the community. We really need to get educated and learn about this kind of mining.

A: Lots of drilling and operation in the well field. Will have a processing facility and will require people, will need environmental professionals. Site services is important. In operations we're looking at 100-150 during peak operations.





Cautionary Statements & References

This presentation and the information contained herein is designed to help you understand management's current views, and may not be appropriate for other purposes. This presentation contains information relating to the uranium market, third party and provincial infrastructure, and the plans and availability thereof, derived from third-party publications and reports which Denison believes are reliable but have not been independently verified by the Company.

Certain information contained in this presentation 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", "anticipated", 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 presentation contains forward-looking information pertaining to the results of, and estimates, assumptions and projections provided in, the Wheeler PFS and the Waterbury PEA, including future development methods and plans, market prices, costs and capital expenditures; assumptions regarding Denison's ability to obtain all necessary regulatory approvals to commence development at Wheeler; Denison's percentage interest in its projects and its agreements with its joint venture partners; and the availability of services to be provided by third parties. 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 faces certain risks, including the current and potential impacts of the COVID-19 pandemic, use of mining methods which are novel and untested in the Athabasca basin, the inability to permit or develop its projects as currently planned, the inability to secure sufficient financing to pursue its business objectives, the unpredictability of market prices, events that could materially increase costs, changes in the regulatory environment governing the project lands, and unanticipated claims against title and rights to the project. 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 13, 2020 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.

Readers should not place undue reliance on forward-looking statements. The forward-looking information contained in this presentation is expressly qualified by this cautionary statement. Any forward-looking information and the assumptions made with respect thereto speaks only as of February 8, 2021. Denison does not undertake any obligation to publicly update or revise any forward-looking information after such date 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 Mineral Resources and Mineral Reserves: This presentation may use terms such as "measured", "indicated" and/or "inferred" mineral resources and "proven" or "probable" mineral reserves, which are terms defined with reference to the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") CIM Definition Standards on Mineral Resources and Mineral Reserves ("CIM Standards"). The Company's descriptions of its projects using CIM Standards may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements under the United States federal securities laws and the rules and regulations thereunder.

Qualified Persons

The disclosure of a scientific or technical nature within this presentation, including the disclosure of mineral resources, mineral reserves, as well as the results of the Wheeler PFS and Waterbury PEA, was reviewed and approved by David Bronkhorst, P.Eng., who is a Qualified Person in accordance with the requirements of NI 43-101.

Technical Reports

- For further details regarding the Wheeler River project, please refer to (a) the Company's press releases dated December 1, 2020, regarding the adoption of the freeze wall design for ISR at Phoenix, and September 24, 2018, regarding the Prefeasibility Study, and (b) the technical report titled "*Prefeasibility Study for the Wheeler River Uranium Project, Saskatchewan, Canada*" with an effective date of September 24, 2018 ("Wheeler PFS").
- For further details regarding the Waterbury Lake project, please refer to the Company's press release dated November 17, 2020 and the technical report titled "*Preliminary Economic Assessment for the Tthe Heldeth Túé (J Zone) Deposit, Waterbury Lake Property, Northern Saskatchewan, Canada*" with an effective date of October 30, 2020. ("Waterbury PEA"). **The Waterbury PEA is a preliminary analysis of the potential viability of the Project's mineral resources, and should not be considered the same as a Pre-Feasibility or Feasibility Study, as various factors are preliminary in nature. There is no certainty that the results from the PEA will be realized. Mineral resources are not mineral reserves and do not have demonstrated economic viability. Schedule/Estimates and grade do not represent an estimate of mineral reserves.**

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 13, 2020. Copies of the foregoing are available on Denison's website and under its profile on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

Denison Mines
WHEELER RIVER | POWERING PEOPLE
2

- Important that the audience understands that the information discussed here today is based on information known presently and as an outcome of the completion of various technical reports. The information shared today should not be relied upon to make investment decisions.

We acknowledge and respect the fact that Denison's flagship Wheeler River Uranium Project is located in northern Saskatchewan within the boundaries of Treaty 10, in the traditional territory of English River First Nation, in the homeland of the Métis and within Nuhenéné.

Denison Mines
WHEELER RIVER | POWERING PEOPLE
3

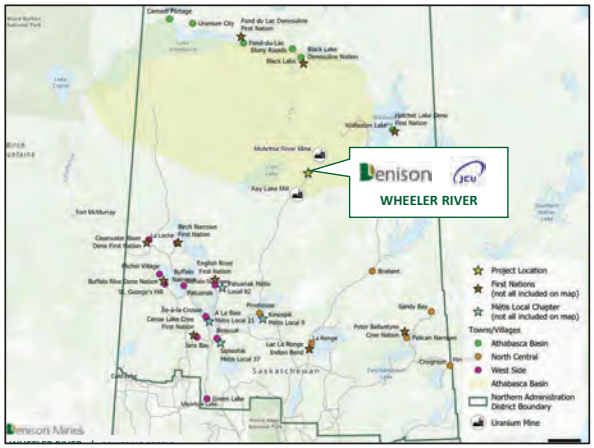
Company Overview:
Denison is focused on opportunities in northern Saskatchewan

- 22.5% interest in **McClean Lake Uranium Mill**
- An effective 95% interest in Flagship **Wheeler River** project
  - Advancing through development process
  - Largest undeveloped uranium project in the infrastructure rich eastern Athabasca Basin
  - Environmental Assessment ("EA") initiated
  - Progressive approach to mining using In Situ Recovery ("ISR") method
- 66.9% in the **Waterbury Lake Property**, hosting the Tthe Heldeth Túé (formerly J Zone) deposit
  - Recently completed Preliminary Economic Assessment ("PEA")[1]
  - Amenable to ISR mining method
- Several other interests in the Athabasca Basin region
  - **McClean Lake, Midwest**, and **Waterbury Lake** properties, all in close proximity to McClean mill
  - **+250,000 hectares** of exploration ground

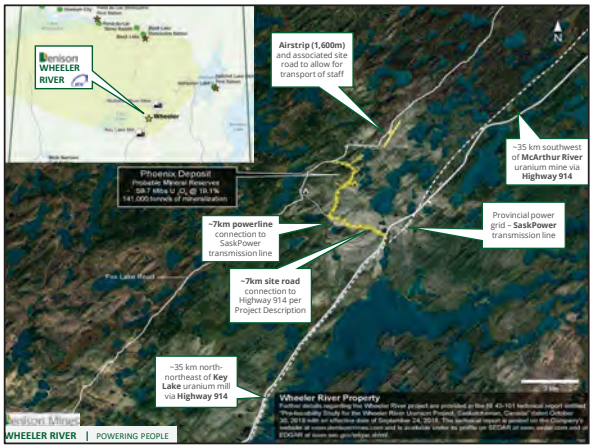
Denison Mines
WHEELER RIVER | POWERING PEOPLE
4

NOTES: (1) See Denison's news release dated Nov. 17, 2021; The PEA is a preliminary analysis and should not be considered the same as a Pre-Feasibility or Feasibility Study, see Cautionary Statements slide for details

- Denison has been working in northern Saskatchewan for a very long time
- Undertakes exploration activities but is also a part owner at the McClean Lake Mill
- Actively advancing the Wheeler River Project – which we will discuss today. The Wheeler River Project plans to use a mining method that has not been used in the Athabasca Basin – called In Situ Recovery Mining (ISR for short)
- Denison also owns a significant portion of the Waterbury Lake Property, near Midwest
- And has a significant amount of hectares in exploration ground



- The Wheeler River Project is 37km north of Key Lake, south of McArthur River

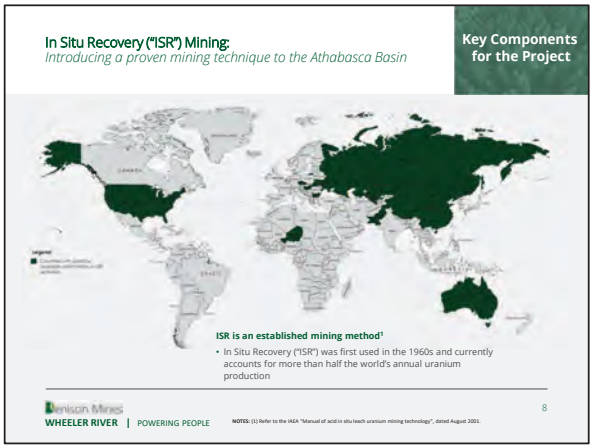


The Wheeler River Project is highlighted in yellow.

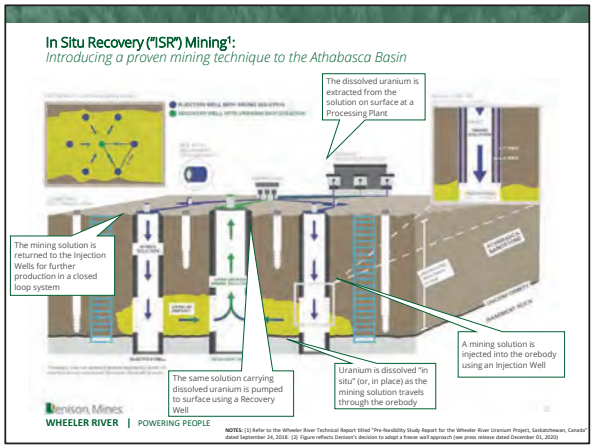
- As mentioned previously, it is 35km south of McArthur River and 35km north of Key Lake
- It is located about 7km off the main highway
- It would require a new 7km road
- It would require a new 7km powerline that would connect to the main power grid
- And we are planning for a new airstrip, just north of the planned operation

Zooming in further to the Wheeler River Project, the main components of the Project are:

1) The Phoenix ore body, marked in green (at 400 metres depth)
2) The In Situ Recovery (or ISR) wellfield contained within the yellow box
3) The 10 metre thick freeze wall around the entire well field, shown by the yellow box
4) Potable water and water treatment storage
5) Treated effluent discharge location
6) Waste management area
7) Gatehouse
8) 150-person camp facility
9) Warehousing, fuel storage, etc
10) Airstrip

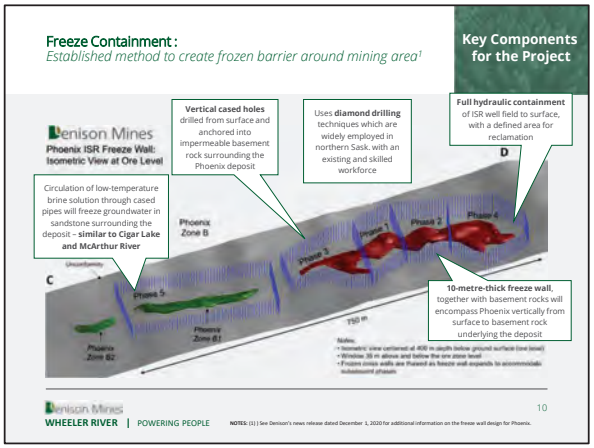


- A key component of the Wheeler River Project is the use of the In Situ Recovery Mining method
- This method is commonly used around the world, but hasn't yet been used in the Athabasca Basin
- It accounts for more than 50% of the world's production of uranium



- ISR involves is undertaken through a series of wells that are drilled underground, through the sandstone into the impermeable rock below
- In order for ISR to be successful, there need to be three things to happen:
  - 1) You need to be able to move solution through the ore body
  - 2) You need to be able to remove the uranium from ore using the acidic mining solution
  - 3) You need to be able to contain the mining solution around the ore body

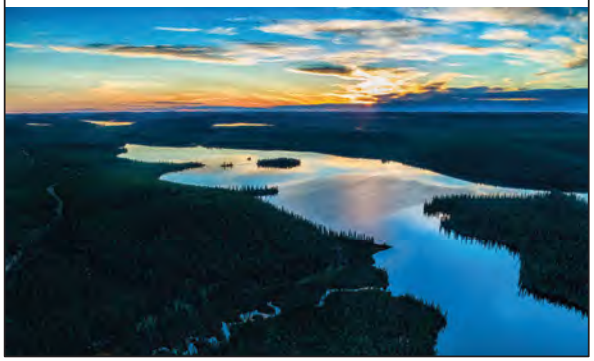
- Between an injection well and a recovery well, acidic mining solution is moved through the ore body, dissolving the uranium from the ore as it travels through the ore body
- The same solution carrying the dissolved uranium is pumped to surface using a recovery well and goes to a processing plant
- The uranium is extracted from the solution and turned into yellowcake
- The acidic mining solution is returned back to the injection wells into an almost closed loop system and repeats itself all over



- An important part of the proposed approach for the Wheeler River Project will be the installation of a freeze wall around the mining area.
- This freezing technology is the same that is used at Cigar Lake and McArthur River, where a low-temperature brine will be used to freeze the water in the sandstone to create the ice wall
- The freezing will create a 10m thick ice wall around the mining area, creating containment for the acidic mining solution
- The drilling technology is that which is widely used in northern Saskatchewan, which will allow for a sustainable deployment of the technology over a longer period of time, with the potential to employ many northern Saskatchewan residents

.

Video: Welcome to Wheeler River



Northern Saskatchewan Environmental Quality Committee

Meeting Notes

March 2-3, 2022, La Ronge

In Attendance :
NSEQC *(In person)*: ***Jeannine Patterson, Nick Daigneault, Allen Augier, Frank Wiegers, Bruce Fidler, Darin Morin, Darwin Lafond, Conrad Misponas, Tyler Morin, Robert St. Pierre***
GRNE: *Scott Boyes, Ashley Carlson (NSEQC Manager). Gill Gracie, Aurora Communications Ltd. (Recorder)*
Presenters & Guests *(Via Teams):*
Ministry of Environment: *Shawn Francis, SK1 Caribou Range Plan Implementation Coordinator*
Denison Mines: Carolanne Inglis-McQuay*, Chad Sorba*
NexGen Energy: ***Adam Engdahl****, Alison Auramenko, Melissa Don Hovdebo (Consultant)*
Orano: ***Tina Searcy,*** *Glenn Lafleur, Stephanie Forseille*
CNSC: ***Richard Snider***
Population Health Unit: *Dr. James Irvine, David Sampson*
Cameco: ***Kristin Cuddington, Anne Gent, Kevin Park, Mike Webster****, Barry Esford, Victor Fern*
Copies of all presentations were distributed at the meeting.

NSEQC Mandate
To increase the level of communication among government, northern stakeholders and industry around uranium development and environmental issues in northern Saskatchewan.

Agenda Item	Notes	Actions/Information
Introduction ***Ashley Carlson***	• Ashley introduced herself as the new NSEQC Manager and gave her background as part of a commercial fishing family. She offered a land acknowledgement. She and staffers Scott Boyes and Nathan Andrews introduced the agenda. • The current NSEQC term ends June 22, 2022; nominations papers have gone out. The NSEQC is authorized by the province. Discussion of the Criminal Record Check requirement. Industry supports the NSEQC by facilitating site visits. • Discussion of roles and responsibilities. • There are two or three meetings a year, plus site visits (now once every two years to each site). Also, potentially conferences and regional subcommittee meetings. • Discussion of potential communications methods and vehicles: annual Report to Communities, newsletters, meeting notes, town hall meetings, talking to youth, posters, and just being visible in the community. • Discussion of challenges, including changing personnel and changing environmental legislation. **NSEQC Reps asked:** • **Is this part of Duty to Consult?** *(Not officially, but it helps people understand so consultation goes more smoothly. The legal Duty applies to First Nations and Metis peoples, while the NSEQC includes municipalities as well as First Nations, and is not a rights-based body).* • **Is there a need to update the Roles and Responsibilities booklet so the NSEQC is not so council-based?** *(We will specify that NSEQC members do not have to be councillors).* • **At what point are new exploration companies made aware of the NSEQC?** The manager explained that exploration companies are not required to meet with the NSEQC. (Additional note: companies typically become aware of the NSEQC later in the development process, such as the EIS stage, but the NSEQC is interested in pursuing earlier engagement). • **Request for a map (heatmap) of exploration projects in the north**. *(Ashley will try to produce one).* • **Question about what to do if companies leave materials or unsafe conditions on their worksites – examples of holes dug near Green Lake that Sask Resources filled in.** *(Ashley will distribute what information she is able to find).*	**Ashley Carlson - Manager** 306-425-4211 Office 306-425-7303 Cell *Ashley.carlson@gov.sk.ca* **Nathan Andrews, Admin** 306-425-4200 *Nathan.andrews@gov.sk.ca* **EA:** Environmental Assessment **EIS:** Environmental Impact Statement ***ACTION****: Ashley: Heatmap of exploration projects*
	• On March 24, the CNSC will hear Cameco's application to release 18 remediated sites from the Eldorado site near Uranium City to provincial Institutional Control. 24 properties have already been released in this way, in 2009 and 2019, including the free release of one area that was never mined.	**Institutional Control:** the phase of a project where the province accepts remediated land back to provincial

Beaverlodge Public Hearing May 24 ***Ashley Carlson***	• **Motion:** ***"That the release of the 18 properties at Beaverlodge not be approved until further investigation, including by communities outside the Athabasca region". A. Augier, Seconder B. Fidler. Carried.*** • Ashley has submitted a written intervention on behalf of the NSEQC. • Robert St. Pierre will make an oral presentation to the CNSC Commission on March 24. **NSEQC reps asked:** • **Concern that the NSEQC has not seen the properties on the ground. Suggested the NSEQC should support a First Nations request to delay the decision for a year and see the sites in person first next summer.** Agreed.	control. The release is accompanied by funding for ongoing monitoring to make sure the land stays safe in perpetuity. ***ACTION:*** *Letter to go in; no guarantee it will be considered.*

Establishment of Co-Chairs	• Each subcommittee names its own chair.
	  o Bruce Fidler named South Central Co-Chair. Bruce took over the chair from Ashley.
	  o Allen Augier named Athabasca Co-Chair
	  o Robert St. Pierre named West Side Co-Chair.	

Open Topics	**Communications**
	• Monthly newsletter or speaking points for reps, in simple language, to be shared with communities, posted in gas stations, shared around and/or added to community scroll. To include government website links and contact emails. Send to the EQC member and the community admin office.
	• Heatmap of exploration sites.
	• Potentially a regular spot on MBC
	• EQC member posters for bulletin boards, as before, so the community knows who their rep is.
	Non-uranium issues
	• **A peat moss mining application south of La Ronge** has been denounced by the Lac la Ronge Indian Band and a local group called For Peat's Sake. They do not want it to proceed. They have support from the Montreal Lake and Peter Ballantyne Cree Nations. No decision yet from the Minister of Environment. NSEQC members commented:
	  o ***Lambert Peat*** (from Quebec) is doing an Environmental Assessment. There are four potential sites around the Potato Lake, Egg Lake, and on the Creighton Road. Government is offering an 80-year lease.
	  Lambert would offer limited employment, with no particular benefit to our area.
	  o Green Lake is having a similar issue with a company wanting to mine peat in their area.
	  Foran Mining is developing a proposed base metal mine west of Creighton
	  • Just going into the development stage. They have met with Creighton and Denare Beach; PBCN is working with them.
		ACTION:
		Nathan *will send out website links to Lambert Peat and Foran Mining.*
		Ashley *will invite both companies to a meeting.*

Darren Thomas	Previous manager Darren Thomas checked in briefly via TEAMS to greet the reps.	
SK1 Caribou Range Plan Update ***Shawn Francis, Ministry of Environment*** *Refer to presentation*	• SK1 is in the Boreal Shield Caribou Conservation Unit. The planning process will start in late October. The initial meeting this fall will include a conversation on the process and the model and get feedback. Research has not yet begun. • More than 40 communities will be involved in the discussion, including some from Alberta and Manitoba. The proposed fall schedule for SK1 will be sent to all communities in the area in the coming months. • SK1 is very different from the SK2 Boreal Plain unit, which is in the draft stage. SK2 West and SK2 East are done. • Grants are available to First Nations and Métis community land people to talk about caribou observations and hold community meetings. **NSEQC reps commented:** • **The caribou study on the west side involved the Metis locals. Forestry companies there (Carriere, Zelensky) ignored the plan, which addressed old growth forest in terms of the migration pattern.** • **Buffers used to be one km from the highway – not anymore! Financial penalties are too light.** • **The forest service does not take consultation into account.**	**Shawn Francis** is the Implementation Coordinator for this range plan. Team Lead, Landscape Management , Environment, Habitat Unit 102-112 Research Drive, Saskatoon, SK, S7N 3R3 | Phone: 306-230-5109 woodlandcaribouproject@gov.sk.ca ***ACTION:*** *Ashley will gather and distribute more information.*

Cameco Mine Site Updates ***Anne Gent, Kevin Park,*** *Mike Webster, Kristin Cuddington. Victor Fern and Barry Esford were also on the line.* *Refer to presentation*	**1. <u>Uranium 101 – Anne Gent</u>** • Saskatchewan uranium is high-grade, and is found close to the sandstone/basement rock contact (unconformity) • The first Saskatchewan uranium mine started 70 years ago at Beaverlodge. Gunnar was the next. • Modern mining, in sequence: o ***Rabbit Lake (Cameco):*** Discovered 1968, started in 1975, first pockets mined by open pit. Early ore was less than 1% grade. First underground mine at Eagle Point started in 1993, using conventional hard rock mining (blasthole stoping) which requires stable ground and steep dip. Remote scoops and trucks moved the ore to the mill. Access by ramp to max depth of 420 m. Production was 4-5 million pounds U_3O_8 annually. o ***Key Lake (Cameco):*** Two open pit mines. 1983-1997. The mill now processes McArthur River ore. The largest open pit, Deilmann, is now the TMF. o ***McArthur River (Cameco):*** 2000-present. 640-metre (height of CN Tower) shaft to access ore, which is at the unconformity and overlain by saturated sandstone. High-grade ore, up to 20% (currently at 6.58%). o This mine uses a raisebore mining method where frozen ore falls into a lower level and is collected remotely by scoop tram. It is ground to a sandy constituency and pumped to surface as a slurry, then transported to the Key Lake mill in specially shielded totes. o ***Cigar Lake (Cameco):*** 2014 – present. Average ore grade 15.4%; flat, uniform orebody which is frozen for mining. Ore is mined from beneath using a high-pressure water jet boring method developed at the mine, and sent to the McClean Lake mill. o ***Cluff Lake (Orano)***: Open pit and underground mines, 1980 – 2022. Now decommissioned and stable; application to release to IC expected in the next few years. o ***McClean Lake (Orano:*** 1996 – 2008. Started with the JEB pit, then Sue A, B, C, D. Ore processed at an onsite mill which now mills Cigar Lake ore starting in 2014. There is potential on the lease to mine the other small deposits, currently being assessed. Application to expand the TMF recently approved by CNSC. • Ore occurring 100 meters or less below surface is typically mined via open pit, with overburden being removed conventionally. Ore is drilled and blasted, and moved by haul trucks with up to 200 tonnes capacity. • Mined-out open pits are sometimes converted for use as Tailings Management Facilities (TMFs) – examples include Rabbit Lake, Key Lake, McClean Lake. • Ore deeper than 100 meters from surface is usually mined from underground via a shaft or a ramp. This sometimes requires ground support. If water inflow from surrounding water-bearing sandstone is a problem, the sandstone may be frozen using a brine solution at -25°C. Ore is pulverized in an underground grinding circuit, and pumped to surface for storage before being transferred to special totes for transport to a mill. • Milling completes the grinding process and separates the uranium from the slurry. Anne detailed the process. High-grade ore is stored in air-agitated tanks; low-grade ore is stockpiled on surface. At Key Lake, the two are blended for a mill feed grade of 4%. The McClean Lake mill can handle undiluted high-grade ore. • The resulting yellowcake is packed in 45-gallon drums, each weighing 880 pounds, and shipped by road to Blind River, Ont. or to the U.S. for processing into nuclear power reactor fuel. **2. <u>Cameco General Site Updates – Kevin Park</u>** • ***Rabbit Lake:*** In care and maintenance since 2016. Cameco is looking for opportunities to reclaim areas no longer required. The current operating license expires Oct. 31. 2023. • ***Key Lake/McArthur River***: These sites were placed in care and maintenance in 2018 because of world market conditions and received new Approvals to Operate from the Sask. Ministry of Environment in Nov 2021 after an October inspection. The McArthur River mine and Key Lake mill will gradually resume production through 2022, producing about five million pounds U_3O_8 this year. The operating license expires Oct. 31, 2023, and Cameco will seek an indefinite license. Country food monitoring and public information initiatives will continue, and CNSC will issue annual Regulatory Oversight Reports.	**Anne Gent:** Lead Environmental Scientist, Cameco *Anne_gent@cameco.com* **Kristin Cuddington:** Community Social Responsibility (CSR) *Kristin_cuddington@cameco.com* **Kevin Park:** Lead Environmental Engineer; Compliance and Licensing. *Kevin_park@cameco.com* ***Video:*** *How It's Made – Uranium You Tube*

	• ***Cigar Lake:*** The only Saskatchewan uranium mine to continue operating throughout the downturn. The CNSC license was renewed in 2021 for 10 years. They are applying to reduce the lease size by releasing unused areas back to the province.	
Beaverlodge Update ***Mike Webster*** *Refer to presentation*	• Beaverlodge operated from 1952-1982 about 8 km east of Uranium City. Ore grade was about 0.25%, or 100x less than modern mines. About 20,000 tonnes of yellowcake were produced from 70 sites over the 30-year life. It closed in 1982 and initial reclamation was completed in 1985. The site has been in transition monitoring ever since. • In 2007 a framework for the provincial Institutional Control (IC) program was developed to administer remediated properties returned to the province by operating companies, and to ensure ongoing monitoring and maintenance. A Beaverlodge Management Framework was established at the same time. • The process includes gathering information; assessment of risk; consideration of remedial options (with public input through two workshops which included the NSEQC); implementation of the chosen path forward by developing objectives that would leave the sites safe, secure and stable; and application for release. • Performance indicators include acceptable gamma levels, sealed boreholes, no debris. Surveys are recorded by GPS to ensure no areas are missed. Mine openings have been covered with stainless steel caps, and areas of subsidence from crown pillar collapse have been filled. • Five small sites were released to IC in 2009, and 20 in 2019 (including one never-mined site that was free-released outside IC. The land is safe to use for traditional activities. • The releasing company (in this case the federal government through Canada Eldor, the legacy owner of the properties) provides funding to cover the cost of perpetual monitoring. • The CNSC will consider Cameco's application to release 18 more sites at a hearing on March 24, 2022. The NSEQC has submitted a written intervention, and has selected Robert St. Pierre to represent the group in an oral presentation. **NSEQC reps asked:** • **Concern about a high number of barrels scattered in the bush at the north end of the airport.** *(Not clear whose they are; they are not on Beaverlodge properties).* • **Can the province release properties in IC for other uses?** *(They could, with the understanding that there could still be certain risks associated with them, and perhaps indicating certain area to stay away from. The Contact Lake gold mine property north of La Ronge was released for further development in that way.)* • **What is the typical lifespan of decommissioning?** *(Highly variable depending on the condition of the site. It is different for just a mine than for a mine and mill.)* • **Is the process to release part of a lease area different from the IC process?** *(This is undisturbed land, and is released through the Lands Branch of the Environmental Protection section of Sask. Environment. Altered land would likely go to IC).* • **Why do roads always have to be taken out – northerners can use them for hunting and traditional activities!** *(There are arguments on either side).* • **Who makes the recommendations around restarting a mine, and must they be followed to resume production?** *(Companies are not required to follow regulator recommendations; they are not action items).* • **Can IC sites be free released?** *(Sites that have not been mined or disturbed would be released from CNSC licensing. We would then work with Lands Branch to redraw the boundaries of our lease. The land would revert to the Crown to be redistributed for future use).* • **Is there a required thickness for a crown pillar?** *(We saw settling at a thickness of 5-7metres. However, when stoping, the miners built waste rock platforms underground to access the ore which reached to a couple of metres below the surface, so subsidence would be limited. Where we saw subsidence, we added extra waste rock fill on top. Anything 20 metres or more thick would not require additional monitoring. The rest will be monitored annually).* • **What is the plan at current mines so this does not happen again?** *(Current operations would be able to assess crown pillars from underground. All sites have programs regarding mining safety; also current mines are many hundreds of meters below surface so this would not happen.*	**Mike Webster,** Lead Reclamation Specialist, SHEQ; Manager, Beaverlodge Project. *Mike_webster@cameco.com* **A Virtual Tour of Beaverlodge (**in English and Dené) is posted on the Beaverlodge website: *www.beaverlodgesites.com.* ***SHEQ**: Safety, Health, Environment and Quality* **CNSC Project Officer**: **Richard Snider,** Senior Project Officer 306-975-4955 *Richard.snider2@canada.ca* **Sask. Ministry of Environment Project Officer:** **George Bihun,** Environmental Protection Officer, Uranium and Northern Operations 306-930-8918 *George.bihun@gov.sk.ca* Annual reports on each site, and photos of the remediated areas, are available on the Cameco website.

Rook I Update **NexGen Energy** ***Adam Engdahl*** *Alison Auramenko* *Melissa Scansen* ***Luke Moger*** *Don Hovdebo, Consultant* *Refer to presentation*	**Adam outlined the Rook I Project:** • 155 km north of La Loche, on a peninsula in Patterson Lake. • The deposit, discovered in 2014, contains 256 million pounds U3O8 averaging 3.1% uranium, for 3.75 million tonnes of U_3O_8. It is in vertically stacked veins, in very stable crystalline basement rock. The deposit is overlain by 40-60 metres of overburden and 60-100 metres of sandstone. It is monometallic, with no other contaminants like arsenic or molybdenum • Baseline studies started in 2015; in 2016 NexGen announced the largest initial resource estimate ever. From 2016-18 they completed a Preliminary Economic Assessment (PEA), then a Preliminary Feasibility Study (PFS) after more engineering. An Environmental Assessment (EA) was started in 2019, and a project description submitted to regulators in early 2019. A full Feasibility Study (FS) was completed and released in 2021. • It will be mined by conventional underground longhole stoping, and milled conventionally using an acid strip method. 100% of tailings will be returned underground. This is not the most economic, but the best to match our elite standards. This costs 20% more than keeping tailings on surface. • Construction is scheduled for 3 ½ - 4 years; operations for 24 years; active decommissioning for five years. Post-active decommissioning will take 10 years, so there will be activity on site for almost 45 years! • The tailings, in a cemented paste form, will be placed in caverns purpose-mined in clean rock, from 300m to 600m below surface. The clean rock will be hauled to surface and placed on properly lined and drained waste rock piles. • NexGen has been engaging with communities in the Local Priority Area (LPA); in 2019 they signed four study agreements with the Birch Narrows, Buffalo River and Clearwater River Dene Nations and Métis Northern Region 2. Each group has a Joint Working Group with NexGen. • In 2020 we signed an agreement with Ya'thi Nene Lands and Resources for a self-directed Traditional Land Use study. • We deal with the CNSC for the EA and licensing matters, pre-operations and construction. We also deal with the provincial Ministry of Environment in a separate but harmonized process led by the CNSC. *(Exploration and evaluation timeline shown).* • We currently have no approvals for a mine and mill. We have started submitting formal licensing documentation, and will submit the Environmental Impact Statement (EIS) at the end of March. **NSEQC reps asked:** • **What is the depth of each layer of tailings that you will deposit underground?** *(The cells are 50 x 25 x 25 metres. The cemented paste backfill will reduce the chance of seepage.)* • **Is the UGTMF (Underground Tailings Management Facility) scalable in case you mine additional ore?** *(The cell structure is advantageous since we can build out system cells as required. We can use any area that are not mineralized, reducing the amount of PAG (**p**otentially **a**cid-**g**enerating rock) coming to surface.)* • **Will there be continuous engagement throughout all the processes?** *(We will make sure communities are involved prior to drilling, and are part of decommissioning and monitoring after the site reverts to the province. We wany communities fully integrated throughout the process and in all aspects.)*	**NexGen Main Office** 1-306-954-2275 **Adam Engdahl** Senior Project Manager 1-306-716-4770 Cell aengdahl@nxe-energy.ca **Alison Auramenko** Regional Development Manager *306-291-4585* *aauramenko@nxe-energy.ca* **Melissa Scansen** Community Consultation 306-381-7324 *mscansen@nxe-energy.ca* **Luke Moger** VP Environment, Permitting and Licensing Vancouver *lmoger@nxe-energy.ca* ***Ya'Thi Nene*** means "Lands of the North". It serves the seven Athabasca communities. ***Website*** *www.nexgenenergy.ca*
Wheeler River Project **Denison Mines** ***Carolanne Inglis-McQuay*** *Chad Sorba*	• Wheeler River is Denison's primary asset. They also own 22% of the McClean lake mill, the Midwest Project, and other exploration projects in Saskatchewan. • The project is west via a 7-km access road from km 35 of the Key Lake-McArthur River haul road, midway between the two sites. This is in Bobby John's home trapline area, and he is helping Denison with traditional information. A 7-km power line connects to the haul road power line. A 1.6 km airstrip is planned. • The Phoenix deposit is 400m below surface. *Carolanne explained the surface layout.* A second deposit, Gryphon, will be mined later. • Denison plans to mine Phoenix using In-Situ Recovery (ISR). For this to work, the ore must be leachable, and the ore body must be containable. This will be achieved by freezing a wall to enclose the ore body using low-temperature brine, similar to methods used at McArthur River and Cigar Lake.	**Carolanne Inglis-McQuay** **CSR Manager** 306-652-8200 X 131 *cinglismcquay@denisonmines.com* **Chad Sorba** Manager, Technical Services **Video**: Find it about halfway down the webpage.https://wheelerriverproject.ca/

Refer to presentation	• ISR involves injecting an acidic solution through the ore body, which picks up the uranium. The uranium-bearing solution is pumped to surface. This involves injection wells, recovery wells and monitoring wells, all pumping within the freeze wall. On surface, the uranium is stripped from the solution, dried and shipped, and the solution sent back down to pick up more uranium. • Community engagement started in 2016. Several community-owned companies are helping develop the operation. • *10-min. video, available online; see right.* **NSEQC reps asked:** • **What are the concerns with groundwater monitoring once mining is done and the freezing comes out?** *(The freeze wall will be maintained until reclamation targets have been met. There will be substantive monitoring inside and outside the freeze way during operations. There will be a full EA through CNSC for decommissioning the site.)* • **What is the grade? Is it acid-generating rock?** *(The grade is about 19%. We will be injecting acid to leach the uranium , recovering it through wells, and controlling the acid level that way. No rock will be brought to surface).* • **What have been the successes and failures of previous projects using this extraction method?** *(ISR has been used since 1940, mostly in sandstone formations. Most operations inject water first, to understand how groundwater flows in the deposit. Most are very successful They do not go ahead unless they can meet those criteria).*	
Cluff Lake Decommissioning **Orano Canada** ***Tina Searcy*** *Stephanie Forseille* *Glenn Lafleur* *Refer to presentation*	• The closest communities to Cluff Lake are Fort Chipewyan, Clearwater River and La Loche. • Original deposit discovered in the 1960s; EA done in 1978 through the Bayda Inquiry. Project approved in 1980. There have been multiple EAs and licenses over the years. • Operated from 1980 to 2002, with 300 employees at peak production. The project produced 62 million pounds U_3O_8. • Decommissioning license issued in 2004. Physical decommissioning done in 2006, including demolishing the mill, placing demolition debris in the Claude pit, backfilling the pit, shaping and contouring, and planting trees and grass; reclaiming waste rock piles which are revegetating well; draining the tailings area, covering with clean till and planting grasses. Overall, more than half a million native trees and shrubs were planted. Monitoring results were reported to regulators. • The camp and warehouse were used until 2013. This was the largest industrial employer on the west side for more than 20 years. 52% of the staff were northern, and 80% of those from the west side. • *Short video. (6 minutes)* • Decommissioning criteria included removal of structures and reclamation of disturbed land to minimize the need for care and maintenance. Results have been within risk model predictions long-term. Vegetation studies continue. • The site is well understood from decades of monitoring, and is safe for traditional land use and for camping. Water quality meets provincial objectives. Upon transfer to IC, Orano will supply a fund for ongoing monitoring. • The is the first uranium mine in Canada to be environmentally managed from cradle to grave. • The **DJ pit** was flooded in 2005 and has reached a stable chemocline. Waste rock and overburden from excavating the pit was used for cover or put into other pits. The areas were regraded and revegetated. • The **D pit**, first to be mined, was flooded in 1983 and has fully revegetated. Again, the chemocline is stable and surface water meets water quality objectives. • The **underground mines,** OP and DP: Raises and declines were backfilled and covered with a metre of clean till. They are technically monitored to ensure ongoing stability. • The **mill complex** area, once buildings were demolished, was covered with clean till and revegetated. • The **TMA** was covered with a minimum one metre of till and seeded to native grasses. The original environmental assessment indicated this would protect the receiving environment; it has been inspected over two decades and we are confident it is performing well. The consolidated tailings have low permeability. • Replanted vegetation is now self-sustaining; wildlife species are returning; lakes meet water quality objectives. The site is performing as predicted. Radon is at background levels. • Contaminant transport monitoring will continue.	**Tina Searcy,** Regulatory and Environmental Science Manager 306-343-4525 *tina.searcy@orano.group* **Stephanie Forseille,** Coordinator, SHEQ Exploration **Glenn Lafleur,** Northern Affairs Manager. ***Video on You Tube*** *in English, Dene and French. Go to You Tube and search Cluff Lake Uranium Mine.* *Other uranium mine videos there also.* ***Chemocline:*** the boundary in a body of water that separates a fresh upper layer from a deeper layer containing higher concentrations of heavier contaminants.

	• Orano is ready to return the land to provincial care and control under the IC program. There will likely be a CNSC Commission hearing later this year or early in 2023. **NSEQC reps asked:** • **A west side group is doing some ongoing independent testing on wild meat, berries, and water quality from the area. Will your testing continue?** (*We have concluded our studies, although some testing of vegetation and berries is still happening. We can send you fact sheets on the results of our testing.)*	***ACTION:*** *Ashley will get the monitoring results fact sheets from Tina and distribute.*
CNSC Update Overview of Uranium Mines and Mills in Saskatchewan ***Richard Snider*** *Refer to presentation*	• The CNSC regulates mines, mills, refineries and fuel fabrication. They do not regulate exploration. Regulatory oversight is achieved through verification and enforcement. • The CNSC regularly inspects each nuclear site, and assesses each operation based on 14 Safety and Control Areas (SCAs) that evaluate management systems and human performance. Conventional health and safety and environmental protection are paramount. • The inspection program is risk-informed; higher-risk sites are inspected more often. A 10-year inspection time period is broken down into one-year plans. Generally, there are five inspections per site per year, three general and two focused specifically on the SCAs. General inspections look at radiation protection and worker health and safety. • A decommissioned site is normally inspected every three years. Inspections are now more frequent at Beaverlodge due to the request for release of 18 sites. • The CNSC also runs independent environmental monitoring programs (IEMP) to build public trust and to ensure the environment is safe. This is separate from monitoring required under the compliance program. Licensees are also required to monitor. Communities are encouraged to suggest species for incorporation into the monitoring program. • In addition, there's an independent EARMP monitoring program to evaluate the safety of country foods. This was initiated in 2011 to build on a previous cumulative effects monitoring program. Samples are collected by and with local residents. Results continue to show that country food is safe. • CNSC (led by Dr. Rachel Lane) is leading the four-year Canadian Uranium Workers' Study (CANUWS), in which the Saskatchewan government, the uranium industry and the University of Saskatchewan are also participating. About 80,000 current uranium workers are included in the study, which aims to understand the impact of occupational radon exposure on human health in low-exposure workplaces. Data from seven Saskatchewan sites will be included in the study. • Indigenous communities and First Nations with a direct local interest in a given project can apply for participant funding to take part in Commission hearings, of the project might impact traditional territory or rights.	**Richard Snider,** Senior Project Officer. CNSC Project Officer for Beaverlodge, Key Lake and NexGen's Rook 1 Project. 306-975-4955 *Richard.snider2@canada.ca* The CNSC's mission is to regulate the development, production and use of nuclear energy, and to disseminate scientific, regulatory and technical information. The CNSC includes an independent Commission and staff. Staff do the groundwork and make recommendations to the Commission, but the Commission makes the regulatory decisions. CNSC has offices at nuclear power plants, in Ottawa, and four regional offices, including one in Saskatoon to look after the province's uranium mines and mills.
CNSC Site Updates ***Richard Snider*** *Refer to presentation*	• **Rabbit Lake:** In care and maintenance since 2016, with no planned restart date. Current activities include facility preservation and water treatment. Financial Assurance is currently $213 million. A license renewal hearing is likely in 2023, along with Key Lake and McArthur River. • **McArthur River:** Production started in 1999 and was suspended in 2018; now gradually restarting. Financial assurance is $42.1 million following an updated decommissioning plan. License renewal due on 2023; Cameco is asking for an indefinite license; staff are evaluating this request. • **Key Lake:** Processes McArthur River ore. Production suspended in 2018; now gradually restarting. Financial assurance $222.5 million. Recent upgrades include mill automation and a yellowcake packaging upgrade. There will likely be a decision on a 2021 license renewal request in summer of 2023. • **Cigar Lake:** Ore is milled at McClean Lake. License renewed in 2021 for 10 years. Financial Assurance updated in 2021, not $61.8 million. This site added a crushing area for PAG , a supplemental concrete fill underground, and a cooling loop. These are under review. • **McClean Lake:** In 2021, CNSC approved an application to increase the height of the JEB TMF by 10.5 metres. The height of the consolidated tailings will increase by 14 metres. Updated financial assurance is $103 million, including all planned facilities to 2025. License expires June 30, 2027. **Decommissioned sites:**	**PAG:** Potentially acid-generating rock. This has to be kept on a lined ad and water collected and treated in order to not add acidity to the environment. **Financial Assurance:** The money provided upfront, as an irrevocable Letter of Credit, by an operating company to cover the cost of site cleanup should the company be unable to do it. The funds are held by a bank, and not available to government for any other purpose. **Regulatory Oversight Reports** for uranium mines and mills are available on the CNSC website at nuclearsafety.gc.ca,

	• **Beaverlodge:** Operated 1952-1982, then post-decommissioning monitoring. Five properties released from CNSC licensing in 2009, 20 in 2019 (one free release). Cameco is the licensee, with funds from Canada Eldor. Commission hearing March 24 to release 18 more sites for a total of 43; if approved, that will leave 27 properties still under license. License renewal due 2023; we anticipate a request for two years.
	• Performance objectives for release include acceptable gamma radiation levels of less than one millisievert (mSv) per hour; boreholes plugged; caps designed properly; stable crown pillars; debris free; and water quality within predictions.
	• **Cluff Lake:** Decommissioned in 2002-2005; post-decommissioning monitoring since then. Vegetation is growing well. CNSC confident Orano is meeting the terms of the license. Orano has submitted their closure report and long-term maintenance plan. There will be a Commission hearing after a technical review if this information is complete, probably late 2022 or early 2023. Financial Assurance is at $3.5 million. License renewal is due on July 31, 2024.
	Sites in remediation:
	• **Gunnar:** Saskatchewan Research Council (SRC) is the licensee. Reclamation under way; Gunnar main and Central tailings areas are almost complete. Openings to underground workings are complete, with stainless steel caps to be installed this year. Remediation at Langley Bay is delayed because of high water. Waste consolidation and two landfills are part of the plan.
	• **Lorado:** Remediation was completed in 2016. The license will move to a monitoring phase, and the need for a designated CNSC officer will be removed in 2023. Senior management will be able to approve a license renewal.
	Regulatory Oversight Report (ROR):
	• This is an annual report card on how the sites are doing in terms of radiation and environmental protection as well as conventional health and safety. We review accident stats, event reports and corrective actions, and work with the province.
	  o The average individual effective radiation dose was well below the 50 mSv/year limit, and the 20 mSv/year limit over five years.
	  o All spills in 2021 were of low significance.
	  o Uranium, selenium, molybdenum and radium 226 in effluent were all a small fraction of regulatory limits.
	• In 2021, all five active uranium sites met regulatory requirements.
	Proposed projects
	• **Rook I (NexGen Energy)**: The draft EIS is due for technical review by March 31. A license application was submitted in 2019 under CEAA. This site proposes 100% underground tailings.
	• **Wheeler River (Denison Mines):** This will be the first In Situ Recovery (ISR) uranium mine in Canada. The EA is under way; the draft EIS will be submitted for technical review this summer. A license application will follow.
	• **PLS (Fission):** This site is currently doing a provincial EA; no federal EA is required. CNSC is providing comments. No license application to date.
	NSEQC reps asked:
	• **Would Dr. Lane come and talk to us?** *(I'm sure she would)*
	• **Has there been any study to link smoking and radon?** *(I think so. Dr. Lane could speak to that).*
	• **Why does Fission not require a federal EA**? *(Both NexGen and Denison triggered their EA under CEAA, which has different rules than the IAA which Fission is under. Fission is below the cutoff size for a federal EA.)*
	• **What if they extend their mine later?** *(It's more about the number of tonnes mined per year. If they increase that, it would trigger an impact assessment. Mine life is based on reserves or resources; companies try to be optimistic on that).*
		along with other information on each site. Just google ROR Reports.
		
		mSv: Millisievert, a measure of the absorption of radiation by tissue.
		
		CEAA: Canadian Environmental Assessment Act 2012.
		This legislation was superseded in 2019 by the federal **Impact Assessment Act (IAA)**.
		
		EA: Environmental Assessment
		
		EIS: Environmental Impact Statement.

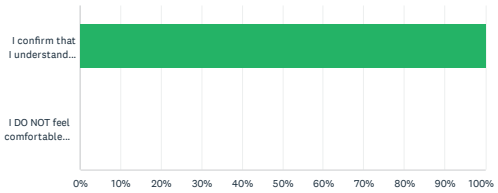
Closing Round Table	• Most reps stated that they enjoyed the meeting and were glad to be back on the job. Particular points made:
	  o Like to see more reps from my area here. More First Nations should be here.
	  o Will take to my community, band, Grand Council and maybe FSIN.
	  o Learned a lot about mining. Passionate about the environment.
	  o Need to stay on top of potential adverse environmental effects.	

	o Need Fission here. o Get the Ministry to explain the roles and responsibilities. o NSEQC should go into communities to explain their role and how they can help with information. o Need a newsletter and the exploration project heatmap. o Like more information on the ISR mining and how the groundwater is protected after mining stops. o Today's information focused on mining, which is the roots of the NSEQC. Inform each other. Other environmental topics can also be discussed.	
Next meeting	• TBA, perhaps early June.	

ROC652

Q1 By checking this box, you confirm that you understand the purpose of the survey, how the information you share will be used, and that participation in the survey is voluntary.

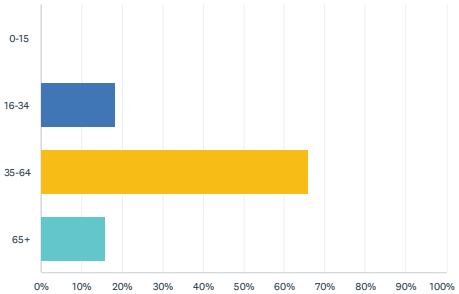
Answered: 39 Skipped: 0



ANSWER CHOICES	RESPONSES	
I confirm that I understand the purpose of this survey, how the information will be shared, and that participation is voluntary	100.00%	39
I DO NOT feel comfortable proceeding with this survey and would like to exit	0.00%	0
TOTAL		39

Q2 Age:

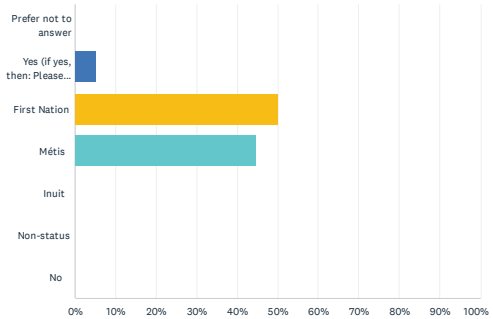
Answered: 38 Skipped: 1



ANSWER CHOICES	RESPONSES	
0-15	0.00%	0
16-34	18.42%	7
35-64	65.79%	25
65+	15.79%	6
TOTAL		38

Q3 Do you identify as an Indigenous person (First Nations, Métis, or Inuit?) Answers to this question are entirely voluntary and not required.

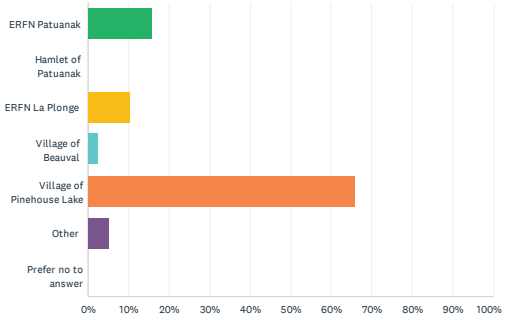
Answered: 38 Skipped: 1



ANSWER CHOICES	RESPONSES	
Prefer not to answer	0.00%	0
Yes (if yes, then: Please select from the following which best applies to you.)	5.26%	2
First Nation	50.00%	19
Métis	44.74%	17
Inuit	0.00%	0
Non-status	0.00%	0
No	0.00%	0
TOTAL		38

Q4 Where do you live most of the year:

Answered: 38 Skipped: 1

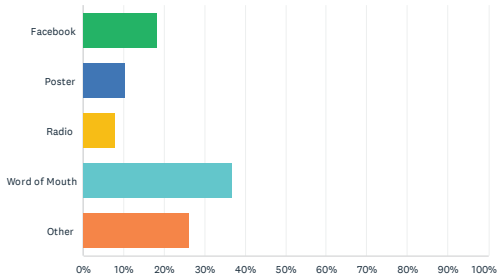


ANSWER CHOICES	RESPONSES	
ERFN Patuanak	15.79%	6
Hamlet of Patuanak	0.00%	0
ERFN La Plonge	10.53%	4
Village of Beauval	2.63%	1
Village of Pinehouse Lake	65.79%	25
Other	5.26%	2
Prefer no to answer	0.00%	0
TOTAL		38

#	PLEASE IDENTIFY WHICH OTHER COMMUNITY YOU ARE FROM	DATE
1	Patuanak	5/30/2022 3:54 PM

Q5 How did you hear about this survey?

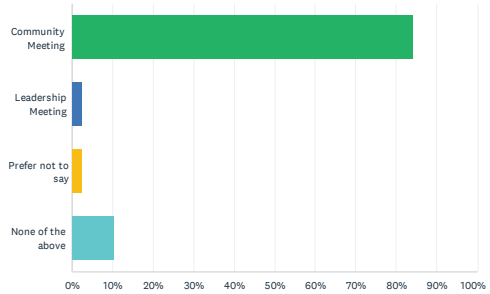
Answered: 38 Skipped: 1



ANSWER CHOICES	RESPONSES	
Facebook	18.42%	7
Poster	10.53%	4
Radio	7.89%	3
Word of Mouth	36.84%	14
Other	26.32%	10
TOTAL		38

Q6 Which of the following presentations did you attend? Check all that apply.

Answered: 38 Skipped: 1



ANSWER CHOICES	RESPONSES	
Community Meeting	84.21%	32
Leadership Meeting	2.63%	1
Prefer not to say	2.63%	1
None of the above	10.53%	4
TOTAL		38

Q7 Are there any topics of particular concern that Denison needs to pay special attention to?

Answered: 35 Skipped: 4

#	RESPONSES	DATE
1	Mostly just environmental	6/3/2022 10:54 AM
2	Environmental & Research	6/3/2022 10:51 AM
3	Underground water with acid	6/3/2022 10:40 AM
4	Mostly providing jobs	6/3/2022 10:39 AM
5	Water not to disturb in its present healthy state, very important	6/3/2022 10:35 AM
6	Impact on the environment and restoring to how it was after the project.	6/3/2022 10:32 AM
7	Restoring our environment to its original state or even better	6/3/2022 10:30 AM
8	Covid-19 unvaccinated and restrictions (future)	6/3/2022 10:28 AM
9	No	6/3/2022 10:25 AM
10	To be honest I have no idea what it's about but I'm eager and interested to know more.	6/3/2022 10:23 AM
11	What's in it for communities affected	6/3/2022 10:18 AM
12	Yes, no cell service rom km 10 - km 195 key lake road	6/3/2022 10:13 AM
13	no	6/3/2022 10:09 AM
14	Accessibility for people to visit, safety, accessibility into buildings	6/3/2022 10:08 AM
15	Water being used by drillers, where does water flow as it is being used? Is it contained or is it contaminated water being released to the environment?	6/3/2022 9:59 AM
16	Jobs	6/3/2022 9:56 AM
17	Local employment is important to me	6/3/2022 9:54 AM
18	More recycling projects	6/3/2022 9:50 AM
19	N/A	6/3/2022 9:48 AM
20	Hoping Denison will participate in northern communities in developing qualified participants.	6/3/2022 9:47 AM
21	Not at all	6/3/2022 9:41 AM
22	To provide jobs	6/3/2022 9:22 AM
23	i) community concerns a)traditional lands b)climate change c)exploitation of the north, no returns	6/3/2022 9:19 AM
24	Other community politics.	6/3/2022 9:16 AM
25	Traditional cabins on land.	6/3/2022 9:11 AM
26	Info is good. More info is good (my gmail).	6/3/2022 9:06 AM
27	Don't think so they covered most things	6/2/2022 10:47 AM
28	I think Denison convered all the main topics very well.	6/1/2022 5:28 PM
29	No	6/1/2022 5:23 PM
30	No	6/1/2022 4:33 PM

31	Environmental	6/1/2022 4:31 PM
32	Environmental impacts and the creation of jobs for northerners	5/31/2022 5:08 PM
33	Nope	5/30/2022 6:34 PM
34	Employment for our young people	5/30/2022 5:30 PM
35	No	5/30/2022 3:55 PM

Q8 Are there any things missing that Denison should consider to reduce the effects of the Project to the environment?

Answered: 35 Skipped: 4

#	RESPONSES	DATE
1	Environmental and the environment	6/3/2022 10:54 AM
2	Environmental Jobs	6/3/2022 10:51 AM
3	Test surrounding lakes	6/3/2022 10:40 AM
4	No, there's good information	6/3/2022 10:39 AM
5	Yes, air quality	6/3/2022 10:35 AM
6	No response	6/3/2022 10:32 AM
7	No response	6/3/2022 10:30 AM
8	No- work at Denison Mine couple shifts, like the safe orientated culture and respect of land and native people that live near the mine sites.	6/3/2022 10:28 AM
9	Are these surface pipes spell ready at all times?	6/3/2022 10:25 AM
10	I think he has done a great job at being transparent with the community and that's awesome!	6/3/2022 10:23 AM
11	No	6/3/2022 10:18 AM
12	animal impacts, spills, etc	6/3/2022 10:13 AM
13	no	6/3/2022 10:09 AM
14	Make sure the animals come back, focus on caribou habitat management, forward planning	6/3/2022 10:08 AM
15	Garbage, paper could be recycled.	6/3/2022 9:59 AM
16	Pretty much covered	6/3/2022 9:56 AM
17	I want to see yearly reports about the environment	6/3/2022 9:54 AM
18	Sounds good	6/3/2022 9:50 AM
19	N/A	6/3/2022 9:48 AM
20	Reassure land users mining practices used are the safest.	6/3/2022 9:47 AM
21	Maybe in the future	6/3/2022 9:41 AM
22	No, there is good information already	6/3/2022 9:22 AM
23	impact of exploration & activity on animals, water, etc.	6/3/2022 9:19 AM
24	None	6/3/2022 9:16 AM
25	No response	6/3/2022 9:11 AM
26	Info is good. More info is good (my gmail).	6/3/2022 9:06 AM
27	No	6/2/2022 10:47 AM
28	Maybe denison can learn from the people around this project how to reduce the effects of the project to the environment	6/1/2022 5:28 PM
29	No	6/1/2022 5:23 PM
30	No	6/1/2022 4:33 PM

31	None	6/1/2022 4:31 PM
32	Cant think of any	5/31/2022 5:08 PM
33	I don't think so	5/30/2022 6:34 PM
34	No	5/30/2022 5:30 PM
35	No	5/30/2022 3:55 PM

Q9 Are there any topics that you would like to see including in monitoring plans?

Answered: 35 Skipped: 4

#	RESPONSES	DATE
1	environmental jobs	6/3/2022 10:54 AM
2	Mostly environmental plans	6/3/2022 10:51 AM
3	Long term monitoring. Surface water.	6/3/2022 10:40 AM
4	Not really	6/3/2022 10:39 AM
5	Need someone to teach safety, attendance, by leader	6/3/2022 10:35 AM
6	Jobs given to the community	6/3/2022 10:32 AM
7	Jobs given to community, better yet "communities", giving opportunity	6/3/2022 10:30 AM
8	No	6/3/2022 10:28 AM
9	How every pipe is double plated and spell prove ready to protect the environment	6/3/2022 10:25 AM
10	No.	6/3/2022 10:23 AM
11	No	6/3/2022 10:18 AM
12	yes, how are they freezing the drilling and does it thaw out or continue freezing	6/3/2022 10:13 AM
13	no	6/3/2022 10:09 AM
14	Water, fish. Long term monitoring-put money aside for this.	6/3/2022 10:08 AM
15	Water consumption, where does water com from, is it treated.	6/3/2022 9:59 AM
16	No	6/3/2022 9:56 AM
17	More local meetings like this	6/3/2022 9:54 AM
18	Water sampling	6/3/2022 9:50 AM
19	N/A	6/3/2022 9:48 AM
20	Continue reporting operational successes and failures	6/3/2022 9:47 AM
21	Future-wise	6/3/2022 9:41 AM
22	No	6/3/2022 9:22 AM
23	mental health; how are people feeling about this	6/3/2022 9:19 AM
24	ERFN- priority community publicized.	6/3/2022 9:16 AM
25	How the uranium was discovered.	6/3/2022 9:11 AM
26	Info is good. More info is good (my gmail).	6/3/2022 9:06 AM
27	No I think there doing a good job	6/2/2022 10:47 AM
28	I would like to see more pros of the denison project, and how they work.	6/1/2022 5:28 PM
29	Nope	6/1/2022 5:23 PM
30	No	6/1/2022 4:33 PM
31	None	6/1/2022 4:31 PM

32	Indigenous voices	5/31/2022 5:08 PM
33	Not really all good	5/30/2022 6:34 PM
34	Elders from our community to be liaison workers	5/30/2022 5:30 PM
35	No	5/30/2022 3:55 PM

Q10 What additional information would be helpful for you to understand the Project and its potential impacts to people and the environment?

Answered: 35 Skipped: 4

#	RESPONSES	DATE
1	courses and jobs	6/3/2022 10:54 AM
2	more understanding of environmental	6/3/2022 10:51 AM
3	What benefits does communities get	6/3/2022 10:40 AM
4	It's my first time to attend meeting but find good information	6/3/2022 10:39 AM
5	Always explain the motto "help us help you"	6/3/2022 10:35 AM
6	For our younger generation, it would be great for the company to give out scholarships, to this industry.	6/3/2022 10:32 AM
7	Younger adults be involved and educate them.	6/3/2022 10:30 AM
8	Remain transparent with communities, step by step projects.	6/3/2022 10:28 AM
9	Plans on how you guys would control plans	6/3/2022 10:25 AM
10	Remain transparent with the community and always ask before major changes.	6/3/2022 10:23 AM
11	I would like to better understand the effect it would have on our environment.	6/3/2022 10:18 AM
12	more community meetings	6/3/2022 10:13 AM
13	I would like to know how long this project is.	6/3/2022 10:09 AM
14	More opportunities for people with disabilities. Job coach for people with disabilities.	6/3/2022 10:08 AM
15	More practice on recycling. Are water samples being taking for human consumption.	6/3/2022 9:59 AM
16	No additional	6/3/2022 9:56 AM
17	Regular community meetings are important	6/3/2022 9:54 AM
18	Water runoff from drillers, is it safe.	6/3/2022 9:50 AM
19	N/A	6/3/2022 9:48 AM
20	Make provisions for local community Elder representation in decision making	6/3/2022 9:47 AM
21	Hopefully jobs in the future	6/3/2022 9:41 AM
22	first time to attend, good information already	6/3/2022 9:22 AM
23	explanation in Dene every step of the way	6/3/2022 9:19 AM
24	none	6/3/2022 9:16 AM
25	A community liaison worker- keep people up to date.	6/3/2022 9:11 AM
26	Info is good. More info is good (my gmail).	6/3/2022 9:06 AM
27	None	6/2/2022 10:47 AM
28	Just how the actual site works, and what they do there. What are the jobs and what do they do.	6/1/2022 5:28 PM
29	Nope	6/1/2022 5:23 PM
30	None	6/1/2022 4:33 PM

31	None	6/1/2022 4:31 PM
32	more graphs please, not enough numbers on these infographics for my taste	5/31/2022 5:08 PM
33	All good	5/30/2022 6:34 PM
34	The family trapline impacts my family because my dad [redacted] was the trapper right in that area.	5/30/2022 5:30 PM
35	No	5/30/2022 3:55 PM

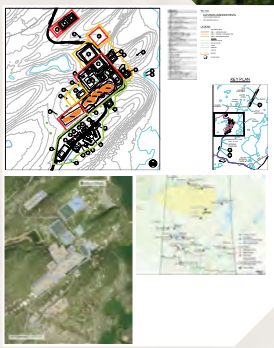
ROC823

Wheeler River
Project Overview

Powering
PEOPLE, PARTNERSHIPS AND PASSION.

We acknowledge and respect the fact that Denison's flagship Wheeler River Uranium Project is located in northern Saskatchewan within the boundaries of Treaty 10, in the traditional territory of English River First Nation, in the homeland of the Métis and within Nuhenéné.

Key Project Components	Construction (Year 1 to 3)	Operation (Year 3 to 18)	Decommissioning (Year 18 to 23)	Post-Decommissioning (Year 23 to 38)
	Develop access roads and air strip		Facility removal	Active environmental monitoring of vegetation growth; monitoring of surface water and groundwater quality; monitoring of wildlife site
	Site preparation and earthworks			
	ISR wellfield drilling	Operation of the ISR wellfield ISR wellfield drilling	Process water treatment and release Mining horizon remediation	
	Freeze hole drilling and ground freezing	Freeze hole drilling and ground freezing	Thawing of freeze wall	
	Development of surface infrastructure (camp, operations centre, plants, ponds, pads and support facilities)	Operation of processing plant and production of uranium concentrate	Decontamination of surface facilities, injection, recovery and monitoring wells Facility removal	
		Water withdrawal from groundwater or surface water body		
		Treated effluent release to surface water body	Site water management, treatment and release	
		Waste management		
	Active environmental monitoring of vegetation growth; monitoring of surface water and groundwater quality; monitoring of wildlife site			



Key Advantages of ISR Mining

- Small surface footprint
- No conventional tailings facility
- No underground workings - mining done from surface
- Low energy consumption
- Small volume of treated effluent
- Small volumes of clean waste rock (sandstone drill cores from wellfield drilling)
- Small volume of treated water precipitates
- Small volumes of waste rock (mineralized drill cuttings from wellfield development)
- Introduces opportunity to develop potential mineral deposits not considered economically viable by conventional mining methods

Considerations of ISR Mining

- Protection of surrounding groundwater regime
- Significant evaluation efforts required to confirm ISR mining method is viable for high grade Phoenix deposit

Wheeler River
Project Technologies

Powering
PEOPLE, PARTNERSHIPS AND PASSION.

In Situ Recovery

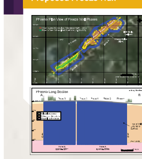
- Use an acidic or low pH mining solution to leach uranium ores from the ground
- Mining solution is a mixture of sulphuric acid, hydrogen peroxide and ferric sulphate
- Freshwater obtained from shallow groundwater or surface water
- Mining solution expected to be reused over and over, wherever possible
- Use mud rotary drilling to create wellfield – most common method of well drilling in Saskatchewan

ISR Process Overview

Ground Freezing – Freeze Wall

- Ground freezing used to prevent groundwater in the sandstone from flowing through the uranium deposit
- Uranium deposit will be surrounded by an engineered freeze wall to isolate mining area from groundwater flow
- Freeze wall surrounding deposit from the basement rock to surface
- Use of groundwater wells for monitoring of the mining solution, groundwater level, ground pressure and temperature
- Freeze wall established by +300 freeze holes 6m apart from surface to low permeability basement rock
- Freeze wall holes made using diamond drilling method
- Chilled brine solution (calcium chloride brine) will circulate in the steel encased holes to remove the heat from the ground
- Warm brine solution flows out to surface to be re-chilled in a closed loop system - similar to how a community ice rink is kept frozen
- Commonly used technology at McArthur River and Cigar Lake

Proposed Freeze Wall



Typical Freeze Pipe

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Regulatory Process

Powering
PEOPLE, PARTNERSHIPS AND PASSION.

Federal Regulators

Lead: Canadian Nuclear Safety Commission

- Reviews and approves Environmental Impact Statement (EIS) and licence applications
- Mandate to protect health, safety and security of Canadians and the environment

Main authorizations granted include:

- Licence to Prepare Site and Construct
- Licence to Operate

Provincial Regulators

Lead: Saskatchewan Ministry of Environment

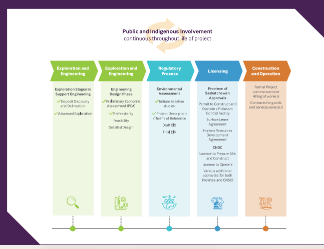
- Understand and evaluate potential environmental impacts of a project before any irreversible decisions are taken that may lead to negative effects on the environment, natural resources, or public health and safety
- Grant regulatory permits or licences
- Review and approve Environmental Impact Statement (EIS)

Main authorizations granted include:

- Permit to Operate a Pollutant Control Facility
- Surface Lease Agreement

Wheeler River Project Process Status

- Environmental baseline studies ongoing since 2012
- Federal and provincial EA process initiated in May 2019 with submission of Project Description
- Environmental studies are completed to inform engineering design and mitigate potential effects of the project on the biophysical and human environments



Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Understanding Environmental Assessment (EA)

Powering
PEOPLE, PARTNERSHIPS AND PASSION.

Valued components

What are VCs?

It stands for Valued components. These are elements that are important to humans or the environment. Because viewpoints can vary, it was important to consult with northern communities to identify appropriate valued components.

When determining VCs, we used input from multiple northern communities:

- English River First Nation,
- Kineepik Métis Local #9,
- Pinehouse Lake,
- Beauval,
- Ile a la Crosse,
- Patuanak, and
- the seven Athabasca Communities represented by the Ya'thi Néné Lands and Resources Office

VCs were determined to be Air, Humans, Indigenous Land and Resource Use, Ground/Terrain/Soil, Vegetation, Water, and Wildlife.

Project Interactions

How will the project impact VCs? The project has several phases and activities that can interact with VCs. These are:

- Preparation
- Operation
- Decommission
- Waste Management
- Water Management

We undertake actions to eliminate or reduce negative project impacts on VCs. These actions are called mitigation measures.

Significance

Can the impacts to VCs be effectively managed?

We study many considerations before making conclusions on whether impacts are significant. Residual adverse effects must be determined. These are the effects left after mitigation measures. Then, we answer questions about the residual adverse effect of each VC:

- Magnitude- How big is the effect?
- Geographic extent- Where do the effects occur?
- Time- When do the effects occur?
- Frequency- How often do the effects occur?
- Duration- How long do the effects last?
- Reversibility- Can the effects be undone?
- Context- Are there environmental or social factors to consider?

Surrounding projects, laws, policies, communities, practices, land use, reliability of mitigation, multiple sources of knowledge, and many other factors can influence VC conditions. These factors are evaluated, considering the baseline conditions, to make a conclusion on significance.

A conclusion of "not significant" does not mean that an adverse effect won't occur or isn't important relative to people or the environment – it is simply a conclusion that the potential changes can be effectively managed.

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VCs: Vegetation, Ecosystems and Wetlands

Powering
PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations

- Abundance of vegetation
- Chemical make-up of the constituents
- Listed Plant Species

Potential Effects

Activities that could reduce or disturb vegetation, listed plant species, and wetlands:

- Introduction of weeds
- Generation and deposition of dust
- Changes to water quality
- Storage, handling, and transport of waste
- Reclamation of disturbed areas

Mitigation Measures

- Limit the area of disturbance
- Use of existing clearings and previously disturbed land
- Cleared bush will be stockpiled and used in progressive reclamation
- Implementation of controls to limit dust generation
- Secondary containment of tanks and pipelines to contain accidental leaks and spills
- Minimize risk of accidental spills through the Fuel Management and Spill Control Plan
- Mining solution and process water will be reused whenever possible to reduce water required for the Project and to reduce treated water released to the environment

Conclusions

Effects are anticipated to be:

- Low magnitude - less than 0.1% of wetlands lost; about 2.9% of habitat types potentially affected in the local area
- Local - limited to areas disturbed by the project
- Long term – throughout the project life cycle
- Not significant – residual effects are not expected to alter vegetation and ecosystems integrity (sustainability)

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Cumulative Effects Assessment

Powering
PEOPLE, PARTNERSHIPS AND PASSION.

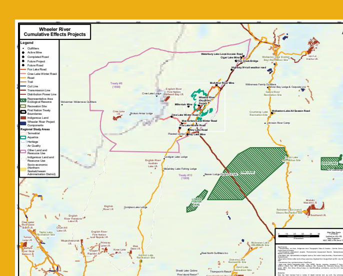
A Cumulative Effects Assessment (CEA) is completed to ensure that the incremental effects from multiple activities in an area (environment, human health, land use, etc.) are considered together. Project activities can interact with Valued Components; when interactions cause Valued Components' conditions to change, it is known as an "effect". The combined effects may be significant even though the effects of each independent activity is not significant.

Cumulative Effects Considerations

- The cumulative effects (overlapping effects) were characterized to inform the CEA
- The significance of the cumulative effect was determined for each Valued Component
- The Cumulative effects for all of the Valued Components were predicted to be Not Significant

Key Points of a CEA

- Completed for each of the selected Valued Components.
- Uses established assessment methods.
- Includes Indigenous, local and scientific knowledge.
- Conducted at the regional level for each Valued Component.
- Baseline conditions of the Valued Components reflect the effects from past and present projects and activities.
- Identifies overlapping residual effects (such as time and space) from the Project, with residual effects from known projects and/or activities from past, present, and future projects and/or activities.
- Considers all known projects and activities, and climate change.



Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

ROC823

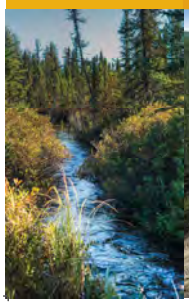
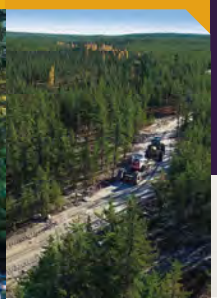
Wheeler River
VCs: Ground, Terrain and Soil

Powering PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations
- Land stability
- Soil quantity, quality and nutrients

Potential Effects
Activities that could impact land stability, surface drainage patterns, surface erosion potential, soil quality, and soil quantity:
- Clearing, grading, and construction
- Unexpected spills, leaks
- Release of water to groundwater and/or surface water bodies

Reclamation of disturbed areas may result in similar Project-related effects, but to a lesser extent.

Mitigation Measures
- Limit the area of disturbance
- Construction strategies to eliminate or reduce impacts
- Use of existing clearings and previously disturbed land
- Reusing disturbed sources of soil nutrients, generated during construction, for the reclamation process
- Installation of sediment/erosion controls and surface water management features
- Monitoring of open-source dust associated with major earthworks and equipment travel
- Fuel Management and Spill Control Plan in place to respond to unexpected leaks, spills, and releases of materials
- Wherever possible, progressive reclamation will be conducted throughout the life of the Project in relation to landscape features (slope, aspect) and surface drainage patterns
- Decommissioning phase to restore the landscape to safe, stable and self-sustaining landscape

Conclusions
Effects are anticipated to be:
- Low magnitude – within range of natural variations
- Local - limited to areas disturbed by the project
- Medium term – up to, but not including post-decommissioning
- Not significant – residual effects are not expected to alter VCs integrity and sustainability nor their availability to contribute to the environment

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VCs: Wildlife and Birds

Powering PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations
Populations and health of wildlife including:
- Ungulates: Moose, Woodland Caribou
- Furbearers: Wolverine, Mink, Muskrat
- Birds: Bald Eagle, Osprey, Common Nighthawk, Short-Eared Owl, Waterbirds, Game Birds, Songbirds, Yellow Rail, Rusty Blackbird, Olive-Sided Flycatcher

Potential Effects
Activities that could reduce or disturb species of wildlife, birds, or habitats include:
- Vehicles, equipment, and aircraft traffic
- Dust
- Human presence
- Collisions with equipment and vehicles
- Entrapment in facilities
- Exposure to substances in dust
- Release of Project-related treated effluent
- Spills of hazardous materials
- More efficient hunter, trapper, and predator access to the Project area via new access routes

Changes to surface water quality could affect wildlife habitat and health from water management practices.

Decommissioning of Project site may result in a continued alteration of wildlife habitat and/or mortality from vehicle wildlife collisions.

Mitigation Measures – Wildlife Management Plan
- Limit the area of disturbance
- Use of existing clearings and previously disturbed land
- Site clearing scheduled to avoid times when animal and birds are denning, calving, breeding
- Nesting surveys conducted before clearing to identify and establish measures to protect dens, burrows, lodges, nests, and other habitat
- Measures and practices to reduce the generation of dust
- Secondary containment of tanks and pipelines to contain accidental leaks and spills
- Implementation of Fuel Management and Spill Control Plan
- Fencing and monitoring contaminated areas – waste ponds and pads, landfill
- Implementation of Woodland Caribou Management Plan
- Employees trained to minimize their impact on wildlife, such as no littering, respect for wildlife, etc
- Implementation of speed limits to reduce risk of collision with wildlife
- Waste and hazardous materials collected and temporarily stored in wildlife-proof containers.

Conclusions
Effects are anticipated to be:
- Low magnitude – risk of mortality within range of natural variations
- Regional effect on habitat loss – limited to Project area
- Local effect on mortality – direct mortality within Project area from vehicle-wildlife collisions, but indirect mortality could extend beyond Project area
- Medium term for ungulate – highest loss of habitat and and mortality (vehicle-wildlife collisions) expected during construction and operation, but may continue during other phases of the project
- Medium to long term for furbearers, raptors and at-risk bird species – loss of habitat and and mortality (vehicle/aircraft-wildlife collisions) expected during all phases of the project
- Long term for woodland caribou and migratory breeding birds – Alteration of habitat and and mortality (vehicle/aircraft-wildlife collisions) through all phases of project – highest mortality potential during construction and operation
- Not significant – residual effects not expected to alter habitat integrity nor wildlife and bird regional populations sustainability

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VC: Aquatic Environment

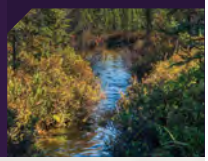
Powering PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations
- Fish habitat availability and distribution
- Fish survival and reproduction
- Surface water levels and flow
- Concentration of chemicals and metals in surface water
- Concentration of chemical and metals in aquatic sediments
- Distribution and survival of snails, worms, dragonfly larvae, and other benthic invertebrates

Potential Effects
Activities that could reduce or disturb aquatic environments, species, or habitats:
- Modification of fish habitat from disturbances around surface water
- Erosion and transport of sediments into surface water
- Water withdrawal from Whitefish Lake
- Releasing effluent to Whitefish Lake.
- Water management could result in changes to water quality affecting fish, fish habitat, and benthic invertebrates.
- Water management could alter stream flow or lake levels required for fish mobility and productivity
- Reclamation of disturbed areas could increase sediments in water and change fish habitat

Mitigation Measures
- Limiting duration of in-water working (conducting work during low flow periods, and conducting work away from flows when possible)
- Avoiding activities in windy or rainy conditions to limit erosion and sedimentation
- Plan activities in waterbodies to limit loss or disturbance to aquatic and sensitive habitat
- Limit shoreline degradation when operating machinery
- Stabilize shorelines to limit erosion and sedimentation by limiting clearing of vegetation and revegetating with native species, whenever possible
- Maintaining routes used for fish passage by designing water intake and treated water discharge locations to protect fish, fish movements, and fish habitats
- Planning to avoid chemicals entering waterways during near-water work
- Implementing an Erosion and Sediment Control Plan

Conclusions
Effects are anticipated to be:
- Low magnitude – no loss of habitat and fish population
- Local – limited to Project area
- Long term for habitat availability – throughout construction and operation
- Short term for habitat distribution – fish movement protected throughout life of the project
- Not significant – residual effects not expected to alter local fish populations

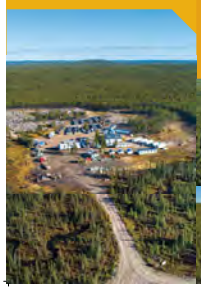


Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VC: Relationship to the Land

Powering PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations
- Resources availability
- Land availability
- Suitability of land and resources



Potential Effects
The presence of the project and its activities may result in changes to:
- Water, vegetation, fish, and wildlife
- Access to the area
- Land area available
- Noise level, traffic, dust, and other disturbances associated with Project activities
- Quality of the experience using resources
- Opportunities for Indigenous land use activities
- Opportunities for non-Indigenous land use

Mitigation Measures
- Implementation of measures to protect plants, fish, and wildlife
- Limit the area of disturbance
- Use of noise reducing equipment
- Reduce dust and air emissions
- Enforce speed limits for traffic
- Implement radiological clearance of equipment before exiting Project site
- Implement progressive reclamation of disturbed areas
- Establish community agreements
- Establish trappers' compensation
- Implement Indigenous People's Policy, including ongoing communication with Indigenous Communities of Interest

Conclusions
Effects are anticipated to be:
- Low magnitude – no loss of habitat and fish population
- Local – Project area (in and around the local and regional study area)
- Long term – until reclamation is complete
- Not significant – continuous in frequency, low in context, and fully reversible following decommissioning

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VCs: Community, Culture and Economy

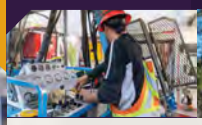
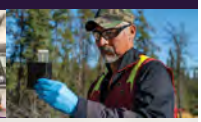
Powering PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations
- Populations, traffic, community infrastructure and services
- Income, employment, training, government revenues, business opportunities
- Community cohesion and traditional economy
- Employment and training (generally delivered through institutions connected to northern Saskatchewan)

Potential Effects
Activities that could interact with community, culture, and economy:
- Population numbers and population characteristics
- Up to 300 jobs created during construction and more than 100 direct and contract roles during the operation phase
- Supervisory, trades, professional, technical, and foundational (entry level) positions available during operations
- Availability and increased opportunities for business and training
- Participation in traditional economic activities
- Abundance of Traffic
- Increased demand on community infrastructure and services

Mitigation Measures
- Implementation of agreements with communities (support)
- Prioritize Indigenous and non-Indigenous Communities of Interest (employment, training, and business, wherever possible)
- Implement procurement approach focused on communities
- Implementation of education and other support services for workers and in some cases their families
- Planned pick-up points in alignment with employment practices
- Implementation of Emergency Response Plan

Conclusions
Effects on community well-being, infrastructure, services and economy are currently being assessed, and are anticipated to be:
- Minimal adverse and/or positive
- Low to moderate magnitude – during construction and operation, and low during reclamation
- Local – primarily in the Project area
- Short to medium – based on Project phases
- Not significant – continuous in frequency, moderate in context, and fully reversible following decommissioning

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Risk Assessment

Powering PEOPLE, PARTNERSHIPS AND PASSION.

To evaluate and understand if people, plants, and animals will be exposed to substances at amounts above what is known to be safe after the planned mitigation measures have been applied.

It incorporates the movement of substances through the food chain as well as direct exposure to substances (soil, air, water, etc) to appropriately capture risk.

Human Health Risk Assessment
People who access the project site are considered in the risk assessment. They include:
- Camp workers
- Seasonal resident/lodge operator – seasonal access
- People fishing/hunting/trapping/gathering firewood/picking berries – traditional and recreational access
- Neighbouring residents fishing/hunting/trapping
- Future permanent residents- access to Project site after its decommissioning.

Assessment Results and Mitigation
- Low overall health risk to people using the area
- Expected radiation doses to people below public dose limit
- Low risk of exposure of people to metals in the environment (below benchmarks for metals)
- Ongoing monitoring during all Project phases

Ecological Risk Assessment
Considers ecological receptors such as:
- Terrestrial Mammals – Woodland Caribou, hare, moose, black bear, lynx, etc.
- Riparian Mammals – Muskrat, mink
- Terrestrial Birds – Bald eagle, robin, Canada goose, etc.
- Riparian Birds – Mallard, loon,
- Fish – Northern pike, white sucker
- Terrestrial Invertebrates – Earthworm
- Aquatic Invertebrates – Zooplankton, benthic invertebrates
- Terrestrial Vegetation – Lichen, blueberry, Labrador tea
- Aquatic Vegetation – Phytoplankton, Macrophyte

These can be exposed to substances through direct exposure in water, sediment, soil, air or through the food chain.

Assessment Results and Mitigation
- Low overall health risk to animals, plants, and invertebrates
- Expected radiation doses to ecological receptors below benchmarks.
- No risk of exposure to ecological receptors to non-radionuclides hazards
- Ongoing monitoring during all Project phases

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

ROC823

Wheeler River
Project People

Powering
PEOPLE, PARTNERSHIPS AND PASSION.

At the Wheeler River Project site, we strive to employ as many Northerners as possible. We also strive to hire most of the contractors and services we need from northern and Indigenous people owned businesses.

Here are some of the people who have been on site in the past few years; some have moved on while others continue to help advance the Project.

Denison Mines

wheelerriverproject.ca | denisonmines.com

Information provided as of May, 2022

Wheeler River
Building Relationsips

Powering
PEOPLE, PARTNERSHIPS AND PASSION.

Denison and the Wheeler River Project team are committed to meaningful engagement with Indigenous people, communities, residents, and organizations with an interest in our Project.

TALKING together. LISTENING to you. RESPONDING to explain.

Engagement With Indigenous and Non-Indigenous Communities of Interest

- English River First Nation
- Kinepik Métis Local 9 (Pinehouse)
- Métis Nation - Saskatchewan
- A La Baie Métis Local 21 (Ile a la Crosse)
- Sipishik Métis Local 37 (Beauval)
- Patuanak Métis Local 82 (Patuanak)
- Northern Hamlet of Patuanak
- Northern Village of Pinehouse
- Northern Village of Ile a la Crosse
- Northern Village of Beauval

Other communities, organizations and groups of interest:

- Lac la Ronge Indian Band
- Birch Narrows Dene Nation
- Buffalo River Dene Nation
- Hatchet Lake First Nation
- Black Lake First Nation
- Fond du Lac First Nation
- Métis Nation – Saskatchewan
- Ya'thi Néné Land and Resource Office
- Prince Albert Grand Council
- Meadow Lake Tribal Council
- Commercial trappers
- Commercial fishers
- Commercial lodges
- Cabin and lease owners

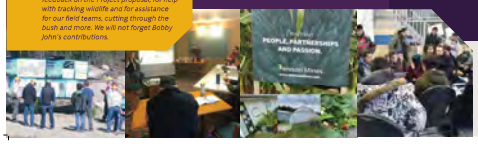
Since 2016 and every year after, Denison has met with community members and leadership through workshops, site tours, public meetings, and even virtual community meetings to hear concerns, receive knowledge and input, and share Project information.

Subjects of workshops and meetings have included:

- Wheeler River Project components:
  - Access road
  - Treated water (effluent) discharge location
  - Mining method
  - Design change to freezing containment method
- Environmental considerations:
  - Water bodies - fishing
  - Fish habitat
  - Species at risk
  - Land disturbance

Thank You, Bobby John

Bobby John lived, trapped, fished and hunted in the Wheeler River Project area long before Denison and its predecessors started exploring the site. Over the years, Bobby John became someone our Project team relied on for insight on the area, for feedback on the Project proposal, for help with tracking wildlife and for assistance for our field teams, cutting through the bush and more. We will not forget Bobby John's contributions.



Our Support of Communities

Denison's support of communities can take various forms:

- Donations to community organizations
- Sponsorships of community events
- Scholarships or in-kind support of education and field trips
- Direct agreements with specific Indigenous communities

Here are some examples of Denison's support in 2021:

- Entered into an Exploration Agreement with English River First Nation
- Métis Nation Saskatchewan Region 3 South Bay Gathering
- Sakitawak Elders Group and their market garden initiative
- Pinehouse Lake hockey tournament
- Improvements to the English River First Nation Culture Camp at the Mawdsley Reserve at 160km
- Many Christmas initiatives in the region, including those in in Beauval, Ile a la Crosse, and the Hamlet of Patuanak

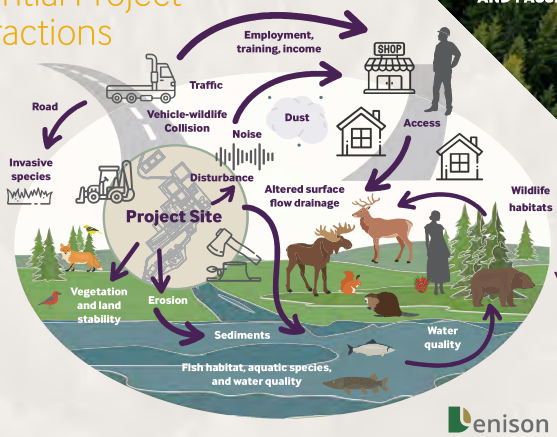
Denison Mines

wheelerriverproject.ca | denisonmines.com

Information provided as of May, 2022

Wheeler River
Potential Project Interactions

Powering
PEOPLE, PARTNERSHIPS AND PASSION.



Denison Mines

wheelerriverproject.ca | denisonmines.com

Information provided as of May, 2022

ROC823

The Wheeler River Project

Powering
PEOPLE, PARTNERSHIPS AND PASSION.

Denison Mines

ROC823

Project Overview

- Eastern Athabasca Basin
- 35km northeast of Key Lake Mill
- 35km southwest of McArthur River Mine
- Within the boundaries of Treaty 10, the traditional territory of English River First Nation, in the homeland of the Métis, within Nuhenéné.
- The purpose is to construct, operate, and decommission an ISR uranium mine and processing plant.

ROC823

Wheeler River Project

Location	Northern Saskatchewan, Canada.	
Project Components and Activities:	The central Project components are the ISR mine and the processing plant.	Supporting Project components and activities include those needed for waste management, water management, distribution of electricity, and transportation, such as pads, ponds, buildings, roads, and an airstrip.
Inputs	freshwater, chemicals (for mining, uranium processing, treating water), electricity, and fuel.	
Outputs	waste (organics, clean waste rock, special waste rock (drilling core), domestic waste, industrial waste, precipitates from the processing plant and water treatment, sewage), air emissions including greenhouse gas emissions (GHGs), noise, and treated effluent.	
Product	U3O8 or yellowcake. The product Denison sells is ultimately used as fuel in nuclear power plants, supporting global efforts to reduce GHG emissions.	
Employment	Approximately 300 workers during Construction and 180 during Operation. The Project will be operated as a fly-in-fly-out operation.	
Project Duration:	Total of approximately 38 years, about 2 years for Construction, 15 years for Operation, 5 years for Decommissioning, and 15 years for Post-Decommissioning periods.	

ROC823

Schedule of Activities

Key Project Components

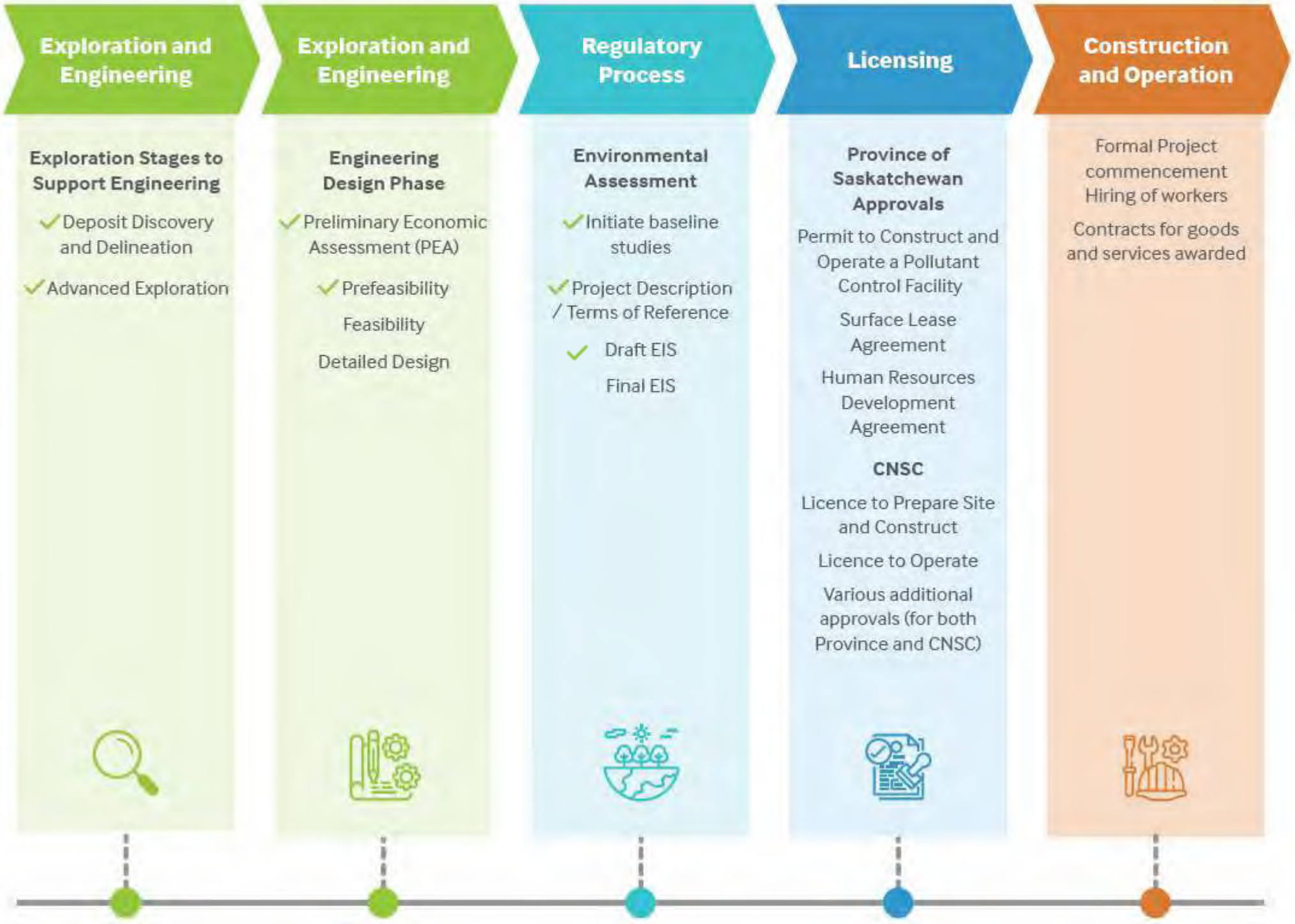
Construction (Year 1 to 3)	Operation (Year 3 to 18)	Decommissioning (Year 18 to 23)	Post-Decommissioning (Year 23 to 38)
Develop access roads and air strip		Facility removal	Active environmental monitoring of vegetation growth; monitoring of surface water and groundwater quality; monitoring of wildlife site
Site preparation and earthworks			
ISR wellfield drilling	Operation of the ISR wellfield ISR wellfield drilling	Process water treatment and release Mining horizon remediation	
Freeze hole drilling and ground freezing	Freeze hole drilling and ground freezing	Thawing of freeze wall	
Development of surface infrastructure (camp, operations centre, plants, ponds, pads and support facilities)	Operation of processing plant and production of uranium concentrate	Decontamination of surface facilities, injection, recovery and monitoring wells Facility removal	
	Water withdrawal from groundwater or surface water body		
	Treated effluent release to surface water body	Site water management, treatment and release	
	Waste management		
Active environmental monitoring of vegetation growth; monitoring of surface water and groundwater quality; monitoring of wildlife site			

ROC823

Economics
Atmospheric and Acoustic Environment
Quality of Life
Geology and Groundwater
Wheeler River Project
Environmental Assessment
Land and Resource Use
Aquatic Environment
Human Health
Terrestrial Environment

ROC823

Regulatory Process



ROC823

Questions

Denison – Wheeler River Project
NR 1 Regional Council Introduction to Canadian Nuclear Safety Commission (CNSC), Denison and Government of Saskatchewan

Date: Saturday February 11, 2023
Location: Dakota Dunes
Time: 10am – 3pm

Attendees:

Elder Max Morin – MNS
Shannon Landrie-Crossland – MNS
Brent Laroque – MNS
Roslyn Smit – MNS
Andrew Spriggs – MNS
Heidi Klein – Two Worlds
Eliza Bethune – Two Worlds
Brianne England – Province of SK
Aimann Sadik – Province of SK
Jessica Way – CNSC
Janna Switzer – DEN
Chad Sorba – DEN
Carolanne Inglis-McQuay - DEN
Allen Augier – UCity
George Natomagan – Weyakwin
Laura Burnouf – NR1 Regional President
Larry Lavalee – Timber Bay
Maxine Morin – IleX
Lazur Lafleur – La Ronge

Notes taken by Denison in relation to questions / comments made to Denison

Theme from Max Morin: What are we getting? What are we going to get from this? Don't pollute the area.

Lazur – How much water discharged?

A – 40m3/hour

Allen Augier – Quality of ore contaminants; consistency of the ore

A – Very consistent deposit; clean ore body; since 40% grade doesn't leave much room for contaminants

Lazur – How far off the road? Do you have to build the road?

A – we are 4km west of road; upgrade portions of road

Lazur – How far from the Wheeler River?

A – about 30km away

Lazur – What is the strategy for the release for contaminants? Strategy for the waste water management?

A – Runoff around the various features of the site will be collected and treated; treated effluent discharge into whitefish lake

Lazur – If you don't have 100% recovery, what is the rehabilitation of the area?

A – We will have 85% recovery rate; we will flush the area; check the area and assess the contaminants; neutralize the area if necessary

Brent – Original source of water for the lixiviant?

A – groundwater or surface water; it is a near balanced system; but we will likely draw a bit more than we discharge

Laura – How effective is the freeze wall? What happens when they melt?

A – 1st step is to create a system where there is an inward gradient of pressure toward the recovery wells, keeping the lixiviant away from the freeze wall; Wall will take 12-18 months to build the wall; 10m wide wall; while the freeze wall is in place it will have to be regulated (otherwise it will grow too large); the freeze wall won't be turned off until the mining is done

Max Morin – Who will be doing the monitoring? The Province? The Federal Government? How will we be part of the process?

A – Pointed to EARMP; existing CNSC IEMP framework; Province described their monitoring process; Denison indicated that we have a significant interest in making sure there is transparency and trust in relation to the monitoring results.

Lazur – Are there initiatives for Indigenous monitoring?

A – yes, there are various Federal programs (Indigenous Guardian program, EARMP, CNSC IEP)

Allen – The water that is going through the water treatment system; is it being filtered to prevent solids from going into the environment?

A – Solids will be removed, treated to regulatory requirements

Lazur – What would be your precipitates that come out of the water by discharge?

A – (Janna) I'd have to review the details on this; but I can speak to the fact that there moly is not a concern

Brent – What are your release standards?

A – CCME, Saskatchewan Surface Water Quality Guidelines – we've picked the most stringent standards

Lazur – Water flow from the southeast from the site?

A – yes

Lazur – Confirmation that MaxPerf is like a mini direction drill

A – yes

Brent – monitoring wells will be tailored to the mining plan and determined in accordance to the location of the freeze wall, etc

A – confirmed

Max – are you fracking? Will you use enough pressure that will open up the land?

A – No, we are not fracking. The pressures we are using are very low levels; for example, less that the tire pressure in your bicycle. We use the low level pressures within a controlled environment

Lazur – did your initial baseline studies consider the baseline work from Key Lake and McArthur River?

A – to a small degree, but our baseline studies are focussed at the Wheeler River Project site specifically.

Denison Mines

Métis Nation – Saskatchewan

February 11 & 12, 2023

Wheeler River Project and Environmental Assessment Overview

Cautionary Statements & References

This presentation and the information contained herein is designed to help you understand management's current views, and may not be appropriate for other purposes. This presentation contains information relating to the uranium market, third party and provincial infrastructure, and the plans and availability thereof, derived from third-party publications and reports which Denison believes are reliable but have not been independently verified by the Company.

Certain information contained in this presentation 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 presentation contains forward-looking information pertaining to the results of, and estimates, assumptions and projections provided in, the Wheeler PFS and the Waterbury PEA, including future development methods and plans, market prices, costs and capital expenditures; de-risking and project assessment activities, plans and objectives; assumptions regarding Denison's ability to obtain all necessary regulatory approvals to commence development at Wheeler; Denison's percentage interest in its projects and assumed continuity of its agreements with its joint venture partners and other third parties; production and SABRE development outlook for McClean Lake; and estimates of uranium industry factors, including physical uranium supply and demand. 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 faces certain risks, including the current and potential impacts of the COVID-19 pandemic, use of mining methods which are novel and untested in the Athabasca basin, the inability to permit or develop its projects as currently planned, the inability to secure sufficient financing to pursue its business objectives, the unpredictability of market prices, events that could materially increase costs, changes in the regulatory environment governing the project lands, and unanticipated claims against title and rights to the project. 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 25, 2022 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.

Readers should not place undue reliance on forward-looking statements. The forward-looking information contained in this presentation is expressly qualified by this cautionary statement. Any forward-looking information and the assumptions made with respect thereto speaks only to the effective date of this presentation. Denison does not undertake any obligation to publicly update or revise any forward-looking information after such date 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 Mineral Resources and Mineral Reserves: This presentation may use terms such as "measured", "indicated" and/or "inferred" mineral resources and "proven" or "probable" mineral reserves, which are terms defined with reference to the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") CIM Definition Standards on Mineral Resources and Mineral Reserves ("CIM Standards"). The Company's descriptions of its projects may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements under the United States federal securities laws and the rules and regulations thereunder.

Qualified Persons
The disclosure of a scientific or technical nature within this presentation, including the disclosure of mineral resources, mineral reserves, as well as the results of the Wheeler PFS and Waterbury PEA, was reviewed and approved by David Bronkhorst, P.Eng. and Andy Yackulic, P.Geo, each of whom is a Qualified Person in accordance with the requirements of NI 43-101.

Technical Reports
- For further details regarding the **Wheeler River project**, please refer to the Company's press release dated September 24, 2018 and the technical report titled "Prefeasibility Study for the Wheeler River Uranium Project, Saskatchewan, Canada" with an effective date of September 24, 2018 ("Wheeler PFS").
- For further details regarding the **Waterbury Lake project**, please refer to the Company's press release dated November 17, 2020 and the technical report titled "Preliminary Economic Assessment for the The Helideth Tüé (J Zone) Deposit, Waterbury Lake Property, Northern Saskatchewan, Canada" with an effective date of October 30, 2020 ("Waterbury PEA"). **The PEA is a preliminary analysis of the potential viability of the Project's mineral resources, and should not be considered the same as a Pre-Feasibility or Feasibility Study, as various factors are preliminary in nature. There is no certainty that the results from the PEA will be realized. Mineral resources are not mineral reserves and do not have demonstrated economic viability. Scheduled tonnes and grade do not represent an estimate of mineral reserves.**

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 25, 2022. A copy of the foregoing is available on Denison's website and under its profile on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

Project Introduction: Location

The Wheeler River Project is located:

- In northern Saskatchewan, Canada.
- Along the eastern edge of the Athabasca Basin.
- 4 km west of Highway 914.
- 35 kilometers northeast of the Key Lake and Key Lake controlled access point
- 35 kilometers southwest of the McArthur River.

Project Introduction: Schedule of Activities

Construction:
- Site preparation and earthworks, freeze hole drilling and ground freezing, ISR wellfield drilling, construction of processing plant, and development of other Project components including camp, ponds, pads, access road, and airstrip.

Operation:
- Operation of the ISR mine, operation of the processing plant and production of uranium concentrate (U_3O_8), water withdrawal, treated effluent release, waste management, and maintenance activities

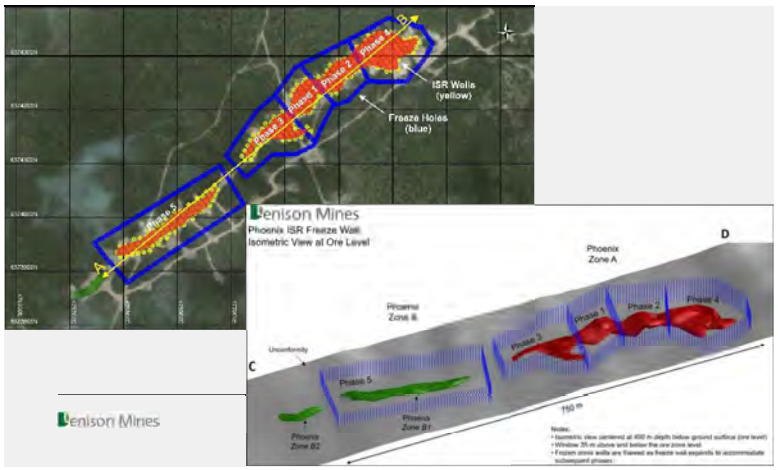
Decommissioning:
- Physical decommissioning activities include 1) mining area remediation, 2) asset removal, and 3) decontamination, demolition, and disposal. Physical decommissioning activities are followed by reclamation.

Post-Decommissioning:
- Environmental monitoring to physical, chemical, and biological monitoring of the site will be conducted to confirm that the site is chemically and physically stable.

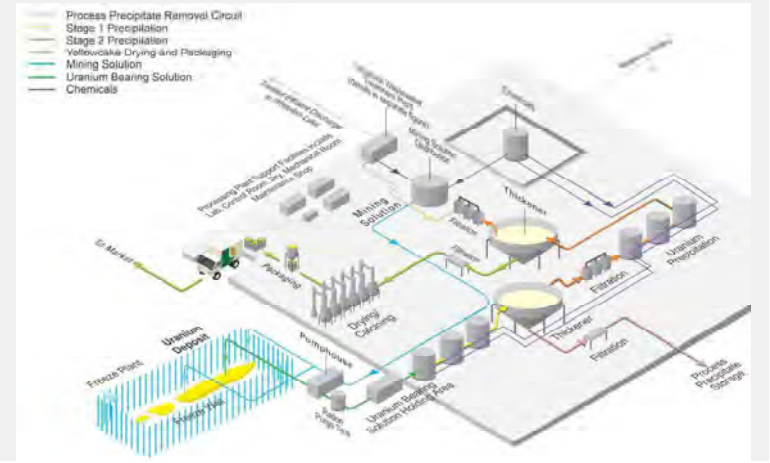
Project Introduction: Site Layout

Project Technology: In Situ Recovery and Wellfield Remediation

Project Technology:
Freeze Wall

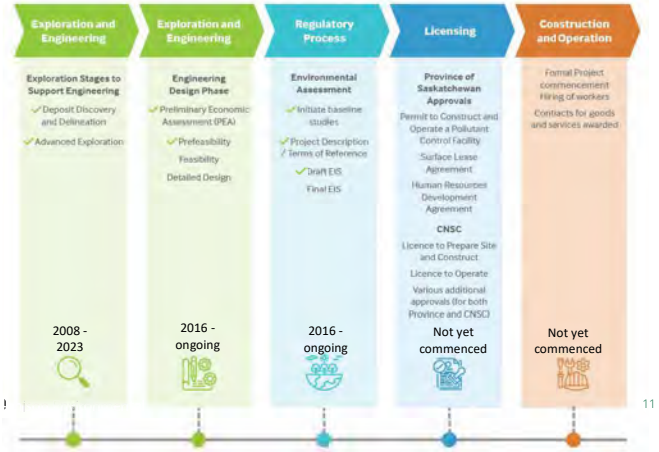


Project Technology:
Processing



Project Technology:
Video Overview

Regulatory Process



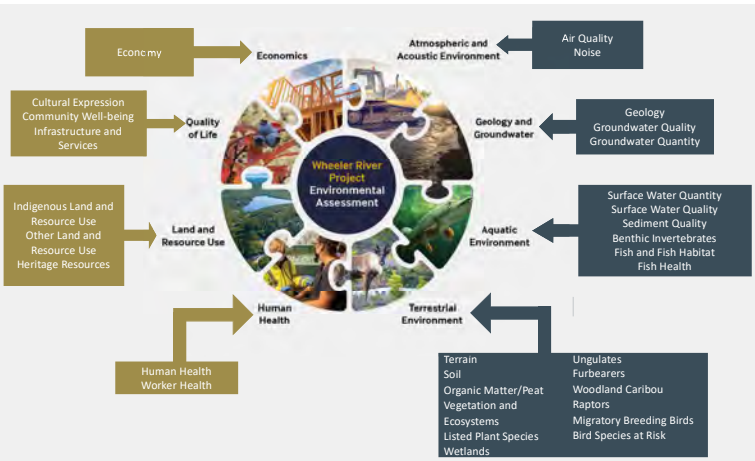
Environmental Assessment Approach and Methodology

- Identifying Valued Components, Key Indicators, Measurable Parameters and setting temporal and spatial boundaries
- Highlighting the influence of IK, LK, and engagement on the assessment
- Describing the existing environment
- Completing the environmental assessment process using the following general methodology:

Project Components → Environmental Baseline → Mitigation → Potential to Change Baseline Environmental Conditions → Monitor

Denison Mines 12

Environmental Assessment Approach and Methodology



The Wheeler River Project:
Project Video

Denison Mines

Denison – Wheeler River Project
NR 3 Regional Council Introduction to Canadian Nuclear Safety Commission (CNSC), Denison and Government of Saskatchewan

Date: Sunday February 12, 2023
Location: Dakota Dunes
Time: 10am – 3pm

Attendees:

Glen McCallum – MNS
Tex Bouvier – MNS
Shannon Landrie-Crossland – MNS
Andrew Spriggs – MNS
Brennan Merasty – MNS
Brent Laroque – MNS
Roslyn Smith – MNS
Janna Switzer – DEN
Carolanne Inglis-McQuay – DEN
Chad Sorba – DEN
Brianne England – GoS
Fred Kenny
Nancy Laliberte
Lisa Maurice
Percy Kenny
Richard Morin
Louis Gardiner
Kim Burnouf
Joe Daigneault
Riley Couilonneur
Max Morin
Eliza Bethune (Two Worlds)
Heidi Klein (Two Worlds)
Jes Way (CNSC)
Mike Natomagan

Notes taken by Denison in relation to questions / comments made to Denison

Q – how far from Wheeler River?

A – 28km north of the Wheeler River

Q – what is the lake called near the site?

A – Whitefish Lake, named by the late Bobby John, the ERFN trapper

Q – what kind of testing have you done in the area to know this mining method will work?

A – Four years of testing; moving water through the ore body, then moving a salt tracer through the ore body to know where the liquids move; followed by feasibility field test this past summer, using lixiviant or mining solution to confirm uranium could be leached from the ore body in a small scale test.

Q – What was the recovery you obtained?

A – Test wasn't intended to obtain a particular recovery rate; it was intended to demonstrate that we could leach uranium, control fluids and return the conditions underground to levels required by the government.

Q – What was the recovery of the reagents you put into the ground?

A – We recovered the majority of the reagents through flushing and injection of a neutralizing agent. We also confirmed there was not movement of reagents beyond the mining area

Q – Can you prove that the reagents were contained (in the FFT)?

A – We can. The monitoring we undertook showed that nothing moved beyond the mining zone. We met the groundwater criteria and are continuing to monitor to confirm no excursions.

Q – Do you have a disaster / accident back up plan in case your work / monitoring results aren't what you expect.

A – we have a financial assurance we've provided to the Province that they are holding in full – in case that the monitoring shows otherwise to the results.

Q – Is this method used at other mines in Canada? Globally?

A – ISR Mining accounts for 45-50% of the world's production of uranium. In Canada, the comparable type of mining is solution mining for potash mining in southern Saskatchewan. But this will be the first time that ISR will be used in the Athabasca Basin uranium operations.

Q – What happens when you take out the uranium from the ore body?

A – the mining solution will leach the uranium; it won't take all the materials out; there will be some materials left behind, leaving a spiderweb-like network that will be filled with mining solution and then groundwater. There won't be wide open voids left behind like those that create shafts and drifts, etc – no grouting required. It is estimated that on surface there could be a maximum disturbance or slumping of 6-7cm.

Q – Can you guarantee this?

A – nothing is guaranteed but we have done systematic testing to de-risk the project and feel confident that the results to date; that we can move this project ahead based on the information we have today.

Q – General comments made about technical monitoring versus community monitoring and trust and confidence in monitoring data. Denison does assessment and monitoring; how can we have training and monitoring in the communities? The cultural part of monitoring is important. Traditional users should be included in monitoring; the Province is not including northern users in the monitoring programs. How do you reconcile the differences between information from the communities and information from the companies and the labs? Northerners have a vested interest in the environment; trust is important.

A – There are a host of monitoring programs that currently exist that try to bridge this gap – the CNSC independent monitoring program, and Eastern Athabasca Regional Monitoring Program – and these programs can be considered and brought forward for the new mining projects, like the Wheeler River Project. Further to that, we are trying to do things differently, by already having a community monitor attend to our exploration sites (to create transparency) and considering best practices on how we can be transparent when it comes to our data. We don't have anything fully designed at this point but we understand the interest from the communities in this respect.

Q – What do you have to monitor for the air quality? How do you do this?

A – We look at emissions from the site (including dust) and noise. We will have monitoring around the stack, along with noise monitoring where it makes sense.

Q – We should have a lab in northern Saskatchewan and then maybe we would trust the results.

A – *answer provided by Brent regarding comprehensive testing and standards for labs*

Max Morin: made number of statements with respect to the importance of transparency regarding monitoring data (Cluff Lake, Gunner), importance of the Province involving northerners into the monitoring programs, etc

Q – your monitoring wells in relation to the mining solution and the freeze walls, are they too far away right now? What's your plan for these?

A – The precise locations have not been determined yet; but they will be based on all the testing we've done to date, on what the evidence shows us in relation to how fast water moves, etc.

Comment – bringing together both types of knowledge (western science and Indigenous knowledge) is important.

Q – is this freeze technology used elsewhere? Is it used globally?

A – It is used extensively at Cigar Lake and McArthur River – but in the capacity to freeze the sandstone above and around the ore body in order to safely mine underground. To our knowledge it is not being used globally for the purposes we are using it.

Q – Is the training different for this type of mining?

A – not really. ISR wellfield operators will require the same type of training as process operators; a program which can be undertaken here in SK and even in Meadow Lake.

Q – For the storage of radium precipitates and gypsums, what's the plan for keeping them safe and secure?

A – The plan right now is to take off site the radium precipitates because there is some value to those. They will go to a disposal facility that is licensed to handle them. For the gypsum, the product produced is largely inert, and so they will be permanently disposed of on site. For both these waste streams, they will be on engineered lined pads, with runoff collection for treatment of any runoff, with leak detection.

Comment – there is a strong relationship between the Human Resource Development Agreement and the socioeconomic conditions for the project. We are concerned because all of our people are on the lower end of the jobs for the operations (entry level positions). Sometimes there is an issue with trade unions causing issues for our northerners to advance, and racism on site.

A – we will be actively working with the Government on the negotiation of the surface lease. We are hoping to capitalize on the many generations of northerners who have worked in the uranium mines. We understand the interest of northerners in positions beyond entry level. We have a policy about a respectful workplace and also an Indigenous Peoples' Policy that sets out our commitments toward employment and creating a culture of respect. This past year 8 of the 11 field staff working on our

Feasibility Field Test self-identified as Indigenous. We are very proud of this and didn't have any reported issues in the field with respect to racism.

Comment – Safe work environment means that you should be able to let people speak their language over the radio, educating your team on Truth and Reconciliation, etc.

Comment – Denison should provide the MN-S with capacity for us to do what we need to do in relation to your Project.

Response – Denison has agreed to a Capacity Funding Agreement with the MN-S; it fully funds the MN-S to do a Metis Knowledge Study (as requested) and associated items with that Study.

Denison Mines

Métis Nation – Saskatchewan

February 11 & 12, 2023

Wheeler River Project and Environmental Assessment Overview

Cautionary Statements & References

This presentation and the information contained herein is designed to help you understand management's current views, and may not be appropriate for other purposes. This presentation contains information relating to the uranium market, third party and provincial infrastructure, and the plans and availability thereof, derived from third-party publications and reports which Denison believes are reliable but have not been independently verified by the Company.

Certain information contained in this presentation 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 presentation contains forward-looking information pertaining to the results of, and estimates, assumptions and projections provided in, the Wheeler PFS and the Waterbury PEA, including future development methods and plans, market prices, costs and capital expenditures; de-risking and project assessment activities, plans and objectives; assumptions regarding Denison's ability to obtain all necessary regulatory approvals to commence development at Wheeler; Denison's percentage interest in its projects and assumed continuity of its agreements with its joint venture partners and other third parties; production and SABRE development outlook for McClean Lake; and estimates of uranium industry factors, including physical uranium supply and demand. 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 faces certain risks, including the current and potential impacts of the COVID-19 pandemic, use of mining methods which are novel and untested in the Athabasca basin, the inability to permit or develop its projects as currently planned, the inability to secure sufficient financing to pursue its business objectives, the unpredictability of market prices, events that could materially increase costs, changes in the regulatory environment governing the project lands, and unanticipated claims against title and rights to the project. 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 25, 2022 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.

Readers should not place undue reliance on forward-looking statements. The forward-looking information contained in this presentation is expressly qualified by this cautionary statement. Any forward-looking information and the assumptions made with respect thereto speaks only to the effective date of this presentation. Denison does not undertake any obligation to publicly update or revise any forward-looking information after such date 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 Mineral Resources and Mineral Reserves: This presentation may use terms such as "measured", "indicated" and/or "inferred" mineral resources and "proven" or "probable" mineral reserves, which are terms defined with reference to the guidelines set out in the Canadian Institute of Mining, Metallurgy and Petroleum ("CIM") CIM Definition Standards on Mineral Resources and Mineral Reserves ("CIM Standards"). The Company's descriptions of its projects may not be comparable to similar information made public by U.S. companies subject to the reporting and disclosure requirements under the United States federal securities laws and the rules and regulations thereunder.

Qualified Persons
The disclosure of a scientific or technical nature within this presentation, including the disclosure of mineral resources, mineral reserves, as well as the results of the Wheeler PFS and Waterbury PEA, was reviewed and approved by David Bronkhorst, P.Eng. and Andy Yackulic, P.Geo, each of whom is a Qualified Person in accordance with the requirements of NI 43-101.

Technical Reports
- For further details regarding the **Wheeler River project**, please refer to the Company's press release dated September 24, 2018 and the technical report titled "Prefeasibility Study for the Wheeler River Uranium Project, Saskatchewan, Canada" with an effective date of September 24, 2018 ("Wheeler PFS").
- For further details regarding the **Waterbury Lake project**, please refer to the Company's press release dated November 17, 2020 and the technical report titled "Preliminary Economic Assessment for the The Helideth Tüé (J Zone) Deposit, Waterbury Lake Property, Northern Saskatchewan, Canada" with an effective date of October 30, 2020 ("Waterbury PEA"). **The PEA is a preliminary analysis of the potential viability of the Project's mineral resources, and should not be considered the same as a Pre-Feasibility or Feasibility Study, as various factors are preliminary in nature. There is no certainty that the results from the PEA will be realized. Mineral resources are not mineral reserves and do not have demonstrated economic viability. Scheduled tonnes and grade do not represent an estimate of mineral reserves.**

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 25, 2022. A copy of the foregoing is available on Denison's website and under its profile on SEDAR at www.sedar.com and on EDGAR at www.sec.gov/edgar.shtml.

Project Introduction: Location

The Wheeler River Project is located:

- In northern Saskatchewan, Canada.
- Along the eastern edge of the Athabasca Basin.
- 4 km west of Highway 914.
- 35 kilometers northeast of the Key Lake and Key Lake controlled access point
- 35 kilometers southwest of the McArthur River.

Project Introduction: Schedule of Activities

Construction:
- Site preparation and earthworks, freeze hole drilling and ground freezing, ISR wellfield drilling, construction of processing plant, and development of other Project components including camp, ponds, pads, access road, and airstrip.

Operation:
- Operation of the ISR mine, operation of the processing plant and production of uranium concentrate (U_3O_8), water withdrawal, treated effluent release, waste management, and maintenance activities

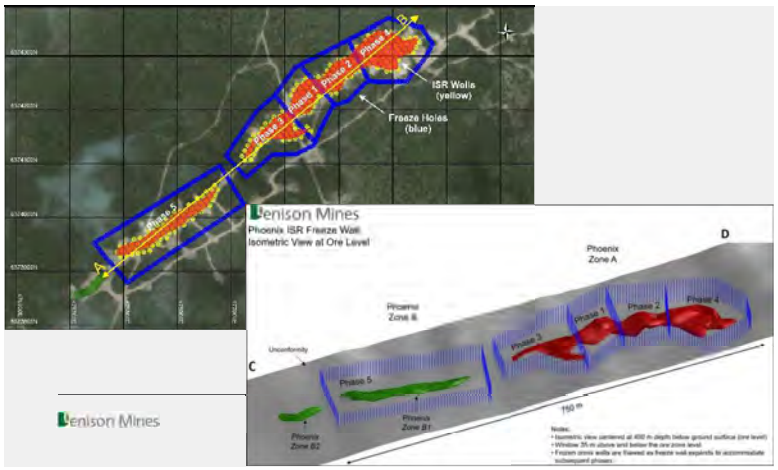
Decommissioning:
- Physical decommissioning activities include 1) mining area remediation, 2) asset removal, and 3) decontamination, demolition, and disposal. Physical decommissioning activities are followed by reclamation.

Post-Decommissioning:
- Environmental monitoring to physical, chemical, and biological monitoring of the site will be conducted to confirm that the site is chemically and physically stable.

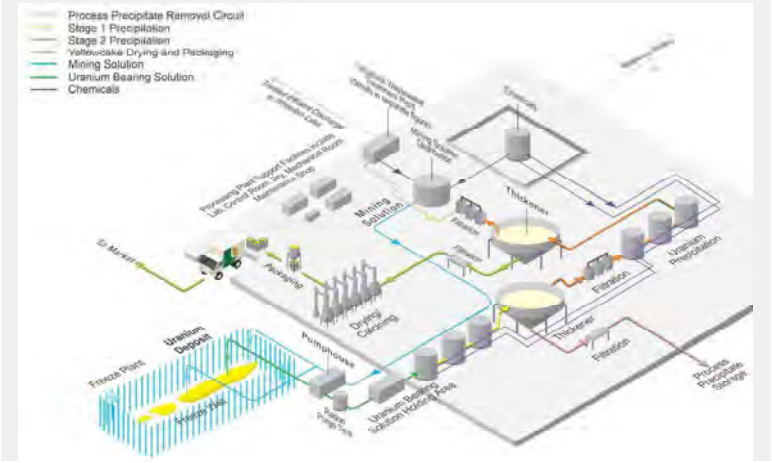
Project Introduction: Site Layout

Project Technology: In Situ Recovery and Wellfield Remediation

Project Technology:
Freeze Wall

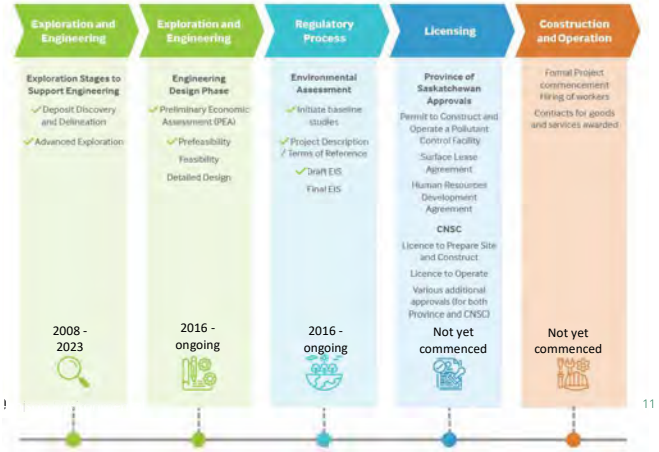


Project Technology:
Processing



Project Technology:
Video Overview

Regulatory Process

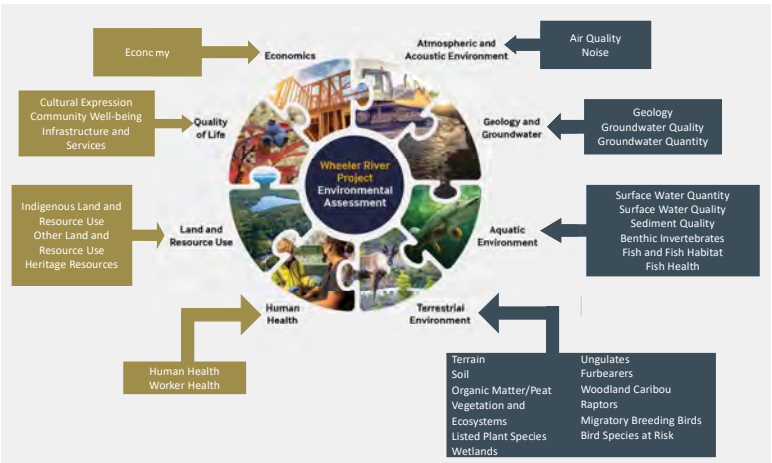


Environmental Assessment Approach and Methodology

- Identifying Valued Components, Key Indicators, Measurable Parameters and setting temporal and spatial boundaries
- Highlighting the influence of IK, LK, and engagement on the assessment
- Describing the existing environment
- Completing the environmental assessment process using the following general methodology:

Project Components → Environmental Baseline → Mitigation → Potential to Change Baseline Environmental Conditions → Monitor

Environmental Assessment Approach and Methodology



ROC835

The Wheeler River Project:
Project Video

Questions & Discussion

Denison Mines

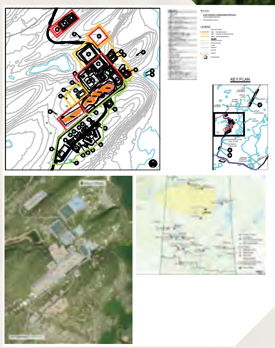
ROC842

Wheeler River
Project Overview

Powering PEOPLE, PARTNERSHIPS AND PASSION.

We acknowledge and respect the fact that Denison's flagship Wheeler River Uranium Project is located in northern Saskatchewan within the boundaries of Treaty 10, in the traditional territory of English River First Nation, in the homeland of the Métis and within Nuhenéné.

Key Project Components	Construction (Year 1 to 3)	Operation (Year 3 to 18)	Decommissioning (Year 18 to 23)	Post-Decommissioning (Year 23 to 38)
	Develop access roads and air strip		Facility removal	Active environmental monitoring of vegetation growth; monitoring of surface water and groundwater quality; monitoring of wildlife site
	Site preparation and earthworks			
	ISR wellfield drilling	Operation of the ISR wellfield ISR wellfield drilling	Process water treatment and release Mining horizon remediation	
	Freeze hole drilling and ground freezing	Freeze hole drilling and ground freezing	Thawing of freeze wall	
	Development of surface infrastructure (camp, operations centre, plants, ponds, pads and support facilities)	Operation of processing plant and production of uranium concentrate	Decontamination of surface facilities, injection, recovery and monitoring wells Facility removal	
		Water withdrawal from groundwater or surface water body		
		Treated effluent release to surface water body	Site water management, treatment and release	
		Waste management		
	Active environmental monitoring of vegetation growth; monitoring of surface water and groundwater quality; monitoring of wildlife site			



Key Advantages of ISR Mining

- Small surface footprint
- No conventional tailings facility
- No underground workings - mining done from surface
- Low energy consumption
- Small volume of treated effluent
- Small volumes of clean waste rock (sandstone drill cores from wellfield drilling)
- Small volume of treated water precipitates
- Small volumes of waste rock (mineralized drill cuttings from wellfield development)
- Introduces opportunity to develop potential mineral deposits not considered economically viable by conventional mining methods

Considerations of ISR Mining

- Protection of surrounding groundwater regime
- Significant evaluation efforts required to confirm ISR mining method is viable for high grade Phoenix deposit

Denison Mines

wheelerriverproject.ca | denisonmines.com

Information provided as of May, 2022

Wheeler River
Project Technologies

Powering PEOPLE, PARTNERSHIPS AND PASSION.

In Situ Recovery

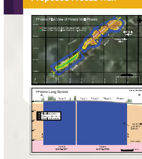
- Use an acidic or low pH mining solution to leach uranium ores from the ground
- Mining solution is a mixture of sulphuric acid, hydrogen peroxide and ferric sulphate
- Freshwater obtained from shallow groundwater or surface water
- Mining solution expected to be reused over and over, wherever possible
- Use mud rotary drilling to create wellfield – most common method of well drilling in Saskatchewan

ISR Process Overview

Ground Freezing – Freeze Wall

- Ground freezing used to prevent groundwater in the sandstone from flowing through the uranium deposit
- Uranium deposit will be surrounded by an engineered freeze wall to isolate mining area from groundwater flow
- Freeze wall surrounding deposit from the basement rock to surface
- Use of groundwater wells for monitoring of the mining solution, groundwater level, ground pressure and temperature
- Freeze wall established by +300 freeze holes 6m apart from surface to low permeability basement rock
- Freeze wall holes made using diamond drilling method
- Chilled brine solution (calcium chloride brine) will circulate in the steel encased holes to remove the heat from the ground
- Warm brine solution flows out to surface to be re-chilled in a closed loop system - similar to how a community ice rink is kept frozen
- Commonly used technology at McArthur River and Cigar Lake

Proposed Freeze Wall



Typical Freeze Pipe

Denison Mines

wheelerriverproject.ca | denisonmines.com

Information provided as of May, 2022

Wheeler River
Regulatory Process

Powering PEOPLE, PARTNERSHIPS AND PASSION.

Federal Regulators

Lead: Canadian Nuclear Safety Commission

- Reviews and approves Environmental Impact Statement (EIS) and licence applications
- Mandate to protect health, safety and security of Canadians and the environment

Main authorizations granted include:

- Licence to Prepare Site and Construct
- Licence to Operate

Provincial Regulators

Lead: Saskatchewan Ministry of Environment

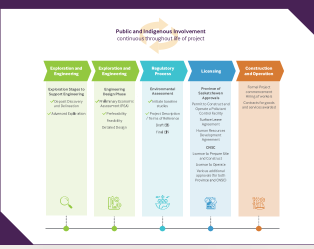
- Understand and evaluate potential environmental impacts of a project before any irreversible decisions are taken that may lead to negative effects on the environment, natural resources, or public health and safety
- Grant regulatory permits or licences
- Review and approve Environmental Impact Statement (EIS)

Main authorizations granted include:

- Permit to Operate a Pollutant Control Facility
- Surface Lease Agreement

Wheeler River Project Process Status

- Environmental baseline studies ongoing since 2012
- Federal and provincial EA process initiated in May 2019 with submission of Project Description
- Environmental studies are completed to inform engineering design and mitigate potential effects of the project on the biophysical and human environments



Denison Mines

wheelerriverproject.ca | denisonmines.com

Information provided as of May, 2022

Wheeler River
Understanding Environmental Assessment (EA)

Powering PEOPLE, PARTNERSHIPS AND PASSION.

Valued components

What are VCs?

It stands for Valued components. These are elements that are important to humans or the environment. Because viewpoints can vary, it was important to consult with northern communities to identify appropriate valued components.

When determining VCs, we used input from multiple northern communities:

- English River First Nation,
- Kineepik Métis Local #9,
- Pinehouse Lake,
- Beauval,
- Ile a la Crosse,
- Patuanak, and
- the seven Athabasca Communities represented by the Ya'thi Néné Lands and Resources Office

VCs were determined to be Air, Humans, Indigenous Land and Resource Use, Ground/Terrain/Soil, Vegetation, Water, and Wildlife.

Project Interactions

How will the project impact VCs? The project has several phases and activities that can interact with VCs. These are:

- Preparation
- Operation
- Decommission
- Waste Management
- Water Management

We undertake actions to eliminate or reduce negative project impacts on VCs. These actions are called mitigation measures.

Significance

Can the impacts to VCs be effectively managed?

We study many considerations before making conclusions on whether impacts are significant. Residual adverse effects must be determined. These are the effects left after mitigation measures. Then, we answer questions about the residual adverse effect of each VC:

- Magnitude- How big is the effect?
- Geographic extent- Where do the effects occur?
- Time- When do the effects occur?
- Frequency- How often do the effects occur?
- Duration- How long do the effects last?
- Reversibility- Can the effects be undone?
- Context- Are there environmental or social factors to consider?

Surrounding projects, laws, policies, communities, practices, land use, reliability of mitigation, multiple sources of knowledge, and many other factors can influence VC conditions. These factors are evaluated, considering the baseline conditions, to make a conclusion on significance.

A conclusion of "not significant" does not mean that an adverse effect won't occur or isn't important relative to people or the environment – it is simply a conclusion that the potential changes can be effectively managed.

Denison Mines

wheelerriverproject.ca | denisonmines.com

Information provided as of May, 2022

Wheeler River
VCs: Vegetation, Ecosystems and Wetlands

Powering PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations

- Abundance of vegetation
- Chemical make-up of the constituents
- Listed Plant Species

Potential Effects

Activities that could reduce or disturb vegetation, listed plant species, and wetlands:

- Introduction of weeds
- Generation and deposition of dust
- Changes to water quality
- Storage, handling, and transport of waste
- Reclamation of disturbed areas

Mitigation Measures

- Limit the area of disturbance
- Use of existing clearings and previously disturbed land
- Cleared bush will be stockpiled and used in progressive reclamation
- Implementation of controls to limit dust generation
- Secondary containment of tanks and pipelines to contain accidental leaks and spills
- Minimize risk of accidental spills through the Fuel Management and Spill Control Plan
- Mining solution and process water will be reused whenever possible to reduce water required for the Project and to reduce treated water released to the environment

Conclusions

Effects are anticipated to be:

- Low magnitude - less than 0.1% of wetlands lost; about 2.9% of habitat types potentially affected in the local area
- Local - limited to areas disturbed by the project
- Long term – throughout the project life cycle
- Not significant – residual effects are not expected to alter vegetation and ecosystems integrity (sustainability)

Denison Mines

wheelerriverproject.ca | denisonmines.com

Information provided as of May, 2022

Wheeler River
Cumulative Effects Assessment

Powering PEOPLE, PARTNERSHIPS AND PASSION.

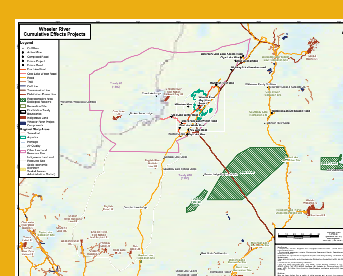
A Cumulative Effects Assessment (CEA) is completed to ensure that the incremental effects from multiple activities in an area (environment, human health, land use, etc.) are considered together. Project activities can interact with Valued Components; when interactions cause Valued Components' conditions to change, it is known as an "effect". The combined effects may be significant even though the effects of each independent activity is not significant.

Cumulative Effects Considerations

- The cumulative effects (overlapping effects) were characterized to inform the CEA
- The significance of the cumulative effect was determined for each Valued Component
- The Cumulative effects for all of the Valued Components were predicted to be Not Significant

Key Points of a CEA

- Completed for each of the selected Valued Components.
- Uses established assessment methods.
- Includes Indigenous, local and scientific knowledge.
- Conducted at the regional level for each Valued Component.
- Baseline conditions of the Valued Components reflect the effects from past and present projects and activities.
- Identifies overlapping residual effects (such as time and space) from the Project, with residual effects from known projects and/or activities from past, present, and future projects and/or activities.
- Considers all known projects and activities, and climate change.



Denison Mines

wheelerriverproject.ca | denisonmines.com

Information provided as of May, 2022

ROC842

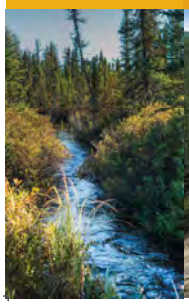
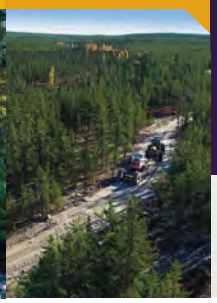
Wheeler River
VCs: Ground, Terrain and Soil

Powering PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations
- Land stability
- Soil quantity, quality and nutrients

Potential Effects
Activities that could impact land stability, surface drainage patterns, surface erosion potential, soil quality, and soil quantity:
- Clearing, grading, and construction
- Unexpected spills, leaks
- Release of water to groundwater and/or surface water bodies

Reclamation of disturbed areas may result in similar Project-related effects, but to a lesser extent.

Mitigation Measures
- Limit the area of disturbance
- Construction strategies to eliminate or reduce impacts
- Use of existing clearings and previously disturbed land
- Reusing disturbed sources of soil nutrients, generated during construction, for the reclamation process
- Installation of sediment/erosion controls and surface water management features
- Monitoring of open-source dust associated with major earthworks and equipment travel
- Fuel Management and Spill Control Plan in place to respond to unexpected leaks, spills, and releases of materials
- Wherever possible, progressive reclamation will be conducted throughout the life of the Project in relation to landscape features (slope, aspect) and surface drainage patterns
- Decommissioning phase to restore the landscape to safe, stable and self-sustaining landscape

Conclusions
Effects are anticipated to be:
- Low magnitude – within range of natural variations
- Local - limited to areas disturbed by the project
- Medium term – up to, but not including post-decommissioning
- Not significant – residual effects are not expected to alter VCs integrity and sustainability nor their availability to contribute to the environment

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VCs: Wildlife and Birds

Powering PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations
Populations and health of wildlife including:
- Ungulates: Moose, Woodland Caribou
- Furbearers: Wolverine, Mink, Muskrat
- Birds: Bald Eagle, Osprey, Common Nighthawk, Short-Eared Owl, Waterbirds, Game Birds, Songbirds, Yellow Rail, Rusty Blackbird, Olive-Sided Flycatcher

Potential Effects
Activities that could reduce or disturb species of wildlife, birds, or habitats include:
- Vehicles, equipment, and aircraft traffic
- Dust
- Human presence
- Collisions with equipment and vehicles
- Entrapment in facilities
- Exposure to substances in dust
- Release of Project-related treated effluent
- Spills of hazardous materials
- More efficient hunter, trapper, and predator access to the Project area via new access routes

Changes to surface water quality could affect wildlife habitat and health from water management practices.

Decommissioning of Project site may result in a continued alteration of wildlife habitat and/or mortality from vehicle wildlife collisions.

Mitigation Measures – Wildlife Management Plan
- Limit the area of disturbance
- Use of existing clearings and previously disturbed land
- Site clearing scheduled to avoid times when animal and birds are denning, calving, breeding
- Nesting surveys conducted before clearing to identify and establish measures to protect dens, burrows, lodges, nests, and other habitat
- Measures and practices to reduce the generation of dust
- Secondary containment of tanks and pipelines to contain accidental leaks and spills
- Implementation of Fuel Management and Spill Control Plan
- Fencing and monitoring contaminated areas – waste ponds and pads, landfill
- Implementation of Woodland Caribou Management Plan
- Employees trained to minimize their impact on wildlife, such as no littering, respect for wildlife, etc
- Implementation of speed limits to reduce risk of collision with wildlife
- Waste and hazardous materials collected and temporarily stored in wildlife-proof containers.

Conclusions
Effects are anticipated to be:
- Low magnitude – risk of mortality within range of natural variations
- Regional effect on habitat loss – limited to Project area
- Local effect on mortality – direct mortality within Project area from vehicle-wildlife collisions, but indirect mortality could extend beyond Project area
- Medium term for ungulates – highest loss of habitat and and mortality (vehicle-wildlife collisions) expected during construction and operation, but may continue during other phases of the project
- Medium to long term for furbearers, raptors and at-risk bird species – loss of habitat and and mortality (vehicle/aircraft-wildlife collisions) expected during all phases of the project
- Long term for woodland caribou and migratory breeding birds – Alteration of habitat and and mortality (vehicle/aircraft-wildlife collisions) through all phases of project – highest mortality potential during construction and operation
- Not significant – residual effects not expected to alter habitat integrity nor wildlife and bird regional populations sustainability

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VC: Aquatic Environment

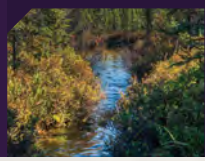
Powering PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations
- Fish habitat availability and distribution
- Fish survival and reproduction
- Surface water levels and flow
- Concentration of chemicals and metals in surface water
- Concentration of chemical and metals in aquatic sediments
- Distribution and survival of snails, worms, dragonfly larvae, and other benthic invertebrates

Potential Effects
Activities that could reduce or disturb aquatic environments, species, or habitats:
- Modification of fish habitat from disturbances around surface water
- Erosion and transport of sediments into surface water
- Water withdrawal from Whitefish Lake
- Releasing effluent to Whitefish Lake.
- Water management could result in changes to water quality affecting fish, fish habitat, and benthic invertebrates.
- Water management could alter stream flow or lake levels required for fish mobility and productivity
- Reclamation of disturbed areas could increase sediments in water and change fish habitat

Mitigation Measures
- Limiting duration of in-water working (conducting work during low flow periods, and conducting work away from flows when possible)
- Avoiding activities in windy or rainy conditions to limit erosion and sedimentation
- Plan activities in waterbodies to limit loss or disturbance to aquatic and sensitive habitat
- Limit shoreline degradation when operating machinery
- Stabilize shorelines to limit erosion and sedimentation by limiting clearing of vegetation and revegetating with native species, whenever possible
- Maintaining routes used for fish passage by designing water intake and treated water discharge locations to protect fish, fish movements, and fish habitats
- Planning to avoid chemicals entering waterways during near-water work
- Implementing an Erosion and Sediment Control Plan

Conclusions
Effects are anticipated to be:
- Low magnitude – no loss of habitat and fish population
- Local – limited to Project area
- Long term for habitat availability – throughout construction and operation
- Short term for habitat distribution – fish movement protected throughout life of the project
- Not significant – residual effects not expected to alter local fish populations

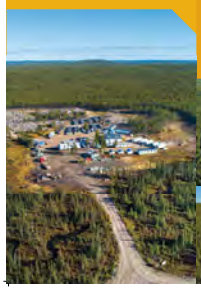


Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VC: Relationship to the Land

Powering PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations
- Resources availability
- Land availability
- Suitability of land and resources



Potential Effects
The presence of the project and its activities may result in changes to:
- Water, vegetation, fish, and wildlife
- Access to the area
- Land area available
- Noise level, traffic, dust, and other disturbances associated with Project activities
- Quality of the experience using resources
- Opportunities for Indigenous land use activities
- Opportunities for non-Indigenous land use

Mitigation Measures
- Implementation of measures to protect plants, fish, and wildlife
- Limit the area of disturbance
- Use of noise reducing equipment
- Reduce dust and air emissions
- Enforce speed limits for traffic
- Implement radiological clearance of equipment before exiting Project site
- Implement progressive reclamation of disturbed areas
- Establish community agreements
- Establish trappers' compensation
- Implement Indigenous People's Policy, including ongoing communication with Indigenous Communities of Interest

Conclusions
Effects are anticipated to be:
- Low magnitude – no loss of habitat and fish population
- Local – Project area (in and around the local and regional study area)
- Long term – until reclamation is complete
- Not significant – continuous in frequency, low in context, and fully reversible following decommissioning

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VCs: Community, Culture and Economy

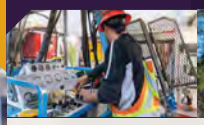
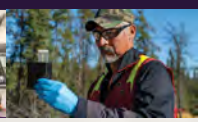
Powering PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations
- Populations, traffic, community infrastructure and services
- Income, employment, training, government revenues, business opportunities
- Community cohesion and traditional economy
- Employment and training (generally delivered through institutions connected to northern Saskatchewan)

Potential Effects
Activities that could interact with community, culture, and economy:
- Population numbers and population characteristics
- Up to 300 jobs created during construction and more than 100 direct and contract roles during the operation phase
- Supervisory, trades, professional, technical, and foundational (entry level) positions available during operations
- Availability and increased opportunities for business and training
- Participation in traditional economic activities
- Abundance of Traffic
- Increased demand on community infrastructure and services

Mitigation Measures
- Implementation of agreements with communities (support)
- Prioritize Indigenous and non-Indigenous Communities of Interest (employment, training, and business, wherever possible)
- Implement procurement approach focused on communities
- Implementation of education and other support services for workers and in some cases their families
- Planned pick-up points in alignment with employment practices
- Implementation of Emergency Response Plan

Conclusions
Effects on community well-being, infrastructure, services and economy are currently being assessed, and are anticipated to be:
- Minimal adverse and/or positive
- Low to moderate magnitude – during construction and operation, and low during reclamation
- Local – primarily in the Project area
- Short to medium – based on Project phases
- Not significant – continuous in frequency, moderate in context, and fully reversible following decommissioning

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Risk Assessment

Powering PEOPLE, PARTNERSHIPS AND PASSION.

To evaluate and understand if people, plants, and animals will be exposed to substances at amounts above what is known to be safe after the planned mitigation measures have been applied.

It incorporates the movement of substances through the food chain as well as direct exposure to substances (soil, air, water, etc) to appropriately capture risk.

Human Health Risk Assessment
People who access the project site are considered in the risk assessment. They include:
- Camp workers
- Seasonal resident/lodge operator – seasonal access
- People fishing/hunting/trapping/gathering firewood/picking berries – traditional and recreational access
- Neighbouring residents fishing/hunting/trapping
- Future permanent residents- access to Project site after its decommissioning.

Assessment Results and Mitigation
- Low overall health risk to people using the area
- Expected radiation doses to people below public dose limit
- Low risk of exposure of people to metals in the environment (below benchmarks for metals)
- Ongoing monitoring during all Project phases

Ecological Risk Assessment
Considers ecological receptors such as:
- Terrestrial Mammals – Woodland Caribou, hare, moose, black bear, lynx, etc.
- Riparian Mammals – Muskrat, mink
- Terrestrial Birds – Bald eagle, robin, Canada goose, etc.
- Riparian Birds – Mallard, loon,
- Fish – Northern pike, white sucker
- Terrestrial Invertebrates – Earthworm
- Aquatic Invertebrates – Zooplankton, benthic invertebrates
- Terrestrial Vegetation – Lichen, blueberry, Labrador tea
- Aquatic Vegetation – Phytoplankton, Macrophyte

These can be exposed to substances through direct exposure in water, sediment, soil, air or through the food chain.

Assessment Results and Mitigation
- Low overall health risk to animals, plants, and invertebrates
- Expected radiation doses to ecological receptors below benchmarks.
- No risk of exposure to ecological receptors to non-radionuclides hazards
- Ongoing monitoring during all Project phases

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

ROC842

Wheeler River
Project People

Powering
PEOPLE, PARTNERSHIPS AND PASSION.

At the Wheeler River Project site, we strive to employ as many Northerners as possible. We also strive to hire most of the contractors and services we need from northern and Indigenous people owned businesses.

Here are some of the people who have been on site in the past few years; some have moved on while others continue to help advance the Project.

Denison Mines

wheelerriverproject.ca | denisonmines.com

Information provided as of May, 2022

Wheeler River
Building Relationsips

Powering
PEOPLE, PARTNERSHIPS AND PASSION.

Denison and the Wheeler River Project team are committed to meaningful engagement with Indigenous people, communities, residents, and organizations with an interest in our Project.

TALKING together. LISTENING to you. RESPONDING to explain.

Engagement With Indigenous and Non-Indigenous Communities of Interest

- English River First Nation
- Kinepik Métis Local 9 (Pinehouse)
- Métis Nation - Saskatchewan
- A La Baie Métis Local 21 (Ile a la Crosse)
- Sipishik Métis Local 37 (Beauval)
- Patuanak Métis Local 82 (Patuanak)
- Northern Hamlet of Patuanak
- Northern Village of Pinehouse
- Northern Village of Ile a la Crosse
- Northern Village of Beauval

Other communities, organizations and groups of interest:

- Lac la Ronge Indian Band
- Birch Narrows Dene Nation
- Buffalo River Dene Nation
- Hatchet Lake First Nation
- Black Lake First Nation
- Fond du Lac First Nation
- Métis Nation – Saskatchewan
- Ya'thi Néné Land and Resource Office
- Prince Albert Grand Council
- Meadow Lake Tribal Council
- Commercial trappers
- Commercial fishers
- Commercial lodges
- Cabin and lease owners

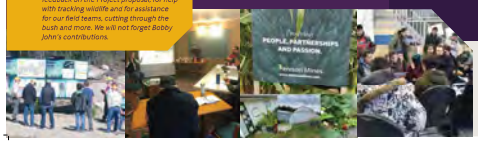
Since 2016 and every year after, Denison has met with community members and leadership through workshops, site tours, public meetings, and even virtual community meetings to hear concerns, receive knowledge and input, and share Project information.

Subjects of workshops and meetings have included:

- Wheeler River Project components:
  - Access road
  - Treated water (effluent) discharge location
  - Mining method
  - Design change to freezing containment method
- Environmental considerations:
  - Water bodies - fishing
  - Fish habitat
  - Species at risk
  - Land disturbance

Thank You, Bobby John

Bobby John lived, trapped, fished and hunted in the Wheeler River Project area long before Denison and its predecessors started exploring the site. Over the years, Bobby John became someone our Project team relied on for insight on the area, for feedback on the Project proposal, for help with tracking wildlife and for assistance for our field teams, cutting through the bush and more. We will not forget Bobby John's contributions.



Our Support of Communities

Denison's support of communities can take various forms:

- Donations to community organizations
- Sponsorships of community events
- Scholarships or in-kind support of education and field trips
- Direct agreements with specific Indigenous communities

Here are some examples of Denison's support in 2021:

- Entered into an Exploration Agreement with English River First Nation
- Métis Nation Saskatchewan Region 3 South Bay Gathering
- Sakitawak Elders Group and their market garden initiative
- Pinehouse Lake hockey tournament
- Improvements to the English River First Nation Culture Camp at the Mawdsley Reserve at 160km
- Many Christmas initiatives in the region, including those in in Beauval, Ile a la Crosse, and the Hamlet of Patuanak

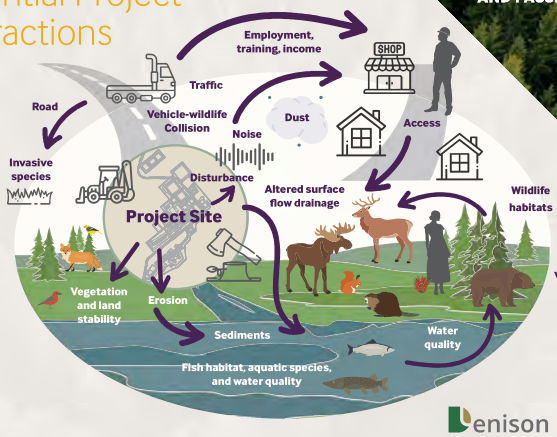
Denison Mines

wheelerriverproject.ca | denisonmines.com

Information provided as of May, 2022

Wheeler River
Potential Project Interactions

Powering
PEOPLE, PARTNERSHIPS AND PASSION.



Denison Mines

wheelerriverproject.ca | denisonmines.com

Information provided as of May, 2022

ROC842

The Wheeler River Project

Powering
PEOPLE, PARTNERSHIPS AND PASSION.

Denison Mines

ROC842

Project Overview

- Eastern Athabasca Basin
- 35km northeast of Key Lake Mill
- 35km southwest of McArthur River Mine
- Within the boundaries of Treaty 10, the traditional territory of English River First Nation, in the homeland of the Métis, within Nuhenéné.
- The purpose is to construct, operate, and decommission an ISR uranium mine and processing plant.

ROC842

Wheeler River Project

Location	Northern Saskatchewan, Canada.	
Project Components and Activities:	The central Project components are the ISR mine and the processing plant.	Supporting Project components and activities include those needed for waste management, water management, distribution of electricity, and transportation, such as pads, ponds, buildings, roads, and an airstrip.
Inputs	freshwater, chemicals (for mining, uranium processing, treating water), electricity, and fuel.	
Outputs	waste (organics, clean waste rock, special waste rock (drilling core), domestic waste, industrial waste, precipitates from the processing plant and water treatment, sewage), air emissions including greenhouse gas emissions (GHGs), noise, and treated effluent.	
Product	U3O8 or yellowcake. The product Denison sells is ultimately used as fuel in nuclear power plants, supporting global efforts to reduce GHG emissions.	
Employment	Approximately 300 workers during Construction and 180 during Operation. The Project will be operated as a fly-in-fly-out operation.	
Project Duration:	Total of approximately 38 years, about 2 years for Construction, 15 years for Operation, 5 years for Decommissioning, and 15 years for Post-Decommissioning periods.	

ROC842

Schedule of Activities

Key Project Components

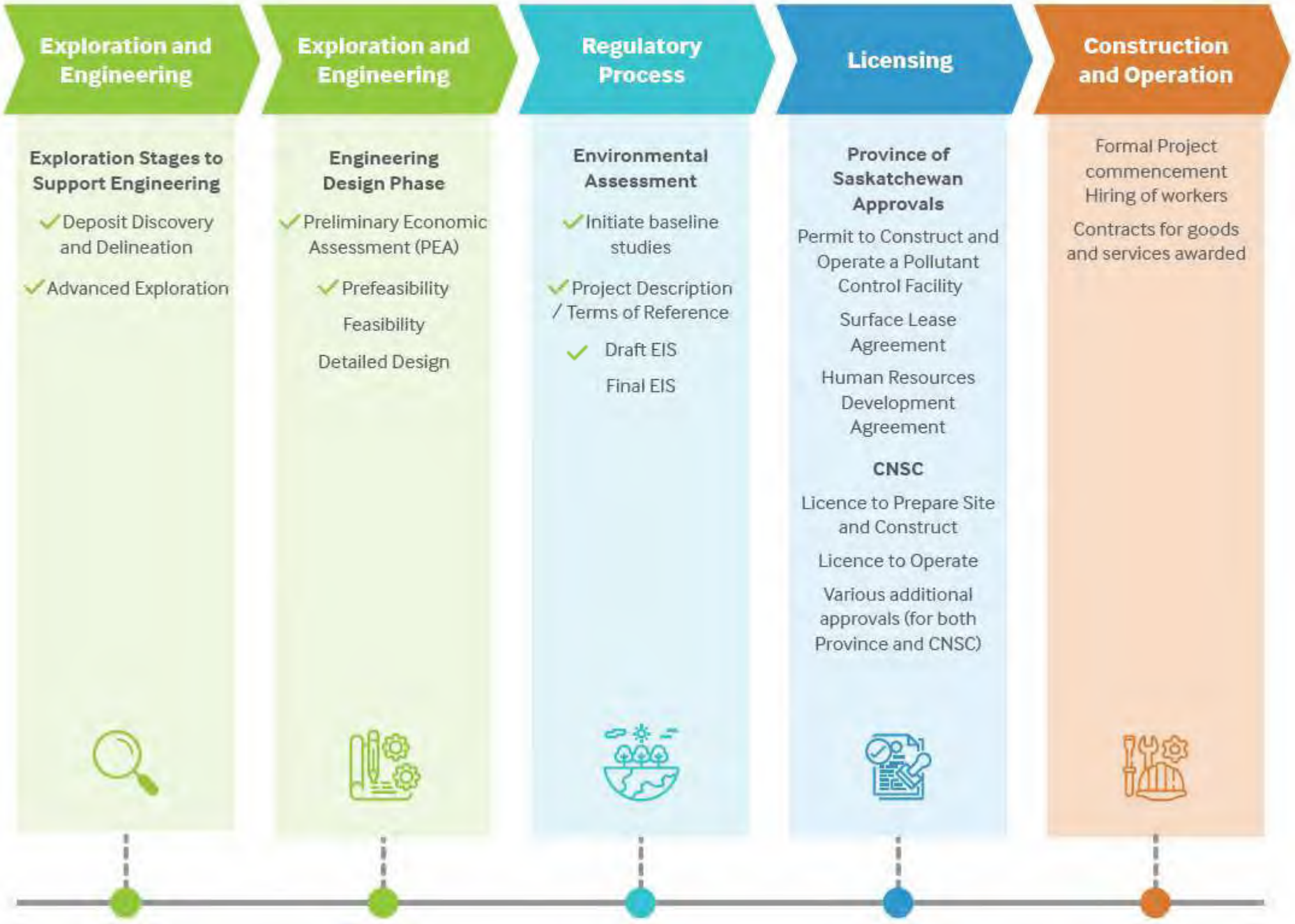
Construction (Year 1 to 3)	Operation (Year 3 to 18)	Decommissioning (Year 18 to 23)	Post-Decommissioning (Year 23 to 38)
Develop access roads and air strip		Facility removal	Active environmental monitoring of vegetation growth; monitoring of surface water and groundwater quality; monitoring of wildlife site
Site preparation and earthworks			
ISR wellfield drilling	Operation of the ISR wellfield ISR wellfield drilling	Process water treatment and release Mining horizon remediation	
Freeze hole drilling and ground freezing	Freeze hole drilling and ground freezing	Thawing of freeze wall	
Development of surface infrastructure (camp, operations centre, plants, ponds, pads and support facilities)	Operation of processing plant and production of uranium concentrate	Decontamination of surface facilities, injection, recovery and monitoring wells Facility removal	
	Water withdrawal from groundwater or surface water body		
	Treated effluent release to surface water body	Site water management, treatment and release	
	Waste management		
Active environmental monitoring of vegetation growth; monitoring of surface water and groundwater quality; monitoring of wildlife site			

ROC842

Economics
Atmospheric and Acoustic Environment
Quality of Life
Geology and Groundwater
Wheeler River Project
Environmental Assessment
Land and Resource Use
Aquatic Environment
Human Health
Terrestrial Environment

ROC842

Regulatory Process



ROC842

Questions

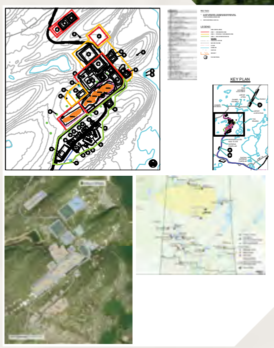
ROC845

Wheeler River
Project Overview

Powering
PEOPLE, PARTNERSHIPS AND PASSION.

We acknowledge and respect the fact that Denison's flagship Wheeler River Uranium Project is located in northern Saskatchewan within the boundaries of Treaty 10, in the traditional territory of English River First Nation, in the homeland of the Métis and within Nuhenéné.

Key Project Components	Construction (Year 1 to 3)	Operation (Year 3 to 18)	Decommissioning (Year 18 to 23)	Post-Decommissioning (Year 23 to 38)
	Develop access roads and air strip		Facility removal	Active environmental monitoring of vegetation growth; monitoring of surface water and groundwater quality; monitoring of wildlife site
	Site preparation and earthworks			
	ISR wellfield drilling	Operation of the ISR wellfield ISR wellfield drilling	Process water treatment and release Mining horizon remediation	
	Freeze hole drilling and ground freezing	Freeze hole drilling and ground freezing	Thawing of freeze wall	
	Development of surface infrastructure (camp, operations centre, plants, ponds, pads and support facilities)	Operation of processing plant and production of uranium concentrate	Decontamination of surface facilities, injection, recovery and monitoring wells Facility removal	
		Water withdrawal from groundwater or surface water body		
		Treated effluent release to surface water body	Site water management, treatment and release	
		Waste management		
	Active environmental monitoring of vegetation growth; monitoring of surface water and groundwater quality; monitoring of wildlife site			



Key Advantages of ISR Mining

- Small surface footprint
- No conventional tailings facility
- No underground workings - mining done from surface
- Low energy consumption
- Small volume of treated effluent
- Small volumes of clean waste rock (sandstone drill cores from wellfield drilling)
- Small volume of treated water precipitates
- Small volumes of waste rock (mineralized drill cuttings from wellfield development)
- Introduces opportunity to develop potential mineral deposits not considered economically viable by conventional mining methods

Considerations of ISR Mining

- Protection of surrounding groundwater regime
- Significant evaluation efforts required to confirm ISR mining method is viable for high grade Phoenix deposit

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Project Technologies

Powering
PEOPLE, PARTNERSHIPS AND PASSION.

In Situ Recovery

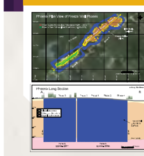
- Use an acidic or low pH mining solution to leach uranium ores from the ground
- Mining solution is a mixture of sulphuric acid, hydrogen peroxide and ferric sulphate
- Freshwater obtained from shallow groundwater or surface water
- Mining solution expected to be reused over and over, wherever possible
- Use mud rotary drilling to create wellfield – most common method of well drilling in Saskatchewan

ISR Process Overview

Ground Freezing – Freeze Wall

- Ground freezing used to prevent groundwater in the sandstone from flowing through the uranium deposit
- Uranium deposit will be surrounded by an engineered freeze wall to isolate mining area from groundwater flow
- Freeze wall surrounding deposit from the basement rock to surface
- Use of groundwater wells for monitoring of the mining solution, groundwater level, ground pressure and temperature
- Freeze wall established by +300 freeze holes 6m apart from surface to low permeability basement rock
- Freeze wall holes made using diamond drilling method
- Chilled brine solution (calcium chloride brine) will circulate in the steel encased holes to remove the heat from the ground
- Warm brine solution flows out to surface to be re-chilled in a closed loop system - similar to how a community ice rink is kept frozen
- Commonly used technology at McArthur River and Cigar Lake

Proposed Freeze Wall



Typical Freeze Pipe

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Regulatory Process

Powering
PEOPLE, PARTNERSHIPS AND PASSION.

Federal Regulators

Lead: Canadian Nuclear Safety Commission

- Reviews and approves Environmental Impact Statement (EIS) and licence applications
- Mandate to protect health, safety and security of Canadians and the environment

Main authorizations granted include:

- Licence to Prepare Site and Construct
- Licence to Operate

Provincial Regulators

Lead: Saskatchewan Ministry of Environment

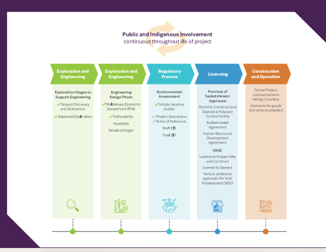
- Understand and evaluate potential environmental impacts of a project before any irreversible decisions are taken that may lead to negative effects on the environment, natural resources, or public health and safety
- Grant regulatory permits or licences
- Review and approve Environmental Impact Statement (EIS)

Main authorizations granted include:

- Permit to Operate a Pollutant Control Facility
- Surface Lease Agreement

Wheeler River Project Process Status

- Environmental baseline studies ongoing since 2012
- Federal and provincial EA process initiated in May 2019 with submission of Project Description
- Environmental studies are completed to inform engineering design and mitigate potential effects of the project on the biophysical and human environments



Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Understanding Environmental Assessment (EA)

Powering
PEOPLE, PARTNERSHIPS AND PASSION.

Valued components

What are VCs?

It stands for Valued components. These are elements that are important to humans or the environment. Because viewpoints can vary, it was important to consult with northern communities to identify appropriate valued components.

When determining VCs, we used input from multiple northern communities:

- English River First Nation,
- Kineepik Métis Local #9,
- Pinehouse Lake,
- Beauval,
- Ile a la Crosse,
- Patuanak, and
- the seven Athabasca Communities represented by the Ya'thi Néné Lands and Resources Office

VCs were determined to be Air, Humans, Indigenous Land and Resource Use, Ground/Terrain/Soil, Vegetation, Water, and Wildlife.

Project Interactions

How will the project impact VCs? The project has several phases and activities that can interact with VCs. These are:

- Preparation
- Operation
- Decommission
- Waste Management
- Water Management

We undertake actions to eliminate or reduce negative project impacts on VCs. These actions are called mitigation measures.

Significance

Can the impacts to VCs be effectively managed?

We study many considerations before making conclusions on whether impacts are significant. Residual adverse effects must be determined. These are the effects left after mitigation measures. Then, we answer questions about the residual adverse effect of each VC:

- Magnitude- How big is the effect?
- Geographic extent- Where do the effects occur?
- Time- When do the effects occur?
- Frequency- How often do the effects occur?
- Duration- How long do the effects last?
- Reversibility- Can the effects be undone?
- Context- Are there environmental or social factors to consider?

Surrounding projects, laws, policies, communities, practices, land use, reliability of mitigation, multiple sources of knowledge, and many other factors can influence VC conditions. These factors are evaluated, considering the baseline conditions, to make a conclusion on significance.

A conclusion of "not significant" does not mean that an adverse effect won't occur or isn't important relative to people or the environment – it is simply a conclusion that the potential changes can be effectively managed.

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VCs: Vegetation, Ecosystems and Wetlands

Powering
PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations

- Abundance of vegetation
- Chemical make-up of the constituents
- Listed Plant Species

Potential Effects

Activities that could reduce or disturb vegetation, listed plant species, and wetlands:

- Introduction of weeds
- Generation and deposition of dust
- Changes to water quality
- Storage, handling, and transport of waste
- Reclamation of disturbed areas

Mitigation Measures

- Limit the area of disturbance
- Use of existing clearings and previously disturbed land
- Cleared bush will be stockpiled and used in progressive reclamation
- Implementation of controls to limit dust generation
- Secondary containment of tanks and pipelines to contain accidental leaks and spills
- Minimize risk of accidental spills through the Fuel Management and Spill Control Plan
- Mining solution and process water will be reused whenever possible to reduce water required for the Project and to reduce treated water released to the environment

Conclusions

Effects are anticipated to be:

- Low magnitude - less than 0.1% of wetlands lost; about 2.9% of habitat types potentially affected in the local area
- Local - limited to areas disturbed by the project
- Long term – throughout the project life cycle
- Not significant – residual effects are not expected to alter vegetation and ecosystems integrity (sustainability)

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Cumulative Effects Assessment

Powering
PEOPLE, PARTNERSHIPS AND PASSION.

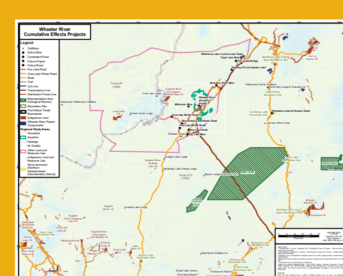
A Cumulative Effects Assessment (CEA) is completed to ensure that the incremental effects from multiple activities in an area (environment, human health, land use, etc.) are considered together. Project activities can interact with Valued Components; when interactions cause Valued Components' conditions to change, it is known as an "effect". The combined effects may be significant even though the effects of each independent activity is not significant.

Cumulative Effects Considerations

- The cumulative effects (overlapping effects) were characterized to inform the CEA
- The significance of the cumulative effect was determined for each Valued Component
- The Cumulative effects for all of the Valued Components were predicted to be Not Significant

Key Points of a CEA

- Completed for each of the selected Valued Components.
- Uses established assessment methods.
- Includes Indigenous, local and scientific knowledge.
- Conducted at the regional level for each Valued Component.
- Baseline conditions of the Valued Components reflect the effects from past and present projects and activities.
- Identifies overlapping residual effects (such as time and space) from the Project, with residual effects from known projects and/or activities from past, present, and future projects and/or activities.
- Considers all known projects and activities, and climate change.



Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

ROC845

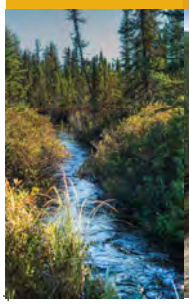
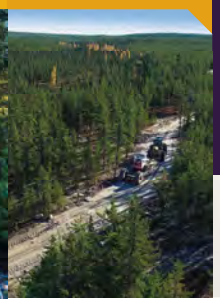
Wheeler River
VCs: Ground, Terrain and Soil

Powering PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations
- Land stability
- Soil quantity, quality and nutrients

Potential Effects
Activities that could impact land stability, surface drainage patterns, surface erosion potential, soil quality, and soil quantity:
- Clearing, grading, and construction
- Unexpected spills, leaks
- Release of water to groundwater and/or surface water bodies

Reclamation of disturbed areas may result in similar Project-related effects, but to a lesser extent.

Mitigation Measures
- Limit the area of disturbance
- Construction strategies to eliminate or reduce impacts
- Use of existing clearings and previously disturbed land
- Reusing disturbed sources of soil nutrients, generated during construction, for the reclamation process
- Installation of sediment/erosion controls and surface water management features
- Monitoring of open-source dust associated with major earthworks and equipment travel
- Fuel Management and Spill Control Plan in place to respond to unexpected leaks, spills, and releases of materials
- Wherever possible, progressive reclamation will be conducted throughout the life of the Project in relation to landscape features (slope, aspect) and surface drainage patterns
- Decommissioning phase to restore the landscape to safe, stable and self-sustaining landscape

Conclusions
Effects are anticipated to be:
- Low magnitude – within range of natural variations
- Local - limited to areas disturbed by the project
- Medium term – up to, but not including post-decommissioning
- Not significant – residual effects are not expected to alter VCs integrity and sustainability nor their availability to contribute to the environment

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VCs: Wildlife and Birds

Powering PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations
Populations and health of wildlife including:
- Ungulates: Moose, Woodland Caribou
- Furbearers: Wolverine, Mink, Muskrat
- Birds: Bald Eagle, Osprey, Common Nighthawk, Short-Eared Owl, Waterbirds, Game Birds, Songbirds, Yellow Rail, Rusty Blackbird, Olive-Sided Flycatcher

Potential Effects
Activities that could reduce or disturb species of wildlife, birds, or habitats include:
- Vehicles, equipment, and aircraft traffic
- Dust
- Human presence
- Collisions with equipment and vehicles
- Entrapment in facilities
- Exposure to substances in dust
- Release of Project-related treated effluent
- Spills of hazardous materials
- More efficient hunter, trapper, and predator access to the Project area via new access routes

Changes to surface water quality could affect wildlife habitat and health from water management practices.

Decommissioning of Project site may result in a continued alteration of wildlife habitat and/or mortality from vehicle wildlife collisions.

Mitigation Measures – Wildlife Management Plan
- Limit the area of disturbance
- Use of existing clearings and previously disturbed land
- Site clearing scheduled to avoid times when animal and birds are denning, calving, breeding
- Nesting surveys conducted before clearing to identify and establish measures to protect dens, burrows, lodges, nests, and other habitat
- Measures and practices to reduce the generation of dust
- Secondary containment of tanks and pipelines to contain accidental leaks and spills
- Implementation of Fuel Management and Spill Control Plan
- Fencing and monitoring contaminated areas – waste ponds and pads, landfill
- Implementation of Woodland Caribou Management Plan
- Employees trained to minimize their impact on wildlife, such as no littering, respect for wildlife, etc
- Implementation of speed limits to reduce risk of collision with wildlife
- Waste and hazardous materials collected and temporarily stored in wildlife-proof containers.

Conclusions
Effects are anticipated to be:
- Low magnitude – risk of mortality within range of natural variations
- Regional effect on habitat loss – limited to Project area
- Local effect on mortality – direct mortality within Project area from vehicle-wildlife collisions, but indirect mortality could extend beyond Project area
- Medium term for ungulates – highest loss of habitat and and mortality (vehicle-wildlife collisions) expected during construction and operation, but may continue during other phases of the project
- Medium to long term for furbearers, raptors and at-risk bird species – loss of habitat and and mortality (vehicle/aircraft-wildlife collisions) expected during all phases of the project
- Long term for woodland caribou and migratory breeding birds – Alteration of habitat and and mortality (vehicle/aircraft-wildlife collisions) through all phases of project – highest mortality potential during construction and operation
- Not significant – residual effects not expected to alter habitat integrity nor wildlife and bird regional populations sustainability

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VC: Aquatic Environment

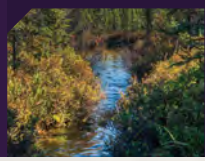
Powering PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations
- Fish habitat availability and distribution
- Fish survival and reproduction
- Surface water levels and flow
- Concentration of chemicals and metals in surface water
- Concentration of chemical and metals in aquatic sediments
- Distribution and survival of snails, worms, dragonfly larvae, and other benthic invertebrates

Potential Effects
Activities that could reduce or disturb aquatic environments, species, or habitats:
- Modification of fish habitat from disturbances around surface water
- Erosion and transport of sediments into surface water
- Water withdrawal from Whitefish Lake
- Releasing effluent to Whitefish Lake.
- Water management could result in changes to water quality affecting fish, fish habitat, and benthic invertebrates.
- Water management could alter stream flow or lake levels required for fish mobility and productivity
- Reclamation of disturbed areas could increase sediments in water and change fish habitat

Mitigation Measures
- Limiting duration of in-water working (conducting work during low flow periods, and conducting work away from flows when possible)
- Avoiding activities in windy or rainy conditions to limit erosion and sedimentation
- Plan activities in waterbodies to limit loss or disturbance to aquatic and sensitive habitat
- Limit shoreline degradation when operating machinery
- Stabilize shorelines to limit erosion and sedimentation by limiting clearing of vegetation and revegetating with native species, whenever possible
- Maintaining routes used for fish passage by designing water intake and treated water discharge locations to protect fish, fish movements, and fish habitats
- Planning to avoid chemicals entering waterways during near-water work
- Implementing an Erosion and Sediment Control Plan

Conclusions
Effects are anticipated to be:
- Low magnitude – no loss of habitat and fish population
- Local – limited to Project area
- Long term for habitat availability – throughout construction and operation
- Short term for habitat distribution – fish movement protected throughout life of the project
- Not significant – residual effects not expected to alter local fish populations

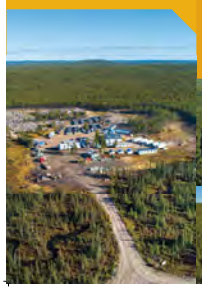


Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VC: Relationship to the Land

Powering PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations
- Resources availability
- Land availability
- Suitability of land and resources



Potential Effects
The presence of the project and its activities may result in changes to:
- Water, vegetation, fish, and wildlife
- Access to the area
- Land area available
- Noise level, traffic, dust, and other disturbances associated with Project activities
- Quality of the experience using resources
- Opportunities for Indigenous land use activities
- Opportunities for non-Indigenous land use

Mitigation Measures
- Implementation of measures to protect plants, fish, and wildlife
- Limit the area of disturbance
- Use of noise reducing equipment
- Reduce dust and air emissions
- Enforce speed limits for traffic
- Implement radiological clearance of equipment before exiting Project site
- Implement progressive reclamation of disturbed areas
- Establish community agreements
- Establish trappers' compensation
- Implement Indigenous People's Policy, including ongoing communication with Indigenous Communities of Interest

Conclusions
Effects are anticipated to be:
- Low magnitude – no loss of habitat and fish population
- Local – Project area (in and around the local and regional study area)
- Long term – until reclamation is complete
- Not significant – continuous in frequency, low in context, and fully reversible following decommissioning

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
VCs: Community, Culture and Economy

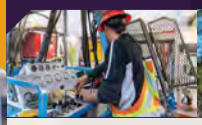
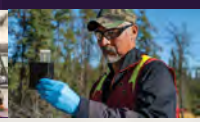
Powering PEOPLE, PARTNERSHIPS AND PASSION.

Environmental Assessment Considerations
- Populations, traffic, community infrastructure and services
- Income, employment, training, government revenues, business opportunities
- Community cohesion and traditional economy
- Employment and training (generally delivered through institutions connected to northern Saskatchewan)

Potential Effects
Activities that could interact with community, culture, and economy:
- Population numbers and population characteristics
- Up to 300 jobs created during construction and more than 100 direct and contract roles during the operation phase
- Supervisory, trades, professional, technical, and foundational (entry level) positions available during operations
- Availability and increased opportunities for business and training
- Participation in traditional economic activities
- Abundance of Traffic
- Increased demand on community infrastructure and services

Mitigation Measures
- Implementation of agreements with communities (support)
- Prioritize Indigenous and non-Indigenous Communities of Interest (employment, training, and business, wherever possible)
- Implement procurement approach focused on communities
- Implementation of education and other support services for workers and in some cases their families
- Planned pick-up points in alignment with employment practices
- Implementation of Emergency Response Plan

Conclusions
Effects on community well-being, infrastructure, services and economy are currently being assessed, and are anticipated to be:
- Minimal adverse and/or positive
- Low to moderate magnitude – during construction and operation, and low during reclamation
- Local – primarily in the Project area
- Short to medium – based on Project phases
- Not significant – continuous in frequency, moderate in context, and fully reversible following decommissioning

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

Wheeler River
Risk Assessment

Powering PEOPLE, PARTNERSHIPS AND PASSION.

To evaluate and understand if people, plants, and animals will be exposed to substances at amounts above what is known to be safe after the planned mitigation measures have been applied.

It incorporates the movement of substances through the food chain as well as direct exposure to substances (soil, air, water, etc) to appropriately capture risk.

Human Health Risk Assessment
People who access the project site are considered in the risk assessment. They include:
- Camp workers
- Seasonal resident/lodge operator – seasonal access
- People fishing/hunting/trapping/gathering firewood/picking berries – traditional and recreational access
- Neighbouring residents fishing/hunting/trapping
- Future permanent residents- access to Project site after its decommissioning.

Assessment Results and Mitigation
- Low overall health risk to people using the area
- Expected radiation doses to people below public dose limit
- Low risk of exposure of people to metals in the environment (below benchmarks for metals)
- Ongoing monitoring during all Project phases

Ecological Risk Assessment
Considers ecological receptors such as:
- Terrestrial Mammals – Woodland Caribou, hare, moose, black bear, lynx, etc.
- Riparian Mammals – Muskrat, mink
- Terrestrial Birds – Bald eagle, robin, Canada goose, etc.
- Riparian Birds – Mallard, loon,
- Fish – Northern pike, white sucker
- Terrestrial Invertebrates – Earthworm
- Aquatic Invertebrates – Zooplankton, benthic invertebrates
- Terrestrial Vegetation – Lichen, blueberry, Labrador tea
- Aquatic Vegetation – Phytoplankton, Macrophyte

These can be exposed to substances through direct exposure in water, sediment, soil, air or through the food chain.

Assessment Results and Mitigation
- Low overall health risk to animals, plants, and invertebrates
- Expected radiation doses to ecological receptors below benchmarks.
- No risk of exposure to ecological receptors to non-radionuclides hazards
- Ongoing monitoring during all Project phases

Denison Mines
wheelerriverproject.ca | denisonmines.com
Information provided as of May, 2022

ROC845

Wheeler River
Project People

Powering PEOPLE, PARTNERSHIPS AND PASSION.

At the Wheeler River Project site, we strive to employ as many Northerners as possible. We also strive to hire most of the contractors and services we need from northern and Indigenous people owned businesses.

Here are some of the people who have been on site in the past few years; some have moved on while others continue to help advance the Project.

Denison Mines

wheelerriverproject.ca | denisonmines.com

Information provided as of May, 2022

Wheeler River
Building Relationsips

Powering PEOPLE, PARTNERSHIPS AND PASSION.

Denison and the Wheeler River Project team are committed to meaningful engagement with Indigenous people, communities, residents, and organizations with an interest in our Project.

TALKING together. LISTENING to you. RESPONDING to explain.

Engagement With Indigenous and Non-Indigenous Communities of Interest

- English River First Nation
- Kinoepik Métis Local 9 (Pinehouse)
- Métis Nation - Saskatchewan
- A La Baie Métis Local 21 (Ile a la Crosse)
- Sipishik Métis Local 37 (Beauval)
- Patuanak Métis Local 82 (Patuanak)
- Northern Hamlet of Patuanak
- Northern Village of Pinehouse
- Northern Village of Ile a la Crosse
- Northern Village of Beauval

Other communities, organizations and groups of interest:

- Lac la Ronge Indian Band
- Birch Narrows Dene Nation
- Buffalo River Dene Nation
- Hatchet Lake First Nation
- Black Lake First Nation
- Fond du Lac First Nation
- Métis Nation – Saskatchewan
- Ya'thi Néné Land and Resource Office
- Prince Albert Grand Council
- Meadow Lake Tribal Council
- Commercial trappers
- Commercial fishers
- Commercial lodges
- Cabin and lease owners

Since 2016 and every year after, Denison has met with community members and leadership through workshops, site tours, public meetings, and even virtual community meetings to hear concerns, receive knowledge and input, and share Project information.

Subjects of workshops and meetings have included:

- Wheeler River Project components:
  - Access road
  - Treated water (effluent) discharge location
  - Mining method
  - Design change to freezing containment method
- Environmental considerations:
  - Water bodies - fishing
  - Fish habitat
  - Species at risk
  - Land disturbance

Thank You, Bobby John

Bobby John lived, trapped, fished and hunted in the Wheeler River Project area long before Denison and its predecessors started exploring the site. Over the years, Bobby John became someone our Project team relied on for insight on the area, for feedback on the Project proposal, for help with tracking wildlife and for assistance for our field teams, cutting through the bush and more. We will not forget Bobby John's contributions.

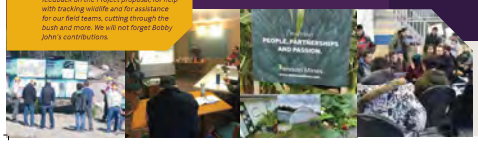
Our Support of Communities

Denison's support of communities can take various forms:

- Donations to community organizations
- Sponsorships of community events
- Scholarships or in-kind support of education and field trips
- Direct agreements with specific Indigenous communities

Here are some examples of Denison's support in 2021:

- Entered into an Exploration Agreement with English River First Nation
- Métis Nation Saskatchewan Region 3 South Bay Gathering
- Sakitawak Elders Group and their market garden initiative
- Pinehouse Lake hockey tournament
- Improvements to the English River First Nation Culture Camp at the Mawdsley Reserve at 160km
- Many Christmas initiatives in the region, including those in in Beauval, Ile a la Crosse, and the Hamlet of Patuanak



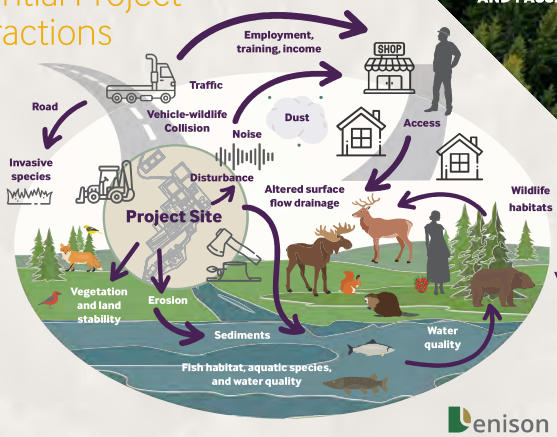
Denison Mines

wheelerriverproject.ca | denisonmines.com

Information provided as of May, 2022

Wheeler River
Potential Project Interactions

Powering PEOPLE, PARTNERSHIPS AND PASSION.



Denison Mines

wheelerriverproject.ca | denisonmines.com

Information provided as of May, 2022

ROC845

The Wheeler River Project

Powering
PEOPLE, PARTNERSHIPS AND PASSION.

Denison Mines

ROC845

Project Overview

- Eastern Athabasca Basin
- 35km northeast of Key Lake Mill
- 35km southwest of McArthur River Mine
- Within the boundaries of Treaty 10, the traditional territory of English River First Nation, in the homeland of the Métis, within Nuhenéné.
- The purpose is to construct, operate, and decommission an ISR uranium mine and processing plant.

ROC845

Wheeler River Project

Location	Northern Saskatchewan, Canada.	
Project Components and Activities:	The central Project components are the ISR mine and the processing plant.	Supporting Project components and activities include those needed for waste management, water management, distribution of electricity, and transportation, such as pads, ponds, buildings, roads, and an airstrip.
Inputs	freshwater, chemicals (for mining, uranium processing, treating water), electricity, and fuel.	
Outputs	waste (organics, clean waste rock, special waste rock (drilling core), domestic waste, industrial waste, precipitates from the processing plant and water treatment, sewage), air emissions including greenhouse gas emissions (GHGs), noise, and treated effluent.	
Product	U3O8 or yellowcake. The product Denison sells is ultimately used as fuel in nuclear power plants, supporting global efforts to reduce GHG emissions.	
Employment	Approximately 300 workers during Construction and 180 during Operation. The Project will be operated as a fly-in-fly-out operation.	
Project Duration:	Total of approximately 38 years, about 2 years for Construction, 15 years for Operation, 5 years for Decommissioning, and 15 years for Post-Decommissioning periods.	

ROC845

Schedule of Activities

Key Project Components

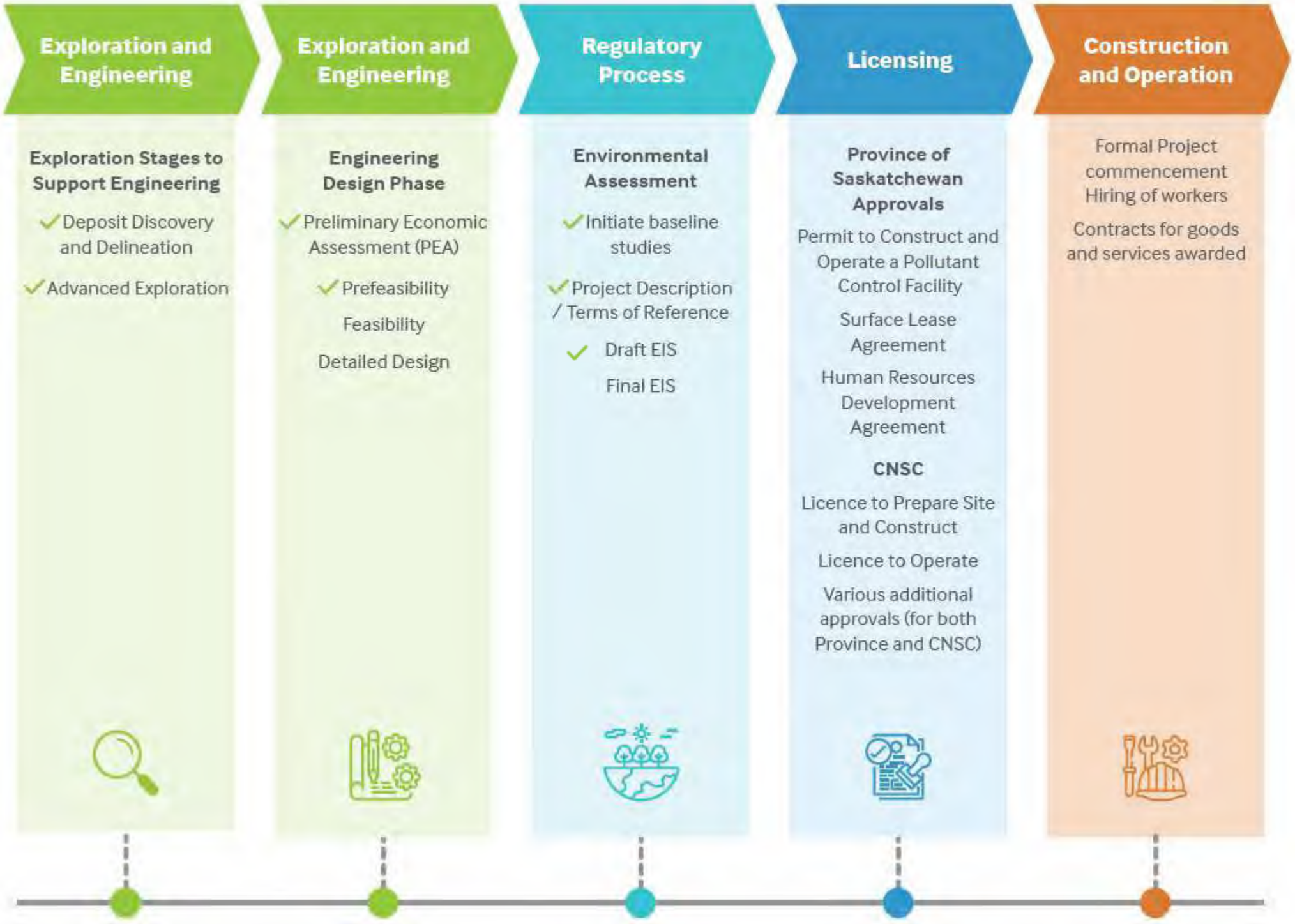
Construction (Year 1 to 3)	Operation (Year 3 to 18)	Decommissioning (Year 18 to 23)	Post-Decommissioning (Year 23 to 38)
Develop access roads and air strip		Facility removal	Active environmental monitoring of vegetation growth; monitoring of surface water and groundwater quality; monitoring of wildlife site
Site preparation and earthworks			
ISR wellfield drilling	Operation of the ISR wellfield ISR wellfield drilling	Process water treatment and release Mining horizon remediation	
Freeze hole drilling and ground freezing	Freeze hole drilling and ground freezing	Thawing of freeze wall	
Development of surface infrastructure (camp, operations centre, plants, ponds, pads and support facilities)	Operation of processing plant and production of uranium concentrate	Decontamination of surface facilities, injection, recovery and monitoring wells Facility removal	
	Water withdrawal from groundwater or surface water body		
	Treated effluent release to surface water body	Site water management, treatment and release	
	Waste management		
Active environmental monitoring of vegetation growth; monitoring of surface water and groundwater quality; monitoring of wildlife site			

ROC845

Economics
Atmospheric and Acoustic Environment
Quality of Life
Geology and Groundwater
Wheeler River Project
Environmental Assessment
Land and Resource Use
Aquatic Environment
Human Health
Terrestrial Environment

ROC845

Regulatory Process



ROC845

Questions